



## 1. Application details

### 1.1. Permit application details

Permit application No.: 424/1  
Permit type: Area Permit

### 1.2. Proponent details

Proponent's name: Agrifresh Pty Ltd

### 1.3. Property details

Property: LOT 3608 ON PLAN 206454 ( BADGINGARRA 6521)  
Local Government Area: Shire Of Dandaragan  
Colloquial name:

### 1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
		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
Beard vegetation association 1036: Low woodland; Banksia prionotes (Hopkins et al. 2001, Shepherd et al. 2001).	The degraded areas of vegetation contain little or no understorey with only Banksia, Zamia and Adenanthos species remaining. These remnants are heavily infested with weed species as illustrated in the photographs taken from the site visit (TRIM Ref: GD341).	Degraded: Structure severely disturbed; regeneration to good condition requires intensive management (Keighery 1994)	Observed during site visit: the degraded vegetation is infested with introduced weed species and only Banksia and a few Zamia and Adenanthos species prevail. Unlike the pristine areas of vegetation, the degraded areas did not support the bird and marsupial species observed in other areas.
Beard vegetation association 1036: Low woodland; Banksia prionotes (Hopkins et al. 2001, Shepherd et al. 2001).	Flora species affected by this application include Actinostrobos arenarius, Eucalyptus sp., Acacia sp., Anigozanthos, Ecdeiocolea monostachya, Banksia sp. Hakea sp. and Adenanthos sp.	Good: Structure significantly altered by multiple disturbance; retains basic structure/ability to regenerate (Keighery 1994)	Observed during site visit: the only vegetation on the property that remains in pristine condition occurs in the north eastern corner and the proponent has since agreed to amend his proposal to exclude this area. There are other patches of vegetation in good condition (TRIM Ref: GD341) but the effects of weed invasion and grazing are clearly visible. Most of the remnant vegetation occurs in islands surrounded by cropped areas.

## 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 at variance to this Principle**

The area under application falls within the Swan Coastal Plain and is directly south of the Watheroo National Park. There is only one area of remnant vegetation on the property that maintains a high level of biodiversity and the proponent has agreed to withdraw this area from his application. The property was historically cleared to provide land for pasture and grain crops (Water Direct Limited, 2004). This land use has significantly reduced species richness and density, therefore the application is not at variance to this Principle.

**Methodology** GIS Databases: Interim Biogeographic Regionalisation of Australia-EA 18/10/00.  
Water Direct Limited, 2004.  
Site visit, DoE officers, 2005.

### (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 only one area of remnant vegetation on the property that maintains a high level of biodiversity and the proponent has agreed to withdraw this area from his application. The remaining vegetation was observed to be

habitat for *Ocyphaps lophotes*, *Macropus giganteus giganteus* and *Platycercus zonarius*, none of which are protected species. The historical land use has significantly reduced species richness and density, therefore the application is not likely to be at variance to this Principle.

**Methodology** CALM's Threatened and Priority Fauna Database [The comprehensiveness of the database is dependent on the amount of survey carried out in the area and does not necessarily represent a comprehensive listing (CALM, 2005)].

**(c) Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, significant flora.**

**Comments** **Proposal is not at variance to this Principle**  
No Declared Rare or Priority Flora have been recorded in the area proposed to be cleared, therefore this proposal is not at variance to this Principle.

**Methodology** GIS Databases: Declared Rare and Priority Flora list - CALM 13/08/03.  
CALM's Threatened and Priority Flora Database [The comprehensiveness of the database is dependent on the amount of survey carried out in the area and does not necessarily represent a comprehensive listing (CALM, 2005)].

**(d) Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of a significant ecological community.**

**Comments** **Proposal is not at variance to this Principle**  
The Threatened Ecological Community (TEC) data base did not include the area affected by this application.

**Methodology** 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 at variance to this Principle**  
The Swan Coastal Plain Bioregion, the Shire of Dandaragan and Beard vegetation association 1036, all have greater than 30% of their pre-European vegetation remaining. This makes them 'depleted' by conservation status standards and therefore not at variance to this Principle.

	Pre-European Reserves/CALM-area (ha)	Current extent (ha)	Remaining %*	Conservation status**	managed land,
%					
IBRA Bioregion - Swan Coastal Plain	1,498,297	626,512	41.8	Depleted	Not available
Shire - Dandaragan	668,507	326,283	48.8	Depleted	Not available
Beard veg type - 1036	100,496	37,146	37.0	Depleted	43.2

\* (Shepherd et al. 2001)

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

**Methodology** GIS Databases: Interim Biogeographic Regionalisation of Australia - EA 18/10/00, Pre-European Vegetation - DA 01/01, Local Government Authorities - DLI 08/07/04.  
Shepherd et al, 2001.  
Department of Natural Resources and Environment, 2002

**(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 at variance to this Principle**  
The Yallalie Depression (a salt lake being the remains of a Mesozoic meteorite impact crater) and associated wetland margins occur on the western portion of the property. The waters in these wetlands are saline and there are no groundwater dependent ecosystems in the area (Eyre and Shepherd, 2005). All orchard development is located in sandy soils on the eastern part of the property, being approximately 1km from the wetland (Water Direct Limited, 2004). The proposed clearing is therefore, not at variance to this Principle. The saline wetlands do not represent a significant habitat, therefore the proposal is not at variance to this Principle.

**Methodology** GIS Databases: Hydrography, linear - DoE 01/02/04  
Water Direct Limited, 2004.  
Eyre and Shepherd, 2005.

**(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**

DAWA advised that the proposed clearing was not likely to cause appreciable on or off site land degradation providing appropriate strategies are put in place to manage potential wind erosion, increase in recharge or fertiliser contamination of groundwater. The proponent has advised that Casuarinas will be planted as a windbreak for the orchards and an Advanced Fertigation System (AFS) will be used to provide water and nutrients to the citrus trees. The AFS is a closed system that delivers only the required nutrients and water to avoid waste or run off. With these measures in place, it is unlikely that this proposal is at variance to this Principle.

**Methodology** GIS Databases - Rainfall, Mean Annual - BOM 30/09/01, Salinity Risk LM 25m - DOLA 00.  
DAWA, 2005.  
Water Direct Limited, 2004.

**(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 at variance to this Principle**

The vegetation proposed to be cleared is not included in or adjacent to a conservation area and is therefore not at variance to this Principle.

**Methodology** GIS Databases - CALM Regional Parks - CALM 12/04/02, WRC Estate - WRC 05/99, CALM Managed Lands & Waters - CALM 01/06/04, Proposed National Parks FMP-CALM 19/03/03, 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 at variance to this Principle**

The area under application falls within the Leederville Formation aquifer in the Minyulo Caren Caren catchment and does not include any Public Drinking Water Source Areas (PDWSA) or Protection Zones. The Leederville Formation aquifer lies below an impermeable aquilude, so any activity on the surface will not affect the aquifer. In addition, there are not any groundwater dependent ecosystems in the area (Eyre and Shepherd, 2005). Therefore, the proposal will not cause any deterioration in the quality of surface or underground water.

**Methodology** GIS Databases - Current WIN data sets, PDWSA Protection Zones - DOE 07/01/04, Public Drinking Water Sources (PDWSAs) - DOE 29/11/04, Hydrographic Catchments - Catchments - DOE 03/04/03.  
Eyre and Shepherd, 2005.  
Water Direct Limited, 2004.

**(j) Native vegetation should not be cleared if clearing the vegetation is likely to cause, or exacerbate, the incidence of flooding.**

**Comments Proposal is not at variance to this Principle**

The area under application experiences a typically Mediterranean climate, characterised by cool, wet winters and warm, dry summers. The long term average rainfall is 587mm with temperatures ranging from 17 to 35 degrees celsius. Rainfall exceeds potential evaporation only during winter months (Water Direct Limited, 2004). An incremental increase in peak flood height or duration is unlikely due to the permeable nature of the sandy soils on the property and the low rainfall.

**Methodology** GIS Databases - Rainfall, Mean Annual - BOM 30/09/01, Topographic Contours, Statewide - DOLA 12/09/02.  
Water Direct Limited, 2004.  
DAWA, 2005.

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

**Comments**

The Shire of Dandaragan has not indicated that there are any planning requirements/approvals that would affect the clearing.

**Methodology**

**4. Assessor's recommendations**

Purpose	Method	Applied area (ha)/ trees	Decision	Comment / recommendation
Horticulture	Mechanical Removal		Grant	The assessable criteria have been addressed and no objections were raised. The assessing officer therefore recommends that the permit should be granted provided the following conditions are met:

The permit holder shall ensure that the 20 hectares in the north eastern corner of the property (labelled Area A as indicated in attached map TRIM Ref: GD342)) is clearly marked and all activities are excluded from this zone.

The permit holder shall ensure that the 50 hectares in the north western corner of the property (labelled Area B as indicated in the attached map TRIM Ref: GD342)) is deep ripped along the contour in random, irregular lines.

## 5. References

- DAWA (2004) Land degradation assessment report. Office of the Commissioner of Soil and Land Conservation, Department of Agriculture Western Australia. DoE TRIM ref GD339 and GD338
- 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.
- Eyre, D. and Shepherd, R., 2005. *Parmelia - Leederville aquifer Dinner Hill sub area groundwater allocation assessment process Jurien groundwater area presentation to the Water Resource Allocation Committee*. Geraldton, 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.
- Water Direct Limited, 2004. *Nutrient and irrigation management plan Melbourne location 3608 for Agrifresh Pty Ltd*. Perth, Western Australia.