Department of Environment
Government of Western Australia

Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 1489/1
Permit type: Area Permit

1.2. Proponent details

Proponent's name: MS Stephanie Catchpole

1.3. Property details

Property: Lot 84 on Plan 12396 (128 Greenwood Way BARRAGUP 6210)
Local Government Area: Shire Of Murray
Colloquial name:

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
0.15		Mechanical Removal	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
Heddle Vegetation Complex: Bassendean Complex - Central and South - Vegetation ranges from a woodland of *E. marginata - C. fraseriana - Banksia* spp. To low woodland of Melaleuca species, and sedgelands on the moister sites. Beard Vegetation Association: 1000 - Mosaic: Medium forest; jarrah-marri/Low woodland; banksia / low forest; tea-tree (Melaleuca spp.)	The proposal includes the clearing of 0.15ha of understorey for the purpose of hazard reduction and fire control and to extent the recreation area adjacent to the house. The vegetation under application comprises Eucalypt woodland with a mixed understorey including *Acacia pulchella, Banksia spp., Macrozamia reidlii, Xanthorrhoea preissii, Hibbertia spp.*, and *Conostylis prostrata.* Vegetation is mostly in degraded condition, with some areas in the south of the applied area that are completely degraded, being devoid of vegetation.	Degraded: Structure severely disturbed; regeneration to good condition requires intensive management (Keighery 1994)	Vegetation clearing description based on a site visit conducted by DEC Officers (Swan Region, Mandurah) on 22 August 2006. TRIM ref. DOC4235

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

A small portion of the vegetation under application is in good condition, however the majority is degraded. In addition, the vegetation under application is only 0.15 hectares, and it is not considered likely to comprise a high level of biological diversity when compared to the remaining vegetation on the property and the nearby conservation areas.

Methodology DEC site visit 22/8/06
GIS Database: Swan Coastal Plain South 20cm Orthomosaic - DLI06

(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 clearing as proposed includes parkland clearing of 0.15ha of vegetation in mostly degraded condition. The

clearing does not include mature trees that may provide potential habitat hollows. In addition, there were no signs of fauna, such as scat or diggings, observed during the site visit.

Given that the mature trees are not included in the proposal, the limited size of the applied area, and in the absence of any visible signs of fauna, the proposal is not likely to impact significant habitat for indigenous fauna and therefore is not likely to be at variance to this Principle.

Methodology DEC site visit 22/8/06

(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 only one known occurrence of Declared Rare Flora (DRF) within the local area (5km radius) of the application, being *Diuris micrantha* located 2.8km to the southwest. This occurrence is found within a different vegetation complex and soil association and therefore is not likely to occur within the applied area.

Given that the majority of the vegetation under application is in a degraded condition, and the absence of DRF species on similar habitats in the local area, it is not considered likely that the vegetation would include, or be necessary for the continued existence of, rare flora.

Methodology

DEC site visit 22/8/06
State of Western Australia (2005)
GIS Databases:
Declared Rare and Priority Flora List - CALM 01/07/05
Heddle Vegetation Complexes - DEP 21/06/95

(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

The nearest Threatened Ecological Community (TEC) is located approximately 4.7km to the south west of the applied area on different vegetation and soil complexes.

The TEC associated with the Bassendean Dune System are:
- *Banksia attenuata* woodlands over species rich dense shrublands (20a)
- Eastern *Banksia attenuata* and/or *Eucalyptus marginata* woodlands (20b)
- Eastern shrublands and woodlands (20c)

Given that the species composition of the vegetation within the applied area is not consistent with the TEC associated with the Bassendean Dune System, the vegetation is not likely to comprise, or be necessary for the maintenance of, a TEC.

Methodology

DEC site visit 22/8/06
State of Western Australia (2005)
GIS Databases:
Heddle Vegetation Complexes - DEP 21/06/95
Threatened Ecological Communities - CALM 12/4/05

(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 vegetation under application is identified by Heddle et al. (1980) as 'Bassendean complex - Central and south' of which there is 27.0% of pre-European vegetation remaining, and which is considered to be of a 'vulnerable' status for biodiversity conservation (Department of Natural Resources and Environment 2002).

The State Government is committed to the National Objectives Targets for Biodiversity Conservation 2001-2005, which includes a target that prevents clearance of ecological communities with an extent below 30% of that present pre-1750 (Department of Natural Resources and Environment 2002; EPA 2000). Beyond this value, species extinction is believed to occur at an exponential rate and any further clearing may have irreversible consequences for the conservation of biodiversity.

Although the identified vegetation complex has less than the recommended minimum 30% remaining, the majority of the vegetation under application is in degraded condition. Given that the vegetation under application is only 0.15ha, it is not considered likely to be significant as a remnant in an area that has been extensively cleared.

Pre-European area (ha)	Current extent (ha)		Remaining %	Conservation status*** %	in reserves/DEC- managed land
IBRA Bioregion - SCP	1,529,235	657,450	43.0*	Depleted	

LGA - Shire of Murray	181,526	98,552	54.3*	Least concern	
Local Area (~10km radius)					
Heddle vegetation complex					
Bassendean Complex C&S	87,477	23,624	27.0**	Vulnerable	0.7
Beard vegetation associations - 1000					
	119,340	29,396	24.6*	Vulnerable	13.0

* (Shepherd et al. 2001)
**(EPA, 2003)
***(Department of Natural Resources and Environment 2002)

Methodology
DEC Site visit 22/8/06
Department of Natural Resources and Environment (2002)
EPA (2000)
Shepherd et al. (2001)
GIS Databases:
Heddle Vegetation Complexes - DEP 21/06/95
NLWRA, Current Extent of Native Vegetation - DA 30/01/01
Pre-European Vegetation - DA 01/01

(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 area under application is located approximately 330m to the west of Black Lake, which is classified as a Conservation Category Wetland (CCW). Wetlands in this category support a high level of ecological attributes and functions and have the highest priority for management (Water and Rivers Commission 2001).

Although a CCW is located nearby to Lot 84, it is at a distance of 330m, and given no wetland dependent vegetation was observed during the site visit, the vegetation under application is not likely to be vegetation growing in, or in association with a watercourse or wetland.

Methodology
DEC site visit 22/8/06
Water and Rivers Commission (2001)
GIS Database:
EPP, Lakes - DEP 1/12/92
Geomorphic Wetlands (Mgt Categories), Swan Coastal Plain - DEC

(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

Soils within the applied area are identified as Bassendean B2 Phase, which comprise flat to very gently undulating sandplains with well to moderately well drained deep bleached grey sands with a pale yellow B horizon or a weak iron-organic hardpan (State of Western Australia 2005).

These soils are associated with a low risk of erosion, salinity and waterlogging. The bleached sands have low phosphorus retention ability and clearing of vegetation may result in an increase in nutrient export from the site, however given the limited area and extent of the clearing this is not likely to be significant.

Lot 84 is also within an area with a moderate to low risk of acid sulphate soils; however these soils are at a depth where they are unlikely to be disturbed by the clearing as proposed. Given the limited area proposed to be cleared, it is not likely to result in appreciable land degradation.

Methodology
Department of Agriculture and Food (2006)
State of Western Australia (2005)

(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

Black Lake is located approximately 330m to the west and Goegrup Lake Nature Reserve is located approximately 3.7km to the northwest of the applied area. Given this distance, and the limited extent of the clearing, the proposal is not likely to have a direct impact on the environmental values of any nearby conservation reserve.

'Bassendean Complex - Central and South' currently has 0.7% (EPA 2003) in secure tenure, with JANIS (1997) recommending that 15% of the pre-1750 distribution of each vegetation ecosystem should be protected in a

comprehensive, adequate and representative reserve system. However, the majority of the vegetation under application is in degraded condition and is not likely to be of conservation value. The proposal therefore is not likely to be at variance to this Principle.

Methodology DEC site visit 12/7/06
Janis (1997)
GIS Database:
CALM Managed Lands and Waters - CALM 1/07/05
Geomorphic Wetlands (Mgt Categories), Swan Coastal Plain - DEC

(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 applied area is located approximately 330m from Black Lake, which is a Conservation Category Wetland (CCW), and is situated at an elevation of 5 metres with minimal slope. The applied area is not located within a Public Drinking Water Source Area (PDWSA). Groundwater salinity in the local area is 1000-3000 mg/L and there is a high risk of acid sulphate soils.

Given that the proposed clearing comprises only 0.15ha of understorey vegetation and is located within an area with minimal slope, it is not expected to impact groundwater tables or cause deterioration in the quality of surface or underground water.

Methodology DEC site visit 22/8/06
GIS Databases:
Acid Sulfate Soil Risk Map, SCP - DOE 04/11/04
Groundwater Salinity, Statewide - 22/02/00
Hydrography, linear (hierarchy) ý DOW
Public Drinking Water Source Areas (PDWSAs) - DOE 07/02/06

(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**
Flooding impacts are not likely to occur as a result of the proposal due to the limited extent of the clearing. Lot 84 is located approximately 330m from Black Lake, at an elevation of 5 metres. The proposed clearing comprises 0.15ha of understorey vegetation, and it is not considered likely that the removal of vegetation from site would have an impact on peak flood height or duration.

Methodology DEC site visit 22/8/06
GIS Databases:
Geomorphic Wetlands (Mgt Categories), Swan Coastal Plain - DEC
Topographic Contours, Statewide - DOLA 12/09/02

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

Comments

In a submission, the Peel Harvey Catchment Council (2006) provide the following comments:
- Remnants of the Swan Coastal Plain with basic vegetation structure intact or ability to be regenerated are of high conservation value
- the applied area may contain flora species that are utilised for habitat by Carnaby's cockatoo, which has been recorded 4.5km from Greenwood Way. The vegetation should be assessed for the presence of rare flora and for fauna habitat values
- Wind erosion is highly likely on the Bassendean sand soils present on site
- The applied area is in close proximity to Black Lake, which is a Conservation Category Wetland (CCW), and the Ramsar listed Peel-Yalgorup System, also a CCW.
- the clearing of native remnant vegetation is not necessarily a valid hazard reduction method and the fuel load may actually increase as a result of weed invasion in the cleared area
- approval of the proposal may set a 'dangerous precedent' for public perception of valid bushland management and fire control techniques
- a more effective approach to the issue may be to meet with the Shire of Murray and the landholder to discuss alternative fire control and management strategies other than clearing native vegetation

The comments provided by the Peel Harvey Catchment Council have been addressed in the Clearing Principles, and the applied area has been reduced. The DEC will advise the proponent to contact the local Bush Fire Control Officer in regards to how best to manage native vegetation for the management of fire risk. This advice will be placed in the cover letter to this permit.

Greenwood Way is within mapped Aboriginal Sites of Significance and the DEC will advise the proponent of their responsibilities under the Aboriginal Heritage Act 1972. This advice will be placed in the cover letter to this

permit.

Lot 84 Greenwood Way is part of a Native Title Claim however, since it is privately owned the Native Title has been extinguished under the Native Title Act. Therefore the clearing as proposed should not fall under the future acts process of the Native Title Act 1993.

There are no other statutory approvals that are required to undertake the clearing.

Methodology Peel Harvey Catchment Council submission (2006)
GIS Database: Native Title Claims - DLI 7/11/05

4. Assessor's recommendations

Purpose	Method	Applied area (ha)/ trees	Decision	Comment / recommendation
Hazard reduction fire control	Mechanical cRemoval	0.15	**Grant**	The assessable criteria have been addressed and no objections were raised. The assessing officer therefore recommends that the permit should be granted. The assessing officer recommends that the proponent be advised to contact the Bush Fire Control Officer for information on managing vegetation for fire risk and conservation.

5. References

DAFWA Land degradation assessment report. Office of the Commissioner of Soil and Land Conservation, Department of Agriculture and Food Western Australia. DoE TRIM ref 5317.

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 (2003) 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 (2000) Bush Forever Volumes 1 and 2. Western Australian Planning Commission, Perth WA.

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.

JANIS Forests Criteria (1997) Nationally agreed criteria for the establishment of a comprehensive, Adequate and Representative reserve System for Forests in Australia. A report by the Joint ANZECC/MCFFA National Forest Policy Statement Implementation Sub-committee. Regional Forests Agreement process. Commonwealth of Australia, Canberra.

Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.

Peel Harvey Catchment Council submission (2006)

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.

Site Visit 22/08/06, Department of Environment and Conservation (DEC), Western Australia. TRIM ref DOC4365.

State of Western Australia (2005) Agmaps Land Manager CD Rom.

WA Herbarium (1998) FloraBase: Flora of Western Australia. http://florabase.calm.wa.gov.au/

6. Glossary

Term	Meaning
DAFWA	Department of Agriculture and Food
DEC	Department of Environment and Conservation
DoE	Department of Environment (now DEC)
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)