Department of Industry and Resources

Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 1419/1

Permit type: Area Permit

1.2. Proponent details

Proponent's name: **Luzenac Australia Pty Ltd**

1.3. Property details

Property: Mining Lease M70/243

Local Government Area: Shire of Three Springs

Colloquial name: Three Springs Talc Operations

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
8		Mechanical Removal	Stockpile

2. Site Information

2.1. Existing environment and information

2.1.1. Description of the native vegetation under application

Vegetation Description	Clearing Description	Vegetation Condition	Comment
Beard Vegetation Association 352: Medium woodland; York gum. There is approximately 23.8% of this vegetation type remaining in the Avon Wheatbelt P1 subregion (Shepherd et al, 2001). Despite the Beard classification, there is no Medium Woodland; York gum in the area applied to clear. Clearing of the area has taken place since European settlement to establish farmland. The vegetation of the area applied to clear is now predominately non-native pasture (Borger, 2004). All grasses in the area are non-native and include Barley grass (*Hordeum leporinum*), Wild oats (*Avena fatua*), Canary grass (Phalaris canariensis), Great brome (*Bromus diandrus*), Doublegee (*Emex australis*) and Silvery hair grass (*Aira caryophyllea*) (Borger, 2004). Other non-native species include Paterson's Curse (*Echium plantagineum*), Ice Plant (*Mesembryanthemum crystallinum*) and Roly Poly (*Salsola kali*) (Borger, 2004). Some native shrub species have returned to the area as regrowth, however, no tree species were recorded within the area applied to cear (Borger, 2004). Shrubs within the pasture are dominated by Bluebush (*Maireana brevifolia*), Saltbush (*Rhagodia drummondii*), Ruby saltbush (*Enchylaena tomentosa*) and various Acacia species such *as A. acuaria*, *A. acuminata*, *A. restiacea* and *A. sphacelata* (Borger, 2004). None of the native shrub species recorded from the area applied to clear are of conservation significance.	The clearing permit application is for an area permit to clear 8ha. The clearing is for the establishment of a finished product stockpile. The proposed clearing will involve mechanical removal of non-native grass species and some native shrubs (Borger, 2004). Topsoil will be stockpiled for rehabilitation purposes.	Completely Degraded: No longer intact; completely/almost completely without native species (Keighery 1994)	A botanical consultant (J. Borger) undertook a vegetation survey on part of mining lease M70/243 in December 2004. The survey covered an area of approximately 30ha, and included: the 8ha area applied to clear, a remnant patch of native vegetation 250m south of the application area, tree plantings along the southern and eastern boundaries of the mining lease, and adjacent road verge vegetation (Borger, 2004). The area applied to clear was used as farmland up until December 1999. The area is still grazed occasionally (Borger, 2004).

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 area applied to clear is not representative of an area of outstanding biodiversity in the local district or in the Avon-Wheatbelt P1 subregion. The area's native vegetation has been historically cleared to establish farmland (Borger, 2004). Only twenty two species were identified within the application area, nine of these being non-native pasture species (Borger, 2004). Some native shrubs exist in the area as regrowth, none of which are of conservation significance (Borger, 2004).

The vegetation in the application area is not likely to be of a higher biodiversity value than surrounding areas. It does not support a species rich assemblage of flora or fauna. No Threatened Ecological Communities (TEC's), Declared Rare Flora (DRF), or Priority flora are known from the area applied to clear (GIS Database).

The clearing as proposed is not likely to be at variance to this principle.

Methodology

Borger (2004).
GIS Database:
- Declared Rare and Priority Flora List- CALM 01/07/05.
- Threatened Ecological Communities - CALM 12/04/05.

(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

There are no records of any Threatened or Priority Fauna within a 10km radius of the area applied to clear (GIS Database). It is highly unlikely that the proposed clearing area provides significant habitat for any indigenous fauna given that it is dominated by non-native grasses, which could be expected to be well represented in adjacent farmlands. Furthermore, the area applied to be cleared contains no tree species, and has been historically disturbed by farming (Borger, 2004).

The clearing as proposed is not likely to be at variance to this principle.

Methodology

Borger (2004).
GIS Database - Threatened Fauna - CALM 30/09/05.

(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

According to the available CALM datasets, no Priority flora or DRF species are known to occur within the area under application (GIS Database). No DRF or Priority flora were found within the application area during a vegetation survey conducted on the 7th and 8th of December 2004 (Borger, 2004). The survey was undertaken along transects of the pasture, running in an east-west direction. Specimens that could not be determined in the field were collected for later identification (Borger, 2004).

Three populations of DRF have been recorded within a 10km radius of the application area (GIS Database). A population of *Daviesia bursaroides* exists approximately 7.5km to the west, a population of *Chorizema humile* has been found approximately 8km to the southeast, whilst a population of *Darwinia sp. Carnamah* has also been found in the same location (GIS Database). Three populations of Priority Flora have also been recorded within a 10km radius of the application area (GIS Database). *Acacia nodiflora* (P3) has been found in three nearby locations approximately 8.5km to the southeast (GIS Database). The proposed clearing is not likely to have any impact upon these DRF or Priority flora populations.

The clearing as proposed is not likely to be at variance to this principle.

Methodology

Borger (2004).
GIS Database: Declared Rare and Priority Flora List- CALM 01/07/05.

(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 (TEC's) within the area applied to clear (GIS Database). Sixteen listed TEC's have been identified within a 10km radius of the application area, and these TEC's exist in a relatively close grouping, 6.5 - 10km southeast of the proposed clearing area (GIS Database).

The small scale clearing of what is predominantly non-native pasture is highly unlikely to have any impact upon these TEC's, and therefore the clearing as proposed is not likely to be at variance to this principle.

Methodology GIS Database: Threatened Ecological Communities - CALM 12/04/05.

(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 clear falls within the IBRA Avon Wheatbelt P1 subregion (GIS Database). There is approximately 18.6% of the pre-European vegetation remaining in this subregion (Shepherd et al, 2001a).

The vegetation of the application area has been classified as Beard Vegetation Association 352: Medium woodland; York Gum (GIS Database). There is approximately 23.8% of this vegetation type remaining in the Avon Wheatbelt P1 subregion (Shepherd et al, 2001a). Native vegetation within the application area has been cleared since European settlement to establish farmland and the application area no longer represents a York Gum woodland. Native vegetation has been replaced with non-native pasture species, although some native shrubs have returned to the area as regrowth (Borger, 2004).

The area applied to clear does not represent a significant remnant of native vegetation in an area that has been extensively cleared, and it is therefore considered that the proposed clearing is not at variance to this principle.

	Pre-European area (ha)*	Current extent (ha)*	Remaining %*	Conservation Status**	% in IUCN Class I-IV Reserves*
IBRA Subregion - Avon Wheatbelt P1	6,524,182***	1,212,881***	~18.6%	Vulnerable	~6.6%
Shire of Three Springs	258,882***	51,008***	~19.7%	Vulnerable	
Beard vegetation associations - Avon Wheatbelt P1 - 352	292,719	69,781	~23.8%	Vulnerable	~1.0%

* Shepherd et al. (2001)
* Shepherd et al. (2001a)
** Department of Natural Resources and Environment (2002)
*** Area within the Intensive Landuse Zone

Methodology Borger (2004).
Department of Natural Resources and Environment (2002)
GIS Database:
- IBRA - EA - 18/10/00.
- Pre-European Vegetation - DA 01/01
Shepherd et al. (2001).

(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 ephemeral or permanent watercourses or wetlands within the area applied to clear (GIS Database). The vegetation in the proposed clearing area does not grow in association with, or act as a buffer for any watercourses or wetlands.

The clearing as proposed is not at variance to this principle.

Methodology GIS Database - Hydrography, linear - DOE 01/02/04.

(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 area is affected by salinity, evidenced by the presence of Barley Grass and Saltbushes (Borger, 2004). Groundwater salinity levels are also high (14000-35000mg total dissolved salts/L) (GIS Database). An extensive belt of saline land exists approximately 1 km west of the application area. This belt is more than 3km wide and stretches approximately 20km in a north-south orientation. It is characterised by salt lakes and saltpans (GIS Database). Soil surface structure of the application area is poor, and there is evidence of soil sodicity (Borger, 2004).

Salinisation has already occurred in the application area and in surrounding areas. This is largely the result of removing native vegetation and replacing it with shallow-rooted non-native pasture species. It is unlikely that the small scale removal of pasture vegetation will increase land degradation on or off site.

Given the purpose of the clearing is for the establishment of a finished product stockpile, ground exposure from the clearing is likely to be temporary and thereby reducing the potential for wind or water erosion.

The clearing as proposed is not likely to be at variance to this principle.

Methodology Borger (2004).
GIS Database:
- Carnamah 1.4m Orthomosaic - DLI March 01 (Image).
- Groundwater Salinity, Statewide - 22/02/00.

(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 is one conservation area within a 10km radius of the area applied to clear; the Yarra Yarra Lakes Nature Reserve located approximately 8.5km to the southwest (GIS Database).

Given the distance to the Yarra Yarra Lakes Nature Reserve and the small scale of clearing involved, it is highly unlikely that this proposal will have any impact upon the environmental values of this conservation area. Similarly, the area proposed to be cleared is not likely to act as an ecological linkage to the Yarra Yarra Lakes Nature Reserve.

The clearing as proposed is not likely to be at variance to this principle.

Methodology GIS Database - CALM Managed Lands and Waters - CALM 01/07/05.

(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 surface water features within the area applied to clear therefore there will be no impact on surface water quality (GIS Database). Groundwater in the area is already saline (14000-35000mg total dissolved salt/L), therefore the clearing will not impact upon groundwater quality. Furthermore, the clearing of such a small area of vegetation is not likely to have a significant impact on the depth to the water table.

The clearing as proposed is not likely to be at variance to this principle.

Methodology GIS Database:
- Hydrography, linear - DOE 01/02/04.
- Groundwater Salinity, Statewide - 22/02/00.

(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 average annual rainfall of the proposed clearing area is approximately 400mm, whilst average annual evaporation rates are in the range of 2,600mm (GIS Database). It is therefore expected that there would be little surface flow during normal seasonal rains. The topography of the area is relatively flat, which would assist in the dispersal of flood waters during and after heavy rainfall events. There are no permanent watercourses in the vicinity of the application area, and the clearing of such a small area will not create a catchment area large enough to increase the incidence of flooding (GIS Database).

The clearing as proposed is unlikely to cause or exacerbate the incidence or intensity of flood events.

Methodology GIS Database:
- Evaporation Isopleths - BOM 09/98.
- Hydrography, linear - DOE 01/02/04.
- Rainfall, Mean Annual - BOM 30/09/01.
- Topographic Contours, Statewide - DOLA 12/09/02_1.

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

Comments

There is one native title claim (WC04/002) over the area under application. This claim has been registered with the National Native Title Tribunal (GIS Database). 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 known sites of aboriginal significance within the area applied to clear (GIS Database). 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.

Luzenac Australia has a current operating licence (5877) granted in accordance with the *Environmental Protection Act 1986* (DoE, 2006). The proposed clearing is not at variance to this licence and no amendments to the licence will be required for this project (DoE, 2006).

Luzenac Australia have submitted an application for a groundwater licence for 1.5GL of water to be abstracted and used on M70/243 and M70/101 for the purposes of dust suppression, mineral ore processing and dewatering. DoE is currently assessing this application (DoE, 2006).

Methodology DoE (2006).
GIS Database:
- Aboriginal Sites of Significance - DIA 04/07/02.
- Native Title Claims - DLI 19/12/04.

4. Assessor's recommendations

Purpose	Method	Applied area (ha)/ trees	Decision	Comment / recommendation
Stockpile	Mechanical Removal	8	**Grant**	The proposed clearing is not at variance to principles e or f, and is considered not likely to be at variance to principles a, b, c, d, g, h, i, or j. The assessing officer therefore recommends that the permit should be granted.

5. References

Borger (2004) Beneficiation Plant Project Vegetation Survey for Luzenac Australia Pty Ltd, Three Springs Talc Operation, Western Australia.

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.

DoE (2006) Water Allocation/Licence Advice. Advice to Assessing Officer, Native Vegetation Assessment Branch, Department of Industry and Resources (DoIR). Department of Environment, Western Australia.

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

Shepherd, D.P., Beeston, G.R. and Hopkins, A.J.M. (2001) Native Vegetation in Western Australia, Extent, Type and Status. Resource Management Technical Report 249. Department of Agriculture, Western Australia.

Shepherd, D.P., Beeston, G.R. and Hopkins, A.J.M. (2001a) Native Vegetation in Western Australia, Extent, Type and Status. Resource Management Technical Report 249. Department of Agriculture, Western Australia (updated 2005).

6. Glossary

Acronyms:

BoM	Bureau of Meteorology, Australian Government.
CALM	Department of Conservation and Land Management, Western Australia.
DAFWA	Department of Agriculture and Food, Western Australia.
DA	Department of Agriculture, Western Australia.
DEH	Department of Environment and Heritage (federal based in Canberra) previously Environment Australia
DEP	Department of Environment Protection (now DoE), Western Australia.
DIA	Department of Indigenous Affairs
DLI	Department of Land Information, Western Australia.
DoE	Department of Environment, Western Australia.
DoIR	Department of Industry and Resources, Western Australia.
DOLA	Department of Land Administration, Western Australia.
EP Act	Environment Protection Act 1986, Western Australia.
EPBC Act	Environment Protection and Biodiversity Conservation Act 1999 (Federal Act)
GIS	Geographical Information System.
IBRA	Interim Biogeographic Regionalisation for Australia.
IUCN	International Union for the Conservation of Nature and Natural Resources – commonly known as the World Conservation Union
RIWI	Rights in Water and Irrigation Act 1914, Western Australia.
s.17	Section 17 of the Environment Protection Act 1986, Western Australia.
TECs	Threatened Ecological Communities.

Definitions:

{Atkins, K (2005). *Declared rare and priority flora list for Western Australia, 22 February 2005*. Department of Conservation and Land Management, Como, Western Australia} :-

P1	**Priority One - Poorly Known taxa**: taxa which are known from one or a few (generally <5) populations which are under threat, either due to small population size, or being on lands under immediate threat, e.g. road verges, urban areas, farmland, active mineral leases, etc., or the plants are under threat, e.g. from disease, grazing by feral animals, etc. May include taxa with threatened populations on protected lands. Such taxa are under consideration for declaration as 'rare flora', but are in urgent need of further survey.
P2	**Priority Two - Poorly Known taxa**: taxa which are known from one or a few (generally <5) populations, at least some of which are not believed to be under immediate threat (i.e. not currently endangered). Such taxa are under consideration for declaration as 'rare flora', but are in urgent need of further survey.
P3	**Priority Three - Poorly Known taxa**: taxa which are known from several populations, at least some of which are not believed to be under immediate threat (i.e. not currently endangered). Such taxa are under consideration for declaration as 'rare flora', but are in need of further survey.
P4	**Priority Four – Rare taxa**: taxa which are considered to have been adequately surveyed and which, whilst being rare (in Australia), are not currently threatened by any identifiable factors. These taxa require monitoring every 5–10 years.
R	**Declared Rare Flora – Extant taxa** *(= Threatened Flora = Endangered + Vulnerable)*: taxa which have been adequately searched for, and are deemed to be in the wild either rare, in danger of extinction, or otherwise in need of special protection, and have been gazetted as such, following approval by the Minister for the Environment, after recommendation by the State's Endangered Flora Consultative Committee.
X	**Declared Rare Flora - Presumed Extinct taxa**: taxa which have not been collected, or otherwise verified, over the past 50 years despite thorough searching, or of which all known wild populations have been destroyed more recently, and have been gazetted as such, following approval by the Minister for the Environment, after recommendation by the State's Endangered Flora Consultative Committee.

{Wildlife Conservation (Specially Protected Fauna) Notice 2005} [Wildlife Conservation Act 1950] :-

Schedule 1	**Schedule 1 – Fauna that is rare or likely to become extinct:** being fauna that is rare or likely to become extinct, are declared to be fauna that is need of special protection.
Schedule 2	**Schedule 2 – Fauna that is presumed to be extinct:** being fauna that is presumed to be extinct, are declared to be fauna that is need of special protection.
Schedule 3	**Schedule 3 – Birds protected under an international agreement:** being birds that are subject to an agreement between the governments of Australia and Japan relating to the protection of migratory birds and birds in danger of extinction, are declared to be fauna that is need of special protection.
Schedule 4	**Schedule 4 – Other specially protected fauna:** being fauna that is declared to be fauna that is in need of special protection, otherwise than for the reasons mentioned in Schedules 1, 2 or 3.

{CALM (2005). *Priority Codes for Fauna*. Department of Conservation and Land Management, Como, Western Australia} :-

P1 **Priority One: Taxa with few, poorly known populations on threatened lands**: Taxa which are known from few specimens or sight records from one or a few localities on lands not managed for conservation, e.g. agricultural or pastoral lands, urban areas, active mineral leases. The taxon needs urgent survey and evaluation of conservation status before consideration can be given to declaration as threatened fauna.

P2 **Priority Two: Taxa with few, poorly known populations on conservation lands**: Taxa which are known from few specimens or sight records from one or a few localities on lands not under immediate threat of habitat destruction or degradation, e.g. national parks, conservation parks, nature reserves, State forest, vacant Crown land, water reserves, etc. The taxon needs urgent survey and evaluation of conservation status before consideration can be given to declaration as threatened fauna.

P3 **Priority Three: Taxa with several, poorly known populations, some on conservation lands**: Taxa which are known from few specimens or sight records from several localities, some of which are on lands not under immediate threat of habitat destruction or degradation. The taxon needs urgent survey and evaluation of conservation status before consideration can be given to declaration as threatened fauna.

P4 **Priority Four: Taxa in need of monitoring**: Taxa which are considered to have been adequately surveyed, or for which sufficient knowledge is available, and which are considered not currently threatened or in need of special protection, but could be if present circumstances change. These taxa are usually represented on conservation lands.

P5 **Priority Five: Taxa in need of monitoring**: Taxa which are not considered threatened but are subject to a specific conservation program, the cessation of which would result in the species becoming threatened within five years.

Categories of threatened species (*Environment Protection and Biodiversity Conservation Act 1999)*

EX **Extinct:** A native species for which there is no reasonable doubt that the last member of the species has died.

EX(W) **Extinct in the wild:** A native species which:
(a) is known only to survive in cultivation, in captivity or as a naturalised population well outside its past range; or
(b) has not been recorded in its known and/or expected habitat, at appropriate seasons, anywhere in its past range, despite exhaustive surveys over a time frame appropriate to its life cycle and form.

CR **Critically Endangered:** A native species which is facing an extremely high risk of extinction in the wild in the immediate future, as determined in accordance with the prescribed criteria.

EN **Endangered:** A native species which:
(a) is not critically endangered; and
(b) is facing a very high risk of extinction in the wild in the near future, as determined in accordance with the prescribed criteria.

VU **Vulnerable:** A native species which:
(a) is not critically endangered or endangered; and
(b) is facing a high risk of extinction in the wild in the medium-term future, as determined in accordance with the prescribed criteria.

CD **Conservation Dependent:** A native species which is the focus of a specific conservation program, the cessation of which would result in the species becoming vulnerable, endangered or critically endangered within a period of 5 years.