



# Clearing Permit Decision Report

## 1. Application details

### 1.1. Permit application details

Permit application No.: 3892/1  
Permit type: Purpose Permit

### 1.2. Proponent details

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

### 1.3. Property details

Property: *Iron Ore (Cleveland Cliffs) Agreement Act 1964*, Mineral Lease 248SA (AML 70/248)  
Local Government Area: Shire of Ashburton  
Colloquial name: Mesa K Project

### 1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
2.2		Mechanical Removal	Mineral Production

## 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, 2007).

**609:** Mosaic: Hummock grasslands, open low tree steppe; bloodwood with sparse kanji shrubs over soft spinifex / Hummock grasslands, open low tree steppe; snappy gum over *Triodia wiseana* on a lateritic crust (GIS Database; Shepherd, 2007).

The application area was surveyed by Biota Environmental Sciences staff in September 2005 and November 2006 (Biota Environmental Sciences, 2007). The following vegetation type was identified within the application area:

#### Stony Hills

**EIAatAarTw:** *Eucalyptus leucophloia* scattered low trees over *Acacia atkinsiana* (*A. arida*) open shrubland to tall shrubland over *Triodia wiseana* hummock grassland (Biota Environmental Sciences, 2007; Rio Tinto, 2010).

**Clearing Description** Robe River Mining Co Pty Ltd is proposing to clear up to 2.2 hectares of native vegetation within an area of approximately 2.3 hectares to construct a security gatehouse and car parking area (Robe River Mining Co Pty Ltd, 2010). The new gatehouse will provide improved security and will consist of two gates, one for heavy vehicles and one for light vehicles (Robe River Mining Co Pty Ltd, 2010). Two parking bays will be levelled off and various service works will be required to supply lighting and electrical structures (Robe River Mining Co Pty Ltd, 2010).

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

**Comment** The application area is located in the Pilbara region, approximately 10 kilometres south-west of Pannawonica (GIS Database). The vegetation condition was derived from a vegetation survey conducted by Biota Environmental Sciences (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 area occurs within the Hamersley (PIL3) subregion of the Pilbara Interim Biogeographic Regionalisation of Australia (IBRA) bioregion (GIS Database). This subregion is characterised by Mulga low woodland over bunch grasses on fine textured soils in valley floors, and *Eucalyptus leucophloia* over *Triodia brizoides* on skeletal soils on the ranges (CALM, 2002).

The vegetation within the application areas consists of Beard vegetation association 609 which is common and widespread throughout the Pilbara region, with approximately 100% of the pre-European vegetation extent

remaining (Shepherd, 2007; GIS Database). Biota Environmental Sciences (2007) recorded 164 taxa from 91 genera and 42 families during the vegetation survey of the wider Mesa K study area. One species of Priority flora was recorded within the application area (Rio Tinto, 2010).

**P3 - *Triodia* sp.** Robe River (Rio Tinto, 2010).

This species was recorded from the boundary of the application area at 424128E, 7598564N (Rio Tinto, 2010). Robe River Mining Co Pty Ltd advised that an exclusion zone has been placed around the population of *Triodia* sp. Robe River, therefore no individuals will be directly impacted by the proposed clearing activities.

No alien weed species were recorded within the application area (Biota Environmental Sciences, 2007). 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.

The application area intersects a 10 kilometre buffer zone around the Priority Ecological Communities (PEC), 'subterranean invertebrate community of pisolitic hills in the Robe Valley' and 'subterranean invertebrate community of pisolitic mesas in the Robe Valley' (DCE, 2010; GIS Database). Both these PEC's have been given a status of Priority 1, with threatening processes being listed as mining (DEC, 2010). As the proposed clearing will not impact on the hills or mesas within the Robe Valley, it is not likely that there will be a significant impact on the PEC's from the proposed clearing.

A single habitat was recorded as occurring within the application area: Stony Hills (Rio Tinto, 2010). This habitat has suffered previous disturbance from both road and mining activities (Rio Tinto, 2010). The fauna habitats that occur within the proposed impact footprint clearly also occur beyond the application area.

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

**Methodology** Biota Environmental Sciences (2007)  
CALM (2002)  
DEC (2010)  
Rio Tinto (2010)  
Shepherd (2007)  
GIS Database:  
- IBRA WA (regions - subregions)  
- Pre-European Vegetation

**(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**

According to Shepherd (2007) approximately 100% of the pre-European vegetation remains within the Pilbara bioregion. Given the extent of native vegetation remaining in the local area and bioregion, the vegetation to be cleared does not represent a significant ecological linkage.

Biota Environmental Sciences (2007) recorded one broad habitat type as occurring within the application area: Stony Hills. This habitat type is represented widely in the Pilbara region (Biota Environmental Sciences, 2007).

The application area is dissected by an existing road and lies adjacent to existing mine operations (Rio Tinto, 2010). The habitat within the application area is not likely to be considered significant in either a local or regional context.

All vertebrate species that are likely to occur within the application area are wide-ranging and are unlikely to be impacted on a regional level (Biota Environmental Sciences, 2007).

The proposed clearing is unlikely to result in a significant impact on fauna or the availability of fauna habitat in the local or regional area.

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

**Methodology** Biota Environmental Sciences (2007)  
Shepherd (2007)

**(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) or Priority Flora within the application area (GIS Database).

A flora survey was conducted over the application area by staff from Biota Environmental Sciences in September 2005 and November 2006 (Biota Environmental Sciences, 2007). No DRF species were recorded within the application area (Biota Environmental Sciences, 2007).

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

**Methodology** Biota Environmental Sciences (2007)  
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 (TEC's) within the application area (GIS Database). The nearest TEC is located approximately 113 kilometres south-east of the application area (Themeda Grasslands). At this distance there is little likelihood of any impact to the TEC from the proposed clearing.

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). Shepherd (2007) reports that approximately 99.95% of the pre-European vegetation remains in this bioregion.

The vegetation in the application area is recorded as Beard vegetation association:

609: Mosaic: Hummock grasslands, open low tree steppe; bloodwood with sparse kanji shrubs over soft spinifex / Hummock grasslands, open low tree steppe; snappy gum over *Triodia wiseana* on a lateritic crust (GIS Database; Shepherd, 2007).

According to Shepherd (2007) 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	17,804,188	17,794,647	~99.95%	Least Concern	~6.32%
Beard vegetation associations - State					
609	74,186	74,186	~100%	Least Concern	0%
Beard vegetation associations - Bioregion					
609	74,186	74,186	~100%	Least Concern	0%

\* Shepherd (2007)

\*\* 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 (2007)  
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 GIS databases, there are no watercourses or wetlands within the application area (GIS Database).

Based on vegetation mapping conducted by Biota Environmental Sciences (2007) and analysis of aerial photography (GIS Database) the vegetation community found within the application area is not considered to be riparian vegetation.

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

**Methodology Biota Environmental Sciences (2007)**

GIS Database:

- Hydrography, Linear
- Geodata, Lakes
- Pannawonica 1.4m Orthomosaic - Landgate 2000

**(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 Robe land system (GIS Database).

The Robe Land System is described as low limonite mesas and buttes supporting soft spinifex (and occasionally hard spinifex) grasslands (Van Vreeswyk et al., 2004). The vegetation of this land system is generally not prone to degradation and the system is not susceptible to erosion (Van Vreeswyk et al., 2004).

Based on the above, the proposed clearing is not likely to be at variance to this Principle. Potential land degradation impacts as a result of the proposed clearing may be minimised by the implementation of a rehabilitation condition.

**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 the Cane River Conservation Park, located approximately 51 kilometres south-west (GIS Database).

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 nearest PDWSA is the Millstream Water Reserve which is located approximately 58 kilometres east of the application area. Given the distance separating the application area and the Millstream Water Reserve, the proposed clearing is unlikely to impact on the water quality of the Millstream Water Reserve.

The application area is located within a *Rights in Water and Irrigation Act 1914* (RIWI Act) Groundwater Management Area (GIS Database). The proponent is required to obtain permits to abstract groundwater in this area.

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 size of the area to be cleared (2.2 hectares) compared to the size of the Hamersley Groundwater Province (10,166,833 hectares) (GIS Database), the proposed clearing is not likely to cause salinity levels within the application area to alter significantly.

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

**Methodology** GIS Database:  
- Public Drinking Water Source Area  
- Groundwater Salinity, Statewide  
- RIWI Act, Groundwater Areas  
- Groundwater Provinces

**(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 274 millimetres recorded from the nearest weather station at Onslow approximately 118 kilometres west of the application area (CALM, 2002; BoM, 2010).

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 (2.2 hectares) is unlikely to significantly alter the intensity of flooding within the application area and surrounding areas.

The application area is located within the Robe River catchment area (GIS Database). However, the size of the area to be cleared (2.2 hectares) in relation to the size of the Robe River Catchment area (757,138 hectares) (GIS Database) is not likely to increase the potential for flooding within the application area, local area or within the catchment (GIS Database).

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

**Methodology** BoM (2010)  
CALM (2002)  
GIS Database:  
- Hydrographic Catchments - Catchments

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

**Comments**

There is one Native Title Claim (WC99/12) over the area under application. 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 (ID\_7047) overlapping 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.

The application area is located within a *Rights in Water and Irrigation Act 1914* (RIWI Act) Groundwater Area (GIS Database). The proponent is required to obtain permits to abstract groundwater in this area.

It is the proponent's responsibility to liaise with the Department of Environment and Conservation and the DoW, 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 16 August 2010 by the Department of Mines and Petroleum inviting submissions from the public. No submissions were received in relation to this proposal.

**Methodology** GIS Database:  
- Aboriginal Sites of Significance  
- Native Title Claims  
- RIWI - Groundwater Areas

**Comment**

The application has been assessed against the clearing principles, planning instruments and other matters in accordance with s.51O of the *Environmental Protection Act 1986*, and the proposed clearing is not likely to be at variance to Principles (a), (b), (c), (d), (f), (g), (h), (i) and (j) and is not at variance to Principle (e).

## 4. References

- Biota Environmental Sciences (2007) A Vegetation and Seasonal Flora Survey of the Mesa K Mine Site, Near Pannawonica. Unpublished report prepared for Robe River Mining Pty Ltd, March 2007.
- BoM (2010) Bureau of Meteorology Website - Climate Averages by Number, Averages for ONSLOW. [www.bom.gov.au/climate/averages/tables/cw\\_005016.shtml](http://www.bom.gov.au/climate/averages/tables/cw_005016.shtml) (Accessed 6 October 2010)
- CALM (2002) A Biodiversity Audit of Western Australia's 53 Biogeographical Subregions. Pilbara 3 (PIL3 - Hamersley subregion) Department of Conservation and Land Management, Western Australia.
- DEC (2010) Priority Ecological Communities for Western Australia. Species and Communities Branch, Department of Environment and Conservation.
- 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.
- Rio Tinto (2010) Statement Addressing the 10 Clearing Principles: Mesa K/J New Security Gate and Facility. Supporting Documentation dated July 2010. Rio Tinto, Western Australia.
- Robe River Mining Co Pty Ltd (2010) Application for Purpose Clearing Permit (Purpose Permit): Mesa K Security Gate and Carpark Facility - Tenement ML248SA - Supporting Documentation.
- Shepherd, D.P. (2007) 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.

