



# Clearing Permit Decision Report

## 1. Application details

### 1.1. Permit application details

Permit application No.: 4414/1  
Permit type: Purpose Permit

### 1.2. Proponent details

Proponent's name: Robe River Mining Co Pty Ltd

### 1.3. Property details

Property: Iron Ore (Robe River) Agreement Act 1964, Special Lease for Mining Operations 3116/4627, Lot 54 on Deposited Plan 241547  
Local Government Area: Shire of Ashburton  
Colloquial name: Pannawonica Townsite Project

### 1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
1		Mechanical Removal	Drainage control works and associated infrastructure

### 1.5. Decision on application

Decision on Permit Application: Grant  
Decision Date: 11 August 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 for the whole of Western Australia and are useful to look at vegetation in a regional context. One Beard vegetation association has been mapped within the application area:

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

Biota Environmental Sciences (2011) conducted a flora survey of the application area and surrounding areas during January 2010, and described two vegetation communities of the application area:

**AiAbTw:** *Acacia inaequilatera* scattered tall shrubs over *A. bivenosa* scattered shrubs over *Triodia wiseana* hummock grassland; and

**Disturbed:** AiAbTw, with the majority of the area already degraded through historical clearing and construction, and subsequently weed invasion (*Aerva javanica* and *Cenchrus ciliaris*).

**Clearing Description** Robe River Mining is proposing to clear up to 1 hectare of native vegetation for the Pannawonica Townsite Project. The clearing of vegetation is required for the construction of flood storage basins, drainage bunds, installation of culverts and associated infrastructure.

The vegetation will be cleared using a dozer with the blade down. The vegetation will be stockpiled and used in rehabilitation.

**Vegetation Condition** Good: Structure significantly altered by multiple disturbance; retains basic structure/ability to regenerate (Keighery, 1994);

To:

Degraded: Structure severely disturbed; regeneration to good condition requires intensive management (Keighery, 1994).

**Comment** This application area is located in the Chichester subregion of Western Australia and is situated approximately 500 metres south-east of the Pannawonica Townsite.

### 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) subregion of the Pilbara Interim Biogeographic Regionalisation of Australia (IBRA) bioregion (GIS Database). This subregion is characterised by plains supporting a shrub steppe characterised by *Acacia inaequilatera* over *Triodia wiseana* hummock grasslands, while *Eucalyptus leucophloia* tree steppes occur on ranges (CALM, 2002). The vegetation within the application area consists of Beard vegetation association 603, which is common and widespread throughout the Pilbara bioregion with approximately 100% of the pre-European vegetation extent remaining (Shepherd, 2009; GIS Database).

A vegetation survey by Biota Environmental Sciences (2011) during January 2010 of the application area and surrounding vegetation identified two vegetation communities within the application area. The condition of the vegetation types were classified as 'degraded' to 'good' (Keighery, 1994; GIS Database).

A search of the Department of Environment and Conservation Declared Rare and Priority Flora databases revealed no records of Priority Flora species within a 20 kilometre radius of the application area (DEC, 2011). No Declared Rare Flora (DRF) species were identified (DEC, 2011). Biota Environmental Sciences (2010) identified no DRF and no Priority Flora species within the application area.

No Threatened Ecological Communities or Priority Ecological Communities were recorded or identified within the application area (GIS Database).

Two weed species were identified during the survey: Kapok (*Aerva javanica*) and Buffel Grass (*Cenchrus ciliaris*) (Biota Environmental Sciences, 2011). None of these species are listed by the Western Australian Department of Agriculture and Food as Declared Plants. Weeds have the potential to significantly change the dynamics of a natural ecosystem and lower the biodiversity of an area. Potential impacts to the biodiversity as a result of the proposed clearing may be minimised by the implementation of a weed management condition.

The fauna habitat within the application area is considered to be common and widespread within the subregion and the faunal assemblage is unlikely to be different to that found in similar habitat located elsewhere in the region (Biota Environmental Sciences, 2011). The application area is disturbed and has been previously cleared for a temporary accommodation village and associated infrastructure (Biota Environmental Sciences, 2011). Given this disturbance the application area is not likely to comprise a high level of biological diversity.

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

##### Methodology

Biota Environmental Sciences (2011)  
CALM (2001)  
DEC (2011)  
Keighery (1994)  
Shepherd (2009)  
GIS Database:  
- 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**

No targeted fauna surveys have been conducted over the application area. A vegetation survey conducted by Biota Environmental Sciences (2011) identified one broad fauna habitat type; Mixed *Acacia* species, scattered shrubs over a *Triodia wiseana* hummock grassland on a broad stony plain.

The application area does not contain habitats or faunal assemblages that are ecologically significant, and it is unlikely that any species of conservation significance will be directly affected to a large degree by the clearing of native vegetation in the application area. The proposed clearing is not likely to significantly impact important habitat for endemic fauna. There is approximately 100% of the pre-European vegetation remaining within the Pilbara bioregion (Shepherd, 2009; GIS Database). Given the extent of the native vegetation remaining in the local area and bioregion, the vegetation to be cleared does not represent a significant ecological link.

There are no species of conservation significance listed as either threatened species under the Environment Protection and Biodiversity Conservation Act (EPBC) 1999 or protected under Western Australian legislation (Wildlife Conservation Act 1950), that may potentially occur within a 20 kilometre radius of the application area (DEC, 2011). The proposed clearing of one hectare of native vegetation is unlikely to have a significant impact on the conservation status of potentially occurring threatened fauna, given that there is little or no core habitat represented within the application area (Biota Environmental Sciences, 2011).

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

**Methodology** Biota Environmental Sciences (2011)  
 DEC (2011)  
 Shepherd (2009)  
 GIS Database:  
 - IBRA WA (regions - subregions)  
 - Pre-European Vegetation

**(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 databases, there are no records of Declared Rare Flora (DRF) within the application area (GIS Database). A search of the Department of Environment and Conservation's NatureMap database identified no DRF species as occurring within a 20 kilometre radius of the application areas (DEC, 2011).

Biota Environmental Sciences (2011) conducted a vegetation and flora survey of the application area during January 2010. No DRF were recorded within the survey area.

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

**Methodology** Biota Environmental Sciences (2011)  
 DEC (2011)  
 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 the available databases shows that there are no Threatened Ecological Communities situated within 100 kilometres of the application area (GIS Database).

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 area falls within the Pilbara IBRA bioregion (GIS Database). 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), Beard vegetation association 603 retains approximately 100% of its pre-European extent. Therefore, the area proposed to be cleared is not a significant remnant of native vegetation in an area that has been extensively cleared.

	Pre-European area (ha)*	Current extent (ha)*	Remaining %*	Conservation Status**	Pre-European % in IUCN Class I-IV Reserves
IBRA Bioregion - Pilbara	17,804,193.01	17,785,000.82	~99.89	Least Concern	6.32
Beard vegetation associations - State					
603	388,455.24	388,455.24	~100	Least Concern	16.14
Beard vegetation associations - Bioregion					
603	388,455.24	388,455.24	~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 not likely to be at variance to this Principle**  
According to available databases, there are no watercourses or wetlands within the application area (GIS Database). The vegetation within the application area is not considered to be growing in association with any watercourse or wetland.

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

**Methodology** GIS Database:  
- Geodata, Lakes  
- Hydrography, Linear  
- Pannawonica Townsite 20cm Orthomosaic - Landgate 2001

**(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 is within 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). This system is generally not susceptible to erosion. The majority of the application area has already been degraded through historical clearing and construction, and subsequently weed invasion (Biota Environmental Sciences, 2011).

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

**Methodology** Biota Environmental Sciences (2011)  
CALM (2002)  
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 application area is not located within any conservation area (GIS Database). The nearest conservation area is Cane River Conservation Park, located approximately 61 kilometres south-west of the application area (GIS Database).

Given the distance of the application area from Cane River Conservation Park, the proposed clearing is not likely to provide a significant ecological linkage or fauna movement corridor and is not likely to impact the environmental values of the 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**  
The application area is not located within a Public Drinking Water Source Area (GIS Database). There are no permanent watercourses or water bodies within the application area (GIS Database). Any surface water within the application area is likely to only remain for short periods following significant rainfall events. The proposed clearing is not likely to cause deterioration in the quality of any surface water within or outside of the application area.

Given the low impact nature of the proposed clearing activities, the proposed clearing is not likely to cause deterioration in the quality of any underground water.

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

**Methodology** GIS Database:  
- Geodata, Lakes  
- Hydrography, Linear  
- Public Drinking Water Source Areas

**(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 summer cyclonic or thunderstorm events, with an annual average of approximately 412.1 millimetres per year (CALM, 2002; BoM, 2011). Based on an average annual evaporation rate of 3,200 - 3,600 millimetres (BoM, 2011), any surface water resulting from rainfall events is likely to be relatively short lived.

The small clearing size of 1 hectare in comparison to the size of the Robe River catchment area (1,860,784 hectares) and Ashburton catchment area (757,138 hectares) (GIS Database) is not likely to lead to an appreciable increase in run off, and subsequently cause or exacerbate the incidence or intensity of flooding.

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

**Methodology** BoM (2011)  
CALM (2002)  
GIS Database:  
- Hydrographic Catchments - Catchments  
- Hydrography, Linear

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

**Comments**

There are no Native Title claims over the area under application. 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 are no registered Aboriginal Sites 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 27 June 2011 by the Department of Mines and Petroleum inviting submissions from the public. One submission was received. A written response was provided on the matters raised.

**Methodology** GIS Database:  
- Aboriginal Sites of Significance  
- Native Title Claims - Registered with the NNTT

**4. References**

- Biota Environmental Sciences (2011) Native Vegetation Clearing Permit: Wandoo Housing Project ? Flood Storage Basin. Prepared for Rio Tinto, February 2011.
- BoM (2011) Climate Statistics for Australian Locations. A Search for Climate Statistics for Pannawonica WA, Australian Government Bureau of Meteorology, viewed 3 August 2011, <[http://reg.bom.gov.au/climate/averages/tables/cw\\_005069.shtml](http://reg.bom.gov.au/climate/averages/tables/cw_005069.shtml)>.
- 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.
- DEC (2011) NatureMap - Mapping Western Australia Biodiversity, Department of Environment and Conservation, viewed 4 August 2011, <<http://naturemap.dec.wa.gov.au>>.
- 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.  
 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 in 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.