



# Clearing Permit Decision Report

## 1. Application details

### 1.1. Permit application details

Permit application No.: 3810/1  
Permit type: Purpose Permit

### 1.2. Proponent details

Proponent's name: **Iron Ore Holdings Limited**

### 1.3. Property details

Property: *Iron Ore (Mt Bruce) Agreement Act 1972, Mineral Lease 252SA (AML70/252)*  
Local Government Area: Shire of Ashburton  
Colloquial name: Koodaideri South Project

### 1.4. Application

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

## 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).

Beard vegetation association 82: Hummock grasslands, low tree steppe; Snappy Gum over *Triodia wiseana* (Shepherd, 2007).

**Clearing Description** Iron Ore Holdings Ltd are seeking a Purpose Permit to clear up to 0.8 hectares of native vegetation within an application area of approximately 15 hectares (GIS Database). The proposed clearing will allow the proponent to construct a heavy vehicle access track (1.1 kilometres in length and 3 metres in width).

Vegetation clearing will be undertaken via mechanical means, using a bulldozer with a raised blade.

**Vegetation Condition** Very Good: Vegetation structure altered; obvious signs of disturbance (Keighery, 1994);  
To  
Excellent: Vegetation structure intact; disturbance affecting individual species, weeds non-aggressive (Keighery, 1994).

**Comment** The vegetation condition rating is based on photographs provided by the proponent, 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 proposed clearing area is located approximately 69 kilometres south-east of Wittenoom in the Hamersley subregion of the Pilbara Interim Biogeographic Regionalisation of Australia (IBRA) bioregion (GIS Database). The Hamersley subregion is extensive, covering approximately 6.25 million hectares. The subregion is well reserved, with approximately 12.88% of the total land area in conservation reserves (Shepherd, 2007). At a broad scale, vegetation of the Hamersley subregion can be described as Mulga low woodlands over bunch grasses on fine textured soils in valley floors and *Eucalyptus leucophloia* over *Triodia brizoides* on skeletal soils of the ranges (CALM, 2002).

Based on broad scale Beard vegetation association mapping, the proposed clearing area is characterised by hummock grasslands, low tree steppe; Snappy Gum over *Triodia wiseana* - a common and widespread vegetation association both locally and regionally (Shepherd, 2007; 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).

The application area is located within the 10 kilometre buffer zone of the Fortescue Marsh, which is a Priority Ecological Community (PEC). The Fortescue Marsh PEC is comprised of endemic *Eremophila* species and several near endemic and new to science samphires (DEC, 2009a). It is also a recorded locality for the Night Parrot (*Pezoporus occidentalis*) and Bilby (*Macrotis lagotis*), as well as several restricted aquatic invertebrates.

The Fortescue Marsh has been given a status of Priority 1, with threatening processes being listed as mining, altered hydrology (watering with fresh water), grazing and weed invasion (DEC, 2009a). Given that the application area is located approximately 16.5 kilometres south-west of the Fortescue Marsh, the clearing of 0.8 hectares is not likely to impact on this PEC.

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

**Methodology** CALM (2002)  
DEC (2009a)  
Shepherd (2007)  
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 broad drainage valley in an uncleared landscape characterised by ridges, valleys and plains (GIS Database). Fauna habitat in the local area is largely undisturbed, apart from various existing tracks which support mineral exploration 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:  
- Munjina 50cm Orthomosaic 2004

**(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).

Iron Ore Holdings Ltd commissioned a search of the following databases to determine the likelihood of Rare or Priority Flora occurring within the proposed clearing area:

1. The Department of Environment and Conservation's (DEC's) Declared Rare and Priority Flora database;
2. DEC's Threatened (Declared Rare) Flora list;
3. The West Australian Herbarium Specimen database search of Priority Flora; and
4. The Department of Environment, Water, Heritage and the Arts (DEWHA) *Environment Protection and Biodiversity Conservation Act (1999) Protected Matters Report*.

According to the above database searches, there are no known records of DRF or Priority Flora within the proposed clearing area or surrounding vicinity (Iron Ore Holdings Ltd, 2010; DEC, 2009b).

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

**Methodology** DEC (2009b)  
Iron Ore Holdings Ltd (2010)  
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). There are no TECs within a 100 kilometre radius 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 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 within the application area is recorded as Beard vegetation association 82: Hummock grasslands, low tree steppe; Snappy Gum over *Triodia wiseana* (GIS Database; Shepherd, 2007).

According to Shepherd (2007) approximately 100% of these Beard Vegetation Associations remain 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%
IBRA Subregion - Hamersley	5,634,726	5,634,726	~100%	Depleted	~12.88%
Beard vegetation associations - State					
82	2,565,901	2,565,901	~100%	Least Concern	~10.24%
Beard vegetation associations - Bioregion					
82	2,563,581	2,563,583	~100%	Least Concern	~10.25%

\* 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 may be at variance to this Principle**

Analysis of aerial photography and topographic contours suggests that the proposed clearing area occurs in a broad drainage valley (GIS Database). Iron Ore Holdings Ltd (2010) corroborate this interpretation, describing the proposed clearing area as a broad drainage valley filled with alluvial material and some small hills. This area would carry surface water flows following significant rainfall events, most likely associated with cyclonic activity.

Iron Ore Holdings Ltd (2010) advised that there are no permanent waterholes known from the local area. Analysis of GIS databases supports this claim (GIS Database). Iron Ore Holdings Ltd (2010) advised that the drainage channels will not be modified or require clearing as the open, stone-filled channels provide adequate vehicle access. The proposed clearing of a 3 metre wide access track over a linear footprint of approximately 1.1 kilometres is unlikely to result in significant impacts to an environment associated with a wetland or watercourse.

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

**Methodology** Iron Ore Holdings Ltd (2010)  
GIS Database  
- Hydrography, linear  
- Topographic contours, statewide  
- Munjina 50cm Orthomosaic

**(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). The application area is composed of the Newman land system (GIS Database).

The Newman Land System is described as rugged jaspilite plateaux, ridges and mountains supporting hard spinifex grasslands (Van Vreeswyk et al., 2004). The Newman land system is generally not prone to erosion (Van Vreeswyk et al, 2004).

The proposed clearing will be undertaken using raised blade methods, leaving rootstock intact and minimising the potential for erosion (Iron Ore Holdings Ltd, 2010). The small scale of the proposal is unlikely to result in appreciable land degradation.

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

**Methodology** Iron Ore Holdings Ltd (2010)  
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 Karijini National Park, located approximately 23 kilometres west-north-west 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  
- 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 is located within a *Rights in Water and Irrigation Act 1914* (RIWI Act) Groundwater Area (DoW, 2008; 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 (0.8 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** DoW (2008)  
GIS Database  
- Groundwater Provinces  
- Groundwater Salinity, Statewide  
- Public Drinking Water Source Area  
- RIWI Act, Groundwater 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 an average annual rainfall of 455.2 millimetres recorded from the nearest weather station at Wittenoom approximately 69 kilometres north-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 (0.8 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 (0.8 hectares) in relation to the size of the Fortescue River Catchment area (2,975,192 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 an access track 3 metres in width and 1.1 kilometres in length (Iron Ore Holdings Ltd, 2010) 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** BoM (2010)  
CALM (2002)  
Iron Ore Holdings Ltd (2010)  
GIS Database  
- Hydrographic Catchments - Catchments

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

**Comments**

There is one Native Title Claim (WC98/062) over the area under application. This claim has been registered with the National Native Title Tribunal on behalf of the claimant group. However, the tenement 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 or in close proximity to 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 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 application area is located within a *Rights in Water and Irrigation Act 1914* (RIWI Act) Groundwater Area (DoW, 2008; GIS Database). The proponent is required to obtain permits to abstract groundwater in this area.

The clearing permit application was advertised on 12 July 2010 by the Department of Mines and Petroleum inviting submissions from the public. No submissions were received in relation to this clearing permit application.

**Methodology** DoW (2008)  
GIS Database  
- Aboriginal Sites of Significance  
- Native Title Claims  
- RIWI Act, Groundwater Areas

**4. Assessor's comments**

**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 may be at variance to Principle (f), is not likely to be at variance to Principles (a), (b), (c), (d), (g), (h), (i) and (j) and is not at variance to Principle (e).

## 5. References

- BoM (2010) Bureau of Meteorology Website - Climate Averages by Number, Averages for WITTENOOM. [www.bom.gov.au/climate/averages/tables/cw\\_005026.shtml](http://www.bom.gov.au/climate/averages/tables/cw_005026.shtml) (Accessed 15 July 2010).
- CALM (2002) A Biodiversity Audit of Western Australia's 53 Biogeographical Subregions. Pilbara 3 (PIL 3 - Hamersley subregion).
- DEC (2009a) Priority Ecological Communities for Western Australia. Species and Communities Branch, Department of Environment and Conservation. [www.dec.wa.gov.au](http://www.dec.wa.gov.au) (Accessed 12 July 2010).
- DEC (2009b) Request for Rare Flora Information. 20km radial search - 22 21' - 22 43' S and 118 48' - 119 12'E (GDA94). Search conducted for URS Australia Pty Ltd, c/o Iron Ore Holdings Ltd. 6 July 2009.
- 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.
- DoW (2008) Water Quality Advice. Advice to assessing officer, Native Vegetation Assessment Branch, Department of Industry and Resources (now Department of Mines and Petroleum (DMP)), received (21 January 2008). Department of Water, Western Australia.
- Iron Ore Holdings Ltd (2010) Application for a clearing permit (Purpose Permit). July 2010.
- 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. (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, Payne, A.L, Leighton, K.A & Hennig, P (2004) Technical Bulletin No. 92: An inventory and condition survey of the Pilbara region, Western Australia. Department of Agriculture, South Perth, Western Australia.

## 6. Glossary

### Acronyms:

<b>BoM</b>	Bureau of Meteorology, Australian Government.
<b>CALM</b>	Department of Conservation and Land Management, Western Australia.
<b>DAFWA</b>	Department of Agriculture and Food, Western Australia.
<b>DA</b>	Department of Agriculture, Western Australia.
<b>DEC</b>	Department of Environment and Conservation
<b>DEH</b>	Department of Environment and Heritage (federal based in Canberra) previously Environment Australia
<b>DEP</b>	Department of Environment Protection (now DoE), 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, Western Australia.
<b>DoIR</b>	Department of Industry and Resources, Western Australia.
<b>DOLA</b>	Department of Land Administration, Western Australia.
<b>DoW</b>	Department of Water
<b>EP Act</b>	Environment 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>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</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>TECs</b>	Threatened Ecological Communities.

### 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.

