



1. Application details

1.1. Permit application details

Permit application No.: 1617/1
Permit type: Area Permit

1.2. Proponent details

Proponent's name: Shire of Busselton

1.3. Property details

Property: ROAD RESERVE (BUSSELTON 6280)
ROAD RESERVE (BUSSELTON 6280)
Local Government Area: Shire Of Busselton

Colloquial name:

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
	2	Cutting	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 Unit: 676 - Succulent steppe; samphire.	2 native trees on roadside in a residential area.	Completely Degraded: No longer intact; completely/almost completely without native species (Keighery 1994)	Vegetation condition established through aerial photography and photographs submitted by the Shire with the application to clear (DOC8616). Photographs taken on the 18th October 2006.
Mattiske QD - Unknown		Completely Degraded: No longer intact; completely/almost completely without native species (Keighery 1994)	

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 area proposed to be cleared is Completely Degraded (Keighery 1994) consisting of two native trees with no native understorey. Due to the lack of species diversity and understorey layer, the vegetation proposed to be cleared is not considered to be of a high level of biological diversity and the proposed clearing is not representative of an area of outstanding biodiversity within the local area (10km radius).

Methodology Keighery (1994)
GIS databases:
- Declared Rare and Priority Flora List - CALM 13/08/03
- Pre European Vegetation - DA 01/01
- Mattiske Vegetation - CALM 24/3/98
- Busselton 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**
The two *Agonis flexuosa* (Peppermint) trees proposed to be cleared have been identified as potential habitat for native mammals, particularly the Western Ringtail Possum (*Pseudocheirus occidentalis*) which is protected under the Environmental Protection and Biodiversity Conservation Act 1999 and may also provide habitat for some birds. A survey for Western Ringtail Possums was conducted by ATA Environmental on the 24th and 25th January 2007. The survey found that "there was no evidence of WRP (Western Ringtail Possums) in the

two mature Peppermints on Peel Terrace (the two trees proposed for clearing) or in the immediate vicinity." The report also states that "While there was no apparent evidence of WRP during the site visits, they are still potentially present."

The recommendation made by the consultants is that "it may be necessary to engage an experienced "fauna spotter" and a cherry picker during the clearing process to ensure no WRP are injured or killed and to aid in their relocation to nearby trees if required. If any native fauna, in particular WRP's, are encountered they should be allowed to make their own way from the works area" (ATA Environmental, 2007b). Due to the potential of Western Ringtail Possums inhabiting the two Peppermint trees to be cleared, it will be a condition of the clearing permit that the Shire employ a fauna specialist to be onsite at the time of clearing and any fauna identified within the trees to be cleared will only be removed and relocated by a fauna clearing person, in accordance with a licence issued by DEC. It will also be a condition that records be kept of any fauna identified and relocated.

Methodology - ATA Environmental (2007b)
GIS databases:
- Busselton 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 at variance to this Principle

There are eight Declared Rare Flora species in the local area (10km radius) with the closest one being *Caladenia procera* which is approximately 1.7km from the clearing area. There are also nine Priority species within the local area with *Synaphea hians* (Priority 3) being the closest species at approximately 5km south east of the proposed clearing area.

Due to the proposed clearing being for two roadside trees with no native understorey vegetation, it is unlikely that the clearing of these trees will impact upon declared rare or priority flora species.

Methodology GIS databases:
- Declared Rare and Priority Flora List - CALM 13/08/03
- 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 at variance to this Principle

There are 20 Threatened Ecological Communities (TEC) within the local area (10km radius) of the proposed clearing with the closest one approximately 9km south. There is one Threatened Plant Community (TPC) in the local area, which is approximately 8.9km south of the clearing area.

The proposed clearing is for two Peppermint trees in an area which is Completely Degraded (Keighery 1994), lacking vegetation structure and understorey. Due to the distance, lack of vegetation links, degraded condition and scale of the proposed clearing, the area is unlikely to contain or impact on any local TEC's or TPC's.

Methodology - Keighery (1994)
GIS databases:
-Threatened Ecological Communities - CALM 15/7/03
-Threatened Plant Communities - DEP 06/95
- Busselton 50cm Orthomosaic - DLI04

(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

The proposed clearing is located in the Swan Coastal Region in the Shire of Busselton. The extent of native vegetation in these areas are 41.8% and 44.5% respectively. The trees are a component of the Beard vegetation classification 676 (Succulent steppe; samphire) of which there is 98.9% remaining (Shepherd et al, 2001) and is therefore of a 'least concern' status. It is also within the QD Mattiske classification, the details of which are unknown.

The two Peppermint trees proposed to be cleared are within a Completely Degraded area (Keighery 1994) with no understorey and are along a road verge, within a shopping town planning scheme zone.

Much of the local area (10km radius) has been previously cleared for development, residential purposes and rural properties (farmland). However, the two trees are not representative of the above vegetation complexes due to the lack of vegetation structure and species diversity.

Therefore, the area proposed to be cleared is not considered to be a significant remnant within an extensively

cleared area.

- Methodology**
- Shepherd et al. (2001)
 - Hopkins et al. (2001)
 - Keighery (1994)
 - Department of Natural Resources and Environment (2002)
- GIS databases:
- Mattiske Vegetation - CALM 24/3/98
 - Local Government Authorities - DLI 8/07/04
 - Pre European Vegetation - DA 01/01
 - Busselton 50cm Orthomosaic - DLI04
 - IBRA - EM18/10/00

(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

The two trees are approximately 65.5m north west of the Lower Vasse River.

One of the trees is within an Environmentally Sensitive Area (ESA), Swan Coastal Plain - Conservation category wetlands, however, due to the tree being in a Completely Degraded (Keighery, 1994) area with no native understorey and the applicant will be required to plant 20 trees within the vicinity of the clearing, alongside the Lower Vasse River, it is unlikely that the clearing of the two trees will have a significant impact upon the ESA.

The two trees are approximately 50m from an EPP Lake (associated with the Vasse River) and the closest ANCA wetland is approximately 152 metres from the closest tree to be cleared. The Vasse-Wonnerup RAMSAR wetlands are approximately 1.2km from the trees.

Although the removal of two trees may cause some minor impacts, the applicant will be required as a condition of the permit, to replant 20 *Agonis flexuosa* (Peppermint) trees alongside the Lower Vasse River to mitigate any potential impacts.

- Methodology**
- GIS databases:
- ANCA, Wetlands - CALM 08/01
 - EPP Lakes - DEP 28/07/03
 - Geomorphic Wetlands (Mgt Categories) Swan Coastal Plain - DoE 15/9/04
 - Hydrography Linear - DoE 1/2/04
 - RAMSAR, Wetlands - CALM 21/10/02
 - Busselton 50cm Orthomosaic - DLI04

(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 proposed clearing lies within a high risk acid sulphate soil area, a low risk salinity area and a mapped groundwater salinity level of 3000 - 7000mg/L. To mitigate the risk of salinity, the applicant will be required as a condition of the permit to plant 20 Peppermint trees alongside the Lower Vasse River. The applicant will not need to undertake any excavating for the removal of the trees and therefore the clearing of the two trees is not likely to disturb acid sulfate soils.

It is unlikely that the removal of the trees will cause further land degradation to this area due to the small scale clearing and the required revegetation.

- Methodology**
- GIS databases:
- Acid Sulphate Soil Risk Map, SCP - DoE 01/02/04
 - Salinity Risk LM 25m - DOLA 00
 - Groundwater Salinity, Statewide - 22/02/00

(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 at variance to this Principle

There are two CALM (DEC) managed lands and two Register of National Estate locations within the local area (10km radius) of the proposed clearing. The closest is approximately 451m from the area under application.

The removal of two roadside trees within this Completely Degraded area (Keighery, 1994) will not impact upon these local conservation areas due to the size of the proposed clearing area and lack of vegetation links.

Methodology - Keighery (1994)
GIS database:
- CALM Managed Lands and Waters - CALM 1/06/04
- Register of National Estate - EA 28/01/03
- Busselton 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 is not likely to be at variance to this Principle**
The area proposed to be cleared is within the Vasse-Wonnerup Estuary Catchment Area and falls within the Busselton-Capel RIWI Ground Water Area.

Given the small scale of the area under application, the Completely Degraded (Keighery, 1994) condition of the vegetation, and that it will be a condition of the permit that the applicant plant 20 trees alongside the Lower Vasse River, further degradation of local water quality is not likely to occur as a result of the proposed clearing.

Methodology - Keighery (1994)
GIS databases:
- Hydrographic catchments, Catchments - DoE 3/4/03
- RIWI Act, Groundwater Areas - WRC 13/06/00

(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 is unlikely to exacerbate the incidence or intensity of flooding given the scale of the area under application.

Methodology GIS database:
Topographic Contours, Statewide - DOLA 12/09/02

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

Comments
The location containing the two trees are zoned Shopping under the Town Planning Scheme.

The area proposed for the roundabout has been identified as a high risk acid sulfate soil area, the clearing of the two trees is unlikely to cause a problem however, there is a potential risk associated with the underground drainage. A preliminary investigation report has been written by ATA Environmental (DOC15918) and was submitted to the Department on the 14th February 2007 and referred to the Department's Land and Water Quality Branch for review on the 15th February 2007. Land and Water Quality Branch advice (DEC, 2007) states that "there are a number of significant environmental issues in that area which have not been addressed in the ATA report and that may need to be managed in any proposed works in the area." Issues that have been identified by Land and Water Quality Branch in this area relate to the banks of the Vasse River "being undermined (by up to 2 metres), and this appeared to be causing mature trees on the foreshore reserve to be at risk of falling over" and "although the overall profile is calcareous, there is a pyritic silt layer on top of the limestone bedrock which is the surface where erosion is taking place." Land and Water Quality Branch have identified high levels of nutrients in groundwater flowing into the Vasse estuary as well as "a large amount of waste material is falling into the Vasse estuary along this erosion surface indicating that the park here is actually built on top of a historical landfill site." "Iron monosulphide black oozes are growing in the Vasse estuary" further down from the intended area of the roundabout "indicating a high input of nutrients and iron into the system. A few hundred metres upstream from this site, all of the riparian vegetation is dying back for a reason(s) that is currently not known."

It is recommended by Land and Water Quality Branch that dewatering not be undertaken "because of the nutrient content and risk of exacerbating the current destabilised banks problem. If dewatering is used, effluent should be infiltrated onsite and not discharged into the estuary." The volume of material to be excavated is 43.68 cubic metres, less than 100 cubic metres and therefore there is no requirement for the Shire to undertake a preliminary contaminated sites assessment due to the old landfill site. It has also been advised that the waste soil may need to be taken to the local rubbish tip due to possible landfill.

The Shire has informed the Department that they will not need to dewater and if they do it will be under the rate outlined in the dewatering exemption. The Shire has been informed that they should contact the local Department of Water office and notify them of the works to ensure that they will be exempt from requiring a licence to take water.

Methodology ATA Environmental (2007a)
DEC (2007)
GIS database:

- Town Planning Scheme Zones - MFP 8/98
- Acid Sulfate Soil Risk Map, SCP - DOE 01/02/04

4. Assessor's recommendations

Purpose	Method	Applied area (ha)/ trees	Decision	Comment / recommendation
Road construction or maintenance	Cutting	2	Recommendation to grant application with condition to revegetate 20 <i>Agonis flexuosa</i> (Peppermint) seedlings along the Lower Vasse River.	

5. References

- ATA Environmental (2007a) Acid Sulfate Soils Preliminary Investigation, Peel Terrace Roundabout, Busselton, ATA Environmental, Perth, W.A. TRIM ref DOC15918.
- ATA Environmental (2007b) Letter from ATA Environmental to Shire of Busselton: Western Ringtail Possum Tree Inspection, Peel Terrace, Busselton, ATA Environmental, Perth, W.A. TRIM ref DOC16410.
- DEC (2007) Advice from Land and Water Quality Branch, Perth W.A. TRIM ref DOC16990.
- Department of Natural Resources and Environment (2002) Biodiversity Action Planning. Action planning for native biodiversity at multiple scales; catchment bioregional, landscape, local. Department of Natural Resources and Environment, Victoria.
- Havel, J.J. and Mattiske Consulting Pty Ltd (2002) Review of management options for poorly represented vegetation complexes, Conservation Commission.
- 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 Consulting (1998) Mapping of vegetation complexes in the South West forest region of Western Australia, CALM.
- 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
CALM	Department of Conservation and Land Management
DAWA	Department of Agriculture
DEP	Department of Environmental Protection (now DoE)
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 DoE)