



Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 2845/3
Permit type: Area Permit

1.2. Proponent details

Proponent's name: BHP Billiton Nickel West Pty Ltd

1.3. Property details

Property: Mining Lease 36/4
Local Government Area: Shire of Leonora
Colloquial name: Koonoonooka Sand Quarry

1.4. Application

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

1.5. Decision on application

Decision on Permit Application: Grant
Decision Date: 11 October 2017

2. Site Information

2.1. Existing environment and information

2.1.1. Description of the native vegetation under application

Vegetation Description The vegetation of the application area is broadly mapped as the following Beard vegetation association: 18: Low woodland; mulga (*Acacia aneura*) (GIS Database).

A flora and vegetation survey was conducted over the application area by Western Botanical (2008) during 19 – 22 May 2008. The survey area was traversed on foot, whilst comprehensively describing and mapping the vegetation present (Western Botanical, 2008). The following four vegetation associations were recorded within the application area (Western Botanical, 2008):

1) Sandplain Spinifex and Myrtaceae Heath (SAMH)

This vegetation unit is characterised by *Homalocalyx thryptomenoides* that dominates the mid stratum. Occasional emergent *Acacia effusifolia*, *A. aneura*, *A. pachyacra*, *Eucalyptus youngiana*, *Grevillea eriostachya* and *Eremophila forrestii* are typical of the upper stratum, over *Triodia basedowii* that dominates the lower strata. Associated species include *Enekbatus eremaeus*, *Leptosema chambersii*, *Micromyrtus flaviflora*, *Prostanthera* sp. Bullimore Sandplain, *Hakea minima* and the Priority one taxon *Euryomyrtus inflata*. This vegetation unit was typically long unburnt.

2) Sandplain Spinifex and *Eucalyptus gongylocarpa* Shrubland (SAGS)

These communities are characterised by *Eucalyptus gongylocarpa*, over a mid-stratum of *Acacia aneura* (2 forms), *A. effusifolia*, *A. jamesiana*, *A. ligulata*, *Grevillea eriostachya* and other eucalypts including *Eucalyptus leptopoda* ssp., *E. trivalvis* and *E. youngiana*. The low shrub stratum is dominated by *Triodia basedowii*. Associated species include *Acacia aneura*, *Dodonaea adenophora*, *Eremophila forrestii*, *E. latrobei*, *E. platythamnos*, *Keraudrenia velutina*, *Micromyrtus flaviflora*, *Pittosporum angustifolia*, *Rhyncharrhena linearis*, *Scaevola spinescens*, *Senna artemisioides* ssp. *sturtii* and *S. glutinosa* ssp. *chatelainiana*. Soils in this vegetation type are typically level and fine, red silty sand.

3) Sandplain Spinifex and *Acacia effusifolia* Shrubland (SAWS)

This vegetation unit is characterised by *Acacia effusifolia* over scattered sclerophyll shrubs including *Dodonaea adenophora*, *Leptosema chambersii*, *Homalocalyx thryptomenoides* and *Senna pleurocarpa* ssp. *angustifolia*. *Triodia basedowii* dominates the lower stratum. This community is also characterised by the absence of Mulga (*Acacia aneura*) due to the more frequent fire regime in this vegetation unit.

4) Sandplain Spinifex and *Acacia effusifolia* Shrubland with Mallee (SAWS-M)

This community is similar to Vegetation Unit 3 but with the addition of emergent mallees including occasional *Eucalyptus gongylocarpa*, *E. youngiana* and *E. leptopoda* ssp. *elevata*. Other species in the upper storey included *Grevillea juncifolia* and *Acacia effusifolia*. The mid strata was relatively diverse with *Acacia aneura* (twisted leaf), *Eremophila spuria*, *Acacia longispinea*, *Eremophila forrestii*, *Prostanthera* sp. Bullimore Sandplain, *Philotheca tomentella*, *Brachychiton gregorii*, *Lachnostachys* sp., *Spartothamnella teucriiflora*, *Keraudrenia velutina*, *Scaevola spinescens* (narrow leaf form), *Senna artemisioides* ssp. *artemisioides* and *Psydrax attenuate*. The lower strata was dominated by *Triodia basedowii* with *Rulingia loxophylla*, *Leptosema chambersii* and *Prostanthera* sp. Bullimore Sandplain. ?*Paspalum basicladum* (dead grass) and *Eragrostis* sp. also present. There was also evidence of the fire ephemeral *Codonocarpus cotinifolius* that had died prior to the survey.

Clearing Description	Koonoonooka Sand Quarry. BHP Billiton Nickel West Pty Ltd proposes to clear up to 92.1 hectares of native vegetation within a boundary of approximately 92.1 hectares, for the purpose of a sand quarry. The project is located approximately 18 kilometres north-east of Leinster, within the Shire of Leonora.
Vegetation Condition	Excellent: Vegetation structure intact; disturbance affecting individual species, weeds non-aggressive (Keighery, 1994).
Comment	The vegetation condition was derived from a vegetation survey conducted by Western Botanical (2008). Clearing permit CPS 2845/1 was granted by the Department of Mines and Petroleum (now the Department of Mines, Industry Regulation and Safety) on 5 February 2009, and was valid from 7 March 2009 to 31 October 2014. The permit authorised the clearing of up to 92.1 hectares of native vegetation for a sand quarrying operation. CPS 2845/2 was granted on 14 August 2014, extending the permit duration by three years to 31 October 2017. On 9 August 2017, the Permit Holder applied to extend the permit duration by a further five years to 31 October 2022.

3. Assessment of application against Clearing Principles

Comments

BHP Billiton Nickel West Pty Ltd has applied to amend the clearing permit to extend the permit duration to 31 October 2022. The size of the area approved to clear (92.1 hectares), and the permit boundaries remain unchanged.

The amendment is unlikely to result in any significant change to the environmental impacts of the proposed clearing (GIS Database). The assessment of the proposed clearing against the clearing principles remains consistent with the assessment contained in previous versions of the decision report.

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 (WC2011/007) over the area under application (DPLH, 2017). 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 no registered Aboriginal Sites of Significance within the application area (DPLH, 2017). It is the proponent's responsibility to comply with the *Aboriginal Heritage Act 1972* and ensure that no Aboriginal Sites of Significance are damaged through the clearing process.

It is the proponent's responsibility to liaise with the Department of Water and Environmental Regulation and the Department of Biodiversity Conservation and Attractions, to determine whether a Works Approval, Water Licence, Bed and Banks Permit, or any other licences or approvals are required for the proposed works.

Methodology DPLH (2017)

4. References

- DPLH (2017) Aboriginal Heritage Enquiry System. Department of Planning, Lands and Heritage.
<http://maps.daa.wa.gov.au/AHIS/> (Accessed 5 October 2017).
Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.
Western Botanical (2008) Flora and Vegetation of the Proposed Clearing within the Koonoonooka Sand Quarry, May 2008. Western Botanical, Western Australia.

5. Glossary

Acronyms:

BoM	Bureau of Meteorology, Australian Government
DAA	Department of Aboriginal Affairs, Western Australia (now DPLH)
DAFWA	Department of Agriculture and Food, Western Australia (now DPIRD)
DBCA	Department of Biodiversity Conservation and Attractions, Western Australia
DEC	Department of Environment and Conservation, Western Australia (now DBCA and DWER)
DEE	Department of the Environment and Energy, Australian Government
DER	Department of Environment Regulation, Western Australia (now DWER)
DMIRS	Department of Mines, Industry Regulation and Safety, Western Australia
DMP	Department of Mines and Petroleum, Western Australia (now DMIRS)
DPIRD	Department of Primary Industries and Regional Development, Western Australia
DPLH	Department of Planning, Lands and Heritage, Western Australia
DRF	Declared Rare Flora
DoE	Department of the Environment, Australian Government (now DEE)
DoW	Department of Water, Western Australia (now DWER)
DPaW	Department of Parks and Wildlife, Western Australia (now DBCA)
DSEWPac	Department of Sustainability, Environment, Water, Population and Communities (now DEE)
DWER	Department of Water and Environmental Regulation, Western Australia
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 (2017) **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 1950*.

Threatened flora is flora that has been declared to be 'likely to become extinct or is rare, or otherwise in need of special protection', pursuant to section 23F(2) of the *Wildlife Conservation Act 1950*.

The assessment of the conservation status of these species is based on their national extent and ranked according to their level of threat using IUCN Red List categories and criteria as detailed below.

CR

Critically endangered species

Threatened species considered to be facing an extremely high risk of extinction in the wild. Published as Specially Protected under the *Wildlife Conservation Act 1950*, in Schedule 1 of the Wildlife Conservation (Specially Protected Fauna) Notice for Threatened Fauna and Wildlife Conservation (Rare Flora) Notice for Threatened Flora.

EN

Endangered species

Threatened species considered to be facing a very high risk of extinction in the wild. Published as Specially Protected under the *Wildlife Conservation Act 1950*, in Schedule 2 of the Wildlife Conservation (Specially Protected Fauna) Notice for Threatened Fauna and Wildlife Conservation (Rare Flora) Notice for Threatened Flora.

VU

Vulnerable species

Threatened species considered to be facing a high risk of extinction in the wild. Published as Specially Protected under the *Wildlife Conservation Act 1950*, in Schedule 3 of the Wildlife Conservation (Specially Protected Fauna) Notice for Threatened Fauna and Wildlife Conservation (Rare Flora) Notice for Threatened Flora.

- EX Presumed extinct species**
Species which have been adequately searched for and there is no reasonable doubt that the last individual has died. Published as Specially Protected under the *Wildlife Conservation Act 1950*, in Schedule 4 of the Wildlife Conservation (Specially Protected Fauna) Notice for Presumed Extinct Fauna and Wildlife Conservation (Rare Flora) Notice for Presumed Extinct Flora.
- IA Migratory birds protected under an international agreement**
Birds that are subject to an agreement between the government of Australia and the governments of Japan (JAMBA), China (CAMBA) and The Republic of Korea (ROKAMBA), and the Bonn Convention, relating to the protection of migratory birds. Published as Specially Protected under the *Wildlife Conservation Act 1950*, in Schedule 5 of the Wildlife Conservation (Specially Protected Fauna) Notice.
- CD Conservation dependent fauna**
Fauna of special conservation need being species dependent on ongoing conservation intervention to prevent it becoming eligible for listing as threatened. Published as Specially Protected under the *Wildlife Conservation Act 1950*, in Schedule 6 of the Wildlife Conservation (Specially Protected Fauna) Notice.
- OS Other specially protected fauna**
Fauna otherwise in need of special protection to ensure their conservation. Published as Specially Protected under the *Wildlife Conservation Act 1950*, in Schedule 7 of the Wildlife Conservation (Specially Protected Fauna) Notice.
- P Priority species**
Species which are poorly known; or
Species that are adequately known, are rare but not threatened, and require regular monitoring. Assessment of Priority codes is based on the Western Australian distribution of the species, unless the distribution in WA is part of a contiguous population extending into adjacent States, as defined by the known spread of locations.
- P1 Priority One - Poorly-known species:**
Species that are known from one or a few locations (generally five or less) which are potentially at risk. All occurrences are either: very small; or on lands not managed for conservation, e.g. agricultural or pastoral lands, urban areas, road and rail reserves, gravel reserves and active mineral leases; or otherwise under threat of habitat destruction or degradation. Species may be included if they are comparatively well known from one or more locations but do not meet adequacy of survey requirements and appear to be under immediate threat from known threatening processes. Such species are in urgent need of further survey.
- P2 Priority Two - Poorly-known species:**
Species that are known from one or a few locations (generally five or less), some of which are on lands managed primarily for nature conservation, e.g. national parks, conservation parks, nature reserves and other lands with secure tenure being managed for conservation. Species may be included if they are comparatively well known from one or more locations but do not meet adequacy of survey requirements and appear to be under threat from known threatening processes. Such species are in urgent need of further survey.
- P3 Priority Three - Poorly-known species:**
Species that are known from several locations, and the species does not appear to be under imminent threat, or from few but widespread locations with either large population size or significant remaining areas of apparently suitable habitat, much of it not under imminent threat. Species may be included if they are comparatively well known from several locations but do not meet adequacy of survey requirements and known threatening processes exist that could affect them. Such species are in need of further survey.
- P4 Priority Four - Rare, Near Threatened and other species in need of monitoring:**
(a) Rare. Species that are considered to have been adequately surveyed, or for which sufficient knowledge is available, and that are considered not currently threatened or in need of special protection, but could be if present circumstances change. These species are usually represented on conservation lands.
(b) Near Threatened. Species that are considered to have been adequately surveyed and that are close to qualifying for Vulnerable, but are not listed as Conservation Dependent.
(c) Species that have been removed from the list of threatened species during the past five years for reasons other than taxonomy.

Principles for clearing native vegetation:

- (a) Native vegetation should not be cleared if it comprises a high level of biological diversity.
- (b) Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of, a significant habitat for fauna indigenous to Western Australia.
- (c) Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, rare flora.
- (d) Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of a threatened ecological community.
- (e) Native vegetation should not be cleared if it is significant as a remnant of native vegetation in an area that has been extensively cleared.
- (f) Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland.
- (g) Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation.
- (h) Native vegetation should not be cleared if the clearing of the vegetation is likely to have an impact on the environmental values of any adjacent or nearby conservation area.
- (i) Native vegetation should not be cleared if the clearing of the vegetation is likely to cause deterioration in the quality of surface or underground water.
- (j) Native vegetation should not be cleared if clearing the vegetation is likely to cause, or exacerbate, the incidence or intensity of flooding.