



Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 8239/1
Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: Northern Minerals Limited

1.3. Property details

Property: Exploration Licence 80/4298
Exploration Licence 80/4967
Local Government Area: Shire of Halls Creek
Colloquial name: John Galt Rare Earths Project

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
25		Mechanical Removal	Mineral Exploration and Associated Activities

1.5. Decision on application

Decision on Permit Application: Grant
Decision Date: 13 December 2018

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:

91: Hummock grasslands, sparse low tree steppe; snappy gum (*Eucalyptus brevifolia*) over soft spinifex (*Triodia pungens*) (GIS Database).

A site inspection was undertaken over the application area by Outback Ecology Services on 3 February 2012. The following four broad vegetation types were recorded within the application area (Outback Ecology, 2012):

Scree slope - *Eucalyptus* low open woodland over *Grevillea refracta* and *Acacia colei* tall open shrubland and *Tephrosia procera* scattered low shrubs over *Triodia* hummock grassland and *Chrysopogon fallax* tussock grassland;

Ridge top - *Eucalyptus* scattered low trees over *Grevillea refracta* and *Acacia* tall or tall open *Templetonia hookeri* scattered shrubs over *Triodia* hummock grassland;

Drainage Line - *Eucalyptus* low open woodland over *Chrysopogon fallax* closed tussock grassland; and

Low hills - *Adansonia gregorii* scattered trees and *Eucalyptus* scattered low trees over *Grevillea pyramidalis* scattered tall shrubs over *Cullen* sp. scattered shrubs over *Triodia* hummock grassland, respectively.

Clearing Description John Galt Rare Earths Project.
Northern Minerals Limited proposes to clear up to 25 hectares of native vegetation within a boundary of approximately 484 hectares, for the purposes of mineral exploration and associated activities. The project is located approximately 114 kilometres north-east of Halls Creek, within the Shire of Halls Creek.

Vegetation Condition Pristine: No obvious signs of disturbance (Keighery, 1994).
To;
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 Outback Ecology (2012).
The proposed clearing of 25 hectares is for mineral exploration activities to primarily target xenotime mineralisation on the John Galt Ridge (Northern Minerals, 2018).

3. Assessment of application against Clearing Principles

Comments

The proposal to clear 25 hectares of native vegetation within an application area of approximately 484 hectares for the purpose of mineral exploration is unlikely to have any significant environmental impacts. The application area occurs within the Purnululu (OVP1) subregion of the Ord Victoria Plains Interim Biogeographic Regionalisation of Australia (IBRA) bioregion (GIS Database). This subregion is characterised by level to gently undulating plains with scattered hills on Cambrian volcanic and Proterozoic sedimentary rocks; vertosols on plains and predominantly skeletal soils on hills (CALM, 2002). The overall vegetation is grassland with scattered bloodwoods (*Corymbia* spp.) and snappy gum (*Eucalyptus brevifolia*) with spinifex and annual grasses (CALM, 2002).

There was no flora survey undertaken over the application area. Outback Ecology (2012) identified four broad vegetation types within the application area. There are no known Threatened or Priority flora located within the application area (Northern Minerals, 2018; GIS Database). No Threatened Ecological Communities or Priority Ecological Communities were recorded within the application area (Northern Minerals, 2018; GIS Database). The condition of the vegetation types was classified from 'excellent' to 'pristine' (Keighery, 1994).

Outback Ecology (2012) identified four broad faunal habitats within the application area; scree slope, ridge top, drainage line and low hills. Based on aerial imagery and Outback Ecology (2012), the application area does not contain significant fauna habitat, and landforms and fauna habitat types occurring within the application area appear consistent with the surrounding area (GIS Database).

Beard vegetation association 91 retains approximately 99% or above of its pre-European extent at both the state and bioregion level (Government of Western Australia, 2018). The area proposed to be cleared is not a significant remnant of native vegetation.

There are several non-perennial watercourses mapped within the area under application with one major non-perennial watercourse located in the north-east corner of the application area (GIS Database). Aerial imagery suggest the presence of riparian vegetation, which may provide important habitat for fauna (GIS Database). Provided disturbance to riparian habitats is avoided or minimised where possible, and strict weed hygiene procedures are followed, the proposed works are not expected to substantially impact any watercourses or wetlands. Potential impacts to riparian vegetation may be minimised through the implementation of a vegetation management condition.

There are no conservation areas within the application area, however the nearest DBCA managed land is the Purnululu Conservation Reserve which is located approximately one kilometre east of the application area (GIS Database). Given the proposed exploration activities, and the distance between the application area and Purnululu Conservation Reserve, the proposed clearing is not likely to impact on the conservation area.

The application area is within the 'Middle Ord Region (Purnululu)' Environmentally Sensitive Area (Register of National Estate) (GIS Database). The Middle Ord Region has significant natural and Indigenous heritage values. It is of significance for supporting plant and animal communities and species which are at the limit of their range, which are disjunct or outlying from other populations, or which are endemic to the area (DotEE, 2018). Despite the area being on the Register of National Estate for Indigenous heritage and natural values, it is considered that the proposed clearing will not significantly impact on the environmental values of the area. Following the cessation of exploration activities and rehabilitation undertaken by the proponent, the proposed activities are not expected to significantly impact on the conservation values of the Middle Ord Region (Purnululu).

The Dockrell and Wickham Land systems intersect the application area, both of which have a low susceptibility to erosion (Payne and Schoknecht, 2011). The proposed clearing is not likely to cause a deterioration in the quality of surface or underground water or increase the incidence or intensity of flooding (GIS Database).

The application has been assessed against the clearing principles, planning instruments and other matters in accordance with s.51O of the *Environmental Protection Act 1986*, and the proposed clearing is not likely to be at variance to Principles (a), (b), (c), (d), (f), (g), (h), (i), and (j), and is not at variance to Principle (e).

Methodology CALM (2002)
DotEE (2018)
Government of Western Australia (2018)
Keighery (1994)
Northern Minerals (2018)
Payne and Schoknecht (2011)

GIS Database:

- DPaW Tenure
- Hydrography, Lakes
- Hydrography, Linear
- IBRA Australia
- Imagery
- Landsystem Rangelands
- Pre-European Vegetation
- Public Drinking Water Source Areas
- Soils, Statewide
- Threatened and Priority Ecological Communities boundaries
- Threatened and Priority Ecological Communities buffers
- Threatened and Priority Flora
- Threatened Fauna

Planning Instrument, Native Title, previous EPA decision or other matter.

Comments

There are no Native Title claims over the area under application (DPLH, 2018). 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, 2018). 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.

The amendment application was advertised on 19 November 2018 by the Department of Mines, Industry Regulation and Safety inviting submissions from the public. No submissions were received in relation to this application.

Methodology DPLH (2018)

4. References

- CALM (2002) A Biodiversity Audit of Western Australia's 53 Biogeographical Subregions. Ord Victoria Plains 1 (OVP1 - Ord subregion) Department of Conservation and Land management, Western Australia.
- DotEE (2018) Australian Heritage Database. Department of the Environment and Energy.
<http://www.environment.gov.au/heritage/places/register-national-estate> (Accessed 28 November 2018).
- DPLH (2018) Aboriginal Heritage Enquiry System. Department of Planning, Lands and Heritage.
<http://maps.daa.wa.gov.au/AHIS/> (Accessed 28 November 2018).
- Government of Western Australia (2018) 2017 Statewide Vegetation Statistics incorporating the CAR Reserve Analysis (Full Report). Current as of December 2017. WA Department of Biodiversity, Conservation and Attractions.
<https://catalogue.data.wa.gov.au/dataset/dbca-statewide-vegetation-statistics>
- Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.
- Northern Minerals (2018) John Galt Rare Earths Project Purpose Permit Application – Supporting Document. Northern Minerals Ltd, November 2018.
- Outback Ecology (2012) Northern Minerals Limited – John Galt, Ecological Reconnaissance. Prepared for Northern Minerals Limited by Outback Ecology Services, June 2012.
- Payne, A.L. and Schoknecht, N. (2010) Land Systems of the Kimberley Region, Western Australia. Department of Agriculture and Food, Western Australia. Technical Bulletin 98, 250p.

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	<p>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).</p> <p>Threatened fauna is that subset of ‘Specially Protected Fauna’ declared to be ‘likely to become extinct’ pursuant to section 14(4) of the <i>Wildlife Conservation Act 1950</i>.</p> <p>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 <i>Wildlife Conservation Act 1950</i>.</p> <p>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.</p>
CR	<p>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.</p>
EN	<p>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.</p>
VU	<p>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.</p>
EX	<p>Presumed extinct species</p>

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.