



# Clearing Permit Decision Report

## 1. Application details

### 1.1. Permit application details

Permit application No.: 3821/1  
Permit type: Purpose Permit

### 1.2. Proponent details

Proponent's name: **BHP Billiton Iron Ore Pty Ltd**

### 1.3. Property details

Property: Iron Ore (Mt Newman) Agreement Act 1964, Mineral Lease 244SA  
Local Government Area: Shire of East Pilbara  
Colloquial name: Mt Whaleback Minesite Carpark Project

### 1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
6.5		Mechanical Removal	Car park construction and associated infrastructure

## 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 scale of 1:250,000 for the whole of Western Australia. One Beard Vegetation Association is located within the application area (GIS Database):

**Beard Vegetation Association 82:** hummock grasslands, low tree steppe; Snappy Gum over *Triodia wiseana*.

In July 2009, Biologic conducted a flora assessment of an area that measured 132 kilometres by 12 metres and included part of the application area. This survey recorded 11 vegetation associations within the survey area; one of which was present within the application area (Biologic, 2009):

##### Association 11:

Area almost completely cleared. Occasional scattered trees over patchy scattered shrubs over scattered to very open tussock and hummock grasses.

##### Clearing Description

BHP Billiton Iron Ore Pty Ltd (BHP Billiton) proposes to clear up to 6.5 hectares of native vegetation, within an area totalling approximately 7.6 hectares (BHP Billiton, 2010). The application area is located approximately 1.2 kilometres west of Newman (GIS Database).

The purpose of the proposed clearing is to construct a car park, adjacent to the Mt Whaleback mine site security gate, for BHP Billiton Iron Ore staff and visitors (BHP Billiton, 2010). Vegetation will be cleared by mechanical means and vegetation and topsoil will be stockpiled for rehabilitation purposes (BHP Billiton, 2010).

##### Vegetation Condition

Degraded: Structure severely disturbed; regeneration to good condition requires intensive management (Keighery, 1994);

to

Completely Degraded: No longer intact; completely/almost completely without native species (Keighery, 1994).

##### Comment

The vegetation condition rating is derived from a flora and vegetation survey conducted by Biologic (2009).

The application area was degraded with parts of it already cleared for infrastructure purposes (Biologic, 2009).

## 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 is located within the Hamersley subregion of the Pilbara Interim Biogeographic Regionalisation of Australia (IBRA) bioregion (GIS Database). The Hamersley subregion is described by CALM (2002) as being rich in *Acacia*, *Triodia*, *Ptilotus* and *Sida* species.

A flora and vegetation survey was conducted by Biologic from the 6 to 16 July 2009. Biologic (2009) identified a total of 319 flora species from 54 families within an area measuring approximately 132 kilometres by 12 metres. This survey area included sections of the application area. The most common families within the survey area were *Poaceae* (43 taxa), *Mimosaceae* (33 taxa), *Malvaceae* (23 taxa) and *Amaranthaceae* (18 taxa) (Biologic, 2009). The vegetation within the application area is degraded and therefore, it is not expected that it would represent a high level of flora diversity.

Biologic (2009) has identified 14 weed species within the survey area. The presence of weed species lowers the biodiversity value of the proposed clearing area. It is important to ensure that the proposed clearing activities do not spread or introduce weed species to non-infested areas. The risk of spreading weed species can be mitigated by imposing a condition for the purpose of weed management.

The vegetation and landforms within the application area are well represented within the Pilbara bioregion (Biologic, 2009). No Declared Rare Flora, Priority Flora, Threatened Ecological Communities or Priority Ecological Communities were recorded within the application area during the flora and vegetation survey (Biologic, 2009).

Biologic (2009) conducted a fauna survey from the 6 to 16 July 2009. Biologic (2009) identified 82 vertebrate fauna species within the survey area, consisting of 13 mammal species, 57 bird species and 12 reptile species. These results are for an area measuring approximately 132 kilometres by 12 metres. Therefore, the degraded 7.6 hectare application area is expected to have a much lower faunal diversity than indicated above.

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

**Methodology** Biologic (2009)  
CALM (2002)  
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**

Biologic conducted a fauna survey for an area that included part of the application area, in July 2009. The survey covered an area measuring approximately 132 kilometres by 12 metres (Biologic, 2009). Two fauna species of conservation significance were identified during the survey (Biologic, 2009):

- Star Finch (*Neochima ruficauda subclarescens*) – Priority 4; and
- Rainbow Bee-eater (*Merops ornatus*) – Marine and Migratory.

Biologic (2009) reports that due to the degraded nature of the vegetation, the survey area, which includes part of the application area, provides poor quality fauna habitat. Biologic (2009) claims that the survey area has been cleared in the past and parts of it have received several burns. Biologic (2009) states that no real structural complexity is present such as large trees, tree hollows, rock cracks and crevices, fallen timber or large hummocks of Spinifex, which are generally considered to provide good habitat for fauna. Most of the survey area consists of degraded grassland (with many weeds present) with the occasional intrusion of Spinifex and medium shrubs (Biologic, 2009). This habitat and its characteristics provide little value for significant fauna species in the area (Biologic, 2009).

The landforms and habitat types found within the application area are considered to be well represented in the Pilbara bioregion (Biologic, 2009). Therefore, the vegetation of the application area is unlikely to represent significant habitat for any fauna species.

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

**Methodology** Biologic (2009)

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

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

In July 2009, Biologic conducted a flora assessment of an area that measured approximately 132 kilometres by 12 metres and included part of the application area. The assessment included a desktop review of previous surveys conducted in the area, as well as databases such as the Department of Environment and Conservation's (DEC's) NatureMap database (Biologic, 2009). A field survey was conducted from the 6 to 16 July 2009 (Biologic, 2009).

No Declared Rare Flora species were recorded within the survey area during the flora assessment (Biologic, 2009).

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

**Methodology** Biologic (2009)

**(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 (TECs) within the area applied to clear (GIS Database). The nearest known TEC is located approximately 15 kilometres north-east of the application area (GIS Database).

Biologic (2009) reports that no TECs were identified within the application area during the flora and vegetation survey.

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

**Methodology** Biologic (2009)  
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 Interim Biogeographic Regionalisation of Australia (IBRA) bioregion (GIS Database). Shepherd (2007) reports that approximately 99.9% of the pre-European vegetation still exists within the Pilbara bioregion (see table below). The vegetation within the application area is recorded as the following Beard Vegetation Association (Shepherd, 2007):

**Beard Vegetation Association 82:** hummock grasslands, low tree steppe, Snappy Gum over *Triodia wiseana*.

According to Shepherd (2007) approximately 100% of this vegetation association remains within the bioregion (see table below).

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

	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	~99.9	Least Concern	~6.3
Beard vegetation associations - State					
82	2,565,901	2,565,901	~100	Least Concern	~10.2
Beard vegetation associations - Bioregion					
82	2,563,583	2,563,583	~100	Least Concern	~10.2

\* 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)

**(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**

According to available databases there are no permanent watercourses within the application area, however, there is one minor, ephemeral watercourse (GIS Database). This watercourse is only likely to flow following significant rainfall.

The following vegetation unit is reported as occurring within the application area (Biologic, 2009):

- Area almost completely cleared. Occasional scattered trees over patchy scattered shrubs over scattered to very open tussock and hummock grasses.

This vegetation unit indicates that the application area is degraded and this is supported by aerial imagery of the area (GIS Database). Furthermore, Biologic (2009) states that the vegetation of the application area is well represented throughout the Pilbara bioregion.

Given the degraded nature of the application area, the further clearing of 6.5 hectares is unlikely to have a further significant impact on any watercourse or wetland or any riparian vegetation.

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

**Methodology** Biologic (2009)  
GIS Database  
- Hydrography, linear  
- Newman\_2003\_50cm-Orthomosaic-Landgate 2003

**(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 mapped as occurring within the Newman land system (GIS Database).  
  
Van Vreeswyk et al. (2004) states that the Newman land system is not susceptible to soil erosion.  
  
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 area is not located within any conservation areas (GIS Database). The nearest Department of Environment and Conservation managed land is Karijini National Park located approximately 120 kilometres north-west of the application area (GIS Database).  
  
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 may be at variance to this Principle**  
The application area is located within a Public Drinking Water Source Area (PDWSA), the Newman Water Reserve, and a proclaimed surface water area under the *Rights in Water and Irrigation Act 1914* (GIS Database).  
  
Based on the above, the proposed clearing may be at variance to this Principle.  
  
The Department of Water (DoW) has provided advice relating to the proposed clearing for car park construction.  
  
The DoW (2010) states that clearing activities for the purpose of a car park, within mining tenement AML70/244, is unlikely to have a significant impact on the quality or quantity of groundwater. The DoW (2010) is satisfied that the proposed activities are compatible with the Newman Water Reserve PDWSA.  
  
The DoW (2010) states that any taking or diversion of surface water in a proclaimed area under the *Rights in Water and Irrigation Act 1914*, for purposes other than domestic and/or stock watering, is subject to licence by the DoW. The proposed clearing area is intersected by a waterway and therefore, the proponent should use best management practices to ensure impacts to surface water as a result of the clearing are minimised (DoW, 2010).  
  
It is the proponent's responsibility to liaise with the DOW to determine whether a Water Licence, Bed and Banks permit or any other licences or approvals are required for the proposed works.

**Methodology** DoW (2010)  
GIS Database  
- Public Drinking Water Source Areas (PDWSAs)  
- RIWI Act, Surface Water 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**  
According to available databases there is one minor, ephemeral watercourse within the application area (GIS Database).  
  
Natural flood events occur seasonally in the Pilbara region as a result of cyclonic activity and sporadic

thunderstorm activity (BHP Billiton, 2010). The ephemeral watercourse within the application area could experience natural seasonal flooding from the runoff of surface water following significant rain fall events. However, the proposed clearing of 6.5 hectares, within an already degraded area, is unlikely to increase the incidence or intensity of flood events.

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

**Methodology** BHP Billiton (2010)  
GIS Database  
- Hydrography, linear

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

##### **Comments**

There is one Native Title claim (WC 99/004) 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 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*.

According to available databases there is one registered Aboriginal Site of Significance (site ID: 6702) 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 was advertised by the Department of Mines and Petroleum on 12 July 2010, inviting submissions from the public. There were no submissions received.

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

#### **4. Assessor's comments**

##### **Comment**

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

#### **5. References**

- BHP Billiton (2010) Clearing Permit Application Supporting Documentation. BHP Billiton Iron Ore Pty Ltd.
- Biologic (2009) Newman Power Network, Level 2: Flora and Level 1 Fauna Survey. Biologic Environmental Survey Pty Ltd, Western Australia.
- CALM (2002) A Biodiversity Audit of Western Australia's 53 Biogeographic Subregions in 2002. 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.
- DoW (2010) Clearing Permit advice. Department of Water, Western Australia.
- Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.
- Shepherd, D.P. (2007) Adapted from: Shepherd, D.P., Beeston, G.R., and Hopkins, A.J.M. (2001), Native Vegetation in Western Australia. Technical Report 249. Department of Agriculture Western Australia, South Perth.
- Van Vreeswyk, A.M.E., Payne, A.L., Hennig, P. and Leighton, K.A. (2004) An Inventory and Condition Survey of the Pilbara Region, Western Australia. Department of Agriculture, Western Australia.

#### **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.