



Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 6812/1
Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: NiCul Minerals Limited

1.3. Property details

Property: Exploration Licence 69/2864
Local Government Area: Shire of Ngaanyatjaraku
Colloquial name: Spinifex Range Project

1.4. Application

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

1.5. Decision on application

Decision on Permit Application: Grant
Decision Date: 17 December 2015

2. Site Information

2.1. Existing environment and information

2.1.1. Description of the native vegetation under application

Vegetation Description The clearing permit application area has been broadly mapped as the following Beard vegetation association: 95: Hummock grasslands, shrub steppe; acacia and grevillea over *Triodia basedowii* (GIS Database).

A flora and vegetation survey was conducted by Western Botanical during July 2013 over an area of approximately 240 hectares within tenement E69/2864, including the current clearing permit application area (NiCul, 2015; Western Botanical, 2013).

The following three vegetation associations were recorded within the application area (NiCul, 2015):

1. AkC: *Acacia kempeana* open shrubland over annual grasses on calcrete rise;
2. AsT: *Acacia victoriae* thicket; and
3. Cpn: Claypans supporting annuals.

Clearing Description Spinifex Range Project.
NiCul Minerals Limited (NiCul) proposes to clear up to 0.15 hectares of native vegetation within a boundary of approximately 130 hectares, for the purpose of mineral exploration. The project is located approximately 100 kilometres northeast of Warburton, within the Shire of Ngaanyatjaraku.

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 (2013).

The application area falls within the boundary of a previous clearing permit (CPS 5513/1), which was granted in April 2013 to Anglo American Exploration (Australia) Pty Ltd. The permit authorised the clearing of up to 5.9 hectares of native vegetation for the purpose of mineral exploration, within a permit boundary of approximately 866 hectares. CPS 5513/1 was surrendered in July 2015, when the permit holder withdrew from the joint venture exploration project. The current proposal from NiCul is to continue mineral exploration activities, but within a smaller geographic area. Clearing will be minimised by using existing access tracks wherever possible, and by locating exploration drill holes in close proximity to existing tracks (NiCul, 2015).

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 within the Mann-Musgrave Block subregion of the Central Ranges Bioregion of the Interim Biogeographic Regionalisation for Australia (IBRA) (GIS Database). The Mann-Musgrave Block subregion is characterised by sandplains supporting low open woodlands of either Desert Oak or Mulga over *Triodia basedowii* hummock grasslands (CALM, 2002). Low open woodlands of Ironwood (*Acacia estrophiolata*) and Corkwoods (*Hakea* spp.) over tussock and hummock grasses often fringe the ranges. The ranges support mixed wattle scrub or *Callitris glaucophylla* woodlands over hummock and tussock grasslands (CALM, 2002). The subregion is rich and diverse in flora and fauna, however most species are wide ranging and usually occur in at least one, and often several, adjoining regions (CALM, 2002). The dominate land-use of the subregion is grazing, and the subregion remains largely uncleared (CALM, 2002).

The clearing permit application area is relatively flat and is generally sparsely vegetated and includes some bare claypan areas (NiCul, 2015).

A Level 1 flora and vegetation survey was conducted by Western Botanical over the application area and surrounding areas during July 2013. A total of 62 flora species, from 20 families and 45 genera were recorded within the survey area (Western Botanical, 2013). The flora was dominated by the Chenopodiaceae, Fabaceae and Poaceae families (Western Botanical, 2013).

There are no records of Threatened flora occurring within the local area, and none were found during the flora survey (GIS Database; Western Botanical, 2013). Desktop searches identified five Priority flora species with the potential to occur within the survey area, based on known distributions, however no Priority flora were recorded during the flora survey (Western Botanical, 2013).

No Threatened or Priority Ecological Communities have been recorded within or in close proximity to the application area, and none were found during the flora survey (GIS Database; Western Botanical, 2013).

The vegetation condition within the survey area was described as Excellent on the Keighery scale, with some parts of the application area previously disturbed by vehicle tracks, previous mineral exploration activities, and grazing by feral animals including rabbits and camels (NiCul, 2015; Western Botanical, 2013).

Three weed species, (*Cenchrus ciliaris*, *Malvastrum americanum* and *Portulaca oleracea*) were recorded within the survey area (Western Botanical, 2013). Weeds have the potential to out-compete native flora and reduce the biodiversity of an area. Potential impacts to biodiversity as a result of the proposed clearing may be minimised by the implementation of a weed management condition.

All the vegetation associations and fauna habitats found within the application area are widespread in the region, and the application area is unlikely to represent an area of higher biodiversity than surrounding areas.

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

Methodology

CALM (2002)
NiCul (2015)
Western Botanical (2013)
GIS Database:
- IBRA Australia
- Pre-European Vegetation
- Threatened and Priority Flora
- Threatened and Priority Ecological Communities (TECPEC) - boundaries

(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

Western Botanical (2013) identified three fauna habitat types within the application area, each one associated with a specific vegetation community:

1. Calcrete Rise;
2. Minor Drainage Lines within the Calcrete Rise Landform System; and
3. Claypans.

The vegetation types, landforms and habitat types within the application area are common and widespread in the region (GIS Database, Western Botanical, 2013), and the application area is considered unlikely to represent a significant habitat for indigenous fauna (NiCul, 2015).

Several fauna species of conservation significance have the potential to occur within the application area, based on known distributions. However most conservation significant fauna species occurring in the region are highly mobile and are unlikely to be impacted by the proposed clearing. The Mulgara (*Dasyercus cristicauda* and *Dasyercus blythi*), both listed as Priority 4 by the Department of Parks and Wildlife (DPaW); the Greater

Bilby (*Macrotis lagotis*), listed as Vulnerable and protected under the *Wildlife Conservation Act 1950* (WC Act); and the Great Desert Skink (*Liopholis kintorei*), listed as Vulnerable and protected under the WC Act; were the fauna species of conservation significance considered most likely to be impacted by the proposed clearing activities, due to their reliance on fixed habitats such as burrows (NiCul, 2015).

Biota Environmental Sciences Pty Ltd (Biota) conducted targeted searches for the Mulgara, Greater Bilby and Great Desert Skink within tenement E69/2864 for the previous "Manchego Prospect" exploration programme, during 2013 (Biota, 2013). No evidence of any of the target fauna species was detected during the survey, and Biota (2013) concluded that the habitats present within the survey area were unsuitable for these species. The survey area consisted predominantly of calcrete uplands adjacent to clay-based drainage depressions, supporting a variety of open *Acacia* and *Hakea* shrublands with a low open annual grassland. The Manchego fauna survey area includes the northern part of the current clearing permit application area. The landform units and vegetation associations found within the entire application area are consistent with those recorded within the Manchego fauna survey (Biota, 2013; Western Botanical, 2013), and the habitat values of the two areas are likely to be similar.

The proposed clearing of 0.15 hectares of native vegetation within a total area of approximately 130 hectares is unlikely to have any significant impact on fauna habitats in a local or regional context.

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

Methodology Biota (2013)
NiCul (2015)
Western Botanical (2013)
GIS Database:
- Aerial 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

A flora survey conducted over the application area did not record any species of Threatened flora (Western Botanical, 2013). The vegetation associations recorded within the application area are well represented in surrounding areas (GIS Database; NiCul, 2015), and the vegetation proposed to be cleared is unlikely to be necessary for the continued existence of any species of Threatened (rare) flora.

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

Methodology NiCul (2015)
Western Botanical (2013)
GIS Database:
- Threatened and Priority Flora
- 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 (TECs) located within a 100 kilometre radius of the application area (GIS Database).

A flora and vegetation survey of the application area did not identify any TECs (Western Botanical, 2013).

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

Methodology Western Botanical (2013)
GIS Database:
- Threatened and Priority Ecological Communities (TECPEC) - boundaries

(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 area applied to be cleared is located within the Central Ranges IBRA bioregion (GIS Database). There is approximately 99% of pre-European vegetation remaining within the bioregion (Government of Western Australia, 2014).

The application area is broadly mapped as Beard vegetation association: 95: Hummock grasslands, shrub steppe; acacia and grevillea over *Triodia basedowii* (GIS Database). Approximately 99% and 100% of the pre-European extent of this vegetation association remains uncleared, respectively, at the state and bioregional level (Government of Western Australia, 2014). 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 lands
IBRA Bioregion – Central Ranges	4,701,519	4,700,206	~ 99	Least Concern	0
Beard vegetation association - State					
95	1,224,626	1,223,593	~ 99	Least Concern	3.7
Beard vegetation association - Bioregion					
95	47,953	47,953	~ 100	Least Concern	0

* Government of Western Australia (2014)

** 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 (2014)
GIS Database:
- IBRA Australia
- 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 watercourses or wetlands within or in close proximity to the application area (GIS database).

The local climate is arid with a low average annual rainfall. Drainage systems in the area are poorly developed and consist of ephemeral drainage channels and small seasonal lakes or claypans (NiCul, 2015). Minor ephemeral drainage lines and claypans occur within the application area, however these are dry for most of the year, only holding water briefly following significant rainfall events (NiCul, 2015), and are not considered to represent a wetland environment.

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

Methodology NiCul (2015)
GIS Database:
- Hydrography, Lakes
- Hydrography, linear

(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 proposed clearing for mineral exploration activities will consist of small areas of clearing, totalling approximately 0.15 hectares, distributed throughout the application area (NiCul, 2015). The small area and temporary nature of the proposed clearing is unlikely to result in appreciable land degradation.

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

Methodology NiCul (2015)

(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

There are no nearby conservation areas. The nearest conservation area is the Gibson Desert Nature Reserve, which is located approximately 132 kilometres northwest of the application area, at its nearest point (GIS Database). As the region remains largely uncleared, the small area of the proposed clearing is unlikely to have any impacts on ecological linkages to this or any other conservation area.

The proposed clearing is within an area known as the 'Ranges of the Western Desert', which is recognised for its unique natural values (GIS Database). The ranges of the Western Desert covers an area of approximately 8 million hectares. The small area of the proposed clearing (0.15 hectares) is unlikely to have any significant impact on the natural values of this area.

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

Methodology GIS Database:
- DPaW Tenure
- Environmentally Sensitive Areas

(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 Public Drinking Water Source Areas within or in close proximity to the clearing permit application area (GIS Database). There are no permanent watercourses or wetlands within the application area (GIS Database). Ephemeral drainage lines and claypans in the region are dry for most of the year, only holding water briefly immediately following significant rainfall (NiCul, 2015), and the proposed clearing is unlikely to result in increased sediment loads in surface water. The small area and temporary nature of the proposed clearing is unlikely to have any significant impact on the quality of surface water or groundwater.

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

Methodology NiCul (2015)
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 application area falls within the Warburton Basin catchment area, which covers a total area of approximately 17,203,745 hectares (GIS Database).

The climate of the application area is arid, with a mean annual rainfall of approximately 200 millimetres comprising summer and winter rains (CALM, 2002). Localised flooding may occur following heavy rainfall events. However, the proposed clearing of approximately 0.15 hectares within a total application area of approximately 130 hectares, 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 CALM (2002)
GIS Database:
- Hydrographic Catchments - Catchments
- Rainfall, Mean Annual

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

Comments

The clearing permit application was advertised on 2 November 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 (WC2004/003) over the area under application (DAA, 2015). This claim was determined by the Federal Court in 2005 (DAA, 2015). However, the mining tenement 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 located within the application area (DAA, 2015; 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

- Biota (2013) Manhego and Bergenost Areas Fauna Clearances. Report prepared for Anglo American Exploration Australia Pty Ltd, by Biota Environmental Sciences, 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.
- 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.
- NiCul (2015) Native Vegetation Clearing Permit Application E69/2864 Spinifex Range Ngaanyatjarra Western Australia. NiCul Minerals Limited, October 2015.
- Western Botanical (2013) Assessment of Flora and Vegetation for the Manhego Prospect. Report prepared for Anglo American Exploration Australia Pty Ltd, by Western Botanical, July 2013.

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
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 <i>Wildlife Conservation Act 1950</i> , 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 <i>Wildlife Conservation Act 1950</i> , 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 <i>Wildlife Conservation Act 1950</i> , 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 <i>Wildlife Conservation Act 1950</i> , 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.