



## 1. Application details

### 1.1. Permit application details

Permit application No.: 2649/1  
 Permit type: Area Permit

### 1.2. Proponent details

Proponent's name: Shire of Manjimup

### 1.3. Property details

Property: LOT 13722 ON PLAN 37592 ( MIDDLESEX 6258)  
 ROAD RESERVE ( MIDDLESEX 6258)  
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 Local Government Area: Shire Of Manjimup  
 Colloquial name:

### 1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
1		Mechanical Removal	Road construction or maintenance

## 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
Pre-European Vegetation: 3 - Medium forest; jarrah-marri 1144 - Tall forest; karri & marri (Corymbia calophylla) Mattiske Vegetation Complexes: CRy - Tall open forest of Corymbia calophylla with mixture of Eucalyptus marginata subsp. marginata and Eucalyptus diversicolor on uplands in hyperhumid and perhumid zones. PM1 - Tall open forest of Eucalyptus diversicolor with mixtures of Corymbia calophylla on valley slopes and low forest of Agonis juniperina-Banksia seminuda-Callistachys lanceolata on valley floors in the perhumid zone. CRb - Tall open forest of Corymbia calophylla-Eucalyptus diversicolor on upper slopes with Allocasuarina decussata-Banksia grandis on upper slopes in hyperhumid and perhumid zones.	The Middlesex road reserve vegetation consist predominately of Karri and Marri trees, a middle storey of peppermint and Acacias when present, and limited understorey, some native, some introduced.	Good: Structure significantly altered by multiple disturbance; retains basic structure/ability to regenerate (Keighery 1994)	Vegetation was assessed through photos, aerial photography and a site visit (DEC, 2008).

### 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 may be at variance to this Principle**

The area proposed to be cleared is 1 ha within 6.6 ha along Middlesex Road for the purpose of road reconstruction. The vegetation has been assessed as being in good condition (Keighery, 1994) though highly disturbed (DEC, 2008). Site photos (2008) showing that it consists of Marri and Karri trees, a middle storey of peppermint and acacias when present, and some native and non native understorey.

Advice received (RCC, 2008) states that the roadside vegetation does not support a particular links within the landscape. The local area (10kms) has been heavily cleared in parts with approximately 30% vegetation remaining, resulting in areas of vegetation that are highly fragmented.

The application abuts Smithsbrook Nature Reserve and because of this, Weed and Dieback conditions have been included in the permit to minimise the spread of identified weeds and dieback to uninfected areas.

A Priority Ecological Community exists, which is named 'Epiphytic Cryptogams of the karri forest' and is listed as a P3 community. This PEC comprises liverworts, mosses and lichens found on the bark of mature (15 years or greater) trees in Karri forests. It is likely that the community lives within the creek line areas. A minor perennial creek runs along the Middlesex road reserve, approximately 30m from the road reserve. Given the distance from the road works and the lack of vegetation extending past the road reserve on either side, clearing is unlikely to impact upon this community.

The application may be at variance to this principle.

**Methodology**    DEC (2008)  
                      RCC (2008)  
                      Site photos (2008)  
                      Keighery (1994)  
                      SAC bio datasets, accessed 10 October 08  
                      GIS Databases:  
                      - CALM Managed Lands and Waters - CALM 01/06/05  
                      - 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 may be at variance to this Principle**

Photographs (Site Photos, 2008) of the application areas suggest that Middlesex road reserve appears to contain good quality habitat trees. The local area (10kms) has been heavily cleared in parts with approximately 30% vegetation remaining, resulting in areas of vegetation that are highly fragmented. Given this, the roadside vegetation may play a significant role as habitat, refuge and as a wildlife corridor for local fauna populations.

Within the local area the following vulnerable or priority fauna may be impacted upon with the clearing of karri and marri trees:

- Western Ringtail Possum (*Pseudocheirus occidentalis*)
- Forest Red-tailed Black Cockatoo (*Calyptorhynchus banksii naso*)
- Baudins black Cockatoo (*Calyptorhynchus baudinii*)
- Brush-tailed phascogale (*Phascogale tapoatafa ssp.*)

Baudins Cockatoos have been sighted foraging in marri trees along the road reserve (DEC, 2008). Regional advice (DEC, 2008) suggests that where possible, mature trees (especially marri's) should be retained to accommodate these species.

The roadside vegetation may play a significant role as habitat, refuge and as a wildlife corridor for local fauna populations. Therefore the proposed clearing may provide a significant habitat for indigenous fauna. A condition has been placed on the permit requiring that the clearing of native vegetation be avoided, and where this is not possible, minimised.

**Methodology**    SAC Bio datasets, accessed 10 Oct 2008  
                      Site photos (2008)  
                      DEC (2008)  
                      GIS Databases:  
                      - 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**

Within the local area (10km radius) there are two recorded species of rare flora:

- Caladenia christineae
- Andersonia annelsii

C. christineae enjoys winterwet flats, swamps and freshwater lakes (WA Herbarium, 2008) and is recorded in the same soil, but differing vegetation type to the application area. There are no watercourses or wetland within the proposed clearing area.

A. annelsii has been recorded in the same soil, but differing vegetation type to the application area. It is found in sandy loam or clay, skeletal soils (WA Herbarium, 200), though the application area consists predominately of hard acidic yellow mottled soils.

No rare flora species are known to occur along Middlesex Road (DEC, 2008). Additionally, no evidence of rare flora was recorded during a site visit (DEC, 2008).

Given the above it is unlikely that the proposal is at variance to this principle.

**Methodology** SAC Bio datasets, accessed 10 Oct 08  
WA Herbarium (2008)  
GIS Databases:  
- Manjimup 50cm Orthomosaic - DLI04  
- Soils, Statewide DA 11/99

**(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**

Within the local area (10km radius) there are no known Threatened Ecological Communities (TEC). Given this, it is unlikely that the proposed clearing would be at variance to this principle.

**Methodology** SAC bio datasets, accessed 10 Oct 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 at variance to this Principle**

	Pre-European (ha)	Current extent (ha)	(%)
IBRA Bioregion*			
Warren	835,925	675,836	80.85
Shire*			
Manjimup	697,359	595,561	85.40
Mattiske Vegetation Complex**			
CRy	337,605	236,268	70.00
PM1	258,061	169,317	65.60
CRb	527,433	428,454	81.20
Beard Vegetation Complex*			
3	2,661,403	1,846,588	69.40
1144	160,314	131,412	81.97

\*(Shepherd, et al. 2007)

\*\* (Mattiske, 1998)

Approximately 80.85% and 85.40% of the Pre-European vegetation remains in the IBRA Warren Bioregion and Shire of Manjimup, within which this proposal is located (Shepherd et al., 2007).

The local area (10kms) has been heavily cleared in parts with approximately 30% vegetation remaining, resulting in areas of vegetation that are highly fragmented.

Though as all Mattiske and Pre-European vegetation complexes have a high percentage remaining the 1ha area proposed to be cleared is not considered to be a significant remnant of native vegetation within an extensively cleared area.

Based on the above, the proposed clearing is not at variance to this Principle.

**Methodology** Shepherd et al, (2007)  
Mattiske (1998)  
GIS Databases:  
- Pre-European Vegetation - DA 01/01  
- Mattiske Vegetation - (01/03/1998)

**(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**

A minor perennial watercourse runs approximately 30m north of the application area, following the length of Middlesex road. The proposed clearing area is within a road reserve which already exists and already contains roadside infrastructure i.e; culverts and table drains.

Due to the vegetation under application being contained in the road reserve of an existing road, this proposal is not likely to be at variance to this principle.

**Methodology** GIS Databases:  
- Hydrography, linear - DOW 13/7/06

**(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 topography within the region is of low relief. The purpose of the clearing is for road upgrades, on roads that are already established. The road side vegetation under application is not considered to be in an area associated with high salinity risk. The application falls within Zone C boundary of the CAWS Act. CAWS advice (2008) received states that the applicant should revegetate an equivalent area to that applied to clear (1ha).

The proposal may cause some short term land degradation issues in terms of flooding and soil erosion during works. However these issues should be minimal as Middlesex road already has road side infrastructure in place to prevent land degradation associated with roads, ie; table drains and culverts.

Given the above, the proposal may be at variance to this principle, and therefore, revegetation conditions have been placed on the permit to address CAWS issues.

**Methodology** GIS Databases:  
- Soils, Statewide - DA 11/99  
- Hydrogeology, Statewide - DOW 13/07/06  
- Manjimup 50cm Orthomosaic - DLI04  
- Groundwater Salinity, Statewide - DoW 13/07/06

**(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 application area is adjacent to Smithbrook Nature Reserve. The clearing is proposed to occur within Middlesex road reserve.

Given the low topography of the region and the linear nature of the application area, the proposed clearing for roadworks is unlikely to significantly impact the conservation area. However, Weed and Dieback conditions have been included in the permit to minimise the spread of identified weeds and dieback to uninfected areas.

**Methodology** SAC Bio datasets, accessed 10 Oct 08  
GIS Databases:  
- CALM Managed Lands and Water - CALM 01/06/05  
- Manjimup 50cm Orthomosaic - DLI04

**(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 may be at variance to this Principle**

The proposed clearing site falls within the Warren River hydrographic catchment. The region is of low relief with an average annual rainfall of 1100mm. Groundwater salinity is mapped at 500mg/L to 1000 mg/L TDS (Total Dissolved Solids).



The proposed clearing for roadworks may cause some short term water quality issues in terms of localised surface water sedimentation during works. However, these issues should be minimised as roadworks will include roadside infrastructure to prevent water quality issues associated with roads (ie table drains and culverts).

The area proposed to be cleared lies within Zone C of the CAWSA boundaries. CAWS advice (2008) received states the applicant should revegetate an equivalent area to that applied to clear (1ha).

Given the above, the clearing of native vegetation for roadworks may cause deterioration in the quality of surface water or groundwater within the local area, however, revegetation conditions will be placed on the permit to address the CAWSA issue.

**Methodology** GIS Databases:  
- Groundwater Salinity, Statewide - DoW 13/07/06  
- Hydrography, linear - DOW 13/7/06

**(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 purpose of clearing is to upgrade Middlesex road. Clearing associated with road widening is within a road reserve that already exists and as such, issues relating to flooding have been previously addressed by diverting water bodies through culverts or under bridges.

Given the above, the proposed clearing is not likely to cause, or exacerbate, the incidence or intensity of flooding.

**Methodology** Site photos (2008)

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

**Comments**  
The area proposed to be cleared lies within Zone C of the CAWSA boundaries. CAWS advice (2008) received suggests the applicant should revegetate an equivalent area to that applied to clear (1ha). The area also within a non-assessed Public Drinking Water Source Area.

**Methodology**  
- Country Area Water Supply Act (Part IIA) Clearing Control Catchments 29/06/2006  
- Public Drinking Water Source Areas (PDWSAs) - 07/02/06

#### 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 is maybe at variance to Principle (a), (b), (g) and (i), is not at variance to Principle (e) and is not likely to be at variance to the remaining clearing Principles.

#### 5. References

- DEC (2008) Site Inspection Report for Clearing Permit Application CPS 2649/1, Middlesex road reserve, Middlesex. Site inspection undertaken 13/10/2008. Department of Environment and Conservation, Western Australia (TRIM Ref. DOC65260).
- Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.
- Mattiske, E.M. and Havel, J.J. (1998) Vegetation Complexes of the South-west Forest Region of Western Australia. Maps and report prepared as part of the Regional Forest Agreement, Western Australia for the Department of Conservation and Land Management and Environment Australia.
- RCC (2008). Road Conservation Committee Value Mapping, Shire of Manjimup. Roadside Conservation Committee 2008. Sac Bio Datasets (10/10/08). Department of Environment and Conservation, Sac Bio Datasets, Kensington, Western Australia.
- Shepherd, D.P. (2007). Adapted from: Shepherd, D.P., Beeston, G.R., and Hopkins, A.J.M. (2001), Native Vegetation in Western Australia. Technical Report 249. Department of Agriculture Western Australia, South Perth. Includes subsequent updates for 2006 from Vegetation Extent dataset ANZWA1050000124.
- Site photos (2008). Shire of Manjimup application area site photos, Middlesex road, DEC TRIM Ref DOC59815

#### 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)