



1. Application details

1.1. Permit application details

Permit application No.: 1598/1
Permit type: Area Permit

1.2. Proponent details

Proponent's name: Shire of Wyalkatchem

1.3. Property details

Property: LOT 29601 ON PLAN 29712 (Lot No. 29601 WHITE DAM WYALKATCHEM 6485)
Local Government Area: Shire Of Wyalkatchem
Colloquial name:

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
13.1		Mechanical Removal	Miscellaneous
1.1		Mechanical Removal	Miscellaneous

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 Associations 1413 - shrublands; acacia, casuarina and melaleuca thicket (Shepherd et al. 2001, Hopkins et al. 2001).	<p>The proposal is to clear 14.2ha of native vegetation within the Shire of Wyalkatchem for the purposes of water supply.</p> <p>The areas associated with the vegetation under application have previously been cleared, and DAFWA (2007) advice estimates the majority of vegetation on the site to be approximately 4 years old. Photographs provided by DAFWA (TRIM Ref. DOC14135), the Shire of Wyalkatchem (TRIM Ref. DOC14855) and aerial images (1999) show the vegetation as sparse and scattered, and comprised of regenerated acacia, casuarina and melaleuca. Overall the condition appears to be degraded with a low level of biological diversity.</p>	Degraded: Structure severely disturbed; regeneration to good condition requires intensive management (Keighery 1994)	The vegetation clearing description is based on information obtained from the DAFWA Land Assessment Report (TRIM Ref. DOC14135), GIS aerial imaging and photographs provided by the Shire of Wyalkatchem (TRIM Ref. DOC14855).

3. Assessment of application against clearing principles

(a) Native vegetation should not be cleared if it comprises a high level of biological diversity.

Comments	<p>Proposal is not likely to be at variance to this Principle</p> <p>The native vegetation applied to be cleared is located within a roaded water catchment in an extensively cleared agricultural area and has previously been cleared for the purpose of water supply. The vegetation comprises mainly of scattered, regenerated Acacia, Casuarina and Melaleuca species with an overall low level of biological diversity. Therefore, the proposed clearing is not likely to be at variance to this Principle.</p>
Methodology	<p>Reference:</p> <ul style="list-style-type: none">- DAFWA (2007) (TRIM Ref. DOC14135)GIS database:

(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 is located within an extensively cleared agricultural area.

Whilst the vegetation is comprised mainly of regenerated Acacia, Casuarina and Melaleuca species and has an overall low level of biological diversity the area is part of a larger remnant of more intact vegetation within an area that is extensively cleared and therefore may provide significant habitat for indigenous fauna or ecological linkages necessary for the maintenance, or movement, of fauna. Therefore, the proposed clearing may be at variance to this Principle.

Methodology Reference:

- DAFWA (2007) (TRIM Ref. DOC14135)

GIS database:

- Dowerin 1.4m Orthomosaic - DOLA 99

(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 no known Declared Rare or Priority Flora populations within a 10km radius of the vegetation under application. The closest being Acacia campylophylla (Priority 3) located ~12kms from the vegetation under application. The closest Declared Rare Flora (DRF) population is Conostylis wonganensis (Rare), located ~17kms from the vegetation under application.

C. wonganensis (Rare) is known to occur within a different Beard vegetation unit.

Given the above and the sparseness of the regenerating vegetation applied to be cleared, the proposed clearing is not likely to be at variance to this Principle.

Methodology GIS databases:

- DEC SAC Bio Datasets, Accessed 27/04/2007

- Pre-European Vegetation - DA 01/01

(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 (TEC) within close proximity to the vegetation under application (the closest being ~136kms west).

Therefore, the proposed clearing is not likely to be at variance to this Principle.

Methodology Reference:

- Gibson et al. (1994)

GIS Database:

- DEC SAC Bio Datasets, Accessed 27/04/2007

(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 at variance to this Principle

The vegetation under application is a component of Beard Vegetation Association 1413 (Hopkins et al. 2001) of which 74.2% of Pre-European extent remains (Shepherd et al. 2001). The vegetation under application is also located within the Intensive Land-use Zone (Shepherd et al. 2001) within the area defined in EPA Position Statement No. 2 (EPA 2000).

The State Government is committed to the National Objectives and Targets for Biodiversity Conservation which includes a target that prevents a clearance of ecological communities with an extent below 30% of that present pre-European settlement (Department of Natural Resources and Environment 2002, EPA 2000).

	Pre-European	Current extent	Remaining	Conservation***	% In
reserves/CALM	(ha)	(ha)	(%)	status	managed land
IBRA Bioregions					
Avon Wheatbelt*	9,578,995	1,536,296	16.0	Vulnerable	

Shire of Wyalkatchem*	158,004	7,814	4.9	Endangered	
Vegetation type:					
Beard: 1413**	1,679,930	1,247,089	74.2	Least concern	11.5

* (Shepherd et al. 2001)

** (Adapted from: Shepherd et al. 2001)

*** (Department of Natural Resources and Environment 2002)

EPA Position Statement No. 2 (EPA 2000) states that under the National Heritage Trust Partnership Agreements (current in 1999), all jurisdictions (States) have committed to no clearing of endangered ecological communities. Vegetation within the Shire of Wyalkatchem and the Avon Wheatbelt are both well below the State Government's National Objectives and Targets for Biodiversity Conservation of 30% at 4.9% (endangered) and 16.0% (vulnerable) respectively.

The area under application has previously been cleared and comprises of regenerated local species. The original vegetation structure and ecological function has been lost. Notwithstanding, the regeneration of vegetation within the Shire is significant given that only 4.9% of Pre-European vegetation remains within the shire. Given the above, the proposed clearing is at variance to this Principle.

To mitigate loss of vegetation if clearing is permitted a condition to offset vegetation cleared will be imposed.

- Methodology** **References:**
- Shepherd et al. (2001)
 - Adapted from: Shepherd et al. (2001)
 - Hopkins et al. (2001)
 - Department of Natural Resources and Environment (2002)
 - EPA (2000)
- GIS databases:**
- Pre-European Vegetation - DA 01/01
 - Interim Biogeographic Regionalisation of Australia - EA 18/10/00
 - EPA Position Paper No 2 Agriculture Region - DEP 12/00

(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 at variance to this Principle**
- The vegetation under application includes, and is adjacent to, a minor non-perennial watercourse. The watercourse within the vegetation under application is currently utilised as a collecting drain within the roaded catchment.

The vegetation under application within, and adjacent to, the collecting drain is in a degraded condition, comprising sparse regenerated Acacia, Casuarina and Melaleuca species. The drainage line has previously been cleared and is not considered to comprise the original environmental values of the associated watercourse. Photographs of the drainage line indicate that regeneration is more prominent along the watercourse. Therefore, the vegetation under application is considered to be growing in, or in association with, an environment associated with a watercourse.

- Methodology** **Reference:**
- DAFWA (2007) (TRIM Ref. DOC14135)
- GIS databases:**
- Rivers 250K - GA
 - Geomorphic Wetlands (Mgt Categories), Swan Coastal Plain - DEC
 - Hydrography, linear - DOE 1/2/04

(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 vegetation under application lies within soil units Va66 and Ms8. Soil unit Va66 is associated with a gently undulating to rolling terrain, with the variable presence of lateritic mesas/buttes and granitic tors/bosses and chief soils of hard alkaline yellow mottled soils and hard alkaline red soils. Soil unit Ms8 is associated with gently sloping to gently undulating plateau areas or uplands, with long and very gentle slopes and chief soils of sandy yellow earths and ironstone gravels (DAWA 2004).

DAFWA (2007) advise that the risk of proposed clearing causing appreciable land degradation is low, and therefore, the proposed clearing is not likely to be at variance to this Principle.

Methodology **References:**
- DAFWA (2007) (TRIM Ref. DOC14135)
- DAWA(2004)
GIS database:
- 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 three nature reserves within a 10km radius of the vegetation under application, the closest being approximately 2.3kms to the west.

Given the distance to these conservation areas and the overall degraded condition and scattered nature of the vegetation, the proposed clearing is not likely to impact on the environmental values of these conservation areas. Therefore, the proposed clearing is not likely to be at variance to this Principle.

Methodology **GIS databases:**
- Dowerin 1.4m Orthomosaic - DOLA 99
- Clearing Regulations - Environmentally Sensitive Areas - DOE 30/5/05
- 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**
The vegetation under application is located within a roaded water catchment that collects surface water runoff for the Shire of Wyalkatchem's water supply. The area of vegetation under application does not include any Public Drinking Water Source Areas (PDWSA) or PDWSA Protection Zones.

The vegetation under application lies within an area mapped with an average groundwater salinity of 7000-14000 (TDS) mg/L.

DAFWA (2007) advise that there is a low risk of salinity and eutrophication resulting from the proposed clearing. Therefore, the proposed clearing is not considered likely to cause deterioration in the quality of surface or underground water.

Methodology **Reference:**
- DAFWA (2007) (TRIM Ref. 14135)
GIS databases:
- Public Drinking Water Source Areas (PDWSAs) - DOE 07/02/06
- Groundwater Salinity, Statewide - 22/02/00

(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 likely to be at variance to this Principle**
The vegetation under application occurs within an area associated with an annual evaporation rate of approximately 2400mm and an annual rainfall of approximately 400mm.

Furthermore, DAFWA (2007) advise that there is a low risk of waterlogging and flooding. Therefore, the proposed clearing is not likely to be at variance to this Principle.

Methodology **Reference:**
- DAFWA (2007) (TRIM Ref. DOC14135)
GIS databases:
- Rainfall, Mean Annual - BOM 30/09/01
- Evaporation Isopleths - BOM 09/98

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

Comments
The vegetation under application is located within the Intensive Land-use Zone (Shepherd et al. 2001) within the area defined in EPA Position Statement No. 2 (EPA 2000). EPA Position Statement No. 2 states that 'the EPA could consider supporting clearing in the agricultural area if the proposed land use addresses alternative mechanisms for protecting biodiversity'. The inclusion of conditions which includes an offset package is considered to address this issue.

There are no Aboriginal Sites of Significance within the area under application and the vegetation under

application is not within a Native Title Claim area. Therefore, the clearing as proposed does not fall under the future acts process of the Native Title Act 1993.

The vegetation under application lies within a Rights in Water and Irrigation Act 1914 (RIWI) area. However as the proposed clearing is to maintain previously cleared areas an approval under the RIWI Act is not required.

There is no other EPA Act Licence that affects the vegetation under application.

Methodology

Reference:

- EPA (2000)

GIS databases:

- Native Title Claims - DLI 7/11/05

- Aboriginal Sites of Significance - DIA

- RIWI Act, Areas - WRC 05/04/02

- EPA Position Paper No 2 Agriculture Region - DEP 12/00

4. Assessor's comments

Purpose	Method	Applied area (ha)/ trees	Comment
Miscellaneous	Mechanical Removal	13.1	The clearing 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 clearing as proposed is at variance to Principles (e) and (f).
Miscellaneous	Mechanical Removal	1.1	

5. References

- 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.
- DAFWA (2007) Land degradation assessment report. Office of the Commissioner of Soil and Land Conservation, Department of Agriculture and Food Western Australia. DEC TRIM Ref. DOC14135
- DAWA (2004) Soil-landscape mapping, Western Australia Department of Agriculture, Date accessed 22/01/2007.
- 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.
- Gibson et al. (1994). A Floristic Survey of the Southern Swan Coastal Plain. Western Australian Department of Conservation and Land Management.
- 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.
- 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)

