Government of Western Australia
Department of Mines and Petroleum

Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 6835/1
Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: **Neil Francis Smith**
Robert Neil Hebiton

1.3. Property details

Property: Mining Lease 70/613
Local Government Area: Shire of Irwin
Colloquial name: Cliff Head Gypsum

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
0.5		Mechanical Removal	Gypsum Mining

1.5. Decision on application

Decision on Permit Application: Grant
Decision Date: 4 February 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. The following vegetation association has been mapped within the application area (GIS Database):

255: Shrubland; mallee scrub, *Eucalyptus dongarraensis.*

A site visit was undertaken by the assessing officer on 14 January 2016. It was observed that the application has been previously impacted by fire and the vegetation is dominated by young Eucalypts.

Clearing Description Cliff Head Gypsum Project.
Neil Francis Smith and Robert Neil Hebiton propose to clear up to 0.5 hectares of native vegetation within a boundary of approximately 0.5 hectares for the purpose of gypsum mining. The project is located approximately 30 kilometres south of Dongara in the Shire of Irwin.

Vegetation Condition Very Good: Vegetation structure altered; obvious signs of disturbance (Keighery, 1994).

Comment The vegetation condition was determined by the assessing officer during a site visit. The application area has been burnt by fire 6-8 years ago. There were signs of previous mining activities in parts of the application area.

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 falls within the Lesueur Sandplain subregion of the Geraldton Sandplain Interim Biogeographic Regionalisation of Australia (IBRA) bioregion (GIS Database). This region is characterised by proteaceous scrub-heaths, rich in endemics, on sandy earths of an extensive, undulating, lateritic sandplain with extensive York Gum and Jam woodlands occurring on outwash plains associated drainage (CALM, 2002). This subregion exhibits extremely high floristic endemism, with over 250 species of flora endemic to the subregion (CALM, 2002).

There are no records of any Threatened or Priority Ecological Communities within 20 kilometres of the application area (GIS Database).

The application area was burnt 6-8 years ago. The application area is adjacent to an existing gypsum mining operation. There is also some disturbance from previous mining activities within the application area.

A Search of the Department of Parks and Wildlife's NatureMap shows that there are records of 363 flora species from 72 families indicating that the local area supports a high level of floral diversity (DPaW, 2016). However, the assessing officer observed that the overstorey was largely dominated by a species of Eucalpyt

that had regenerated following the fire. It was also observed that the understorey is quite sparse and not as developed as surrounding areas that were not impacted by fire.

Of the species recorded in the surrounding area, two are listed as Threatened flora and 14 as Priority flora species (DPaW, 2016). Based on the soil types and landforms present, the application area may provide habitat for several of these species (GIS Database). Whilst the proposed clearing may impact Priority flora, the proposed clearing of 0.5 hectares is not likely to impact on the conservation of flora species in the local region.

The assessing officer did not observe any evidence of native fauna species within the application area (scats, diggings, nests etc). The application area has a low diversity of habitats and given the sparse understorey, is not likely to support a high diversity of fauna species.

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

Methodology
CALM (2002)
DPaW (2016)
GIS Database
- IBRA Australia
- Soils, Statewide
- Threatened and Priority Ecological Communities

(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
The fauna habitat within the application area is predominately Eucalypt shrubland. This habitat is common in the surrounding landscape (GIS Database). There is a very sparse understorey with minimal leaf litter present. During a site visit the assessing officer did not observe any evidence of native fauna species within the application area (scats, diggings, nests etc). A rabbit was seen in adjacent vegetation. Based on nearby records, there are several conservation significant fauna species that may potentially utilise the application area (DPaW, 2015). The application area is not part of an ecological linkage (GIS Database). Given the quality of the habitat and the small amount clearing (0.5 hectares), the application area is not likely to be significant habitat for native fauna species.

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

Methodology
DPaW (2016)
GIS Database:
- Imagery
- Pre-European Vegetation

(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
There are no records of Threatened flora species within the application area (DPaW, 2016; GIS Database). The Threatened flora species *Leucopogon obtectus* and *Paracaleana dixonii* have been recorded within 10 kilometres of the application area (DPaW, 2016).

Paracaleana dixonii is known to occur in deep sand in open areas beneath tall shrubland with scattered emergent Banksias, or in shallow sand over laterite in heathland (Department of the Environment, 2016). The species flowers from October to January (Western Australian Herbarium, 2016). The assessing officer visited the site on 14 January and an effort was made to search for this species. No *Paracaleana dixonii* were observed within the application area.

Leucopogon obtectus is found in low, open heath on the crests and upper slopes of sand dunes, or more rarely in interdunal swales in grey-white or pale yellow sand (Department of Environment and Conservation, 2006). It usually grows in association with several Banksia species, *Calothamnus sanguineus* and *Hakea* sp. (Department of Environment and Conservation, 2006). Suitable habitat was not observed in the application area so it is considered that the application area has a low potential of supporting this species.

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

Methodology
Department of Environment and Conservation (2006)
Department of the Environment (2016)
DPaW (2016)
Western Australian Herbarium (2016)
GIS Database:
- Threatened and Priority 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.

Comments

Proposal is not likely to be at variance to this Principle
There are no records of any Threatened Ecological Communities (TECs) within the application area (GIS Database). The nearest recorded TEC is more than 35 kilometres from the application area (GIS Database).

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

Methodology

GIS Database:
- Threatened and Priority Ecological Communities

(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 application area lies within the Geraldton Sandplain Interim Biogeographical Regionalisation of Australia (IBRA) bioregion in which approximately 44.8% of the pre-European vegetation remains (Government of Western Australia, 2014; GIS Database).

The vegetation of the application area has been broadly mapped as Beard vegetation association 255 (GIS Database). This vegetation association has not been extensively cleared as over 90% remains at both a State and bioregional level (Government of Western Australia, 2014). The application area is not a remnant nor does it form part of any remnants within the local area (GIS Database).

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

Methodology

Government of Western Australia (2014)
GIS Database:
- IBRA WA (Regions - Sub Regions)
- Imagery
- 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 at variance to this Principle
There are no watercourses within the application area (GIS Database). There is no distinctive vegetation growing in association with a watercourse or wetland (GIS Database).

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

Methodology

GIS Database:
- Hydrography, linear
- Imagery

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

Comments

Proposal may be at variance to this Principle
The soil unit within the application area has been described as coastal dune formations backed by low-lying deposits of inlets and estuaries with chief soils being calcareous sands on the dunes (Northcote et al., 1960-68; GIS Database). This soil unit is also associated with various acid peat soils in the swales behind coastal dunes, however, these soils were not observed within the application area (Northcote et al., 1960-68). Coastal dune sands are often susceptible to wind erosion if vegetation cover is removed. Potential impacts of erosion may be minimised by the implementation of a staged clearing condition.

Based on the above, the proposed clearing may be at variance to this Principle.

Methodology

Northcote et al. (1960-68)
GIS Databse:
- Soils, Statewide

(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 application area is not located within any DPaW managed lands or conservation areas (GIS Database). The Beekeepers Nature Reserve is located approximately 60 metres east of the application area (GIS Database). The application area is separated from Beekeepers Nature Reserve by Indian Ocean Drive. The proposed clearing will not impact on any linkages to the area and is not likely to impact on the environmental

values of the Nature Reserve. Care needs to be taken to ensure that the proposed clearing does not facilitate the spread of weeds into the Beekeepers Nature Reserve. Potential impacts from weeds may be minimised by the implementation of a weed management condition.

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

Methodology GIS Database:
- 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**
There are no watercourses within the application area (GIS Database). There are also no watercourses in the vicinity of the application area. The proposed clearing of 0.5 hectares is not likely to cause sedimentation of any surface water in the local area.

The application area is not located within a Public Drinking Water Source Area (PDWSA) (GIS Database). The groundwater in the application area is considered to be brackish to saline ranging from 3,000 to 7,000 milligrams/litre total dissolved solids (GIS Database). The proposed clearing of 0.5 hectares is not expected to have any impact on the quality of groundwater in the local area.

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

Methodology GIS Database:
- Groundwater Salinity, Statewide
- Hydrography, linear
- Public Drinking Water Source Areas (PDWSAs)

(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 chief soils in the application area are calcareous sands which are not prone to waterlogging (GIS Database). There are no watercourses within or nearby the application area (GIS Database). The application area is within the greater Moore-Hill Rivers catchment area and the clearing of 0.5 hectares will not exacerbate the incidence or intensity of flooding in the area (GIS Database).

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

Methodology GIS Database:
- Hydrographic Catchments - Catchments
- Hydrgraphy, linear
- Soils, Statewide

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

Comments

There is one Native Title Claim over the area under application (WC2004/002) (Department of Aboriginal Affairs, 2016). 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 no 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 11 January 2016 by the Department of Mines and Petroleum inviting submissions from the public. One submission was received providing comments in relation to Native Title matters.

Methodology Department of Aboriginal Affairs (2016)

4. References

CALM (2002) A Biodiversity Audit of Western Australia's 53 Biogeographical Subregions, Department of Conservation and Land Management, Perth.

Department of Aboriginal Affairs (2016) Aboriginal Heritage Inquiry System. Available online at

<http://maps.dia.wa.gov.au/AHIS2/> Accessed on 1 February 2015.

Department of Environment and Conservation (2006) Hidden Beard Heath (*Leucopogon obtectus*) Interim Recovery Plan 2006-2011. Interim Recovery Plan No. 227. Department of Environment and Conservation, Perth, Western Australia.

Department of Parks and Wildlife (2016) NatureMap, Department of Parks and Wildlife. Available online at http://naturemap.dec.wa.gov.au Accessed on 12 January 2016.

Department of the Environment (2016) *Paracaleana dixonii* - Sandplain Duck Orchid. Available online at <https://www.environment.gov.au/cgi-bin/sprat/public/publicspecies.pl?taxon_id=86882> Accessed on 12 January 2016.

Government of Western Australia (2014) 2014 Statewide Vegetation Statistics incorporating the CAR Reserve Analysis (Full Report). Current as of June 2014. WA Department of Parks and Wildlife, 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.

Northcote, K. H. with Beckmann G G, Bettenay E., Churchward H. M., van Dijk D. C., Dimmock G. M., Hubble G. D., Isbell R. F., McArthur W. M., Murtha G. G., Nicolls K. D., Paton T. R., Thompson C. H., Webb A. A. and Wright M. J. (1960-68): 'Atlas of Australian Soils, Sheets 1 to 10, with explanatory data'. CSIRO and Melbourne University Press: Melbourne.

Western Australian Herbarium (2016) FloraBase - The Western Australian Flora. Department of Parks and Wildlife. <http://florabase.dpaw.wa.gov.au/> Accessed 28 January 2015.

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
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.