



## 1. Application details

### 1.1. Permit application details

Permit application No.: 2521/1  
 Permit type: Purpose Permit

### 1.2. Proponent details

Proponent's name: Shire of Augusta- Margaret River

### 1.3. Property details

Property:  
 ROAD RESERVE ( ROSA GLEN 6285)  
 ROAD RESERVE ( ROSA GLEN 6285)  
 ROAD RESERVE ( WITCHCLIFFE 6286)  
 ROAD RESERVE ( TREETON 6284)  
 ROAD RESERVE ( COWARAMUP 6284)  
 ROAD RESERVE ( TREETON 6284)  
 ROAD RESERVE ( COWARAMUP 6284)  
 ROAD RESERVE ( COWARAMUP 6284)  
 ROAD RESERVE ( COWARAMUP 6284)  
 Local Government Area: Shire Of Augusta-Margaret River & Shire Of Busselton  
 Colloquial name: Davis, Rowe, Jindong Treeton, North Treeton, Saunders and Wurring Roads

### 1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
		Mechanical Removal	Road construction or maintenance
		Mechanical Removal	Road construction or maintenance
		Mechanical Removal	Road construction or maintenance
		Mechanical Removal	Road construction or maintenance
		Mechanical Removal	Road construction or maintenance
2.76		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
Beard Vegetation: 1 - Tall forest; karri (Eucalyptus diversicolor); 3 - Medium forest; jarrah-marri	Areas under application are for the purpose of road maintenance. Much of the proposed clearing will be undertaken in table drains within existing road reserves. Vegetation condition (Keighery, 1994) of the areas to be cleared area as follows:	Good: Structure significantly altered by multiple disturbance; retains basic structure/ability to regenerate (Keighery 1994)	Condition of the vegetation under application was assessed through aerial photography, and a site visit (DEC, 2008).
Mattiske Vegetation: T - Woodland of Eucalyptus marginata subsp. marginata-Corymbia calophylla with some Allocasuarina fraseriana on mild slopes in the perhumid zone; Tw - Open forest of Eucalyptus patens-Corymbia calophylla-Eucalyptus marginata subsp. marginata on lower slopes and on floors of minor valleys in the perhumid zone; Cw2 - Woodland of Eucalyptus marginata subsp. marginata-Corymbia calophylla on slopes and low woodland of Melaleuca preissiana-24 Banksia littoralis on depressions in perhumid	Completely degraded (Saunders and Treeton North Road); Good (Jindong Treeton Road); Very Good (Rowe and Wurring Roads); and Excellent (Davis Road)		

and humid zones; Cd - Woodland of Eucalyptus marginata subsp. marginata-Corymbia calophylla-Banksia ilicifolia on sandy rises and low woodland of Melaleuca preissiana on lower slopes in the hyperhumid to humid zones.

### 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 under application is to clear 2.76 hectares of native vegetation for the purpose of road maintenance. The condition (Keighery, 1994) of the roadside vegetation to be cleared is as follows:

- \* Completely degraded (Saunders and Treeton North Road, consisting of only isolated trees with little to no understorey);
- \* Good (Jindong Treeton Road);
- \* Very Good (Rowe and Wurring Roads); and
- \* Excellent (Davis Road).

The native vegetation under application has been classified by the Roadside Conservation Committee as having a medium low to medium high conservation value. Davis Road particularly at the western end, has been categorised as of medium high to high conservation value, with Rowe and Wurring roads medium conservation value, all important ecological corridors (RCC Advice, 2008).

There are 31 records of different priority flora species present within a 10km radius of the area under application, most falling within the same vegetation and soil type as the area under application. One *Thomasia laxiflora* (P3) was recorded within the Jindong Treeton road reserve (DEC, 2008). If granted, a flora management condition will be placed on the permit.

Due to the small size of each of the 6 proposed clearing sites (0.1-0.88ha), the application areas are not considered to hold significant biodiversity values, though may be at variance to this principle given the high record of priority species in close proximity to the roads.

**Methodology**      DEC (2008)  
Keighery (1994)  
RCC Advice (2008)  
GIS Database:  
- Busselton 50cm ORTHOMOSAIC - DLI04  
- Augusta 1.4m Orthomosaic - DLI00 (image)  
- SAC Biodataset 030708

#### (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**

Within the local area (10km radius from the proposed clearing) there are fifteen records of threatened fauna and 8 records of priority species.

Approximately 50% of the local area (20km radius) is uncleared, with the majority of the road reserves under application adjacent to densely vegetated reserves. The road side structure of the application areas have been classified by the Roadside Conservation Committee, the majority given a medium low to medium high conservation value. Davis road particularly at the western end, has been categorised as of medium high to high conservation value as an important ecological corridor for fauna (RCC Advice, 2008).

Some potential nesting trees (5-10) especially for Phascogales, have been identified on Wurring Road, predominately *Eucalyptus calophylla* (Marri). It is recommended that there be tree retention wherever possible (DEC, 2008).

The 6 areas under application are small (0.1 - 0.88ha), linear and some are surrounded by more suitable remnants of habitat nearby, though they provide a stepping stone for fauna in a highly cleared area. Given this, the proposed clearing may be at variance with the principle. If granted, a fauna management condition will be imposed on the permit.

**Methodology**      DEC (2008)  
RCC Advice (2008)



GIS Database:

- CALM Managed Lands and Waters - CALM 01/06/05
- Busselton 50cm ORTHOMOSIAC - DLI04
- Threatened Fauna, SAC Bio Dataset (24/07/08)

**(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) of the site under application there is 9 records of rare flora. Species that fall within the same vegetation and soil complexes as the application areas are:

Caladenia excelsa;  
Dryandra nivea subsp. uliginosa;  
Dryandra squarrosa subsp. argillacea;  
Daviesia elongata subsp. elongata;  
Drakea micrantha; and  
Reedia spathacea

The soil type of the area under application is described as gently undulating terrain of broad shallow valleys and low ridges with moderate amounts of laterite and lateritic (ironstone) gravel (Northcote et al. 1960-68). The vegetation type can be summarised as Medium Forest; jarrah & marri and karri (Shepherd 2006). No rare flora was recorded in or likely to be found near any of the application road reserves (DEC, 2008).

Caladenia excelsa (DRF) grow in white, grey or brown sand and sandy loam (WA Herbarium 2008); Daviesia elongata subsp. elongata (DRF) in sandy soils; and Reedia spathacea (DRF) peaty sand near swamps and river edges (WA Herbarium 2008). The soil of the application area differs markedly from that preferred by the above species.

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

**Methodology** DEC (2008)  
WA Herbarium (2008)  
Northcote et al. (1968)  
Shepherd et al. (2006)  
GIS Database:  
- SAC Bio Dataset 010708  
- Busselton 50cm ORTHOMOSAIC - DLI04

**(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**

Land applied to be cleared includes an area within the buffer of two Shrublands on southern Swan Coastal Plain Ironstones (Busselton area) threatened ecological communities. Although the buffer region falls within the same vegetation type as the application area, DEC (2008) advice suggests that the clearing of vegetation from the proposed clearing area may not impact on the TEC's.

Given this, the proposed clearing is not likely to be at variance to this principle.

**Methodology** DEC (2008)  
GIS Database:  
- TEC, SAC Bio Dataset (24/07/08)

**(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**

The area under application is located in the Warren Bioregion and the Shire of Augusta-Margaret River. The extent of vegetation remaining within these regions is 79.5% and 67.3% respectively (Shepherd et al. 2006). Furthermore, the remaining pre-European vegetation 1 (Tall forest; karri (Eucalyptus diversicolor)) and 3 (Medium forest; jarrah-marri) are 78.9% and 69.4% respectively (Shepherd et al. 2006). Vegetation has not been extensively cleared within this region, and is higher than the desirable 30% threshold level target identified by the EPA (2000). Mattiske and Heddle vegetation complexes that fall within the application area are all above the 30% threshold.

Given the high extent of vegetation remaining for all vegetation complexes, and the small size of the 6 application areas (0.1-0.88ha) it is unlikely that the application is at variance to this principle.

**Methodology** EPA (2000)  
Keighery (1994)

Shepherd et al. (2006)

GIS Database:

- Interim Biogeographic Regionalisation of Australia - EA 18/10/00
- Pre European Vegetation, SAC Bio Dataset (3/07/08)
- Busselton 50cm ORTHOMOSAIC - DLI04
- Augusta 1.4m Orthomosaic - DLI00 (Image)

**(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**

Davis and Jindong - Treeton Roads both intersect with a watercourse or a wetland. All of the areas under application are within road reserves of roads that already exist. All watercourses have previously been diverted through culverts or under bridges.

Due to the vegetation under application being contained in road reserves where existing roads exist, this proposal is not likely to be at variance to this principle.

**Methodology GIS Database:**

- Hydrography linear (hierarchy) - 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 is not likely to be at variance to this Principle**

The topography of the sites is between 30-140m AHD (Australian Height Datum) and the land is situated on sedimentary rock and rocks of low permeability. The soil type of the areas under application is described as gently undulating terrain of broad shallow valleys and low ridges with moderate amounts of laterite and lateritic (ironstone) gravel: chief soils of the broad shallow valleys are acid grey earths sometimes containing ironstone gravels and possibly with some soils also (Northcote et al. 1960-68).

The mean rainfall is 1100 - 1200mm per annum and the evapotranspiration rate is 800mm. Given the low topography, gravelly soils and small applications areas (0.1 - 0.88ha) it is unlikely that clearing of 2.76 hectares will be associated with soil erosion, wind erosion or water logging. Furthermore, the groundwater salinity is > 500 and 1000 to 3000mg/L (low salinity risk). Given the small areas to be cleared and high mean rainfall, salinity is not considered a risk.

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 the existing roads already have road side infrastructure in place to prevent land degradation associated with roads, ie; table drains and culverts.

Given the small and linear nature of each application area, it is unlikely that the proposed clearing of native vegetation would cause appreciable land degradation.

**Methodology Northcote et al. (1968)**

GIS Database:

- Evapotranspiration Isopleths - WRC 29/09/98
- Groundwater Salinity Statewide DoW 13/07/06
- Mean Annual Rainfall Isohytes (1975 - 2003) - DEC 02/08/05
- Topographic Contours, Statewide - DOLA 12/09/02

**(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 closet conservation area is Blackwood State Forest (unofficial) which is adjacent to Jindong-Treeton Rd.

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

**Methodology GIS Database:**

- CALM Managed Lands and Waters - CALM 01/06/05



**(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**

The proposed clearing sites fall within a number of catchment areas including Carburnup - Busselton Coast, Buayanup-Busselton Coast, Bramley-Busselton Coast, Wilyabup-Busselton Coast, Lower Blackwood - Upper Chapman and Lower Blackwood-Chapman. The region is of low relief with an annual rainfall ranging from 1100mm - 1200mm. Groundwater salinity is mapped at less than 500mg/L to 3000 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).

Due to the small and linear nature of the areas proposed to be cleared, it is unlikely that the clearing of native vegetation for roadworks will cause deterioration in the quality of surface water or groundwater within the local area.

**Methodology** GIS Database:  
- Evapotranspiration Areal Actual (30/09/2001)  
- Hydrogeology, Statewide (05/02/02)  
- Groundwater Salinity Statewide - DoW 13/07/06  
- Mean Annual Rainfall Isohytes (1975 - 2003) - DEC 02/08/05  
- Topographic Contours, Statewide - DOLA 12/09/02

**(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 at variance to this Principle**

The purpose of clearing is for road upgrades. Some of the roads under application cross over areas subject to inundation, rivers, perennial watercourses and drains. Clearing associated with road widening is within road reserves that already exist 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** GIS Database:  
- Evapotranspiration Isopleths - WRC 29/09/98  
- Mean Annual Rainfall Isohytes (1975 - 2003) - DEC 02/08/05  
- Topographic Contours, Statewide - DOLA 12/09/02

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

**Comments**

The subject properties lie within a Groundwater Area as proclaimed area under the Rights in Water and Irrigation Act 1914. Any groundwater extraction and/or taking or diversion of surface water for the purposes other than domestic and/or stock watering is subject to licence by the Department of Water. The proponent does not require the use of groundwater.

**Methodology** GIS Database:  
- Native Title Claims - LA 2/5/07  
- RIWI Act, Groundwater Areas - DoW 13/07/06

**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, may be at variance to Principle (a) and (b), 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 2521/1, Road Reserves Davis, Rowe, Jindong Treeton, North Treeton, Saunders and Wurring, Shire of Augusta-Margaret River. Site inspection undertaken 07/08/2008. Department of Environment and Conservation, Western Australia (TRIM Ref. DOC59532).
- 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.
- Mattiske Consulting (1998) Mapping of vegetation complexes in the South West forest region of Western Australia, CALM.
- RCC Advice (2008). Roadside Conservation Committee. Executive Officer of Roadside Conservation Committee advice 2008. DEC TRIM Ref: DOC59906
- Shepherd, D.P. (2006). 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.
- 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.
- Western Australian Herbarium (1998-). FloraBase - The Western Australian Flora. Department of Environment and Conservation. <http://florabase.dec.wa.gov.au/> Accessed on Monday, 24 July 2008.

## 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)