Department of Environment
Government of Western Australia

Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 503/1
Permit type: Area Permit

1.2. Proponent details

Proponent's name: **Shire of Chapman Valley**

1.3. Property details

Property: VICTORIA LOCATION 11554 (NANSON 6532)
Local Government Area: Shire Of Chapman Valley
Colloquial name: Crown Reserve 39051, Nabawa-Yetna Rd

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
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 association 35: Shrublands; jam scrub with scattered York gum. Beard vegetation association 408: Shrublands; scrub-heath on coastal association, yellow sandplain. Beard vegetation association 675: Shrublands; mixed thicket (melaleuca & hakea). (Hopkins et al. 2001, Shepherd et al.2001)	The area under application comprises 2ha of a 14ha property and is located in the centre of the lot. The vegetation under application mainly consists of Closed Tall Scrub (Keighery BJ 1994) and comprises mainly of Allocasuarina campestris, Banksia attenuata (dwarf) and Hibbertia hypericoides over a variety of smaller shrubs and herbaceous species. Occasional taller species were recorded including Banksia prionotes though not in large numbers or area. Small areas of more Open Heath were scattered throughout the site but consisted of similar vegetation to that of the Closed Tall Scrub. Much of the vegetation is in pristine condition with few external impacts (Greening Australia ESU 2005).	Pristine: No obvious signs of disturbance (Keighery 1994)	The description of the vegetation to be cleared was obtained from the Flora Survey conducted by Greening Australia Environmental Services Unit (DoE Trim No. GD592).

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 area under application falls within the Geraldton Sandplains bioregion, which is a known biodiversity hotspot and is part of a small patch of remnant vegetation remaining in an extensively cleared landscape. Based on the relatively intact nature of the vegetation proposed to be cleared and the wildlife refuge potential of the area, it is possible that the vegetation supports a high degree of biological biodiversity in the context of the local area (CALM 2005). Greening Australia's Environmental Services Unit undertook a flora survey of the area under application identifying that much of the vegetation is in pristine condition with few external impacts and found 83 taxa from 34 families and 70 genera present during the survey (Greening Australia 2005). Negotiations with the applicant has resulted in a reduction in the area to be cleared to 1ha, in addition to revegetation of existing cleared areas within the property which will result in zero net loss and seed collection

for future rehabilitation works onsite. This proposal is therefore not likely to be at variance with this Principle.

Methodology Greening Australia (2005) (DoE TRIM No. GD592)
Site visit (20 April 2005 & 1 June 2005)
CALM (2005) (DoE Trim No. GD533)
GIS Databases: - Interim Biogeographic Regionalisation of Australia-EA 18/10/00

(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 vegetation that is proposed to be cleared forms part of a predominantly intact and continuous area of remnant vegetation, and is likely to be utilised as habitat by a range of local fauna. Although clearing this vegetation will reduce the available fauna habitat in the local area, aerial imagery indicates that similar quality habitat exists on the surrounding land (CALM 2005). Existing remnant vegetation provides important habitats for a number of indigenous mammals, such as the Western Grey Kangaroo, Red Kangaroo, Honey Possum, Dunnart, Echidna and Brush Wallaby (Hille et al, 2004). In addition, whilst undertaking a site visit it was noted that there was extensive bird life in the area with evidence of marsupials and lizards (Site visit 2005). Due to the small size (1ha) of the area under application and the ample habitat provided by surrounding vegetation, the proposal is unlikely to be at variance to this Principle.

Methodology Site visit (20 April 2005 & 1 June 2005)
CALM (2005) Hille et al (2004)

(c) Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, rare flora.

Comments **Proposal is not at variance to this Principle**
The remnant plant communities within the Shire of Chapman Valley contain a number of priority and rare species and are regarded as being significant with generally high conservation value. CALM (2005) advises that Declared Rare Flora (DRF) populations exist within a 10km radius of the area under application. There is one population of Caladenia bryceana subsp. Cracens, eight populations of Caladenia hoffmanii, two populations of Drummondita ericoides, nine populations of Eucalyptus blaxellii, three populations of Eucalyptus cuprea and six populations of Grevillea bracteosa. In addition there are also six priority one species, three priority 2 species, eight priority three species and eighteen priority four species known to occur within a 10km radius of the area under application. Available records indicate that DRF and Priority Flora have been found in the local area and on similar vegetation associations as that proposed to be cleared and accordingly, the proposal appears to have potential to impact on significant flora species (CALM 2005). Greening Australia Environmental Services Unit conducted a flora survey of the area under application and found no species listed as Rare or Priority under the Wildlife Conservation Act 1950 were recorded in the project area. As no rare flora species were found within the area under application, this proposal is therefore not a variance to this Principle.

Methodology Greening Australia (2005) (DoE Trim No GD592).
CALM (2005) (DoE Trim No GD533).
GIS Databases:
- Declared Rare and Priority Flora list - CALM 13/08/03
- Threatened Flora Data Management System - CALM (CALM 2005)
- Herbarium Specimen Collection Database - CALM (CALM 2005)

(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**
The Threatened Ecological Community (TEC) database did not highlight any TEC areas within the area under application. Three occurrences of the Moresby Range TEC (Moresby 1-3) are known to occur within portions of the Oakajee and Howatharra Nature Reserves. The closest TEC is approximately 7.5km away from the area under application, however the area under application is well outside of the required buffer of 500m. The flora survey undertaken did not identify any TEC's within the area under application (Greening Australia 2005). Due to the distance from the nearest threatened ecological community and the outcomes of the flora survey, the proposal is not at variance to this Principle.

Methodology Greening Australia (2005) (DoE Trim No GD592).
CALM (2005) (DoE Trim No GD533)
GIS Databases:
- Threatened Ecological Communities - CALM 15/07/03

(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 part of Beard vegetation associations 35, 408 and 675. There is 10.3% of

association 35 and 21.7% of association 675 remaining (Shepherd et al, 2001) making them vulnerable by conservation status standards. In addition, the Geraldton Sandplains has 26.8% remaining and the Shire of Chapman Valley has 10.4% of native vegetation remaining within the intensive agricultural area. Negotiations with the applicant has resulted in a reduction in the area to be cleared to 1ha, in addition to revegetation of existing cleared areas within the property which will result in zero net loss. This proposal is therefore not likely to be at variance with this Principle.

Methodology GIS Databases: Interim Biogeographic Regionalisation of Australia - EA 18/10/00, Pre-European Vegetation - DA 01/01, Local Government Authorities - DLI 08/07/04.
Shepherd et al, 2001.
Department of Natural Resources and Environment, 2002

(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 at variance to this Principle

The area under application falls within the Chapman River catchment. No watercourses or wetlands exist within the area under application. The Chapman River lies approximately 2.6 km to the East of the proposal. The proposal is therefore, not at variance to this Principle.

Methodology GIS Databases:
- Hydrography, linear - DoE 01/02/04
- Hydrographic Catchments-Catchments DOE 3/4/03

(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 proposed to be cleared is a small area (1 hectare) that experiences average to good rainfall of 500mm and does not fall within the salinity risk or acid sulphate soils area. The steeper, sloping soils of the Chapman system are subject to water erosion (Hille et al, 2004). Erosion was noted during the site visit (undertaken by DoE officers) around the existing open rubbish tip that is allowing runoff from the tip into the surrounding pristine vegetation. The Chapman Valley system is an area requiring catchment management where there is localised potential for nutrients and pesticides to move down catchments during storm events where the soil can easily be washed away. The potential for soil cover to be lost following clearing is high. Runoff from heavy rainfall events has generally increased the amount of sediment added to the Chapman River in the past since clearing (Hille et al, 2004). Erosion may be an issue of concern, however due to the small area (1ha) under application and if managed appropriately this proposal is not likely to be at variance to this Principle.

Methodology Site visit (20 April 2005 & 1 June 2005).
Hille et al, 2004.
GIS Databases:
- Rainfall, Mean Annual - BOM 30/09/01
- Salinity Risk LM 25m - DOLA 00
- Acid Sulphate Soil Risk Map, SCP - DOE 01/02/04

(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 under application falls within the Intensive Landuse Zone and has been significantly cleared for agricultural use. The Geraldton Sandplains has 26.8% and the Shire of Chapman Valley has 10.4% of native vegetation remaining. The remnant plant communities in the Chapman Valley and Moresby Ranges contain a number of Priority and Rare species and are regarded as being significant with generally high conservation value (Hille et al, 2004). The area under application forms part of an ecological corridor between Protheroe Reserve to the north and surrounding remnant vegetation on private land and large pristine areas on unallocated crown land adjacent to the proposal.

The proposed area also provides habitats not well represented on conservation land with only 2.3% and 3% of Beard vegetation types 35 and 675 respectively protected in secure tenure. The benchmark of 15% representation in conservation reserves (JANIS Forests Criteria, 1997) has not been met for these vegetation complexes. Negotiations with the applicant has resulted in a reduction in the area to be cleared to 1ha, in addition to revegetation of existing cleared areas within the property which will result in zero net loss and maintain the connectivity between adjacent areas of remnant vegetation. This proposal is therefore not likely to be at variance with this Principle.

Methodology CALM, 2005.
Site visit (20 April 2005 & 1 June 2005).
Hille et al, 2004.
JANIS Forests Criteria, 1997.

Shepherd et al, 2001.
GIS Databases:
- CALM Regional Parks - CALM 12/04/02
- WRC Estate - WRC 05/99
- CALM Managed Lands & Waters - CALM 01/06/04
- Proposed National Parks FMP-CALM 19/03/03
- Register of National Estate - EA 28/01/03

(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 steeper, sloping soils of the Chapman system are subject to water erosion (Hille et al, 2004). Erosion was noted during the site visit (undertaken by DoE officers) around the existing open rubbish tip that is allowing runoff from the tip into the surrounding pristine vegetation. The Chapman Valley system is an area requiring catchment management where there is localised potential for nutrient and pesticide to move down catchments during storm events where the soil can easily be washed away. The potential for soil cover to be lost following clearing is high. Runoff from heavy rainfall events has generally increased the amount of sediment added to the Chapman River since clearing (Hille et al, 2004). Shallow groundwater volumes have been rising where recharge has increased since clearing and in most areas water tables are rising (Hille et al, 2004). However, due to the small area under application (1 ha) it is unlikely that the proposal is at variance to this Principle.

Methodology Hille et al, 2004.
GIS Databases - Current WIN data sets, PDWSA Protection Zones - DOE 07/01/04, Public Drinking Water Sources (PDWSAs) - DOE 29/11/04, Hydrographic Catchments - Catchments - DOE 03/04/03.

(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 Chapman River has flooded twice in the last 10 years which is usually due to weak cyclonic systems that dump large volumes of rainfall in the catchment within a short period of time, although flooding from winter frontal systems also occurs. There is also a potential for minor flash flooding associated with localised storms in the Chapman Valley area when surface water rushes down normally dry drainage lines (Hille et al, 2004). However, the removal of vegetation from the proposed area is unlikely to have an impact on peak flood height or duration due to the small scale of the clearing and therefore unlikely to be at variance to this Principle.

Methodology Hille et al, 2004.
GIS Databases - Rainfall, Mean Annual - BOM 30/09/01

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

Comments

The Shire of Chapman Valley has advised that there are no planning approvals or requirements pertinent to this application.

Four Environmental Impact Assessments were noted in the vicinity of the area under application, however none were formally assessed by the Environmental Protection Authority and therefore doesn't impact on this proposal.

The Nabawa Refuse Site is currently subject to registration under the Environmental Protection Act 1986 Environmental Protection (Rural Landfill) Regulations 2002. The area under application would be subject to the same requirements. There is no further requirement for a RIWI Act Licence.

There are three Native Title claims over the area under application by the Mullewa Wadjari, Naaguja and Amangu people. Native Title does not affect this application as the clearing is in accordance with the vesting of the reserve.

Three submissions were received in relation to this application and they all raised biodiversity values as an issue. This has been addressed in Principle a, native vegetation should not be cleared if it comprises a high level of biodiversity. An agreement has been reached with the applicant, to reduce the area to clear to 1ha and revegetate the expired cells on the property, and the submission writers are happy with the agreed outcome.

Methodology Shire of Chapman Valley submission

4. Assessor's recommendations

Purpose	Method	Applied area (ha)/ trees	Decision	Comment / recommendation
Miscellaneous	Mechanical Removal	1	**Grant**	The assessable criteria have been addressed and negotiations with the applicant have resulted in a reduction in the area to be cleared to 1ha, in addition to

revegetation of existing cleared areas within the property, which will result in zero net loss and maintain the connectivity between adjacent areas of remnant vegetation. Therefore the assessing officer recommends that the permit should be granted for 1ha subject to the conditions outlined on the permit.

5. References

AGPS (2001) The national objective and targets for biodiversity conservation 2001-2005. Commonwealth of Australia, Canberra.

CALM (2005) Land clearing proposal advice. Advice to A/Director General, Department of Environment (DoE). Department of Conservation and Land Management, Western Australia. DoE TRIM ref GD533.

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.

Greening Australia Environmental Services Unit (2005) Vegetation and Flora Survey - Nabawa Landfill Site, Greening Australia, Western Australia. DoE TRIM ref GD592.

Hille, Thompson & Delfos, 2004, Shire of Chapman Valley - Local Rural Strategy, Shire of Chapman Valley, 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.

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, BJ (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
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)