Government of Western Australia
Department of Mines, Industry Regulation and Safety

Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 7052/2
Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: **Genesis Minerals Limited**

1.3. Property details

Property: Mining Lease 40/166
Local Government Area: Shire of Menzies
Colloquial name: Ulysses Project

1.4. Application

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

1.5. Decision on application

Decision on Permit Application: Grant
Decision Date: 3 May 2018

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 (GIS Database): 18: Low woodland; mulga (*Acacia aneura*).

A flora and vegetation survey was conducted by Botanica Consulting (Botanica) in January 2016 over the area covered by Mining Lease 40/166 (approximately 996 hectares), which included the original clearing permit area and the current amendment application area (Botanica, 2016).

The following four vegetation communities were recorded within the survey area, grouped according to landform types (Botanica, 2016). All four vegetation communities occur within the original clearing permit area and the amendment application area, with community type CLP-AFW1 representing the majority of the amendment area (Botanica, 2016):

Clay-Loam Plain
CLP-AFW1: Forest of *Acacia caesaneura/ A. incurvaneura* over low scrub of *Eremophila forrestii* subsp. *forrestii/ Eremophila margarethae* and open low grass of *Eragrostis eriopoda* on clay-loam plain;
CLP-AFW2: Low woodland of *Acacia incurvaneura* over open low scrub of *A. ramulosa* and dense low heath of *Maireana pyramidata* on clay loam plain;

Drainage Depression
DD-AFW1: Forest of *Acacia caesaneura* over low scrub of *A. ramulosa/ Eremophila georgei* and open low grass of *Eragrostis eriopoda/ Monachather paradoxus* in drainage depression;

Rocky Hillslope
RHS-AFW1: Low woodland of *Acacia incurvaneura* over low scrub of *A. ramulosa* and open dwarf scrub of *Ptilotus obovatus* on rocky hillslope.

Clearing Description

Ulysses Project.
Genesis Minerals Limited proposes to clear up to 58.2 hectares of native vegetation within a boundary of approximately 64.9 hectares, for the purposes of mineral production and mining-related infrastructure. The project is located approximately 30 kilometres south of Leonora, within the Shire of Menzies.

Vegetation Condition

Good: Structure significantly altered by multiple disturbance; retains basic structure/ability to regenerate (Keighery, 1994).

Comment

The vegetation condition was derived from a vegetation survey conducted by Botanica Consulting (Botanica) in January 2016 (Botanica, 2016).

The proposed clearing is for the development of the Ulysses Project minesite and associated mining related infrastructure.

Clearing permit CPS 7052/1 was granted by the Department of Mines and Petroleum (now the Department of Mines, Industry Regulation and Safety) on 21 July 2016 and was valid from 13 August 2016 to 31 August 2021. The permit authorised the clearing of up to 15 hectares of native vegetation within a permit boundary of approximately 21.7 hectares, for the purpose of mineral production and associated activities.

On 1 March 2018, the Permit Holder applied to amend CPS 7052/1 to increase the amount of clearing authorised to 58.2 hectares, and increase the permit boundary to approximately 64.9 hectares.

3. Assessment of application against clearing principles

Comments

Genesis Minerals Limited has applied to amend the permit to increase the amount of authorised clearing by 43.2 hectares to 58.2 hectares, and to increase the permit boundary by approximately 43.2 hectares. The amendment area is located immediately adjacent to and surrounding the original permit area, and the additional clearing is to allow for the development of further mining related infrastructure.

The permit area is located within the Eastern Murchison subregion of the Murchison Interim Biogeographic Regionalisation of Australia (IBRA) bioregion (GIS Database). The Eastern Murchison subregion is characterised by broad plains of red-brown soils and breakaway complexes as well as red sandplains. The vegetation of this subregion is dominated by Mulga Woodlands often rich in ephemerals; hummock grasslands, saltbush shrublands and Halosarcia shrublands (CALM, 2002). The Eastern Murchison subregion supports a rich and diverse flora and fauna, however most species are wide ranging and not restricted to the subregion (CALM, 2002).

The amendment area is broadly mapped as Beard vegetation association 18, which is consistent with the original permit area (GIS Database). Approximately 99% of the pre-European extent of Beard vegetation association 18 remains uncleared at both the state and bioregional level (Government of Western Australia, 2018). Hence, the vegetation proposed to be cleared does not represent a significant remnant of native vegetation in an area that has been extensively cleared.

Botanica (2016) conducted a Level 1 flora and vegetation survey over the whole of tenement M40/166, which included the original permit area and the amendment application area. No Threatened flora, Priority flora, Threatened Ecological Communities or Priority Ecological Communities have been recorded within the amendment area (GIS Database), and none were found during the flora and vegetation surveys (Botanica, 2016). Analysis of aerial imagery indicates that the vegetation associations and landform types occurring within the amendment area are similar to those occurring within the original permit boundary, and are well represented in the region (GIS Database). The amendment area is unlikely to represent an area of higher biodiversity than the original permit area or surrounding areas.

A Level 1 fauna survey was conducted over the whole of tenement M40/166 by consulting zoologist Greg Harewood in January 2016, comprising of a desktop review and a reconnaissance field survey (Harewood, 2016). Harewood (2016) reported that the fauna assemblage within the survey area was typical of the region.

Several fauna species of conservation significance have the potential to occur within the amendment area, based on known distributions and available habitats (Harewood, 2016), however the majority of these species are highly mobile. The proposed additional clearing is unlikely to impact the conservation status of any fauna species, or have any significant additional impacts to fauna or fauna habitats.

There are no permanent watercourses or wetlands within the application area (GIS Database). One minor seasonal watercourse passes through the original permit area, and the amendment area includes one additional minor seasonal watercourse (GIS Database). Potential impacts to vegetation associated with these watercourses, and vegetation downstream from the application area, may be minimised by the continued implementation of the existing watercourse management condition on the permit.

The proposed clearing of an additional 43.2 hectares of native vegetation, is unlikely to result in appreciable land degradation, or have any significant additional impact on surface or groundwater quality, or on the incidence or intensity of flooding. Continued implementation of the existing staged clearing condition may minimise the risk of land degradation.

The application area is not within or in close proximity to any conservation areas (GIS Database). The Murchison Bioregion remains largely uncleared (Government of Western Australia, 2018), and the proposed additional clearing is unlikely to significantly impact on ecological linkages to any conservation areas.

Two weed species were recorded within the tenement during the flora and vegetation survey (Botanica, 2016). Weeds have the potential to out-compete native vegetation and reduce biodiversity. Continued implementation of the existing weed management condition may minimise the risk of further spread of weeds.

The vegetation associations, habitat types and landforms found within the amendment area are similar to the original permit area, and are well represented in surrounding areas (Botanica, 2016; Harewood, 2016; GIS Database). The additional 43.2 hectares of proposed clearing is unlikely to have any significant additional environmental impacts.

The amendment application has been assessed against the clearing principles, planning instruments and other matters in accordance with s.51O of the *Environmental Protection Act 1986.* Environmental information has been reviewed, and the assessment of the proposed clearing against the clearing principles remains consistent with the assessment contained in decision report CPS 7052/1.

Methodology

Botanica (2016)
CALM (2002)
Government of Western Australia (2018)
Harewood (2016)

GIS Database:
- DPaW Tenure
- Hydrography, Lakes
- Hydrography, Linear
- IBRA Australia
- Imagery
- Landsystem Rangelands
- Pre-European Vegetation
- Public Drinking Water Source Areas
- Threatened and Priority Ecological Communities boundaries
- 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 March 2018 by the Department of Mines, Industry Regulation and Safety inviting submissions from the public. One submissions was received, raising no concerns in relation to this amendment application.

Methodology

DPLH (2018)

4. References

Botanica (2016) Level 1 Flora and Vegetation Survey. Ulysses survey area. Report prepared for Genesis Minerals Limited, by Botanica Consulting, January 2016.

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

DPLH (2018) Aboriginal Heritage Enquiry System. Department of Planning, Lands and Heritage. http://maps.daa.wa.gov.au/AHIS/ (Accessed 26 April 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

Harewood, G. (2016) Fauna Assessment. Ulysses Project. Report prepared for Genesis Minerals Limited. February 2016.

Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.

5. Glossary

Acronyms:

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

T **Threatened species:**
Published as Specially Protected under the *Wildlife Conservation Act 1950,* listed under Schedules 1 to 4 of the Wildlife Conservation (Specially Protected Fauna) Notice for Threatened Fauna and Wildlife Conservation (Rare Flora) Notice for Threatened Flora (which may also be referred to as Declared Rare Flora).

Threatened fauna is that subset of 'Specially Protected Fauna' declared to be 'likely to become extinct' pursuant to section 14(4) of the Wildlife Conservation Act.

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.

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.