



Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 3094/2
Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: BHP Billiton Nickel West Pty Ltd

1.3. Property details

Mining Lease 53/56
Mining Lease 53/57
Mining Lease 53/165
Mining Lease 53/166
Mining Lease 53/167
Mining Lease 53/218
Mining Lease 53/462
Mining Lease 53/489
Local Government Area: Shire of Wiluna
Colloquial name: Mount Keith Mine PProject

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
200		Mechanical Removal	Mineral Production

1.5. Decision on application

Decision on Permit Application: Grant
Decision Date: 22 May 2014

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 at a 1:250,000 scale for the whole of Western Australia. One Beard Vegetation Association has been mapped within the application area (GIS Database; Shepherd et al., 2001).

39: Shrublands; mulga scrub.

The application area was flora surveyed by Western Botanical staff on 20 November and between 1-5 December 2008 (Western Botanical, 2008). The following vegetation types were identified within the application area (Western Botanical, 2008):

Hills and Slopes, Sclerophyll Shrublands

Stony Ironstone Mulga Shrublands (SIMS): Characteristically have a scattered upper storey of *Acacia aneura* and/or *Acacia quadrimarginea*. A mid storey dominated by shrubs of *Thryptomene* sp. Leinster, *Dodonaea petiolaris*, *Dodonaea rigida*, *Calytrix desolata*, *Scaevola spinescens* and *Senna* spp. A lower storey usually dominated by annuals including *Ptilotus helipteroides*, *Brachycome iberidifolia* and other annual *Asteraceae* spp. produce a good show of ephemerals following winter rains (Western Botanical, 2008).

Stony Ironstone Low Shrublands (SILS): Small areas with gravelly upper to lower slopes which are dominated by *Thryptomene* sp. Leinster and *Calytrix desolata* with *Senna* spp., *Scaevola spinescens*, *Dodonaea petiolaris* and *D. rigida* also present. Characteristically there is no upper storey of mulga present. The lower storey of annuals, if present is dominated by *Ptilotus helipteroides* and occasionally various *Asteraceae* spp. (Western Botanical, 2008).

Undulating Plains, Sclerophyll Shrub Dominated

Scattered *Acacia-Eremophila* Shrublands (SAES): Colluvial plains and low rises with stony ironstone and/or quartz mantles supporting scattered sclerophyllous shrublands. The upper storey is characteristically very scattered *Acacia aneura* and the mid storey is dominated by *Eremophila galeata*, either with or without significant annual herbage lower stratum (*Helipterum craspedioides*, *Cephalopterum drummondii*, *Velleia* spp. and *Goodenia* spp.) (Western Botanical, 2008).

Hard Pan Mulga Shrublands (HPMS): Level or gently inclined clay-loam plains with a well developed hardpan

supporting an upper storey of scattered to moderately closed *Acacia aneura* woodland/shrubland with very scattered mid storey of sclerophyllous shrubs including *Sida ectogama* and a well developed annual herb lower stratum of various Asteraceae *Helipterum craspedioides* and *Rhodanthe charsleyae* (Western Botanical, 2008).

Loamy Plain Mulga Shrublands (PLMS): Characteristically scattered to moderately closed tall mulga shrublands often with scattered *Eremophila gilesii* and *Grevillea deflexa* low shrub component on deep alluvial loamy soils (Western Botanical, 2008).

Undulating Plains, Grass Dominated

Wanderrie Bank Mulga Shrublands (WABS): Very scattered to scattered mulga shrublands on hardpan with discrete sandy rises where perennial grasses such as Woollybutt Grass (*Eragrostis eripoda*) are common or dominant. The lower shrub component usually includes *Eremophila latrobei*, *Sida platycalyx*, *Sida ectogama*, *Ptilotus obovatus*, *Eremophila forrestii* and *Eremophila spectabilis*.

Sandplain Hummock Grasslands with Mulga Overstorey (SAMU): An upper storey of *Acacia aneura*, *Acacia linophylla* and *Acacia coolgardiensis* dominated shrublands/woodlands either with or without significant *Eucalyptus kingsmillii* and *E. trivalvis*, with a mid storey of *Eremophila forrestii*. A lower storey of hummock grassland *Triodia basedowii* is often also associated with other grasses such as Woollybutt Grass (*Eragrostis eripoda*), Buck Wanderrie Grass (*Thyridolepis multiculmis*) and Broad-leaved Wanderrie Grass (*Monachather paradoxus*), and Sticky Everlasting (*Lawrencella davenportii*). Occasionally *Eremophila demissa* occurs in small populations (Western Botanical, 2008).

Breakaway Grassy Plains (BRGP): Variable sites which can be regarded as the gently sloping footslopes of granite plateaux with many exposed granite rocks, sheets and tors evident. It is characterised by narrow to broad, gently inclined alluvial gritty, siliceous sandy plains supporting a lower storey of small range annuals (*Maireana carnososa*, *Scleroleana* spp.) and very few trees or perennial shrubs except in drainage lines and adjacent to granite rocks where preferential water penetration may occur. Broader drainage lines within this habitat support *Eucalyptus lucasii* in mixed woodlands with *Acacia quadrimarginea*, *Acacia aneura* var. *aneura* and *Pittosporum angustifolium* (Western Botanical, 2008).

Areas of Concentrated Drainage

Drainage Tract Mulga Shrublands/Woodlands (DRMS): Poorly defined narrow to broad drainage tracts dominated by *Acacia aneura* var. *latifolia*. Often little mid storey shrub component due to competition for light, however, the lower stratum is dominated by the annual *Rhodanthe charsleyae*. Soils are clay-loams and relief below surrounding plains is rarely more than 0.5 metres (Western Botanical, 2008).

Drainage Tract Eucalypt Shrublands/Woodlands (DRES): Narrow to broad drainage tracts with eucalypts such as *Eucalyptus lucasii* present. A very scattered shrub stratum on banks and well defined incised ephemeral watercourse with sandy or rocky substrates, often 1-2 metres below the surrounding plains and banks is characteristic (Western Botanical, 2008).

Clearing Description	<p>Mount Keith Nickel Operation.</p> <p>BHP Billiton Nickel West Pty Ltd (BHP Billiton) proposes to clear up to 200 hectares of native vegetation, within a total boundary of approximately 695 hectares, for the purpose of mineral production. The project is located approximately 73 kilometres south-east of Wiluna, in the Shire of Wiluna.</p>
Vegetation Condition	<p>Excellent: Vegetation structure intact; disturbance affecting individual species, weeds non-aggressive (Keighery, 1994);</p> <p>to</p> <p>Degraded: Structure severely disturbed; regeneration to good condition requires intensive management (Keighery, 1994).</p>
Comment	<p>Clearing permit CPS 3094/1 was granted on 4 June 2009. On 21 March 2014, BHP Billiton Nickel West applied to amend CPS 3094/1 in order to extend the duration of the clearing permit until 31 July 2019.</p> <p>The purpose of the proposed clearing is mineral production. The application area has been subdivided into four sections: Northwest, Eastern, Southern and Plant and Surrounds (BHP Billiton, 2009).</p> <p>BHP Billiton (2009), propose to clear for:</p> <p>Northwest Section:</p> <ul style="list-style-type: none">• Battering of waste dumps for progressive rehabilitation along the western waste dumps;• Relocation of the mine access road;• Relocation of the Albion Downs Borefield Pipeline; and• Relocation of the HV Powerline. <p>Eastern Section:</p> <ul style="list-style-type: none">• Progressive rehabilitation of the eastern dumps;• Extension to workshop facilities;• New biomediation facility;• Laydown yards; and• Access tracks.

Southern Section:

- Potential future topsoil stockpile area.

Plant and Surrounds Section:

- Potential expansion within the plant area (BHP Billiton, 2009).

The vegetation condition rating is based on the vegetation report by BHP Billiton (2009). BHP Billiton (2009) state that previous pastoral activity has caused heavy land degradation in the region due to clearing and grazing, which has led to extensive vegetation loss and severe erosion in some areas.

3. Assessment of application against clearing principles

Comments

BHP Billiton Nickel West Pty Ltd has applied to extend the permit duration from 31 July 2014 to 31 July 2019. There are no additional environmental impacts associated with this amendment. Therefore, the assessment against the clearing principles is consistent with the assessment in Clearing Permit Decision Report CPS 3094/1.

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

Comments

There is one native title claim over the area under application (GIS Database). Native title claim WC2011/007 has been registered with the Native Title Tribunal on behalf of the claimant groups. 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*.

According to available databases, there are four registered Aboriginal Sites of Significance within the application area (GIS Database). It is the proponent's responsibility to comply with the *Aboriginal Heritage Act 1972* and ensure that no Aboriginal Sites of Significance are damaged through the clearing process.

It is the proponent's responsibility to liaise with the Department of Environment Regulation, the Department of 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

GIS Database

- Aboriginal Sites of Significance
- Native Title Claims - Determined by the Federal Court
- Native Title Claims - Registered with the NNTT

4. References

BHP Billiton (2009) BHP Billiton Nickel West: Mt Keith Nickel Operation. Supporting Document for a Native Vegetation Clearing Application (Purpose Permit). Unpublished report dated April 2009

Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.

5. Glossary

Acronyms:

BoM	Bureau of Meteorology, Australian Government
CALM	Department of Conservation and Land Management (now DEC), Western Australia
DAFWA	Department of Agriculture and Food, Western Australia
DEC	Department of Environment and Conservation, Western Australia
DEH	Department of Environment and Heritage (federal based in Canberra) previously Environment Australia
DEP	Department of Environment Protection (now DEC), Western Australia
DIA	Department of Indigenous Affairs
DLI	Department of Land Information, Western Australia
DMP	Department of Mines and Petroleum, Western Australia
DoE	Department of Environment (now DEC), Western Australia
DoIR	Department of Industry and Resources (now DMP), Western Australia
DOLA	Department of Land Administration, Western Australia
DoW	Department of Water
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
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:

{Atkins, K (2005). *Declared rare and priority flora list for Western Australia, 22 February 2005*. Department of Conservation and Land Management, Como, Western Australia} :-

- P1 Priority One - Poorly Known taxa:** taxa which are known from one or a few (generally <5) populations which are under threat, either due to small population size, or being on lands under immediate threat, e.g. road verges, urban areas, farmland, active mineral leases, etc., or the plants are under threat, e.g. from disease, grazing by feral animals, etc. May include taxa with threatened populations on protected lands. Such taxa are under consideration for declaration as 'rare flora', but are in urgent need of further survey.
- P2 Priority Two - Poorly Known taxa:** taxa which are known from one or a few (generally <5) populations, at least some of which are not believed to be under immediate threat (i.e. not currently endangered). Such taxa are under consideration for declaration as 'rare flora', but are in urgent need of further survey.
- P3 Priority Three - Poorly Known taxa:** taxa which are known from several populations, at least some of which are not believed to be under immediate threat (i.e. not currently endangered). Such taxa are under consideration for declaration as 'rare flora', but are in need of further survey.
- P4 Priority Four – Rare taxa:** taxa which are considered to have been adequately surveyed and which, whilst being rare (in Australia), are not currently threatened by any identifiable factors. These taxa require monitoring every 5–10 years.
- R Declared Rare Flora – Extant taxa (= Threatened Flora = Endangered + Vulnerable):** taxa which have been adequately searched for, and are deemed to be in the wild either rare, in danger of extinction, or otherwise in need of special protection, and have been gazetted as such, following approval by the Minister for the Environment, after recommendation by the State's Endangered Flora Consultative Committee.
- X Declared Rare Flora - Presumed Extinct taxa:** taxa which have not been collected, or otherwise verified, over the past 50 years despite thorough searching, or of which all known wild populations have been destroyed more recently, and have been gazetted as such, following approval by the Minister for the Environment, after recommendation by the State's Endangered Flora Consultative Committee.

{Wildlife Conservation (Specially Protected Fauna) Notice 2005} [Wildlife Conservation Act 1950] :-

- Schedule 1 Schedule 1 – Fauna that is rare or likely to become extinct:** being fauna that is rare or likely to become extinct, are declared to be fauna that is need of special protection.
- Schedule 2 Schedule 2 – Fauna that is presumed to be extinct:** being fauna that is presumed to be extinct, are declared to be fauna that is need of special protection.
- Schedule 3 Schedule 3 – Birds protected under an international agreement:** being birds that are subject to an agreement between the governments of Australia and Japan relating to the protection of migratory birds and birds in danger of extinction, are declared to be fauna that is need of special protection.
- Schedule 4 Schedule 4 – Other specially protected fauna:** being fauna that is declared to be fauna that is in need of special protection, otherwise than for the reasons mentioned in Schedules 1, 2 or 3.

{CALM (2005). *Priority Codes for Fauna*. Department of Conservation and Land Management, Como, Western Australia} :-

- P1 Priority One: Taxa with few, poorly known populations on threatened lands:** Taxa which are known from few specimens or sight records from one or a few localities on lands not managed for conservation, e.g. agricultural or pastoral lands, urban areas, active mineral leases. The taxon needs urgent survey and evaluation of conservation status before consideration can be given to declaration as threatened fauna.
- P2 Priority Two: Taxa with few, poorly known populations on conservation lands:** Taxa which are known from few specimens or sight records from one or a few localities on lands not under immediate threat of habitat destruction or degradation, e.g. national parks, conservation parks, nature reserves, State forest, vacant Crown land, water reserves, etc. The taxon needs urgent survey and evaluation of conservation status before consideration can be given to declaration as threatened fauna.
- P3 Priority Three: Taxa with several, poorly known populations, some on conservation lands:** Taxa which are known from few specimens or sight records from several localities, some of which are on lands not under immediate threat of habitat destruction or degradation. The taxon needs urgent survey and evaluation of conservation status before consideration can be given to declaration as threatened fauna.
- P4 Priority Four: Taxa in need of monitoring:** Taxa which are considered to have been adequately surveyed, or for which sufficient knowledge is available, and which are considered not currently threatened or in need of special protection, but could be if present circumstances change. These taxa are usually represented on conservation lands.
- P5 Priority Five: Taxa in need of monitoring:** Taxa which are not considered threatened but are subject to a specific conservation program, the cessation of which would result in the species becoming threatened within five years.

Categories of threatened species (*Environment Protection and Biodiversity Conservation Act 1999*)

- EX** **Extinct:** A native species for which there is no reasonable doubt that the last member of the species has died.
- EX(W)** **Extinct in the wild:** A native species which:
(a) is known only to survive in cultivation, in captivity or as a naturalised population well outside its past range; or
(b) has not been recorded in its known and/or expected habitat, at appropriate seasons, anywhere in its past range, despite exhaustive surveys over a time frame appropriate to its life cycle and form.
- CR** **Critically Endangered:** A native species which is facing an extremely high risk of extinction in the wild in the immediate future, as determined in accordance with the prescribed criteria.
- EN** **Endangered:** A native species which:
(a) is not critically endangered; and
(b) is facing a very high risk of extinction in the wild in the near future, as determined in accordance with the prescribed criteria.
- VU** **Vulnerable:** A native species which:
(a) is not critically endangered or endangered; and
(b) is facing a high risk of extinction in the wild in the medium-term future, as determined in accordance with the prescribed criteria.
- CD** **Conservation Dependent:** A native species which is the focus of a specific conservation program, the cessation of which would result in the species becoming vulnerable, endangered or critically endangered within a period of 5 years.