



1. Application details

1.1. Permit application details

Permit application No.: 1999/1
Permit type: Area Permit

1.2. Proponent details

Proponent's name: Shire of Cranbrook

1.3. Property details

Property: HAY LOCATION 2361 (CRANBROOK 6321)
LOT 648 ON PLAN 141802 (Lot No. 648 FRANKLAND-CRANBROOK CRANBROOK 6321)
Local Government Area: Shire Of Cranbrook
Colloquial name: Road re-engineering

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
0.6		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 967: Medium woodland; wandoo and yate.	Aerial mapping images show the area under application has large portions of disturbed or non-existent vegetation (approximately 40%) due to its proximity to the roadside and farm land.	Degraded: Structure severely disturbed; regeneration to good condition requires intensive management (Keighery 1994)	The condition and description of the application area was determined via the use of orthomosaic mapping.

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**
Aerial mapping images show the area under application has large portions of disturbed or non-existent vegetation (approximately 40%) due to its proximity to the roadside and farm land. There are 11 priority listed flora species present within the local area (10km radius) as well as 4 Declared Rare species. However, given the degraded nature of the application area and its size, it is not likely to be representative of an area of outstanding biodiversity.

Methodology GIS Datasets:
- Mount Barker North 1.4m Orthomosaic DLI 01
- Fauna
- gtsouthern_waherb
- Flora
- Threatened Ecological Communities

(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 is not likely to be at variance to this Principle**
The area under application is 0.6 ha and is in a degraded condition (Keighery 1994), it is situated in an already extensively cleared area, with little habitat remaining for fauna. There are 2 species with a threatened status that occur in the local area (10km radius); the Phascogale tapoatafa (Brush-tailed Phascogale) and the Calyptorhynchus latirostris (Carnaby's Black-Cockatoo). The area under application has a Beard Vegetation type 967: Medium woodland, wandoo and yate (Shepherd et al. 2006) which may be a suitable habitat for the aforementioned faunal species, however due to the condition of the area under application, it's size and its surrounds, it is unlikely that the 0.6 ha of vegetation proposed to be cleared will be of any significance as a refuge or habitat for fauna in the local area.

Methodology GIS Datasets
- Mount Barker North 1.4m Orthomosaic
- Fauna
CALM (2006)
Keighery (1994)

(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 (10km) there are 4 Declared Rare Flora species present. *Acacia trulliformis*, *Dryandra mucronulata* subsp. *retrorsa*, *Gastrolobium lehmannii* and *Adenanthos velutinus*. *Dryandra mucronulata* subsp. *retrorsa* can be found on the same soil type and vegetation complex as the area under application.

Gastrolobium lehmannii occurs in red and brown loam and gravel. All known populations occur in low open woodland scrub which is different to the medium woodland of the application area, *Adenanthos velutinus* grows in scant peaty soil among rocks on hill slopes, and is often dominant in dense scrub, therefore, these two species are not likely to occur on the proposed area to be cleared (DEWHA 2008).

Dryandra mucronulata subsp. *retrorsa* and *Acacia trulliformis* may occur on the application area as their habitat preferences are similar to those found on the application area (Phillimore, Brown & Loudon 2003, & DEWHA 2008), however, due to the size and condition of the application area it is considered unlikely that area proposed to be cleared is necessary for the continued existence of rare flora.

Methodology GIS Datasets:
- Mount Barker North 1.4m Orthomosaic DLI 01
- sac bio set data
- Soils, statewide
- Pre-European Vegetation
DEWHA (2008)
Phillimore, Brown & Loudon (2003)

(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 no Threatened Ecological Communities (TECs) present within the local area (10km radius), therefore the proposed clearing of 0.6 ha of native vegetation is not at variance to this principle.

Methodology GIS Datasets:
- Mount Barker North 1.4m Orthomosaic DLI 01
-Threatened Ecological Communities

(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 native vegetation within the local area (10km radius) has been extensively cleared; the bioregion (Avon Wheatbelt) has 15.4% native vegetation remaining which is below the 30% threshold recommended by The National Objectives and Targets for Biodiversity Conservation 2001-2005.

The area proposed to be cleared also lies within an agricultural area which the EPA has stated from an environmental perspective, the EPA is of the view that it is unreasonable to expect to be able to continue to clear native vegetation from land within the agricultural area, other than relatively small areas and where alternative mechanisms for protecting biodiversity are addressed (EPA 2000).

The Beard Vegetation Association (967) found on the area under application has 12.2% of pre 1750 native vegetation remaining, which is well below recommended thresholds, although within the shire of Cranbrook this vegetation type (967) is above the 30% threshold (Shepherd et al. 2006).

Due to the size and current condition of the area under application, it is not likely to be significant as a remnant of native vegetation, in an already extensively cleared area.

Methodology GIS Datasets:
- Mount Barker North 1.4m Orthomosaic DLI 01
- Pre-European Vegetation
- Shepherd et al. (2006)
- National Objectives and Targets for Biodiversity Conservation

(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

All major watercourses within the Bioregion (Avon Wheatbelt) are categorised as "very poor." Pinjalup Creek is situated less than 35m west of the area under application and Gordon River (mainstream) is located 1.4km, all fringing vegetation along substantial streamlines are also classed as being "very poor", meaning the land is cleared of virtually all natural vegetation (CALM 2002). Therefore the proposed clearing of the area under application is not likely to be at variance to this principle.

Methodology GIS Datasets:

- Mount Barker North Orthomosaic DLI 01
 - Rivers
 - Calm Managed Lands and Waters
- CALM (2002)

(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 Hydrogeology of the proposed area to be cleared consists of rocks of low permeability, fractured and weathered rocks; the area has an annual rainfall of 500-600mm and is in an area of low relief (225-320m). Due to the sparsely scattered remaining native vegetation on the area under application, it is not likely that the proposed clearing of 0.6 ha will cause any appreciable land degradation.

Methodology GIS Datasets

- Mount Barker North 1.4m Orthomosaic DLI 01
- Rainfall, Mean Annual
- Topography, statewide

(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

The closest and only conservation area within the local area (10km radius) is the Twongkup Nature Reserve, which is located 4.8km south of the proposed area to be cleared. There is little vegetation between the area under application and the Nature reserve, the proposed clearing of 0.6 ha of native vegetation forms no linkage to the Twongkup Nature Reserve nor does it contribute to the environmental values of the conservation area.

Methodology GIS Datasets:

- Mount Barker North 1.4m Orthomosaic DLI 01
- 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

Ground water salinity has been record at 7000 - 14000 mg/L within the local area (10km radius) and on the proposed area to be cleared. Extensive clearing in the bioregion has lead to rising saline groundwater levels which threatens up to 30% of the landscape (CALM 2002). Due to the condition and size of the area under application, it is unlikely to contribute further to the rising ground water salinity trends within the local area.

Methodology GIS Datasets:

- Mount Barker North 1.4m Orthomosaic DLI 01
- Ground Water Salinity, Statewide
- CALM (2002)

(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 area proposed to be cleared is unlikely to have an impact on any flood regimes, be it peak flood height or duration of flood peak, due to its current condition and size.

Methodology GIS Dataset:

- Mount Barker North Orthomosaic DLI 01

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

Comments

There is a Native Title Claims over the area under application. The Department of Environment and Conservation's advertising of the application in the West Australian Newspaper constitutes legal notification of the Native Title representative body for the purpose of the future act procedures under the Native Title Act 1993, there has been no comment received in relation to this claim.

Methodology

GIS Datasets:
- Mount Barker North 1.4m Orthomosaic DLI 01
- Native title Claims
- Aboriginal Sites of Significance

4. Assessor's comments

Purpose	Method Applied	area (ha)/ trees	Comment
Road construction or maintenance	Mechanical Removal	0.6	The assessment against clearing has found: Principle (d) to be not at variance All other Principles found to be not likely to be at variance

5. References

- Department of the Environment, Water, Heritage and the Arts (2008). *Adenanthos velutinus* in Species Profile and Threats Database, Department of the Environment, Water, Heritage and the Arts, Canberra. Available from: <http://www.environment.gov.au/sprat>. Accessed 19/03/08
- Department of the Environment, Water, Heritage and the Arts (2008). *Gastrolobium lehmannii* in Species Profile and Threats Database, Department of the Environment, Water, Heritage and the Arts, Canberra. Available from: <http://www.environment.gov.au/sprat>. Accessed 19/03/08
- 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.
- Keighery, B.J. (1994) *Bushland Plant Survey: A Guide to Plant Community Survey for the Community*. Wildflower Society of WA (Inc). Nedlands, Western Australia.
- National Objectives and Targets for Biodiversity Conservation 2001-2005, (2001), Canberra.
- Phillimore, Brown & Loudon (2003) Department of Conservation and Land Management Western Australian Threatened Species and Communities Unit RECURVED-LEAVED SWORDFISH DRYANDRA (*DRYANDRA MUCRONULATA* SUBSP. *RETRORSA*) INTERIM RECOVERY PLAN 2003-2008
- Shepherd, D.P., Beeston, G.R. and Hopkins, A.J.M. (2001a) *Native Vegetation in Western Australia, Extent, Type and Status*. Resource Management Technical Report 249. Department of Agriculture, Western Australia (updated 2006). www.NatureBase.net (accessed february 2008)

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)