



Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 4677/3
Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: BHP Billiton Iron Ore Pty Ltd

1.3. Property details

Property: Iron Ore (Mount Newman) Agreement Act 1964, Mineral Lease 244SA (AML 70/244)
Local Government Area: Shire of East Pilbara
Colloquial name: Orebody 31 Exploration Drilling Programme

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
200		Mechanical Removal	Mineral exploration, hydrological investigations and associated infrastructure

1.5. Decision on application

Decision on Permit Application: Grant
Decision Date: 8 December 2016

2. Site Information

2.1. Existing environment and information

2.1.1. Description of the native vegetation under application

Vegetation Description Beard vegetation associations have been mapped for the whole of Western Australia and are useful to look at vegetation in a regional context. The following Beard vegetation associations have been broadly mapped within the application area (GIS Database):

82: Hummock grasslands, low tree steppe; snappy gum over *Triodia wiseana*; and
216: Low woodland; mulga (with spinifex) on rises.

A flora and vegetation survey of the application area undertaken in October 2013 identified the following vegetation associations within this area (Onshore Environmental, 2014):

- 1a:** Low open forest (to low woodland) of *Acacia aptaneura*, *Acacia paraneura* and *Eucalyptus leucophloia* subsp. *leucophloia* over open scrub (to high shrubland) of *Acacia balsamea*, *Acacia wanyu* and *Acacia monticola* over open hummock grassland of *Triodia pungens* forming mulga groves on flood plains and on minor drainage lines through undulating ironstone ridges, hills and valleys;
- 1b:** Low open forest of *Acacia aptaneura*, *Acacia paraneura* and *Eucalyptus leucophloia* subsp. *leucophloia* over open scrub of *Acacia wanyu*, *Acacia tetragonophylla* and *Acacia bivenosa* over open hummock grassland of *Triodia pungens* and *Triodia* sp. Shovelanna Hill on minor drainage lines through undulating ironstone ridges, hills and valleys;
- 2a:** Low woodland of *Acacia aptaneura*, *Acacia catenulata* subsp. *occidentalis* and *Acacia ayersiana* over high shrubland of *Acacia subcontorta* over open hummock grassland of *Triodia basedowii* on stony loam plains;
- 2b:** Low woodland of *Acacia citrinoviridis*, *Eucalyptus victrix* and *Acacia pruinocarpa* over high shrubland of *Acacia monticola*, *Acacia pyrifolia* var. *pyrifolia* and *Petalostylis labicheoides* over open tussock grassland of *Themeda triandra* and *Eriachne tenuiculmis* on medium drainage lines;
- 3:** Closed scrub (to closed low forest) of *Acacia pteraneura* and *Corymbia aspera* over tussock grassland of *Panicum effusum* and *Eragrostis flaccida* and open shrubland of *Eremophila fraseri* on gilgai drainage zones and flats;
- 4a:** Open scrub of *Acacia ancistrocarpa*, *Acacia bivenosa* and *Acacia tenuissima* over hummock grassland of *Triodia pungens* with low open mallee of *Eucalyptus gamophylla* on drainage lines and drainage zones;
- 4b:** Open scrub of *Acacia monticola* and *Grevillea wickhamii* subsp. *hispidula* over open hummock grassland of *Triodia pungens* and *Triodia* sp. Shovelanna Hill with scattered low trees of *Corymbia deserticola* subsp. *deserticola*, *Corymbia hamersleyana* and *Eucalyptus leucophloia* subsp. *leucophloia* on minor drainage lines dissecting low hills and foot slopes;
- 5a:** High shrubland of *Acacia ancistrocarpa*, *Acacia adsurgens* and *Acacia elachantha* over open hummock grassland of *Triodia schinzii* and open tussock grassland of *Aristida inaequiglumis*, *Eulalia aurea* and *Digitaria brownii* on foot slopes;
- 5b:** High shrubland of *Acacia ancistrocarpa*, *Acacia adsurgens* and *Acacia elachantha* over open tussock grassland of *Themeda triandra*, *Aristida holathera* var. *holathera* and *Paraneurachne muelleri* with low open woodland of *Corymbia hamersleyana*, *Corymbia aspera* and *Hakea lorea* subsp. *lorea* on sandy drainage zones and floodplains;
- 5c:** High shrubland of *Acacia balsamea*, *Acacia wanyu* and *Acacia tetragonophylla* over open shrubland of *Senna glutinosa* subsp. *x luerssenii*, *Eremophila platycalyx* and *Senna stricta* over open hummock grassland of *Triodia pungens* and *Triodia* sp. Shovelanna Hill on undulating plateaux and hill slopes;

- 6: High open shrubland of *Acacia aptaneura* and *Acacia paraneura* over scattered tussock grasses of *Aristida contorta* and *Aristida inaequiglumis* and scattered hummock grasses of *Triodia basedowii* and *Triodia pungens* on clay loam flats and stony plains;
- 7: Shrubland of *Acacia wanyu*, *Acacia tetragonophylla* and *Senna glutinosa* subsp. x *luerssenii* over low shrubland of *Senna stricta*, *Eremophila cuneifolia* and *Scaevola spinescens* over open hummock grassland of *Triodia pungens* and *Triodia* sp. Shovelanna Hill on undulating hills, ironstone ridges and valleys;
- 8: Low shrubland of *Eremophila compacta*, *Eremophila cuneifolia* and *Lepidium platypetalum* with low open woodland of *Acacia aptaneura* and *Acacia paraneura* and high open shrubland of *Acacia wanyu* and *Senna glutinosa* subsp. x *luerssenii* on low hill crests and slopes;
- 9: Low shrubland of *Sclerolaena cuneata*, *Frankenia setosa* and *Eremophila cuneifolia* with open shrubland of *Acacia synchronicia* and scattered low trees of *Acacia aptaneura* and *Acacia paraneura* on gently sloping plains;
- 10a: Hummock grassland of *Triodia angusta* and *Triodia pungens* with shrubland of *Acacia bivenosa* and low open mallee of *Eucalyptus socialis* subsp. *eucentrica* and *Eucalyptus gamophylla* on low calccrete hills and rises;
- 10b: Hummock grassland of *Triodia angusta* with open shrubland of *Acacia synchronicia*, *Acacia tetragonophylla* and *Acacia wanyu* over low open shrubland of *Eremophila cuneifolia*, *Lepidium platypetalum* and *Maireana pyramidata* on undulating hills, ironstone ridges and eroded slopes;
- 10c: Hummock grassland of *Triodia basedowii* and *Triodia pungens* with high shrubland (to open scrub) of *Acacia ancistrocarpa*, *Acacia pyriformis* var. *pyrifolia* and *Acacia bivenosa* and low open woodland of *Corymbia hamersleyana* on sandy floodplains and levee banks;
- 10d: Hummock grassland of *Triodia basedowii* with low open woodland of *Corymbia hamersleyana*, *Hakea lorea* subsp. *lorea* and high open shrubland of *Acacia ancistrocarpa*, *Acacia pachyacra* and *Acacia bivenosa* on stony sand plains;
- 10e: Hummock grassland of *Triodia basedowii* with low woodland of *Acacia pteraneura* over open shrubland of *Eremophila forrestii* subsp. *forrestii* and *Senna glutinosa* ssp. x *luerssenii* on sandy loam plains;
- 10f: Hummock grassland of *Triodia basedowii*, *Triodia pungens* and *Triodia* sp. Shovelanna Hill with low woodland of *Acacia aptaneura*, *Acacia pruinocarpa* and *Acacia paraneura* over shrubland of *Eremophila fraseri* and *Eremophila forrestii* subsp. *forrestii* on sandy drainage zones;
- 10g: Hummock grassland of *Triodia pungens* with high shrubland of *Acacia ancistrocarpa* and *Acacia tenuissima* with low open woodland of *Eucalyptus xerothermica*, *Corymbia aspera* and *Corymbia hamersleyana* on clay loam drainage zones;
- 10h: Hummock grassland of *Triodia pungens* with shrubland (to open scrub) of *Acacia pyriformis* var. *pyrifolia*, *Gossypium robinsonii* and *Acacia maitlandii* with low open woodland of *Corymbia hamersleyana* on sandy floodplain and levee banks;
- 10i: Hummock grassland of *Triodia* sp. Shovelanna Hill and *Triodia pungens* with high shrubland of *Acacia rhodophloia* and low shrubland of *Eremophila exilifolia* on ironstone hill slopes;
- 10j: Hummock grassland of *Triodia* sp. Shovelanna Hill with high shrubland of *Acacia ancistrocarpa*, *Grevillea wickhamii* subsp. *hispidula* and *Acacia bivenosa* over low open shrubland of *Acacia hilliana* on foot slopes;
- 10k: Hummock grassland of *Triodia* sp. Shovelanna Hill with high shrubland of *Acacia wanyu*, *Acacia bivenosa* and *Grevillea wickhamii* subsp. *hispidula* over open shrubland of *Senna glutinosa* subsp. x *luerssenii* on foot slopes and lower hill slopes;
- 10l: Hummock grassland of *Triodia* sp. Shovelanna Hill with low shrubland of *Acacia hilliana*, *Acacia adoxa* var. *adoxo* and *Halganina solanacea* with high open shrubland of *Grevillea wickhamii* subsp. *hispidula*, *Acacia marramamba* and *Grevillea berryana* on hill crests and slopes;
- 11a: Open hummock grassland of *Triodia basedowii* and *Triodia pungens* over open tussock grassland of *Aristida inaequiglumis*, *Themeda triandra* and *Digitaria brownii* with low open woodland of *Corymbia hamersleyana* on loamy drainage zones adjacent to floodplains;
- 11b: Open hummock grassland of *Triodia basedowii* and *Triodia* sp. Shovelanna Hill with low open woodland of *Acacia aptaneura*, *Acacia pruinocarpa* and *Corymbia hamersleyana* and high open shrubland of *Eremophila platycalyx*, *Acacia wanyu* and *Acacia synchronicia* on stony rises, plains and foot slopes;
- 11c: Open hummock grassland of *Triodia pungens* and *Triodia* sp. Shovelanna Hill with low open woodland of *Corymbia ferriticola* and *Eucalyptus leucophloia* subsp. *leucophloia* and open shrubland of *Astrotricha hamptonii*, *Dodonaea pachyneura* and *Acacia maitlandii* on faces of large open ravines and occasionally cliffs;
- 12: Closed tussock grassland of *Themeda triandra* and *Eulalia aurea* with low open woodland of *Hakea lorea* subsp. *lorea*, *Acacia aptaneura* and *Corymbia aspera* and open shrubland of *Acacia pyriformis* var. *pyrifolia* and *Acacia ancistrocarpa* on plains and drainage zones;
- 13a: Tussock grassland of *Themeda triandra*, *Digitaria brownii* and *Aristida inaequiglumis* with low woodland of *Acacia aptaneura* and *Corymbia hamersleyana* and very open hummock grassland of *Triodia basedowii* on clay drainage zones and floodplains;
- 13b: Tussock grassland of *Themeda triandra*, *Eulalia aurea* and *Digitaria brownii* with low open woodland (to low woodland) of *Acacia aptaneura* and *Acacia paraneura* and open shrubland of *Eremophila fraseri* on floodplains;
- 13c: Tussock grassland of *Themeda triandra*, *Eulalia aurea* and *Digitaria brownii* with low woodland (to low open woodland) of *Acacia aptaneura*, *Eucalyptus xerothermica* and *Corymbia hamersleyana* and low open shrubland of *Isotropis forrestii* and *Ptilotus obovatus* on drainage zones and flats;
- 14: Tussock grassland of *Eragrostis eriopoda*, *Paraneurachne muelleri* and *Aristida contorta* with low open woodland of *Corymbia hamersleyana*, *Hakea lorea* subsp. *lorea* and *Corymbia aspera* and open shrubland of *Acacia melleodora* and *Senna artemisioides* subsp. *oligophylla* on gently sloping sandy loam plains;
- 15: Tussock grassland of *Cenchrus ciliaris* with low open woodland of *Acacia citrinoviridis*, *Acacia aptaneura* and *Corymbia hamersleyana* and high shrubland of *Gossypium robinsonii*, *Acacia pyriformis* var. *pyrifolia* and *Petalostylis labicheoides* on sandy floodplain.

Clearing Description

Orebody 31 Exploration Drilling Programme
BHP Billiton Iron Ore Pty Ltd proposes to clear up to 200 hectares of native vegetation within a total boundary of approximately 3,010 hectares, for the purpose of mineral exploration, hydrological investigations and associated activities. The project is located approximately 37 kilometres east of Newman, in the Shire of East Pilbara.

Vegetation Condition

Excellent: Vegetation structure intact; disturbance affecting individual species, weeds non-aggressive (Keighery, 1994);

To

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

Comment Clearing permit CPS 4677/1 was granted by the Department of Mines and Petroleum (DMP) on 8 December 2011 and was valid from 31 December 2011 to 31 December 2021. The permit authorised the clearing of 102 hectares of native vegetation within a permit boundary of approximately 3,039 hectares. Amended permit CPS 4677/2 was granted on 5 June 2014, increasing the amount of clearing authorised to 200 hectares, decreasing the permit boundary to approximately 3,010 hectares to avoid areas of environmental significance, and changing the permit expiry date to 30 November 2021 to align with other permits.

On 14 November 2016, the Permit Holder applied to amend CPS 4677/2 to extend the permit duration to 30 November 2026, and to extend the period within which clearing is authorised to 30 November 2021. The area of clearing authorised and the permit boundaries remain unchanged.

3. Assessment of application against clearing principles

Comments

BHP Billiton Iron Ore Pty Ltd has applied to amend the permit, to extend the permit duration to 30 November 2026. The size of the area approved to clear (200 hectares) and the permit boundaries remain unchanged.

The amendment to extend the permit duration by five years is unlikely to result in any significant change to the environmental impacts of the proposed clearing (GIS Database).

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 reports CPS 4677/1 and 4677/2.

Methodology

GIS Database:

- Hydrography, linear
- Pre-European Vegetation
- Threatened and Priority Flora
- Threatened and Priority Ecological Communities (TEC/PEC) - Boundaries
- 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 (DAA, 2016). 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 (DAA, 2016; 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 Parks and Wildlife and the Department of Water, to determine whether a Works Approval, Water Licence, Bed and Banks permit, or any other licences or approvals are required for the proposed works.

Methodology

DAA (2016)

GIS Database:

- Aboriginal Sites Register System

4. References

- DAA (2016) Aboriginal Heritage Enquiry System. Department of Aboriginal Affairs. <http://maps.dia.wa.gov.au/AHIS2/> (Accessed 29 November 2016).
- Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.
- Onshore Environmental (2014) Orebody 31 Level 2 Flora and Vegetation Survey. Report prepared for BHP Billiton Iron Ore Pty Ltd, by Onshore Environmental Consultants Pty Ltd, February 2014.

5. Glossary

Acronyms:

BoM	Bureau of Meteorology, Australian Government
DAA	Department of Aboriginal Affairs, Western Australia
DAFWA	Department of Agriculture and Food, Western Australia
DEC	Department of Environment and Conservation, Western Australia (now DPaW and DER)
DEE	Department of the Environment and Energy, Australian Government
DER	Department of Environment Regulation, Western Australia
DMP	Department of Mines and Petroleum, Western Australia
DRF	Declared Rare Flora
DoE	Department of the Environment, Australian Government (now DEE)
DoW	Department of Water, Western Australia
DPaW	Department of Parks and Wildlife, Western Australia
DSEWPaC	Department of Sustainability, Environment, Water, Population and Communities (now DEE)
EPA	Environmental Protection Authority, Western Australia
EP Act	<i>Environmental Protection Act 1986</i> , Western Australia
EPBC Act	<i>Environment Protection and Biodiversity Conservation Act 1999</i> (Federal Act)
GIS	Geographical Information System
ha	Hectare (10,000 square metres)
IBRA	Interim Biogeographic Regionalisation for Australia
IUCN	International Union for the Conservation of Nature and Natural Resources – commonly known as the World Conservation Union
PEC	Priority Ecological Community, Western Australia
RIWI Act	<i>Rights in Water and Irrigation Act 1914</i> , Western Australia
TEC	Threatened Ecological Community

Definitions:

{DPaW (2015) Conservation Codes for Western Australian Flora and Fauna. Department of Parks and Wildlife, Western Australia}:-

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.

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.

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

- 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.