



Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 6576/1
Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: **Buckski Holdings Pty Ltd**

1.3. Property details

Property: Mining Lease 45/1242
Local Government Area: Town of Port Hedland
Colloquial name: Pippingarra Sand Mine

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
350		Mechanical Removal	Sand mining and associated activities

1.5. Decision on application

Decision on Permit Application: Grant
Decision Date: 9 July 2015

2. Site Information

2.1. Existing environment and information

2.1.1. Description of the native vegetation under application

Vegetation Description	Clearing Description	Vegetation Condition	Comment
<p>The clearing permit application area has been broadly mapped as Beard vegetation associations:</p> <p>589: Mosaic: Short bunch grassland - savannah /grass plain (Pilbara) /Hummock grasslands, grass steppe; soft spinifex; and</p> <p>93: Hummock grasslands, shrub steppe; kanji over soft spinifex (GIS Database).</p> <p>ENV Australia Pty Ltd (ENV, 2013) conducted a flora and vegetation survey of the application area in March 2013 and mapped the following three vegetation associations:</p> <p>1. Low open woodland of <i>Corymbia candida</i> over shrubland of <i>Acacia Tumida</i> and <i>Acacia colei</i> var. <i>colei</i> over hummock grassland of <i>Triodia epactia</i> over very open tussock grassland of <i>Chrysopogon fallax</i>;</p> <p>2. Scattered low trees of <i>Corymbia candida</i> and <i>Corymbia hamersleyana</i> over open shrubland of <i>Acacia colei</i> var. <i>colei</i> over low open shrubland of <i>Goodenia lamprosperma</i> over open tussock grassland of <i>Chrysopogon fallax</i>; and</p> <p>3. Scattered shrubs of <i>Acacia inaequilatera</i>, <i>Acacia colei</i> var. <i>colei</i> and <i>Acacia tumida</i> over low open shrubland of <i>Acacia stellaticeps</i> over open hummock grassland of <i>Triodia lanigera</i> and <i>Triodia epactia</i>.</p>	<p>Pippingarra Sand Mine project. Buckski Holdings Pty Ltd proposes to clear up to 350 hectares of native vegetation within a boundary of approximately 351 hectares, for the purpose of sand mining. The project is located approximately 20 kilometres southeast of Port Hedland, within the Town of Port Hedland.</p>	<p>Very Good: Vegetation structure altered; obvious signs of disturbance (Keighery, 1994).</p>	<p>The vegetation condition was derived from a vegetation survey conducted by ENV Australia Pty Ltd (ENV, 2013).</p> <p>Vegetation clearing is for the purpose of developing a sand mining operation and associated infrastructure. Clearing will occur progressively, commencing from the north and moving to the south, with progressive rehabilitation occurring.</p>

3. Assessment of application against clearing principles

(a) Native vegetation should not be cleared if it comprises a high level of biological diversity.

Comments

Proposal is not likely to be at variance to this Principle

The application area is located on the boundary of the Roebourne and Chichester subregions of the Pilbara Bioregion of the Interim Biogeographic Regionalisation for Australia (IBRA) (GIS Database). The Chichester subregion is described as undulating granite and basalt plains with significant areas of basaltic ranges. Plains support a shrub steppe characterised by *Acacia inaequilatera* over *Triodia wiseana* hummock grasslands, while *Eucalyptus leucophloia* tree steppes occur on the ranges (CALM, 2002). The Roebourne sub-region is described as coastal and subcoastal plains with a grass savannah of mixed bunch and hummock grasses, and dwarf shrub steppe of *Acacia stellaticeps* or *A. pyrifolia* and *A. inaequilatera*. Uplands are dominated by *Triodia* hummock grasslands. Ephemeral drainage lines support *Eucalyptus victrix* or *Corymbia hamersleyana* woodlands. Samphire, *Sporobolus* and mangal occur on marine alluvial flats and river deltas (CALM, 2002).

The clearing permit application area is located predominantly within the Roebourne subregion (GIS Database).

The vegetation condition within the application area ranges from Good to Excellent with parts of the application area having been previously disturbed by grazing activities (ENV, 2013).

The application areas are located within the Pippingarra pastoral lease (GIS Database), and previous vegetation disturbance has occurred from pastoral activities, including some weed invasion particularly by the introduced pastoral grass species *Cenchrus ciliaris* (Buffel Grass) (ENV, 2013).

A flora and vegetation survey was conducted over the application area and surrounding areas during March 2013 by ENV (2013). No Threatened or Priority Ecological Communities, or Threatened flora species were recorded in the survey.

Two Priority flora species were recorded within the application area, *Heliotropium muticum* (P1) and *Goodenia nuda* (P4) (ENV, 2013). Only one *Goodenia nuda* plant was recorded within the application area, and the clearing of this plant is unlikely to have any impact on the conservation status of this species. A total of 630 *Heliotropium muticum* plants were recorded from 87 locations within the application area, grouped together within the southern half of the application area. DPaW (2015) advise that *Heliotropium muticum* is a poorly known species with a known range within approximately 100 kilometres to the west and south of Port Hedland. The population within the application area is considered to be a significant population of this species and clearing of this species should be avoided or minimised (DPaW, 2015). Potential impacts to this species as a result of the proposed clearing may be minimised by the implementation of a flora management condition.

A search of relevant databases identified numerous fauna species of conservation significance with the potential to occur within the application area (ENV, 2013), however the majority of these species are highly mobile and none are expected to be wholly reliant on the habitat available within the application area.

The vegetation associations and fauna habitat types found in the application area are well represented and widespread within the region (ENV, 2013; GIS Database).

Based on the above, the proposed clearing is not likely to be at variance to this Principle.

Methodology

DPaW (2015)
ENV (2013)
CALM (2002)
GIS Database:
- Pastoral Leases
- Pre-European Vegetation
- Threatened Ecological Sites Buffered

(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.

Comments

Proposal is not likely to be at variance to this Principle

A vegetation survey conducted by ENV (2013) identified the following two fauna habitat types within the application area:

Sandplain with Hummock Grassland: sandplain with a hummock grassland of *Triodia* spp. covering between 20 to 60%, with occasional scattered *Acacia* shrubs up to 2 metres. This was the most widespread habitat type, covering approximately 91% of the application area (ENV, 2013).

Sandplain with Open Woodland: sandplain with a dense ground cover of Spinifex and other grasses, below an open woodland of *Corymbia candida* and *Corymbia hamersleyana*, with an open midstorey of *Acacia* shrubs.

Substantial areas of similar habitat occur outside of the application areas, and the application areas were considered unlikely to represent significant habitat for fauna in comparison to surrounding areas (ENV, 2013).

One fauna species of conservation significance, the Australian Bustard (*Ardeotis australis*) was recorded within the application area (ENV, 2013), however this is a highly mobile species and is unlikely to be significantly impacted by the proposed clearing.

A database search identified a further 67 fauna species of conservation significance, with the potential to occur within the application area, based on known distributions (ENV, 2013). Of these, the following ten species were considered most likely to occur within the application area, although none were recorded during the survey:

- Woma Python (*Aspidites ramsayi*): Schedule 4 (WC Act);
- Brush-tailed Mulgara (*Dasymercus blythi*): Priority 4 (DEC).
- Flock Bronzewing (*Phaps histrionica*): Priority 4 (DEC);
- Fork-tailed Swift (*Apus pacificus*): Migratory (EPBC Act); Schedule 3 (WC Act);
- Cattle Egret (*Ardea ibis*): Migratory (EPBC Act); Schedule 3 (WC Act);
- Bush Stone-Curlew (*Burhinus grallarius*): Priority 4 (DEC);
- Little Curlew (*Numenius minutus*): Migratory (EPBC Act); Schedule 3 (WC Act);
- Oriental Plover (*Charadrius veredus*): Migratory (EPBC Act); Schedule 3 (WC Act);
- Rainbow Bee-Eater (*Merops ornatus*): Migratory (EPBC Act); Schedule 3 (WC Act); and
- Western Star Finch (*Neochmia ruficauda subclarescens*): Priority 4 (DEC).

Although some conservation significant species may pass through or forage within the application area, abundant areas of similar habitat occur outside of the application area and hence these species are considered unlikely to be reliant on the habitat found within the application areas (ENV, 2013).

The proposed clearing will occur progressively in stages with progressive rehabilitation of each stage as the mining area moves forward. The proposed clearing is unlikely to have any significant impact on available fauna habitats at either a local or regional scale.

Based on the above, the proposed clearing is not likely to be at variance to this Principle.

Methodology ENV (2013)
GIS Database:
- Pre-European Vegetation
- Threatened fauna

(c) Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, rare flora.

Comments **Proposal is not likely to be at variance to this Principle**

A flora survey of the application area did not record any species of Threatened flora (ENV, 2013).

The vegetation associations recorded within the application areas are well represented in surrounding areas (ENV, 2013), and the vegetation proposed to be cleared is unlikely to be necessary for the continued existence of any species of rare flora.

Based on the above, the proposed clearing is not likely to be at variance to this Principle.

Methodology ENV (2013)
GIS Database:
- Declared Rare and Priority Flora List
- Pre-European Vegetation

(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.

Comments **Proposal is not likely to be at variance to this Principle**

There are no known Threatened Ecological Communities (TEC's) located within a 100 kilometre radius of the application area (GIS Database).

Surveys of the application area did not identify any Threatened Ecological Communities (ENV, 2013).

Based on the above, the proposed clearing is not likely to be at variance to this Principle.

Methodology ENV (2013)
GIS Database:
- Threatened and Priority Ecological Communities (TECPEC) – Boundaries
- Threatened and Priority Ecological Communities (TECPEC) – Buffers

(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.

Comments Proposal is not at variance to this Principle

The areas applied to be cleared are located within the Pilbara IBRA bioregion (GIS Database). There is approximately 99% of Pre-European vegetation remaining within the bioregion (Government of Western Australia, 2013).

The majority of the vegetation of the application area is broadly mapped as Beard vegetation association: 589 - Mosaic: Short bunch grassland - savannah /grass plain (Pilbara) /Hummock grasslands, grass steppe; soft spinifex (GIS Database). A small section of the south-eastern corner of the application area is broadly mapped as Beard vegetation association 93: Hummock grasslands, shrub steppe; kanji over soft spinifex. Approximately 99% of the pre-European extent of these vegetation associations remains uncleared at both the state and bioregion level (Government of Western Australia, 2013). Hence, the vegetation proposed to be cleared does not represent a significant remnant of vegetation in an area that has been extensively cleared.

	Pre-European area (ha)*	Current extent (ha)*	Remaining %*	Conservation Status**	Pre-European % in DPaW Managed Land
IBRA Bioregion - Pilbara	17,808,657	17,733,583	~ 99	Least Concern	6.3
Beard vegetation association - State					
93	13,428	13,428	~ 99	Least Concern	1.96
589	807,698	802,713	~ 99	Least Concern	1.59
Beard vegetation association - Bioregion					
93	3,042,114	3,038,471	~ 99	Least Concern	1.96
589	726,768	724,695	~ 99	Least Concern	1.78

* Government of Western Australia (2013)

** Department of Natural Resources and Environment (2002)

Based on the above, the proposed clearing is not at variance to this Principle.

Methodology Department of Natural Resources and Environment (2002)
Government of Western Australia (2013)
GIS Database:
- IBRA WA (Regions - Sub Regions)
- Pre-European Vegetation

(f) Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland.

Comments Proposal is not likely to be at variance to this Principle

There are no water courses or waterbodies within the application area (GIS Database). The Beebingarra Creek runs roughly parallel to the eastern boundary of the majority of the application area, and the edge of creekline is approximately 60 metres away from the clearing permit boundary at its nearest point (GIS Database).

However the creekline is located on the other side of the road which forms the eastern boundary of the application area, and the proposed clearing is not expected to impact on the Beebingarra Creek. The creek is dry for most of the year, only flowing briefly following significant rainfall (ENV, 2013).

Based on the above, the proposed clearing is not likely to be at variance to this Principle.

Methodology ENV (2014)
GIS Database:
- Geodata, Lakes
- Hydrography, linear
- Port Hedland 50cm Orthomosaic - Landgate 2004

(g) Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation.

Comments Proposal is not likely to be at variance to this Principle

The application area falls within the Uaroo Land System (GIS Database). The Uaroo Land System is characterised by broad sandy plains supporting shrubby hard and soft spinifex grasslands, and is not generally susceptible to erosion. However, as the soil within the application area is sand, it may be susceptible to wind erosion if large areas are cleared at any one time. The implementation of a staged clearing condition may reduce the likelihood of wind erosion occurring.

The proposed clearing will be undertaken in stages progressively over the life of the mining operation, commencing from the northern end of the application area and moving progressively towards the southern end (ENV, 2013). Progressive rehabilitation of each stage will be undertaken (ENV, 2013), which will assist in minimising potential erosion.

Based on the above, the proposed clearing is not likely to be at variance to this Principle.

Methodology ENV (2013)
Van Vreeswyk et al. (2004)
GIS Database:
- Rangeland Land System Mapping

(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.

Comments Proposal is not likely to be at variance to this Principle

The nearest conservation area is the Mungaroon Range Nature Reserve, which is located approximately 100 kilometres southwest of the application area (GIS Database). The proposed clearing is unlikely to have any impacts on the environmental values of this or any other conservation area.

Based on the above, the proposed clearing is not likely to be at variance to this Principle.

Methodology GIS Database:
- DEC proposed 2015 pastoral lease exclusions
- DPaW Tenure

(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.

Comments Proposal is not likely to be at variance to this Principle

The application area is not within a Public Drinking Water Source Area. There are no permanent watercourses or wetlands within the application area (GIS Database). Drainage lines and watercourses in the area are dry for most of the year, only flowing briefly immediately following significant rainfall (ENV, 2013).

The proposed clearing is unlikely to result in increased sedimentation of any watercourse, or cause deterioration in the quality of surface or underground water.

Based on the above, the proposed clearing is not likely to be at variance to this Principle.

Methodology ENV (2013)
GIS Database:
- Hydrography, Linear
- Public Drinking Water Source Areas

(j) Native vegetation should not be cleared if clearing the vegetation is likely to cause, or exacerbate, the incidence or intensity of flooding.

Comments Proposal is not likely to be at variance to this Principle

The climate of the region is semi-arid, with a low average rainfall of approximately 200-300 millimetres per year (ENV, 2013; Van Vreeswyk et al., 2004). Drainage lines in the area are dry for most of the year, only flowing briefly immediately following significant rainfall (ENV, 2013).

There are no water courses or waterbodies within the application area (GIS Database). The Beebingarra Creek runs roughly parallel to the eastern boundary of the majority of the application area, approximately 60 metres away from the clearing permit boundary at its nearest point, but on the other side of the road which forms the eastern boundary of the application area.

The creek is dry for most of the year, only flowing briefly following significant rainfall (ENV, 2013). Temporary localised flooding may occur during heavy rainfall events. However, the proposed clearing is unlikely to increase the incidence or intensity of natural flooding events.

Based on the above, the proposed clearing is not likely to be at variance to this Principle.

Methodology ENV (2013)
Van Vreeswyk et al. (2004)
GIS Database:
- Hydrography, linear

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

Comments

The clearing permit application was advertised on 25 May 2015 by the Department of Mines and Petroleum inviting submissions from the public. No submissions were received in relation to this application.

There is one native title claim (WC1999/003) over the area under application (DAA, 2015). This claim has been registered with the National Native Title Tribunal on behalf of the claimant group. 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*.

There is one registered Aboriginal Sites of Significance located partly 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 Water, and the Department of Parks and Wildlife, 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 (2015)
GIS Database:
- Aboriginal Sites of Significance

4. References

- ENV (2013) Pippingarra Road Flora, Vegetation and Fauna Assessment of E45/3819. Unpublished report prepared for Brookdale Contractors. ENV Australia Pty Ltd, July 2013.
- CALM (2002) A Biodiversity Audit of Western Australia's 53 Biogeographic Subregions in 2002. Department of Conservation and Land Management, Western Australia.
- DAA (2015) Aboriginal Heritage Enquiry System. Department of Aboriginal Affairs. <http://maps.dia.wa.gov.au/AHIS2/>
- Department of Natural Resources and Environment (2002) Biodiversity Action Planning. Action planning for native biodiversity at multiple scales; catchment bioregional, landscape, local. Department of Natural Resources and Environment, Victoria.
- DPaW (2015) Advice from DPaW Species and Communities Branch for Clearing Permit 6576/1. Department of Parks and Wildlife, Western Australia, June 2015.
- Government of Western Australia (2013) 2012 Statewide Vegetation Statistics incorporating the CAR Reserve Analysis (Full Report). Current as of October 2012. WA Department of Environment and Conservation, Perth.
- Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.
- Van Vreeswyk, A.M.E., Payne, A.L., Hennig, P., and Leighton, K.A. (2004) An Inventory and Condition Survey of the Pilbara Region, Western Australia. Department of Agriculture, Western Australia.

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	<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
s.17	Section 17 of the <i>Environment Protection Act 1986</i> , 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 *Calyptorhynchus 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.