



# Clearing Permit Decision Report

## 1. Application details

### 1.1. Permit application details

Permit application No.: 6591/1  
Permit type: Purpose Permit

### 1.2. Proponent details

Proponent's name: **Pilbara Sands Holdings Pty Ltd**

### 1.3. Property details

Property: Mining Lease 45/1249  
Local Government Area: Town of Port Hedland  
Colloquial name: Wilga Granite Quarry Project

### 1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
211.97		Mechanical Removal	Mineral Exploration, Mineral Production & Associated Activities

### 1.5. Decision on application

Decision on Permit Application: Grant  
Decision Date: 9 July 2015

## 2. Site Information

### 2.1. Existing environment and information

#### 2.1.1. Description of the native vegetation under application

##### Vegetation Description

The clearing permit application area has been broadly mapped as Beard vegetation association:  
**93:** Hummock grasslands, shrub steppe; kanji over soft spinifex.

A flora and vegetation survey conducted by Coffey Environments (Coffey, 2014) over the application area identified the following seven vegetation types:

**V1** – Isolated mid shrubs of *Acacia inaequilatera* over sparse hummock grassland of *Triodia epactia* on red brown coarse-grained sand..

**V2** – Sparse low shrubs of *Acacia inaequilatera* over open hummock grassland of *Triodia epactia* on a rocky rise of quartz and granite.

**V3** – Isolated tall shrubs of *Ehretia saligna* var. *saligna* over open tussock grassland of *Cenchrus ciliaris* over sparse hummock grassland of *Triodia epactia* on a granite outcrop.

**V4** – Isolated low trees of *Corymbia flavescens* over sparse tall shrubs of *Acacia coleii* var. *coleii* over, a hummock grassland of *Triodia epactia* over a sparse tussock grassland of *Cenchrus ciliaris* on redbrown sandy, loam in a minor drainage line.

**V5** – Isolated mid shrubs of *Acacia inaequilatera* over low shrubland of *Acacia stellaticeps* over open hummock grassland of *Triodia epactia* and *Triodia secunda* on red brown clayey, sand on a sandplain.

**V6** – Isolated mid shrubs of *Acacia inaequilatera* over sparse low shrubs of *Acacia coleii* var. *coleii* and *Acacia stellaticeps* over isolated tussock grasses of *Aristida holathera* var. *holathera* over open hummock grassland of *Triodia epactia* on red brown sand on a sandy and stony plain.

**V7** – Open tall shrubland of *Acacia coleii* var. *coleii* over sparse mid shrubland of *Acacia inaequilatera* over open hummock grassland of *Triodia epactia* on red brown clayey sand and sandy loam with surface rocks of quartz and granite on a low west facing slope.

##### Clearing Description

Wilga Granite Quarry Project  
Pilbara Sands Holdings Pty Ltd proposes to clear up to 211.97 hectares of native vegetation within a total boundary of approximately 211.97 hectares, for the purpose of mineral exploration, mineral production and associated activities. The project is located approximately 40 kilometres south east of Port Hedland, in the Town of Port Hedland.

##### Vegetation Condition

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

to

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

#### Comment

Vegetation condition was determined by Coffey (2014) using the Keighery scale.

### 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 Roebourne subregion of the Pilbara Interim Biogeographic Regionalisation for Australia (IBRA) bioregion (GIS Database). The Roebourne subregion is characterised by coastal and sub-coastal alluvial and older colluvial plains with a grass savannah of mixed bunch and hummock grasses, and dwarf shrub steppe of *Acacia stellaticeps* or *A. pyrifolia* and *A. inaequilatera* (GIS Database).

A flora and vegetation survey was conducted by Coffey Environments (Coffey) over the application area in 2014 (Coffey, 2014). A total of 59 flora taxa (including subspecies and varieties) representing 19 families and 36 genera were recorded from the application area during the flora and vegetation survey (Coffey, 2014).

No Threatened or Priority Ecological Communities, Threatened or Priority Flora or vegetation associations of restricted distribution were recorded within the application area during the flora and vegetation survey (Coffey, 2014).

One introduced flora species (*Cenchrus ciliaris*, Buffel Grass) was recorded within the application area during the flora and vegetation survey (Coffey, 2014). This introduced flora species is not a Declared Pest or listed as a Weed of National Significance (Coffey, 2014). Potential impacts on biological diversity from weeds may be minimised by the implementation of a weed management condition.

A fauna assessment was conducted by Coffey (2014) over the application area in 2014. No significant fauna habitats were recorded within the application area however one conservation significant fauna species (*Ardeotis australis*, Australian Bustard) was recorded within the application area during the survey (Coffey, 2014). This species is not expected to be restricted to the application area or rely exclusively on fauna habitats present within the application area.

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

##### Methodology

Coffey (2014)  
GIS Database:  
- IBRA WA (Regions - Sub Regions)  
- Pre-European Vegetation  
- Threatened and Priority Flora  
- Threatened Fauna  
- 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 was conducted by Coffey (2014) over the application area in 2014. The following three fauna habitats were recorded within the application area during the fauna survey:

##### **Granite Outcrop**

The vegetation of this habitat is typified by isolated tall shrubs of *Ehretia saligna* var. *saligna* over open tussock grassland of *Cenchrus ciliaris* over sparse hummock grassland of *Triodia epactia*. As its name suggests this habitat is created by the outcropping of granite rock from the surrounding areas. These sections are limited in height and lack the habitat niches such as escarpments and caves that are present in other rocky habitats. However, boulders and exfoliating rocks provide habitat for numerous rock dwelling fauna and provide shade and shelter for kangaroos and numerous bird species. This habitat lacked the heavily dissected terrain and boulder piles favoured by the Northern Quoll (*Dasyurus hallucatus*) as den sites. Disturbances are limited to vehicle tracks, weeds and some exploration drilling. The Granite Outcrop habitat was classified as providing moderate habitat value (Coffey, 2014).

##### **Low Hill**

The vegetation of this habitat is typified by sparse low shrubs of *Acacia inaequilatera* over open hummock grassland of *Triodia epactia*. The Low Hill habitat is created by a low gradient rise of quartz rocks and pebbles. This habitat provides limited microhabitats due to the hard substrate and sparse vegetation. Disturbances present include cattle grazing, weeds and vehicle tracks across some sections. The Low Hill habitat was classified as providing low habitat value (Coffey, 2014).

### **Sandplain**

The vegetation of this habitat is typified by isolated mid shrubs of *Acacia inaequilatera* over *Acacia stellaticeps* and *Acacia colei* over open grasslands of *Triodia epactia*. The Sandplain habitat is restricted to the lower lying areas of the site. The sandy soils of this habitat provide ideal substrate for burrowing species such as goannas and dragons. In addition to the soil, this habitat provides a variety of microhabitats, ground vegetation and a more complex mid story vegetation than other habitats. Disturbances include cattle grazing, weeds and vehicle tracks across some sections. The Low Hill habitat was classified as providing low habitat value (Coffey, 2014).

No significant fauna habitats were recorded within the application area and the fauna habitats within the application area are well represented elsewhere in the local area (GIS Database; Coffey, 2014).

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

**Methodology** Coffey (2014)  
GIS Database:  
- IBRA WA (Regions - Sub Regions)  
- Pre-European Vegetation

### **(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 records of Threatened Flora within the application area (GIS Database).

The flora and vegetation survey conducted by Coffey over the application area did not record any species of Threatened Flora (Coffey, 2014).

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

**Methodology** Coffey (2014)  
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 Threatened Ecological Communities within the application area (GIS Database).

The flora and vegetation survey conducted by Coffey over the application area did not record any Threatened Ecological Communities (Coffey, 2014).

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

**Methodology** Coffey (2014)  
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 in which approximately 99% of the Pre-European vegetation remains (see table) (GIS Database; Government of Western Australia, 2013).

The vegetation of the application area has been mapped as the following Beard vegetation association:

**93:** Hummock grasslands, shrub steppe; kanji over soft spinifex (GIS Database).

Approximately 99% of Beard vegetation association 93 remains at state and bioregion level (Government of Western Australia, 2013). Therefore, the area proposed to be cleared is unlikely to represent a significant 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 DPaW Managed Lands
IBRA Bioregion - Pilbara	17,808,657.06	17,733,583.95	~99.58	Least Concern	8.41
Beard vegetation associations - State					
93	3,044,309.54	3,040,641.01	~99.88	Least Concern	1.96
Beard vegetation associations - Bioregion					
93	3,042,114.29	3,038,471.70	~99.88	Least Concern	1.96

\* Government of Western Australia (2013)

\*\* 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)  
Government of Western Australia (2013)  
GIS Database:  
- IBRA WA (Regions - Sub Regions)  
- 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 likely to be at variance to this Principle**  
There are no permanent water bodies or watercourses within the application area (GIS Database).

No vegetation associated with a permanent watercourse or wetland was recorded within the application area during the flora and vegetation survey (Coffey, 2014).

There is one minor non-perennial drainage line that intersects the application area (GIS Database). The surface flows of this drainage line are likely to be dry most of the year therefore it is not expected the proposed clearing will have a detrimental effect on native vegetation growing in, or in association with a watercourse or wetland.

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

**Methodology** Coffey (2014)  
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 occurs across three land systems: Boolaloo, Macroy and Uaroo (GIS Database). None of these land systems have extensive soil erosion (Coffey, 2014).

The application area is located on the Abydos Plain and is dominated by deep sandy and stony soils and granite outcropping (Coffey, 2014). This soil type is not prone to erosion therefore the clearing of vegetation is unlikely to cause appreciable land degradation.

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

**Methodology** GIS Database:  
- Rangeland Land System Mapping  
- Soils, Statewide

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

**Comments** **Proposal is not likely to be at variance to this Principle**  
The application area does not lie within any conservation areas (GIS Database).

The nearest conservation area is Eighty Mile Beach Marine Park which lies offshore approximately 100 kilometres north east of the application area (GIS Database). Given the distance between the application area and the marine park, the proposed clearing is not likely to impact the conservation area.

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

**Methodology** GIS Database:  
- DPaW 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) and there are no permanent water bodies or watercourses within the application area (GIS Database).

Groundwater salinity within the application area is between 1,000 and 3,000 milligrams/Litre Total Dissolved Solids (TDS) which is considered to be relatively fresh to brackish (GIS Database). The proposed clearing is not likely to cause groundwater or surface water quality within the application area to alter significantly.

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

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

**(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 Pilbara has an arid-tropical climate with two distinct seasons, a hot and wet summer from October to April and a mild winter from May to September (BoM, 2015).

There are no permanent water bodies or watercourses within the application area (GIS Database).

There is one minor non-perennial drainage line that intersects the application area (GIS Database). The surface flows of this drainage line are likely to be dry most of the year therefore the proposed clearing is unlikely to 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 (2015)  
GIS Database:  
- Hydrography, linear

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

**Comments**

There is one Native Title Claim (WC2005/002) over the application area (DAA, 2015). This claim has been filed at the federal court on behalf of the claimant group. 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 Regulation, the Department of Water, and the Department of Parks and Wildlife, 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 15 June 2015 by the Department of Mines and Petroleum inviting submissions from the public. No submissions were received in relation to the application.

**Methodology** DAA (2015)  
GIS Database:  
- Aboriginal Sites Register System

## 4. References

- BoM (2015) Bureau of Meteorology (WWW Document). Retrieved from <http://www.bom.gov.au> on 17 June 2015.
- Coffey (2014) Pilbara Sands Holdings Pty Ltd – Level 1 Flora, Vegetation and Fauna Assessment. December 2014. Report prepared by Coffey Environments Pty Ltd for Pilbara Sands Holdings Pty Ltd, Western Australia.
- DAA (2015) Department of Aboriginal Affairs (WWW Search – Aboriginal Heritage Inquiry System). Retrieved from <http://maps.dia.wa.gov.au/AHIS2/> on 26 June 2015.
- 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.
- Government of Western Australia (2013) 2012 Statewide Vegetation Statistics incorporating the CAR Reserve Analysis (Full Report). Current as of October 2012. WA Department of Environment and Conservation, Perth.
- 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:

<b>BoM</b>	Bureau of Meteorology, Australian Government
<b>DAA</b>	Department of Aboriginal Affairs, Western Australia
<b>DAFWA</b>	Department of Agriculture and Food, Western Australia
<b>DEC</b>	Department of Environment and Conservation, Western Australia (now DPaW and DER)
<b>DER</b>	Department of Environment Regulation, Western Australia
<b>DMP</b>	Department of Mines and Petroleum, Western Australia
<b>DRF</b>	Declared Rare Flora
<b>DotE</b>	Department of the Environment, Australian Government
<b>DoW</b>	Department of Water, Western Australia
<b>DPaW</b>	Department of Parks and Wildlife, Western Australia
<b>DSEWPaC</b>	Department of Sustainability, Environment, Water, Population and Communities (now DotE)
<b>EPA</b>	Environmental Protection Authority, Western Australia
<b>EP Act</b>	<i>Environmental Protection Act 1986</i> , Western Australia
<b>EPBC Act</b>	<i>Environment Protection and Biodiversity Conservation Act 1999</i> (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
<b>PEC</b>	Priority Ecological Community, Western Australia
<b>RIWI Act</b>	<i>Rights in Water and Irrigation Act 1914</i> , Western Australia
<b>s.17</b>	Section 17 of the <i>Environment Protection Act 1986</i> , Western Australia
<b>TEC</b>	Threatened Ecological Community

### Definitions:

{DPaW (2013) Conservation Codes for Western Australian Flora and Fauna. Department of Parks and Wildlife, Western Australia}:-

- T**      **Threatened species:**  
Specially protected under the *Wildlife Conservation Act 1950*, listed under Schedule 1 of the Wildlife Conservation (Specially Protected Fauna) Notice for Threatened Fauna or the Wildlife Conservation (Rare Flora) Notice for Threatened Flora (which may also be referred to as Declared Rare Flora).  
  
Threatened Fauna and Flora are further recognised by DPaW according to their level of threat using IUCN Red List criteria. For example Carnaby's Cockatoo *Calyptorhynchus latirostris* is specially protected under the *Wildlife Conservation Act 1950* as a threatened species with a ranking of Endangered.  
  
Rankings:  
CR: Critically Endangered - considered to be facing an extremely high risk of extinction in the wild.  
EN: Endangered - considered to be facing a very high risk of extinction in the wild.  
VU: Vulnerable - considered to be facing a high risk of extinction in the wild.
- X**      **Presumed Extinct species:**  
Specially protected under the *Wildlife Conservation Act 1950*, listed under Schedule 2 of the Wildlife Conservation (Specially Protected Fauna) Notice for Presumed Extinct Fauna and Wildlife Conservation (Rare Flora) Notice for Presumed Extinct Flora (which may also be referred to as Declared Rare Flora).
- IA**      **Migratory birds protected under an international agreement:**  
Specially protected under the *Wildlife Conservation Act 1950*, listed under Schedule 3 of the Wildlife Conservation (Specially Protected Fauna) Notice.  
Birds that are subject to an agreement between governments of Australia and Japan, China and The Republic of Korea relating to the protection of migratory birds and birds in danger of extinction.

- S**            **Other specially protected fauna:**  
Specially protected under the *Wildlife Conservation Act 1950*, listed under Schedule 4 of the Wildlife Conservation (Specially Protected Fauna) Notice.
- P1**            **Priority One - Poorly-known species:**  
Species that are known from one or a few collections or sight records (generally less than five), all on lands not managed for conservation, e.g. agricultural or pastoral lands, urban areas, Shire, rail reserves and Main Roads WA road, gravel and soil reserves, and active mineral leases and under threat of habitat destruction or degradation. Species may be included if they are comparatively well known from one or more localities but do not meet adequacy of survey requirements and appear to be under immediate threat from known threatening processes.
- P2**            **Priority Two - Poorly-known species:**  
Species that are known from one or a few collections or sight records, some of which are on lands not under imminent threat of habitat destruction or degradation, e.g. national parks, conservation parks, nature reserves, State forest, unallocated Crown land, water reserves, etc. Species may be included if they are comparatively well known from one or more localities but do not meet adequacy of survey requirements and appear to be under threat from known threatening processes.
- P3**            **Priority Three - Poorly-known species:**  
Species that are known from collections or sight records from several localities not under imminent threat, or from few but widespread localities with either large population size or significant remaining areas of apparently suitable habitat, much of it not under imminent threat. Species may be included if they are comparatively well known from several localities but do not meet adequacy of survey requirements and known threatening processes exist that could affect them.
- P4**            **Priority Four - Rare, Near Threatened and other species in need of monitoring:**  
(a) Rare. Species that are considered to have been adequately surveyed, or for which sufficient knowledge is available, and that are considered not currently threatened or in need of special protection, but could be if present circumstances change. These species are usually represented on conservation lands.  
(b) Near Threatened. Species that are considered to have been adequately surveyed and that do not qualify for Conservation Dependent, but that are close to qualifying for Vulnerable.  
(c) Species that have been removed from the list of threatened species during the past five years for reasons other than taxonomy.
- P5**            **Priority Five - Conservation Dependent species:**  
Species that are not threatened but are subject to a specific conservation program, the cessation of which would result in the species becoming threatened within five years.