Department of Environment and Conservation

Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 2058/1

Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: **Peet Baldivis Heights Pty Ltd**

1.3. Property details

Property: ROAD RESERVE (BALDIVIS 6171)
ROAD RESERVE (WELLARD 6170)
ROAD RESERVE (WELLARD 6170)

Local Government Area: Town Of Kwinana

Colloquial name: Bertram Road Reserve

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
0.05		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: Serpentine Complex - Closed scrub of Melaleuca species and fringing woodland of E. rudis - M. rhaphiophylla along streams. Bassendean Complex - central and 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 Associations: 999 - Medium woodland; marri 1001 - Medium very sparse woodland; jarrah with low woodland; banksia and casuarina (Shepherd 2006)	The proposal is to clear native vegetation over approximately 280m road reserve for the construction of a sewer pressure main. The vegetation under application is in a completely degraded condition and is limited to individual Eucalyptus marginata, Acacia spp. and Jacksonia spp, with an understorey dominated by invasive non-native grass species.	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 8 November 2007.

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 sparse and comprises individual Eucalyptus marginata, Acacia spp. and Jacksonia spp. with a high proportion of weeds and is considered to be in completely degraded condition. Given the completely degraded condition and the low species diversity of the vegetation under application, it is not considered likely to comprise a high level of biodiversity.

Methodology DEC site visit 8/11/07

(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

Within the local area (5km radius) there have been seven recorded occurrences of significant fauna species including the following:

- Quenda (Isoodon obesulus fusciventer, P5)
- Western Brush Wallaby (Macropus irma, P4)
- Water Rat (Hydromys chrysogaster, P4).

The Water Rat occupies habitat in the vicinity of permanent water (DEC 2007), with the closest recorded sighting of this species 5km northeast of the applied area at Bollard Bulrush Swamp. Given the absence of wetland vegetation in the area under application, it is not considered likely to provide suitable habitat for the Water Rat.

The proposed clearing is limited to 0.05 hectares of sparse vegetation contained within the Wellard Road reserve and is in completely degraded condition. There is a lack of understorey within the area under application which would limit the habitat potential for ground dwelling fauna species, including the Quenda and Western Brush Wallaby.
During the DEC site visit no hollows were seen that could potentially be used for habitat, and the trees under application were not considered to be of hollow bearing age.

Given the lack of hollows and understorey within the vegetation under application, it is not considered likely that the vegetation under application comprises significant habitat for indigenous fauna.

Methodology DEC site visit 8/11/07
DEC (2007)
GIS Database:
SAC Bio datasets - accessed 08/11/07

(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 area of application) there are four known populations of the Declared Rare Flora (DRF) Diuris micrantha and Caladenia huegelii, the closest of which D. micrantha is located approximately 3.2km northeast of the area under application. There are also two known occurrences of the Priority species Aotus cordifolia (P3) and Cyathochaeta teretifolia (P3), with the closest being A. cordifolia located approximately 3.3km northeast of the applied area.

The identified DRF species are found within the same mapped vegetation complex and soil type as the area under application. However, D. micrantha is found in sandy clay soils, associated with winter-wet swamps amongst native sedge species (Brown et al. 1998) and C. huegelii is generally found in sand to clay loams in areas with lush undergrowth (Brown et a. 1998). Given that the vegetation under application is located on a sandy rise and is in completely degraded condition, it is not considered likely that the vegetation under application would provide suitable habitat for the above DRF species.

A. cordifolia and C. teretifolia are associated with peaty and sandy clay soils adjoining swamps (Western Australian Herbarium, 1998) and it is therefore not considered likely that the area under application, which is located on a sandy rise, would include habitat suitable for these Priority species.

Given the distance to the nearest known population of DRF and Priority flora species, the completely degraded condition of the vegetation, and the lack of suitable habitat present on site, it is not considered likely that the vegetation under application includes, or is necessary for the continued existence of, rare flora.

Methodology DEC site visit 8/11/07
Brown et al. (1998)

Western Australian Herbarium (1998)
GIS Database:
SAC Bio datasets accessed 08/11/07

(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) within the local area (5km radius), the closest of which has been identified as Floristic Community Type (FCT) 19b - Woodlands over sedgelands in Holocene dune swales of the southern Swan Coastal Plain. This TEC is located approximately 4.2km west of the applied area and is associated with the Quindalup Dune System (Government of Western Australia 2000).

The vegetation under application is located within the Bassendean Dune System and comprises individual Eucalyptus marginata, Acacia spp. and Jacksonia spp. with a high proportion of weeds, and is considered to be in completely degraded condition.

Given that the area under application is located on the Bassendean Dunes which does not support the TEC 19b, the completely degraded condition of the vegetation under application, and the distance to the nearest TEC, it is not considered likely that the vegetation under application comprises, or is necessary for the maintenance of, a TEC.

Methodology

DEC site visit 8/11/07
Government of Western Australia (2000)
GIS Databases:
SAC Bio datasets accessed 04/11/07

(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

Heddle et al (1980) defines the vegetation under application as 'Serpentine Complex' and 'Bassendean Complex - Central and South', which have pre-European representations of 10.6% and 27.0% respectively (EPA 2006).

The vegetation under application is also classified as Beard vegetation association 999 and 1001, which have 13.1% and 26.5% respectively of pre-European extent remaining (Shepherd 2006).

The State Government is committed to the National Objectives Targets for Biodiversity Conservation which includes a target that prevents clearance of ecological communities with an extent below 30% of that present pre-1750 (EPA, 2000).

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 remaining to a minimum of 10% of the pre-European extent.

The vegetation under application comprises individual Eucalyptus marginata, Acacia spp and Jacksonia spp, with an understorey restricted to non-native grass species, and is in completely degraded condition. It is therefore not considered likely that the vegetation under application is representative of the mapped Heddle and Beard vegetation complexes and is not considered likely to be significant as a remnant in an area that has been extensively cleared.

	Pre-European (ha)		Current (ha)	Remaining %	% in reserves
Swan Coastal Plain	1,501,456	571,758	38.1**		
City of Rockingham	24,326	8,534	35.1*		
Local Area (~10km radius)	26,000	8,500	~32%		
Heddle vegetation complex			***		
Serpentine Complex	19,855	2,103	10.6		2.8
Bassendean Complex central and south		87,477	23,624	27.0	0.7
Beard vegetation association					
999	115,712	15,161	13.1**		2.5
1001	57,412	15,241	26.5		4.5

* (Shepherd et al. 2001)
** (Shepherd 2006)
***(EPA, 2006)
****(Department of Natural Resources and Environment 2002)

Methodology DEC site visit 8/11/07
EPA (2006)
Shepherd (2006)
Heddle et al. (1980)
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 proposed sewer main alignment on Wellard Road is located approximately 60m north of a Multiple Use Wetland and 68m north of a Resource Enhancement Wetland. The nearest watercourse is the Peel Main Drain which is located approximately 535m east of Wellard Road reserve.

Given the area under application is located on a sandy rise, and that no wetland dependent vegetation was observed during the DEC site visit, the vegetation under application is not considered likely to include vegetation growing in, or in association with, an environment associated with a watercourse or wetland.

Methodology DEC site visit ? 8/11/07
GIS Databases:
Geomorphic Wetlands (Classification), 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 is not likely to be at variance to this Principle

Soils within the area under application are part of the Bassendean B2 Phase, which are described as well drained deep bleached grey sands or pale sands which have a low risk of water erosion and waterlogging (State of Western Australia 2005). These soils are generally associated with a nil to low risk of salinity and a moderate to low risk of acid sulphate soils (State of Western Australia 2005). Given that the clearing as proposed does not involve deep excavation of the soils, it is therefore not considered likely that it would have an impact on acid sulphate soils.

The main land degradation risk associated with the removal of vegetation on the identified soil type is considered to be a high risk of phosphorous export and wind erosion (State of Western Australia 2005), however, the selective removal of two Eucalyptus trees, two individual Acacia spp. and a Jacksonia spp. is not considered likely to impact the export of nutrients. Although the soils identified on site have a high risk of wind erosion, the vegetation under application is limited to individual Acacia and Eucalyptus trees and is considered to be in a completely degraded condition.

In addition, the ground within the applied area is covered with non-native grasses, which would minimise the risk of wind erosion. It is therefore not considered likely that the proposed clearing would result in appreciable land degradation.

Methodology DEC Site visit ? 8/11/07
State of Western Australia (2005)
GIS Databases:
Acid Sulphate Soil Risk Map, Swan Coastal Plain - DEC
Salinity Risk LM 25m - DOLA 00

(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 may be at variance to this Principle

The area under application is located within the mapped boundaries of Bush Forever site 349. Leda Nature Reserve is also located 12m to the west of the applied area.

Given that the applied area is limited to 0.05 hectares of sparse vegetation in completely degraded condition, it is not considered likely that the proposed clearing would have a direct impact on the environmental values of Bush Forever site 349.

The proposed clearing may however have indirect impacts on the environmental values of Bush Forever site 349 through the spread or introduction of dieback or weed species by machinery. There are serious consequences associated with the spread of such diseases and exotic species into an area reserved for conservation, including the potential local extinction of species.

Given that the proposed clearing may have an indirect impact on its environmental values of Bush Forever site 349, it is considered that the proposal may be at variance to this Principle.

If a permit is granted, conditions will be imposed requiring dieback and weed prevention measures.

Methodology DEC site visit ? 8/11/07
GIS Databases:
Bushforever - MFP 07/01
CALM Regional Parks - CALM 12/04/02

(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 nearest watercourses are the Peel Main Drain which is located approximately 535m east of Wellard Road and Bollard Bulrush Swamp, an EPP Lake, which is located approximately 1km north of the applied area. The area under application is within the Peel Estuary - Serpentine River Catchment, but is not located within a Public Drinking Water Source Area.

The area under application has a nil to low risk of salinity and a nil to low risk of acid sulphate soils. It is therefore not considered likely that the proposed clearing would cause salinity or acid sulphate soils resulting in the deterioration in the quality of underground water.

Due to the high infiltration rates of the sandy soils identified at the area under application, and given the distance to the nearest watercourse, it is not considered likely that the proposed clearing would cause water erosion resulting in deterioration in surface water quality.

Methodology DEC site visit - 8/11/07
GIS Databases:
Acid Sulphate Soil Risk Map, Swan Coastal Plain - DEC
Hydrography, linear (hierarchy) - DOW
Hydrography Catchments - Catchments - DOW
Public Drinking Water Source Areas (PDWSAs) - DOW
Salinity Risk LM 25m - DOLA 00

(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 538m west of the Peel Main Drain, at an elevation of 10 metres. Given that there is a low risk of water logging associated with the identified soil type on site (State of Western Australia 2005) and the high permeability of these sandy soils, it is not considered likely that the proposal would have an impact on peak flood height or duration.

Methodology DEC site visit 8/11/07
State of Western Australia (2005)
GIS Database:
Hydrography, linear (hierarchy) - DOW
Topographic Contours, Statewide - DOLA 12/09/02

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

Comments

The City of Rockingham has given approval for Cardno BSD to install the sewer main in the road reserve.

The Town of Kwinana has given approval for Peet Baldivis Heights to install the sewer main in the road reserve, subject to the conditions that any mature Eucalyptus trees are not to be cleared. If any of the trees are location in the path of the proposed pipeline, the Town of Kwinana require thrust boring to pass the trees.

The area under application is part of a Native Title Claim. The applied area is contained within existing road reserves that are managed by, or invested in the Town of Kwinana. Therefore the clearing as proposed should not fall under the future acts process under the Native Title Act 1993.

In a submission the Bush Forever Office does not object to the proposed clearing but recommend that a temporary fence be constructed between the Bush Forever site and the road reserve for the duration of the works, to prevent any disturbance to the vegetation and rubbish from entering the Bush Forever site.

Methodology Town of Kwinana (2007)
GIS Database:
Native Title Claims ? DIA_1

4. Assessor's comments

Purpose	Method	Applied area (ha)/ trees	Comment
Building or Structure	Mechanical Removal	0.05	The assessable criteria have been addressed and the proposed clearing may be at variance to Principle (h).

5. References

Brown A., Thomson-Dans C. and Marchant N., (1998). Western Australia's Threatened Flora, Department of Conservation and Land Management, Western Australia.

DEC (2007) NaturebaseFaunaSpeciesProfile,Water rathttp://www.naturebase.net/component/option,com_docman/task,doc_download/gid,147/Itemid,1288. accessed on 21/12/2007.

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.

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.

Site Visit 8 November 2007, Department of Environment and Conservation (DEC), Western Australia. TRIM ref DOC43213.

State of Western Australia (2005) Agmaps Land Manager CD Rom.

Western Australian Herbarium (1998-). FloraBase - The Western Australian Flora. Department of Environment and Conservation. http://florabase.calm.wa.gov.au/ Accessed on 1 December 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)