Government of Western Australia
Department of Mines and Petroleum

Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 3547/3

Permit type: Purpose

1.2. Proponent details

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

1.3. Property details

Property: *Iron Ore (McCamey's Monster) Agreement Authorisation Act 1972*, Special Lease for Mining Operations, I 126948, Lot 32 on Deposited Plan 217524, Lot 39 on Deposited Plan 194318
Iron Ore (Mount Newman) Agreement Act 1964, Mineral Lease 244SA
Miscellaneous Licence 52/108
Miscellaneous Licence 52/109

Local Government Area: Shire of East Pilbara

Colloquial name: Jimblebar No. 2 Spur Project

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
295		Mechanical Clearing	Construction and Maintenance of Railways, Water Pipelines, Power Lines and Other Associated Infrastructure.

1.5. Decision on application

Decision on Permit Application: Grant

Decision Date: 17 November 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. Two Beard vegetation associations have been mapped within the application area (GIS Database):

29: Sparse low woodland; Mulga, discontinuous in scattered groups;
82: Hummock grasslands, low tree steppe; Snappy Gum over *Triodia wiseana*; and
216: Low woodland; Mulga (with spinifex) on rises (GIS Database).

There have been numerous flora and vegetation surveys undertaken across the amendment area and surrounding area since 2009 (BHP Billiton, 2016; Onshore Environmental, 2014). The following vegetation associations have been identified within the permit area:

Acacia High Shrubland

FP Aa Ch TtCfAco - High Shrubland of *Acacia aptaneura* with Low Open Woodland of *Corymbia hamersleyana* over Open Tussock Grassland of *Themeda triandra*, *Chrysopogon fallax* and *Aristida contorta* on red loamy sand on floodplains; and

FP AaAscAan Tp - 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.

Acacia Low Open Woodland

FP AaAciApr AsyAscAb Tp - 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; and

FP AaAprCh EfrAteDpe AinCfAco - Low Open Woodland of *Acacia aptaneura*, *Acacia pruinocarpa* and *Corymbia hamersleyana* with Open Shrubland of *Eremophila fraseri*, *Acacia tetragonophylla* and *Dodonea petiolaris* over Tussock Grassland of *Aristida inaequiglumis*, *Chrysopogon fallax* and *Aristida contorta* on red sandy loam on floodplains.

Acacia Low Woodland

FP AcaAaEx Eff Tp - Low Woodland of *Acacia catenulata* subsp. *occidentalis*, *Acacia aptaneura* and *Eucalyptus xerothermica* over Open Shrubland of *Eremophila forrestii* subsp. *forrestii* over Open Hummock Grassland of *Triodia pungens* on red sandy loam on floodplains; and

FP AciChAa AanApyPl TtAinCc - Low Woodland of *Acacia citrinoviridis*, *Corymbia hamersleyana* and *Acacia aptanerua* over High Shrubland of *Acacia ancistrocarpa*, *Acacia pyrifolia* var. *pyrifolia* and *Petalostylis labicheoides* over Very Open Tussock Grassland of *Themeda triandra*, *Aristida inaequiglumis* and **Cenchrus ciliaris* on brown sandy loam on floodplains and medium drainage lines.

Acacia Shrubland

MI AmoAanPl ChEl TtAin - Shrubland of *Acacia monticola*, *Acacia ancistrocarpa* and *Petalostylis labicheoides* with Scattered Low Trees of *Corymbia hamerselyana* and *Eucalyptus leucophloia* subsp. *leucophloia* over Open Tussock Grassland of *Themeda triandra* and *Aristida inaequilatera* on red loamy sand on minor drainage lines.

Corymbia Low Open Woodland

MI CcAa CcCs Tb - Low Open Woodland of *Corymbia candida* subsp. *dipsodes* and *Acacia aptaneura* over Open Tussock Grassland of **Cenchrus ciliaris* and **Cenchrus setiger* and Very Open Hummock Grassland of *Triodia basedowii* on red brown loam on floodplains and minor drainage lines; and

SP ChEoCd AanApaAad TbTscTs - Low Open Woodland of *Corymbia hamersleyana*, *Eucalyptus odontocarpa* and *Corymbia deserticola* subsp. *deserticola* over Open Shrubland of *Acacia ancistrocarpa*, *Acacia pachyacra* and *Acacia adsurgens* over Open Hummock Grassland of *Triodia basedowii*, *Triodia schinzii* and *Triodia* sp. Shovelanna Hill on red brown sandy loam on footslopes and stony plains.

Themeda Tussock Grassland

ME TtCfEa ExEvCh PlApaApy - Tussock Grassland of *Themeda triandra*, *Chrysopogon fallax* and *Eulalia aurea* with Low Open Woodland of *Eucalyptus xerothermica*, *Eucalyptus victrix* and *Corymbia hamersleyana* and Shrubland of *Petalostylis labicheoides*, *Acacia pachyacra* and *Acacia pyrifolia* var. *pyrifolia* on red sandy loam on medium drainage lines; and

MI TtCobEmu ChEg GwPlEt - Tussock Grassland of *Themeda triandra*, *Cymbopogon obtectus* and *Eriachne mucronata* with Open Woodland of *Corymbia hamersleyana* and *Eucalyptus gamophylla* over High Open Shrubland of *Grevillea wickhamii* subsp. *hispidula*, *Petalostylis labicheoides* and *Eremophila tietkensii* on red loamy sand on minor drainage lines.

Triodia Hummock Grassland

FP Tb AaApr Eff - Hummock Grassland of *Triodia basedowii* with Low Open Woodland of *Acacia aptaneura* and *Acacia pruinocarpa* over Open Shrubland of *Eremophila forrestii* subsp. *forrestii* on red sandy loam on floodplains;

FP Tp EtEg AbAanPl - Hummock Grassland of *Triodia pungens* with Very Open Mallee of *Eucalyptus trivalva* and *Eucalyptus gamophylla* over Shrubland of *Acacia bivenosa*, *Acacia ancistrocarpa* and *Petalostylis labicheoides* on red brown loam on uninsised drainage tracts on stony plains;

HC TsTp EkEg - Hummock Grassland of *Triodia* sp. Shovelanna Hill and *Trioidia pungens* with Very Open Mallee of *Eucalyptus kingsmillii* subsp. *kingsmillii* and *Eucalyptus gamophylla* on red sandy loam on hill slopes and hill crests;

HS Tb El AbAiPl - Hummock Grassland of *Triodia basedowii* with Low Open Woodland of *Eucalyptus leucophloia* subsp. *leucophloia* over Open Shrubland of *Acacia bivenosa*, *Acacia inaequilatera* and *Petalostlyis labicheoides* on red brown sandy loam on hill slopes;

HS TpTs CdEl AanAbAte - Hummock Grassland of *Triodia pungens* and *Triodia* sp. Shovelanna Hill with Low Open Woodland of *Corymbia deserticola* subsp. *deserticola* and *Eucalyptus leucophloia* subsp. *leucophloia* over Open Shrubland of *Acacia ancistrocarpa*, *Acacia bivenosa* and *Acacia tenuissima* on red loamy sand on hill slopes and footslopes;

HS Ts - Hummock Grassland of *Triodia* sp. Shovelanna Hill (S. van Leeuwen 3835) on red brown sandy loam on hill slopes;

HS TsTwTp ElCh AhiAad - Hummock Grassland of *Triodia* sp. Shovelanna Hill (S. van Leeuwen 3835), *Triodia wiseana* and *Triodia pungens* with Low Open Woodland of *Eucalyptus leucophloia* subsp. *leucophloia* and *Corymbia hamersleyana* over Low Open Shrubland of *Acacia hilliana* and *Acacia adoxa* var. *adoxa* on red brown sandy loam on hill slopes;

HS Tw ElChHc AanAbAa - Hummock Grassland of *Triodia wiseana* with Low Open Woodland of *Eucalyptus leucophloia* subsp. *leucophloia*, *Corymbia hamersleyana* and *Hakea chordophylla* and Open Shrubland of *Acacia ancistrocarpa*, *Acacia bivenosa* and *Acacia aptaneura* on red sandy loam on hill slopes;

HS TwTs HcAbGw AptAhi - Hummock Grassland of *Triodia wiseana* and *Triodia* sp. Shovelanna Hill with Open Shrubland of *Hakea chordophylla*, *Acacia bivenosa* and *Grevillea wickhamii* subsp. *hispidula* over Low Open Shrubland of *Acacia pytchophylla* and *Acacia hilliana* on red brown sandy loam on upper hill slopes and hill crests;

MI TsTp AanAmoGw - Hummock Grassland of *Triodia* sp. Shovelanna Hill (S. van Leeuwen 3835) and *Triodia pungens* with Shrubland of *Acacia ancistrocarpa*, *Acacia monticola* and *Grevillea wickhamii* subsp. hispidula on brown sandy loam on minor drainage lines;

SA Tb ChEg SpBeKp - Hummock Grassland of *Triodia basedowii* with Low Open Woodland of *Corymbia hamersleyana* and *Eucalyptus gamophylla* over Low Open Shrubland of *Scaevola parvifolia*, *Bonamia erecta* and *Kennedia prorepens* on red loamy sand on sand plains;

SP TpTb Eg PlAbAan - Hummock Grassland of *Triodia pungens* and *Triodia basedowii* with Open Mallee of *Eucalyptus gamophylla* and Shrubland of *Petalostylis labicheoides*, *Acacia bivenosa* and *Acacia ancistrocarpa* on red brown loamy sand on stony plains and footslopes; and

SP TpTwTs EfrSgpSao - Hummock Grassland of *Triodia pungens*, *Triodia wiseana* and *Triodia* sp. Shovelanna Hill with Open Shrubland of *Eremophila fraseri*, *Senna glutinosa* subsp. *pruinosa* and *Senna artemisioides* subsp. *oligophylla* on red brown loamy sand on stony plains and hill slopes.

Clearing Description

Jimblebar No. 2 Spur Project.
BHP Billiton Iron Ore Pty Ltd proposes to clear up to 295 hectares within a total boundary of approximately 1,195 hectares for the purposes of construction and maintenance of railways, water pipelines, power lines and other associated infrastructure. The project is located approximately 18 kilometres east-northeast of Newman within the Shire of East Pilbara.

Vegetation Condition

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

to

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

Comment

Clearing Permit CPS 3547/1 was granted by the Department of Mines and Petroleum (DMP) on 4 March 2010 and authorised the clearing of 295 hectares within a permit boundary of approximately 1,017 hectares, for the purpose of railway construction and maintenance, and associated works.

CPS 3547/1 was amended on 27 November 2014 to change the purpose of clearing to include construction and maintenance of railways, water pipelines, power lines and other associated infrastructure. The amendment also included extending the duration of the permit to 30 November 2020, and amending the annual reporting date of 1 October. The permit duration was extended to 2026 to allow for rehabilitation activities. No clearing is authorised after 30 November 2020.

An application to amend CPS 3547/2 was received on 23 September 2016 to increase the permit boundary to 1,195 hectares. The amount of clearing proposed remains the same.

3. Assessment of application against clearing principles

Comments

BHP Billiton Iron Ore Pty Ltd has applied to increase the permit boundary from 1,017 hecatres to 1,195 hectares.

The flora and vegetation survey within the amended permit boundary identified 24 vegetation associations, which are well represented within the regional area (BHP Billiton, 2016; GIS Database). None of the vegetation associations recorded are associated with a Threatened or Priority Ecological Community (BHP Billiton, 2016; GIS Database).

The decision report for Clearing Permit CPS 3547/1 identified several individuals of the Priority Flora species *Aristida jerichoensis* var. *subspinulifera* (Priority 3) within the permit area (BHP Billiton, 2016). This species was a listed as a Priority 1, but has since been decreased to a Priority 3 species. There were no Priority or Threatened Flora species recorded within the amendment area (BHP Billiton, 2016).

Biologic (2014) mapped six fauna habitats within the amendment area;

1. Drainage Area;
2. Minor Drainage Line;
3. Mulga;
4. Sand Plain;
5. Stony Plain; and
6. Crest/Slope.

The majority of the faunal habitats were also mapped within the previous permit boundary. The amendment area does not contain significant faunal habitats such as permanent waterbodies, caves or gorge/gully habitats. Two species of conservation significance were recorded within the amendment area; Rainbow Bee-eater (*Merops ornatus*) (Migratory), and Western Pebble-mound Mouse (*Pseudomys chapmani*) (Priority 4). These species are common and widespread throughout the local and regional area, and are likely to use the amendment area as foraging habitat. The proposed clearing of native vegetation is unlikely to impact the conservation significance of these species.

Several non-perennial drainage lines intersect the application area with riparian vegetation occurring in association with these areas (BHP Billiton, 2016; GIS Database). As these drainage lines are only likely to inundate following significant rainfall or cyclonic events, the proposed clearing is unlikely to result in any significant impact to any watercourse or wetland provided natural surface water flow patterns are not disturbed.

Potential impacts to riparian vegetation may be minimised through the implementation of a vegetation management condition.

Several weed species were identified within the amendment area (BHP Billiton, 2016). Clearing activities have the potential to result in an increase in the incidence of weed species, which may negatively impact on the biodiversity of the local area. Potential impacts to biodiversity as a result of the proposed clearing may be minimised by the implementation of existing weed management conditions.

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*. The assessment against the remaining clearing Principles remains unchanged, and further information can be found in previous decision reports.

Methodology BHP Billiton (2016)

GIS Database:
- Hydrography, linear
- Imagery
- Threatened Ecological Sites Buffered
- Threatened and Priority Flora List

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

Comments

There is one native title claim (WC2005/006) over the application area (Department of Aboriginal Affairs, 2016). This claim has been registered with the National Native Title Tribunal on behalf of the claimant groups. However, the 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*.

According to available databases, there is one registered Aboriginal sites of significance within the application area (Department of Aboriginal Affairs, 2016). 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, 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.

The clearing permit application was advertised on 17 October 2016 by the Department of Mines and Petroleum inviting submissions from the public. One submission was received stating no objection to the proposed clearing.

Methodology Department of Aboriginal Affairs (2016)

4. References

Biologic (2014) OB19 Vertebrate Survey. Report prepared for BHP Billiton Iron Ore Pty Ltd, by Biologic, Western Australia, 2014.

BHP Billiton (2016) Application to Amend NVCP CPS 3547/2 Jimblebar No. 2 Spur. Native Vegetation Clearing Permit Application Supporting Document. BHP Billiton Iron Ore Pty Ltd, Western Australia, September 2016.

Department of Aboriginal Affairs (2016) Aboriginal Heritage Enquiry System. Government of Western Australia, http://maps.dia.wa.gov.au/AHIS2/. (Accessed 1 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) Consolidation of Regional Vegetation Mapping BHP Billiton Iron Ore Pilbara Tenure. Report prepared for BHP Billiton Iron Ore Pty Ltd, by Onshore Environmental, Western Australia, 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	*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
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 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.