



1. Application details

1.1. Permit application details

Permit application No.: 836/1

Permit type: Area Permit

1.2. Proponent details

Proponent's name: Shire of Augusta Margaret River

1.3. Property details

Property: SUSSEX LOCATION 4008 (Lot No. 4008 TANAH MARAH BRAMLEY 6285)

Local Government Area: Shire Of Augusta-Margaret River

Colloquial name:

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
12		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
<p>Beard Unit: 3 - Medium forest - jarrah-marri</p> <p>Mattiske: Cowaramup (C2) - Open forest of Eucalyptus marginata subsp. marginata-Corymbia calophylla-Banksia grandis on lateritic uplands in perhumid and humid zones.</p>	<p>Given the time constraints placed on the assessment of this application the Department was unable to complete a Site Report for the proposed clearing. The vegetation however has been previously assessed by CALM.</p> <p>A CALM survey was undertaken between the 27th and 30th November 2003 and reported the following:</p> <p>The dominant vegetation community of this area is Eucalyptus marginata, Corymbia calophylla open forest, over Hakea lissocarpa, Hibbertia hypericoides, Podocarpus drouynianus, Hakea amplexicaulis, Patersonia umbrosa open low heath, on lateritic gravelly loam upland/upper slopes with lateritic rock outcrops.</p> <p>A CALM dieback interpreter assessed the Tanah Marah Reserve on the 13th August 2004 for Phytophthora dieback presence. The following conclusions from evidence gathered were;</p> <ol style="list-style-type: none"> 1. The vegetated area within the reserve is sporadically infested. 2. Some uninfested areas may exist, however sufficient evidence was 	<p>Very Good: Vegetation structure altered; obvious signs of disturbance (Keighery 1994)</p>	<p>CALM comments from the survey completed between 27th-30th November 2003 were as follows:</p> <p>'The vegetation health of this site is 'Excellent' condition, with logging being the only indication of past disturbance.</p> <p>The Department acknowledges the recent confirmation of the presence of Phytophthora (dieback) and believes this devalues the vegetation to a degree. For this reason the condition has been rated as 'Very Good' instead of 'Excellent' as previously given by the CALM.</p>

collected to rule out separation of uninfested from infested area. For the purpose of pit extension, or starting a new pit elsewhere in the reserve, the entire area should be regarded as infested or unprotectable.

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 may be at variance to this Principle**

The vegetation under application was rated to be in 'excellent' condition by CALM officers while completing a flora survey in November 2003 (Keighery, BJ 1994). An assessment of the vegetation has since been completed by a CALM dieback interpreter who confirmed the existence of the disease sporadically spread throughout the reserve. The Department believes the vegetation's condition should be decreased to 'very good' instead of excellent, showing consideration to the presence of dieback.

A flora survey of the vegetation was completed in November 2003 producing a species list of all plants identified within the area. The survey showed a vast number of species were present within the reserve and confirmed the area's high level of biodiversity and structure.

This evaluation of the vegetation suggests it may provide significant habitat for indigenous fauna, however without CALM advice this cannot be confirmed.

The area under application has been identified as the Cowaramup Mattiske vegetation type, and has a low representation, with only 23% remaining. The majority of the large remnants remaining within the local area are also this vegetation type and together form ecological linkages which in turn maintain genetic diversity.

The Pit Management Plan outlines areas proposed to be retained to act as both buffers and 'green belts'. The pit operation area covers approximately 23 hectares, of which 11.8ha are proposed for quarrying operations and 9.09ha are proposed as 'green belts'. The Department believes these belts will provide sufficient linkages to other remnants while the clearing operations are occurring. The Shire has also committed to rehabilitating the area on completion of the extraction operation. The revegetating will be done progressively within the identified cells as the excavation is complete in these areas.

Given the above information the Department believes the proposed green belts will act as corridors to other remaining remnants in the local area, while the extraction is occurring and that the existing links will be maintained when the area is rehabilitated.

The Department believes the vegetation may provide potential habitat for fauna given its vegetation condition rating and its large area. If cleared it could impact on the faunal communities which may exist within the vegetation. It is for this reason the Department believes the proposal may be at variance to this principle.

Methodology Shire of Augusta Margaret River Pit Management Plan 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 may be at variance to this Principle**

CALM advice was not available for this proposal.

There is a potential risk in relation to this principle, given the large size of the area proposed for clearing and the vegetation condition rating of 'very good'. The risk may be mitigated to some extent, by the proposed staged development approach and the availability of uncleared corridors as refuges.

The Department concludes the proposal may be at variance to this principle.

Methodology Shire of Augusta Margaret River Pit Management Plan 2004

(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**

Caladenia excelsa, an identified Declared Rare Flora (DRF) species occurs 6.7km west of the area under application. There are nine other specimens in the local area (10km radius) and all occur within the same Beard vegetation type. There are vegetated links from all six DRF specimens in the local area to the area under application.

There is one Priority 2 species, *Acacia subracemosa* in the local area. This occurs 9.8km north west of the area under application. This species is found within a different vegetation type and is not linked by vegetation.

There are two Priority 3 species in the local area, and these occur within the same Beard vegetation type as the area under application. The closest is *Bossiaea disticha* which is located 7.5km west of the proposed clearing. Both of these specimens are linked by vegetation to the area under application.

Two Priority 4 species exist within the local area, however neither of which are found within the same vegetation type or linked by vegetation. The closest is *Jansonia formosa* which is 5.3km south west from the proposed clearing.

The Department of Conservation and Land Management (CALM) undertook Threatened Flora surveys between the 27th and 30th November 2003. The report found the following:

"Within a 10km radius of the inspection site the Declared Rare species *Dryandra squarrosa* ssp. *argillacea* and 20 Priority listed species have been previously recorded."

"No currently listed Declared or Priority flora were located within the area inspected."

Given the above information the Department believes the proposal is not likely to be at variance to this principle

Methodology CALM Survey 2003
GIS Database:
- Declared Rare and Priority Flora List - CALM 13/08/03

(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 no known occurrences of Threatened Ecological Communities within a 10 km radius of the proposed clearing.

The Department concludes the proposal is not likely to be at variance to this principle.

Methodology GIS Database:
- Threatened Ecological Communities - CALM 15/7/03
- Threatened Plant Communities - DEP 06/95

(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 may be at variance to this Principle

The application is located in the Jarrah Forest Bioregion in the Shire of Augusta Margaret River. The extent of native vegetation in these areas is 58.3% and 71.7% respectively (Shepherd et al. 2001). There is approximately 40% of native vegetation remaining in the local area and the majority of this is within State Forest.

The Mattiske vegetation complex, Cowaramup represents the entire 12 hectares proposed for clearing. There is currently 23% of this type remaining, which is considered to be vulnerable (Department of Natural Resources and Environment 2002). Although this vegetation type has been identified as having a low representation, much of it is protected within large areas of state forest existing in the local area.

The Department acknowledges the fact that the Mattiske vegetation complex has been identified as being poorly represented and also CALM's vegetation rating of 'excellent' condition. It should be noted however that since this rating was given CALM have completed a test confirming the presence of *Phytophthora*. The Department believes the infestation of this disease would decrease the vegetation rating to Very Good (Keighery, BJ 1994).

The existence of *Phytophthora*, which CALM have reported to be sporadically infested throughout the reserve compromises the value of the existing vegetation to some extent.

Given the above information the Department concludes the clearing proposal may be at variance to this principle.

Methodology CALM Survey 2003
GIS Database:
- Mattiske Vegetation - CALM 24/3/98
- Interim Biogeographic Regionalisation of Australia - EM 18/10/00
- Pre European Vegetation - DA 01/01
- Local Government Authorities - DLI 8/07/04

(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 within the area proposed for clearing.

A minor perennial watercourse exists to both the west (approximately 250m) and east (approximately 155m) of the area under application.

There is a 20m gradient between the proposed gravel pit and eastern watercourse creating a small risk of potential runoff entering the stream. The Pit Management Plan however explains the intended use of silt traps and settlement ponds to be constructed down slope of the extraction area to combat this issue. The Management Plan also confirms a 50m vegetated buffer will be left on the eastern boundary, which should also assist in filtration, should any runoff leave the property.

No wetlands exist on the property or within the local area.

Given the above information the Department concludes the proposal is not likely to be at variance to this principle.

Methodology Shire of Augusta Margaret River Pit Management Plan
GIS Database:
- Hydrography Linear - DoE 1/2/04

(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

The Department of Agriculture advice was received on 04/11/05 and the following recommendations were made:

Degradation Assessment:

Cowaramup Flats Phase

Degradation risks associated with this soil landscape unit include:

Eutrophication - 5% of this map unit is rated as having a very high risk of phosphorus loss. This loss would most likely be tied to areas of pale deep sand within this landscape unit and if this occurs on this property it is unlikely to be utilised for gravel extraction. As the site will not be used for agriculture the levels of nutrients in the soil will not be artificially elevated by the use of fertilizers. Once the extraction process has been completed the area will be rehabilitated back to native vegetation and the risk of movement of nutrients off site would be minimal.

Waterlogging, 5% of this landscape unit is rated as having a very high risk of waterlogging.

The risk of other forms of land degradation is considered low.

Conclusion:

The area is well suited to the proposed land use.

"The proposed clearing of 12 hectares of land within Reserve 23495 is unlikely to cause appreciable land degradation provide the site is progressively rehabilitated to native vegetation."

"Therefore this clearing is unlikely to be at variance to Principle (g)."

The Pit Management Plan has measures in place to control sediment run off with silt traps, settlement ponds and vegetated buffers.

Given the above information the Department concludes the proposal is not likely to be at variance to this principle.

Methodology Department of Agriculture Report 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 Bramley National Park exists approximately 600m south west of the proposed clearing. The Park is linked to the area under application by vegetation and is located within the same Matiske vegetation complex, Cowaramup (C2).

Two other CALM Managed Lands / Water exist within the local area. The first being the Margaret River State

Forest which is found 5.9km east of the property and is within the same Beard vegetation type. The second is the Leeuwin Naturaliste National Park which is found approximately 7km west of the property, however does not share the same vegetation type.

One Registered National Estate exists within the local area. The Leeuwin Naturaliste Ridge Area is located approximately 7km west of the proposed clearing and does not share the same vegetation type.

The area proposed for clearing does form part of an ecological linkage between state forest and other large remnants in the local area. The Shire is willing however, to maintain vegetated buffers of at least 50m around the majority of the property. These buffers will provide corridors to maintain that linkage until the site has been replanted. The Department also acknowledges the rehabilitation plan the Shire has committed to commence on completion of the extraction program.

Given the above information the Department concludes the proposal is unlikely to be at variance to this principle.

Methodology GIS database:
- CALM Managed Lands and Waters - CALM 1/06/04
- Register of National Estate - EA 28/01/03

(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

A minor perennial watercourse exists approximately 155m downslope from the proposed clearing. The Pit Management Plan outlines the measures proposed to control dust emissions, which should prevent the dust from entering the watercourse. These include using the proposed 50m vegetated buffer to assist in trapping any resulting dust, and using a water tanker/sprayer to suppress any dust that may be emitted from stockpiled material.

The Management Plan also outlines the proposed methods to prevent any runoff leaving the property. The Shire plan to encourage drainage towards the containment sump/silt traps, thereby protecting the quality of the nearby watercourse.

The Shire proposes to maintain a 50m vegetated buffer around the majority of the extraction area which should help to filter any dust or runoff that may leave the site.

Storage of fuel and oil will not be permitted on site, and any re-fueling required will be by direct transfer from a daily tanker delivery. The Management plan also includes a policy of no oil changes to be carried out within the pit area. Any soil contaminated by oil or fuel will be removed from site and disposed of at an approved location. This practice will prevent any seepage into the watertable.

Given the above information the Department believes the proposal is not likely to be at variance to this principle.

Methodology AMR Pit Management Plan 2005
GIS Database:
- Hydrography Linear - DoE 1/2/04

(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

Due to the scale of the proposed clearing, flooding impacts are unlikely to occur.

The Department concludes the proposal is unlikely to be at variance to this principle.

Methodology GIS database:
- Topographic Contours, Statewide - DOLA 12/09/02

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

Comments

No water licences or works approvals are required for the proposed gravel extraction operation.

The property is zoned Public Purposes - Timber and Government Requirements and the extraction operation has already commenced in a small area of the property.

The advertisement of the proposed clearing attracted no submissions.

Methodology GIS Database:
- Town Planning Scheme Zones - MFP 8/98

4. Assessor's recommendations

Purpose	Method	Applied area (ha)/ trees	Decision	Comment / recommendation
Extractive Industry	Mechanical Removal	12	Grant	<p>Assessment of the clearing application found that Principle A, B and E may be at variance to the proposal. All other Principles were not likely to be at variance to the extraction operation.</p> <p>CALM advice was not available for Principles A and B and therefore the Department acknowledges the risk of allowing the clearing to take place. The vegetation may provide potential habitat to indigenous fauna.</p> <p>The Shire have committed to retaining 'green belts' on the property which will assist in providing habitat and corridors to fauna in the area. This commitment may reduce the risk identified for Principle B to a certain degree.</p> <p>The area under application has been classified as the Cowaramup Mattiske vegetation type, which is known to be poorly represented with only 23% of native vegetation remaining. Given the fact the disease Phytophthora is present within the vegetation, the Department believes that over time this area would deteriorate and become degraded.</p> <p>The Shire have proposed to progress the operation in stages, with 5 cells to be cleared over a three year period. They have committed to rehabilitate these cells progressively, by commencing the revegetation of a cell on completion of the extraction operation. Essentially this ensures only a small area is uncleared at one time.</p> <p>The Shire have identified the presence of dieback throughout the site and have proposed measures to prevent the spread of disease. The Department recommends the Shire liaise with CALM to develop a Phytophthora Hygiene Management Plan for the grave pit operation.</p> <p>The Department acknowledges the Shires commitment to revegetate the cleared cells upon completion of the extraction operation. This will be done by replacing the stockpiled topsoil, then revegetating by direct seeding and hand planting. A suggested species mix was provided by the Shire, however the Department has some concerns with the proposed species. Many of the suggested species are known to be sensitive to dieback such as <i>Eucalyptus marginata</i> and <i>Banksia grandis</i>.</p> <p>The Department recommends the Shire liaise with a Phytophthora expert from CALM to develop a list of species which are known to be 'dieback hardy' for the rehabilitation of the pit.</p> <p>In conclusion, the Department is satisfied that provided the 'green belts' are left while the extraction operation continues, and the Shire liaise with CALM on the above mentioned issues the site can be sustainably mined and rehabilitated to an acceptable state. The project could also be deemed to be for the public good, given the Shire's urgent requirement of gravel to complete their road construction projects.</p> <p>The Department recommends the clearing proposal be granted for 12 hectares.</p>

5. References

- Brockman Road Pit Management Plan 2005, Shire of Augusta Margaret River, Augusta Margaret River, Western Australia.
- DAWA Land degradation assessment report. Office of the Commissioner of Soil and Land Conservation, Department of Agriculture Western Australia. DoE TRIM ref XXXXX.
- 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.
- 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.

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)