



1. Application details

1.1. Permit application details

Permit application No.: 931/1
Permit type: Area Permit

1.2. Proponent details

Proponent's name: Gordon & Pauline Lane

1.3. Property details

Property: LOT 30 ON DIAGRAM 58728 (House No. 40 CARMIGNANI GNANGARA 6065)
Local Government Area: City Of Wanneroo
Colloquial name:

1.4. Application

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

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
Heddle vegetation association 1949 - low woodland; Banksia on low sandhills; swamps in swales with tea tree and paperbark (Shepherd et al 2001, Hopkins et al 2001).	The area under application consists of a narrow band of vegetation approximately 25m wide by 130m long. It is immediately adjacent to an existing horticultural development that is approximately 1.6ha in size. The remainder of the block is well vegetated.	Excellent: Vegetation structure intact; disturbance affecting individual species, weeds non-aggressive (Keighery 1994)	It is considered that the vegetation under application may have been subject to edge effects from the adjacent market garden. These edge effects could include weed invasion, spray drift and trampling. However, from the orthomosaic, the vegetation under application and the remainder of the block appears to retain good vegetation cover and form. As such, the condition classification of 'excellent' rather than 'pristine' was used in this assessment. (GIS Databases: Swan Coastal Plain North 40cm Orthomosaic)
Heddle vegetation complex Karakatta Complex Central and South - predominantly open forest of Eucalyptus gomphocephala, E. marginata, E. calophylla and woodland of E. marginata and Banksia species (Heddle et al 1980).			

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 is located adjacent to an existing market garden. It is considered that due to the adjacent market garden, the area under application may have been degraded through 'edge effects' such as weed invasion, spray drift and trampling. It is also considered that due to its small size, the area proposed to be cleared is unlikely to be of greater biodiversity than the surrounding area which contains a number of Bush Forever sites. As such, the clearing as proposed is not likely to be at variance to this Principle.

Methodology Information provided by the proponent (DoE Trim No IN24526)
GIS Databases:
- Swan Coastal Plain North Orthomosaic 40cm - DLI 05
- Bush Forever - 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**
There is the possibility that the area under application, along with the remainder of the block to the east, could

provide habitat for fauna in the area. However, given the small size (0.33ha) of the area under application, and its location immediately adjacent to an existing market garden, it is unlikely the clearing as proposed would significantly impact on fauna and available habitat in the local area.

Methodology GIS Database:
- Swan Coastal Plain North 40cm Orthomosaic - DLI 05

(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 no known occurrences of Declared Rare Flora (DRF) species within 5km of the area under application. The Priority 3 species *Cyathochaeta teretifolia* is located 1km to the south west, however it is unlikely to be found within the area under application as it is associated with swamps and creek edges (Florabase 2005). The Priority 2 species *Acacia benthami* is also located approximately 1km to the north-east. This species is associated with limestone breakaways, so it is also unlikely to occur within the area under application.

Methodology Florabase (2005) CALM Flora Database
Shepherd et al (2001)
Hopkins et al (2001)
GIS Databases:
- 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 a number of Threatened Ecological Communities (TECs) approximately 4km to the south. However it is unlikely that the clearing as proposed would have a significant impact on these communities, given the distance to the TECs and the small area applied to clear. In addition, the TECs are also located on a different vegetation to that within the area under application (Shepherd et al 2001, Hopkins et al 2001).

Methodology Shepherd et al (2001)
Hopkins et al (2001)
GIS Databases:
- Threatened Ecological Communities - CALM 15/07/03

(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 State Government is committed to the National Objectives and Targets for Biodiversity Conservation which includes a target that prevents clearance of ecological communities with an extent below 30% of that present pre-European settlement (Department of Natural Resources and Environment 2001, EPA 2000).

In relation to this application, the vegetation proposed to be cleared consists of Heddle vegetation complex Karrakatta Complex Central and South (Heddle et al 1980) and the Beard vegetation association 1949 (Shepherd et al 2001, Hopkins et al 2001). The Heddle vegetation complex has approximately 29.5% (14, 729ha) remaining (Heddle et al 1980) and the Beard vegetation association has approximately 25% (34, 012ha) remaining (Shepherd et al 2001, Hopkins et al 2001). Although both of these vegetation representations have less than 30% remaining, it is considered that the small area under application (0.33ha) is unlikely to significantly effect the conservation status of these vegetation associations. Therefore the clearing as proposed is not likely to be at variance to this Principle.

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

(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 or other watercourse features within the area under application. The nearest wetland is 200m from the proposed clearing. As such, the vegetation under application is not considered to be wetland or watercourse dependent. In addition, the small area under application (0.33ha), is unlikely to have a significant impact on the wetlands in the surrounding area.

Methodology GIS Databases:
- Hydrography, linear - DOE 01/02/04
- Geomorphic wetlands (Mgmt categories) - Swan Coastal Plain - DOE 08/03/05
- EPP, Lakes - DEP 28/07/03

(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 soils within the area under application are leached sands which are potentially susceptible to wind erosion. The remaining area of the property to the east of the area under application is well vegetated and there is also significant vegetation to the north. However, given the small size of the area under application (0.33ha), DAWA have advised that the proposed clearing is unlikely to have any significant land degradation issues.

The area under application has a Class 2 (Moderate risk of shallow acid sulphate soils) and Class 3 (no known risk) Acid Sulphate Soil risk.

Given the above, it is unlikely that the clearing as proposed would cause appreciable on or off-site land degradation.

Methodology DAWA (2005) (DoE Trim Ref HD25891)
GIS Databases:
- Swan Coastal Plain North 40cm Orthomosaic - DLI 05
- Soils, Statewide - DA 11/99
- Acid Sulphate Soil risk map, SCP - DOE01/02/04

(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**

There are a number of conservation areas in the local area (5km radius) of the proposed clearing including the Jandabup Nature Reserve, Gnangara-Moore River State Forest, Lake Joondalup Nature Reserve as well as a number of Bush Forever sites. However, given the small size of the area under application, in addition to the retention of the vegetation on the eastern side of the property, it is considered unlikely that the proposed clearing would have a significant impact on the conservation and linkage values of these reserves.

Methodology GIS Databases:
- CALM Managed Lands and Waters - CALM 01/08/04
- Bush Forever - MFP 07/01
- Swan Coastal Plain North Orthomosaic 40cm - 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**

There are no surface water or other hydrographic features within or surrounding the area under application. There are however, a number of wetlands and EPP lakes in the surrounding area including a Resource Enhancement Wetland 200m from the proposed clearing.

The area under application has been previously mapped within the Wanneroo Groundwater Pollution Protection Zone. However the mapping has been revised and now the area under application is longer within this Public Drinking Water Protection Zone.

It is considered that the small size of the area under application would not have a significant impact on the quality of surface or under ground water.

Methodology GIS Databases:
- Hydrography, Linear - DOE 01/02/04
- EPP, Lakes - DEP 01/12/92
- Geomorphic wetlands (Mgmt categories) - Swan Coastal Plain - DOE 15/09/04
- Public Drinking Water Source Areas (PDWSAs) - DOE 07/02/06

(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 receives moderate rainfall (800mm per annum) and there is a gentle slope to the east towards the remaining vegetation on the block. However, it is considered that given the small size of the area under application, the proposed clearing is unlikely to exacerbate the incidence or intensity of flooding.

Methodology GIS Databases:
 - Rainfall, Mean Annual - BOM 30/09/01
 - Topographic Contours, Statewide - DOLA 12/09/02

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

Comments

The proponents have a licence to abstract groundwater for household purposes as well as for the irrigation of vegetables (SN4031).

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 CPS Water Allocation Checklist

4. Assessor's recommendations

Purpose	Method	Applied area (ha)/ trees	Decision	Comment / recommendation
Horticulture	Mechanical Removal	0.33	Grant	The proposed clearing has been assessed and it is not likely to be at variance to any of the Principles. Given the small size of the area under application and the existing landuse, the assessing officer recommends that the permit be granted.

5. References

DAWA (2005) Land degradation assessment report. Office of the Commissioner of Soil and Land Conservation, Department of Agriculture Western Australia. DoE TRIM ref HD25891.

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.

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.

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)

