Department of Environment
Government of Western Australia

Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 421/1
Permit type: Area Permit

1.2. Proponent details

Proponent's name: **BOC Limited**

1.3. Property details

Property: ROAD RESERVE (KWINANA BEACH 6167)
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Local Government Area: Town Of Kwinana
Colloquial name: Rockingham Road Reserve between Thomas Road and Anketell Road

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
1.2		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
Beard vegetation association: 998 - Medium woodland; Tuart	The vegetation under application varies along the length of the proposed pipeline route.	Degraded: Structure severely disturbed; regeneration to good condition requires intensive management (Keighery 1994)	Vegetation description based on vegetation description within the application, and observations during site inspection (28/4/2005).
Heddle vegetation complex: Cottesloe Complex - Central & South: Mosaic of woodland of E. gomphocephala and open forest of E. gomphocephala - E. marginata - E. calophylla; closed heath on the Limestone outcrops.	The southern portion of the proposed area primarily consists of small disturbed stands of Acacia, over a weed understorey. The mid section of the proposed area is conprised of a relatively dense scrub of Acacia cyclops, A. pulchella, A. saligna, Agonis flexuosa, Callitris preisii, Dryandra sessilis, E. gomphocephala, Hardenbergia comptoniana, and Templetonia retusa. This section also contains non provincial vegetation most likely introduced through the revegetation after the construction of Rockingham Road, including E. platypus, Chamelaucium uncinatum, E. torquata, Melaleuca spp., and Grevillea spp. Vegetation within the northern 150 metres of the proposed area primarily consists of semi mature E. gomphocephala and E. foecunda.		

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 predominantly located within cleared area, or vegetation which has been impacted through past development. A site inspection of the area on 28/4/2005 found that vegetation within the pipeline corridor is mainly in a degraded state, having been impacted through edge effects, weed invasion, and past clearing activities. Vegetated areas surrounding the proposed pipeline route are considerably more likely to have increased biological values, and thus this vegetation is not likely to be representative of an area of high biological diversity.

Methodology

GIS Database - Swan Coast Plain South 1m Orthomosaic - DLI 01/04
Site inspection 28/4/2005

(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 has been significantly altered from its original vegetation structure, now containing only a sparse upperstorey of E. gomphocephala in the northern portion of the proposed area, and a relatively sparse understorey consisting of both introduced and native species along the length of the proposed pipeline area.

Based on the quality of the vegetation on site, it is considered likely that the area surrounding this application contains a much wider variety of habitat types, and as such this vegetation is not considered to be representative of significant habitat for fauna, both locally and regionally.

Methodology

Site inspection (28/4/2005)

(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

The local area, defined as a 5km radius surrounding the proposed site, contains 19 known populations of Rare and/or Priority Flora. Of these, only one exists within the same vegetation type as that under application. A site inspection of the property on the 28/4/2005 found that the area of vegetation under application has been noticeably impacted through historical clearing, leaving the majority of the proposed pipeline route in a degraded condition. It is therefore considered unlikely that the proposed clearing would be at variance to this principle.

Methodology

GIS Database: Declared Rare and Priority Flora - CALM 01/07/2005

(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

The Threatened Ecological Communities (TEC) database has identified 23 known TEC populations within the local area, defined as a 5km radius surrounding the proposal. Of these, one example is known to exist within the same vegetation complex as that under application. Based on the current condition of the vegetation under application, and the historical impacts of development in the area, it is considered unlikely that the proposed clearing would be at variance to this principle.

Methodology

GIS Database: Threatened Ecological Communities - CALM 12/04/2005
Site inspection 28/4/2005

(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 State Government is committed to the National Objectives and Targets for Biodiversity Conservation which includes a target that prevents clearance of ecological communities with an extent below 30% of that present pre-European settlement (Department of Natural Resources and Environment 2002; EPA 2000). The vegetation on site is a component of Beard Vegetation association 998 (Hopkins et al. 2001) and Heddle vegetation complex Cottesloe Complex Central and South (Heddle et al, 1980), which while recognised as being depleted, are above the recommended minimum 30% limit.

	Pre-European area (ha)	Current extent (ha)	Remaining %*	Conservation status**	% in reserves/CALM-managed land
IBRA Bioregion	1,529,235	657,450	43%	Depleted	
Town of Kwinana	11,981	4,760	39.7%	Depleted	
Beard vegegtation association - 998	51,094	18,320	35.9%	Depleted	32.9%
Heddle vegetation complex - Cottesloe Complex - Central and South	44,995	18,474	41.1%	Depleted	8.8%

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

Methodology Department of Natural Resource and Environment (2002)
EPA (2000)
Hopkins et al. (2001)
Heddle et al. (1980)
Shepherd et al. (2001)

(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 within the boundaries of the area under application. At the closest point, the proposed clearing occur will approximately 450 metres to the south west of the Conway Road Resource Enhancement Wetland. This distance is more than 50 metre minimum recommendation presented by the Water and Rivers Commission Position Statement: Wetlands (2001).

Methodology Water and River Commission Position Statement: Wetlands (2001)
GIS Database: Geomorphic Wetlands ý Swan Coastal Plain ý DOE 15/09/04
GIS Database: EPP, Lakes ý DEP 28/07/03

(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**
The soil type within the proposed pipeline corridor is defined as Safety Bay Sand formation, comprised primarily of calcareous sand.

Development approval for the proposed pipeline has been obtained from the Town of Kwinana, and contains conditions relating to dust management and water runoff. With the relatively narrow dimensions of the proposed clearing and other management options in place, it is not expected that land degradation through wind and water erosion would increase by any appreciable amount.

Methodology Site inspection (28/4/2005)

(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**
The area under application located within a relatively close proximity to Bush Forever Site 349, being approximately 400 metres to the south east of the applied area. Based on the limited area and quality of the vegetation under application, and the buffer of Rockingham Road, it is considered unlikely to clearing will impact adversely on the reserve. The local area surrounding the application also contains Bush Forever Site 346, and the CALM managed Leda Nature Reserve and the Harry Waring Marsupial Reserve. These reserves however, are all located at distances greater than 2.5 kilometres, and as such as not likely to be impacted through the approval of this proposal.

Methodology GIS Database: CALM Managed Lands and Water - CALM 01/08/04
GIS Database: Bushforever - MFP 07/01

(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 for the purpose of the assessment is primarily comprised of calcereous fine - medium grained quartz sand (Site inspection, 28/4/2005) which would have a relatively high capacity for water infiltration. While the clearing of vegetation from the proposed pipeline route will likely increase the infiltration

and recharge of groundwater on site, the scale, quality and amount of the vegetation to be removed, make this proposal unlikely to appreciably impact on the quality of surface or groundwater.

Methodology Site inspection (28/4/2005)

(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 of vegetation under application is not located within close proximity to any wetlands or watercourses. Correspondence from the applicant (DoE TRIM ref: IN19895) advises that the groundwater table below the applied area is at a minimum distance of 2 metres. Although the clearing of vegetation will increase water infiltration to the groundwater table, the scale and amount of clearing makes this application unlikely to impact on localised flooding.

Methodology Site inspection (28/4/2005)

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

Comments

The Town of Kwinana have assessed the application and have no objection to the clearing, provided that the applicants ensure they liaise with the appropriate service authorities prior to undertaking any clearing. Information provided by the applicant (DoE TRIM ref: IN19895) indicates that planning approval for the proposed CO2 pipeline has been approved by the Town of Kwinana, subject to conditions.

No other statutory approvals are required under legislation administered by the Department when considering this proposal.

Methodology Town of Kwinana Direct Interest Submission (DOE TRIM ref: 2005I/1167)

4. Assessor's recommendations

Purpose	Method	Applied area (ha)/ trees	Decision	Comment / recommendation
Building or Structure	Mechanical Removal	1.2	**Grant**	The assessable criteria have been addressed, the no objections were raised. The assessing officer therefore recommends that the permit be granted.

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 (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.

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.

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, BJ (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.

Water and Rivers Commission Position Statement: Wetlands (2001)

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)