



## 1. Application details

### 1.1. Permit application details

Permit application No.: 358/1  
Permit type: Area Permit

### 1.2. Proponent details

Proponent's name: Reed Resources Ltd

### 1.3. Property details

Property: M29/52  
M29/233  
L29/67  
M29/321  
M29/200  
Local Government Area: Shire Of Menzies  
Colloquial name:

### 1.4. Application

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

## 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
Low woodland of mulga mixed with Casuarina cristata and Eucalyptus species (Shepherd et al 2001, Hopkins et al 2001).	A total of 43 plant species were identified in the area under application including Acacia, Eremophila, Eucalyptus, Grevillea and Solanum species (Letter from Ecologia 2004 DoE Trim No. EI892).	Good: Structure significantly altered by multiple disturbance; retains basic structure/ability to regenerate (Keighery 1994)	Area under application is located on the historic Sand Queen Gold Mine tenements, therefore the area has been previously disturbed (Supporting documentation supplied by proponent DoE Trim No. IN19328)

## 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 under application is located on the historic Sand Queen Gold Mine tenements and has previously been disturbed. It is therefore not likely to be of higher biological diversity than the surrounding area.

**Methodology** Letter from Ecologia Environmental to the proponent (DoE Trim No. EI892)  
Information provided by the proponent (DoE Trim No. IN19328)

### (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  
The following species may occur within the area under application, the Mallee fowl (*Leipoa ocellata*, Schedule 1), the Peregrine falcon (*Falco peregrinus*, Schedule 4) and the Hooded plover (*Charadrius rubricollis*, Priority 4). It is unlikely however that these species would be permanently found within the area under application as they have specific habitat requirements, such as abundant litter layer, cliffs, watercourses and salt lakes. Furthermore, the habitat for these species has historically been disturbed and there is >1.5 million ha of the same vegetation type remaining.

**Methodology** Letter from CALM to proponent re request for Threatened Fauna Information (DoE Trim No. IN19328).

**(c) Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, significant flora.**

**Comments Proposal is not likely to be at variance to this Principle**

A 2004 Flora Survey conducted by Ecologia Environment Consultants (2005) in of the area under application did not identify any of the 15 Priority species listed by CALM as occurring within the local area (10km radius). Furthermore, no Declared Rare Flora or Priority Species were identified.

**Methodology** Ecologia Environment Consultants (2005) letter to the proponent (DoE Trim No. EI892)  
GIS Databases:  
- Declared Rare and Priority Flora List - CALM 13/08/03

**(d) Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of a significant ecological community.**

**Comments Proposal is not at variance to this Principle**

The are no records of any Threatened Ecological Communities within the vicinity (20km) of the area under application.

**Methodology** GIS Databases:  
- Threatened Ecological Communities - CALM 15/07/03

**(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 under application contains Beard Vegetation Association 20 of which there is 99.6% of the original extent remaining (Shepherd et al 2001, Hopkins et al 2001). The State Government is committed to the National Objectives Targets for Biodiversity Conservation which includes a target that prevents clearance of ecological communities with an extent below 30% of that present pre-European settlement (Department of Natural Resources and Environment 2002, EPA 2000). All vegetation representations within the area under application are above this 30% minimum therefore this Principle is not at variance.

	Pre-European area (ha)	Current extent (ha)	Remaining %*	Conservation Status**	% in reserves/CALM-managed land
IBRA Bioregion - Murchison Shire - Menzies	28,206,195	28,206,195	~100	Least concern	
Beard vegetation association - 20	1,558,296	1,552,012	99.6	Least concern	13.1

\* Shepherd et al. (2001)

\*\* Department of Natural Resources and Environment (2002)

**Methodology** Shepherd et al (2001)  
Hopkins et al (2001)  
Department of Natural Resources and Environment (2002)  
EPA (2000)

**(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**

The nearest watercourse to the area under application is the salt lake, Lake Goongarrie which is located approximately 2-2.5km east of the proposed clearing. It is unlikely that the proposed clearing would have a significant impact on this lake.

**Methodology** GIS Databases:  
- Geodata, Lakes - GA 28/06/02

**(g) Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation.**

**Comments Proposal may be at variance to this Principle**

The area under application is on elevated terrain with shallow calcareous loamy soils. As such the proposed clearing may increase the risk of wind erosion. It is unlikely that the proposed clearing would increase the risk of water erosion or water logging as the area receives little rainfall (<300mm). The risk from eutrophication is also minimal as there are no agricultural practices near the area under application. Therefore the risk of appreciable on-site or off-site degradation is considered minimal.

**Methodology** GIS Databases:

- Soils, Statewide - DA 11/99
- Rainfall, Mean Annual - BOM 30/09/01

**(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**  
 In proximity to the area under application is an old pastoral station that is now being managed for conservation purposes by the Department of Conservation and Land Management (CALM). It is unlikely that the proposed clearing would have a significant impact on this conservation reserve.

**Methodology** GIS Databases:  
 - CALM Managed Lands and Waters - CALM 01/08/04

**(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**  
 It is unlikely that the proposed clearing would have a significant impact on the quality of groundwater and surface water as the area under application is located in a salt lake basin. As such, the groundwater is already saline (approximately 35,000mg/L) and Lake Goongarrie which is located 2km to the east is a salt lake. The proposed clearing may increase surface water run-off into Lake Goongarrie but this is unlikely to have a significant effect as the area receives low rainfall.

**Methodology** GIS Databases:  
 - Groundwater Salinity, Statewide - 22/02/00  
 - Geodata, Lakes - GA 28/06/02

**(j) Native vegetation should not be cleared if clearing the vegetation is likely to cause, or exacerbate, the incidence of flooding.**

**Comments** **Proposal is not likely to be at variance to this Principle**  
 The area under application is in an elevated position and receives little rainfall (<300mm). It is therefore unlikely that the proposed clearing would have an impact on peak flood height or duration.

**Methodology** GIS Databases:  
 - Topographic contours, Statewide - DOLA 12/09/02  
 - Rainfall, Mean Annual - BOM 30/09/01

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

**Comments** The Shire of Menzies has no objections to the proposed clearing.

**Methodology** Submission from Shire of Menzies (DoE Trim No. ND739)

**4. Assessor's recommendations**

Purpose	Method	Applied area (ha)/ trees	Decision	Comment / recommendation
Mining	Mechanical Removal	14	Grant	The assessable criteria have been addressed and the clearing as proposed may be at variance with Principle g relating to land degradation. Given the low annual rainfall of the area under application and the intended land-use, the proposed clearing is unlikely to cause appreciable land degradation. Therefore, the assessing officer recommends that this permit should be granted.

**5. References**

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.

EPA (2000) Environmental protection of native vegetation in Western Australia. Clearing of native vegetation, with particular reference to the agricultural area. Position Statement No. 2. December 2000. Environmental Protection Authority.

Hopkins, A.J.M., Beeston, G.R. and Harvey J.M. (2001) A database on the vegetation of Western Australia. Stage 1. CALMScience after J. S. Beard, late 1960's to early 1980's Vegetation Survey of Western Australia, UWA Press.

Keighery, BJ (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.