



1. Application details

1.1. Permit application details

Permit application No.: 1644/1
 Permit type: Area Permit

1.2. Proponent details

Proponent's name: Peter Hunt Architect on Behalf of Department of Education

1.3. Property details

Property: KWINANA TOWNSITE LOT A427 (House No. 2 Clark Place ORELIA 6167)
 Local Government Area: Town Of Kwinana
 Colloquial name:

1.4. Application

| Clearing Area (ha) | No. Trees | Method of Clearing | For the purpose of: |
|--------------------|-----------|--------------------|-----------------------|
| 0.05 | 25 | Cutting | Building or Structure |

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 |
|--|--|--|--|
| Heddlle Vegetation Complex: Cottesloe Complex Central and South - Mosaic of woodland of <i>E. gomphocephala</i> and open forest of <i>E. gomphocephala</i> - <i>E. marginata</i> - <i>E. calophylla</i> ; closed heath on the Limestone outcrops. | The proposal includes clearing of 0.05ha of native vegetation for the purpose of constructing buildings associated with Kwinana TAFE. The vegetation under application has been parkland cleared and comprises <i>Eucalyptus</i> sp. with no understorey present. Vegetation is considered to be completely degraded. | Completely Degraded: No longer intact; completely/almost completely without native species (Keighery 1994) | Vegetation clearing description based on a site visit conducted by DEC officers for a clearing permit at the adjacent Kwinana High School on 9 October 2006. |
| Beard Vegetation Association: 998 Medium woodland; tuart | | | |

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 is degraded, having previously been parkland clearing, and comprises *Eucalyptus* woodland with an understorey consisting primarily of weeds. Given the condition, the limited area and the low species diversity of the vegetation under application it is not considered likely that it is representative of an area of high biodiversity in the local area, especially when compared to the nearby Bush Forever sites.

Methodology DEC site visit 9/10/06
 GIS Database: Bushforever - MFP 07/01

(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
 The vegetation under application is degraded, with an understorey consisting primarily of dense weeds, and therefore the habitat value of the site is likely to be limited. In addition, the area under application has no connectivity to larger tracts of native vegetation and is not likely to be considered as significant faunal habitat when compared to the larger vegetation remnants in the local area that are in better condition.

Methodology DEC site visit 9/10/06

(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 six known occurrences of four Declared Rare Flora (DRF) species within the local area (5km radius of the application), including *Caladenia huegelii*, *Aponogenton hexatepalus*, *Diuris micrantha* and *Drakaea elastica*, the closest of which is located approximately 3.1km to the east of the applied area. These occurrences are found on similar soil associations to that found within the applied area.

Although the DRF species recorded nearby are found on similar soils to the applied area, the vegetation under application is in a degraded condition, having a sparse native understorey and a severe invasion of weeds. It is therefore not considered likely that the vegetation under application includes, or is necessary for the continued existence of rare flora.

Methodology DEC site visit 9/10/06
 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

There are two known occurrences of Threatened Ecological Communities (TEC) within the local area of the application, the nearest of which is located approximately 3km to the north.

The TEC identified by the Bush Forever study to be associated with the Spearwood landform is *Melaleuca huegelii* - *Melaleuca acerosa* shrublands on Limestone ridges (26a) (Government of Western Australia 2000). Given that the vegetation under application comprises *Eucalyptus sp.* in a completely degraded condition, and given the distance to the nearest TEC, it is not considered likely to comprise, or be necessary for the maintenance of, a TEC.

Methodology DEC site visit 9/10/06
 Government of Western Australia (2000)

(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 part of Beard vegetation association 998 of which there is 35.9% remaining (Shepherd et al. 2002), and which is considered to be depleted (Department of Natural Resources and Environment 2002).

The vegetation under application is also identified by Heddl et al. (1980) as 'Cottesloe complex - Central and South' of which there is 41.1% of pre-European vegetation remaining, and which is also considered to be depleted (Department of Natural Resources and Environment 2002).

The vegetation under application is 0.05ha in a degraded condition with an understorey comprising mainly of weeds, having previously been previously cleared. The vegetation under application is therefore not considered to be representative of these vegetation complexes, and the proposed clearing is not likely to be at variance to this Principle.

| Pre-European | Current area (ha) | Remaining extent (ha) | Conservation % | % in reserves/DEC-status*** | managed land |
|-----------------------------------|-------------------|-----------------------|----------------|-----------------------------|--------------|
| IBRA Bioregion - SCP | 1,529,235 | 657,450 | 43.0* | Depleted | |
| LGA - Town of Kwinana | | | * | | |
| Local Area (~10km radius) | | | | | |
| Heddl vegetation complex | | | | | |
| Cottesloe Complex Central & South | | 44,995 | 18,474 | 41.1** | Depleted 8.8 |
| Beard vegetation associations 998 | | | | | |
| | 51,094 | 18,320 | 35.9* | Depleted | 3.0 |

* (Shepherd et al. 2001)

** (EPA, 2003)

*** (Department of Natural Resources and Environment 2002)

Methodology DEC site visit 9/10/06

Department of Natural Resources and Environment (2002)
EPA (2000)
Shepherd et al. (2001)
GIS Databases:
Heddl Vegetation Complexes - DEP 21/06/95
Pre-European Vegetation - DA 01/01

(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 Peel Main Drain is located approximately 2km southeast of the applied area, and the Spectacles Wetlands, which are Conservation Category Wetlands (CCW), are located approximately 2.4km to the northeast. No wetlands have been mapped within the area under application and no wetland dependent vegetation was observed on site.

Given the distance to the nearest wetland, and that no wetland dependent vegetation was observed during the site visit, the proposal is not considered likely to impact vegetation associated with a wetland or waterbody.

Methodology DEC site visit 9/10/06
GIS Databases:
Geomorphic Wetlands (Mgt Categories), Swan Coastal Plain y DEC
Hydrography, linear (hierarchy) - DOW

(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

Soils within the area under application have been identified as part of the Spearwood S2 Phase, which is described as 'lower slopes of dune ridge with moderately deep to deep siliceous yellow-brown sands or pale sands with yellow-brown subsoils and minor limestone outcrop' (State of Western Australia 2005). These soils have a low risk of land degradation (State of Western Australia 2005) including waterlogging, water erosion and acid sulphate soils, however, the sandy soils may have a high risk of wind erosion, especially with the removal of vegetation.

Although the soils identified on site have a high risk of wind erosion, the vegetation proposed to be cleared is 0.05 hectares in a completely degraded condition. It is therefore not considered likely that the proposal would result in appreciable land degradation.

Methodology State of Western Australia (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

Leda Nature Reserve is located approximately 3.4km south of the area under application, and a number of large Bush Forever sites are located within the local area, the closest of which is located approximately 1.3km to the east. The Spectacles Wetlands is also located approximately 3.1km to the northeast.

Given the distance to the nearest conservation reserve and the limited area of the clearing, the proposal is not considered likely to have an impact on the environmental values of any nearby conservation reserve, and is not likely to be at variance to this Principle.

Methodology GIS Databases:
Bushforever - MFP 07/01
CALM Managed Lands and Waters - CALM 1/07/05
Geomorphic Wetlands (Mgt Categories), Swan Coastal Plain - DEC
Hydrography, linear (hierarchy) - DOW
DOW

(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 located approximately 2km from the Peel Main Drain and 2.4km from the Spectacles Wetlands and is situated at an elevation of between 25 - 30 metres. The area under application is not located within a Public Drinking Water Source Area (PDWSA). Groundwater salinity in the area is 500-1000mg/L and there is a low risk of salinity and acid sulphate soils.

Given that the proposed clearing comprises sparse vegetation in a degraded condition and is located within an area with minimal slope it is not expected to impact groundwater tables or cause deterioration in the quality of surface or underground water.

Methodology DEC site visit 9/10/06
 State of Western Australia (2005)
 GIS Database:
 Geomorphic Wetlands (Mgt Categories), Swan Coastal Plain y DEC
 Hydrography, linear (hierarchy) - DOW
 Public Drinking Water Source Areas (PDWSAs) - DOE 07/02/06
 Topographic Contours, Statewide - DOLA 12/09/02

(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**
 Flooding impacts are not likely to occur as a result of the proposed clearing due to its size and location. The proposed clearing includes vegetation in a completely degraded condition within 0.05 hectares of land that has previously been parkland cleared. The area under application is located approximately 2km from the Peel Main Drain, at an elevation of between 25 - 30 metres. It is therefore not considered likely that the removal of vegetation from site would have an impact on peak flood height or duration.

Methodology DEC site visit 9/10/06
 GIS Databases:
 Hydrography, linear (hierarchy) - DOW
 Topographic Contours, Statewide - DOLA 12/09/02

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

Comments
 The area under application is part of Crown Reserves 24595 (Kwinana Townsite Lot A427) and the Town of Kwinana holds management orders for the designated purposes of 'School/high school'. The purpose of the clearing for Reserve 24595 is for educational buildings, which constitutes a 'secondary approval' and therefore the clearing as proposed should not fall under the future acts process of the Native Title Act 1993.

There are no other statutory approvals that are required from the Department of Environment and Conservation to undertake the clearing.

Methodology

4. Assessor's comments

| Purpose | Method | Applied area (ha)/ trees | Comment |
|--------------------|----------|--------------------------|---|
| Building Structure | cCutting | 0.05 25 | The assessable criteria have been addressed and no objections were raised. The assessing officer therefore recommends that the permit be granted. |

5. References

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, B.J. (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.

Site Visit 9/10/2006, Department of Environment and Conservation (DEC), Western Australia.

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) |

