



# Clearing Permit Decision Report

## 1. Application details

### 1.1. Permit application details

Permit application No.: 4114/1  
 Permit type: Purpose Permit

### 1.2. Proponent details

Proponent's name: **Hamersley Iron Pty Ltd**

### 1.3. Property details

Property: *Iron Ore (Hamersley Range) Agreement Act 1963, Mineral Lease 4SA*  
 Local Government Area: Town of Port Hedland  
 Colloquial name: Beasley River Access Track

### 1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
0.2		Mechanical Removal	Access Track

### 1.5. Decision on application

Decision on Permit Application: Grant  
 Decision Date: 20 January 2011

## 2. Background

### 2.1. Existing environment and information

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

Vegetation Description	Clearing Description	Vegetation Condition	Comment
Beard Vegetation Associations have been mapped at a scale of 1:250,000 for the whole of Western Australia. Two Beard Vegetation Associations are located within the application area (Shepherd, 2007):  Beard Vegetation Association 82: Hummock grasslands, low tree steppe; snappy gum over <i>Triodia wiseana</i> .  Beard Vegetation Association 567: Hummock grasslands, shrub steppe; mulga & kanji over soft spinifex & <i>Triodia basedowii</i> .	Robe River Mining Co Pty Ltd is proposing to clear up to 0.2 hectares of native vegetation within an area of 4.7 hectares. The proposed clearing is for the purpose of establishing an access track to Mesa 1 at Beasley River to gain access to a proposed drilling program.	Very Good: Vegetation structure altered; obvious signs of disturbance (Keighery, 1994).	The application area is located 25 kilometres southwest of the existing Brockman 2 mine site, within the Pilbara region (GIS Database). The vegetation condition was derived from a vegetation survey conducted by Rio Tinto (2009).

In June 2009 Rio Tinto undertook flora and vegetation surveys of the application area and identified the following vegetation units within the application area:

#### Vegetation from Stony Slopes

Vegetation Type 1 - Valley, slight slope, clay with surface stone - *Eucalyptus leucophloia* low woodland over *Melaleuca eleuterostachya*, *Acacia bivenosa*, *Gossypium australis* shrubland over *Ptilotus subspinescens* low open shrubland over *Triodia longiceps*, *Triodia wiseana* hummock grassland over *Paraneurachne muelleri* open tussock grassland.

Vegetation Type 2 - Lower stony slope - *Eucalyptus leucophloia* low open woodland over *Petalostylis labicheoides*, *Stylobasium spathulatum* shrubland over *Sida cardiophylla*, *Ptilotus subspinescens*, *Corchorus sidoides* low shrubland over *Triodia wiseana*, *Triodia longiceps* hummock grassland over *Eriachne mucronata*, *Paraneurachne muelleri* open tussock grassland.

### **Vegetation from Minor Drainage lines**

Vegetation Type 3 - *Eucalyptus leucophloia*  
low woodland over *Petalostylis labicheoides*,  
*Gossypium robinsonii* open scrub over  
*Stylobasium spathulatum*, *Corchorus*  
*lasiophyllum*, *Ptilotus subspinescens* low  
shrubland over *Triodia longiceps*, *Triodia*  
*wiseana* hummock grassland over  
*Paraneurachne muelleri*, *Eriachne mucronata*  
open tussock grassland.

## **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) sub-region of the Pilbara Bioregion of the Interim Biogeographic Regionalisation for Australia (IBRA) (GIS Database). This sub-region 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 of the ranges (CALM, 2002).

Rio Tinto (2009) identified two fauna habitat types present within the application area and concluded that these fauna habitats are both common and widespread in the Pilbara bioregion. Given that the vegetation and habitats present within the application area are well represented on a regional scale it is unlikely that the 0.2 hectares applied to be cleared for an access track represents significant fauna habitat in a regional context.

A total of 54 vascular plant species from 31 plant genera belonging to 20 plant families were recorded within the study area. The genera and families represented within the application area are considered characteristic of Pilbara flora however one Priority 3 flora species *Ptilotus subspinescens* was recorded in the application area (Rio Tinto, 2009). Rio Tinto (2009) estimate that approximately 200 specimens of this species may occur within the application area however given the presence of large populations of this species in the local Mt Brockman area and considering the small size of the area to be cleared (0.2 hectares) it is unlikely that the area to be cleared comprises a high level of biological diversity in a local context due to the potential presence of this species.

The vegetation under application is in very good (Keighery, 1994) condition however no Declared Rare Flora species or Threatened Ecological Communities were recorded from the study area (Rio Tinto, 2009) and given the small size of the area to be cleared (0.2 hectares) it is not likely that the area to be cleared comprises a high level of biological diversity in a regional context.

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

**Methodology** CALM (2002)  
Keighery (1994)  
Rio Tinto (2009)  
GIS Database:  
- Interim Biogeographic Regionalisation of Australia

### **(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**

Rio Tinto (2009) identified the following two fauna habitat types within the application area;

- Minor drainage lines supporting *Eucalyptus* low woodland over mixed open scrub over mixed low shrubland over *Triodia* hummock grassland over open tussock grassland; and

- Stony slopes of *Eucalyptus* low woodland over *Melaleuca*, *Acacia* shrubland over *Ptilotus* low open shrubland over *Triodia* hummock grassland over open tussock grassland.

There are 6 threatened fauna species recorded within a 10 kilometre radius of the area applied to be cleared however the broad fauna habitats within the application area are both common locally and regionally. No significant fauna habitats such as major caves, rock piles, waterholes, termite mounds or sandy banks were observed within the application area (Rio Tinto, 2009).

One mound of the Western Pebble-mound Mouse (*Pseudomys chapmani*) was observed in the application area. This species is currently listed as Priority 4 under the *Wildlife Conservation Act 1954*. Given the broad distribution of this species regionally it is unlikely that the 0.2 hectares to be cleared is necessary for the maintenance of a significant habitat for this species or fauna indigenous to Western Australia.

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

**Methodology** Rio Tinto (2009)

**(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) in the local area (15 kilometre radius) (GIS Database).

Rio Tinto (2009) conducted a flora survey in June 2009 of the application area. No DRF species have been recorded within the clearing permit area (Rio Tinto, 2009) and it is therefore not likely that the area to be cleared includes, or is necessary for the continued existence of, rare flora.

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

**Methodology** Rio Tinto (2009)  
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**

There are no known Threatened Ecological Communities (TEC's) which occur within the application area and the closest known TEC is located approximately 34 kilometres north of the application area (Rio Tinto, 2009; GIS Database).

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

**Methodology** Rio Tinto (2009)  
GIS Database:  
- Threatened Ecological Communities

**(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 still exists in this bioregion.

	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	~6.3
Beard vegetation associations - State					
82	2,565,901	2,565,901	~100	Least Concern	10.5
567	777,507	777,507	~100	Least Concern	22.5
Beard vegetation associations - Bioregion					
82	2,563,583	2,563,583	~100	Least Concern	10.5
567	776,824	776,824	~100	Least Concern	22.5

\* Shepherd (2007)

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

Beard vegetation associations 82 and 567 retain approximately 100% of their pre-European extent which is more than the 30% threshold level recommended in the National Objectives Targets for Biodiversity Conservation below which, species loss appears to accelerate exponentially at an ecosystem level (EPA, 2000).

Given that the vegetation is well represented locally and regionally the vegetation within the proposed area is

not likely to be significant as a remnant in a highly cleared landscape.

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

**Methodology** Department of Natural Resources and Environment (2002)  
EPA (2000)  
Shepherd (2007)  
GIS Database:  
- Interim Biogeographic Regionalisation of Australia

**(f) Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland.**

**Comments Proposal is at variance to this Principle**

There are no permanent watercourses mapped within the area under application however there are two minor ephemeral drainage lines (GIS Database) and Rio Tinto (2009) have identified vegetation unit 3 growing in association with minor drainage lines.

Given that vegetation unit 3 is growing in association with minor drainage lines, part of the vegetation under application is considered to be growing in an environment associated with a watercourse. However, ephemeral drainage lines are common throughout the Pilbara landscape and the clearing of 0.2 hectares of native vegetation is unlikely to have any significant environmental impacts in a regional context.

Based on the above, the proposed clearing is at variance to this Principle.

**Methodology** Rio Tinto (2009)  
GIS Database:  
- 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 is located within 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. This system is not generally susceptible to vegetation degradation or erosion (Van Vreeswyk et al., 2004; Rio Tinto, 2009).

Given the low erosion risk associated with the land system and considering the small size of the area to be cleared (0.2 hectares) it is not likely that the proposed clearing will cause appreciable land degradation.

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

**Methodology** Rio Tinto (2009)  
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 nearest conservation area is the 'A' Class Karijini National Park which is situated approximately 25 kilometres west of the application area (GIS Database).

Given the distance to the nearest area of conservation significance and considering the small size of the area to be cleared (0.2 hectares) it is not likely that the clearing will significantly impact on 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**

The area under application is not located within a Public Drinking Water Source Area (PDWSA).

The Pilbara is an arid environment. The drainage lines within the area under application are ephemeral and surface water runoff is only likely to occur during and immediately following significant rainfall events. Groundwater within the application area has low salinity levels of between 500 to 1000 milligrams per litre total dissolved solids (TDS) (GIS Database) and given the small size of the area to be cleared (0.2 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:  
- Groundwater Salinity  
- 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**

There are no permanent watercourses mapped within the areas under application however there are two minor ephemeral drainage lines located within the area under application (GIS Database).

Local flooding occurs seasonally in the Pilbara region as a result of cyclonic activity and sporadic thunderstorms and it is likely that the drainage lines within the area under application would experience seasonal flooding during high rainfall periods however it is not likely that the clearing of 0.2 hectares of vegetation will increase the incidence or intensity of this flooding.

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

**Methodology** GIS Database:  
- Hydrography, linear

**Planning instrument, Native Title, RIWI Act Licence, EP Act Licence, Works Approval, Previous EPA decision or other matter.**

**Comments**

There is one Native Title Claim (WC99/3) 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 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 December 2010 by the Department of Mines and Petroleum inviting submissions from the public. No submissions were received.

**Methodology** GIS Database  
- Aboriginal Sites of Significance  
- Native Title Claims

**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.
- EPA (2000) Environmental protection of native vegetation in Western Australia. Clearing of native vegetation, with particular reference to the agricultural area. Position Statement No. 2. December 2000. Environmental Protection Authority, Western Australia.
- 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 (2009) Botanical Survey for an Access track to Mesa 1 at Beasley River: Native Vegetation Clearing Permit Supporting Document, August 2009.

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.