Government of **Western Australia**
Department of **Mines and Petroleum**

Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 2527/4
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 (AML 70/244)
Local Government Area: Shire of East Pilbara
Colloquial name: Orebody 17 Exploration Project

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
100		Mechanical Removal	Mineral exploration, construction of access tracks, water pipelines and ammonium nitrate storage facility

1.5. Decision on application

Decision on Permit Application: Grant
Decision Date: 30/07/2015

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 are located within the application area (GIS Database):

82: Hummock grasslands, low tree steppe; Snappy Gum over *Triodia wiseana*; and
216: Low woodland; Mulga (with spinifex) over rises.

Vegetation mapping which compiled the findings of previous flora surveys in the area was conducted by Onshore Environmental (2013). A total of nine broad floristic communities with 17 vegetation associations were mapped to occur within the application area:

***Triodia* Hummock Grassland**
DL2: *Eucalyptus trivalvis* low open woodland over *Acacia bivenosa*, *Acacia ancistrocarpa*, *Acacia adsurgens*, *Acacia dictyophleba*, *Acacia tenuissima* shrubland over *Triodia pungens* hummock grassland.

FP5: *Corymbia hamersleyana* scattered low trees over *Acacia ancistrocarpa*, *Acacia dictyophleba* open shrubland over *Triodia basedowii* hummock grassland.

FS2: *Triodia basedowii* hummock grassland.

HC1: *Corymbia hamersleyana*, *Eucalyptus kingsmillii* low open woodland over *Acacia maitlandii*, *Petalostylis labicheoides*, *Mirbelia viminalis*, *Eremophila exilifolia* shrubland over *Acacia hilliana*, *Acacia adoxa*, *Waltheria virgata* low shrubland over *Triodia pungens* hummock grassland.

HC4: *Eucalyptus leucophloia* scattered low trees over *Eremophila latrobei* subsp. *filiformis*, *Eremophila latrobei* subsp. *glabra*, *Senna artemisioides* subsp. *stricta*, *Senna glutinosa* subsp. *pruinosa* open shrubland over *Acacia hilliana*, *Acacia adoxa*, *Dodonaea coriacea* low shrubland over *Triodia basedowii* open hummock grassland.

HS3: *Acacia aneura*, *Acacia pruinocarpa*, *Acacia wanyu* low open woodland over *Senna glutinosa* subsp. *glutinosa*, *Dodonaea viscosa*, *Eremophila forrestii* x *latrobei* open shrubland over *Sida excedentifolia*, *Gompholobium oreophilum* low open shrubland over *Triodia basedowii* open hummock grassland over *Eriachne mucronata* open grassland.

***Corymbia* Low Woodland**
DL3: *Corymbia hamersleyana*, *Eucalyptus gamophylla* low woodland over *Petalostylis labicheoides*, *Gossypium robinsonii* open scrub over *Acacia monticola*, *Senna glutinosa* subsp. *glutinosa shrubland* over *Scaevola parvifolia*, *Isotropis atropurpurea* low open shrubland.

***Eucalyptus* Low Woodland**
GG3: *Eucalyptus leucophloia*, *Acacia aneura* low woodland over *Senna artemisioides* subsp. *artemisioides*, *Eremophila latrobei*, *Dodonaea pachyneura* open shrubland over *Sida excedentifolia*, *Eremophila cuneifolia* low shrubland over *Eriachne mucronata* open grassland over *Triodia pungens* open hummock grassland.

***Goodenia* Low Shrubland**
FS4: *Eucalyptus gamophylla*, *Corymbia hamersleyana* scattered low trees over *Hakea lorea* subsp. *lorea* scattered shrubs over *Goodenia* sp. 'Sandy Creek' low shrubland over *Fimbristylis simulans* open herbland.

HS1: *Eucalyptus leucophloia*, *Corymbia hamersleyana*, *Corymbia deserticola* low open woodland over *Petalostylis labicheoides* open shrubland over *Goodenia stobbsiana*, *Dampiera candicans* low shrubland over *Eriachne lanata* open grassland over *Triodia basedowii* open hummock grassland.

HS4: *Eucalyptus leucophloia*, *Corymbia hamersleyana* low open woodland over *Halgania solanacea*, *Goodenia* sp. 'Sandy Creek', *Gompholobium oreophilum* low shrubland over *Eriachne lanata*, *Eriachne mucronata* open grassland over *Triodia basedowii* open hummock grassland over *Fimbristylis simulans* open herbland.

***Themeda* Closed Grassland**
FP3: *Corymbia hamersleyana* low open woodland over *Rulingia luteiflora*, *Acacia* spp. open shrubland over *Bonamia rosea*, *Indigofera georgei*, *Isotropis forrestii*, *Scaevola parvifolia* subsp. *pilbarae* low open shrubland over *Themeda triandra*, *Aristida holathera*, *Paraneurachne muelleri*, *Chrysopogon fallax* closed grassland.

***Aristida* Grassland**
FP4: *Corymbia hamersleyana* scattered low trees over *Acacia ancistrocarpa*, *Acacia dictyophleba*, *Acacia monticola*, *Rulingia luteiflora* open shrubland over *Scaevola parvifolia*, *Sida cardiophylla*, *Bonamia rosea*, *Isotropis atropurpurea* low shrubland over *Paraneurachne muelleri*, *Aristida holathera*, *Eragrostis eriopoda*, **Cenchrus ciliaris* grassland.

FS5: *Corymbia hamersleyana* low open woodland over *Hakea lorea* subsp. *lorea* scattered shrubs over *Grevillea wickhamii*, *Ptilotus calostachyus* shrubland over *Goodenia* sp. 'Sandy Creek', *Gompholobium oreophilum*, *Grevillea wickhamii*, *Acacia hilliana*, *Acacia adoxa* low shrubland over *Paraneurachne muelleri*, *Aristida holathera* grassland.

***Aristida* Closed Grassland**
FP6: *Corymbia hamersleyana* low open woodland over *Acacia ancistrocarpa*, *Acacia dictyophleba*, *Grevillea wickhamii*, *Gossypium robinsonii* open shrubland over *Bonamia rosea*, *Indigofera georgei*, *Ptilotus obovatus*, *Scaevola parvifolia* subsp. *pilbarae* low open shrubland over *Paraneurachne muelleri*, *Aristida holathera*, *Themeda triandra* closed grassland.

***Senna* Low Shrubland**
FS7: *Acacia aneura*, *Acacia wanyu* low open woodland over *Senna stricta*, *Eremophila cuneifolia* low shrubland over *Triodia basedowii* open hummock grassland over *Aristida contorta* open grassland.

***Sida* Low Shrubland**
GG1: *Eucalyptus leucophloia*, *Ficus brachypoda*, *Acacia aneura* (+/- *Eucalyptus kingsmillii*) low open woodland over *Petalostylis labicheoides*, *Gossypium robinsonii* high open shrubland over *Grevillea wickhamii*, *Acacia monticola* open shrubland over *Sida excedentifolia*, *Triumfetta maconochieana*, *Ptilotus obovatus*, *Acacia maitlandii*, *Stemodia grossa*, *Goodenia stobbsiana*, *Dampiera candicans*, *Gompholobium oreophilum* low shrubland over *Cymbopogon ambiguus*, *Eriachne mucronata*, *Eriachne lanata* open grassland over *Triodia pungens* open hummock grassland.

In another portion of the application area, Syrinx (2012) mapped five broad floristic communities with six vegetation associations within the application area:

***Acacia* Low Woodland**
2c: Low Woodland of *Acacia aptaneura* and *Corymbia hamersleyana* over Very Open Shrubland of *Acacia wanyu*, *Acacia ancistrocarpa* and *Eremophila forrestii* subsp.(indet) over Very Open Hummock Grassland of *Triodia epactia* and *Triodia lanigera.*

***Acacia* High Shrubland**
4a: High Shrubland of *Acacia monticola*, *Rulingia luteiflora* and *Gossypium robinsonii* with Low Woodland of *Corymbia hamersleyana*, *Eucalyptus victrix* and *Eucalyptus leucophloia* subsp. *leucophloia* over Very Open Tussock Grassland of *Themeda triandra*, **Cenchrus ciliaris* and *Cymbopogon procerus.*

***Triodia* Hummock Grassland**
5e: Hummock Grassland of *Triodia* sp. Shovelanna Hill (S. van Leeuwen 3835),
Triodia angusta and *Triodia epactia* with Scattered Shrubs of *Acacia tenuissima*, *Acacia melleodora* and *Eremophila cuneifolia* with Scattered Low Trees of *Acacia aptaneura* and *Acacia pruinocarpa.*

5f: Hummock Grassland of *Triodia lanigera* and *Triodia epactia* with High Open Shrubland of *Acacia bivenosa, Acacia ancistrocarpa* and *Acacia tenuissima* with Very Open Mallee of *Eucalyptus gamophylla*.

Mixed Tussock Grassland
8a: Tussock Grassland of *Eulalia aurea*, *Themeda triandra* and *Aristida inaequiglumis* with Low Open Woodland of *Corymbia hamersleyana*, *Acacia aptaneura* and *Acacia citrinoviridis* over Open Shrubland of *Acacia ancistrocarpa*, *Gossypium robinsonii* and *Acacia pyrifolia*.

Mixed Open Tussock Grassland
9a: Open Tussock Grassland of *Themeda triandra*, *Aristida inaequiglumis* and *Aristida contorta* with Open Shrubland of *Acacia monticola*, *Acacia ancistrocarpa* and *Grevillea wickhamii* subsp. *aprica* with Scattered

Low Trees of *Corymbia hamersleyana*.

In addition, Syrinx (2011) mapped four broad floristic communities with four vegetation associations within a further portion of the application area:

***Acacia* Closed Scrub**
3a: Closed Scrub of *Acacia monticola* over Open Shrubland of *Santalum lanceolatum*, *Acacia maitlandii* and *Grevillea wickhamii* subsp. (indet) with Scattered Low Trees of *Corymbia deserticola*, *Eucalyptus leucophloia* subsp. *leucophloia* and *Corymbia hamersleyana*.

***Triodia* Closed Hummock Grassland**
9a: Closed Hummock Grassland of *Triodia* sp. Shovelanna Hill (S. van Leeuwen 3835) with Low Scattered Shrubs of *Acacia adoxa* var. *adoxa*, *Halgania solanacea* var. Mt Doreen (G.M. Chippendale 4206) and *Senna glutinosa* subsp. x *luerssenii* with Scattered Tall Shrubs of *Grevillea wickhamii* subsp. (indet).

***Triodia* Hummock Grassland**
10a: Hummock Grassland of *Triodia* sp. Shovelanna Hill (S. van Leeuwen 3835) with Low Open shrubland of *Acacia hilliana*, *Acacia adoxa* var. *adoxa* and *Halgania solanacea* var. Mt Doreen (G.M. Chippendale 4206) with High Open Shrubland of *Acacia bivenosa*, *Grevillea wickhamii* subsp. (indet) and *Acacia trudgeniana*.

***Triodia* Open Hummock Grassland**
11b: Open Hummock Grassland of *Triodia lanigera* and *Triodia epactia* with Open
Shrubland of *Acacia ancistrocarpa*, *Acacia atkinsiana* and *Acacia tetragonophylla* with Scattered Trees of *Corymbia hamersleyana.*

Clearing Description

Orebody 17 Exploration Project.

BHP Billiton Iron Ore Pty Ltd (BHP) proposes to clear up to 100 hectares of native vegetation, within a total boundary of 612.9 hectares, for the purpose of mineral exploration, construction of access tracks, water pipelines and ammonium nitrate storage facility. The project is located approximately 32 kilometres east, north 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

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

Comment

Vegetation condition was derived from flora and vegetation assessments conducted by Syrinx (2011;2012) and Onshore (2013).

Clearing permit CPS 2527/1 was granted by the Department of Mines and Petroleum on 5 February 2009, authorising the clearing of up to 50 hectares of native vegetation within a boundary of approximatley 612 hectares for the purpose of mineral exploration.

CPS 2527/2 was granted on 6 December 2012 to include the construction of access tracks and ammonium nitrate storage facility in the purpose for which clearing may be conducted and to extend the duration of the permit until 1 October 2019.

CPS 2527/3 was granted on 15 May 2014, increasing the area to be cleared from 50 hectares to 100 hectares within the existing boundary and extending the duration of the permit from 30 September 2019 to 30 September 2024.

3. Assessment of application against clearing principles

Comments

BHPBIO has applied to amend the purpose for which clearing may be done to include construction of water pipelines, extend the duration of the permit to 30 November 2024 and amend the final reporting date to 30 November 2024. Given that there is no change in the amount of native vegetation required to be cleared, or alterations to the approved clearing permit boundary, no additional environmental impacts are likely to result from the proposed amendment.

Current environmental information has been reviewed and the assessment of clearing principles (a), (b), (c), (d), (e) and (f) remain consistent with the assessment in clearing permit decision report CPS 2527/3. Clearing Principles (g), (h), (i) and (j) remain consistent with the assessment in clearing permit decision reports CPS 2527/2 and CPS 2527/1.

Therefore, the proposed clearing is at variance to Principle (f), may be at variance to Principle (g), is not likely to be at variance to Principles (a), (b), (c), (d), (h), (i) and (j) and is not at variance to Principle (e). Potential environmental impacts resulting from the proposed clearing may be minimised by the implementation of existing permit conditions.

Methodology

Onshore Environmental (2013)
Syrinx (2011)
Syrinx (2012)
GIS Database:
- DEC Tenure

- Imagery
- Groundwater Salinity
- Hydrographic Catchments – Catchments
- Hydrography, linear
- IBRA WA (Regions - Sub Regions)
- Pre-European Vegetation
- Public Drinking Water Source Areas (PDWSAs)
- RIWI Act, Groundwater Areas
- Soils, statewide
- Threatened and Priority Flora List
- Threatened Ecological Sites Buffered
- Threatened and Priority Ecological Communities Buffers
- Threatened and Priority Ecological Communities Boundaries

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

Comments

There is one native title claim in the application area (DAA, 2015). This claim (WC2005/06) has been registered with the National Native Title Tribunal on behalf of the claimant group (GIS Database). 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 four registered Sites of Aboriginal Significance located in the area applied to clear (GIS Database). It is the proponent's responsibility to comply with the *Aboriginal Heritage Act 1972* and ensure that no Sites of Aboriginal 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.

As there were no changes in the amount of clearing authorised or the clearing permit boundary, the application to amend clearing permit CPS 2527/3 was not advertised by the Department of Mines and Petroleum.

Methodology

DAA (2015)
GIS Databases:
- Aboriginal Sites of Significance
- Native Title Claims - Registered with the NNTT

4. References

DAA (2015) Aboriginal Heritage Inquiry System, Department of Aboriginal Affairs, Perth, Western Australia. < http://maps.dia.wa.gov.au/AHIS2/>.

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 (2013) Orebody 17/18 Derived Vegetation Association Mapping. Consultants report prepared for BHP Billiton Iron Ore Pty Ltd, January 2013.

Syrinx (2011) Orebody 31 Flora and Vegetation Assessment. Consultants report prepared for BHP Billiton Iron Ore Pty Ltd, September 2011.

Syrinx (2012) Wheelarra Hill North Flora and Vegetation Assessment. Consultants report prepared for BHP Billiton Iron Ore Pty Ltd, February 2012.

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)
DER	Department of Environment Regulation, Western Australia
DMP	Department of Mines and Petroleum, Western Australia
DRF	Declared Rare Flora
DotE	Department of the Environment, Australian Government
DoW	Department of Water, Western Australia
DPaW	Department of Parks and Wildlife, Western Australia
DSEWPaC	Department of Sustainability, Environment, Water, Population and Communities (now DotE)
EPA	Environmental Protection Authority, Western Australia

EP Act	*Environmental Protection Act 1986*, Western Australia
EPBC Act	*Environment Protection and Biodiversity Conservation Act 1999* (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	*Rights in Water and Irrigation Act 1914*, Western Australia
s.17	Section 17 of *the Environment Protection Act 1986*, Western Australia
TEC	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 the Department according to their level of threat using IUCN Red List criteria. For example Carnaby's Cockatoo *Calyptorynchus 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.

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.