



## 1. Application details

### 1.1. Permit application details

Permit application No.: 2533/1  
 Permit type: Area Permit

### 1.2. Proponent details

Proponent's name: Jarnadup Investments Pty Ltd

### 1.3. Property details

Property: LOT 2 ON DIAGRAM 9652 ( SMITH BROOK 6258)  
 LOT 10910 ON PLAN 203844 ( SMITH BROOK 6258)

Local Government Area: Shire Of Manjimup  
 Colloquial name:

### 1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
14.1		Mechanical Removal	Grazing & Pasture
		Mechanical Removal	Grazing & Pasture
		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 association 3: Medium forest; jarrah-marri	The proposal is for the clearing of as total of 14.1ha of native vegetation within 3 remnants. The vegetation is in degraded condition attributed to livestock access resulting in little or no understorey structure and weed invasion. The proposed clearing is for agricultural purposes.	Degraded: Structure severely disturbed; regeneration to good condition requires intensive management (Keighery 1994)	Vegetation condition was determined from a DAFWA site visit, photographs provided by the proponent and aerial mapping Manjimup 1.4M Orthomosaic (DLI 00) and Manjimup 50cm Orthomosaic (DLI 04).
Beard vegetation association 1144: Tall forest; karri & marri (Corymbia calophylla).			
Mattiske vegetation complex: Crowea (CRy) - Tall open forest of Corymbia calophylla with mixture of Eucalyptus marginata subsp. marginata and Eucalyptus diversicolor on uplands in hyperhumid and perhumid zones.			

## 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 within the applied area is in degraded condition(Keighery 1994), with the structure severely disturbed, and regeneration to good condition requiring intensive management. The area has been parkland cleared by livestock grazing and little to no understorey remaining in the majority of the application area, with large levels of grassy weed intrusion. The area therefore comprises of low level of biological diversity.

The local area (10km radius) is well vegetated (approximately 50%) with 6 DEC managed lands in the vicinity, and as such the 14.1ha applied for clearing is not of high biodiversity in the local context.

On this basis, the clearing as proposed is not likely to be at variance to this principle.

**Methodology** References:  
 - Keighery (1994)  
 - DAFWA Advice (2008)

GIS database:

- CALM Managed Lands and Waters - CALM 01/06/05
- SAC Biodatasets - accessed 27 June 08
- Mattiske Vegetation (01/03/1998)
- Declared Rare and Priority Flora List - CALM 13/08/03
- Heddle Vegetation Complexes - DEP 22/06/95
- Pre European Vegetation - DA 01/01
- Clearing Regulations, Environmentally Sensitive Areas 30 May 2005
- NLWRA, Current Extent of Native Vegetation 20 Jan 2001

**(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**

Eight declared threatened and 1 priority fauna species have been recorded within the local area (10km). All of these were recorded in the same vegetation complexes as the proposed clearing area. The vegetation of the application area has been described as degraded, with the vegetation structure having been significantly altered through livestock grazing, which has resulted in the removal of native understorey vegetation, with mostly mature trees remaining.

Phascogale tapoatafa spp. (Brush-tailed Phascogale), has been recorded as close as 30m from the proposed clearing. This species is known to live in dry sclerophyll forests and open woodlands that contain hollow-bearing trees but a sparse ground cover (Naturebase, 2008). This species may therefore utilise the applied area, which is parkland cleared. Advice received from the Warren Region stated that the clearing as proposed is not likely to impact on the species as a whole which is widespread, as there are larger areas of vegetation in better condition within the local area (DEC 2008), namely the Tone State Forest.

While there are several fauna species (Calyptorhynchus banksii naso, Calyptorhynchus baudinii, Isoodan obesulus fusciventer and Setonix brachyurus) that may utilise the proposed areas, there are larger areas of similar vegetation types within the surrounding area. The proposed clearing is not likely to represent a significant habitat for indigenous fauna as the local area (10km radius) is not heavily cleared.

Therefore, given the better condition of consolidated vegetation within the area, the clearing of 14.1 ha of degraded native vegetation is not likely to be at variance to this principle.

**Methodology References:**

- DEC (2008)
- Naturebase (2008)
- Chapman, T., Johnstone, R. and Massam, M. (2005)
- Chapman, T. and Massam, M. (2005)
- Bramwell, E. (2001)

**GIS databases:**

- CALM Managed Lands and Waters - CALM 01/06/05
- Mattiske Vegetation (01/03/1998)
- SAC Biodatasets - accessed 27 June 08
- Hydrography linear - DOW 13/7/06
- Hydrography linear (hierarchy) - DoW 13/7/06

**(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**

There are no known records of declared rare flora within the local area (10km of the proposal area) and therefore, it is unlikely the clearing as proposed is at variance with this principle.

**Methodology GIS databases:**

- Mattiske Vegetation (01/03/1998)
- Pre European Vegetation - DA 01/01
- SAC Biodatasets - accessed 27 June 08
- Soils, Statewide DA 11/99

**(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 records of Threatened Ecological Communities (TEC) in the local area (10km) of the proposed clearing. Therefore, it is unlikely the clearing as proposed is at variance with this principle.

**Methodology GIS databases:**

- SAC Biodatasets - accessed 27 June 08
- Mattiske Vegetation (01/03/1998)
- Pre European Vegetation - DA 01/01
- Soils, Statewide DA 11/99

**(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 vegetation within the application area is a component of Beard Vegetation Associations 3 and 1144 (Hopkins et al, 2001) of which there is approximately 69.4% and 79.5% respectively of the pre-European extent remaining (Shepherd, 2006).

The vegetation proposed for clearing is also a component of Mattiske vegetation complex Crowea, of which 70% of the pre-European extent is remaining (Mattiske, 1998). The local area is approximately 50% vegetated with native vegetation, and contains 6 DEC managed lands. The vegetation under application is comprised of a vegetation complex that is well represented. The data suggests that the Shire of Manjimup is also well vegetated, with 84.6% native vegetation remaining.

Given the pre-European extent remaining of the aforementioned vegetation associations and Mattiske vegetation complex, the relatively high proportion of vegetation remaining within the local area, and the degraded condition of the applied area, the applied area is not considered to be a significant remnant of vegetation in an area that has been extensively cleared.

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

**Methodology References:**

- Shepherd (2006)
- Hopkins et al. (2001)
- Mattiske (1998)

**GIS databases:**

- Interim Biogeographic Regionalisation of Australia - EA 18/10/00
- Local Government Authorities - DLI 8/07/04
- Mattiske Vegetation - CALM 1/03/1998
- Pre European Vegetation - DA 01/01
- SAC Biodatasets - accessed 27 June 08
- NLWRA, Current Extent of Native Vegetation 20 Jan 2001

**(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 clearing application area is located within 300m of the Smith Brook, a minor perennial watercourse, with medium to high relief between the two. The vegetation community identified as being associated with the water course, Wheatly, is described as: Tall open forest of Eucalyptus diversicolor, Corymbia calophylla on slopes and tall open forest of Eucalyptus patens on valley floor in perhumid and humid zones (Mattiske, 1998).

The proposed clearing falls outside the recommended buffer for water courses, 50m. The neighbouring Smith Brook Nature Reserve, and the areas proposed by the proponent to be reserved as natural vegetation, will provide a buffer for the water courses to the south of the proposed clearings from impacts of the proposed clearing.

Topographic contours show that runoff from the north eastern areas will flow into the properties two dams, and the relief is medium.

The clearing as proposed is therefore not likely to be at variance to this principle.

**Methodology References:**

- Mattiske (1998)

**GIS databases:**

- ANCA wetlands - Environment Australia 26/3/99
- CALM Managed Lands and Waters - CALM 01/06/05
- EPP Lakes Policy Area - DEP 14/05/97
- EPP, Wetlands 2004 (DRAFT) - EPA 21/7/04
- Clearing Regulations, Environmentally Sensitive Areas 30 May 2005
- Hydrography linear (hierarchy) - DoW 13/7/06

- Ramsar wetlands - DEC 03
- South Coast Significant Wetlands - WRC 10/06/2003

**(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 local area surrounding the application is approximately 50% vegetated with native vegetation, and the Shire of Manjimup is also well vegetated, with 84.6% native vegetation remaining (Shepherd, 2006).

The soil type mapped for the area is steep, hilly to hilly dissected lateritic plateau with steep valley side slopes: chief soils are hard, and also sandy, neutral, and also acidic, yellow and yellow mottled soils (Northcote et al. 1968). These soils are not at high risk of wind erosion following clearing.

Department of Agriculture and Food WA advice stated that no significant land degradation is expected to occur as a result of the proposed clearing. The proposed clearing is not likely to be at variance with this principle.

**Methodology**      **References:**  
 - Shepherd (2006)  
 - DAFWA Advice (2008)

**GIS databases:**  
 - Average Annual Rainfall Isohyets - WRC 29/09/98  
 - Annual Evaporation Contours (Isopleths) - WRC 29/09/98  
 - Hydrogeology, statewide ? DOW 13/07/06  
 - Hydrographic catchments, catchments - DoW 01/06/07  
 - Hydrography, linear - DOW 13/7/06  
 - Salinity Risk LM 25m - DOLA 00  
 - Soils, Statewide DA 11/99  
 - Topographic contours statewide - DOLA and ARMY 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 may be at variance to this Principle**  
 The local area contains 6 DEC managed lands. These include Donnelly State Forest (2.17km west), Warren State Forest (1.97km south west), Tone State Forest (360m north) and Sir James Mitchell National Park (1.6km west south west).

The applied areas provide some corridor linkage between the reserves lying to the south-west and the Tone State Forest. However, given the relatively consolidated condition of the surrounding conservation areas, the significance of the applied area as an ecological linkage is reduced.

The area applied to clear borders the Smith Brook Nature Reserve, which is recorded as an environmentally sensitive area and registered national estate. The vegetation may be providing some buffering capacity against the spread of weeds and dieback into conservation areas.

Weed and dieback control conditions will be placed on the permit to minimise the effects the clearing will have on the surrounding conservation areas if the permit is granted.

**Methodology**      **GIS database:**  
 - CALM Managed Lands and Waters - CALM 01/06/05  
 - Hydrography, linear - DOW 13/7/06  
 - Register of National Estate - Environment Australia, Australian and world heritage division 12 Mar 02  
 - System 1 to 5 and 7 to 12 areas ? DEC 11/7/06

**(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 application area falls within the Warren River and Smith Brook catchments, and the Warren River Public Drinking Water Source Area (no priority assigned). The area is within a Country Area Water Supply in zone C. The clearing of 14ha as proposed will not result in less than 10% native vegetation on the holding (DoW 2008).

The area under application has a rainfall of 1100mm and evapotranspiration rate of 800mm a year. The groundwater has a salinity of less than 1000mg/L and the area is of low salinity risk. The data suggests that the shire of Manjimup is also well vegetated, with 84.6% native vegetation remaining.

The area under application is located on soil described as Steep hilly to hilly dissected lateritic plateau with

steep valley side slopes: chief soils are hard, and also sandy, neutral, and also acidic, yellow and yellow mottled soils (Northcote et al. 1968). The locally high topography of the site should result in any surface water leaving the site being relatively fresh.

The neighbouring Smith Brook Nature Reserve, as well as remnant vegetation to be retained by the proponent, will provide adequate buffering to provide protection from surface water degradation.

The clearing as proposed is therefore not likely to be at variance to this principle.

**Methodology** Reference:

- Northcote et al. 1968
- DoW Advice 2008

GIS database:

- Evapotranspiration Isopleths - WRC 29/09/98
- Groundwater Salinity Statewide DoW 13/07/06
- Hydrographic catchments, catchments - DoW 01/06/07
- Hydrographic catchments, subcatchments - DoW 01/06/07
- Hydrography, linear - DOW 13/7/06
- Mean Annual Rainfall Isohytes (1975 - 2003) - DEC 02/08/05
- Salinity Risk LM 25m - DOLA 00
- Topographic Contours, Statewide - DOLA 12/09/02

**(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**

The local area surrounding the proposed clearing is well vegetated, and there are no records of floodways or areas of flooding within the applied or surrounding areas. The applied area occurs on a hill side of medium relief, which reduces the susceptibility of the area to flooding. Surface water flowing from the two north eastern proposed clearing sites is likely to flow into dams, and water from the southern site is likely to flow through nature reserve into the Smith Brook, and contribute to dams downstream.

Therefore, the clearing as proposed is not likely to be at variance with this principle as the topography and remaining vegetation in the catchment reduces the incidence and intensity of flooding.

**Methodology** GIS database:

- Environmental Impact Assessments - EPA 22/2/07
- Evaporation Isopleths - WRC 29/09/98
- Hydrographic catchments, catchments - DoW 01/06/07
- Hydrographic catchments, subcatchments - DoW 01/06/07
- Hydrography, linear - DoW 13/7/06
- Mean Annual Rainfall Isohytes (1975 - 2003) - DEC 02/08/05
- Topographic Contours, Statewide - DOLA 12/09/02

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

**Comments**

The properties under application are currently zoned as rural.

The properties under application fall within Country Area Water Supply zone C. The Department of Water advises that compensation has not been paid.

**Methodology**

References:

- DoW Advice (2008)

GIS database:

- Cadastre - Landgate Dec 07
- Native Title Claims - LA 2/5/07
- RIWI Act, Groundwater Areas - DoW 13/07/06
- RIWI Act, Irrigation Districts - DoW 13/07/06
- Town Planning Scheme Zones - MFP 31/08/98
- Country Area Water Supply Act (Part IIA) Clearing Control Catchments 29/06/2006
- Aboriginal Sites of Significance 26 April 2007
- Public Drinking Water Source Areas (PDWSAs) ? 07/02/06

**4. Assessor's comments**

**Comment**

The application has been assessed against the clearing principles, planning instruments and other matters in accordance with s510 of the

Environmental Protection Act 1986, and the proposed clearing may be at variance with Principle (h) and is not likely to be at variance with the remaining Principles.

## 5. References

- Bramwell, E. (2001). Living with Quendas. Department of Conservation and Land Management, WA.
- Chapman, T. and Massam, M. (2005). Reducing fruit damage by Baudin's Cockatoo. Fauna Note No. 01/2005. Department of Conservation and Land Management, WA. Available from: <http://www.dec.wa.gov.au/animals/fauna-management/fauna-species-profiles.html>
- Chapman, T., Johnstone, R. and Massam, M. (2005). Red-tailed Black Cockatoo. Fauna Note No. 06/2005. Department of Conservation and Land Management, WA.
- DAFWA Advice (2008). TRIM Ref DOC 60156.
- DEC (2008). Regional Advice. TRIM Ref DOC 60992.
- DoW Advice (2008). TRIM Ref DOC59838.
- 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.
- Naturebase (2008). Fauna Species Profiles. Department of Environment and Conservation, WA. Available from: <http://www.dec.wa.gov.au/animals/fauna-management/fauna-species-profiles.html>
- 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, D.P. (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)