



# Clearing Permit Decision Report

## 1. Application details

### 1.1. Permit application details

Permit application No.: 6924/2  
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, Mining Lease 244SA (AML 70/244) Special Lease for Mining Operations 3116/3684, Crown Lease N088235, Newman Water Lease, Lot 351 on Deposited Plan 74327 pursuant to the Iron Ore (Mount Newman) Agreement Act 1964  
Local Government Area: Shire of East Pilbara  
Colloquial name: Ophthalmia Dam Maintenance Project

### 1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
40		Mechanical Removal	Maintenance to Ophthalmia Dam And All Associated Infrastructure

### 1.5. Decision on application

Decision on Permit Application: Grant  
Decision Date: 7 February 2019

## 2. Site Information

### 2.1. Existing environment and information

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

##### Vegetation Description

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

29: Sparse low woodland; mulga, discontinuous in scattered groups

A Level 2 Flora and Vegetation Survey of the application area was undertaken by Syrinx Environmental PL during the period 16 March and 19 – 27 March 2012. The vegetation survey identified the following ten vegetation associations of the application area:

1. *Acacia* High Shrubland - High Shrubland of *Acacia aptaneura*, *Acacia sclerosperma* subsp. *sclerosperma* and *Acacia ancistrocarpa* over Very Open Hummock Grassland of *Triodia pungens* on red brown sandy loam on floodplains and drainage lines.
2. *Acacia* Low Open Woodland - Low Open Woodland of *Acacia aptaneura*, *Acacia citrinoviridis* and *Acacia pruinocarpa* over Open Shrubland of *Acacia synchronicia*, *Acacia sclerosperma* subsp. *sclerosperma* and *Acacia bivenosa* over Very Open Hummock Grassland of *Triodia pungens* on red brown clay loam on floodplains and medium drainage lines.
3. *Acacia* Low Woodland - Low Woodland of *Acacia aptaneura*, *Acacia pruinocarpa* and *Acacia catenulata* subsp. *occidentalis* over Open Shrubland of *Eremophila forrestii* subsp. *forrestii*, *Dodonaea petiolaris* and *Sida ectogama* over Open Tussock Grassland of *Aristida contorta*, *Digitaria ammophila* and *Aristida inaequiglumis* on red orange clay loam on floodplains.
4. *Eucalyptus* Woodland - Woodland of *Eucalyptus camaldulensis* subsp. *refulgens* and *Eucalyptus victrix* over High Open Shrubland of *Acacia citrinoviridis*, *Acacia pyrifolia* var. *pyrifolia* and *Melaleuca glomerata* over Tussock Grassland of \**Cenchrus ciliaris*, *Eulalia aurea* and *Themeda triandra* on brown clay loam on banks of major drainage lines.
5. *Eucalyptus* Woodland - Woodland of *Eucalyptus victrix*, *Acacia citrinoviridis* and *Eucalyptus camaldulensis* subsp. *refulgens* over Low Open Shrubland of *Tephrosia rosea* var. *clementii*, *Corchorus crozophorifolius* and *Acacia pyrifolia* var. *pyrifolia* over Very Open Tussock Grassland of \**Cenchrus ciliaris*, *Eulalia aurea* and *Themeda triandra* on brown loamy sand on channels of major drainage lines.
6. *Frankenia* Low Open Shrubland - Low Open Shrubland of *Frankenia setosa* with Scattered Tussock Grasses of \**Cenchrus ciliaris* on red brown clay loam on saline flats.
7. *Triodia* Hummock Grassland - Hummock Grassland of *Triodia wiseana* with Low Open Woodland of *Eucalyptus leucophloia* subsp. *leucophloia*, *Corymbia hamersleyana* and *Hakea chordophylla* and

	<p>Open Shrubland of <i>Acacia ancistrocarpa</i>, <i>Acacia bivenosa</i> and <i>Acacia aptaneura</i> on red sandy loam on hill slopes.</p> <p>8. <i>Triodia</i> Hummock- Grassland - Hummock Grassland of <i>Triodia</i> sp. Shovelanna Hill (S. van Leeuwen3835) with High Open Shrubland of <i>Acacia inaequilatera</i> on red brown loamy sand on hill slopes and stony plains.</p> <p>9. <i>Triodia</i> Hummock- Grassland - Hummock Grassland of <i>Triodia wiseana</i> and <i>Triodia angusta</i> with Open Mallee of <i>Eucalyptus socialis</i> subsp. <i>eucentrica</i> and Open Shrubland of <i>Acacia bivenosa</i>, <i>Petalostylis labicheoides</i> and <i>Acacia pyrifolia</i> var. <i>pyrifolia</i> on light brown clay loam on calcrete plains and rises.</p> <p>10. <i>Typha</i> Sedges - Sedges of <i>Typha domingensis</i> and <i>Cyperus vaginatus</i> with Open Woodland of <i>Eucalyptus camaldulensis</i> subsp. <i>refulgens</i> and <i>Eucalyptus victrix</i> over Low Open Woodland of <i>Acacia citrinoviridis</i> and <i>Acacia coriacea</i> subsp. <i>pendens</i> on brown clayey sand on permanent pools along major drainage lines.</p>
<b>Clearing Description</b>	<p>Ophthalmia Dam Maintenance Project.</p> <p>BHP Billiton Iron Ore Pty Ltd (BHP Billiton) proposes to clear 40 hectares of native vegetation within a boundary of 235.7 hectares for the purposes of maintenance to Ophthalmia Dam and all associated infrastructure. The project is located approximately 8 kilometres east of Newman in the Shire of East Pilbara.</p>
<b>Vegetation Condition</b>	<p>Very Good: Vegetation structure altered; obvious signs of disturbance (Keighery, 1994);</p> <p>To</p> <p>Completely Degraded: No longer intact; completely/almost completely without native species (Keighery, 1994).</p>
<b>Comment</b>	<p>Where possible existing cleared tracks will be used to cross surface water features. Where it is necessary for new crossings to be installed, clearing will be kept to a minimum and will be constructed flat level to the surface to maintain the natural surface water flow (BHP Billiton, 2016).</p> <p>Clearing permit 6924/1 was granted by the Department of Mines and Petroleum on 24 March 2016. The clearing permit authorised the clearing of 35 hectares of native vegetation within a total boundary of approximately 189.4 hectares for the purpose of maintenance to Ophthalmia dam and all associated activities.</p> <p>BHP Billiton has applied to amend CPS 6924/1 for the purpose of increasing the amount of approved clearing, the permit boundary and to include additional tenure.</p>

### 3. Assessment of application against Clearing Principles

#### Comments

BHP Billiton has applied to amend CPS 6924/1 for the purpose of increasing the amount of approved clearing by five hectares, increase the permit boundary by 46.3 hectares and include additional tenure.

The application area is located within the Gascoyne Interim Biogeographic Regionalisation of Australia (IBRA) bioregion in which approximately 99.95% of the pre-European extent of vegetation remains in Western Australia (Government of Western Australia, 2014; GIS Database). This region is described as rugged, low Proterozoic sedimentary and granite ranges divided by broad flat valleys (CALM, 2002). Although the Gascoyne River System provides the main drainage of this sub-region, it is also the headwaters of the Ashburton and Fortescue Rivers. The area also contains extensive areas of alluvial valley-fill deposits. Mulga woodland with *Triodia* occurs on shallow stony loams on rises, while the shallow earthy loams over hardpan on the plains are covered by Mulga parkland (CALM, 2002). The vegetation of the Gascoyne bioregion is well represented in Western Australia and is considered to be of least concern with regards to conservation status (Department of Natural Resources and Environment, 2002).

A flora survey was undertaken by Syrinx (2012) of the broader Orebody 37 study area (comprising the western portion of the application area) which identified a total of 13 vegetation associations (survey area 2,862 hectares) (Syrinx, 2012). A total of 310 species were identified, representing 46 families and 139 genera in the Orebody 37 study area (Syrinx, 2012). An earlier and broader flora survey (survey area 1,549.36 hectares) was also undertaken in November 2010 by ENV Australia Pty Ltd (ENV) (which comprised the eastern portion of the application area). This survey recorded a total of 145 taxa, representing 70 genera and 31 families (ENV, 2011). However, within the Ophthalmia Dam application area (235.7 hectares) a reduced number of taxa would be present. No species of Threatened or Priority flora were recorded in the application area during either of the flora surveys (Syrinx, 2012; ENV, 2011; BHP Billiton, 2016).

One Threatened Ecological Community (TEC) occurs within the application area, and is adjacent to the proposed amendment area (GIS Database). The boundary of the 'Ethel Gorge Aquifer Stygobiont Community' TEC is located over the majority of the application area, however only the buffer is present over the amendment area (GIS Database). The TEC covers a large area (3,743.19 hectares) and is associated with subterranean biota occurring in the groundwater aquifer. The proposed clearing is not likely to impact on groundwater ecosystems or subterranean biota associated with the TEC (BHP Billiton, 2016). No Priority Ecological Communities (PEC's) were identified in either of the flora surveys undertaken of the application area (BHP Billiton, 2016).

In the past, several fauna surveys were undertaken of the application area and surrounding areas. The most recent and crucial being the 'Ophthalmia Dam Avian Fauna Survey' undertaken by MWH in 2015. This survey was completed over a broad area, approximately 4,316 hectares in size. A total of 124 avifauna species were

recorded during the field survey (MWH, 2015). The majority of fauna habitat located within the amendment area was major drainage line habitat which accounts for the large number of avifauna species recorded. No Threatened fauna were recorded in the amendment area as part of the fauna survey (BHP Billiton, 2016).

The amendment area does not lie within any conservation areas or Department of Biodiversity, Conservation and Attractions managed lands (BHP Billiton, 2016; GIS Database). The nearest conservation area is Karijini National Park which is located approximately 130 kilometres north-east of the application area (GIS Database). As this conservation area is located a considerable distance from the application area, the proposed clearing is not likely to have any impacts on the environmental values of adjacent or nearby conservation areas.

The amendment area is located within the Newman Water Reserve Public Drinking Water Source Area (PDWSA) (GIS Database). This PDWSA has been assigned a Priority 1 rating under the Water Source Protection Classification system. Previous advice from the Department of Water (DoW) (now the Department of Water and Environmental Regulation (DWER)) (2016) noted that BHP Billiton is the water service provider for this water source and that for the benefit of the community, planning decisions on proposed land uses in the reserve need to be carefully considered. It was noted that that clearing activities associated with mineral production are compatible with conditions within a Priority 1 PDWSA (DoW, 2016). The DoW advise that provided activities are carried out in accordance with DoW advice and guidelines, the proposed clearing is not likely to have a significant impact on the quality or quantity of groundwater (DoW, 2016).

The amendment application has been assessed against the clearing principles, planning instruments and other matters in accordance with s.51O of the *Environmental Protection Act 1986*. Environmental information has been reviewed, and the assessment of the proposed clearing against the clearing principles remains consistent with the assessment contained in decision report CPS 6924/1.

#### Methodology

BHP Billiton (2016)  
CALM (2002)  
Department of Natural Resources and Environment (2002)  
DoW (2016)  
ENV (2011)  
MWH (2015)  
Syrinx (2012)

GIS Database:

- DPaW Tenure
- Hydrography, Lakes
- Hydrography, Linear
- IBRA Australia
- Imagery
- Landsystem Rangelands
- Pre-European Vegetation
- Public Drinking Water Source Areas
- Soils, Statewide
- Threatened and Priority Ecological Communities boundaries
- Threatened and Priority Ecological Communities buffers
- Threatened and Priority Flora
- Threatened Fauna

#### Planning Instrument, Native Title, previous EPA decision or other matter.

##### Comments

There is one Native Title claim (WC2005/006) over the area under application (DPLH, 2019). 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 several registered Aboriginal Sites of Significance within the application area (DPLH, 2019). 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 Water and Environmental Regulation and the Department of Biodiversity, Conservation and Attractions, 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 amendment application was advertised on 17 December 2018 by the Department of Mines, Industry Regulation and Safety inviting submissions from the public. No submissions were received in relation to this application.

#### 4. References

- BHP Billiton (2016) Ophthalmia Dam Native Vegetation Clearing Permit Application Supporting Document for Ophthalmia Dam Maintenance, January 2016. BHP Billiton Iron Ore Pty Ltd, Perth, Western Australia.
- CALM (2002) A Biodiversity Audit of Western Australia's 53 Biogeographical Subregions. Gascoyne (GAS3 – Augustus subregion) Department of Conservation and Land Management, Perth, 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.
- DPLH (2018) Aboriginal Heritage Enquiry System. Department of Planning, Lands and Heritage.  
<http://maps.daa.wa.gov.au/AHIS/> (Accessed 29 January 2019).
- DoW (2016) Advice received in relation to Clearing Permit Application CPS6924/1 Land Use Planning/Approvals, Department of Water, Department of Water, Western Australia, March 2016.
- ENV (2011) Orebody 42/43 Flora, Vegetation and Fauna Assessment, Prepared for BHP Billiton Iron Ore, by ENV Australia Pty Ltd, Perth, Western Australia, 24 June 2011.
- Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.
- MWH (2015) Ophthalmia Dam Avian Fauna Survey Report, Prepared by BHP Billiton by MWH, Perth, Western Australia, April 2015.
- Syrinx (2012) Technical Report, Orebody 37 Flora and Vegetation Assessment for BHP Billiton Iron Ore, Syrinx Environmental PL, Perth, Western Australia, September 2012.

#### 5. Glossary

##### Acronyms:

<b>BoM</b>	Bureau of Meteorology, Australian Government
<b>DAA</b>	Department of Aboriginal Affairs, Western Australia (now DPLH)
<b>DAFWA</b>	Department of Agriculture and Food, Western Australia (now DPIRD)
<b>DBCA</b>	Department of Biodiversity, Conservation and Attractions, Western Australia
<b>DEC</b>	Department of Environment and Conservation, Western Australia (now DBCA and DWER)
<b>DEE</b>	Department of the Environment and Energy, Australian Government
<b>DER</b>	Department of Environment Regulation, Western Australia (now DWER)
<b>DMIRS</b>	Department of Mines, Industry Regulation and Safety, Western Australia
<b>DMP</b>	Department of Mines and Petroleum, Western Australia (now DMIRS)
<b>DPIRD</b>	Department of Primary Industries and Regional Development, Western Australia
<b>DPLH</b>	Department of Planning, Lands and Heritage, Western Australia
<b>DRF</b>	Declared Rare Flora
<b>DoE</b>	Department of the Environment, Australian Government (now DEE)
<b>DoW</b>	Department of Water, Western Australia (now DWER)
<b>DPaW</b>	Department of Parks and Wildlife, Western Australia (now DBCA)
<b>DSEWPac</b>	Department of Sustainability, Environment, Water, Population and Communities (now DEE)
<b>DWER</b>	Department of Water and Environmental Regulation, Western Australia
<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 – commonly known as the World Conservation Union
<b>PEC</b>	Priority Ecological Community, Western Australia
<b>RIWI Act</b>	<i>Rights in Water and Irrigation Act 1914</i> , Western Australia
<b>TEC</b>	Threatened Ecological Community

##### Definitions:

- T**            **Threatened species:**  
Published as Specially Protected under the *Wildlife Conservation Act 1950*, listed under Schedules 1 to 4 of the Wildlife Conservation (Specially Protected Fauna) Notice for Threatened Fauna and Wildlife Conservation (Rare Flora) Notice for Threatened Flora (which may also be referred to as Declared Rare Flora).  
  
*Threatened fauna* is that subset of 'Specially Protected Fauna' declared to be 'likely to become extinct' pursuant to section 14(4) of the *Wildlife Conservation Act 1950*.  
  
*Threatened flora* is flora that has been declared to be 'likely to become extinct or is rare, or otherwise in need of special protection', pursuant to section 23F(2) of the *Wildlife Conservation Act 1950*.  
  
The assessment of the conservation status of these species is based on their national extent and ranked according to their level of threat using IUCN Red List categories and criteria as detailed below.
- CR**            **Critically endangered species**  
Threatened species considered to be facing an extremely high risk of extinction in the wild. Published as Specially Protected under the *Wildlife Conservation Act 1950*, in Schedule 1 of the Wildlife Conservation (Specially Protected Fauna) Notice for Threatened Fauna and Wildlife Conservation (Rare Flora) Notice for Threatened Flora.
- EN**            **Endangered species**  
Threatened species considered to be facing a very high risk of extinction in the wild. Published as Specially Protected under the *Wildlife Conservation Act 1950*, in Schedule 2 of the Wildlife Conservation (Specially Protected Fauna) Notice for Threatened Fauna and Wildlife Conservation (Rare Flora) Notice for Threatened Flora.
- VU**            **Vulnerable species**  
Threatened species considered to be facing a high risk of extinction in the wild. Published as Specially Protected under the *Wildlife Conservation Act 1950*, in Schedule 3 of the Wildlife Conservation (Specially Protected Fauna) Notice for Threatened Fauna and Wildlife Conservation (Rare Flora) Notice for Threatened Flora.
- EX**            **Presumed extinct species**  
Species which have been adequately searched for and there is no reasonable doubt that the last individual has died. Published as Specially Protected under the *Wildlife Conservation Act 1950*, in Schedule 4 of the Wildlife Conservation (Specially Protected Fauna) Notice for Presumed Extinct Fauna and Wildlife Conservation (Rare Flora) Notice for Presumed Extinct Flora.
- IA**            **Migratory birds protected under an international agreement**  
Birds that are subject to an agreement between the government of Australia and the governments of Japan (JAMBA), China (CAMBA) and The Republic of Korea (ROKAMBA), and the Bonn Convention, relating to the protection of migratory birds. Published as Specially Protected under the *Wildlife Conservation Act 1950*, in Schedule 5 of the Wildlife Conservation (Specially Protected Fauna) Notice.
- CD**            **Conservation dependent fauna**  
Fauna of special conservation need being species dependent on ongoing conservation intervention to prevent it becoming eligible for listing as threatened. Published as Specially Protected under the *Wildlife Conservation Act 1950*, in Schedule 6 of the Wildlife Conservation (Specially Protected Fauna) Notice.
- OS**            **Other specially protected fauna**  
Fauna otherwise in need of special protection to ensure their conservation. Published as Specially Protected under the *Wildlife Conservation Act 1950*, in Schedule 7 of the Wildlife Conservation (Specially Protected Fauna) Notice.
- P**              **Priority species**  
Species which are poorly known; or  
Species that are adequately known, are rare but not threatened, and require regular monitoring. Assessment of Priority codes is based on the Western Australian distribution of the species, unless the distribution in WA is part of a contiguous population extending into adjacent States, as defined by the known spread of locations.
- P1**            **Priority One - Poorly-known species:**  
Species that are known from one or a few locations (generally five or less) which are potentially at risk. All occurrences are either: very small; or on lands not managed for conservation, e.g. agricultural or pastoral lands, urban areas, road and rail reserves, gravel reserves and active mineral leases; or otherwise under threat of habitat destruction or degradation. Species may be included if they are comparatively well known from one or more locations but do not meet adequacy of survey requirements and appear to be under immediate threat from known threatening processes. Such species are in urgent need of further survey.
- P2**            **Priority Two - Poorly-known species:**

Species that are known from one or a few locations (generally five or less), some of which are on lands managed primarily for nature conservation, e.g. national parks, conservation parks, nature reserves and other lands with secure tenure being managed for conservation. Species may be included if they are comparatively well known from one or more locations but do not meet adequacy of survey requirements and appear to be under threat from known threatening processes. Such species are in urgent need of further survey.

**P3 Priority Three - Poorly-known species:**

Species that are known from several locations, and the species does not appear to be under imminent threat, or from few but widespread locations 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 locations but do not meet adequacy of survey requirements and known threatening processes exist that could affect them. Such species are in need of further survey.

**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 are close to qualifying for Vulnerable, but are not listed as Conservation Dependent.

(c) Species that have been removed from the list of threatened species during the past five years for reasons other than taxonomy.

**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.