



## CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

<b>Purpose Permit number:</b>	CPS 5037/1
<b>Permit Holder:</b>	Robe River Mining Company Pty Ltd
<b>Duration of Permit:</b>	13 July 2012 – 13 July 2022

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 quarry construction and associated works.
- 2. Land on which clearing is to be done**  
Lot 72 on Deposited Plan 217843 (ANTONYMYRE, 6714).
- 3. Area of Clearing**  
The Permit Holder must not clear more than 10 hectares of native vegetation within the area hatched yellow on attached Plan 5037/1.
- 4. Period in which clearing is authorised**  
The Permit Holder shall not clear any native vegetation 12 July 2017.
- 5. 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.
- 6. 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 right to access land under the *Land Administration Act 1997* or any other written law.

### 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

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*:

- (a) clean earth-moving machinery of soil and vegetation prior to entering and leaving the area to be cleared;
- (b) ensure that no *weed*-affected soil, *mulch*, *fill* or other material is brought into the area to be cleared; and
- (c) restrict the movement of machines and other vehicles to the limits of the areas to be cleared.

## 9. Vegetation management

Where practicable the Permit Holder shall avoid clearing riparian vegetation.

## 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.
- (b) at an *optimal time* 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:
  - (i) laying the vegetative material and topsoil retained under condition 10(a) on the cleared area(s); and
  - (ii) deliberately *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
  - (iii) ensuring only *local provenance* seeds and propagating material are used to *revegetate* and *rehabilitate* the area.
- (c) within 24 months of undertaking *revegetation* and *rehabilitation* 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, the Permit Holder must undertake additional *planting* or *direct seeding* of native vegetation in accordance with the requirements of condition 10(b)(ii) and (iii) of this Permit.

## PART III - RECORD KEEPING AND REPORTING

### 11. 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 or decimal degrees;
  - (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 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 or decimal degrees;
  - (ii) a description of the *revegetation* and *rehabilitation* activities undertaken;
  - (iii) the size of the area *revegetated* and *rehabilitated* (in hectares);
  - (iv) the species composition, structure and density of *revegetation* and *rehabilitation*, and
  - (v) a copy of the environmental specialist's report.

## 12. 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 11 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 13 April 2022, 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:

**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 kms 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;

**optimal time** means the period from [November to December; for undertaking *direct seeding*

**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.

**riparian vegetation** has the meaning given to it in Regulation 3 of the Environmental Protection (Clearing of Native Vegetation) Regulations 2004;

**weeds** 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*

21 June 2012

# Plan 5037/1



## LEGEND

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

Roebourne 50cm Orthomosaic  
- Landgate 2007



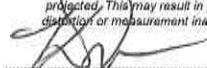
0 100 200 m

Scale 1:7000

(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 21/6/12

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

Our environment, our future  
WA Crown Copyright 2002



## 1. Application details

### 1.1. Permit application details

Permit application No.: 5037/1  
Permit type: Purpose Permit

### 1.2. Proponent details

Proponent's name: Robe River Mining Company Pty Ltd

### 1.3. Property details

Property: LOT 72 ON PLAN 217843 (ANTONYMYRE 6714)  
Local Government Area: Shire of Roebourne  
Colloquial name:

### 1.4. Application

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

### 1.5. Decision on application

Decision on Permit Application: Grant  
Decision Date: 21 June 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
Mapped Beard vegetation association 157: Hummock grasslands, grass steppe; hard spinifex, <i>Triodia wiseana</i> . (Shepherd et al 2001)	The application is to clearing 10 ha of native vegetation within a larger footprint of 29 ha.  A vegetation and flora survey conducted within and around the area under application describes the vegetation under application as hummock grasslands occurring on plains and are dominated by <i>Triodia</i> species (GHD 2008b).  The vegetation within the proposed clearing is described as completely degraded to very good (GHD 2008a).	Completely Degraded: No longer intact; completely/almost completely without native species (Keighery 1994).  To  Very Good: Vegetation structure altered; obvious signs of disturbance (Keighery 1994)	The condition of the native vegetation under application was determined by a Flora and Fauna Assessment (GHD 2008a), an Ecological Survey (GHD 2008b) and digital imagery (Roebourne 50cm Orthomosaic - Landgate 2007).

## 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 application proposes to clear up to 10 ha (within a larger footprint of 29 ha) of native vegetation within Lot 72 on Plan 217843 for the purpose of constructing a quarry and associated works.

During a flora assessment conducted by GHD (2008a) over the application area and surrounding areas a total of 158 taxa from 34 families have been recorded within the study area (1793ha area - Cape Lambert study area). Four priority flora species have been recorded within the local area, the closest being *Helichrysum oligochaetum* (P1) located approximately 6.5km away on a different vegetation and soil type to the application area. The flora assessment conducted within the application area found no priority flora or Declared Rare Flora (DRF) within the study area (GHD 2008a).

A total of 23 bird species, 2 mammal species and 3 reptile species were recorded during the reconnaissance survey within the Cape Lambert Study area (GHD 2008a). 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.

No Threatened or Priority Ecological Communities (PEC) have been recorded within the application area (GHD 2009). The closest know record of a PEC is 'Horseflat Land System of the Roebourne Plains (P3) located

approximately 5.5 km south of the application area.

The disturbance cause by the proposed clearing will increase the risk of weeds spreading into adjacent vegetation. Weed management practices will assist in mitigating this risk.

**Methodology** Given the above the clearing as proposed is not likely to be at variance to this principle.  
Reference:  
DEC (2007-)  
GHD (2008a)

GIS Databases:  
- Pre-European vegetation  
- Roebourne 50cm Orthomosaic - Landgate 2007  
- SAC Biodatasets - accessed accessed 8 May 2012

**(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 fauna species considered rare or likely to become extinct have been recorded within the local area (40 km radius) being, *Dasyurus hallucatus* (Northern Quoll) and *Liasis olivaceus* subsp. *barroni* (DEC 2007-).

Numerous fauna species of conservation significance have been identified as potentially occurring within the application area including the Northern Quoll (*Dasyurus hallucatus*), Banded Hare Wallaby, Mernine (*Lagostrophus fasciatus fasciatus*), Australian Bustard (*Ardeotis australis*) and Western Pebble-mouse- Ngadji (*Pseudomys chapmani*) (GHD 2008a).

The fauna survey undertaken by GHD (2008a) identified a number of different fauna habitats within the study area. Frequent fire events across the entire survey site have resulted in reduced litter and logs that provide habitat for ground dwelling taxa (GHD 2008a). Minimal mature trees were found within the study area. The lack of large trees and nesting hollows may also reduce habitat values in the general area (GHD 2008a).

The habitat value of the majority of the study area is considered to be low and as the area required for clearing is small relative to the habitat areas surrounding the study area, the impacts on fauna species are expected to be minimal (GHD 2008).

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.

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

**Methodology** Reference:  
DEC (2007-)  
GHD (2008a)

GIS Databases:  
- Pre-European vegetation  
- Roebourne 50cm Orthomosaic - Landgate 2007  
- SAC Biodatasets - accessed accessed 8 May 2012

**(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**  
No known records of Declared Rare Flora (DRF) have been located within the local area (20 km).

During a flora survey undertaken by GHD (2008a) no DRF were observed within the application area.

Given the above, it is unlikely the vegetation under application will include or be necessary for the continued existence of DRF. Therefore the clearing as proposed is not likely to be at variance to this principle.

**Methodology** Reference:  
GHD (2008a)

GIS Databases:  
- Pre-European vegetation  
- Roebourne 50cm Orthomosaic - Landgate 2007  
- SAC Biodatasets - accessed accessed 8 May 2012

**(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 known records of Threatened Ecological Communities are located within the application area or within the local area (20km).

Given the above, the clearing as proposed is not likely to be at variance to this principle.

**Methodology** GIS Database:  
 - Pre-European vegetation  
 - Roebourne 50cm Orthomosaic - Landgate 2007  
 - SAC Biodatasets - accessed 8 May 2012

**(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**  
 The area under application is located within the Pilbara Interim Biogeographic Regionalisation of Australia (IBRA) bioregion. This IBRA bioregion has approximately 99 per cent of its Pre European vegetation extent remaining (Government of Western Australia 2011).

The vegetation under application is mapped as Beard Vegetation Association 157, which has approximately 99 per cent of its Pre European extent remaining in the Pilbara bioregion (Government of Western Australia 2011).

Digital imagery (Roebourne 50cm Orthomosaic - Landgate 2007) indicates that the local area (20km radius) surrounding the area under application retains approximately 90 per cent vegetation cover.

Given the vegetation representation within the local area it is unlikely that the vegetation under application is significant as a remnant in an extensively cleared landscape.

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

	Pre-European (ha)	Current Extent Remaining (ha)	Remaining (%)	Extent in DEC Managed Lands (%)
IBRA Bioregion*				
Pilbara	17,804,427	17,729,352	99.59	8.39
Shire*				
Shire of Roebourne	1,535,627	1,496,779	97.47	0.81
Beard Vegetation Association in Bioregion*				
157	502,729	498,026	99.06	18.23

**Methodology** (Government of Western Australia 2011)  
 References:  
 Government of Western Australia (2011)

GIS Database:  
 - IBRA Australia  
 - Local Government Authority  
 - Pre-European vegetation  
 - Roebourne 50cm Orthomosaic - Landgate 2007  
 - SAC Biodatasets - accessed 8 May 2012

**(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 may be at variance to this Principle**  
 Three minor watercourses have been recorded within the application area.

No permanent watercourses or wetlands have been recorded within the application area. A number of ephemeral creek lines may occur within the application however they are only likely to flow after major rainfall events (GHD 2008a).

Given the above, the clearing as proposed may remove vegetation that is associated with the known watercourses. Therefore the application may be at variance to this principle.

**Methodology** Reference:  
-GHD (2008a)

GIS Databases:  
-Hydrology, linear

**(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 type Fa19, which Northcote (1960-68) describes as 'Steep stony hills and ranges on metamorphosed basic and ultra basic rocks, with some iron ore formations. There may also be small areas of granite. Limited areas of steep dissected pediments and valley plains are included. The soils are generally shallow and stony and there are extensive areas without soil cover: chief soils are shallow stony earthy loams.

Given the nature of the soil within the application area it is unlikely that appreciable land degradation in the form of water or wind erosion will occur.

The requirement to revegetate areas no longer used for the purpose for which they were cleared will assist in managing any land degradation impacts.

The application is not likely to be at variance to this principle.

**Methodology** Reference:  
-Keighery 1994  
-Northcote et al. (1960 - 1968)

GIS Database:  
Soils, statewide

**(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 closest known conservation reserve is a unnamed Nature Reserve located approximately 22km north east of the application area.

A large proportion of the vegetation in the Pilbara bioregion remains uncleared, approximately 99 per cent (Government of Western Australia 2011). Therefore, it is unlikely that the application area provides an important buffer or ecological linkage to this unnamed Nature Reserve.

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

**Methodology** Reference:  
- Government of Western Australia (2011)

GIS Databases:  
-DEC Tenure  
-Pre-European vegetation

**(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**

Three minor watercourses have been mapped as occurring within the application area.

The known watercourses consist mainly of seasonal creeks and drainage lines. It is possible the clearing as proposed may cause deterioration to the water quality to the known watercourses during seasonal rainfall events. However these impacts are likely to be short term with minimal impacts and can be minimised if clearing is conducted outside of the wet season (GHD 2008a).

Department of Water (DoW 2012) consider the application to clearing 10 ha of native vegetation for the purpose quarry construction and associated works is unlikely to have an impact on the quantity or quality of groundwater, providing clearing activities are conducted in accordance with DoW guidelines and advice.

Given the above the clearing as proposed is not likely to be at variance to this principle.

**Methodology** Reference:  
-DoW (2012)



-GHD (2008a)

GIS Databases:  
-Hydrology, Linear

**(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.

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

**Methodology** GIS Database:  
- Rainfall, Mean Annual

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

**Comments**

Department of Water (DoW 2012) consider the application to clear 10 ha of native vegetation for the purpose quarry construction and associated works is unlikely to have an impact on the quantity or quality of groundwater, providing clearing activities are conducted in accordance with DoW guidelines and advice.

The application area falls within Pilbara Groundwater Area under the Rights in Water Irrigation Act 1914. DoW (2012) has advised any groundwater abstraction in this proclaimed area is subject to licensing by DoW.

The application area falls within the Pilbara Surface Water Area under the Rights in Water Irrigation Act 1914. DoW (2012) has advised any taking or diversion of surface water in this proclaimed area for the purposes other than domestic and/or stock watering is subject to licensing by DoW. Any interference with the bed or banks of a watercourse in this proclaimed area will require a permit from DoW (DoW 2012).

One Aboriginal Site of Significance is located within the application area. The applicant will be notified to liaise with the Department of Indigenous Affairs regarding their obligations under the Aboriginal Heritage Act 1972.

**Methodology** Reference:  
DoW (2012)

GIS Database:  
-Aboriginal Sites of Significance

**4. References**

DoW (2012) Advice for Clearing Permit Application CPS 5037/1. Department of Water. Western Australia.. (DEC Ref: A506547).

GHD (2008a) Report for 320 Mt Marshalling Yards, Maintenance Workshop and Quarry - Flora and Fauna Assessment. WA. (DEC Ref: A497001).

GHD (2008b) Report for 320 Mt Rail Expansion: Quarries, Water Bores and Crossover 104 - Ecological Surveys. WA. (DEC Ref: A497001).

Government of Western Australia (2011); 2011 Statewide Vegetation Statistics incorporating the CAR Reserve Analysis (Full Report). WA Department of Environment and Conservation, Perth.

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., 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
DEC	Department of Environment and Conservation
DRF	Declared Rare Flora
GIS	Geographical Information System
ha	Hectare (10,000 square metres)
TEC	Threatened Ecological Community