Department of Environment and Conservation

Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 1719/1

Permit type: Area Permit

1.2. Proponent details

Proponent's name: **Water Corporation**

1.3. Property details

Property: Lot 9 on Diagram 31097 (Lot No. 9 Cockburn Road MUNSTER 6166)

Local Government Area: City Of Cockburn

Colloquial name:

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
3.8		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 the clearing of 3.8 hectares for the purpose of upgrading the Wastewater Treatment Plant for odour control. The following vegetation communities were recorded by Maunsell Australia Pty Ltd (2006) within the survey area: - W1: Degraded shrubland dominated by introduced shrub species **Leptospermum laevigatum* with occasional *Acacia saligna*, with an understorey consisting of **Nicotiana glauca, *Pennisetum setaceum, *Ehrharta longifolia* and **Pelargonium capitatum* on pale orange shale with limestone; - W2: Degraded, introduced grasslands dominated by **Bromus diandrus, *Pennisetum setaceum, *Ehrharta longifolia,* with occasional **Nicotiana glauca* on pale orange shale with limestone; - W3: Degraded, open shrubland dominated by *Dryandra sessilis* and *Acacia rostellifera*, with occasional *Olearia axillaris* and *Acacia saligna*, over **Euphorbia terracina, *Pennisetum setaceum* and *Trymalium floribundum* on pale orange shale with limestone.	Completely Degraded: No longer intact; completely/almost completely without native species (Keighery 1994)	Vegetation clearing description based on a site visit conducted by DEC officers on Monday 12 February 2007 and a spring Flora and fauna assessment conducted by Maunsell Australia Pty Ltd (2006). Vegetation ranges in condition from degraded to completely degraded, but is considered to be mostly completely degraded.

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 mainly introduced species and is considered to be degraded to completely degraded. It is therefore not considered likely that the applied vegetation comprises a high level of biodiversity.

Methodology DEC site visit 12/2/07

(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**

During a desktop assessment Maunsell Australia (2006) identified the Masked Owl *Tyto novaehollandiae novaehollandiae* (P3) and the Hooded Plover *Charadrius rubricollis* (P4) as having the potential to occur within the area under application. These species have previously been sighted in the local area, however were not observed during the fauna survey (Maunsell Australia 2006).

The vegetation under application is in a degraded to completely degraded condition, comprising primarily introduced flora species, and with some areas devoid of vegetation. It is therefore not considered likely that the vegetation under application comprises, or is necessary for the maintenance of, significant habitat for indigenous fauna.

Methodology DEC site visit 12/2/07
Maunsell Australia (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**

Within the local area (5km radius of the application) there are no known occurrences of Declared Rare Flora (DRF), with the nearest being 8.4km to the east. There are three known occurrences of Priority listed flora within the local area. No DRF or Priority flora species were recorded during the spring flora survey conducted by Maunsell Australia (2006).

Given that there are no known occurrences of DRF in the local area and that none were recorded during the spring flora survey, the vegetation under application is not considered likely to include, or be necessary for the continued existence of, rare flora.

Methodology Maunsell Australia (2006)
GIS Databases:
Declared Rare and Priority Flora List - CALM 01/07/05

(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 four known occurrences of Threatened Ecological Communities (TEC) in the local area, all of which are located approximately 760m to the west of the applied area, at Woodman Point. The applied area is located within the buffer for these TECs.

Biodiversity Coordination Section (2006) advice for CPS 1580/1 located on the same property stated that the nearest TEC at Woodman Point is not likely to be found in the applied area or be impacted by the proposed clearing.

The vegetation under application is mostly completely degraded and comprises mostly introduced species. Given the completely degraded condition of the vegetation under application, the distance to the nearby TEC and the BCS advice, it is not considered likely that the vegetation under application comprises, or is necessary for the maintenance of, a TEC.

Methodology BCS (2006)
DEC site visit 12/2/07
Government of Western Australia (2000)
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 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 considered to be depleted (Department of Natural Resources and Environment 2002).

The vegetation under application is also part of Beard vegetation association 998 of which there is 41.5% remaining (Shepherd 2006), and which is also considered to be depleted (Department of Natural Resources and Environment 2002).

The vegetation complexes identified within the area under application have above the minimum 30% of pre-European representation target set in the National Objectives Targets for Biodiversity Conservation, and the vegetation under application is in a degraded to completely degraded condition comprising mainly introduced species. The proposal is therefore not considered likely to be at variance to this Principle.

	Pre-European (ha)	Current (ha)	Remaining %	Conservation status***	% in reserves
Swan Coastal Plain Heddle vegetation complex	1,501,456	571,758	38.1*	Depleted	
Cottesloe Complex Beard vegetation association 998	44,995	18,474	41.1**	Depleted	8.8
	51,017	21,178	41.5*	Depleted	3.0

* (Shepherd 2006)
**(EPA, 2003)
***(Department of Natural Resources and Environment 2002)

Methodology DEC site visit 12/2/07
Department of Natural Resources and Environment (2002)
Shepherd (2006)
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**
Lake Coogee is located approximately 300m to the east of the eastern extent of the applied area. Lake Coogee is classified as a Conservation Category Wetland (CCW). The coastal waterline is also located approximately 190m to the west of the western boundary.

During the site visit conducted by DEC officers no wetland dependent vegetation was observed within the area under application. Given this, and the distance to the nearest wetland, the vegetation under application is not considered likely to be growing in, or in association with, an environment associated with a watercourse or wetland.

Methodology DEC Site visit 12/2/07
GIS Databases:
Geomorphic Wetlands (Mgt Categories), Swan Coastal Plain
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 may be at variance to this Principle**
Soils within the applied area are identified as 'siliceous sands with smaller areas of brown sands and leached sands in the wetter sites' (Northcote 1960-1968) and there is a nil risk of salinity and acid sulphate soils. This soil type is associated with a high risk of wind erosion, especially with the removal of vegetation.

Given the high risk of wind erosion associated with the soil type, and given the large area proposed to be cleared it is considered that the proposed clearing may cause appreciable land degradation in the form of wind erosion.

Dust impacts will be considered under the Part V Works Approval and the Water Corporation will take all reasonable measures to prevent or minimise the generation of dust, and to comply with the DEC document 'Land Development sites and Impacts on Air Quality - A Guideline for the Prevention of Dust and Smoke Pollution from Land Development Sites in Western Australia'.

Methodology Northcote (1960-1968)
GIS Database:
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**
There is a Bush Forever site and Nature Reserve located approximately 200m to the west of the area under

application. The land surrounding Lake Coogee is also a Bush Forever site and a Conservation Category Wetland, and is located approximately 270m to the east of the applied area.

Given the distance to the nearby conservation reserves and the mostly completely degraded condition of the vegetation under application, it is not considered likely that the proposed clearing would have a direct or indirect impact on their environmental values.

Methodology BCS (2006)
DEC site visit 12/2/07
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 situated at an elevation of 10 - 35 metres sloping toward Lake Coogee, which is located approximately 300m to the east. The applied area is not located within a Public Drinking Water Source Area (PDWSA). There is a nil risk of salinity and acid sulphate soils and therefore the proposed clearing is not considered likely to result in a deterioration in the quality of groundwater.

The sandy soils identified on site are considered to have high infiltration rates and therefore it is not considered likely that the proposed clearing would result in water erosion causing a deterioration in the quality of surface water.

Methodology DEC site visit 12/2/07
GIS Databases:
Acid Sulfate Soil Risk Map, SCP - DOE 04/11/04
Geomorphic Wetlands (Mgt Categories), Swan Coastal Plain
Groundwater Salinity, Statewide - 22/02/00
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

The area under application is located approximately 300m from Lake Coogee, at an elevation of 10 - 35 metres. The area under application is located on sandy soils with a high permeability and it is not considered likely that the proposal would have an impact on peak flood height or duration.

Methodology GIS Databases:
Geomorphic Wetlands (Mgt Categories), Swan Coastal Plain
Rainfall, Mean Annual - BOM 30/09/01
Topographic Contours, Statewide - DOLA 12/09/02

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

Comments

The proposal is not part of a Native Title Claim, however an Aboriginal site of significance has been mapped over the area under application. It is the responsibility of the proponent to ensure that no Aboriginal Sites of Significance are damaged through the clearing process and the proponent has been advised to liaise with the Department of Indigenous Affairs regarding their obligations under the Aboriginal Heritage Act 1972.

The proposed works were referred to the Environmental Protection Authority (EPA) and the EPA set the level of assessment as 'Not Assessed' and advised that the environmental impacts will be adequately managed under Part V of the Environmental Protection (EP) Act Works Approval and Clearing Permit. The EPA decision was appealed, however the appeal was dismissed by the Minister for Environment.

A Part V Works Approval is currenly being assessed by the Department of Environment and Conservation.

Methodology GIS Databases:
Aboriginal Sites of Significance - DIA
Native Title Claims - DIA

4. Assessor's comments

Purpose	Method	Applied area (ha)/ trees	Comment

Building Structure	cMechanical 3.8 Removal	The assessable criteria have been addressed and the clearing as proposed may be at variance to Principle g.

5. References

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 (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.

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.

Maunsell Australia Pty Ltd (2006) Woodman Point Wastewater Treatment Plant Upgrade - Flora and Fauna assessment, Water Corporation. DEC TRIM ref. DOC 15728.

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 (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.

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)