



1. Application details

1.1. Permit application details

Permit application No.: 1280/1
Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: Shire of Toodyay

1.3. Property details

Property:

- ROAD RESERVE (WATTENING 6568)
- ROAD RESERVE (WATTENING 6568)
- ROAD RESERVE (BEJOORDING 6566)
- ROAD RESERVE (CULHAM 6566)
- ROAD RESERVE (COONDLE 6566)
- ROAD RESERVE (DEWARS POOL 6567)
- ROAD RESERVE (DEWARS POOL 6567)
- ROAD RESERVE (COONDLE 6566)
- ROAD RESERVE (NUNILE 6566)
- ROAD RESERVE (NUNILE 6566)
- ROAD RESERVE (DUMBARTON 6566)
- ROAD RESERVE (WEST TOODYAY 6566)
- ROAD RESERVE (TOODYAY 6566)

ROAD RESERVE (TOODYAY 6566)

Local Government Area: Shire Of Toodyay
Colloquial name: Road Reserve Telegraph Road: Bridge 695

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
1.5		Cutting	Hazard reduction or fire control

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 Association 4: Medium woodland; marri and wandoo.	The areas under application are located within road reserves adjacent to 18 bridges within the Shire of Toodyay. The proposed clearing of 65 mature trees is to ensure a cleared area of 10m on both sides of the 18 bridges in accordance with the Main Roads WA's 'Timber Bridge Preventative Maintenance Standards' (Information provided by the proponent 2006) (TRIM Ref DOC2925).	Very Good: Vegetation structure altered; obvious signs of disturbance (Keighery 1994)	The vegetation under application, that is mature trees, is considered to be in excellent condition. However, the condition of the associated vegetation community is very good with weeds, predominantly Oxalis spp., dominating the lower storey (Site visit 2006) (TRIM Ref ED1098).
Beard Vegetation Association 352: Medium woodland; York gum (Hopkins et al. 2001, Shepherd et al. 2001).			
Hedde Vegetation Complexes: Bindoon Complex: No information available.			
Williams-Avon-Brockman-Mumballup Complex: No information available (Hedde et al. 1980).			
Mattiske Vegetation	The areas to be cleared consist of mature trees including Flooded gum (Eucalyptus rudis),		

Complexes Bindoon
Complex: Woodland of
Eucalyptus loxophleba on
the slopes, flanked by
woodlands of Eucalyptus
wandoo-Eucalyptus
accedens on the
breakaways and upper
slopes in the perarid zone.
Williams Complex: Mixture
of woodland of Eucalyptus
rudis-Melaleuca
rhapsiophylla, low forest of
Casuarina obesa and tall
shrubland of Melaleuca
spp. on major valley
systems in arid and perarid
zones
(Mattiske Consulting
1998).

Sheoaks (Casuarina spp.)
and wandoo (Eucalyptus
wandoo), with regenerating
flooding gum, sheoaks and
weeds (Site visit 2006).
The weeds and
regenerating vegetation are
within the maintenance
area and are therefore
exempt from requiring a
clearing permit under
Schedule 2 of the
Regulations (TRIM Ref
DOC2925).

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 clearing proposal is for 65 mature trees adjacent to 18 bridges within the Shire of Toodyay. The areas underneath the timber bridges and extending 10m on both sides of the bridges have been maintained in a cleared state, except for the mature trees, with the clearing of vegetation and debris ongoing for maintenance and safety (Information provided by the proponent 2006).

Given the areas under application have been previously disturbed by ongoing maintenance for the timber bridges and are within road reserves, with likely edge effects, it is unlikely that the areas under application are of higher biodiversity value than that of other less disturbed areas in the local area.

Methodology Information provided by the proponent (2006) (TRIM Ref CRN218981)
GIS Databases:
- Cadastre - DLI 1/12/05
- Northam 1m Orthomosaic - DLI 12/03

(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**

During a site visit (2006) a nest and hollow were observed in a mature tree adjacent to Bridge 696. Biodiversity Coordination Section (BCS), DEC (2006) advised that the nest is likely to have constructed by a Raven, for which there are other suitable sites and nesting material. In addition, the mature tree appears to have a hollow of sufficient girth to be utilized by Carnaby's black Cockatoos. Therefore, BCS recommends that prior to clearing a fauna specialist be engaged to examine the tree to determine whether it is being utilized by Carnaby's black Cockatoos. If an egg or a nestling is discovered, work must cease immediately and contact be made with DEC Nature Protection Branch for further instruction.

Given the above, Management Conditions addressing Fauna, Recording and Reporting has been recommended for this permit.

Methodology Biodiversity Coordination Section, DEC (2006) (TRIM Ref ED1102)
Site visit 2006 (TRIM Ref ED1098)
GIS Databases:
- Northam 1m Orthomosaic - DLI 12/03
- Cadastre - DLI 1/12/05

(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 two species of Declared Rare Flora (DRF), Grevillea flexuosa (zig-zag grevillea) and Asterolasia nivea (Bindoon starbush), within 5km of the areas under application.

Grevillea flexuosa is confined to Stoneville and Toodyay (Rugged Hills Nature Reserve and Unnamed (19904)) Nature Reserve. The species occurs on low heaths on hilltops, slopes and in gullies (Brown et al 1998). Asterolasia nivea is located within Flat Rock Gully Nature Reserve, in the Shire of Toodyay. The species

occurs in marri woodland on lateritic clay soil.

Given the small areas under application (1.5ha) and that the vegetation under application is predominantly riparian vegetation (Flooded gum and Sheoaks), it is unlikely that the vegetation proposed to be cleared includes or is necessary for the continued existence of rare flora.

Methodology Brown et al (1998) Western Australia's Threatened Flora
GIS databases:
- Declared Rare and Priority Flora List - CALM 01/07/05

(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 occurrences of Threatened Ecological Communities (TECs) within 40km of the areas under application.
It is therefore unlikely that the vegetation proposed to be cleared comprises the whole or part of or is necessary for the maintenance of a TEC.

Methodology GIS Databases:
- Threatened Ecological Community Database - CALM 12/04/05
- Environmentally Sensitive Areas - DOE 08/03/05

(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 State Government is committed to the National Objectives and Targets for Biodiversity Conservation which includes a target that prevents the clearance of ecological communities with an extent below 30% of that present Pre-European settlement (Department of Natural Resources and Environment 2002, EPA 2000). Some vegetation complexes in the areas under application are below the recommended minimum of 30% representation.

Six of the eighteen areas under application are located within the Intensive Land-use Zone as mapped in EPA Position Statement No. 2 (EPA 2000). Significant clearing of native vegetation has already occurred in this area and any further reduction through clearing is not supported.

	Pre-European (ha)*	Current extent (ha)*	Remaining (%)*	Conservation**% status	In reserves/CALM managed land
IBRA Bioregions					
- Avon Wheatbelt***	9 578 995	1 536 296	16.0	Vulnerable	
- Jarrah Forrest	4 544 335	2 665 480	58.7	Least Concern	
Shire of Toodyay	173 440	88 082	50.8	Least Concern	
Vegetation type:					
Beard: Unit 4	1 247 834	292 993	23.5	Vulnerable	14.8
Beard: Unit 352	874 652	133 255	15.2	Vulnerable	3.0
Mattiske:					
Bindoon Complex	266 761	78 976	29.6	Vulnerable	
Williams Complex	234 849	48 193	20.5	Vulnerable	

* (Shepherd et al. 2001)

** (Department of Natural Resources and Environment 2002)

*** Within the Intensive Landuse Zone

There is no information available for Heddle Bindoon Complex and Williams-Avon-Brockman-Mumballup Complex.

Given the proposed clearing of 1.5ha, in 18 separate locations, is relatively small compared to the area of remnant vegetation remaining within the Regions and the disturbance from the ongoing maintenance of the immediate areas surrounding the timber bridges, the vegetation proposed to be cleared is not likely to be significant as a remnant of native vegetation in the surrounding area.

Methodology Department of Natural Resources and Environment (2002)
EPA (2000)
Hopkins et al. (2001)
Shepherd et al. (2001)
Heddle et al. (1980)
Mattiske Consulting (1998)

GIS Databases:

- Pre-European Vegetation - DA 01/01

- Interim Biogeographic Regionalisation of Australia - EA 18/10/00

(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 may be at variance to this Principle

The areas under application are associated with bridge infrastructure, within 10m of 18 bridges. The vegetation proposed to be cleared is predominantly riparian vegetation in association with watercourses, which include Toodyay Brook, Avon River, Jimperding Brook, Phillips Brook and Bejoording Brook and therefore the clearing may be at variance to this Principle.

However, the clearing of the mature trees is a requirement for the safe management of the associated timber bridges.

Methodology GIS Databases:

- Hydrography, linear - DOE 01/02/04

- Northam 1m Orthomosaic - DLI 12/03

(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 landform of the areas under application can be described as river terraces with the chief soils of hard alkaline red soils and small areas of other soils are likely. The surrounds can be described as rolling to hilly with some steep slopes, gneissic rock outcrops common with the chief soils being hard neutral red soils.

DAFWA (2006) advised that it is unlikely that the proposal to remove 69 trees near 19 bridges would be at variance for soil erosion. The revised application comprises of 65 trees near 18 bridges (Site visit 2006) which is unlikely to cause appreciable land degradation.

Methodology DAFWA (2006) (TRIM Ref DOC3423)

Site visit 2006 (TRIM Ref ED1098)

GIS Databases:

- Soils, Statewide - DA 11/99

(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

There are numerous conservation reserves within 15km of the area under application, including Rugged Hills Nature Reserve, an Unnamed (19904) Nature Reserve, Julimar State Forest, Wongamine Nature Reserve, Wattering Nature Reserve, Rock Gully Nature Reserve and Poison Gully Nature Reserve.

Given the small scale of the areas under application (1.5ha in 18 separate locations) that are limited to 10m on both sides of the 18 bridges, it is unlikely that the clearing as proposed would have an impact on the environmental values of the nearby conservation reserves.

Methodology GIS databases:

- CALM Managed Lands and Water - CALM 01/07/05

(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

With an average annual rainfall of 500mm - 700mm and an annual evaporation rate of 2,000mm - 2,200mm there is likely to be little surface flow during normal seasonal rains. It is only during major rainfall events that there would be significant surface flow and this flow during these events tends to be relatively fresh. The Main Avon Catchment of the Avon River and Swan Coastal Basins becomes a medium for the collection and transportation of the major flows.

With high annual evaporation rates and low annual rainfall there is little recharge into regional groundwater table, which at this site is between 3,000 mg/l and 14,000 mg/l and is considered to be brackish to high saline. The proposed clearing of native vegetation (1.5ha in 18 separate locations) is unlikely to have an impact on regional groundwater considering the small size of the proposal and the magnitude of the Yilgarn-Southwest Groundwater Province (~246,000 sq km).

Methodology GIS Databases:

- Evaporation Isoleths - BOM 09/98

- Isohyets - BOM 09/98
- Groundwater Salinity, Statewide - 22/02/00
- Hydrography, linear - DOE 01/02/04
- Groundwater Provinces - WRC 98
- Hydrographic Catchments, Catchments - DOE 23/03/05

(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**
 With an average annual rainfall of 500mm - 700mm and an annual evaporation rate of 2,000mm - 2,200mm there is little surface flow during normal seasonal rains. It is only during major rainfall events that there is a likelihood of flooding: the river systems of the region are designed to compensate and sustain floodwaters in these instances. Given the small scale of the proposed clearing (1.5ha in 18 separate locations), it is unlikely to cause or exacerbate the incidence or intensity of flooding.

Methodology GIS Databases:
 - Evaporation Isopleths - BOM 09/98
 - Isohyets - BOM 09/98
 - Hydrography, linear - DOE 01/02/04
 - Topographic Contours, Statewide - DOLA 12/09/02

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

Comments
 The areas under application are within the Proclaimed Surface Water Area of the Avon River Catchment. Therefore any abstraction of surface water would require a licence. However, considering this application is only for hazard reduction or fire control, no licence will be necessary.

The Department will advise the proponent in the covering letter that if disturbance of the bed and banks is to occur a RIWI license may be required.

There is no other Works Approval or EPA Act Licence that affects the area under application.

The proposed clearing is within road reserves that are vested with the Shire of Toodyay. As the proposed clearing is consistent with the purpose of the vesting and the Shire is exercising a statutory power, the granting of a clearing permit constitutes a secondary approval and is not a future act under the Native Title Act 1993.

The Department advises that the proponent contact the relevant authorities to seek advice on whether or not the proposed clearing will impact upon the Aboriginal Sites of Significance listed within the areas under application.

Methodology GIS databases:
 - Aboriginal Sites of Significance - DIA 28/02/03
 - Cadastre - DLI 1/12/05
 - Native Title Claims - DLI 7/11/05
 - RIWI Act, Groundwater Areas - WRC 13/06/00
 - RIWI Act, Surface Water Areas - WRC 18/10/02

4. Assessor's recommendations

Purpose	Method	Applied area (ha)/ trees	Decision	Comment / recommendation
Hazard reduction or fire control	Cutting	1.5	Grant	The clearing as proposed may be at various to Principle (b) and may be at variance to Principle (f). It is recommended to grant a permit to clear 65 trees for hazard reduction or fire control with conditions addressing Fauna, Recording and Reporting.

5. References

Biodiversity Coordination Section, DEC (2006) Clearing Assessment Unit's biodiversity advice for land clearing application. Advice to Director General, Department of Environment and Conservation (DEC), Western Australia. TRIM Ref ED1102.

Brown A., Thomson-Dans C. and Marchant N., (1998) Western Australia's Threatened Flora, Department of Conservation and Land Management, Western Australia.

DAFWA (2006) Land degradation assessment report. Office of the Commissioner of Soil and Land Conservation, Department of Agriculture and Food Western Australia. DoE TRIM Ref DOC3423.

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.

- 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.
- Heddie, 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.
- 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)