Department of Environment
Government of Western Australia

Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 1539/1
Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: Taylor Robinson Pty Ltd

1.3. Property details

Property: KWINANA TOWNSITE LOT A427 (House No. 2 CLARK ORELIA 6167)
LOT A756 ON PLAN 9475 (Lot No. 756 CHRISTMAS ORELIA 6167)
Local Government Area: Town Of Kwinana
Colloquial name: Oval

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
5.17		Mechanical Removal	Building or Structure

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: Cottesloe Complex Central and South - Mosaic of woodland of *E.gomphocephala* and open forest of *E.gomphocephala - E.marginata - E.calophylla;* closed heath on the Limestone outcrops. Beard Vegetation Association: 998 Medium woodland; tuart	The proposal includes clearing of 5.17ha of native vegetation for the purpose of constructing buildings associated with Kwinana High School. The vegetation under application comprises woodland of *Eucalyptus gomphocephala, E. marginata, Banksia grandis*, and *B. attenuata* with a sparse understorey of *Xanthorrhoea preissii* and *Macrozamia reidlii*. The area under application also has a severe invasion of weeds.	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 on Monday 9 October 2006.

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 degraded, having previously been parkland clearing, and comprising Eucalyptus woodland with an understorey consisting primarily of weeds. Given the condition and the low species diversity of the vegetation under application it is not considered likely that it is representative of an area of high biodiversity in the local area, especially when compared to the nearby Bush Forever sites.

Methodology DEC site visit 9/10/06
GIS Database: Bushforever - MFP 07/01

(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 under application is degraded, with an understorey consisting primarily of dense weeds, and therefore the habitat value of the site is likely to be limited. In addition, the area under application has no connectivity to larger tracts of native vegetation and is not likely to be considered as significant faunal habitat when compared to the larger vegetation remnants in the local area that are in better condition.

Methodology DEC site visit 9/10/06
GIS Database: Swan Coastal Plain Central 20cm Orthomosaic - DLI06

(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 are three Declared Rare Flora (DRF) species recorded within the local area (5km radius of the application), specifically *Caladenia huegelii, Diuris micrantha* and *Drakaea elastica*. These occurrences are found on similar soil associations to that found within the applied area.

The identified members of the Orchidaceae family are killed if burnt when the leaves and flowers are present (September-November). Photographic evidence shows there to be very little fuel load present, indicative of the area having been subject to frequent or modified burning regimes as is typical in urban bush areas. Growth of the identified taxa is also hampered by weed invasion. Photographic evidence shows the native understorey to have been replaced almost entirely by Veldt grass *Ehrharta calycina,* and African Lovegrass *Eragrostis curvula*. The area is also flanked by three large ovals that are likely to have been maintained with regular applications of super phosphate and frequent watering, both of which alter the soil biota and vegetation associations necessary to support the identified species. Members of the *Banksia* genus are particularly sensitive to increases in phosphates and soil moisture. The high mortality of Banksia spp. as depicted in the site photographs, may be attributable to artificial alterations to natural phosphates and or soil moisture levels, associated with maintaining the aforementioned ovals. The area is not likely to include, or be necessary for the continued existence of rare flora.

Methodology

DEC site visit 9/10/06
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

There are two known occurrences of Threatened Ecological Communities (TEC) within the local area of the application, the nearest of which is located approximately 3km to the north.

The TEC identified by the Bush Forever study to be associated with the Spearwood landform is Melaleuca huegelii ý Melaleuca acerosa shrublands on Limestone ridges (26a) (Government of Western Australia 2000). Given the species composition of the vegetation under application and the distance to the nearest TEC, it is not considered likely to comprise, or be necessary for the maintenance of, a TEC.

Methodology

DEC site visit 9/10/06
Government of Western Australia (2000)

(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 association 998 of which there is 35.9% remaining (Shepherd et al. 2002), and which is considered to be depleted (Department of Natural Resources and Environment 2002).

The vegetation under application is also identified by Heddle et al. (1980) as 'Cottesloe complex - Central and South' of which there is 41.1% of pre-European vegetation remaining, and which is also considered to be depleted (Department of Natural Resources and Environment 2002).

The vegetation under application is in a degraded condition with an understorey comprising mainly of weeds, having previously been previously cleared. The vegetation under application is therefore not considered to be representative of these vegetation complexes, and the proposed clearing is not likely to be at variance to this Principle.

	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	
Heddle vegetation complex Cottesloe Complex Central & South	44,995	18,474	41.1**	Depleted	8.8
Beard vegetation associations 998	51,094	18,320	35.9*	Depleted	3.0

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

Methodology

DEC site visit 9/10/06

Department of Natural Resources and Environment (2002)
EPA (2000)
Shepherd et al. (2001)
GIS Databases:
Heddle Vegetation Complexes - DEP 21/06/95
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 Peel Main Drain is located approximately 2km southeast of the applied area, and the Spectacles Wetlands, which are Conservation Category Wetlands (CCW), are located approximately 2.4km to the northeast. No wetlands have been mapped within the area under application and no wetland dependent vegetation is present on site.

Given the distance to the nearest wetland, and that no wetland dependent vegetation was observed during the site visit, the proposal is not considered likely to impact vegetation associated with a wetland or waterbody.

Methodology

DEC site visit 9/10/06
GIS Databases:
Geomorphic Wetlands (Mgt Categories), Swan Coastal Plain - DEC
Hydrography, linear (hierarchy) - DOW

(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 area under application have been identified as part of the Spearwood S2 Phase, which is described as 'lower slopes of dune ridge with moderately deep to deep siliceous yellow-brown sands or pale sands with yellow-brown subsoils and minor limestone outcrop' (State of Western Australia 2005). These soils have a low risk of land degradation (State of Western Australia 2005) including waterlogging, water erosion and acid sulphate soils, however, the sandy soils may have a high risk of wind erosion, especially with the removal of vegetation.

Although the removal of vegetation from the site has a high risk of resulting in wind erosion, this should be managed by dust control measures outlined in the Safety Management Plan submitted by BGC Construction. The proposal is therefore not likely to result in appreciable land degradation.

Methodology

BGC Construction (2006) TRIM ref. DOC6706
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

Leda Nature Reserve is located approximately 3.3km south of the area under application, and a number of large Bush Forever sites are located within the local area, the closest of which is located approximately 1.5km to the northeast. The Spectacles Wetlands is also located approximately 2.4km to the northeast.

Given the distance to the nearest conservation reserve, the proposal is not considered likely to have an impact on the environmental values of any nearby conservation reserve, and is not likely to be at variance to this Principle.

Methodology

GIS Databases:
Bushforever - MFP 07/01
CALM Managed Lands and Waters - CALM 1/07/05
Geomorphic Wetlands (Mgt Categories), Swan Coastal Plain ý DEC
Hydrography, linear (hierarchy) - DOW

(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 area under application is located approximately 2km from the Peel Main Drain and 2.4km from the Spectacles Wetlands and is situated at an elevation of between 25 - 30 metres. The area under application is not located within a Public Drinking Water Source Area (PDWSA). Groundwater salinity in the area is 500-1000mg/L and there is a low risk of salinity and acid sulphate soils.

Given that the proposed clearing comprises sparse vegetation in a degraded condition 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 9/10/06
State of Western Australia (2005)
GIS Database:
Geomorphic Wetlands (Mgt Categories), Swan Coastal Plain ý DEC
Hydrography, linear (hierarchy) - DOW
Public Drinking Water Source Areas (PDWSAs) - DOE 07/02/06
Topographic Contours, Statewide - DOLA 12/09/02

(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 proposed clearing due to its size and location. The proposed clearing includes vegetation in a degraded condition within 6.1 hectares of land that has previously been parkland cleared. The area under application is located approximately 2km from the Peel Main Drain, at an elevation of between 25 ý 30 metres. It is therefore not considered likely that the removal of vegetation from site would have an impact on peak flood height or duration.

Methodology DEC site visit 9/10/06
GIS Databases:
Hydrography, linear (hierarchy) ý DOW
Topographic Contours, Statewide - DOLA 12/09/02

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

Comments

The area under application is part of Crown Reserves 24595 (Kwinana Townsite Lot A427) and 30742 (Lot A756 on Plan 9475) and the Town of Kwinana holds management orders for the designated purposes of 'School/high school' and 'Recreation' respectively. The purpose of the clearing for Reserve 24595 is for high school buildings, and for Reserve 30742 is for a sporting oval. This constitutes a 'secondary approval' and 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 from the Department of Environment and Conservation to undertake the clearing.

Methodology GIS Databases:
Cadastre - DLI
Native Title Claims DLI

4. Assessor's recommendations

Purpose	Method	Applied area (ha)/ trees	Decision	Comment / recommendation
Building or Structure	Mechanical Removal	5.17	**Grant**	The assessable criteria have been addressed and no objections were raised. The assessing officer therefore recommends that the permit be granted.

5. References

BGC Construction (2006) Safety Management Plan for Kwinana High School site - Dust control provisions. DEC TRIM ref. DOC6706

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 (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 (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.

Keighery, B.J. (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.

Site Visit 09/10/06, Department of Environment and Conservation (DEC), Western Australia. TRIM ref DOC6635.

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)