Department of Environment and Conservation

Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 2627/1

Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: **Rocla Quarry Products**

1.3. Property details

Property: LOT 11 ON DIAGRAM 35288 (House No. 189 PAGANONI KARNUP 6176)

Local Government Area: City Of Rockingham

Colloquial name:

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
18.3		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
Heddle Vegetation Complex: Karrakatta Complex - Central and South - Predominantly open forest of E. gomphocephala - E. marginata - E. calophylla and woodland of E. marginata - Banksia species (Heddle et al, 1980) Beard Vegetation Associations: 998 - Medium woodland; tuart (SAC Bio Datasets 3/09/2008; Shepherd 2006)	The proposal is to clear 18.3 hectares of native vegetation for the purpose of extractive industries. The area under application is predominantly cleared with scattered stands of mature trees including Eucalyptus gomphocephala, Eucalyptus marginata and Banksia attenuata over pasture grasses and Ehrharta species.	Completely Degraded: No longer intact; completely/almost completely without native species (Keighery 1994)	Vegetation condition obtained from site inspection and flora survey (RPS, 2008)

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 Eucalyptus gomphocephala, Eucalyptus marginata and Banksia attenuata with no understorey present, and is in completely degraded condition.

Given the completely degraded condition and the low species diversity of the vegetation under application it is not considered likely that the area under application comprises a high level of biodiversity.

Methodology RPS (2008)
DEC (2008)

(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 may be at variance to this Principle

The vegetation under application comprises individual Eucalyptus gomphocephala, Eucalyptus marginata and Banksia attenuata with no understorey present. It is therefore not considered likely to provide suitable vegetation cover for ground-dwelling fauna such as Quenda.

Some of the mature Eucalyptus gomphocephala and Eucalyptus marginata are of hollow-bearing age, and therefore may contain hollows with the potential to be used for habitat by fauna species such as the threatened Carnaby-s Black Cockatoo (Calyptorhynchus latirostris).

Given that the vegetation under application may include habitat hollows that could be utilised by Carnaby's Black Cockatoo, it is considered that it may comprise significant habitat for this species or other threatened fauna.

A condition has been placed on the permit requiring a fauna survey to identify potential habitat hollows, and relocation of fauna where necessary.

Methodology

RPS (2008)
DEC (2008)

(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 two known populations of the rare flora Drakaea elastica within the local area (5km radius), the closest being located approximately 1.6km to the southeast of the area under application. D. elastica is generally found in low-lying situations adjoining winter-wet swamps (Western Australian Herbarium 1998-).

Given that the rare flora in the local area are found in winter-wet areas and the area under application is located on a sandy rise, and given that the vegetation survey did not identify any understorey species within the applied area, the vegetation under application is not considered likely to include, or be necessary for the maintenance of, rare flora.

Methodology

RPS (2008)
DEC (2008)
Western Australian Herbarium (1998-)

(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 13 known occurrences of Threatened Ecological Communities (TEC) within the local area (5km radius), with the closest located approximately 2.6km to the northwest of the applied area.

These TECs have been identified as Floristic Community Types 19a (Sedgelands in Holocene dune swales of the southern Swan Coastal Plain) and 19b (Woodlands over Sedgelands in Holocene dune swales of the southern Swan Coastal Plain), and are associated with seasonal wetlands (Government of Western Australia, 2000).

Given that the TECs in the local area are associated with Holocene dune swales, and the area under application is located on a sandy rise, and given the distance to the nearest TEC, the vegetation under application is not considered likely to include, or be necessary for the maintenance of, a TEC.

Methodology

RPS (2008)
DEC (2008)

(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 'Karrakatta complex - Central and South' of which there is 29.5% of pre-European vegetation remaining (EPA 2006). The vegetation under application is also part of Beard vegetation associations 998 of which there is 41.5% remaining (Shepherd 2006)

The vegetation under application comprises Eucalyptus gomphocephala, Eucalyptus marginata and Banksia attenuata with no understorey present and is considered to be in a completely degraded condition. It is therefore not considered likely that the vegetation is representative of the abovementioned vegetation complex nor 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*	
Heddle vegetation complex			***	
Karrakatta Complex - Central and South	49,912	14,729	29.5	2.5
Beard vegetation associations 998	51,017	21,178	41.5**	

* (Shepherd et al. 2001)
** (Shepherd 2006)
***(EPA, 2006)

Methodology
EPA (2006)
Heddle et al. (1980)
Shepherd (2006)
GIS Databases:
Heddle Vegetation Complexes
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

The nearest wetland is a resource enhancement wetland located approximately 35m to the east of the area under application. Although a small portion of the applied area (0.2 hectares) is within the 50m buffer to this wetland it contains only three trees and therefore is not considered likely the clearing would impact on this wetland.

The vegetation under application comprises individual Eucalyptus gomphocephala, Eucalyptus marginata and Banksia attenuata. Given that no wetland dependent vegetation was observed during the site visit, it is not considered likely that the vegetation under application is growing in, or in association with a watercourse or wetland.

Methodology
GIS Databases:
Geomorphic Wetlands (Classification), Swan Coastal Plain
Hydrography, linear (hierarchy)
DEC (2008)

(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 soils within the area under application are identified as part of Spearwood S2a Phase, which are described as deep siliceous yellow-brown sands or pale sands. S2a phase soils are associated with a low risk of land degradation, a high risk of phosphorus export and a moderate to low risk of acid sulphate soils (State of Western Australia 2005).

The removal of vegetation from site will expose the sandy soils resulting in the potential to cause wind erosion.

Although the soils identified on site have a very high risk of wind erosion and a high risk of phosphorus export, the vegetation under application is limited to Eucalyptus gomphocephala, Eucalyptus marginata and Banksia attenuata trees and is considered to be in a completely degraded condition. In addition, the ground within the area under application 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.

The risk of wind erosion would also be addressed by the requirements of the planning approval and extractive industries licence issued by the City of Rockingham.

Methodology
DEC (2008)
State of Western Australia (2005)
Department of Agriculture (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 nearest conservation reserve is the Swamp and Adjacent Bushland Bush Forever site 395 (, which is located approximately 55m to south of the applied area

The vegetation under application comprises to Eucalyptus gomphocephala, Eucalyptus marginata and Banksia attenuata trees and is in completely degraded condition. The area under application provides limited connectivity between surrounding vegetation and the Bush Forever site. The vegetation under application is considered to have a very limited value as an ecological corridor to facilitate the movement of fauna.

Given that there is an adequate buffer between the area under application and the adjacent Bush Forever site, and that the vegetation under application is in completely degraded condition, it is not considered likely that the proposed clearing would have an impact on the environmental values of any nearby conservation reserve.

Methodology DEC (2008)
GIS Databases:
-Bushforever
-CALM Managed Lands and Waters

(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 wetland is located ~35m to the east of the applied area and the nearest watercourse is the Serpentine River which is located approximately 2.7km to the east. The area under application has a low salinity risk.

Although there is a wetland in close proximity given the high infiltration rates of the sandy soils identified within the area under application it is not considered likely that the proposed clearing would cause water erosion resulting in deterioration in surface water quality. In addition, it is not considered likely that the proposed clearing of ~18.3 hectares in completely degraded condition would cause deterioration in the quality of underground water.

Methodology GIS Databases:
Geomorphic Wetlands (Classification), Swan Coastal Plain
Hydrography, linear (hierarchy)

(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

Given the location of the site on a sandy rise, and given the low risk of water logging associated with the sandy soils, it is not considered likely that the proposed clearing would have an impact on peak flood height or duration.

Methodology DEC (2008)

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

Comments

An Extractive industries licence for sand mining activities has been issued by the City of Rockingham (Rocla, 2008).

The area under application has a moderate to low acid sulphate soil (ASS) risk. It is not considered likely that the proposed clearing would significantly disturb these soils so that management would be required.

The area under application is within the Proclaimed Groundwater Area of Rockingham. Therefore any abstraction of groundwater would require a licence. As the proposed purpose of the clearing is for extractive industry a groundwater licence is not required.

There is no other RIWI Act Licence, Works Approval or EP Act Licence that affects the area under application.

Lot 11 on Diagram 35288, is freehold land and is zoned Rural under the Metropolitan Regional Scheme.

Methodology References:
- Rocla (2008)

- Western Australian Planning Commission (2003)
GIS databases:
- Acid Sulphate Soil risk map, Swan Coastal Plain
- Metropolitan Regional Scheme
- RIWI Act, Groundwater Areas

4. Assessor's comments

Comment
The assessable criteria have been addressed and the proposed clearing may be at variance to principle (b)

5. References

CALM (2003). An Atlas of Tuart Woodlands on the Swan Coastal Plain in Western Australia. Department of Conservation and Land Management WA, Tuart Response Group and Ecoscape.

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

DEC (2008) Site Inspection Report for Clearing Permit Application CPS 2627/1, Lot 11 Paganoni Road, Karnup. Site inspection undertaken 25/08/2008. Department of Environment and Conservation, Western Australia (TRIM Ref DEC61741).

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.

Rocla (2008). Extractive Industry Licence, Issued by City of Rockingham TRIM Ref Doc 61731

RPS Environmental (2008). Vegetation Summary Lot 11 Paganoni Road, Karnup. Subiaco: RPS Environmental.

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.

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 26/08/2008).

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)