



## 1. Application details

### 1.1. Permit application details

Permit application No.: 673/1  
Permit type: Purpose Permit

### 1.2. Proponent details

Proponent's name: Pearl McKinnon Green

### 1.3. Property details

Property: M70/1155  
Local Government Area: Shire Of Lake Grace  
Colloquial name: Magenta Road - M70/1155

### 1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
2.5		Mechanical Removal	Mineral Production

## 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 125: Bare areas; salt lakes  511: Medium woodland; salmon gum & morrel (Hopkins et al. 2001, Shepherd et al. 2001).	The area under application is 2.5ha, which is long and narrow in shape. The area runs parallel to an existing boundary fence on the east, with previous mined areas bordering the narrow southern boundary of the area under application. All other boundaries of the proposed clearing are bordered by native vegetation. Over 25ha of native vegetation will remain on the property subsequent to the proposed clearing. The area under application predominantly consists of Leptospermum species, Eucalypt species with very little understorey vegetation which is predominantly weeds, grasses and shrubs (DAWA 2005). This would indicate that the area under application may have been previously cleared or used for grazing.  Two separate populations of the Declared Rare Flora (DRF) species Eremophila verticillata are located on the property within the 25ha of native vegetation that is not under application. One of these populations is approximately 120m east and the other 230m north from the area under application. The DRF were identified during a CALM survey of the area in 1986 when the initial application was made for the mining lease M70/601. The E. verticillata population to the east of the proposed clearing is bounded by a 100 x 100m fence which allows for an acceptable buffer area and is part of the management strategy to preserve the population.	Very Good: Vegetation structure altered; obvious signs of disturbance (Keighery 1994)	Information pertaining to the clearing description was obtained from the Land Degradation and Assessment Report conducted by a Department of Agriculture officer (DoE TRIM No. E12495), discussions with the proponent and GIS database: Newdegate 1.4m orthomosaic-DLI 04

## 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 main vegetation type found in the area under application is Leptospermum sp. and Eucalypt sp., with very little understorey vegetation that is predominantly weeds, grasses and shrubs (DAWA 2005).

A Declared Rare Flora (DRF) species, *Eremophila verticillata*, is known to occur on the property. A 100 x 100 metre fence protects the nearby populations of DRF and management plans have been put in place to ensure the long term preservation of the DRF species.

Mining activities have taken place adjacent to parts of the area under application for a period of 18 years. Extensive clearing has occurred in the surrounding area for agricultural practices. The presence of weeds and grasses in the understorey also suggests that the area under application may have been previously cleared or grazed. There are also a number of reserves in the local area including Dunn Rock and Lake Magenta Nature Reserves. As a result it is unlikely that the area under application would comprise a higher level of biological diversity than other areas of the property, such as those containing the DRF species, or the surrounding Nature Reserves.

**Methodology** CALM (2006a)  
DAWA (2005)  
GIS databases:  
-Newdegate 1.4m orthomosaic-DLI 04

**(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**

No threatened or priority fauna taxa have been recorded within the local area (<10km radius) and there is no evidence to suggest that the area to be cleared contains any significant fauna habitat, or habitat that is not represented in the nearby adjacent land or the nearby network of nature reserves. (CALM 2006).

The threatened fauna species *Leipoa ocellata* (Malleefowl) has been sighted 10.5 kilometres away from the area under application within the network of nature reserves that link the Lake Magenta and Dunn Rock Nature Reserves (CALM 2006). Further populations of this species, along with *Dasyurus geoffroii* (Chuditch) and the priority 5 species *Bettongia penicillata ogilbyi* (Woylie) have also been sighted in the Lake Magenta Nature Reserve approximately 12 -15 kilometres away from the area under application.

Habitat capable of supporting *Dasyurus geoffroii* (Chuditch), *Phascogale calura* (Red-tailed Phascogale) and *Calyptorhynchus latirostris* (Carnaby's Black-Cockatoo) occurs in the Lake Magenta nature reserve located 15 kilometres from the area under application (CALM 2006).

**Methodology** CALM (2006a)

**(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**

No Declared Rare Flora (DRF) species have been mapped within the area under application. However two populations of the Declared Rare Flora (DRF) species *Eremophila verticillata* are located within close proximity to the area under application - the closest being approximately 120m east and the other 230 m north of the area under application.

CALM (2006) suggests that where areas of topsoil and associated debris have been disturbed and then relaid, *E. verticillata* has emerged. This indicates that the seed of this species remains viable for some time and a degree of disturbance encourages germination (Phillimore and Brown 2003).

The proponent has therefore agreed to retain cleared vegetative matter and top soil, and stockpile it for use in rehabilitation works (required under approvals of mining leases by the Department of Industry and Resources). This practice may aid in the potential regeneration of the *E. verticillata* species (CALM 2006, Phillimore and Brown 2003).

**Methodology** Phillimore and Brown (2003)  
CALM (2006b)  
GIS databases:  
- Declared Rare and Priority Flora List - CALM 13/08/03.  
- Pre-European Vegetation - DA 01/01

**(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 records of Threatened Ecological Communities (TEC) in the vicinity of the proposed clearing or the local area (10km radius). The closest TEC is located 17km south of the area under application. Therefore it is unlikely that the clearing as proposed is at variance to this principle.

**Methodology** GIS databases:

- Threatened Ecological Communities - CALM 15/7/03
- Threatened Plant Communities - DEP 06/95.

**(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 likely to be at variance to this Principle**  
 The State Government is committed to the National Objectives and Targets for Biodiversity Conservation 2001-2005 (AGPS 2001) 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).

The vegetation within the area under application consists of Beard vegetation association 125 and 511 (Shepherd et al 2001, Hopkins et al 2001). The Beard vegetation association 125 has approximately 3,536,992ha (89.8%) remaining and there is approximately 219,324ha (53.6%) remaining of the Beard vegetation association 511 (Shepherd et al 2001, Hopkins et al 2001).

Given that both of these vegetation associations have representations above the 30% threshold, it is considered that clearing as proposed is unlikely to be at variance with this principle.

**Methodology**      Hopkins et al. (2001)  
 Shepherd et al (2001)  
 AGPS (2002)  
 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**  
 Lake Cobham is a non-perennial salt lake. The distance between the area under application and Lake Cobham is approximately 180metres, which when subject to inundation can bring the Lake to within 150 metres from the area under application.

An inspection of the vegetation in the area between Lake Cobham and the area under application indicated that Leptospermum sp. and Eucalypt sp. are the dominant species with very little understorey, which consists predominantly of weeds, grasses and shrubs.

The distance between the area under application and Lake Cobham combined with vegetation type found in the area is considered to be ample for a buffer zone between the two areas.

Given the above it is considered that the area under application is not likely to be at variance with this principle.

**Methodology**      GIS databases:  
 - Clearing Regulations - Environmentally Sensitive Areas - DOE 8/03/05  
 - Geodata, Lakes - GA 28/06/02  
 - DAWA (2005)

**(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**  
 Advice received from DAWA (2005) indicates that the proposed clearing would not cause appreciable on or off site land degradation. As, such the clearing as proposed is unlikely to be at variance to this principle.

**Methodology**      DAWA (2005)

**(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**  
 Lake Magenta is a 7870ha A Class Nature Reserve which is located approximately 5km west of the area under application. This nature reserve and other local reserves including Dunn Rock Nature Reserve and Lake King Nature Reserve create an ecological linkage spanning 15km. It is considered that the aforementioned corridors and ecological links are able to compensate for the loss of 2.5 ha as applied to be cleared.

Given the relatively small size of the area under application (2.5ha), its linearity and the distance to the local reserves, the proposed clearing would not have a significant impact on these reserves or the linkages that they form (CALM 2006).

**Methodology** CALM (2006a)  
 GIS databases:  
 - CALM Managed Lands and Waters - CALM 1/06/04  
 -Soils Statewide DA 11/99  
 -Pre-European Vegetation - DA 01/01

**(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**  
 The property is in the Magenta Internal catchment area which is linked to the Albany basin. The area subject to this proposal has an average annual rainfall of 350mm and regional groundwater salinity at this site is >35000mg/L. High salinity in the area is most likely influenced by the close proximity to the surrounding salt lakes. However deterioration in the quality of surface or underground water as a result of clearing is considered unlikely due to the high groundwater salinity and the low annual rainfall resulting in minimal recharge to groundwater.

**Methodology** GIS databases:  
 - Groundwater Salinity, Statewide - 22/02/00.  
 - Hydrographic Catchments, Sub-catchments - DOE 01/07/03  
 - Rainfall, Mean Annual - BOM 30/09/01  
 - Geodata, Lakes - GA 28/06/02  
 - Clearing Regulations - Environmentally Sensitive Areas - DOE 8/03/05

**(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 area under application has an elevation of 300metres with a relatively flat topography. Rainfall in the area averages 350mm per year and the evaporation rate is 2000mm per annum. A network of surface expressions in the form of salt lakes occur near and around the area under application. The salt lakes are subject to inundation through flooding events which can occur in the region due to cyclones breaking down into rain bearing depressions from the north west of the state and depositing large amounts of rainfall throughout the region. However such events are considered to be infrequent. Given the small size of the area under application, it is unlikely that the clearing will increase the incidence or intensity of flooding from such an event.

**Methodology** GIS databases:-  
 -Topographic Contours, Statewide - DOLA 12/09/02.  
 -Hydrography, linear - DOE 01/02/04.  
 -Evaporation Isopleths - BOM 09/98  
 -Mean Annual Rainfall Surface (1975-2003) - DOE 09/05

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

**Comments**  
 There are two native title claims over the area under application. The proposed clearing is for purposes consistent with the mining tenements which have been granted. Therefore the granting of a clearing permit is not a future act under the Native Title Act.

There is no other RIWI Act Licence, Works Approval or EP Act Licence that will affect the area that has been applied to clear.

**Methodology** GIS Databases:  
 - Native Title Claims - DLI 19/12/04

**4. Assessor's recommendations**

Purpose	Method	Applied area (ha)/ trees	Decision	Comment / recommendation
Mineral Production	Mechanical Removal	2.5	Grant	The application has been assessed and the clearing as proposed is not likely to be at variance with any of the clearing principles. The assessing officer recommends that the permit be granted with the following conditions: 1. The Permit Holder shall stockpile the vegetative material and topsoil removed by the clearing in accordance with this permit for use in rehabilitation. 2. The permit holder shall record the following for each instance of clearing: a. location where clearing occurred; b. purpose; c. area cleared in hectares; d. area rehabilitated in hectares/ 3. The Permit Holder shall provide a report to the CEO by 1 February each year

## 5. References

- AGPS (2001) The national objective and targets for biodiversity conservation 2001-2005. Commonwealth of Australia, Canberra.
- CALM (2006a) Land clearing proposal advice. Advice to A/Director General, Department of Environment (DoE). Department of Conservation and Land Management, Western Australia. DoE TRIM ref IN25479.
- CALM (2006b) Land clearing proposal advice. Advice to A/Director General, Department of Environment (DoE). Department of Conservation and Land Management, Western Australia. DoE TRIM ref EI4687.
- DAWA (2005) Land degradation assessment report. Office of the Commissioner of Soil and Land Conservation, Department of Agriculture Western Australia. DoE TRIM ref EI2493.
- 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, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.
- Robyn Phillimore and Andrew Brown (2003) Whorled eremophila (*Eremophila verticillata*) Interim Recovery Plan 2003-2008. Interim recovery plan no.142. Department of Conservation and Land Management, WA.
- 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.

## 6. Glossary

Term	Meaning
CALM	Department of Conservation and Land Management
DAWA	Department of Agriculture
DEP	Department of Environmental Protection (now DoE)
DoE	Department of Environment
DoIR	Department of Industry and Resources
DRF	Declared Rare Flora
EPP	Environmental Protection Policy
GIS	Geographical Information System
ha	Hectare (10,000 square metres)
TEC	Threatened Ecological Community
WRC	Water and Rivers Commission (now DoE)