



# Clearing Permit Decision Report

## 1. Application details

### 1.1. Permit application details

Permit application No.: 4925/1  
Permit type: Purpose Permit

### 1.2. Proponent details

Proponent's name: Hamersley Iron Pty Ltd

### 1.3. Property details

Property: Iron Ore (Yandicoogina) Agreement Act 1996, Lease L 21123 pursuant to the Land Administration Act 1997, Lot 350 on Deposited Plan 47082  
Local Government Area: Shire of East Pilbara  
Colloquial name: Yandi Village

### 1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
1.04		Mechanical Removal	Infrastructure maintenance compound and associated activities

### 1.5. Decision on application

Decision on Permit Application: Grant  
Decision Date: 19 April 2012

## 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. One Beard vegetation association has been mapped within the application area (GIS Database; Shepherd, 2009):

82: Hummock grassland, low tree steppe; snappy gum over *Triodia wiseana*.

A flora and vegetation survey of the application area was conducted by botanists from Rio Tinto (2012) in October 2011. This survey identified the following two vegetation communities within the application area:

EISpTb – Scattered *Eucalyptus leucophloia* subsp. *leucophloia* low trees over scattered *Senna glutinosa* subsp. *pruinosa*, *Solanum phlomoides* and *Dampiera candidans* low shrubs over open *Triodia basedowii* hummock grassland over scattered *Ptilotus calostachyus* herbs; and

EIGwTb – Scattered *Eucalyptus leucophloia* subsp. *leucophloia* and *Corymbia deserticola* low trees over scattered *Grevillea wickhamii* subsp. *hispidula* shrubs over scattered *Acacia spondylophylla* shrubs over very open *Triodia basedowii* hummock grassland over scattered *Ptilotus calostachyus* herbs.

**Clearing Description** Hamersley Iron Pty Ltd is proposing to clear up to 1.04 hectares of native vegetation for the purpose of constructing an infrastructure maintenance compound and associated activities.

Clearing will be conducted with a dozer using blade down techniques.

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

To

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

**Comment** The application area is located within the Pilbara region of Western Australia and is situated approximately 84 kilometres north west of Newman.

### 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 is located approximately 84 kilometres north west of Newman in the Hamersley subregion of the Pilbara Interim Biogeographic Regionalisation for Australia (IBRA) bioregion (GIS Database). At a broad scale, vegetation 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). Rare features of the subregion include gorges of the Hamersley Ranges (particularly those within Karijini National Park), Palm Spring, Duck Creek and Themeda grasslands (CALM, 2002). Permanent spring systems such as Weeli Wolli are also listed for their importance as refugia (CALM, 2002).

A flora and vegetation survey of the application area and the surrounding areas was conducted by botanists from Rio Tinto (2012) in October 2011. This survey identified 82 flora species from 44 genera and 21 families within the application area (Rio Tinto, 2012). This is not considered to be atypically high, with the families and genera identified being typical of the Pilbara bioregion (Rio Tinto, 2012).

According to available databases there are no Threatened Ecological Communities or Priority Ecological Communities within the application area (GIS Database).

According to available databases there are no Threatened or Priority Flora within the application area (GIS Database). A flora and vegetation survey of the application area conducted by botanists from Rio Tinto (2012) did not identify any Threatened or Priority Flora within the application area.

A flora and vegetation survey conducted by botanists from Rio Tinto (2012) identified one weed species, *Solanum nigrum*, in an area adjacent to the application area. 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 can in turn lead to greater rates of infestation and further loss of biodiversity if the area is subject to repeated fires. This species is not listed as a 'Declared Plant' species under the *Agriculture and Related Resources Protection Act 1976* by the Department of Agriculture and Food. Potential impacts to biodiversity as a result of the proposed clearing may be minimised by the implementation of a weed management condition.

A fauna survey conducted by Rio Tinto (2012) identified one fauna habitat, hill tops and slopes, within the application area. Hill tops and slopes offer a low diversity of fauna habitats with rocky edges and hummock grasslands offering some habitat for reptiles and small mammals. It is considered unlikely that the proposed clearing of 1.04 hectares of native vegetation in the hill top and slopes habitat type will significantly impact on faunal diversity within the area.

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

**Methodology**      CALM (2002)  
Rio Tinto (2012)  
GIS Viewer:  
- IBRA WA (regions – subregions)  
- 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**

A fauna survey conducted by Rio Tinto (2012) identified one fauna habitat, hill tops and slopes, within the application area. Hill tops and slopes offer a low diversity of fauna habitats with rocky edges and hummock grasslands offering some habitat for reptiles and small mammals (Rio Tinto, 2012).

Based on a desktop survey and a ground survey of the site, one conservation significant fauna species, Western Pebble-mound Mouse (*Pseudomys chapmani*) Priority 4, is considered likely to occur within the application area. This species is particularly common in the eastern region of the Pilbara (Rio Tinto, 2012). Given the small scale of the proposed clearing (1.04 hectares) it is considered unlikely that the proposed clearing will impact on the conservation of this species.

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

**Methodology**      Rio Tinto (2012)

#### (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**

There are no known records of Threatened Flora within the application area (GIS Database). A flora and vegetation survey of the application area conducted by botanists from Rio Tinto (2012) in October 2011 did not identify any Threatened Flora species.

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

**Methodology** Rio Tinto (2012)  
GIS Database:  
- Threatened and Priority Flora

**(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) within the application area (GIS Database). The nearest known TEC is approximately 75 kilometres south east of the application area (GIS Database). At this distance there is little likelihood of any impact to the TEC as a result of 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 is located within the Pilbara Interim Biogeographic Regionalisation for Australia (IBRA) bioregion (GIS Database). Shepherd (2009) reports that approximately 99.89% of the pre-European vegetation remains within the Pilbara bioregion.

The vegetation in the application area has been broadly mapped as Beard vegetation association:

82: Hummock grassland, low tree steppe; snappy gum over *Triodia wiseana*.

According to Shepherd (2009) approximately 100% of Beard vegetation association 82 remains within the Pilbara bioregion (see table below).

	Pre-European area (ha)*	Current extent (ha)*	Remaining %*	Conservation Status**	Pre-European % in IUCN Class I-IV Reserves
IBRA Bioregion - Pilbara	17,804,193	17,785,001	~99.89	Least Concern	~6.32
Beard vegetation associations - State					
82	2,565,901	2,565,901	~100	Least Concern	~10.4
Beard vegetation associations - Bioregion					
82	2,563,583	2,563,583	~100	Least Concern	~10.25

\* Shepherd (2009)  
\*\* Department of Natural Resources and Environment (2002)

The vegetation within the application area is not considered to be a remnant of native vegetation in an area that has been extensively cleared.

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 at variance to this Principle**  
There are no known permanent wetlands or watercourses within the application area, however one minor non-

perennial watercourse encroaches on the northern section (GIS Database). A flora and vegetation survey conducted by botanists from Rio Tinto (2012) did not identify any vegetation growing in association with perennial or non-perennial watercourses.

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

**Methodology** Rio Tinto (2012)  
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 intersects one land system, Newman (GIS Database). This land system is characterised by rugged jaspillite plateaux, ridges and mountains supporting hard spinifex grasslands and is largely erosion resistant (Van Vreeswyk et al., 2004).

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

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

**(h) Native vegetation should not be cleared if the clearing of the vegetation is likely to have an impact on the environmental values of any adjacent or nearby conservation area.**

**Comments Proposal is not at variance to this Principle**

The proposed clearing is not located within a conservation reserve (GIS Database). The nearest conservation reserve is Karijini National Park, located approximately 70 kilometres west of the application area (GIS Database). At this distance it is unlikely that the proposed clearing will impact on the environmental values of any conservation areas.

Based on the above, the proposed clearing is not 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 (PDWSA) (GIS Database). The nearest PDWSA is the Newman Water Reserve located approximately 62 kilometres south south-east of the application area (GIS Database). At this distance it is unlikely that the proposed clearing will impact on the water quality of the Millstream Water Reserve.

The groundwater salinity within the application area is between 500 – 1,000 milligrams per litre of Total Dissolved Solids (TDS) (GIS Database). Given the small scale of the proposed clearing (1.04 hectares) it is considered unlikely to alter the salinity levels within the application area.

There are no permanent wetlands or watercourses within the application area (GIS Database). It is therefore considered unlikely that the proposed clearing will impact on the quality of any surface water.

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

**Methodology** GIS Database:  
- Goundwater Salinity, Statewide  
- Hydrography, linear  
- Public Drinking Water Source Areas (PDWSA)

**(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 approximately 313.9 millimetres recorded at nearby Marillana weather station (BoM, 2012; CALM, 2002). The majority of rainfall in this area usually falls in summer cyclonic and thunderstorm events (CALM, 2002). Large runoff as well as localised and regional flooding can occur following intense rainfall events and, given its non contiguous nature, it is considered unlikely that the proposed clearing will 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 (2012)  
CALM (2002)

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

##### **Comments**

There is one Native Title Claim (WC11/6) over the area under application (GIS Database). This claim has been registered with the Native Title Tribunal on behalf of the claimant group. However, the tenure has been granted in accordance with the future act regime of the *Native Title Act 1993* and the nature of the act (i.e. the proposed clearing activity) has been provided for in that process, therefore the granting of a clearing permit is not a future act under the *Native Title Act 1993*.

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

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

The clearing permit application was advertised on 19 March 2012 by the Department of Mines and Petroleum inviting submissions from the public. No submissions were received in relation to the proposed clearing.

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

#### **4. References**

- BoM (2012) BoM Website - Climate Averages by Number, Averages for MARILLANA WEATHER STATION. [www.bom.gov.au/climate/averages/tables.shtml](http://www.bom.gov.au/climate/averages/tables.shtml) (Accessed 5 April 2012).
- CALM (2002) A Biodiversity Audit of Western Australia's 53 Biogeographical Subregions. Department of Conservation and Land Management
- 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 (2012) Flora and Vegetation Survey Yandi Village - Native Vegetation Clearing Permit Supporting Report. Unpublished Report dated January 2012.
- 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>	Environmental Protection and Biodiversity Conservation Act 1999 (Federal Act)
<b>GIS</b>	Geographical Information System

ha	Hectare (10,000 square metres)
IBRA	Interim Biogeographic Regionalisation for Australia
IUCN	International Union for the Conservation of Nature and Natural Resources – commonly known as the World Conservation Union
RIWI Act	Rights in Water and Irrigation Act 1914, Western Australia
s.17	Section 17 of the Environment Protection Act 1986, Western Australia
TEC	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.