



Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 7097/1
Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: Lithium Australia NL

1.3. Property details

Property: Exploration Licence 74/543
Local Government Area: Shire of Ravensthorpe
Colloquial name: Deep Purple Project

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
0.94		Mechanical Removal	Mineral exploration and access tracks

1.5. Decision on application

Decision on Permit Application: Grant
Decision Date: 28 July 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. One Beard vegetation association is located within the application area (GIS Database):

Beard vegetation association 352: Medium woodland; York gum

A Level 1 flora and vegetation survey was conducted over the application area in 2010 by Keith Lindbeck and Associates. The survey was conducted in support of a previously granted clearing permit (CPS 4186/1). Two vegetation types were identified within the application area (Keith Lindbeck and Associates, 2011a):

1) Woodland of *Eucalyptus salmonophloia* over scattered tall mallee *E. oleosa* subsp. *corvina* over *Acacia sulcata*, *Dodonaea ptarmicaefolia*, *Santalum acuminatum*, *Cassinia arcuata*, *Threlkeldia diffusa*, *Senna artemisioides*, *Enchylaena tomentosa*, *Eremophila glabra* and *A. erinacea* on deep loam over clay.

2) Woodland of scattered *Eucalyptus oleosa* subsp. *corvina*, *Acacia acuminata*, *Santalum spicatum*, *A. cyclops*, *Dodonaea ptarmicaefolia*, *Senna artemisioides*, *Scaevola spinescens*, *Enchylaena tomentosa* and *Eremophila glabra* on stony sandy loam over dolerite ridges.

Clearing Description Deep Purple Project
Lithium Australia NL proposes to clear up to 0.94 hectares of native vegetation within a total boundary of approximately 17.5 hectares, for the purpose of mineral exploration. The project is located approximately 13 kilometres south west of Ravensthorpe in the Shire of Ravensthorpe.

Vegetation Condition Excellent: Vegetation structure intact; disturbance affecting individual species, weeds non-aggressive (Keighery, 1994).

Comment Clearing permit CPS 4186/1 was granted by the Department of Mines and Petroleum on 10 March 2011, and approved the clearing of up to 0.6 hectares of native vegetation within a clearing permit boundary of approximately 8.3 hectares. This permit was held by a different permit holder and expired on 30 April 2016. On 2 June 2016, Lithium Australia NL applied for a clearing permit for an area which included parts of the previously approved area.

The Department of Parks and Wildlife (DPaW) provided advice for a clearing permit (CPS 7017/1) located approximately four kilometres south west of the application area. Fauna advice received for CPS 7017/1 was used during the assessment of CPS 7094/1, as the same fauna species are known from the local area.

The condition of the vegetation under application was determined via a flora and vegetation survey conducted in 2010.

3. Assessment of application against Clearing Principles

Comments

The proposed clearing of 0.94 hectares of native vegetation is to occur within a clearing permit boundary of approximately 17.5 hectares and will allow for a drilling program to be completed. Fourteen drill holes, pads and sumps, and 1.7 kilometres of tracks are proposed.

The application areas fall within the Fitzgerald sub-region of the Esperance Plains Interim Biogeographic Regionalisation for Australia (IBRA) bioregion (GIS Database). This sub-region includes the Stirling Ranges Flora, the Fitzgerald River National Park (Biosphere) and has been recognised as a centre of species diversity in southwest Western Australia (CALM, 2002). The vegetation within this sub-region is characterised as having myrtaceous and proteaceous scrub and mallee heaths on sand plain overlying Eocene sediments; rich in endemics. Herb fields and heaths (rich in endemics) occur on abrupt granite tors and quartzite ranges that rise from the plain. Eucalypt woodlands occur in gullies and alluvial foot-slopes (CALM, 2002).

The application area falls within the Cocanarup Reserve (Crown Reserve 30795) which is recognised as an Environmentally Sensitive Area (GIS Database), is known to be comprised of *Eucalyptus salmonophloia* over *Acacia acuminata* woodlands on red loams and is considered to be an ecosystem at risk (CALM, 2002). The Cocanarup Reserve was also previously used as a translocation site for the Numbat (*Myrmecobius fasciatus* - EN) and therefore has been managed or protected for the purposes of conservation.

There are no Threatened Ecological Communities (TECs) or Priority Ecological Communities (PECs) mapped within the amendment area and no TECs or PECs were identified during the flora and vegetation survey (Keith Lindbeck and Associates, 2010; GIS Database).

Two minor non-perennial watercourses intersect the application area. Potential impacts to vegetation growing in association with a watercourse as a result of the proposed clearing may be minimised by the implementation of a watercourse management condition.

According to available databases, ten species of Threatened flora, nineteen Priority 1 flora species, eleven Priority 2 flora species and thirty four Priority 3 flora species have been recorded within the local area (20 kilometre radius) (DPaW, 2016a). Of these, four Priority 1 flora species, three Priority 2 flora species and two Priority 3 flora species have been recorded within 5 kilometres of the application area (DPaW, 2016a). A Level 1 flora survey was conducted over the majority of the application area in 2010 by Keith Lindbeck and Associates and no Threatened flora were recorded. *Cassinia arcuata* (P2) was the only species of Priority flora recorded within the application area. However, the survey was not conducted at the appropriate time of year to identify the presence of annual species. *Levenhookia pulcherrima* (P2) and *Gnephosis intonsa* (P3) are two annual species known within 5 kilometres of the application area that may not have been recorded during the flora survey. Potential impacts to Priority flora species as a result of the proposed clearing may be minimised by the implementation of a flora management condition.

Keith Lindbeck and Associates conducted a Level 1 fauna survey over parts of the application area and considered the majority of the vegetation to be in an "Excellent" (Keighery, 1994) condition. There was no evidence of grazing, very few weeds and no tracks going through the area. In addition to this, the area appears to have remained unburnt for some time, which has provided an open structure with scattered large trees with significant tree hollows and habitat logs on the ground (Keith Lindbeck and Associates, 2010).

Although impacts to the majority of local fauna species (including species of conservation significance) are not likely to be significant due to the small size of the proposed clearing and large amount of surrounding vegetation, DPaW (2016b) have advised that impacts to the Numbat (*Myrmecobius fasciatus* - EN), Carnaby's cockatoo (*Calyptorhynchus latirostris* - EN) and Malleefowl (*Leipoa ocellata* - VU) may potentially be significant if key habitat/breeding features are present.

The Numbat is of concern, given that the local area was previously used as a translocation site. A fire in 2008 impacted on the population, and it is likely that they are no longer extant in the area. However, a survey should be conducted targeting suitable habitat for numbats within the application area and adjoining bushland. If numbats or recent evidence of numbats is found then the clearing may have a significant impact on the local population (DPaW, 2016b).

The proposed clearing area falls within a confirmed breeding area for the Carnaby's cockatoo, and therefore the area has the potential to be used for breeding and/or foraging. If hollow bearing trees are identified as being utilised by Carnaby's cockatoo, a buffer should be placed around the tree and clearing should take place outside of breeding season to minimise any disturbance (DPaW, 2016b).

DPaW (2016b) have advised that there are recent (2005 onwards) records of Malleefowl within the vicinity (20 kilometre radius) of the application area, therefore the application area has the potential to be used for nesting, foraging and/or traversing through the landscape. While the area proposed to be cleared is a very small proportion of the surrounding vegetation, if Malleefowl mounds are located, a buffer should be placed around the mound. If a mound is found to be active, then clearing should take place outside of breeding season to minimise any disturbance (DPaW, 2016b).

Potential impacts to the Numbat, Carnaby's cockatoo and Malleefowl as a result of the proposed clearing may be minimised by the implementation of fauna management conditions. In addition to fauna management conditions, it is recommended that clearing activities be conducted in a manner which allows any vertebrate fauna to move out of the area, and should be undertaken to avoid the breeding season of local fauna species such as the Chuditch to minimise disturbance (DPaW, 2016b).

Beard vegetation association 352 is considered to be 'Vulnerable' within the State, Bioregion, subregion and local shire, with between 10-30% of pre-European levels of native vegetation remaining in all categories

(Department of Natural Resources and Environment, 2002; Government of Western Australia 2014; GIS Database). Despite this vegetation association retaining levels below the recommended 30% threshold of pre-European settlement levels of native vegetation (Commonwealth of Australia, 2001), there are large areas of native vegetation that remain in the local area and region, including the Fitzgerald River National Park, which is situated approximately 14 kilometres south west and has an extent of over 280,000 hectares (GIS Database). Given the small scale of the proposed clearing (0.94 hectares) and large amount of connected native vegetation in the local area and region (DPaW, 2016b; GIS Database), the native vegetation under application is not considered to be a remnant in a highly cleared area. However, given that Beard vegetation association 352 is poorly represented, the proposed clearing may be at variance to Principle (e).

Given the relatively small size of the proposed clearing and the large amount of remaining vegetation in the surrounding area, significant environmental impacts are unlikely to result from the proposed clearing, provided management actions are implemented.

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 may be at variance with Principles (a), (b), (e) and (f), is not likely to be at variance with Principles (c), (g), (h), (i), and (j) and is not at variance to Principle (d).

Methodology CALM (2002)
Commonwealth of Australia (2001)
Department of Natural Resources and Environment (2002)
DPaW (2016a)
DPaW (2016b)
Government of Western Australia (2014)
Keith Lindbeck and Associates (2010)

GIS Database:
- DPaW Tenure
- Hydrography, linear
- IBRA Australia
- Imagery
- Pre-European Vegetation
- Public Drinking Water Source Areas (PDWSAs)
- Threatened and Priority Flora List
- Threatened and Priority Ecological Communities Buffers
- Threatened and Priority Ecological Communities Boundaries

Planning instrument, Native Title, RIWI Act Licence, EP Act Licence, Works Approval, Previous EPA decision or other matter.

Comments

There are three native title claims over the application area (WC2003/006, WC1996/109 and WC1998/070) (DAA, 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 datasets, there are no Sites of Aboriginal Significance located in the area applied to clear (DAA, 2016). It is the proponent's responsibility to comply with the *Aboriginal Heritage Act 1972* and ensure that no Sites of Aboriginal Significance are damaged through the clearing process.

It is the proponent's responsibility to liaise with the Department of Environment Regulation, the 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 20 June 2016 by the Department of Mines and Petroleum inviting submissions from the public. No submissions were received in relation to this application.

Methodology DAA (2016)

4. References

- CALM (2002) A Biodiversity Audit of Western Australia's 53 Biogeographical Subregions. Department of Conservation and Land Management.
- Commonwealth of Australia (2001) National Objectives and Targets for Biodiversity Conservation 2001-2005, Canberra.
- DAA (2016) Aboriginal Heritage Inquiry System, Department of Aboriginal Affairs, Perth, Western Australia
< <http://maps.dia.wa.gov.au>> Accessed July 2016.
- Department of Natural Resources and Environment (2002) Biodiversity Action Planning. Action planning for native biodiversity at multiple scales; catchment bioregional, landscape, local. Department of Natural Resources and Environment, Victoria.
- DPaW (2016a) NatureMap, Department of Parks and Wildlife <<http://naturemap.dec.wa.gov.au>> (Accessed July 2016).
- DPaW (2016b) Advice received in relation to Clearing Permit Application CPS 7017/1. Species and Communities Branch,

Department of Parks and Wildlife, Western Australia, March 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.

Keith Lindbeck and Associates (2010) Bakers Hill North East Project, Level 1 Flora, Vegetation and Fauna Survey. Report prepared for Galaxy Resources Limited, Keith Lindbeck and Associates, February 2011.

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 *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.