



1. Application details

1.1. Permit application details

Permit application No.: 1500/1

Permit type: Area Permit

1.2. Proponent details

Proponent's name: Turloch Pty Ltd

1.3. Property details

Property: LOT 5428 ON PLAN 144754 (NARRIKUP 6326)

Local Government Area: Shire Of Plantagenet

Colloquial name:

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
0.7		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>CA Mosaic of low woodland of <i>Allocasuarina fraseriana-Corymbia ficifolia-Banksia illicifolia-Banksia attenuata-Banksia occidentalis</i> on slopes in perhumid zone to sedgeland of <i>Cyperaceae spp.</i>, tall shrubland of <i>Myrtaceae spp.</i> and an open woodland of <i>Melaleuca preissiana</i> with some <i>Eucalyptus marginata subsp. marginata</i> on broad depressions in perhumid and humid zones (Mattiske 1998)</p> <p>Veg Association 3; Medium forest: jarrah - marri. Woodland; jarrah, marri and wandoo (Shepherd et al., 2001).</p>	<p>The subject area of 0.7ha of native vegetation under application to be cleared for the purpose of creating an extension of existing viticulture for wine production. The area is occupied by fewer than 10 species, including: <i>Taxandria hypericifolia</i>, <i>Billardiera variifolia</i>, <i>Hakea amplexicaulis</i> and <i>Jacksonia horrida</i>.</p> <p>The condition of the native vegetation is considered to be between Degraded and to Completely Degraded (Keighery 1994). No formal flora surveys has been undertaken for this location. Flora species present are extremely limited due to grazing access by livestock, and the previous fire regime.</p> <p>The immediate surrounding land has been cleared, but there are large patches of remnant vegetation within 10km radius (aerial imagery). The area proposed to be cleared has been heavily grazed in the past and sheep were observed during the site visit. (Site Visit Report 2007).</p>	<p>Degraded: Structure severely disturbed; regeneration to good condition requires intensive management (Keighery 1994)</p>	<p>References: Mattiske 1998, Shepherd et al., 2001, Site Visit Report 2007, Keighery 1994</p> <p>GIS datasets:</p> <ul style="list-style-type: none"> - Albany - Mount Barker 1.4m Orthomosaic - DLI02/03 - Pre-European Vegetation - DA 01/01 - Mattiske Vegetation - CALM 24/3/98

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 subject area of 0.7ha of native vegetation under application to be cleared for the purpose of creating an extension of a vineyard for wine production, currently has fewer than 10 endemic flora species present, including: *Taxandria hypericifolia*, *Billardiera variifolia*, *Hakea amplexicaulis* and *Jacksonia horrida*.

The condition of the native vegetation is considered to range between Degraded and to Completely Degraded (Keighery 1994) due to compromise of structure. Aerial photography also confirms this. No formal flora surveys have been undertaken for this location. Flora species present are extremely limited in number due to grazing pressure by livestock, and previous fire regimes. (Site Visit Report 2007), and being isolated from other native vegetation.

Therefore, due to the condition and compromised biological diversity at the site, the proposal is unlikely to be at variance to this Principle.

Methodology Site Visit Report 2007
Keighery 1994
GIS Database:
- Albany - Mount Barker 1.4m Orthomosaic - DLI02/03.

(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**

Aerial photos and site visit suggests that the area to be cleared is in a Degraded to Completely Degraded condition (Keighery, 1994) with substantial disturbance. The proposed clearing of 0.7ha of native vegetation is not likely to include significant habitat for the maintenance of indigenous fauna and is not likely to act as a stepping stone for fauna (Site Visit Report 2007).

Therefore, the proposed clearing is not likely to be at variance to this Principle.

Methodology Site Visit Report 2007
Keighery 1994
GIS Database:
- Albany - Mount Barker 1.4m Orthomosaic - DLI02/03.

(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**

DRF:

There are 8 recorded occurrences of *Lambertia orbifolia* subsp orbifolia; the closest being 825m SE, and 1364m NW,

14 occurrences of *Conostylis misera*; (same Mattiske type); closest being 1789m SW, and 1930m SW,

2 occurrences of *Isopogon uncinatus*; closest being 1821m E,

1 of *Centrolepis caespitose*; closest being 5110m SW,

1 of *Banksia goodii*; closest being 7499m SW

of subject area within a 10 km radius of the proposed clearing.

Priority Species:

P1:1 x *Andersonia* sp Mitchell River; 1997m S of subject area.

P4:2 x *Laxmannia jamesii*; closest 2290m S,

Eucalyptus goniantha subsp goniantha; 6582m SW of subject area.

The aforementioned species occur in Veg Association 3. (Shepherd et al., 2001)

No Declared Rare or Priority species are known to occur within site under application to be cleared. None of these species were found during the site visit within the remnant which has been subject to grazing over an extended period of time. Pasture weeds occur on the periphery of the remnant and it has been exposed to an unplanned fire regime (Site Visit Report 2007).

Due the condition of the site and the small area to be cleared, it is unlikely that the vegetation under application to be cleared (0.7ha) is necessary for the continued existence of rare or priority flora.

Therefore, the proposed clearing is unlikely to be at variance to this Principle.

Methodology Site Visit Report 2007
Shepherd et al., 2001
GIS Database:
- Declared Rare and Priority Flora List - CALM 01/07/05

(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 no known occurrences of Threatened Ecological Communities (TEC) within a ten kilometre radius of the area under application. The clearing of native vegetation under application is unlikely to be necessary for the maintenance of a TEC. (Site Visit report 2007)

Therefore, the proposal is not likely to be at variance to this Principle.

Methodology Site Visit report 2007
GIS Database:
- SAC Bio datasets 23/04/2007
- Threatened Ecological Communities - CALM 12/4/05

(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**
The area under application is located in the Shire of Plantagenet and within the IBRA Southern Jarrah Forest sub-bioregion (JF-2). The extent of pre-European vegetation within these areas is 47.8% and 58.3%, respectively (Shepherd et al., 2001, Hopkins et al. 2001) and is therefore considered to have a conservation status of least concern (Department of Natural Resources and Environment, 2002).

The vegetation additionally occurs in the Menzies sub District of the Darling District of the South-West Botanical Province and contains a single veg type - CA Low Open Forest A of *Corymbia calophylla* over Open Low Scrub B which is not listed as a Beard Vegetation Association (Hopkins et al., 2001, Shepherd et al., 2001). This is most similar to Mattiske type CA - Mosaic of low woodland of *Allocasuarina fraseriana-Corymbia ficifolia-Banksia ilicifolia-Banksia attenuata-Banksia occidentalis* on slopes in perhumid zone to sedgeland of *Cyperaceae spp.*, tall shrubland of *Myrtaceae spp.* and open woodland of *Melaleuca preissiana* with some *Eucalyptus marginata subsp. marginata* on broad depressions in per humid and humid zones. 98% of this veg type remains. (Mattiske 1998).

The vegetation is also mapped as a component of Vegetation Association 3 -; Medium forest: jarrah - marri. Woodland; jarrah, marri and wandoo. There is 72.1% of this vegetation association remaining (61.6% within JF-2). However, there is significant habitat fragmentation, which is likely to result in reduced long-term viability of this vegetation type in some vegetation associations. Additionally 10.1% of Vegetation Association 3 is represented in Reserves. (Hopkins et al., 2001, Shepherd et al., 2001)

Given the extent of native vegetation remaining within the sub and bioregion and the size of the area under application, the proposed clearing is not likely to be at variance to this principle.

Methodology Site Visit Report 2007
Hopkins et al., 2001
Shepherd et al., 2001
Theses details apply to the extent of each vegetation type in IBRA sub-region JF-2 only. (Site Visit Report 2007)
GIS databases:
- Interim Biogeographic Regionalisation of Australia (subregions) - EA
- Pre-European Vegetation - DA 01/01
- Mattiske Vegetation - CALM 24/3/98

(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 native vegetation under application to be cleared is located 250m west of the main branch tributary of Sleeman Creek, and is upland vegetation not associated with the riparian vegetation occurring along Sleeman Creek. The intervening land has been cleared but an open sedgeland has since established in the riparian zone. The original riparian vegetation is now restricted to the fringes of the watercourse, consisting of occasional *Eucalyptus occidentalis* over thickets of *Melaleuca preissiana*. This area has been fenced to exclude livestock. (Site Visit Report 2007)

Lake Eyrie Nature Reserve (Reserve no. 5892), an important reserve for migratory wading birds located 3.75km west is the closest wetland to the site. In view of this distance, which contains areas of remnant native

vegetation interspersed with tracts of cleared land, clearance of vegetation in the subject site will not affect this wetland (Site Visit Report 2007).

Mill Brook, King River and 19 lakes are within 10km of the proposed clearing. The land also forms part of Wilson Inlet Hay River - Denmark Coast catchment.

Removal of this vegetation will have little effect on the adjoining Sleeman Creek. Therefore, the proposed clearing is not likely to be at variance to this Principle.

Methodology Site Visit Report 2007
GIS datasets:
- Hydrography, linear (hierarchy) - DOW
- Lakes, 1M - GA 01/06/00
- Lakes 250K - GA
- Geodata, Lakes - GA 28/06/02
- Hydrographic Catchments - Subcatchments - 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

The subject land does not appear to be affected by salinity or waterlogging. However, it occurs within the Sleeman Creek / Hay River / Wilson Inlet Catchment where problems associated with land clearing-induced salinity and waterlogging pre-exist. The site contains gravely grey sandy soil with a surface expression of lateritic conglomerate boulders and concretions (Site Visit Report 2007) and occurs on a relatively flat area of around 120m ASL adjacent to a slight down-slope to the main tributary of Sleeman Creek, 250m E.

Removal of native vegetation within the subject site is not considered to pose any appreciable land degradation. The remnant is small (0.7ha) and occurs within a much larger area which has been cleared for many years.

Therefore, it is unlikely that that the proposal is at variance to this Principle.

Methodology Site Visit Report 2007
Limited info on GISViewer.
GIS Datasets:
- Topographic Contours, Statewide - DOLA 12/09/02

(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 seven areas nearby that are included on the Register of National Estate; the closest being 1km W, all a component of Beard Veg Association 3 (same as proposed area to be cleared). There are eleven areas of DEC Managed Lands; the closest being 2km S, all in Beard Veg Association 3 (with the exception of one; 2.5km S) (GIS Database). 10.1% of Beard Veg Association 3 is represented in IUCN Reserves (Hopkins et al. 2001, Shepherd et al. 2001,).

Lake Eyrie Nature Reserve (Res No 5892) lies 3.75km west; C-class Reserve No 25965 lies 2.5km ca south; Sleeman Creek Nature Reserve (Res No 18741) lies 7.0km SSW; Lake Barnes Nature Reserve (Res No 14493) lies 4.5km NW of subject land. Sheepwash Creek Nature Reserve is 13.25km west (proposed national park, and now part of the area included in the Walpole Wilderness Area series of national parks and conservation areas (Site Visit Report 2007).

It is unlikely that clearing of 0.7ha of native vegetation will affect any conservation areas due to distance and landscape fragmentation and small area to be cleared. Therefore, the proposal is unlikely to be at variance to this Principle.

Methodology Hopkins et al. 2001
Sheperd et al. 2001
Mattiske 1998
GIS databases:
- CALM Managed Lands and Waters - CALM 1/07/05
- Mattiske Vegetation - CALM 24/3/98
- Pre-European Vegetation - DA 01/01
- 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 not likely to be at variance to this Principle

The removal of 0.7 ha of degraded perennial native vegetation which is located within a much greater area that is already cleared may result in a minor increase in surface run-off into the Sleeman Creek system during periods of high rainfall. This is however not likely to produce any appreciable increase in the dissolved solids loading currently sustained in this system. The effect on underground water of removal of this vegetation is also considered to be low. It is not likely to affect the dissolved solids loading this system currently sustains. The proposed area occurs on relatively flat land around 120m ASL adjacent to a slight down-slope to the main tributary of Sleeman Creek, several hundred metres to the east (Site Visit Report 2007)

The area under application to be cleared (0.7ha) is 860m N of Public Drinking Water Supply Source: Marbelup Water Reserve. The closest salinity reading from the proposed clearing is: 930.0mg per litre TDS; 1017m NW. Given this information, it is unlikely that the removal of 0.7ha will cause appreciable land degradation.

Therefore, it is unlikely that the proposal will be at variance to this Principle.

Methodology Site Visit Report 2007

GIS databases:

- WIN Groundwater Sites, Other - non DEWCP (Current)
- Topographic Contours, Statewide - DOLA 12/09/02
- Public Drinking Water Source Areas (PDWSAs)

(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 proposed for clearing (0.7ha) contains perennial native vegetation in a degraded state which is not strategically located to influence the incidence or frequency of flooding. The site inspection did not find any evidence of previous flooding incidents on the property or any evidence that the subject vegetation had a significant role in preventing or minimizing flooding events.

The evaporation rate exceeds(1400mm/annum) the annual rainfall (800mm/annum), and as the soil types consist of gravelly grey sandy soil with a surface expression of lateritic conglomerate boulders and concretions (Site Visit Report 2007), the soils are unlikely to become inundated with water, and waterlogged, and hence, are unlikely to become flooded. Therefore, the clearing of 0.7ha of native vegetation is unlikely to exacerbate the incidence of flooding, and therefore is unlikely to be at variance to this Principle.

Methodology Site visit inspection 2007

GIS datasets:

- Rainfall, Mean Annual - BOM 30/09/01
- Evaporation isopleths - BOM 09/98

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

Comments

The Department of Water, Albany, advise that the area proposed for clearing occurs beyond any water reserve and that there is no water licence held in respect of the property.

The property is zoned Rural which permits the establishment or expansion of commercial vineyards. The Shire of Plantagenet does not object to the proposed clearing and supports the proposed revegetation adjacent to Sleeman creek as an offset (DEC TRIM ref: DOC22082).

Methodology Site Visite Report 2007

Advice provided Department of Water, Albany and the Shire of Plantagenet DEC TRIM ref: DOC22082.

4. Assessor's comments

Purpose	Method	Applied area (ha)/ trees	Comment
Horticulture	Mechanical Removal	0.7	Assessable criteria have been addressed and no objections have been raised. The proponent has signified their willingness to install at least 1.0 ha of native vegetation adjacent to the tributary of Sleeman Creek which lies within their property in the area between an existing livestock exclusion fence and the existing riparian vegetation on the west side of the watercourse, using on-site provenance seed or other propagative material.

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.

Department of Environment and Conservation – Biodiversity coordination section (2006) Comments relating to application for permit to clear native vegetation in accordance with sub-section 51E (4)(b) of the Environmental Protection act 1986
TRIM ref: DOC16662

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.

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.

Kelghery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.

Mattiske Consulting (1998) Mapping of vegetation complexes in the South West forest region of Western Australia, CALM.

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.

Shire of Manjimup (2007) Submission DEC TRIM ref: DOC22082

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)