



1. Application details

1.1. Permit application details

Permit application No.: 1071/1
 Permit type: Area Permit

1.2. Proponent details

Proponent's name: Ross Bradley Jones

1.3. Property details

Property: LOT 529 ON PLAN 39310 (JULIMAR 6567)
 Local Government Area: Shire Of Toodyay
 Colloquial name:

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
3.2		Mechanical Removal	Grazing & Pasture

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 Associations - 1006: Medium woodland: jarrah, wandoo and powderbark, - 4: Medium woodland: marri and wandoo (Shepherd et al 2001, Hopkins et al 2001)	The proposed clearing consists of a relatively small area (3.2ha) of scattered stands of vegetation within a 34.5ha property. A site inspection to the area identified the vegetation to be in a very good condition, with very little weed invasion. The structure of the vegetation was intact with the major species including Eucalyptus marginata, E. wandoo, Corymbia calophylla, Banksia menziesii, B. attenuata and Nuytsia floribunda. Understorey and mid-storey species include tea-tree, Xanthorrhoea sp, Macrozamia sp., Hibbertia sp, Hakea sp, and Gastrolobium sp.	Very Good: Vegetation structure altered; obvious signs of disturbance (Keighery 1994)	Vegetation clearing description based on information obtained during a site inspection undertaken 22 June 2006 (DEC TRIM ref: E16481).
Heddle Vegetation Complex: - Coolakin Complex in Low Rainfall: No information available (Heddle et al. 1980)			
Mattiske Vegetation Complex: - Yalanbee Complex: Woodland of Eucalyptus wandoo-Eucalyptus accedens, less consistently open forest of Eucalyptus marginata fs24 subsp. thalassica-Corymbia calophylla on lateritic uplands and breakaway landscapes in arid and perard zones (Mattiske Consulting 1998).	The area under application is considered to be in Very Good condition, but does contain obvious indications of disturbance by fire, with the adjacent areas of native vegetation considered to have a higher condition rating due to a denser understorey.		

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 applied to be cleared comprises of 3.2 ha in a property totalling 34.7 ha the majority of which is uncleared. Julimar State Forest 61 (28,600 ha) is located approximately 1.1km north of the notified area with vegetated corridors providing connectivity for avifaunal movement between the subject property and the forest. BCS (2006) also identified 12 Land for Wildlife sites within 10km of the proposal area.

A site visit to the area by DEC representatives in June 2006 identified the vegetation under application to be in a very good condition with little evidence of weed invasion throughout the property. The structure of the vegetation was intact with the major species, including Eucalyptus marginata, Eucalyptus wandoo, Corymbia calophylla, Banksia menziesii, Banksia attenuata and Nuytsia floribunda. Understorey and mid-storey species include tea-tree, Xanthorrhoea sp, Macrozamia sp, Hibbertia sp, Hakea sp, and Gastrolobium sp.

Although the vegetation is considered to be in very good condition with minimal weed invasion, the vegetation that is proposed to be cleared is representative of typical biological diversity for the local area. This proposed is therefore considered not likely to be at variance to this Principle (BCS, 2006)

Methodology BCS (2006a) (DEC TRIM ref: DOC11276)
GIS Databases:
- Northam 1m Orthomosaic - DLI 12/03
- CALM Managed Lands and Waters - CALM 01/08/04

(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

Advice from the Biodiversity Coordination Section (BCS) (2006) identified two records of a Threatened fauna species, and one record of a Priority fauna species within 10km of the proposed clearing, being Carnaby's Black-Cockatoo and the Western Brush Wallaby.

Banksia, Dryandra, Grevillea and Hakea are all flora species that the Carnaby's Black-Cockatoo is known to utilise as a food source (CALM Fauna Species Profiles, accessed at http://www.calm.wa.gov.au/plant_animals/ on 13th October 2006). Given that the vegetation of the application area has been classified as very good, and has been observed to contain Banksia sp. and Hakea sp., it is possible that the area may be of suitable feeding habitat for Carnaby's. However, given the relatively small size of the area (~3.2ha) and it's location adjacent to well vegetated areas of similar habitat value, it is unlikely that the clearing will have a significant impact on the amount of habitat in the local area (BCS, 2006).

The Western Brush Wallaby, *Macropus irma*, prefers areas of forest and woodland supporting a dense shrub layer. Given that the notified area comprises a diverse understorey and mid-storey layer, it is likely that the Western Brush Wallaby may use this area to forage. However, given the small size of the area (~3.2ha) and it's location adjacent to nearby well vegetated areas of similar habitat value, it is unlikely that the clearing will have a significant impact on the level of suitable habitat available in the local area (BCS, 2006).

The clearing of the applied vegetation is therefore considered unlikely to be at variance to this Principle.

Furthermore, to retain habitat values within the proposed vegetation, a condition relating to the retention of mature trees will be recommended for this application.

Methodology BCS (2006a) (DEC TRIM ref: DOC11276)
GIS Databases:
- Northam 1m Orthomosaic - DLI 12/03

(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

BCS (2006) advises that DEC Corporate datasets identify three records of Declared Rare taxon *Thelymitra stellata* and two records of Priority 2 flora species occurring within the local area. The Declared Rare Flora (DRF) found in the local area is described as follows, from CALM's Florabase:

- *Thelymitra stellata* (Star SunOrchid) - Tuberos, perennial, herb, 0.15 - 0.25m high. Flowers yellow or brown, October - November. Occurs on sand, gravel, lateritic loam.

The nearest occurrence of *Thelumitra stellata* is located approximately 930m south east of the applied area.

Based on the limit amount of soil and site characteristics available, it is unlikely that this DRF species would occur within the area.

The Priority Flora found in the local area is described as follows, from CALM's Florabase:

- *Calytrix sylvana* - Shrub, 0.4 - 1m high. Flowers purple, blue or pink, August - October. Lateritic soils, and Sandplains, ridges.

- *Hibbertia miniata* - Decumbent or erect shrub, 0.1-1m high. Flowers orange or red, August - November. Lateritic gravelly soils.

Given that the notified area comprises sandy soils and the Priority species prefer lateritic gravelly soils, it is unlikely that the area would support these Priority flora taxa.

It is therefore considered that the proposed clearing is unlikely to be at variance to this Principle.

Methodology Site Inspection (2006) (DEC TRIM ref: EI6481)
BCS (2006a) (DEC TRIM ref: DOC11276)

(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 Community (TEC) Types within 10km of the notified area. The nearest TEC is located approximately 30km south west of the area to be cleared (BCS 2006). Therefore, the area under application is unlikely to be necessary for the maintenance of a TEC.

Methodology BCS (2006a) (DEC TRIM ref: DOC11276)
 GIS Databases:
 - Threatened Ecological Communities - CALM 15/7/03

(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 may be at variance to this Principle**
 BCS (2006) advise that two Beard Vegetation Associations and one RFA vegetation complex are represented within the area proposed to be cleared. The area is representative of Beard Vegetation Associations 4 and 1006 and Mattiske's Yalanbee Complex, of which there is 26.6%, 36.7%, and 51.7% of the Pre-European remnant vegetation remaining, and 3.5%, 16.6% and 10.4% of the Pre-European extent is secure in conservation reserves respectively.

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).

	Pre-European area (ha)*	Current extent (ha)*	Remaining %*	Conservation status**	% in reserves/DEC-managed land
IBRA Bioregion					
- Jarrah Forest	4,544,335	2,665,480	58.7%	Least concern	
LGA - Shire of Toodyay	173,440	88,082	50.8%	Least concern	
Beard vegetation associations					
- 4	56,345	15,013	26.6%	Depleted	3.5%
- 1006	9,768	3,586	36.7%	Least concern	16.6%
Hedde vegetation complex					
Coolakin Complex in Low Rainfall		No Information available			
Mattiske vegetation association					
- Yalanbee Complex	158,507	81,972	51.7%	Least concern	10.4%

* (Shepherd et al. 2001)

** (Department of Natural Resources and Environment 2002)

As the 26.6% of remnant vegetation remaining of Beard Vegetation Association 4 is below the 30% threshold level, and thus the proposed clearing may be at variance to this Principle. Furthermore, the JANIS Forest Criteria of 15% of native vegetation in secure tenure has not been met for either Beard vegetation associations 4 or Mattiske's Yalanbee Complex.

While it is recognised that the representation of Beard Vegetation Association 4 is below the recommended 30% level, this vegetation complex makes up approximately 0.8ha of the area under application. As the vegetation within the area under application is recognised as having a lower condition rating than the remaining remnant vegetation within the property, conditions are recommended for inclusion on this permit, requiring retention of mature Eucalyptus and Corymbia trees, and the fencing of, and exclusion of stock from, remnant vegetation. The latter condition should aid in the maintenance of the remaining 18ha of under represented vegetation within the property.

Methodology BCS (2006b) (TRIM Ref: DOC13169)
 Shepherd et al. (2001)
 Hopkins et al. (2001)
 Hedde et al. (1980)
 Mattiske Consulting (1998)
 GIS Databases:
 - Northam 1m Orthomosaic - DLI 12/03

(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 known watercourses or wetlands within the area under application, with the closest perennial watercourse, the Avon River, being located approximately 6.6km to the south of the proposed area. There are also a number of minor non-perennial watercourses to the south of the area under application.

Given the distances to these water bodies and the description of the area under application, the vegetation proposed to be cleared is not growing in, or in association with an environment associated with a watercourse or wetland.

- Methodology** GIS Databases:
- Hydrography, linear - DOE 01/02/04
 - EPP, Areas - DEP 06/95
 - EPP, Lakes - DEP 28/07/03
 - EPP, Wetlands (draft) - DEP 21/07/04
 - ANCA Wetlands - CALM 08/01
 - Hydrographic Catchments - Catchments DOE 3/4/03
 - RAMSAR Wetlands - CALM 21/10/02

(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**
- DAFWA (2006) advise that Lot 529 Nerramine Road is located upon a Quailing Xone Landscape unit, which consists mainly of deep yellow and pale sand or pale sands over gravel/loamy sands. Assessment of the on site and off site land degradation risks by DAFWA found that that the proposed clearing is unlikely to lead to an increase in salinity, eutrophication, wind erosion, or water erosion.

It is therefore considered unlikely that the clearing will contribute to appreciable land degradation, and thus is unlikely to be at variance with this Principle.

- Methodology** DAFWA (2006) (DEC TRIM ref: DOC2797)
- GIS Databases:
- Topographic Contours, Statewide - DOLA 12/09/02
 - Soils, Statewide - DA 11/99

(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**
- Lot 529 Nerramine Road is not located adjacent to any DEC Managed Reserves, System 6 Conservation Reserves or areas on the Register of National Estate, with the nearest conservation area being Julimar State Forest 61, located approximately 1.1km north of the area under application.

While there is some vegetated connectivity between the subject property and Julimar State forest, the vegetation applied to be cleared is on the southern aspect of the property. Given the distance to the forest and the vegetated area between the proposed clearing and the forest, BCS (2006) advises that conservation areas are unlikely to be impacted by the proposed clearing.

- Methodology** BCS (2006a) (DEC TRIM ref: DOC11276)
- GIS Databases:
- CALM Managed Lands and Waters - CALM 01/08/04
 - Northam 1m Orthomosaic - DLI 12/03
 - System 6 Conservation Reserves - DEP 06/95

(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 known EPP Lakes or Wetlands within the area under application, or within 5km. There are a number of small non-perennial watercourses found to the south of the proposed area, in addition to a perennial watercourse, being the Avon River, located approximately 6.6km to the south of the area.

Given that these watercourses are relatively isolated from the proposed clearing area, and the scale of the proposed clearing relatively small in the local context, it is considered unlikely that the clearing will have a appreciable impact on any surface or ground water bodies.

- Methodology** GIS Databases:
- Groundwater Salinity, Statewide - 22/02/00
 - Hydrography, linear - DOE 01/02/04
 - EPP, Areas - DEP 06/95
 - EPP, Lakes - DEP 28/07/03
 - EPP, Wetlands (draft) - DEP 21/07/04
 - ANCA Wetlands - CALM 08/01

- Hydrographic Catchments - Catchments DOE 3/4/03
- RAMSAR Wetlands - CALM 21/10/02

(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**
 Flooding impacts are unlikely to occur as a result of the applied clearing, due to its size and location. Lot 529 Nerramine Road is located approximately 6.6km from the Avon River, at an elevation which ranges between 275m and 290m AHD. In addition, the area has a low rainfall and a relatively high evaporation rate, and hence surface flow is only likely to occur in high rainfall events.

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

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

Comments
 The Shire of Toodyay have advised that the subject property is zoned Rural 4 under the Shire of Toodyay Town Planning Scheme No 1. Under the provisions from the current scheme, there are no regulations regarding the clearing of native vegetation and no requirement to obtain planning approval for such activities. As such, the Shire of Toodyay has no objection to the proposed clearing.

There are no Native Title Claims or Aboriginal Sites of Significance in or adjacent to the area under application.

No other Statutory approvals issued by the Department of Environment and Conservation are required, nor does the proponent require a Licence to Take Groundwater under the Rights in Water and Irrigation Act 1914.

Methodology

4. Assessor's comments

Purpose	Method	Applied area (ha)/ trees	Comment
Grazing & Pasture	Mechanical Removal	3.2	<p>Assessment against the Principles of Clearing, as listed in Schedule 5 of the Environmental Protection Act 1986, has been undertaken, and the proposed may be at variance to Principle (e).</p> <p>Principle (e): While it is recognised that the representation of Beard Vegetation Association 4 is below the recommended 30% level, this vegetation complex makes up approximately 0.8ha of the area under application. As such, the assessing officer recommends that a condition be placed on the permit to fence remaining vegetated areas within the property and exclude stock access. This condition should aid in the maintenance of the higher condition areas of Beard Vegetation Association 4 throughout the remainder of the property; fencing approximately 18 hectares.</p> <p>The assessing officer therefore recommend that this application be granted, subject to conditions on the fencing of remnant vegetation, the exclusion of stock, and the retention of mature Eucalyptus and Corymbia species.</p>

5. References

BCS (2006a) Clearing Assessment Unit's biodiversity advice for land clearing application. Advice to Director General, Department of Environment and Conservation (DEC), Western Australia. DEC TRIM ref: DOC 13139

BCS (2006b) Clearing Assessment Unit's biodiversity advice for land clearing application. Advice to Director General, Department of Environment and Conservation (DEC), Western Australia. DEC TRIM ref: DOC13169

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: DOC2797

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.

Heddl, 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.

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.

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)