



# Clearing Permit Decision Report

## 1. Application details

### 1.1. Permit application details

Permit application No.: 4270/1  
Permit type: Purpose Permit

### 1.2. Proponent details

Proponent's name: **Robe River Mining Co Pty Ltd**

### 1.3. Property details

Property: Miscellaneous Licence 47/237  
Local Government Area: Shire of Ashburton  
Colloquial name: Deepdale Railway Project

### 1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
0.052		Mechanical Removal	Railway Maintenance and Infrastructure

### 1.5. Decision on application

Decision on Permit Application: Grant  
Decision Date: 14 April 2011

## 2. Site Information

### 2.1. Existing environment and information

#### 2.1.1. Description of the native vegetation under application

**Vegetation Description** Beard vegetation associations have been mapped at a 1:250,000 scale for the whole of Western Australia. One Beard vegetation association has been mapped within the application area (GIS Database; Shepherd, 2009).

603: Hummock grasslands, sparse shrub steppe; *Acacia bivenosa* over hard spinifex (GIS Database; Shepherd, 2009).

The application area was surveyed by Pilbara Flora staff on 1-4 April, 4-5 May and 22-25 July 2008 (Pilbara Flora, 2008). The following vegetation type was identified within the application area:

**Mixed Acacia shrubland in drainage lines (MASDL):** Mixed *Acacia bivenosa*, *Acacia coleii* var. *coleii*, *Acacia inaequilatera* and *Acacia ancistrocarpa* shrubland over *Cenchrus ciliaris*, *Chrysopogon fallax* and *Triodia wiseana* occurring in drainage lines (Pilbara Flora, 2008; Robe River Mining Co Pty Ltd, 2011).

**Clearing Description** Robe River Mining Co Pty Ltd is proposing to clear up to 0.052 hectares of native vegetation for the purpose of railway maintenance and infrastructure. These activities may include clearing for borrow pits, laydown areas, access tracks, topsoil stockpiles and water bores (Robe River Mining Co Pty Ltd, 2011).

Vegetation will be cleared using a dozer with a lowered blade. All cleared topsoil and vegetation will be stockpiled for use in rehabilitation.

**Vegetation Condition** Very Good: Vegetation structure altered; obvious signs of disturbance (Keighery, 1994).

**Comment** The application area is located in the Pilbara region of Western Australia and is situated approximately 91 kilometres south of Karratha (GIS Database).

The vegetation condition rating is based on analysis of aerial photography and imagery.

## 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 area occurs within the Chichester (PIL1) sub-region of the Pilbara Interim Biogeographic Regionalisation of Australia (IBRA) bioregion (GIS Database). This sub-region is characterised by plains supporting a shrub steppe characterised by *Acacia inaequilatera* over *Triodia wiseana* (formerly *Triodia pungens*) hummock grasslands, while *Eucalyptus leucophloia* tree steppes occur on ranges (CALM, 2002).

The Chichester sub-region is extensive, covering approximately 8.37 million hectares. The subregion is well reserved, with approximately 3.95% of the total land area in conservation reserves (Shepherd, 2009).

Based on broad scale Beard vegetation association mapping, the proposed clearing area is characterised by hummock grasslands, sparse shrub steppe; *Acacia bivenosa* over hard spinifex - a common and widespread vegetation association both locally and regionally (Shepherd, 2009; GIS Database). There are no known records of Declared Rare Flora (DRF), Priority Flora or Threatened Ecological Communities (TEC's) in the application area or surrounding area (GIS Database). The proposed clearing area does not contain any conservation category wetlands, nor is it located within or adjacent to any areas managed for the conservation of biological diversity (GIS Database).

Weed species were recorded within the application area and surrounding areas (Pilbara Flora, 2008). Weeds have the potential to alter the biodiversity of an area, competing with native vegetation for available resources and making areas more fire prone. This in turn can lead to greater rates of infestation and further loss of biodiversity if the area is subject to repeated fires. Potential impacts to biodiversity as a result of the proposed clearing may be minimised by the implementation of a weed management condition.

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

**Methodology** CALM (2002)  
Pilbara Flora (2008)  
Shepherd (2009)  
GIS Database:  
- Declared Rare and Priority Flora List  
- DEC Tenure  
- IBRA WA (Regions - subregions)  
- Pre-European Vegetation  
- Threatened Ecological Sites Buffered

**(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**

Analysis of aerial photography and imagery indicates that the proposed clearing area is located in a drainage line in a largely uncleared landscape characterised by ridges, valleys and plains (GIS Database). Fauna habitat in the local area is largely undisturbed, apart from various existing tracks and railways which support mineral exploration and production activities.

The scale and nature of the clearing proposal render it highly unlikely to result in a loss of significant habitat for fauna indigenous to Western Australia.

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

**Methodology** GIS Database:  
- Elvire 1.4m Orthomosaic - Landgate 2000

**(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**

According to available GIS databases there are no known records of Declared Rare Flora (DRF) within the application area (GIS Database).

A flora survey was conducted over the application area by staff from Pilbara Flora on 1-4 April, 4-5 May and 22-25 July 2008 (Pilbara Flora, 2008). No DRF or species listed under the *Environment Protection and Biodiversity Conservation Act 1999* were recorded within the application area (Pilbara Flora, 2008).

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

**Methodology** Pilbara Flora (2008)  
GIS Database:  
- Declared Rare and Priority Flora List

**(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**

A search of available databases reveals that there are no Threatened Ecological Communities (TECs) within the application area (GIS Database). The nearest TEC is located approximately 86 kilometres south-east of the application area (GIS Database). At this distance the proposed clearing is unlikely to impact on native

vegetation that is within or is necessary for the maintenance of the TEC.

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

**Methodology** GIS Database:  
- Threatened Ecological Sites Buffered

**(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 application falls within the Pilbara Interim Biogeographic Regionalisation of Australia (IBRA) bioregion (GIS Database). Shepherd (2009) reports that approximately 99.89% of the pre-European vegetation remains in this bioregion.

The vegetation within the application area is recorded as Beard vegetation association 603 - Hummock grasslands, sparse shrub steppe; *Acacia bivenosa* over hard spinifex (GIS Database; Shepherd, 2009).

According to Shepherd (2009) approximately 100% of this Beard vegetation association remains within the Pilbara bioregion (see table below).

	Pre-European area (ha)*	Current extent (ha)*	Remaining %*	Conservation Status**	Pre-European % in IUCN Class I-IV Reserves
IBRA Bioregion - Pilbara	17,804,193	17,785,001	~99.89%	Least Concern	~6.32%
IBRA Subregion - Chichester	8,373,874	8,373,503	~100%	Least Concern	~3.95%
Beard vegetation associations - State					
603	388,455	388,455	~100%	Least Concern	~16.14%
Beard vegetation associations - Bioregion					
603	388,455	388,455	~100%	Least Concern	~16.14%

\* Shepherd (2009)

\*\* Department of Natural Resources and Environment (2002)

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

**Methodology** Department of Natural Resources and Environment (2002)  
Shepherd (2009)  
GIS Database:  
- IBRA WA (regions - subregions)  
- Pre-European Vegetation

**(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**

According to available GIS Databases, there are no permanent wetlands or watercourses within the application area; however there is one minor non-perennial drainage line within the application area (GIS Database).

Based on vegetation mapping conducted by Pilbara Flora (2008) the vegetation association found within the application area is associated with a minor non-perennial drainage line.

**Mixed Acacia shrubland in drainage lines (MASDL):** Mixed *Acacia bivenosa*, *Acacia colei* var. *colei*, *Acacia inaequilatera* and *Acacia ancistrocarpa* shrubland over *Cenchrus ciliaris*, *Chrysopogon fallax* and *Triodia wiseana* occurring in drainage lines (Pilbara Flora, 2008; Robe River Mining Co Pty Ltd, 2011).

The riparian vegetation of the application area may be disturbed due to the clearing of vegetation for the purpose of railway maintenance and infrastructure activities. However, the drainage line has suffered previous disturbance as it is adjacent to an existing railway and railway access track to the west and other clearing activities to the east (Robe River Mining Co Pty Ltd, 2011; GIS Database).

Based on the above, the proposed clearing is at variance to this Principle. However, the proposed clearing is not likely to significantly impact on the conservation of vegetation growing in association with permanent watercourses or wetlands due to the absence of these within the application area. The proposed clearing of

0.052 hectares of native vegetation is unlikely to significantly impact on vegetation communities growing in association with this drainage channel. Should the watercourse be disturbed the proponent should liaise with the Department of Water to determine whether a Bed and Banks permit is necessary for the proposed works.

**Methodology** Pilbara Flora (2008)  
Robe River Mining Co Pty Ltd (2011)  
GIS Database:  
- Elvire 1.4m Orthomosaic - Landgate 2000  
- Geodata, Lakes  
- Hydrography, 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 application area has been surveyed by the Department of Agriculture and Food (Van Vreeswyk et al., 2004) and the application area is mapped as the Rocklea land system (GIS Database).

The Rocklea land system is described as basalt hills, plateaux, lower slopes and minor stony plains supporting hard spinifex (and occasionally soft spinifex) grasslands (Van Vreeswyk et al., 2004). The soils of this land system are generally not prone to degradation or erosion (Van Vreeswyk et al., 2004).

At the cessation of railway maintenance activities the miscellaneous licence conditions applied under the *Mining Act 1978* require the area to be rehabilitated back to native vegetation. This would reduce issues of prolonged land degradation through wind and water erosion.

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

**Methodology** Van Vreeswyk et al. (2004)  
GIS Database:  
- Rangeland Land System Mapping

**(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 proposed clearing is not located within a conservation reserve (GIS Database). The nearest known conservation reserve is Millstream Chichester National Park, located approximately 22 kilometres east (GIS Database). At this distance it is unlikely the proposed clearing will impact the environmental values of any conservation area.

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

**Methodology** GIS Database:  
- 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**

According to available databases, the application area is not located within a Public Drinking Water Source Area (PDWSA) (GIS Database).

The application area partially overlaps Crown Reserve 38991, which is held by the Water Corporation as a water supply reserve (GIS Database). The miscellaneous licence conditions applied under the *Mining Act 1978* require the proponent to liaise with the Department of Water prior to ground disturbance activities being undertaken.

The Pilbara is an arid environment. The drainage line within the application area is ephemeral and surface water runoff is only likely to occur during and immediately following significant rainfall events. The groundwater salinity within the application area is approximately 500 - 1,000 milligrams/Litre Total Dissolved Solids (TDS) (GIS Database). This is considered to be potable water. Given the small size of the area to be cleared (0.052 hectares) it is not likely that the removal of native vegetation will cause deterioration in the quality of surface or underground water.

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

**Methodology** GIS Database:  
- Cadastre  
- Groundwater Salinity

- Public Drinking Water Source Areas (PDWSAs)

**(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**

The application area experiences a semi-desert, tropical climate with an average annual rainfall of 400 millimetres (CALM, 2002; GIS Database).

Rainfall is usually experienced during summer months and can be either cyclonic or thunderstorm events (CALM, 2002). It is likely that during times of intense rainfall there may be some localised flooding in adjacent areas. The size of the application area (0.052 hectares) is unlikely to significantly alter the intensity of flooding within the application area and surrounding areas.

The application area is located within the Fortescue River catchment area (GIS Database). However, the size of the area to be cleared (0.052 hectares) in relation to the size of the Fortescue River Catchment area (1,860,784 hectares) (GIS Database) is not likely to increase the potential for flooding within the application area, local area or within the catchment (GIS Database).

The proposed clearing of 0.052 hectares is not likely to pose a flooding risk.

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

**Methodology** CALM (2002)  
GIS Database:  
- Annual Rainfall  
- Hydrographic Catchments - Catchments

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

**Comments**

There is one Native Title Claim (WC99/14) over the area under application (GIS Database). This claim has been registered with the National Native Title Tribunal on behalf of the claimant group. However, the mining tenure has been granted in accordance with the future act regime of the *Native Title Act 1993* and the nature of the act (i.e. the proposed clearing activity) has been provided for in that process, therefore the granting of a clearing permit is not a future act under the *Native Title Act 1993*.

There is one registered Aboriginal Site of Significance within the application area (GIS Database). It is the proponent's responsibility to comply with the *Aboriginal Heritage Act 1972* and ensure that no Aboriginal sites of significance are damaged through the clearing process.

It is the proponent's responsibility to liaise with the Department of Environment and Conservation and the Department of Water, to determine whether a Works Approval, Water Licence, Bed and Banks Permit, or any other licences or approvals are required for the proposed works.

The clearing permit application was advertised on 21 March 2011 by the Department of Mines and Petroleum inviting submissions from the public. No submissions were received in relation to the proposed clearing.

**Methodology** GIS Database:  
- Aboriginal Sites of Significance  
- Native Title Claims - Determined by the Federal Court

**4. References**

- CALM (2002) A Biodiversity Audit of Western Australia's 53 Biogeographical Subregions. Pilbara 1 (PIL1 - Chichester subregion) Department of Conservation and Land Management, Western Australia.
- Department of Natural Resources and Environment (2002) Biodiversity Action Planning. Action planning for native biodiversity at multiple scales; catchment bioregional, landscape, local. Department of Natural Resources and Environment, Victoria.
- Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.
- Pilbara Flora (2008) Flora and Vegetation Survey - Supporting Documentation for a Native Vegetation Clearing Permit Application: Deepdale Railway Borrow Pits and Deepdale Railway Stage 3 Development. Prepared for Rio Tinto Iron Ore. Prepared by Pilbara Flora October 2008.
- Robe River Mining Co Pty Ltd (2011) Application for a Clearing Permit (Purpose Permit) Rail Maintenance and Construction Activities - L47/237. Supporting Documentation prepared by Robe River Mining Co Pty Ltd March 2011.
- 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.
- Van Vreeswyk, A.M.E., Payne, A.L., Hennig, P., and Leighton, K.A. (2004) An Inventory and Condition Survey of the Pilbara Region, Western Australia, Department of Agriculture, Western Australia.

## 5. Glossary

### Acronyms:

<b>BoM</b>	Bureau of Meteorology, Australian Government
<b>CALM</b>	Department of Conservation and Land Management (now DEC), Western Australia
<b>DAFWA</b>	Department of Agriculture and Food, Western Australia
<b>DEC</b>	Department of Environment and Conservation, Western Australia
<b>DEH</b>	Department of Environment and Heritage (federal based in Canberra) previously Environment Australia
<b>DEP</b>	Department of Environment Protection (now DEC), Western Australia
<b>DIA</b>	Department of Indigenous Affairs
<b>DLI</b>	Department of Land Information, Western Australia
<b>DMP</b>	Department of Mines and Petroleum, Western Australia
<b>DoE</b>	Department of Environment (now DEC), Western Australia
<b>DoIR</b>	Department of Industry and Resources (now DMP), Western Australia
<b>DOLA</b>	Department of Land Administration, Western Australia
<b>DoW</b>	Department of Water
<b>EP Act</b>	Environmental Protection Act 1986, Western Australia
<b>EPBC Act</b>	Environment Protection and Biodiversity Conservation Act 1999 (Federal Act)
<b>GIS</b>	Geographical Information System
<b>ha</b>	Hectare (10,000 square metres)
<b>IBRA</b>	Interim Biogeographic Regionalisation for Australia
<b>IUCN</b>	International Union for the Conservation of Nature and Natural Resources – commonly known as the World Conservation Union
<b>RIWI Act</b>	Rights in Water and Irrigation Act 1914, Western Australia
<b>s.17</b>	Section 17 of the Environment Protection Act 1986, Western Australia
<b>TEC</b>	Threatened Ecological Community

### Definitions:

{Atkins, K (2005). *Declared rare and priority flora list for Western Australia, 22 February 2005. Department of Conservation and Land Management, Como, Western Australia*} :-

- P1** **Priority One - Poorly Known taxa:** taxa which are known from one or a few (generally <5) populations which are under threat, either due to small population size, or being on lands under immediate threat, e.g. road verges, urban areas, farmland, active mineral leases, etc., or the plants are under threat, e.g. from disease, grazing by feral animals, etc. May include taxa with threatened populations on protected lands. Such taxa are under consideration for declaration as 'rare flora', but are in urgent need of further survey.
- P2** **Priority Two - Poorly Known taxa:** taxa which are known from one or a few (generally <5) populations, at least some of which are not believed to be under immediate threat (i.e. not currently endangered). Such taxa are under consideration for declaration as 'rare flora', but are in urgent need of further survey.
- P3** **Priority Three - Poorly Known taxa:** taxa which are known from several populations, at least some of which are not believed to be under immediate threat (i.e. not currently endangered). Such taxa are under consideration for declaration as 'rare flora', but are in need of further survey.
- P4** **Priority Four – Rare taxa:** taxa which are considered to have been adequately surveyed and which, whilst being rare (in Australia), are not currently threatened by any identifiable factors. These taxa require monitoring every 5–10 years.
- R** **Declared Rare Flora – Extant taxa (= Threatened Flora = Endangered + Vulnerable):** taxa which have been adequately searched for, and are deemed to be in the wild either rare, in danger of extinction, or otherwise in need of special protection, and have been gazetted as such, following approval by the Minister for the Environment, after recommendation by the State's Endangered Flora Consultative Committee.
- X** **Declared Rare Flora - Presumed Extinct taxa:** taxa which have not been collected, or otherwise verified, over the past 50 years despite thorough searching, or of which all known wild populations have been destroyed more recently, and have been gazetted as such, following approval by the Minister for the Environment, after recommendation by the State's Endangered Flora Consultative Committee.

{Wildlife Conservation (Specially Protected Fauna) Notice 2005} [Wildlife Conservation Act 1950] :-

- Schedule 1** **Schedule 1 – Fauna that is rare or likely to become extinct:** being fauna that is rare or likely to become extinct, are declared to be fauna that is need of special protection.
- Schedule 2** **Schedule 2 – Fauna that is presumed to be extinct:** being fauna that is presumed to be extinct, are declared to be fauna that is need of special protection.
- Schedule 3** **Schedule 3 – Birds protected under an international agreement:** being birds that are subject to an agreement between the governments of Australia and Japan relating to the protection of migratory birds and birds in danger of extinction, are declared to be fauna that is need of special protection.
- Schedule 4** **Schedule 4 – Other specially protected fauna:** being fauna that is declared to be fauna that is in need of special protection, otherwise than for the reasons mentioned in Schedules 1, 2 or 3.

{CALM (2005). *Priority Codes for Fauna*. Department of Conservation and Land Management, Como, Western Australia} :-

- P1** **Priority One: Taxa with few, poorly known populations on threatened lands:** Taxa which are known from few specimens or sight records from one or a few localities on lands not managed for conservation, e.g. agricultural or pastoral lands, urban areas, active mineral leases. The taxon needs urgent survey and evaluation of conservation status before consideration can be given to declaration as threatened fauna.
- P2** **Priority Two: Taxa with few, poorly known populations on conservation lands:** Taxa which are known from few specimens or sight records from one or a few localities on lands not under immediate threat of habitat destruction or degradation, e.g. national parks, conservation parks, nature reserves, State forest, vacant Crown land, water reserves, etc. The taxon needs urgent survey and evaluation of conservation status before consideration can be given to declaration as threatened fauna.
- P3** **Priority Three: Taxa with several, poorly known populations, some on conservation lands:** Taxa which are known from few specimens or sight records from several localities, some of which are on lands not under immediate threat of habitat destruction or degradation. The taxon needs urgent survey and evaluation of conservation status before consideration can be given to declaration as threatened fauna.
- P4** **Priority Four: Taxa in need of monitoring:** Taxa which are considered to have been adequately surveyed, or for which sufficient knowledge is available, and which are considered not currently threatened or in need of special protection, but could be if present circumstances change. These taxa are usually represented on conservation lands.
- P5** **Priority Five: Taxa in need of monitoring:** Taxa which are not considered threatened but are subject to a specific conservation program, the cessation of which would result in the species becoming threatened within five years.

**Categories of threatened species (*Environment Protection and Biodiversity Conservation Act 1999*)**

- EX** **Extinct:** A native species for which there is no reasonable doubt that the last member of the species has died.
- EX(W)** **Extinct in the wild:** A native species which:  
(a) is known only to survive in cultivation, in captivity or as a naturalised population well outside its past range; or  
(b) has not been recorded in its known and/or expected habitat, at appropriate seasons, anywhere in its past range, despite exhaustive surveys over a time frame appropriate to its life cycle and form.
- CR** **Critically Endangered:** A native species which is facing an extremely high risk of extinction in the wild in the immediate future, as determined in accordance with the prescribed criteria.
- EN** **Endangered:** A native species which:  
(a) is not critically endangered; and  
(b) is facing a very high risk of extinction in the wild in the near future, as determined in accordance with the prescribed criteria.
- VU** **Vulnerable:** A native species which:  
(a) is not critically endangered or endangered; and  
(b) is facing a high risk of extinction in the wild in the medium-term future, as determined in accordance with the prescribed criteria.
- CD** **Conservation Dependent:** A native species which is the focus of a specific conservation program, the cessation of which would result in the species becoming vulnerable, endangered or critically endangered within a period of 5 years.