Department of Environment
Government of Western Australia

Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 615/1
Permit type: Purpose Permit

1.2. Proponent details

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

1.3. Property details

Property: LOT M1448 ON DIAGRAM 6412
Local Government Area: Shire Of Gingin
Colloquial name: Creighton Rd - Lot M1448

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
13.3		Mechanical Removal	Mineral Production

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 1027 - mosaic: medium open woodland; jarrah and marri with low woodland; Banksia/medium sparse woodland; jarrah and marri (Shepherd et al 2001, Hopkins et al 2001). Heddle vegetation complex - Karamal complex south: open forest of Eucalyptus marginata, Corymbia calophylla with second storey of Banksia grandis. Heddle vegetation complex - Moondah complex: low closed to low open forest of Banksia attenuata, B. menziesii; E. todtiana, B. prionotes on slopes, open woodland of C. calophylla, Banksia spp in valleys. (Heddle et al 1980)	The area under application is a 13.3ha block of vegetation within a 332ha property. An area in the north-western portion of the property has been previously cleared and used for mineral exploration with other smaller sections of the property parkland cleared. The vegetation under application is dominated by mixed Banksia species (B. attenuata and B.menziesii) with low open woodland, low open forest with Eucalyptus todtiana present in most areas (Henson 2005). Differences in the vegetation occur mainly in the understorey, which change with soil type and slope (Henson 2005). The condition of the vegetation ranges from degraded to very good (Henson 2005).	Good: Structure significantly altered by multiple disturbance; retains basic structure/ability to regenerate (Keighery 1994)	The vegetation condition is described as 'good' in this assessment as the condition of the vegetation ranges from 'very good' to 'degraded' (Henson 2005). The description of the vegetation to be cleared and its condition was obtained from a flora and vegetation survey of the area under application (Henson 2005).

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 area under application and surrounds consists predominantly of an association of Eucalyptus todtiana, Banksia menziesii and B. attenuata, which is common in other vegetation systems in the Darling District (Henson 2005). In addition, the Banksia/mixed Eucalypt Woodland formation occurs extensively to the east and the north of the study area (Henson 2005).

The vegetation condition of the area under application has been described as varying from 'very good' to 'degraded' (according to the Keighery (1994) scale) and may have been subjected to agricultural activities in the past (Henson 2005).

Given the various conditions of the vegetation under application and the commonality of the E. todtiana, B. menziesii and B. attenuata woodland association, it is unlikely that the clearing as proposed consists of a high level of biological diversity. Also, the area under application is adjacent to already cleared areas which may have caused further deterioration in the quality of the vegetation through edge effects such as weed invasion.

Methodology Henson (2005) (DoE Trim Ref IN21311)
Keighery (1994)

(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 following Specially Protected and Priority Fauna species are known to occur in the local area (10km radius):
Chuditch (Dasyurus geoffroii;
Western Mud Minnow (Galaxiella munda);
Western Brush Wallaby (Macropus irma); and
Hooded Plover (Charadrius rubricollis)
(CALM 2005a).
The area under application may also support suitable feeding habitat for the Carnaby's Black Cockatoo (Calyptorhynchus latirostris) (CALM 2005a).

There is a large band of vegetation along the southern boundary of the property, which is contiguous with vegetation on other properties that would allow the movement of fauna. In addition, the remainder of the property is well vegetated (114ha) and includes Banksia attenuata and B. menziesii that are food species for the Carnaby's Black Cockatoo.

The proponent has indicated that the excavation process is to be confined to the elevated ridge line that runs along the northern half of the property and any future excavation would be located along this alignment. The proponent has also indicated that clearing for excavation is not proposed for the southern half of the property as it low lying and would not be a viable option for excavation.

Given that 114ha of native vegetation will remain on the property, it is considered the Carnaby's Black Cockatoo and other fauna in the local area would not be as severely impacted by the proposed clearing as potentially could occur if this vegetation did not exist.

Methodology CALM (2005a) Land Clearing Proposal Advice (DoE Trim Ref HD26055)
Information provided by the proponent (DoE Trim Ref EI4512)
GIS Databases:
- Gingin 1m orthomosaic - DLI 03

(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 following Declared Rare Flora species are known to occur within the local area (10km radius) of the area under application:
Chamelaucium lullfitzii;
Eleocharis keigheryi;
Grevillea curviloba subsp curviloba; and
Grevillea curviloba subsp
(CALM 2005a)

No Declared Rare or Priority Flora were identified from the flora survey provided with the application (Henson 2005). CALM (2005a) raised concerns that the survey may not have been conducted at the appropriate time of year as it was conducted in summer and some DRF and Priority species may not have been identifiable as they would not have been flowering at this time. A subsequent survey was conducted during spring and this survey also did not identify any DRF or Priority Flora species (Weston 2005).

When considered collectively, it is considered that the two flora surveys are sufficiently robust (CALM 2005b) to conclude that the clearing as proposed is unlikely to impact on any species of conservation significance.

Methodology Henson (2005) (DoE Trim Ref IN21311)
CALM (2005a) Land Clearing Proposal Advice (DoE Trim Ref HD20655)
CALM (2005b) Revised Land Clearing Proposal Advice (DoE Trim Ref EI4355)
Weston (2005) (DoE Trim Ref EI4043)

(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 Threatened Ecological Communities (TEC) that are known to occur in the local area (10km radius) to the proposed clearing:

Perth to Gingin Ironstone Formation;
Herb-rich saline shrublands in claypans and Banksia attenuata woodlands over species-rich dense shrublands; and
Forests and woodlands of deep seasonal wetlands of the Swan Coastal Plain
(CALM 2005a)

However, it is considered that given the level of degradation of the vegetation within the area under application (Henson 2005), that it is unlikely that TECs would occur (CALM 2005a). As such, the clearing as proposed is not likely to be at variance to this Principle.

Methodology CALM (2005a) Land Clearing Proposal Advice (DoE Trim Ref HD26055)
Henson (2005) (DoE Trim Ref IN21311)

(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 within the area under application consists of Beard vegetation association 1027 which has approximately 56.5% remaining(Shepherd et al 2001, Hopkins et al 2001) and the Heddle vegetation complexes Karamal Complex South and the Moondah Complex which have approximately 59.4% and 38.7% respectively remaining (Heddle et al 2001). The State Government is committed to the National Objectives and Targets for Biodiversity Conservation (AGPS 2001) which includes a target that prevents clearance of ecological communities with an extent below 30% of that present pre-European (Department of Natural Resources and Environment 2002, EPA 2000). In relation to this application, the Beard vegetation association and the Heddle vegetation complexes are above this 30% value (Shepherd et al 2001, Hopkins et al 2001, Heddle et al 1980). In addition, the area under application is not contained within the Agricultural Region identified in the EPA Position Statement Number 2 (EPA 2000).

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

(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 within the area under application. A Conservation Category Wetland (CCW) abuts the southern boundary of the property more than 1 km away and another is mapped >700 m to the north of the proposed clearing. Agricultural land separates this CCW from the proposed clearing. It is therefore unlikely that the clearing as proposed would have any effect on these CCW's. Further,the vegetation under application is not considered to be wetland or watercourse dependent vegetation. Therefore, the clearing as proposed is not at variance to this Principle.

Methodology GIS Databases:
- Geomorphic Wetlands (Mgmt Categories) Swan Coastal Plain - DOE 15/09/04
- Hydrography, Linear - DOE 01/02/04

(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**
DAWA (2005) advise that there is a high risk of wind erosion, however it is unlikely to be a problem if there is adequate groundcover or windbreaks. There is also a risk of water erosion and eutrophication (DAWA 2005).

In relation to the risk of wind erosion, the excavation licence granted by the Shire of Gingin includes a condition in which "dust retention and mitigation techniques both at the excavation site and on the access road shall be employed at all times...". In addition, the proponent intends to clear small portions sequentially as required. Works are currently operating at the site and to date no dust complaints have been received. The proponent is also required to rehabilitate completed areas as a condition of its excavation licence.

In relation to potential water erosion, there is a gentle slope within the area under application towards the north and this is where the risk of water erosion is greatest (DAWA 2005). However, the area inside this northern boundary is well vegetated (150 - 200m between proposed clearing and property boundary) and the vegetation would aid in the reduction of potential water erosion.

The risk of eutrophication is associated with the landscape unit Gingin subsystem phase 3 and DAWA (2005)

advises that the intended landuse is unlikely to exacerbate this. There are good vegetation stands in this buffering the CCW and other surface water bodies from the area under application.

As such, it is considered that the clearing as proposed is unlikely to cause appreciable land degradation on or off site.

Methodology DAWA (2005) Land Degradation Assessment Advice (DoE Trim Ref EI2258)
Information provided by the proponent (DoE Trim Ref EI4043)
Copy of excavation licence (DoE Trim Ref EI2681)

(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 Yeal, Breera Road and Bampanup Nature Reserves all occur within 10km of the area under application (CALM 2005). However they are sufficiently distanced from the proposed clearing that the environmental values of these reserves are unlikely to be impacted (CALM 2005). There is little to no connectivity between these reserves and the area of proposed clearing. It is therefore considered unlikely that the clearing as proposed would be at variance to this Principle.

Methodology CALM (2005a) Land Clearing Proposal Advice (DoE Trim Ref HD26055)
GIS Databases:
- CALM Managed Lands and Waters - CALM 01/08/04

(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 not contained within a groundwater protection area or Public Drinking Water Source Area (PDWSA). There is a Conservation Category Wetland (CCW) along the southern boundary of the property. This is over 1 km south of the proposed clearing, far greater than the 200 m buffer requirement outlined in the Department of Environment's Position Statement on Wetlands (Water and Rivers Commission 2001). There is a minor, non-perennial watercourse just outside the area under application that flows towards this CCW. There are also a number of EPP lakes in the local area (10km radius). However it is considered that due to the distance from the proposed clearing, they are unlikely to be affected.

The groundwater in the local area is relatively fresh (Total Dissolved Solids 1,000-3,000 mg/L). Given that the majority of the remaining area of the property is well vegetated, it is considered unlikely that the clearing as proposed would have a significant impact on groundwater quality.

Methodology GIS Databases:
- EPP, Areas - DEP 06/95
- Public Drinking Water Supply Areas (PDWSA) - DOE 29/11/04
- Hydrography, Linear - DOE 01/02/04
- Geomorphic Wetlands (Mgmt Categories) Swan Coastal Plain - DOE 15/09/04
- EPP, Lakes - DEP 28/07/03
- Groundwater salinity, Statewide - 22/02/00

(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 on a gentle slope (Henson 2005) and a minor, non-perennial watercourse is located next to the proposed clearing. In addition, the majority of the remaining area of the property is well vegetated (Henson 2005). It is therefore not likely that the clearing as proposed would cause or exacerbate the incidence or intensity of flooding.

Methodology Henson (2005) (DoE Trim Ref IN21311)
GIS Databases:
- Hydrography, Linear - DOE 01/02/04

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

Comments

The submission from the Shire of Gingin advised that they did not support the clearing as proposed as Planning Consent for Extractive Industries did not cover the area applied to clear. Subsequent to this submission in May 2005, a Extraction Licence from the Shire of Gingin has been obtained by the proponent for the mining tenement and is valid for the 2005/06 financial year. (Note: Extraction Licences are subject to annual review, therefore licences are only valid for 12 months)

A submission was also received from the Gingin Land Conservation District Committee outlining their concerns in relation to the impacts of clearing of native vegetation on the Ellen Brook Catchment. The proponent has indicated that their intentions are to clear small portions sequentially as required rather than as one large area. It is considered that by clearing smaller areas every year would help to prevent any potential waterlogging, salinity or other land degradation issues.

A submission received from the public urges that a comprehensive flora and fauna survey be conducted. This survey should consider EPA Position Statement No 2, the biodiversity of the site, the significance of the site for fauna; whether the site contains DRF or Priority species or Threatened Ecological Communities; and that the clearing meets the National Strategy for the Conservation of Australia's Biological Diversity. These points have been considered and addressed within the assessment of the Clearing Principles where appropriate.

There is no other RIWI Act Licence, Works Approval or EP Act Licence that will affect the area that has been applied to clear.

Methodology Direct interest submission from Shire of Gingin (DoE Trim Ref EI1175)
Copy of Excavation Licence provided by Proponent (DoE Trim Ref EI2681)
Direct interest submission from the Gingin Land Conservation District Committee (DoE Trim Ref EI1255)
Public submission (DoE Trim Ref EI1324)

4. Assessor's recommendations

Purpose	Method	Applied area (ha)/ trees	Decision	Comment / recommendation
Mineral Production	Mechanical Removal	13.3	**Grant**	The clearing principles have been assessed and the clearing as proposed may be at variance to Principle b. The proponent had indicated that clearing for excavation purposes within the southern portion of the property is not proposed. It is more viable to excavate on the elevated ridge as there would be more of the resource available than in the lower lying areas in the southern section of the property. As such, the southern section of the property (113ha) would be available for fauna habitat. In addition, the proponent has indicated that their intention is to clear small areas sequentially as required, it is considered that this would aid in the reduction and minimisation of any land degradation issues. Therefore the assessing officer recommends that this permit be granted.

5. References

AGPS (2001) The national objective and targets for biodiversity conservation 2001-2005. Commonwealth of Australia, Canberra.

CALM (2005a) Land clearing proposal advice. Advice to A/Director General, Department of Environment (DoE). Department of Conservation and Land Management, Western Australia. DoE TRIM ref HD26055.

CALM (2005b) Revised Land clearing proposal advice. Advice to A/Director General, Department of Environment (DoE). Department of Conservation and Land Management, Western Australia. DoE TRIM ref EI4355.

DAWA (2005) Land degradation assessment report. Office of the Commissioner of Soil and Land Conservation, Department of Agriculture Western Australia. DoE TRIM ref EI2258.

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.

Henson, M. (2005) Vegetation and Flora of Rocla Quarry, Creighton Road Gingin. Prepared for RPS Bowman Bishaw Gorham, Environmental Management Consultants. DoE Trim Ref IN21311

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.

Weston, AS (2005) Rare Flora Search of Rocal Quarry Site Creighton Road, Gingin. Prepared for Kristen Bennett of RPS Bowman Bishaw Gorham. DoE Trim Ref EI4043

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)