GOVERNMENT OF
WESTERN AUSTRALIA

CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

Purpose Permit number:	CPS 4168/1
Permit Holder:	Robe River Mining Company Pty Ltd
Duration of Permit:	4 April 2011 – 4 April 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 constructing a landfill site.

2. **Land on which clearing is to be done**
   Lot 500 on Plan 63022, WICKHAM

3. **Area of Clearing**
   The Permit Holder must not clear more than 13.6 hectares of native vegetation within the area cross-hatched yellow on attached Plan 4168/1.

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. **Period in which clearing is authorised**
   The Permit Holder shall not clear native vegetation unless actively filling with landfill within 2 months of the authorised clearing being undertaken.

9. **Fauna management**
   (a) Prior to undertaking any clearing authorised under this Permit, the area(s) shall be inspected by a *fauna specialist* who shall identify habitat suitable to be utilised by the Western Pebble Mound Mouse (*Pseudomys chapmani*).

(b) Prior to clearing, any habitat identified by condition 9(a) shall be inspected by a *fauna specialist* for the presence of fauna listed in condition 9(a).

(c) Within one week prior to undertaking any clearing authorised under this Permit, the Permit Holder shall engage a *fauna clearing person* to remove and relocate fauna identified under condition 9(b).

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 fauna management pursuant to condition 9 of this Permit:
   (i) the location of each habitat identified 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;
   (ii) the species name of fauna reasonably likely to utilise, or that have been observed utilising, the habitat; and
   (iii) the location and date where relocated fauna was released, 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.

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 4 January 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.

DEFINITIONS

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

fauna clearing person means a person who has obtained a licence from the Department, issued pursuant to the *Wildlife Conservation Regulations 1970* authorising them to take fauna;

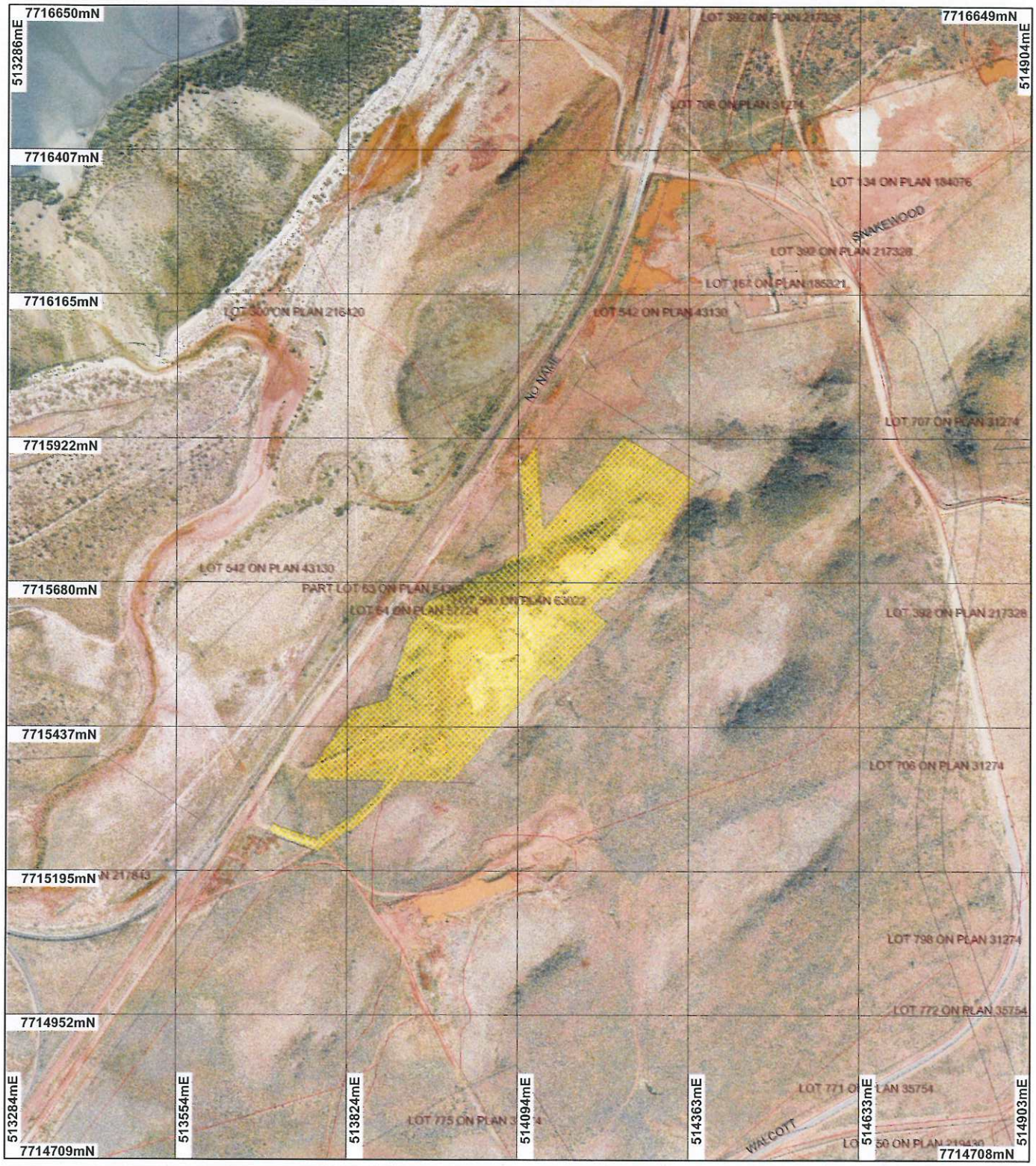
fauna specialist means a person with training and specific work experience in fauna identification or faunal assemblage surveys of Western Australian fauna;

Kelly Faulkner
MANAGER
NATIVE VEGETATION CONSERVATION BRANCH

Officer delegated under Section 20
of the Environmental Protection Act 1986

10 March 2011

Plan 4168/1



LEGEND

Road Centrelines
Cadastre for labelling
- Freehold
- Crown Reserve
- State Forest / Timber Reserve
- Marine Park
- Crown Lease (cent)
- Lease / Reserve
- Lease on State Forest / Timber Reserve
- Public Roads
- Unallocated Crown Land
- Water

Clearing Instruments
- Areas Approved to Clear

Dampier and Extensions 50cm Orthomosaic - Landgate 2008

Roebourne 50cm Orthomosaic - Landgate 2007

Roebourne Townsite 20cm Orthomosaic - Landgate 2005

Cape Lambert 20cm Orthomosaic - Landgate 2005

N

0 250 m

Scale 1:8921
(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 10/3/1

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

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.: 4168/1
Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: Robe River Mining Co Pty Ltd

1.3. Property details

Property: LOT 500 ON PLAN 63022 (WICKHAM 6720)
Local Government Area:
Colloquial name:

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
13.6		Mechanical Removal	Miscellaneous

1.5. Decision on application

Decision on Permit Application: Granted
Decision Date: 10 March 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
Beard vegetation Type 157: Hummock grasslands, grass steppe; hard spinifex, Triodia wiseana. (Shepherd 2009).	The proposed clearing for 13.6ha is for the purpose of the construction of a landfill site. The vegetation under application consists of seven vegetation units occurring on two different landform, rocky hills and sandy alluvial plains. Vegetation occurring on the rocky hills consisted of : Acacia bivenosa open shrubland over Triodia wiseana very open hummock grassland in a good condition Acacia inaequilatera scattered tall shrubs over Triodia wiseana very open hummock grassland in a good condition Acacia stellaticeps low open shrubland over Triodia epactia open hummock grassland in good condition Triodia epactia and Triodia wiseana open hummock grassland in very good condition.	Good: Structure significantly altered by multiple disturbance; retains basic structure/ability to regenerate (Keighery 1994)	Vegetation condition was established through photos and descriptions provided in flora survey report (Western Botanical 2008).
As above	Vegetation occurring on the sandy Alluvial Plain consists of: Cenchrus ciliaris (buffel grass) tussock grassland with a few native species in a completly degraded condition. Mixed tussock grassland consisting of Chrysopogon fallax and Fimbristylis dichotoma and Triodia epactia in a good condition. The weeds Buffel grass (Cenchrus ciliaris) and Kapok Bush (Aerva javanica) grassland in a completely degraded condition. This area use to be a borrow pit.	Degraded: Structure severely disturbed; regeneration to good condition requires intensive management (Keighery 1994)	As above

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 14.3ha of native vegetation for a landfill site. The area to be cleared consists of Beard vegetation association 157 of which there is approximately 99.9% of the Pre-European extent remaining (Shepherd et al., 2007). The central section of the application area is in a degraded (Keighery, 1994) condition, which has been cleared in the past for borrow pits and access tracks (Western Botanical, 2008). The vegetation within the rest of the area is predominately Acacia sp. over tussock and hummock grasslands (Western Botanical, 2008) and ranges from good to very good (Keighery 1994) condition.

There are a number of weeds (including buffel grass) common to the Pilbara region within the site and surrounding areas.

Hibiscus brachysiphonius (P3) recorded 2.6km west, Abutilon trudgenii (P3) recorded 1.7km south east and Helichrysum oligochaetum (P1) recorded 4.4km east of the application area were not observed during a survey of the application area (Western Botanical, 2008). However, no map showing the area surveyed was provided.

Given the high extent of native vegetation remaining, the application area is unlikely to represent an area of higher biodiversity value when compared to representative vegetation in a local and regional context.

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

Methodology

References
-Keighery (1994)
-Shepherd et al (2009)
-Western Botanical (2008)
GIS databases
- Sac Bio datasets (2 March 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

Two main fauna habitats have been identified within the application area being Open Acacia shrubland over hummock grassland on stony hills and tussock grasslands on sandy alluvial plains.

Seven conservation significant species have been recorded within the local area (20 km radius) of the application. These include Lerista nevinae, Northern Quoll (Dasyurus hallucatus), Banded Hare Wallaby ( ), Eastern Curlew (Numenius madagascariensis), Western Pebble Mound Mouse (Pseudomys chapmani), Lake Downs Mouse (Leggadina lakedownensis), and Australian Bustard (Ardoetis australis).

A fauna report undertaken in 2008 identified the application area to provide habitat for the Western Pebble-mound Mouse which prefers habitat containing stony hills (Western Botanical 2008). In addition the fauna report states that the Australian Bustard which prefers lightly wooded grasslands including Triodia sand plains is also likely to utilize the application area especially within the sand plain habitat. The Bush-stone curlew (Burhinus grallarius) and the Star Finch (Neochmia ruficauda subclarescens) which has been recorded within the Cape Lambert Port B development site are also likely to occur within the application area (Western Botanical 2008).

Rainbow Bee-eater (Merops arnatus) was recorded once during the survey of the Cape Lambert Pot B development area which occurs within the proximity of the application area. This species was recorded in Acacia shrubland over buffel grass tussock grassland. Therefore it is also considered that this species could also occur within the application area (Western Botanical 2008).

However, impact on the avian species listed above is considered minimal as they will move to surrounding habitat during the proposed clearing.

In addition, fauna habitats within the proposed area to be cleared are well represented elsewhere within the local (20km radius) and regional area. The area proposed to be cleared does not represent a fauna corridor and the clearing will not remove an ecological linkage that is necessary for the maintenance of local fauna populations. Therefore, it is not considered for the proposed clearing to impact on significant habitat for local fauna.

Based on the above, the proposed clearing is not likely to be at variance to this Principle. A fauna management condition would mitigate any impacts of the clearing on the Western Pebble Mound Mouse.

Methodology

References
-Western Botanical (2008)
GIS databases

- Sac Bio datasets (2 March 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

There are no records of rare flora within the local area (20km radius) of the application area. In addition, no rare flora has been recorded during a flora survey undertaken in May and June of 2008 within the application area (Western Botanical 2008).

Given this it is unlikely that the proposal is at variance to this principle.

Methodology

References
-Western Botanical (2008)
GIS databases
- Sac Bio datasets (2 March 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 ecological communities within a 50 km radius of the area under application.

The closest recorded occurrence of a priority ecological community was Roebourne chenopod association located 11.8km south. Given the distance from the application area it is unlikely that the proposal is at variance to this principle.

Methodology

GIS databases
- Sac Bio datasets (2 March 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 likely to be at variance to this Principle

Approximately 99.94% and 97.82% of the Pre-European vegetation remains of Beard vegetation association 157 in the Pilbara IBRA bioregion and the shire of Roebourne respectively, within which this proposal is located (Shepherd et al., 2009).

Beard Vegetation association 157 has approximately 99.94% of the Pre-European extent remaining and therefore the 13.6 ha area proposed to be cleared is not considered to be a significant remnant of native vegetation within an extensively cleared area. The local area is approximately 80% vegetated.

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

Pre-European	Current extent (ha)	Remaining (ha)	(%)
IBRA Bioregions			
Pilbara	17,804,193	17,755,000	99.89
Shire			
Roebourne	1,535,627	1,502,080	97.82
Beard Vegetation Complex			
157 (in bioregion)	198,633	198,518	99.94
157 (in shire)	73,039	71,824	98.34

(Shepherd et al. 2009)

Methodology

References
-Shepherd et al (2009)
GIS Databses
-Pre-European vegetation
-Interim Biogeographic Regionalisation of Australia

(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

Two minor non-perennial watercourses are located within the applied area. One dissects the application area centrally travelling from the north east corner to the south west corner, the other passes through the northern arm of the application area from west to south. The central watercourse runs through the highly degraded portion of the application area, where previous borrow pits and access tracks are located (Western Botanical, 2008). The topography of the application area shows that the clearing will not impact downstream as the application area is within a depression and is self contained.

Given the above, the proposal is at variance to this principle.

Methodology

References
-Keighery (1994)
-Western Botanical (2008)
GIS Databases
- Hydrography linear
- Topographic contours statewide

(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 application area consists of Ruth Land System which comprises of hills and ridges (Western Botanical, 2008). Soils are brown loams along with significant areas of earthy loam soils and chief soils are deep cracking clays and shallow stony earthy loams (Northcote et al., 1960-68). These soil types are not overly susceptible to erosion following disturbance.

Rainfall and evapotransporation rates for the local area (20km radius) are 300mm and 400mm respectively, suggesting that there is a low risk of water logging within the proposed clearing area.

Given the above, the proposal is unlikely to cause appreciable land degradation.

Methodology

References
-Northcote et al. (1960-68)
-Western Botanical (2008)
GIS Databases
-Soils, statewide
- Evapotransporation Isopleths
- Mean Annual Rainfall Isohytes

(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

There are no mainland conservation areas within the local area (20km radius) of the application area. Given this, it is unlikely that the proposal is at variance to this principle.

Methodology

GIS databases
-DEC, Tenure

(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

The clearing of 13.6 hectares of vegetation is unlikely to have a significant impact on surface orgroundwater in the proposed clearing area given the average annual rainfall of the site is 300mm, with most rainfall occurring over the summer months, and an evapotransporation rate of 400mm per annum. Groundwater salinity is rated as 1000-3000mg/L which is marginally saline.

The majority of existing vegetation is shallow rooted grass and shrub species and thus the proposed clearing is unlikely to have a significant impact on the level or quality of the groundwater table.

Given the above, the application is unlikely to be at variance to this principle.

Methodology

GIS Database
- Hydrogeology, statewide
- Groundwater Salinity Statewide

- Hydrography, linear
- Evapotransporation Isopleths
- Mean Annual Rainfall Isohytes

(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

Clearing of 13.6ha is unlikely to have a significant impact on quality or quantity of groundwater given the mean annual rainfall for the site is 300mm with most rainfall occurring around the summer months, and an evapotransporation rate of 400mm per annum.

Given the above, it is unlikely that the proposed clearing will cause or exacerbate the incidence or intensity of flooding.

Methodology

GIS Databases
- Hydrographic catchments,
- Evapotransporation Isopleths
- Mean Annual Rainfall Isohytes

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

Comments

A previous application (CPS 3113/1) occurring on the same property for a landfill was refused in November 2009 as the applicant did not have legal access to the land and a works approval and a prescribed premises licence from DEC.

The application area falls within the Pilbara Rivers and Tributaries and Groundwater RIWI Area. The Department of Water has advised that any groundwater abstraction will require a groundwater license. This licence is not guaranteed but if issued will contain a number of conditions. Department of Water also advise that the proposed clearing is acceptable as it is not likely to impact upon surface and groundwater resources in the area (DoW 2011).

Native title notification was made on 26 August 2009 for the previous application (CPS 3113) on the property. A response by the claimants was made on 24 September 2009 advising that the claimants and the applicant are currently negotiating an Indigenous Land Use Agreement, and when finalised, a cultural heritage survey would be required. Native title notification was made for this application on the 2 February 2011. No response has been received.

The property under application is Unallocated Crown Land and is owned by the Department of Regional Development of Lands. Rio Tinto (parent company of Robe River Mining Company) has a section 91 licence to access the application area for the purpose of construction and operating a landfill site. This licence expires on the 21 December 2012.

Planning Approval from the Shire of Roebourne has been granted in December 2010 to carry out development for a class1 and 2 landfill facility. Conditions included the development of a Rehabilitation Plan, Construction Environmental Management Plan and an Operational Environmental Management Plan to be approved by the Shire.

An application for DEC Works Approval for a Landfill site (to accept class 1 and/or class 11 waste) has been submitted in November 2010.

Town planning scheme zoning over the application area has been rezoned to "landfill site".

Methodology

References
- DoW (2011)

4. References

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.

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 Botanical (2008). Proposed 7kp Replacement Landfill Site at Cape Lambert: Native Vegetation Clearing Permit Report May - June 2008. Prepared for Pilbara Iron Pty Ltd July 2008.

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)