Department of Environment and Conservation

Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 1650/1
Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: **Shire of Collie**

1.3. Property details

Property: ROAD RESERVE (COLLIE BURN 6225)
ROAD RESERVE (COLLIE BURN 6225)
Local Government Area: Shire Of Collie
Colloquial name: Bacon Street

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
0.5		Mechanical Removal	Infrastructure 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 association 3: Medium forest of Jarrah Marri Mattiske: Muja Complex of Open woodland of Melaleuca preissiana-Banksia littoralis-Banksia ilicifolia with some Eucalyptus patens on moister sites, s24 Banksia spp. on drier sites of valley floors in the subhumid zone.	The area proposed to be cleared on Heatherington Rd comprises mixed swamp vegetation of Eucalyptus patens, E. marginata, E. preissiana and Corymbia calophylla tree species with a notable absence of understorey. On Bacon Rd there are grass trees and other shrub species in degraded to good condition with one large tree specimen E. patens - that is heavily infested with termites.	Degraded: Structure severely disturbed; regeneration to good condition requires intensive management (Keighery 1994)	The description of the vegetation to be cleared was obtained from a site visit report by staff at DEC South West Region (2007) (DEC Trim Ref DOC23312).

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 proposal is to clear approximately 0.5ha of native vegetation in two narrow strips along two road reserves for the purpose of road widening. The land tenure is designated Town Planning minor road reserve under the management of Collie Shire.

The area proposed to be cleared is 4.5km south east of the existing Collie township in a localised area that is predominantly devoid of native vegetation (land use zoned rural and residential).

Native vegetation within a 5 km radius of the proposal remains predominantly intact. Approx 20% has been significantly altered or cleared for rural and residential purposes with the remainder in DEC managed lands (State Forest).

It is unlikely that the 2m wide strip of native vegetation proposed to be cleared has higher ecosystem diversity than local vegetation in reserves and DEC managed land.

Methodology DEC site visit report 23/05/07; SAC Biodatasets 30/05/07; GIS Databases: CALM Managed Lands and Waters 01/07/05; Clearing Regulations ESAs 15/08/05; Interim Biogeographic Regionalisation (IBRA); Mattiske Vegetation - CALM 23/03/98

(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

No threatened fauna has been identified within a ten km radius of the area proposed to be cleared.

Given the narrrow strip of disturbed vegetation proposed to be cleared, it is unlikely that the site would provide significant habitat for fauna species in the local area.

Extensive areas of native vegetation in nearby DEC managed reserves are in better condition than the area under application.

Methodology DEC site visit report 23/05/07; DEC Databases: CALM Managed Lands and Waters 01/07/05; Interim Biogeographic Regionalisation (IBRA); Threatened Fauna CALM 30/09/05

(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

No DRF species occur within a ten km radius of the area proposed to be cleared.

Four populations of Priority 4 DRF Grevillea ripicola and one population of Priority 3 Synaphea hians occur within a five km radius. Of these five populations, all occur more than 1km from the area proposed to be cleared and in either Sate Forest or Reserves.

CSIRO mapping shows the soils of the Collie basin as generally leached sands in swamps and flats with ironstone gravels on the flat to sloping area.

The Grevillea ripicola populations predominate along watercourses or swampy flats in sandy clay, and Synaphea hians occurs in sandy soils. The soil in the area proposed to be cleared appears more ironstone gravel.

Given this difference in soils and landform occurrence, It is unlikely that the vegetation proposed to be cleared contributes to or comprises significant habitat for known Priority Flora.

Methodology DEC site visit report 23/05/07; SAC Biodatasets 30/05/07; DEC Databases: CALM Managed Lands and Waters 01/07/05; Interim Biogeographic Regionalisation (IBRA); Declared Rare and Priority Flora CALM 01/07/05; Clearing Regulations ESAs; Threatened Flora CALM

(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

No TECs or PECs occur within a ten km radius of the area proposed to be cleared.

Methodology SAC Bio datasets 31/05/07: TECs; TEC buffers; PECs; ESAs

(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

Pre-European	Current extent (ha)*	Remaining (ha)*	Conservation (%)*	% In reserves/CALM **status	managed land
IBRA Bioregions - Jarrah forest					
Southern Jarrah forest	4 544 335	2 665 480	58.7	Least Concern	58.3
Shire of Collie	172 072	161 845	94.0	Least Concern	
Vegetation type: Beard: Unit 3					
Medium forest	2 662 058	1 884 029	70.8	Least Concern	77.4
Mattiske:					
Muja Complex	102 018	71 998	70.6	Least Concern	

* (Shepherd et al. 2001)

** (Department of Natural Resources and Environment 2002)

The vegetation complex proposed to be cleared is well represented in reserves and on other lands. The clearing of 0.5ha of degraded vegetation is not likely to adversely impact on the type being cleared.

Methodology GIS datasets: NLWRA Current extent of Native Vegetation; Heddle vegetation complexes; Mattiske Vegetation; IBRA; Bush Forever; DAFWA

(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 nearest watercourse or wetland to the area proposed to be cleared is the Collie River. At 100m to 300m east of the site, the proposed clearing is outside the buffer area of this watercourse.

The small area of degraded vegetation proposed to be cleared is unlikely to alter water tables or adversely affect wetland or groundwater dependent communities.

Methodology GIS datasets: Rivers 1M; Hydrography, Linear; Wild Rivers DEWCP; Ramsar Wetlands; EPP, South West Agricultural Zone Wetlands; Hydrogeographic Catchments; Clearing Regulations ESAs.

(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 area to be cleared is within the Wellington Dam-Collie River Hydrographic Catchment (CAWSA Zone D), and so land degradation/soils erosion issues could be a matter for concern. However, the hydrogeology of the area proposed to be cleared comprises sedimentary rocks of sand and sandstone over a deep and extensive aquifer. It is therefore unlikely that clearing a 0.5ha area of degraded vegetation would increase soil erosion or waterlogging.

Given its close proximity to the Collie River (100m to 300m), the site is within DOLAs mapped Salinity Risk area. Being located in the high rainfall South Coast district, with an average annual recording of 900mm pa, it is unlikely that the small area of proposed clearing would increase salinisation.

There is no known Acid Sulphate Soil Risk.

Methodology GIS datasets: Salinity Risk LM 25m-DOLA; Soils Statewide-DA; Acid Sulphate Soils Risk Map-DEC; CAWSA Part IIA Clearing Control Catchments-DOW; Rainfall, Mean Annual-BOM; Hydrogeology, Statewide-WRC

(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 area proposed to be cleared is on designated public road reserves in the Collie-Burn township. Immediately to the west of the site is a railway reserve and with extensive State Forest beyond. The Collie River and State Forest lies the east of the road reserves and township.

Approximately 80% of the land within a 5km radius of the site is vested reserves and DEC managed land, so it is unlikely that the 0.5ha of degraded native vegetation proposed to be cleared provides habitat not well represented in conservation land.

A System 6 Conservation Reserve is located on the opposite side of the main Collie township, approximately 6km to the northwest of the area proposed to be cleared. The narrow 2m strips of vegetation proposed to be cleared on these two minor roads are unlikely to provide a buffer to conservation areas.

Methodology GIS datasets: CALM Managed LAnds and Waters-CALM; WRC Estate-DOE; System 6 Conservation Reserves-DEP; Bush Forever-MFP; Register of National Estate-EA; Cadastre-DLI

(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 area to be cleared is within the Wellington Dam-Collie River Hydrographic Catchment (CAWSA Zone D low risk), and so water quality issues could be a matter for concern. However, this site is in a CAWSA Zone D area - which is considered a low salinity risk.

Given its close proximity to the Collie River (100m to 300m), the site is within DOLAs mapped Salinity Risk area. Being located in the high rainfall South Coast district, with an average annual recording of 900mm pa, it is unlikely that the small area of proposed clearing would significantly alter salinity or pH of water tables.

The hydrogeology of the area proposed to be cleared comprises sedimentary rocks of sand and sandstone over a deep and extensive aquifer. It is therefore unlikely that clearing a 0.5ha area of degraded vegetation would adversely affect the quality of surface or underground water.

Methodology GIS datasets: EPP AReas-DEP; RIWI Act, Rivers-WRC; Salinity Risk LM 25m-DOLA; Soils Statewide-DA; Acid Sulphate Soils Risk Map-DEC; CAWSA Part IIA Clearing Control Catchments-DOW; Rainfall, Mean Annual-BOM; Hydrogeology, Statewide-WRC

(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 located in the high rainfall South Coast district, with an average annual recording of 900mm pa and evaporation of 1400 pa.

The hydrogeology of the area proposed to be cleared comprises sedimentary rocks of sand and sandstone over a deep aquifer. It is therefore unlikely that clearing a 0.5ha area of degraded vegetation in this heavily vegetated region would cause or exacerbate the duration, height or occurrence of flooding.

Methodology GIS datasets: DWAID Aquifers-DOW; Evaporation Isopleths-BOM; Isohyets-BOM; Hydrography, linear-DOE; Topographic contours, Statewide-DOLA; RAinfall, Mean Annual_BOM

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

Comments

There is an Aboriginal Site of Significance (Interim Register) - Collie River Waugal - approximately 100m to 300m east of the area proposed to be cleared.

There is a Native Title Claim over the area under application (DLI 07/11/05 Gnaala Karla Booja). 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. No response was received from the representative body

Methodology GIS datasets

4. Assessor's comments

Purpose	Method	Applied area (ha)/ trees	Comment
Infrastructure Maintenance	Mechanical Removal	0.5	The proposal is for the widening of existing minor roads on designated road reserves in the Collie-Burn townsite. The assessable criteria have been addressed and the proposal is not likely to be at variance to any of the principles.

5. References

ANCA (1996) A Directory of Important Wetlands in Australia. Second Edition. Australian Nature Conservation Agency, Canberra

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 (1998) Environmental Protection (South West Wetlands) Policy 1998.

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.

EPA (2001) Environmental Protection of Wetlands. Preliminary Position Statement No.4. Perth, Western Australia.

EPA (2002) Terrestrial Biological Surveys as an element of biodiversity protection. Position Statement No. 3. March 2002. Environmental Protection Authority

EPA (2004) Guidance for the Assessment of Environmental Factors - terrestrial fauna for Environmental Impact Assessment in Western Australia. Report by the EPA under the Environmental Protection Act 1986. No 56 WA.

EPA (2004) Guidance for the Assessment of Environmental Factors - terrestrial flora and vegetation surveys for Environmental Impact Assessment in Western Australia. Report by the EPA under the Environmental Protection Act 1986. No 51 WA.

EPA (2006) Guidance for the Assessment of Environmental Factors -level of assessment of proposals affecting natural areas within the System 6 region and Swan Coastal Plain portion of the System 1 Region. Report by the EPA under the Environmental Protection Act 1986. No 10 WA.

Government of Western Australia (1997) Wetlands Conservation Policy for Western Australia, Department of Conservation and Land Management and the Water and Rivers Commission, Perth WA.

Government of Western Australia (2000) Bush Forever Volumes 1 and 2. Western Australian Planning Commission, Perth WA.

Greenwood, E.A.N., Klien, L., Beresford, J.D., Watson, G.D. and Wright, K.D. (1985) Evaporation from the understorey in the jarrah (Eucalyptus marginata Don ex Sm) forest, Southwestern Australia. Journal of Hydrology 80: 337-349.

Havel, J.J. and Mattiske Consulting Pty Ltd (2002) Review of management options for poorly represented vegetation complexes, Conservation Commission.
Heddle, 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.
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.
WRC (1996) Policy and Guidelines: Granting of Licences to Clear Indigenous Vegetation in Catchments Subject to Clearing Control Legislation. Water and Rivers Commission, 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)