Department of Environment and Conservation

Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 1389/1

Permit type: Area Permit

1.2. Proponent details

Proponent's name: **Statewest Surveying & Planning Pty Ltd**

1.3. Property details

Property: LOT 5 ON PLAN 7892 (House No. 1880 GREAT NORTHERN BULLSBROOK 6084)

Local Government Area: City Of Swan

Colloquial name:

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
1.8		Mechanical Removal	Extractive Industry

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 jarrah-marri (Shepherd 2006). Heddle Guildford Complex: A mixture of open forest to tall open forest of C. calophylla - E. wandoo - E. marginata and woodland of E. wandoo (with rare occurrences of E. lane-poolei). Minor components include E. rudis - M. rhaphiophylla (Heddle et al. 1980). Mattiske Guildford Complex: Mosaic of open forest of Corymbia calophylla-Eucalyptus wandoo-Eucalyptus marginata subsp. marginata and woodland of Eucalyptus wandoo (Mattiske Consulting 1998).	The proposal is to clear 1.8ha of native vegetation for sand extraction on a 162ha property, of which only ~30% is vegetated. The area applied to be cleared is located directly east of an existing sand extraction pit on the property. The vegetation under application comprises a predominantly Jarrah (Eucalyptus marginata) overstorey with occurrences of Eucalyptus lane-poolei, and a Parrot Bush (Banksia sessilis) middle storey. The understorey is predominantly comprised of Xanthorrhoea preissii, Conostylis candicans and Mesomelaena psuedostygia. Historic cattle grazing within the applied area has resulted in a relatively young and uniform Xanthorrhoea preissii understorey. Overall the vegetation under application is considered to be in good condition.	Good: Structure significantly altered by multiple disturbance; retains basic structure/ability to regenerate (Keighery 1994)	Vegetation clearing description and condition based on information obtained during the Site Inspection (DEC 2006a).

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 comprises a predominantly Jarrah (Eucalyptus marginata) overstorey and Parrot Bush (Banksia sessilis) middle storey. The understorey has been impacted by historic grazing activity and predominantly comprises of Xanthorrhoea preissii, Conostylis candicans and Mesomelaena psuedostygia (DEC 2006a). However the vegetation under application is considered to be in an overall good condition (DEC 2006a), and to be representative of Heddle's Guildford Complex, which has only 5.0% pre-European extent remaining (EPA 2006).

Notwithstanding, overall the area of vegetation under application comprises a low level of biological diversity, most likely attributable to historic grazing practices (DEC 2006a). Given the overall low level of biological diversity, the proposed clearing is considered not likely to be at variance to this Principle.

Methodology

References:
- DEC (2006a)
- EPA (2006)
- Heddle et al. (1980)

GIS Database:
- Heddle Vegetation Complexes

(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 located within a 162ha property, of which ~70% is cleared. The property is bordered to the east by Walyunga National Park, and includes an area of Bush Forever Site 412. The areas to the North, South and East are largely cleared rural properties.

The vegetation under application comprises a predominantly Jarrah (Eucalyptus marginata) overstorey and Parrot Bush (Banksia sessilis) middle storey. The understorey has been impacted by historic grazing activity and predominantly comprises of Xanthorrhoea preissii, Conostylis candicans and Mesomelaena psuedostygia (DEC 2006a). Overall the vegetation under application is considered to be in good condition (DEC 2006a).

Six fauna species of conservation significance are known to occur within the local area (5km), being:
- Black-flanked Rock-Wallaby (Petrogale lateralis lateralis) (Vulnerable);
- Carpet Python (Morelia spilota imbricata) (Priority 4);
- Chuditch (Dasyurus geoffroii) (Vulnerable);
- Quenda (Isoodon obesulus fusciventer) (Priority 5);
- Tammar Wallaby (Macropus eugenii derbianus) (Priority 5); and
- Western Swamp Tortoise (Pseudemydura umbrina) (Critically Endangered).

The vegetation under application is not considered likely to comprise populations of Black-flanked Rock Wallaby, Tammar Wallaby or Western Swamp Tortoise due to the absence of suitable habitat (DEC 2006).

The vegetation under application may comprise habitat suitable for Carpet Python, Chuditch and Quenda (DEC 2007, DEC 2006). However given the close proximity of the applied area to the Walyunga National Park and Bush Forever site 412 (~550m), it is considered that these conservation areas offer similar or better habitat than the vegetation under application.

Therefore, given the relatively small area applied to be cleared (1.8ha) and close proximity to conservation areas, the vegetation under application is not considered to comprise significant fauna habitat.

Methodology

References:
- DEC (2006)
- DEC (2006a)
- DEC (2007)

GIS Databases:
- Bushforever
- CALM Managed Lands and Waters
- SAC Bio Datasets, Accessed 16/04/2008
- Swan Coastal Plain North 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 seven rare flora species known to occur within the local area (5km radius) of the vegetation under application being;
- Acacia oncinophylla subsp. oncinophylla;
- Caladenia huegelii;
- Eleocharis keigheryi;
- Grevillea christineae;
- Grevillea curviloba subsp. curviloba;
- Grevillea curviloba subsp. incurva; and
- Hydatella dioica.

The closest known populations of rare flora are Hydatella dioica and Eleocharis keigheryi 1.9km from the area under application.

Eleocharis keigheryi, Grevillea curviloba subsp. curviloba, Caladenia huegelii, Grevillea curviloba subs. incurva and Hydatella dioica are known to occur within the same mapped vegetation complexes as the area under application. However none of these species are known to occur within the same soil type and/or habitat (e.g. winter wet areas) as the area under application (Western Australian Herbarium 1998-).

Therefore, the proposal is considered not likely to be at variance to this Principle.

Methodology

References:
- DEC (2006a)
- Western Australian Herbarium (1998-)

GIS DataBases:
- Heddle Vegetation Complexes
- Mattiske Vegetation
- Pre-European Vegetation
- SAC Bio Datasets, Accessed 29/05/2008

(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 three known occurrences of Threatened Ecological Communities (TEC) with a 5km radius of the vegetation under application. The closest being Floristic Community Type 15, known as Forests and woodlands of deep seasonal wetlands (Gibson et al. 1994) (Vulnerable), located approximately 2km west of the vegetation under application.

Two threatened ecological communities are associated with Bush Forever Site 301, south of the vegetation under application. These TEC are the Critically Endangered Floristic Community Type 3c known as Corymbia calophylla-Xanthorrhoea preissii woodlands and shrublands and Vulnerable Floristic Community Type 8 known as Herb rich shrublands in clay pans (Gibson et al. 1994).

The vegetation within the area applied to be cleared consists of a Eucalyptus marginata and Banksia sessilis open woodland over a Xanthorrhoea preissii understorey on deep sandy soils (DEC 2006a).

Given the description of the vegetation, geology of the site and the distance to nearby occurrences of TEC, the vegetation under application is not considered to comprise the whole, or part of, or be necessary for the maintenance of a TEC.

Methodology

References:
- DEC (2006a)
- Gibson et al. (1994)

GIS Database:
- SAC Bio Datasets, Accessed 27/04/2007

(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 at variance to this Principle

The vegetation under application is mapped as a component of Beard Vegetation Association 3, Heddle Guildford Complex and Mattiske Guildford Complex of which 70.0%, 5.0% and 12.3% pre-European vegetation extent remains respectively (EPA 2006, Mattiske Consulting 1998 and Shepherd 2006). Of these vegetation associations the vegetation proposed to be cleared is considered to align most closely to Heddle and Mattiske Guildford vegetation complexes due to the presence of Eucalyptus lane-poolei, a species cited as being common to the Guildford vegetation community (DEC 2007a).

The State Government is committed to the National Objectives and Standards that includes a target that prevents clearance of ecological communities with an extent below 30% of that present Pre-European settlement (Commonwealth of Australia 2001). The EPA (2006), however, 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.

Notwithstanding, EPA Position Statement No. 2 (EPA 2000) states that all jurisdictions (States) have committed to no further clearing of endangered ecological communities. Endangered ecological communities are those with less than 10% pre-European extent remaining (Department of Natural Resources and Environment 2002).

Of the three mapped vegetation communities associated with the area under application, both Heddle and Mattiske's Guildford complex are below the State Government's 30% biodiversity conservation target, and whilst the proposal is acknowledged to be located within the 'constrained area', Heddle's Guildford Complex is classified as 'Endangered' with only 5.0% pre-European extent remaining (EPA 2006).

Whilst the vegetation has been impacted by historic logging activity and grazing, the vegetation is still considered to be in an overall good condition (DEC2006a). Therefore given the low vegetation representation for the Guildford vegetation complex and overall good condition of the vegetation proposed to be cleared (DEC 2006a), the area under application is considered to comprise vegetation that is significant as a remnant of native vegetation.

An offset condition is imposed to mitigate the clearing of the Guildford complex.

Pre-European	Current extent (ha)	Remaining% (ha)	In reserves/CALM (%)	managed land
IBRA Bioregion:				
Swan Coastal Plain*	1,501,456	571,758	38.1	
City of Swan****	104,220	46,043	44.2	
Vegetation types:				
- Beard: Unit 3*	2,661,514	1,863,982	70.0	80.3
- Heddle Guildford Complex**	92,497	4,662	5.0	0.2
- Mattiske Guildford Complex***		68,546	8,441	12.3

* (Shepherd 2006)
** (EPA 2006)
*** (Mattiske 1998)
**** (Shepherd et al. 2001)

Methodology

References:
- Commonwealth of Australia (2001)
- DEC (2006a)
- DEC (2007a)
- Department of Natural Resources and Environment (2002)
- EPA (2000)
- EPA (2006)
- Hopkins et al. (2001)
- Mattiske Consulting (1998)
- Shepherd et al. (2001)
- Shepherd (2006)

GIS Databases:
- Heddle Vegetation Complexes
- Interim Biogeographic Regionalisation of Australia
- Local Government Authorities
- Mattiske Vegetation
- Pre-European Vegetation

(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

There are no wetlands or watercourses mapped within the area under application. The closest surface hydrological feature is a Multiple Use Wetland mapped >280m to the north and west of the vegetation under application.

The vegetation under application is located mid slope on the property and comprises an open Eucalyptus

marginata - Banksia sessilis woodland (DEC 2006a). Therefore the vegetation under application is considered to be more representative of an upland vegetation community.

Given the geology, topography and flora species observed on site, and the distance to surface hydrological features, the vegetation under application is not considered to be growing in, or in association with, and environment associated with a watercourse or wetland.

Methodology

References:
- DEC (2006a)
- DAFWA (2006)

GIS Databases:
- Geomorphic Wetlands (Mgt Catagories) Swan Coastal Plain
- Hydrography, linear (hierarchy)
- Topographic Contours, Statewide

(g) Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation.

Comments

Proposal may be at variance to this Principle

The vegetation under application is located on deep, rapidly draining siliceous yellow brown sands and pale/bleached sands (DAFWA 2006), within a 162ha property. The applied area is located mid slope on the property, with a gentle gradient of ~3.5%.

Given the high permeability and deep nature of soils on site the proposed clearing is not considered likely to cause water erosion. In addition, the site contains no evidence of salinity with the overall salinity risk being low (DAFWA 2006).

However the area under application comprises loose, sandy soils within which are susceptible to wind erosion. The removal of vegetation as proposed will expose these soils and has the potential to result in appreciable land degradation in the form of wind erosion.

Given that there is the potential for the proposed clearing to result in wind erosion, it is considered that the proposal may be at variance to this Principle.

Methodology

Reference:
- DAFWA (2006)

GIS Databases:
- Swan Coastal Plain North 20cm Orthomosaic - DLI06
- Topographic Contours, Statewide

(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

There are three conservation areas located within close proximity to the vegetation under application, being Bush Forever sites 296 (~57ha) and 412 (~48ha) , and Walyunga National Park (>1,800ha) located 515m, 554m and 1km from the applied area respectively.

The vegetation under application is separated from Bush Forever Site 296 (Ellen Brook Upper Swan) by a major regional road. Therefore the proposed clearing is not considered likely to impact on the environmental values of this conservation area.

Bush Forever Site 412 (Walyunga Rd Bushland, Bullsbrook) and Walyunga National Park are located east of the applied area within and adjoining the property respectively.

Whilst the vegetation under application is located within relatively close proximity to these conservation areas, the applied area is separated by pasture from remnant vegetation nearby.

Given distance to nearby conservation areas and relatively small size of the area proposed to be cleared (1.8ha), the proposed clearing is not considered likely to impact on the environmental values of nearby conservation areas.

Methodology

References:
- DEC (2006)
- Government of Western Australia (2000)

GIS Databases:
- CALM Managed Lands and Waters
- Road Centrelines
- Swan Coastal Plain North 20cm Orthomosaic - DLI06

(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 vegetation under application is located on deep, rapidly draining siliceous yellow brown sands and pale/bleached sands (DAFWA 2006), mid slope on a 162ha property.

There are no wetlands or watercourses mapped within the area under application. The closest surface hydrological feature is a Multiple Use Wetland mapped >280m to the north and west of the vegetation under application.

Given the relatively small area proposed to be cleared (1.8ha), high elevation within the landscape and distance to nearby surface hydrological features, the proposed clearing is not considered likely to cause deterioration in the quality of surface or underground water.

Methodology

Reference:
- DAFWA (2006)

GIS Databases:
- Geomorphic Wetlands (Mgt Categories), Swan Coastal Plain
- Hydrography, linear (hierarchy)
- Topographic Contours, Statewide

(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 vegetation under application is located on deep, rapidly draining siliceous yellow brown sands and pale/bleached sands (DAFWA 2006), mid slope on a 162ha property.

Given the relatively small area proposed to be cleared (1.8ha), and high permeability and deep nature of soils on site, the proposed clearing is not considered likely to cause, or exacerbate, the incidence or intensity of flooding.

Methodology

Reference:
- DAFWA (2006)

GIS Database:
- Topographic Contours, Statewide

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

Comments

The vegetation under application is associated with an Aboriginal Site of Significance (S02516 - Jane Brook Upper Site). It is the responsibility of the applicant to ensure that no sites are damaged through the clearing process.

The Western Australian Planning Commission (WAPC) has issued an Approval to Commence Development for the proposed sand excavation

An Excavation Licence for sand extraction has also been issued by the City of Swan (Statewest Surveying & Planning 2008).

As the proposed sand extraction is considered to be a temporary activity, a condition requiring revegetation of the site once the activity has been competed, has been imposed on the clearing permit.

There are no other approvals considered likely to affect this proposal.

Methodology

Reference:
- Statewest Surveying & Planning (2008)

GIS Database:
- Aboriginal Sites of Significance

4. Assessor's comments

Comment

The proposed clearing has been assessed, and is considered to be at variance to Principle (e), and may be at variance to Principle (g). The proposal is considered not likely to be at variance to the remaining principles.

5. References

Commonwealth of Australia (2001) National Targets and Objectives for Biodiversity Conservation 2001-2005, AGPS, Canberra.

DAFWA (2006) Land degradation assessment report for clearing permit application CPS 1389/1. Office of the Commissioner of Soil and Land Conservation, Department of Agriculture and Food Western Australia (TRIM Ref. DOC2993).

DEC (2006) Biodiversity Coordination Section advice for land clearing application CPS 1389/1. Advice to Director General, Department of Environment and Conservation (DEC), Western Australia (TRIM Ref. DOC8255).

DEC (2006a) Site Inspection Report for Clearing Permit Application CPS 1389/1, Lot 5 Walyunga Road, Bullsbrook. Site inspection undertaken 20/10/2006. Department of Environment and Conservation, Western Australia (TRIM Ref. DOC8586).

DEC (2007) Fauna Habitat Notes - February 2007.xls. Department of Environment and Conservation, Western Australia.

DEC (2007a) Advice from the Native Vegetation Conservation Branch in relation to the assessment of Principle (e) for clearing permit application CPS 1389/1. Received 06/02/2007 (TRIM Ref. DOC15298).

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 (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.

Gibson N., Keighery B., Keighery G., Burbidge A. and Lyons M. (1994). A Floristic Survey of the Southern Swan Coastal Plain. Western Australian Department of Conservation and Land Management and the Western Australian Conservation Council.

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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. (2006). Adapted from: Shepherd, D.P., Beeston, G.R., and Hopkins, A.J.M. (2001), Native Vegetation in Western Australia. Technical Report 249. Department of Agriculture Western Australia, South Perth. Includes subsequent updates for 2006 from Vegetation Extent dataset ANZWA1050000124.

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.

Statewest Surveying & Planning (2008) Copy of Excavation Licence for Lot 5 Walyunga Road, Bullsbrook. Received 21/08/2008 (TRIM Ref. DOC61108).

Western Australian Herbarium (1998-). FloraBase - The Western Australian Flora. Department of Environment and Conservation. http://florabase.calm.wa.gov.au/ (Accessed 05/01/2007).

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)