



1. Application details

1.1. Permit application details

Permit application No.: 2694/1
Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: Shire of Dardanup

1.3. Property details

Property: UNALLOCATED CROWN LAND (WELLINGTON FOREST 6236)
ROAD RESERVE (FERGUSON 6236)
ROAD RESERVE (DARDANUP 6236)
ROAD RESERVE (CROOKED BROOK 6236)
Local Government Area: Shire Of Dardanup & Shire Of Donnybrook-Balingup
Colloquial name: Joshua Creek Road Reserve

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
1.7		Mechanical Removal	Road construction or maintenance
0.7		Mechanical Removal	Road construction or maintenance
0.7		Mechanical Removal	Road construction or maintenance
0.5		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 type 3: Medium forest; jarrah-marri	Ferguson Rd - juvenile marri and juvenile-adult peppermint trees, little understorey except for weeds.	Good: Structure significantly altered by multiple disturbance; retains basic structure/ability to regenerate (Keighery 1994)	Vegetation condition was assessed by DEC site visit.
Beard Vegetation type 4: Medium woodland; marri & wandoo			
Beard Vegetation type 1182: Medium woodland; Eucalyptus rudis & Melaleuca raphiophylla			
Beard Vegetation type 1184: Medium woodland-fringing; jarrah, marri, Eucalyptus rudis & Agonis flexuosa			
	Joshua Creek Rd - juvenile jarrah and marri, some peppermint trees. Grass trees and other shrubs in middle storey and herb understorey.	Very Good: Vegetation structure altered; obvious signs of disturbance (Keighery 1994)	as above
	Pile Rd - very good condition vegetation, with upper, mid and understorey species jarrah/marri forest. Trees are mature and juvenile.	Very Good: Vegetation structure altered; obvious signs of disturbance (Keighery 1994)	as above
	Wellington mid rd - juvenile jarrah/marri, some peppermint trees, weedy understorey.	Degraded: Structure severely disturbed; regeneration to good condition requires	as above

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 areas proposed to be cleared are linear sections of roadsides. These roadside areas are generally in a disturbed state and condition of vegetation ranges from "completely degraded" to "very good" (Keighery, 1994).
- A site visit (DEC, 2008a) determined that there is limited diversity in the areas under application. Ferguson Rd and Joshua Creek Rd are both within highly cleared landscapes and vegetation along the roadsides is likely to be more diverse than the surrounding paddocks. However, within the local area (10 km radius) there are large stands of remnant vegetation likely to contain high levels of biodiversity.
- The vegetation within Pile Rd has been assessed as being in very good (Keighery, 1994) condition, with upper, mid and understorey species jarrah/marri forest. Trees are mature and juvenile.
- A condition to avoid and minimise clearing will assist in maintaining biodiversity levels in the highly cleared fragments. It is unlikely that the proposed clearing is at variance to the clearing.
- Methodology** SAC Biodatasets - accessed 2 October 2008
DEC, 2008a
Keighery, 1994
GIS Databases:
- Bunbury 50cm Orthomosaic - Landgate 2006
- Donnybrook 50cm Orthomosaic - Landgate 2004

(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 areas proposed to be cleared are linear roadsides ranging from 'completely degraded' to 'very good' (Keighery, 1994) condition.
- Peppermint (*Agonis flexuosa*) and Marri (*Corymbia calophylla*) trees are the predominant species proposed to be cleared. It is likely that Western Ringtail Possums (*Pseudocheirus occidentalis*) and Carnaby's Cockatoos (*Calyptorhynchus latirostris*) will be utilising these species for foraging and habitat.
- Joshua Creek Rd and Ferguson Rd are providing corridors throughout the cleared landscape which may be important for genetic flow of smaller mammal and avian species.
- It is considered that the proposed clearing is maybe at variance to this principle. A fauna condition will be imposed to protect species displaced by the clearing.
- Methodology** SAC Biodatasets - accessed 6 October 2008
DEC, 2008a
GIS Databases:
- Bunbury 50cm Orthomosaic - Landgate 2006
- Donnybrook 50cm Orthomosaic - Landgate 2004

(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 (10 km radius) there are recorded occurrences of three rare flora species, *Synaphea* sp. Fairbridge Farm, *Drakea elastica*, and *Eleocharis keigheryi*.
- Drakea elastica* and *Eleocharis keigheryi* are known from habitat not found within the proposed clearing areas and are unlikely to be impacted by the clearing.
- Synaphea* sp. Fairbridge Farm has been recorded in habitat similar to that found within the proposed clearing area. However, it has also been in different soil, vegetation and topography than that found in the clearing area. The proposed clearing is unlikely to impact upon this species (DEC, 2008b).
- Methodology** SACBio datasets - accessed 30 September 2008
Regional Advice, TRIM ref DOC 67013
SACBio datasets - accessed 30 September 2008
DEC, 2008b

- GIS Databases:
- Soils, Statewide
 - Topographic Contours, Statewide

(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 threatened ecological communities (TEC) within the proposed clearing areas. The application areas do not appear to display habitat characteristics of TECs likely to be found in this area. It is unlikely that the proposed clearing is at variance to this principle.

Methodology SAC biodataset, accessed 13 Oct 08
DEC site visit, 2008
GIS Databases:
- Bunbury 50cm Orthomosaic - Landgate 2006
- Donnybrook 50cm Orthomosaic - Landgate 2004

(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 may be at variance to this Principle

The table below indicates the percentage of remaining vegetation in each vegetation type within the proposed clearing. Vegetation within the application areas ranges from degraded - very good (Keighery, 1994) condition.

	Pre-European (ha)*	Current extent (ha)*	Remaining (%)*
Shire			
Dardanup	52,843.67	25,663.84	48.57
Beard Vegetation Complex			
3	2,661,405.03	1,863,719.41	70.03
4	1,054,279.86	254,656.90	24.15
1184	63,562.26	26,971.93	42.43
1182	23,437.06	6,548.58	27.94

*Shepherd et al. (2007)

Mattiske (1998) and Heddle (1980) complexes are all listed as above 30% targeted vegetation retention (EPA, 2003)

The local area (10 km radius) is approximately 50% vegetated. This vegetation is predominantly restricted to larger vegetation remnants of state forests and National parks. Outside these blocks of vegetation the landscape is heavily cleared. Vegetation within the application areas is providing vegetated corridors within this highly cleared landscape. The proposed clearing maybe at variance to this principle. A condition to avoid and minimise clearing will be placed upon the permit to mitigate the impact of clearing.

Methodology SAC Biodatasets, 13 October 2008
Shepherd, 2007
EPA, 2003
Mattiske, 1998
Heddle, 1980
GIS Databases:
- Bunbury 50cm Orthomosaic - Landgate 2006
- Donnybrook 50cm Orthomosaic - Landgate 2004

(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

Most of the application areas intersect above watercourses, however the roads have existing infrastructure of drains and culverts in place to mediate the impacts of clearing. Vegetation alongside the roads in these areas does not appear to be associated with the watercourse.

Ferguson Rd reserve passes over a mapped Conservation Category Wetland (CCW). Vegetation along the roadside appears to be mainly weedy understorey and not connected with vegetation within the CCW. The vegetation under application is not associated with the CCW (DEC, 2008b).

Methodology DEC, 2008b
GIS Databases:
- Hydrography, linear
- Geomorphic Wetlands (Classification), Swan Coastal Plain

(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 areas proposed to be cleared are small (3.6ha over 10km²) and linear, with the extent of clearing being a width of 2-3 metres from the current road seal.

Clearing of this nature is unlikely to cause land degradation due to the diluted impact of clearing (small vegetation losses over a large area). It is unlikely that the proposed clearing is at variance to this principle.

Methodology GIS Databases:
- Groudwater Salinity
- Soils, Statewide
- Bunbury 50cm Orthomosaic - Landgate 2006
- Donnybrook 50cm Orthomosaic - Landgate 2004

(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 may be at variance to this Principle**

The road sides proposed to be cleared are mainly within a cleared landscape flanked by two conservation areas. Due to the level of local clearing the roads are providing the main vegetation corridors.

In the case of Joshua Creek Rd, road side vegetation is providing a direct corridor link between Boyanup State Forest and Wellington State Forest. This link will be contributing to genetic diversity and species richness in the conservation areas.

Pile Rd runs through Wellington National Park and clearing may increase edge effects and the transfer of pathogens into the National Park. A weed and dieback condition will be placed upon the permit to mitigate these impacts.

The proposed clearing may impact upon buffer capabilities and genetic transfer to the conservation areas. Clearing as proposed may be at variance to this principle.

Methodology GIS databases:
- Bunbury 50cm Orthomosaic - Landgate 2006
- Donnybrook 50cm Orthomosaic - Landgate 2004
- CALM Managed Lands and Waters

(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 areas intersect with watercourses and wetlands in the local area. The roads are currently constructed with bridges, drains and culverts to minimise impact upon these watercourses and wetlands. The clearing may increase sedimentation in the short term, however it is not expected that the clearing will result in significant deterioration of water quality.

Methodology GIS Databases:
- Hydrography, linear
- Geomorphic Wetlands (Classification) Swan Coastal Plain

(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**

Clearing several small (3.6 ha within 10km² area), linear areas is unlikely to increase surface water runoff. The roads are currently constructed with drains and culverts to manage excess water. The proposed clearing is unlikely to be at variance to this principle.

Methodology DEC Site Visit, 2008

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

Comments

Methodology

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 (b), (e), and (h) and is not likely to be at variance to the remaining clearing Principles.

5. References

- DEC (2008a) Site Inspection Report for Clearing Permit Application CPS 2694/1, Pile, Ferguson, Joshua and Wellington road reserves, Shire of Dardanup. Site inspection undertaken 22/09/2008. Department of Environment and Conservation, Western Australia (TRIM Ref. DOC63917).
- DEC (2008b) Advice to Assessing Officer, Department of Environment and Conservation Trim Ref DOC67013
- 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.
- Hedde, E. M., Loneragan, O. W., and Havel, J. J. (1980) Vegetation Complexes of the Darling System, Western Australia. In Department of Conservation and Environment, Atlas of Natural Resources, Darling System, Western Australia.
- 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.
- 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. (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.
- 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
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)