Department of Environment
Government of Western Australia

Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 2179/1
Permit type: Area Permit

1.2. Proponent details

Proponent's name: **Shire of Donnybrook Balingup**

1.3. Property details

Property: ROAD RESERVE (THOMSON BROOK 6239)
ROAD RESERVE (THOMSON BROOK 6239)
ROAD RESERVE (THOMSON BROOK 6239)
Local Government Area: Shire Of Donnybrook-Balingup
Colloquial name: Widen sealed road

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
0.4		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
The area under application is to clear 0.4ha of native vegetation for the purpose of road widening. Much of the area surrounding the application appears to have been cleared for agricultural purposes. Aerial photography shows the vegetation within the application area to be of good to degraded condition (Keighery, 1994). Photographs and vegetation survey supplied by the Shire of Donnybrook Balingup (2007), show that the application area consists predominately of mature Eucalypt species, minimal groundcover and less than 20% weed species. Beard vegetation association 1184: Medium woodland-fringing; jarrah, marri, Eucalyptus rudis & Agonis flexuosa Mattiske vegetation association BLf-Balingup: Woodland of Eucalyptus rudis on valley floors and woodland of Eucalyptus patens-Corymbia calophylla on footslopes with some Eucalyptus marginata subsp. marginata on lower slopes in the humid zone.	The area under application is to clear 0.4ha of native vegetation for the purpose of road widening. Much of the area surrounding the application appears to have been cleared for agricultural purposes. Aerial photography shows the vegetation within the application area to be of good to degraded condition (Keighery, 1994). Photographs and vegetation survey supplied by the Shire of Donnybrook Balingup (2007), show that the application area consists predominately of mature Eucalypt species, minimal groundcover and less than 20% weed species.	Good: Structure significantly altered by multiple disturbance; retains basic structure/ability to regenerate (Keighery 1994)	Vegetation condition was determined from photographs supplied by the Shire of Donnybrook Balingup (2007) and aerial photography.

Heddle vegetation association Lowden Complex: Open forest; jarrah-marri/Low open forest; peppermint			
As above	As above	Degraded: Structure severely disturbed; regeneration to good condition requires intensive management (Keighery 1994)	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 vegetation under application is to be cleared for road widening on Thomson Brook Road Reserve, Donnybrook. Aerial and ground level photos suggest that the 0.4ha of vegetation proposed to be cleared, consists of vegetation ranging from good to degraded condition (Keighery, 1994). Much of the area surrounding the application appears to have been cleared for agricultural purposes. A vegetation survey supplied by the Shire of Donnybrook Balingup (2007), states that the application area consist predominately of mature Eucalypt species, minimal groundcover and less than 20% weed species.

The proposed clearing area is representative of the Balingup vegetation complex, which has a high priority for biodiversity reservation. The vegetation within the application are consisting of Balingup vegetation complex is relatively degraded with obvious signs of disturbance. There is no evidence to suggest that the vegetation under application represents a higher level of biodiversity than other pockets of Balingup vegetation in the local area (5km radius).

Given the condition of the vegetation and the size of the application area it is not likely that it comprises a high level iof biological diversity in the Bioregion or local area.

Methodology

Keighery (1994)
Shire of Donnybrook Balingup (2007)

(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

There are no known records of threatened or priority fauna within the local area (5kms). The area does contain though, mostly mature native trees that could present possible foraging and nesting habitat for endangered birds such as the Baudin's Black Cockatoo (DEC, 2007). However, given the extent of vegetation in a similar or better condition within the local area, it is not expected that the vegetation proposed to be cleared has significant value as nesting habitat.

The road side survey (Shire of Donnybrook-Balingup, 2007) states that the proposed clearing is nearly devoid of native understorey cover; therefore it would be highly unlikely that ground dwelling species would be located within the application area.

Given the above, the proposed clearing is not likely to be at variance to this principle.

Methodology

Shire of Donnybrook-Balingup (2007)
DEC (2007)
GIS Layers:
Sac Bio Datasets 051207

(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 is one known record of rare and priority flora within the local area (5kms). Tetratheca parvifolia, located 4.2km west of the application area, has a conservation status of Priority 3, and is not believed to be under immediate threat of extinction. It is a small understorey shrub of 0.2 to 0.3m high (WA Herbarium, 2007) and was recorded in a different vegetation complex, but the same soil type as the proposed clearing area.

As the proposed clearing area is almost devoid of understorey cover (Shire of Donnybrook-Balingup, 2007), it is doubtful that T. parvifolia would be present within the application area and therefore not likely to be at variance to this principle.

Methodology WA Herbarium (2007)
Shire of Donnybrook-Balingup (2007)

GIS Layers:
Sac Bio Datasets 051207

(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 records of threatened ecological communities or priority ecological communities identified within the local area (5km radius) of the proposed clearing.

The closet threatened community is SCP07 (herb rich saline shrubs in clay pans) approximately 27kms west of the proposed clearing site. As the chief soils of the application area consist of yellow mottled soils (Northcote et al. 1960) and not clay pans it is unlikely that the threatened community falls within the application area.

Given the above information, the proposed clearing is not likely to be at variance to this principle.

Methodology Northcote et al. (1960)
GIS Layers:
Sac Bio datasets 061207

(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 0.4ha of native vegetation under application falls within the IBRA Bioregion of Jarrah Forrest and the Shire of Donnybrook Balingup which retain 53.4% and 72% respectively, of their pre-European vegetation. The area has been mapped as Beard Vegetation Unit 1184, which has 42.6% of its pre-European extent remaining (Shepherd 2001).

The area has been mapped as Mattiske vegetation complex Balingup (BLf) which has 5% of its pre-European vegetation remaining (Mattiske 2002).

Given the above, the proposed clearing may be at variance to this principle. However, given the condition of the vegetation and the size of the application area it is not considered necessary to mitigate this potential impact.

Methodology Keighery (1994)
Mattiske Consulting (2002)
Shepherd (2001)

(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 application is to clear 0.4ha of native vegetation for road widening and sealing. Two major perennial watercourses Thomson Brook and Thomson Brook South are located 40m north and 60m west of the proposed clearing application respectively.

A minor perennial watercourse cuts through the centre of the proposed clearing area in a north south direction. From aerial photography it appears that the watercourse has been diverted through a culvert.

Given the small scale of clearing proposed and the degraded condition of a majority of the vegetation, the proposed clearing is unlikely to further degrade any watercourse or water quality within the area.

Methodology GIS Layer;
- Hydrology, statewide

(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 area in which the application is situated, consists of a generally hilly relief with elevation rising from 100-110 AHD, and contains hard acidic, and also neutral, yellow mottled soils holding moderate to large amounts of ironstone gravels (Northcote et al. 1960).

The mean annual rainfall of the proposed clearing area is 1000mm. Groundwater salinity has been mapped

between 500-1000mg/L TDS (Total dissolved solids) which gives it a low rating.

Acid Sulphate Soils (ASS) risks have not been mapped in the proposed clearing area.

The proposed clearing of the roadside may cause some short term land degradation issues in terms of localised flooding and soil erosion during works. However this issue should be minimised as the existing road has in place roadside infrastructure to prevent land degradation associated with roads i.e. table drains and culverts. Given this, the proposed clearing is not likely to cause appreciable land degradation.

Methodology Northcote et al. (1960)
GIS Layer
- Acid Sulphate Soils
- Hydrographic Catchment
- Evapotranspiration
- Groundwater salinity
- Rainfall, mean annual
- Topography

(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**
The closet conservation reserves to the clearing application area are the Wilga State Forest (approximately 3.1km south), a timber reserve (approximately 1.9km) and a nature reserve (approximately 4.7km south). Given the distance to these conservation areas, the vegetation proposed to be cleared is unlikely to be contributing significantly to the environmental values of, or providing a buffer to, the conservation areas.

Methodology GIS Layer
- CALM Managed Lands

(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 is within the Leschenault Estuary - Preston River Hydrographic Catchment Area. The area has a mean annual rainfall of 1000mm with an evapotranspiration rate of 800mm/year. The region is of low relief (100-110m AHD) and groundwater salinity levels classified as low, and mapped as 500-1000mg/L.

A minor perennial watercourse cuts through the centre of the proposed clearing area in a north south direction. The proposed clearing of the roadside may cause some short term water quality issues in terms of localised surface water sedimentation during works. However these issues should be minimised as the existing road has in place roadside infrastructure to prevent water quality issues associated with roads. From aerial photography it appears that the watercourse has been diverted through a culvert.

Due to the small area proposed to be cleared it is unlikely that the clearing of native vegetation in the area under application will exacerbate existing salinity issues or cause deterioration in the quality of surface water or groundwater within the local area

Methodology GIS Layer
- Evapotranspiration
- Groundwater salinity
- Hydrographic Catchment
- Hydrology, statewide
- Rainfall, mean annual
- Topography

(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 hydrogeology of the area is predominately metamorphic rocks of low permeability, which can assist in intensifying flooding if an abundance of vegetation is cleared. Given though, the sparse cover and condition of the vegetation to be cleared it is unlikely that the clearing will cause or exacerbate flooding within the local area.

Methodology Methodology:
GIS Layer
- Hydrogeology

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

Comments

There is a Native Title claim (Gnaala Karla Booja) over the area under application. However, the land is vested as road reserve, and the Department of Environment and Conservation's permit is a secondary approval to the rights conferred by the Local Government Act.

No submissions have been received.

Methodology GIS Layer:
- Native Title

4. Assessor's recommendations

Purpose	Method	Applied area (ha)/ trees	Decision	Comment / recommendation
Road construction or maintenance	Mechanical Removal	0.4	**The proposal may be at variance to principle (e) and not likely to be at variance to all other principles.**	

5. References

DEC (2007). Calyptorhynchus baudinii - Baudin's Black Cockatoo. Australian Government, Department of the Environment and Water Resources. Retrieved 27/12/07 at www.naturebase.net

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.

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 (2002). Review of Management Options for Poorly Represented Vegetation Complexes. Mattiske Consulting 2002.

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., 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.

Shire of Donnybrook Balingup (2007). Photographs and vegetation survey. Shire of Donnybrook Balingup 2007. Local Government Authority, Western Australia.

WA Herbarium (2007). Department of Environment and Conservation. 2007. Sited on 19/11/07 at http://florabase.dec.wa.gov.au/

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)