Government of **Western Australia**
Department of **Mines and Petroleum**

# Clearing Permit Decision Report

## 1. Application details

### 1.1. Permit application details

**Permit application No.:** 5427/2
**Permit type:** Purpose Permit

### 1.2. Proponent details

**Proponent's name:** **FMG Iron Bridge Limited**

### 1.3. Property details

**Property:** Mining Lease 45/1226
**Local Government Area:** Shire of East Pilbara
**Colloquial name:** North Star Hematite Project

### 1.4. Application

| Clearing Area (ha) | No. Trees | Method of Clearing | For the purpose of: |
|---|---|---|---|
| 319 | | Mechanical Removal | Mineral Production |

### 1.5. Decision on application

**Decision on Permit Application:** Grant
**Decision Date:** 27 March 2014

## 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):

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

A flora and vegetation survey of the application area and surrounding areas (referred to as the survey area from hereon) was conducted by Ecologia in April, August and September 2011 (FMG, 2012). This survey identified the following 33 vegetation communities within the survey area (FMG, 2012):

<u>Rocky Hills and Plains</u>
ElApEm - *Eucalyptus leucophloia* isolated low trees over *Grevillea wickhamii* isolated mid shrubs, over *Acacia ptychophylla* low shrubland, over *Eriachne mucronata* isolated hummock grasses;

AaTw - *Grevillea wickhamii*, *Acacia acradenia* and *Acacia orthocarpa* sparse mid shrubland, over *Triodia wiseana* sparse hummock grassland, over *Dampiera candicans* isolated herbs;

AtEm - *Acacia tumida* and *Grevillea wickhamii* open tall shrubland, over *Acacia orthocarpa* open mid shrubland over *Eriachne mucronata* isolated tussock grasses, over *Dampiera candicans* isolated herbs;

AtTw - *Acacia tumida* and *Grevillea wickhamii* open tall shrubland, over *Triodia wiseana* open hummock grassland;

AoTw - *Acacia orthocarpa* open tall shrubland, over *Triodia wiseana* open hummock grassland and *Eriachne pulchella* isolated tussock grasses;

Tw - *Triodia wiseana* and *Triodia schinzii* hummock grassland and *Eriachne mucronata* isolated hummock grasses;

ElApTw - *Eucalyptus leucophloia* isolated trees, *over Acacia ptychophylla* sparse shrubland, over *Triodia wiseana* open hummock grassland, over *Dampiera candicans* and *Polycarpaea holtzei* isolated herbs;

Tw - *Triodia wiseana* open hummock grassland, over *Bonamia media* isolated herbs;

<u>Calcrete</u>
Tw - *Triodia wiseana* and *Triodia basedowii* hummock grassland;

<u>Rocky Hills and Plains</u>
AaTw - *Acacia acradenia* open mid shrubland, over *Triodia wiseana* hummock grassland;

AaTw - *Acacia tumida* and *Grevillea wickhamii* sparse tall shrubland, over *Acacia acradenia* open mid shrubland, over *Triodia wiseana* hummock grassland;

AaTw - *Acacia acradenia* and *Acacia inaequilatera* sparse mid shrubland over *Triodia wiseana* and *Triodia lanigera* hummock grassland;

Tw - *Triodia wiseana* hummock grassland;

**Shrubby Drainage Lines**
At - *Acacia tumida* and *Grevillea wickhamii* tall shrubland, over *Indigofera monophylla* sparse low shrubland;

**Sandy Loams and Gravelly Plains**
ImTs - *Indigofera monophylla* isolated low shrubs, over *Triodia schinzii* open hummock grassland, over *Ptilotus astrolasius* isolated herbs;

AsTl - *Acacia stellaticeps* sparse low shrubland, over *Triodia longiceps* hummock grassland, over *Bulbostylis barbata* isolated sedges;

Cl - *Grevillea wickhamii* isolated tall shrubs, over *Corchorus laniflorus* and *Solanum phlomoides* sparse shrubland;

AaTb - *Petalostylis labicheoides* and *Acacia acradenia* sparse mid shrubland, over *Corchorus laniflorus* sparse low shrubland, over *Chrysopogon fallax* sparse tussock grassland and *Triodia basedowii* sparse hummock grassland;

AiTb - *Acacia inaequilatera* and *Grevillea wickhamii* sparse tall shrubland, over *Acacia acradenia* sparse mid shrubland, over *Triodia basedowii* and *Triodia wiseana* hummock grassland;

AoTb - *Acacia orthocarpa* open mid shrubland, over *Indigofera monophylla* sparse low shrubland, over *Triodia basedowii* open hummock grassland;

**Drainage Lines**
GwTe - *Grevillea wickhamii* sparse mid shrubland, over *Triodia epactia* or *Triodia schinzii* open hummock grassland and isolated *Eriachne ciliata* grasses and *Polycarpaea holtzei* herbs;

GwTp - *Grevillea wickhamii* sparse tall shrubland, over *Triodia pungens* open hummock grassland and isolated *Eragrostis cumingii* tussock grasses, *Cyperus squarrosus* sedges, and *Stemodia viscosa* herbs;

Ap - *Acacia pyrifolia*, *Gossypium robinsonii*, *Tephrosia rosea* and *Cajanus cinereus* mid shrubland;

ApTp - *Acacia pyrifolia*, *Acacia acradenia*, *Tephrosia rosea* and *Indigofera monophylla* mid shrubland, over *Triodia pungens* open hummock grassland;

**Rocky Outcrops**
Tl - *Triodia lanigera* open hummock grassland, with *Cyperus hesperius* isolated sedges, *Eriachne ciliate* isolated grasses and *Cleome viscose* isolated herbs;

GaTw - *Gossypium australe* sparse mid shrubland, over *Triodia wiseana* open hummock grassland;

**Rivers, Gorges, Creeks and Floodplains**
FpAtCo - *Ficus platypoda* open woodland, over *Acacia tumida* and *Gossypium robinsonii* sparse tall shrubland, over *Cymbopogon obtectus* and *Eriachne mucronata* sparse tussock grassland and *Cyperus hesperius* isolated sedges;

ChAbTp - *Corymbia hamersleyana* open low woodland, over *Acacia bivenosa* mid shrubland, over *Triodia pungens* open hummock grassland and *Cenchrus ciliaris* sparse tussock grassland;

EvCc - *Cenchrus ciliaris* tussock grassland;

PfTp - *Pluchea ferdinand muelleri* open low shrubland, over *Triodia pungens* sparse hummock grassland and *Cenchrus ciliaris*, *Eriachne lanata* and *Chrysopogon fallax* open tussock grassland;

**Granite Sandy Plains and Outcrops**
ImTp - *Indigofera monophylla* and *Solanum phlomoides* sparse open shrubland, over *Triodia pungens* and *Triodia basedowii* sparse hummock grassland with *Mollugo molluginea* and *Bonamia linearis* isolated herbs;

SpTl - *Solanum phlomoides* isolated low shrubs, over *Triodia lanigera* open hummock grassland; and

Tp - *Triodia pungens* open hummock grassland.

**Clearing Description**

North Star Hematite Project.
FMG Iron Bridge Limited (FMG) proposes to clear up to 319 hectares of native vegetation within a total boundary of approximately 2,259 hectares, for the purpose of developing an open pit and construct a processing plant, accommodation camp, roads and other associated infrastructure. The project is located approximately 70 kilometres west of Marble Bar, in the Shire of East Pilbara.

| | |
|---|---|
| **Vegetation Condition** | Very Good: Vegetation structure altered; obvious signs of disturbance (Keighery, 1994);<br><br>To<br><br>Pristine: No obvious signs of disturbance (Keighery, 1994). |
| **Comment** | Vegetation clearing will be undertaken by mechanical means and the vegetation and topsoil will be stockpiled for use in rehabilitation.<br><br>An application to amend CPS 5427/1 was received by the Department of Mines and Petroleum on 16 January 2014 for the purpose of increasing the permit boundary and area approved to clear from 2,145 hectares to 2,259 hectares. |

## 3. Assessment of application against clearing principles

**Comments**

FMG Iron Bridge Limited has applied to increase the permit boundary from 2,145 hectares to 2,259 hectares. The total area of clearing remains the same.

There were no flora surveys conducted over the amended application area. Analysis of aerial imagery suggests that the vegetation communities within the amended application area are similar to that of the local area (GIS Database). A flora survey of an area adjacent to the amended application area states that the families and genera recorded within the survey area are considered to be common within the Pilbara region (FMG, 2012). None of these vegetation communities are considered to be of higher diversity than those assessed within clearing permit decision report CPS 5427/1 and the vegetation types are not considered to be a remnant locally or regionally. A search on the Department of Parks and Wildlife's Threatened and Priority Flora databases within a 10 kilometre radius of the application areas revealed one Priority flora species: *Pityrodia* sp. Marble Bar (Priority 1) may occur within the application area (DPaW, 2014). Approximately 638 individuals of this species have been recorded in the surrounding area (Ecologia, 2012). It is considered unlikely that the proposed clearing will significantly impact on the conservation of the Priority Flora species as the increase in the permit boundary is to allow for the clearing of 1 hectare of native vegetation to upgrade an existing access track (FMG, 2014). No vegetation communities recorded are considered to be Threatened or Priority Ecological Communities and no Threatened Flora species were recorded within the additional area (DPaW, 2014; GIS Database). Therefore, the proposed clearing is not likely to be at variance to Principles (a), (c) and (d) and is not at variance to Principle (e).

Analysis of aerial imagery suggests that the fauna habitats present within the application area are consistent with those described in clearing permit decision report CPS 5427/1 which includes rocky ridge / breakaway / gorge habitat which has been identified as being of high conservation significance. Ecologia (2012) recorded a single species of Pilbara Olive Python (*Liasis olivaceus barroni*) (Vulnerable - *EPBC Act 1999*; Schedule 1 - *Wildlife Conservation Act 1950*) within the amended application area. FMG (2014) has advised that it is feasible to avoid this habitat for the project. Potential impacts to the rocky ridge / breakaway / gorge habitat may be minimised by the implementation of a fauna management condition. Therefore, the proposed clearing is at variance to Principle (b).

Current environmental information has been reviewed and the assessment of clearing principles (f), (g), (h), (i) and (j) is consistent with the assessment in clearing permit decision report CPS 5427/1 (GIS Database).

**Methodology**

DPaW (2014)
Ecologia (2012)
FMG (2012)
FMG (2014)
GIS Database:
- DEC Tenure
- Evaporation Isopleths
- Groundwater Salinity
- Hydrography, linear
- IBRA WA (regions – subregions)
- Pre-European Vegetation
- Public Drinking Water Source Areas
- Rainfall, Mean Annual
- Rangeland Land System Mapping
- Threatened Ecological Sites Buffered
- Threatened and Priority Flora
- Western Australia Landsat Mosaic 25m – AGO 2006
- Wodgina 1.4m Orthomosaic – Landgate 2001

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

**Comments**

There is one native title claim over the area under application (GIS Database). This claim (WC99/8) has been registered with the Native Title Tribunal on behalf of the claimant group (GIS Database). 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.

According to available databases, 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 Regulation, Department of Parks and Wildlife 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 project was referred to the Department of Sustainability, Environment, Water, Population and Communities (DSEWPaC) by the applicant and determined as a controlled action. DSEWPaC determined on 14 June 2013 that there should be no clearing within the rocky ridge / breakaway / gorge habitat and that the open pit should be set back 50 metres from this habitat. Additionally, DSEWPaC determined that no more than 645 hectares shall be cleared on Mining Lease M45/1226 and that all clearing must be conducted in accordance with the EPBC Listed Threatened Fauna Management Plan approved by the Minister.

The amendment application was advertised on 17 February 2014 by the Department of Mines and Petroleum inviting submissions from the public. No submissions were received in relation to the application.

**Methodology**

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

## 4. References


Department of Parks and Wildlife (DPaW) (2014) NatureMap Department of Parks and Wildlife, viewed 10 March 2014 <http://naturemap.dec.wa.gov.au>.

Ecologia (2012) Fortescue Metals Group Ltd North Star Project Level 2 Terrestrial Vertebrate Fauna Assessment. Unpublished report prepared for Fortescue Metals Group Ltd dated July 2012.

FMG (2012) Application to Clear Native Vegetation (Purpose permit) for M45/1226 – North Star Hematite Project. Unpublished report dated December 2012.

FMG (2014) Supporting information for 5427/2 – Use for amended permit boundary. Internal document, March 2014.

Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.


## 5. Glossary

### Acronyms:

| | |
|---|---|
| **BoM** | Bureau of Meteorology, Australian Government |
| **CALM** | Department of Conservation and Land Management (now DEC), Western Australia |
| **DAFWA** | Department of Agriculture and Food, Western Australia |
| **DEC** | Department of Environment and Conservation, Western Australia |
| **DEH** | Department of Environment and Heritage (federal based in Canberra) previously Environment Australia |
| **DEP** | Department of Environment Protection (now DEC), Western Australia |
| **DIA** | Department of Indigenous Affairs |
| **DLI** | Department of Land Information, Western Australia |
| **DMP** | Department of Mines and Petroleum, Western Australia |
| **DoE** | Department of Environment (now DEC), Western Australia |
| **DoIR** | Department of Industry and Resources (now DMP), Western Australia |
| **DOLA** | Department of Land Administration, Western Australia |
| **DoW** | Department of Water |
| **EP Act** | Environmental Protection Act 1986, Western Australia |
| **EPBC Act** | Environment Protection and Biodiversity Conservation Act 1999 (Federal Act) |
| **GIS** | 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.

## Principles for clearing native vegetation:

**(a)** Native vegetation should not be cleared if it comprises a high level of biological diversity.

**(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.

**(c)** Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, rare 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.

**(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.

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

**(g)** Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation.

**(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.

**(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.

**(j)** Native vegetation should not be cleared if clearing the vegetation is likely to cause, or exacerbate, the incidence or intensity of flooding.