Department of Environment and Conservation

Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 863/1

Permit type: Area Permit

1.2. Proponent details

Proponent's name: LWP Property Group

1.3. Property details

Property: Lot 3000 on Plan 49369 (Lot 3000 Lyon Road AUBIN GROVE 6164)

Local Government Area: City Of Cockburn

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
4		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: Bassendean Complex - Central & South: Vegetation ranges from woodland of *E. marginata - C. fraseriana - Banksia spp.* to low woodland of Melaleuca species, and sedgelands on the moister sites. This area includes the transition of *E. marginata* to *E. todtiana* in the vicinity of Perth. Beard Vegetation Association: 1001: Medium very sparse woodland; jarrah, with low woodland; Banksia & Casuarina	The proposal includes the clearing of 4 ha of native vegetation within Lot 3000 (formerly Lot 448) Lyon Road as part of sand extraction for bulk earthworks associated with the adjacent subdivision, and development of a school site. The dominant vegetation communities were described by Ecoscape (2004) as: Jarrah-Banksia Woodland over *Xanthorrhoea preissii, Macrozamia riodloi, Gompholobium tomentosum, Hibbertia hypericoides, Burchardia umbellata* and *Patersonia occidentalis*; Banksia attenuata and Banksia menziesii over an understorey dominated by *Allocasuarina humilis, Eremaea pauiflora, Strilingia latifolia, Calytrix flavescens, Leucopogon conostephioides, Dasypogon bromeliifolius* and *Hibbertia spp.*	Very Good: Vegetation structure altered; obvious signs of disturbance (Keighery 1994)	Vegetation clearing description was obtained during a site visit conducted by DEC officers on 31 January 2006 and from the Flora assessment conducted by Ecoscape (Australia) Pty Ltd (2004). Ecoscape (2006) describes the vegetation under application as being in 'Fair to Good condition'.

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 may be at variance to this Principle

The vegetation under application provides significant habitat for a range of indigenous fauna, especially avifauna, in a landscape that has been extensively cleared for urban development. A fauna survey conducted by Ecoscape (2006) identified 76 bird species, 16 mammal species and 38 reptile species that have the potential to occur within the area under application. Based on this information it is considered that the vegetation under application may have a high diversity of indigenous fauna, especially avifauna species.

Methodology Ecoscape (2006)

(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 at variance to this Principle

Ecoscape (2006) was commissioned in October 2004 to undertake a fauna assessment of the notified area for clearing application CPS 763/1, which included Lot 3000 that is under this application. A variety of mammals, avifauna and reptiles were identified to be present within the area under application.

The Quenda (*Isoodon obesulus fusciventer*) is the only priority mammalian species that was identified as being present. The proponents conducted a translocation program in association with CALM to remove this fauna species to secure suitable habitat. This translocation was conducted in September 2005 and there were 'no signs of recent Quenda activity when the site was inspected in January 2006', however given the timed that has lapsed since the last translocation there is the potential for the Quenda to have recolonised in the area under application. In total there are 16 native mammal species that have the potential to occur in the area under application (Ecoscape 2006).

The fauna survey identified 76 indigenous bird species, including 24 species of local conservation importance, which may potentially occur within the applied area. During the survey 26 of these species were observed within Lot 3000 and the other adjacent lots that were surveyed (Ecoscape 2006). It is considered that the species observed during this survey are likely to utilise the applied vegetation for nesting, foraging and sheltering purposes. Clearing as proposed is likely to result in 'serious impact on local bird species... (with) the resulting (urbanised) landscape likely to support only a subset of the original avifauna' (Ecoscape 2006).

The fauna survey also identified small hollows within the *E. marginata* that were considered suitable for use by nesting birds identified in the area (Ecoscape 2006). Ecoscape (2006) also reported that the area under application may be used as a breeding site for the EPBC Act (Migratory) listed Rainbow Bee-Eater, which nests in burrows excavated in sandy ground during the spring and summer months. Although this species was not observed during the January 2006 fauna survey, clearing of vegetation during the spring and summer months is likely to destroy any burrows that are present.

There are also 38 reptile species, 7 of which are of conservation importance, that have the potential to be present within the applied area (Ecoscape 2006). The area under application contains Banksia woodland in very good condition, and is considered to be an important habitat for reptiles. The applied area also provides suitable roosting and foraging habitat for bats (Ecoscape 2006).

Of the total area surveyed by Ecoscape (2006) of lots in the local area, the vegetation contained within Lot 3000 was described as being 'the most important area for fauna of conservation significance.' A range of fauna species, including species of local conservation importance, were observed within the study area.

Given all of the above it is considered that the vegetation under application comprises significant habitat for indigenous fauna in an area that has been largely cleared for urban development. The clearing as proposed will have a serious impact on local fauna species some of which are of conservation significance with the greatest impact being on avifauna in the local area.

Methodology

(Garnett and Crowley 2000)
(Ecoscape 2004)
(Ecoscape 2006)

(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

CALM (2005) (CPS 763/1) advises that Declared Rare and Priority Flora have been recorded in similar soils within close proximity to the applied area, and Ecoscape (2006) describes Lot 3000 as containing extensive areas of remnant vegetation in good condition.

A flora survey of the area under application was conducted by Ecoscape (2006) during September and no DRF or Priority species were identified. In addition, no DRF or Priority species were identified during a previous flora survey conducted by Ecoscape (2006) in November 2004 and January 2005. It is therefore not considered likely that the vegetation under application includes, or is necessary for the continued existence of, rare flora.

Methodology

CALM (2005)
Ecoscape (2006)

(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 occurrences of Threatened Ecological Communities (TEC) within the local area of the applied area. Ecoscape (2006) identified the Floristic Community Types present on site to be Central Banksia attenuata - Eucalyptus marginata woodlands (21a) and Central Banksia attenuata - Banksia menziesii

woodlands (23a), which are not identified as TECs. It is therefore not considered likely that the vegetation under application comprises, or is necessary for the maintenance of, a TEC.

Methodology Ecoscape (2006)
GIS Database: 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 part of Beard vegetation association 1001 of which there is 27.6% remaining (Shepherd et al. 2002), and which is considered to be of 'vulnerable' status for biodiversity conservation (Department of Natural Resources and Environment 2002).

The vegetation under application is also 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 also considered to be vulnerable (Department of Natural Resources and Environment 2002).

Although the identified vegetation complexes have less than the recommended 30% minimum of Pre-European extent remaining, the applied area is considered to be within a constrained area. The EPA (2003) recognises the Perth Metropolitan Region as a 'constrained area', providing for the reduction of vegetation complexes to a minimum of 10% of the pre-European extent. Therefore the proposal is not considered likely to be at variance to this Principle.

	Pre-European (ha)	Current (ha)	Remaining %	status***	% in reserves
Swan Coastal Plain	1,529,235	657,450	43.0 %*	Depleted	
Heddle vegetation complex					
Bassendean Complex C & S	87,477	23,624	27.0 %**	Vulnerable	0.7%
Beard vegetation associations					
1001	68,475	18,907	27.6 %*	Vulnerable	4.2%

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

Methodology DEC site visit 31/1/06
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**
An ANCA Wetland of approximately 2628ha is situated approximately 0.8km to the south and approximately 0.8km to the east of the area under application. Thomsons Lake is also situated approximately 3km to the north-west of the area under application. No wetlands were identified within the area under application and no wetland dependent vegetation was identified by Ecoscape (2004). Given this and the distance to the nearest wetland the vegetation is not considered likely to include vegetation growing in, or in association with, a watercourse or wetland.

Methodology Ecoscape (2004)
GIS Databases:
Clearing Regulations - Environmentally Sensitive Areas
Hydrography, linear (hierarchy)
Geomorphic Wetlands (Mgt Categories), Swan Coastal Plain

(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**
Ecoscape (2006) advises that the Bassendean Sands identified within the area under application are 'susceptible to mobilisation when dry and free of vegetation'. It is considered that Problems with wind erosion and drainage during and following proposed clearing can be minimised by following the conditions on the City of Cockburn Earthworks Planning Approval.

The area under application is also classified as a medium to low risk area for shallow acid sulphate soils at >3m depth, however the removal of vegetation alone is not considered likely to cause a problem. The proposed clearing therefore is not likely to cause appreciable land degradation.

Methodology Ecoscape (2004)
GIS Databases:
Acid Sulfate Soil Risk Map, SCP - DOE 04/11/04
Soils, Statewide - DA 11/99

(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**
Within the local area (5km) of the area under application there are three areas managed by DEC, including Thompsons Lake Nature Reserve, Harry Waring Marsupial Reserve and Wandi Nature Reserve. There are also 8 Land for Wildlife sites, the nearest of which is approximately 2.1km from the area under application. A number of other conservation areas are also found within the local area, including 12 Bush Forever sites, the closest of which is located approximately 1.2km from the area under application.

Advice from CALM (2005) for the adjacent properties (CPS 763) states that 'the proposal does not appear to directly impact upon any recorded occurrences of CALM-managed lands, EPP wetlands, Bush Forever sites, nor any 'ESA' areas.' This advice was taken from the Ecoscape (2004) report, which is also relevant for Lot 3000 under this application. Given the above, the proposal is not considered likely to be at variance to this principle.

Methodology CALM (2005)
Ecoscape (2004)
GIS Databases:
Bushforever - MFP 07/01
CALM Managed Lands and Waters - CALM 1/07/05
Geomorphic Wetlands (Mgt Categories), Swan Coastal Plain

(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 within a proclaimed groundwater area (Jandakot GWA) and a Priority 3 Public Drinking Water Source Area (PDWSA). The area under application is also located within a Wellhead Protection Zone however, retention of vegetation in this zone is not a requirement of the Metropolitan Water Supply, Sewerage and Drainage Act By-laws.

Due to medium rainfall (900mm per year on average) in the region there is low groundwater recharge, and there is a medium to low risk of acid sulphate soils and salinity. The proposal therefore is not considered likely to cause deterioration in the quality of surface or underground water.

Methodology GIS Databases:
Groundwater Subareas - WRC 10/10/00
Public Drinking Water Source Areas (PDWSA) - DOE 09/08/05
Rainfall, Mean Annual - BOM 30/09/01
PDWSA Protection Zones - DOE 7/1/04

(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 under application is located approximately 2.5km from Thomsons Lake. Due to the size of the proposed clearing, the general relief of the area and distance from any waterbody it is not considered likely that the removal of vegetation from the site would have an impact on peak flood height or duration.

Methodology DEC site visit 31/1/06
GIS Databases:
Topographic Contours, Statewide - DOLA 12/09/02
Hydrography, linear (hierarchy) - DOE 13/4/05

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

Comments

The dust management plan has been approved by the City of Cockburn. The Council has approved the bulk earthworks during the moratorium period of October to March subject to conditions including dust management. DEC TRIM ref. DOC10344.

A groundwater licence is required for dust suppression and compaction requirements on-site. The existing water license for the adjacent subdivision will cover the dust suppression requirements for the works on site. The proponent advised that the documentation will be provided shortly.

A District Structure Plan has been approved by Council. The Lot is zoned urban and is being developed for a school site, which is looking to be progressed January 2007. These are considered to be relevant planning instrument considerations.

No other approvals required by the Department of Environment and Conservation or the Department of Water.

Lot 3000 Lyon Road 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.

Methodology DPI (2006)
City of Cockburn (2005)
GIS Database: Native Title Claims - DLI 7/11/05

4. Assessor's comments

Purpose	Method	Applied area (ha)/ trees	Comment
Building Structure	Mechanical Removal	4	The principles have been assessed and the clearing as proposed is at variance to Principle b and may be at variance to Principle a. The proposed clearing is considered to be at variance to Principle (b) due to the presence of significant fauna habitat, and will have a serious impact on local bird species due to the loss of significant nesting, foraging and sheltering habitat in a landscape that has been substantially cleared for urban development. In addition, due to the high diversity of avifauna that may utilise the area under application, the proposal may be at variance to Principle (a).

5. References

Clearing Assessment Unit's biodiversity advice for land clearing application. Advice to Director General, Department of Environment and Conservation (DEC), Western Australia. TRIM ref IN25227.

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.

Ecoscape (January 2006) Lots 24,27, 448 & 628 Lyon Road - Environmental Assessment. TRIM ref IN22626.

Ecoscape (September 2006) Lots 24, 27, 448 & 628 Lyon Road - Declared & Priority Flora Assessment. TRIM ref. DOC6372.

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.

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 31 January 2006, Department of Environment and Conservation (DEC), Western Australia.

6. Glossary

Term	Meaning
CALM	Department of Conservation and Land Management (now DEC)
DAFWA	Department of Agriculture
DEC	Department of Environmental 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 DoE)