



1. Application details

1.1. Permit application details

Permit application No.: 2111/1
Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: Shire of Dardanup

1.3. Property details

Property: LOT 304 ON PLAN 42868 (FERGUSON 6236)
ROAD RESERVE (FERGUSON 6236)

Local Government Area: Shire Of Dardanup

Colloquial name:

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
0.95		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
<p>Beard:</p> <p>- Unit 4 (Chapman): Medium woodland; marri & wandoo (Hopkins et al., 2001; Shepherd, 2006).</p>	<p>The proposal involves clearing approximately 0.95 hectares for the purpose of road construction.</p> <p>The vegetation under application comprises several large, individual trees with no native understorey.</p>	<p>Completely Degraded: No longer intact; completely/almost completely without native species (Keighery 1994)</p>	<p>Description of the clearing application area is based on a site inspection conducted by DEC officers on 18 October 2007.</p>

Mattiske:

- Darling Scarp (DS2):
Mosaic of open forest of *Eucalyptus marginata* subsp. *marginata*-*Corymbia calophylla*, with some admixtures with *Eucalyptus laevis* in the north (subhumid zone), with occasional *Eucalyptus marginata* subsp. *elegantella* (mainly in subhumid zone) and *Corymbia haematoxylon* in the south (humid zone) on deeper soils adjacent to outcrops, woodland of *Eucalyptus wandoo* (subhumid and semiarid zones), low woodland of *Allocasuarina huegeliana* on shallow soils over granite outcrops, closed heath of Myrtaceae-Proteaceae species and lithic complex on or near granite outcrops in all climate zones
(Havel & Mattiske Consulting, 1998).

Hedde:

- Darling Scarp Complex:
ranges from low-open

woodland of wandoo with admixtures of marri, butter gum and mountain gum, through low open-forest of *C. huegeliana*, through heath, through herblands of *Borya nitida* to lithic complex (on the granite rocks)

(Hedde et al., 1980).

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 at variance to this Principle**

The proposal is for the clearing of approximately 0.95 hectares within a shire managed road reserve. The vegetation under application comprises several large individual trees with no native understorey, and is considered to be in completely degraded condition (Keighery, 1994); therefore the proposed clearing does not hold a high level of biological diversity and is not at variance to this Principle.

Methodology Keighery (1994)

(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**

The vegetation under application comprises several large individual trees that may contain hollows suitable for nesting by local fauna. A nest was observed in one of the trees under application (DEC, Site Inspection, 2008).

Several records of threatened and priority fauna species have been identified within a 10 km radius of the proposed clearing, including but not limited to Chuditch, Western Ringtail Possum, Quokka, Baudin's Black Cockatoo and Tingle Moggridgea Spider. These species are afforded protection (i.e. Vulnerable and Endangered) under WA criteria.

Given the vegetation may contain habitat values (i.e. nesting hollows) for fauna indigenous to Western Australia, the proposal may be at variance to this Principle.

If approved, conditions addressing the protection and well-being of local fauna, are recommended.

Methodology DEC, Site Inspection (2008);

GIS Databases:
- Threatened Fauna - SAC Biodataset - 22/8/07

(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 several records of declared rare and priority listed taxa within close proximity to the area under application (10 kilometre radius); however the completely degraded condition has significantly modified the value of the native vegetation. The area is therefore unlikely to be necessary for the continued existence of rare flora and not likely to be at variance to this Principle.

Methodology GIS Databases:
- DEFL, SAC Bio Dataset - 22/8/07

(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 known records of Threatened Ecological Communities (TECs) within a 10 kilometre radius of the proposed clearing; therefore the area under application is unlikely comprise the whole or part of, or be necessary for the maintenance of local TECs, and is therefore not likely to be at variance to this Principle.

Methodology GIS Databases:
- TEC Database, SAC Bio Dataset - 22/8/07;
- Threatened Ecological Communities - CALM

(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				area (ha)
	Pre-European	Current extent (ha)	Remaining %	% in reserves/DEC-managed land	
IBRA Region:					
- Southern Jarrah Forest	2,607,857	1,294,281	49.6*	70.4	
Local Government Authority:					
- Shire of Dardanup	52,860	25,677	48.6*	34.8	
Vegetation type:					
Beard:					
- Unit 4 (Chapman)	1,054,280	245,945	23.3*	18.2	
Mattiske:					
- Darling Scarp (DS2)	25,826	9,119	35.0**	6.9	
Heddele:					
- Darling Scarp Complex	49,364	18,145	36.8***	N/A	

* (Shepherd, 2006)

** (Mattiske & Havel, 1998)

*** (Heddele et al., 1980)

The area under application is located in the Shire of Dardanup in the Southern Jarrah Forest Bioregion, which retain approximately 48.6% and 49.6% (Shepherd, 2006), respectively of the pre-European extent.

The area under application is mapped as the Darling Scarp complexes (Mattiske & Havel, 1998; Heddele et al., 1980), which are considered to be depleted with 35% and 36%, retained respectively of the pre-clearing extent; however given the scale (0.95 hectares) and completely degraded condition, the proposed clearing is not considered significant remnant vegetation within an extensively cleared area, and is therefore not at variance to this Principle.

Methodology Shepherd (2006);
Mattiske & Havel (1998);
Heddele et al. (1980);

GIS databases:

- Interim Biogeographic Regionalisation of Australia - EM 18/10/00;
- Pre-European Vegetation - DA 01/01;
- Mattiske Vegetation - CALM 24/3/98;
- Heddele Vegetation Complexes - DEP 21/06/95;
- Local Government Authorities - DLI 8/7/04

(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 area under application does not lie within or adjacent to locally mapped watercourses or wetlands; therefore the proposal is not in association with a watercourse or wetland and is not at variance to this Principle.

Methodology GIS Databases:
- Hydrography, Linear - DoE 1/2/04;
- Geomorphic Wetlands (Classification), Swan Coastal Plain - DEC

(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 soils of the area under application are described as hard acidic neutral and yellow mottled soils, containing moderate to large amounts of ironstone gravels (Northcote et al., 1960-68).

The groundwater salinity is 500 to 1000 mg/L and the hydrogeology consists of rocks of low permeability with local aquifers in fractured and weathered rocks.

Given the scale (0.95 hectares) and completely degraded condition; the proposed clearing is not likely to cause appreciable land degradation and therefore is not likely to be at variance to this Principle.

Methodology Northcote et al. (1960-68);

GIS Databases:

- Salinity Risk LM25m - DOLA 00;
- Hydrogeology, Statewide - DoW;
- Groundwater Salinity, Statewide - DoW

(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**

Several areas managed for conservation occur within 10 kilometres of the area under application (e.g. DEC managed State Forest); however given the scale (0.95 hectares) and completely degraded condition of the vegetation under application, the proposed clearing is not likely to impact on the environmental values of nearby conservation areas and is therefore not likely to be at variance to this Principle.

Methodology GIS Databases:

- Register of National Estate - EA 28/01/03;
- CALM Managed Lands and Waters - CALM 1/07/05

(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**

Given the scale (0.95 hectares) and completely degraded condition; the proposed clearing is not likely to cause deterioration in the quality of surface or underground water and is therefore not likely to be at variance to this Principle.

Methodology GIS Databases:

- Hydrographic Catchments, Catchments - DoW;
- Topographic Contours, Statewide - DOLA 12/9/02;
- Groundwater Salinity, Statewide - DoW;
- Hydrogeology, Statewide - DoW

(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 proposed clearing of 0.95 hectares is unlikely to cause or exacerbate the incidence or intensity of flooding and is therefore not likely to be at variance to this clearing principle.

Methodology GIS Databases:

- Soils, Statewide;
- Topographic Contours, Statewide - DOLA 12/9/02

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

Comments

The existing gravel road is currently within private ownership; the Shire has realigned the road to be located within the road reserve, hence the need to clear the vegetation under application.

No public submissions have been received for this proposal.

Methodology

4. Assessor's comments

Purpose	Method	Applied area (ha)/ trees	Comment
Road construction or Removal maintenance	Mechanical	0.95	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 (b); and - is not or is not likely to be at variance to the remaining clearing Principles.

5. References

- Department of Environment and Conservation (DEC) (2007). Site Inspection Report. TRIM Ref: DOC48091.
- 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.
- Mattiske, E.M. and Havel, J.J. (1998). Vegetation mapping in the South West of Western Australia. Department of Conservation and Land Management, Perth.
- 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.
- Sac Bio Datasets (22/8/07). Department of Environment and Conservation, Sac Bio Datasets, Kensington, Western Australia.
- 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.

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)

