



1. Application details

1.1. Permit application details

Permit application No.: 1924/1

Permit type: Area Permit

1.2. Proponent details

Proponent's name: City of Albany

1.3. Property details

Property: LOT 659 ON PLAN 100639 (MARBELUP 6330)

Local Government Area: City Of Albany

Colloquial name:

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
3		Mechanical Removal	Extractive Industry

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
Low forest; jarrah, Eucalyptus staeri & Allocasuarina fraseriana	Vegetation under application is 3ha considered to be in excellent condition (Keighery 1994). The proposed cleared vegetation may form part of an ecological linkage to the coast.	Excellent: Vegetation structure intact; disturbance affecting individual species, weeds non-aggressive (Keighery 1994)	The condition and description of the vegetation present on the area under application was determined by the use of orthomosaic mapping and the flora survey report (Stewart 2008).

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 at variance to this Principle
	<p>The application proposes to clear 3ha in Reserve 21510 designated for the purpose of gravel and protection of remnant vegetation. The purpose of the proposal is for gravel extraction. The vegetation is considered to be in excellent condition (Stewart 2008), and forms part of an ecological linkage to nearby Nature Reserves. However, there does appear to be some degradation of the vegetation on the western boundary of the proposed area due to adjacent land use activities (cleared vegetation) (Stewart 2008).</p> <p>There are 19 priority flora species recorded throughout the local area (10km radius). A targeted flora survey found two priority flora species present: <i>Banksia serra</i> (P4) north of the proposed clearing and <i>Stylidium plantagineum</i> (P4) throughout the application area (Stewart 2008). <i>S. plantagineum</i> is now known to occur frequently throughout the South Coast region, and as such is likely to be delisted in 2009. <i>B. serra</i>, however, is under threat from dieback and clearing and management measures need to be put in place to protect the population north of this proposal (DEC 2008). Therefore, a condition to provide a 30m buffer from individuals of <i>Banksia serra</i> will be imposed on the permit, as well as revegetation, weed and dieback conditions to protect the biological diversity of the local area.</p>
Methodology	<p>Stewart (2008) DEC (2008)</p> <p>GIS datasets: - Albany 1.4m Orthomosaic - DLI March 03 - SacBiosets (fauna, DEFL feb08, waherb)</p>

(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 may be at variance to this Principle

There were 9 rare and priority fauna species present in the local area (10km radius), *Isodon obesulus fusciventer* (Quenda) the closest being 1.5km south east of the application area, *Pseudocheirus occidentalis* (Western Ringtail Possum) 2.4km south east, and *Macropus irma* (Western Brush Wallaby) 8.7km south east. *Calyptorhynchus baudinii* (Baudins Black-Cockatoo) was also found in the local area, as well as *Areotis australis* (Australasian Bustard), and *Calyptorhynchus banksii naso* (Forest Red-Tailed Black-Cockatoo).

Of these fauna species Quenda, Western Ringtail Possum, Western Brush Wallaby and Forest Red-Tailed Black-Cockatoo are likely to occur within the application area (NatureBase2008). Due to the extensive clearing that has taken place in the surrounding area (approximately 30% native vegetation remaining), the application area, while being 3ha, may be significant as habitat for these fauna species. Therefore, a condition requiring the revegetation of the cleared area will be imposed on the permit.

Methodology NatureBase(2008)
SACBio datasets

GIS datasets:

- Albany 1.4m Orthomosaic - DLI March 03
- Pre-European Vegetation - DA 01/01
- CALM Managed Lands and Waters - CALM 1/07/05

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

Comments Proposal is not at variance to this Principle

Whilst there are 2 rare flora species recorded within the local (10km radius) area, none were found to be present during the targeted flora survey (Stewart, 2008). The clearing as proposed is therefore not at variance to this principle.

Methodology SACBio datasets
Stewart (2008)

(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

The closest recorded Threatened Ecological Community (TEC) to the area under application is located 19 km north east, and 19.5km east. Given the distance, and lack of connectivity due to previous land clearing, the area under application is not likely to be necessary for the maintenance of TECs.

Methodology SAC Bio datasets 120907
GIS datasets:
- Albany 1.4m Orthomosaic - DLI March 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

The proposed clearing occurs within the Jarrah Forest IBRA Region, where the area of vegetation remaining is 53.4%, within the City of Albany, 39.52% of Beard Vegetation Association 978 remains (Shepherd et al. 2006). A number of the vegetation complexes within these regions are poorly represented and occur in a landscape that has been extensively cleared.

Aerial mapping indicates that approximately 30% of remnant vegetation remains within a 10km radius of the area under application. Given that the vegetation under application mostly consists of remnant vegetation in excellent condition (Stewart 2008) in a predominantly cleared landscape, the proposed clearing may be at variance to this Principle.

A condition to revegetate the application area will be imposed should a clearing permit be granted.

Methodology Shepherd et al. (2006)

GIS datasets:

- Pre-European Vegetation - DA 01/01
- Albany 1.4m Orthomosaic - DLI March 03
- Interim Biogeographic Regionalisation of Australia - EA 18/10/00

(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 watercourses located on the property. However, the Marbellup Flats are located less than 1km to the east, Powell Lake is located 2.8km to the southeast and Seven Mile Creek is situated 5.5km to the east, all of which are classified as South Coast Significant Wetlands, with Lake Powell also being on the Register of National Estate. Given that there is a vegetated buffer between 70m and 500m wide surrounding the proposed clearing area, as well as the 1km distance between these waterbodies to the proposed cleared area, it is unlikely that the proposed clearing will impact on adjacent watercourses or wetlands.

Methodology GIS datasets:

- Albany 1.4m Orthomosaic - DLI March 03
- Hydrography, linear (hierarchy) } DOW
- South Coast Significant Wetlands - DOE 4/8/03

(g) Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation.

Comments Proposal is not at variance to this Principle

The area under application consists of Soil Type: X14: Swampy plain with some granitic tors in the south-western portion: chief soils are sandy neutral yellow mottled soils and leached sands. Associated are low ridges of soils containing ironstone gravel (Northcote 1960-68).

DAFWA (2007) advice indicates that although rainfall is high, the well drained lateric soils do not waterlog easily, wind erosion risk is considered to be low and the risk of water erosion is rated as very low. Therefore it is unlikely that the proposed clearing will cause appreciable land degradation.

**Methodology Northcote, K. H et al. (1960-68)
DAFWA(2007).**

(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

There are 3 Nature Reserves within 5 km radius of the application area, the closest being Marbellup Nature Reserve which is located 1.2km east. Lake Powell Nature Reserve, also on the Register of National Estate, is located 2.8km south east and Down Road Nature Reserve is located 3.7km north east.

Marbellup Nature Reserve and Down Road Nature Reserve form a component of the same Beard Vegetation Association; however, Lake Powell Nature Reserve forms a component of a different vegetation association to that of the native vegetation under application. Much of the surrounding land has been previously cleared (approx. 30% remaining in 10km radius).

Given the linkage connecting the native vegetation under application to Marbellup Nature Reserve and the condition and size of the vegetation, the proposed clearing may impact on the environmental values of Marbellup Nature Reserve.

In order to protect the environmental values of nearby conservation areas, revegetation conditions will be imposed on the permit.

Methodology GIS datasets:

- Albany 1.4m Orthomosaic - DLI March 03
- CALM Managed Lands and Waters - CALM 1/07/05
- Register of National Estate - EA 28/01/03
- Pre-European Vegetation - DA 01/01

(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

Groundwater salinity has been recorded as 500-1000 total dissolved solids (TDS) mg/L. The proposed area to be cleared lays within the Gazetted Marbellup Water Reserve, in addition the area also overlays the Werillup Formation, which has been identified as a potential potable water source, having significant supplies of fresh water. Despite its proximity to water sources it appears unlikely that the proposed clearing will result in the salinisation of the water resource (DAFWA Advice 2007).

Methodology GIS Datasets:

- Groundwater Salinity, Statewide- DOW

(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 at variance to this Principle**
Rainfall has been recorded as 900-1000 mm/year and evaporation as 1400 mm/year, yet due to the well drained lateric soils present in the area (DAFWA advice 2007), the risk of increased flooding from the proposed clearing is unlikely.

Methodology GIS datasets:
Rainfall, Mean Annual - BOM 30/09/01
Isohyets - BOM 09/98
DAFWA advice (2007)

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

Comments
The land use is zoned public purpose, with a management order for "Gravel and Protection of Remnant Vegetation."

As outlined in the DoW (2007) Marbelup Brook Catchment Area Drinking Water Source Protection Plan, the area under application has been identified as a priority 1 area. The plan also recognizes gravel and sand pits as a low management priority and responsible stakeholder for the plan to be the City of Albany and Landholder, with regards to gravel pits.

Methodology GIS datasets:
- Albany 1.4m Orthomosaic - DLI March 03
- Aboriginal Sites of Significance
- DoW (2007)

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 is at variance to Principle (a), may be at variance to Principles (b), (e) and (h), is not at variance to Principle (c), (g) and (j) and is not likely to be at variance to the remaining clearing Principles.

5. References

- DAFWA Land degradation assessment report. Office of the Commissioner of Soil and Land Conservation, Department of Agriculture and Food Western Australia. DEC TRIM ref DOC35943
- DEC (2008) South Coast Regional Advice. Department of Environment and Conservation Trim Ref DOC72293.
- DEC (YYYY) NatureBase - Fauna Species Profile: <INSERT SPECIES>. Accessed at <http://www.naturebase.net/content/view/840/1288/>. Accessed day/month/year. Department of Environment and Conservation, Western Australia.
- Department of Water Western Australia (2007), Marbellup Brook Catchment Area Drinking Water Source Protection Plan: Lower Great Southern Town Water Supply Scheme, Report No. 67
- Mattiske, E.M. and Havel, J.J. (1998) Vegetation Complexes of the South-west Forest Region of Western Australia. Maps and report prepared as part of the Regional Forest Agreement, Western Australia for the Department of Conservation and Land Management and Environment 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, D.P. (2007). 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.
- Shepherd, D.P., Beeston, G.R. and Hopkins, A.J.M. (2001a) Native Vegetation in Western Australia, Extent, Type and Status. Resource Management Technical Report 249. Department of Agriculture, Western Australia (updated 2006).
- Stewart, P. (2008) Flora Survey Marbelup Gravel Pit S050. City of Albany, TRIM ref DOC70329.

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)

