



1. Application details

1.1. Permit application details

Permit application No.: 881/1

Permit type: Area Permit

1.2. Proponent details

Proponent's name: City of Cockburn

1.3. Property details

Property: LOT 501 ON DIAGRAM 97689

Local Government Area: City Of Cockburn

Colloquial name:

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
0.6		Mechanical Removal	Road construction or maintenance

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 vegetation association:</p> <p>- 1001: Medium very sparse woodland; jarrah, with low woodland; banksia & casuarina. (Shepherd et al. 2001)</p> <p>Hedde vegetation complex:</p> <p>- Bassendean Complex - Central & South: Vegetation ranges from woodland of <i>E. marginata</i> - <i>C. fraseriana</i> - <i>Banksia</i> spp. to low woodland of <i>Melaleuca</i> species, and sedgelands on moister sites. This area includes the transition of <i>E. marginata</i> to <i>E. todtiana</i> in the vicinity of Perth. (Hedde et al. 1980)</p>	<p>The proposal includes the clearing of 0.6 hectares of vegetation for the purpose of upgrading the existing Hammond Road infrastructure.</p> <p>Vegetation within the proposed area consists primarily of <i>Banksia attenuata</i>, <i>Banksia menziesii</i>, and <i>Eucalyptus marginata</i>, with an occasional <i>Nuytsia floribunda</i>. No native understorey vegetation was observed within the applied area, consisting entirely of weed and grass species.</p>	<p>Degraded: Structure severely disturbed; regeneration to good condition requires intensive management (Keighery 1994)</p>	<p>Vegetation description based on observations made during a site inspection on the 7th October 2005.</p>

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**
Vegetation within Lot 501 Hammond Road is limited primarily to *Banksia attenuata*, *B. menziesii*, and *Eucalyptus marginata*, with a weed and grass understorey. With the limited size of this application, and a relatively close proximity to reserves and areas of native vegetation, it is not considered that the applied area is representative of higher biological diversity in the region.

Methodology Site inspection (7/10/2005)

(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

Vegetation within Lot 501 Hammond Road is identified as being within a degraded condition, being limited to a relatively sparse upperstorey of *Banksia attenuata*, *B. menziesii*, and *Eucalyptus marginata*. All vegetation observed appeared to be relatively young, not containing any obvious indications of nesting hollows.

Native understorey vegetation or logs were not observed within the applied area, and thus it is considered unlikely that the vegetation represents significant habitat in the local area.

Methodology Site inspection (7/10/2005)

(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 24 known populations of Declared Rare (DRF) and/or Priority Flora, comprising of *Caladenia huegellii*, *Dodonaea hackettiana*, *Anthotium junciforme*, *Verticordia lindleyi* subsp. *lindleyi*, and *Tripterococcus paniculatus*. Within the same Heddl vegetation complex, there are 13 known populations of DRF and Priority Flora, consisting of the above listed species.

Based on the degraded condition of the vegetation, limited native understorey species present within the area under application, and the highly modified environment of the existing road reserve, it is considered unlikely that the proposed clearing would be at variance to this Principle.

Methodology GIS Databases:
- Declared Rare and Priority Flora List - CALM 01/07/05
- Heddl Vegetation Complexes - DEP 21/06/95

(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 local area, defined as a 5km radius surrounding the proposed site, contains no known Threatened Ecological Communities (TEC). The Bush Forever study (Government of Western Australia, 2000) identifies possible TEC associated with the Bassendean Dune system in this landscape position are considered to be '*Banksia attenuata* woodlands over species rich dense shrublands' (20a), and 'Eastern *Banksia attenuata* and/or *Eucalyptus marginata* woodlands' (20b).

CALM (2005) advice provided for a property located immediately to the north of this proposal (CPS 703/1) advised that the closest State listed TEC is 7km to the west, at Woodman Point Regional Park. The TEC present is Swan Coastal Plain SCP30a described as *Callitiris preissii* (or *Melaleuca lanceolata*) forests and woodlands. With the vegetation in the applied area in a degraded condition, it is considered unlikely that the proposed clearing is at variance to this Principle.

Methodology CALM (2005)
Government of Western Australia (2000)
GIS Databases:
- Threatened Ecological Communities - CALM 12/04/05

(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

Vegetation within the applied area is defined by Heddl et al (1980) as Bassendean Complex - Central and South, and by Beard et al (Shepherd et al. 2001) as association 1001. These complexes have a representation of 27% and 27.6% respectively, and are thus classified as having a vulnerable conservation status (Department of Natural Resources and Environment, 2002).

While these vegetation complexes has a representation under the recommended 30%, the EPA recognises that vegetation within constrained area can be varied to a minimum level of 10% representation (EPA, 2003). Based on the quality of the vegetation under application, it is considered unlikely to be representative of these vegetation types, therefore does not contribute significantly to the conservation of these vegetation communities.

Methodology Heddl et al. (1980)
Shepherd et al. (2001)
Department of Natural Resource and Environment (2002)

(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

Branch Circle Resource Enhancement Wetland is located directly adjacent to the applied area, abutting the south-west corner of Lot 501. Also within relatively close proximity is the Kogolup Lake Conservation Category Wetland, at an approximate distance of 200 metre to its defined boundary.

Vegetation within the applied area is representative of upland vegetation of the Bassendean Dune system, with no obvious signs of wetland species or hydrology in the area.

Vegetation within Lot 501 is relatively sparse, with an understorey of native species absent from the area under application. Based on the type and condition of remaining vegetation, and small size of the proposed clearing it is considered that the applied clearing is not likely to be at variance with this Principle.

Methodology Site inspection (7/10/2005)

GIS Databases:

- Geomorphic Wetlands (Mgt Categories), SCP - DOE 15/09/04

(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 vegetation under application within Lot 501 has been highly modified through historic clearing activities and weed invasion. This vegetation is considered to be within a degraded state, consisting of a relatively sparse strip of *Banksia attenuata*, *Banksia menziesii*, and *Eucalyptus marginata*, and the occasional *Nuytsia floribunda*. Due to the relatively narrow dimensions of the clearing, it is not expected that erosion would increase by any appreciable amount.

The area surrounding the applied vegetation falls within Class 2 risk of Acid Sulphate Soils (ASS) - Moderate to low risk of shallow ASS or PASS occurring (< 3m), but moderate to high risk of ASS or PASS occurring at greater than 3 metres from the soil surface. Vegetation clearing proposed by the applicant is not expected to impact on potential acid sulphate soils.

Based on the amount of vegetation proposed for removal, and the already degraded nature of the area under application, approval of this proposal is considered unlikely to cause appreciable impact on on-site or off-site land degradation.

Methodology Site inspection (5/9/2005)

GIS Database:

- Acid Sulphate Soil Risk Map, SCP - DOE 04/11/04

(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 is not likely to be at variance to this Principle

Lot 501 Hammond Road is located directly adjacent to both the northern corridor of CALM managed Thomsons Lake Nature Reserve, and Bush Forever Site 391.

Based on the current degraded condition of the vegetation, and the relatively high availability of remaining stands of remnant vegetation in the local area, it is not considered likely that the vegetation under application contributes significantly as an ecological linkage or buffer to nearby conservation areas.

Methodology GIS Databases:

- CALM Managed Lands and Waters - CALM 01/08/04

- Bushforever - MSP 07/01

- Swan Coastal Plain North 40cm Orthomosaic - DLI 05

(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

Vegetation under application consists of a relatively sparse *Banksia attenuata*, *B. menziesii*, and *Eucalyptus marginata* within Lot 501 Hammond Road, Beeliar. Based on the current condition of the vegetation under application and the relatively small size of this proposal, it is considered unlikely that the clearing will have an appreciable impact on the quality of surface or groundwater.

Methodology Site inspection (7/10/2005)

(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

Lot 501 Hammond Road shows a general relief in topography toward the south-west, and the Branch Circle Resource Enhancement Wetland. Given the relatively small size of the area under application and the transmissive nature of the sands on site, clearing is considered unlikely to cause or exacerbate the incidence of flooding.

Methodology Site inspection (7/10/2005)

GIS Databases:

- Topographic Contours, Metropolitan Area - DLI
- Hydrography, linear - DOE 01/02/04

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

Comments

No further approvals are required from the Department of Environment for this proposal.

Methodology

4. Assessor's recommendations

Purpose	Method	Applied area (ha)/ trees	Decision	Comment / recommendation
Road construction or maintenance	Mechanical Removal	0.6	Grant	The assessable criteria have been addressed, and no objections were raised. The assessing officer therefore recommends that the permit be granted.

5. References

- CALM Land clearing proposal advice. Advice to A/Director General, Department of Environment (DoE). Department of Conservation and Land Management, Western Australia. DoE TRIM ref IN24153.
- 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 (2003) Guidance for the Assessment of Environmental Factors -level of assessment of proposals affecting natural areas within the System 6 region and Swan Coastal Plain portion of the System 1 Region. Report by the EPA under the Environmental Protection Act 1986. No 10 WA.
- Government of Western Australia (2000) Bush Forever Volumes 1 and 2. Western Australian Planning Commission, Perth WA.
- 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.
- 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)