



1. Application details

1.1. Permit application details

Permit application No.: 1361/1

Permit type: Area Permit

1.2. Proponent details

Proponent's name: Thi Nuoi / Montalto Nguyen / Giacomo

1.3. Property details

Property: LOT 200 ON PLAN 302099

Local Government Area: City Of Swan

Colloquial name:

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
8		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
<p>Beard vegetation association 1018:</p> <p>Mosaic: Medium forest; jarrah-marri/ Low woodland; banksia/ Low forest; tea-tree/ Low woodland; Casuarina obesa (Hopkins et al. 2001, Shepherd et al. 2001)</p> <p>Heddie Vegetation complex;</p> <p>Bassendean Complex - North:</p> <p>Vegetation ranges from a low open forest and low open woodland of Banksia species E. tottiana to low woodland of Melaleuca species and sedgelands which occupy the moister sites (Heddie et al. 1980)</p> <p>Yanga Complex;</p> <p>Predominantly a closed scrub of Melaleuca species and low open forest of C. obesa on the flats subject to inundation. On drier sites the vegetation reflects the adjacent vegetation complexes of Bassendean and Coonambidgee. (Heddie et al. 1980)</p>	<p>The property under application lies within an area that has been cleared for horticulture and agriculture.</p> <p>The vegetation in the area under application consists of occasional Corymbia calophylla and Nuytsia floribunda over a scattered understorey of Xanthorrhoea preisii, Hibbertia hypericoides, Acacia acuminata with weed infestations of species such as Ehrahata calycina (Veldgrass), Briza maxima (Blowfly grass) and Carpobrotus edulis (Pig Face) throughout (Site Visit 2006).</p> <p>While the majority of the land parcel is mapped as a Multiple Use wetland, it is only the western portion of the proposal area that comprises wetland dependent vegetation including Melaleuca sp. and a number of sedge species (Site Visit 2006).</p>	<p>Good: Structure significantly altered by multiple disturbance; retains basic structure/ability to regenerate (Keighery 1994)</p>	<p>The vegetation under application has been classified as being in a good condition, given that the majority of the vegetation associated with the wetland is in good condition and there are a number of well developed communities of Corymbia calophylla and Xanthorrhoea preisii across the properties (Site visit 2006).</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**

Overall the vegetation in the area under application comprises of a low level of biological diversity. There is little species diversity due to extensive weed invasion from a number of different weed species including Veldgrass (*Ehrharta calycina*), Briza maxima and Pig face (*Carpobrotus edulis*)(Site Visit 2006).

A wetland vegetation community exists within the western portion of the area applied to be cleared. It is considered that this area comprises of a higher biological diversity than the rest of the area under application. However, it is considered that vegetated remnants in the local area are more likely to be of greater biodiversity than the fragmented and partially degraded proposal area. Therefore the proposed clearing is not likely to be at variance to this principle.

Methodology Site Visit (2006) (DEC TRIM ref: DOC 8317)
GIS Databases:
- Bushforever - MSP 07/01
- Swan Coastal Plain North 40cm Orthomosaic - DLI 05

(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 within the area under application is fragmented and contains a limited diversity of understorey species within the proposal area.

Due to the relatively close proximity of large vegetated remnants, it is considered unlikely that vegetation within Lot 200 comprises or is necessary for the maintenance of significant habitat for fauna. Therefore the proposed clearing is not likely to be at variance to this principle

Methodology GIS Databases:
- 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 may be at variance to this Principle**

There are no Declared Rare and Priority Flora recorded in the areas under application. There are four populations of the Declared Rare Flora species *Grevillea curviloba* subsp. *curviloba* within 2.5km of the area under application.

Florabase describes this species as a prostrate to erect shrub, which varies in height from 0.1 to 2.5 metres. This species flowers white or cream between August and September, and is known to grow in sand or sandy loam, in winter-wet heath.

As these populations are known to be present within the same Heddl vegetation complex as that present within the applied area, and in similar condition, it is considered that the proposed clearing may be at variance to this Principle. To substantiate the presence of DRF within the applied area, a flora survey conducted in accordance with EPA Position Statement 51 would be required.

Methodology 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 may be at variance to this Principle**

The nearest known TEC located is approximately 1.3km west of applied area. This TEC is identified within Bush Forever (Government of Western Australia, 2000) as Mound Springs SCP, defined as Communities of Tumulus Springs (Organic Mound Springs of the Swan Coastal Plain).

As these TEC are located within the same Heddl Vegetation Complexes, soil type, and wetland environment as that under application, it is considered that the proposed clearing may be at variance to this Principle. However further investigations would be required to substantiate this likelihood.

Methodology Government of Western Australia (2000)
GIS Databases:
- Threatened Ecological Communities - CALM 15/7/03
- Pre-European Vegetation - DA 01/01

(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 at variance to this Principle

The vegetation within the area under application is mapped as Beard Vegetation Association 1018, of which 22.5% (3743ha) of the pre-European extent is remaining (Shepherd et al 2001, Hopkins et al 2001). This association therefore has a conservation status of 'vulnerable' for biodiversity conservation (Department of Natural Resources and Environment 2001).

The vegetation has also been mapped as the Yanga Complex and Bassendean Complex North Heddle Vegetation Complexes, of which there is 18.7% and 72% of existing vegetation remaining, respectively (Heddle et al. 1980). These vegetation complexes have a conservation status of 'vulnerable' and 'least concern' (Department of Natural Resources and Environment 2001).

reserves/CALM	Pre-European (ha)*	Current extent (ha)*	Remaining (%)*	Conservation** status	% In managed land
IBRA Bioregions					
Swan Coastal Plain	498 297	626 512	41.8	Depleted	
City of Swan	103,944	54,792	52.7	Least concern	
Vegetation type:					
Beard: Unit 1018	14087.698	3007.700	21.3	Vulnerable	0.9
Heddle Complex					
Bassendean North	74,147	53,384	72.0	Least concern	27.5
Yanga Complex	26,177	4,884	18.7	Vulnerable	1

* (Shepherd et al. 2001)

** (Department of Natural Resources and Environment 2002)

The State Government is committed to the National Objectives and Targets for Biodiversity Conservation which includes a target that prevents a clearance of ecological communities with an extent below 30% of that present pre-European settlement (Department of Natural Resources and Environment 2002, EPA 2000).

The area mapped as the Yanga Complex is in good condition and there is 18.7% of pre-European extent of this vegetation community. In addition, it is poorly reserved, with only 1% in areas reserved for conservation.

Given the above information, the area applied to be cleared is considered significant as a remnant of native vegetation in an area that has been extensively cleared. Therefore the proposed clearing is at variance to this principle.

Methodology Shepherd et al. (2001)
Heddle et al. (1980)
Department of Natural Resources and Environment (2001)
GIS Databases:
- Pre-European Vegetation - DA 01/01
- Heddle Vegetation Complexes - DEP 21/06/95

(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 at variance to this Principle

A significant portion of the area under application is identified as containing a multiple use wetland. A site inspection of the applied area to be cleared on 31 July 2006 confirmed vegetation within these wetland areas as consisting of various Melaleuca sp. and sedge species, with an overall condition rating 'good'.

While Multiple Use wetlands are identified by Water and Rivers Commission (2001) as wetlands with few important ecological attributes and functions remaining, it is considered that based on the condition of the vegetation observed during the site inspection, these wetland areas are representative of a classification higher than their current Multiple Use status.

As the proposed clearing includes the removal of vegetation growing in or in association with a wetland, it is considered to be at variance to this principle.

Methodology Water and Rivers Commission (2001).
GIS Databases:
- Geomorphic wetlands (Mgmt Categories) - Swan Coastal Plain - DOE 15/09/04
Site Visit (2006) (DEC TRIM ref: DOC 8317)

(g) Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation.

Comments Proposal is seriously at variance to this Principle

DAFWA (2006) have advised that the proposed site has a low capability for intensive horticulture. The removal of vegetation from the applied area has been identified as having a very high to extreme risk of eutrophication, and a high risk of land degradation in the form of waterlogging. The proposed clearing is therefore considered to be seriously at variance with this Principle.

Acid Sulphate Soil (ASS) risk mapping identifies Lot 200 as having a Class 2 risk of ASS or potential ASS occurring. This classification is defined as a moderate to low ASS disturbance risk at depths less than three metres from the surface. As the proposed clearing is unlikely to influence the soil profile at this depth, it is considered unlikely that ASS or potential ASS would be generated.

Methodology DAFWA (2006) (DEC TRIM ref: DOC 7271)
Acid Sulphate Soil risk map, SCP - DOE 01/02/04

(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 no conservation areas within or immediately adjacent to the vegetation under application.

The nearest conservation reserve is Neaves Nature Reserve, located approximately 1.3km west of the area under application. This Nature Reserve contains ecological communities and vegetation complexes also found with the applied area. In addition, Melaleuca Park is located 3.3km to the south west of Lot 200.

Given the distance to the nearest conservation areas, and the relative isolation of the applied area from vegetated corridors, the proposed clearing is considered unlikely to be at variance to this principle.

Methodology GIS Databases:
- CALM Managed Lands and Waters - CALM 01/08/04
- 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 at variance to this Principle

A majority of the area under application is located within a multiple use wetland, with the site inspection confirming a number of wetland dependent species within the applied area. DAFWA (2006) advice indicates that the soils present within Lot 200 are associated with a very high to extreme risk of eutrophication. In this situation, it is considered likely that the proposed clearing would cause a deterioration in the quality of both surface and groundwater. Therefore the proposed clearing is at variance to this principle.

Methodology Site Visit (2006) (DEC TRIM ref: DOC 8317)
GIS Databases:
- Geomorphic wetlands (Mgmt Categories) - Swan Coastal Plain - DOE 15/09/04

(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 may be at variance to this Principle

There is a drainage line that runs east west through the application area. However, DAFWA (2006) indicated that the proposed clearing is unlikely to increase surface runoff, which would contribute to stream flows.

DAFWA (2006) acknowledges that drainage has historically been created with Lot 200 to manage localised waterlogging or flooding. It is considered that the clearing of vegetation from the property, and in particular those areas identified as containing wetland vegetation, may exacerbate these issues. It is therefore considered that the proposed clearing may be at variance to this principle

Methodology DAFWA (2006) (DEC TRIM ref: DOC 7271)
GIS Databases:
- Hydrography, linear - DOE 01/02/04

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

Comments

There is no other RIWI Act Licence, Works Approval, or EP Act Licence that will affect the area that has been applied to clear.

A water licence for 5ha has been issued by the Department of Water (GWL161069).

The proponents were given the opportunity to provide further information to address the issues identified in the assessment. No formal response was received.

Methodology

4. Assessor's comments

Purpose	Method Applied	area (ha)/ trees	Comment
Horticulture	Mechanical Removal	8	The assessable criteria have been addressed, and the clearing as proposed is seriously at variance to Principle (g), at variance to Principles (e), (f) and (i) and may be at variance to Principles (c), (d) and (j). Based on the above assessment, the assessing officer recommends this application be refused.

5. References

- DAFWA (2006) Land degradation assessment report. Office of the Commissioner of Soil and Land Conservation, Department of Agriculture and Food Western Australia. DEC TRIM ref: DOC 7271
- 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, 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.

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)

