



# Clearing Permit Decision Report

## 1. Application details

### 1.1. Permit application details

Permit application No.: 4156/1  
 Permit type: Purpose Permit

### 1.2. Proponent details

Proponent's name: **FMG Pilbara Pty Ltd**

### 1.3. Property details

Property: Exploration Licence 47/2046  
 Local Government Area: Shire of Ashburton  
 Colloquial name: Dales Bore Exploration Drilling Program

### 1.4. Application

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

### 1.5. Decision on application

Decision on Permit Application: Grant  
 Decision Date: 24 February 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. One Beard Vegetation Association is located within the application area (Shepherd, 2009):  Beard Vegetation Association 111: Hummock grasslands, shrub steppe; <i>Eucalyptus gamophylla</i> over hard spinifex.	FMG Pilbara Pty Ltd is proposing to clear 5.2 hectares of native vegetation for the purpose of establishing an exploration drilling programme within the Dales Bore exploration area. Clearing is required for drill pads, groundwater retention sumps, and access tracks. Clearing is to be conducted using a raised blade or scrub rake.	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).	The application area is located within the boundary of the Hamersley Range National Park which is a Register of the National Estate (RNE) site. The Hamersley Range National Park name and boundary has since been revised and the park is now known as the Karijini National Park. However as the boundary of the previous RNE site has not been updated the application area is considered an Environmentally Sensitive Area (ESA) and the low impact exploration activities to be conducted are not exempt from requiring a clearing permit.  The vegetation condition has been determined using available aerial 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 application area occurs within the Fortescue (PIL2) sub-region of the Pilbara bioregion of the Interim Biogeographic Regionalisation for Australia (IBRA) (GIS Database). This sub-region is characterised by alluvial plains and river frontage, extensive salt marsh and mulga-bunch grass, short grass communities on alluvial

plains in the east and deeply incised gorge systems in the western (lower) part of the drainage (CALM, 2002).

The application is to clear 5.2 hectares of native vegetation in very good to excellent condition (Keighery, 1994) for the purpose of mineral exploration. The mapped Beard vegetation association within the application area has 100% of its pre-European extent remaining (Shepherd, 2009).

There are two records of priority fauna located within the local area (20 kilometre radius) (GIS Database) however considering the small size of the area to be cleared (5.2 hectares) and the large tracts of intact native vegetation which exist in the local area and neighbouring Karijini National Park the area to be cleared is not likely to provide significant habitat for fauna in a local or regional context.

A search of the Department of Environment and Conservations NatureMap database identified a total of 200 native flora species, belonging to 124 genera from 46 families, recorded in the local area (NatureMap, 2011). Although this suggests that the local area may be floristically diverse it is unlikely that the small area to be cleared (5.2 hectares) contains a higher level of biological diversity than the surrounding vegetation found within the neighbouring Karijini National Park. The vegetation under application is in very good to excellent condition (Keighery, 1994) and may be susceptible to weed invasion however the implementation of a weed management condition will minimise the risk of the spread of weeds to un-infested areas.

There are no records of Declared Rare flora, Priority flora, Priority Ecological Communities or Threatened Ecological Communities within the local area (GIS Database) and considering the small size of the area to be cleared (5.2 hectares) and its proximity to large tracts of native vegetation in similar or better condition it is not likely that the area to be cleared represents an area of increased 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)  
NatureMap (2011)  
Shepherd (2009)  
GIS Database:  
- IBRA WA (Regions – Subregions)

**(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**

The application is to clear 5.2 hectares of native vegetation in very good to excellent condition (Keighery, 1994) for the purpose of mineral exploration. The mapped Beard vegetation association within the application area has 100% of its pre-European extent remaining (Shepherd, 2009).

A search of the *Environmental Protection and Biodiversity Conservation (EPBC) Act 1999* Protected Matters database conducted by FMG Pilbara Pty Ltd (2010) and of the Department of Environment and Conservations Naturemap database identified 4 species of conservation significance which could potentially utilise the application area. Of these FMG Pilbara Pty Ltd have identified that the Night Parrot (*Pezeporus occidentalis*) and Northern Quoll (*Dasyurus hallucatus*) have potential to occur within local area due to the presence of suitable habitat. However, the application area is small and habitat for these species is well represented in the surrounding vegetation which includes the Karijini National Park.

The proposed clearing is for mineral exploration and the clearing will be conducted using a raised blade and scrub rake. A review of the application area using available aerial imagery did not identify any significant landscape features within the application areas that are considered as representing significant fauna habitat. Given the low impact nature of the clearing activities and considering that the surrounding area is well vegetated and in close proximity to large areas of native vegetation in similar or better condition it is not likely that the small area to be cleared (5.2 hectares) provides a significant habitat for fauna in a regional context.

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

**Methodology** FMG Pilbara Pty Ltd (2010)

**(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 in the local area (20 kilometre radius) (GIS Database).

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

**Methodology** 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) within the local area (20 kilometre radius) and the closest known TEC is located approximately 90 kilometres 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:  
- Threatened Ecological Sites Buffered

**(e) Native vegetation should not be cleared if it is significant as a remnant of native vegetation in an area that has been extensively cleared.**

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

The application area falls within the Pilbara IBRA bioregion (GIS Database). Shepherd (2009) reports that approximately 99.9% 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	17,804,193	17,785,001	~99.9	Least Concern	~8.3
Beard vegetation association - State					
111	742,964	742,964	~100	Least Concern	~6.32
Beard vegetation association - Bioregion					
111	550,286	550,286	~100	Least Concern	~2.48

\* Shepherd (2009)

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

Beard vegetation association 111 retains approximately 100% of its 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 proposed to be cleared 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 (2009)  
GIS Database:  
- IBRA WA (Regions – Subregions)

**(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 or wetlands located within the application area however there are several minor ephemeral drainage lines (GIS Database) which intersect the application area.

Given that the application area intersects minor ephemeral 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 given the low impact nature of the clearing activities for mineral exploration the clearing of 5.2 hectares of native vegetation is unlikely to have any significant environmental impacts in a local or regional context.

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

**Methodology** 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 Boolgeeda land system (GIS Database). The Boolgeeda land system is described as stony lower slopes and plains below hill systems supporting hard and soft spinifex grasslands and mulga shrublands. Vegetation is generally not prone to degradation and the system is not susceptible to erosion (Van Vreeswyk et al., 2004).

Given the low impact nature of the clearing to be conducted for the purpose of exploration using a raised blade and scrub rake it is not likely that the clearing of 5.2 hectares will cause appreciable land degradation.

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 may be at variance to this Principle**

The application area is located approximately 200 metres north of the Karijini National Park. There are no other areas of conservation significance located within the local area (20 kilometre radius) (GIS Database).

The Wittenoom – Roy Hill Road is located in between the application area and the Karijini National Park and acts as a man made barrier between the two areas. Given the low impact nature of the clearing to be conducted for the purpose of exploration using a raised blade and scrub rake it is not likely that the clearing of 5.2 hectares will directly impact upon the National Park. However, considering the proximity of the National Park to the application area there is potential for the spread of weeds through the movement of machinery. Potential impacts to the National Park as a result of the proposed clearing may be minimised by the implementation of a weed management condition.

Based on the above, the proposed clearing may 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 which cross 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).

Given the small size of the area to be cleared (5.2 hectares) and considering the low impact nature of the activities to be undertaken 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  
- Hydrography, linear  
- 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 several minor ephemeral drainage lines which cross 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 5.2 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 (WC98/62) 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 24 January 2011 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 NNTT

## 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.
- FMG Pilbara Pty Ltd (2010) Native Vegetation Clearing Permit Application – Dales Bore Exploration Drilling Program.
- Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.
- NatureMap (2011) Department of Environment and Conservation, Species Report created 16 February 2011.
- 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>	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.