



1. Application details

1.1. Permit application details

Permit application No.: 1870/1
Permit type: Area Permit

1.2. Proponent details

Proponent's name: Murray Fraser

1.3. Property details

Property: Lot 216 on Plan 45216 (Honeymurle Loop FORRESDALE 6112)
Local Government Area: City Of Armadale
Colloquial name:

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
0.85		Cutting	Landscaping

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
Hedde Vegetation Complex- Bassendean Central and 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 sedgeland on the moister sites. This area includes the transition of <i>E. marginata</i> to <i>E. tottiana</i> in the vicinity of Perth.	The proposal is to clear 0.85 hectares of native vegetation for the purpose of filling the land for domestic use purposes. The vegetation under application comprises native sedge species. The area under application has been impacted historically through grazing. The applicant wishes to retain the <i>Melaleuca</i> spp. on site.	Degraded: Structure severely disturbed; regeneration to good condition requires intensive management (Keighery 1994)	Vegetation clearing description based on a site visit conducted by DEC officers on 30 April 2007. The majority of the vegetation under application is completely degraded to degraded condition, with some areas in the central and eastern portions being in good condition.
Beard Vegetation Association 1001: Medium very sparse woodland; jarrah, with low woodland; banksia and casuarina			

(Shepherd 2006)

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 comprises sedge species and weeds and is mostly in completely degraded to degraded condition, with some areas being in good condition. The applied area has been historically grazed.

Given the low species diversity and the mostly completely degraded to degraded condition of the vegetation under application, it is not considered likely to comprise a high level of biodiversity.

Methodology DEC site visit 30/4/07

(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 comprises a low sedgeland and has some vegetation cover that may provide some habitat for ground-dwelling fauna species like the Quenda, however this is not considered likely to be significant habitat given that the vegetation under application is limited to 0.85 hectares with limited connectivity to other vegetation.

Methodology DEC site visit 30/4/07

(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

Within the local area (5km radius) there are 32 known populations of Declared Rare Flora (DRF) and Priority flora, including the following DRF species:

- *Drakaea elastica* with the closest located 1.2km to the southeast;
- *Caladenia huegelii* with the closest located 700m to the east;
- *Drakaea micrantha* with the closest located 2.1km north;
- *Diuris purdiei* with the closest located 4.2km northeast.

These populations were all recorded within a habitat comprising Banksia woodland, and all except *D. purdiei* were recorded within the same soil association and vegetation complex as the area under application.

DEC (2007) Species and Communities Branch has advised that *Drakaea elastica* is predominantly found in Banksia woodland, particularly under thickets of *Kunzea glabrescens* above winter-wet areas, and has occasionally been found near the tops of sandy rises. Similarly, *D. micrantha* is found in open sandy patches in Jarrah/Banksia woodland, and often is associated with thickets of *K. glabrescens* adjacent to winter-wet swamps (DEC undated).

Caladenia huegelii occurs in Banksia/Jarrah woodland, usually in Bassendean Sands, and *Diuris purdiei* has the potential to be found in wetland areas, however this species flowers only following summer fire so it would not be possible to find in a survey if the area is unburnt (DEC 2007).

Given that the above DRF species found in the local area are predominantly found within Banksia/Jarrah woodland and *Kunzea* thickets, it is not considered likely that the sedgeland under application includes, or is necessary for the maintenance of, rare flora.

Methodology DEC (undated)
DEC (2007)
GIS Databases:
SAC Bio datasets accessed 12/07/07

(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

Within the local area (5km radius) there are 12 known occurrences of Threatened Ecological Communities (TEC), with the closest located 4km to the northeast of the applied area, and being identified as SCP08 - Herb rich shrub lands in clay pans.

Given that the vegetation under application comprises sedges on leached sands, and given the distance to the nearest TEC, which is found on clay pans, it is not considered likely that it comprises, or is necessary for the maintenance of, a TEC.

Methodology DEC site visit 30/4/07
GIS Database:
SAC Bio datasets accessed 12/07/07

(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

Hedde et al. (1980) defines the vegetation under application as 'Bassendean Complex - Central and South', which has a pre-European representation of 27.0% and is classified as being 'vulnerable' status for biodiversity conservation (Department of Natural Resources and Environment 2002; EPA 2006).

The vegetation under application is also classified as Beard vegetation association 4, which has 23.3% of the pre-European extent remaining and which is also classified as vulnerable (Shepherd 2006).

The State Government is committed to the National Objectives Targets for Biodiversity Conservation which includes a target that prevents clearance of ecological communities with an extent below 30% of that present pre-1750 (Department of Natural Resources and Environment, 2002; EPA, 2000).

The identified vegetation complexes have less than the recommended 30% minimum of Pre-European extent remaining, however the applied area is considered to be within a constrained area. The EPA (2003) recognises the Perth Metropolitan Region as a 'constrained area', providing for the reduction of vegetation complexes remaining to a minimum of 10% of the pre-European extent. Therefore the proposal is not likely to be at variance to this Principle.

	Pre-European (ha)	Current (ha)	Remaining %	Conservation status****	% in reserves
Swan Coastal Plain	1,501,456	571,758	38.1*	Depleted	
Hedde vegetation complex					
Bassendean Complex - Central and south	87,447	23,624	27.0***	Vulnerable	
Beard vegetation association 1001	57,412	15,241	26.5**	Vulnerable	3.9

* (Shepherd et al. 2001)

** (Shepherd 2006)

***(EPA, 2006)

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

Methodology Hedde et al. (1980)
Shepherd et al. (2001)
Shepherd (2006)
Department of Natural Resources and Environment (2002)
EPA (2000)
EPA (2006)

(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**
Lot 216 is located within an extensive Resource Enhancement management category dampland (seasonally waterlogged basin) (DEC 2007) and wetland vegetation was observed during the DEC site visit.

Given that the vegetation under application comprises wetland vegetation located within a Resource Enhancement wetland, the proposed clearing is considered to be at variance to this Principle.

The DEC (2007) Wetlands Program does not object to the proposed clearing given that the wetland within Lot 216 does not appear to retain significant wetland values or functions, and that it is not considered that the proposed clearing will not significantly impact upon the surrounding area of the wetland.

Methodology DEC site visit 20/04/07
DEC (2007)
GIS Databases:
ANCA, Wetlands - CALM 08/01
Geomorphic Wetlands (Classification), Swan Coastal Plain - DEC

(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 have been mapped as leached sands (Northcoate et al. 1960-1968). The applied area is located within a Resource Enhancement Wetland and therefore the soils on site are considered to have a low risk of water erosion and wind erosion.

The area under application has a high salinity risk and a high to moderate risk of acid sulphate soils, however it is not considered likely that the proposed clearing of 0.85 hectares of sedges would result in salinity. In addition, given that the proposed clearing will be conducted by filling the site, it is not likely to disturb acid sulphate soils.

Given the low risk of water and wind erosion, and that the vegetation under application is limited to 0.85 hectares of sedges, the proposed clearing is not considered likely to cause appreciable land degradation.

Methodology Northcoate et al. (1960-1968)
GIS Databases:
Acid Sulphate Soil Risk Map, Swan Coastal Plain - DEC
Geomorphic Wetlands (Classification), Swan Coastal Plain - DEC
Salinity Risk LM 25m - DOLA 00

(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 nearest conservation reserve is a Bush Forever site located approximately 1km to the northwest of the area under application. The vegetation under application is limited to 0.85 hectares and has limited connectivity to the surrounding vegetation.

Given the distance to the nearest conservation reserve, and that the vegetation under application is 0.85 hectares in a rural subdivision with limited connectivity, it is not considered likely that the proposed clearing would have an impact on the environmental values of any conservation reserve.

Methodology DEC site visit 30/4/07
GIS Databases:
Bushforever - MFP 07/01
CALM Managed Lands and Waters - CALM 1/07/05

(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

The area under application is located within a Resource Enhancement Wetland, has a high salinity risk and a high to moderate risk of acid sulphate soils.

Given that the proposed clearing is limited to 0.85 hectares of sedges, it is not considered likely that it would result in salinity, or disturb acid sulphate soils, causing a deterioration in groundwater quality. In addition, due to the low relief within the area under application, the proposed clearing is not considered likely to result in water erosion causing a deterioration in surface water quality.

Methodology GIS Databases:
Acid Sulphate Soil Risk Map, Swan Coastal Plain - DEC
Geomorphic Wetlands (Classification), Swan Coastal Plain - DEC
Salinity Risk LM 25m - DOLA 00

(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 is located at an elevation of 26m, and has a low relief. The area under application is located within a Resource Enhancement Wetland and therefore the leached sands mapped within the applied area (Northcoate et al. 1960-1968) are considered to have low infiltration rates and therefore a risk of waterlogging.

Although the area under application is likely to have a risk of waterlogging, it is not considered likely that the proposed clearing of 0.85 hectares of sedgeland would cause or exacerbate the incidence of flooding.

Methodology Northcoate et al. (1960-1968)
GIS Databases:
Geomorphic Wetlands (Classification), Swan Coastal Plain - DEC
Topographic Contours, Metropolitan Area - DLI

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

Comments

The land proposed to be cleared is part of a Native Title Claim however, since it is privately owned the Native Title has been extinguished under the Native Title Act. Therefore the clearing as proposed should not fall under the future acts process of the Native Title Act 1993.

In a submission the City of Armadale advised that a development approval is not required for less than 500mm of fill, and the proponent plans to fill up to 250mm. The City have requested plans of the fill to check drainage issues to ensure that the neighbouring property is not affected, however this is related more to the relocation of the building envelope, which is not related to the clearing proposal.

Methodology City of Armadale submission
GIS Database: Native Title Claims - DLI

4. Assessor's comments

Purpose	Method	Applied area (ha)/ trees	Comment
Landscaping	Cutting	0.85	The assessable criteria have been addressed and the clearing as proposed is at variance to Principle f.

5. References

DEC (2007) Biodiversity advice for land clearing application CPS 1852/1. Advice to Assessing Officer, Native Vegetation Assessment Branch, Department of Environment and Conservation (DEC), received 18 June 2007. Species and Communities Branch, Department of Environment and Conservation, Western Australia.

DEC (2007) Wetlands advice for land clearing application. Advice to Assessing Officer, Native Vegetation Assessment Branch, Department of Environment and Conservation (DEC), received 10 July 2007. Wetlands Program, Department of Environment and Conservation, Western Australia.

DEC (undated) Declared Rare Flora. Accessed 13 July 2007
www.naturebase.net/pdf/nature/flora/flora_mgt_plans/central_forest/cfr_drf.pdf

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 (2006) 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.

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.

Northcote, K. H. with Beckmann G G, Bettenay E., Churchward H. M., van Dijk D. C., Dimmock G. M., Hubble G. D., Isbell R. F., McArthur W. M., Murtha G. G., Nicolls K. D., Paton T. R., Thompson C. H., Webb A. A. and Wright M. J. (1960-68): 'Atlas of Australian Soils, Sheets 1 to 10, with explanatory data'. CSIRO and Melbourne University Press: Melbourne.

Shepherd (2006) Adapted from: Shepherd, D.P., Beeston, G.R., and Hopkins, A.J.M. (2001), Native Vegetation in Western Australia. Technical Report 249. Department of Agriculture Western Australia, South Perth. Includes subsequent updates for 2006 from Vegetation Extent dataset ANZWA1050000124.

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)

