



## 1. Application details

### 1.1. Permit application details

Permit application No.: 2503/1  
 Permit type: Area Permit

### 1.2. Proponent details

Proponent's name: MR Francor & Mary Lovi

### 1.3. Property details

Property: LOT 460 ON PLAN 301848 ( MIDDLESEX 6258)  
 Local Government Area: Shire Of Manjimup  
 Colloquial name:

### 1.4. Application

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

## 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
The vegetation consists of : -Beard association 3: Medium forest; jarrah-marri -Mattiske Cry Tall open forest of Corymbia calophylla with mixture of Eucalyptus marginata subsp. marginata and Eucalyptus diversicolor on uplands in hyperhumid and perhumid zones.	The vegetation under application is considered to be in a degraded to good (Keighery 1994) condition with patches of bare land and areas of dense vegetation with some understorey present.	Good: Structure significantly altered by multiple disturbance; retains basic structure/ability to regenerate (Keighery 1994)	The condition and description of the area under application was determined via the use of aerial mapping systems.

## 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 vegetation under application is considered to be in a degraded to good (Keighery 1994) condition with patches of bare land and areas of dense vegetation with some understorey present. The proposed area to be cleared is 1.58 hectares.

The vegetation present on the area under application consist of beard vegetation 3 which is described as medium forest of jarrah and marri. The soil type is described as dissected lateritic plateaus of hilly relief at moderate elevation: chief soils of the dissected hilly areas area hard acidic yellow mottled soils and with some hard acidic red mottled soils and brown earths, all frequently containing ironstone gravels (Northcoate 1968).

There are 6 priority listed flora that occur within the local area (10km radius). This includes one P1, three P2 and two P3 species.

Caladenia erythrochila (P2) prefers grey sand over laterite in well-drained lateritic soils under scattered jarrah (Florabase 2008) and may occur within the area under application.

Due to the condition of the area proposed to be cleared, and given the nearby areas of DEC managed lands, which are in a better condition to that of the application area, it is considered unlikely that the proposed cleared area is representative of an area of outstanding biodiversity.

**Methodology** Florabase (2008)  
Keighery (1994)  
Northcoate (1968)  
SacBioDataSets (accessed 24/06/08)  
GIS DataSets:  
- Calm Managed Lands and Waters (01/11/03)  
- Clearing Regulations-Environmentally sensitive areas (30/05/05)  
- Clearing Regulations-schedule one areas (10/03/05)  
- Manjimup 50cm Orthomosaic DLI04

**(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 vegetation is an isolated pocket of native vegetation as it has timber plantations to the south, market gardens to the east and north, and extensively cleared land to the west. The vegetation under application is considered to be in a degraded to good (Keighery 1994) condition with patches of bare land and areas of dense vegetation with some understorey present.

There are 8 species of significant fauna indigenous to Western Australia within a 10km radius of the application area. The proposed clearing may impact on the Brush-tailed Phascogale (*Phascogale tapoatafa*) as this species is known to inhabit areas to the north and south of the application area (DEC, 2008), however due to the size of the application area and the presence of suitable habitat nearby, the vegetation under application is not considered to be significant habitat for these fauna.

**Methodology** Keighery (1994)  
DEC (2008)  
SacBioDataSets (accessed 24/06/08)  
GIS Datasets:  
- Calm Managed Lands and Waters (01/11/03)  
- Manjimup 50cm Orthomosaic - DLI04

**(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**

There are 2 rare flora species that occur within the local area (10km radius).

The vegetation present on the area under application consists of beard vegetation 3 which is described as medium forest of jarrah and marri. The soil type is described as dissected lateritic plateaus of hilly relief at moderate elevation: chief soils of the dissected hilly areas are hard acidic yellow mottled soils and with some hard acidic red mottled soils and brown earths, all frequently containing ironstone gravels (Northcoate 1968).

The rare flora species, *Andersonia annelsii* prefers sandy loam or clay, skeletal soils and low quartzite ridges, granite outcrops (Florabase 2008) and is therefore not likely to occur within the area under application.

The rare flora species, *Caladenia christineae* prefers Sand, clayey loam, laterite and margins of winter-wet flats, swamps, & freshwater lakes. Although the area under application is mapped as having lateritic soils, the lack of margins of winter-wet flats, swamps, & freshwater lakes (Florabase 2008) within the application area suggests that this species is unlikely to occur on site.

The proposal is therefore not likely to be at variance to this Principle.

**Methodology** Florabase (2008)  
Northcoate (1968)  
SacBioDataSets (accessed 24/06/08)  
GIS DataSets:  
- Calm Managed Lands and Waters (01/11/03)

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

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

There are no known Threatened Ecological Communities (TECs) within the application area, the closest recorded TEC is located 7.9km east of the application area; therefore the proposed clearing is not at variance to this principle.

**Methodology** SacBioDataSets (accessed 24/06/08)



**(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**

As the table below indicates, the vegetation association (Beard 3) is well represented, the bioregions are well vegetated as is the Manjimup shire.

	Pre-European Extent	Current Extent	% Remaining
Beard 3	2661403	1846588	69.4
Warren Bioregion	833981	63141	79.5
Jarrah Forest Bioregion	4506654	2405331	53.4
Shire of Manjimup	696702	589728	84.6

(Shepherd et al. 2006).

All percentages of remaining pre-European vegetation exceed the 30% recommended threshold (EPA 2000). Therefore, the proposed clearing is considered unlikely to be at variance to this principle.

**Methodology** EPA (2000)  
Shepherd et al. (2006)

**(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 at variance to this Principle**

The proposed cleared vegetation is not considered to be growing in association with a wetland or watercourse.

**Methodology** GIS DataSets:  
- Hydrography, linear (13/07/06)  
- Hydrography, linear (hierachy) (13/07/06)  
- Rivers

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

**Comments Proposal is at variance to this Principle**

The application area has a soil type of dissected lateritic plateaus of hilly relief at moderate elevation: chief soils of the dissected hilly areas are hard acidic yellow mottled soils with some hard acidic red mottled soils and brown earths, all containing ironstone gravels (Northcote et al. 1960-1968). Due to the presence of gravel in the soil waterlogging is not considered to be an issue (Cox & McFarlane 1995).

The area under application is considered to have a moderate risk of salinity occurring and is within the Warren river water reserve, an area covered by the Country Areas Water Supply Act (CAWSA). Any clearing that will reduce the amount of native vegetation present on the total land holdings to less than 10%, may contribute to land degradation issues such as an increased risk of salinity. It has been estimated that prior to clearing the remaining vegetation is already below the recommended 10% threshold (DoW, 2008).

The Department of Water (2008) have indicated that the vegetation proposed to be cleared is viable to service a water resources function and concludes that there would be likely effects such as deteriorating water quality. The Warren River catchment area has been under management in an effort to reduce salinity levels. The salinisation of water resources through the clearing of native vegetation is widely known and the clearing of native vegetation in the absence of adequate management plans is likely to increase salinisation in the local area (DoW, 2006).

**Methodology** CAWSA advice (2008)  
DoW (2008)  
DoW (2006)  
Cox & McFarlane (1995)  
Northcote et al. (1960- 1968)

**(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**

The vegetation under application is considered to be in a degraded to good (keighery 1994) condition with patches of bare land and areas of dense vegetation with some understorey present. The closest conservation area is the Tone state forest, located 2.6km east of the application area. The area between the proposed cleared land and the Tone state forest is highly disturbed; therefore the proposed cleared area does not contribute to an ecological linkage.

It is considered unlikely that the proposed clearing is at variance to this principle.

**Methodology** keighery (1994)  
GIS DataSets:  
- Calm Managed Lands and Waters (01/11/03)

**(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 at variance to this Principle**

The area under application is considered to have a moderate risk of salinity occurring and is within the Warren river water reserve, an area covered by the Country Areas Water Supply Act (CAWSA). The amount of native vegetation present on the total land holdings should not be less than 10%, to ensure no salinity issues result on the application area or impact groundwater systems(DoW advice 2008). The total area of the land holdings is approximately 5.9 hectares which is has large areas of previously cleared land within it. It has been estimated that prior to clearing the remaining vegetation is already below the recommended 10% threshold within a CAWSA (DoW advice 2008).

The Department of Water (2008) have indicated that the vegetation proposed to be cleared is viable to service a water resources function and concludes that there would be likely effects such as deteriorating water quality. The Warren River catchment area has been under management in an effort to reduce salinity levels. The salinisation of water resources through the clearing of native vegetation is widely known and the clearing of native vegetation in the absence of adequate management plans is likely to increase salinisation in the local area (DoW, 2006).

**Methodology** CAWSA advice (2008)  
DoW (2008)  
DoW (2006)  
DoW advice (2008) Trim Ref: DOC 57111  
GIS DataSets:  
- Evapotranspiration, Area actual (01/12/99)  
- Rainfall, Mean annual (01/12/99)  
- Topography Contours, statewide (12/11/02)

**(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**

Rainfall in the local area is 1100mm annually, yet due to the presence of gravel in the soil (Northcote et al. 1960 - 1968), the likelihood of an increase in the duration or height of flooding is considered unlikely (Cox & McFarlane 1995).

**Methodology** Cox & McFarlane (1995)  
Northcote et al. (1960-1968)  
GIS DataSets:  
-Rainfall, mean annual (01/12/99)  
- Soils, statewide (30/11/99)

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

**Comments**

Developmental approval is yet to be obtained from the Shire for the plantation.

**Methodology** DoW (2008a)

**4. Assessor's comments**

**Comment**

The application has been assessed against the clearing principles, planning instruments and other matters in accordance with s51O of the Environmental Protection Act 1986, and the proposed clearing has been found to be at variance to Principles (g) and (i), not at variance to Principles (d) & (f) and is not likely to be at variance to the remaining clearing Principles.



## 5. References

- Cox. J & McFarlane D (1995) The causes of waterlogging in shallow soils and their drainage in southwestern Australia, *Journal of Hydrology*, Vol 167, p 175-194
- DEC (2008) Warren Regional Advice. Department of Environment and Conservation Trim Ref: DOC 56644.
- Department of Water (DoW) advice (2008) Trim Ref: DOC57111
- Department of Water (DoW) advice (2008a) Trim Ref: DOC75425
- DoW (2006) Salinity Stuation Statement report (WRT 32) available at: [www.water.wa.gov.au](http://www.water.wa.gov.au), accessed Feb 09
- 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, Western Australia.
- Flora base (2008) Flora Species Profile; *Meziella trifida*. Department of Environment and Conservation viewed electronically via <http://florabase.dec.wa.gov.au/browse/profile/> accessed on 15/07/2008
- Keighery, B.J. (1994) *Bushland Plant Survey: A Guide to Plant Community Survey for the Community*. Wildflower Society of WA (Inc). Nedlands, Western Australia.
- Northcote, K. H. with Beckmann G G, Bettenay E., Churchward H. M., van Dijk D. C., Dimmock G. M., Hubble G. D., Isbell R. F., McArthur W. M., Murtha G. G., Nicolls K. D., Paton T. R., Thompson C. H., Webb A. A. and Wright M. J. (1960-68): 'Atlas of Australian Soils, Sheets 1 to 10, with explanatory data'. CSIRO and Melbourne University Press: Melbourne.
- 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 2006).

## 6. Glossary

Term	Meaning
BCS	Biodiversity Coordination Section of DEC
CALM	Department of Conservation and Land Management (now BCS)
DAFWA	Department of Agriculture and Food
DEC	Department of Environment and Conservation
DEP	Department of Environmental Protection (now DEC)
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 DEC)

