



1. Application details

1.1. Permit application details

Permit application No.: 284/1

Permit type: Area Permit

1.2. Proponent details

Proponent's name: Bradley Craig & Ann Bani

1.3. Property details

Property: M70/1085

Local Government Area: Shire Of Mundaring

Colloquial name:

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
2		Mechanical Removal	Mining

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 3003: Medium forest; jarrah & marri on laterite with wandoo in valleys, sandy swamps with tea-tree and banksia. (Hopkins et al. 2001, Shepherd et al. 2001).	The proposal includes the clearing of 2 hectares of vegetation which has been damaged through fire within the last few years.	Degraded: Structure severely disturbed; regeneration to good condition requires intensive management (Keighery 1994)	Observed during site visit (1/12/04): The majority of the vegetation of the area (2 ha) to be cleared is quite degraded through past fire impacts. Upperstorey species appear to have recovered poorly, with many examples of dead mature trees, with few containing weak regrowth.
Heddlle Vegetation Complex: Yalanbee and Dwellingup Complex in Low Rainfall (Heddlle et al. 1980).	A site inspection of the property (01/12/04) found that the vegetation is mainly an open forest of Eucalyptus marginata and Corymbia calophylla, with a relatively sparse understorey consisting of Macrozamia riedlei, Xanthorrhoea preissii, and Dryandra sessilis.		Understorey species have regenerated with native grasses being the main species, although large areas of relatively sparse vegetation are quite prevalent throughout the area .
Mattiske Vegetation Complex - Yalanbee (Y5) Mixture of open forest of Eucalyptus marginata subsp. thalassica-Corymbia calophylla and woodland of Eucalyptus wandoo on lateritic uplands in semiarid to perarid zones.			

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 has been significantly impacted and altered through past disturbance, namely fire. Upperstorey species have recovered poorly, with many dead trees present in the area under application. Understorey vegetation has regenerated, although it remains sparse in most areas. Due to the condition of the vegetation, it is considered unlikely that the vegetation under application comprises a high level of biological diversity.
Methodology	Site inspection (01/12/2004)

(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

CALM (2005) advises that minimal impact on significant fauna would be expected from this proposal due to the degraded condition of the vegetation under assessment, the relatively small area proposed to be cleared and the similar habitat which exists in the adjacent Woondowing Nature Reserve.

Methodology CALM (2005)

(c) Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, significant flora.

Comments Proposal is not likely to be at variance to this Principle

There are no known populations of Declared Rare Flora or Priority Flora within the vicinity of the proposed clearing (the nearest approximately 7 kilometres away). Vegetation under application has been substantially degraded, limiting its potential conservation value. It is therefore unlikely that the proposed clearing will impact on significant flora.

CALM (2005) advises that there appears to be a low probability of the proposal being at variance with this principle since the vegetation under assessment is likely to be well represented in the adjacent nature reserve and the clearing is limited to a relatively small area.

Methodology CALM (2005)
GIS Database - Declared Rare and Priority Flora List - CALM 13/08/03
Site inspection (01/12/2004).

(d) Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of a significant ecological community.

Comments Proposal is not likely to be at variance to this Principle

The Threatened Ecological Community (TEC) database did not highlight any TEC within the area under application, or the local area, defined as a 10 kilometre radius surrounding the application. Given that the project area has been disturbed through past fire events, there appears to be a low probability of the proposed clearing to be at variance with this Principle.

Methodology GIS Database - Threatened Ecological Communities - CALM 15/7/03
Site inspection (01/12/04)

(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 a component of Beard Vegetation Association 3003 (Hopkins et al. 2001), Matiske Vegetation Complex Ylanbee (Y5) (Matiske Consulting 1998) and Heddle Yalanbee and Dwellingup Complex (Heddle et al 1980). Both Beard and Matiske vegetation associations have a current extent above the 30% minimum representation recommended within the National Objectives Targets for Biodiversity Conservation (Department of Natural Resources and Environment, 2002; EPA, 2000). No information is available on the Heddle Vegetation complex.

	Pre-European area (ha)	Current extent (ha)	Remaining %*	Conservation status**	% in reserves/CALM-managed land
IBRA Bioregion - Jarrah Forest	4,544,335	2,665,480	58.7	Least concern	
Shire of Mundaring	Information not available				
Beard vegetation association -3003	78,358	51,943	66.3	Least concern	36.4
-Matiske vegetation complex Yalanbee (Y5)	1,243,773	852,364	68.5	Least concern	

* (Shepherd et al. 2001)

** (Department of Natural Resources and Environment 2002)

Methodology Hopkins et al (2001)
Shepherd et al (2001).
Department of Natural Resources and Environment (2002).
Matiske Consulting (1998).
Heddle et al (1980)

(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 watercourses or wetlands associated with the area under application.

Methodology GIS Database - Hydrography, linear - DOE 1/2/04
Site inspection (01/12/2004).

(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 proposed clearing of the 2 hectares is not likely to cause appreciable on site or off site land degradation. The soil type is classified as Laterite, and includes overlying pisolithic gravel and laterized sand. It is considered that erosion through wind and water will not cause any appreciable impact.

Methodology GIS Database - Geology, 250K
Site inspection (1/12/04)

(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**
CALM (2005) advises that the proposed gravel extraction has the potential to impact on the environmental values of the adjacent Woondowing Nature Reserve, through the introduction and spread of Phytophthora, and or the introduction of weed species.

However with due care these potentially damaging impacts could be successfully managed through appropriate machinery hygiene procedures and the rehabilitation of exhausted gravel pits at the cessation of mining operations. CALM also recommends locating the gravel pit at an appropriate distance from the edge of the reserve so as to provide a buffer.

If approval to clear is granted CALM strongly recommends that the proponent be required by license condition to implement a strategy to minimise the risk of the introduction and spread of phytophthora, and weeds.

Methodology CALM (2005)

(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**
Mining Lease 70/1085 is not within a proclaimed groundwater area. Based on the geology of the area, it is considered that the groundwater table will be absent from the area. If groundwater is present on site, it would most likely be difficult to obtain, and of inferior quality and quantity.

Methodology GIS Database - Groundwater Subareas - WRC 10/10/00
Site inspection (01/12/2004).

(j) Native vegetation should not be cleared if clearing the vegetation is likely to cause, or exacerbate, the incidence of flooding.

Comments **Proposal is not likely to be at variance to this Principle**
Flooding impacts are unlikely to occur as a result of the proposed clearing due to its size and location. The area under application is located on the Darling Range, at an elevation of approximately 280 metres AHD, and is approximately 3 kilometres from the nearest Minor Perennial Water Course.

Methodology GIS Database - Topographic Contours, Statewide - DOLA 12/09/02
Site inspection (01/12/2004).

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

Comments
No comment.

Methodology

4. Assessor's recommendations

Purpose	Method	Applied area (ha)/ trees	Decision	Comment / recommendation
Mining	Mechanical Removal	2	Grant	<p>The assessable criteria have been addressed, and the proposal may be at variance with Principle (h).</p> <p>CALM (2005) has indicated that the proposed clearing adjacent to Woondowing Nature may impact on the reserve through the introduction and spread of Phytophthora, and or the introduction of weed species. These issues will be manageable through appropriate machinery hygiene procedures and the rehabilitation of exhausted gravel pits at the cessation of mining operations.</p> <p>These potential issues can be adequately dealt with through the Department of Industry and Resources Mining Lease Agreement, and the commitments the proponent has under that Agreement to manage and revegetate the applied area.</p> <p>The assessing officer therefore recommends that the permit be granted, with the following advice:</p> <ol style="list-style-type: none">1. All activities should be conducted in accordance with Mining Approval from the Department of Industry and Resources.2. To avoid the potential introduction of weeds and dieback into the proposed clearing area, excavation equipment should be cleaned free of soil and vegetation before entering and leaving the site. Cleandown should consist of brushing, gouging and/or scraping to remove any compacted soil or plant material, accompanied and followed by jetting with compressed air or high pressure water such that all soil and plant residue is removed.3. No machines, trucks, or equipment are to be taken into, or moved through Woondowing Nature Reserve or associated firebreaks.

5. References

- CALM (2005) Land clearing proposal advice. Advice to A/Director General, Department of Environment (DoE). Department of Conservation and Land Management, Western Australia. DoE TRIM ref EI617.
- 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.
- Hedde, 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.
- Mattiske Consulting (1998) Mapping of vegetation complexes in the South West forest region of Western Australia, CALM.
- 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.