



1. Application details

1.1. Permit application details

Permit application No.: 2852/1
 Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: City of Albany

1.3. Property details

Property: LOT 4795 ON PLAN 157139 (House No. 134 WILCOX REDMOND 6327)
 LOT 4795 ON PLAN 157139 (House No. 134 WILCOX REDMOND 6327)
 ROAD RESERVE (REDMOND 6327)
 LOT 4 ON DIAGRAM 90014 (House No. 1091 TAKENUP NAPIER 6330)
 ROAD RESERVE (GREEN RANGE 6328)

Local Government Area: City Of Albany
 Colloquial name: Warriup Road

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
6.6		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
The three areas under application are comprised of the following beard vegetation associations.	Wilcox Road vegetation: Banksia grandis, Eucalyptus marginata, Xanthorrhoea species, Corymbia calophylla and Hakea species (DEC site inspection 2008). The vegetation is predominately Eucalyptus marginatus and Allocasuarina fraseriana woodland, with a diverse array of understorey shrubs, herbs and sedges (Stewart 2008).	Very Good: Vegetation structure altered; obvious signs of disturbance (Keighery 1994)	The condition and description of the vegetation under application was determined via the use of aerial mapping systems, a DEC site inspection and flora surveys.
Beard 1000: Mosaic: Medium forest; jarrah-marri / Low woodland; banksia / Low forest; teatree (Melaleuca spp.)			
Beard 14: Low forest; Eucalyptus marginata (Jarrah) &			
Beard 980: Shrublands; jarrah mallee-heath	Takenup Road: Banksia grandis, Kingia australis, Eucalyptus marginata, Nutysia floribunda, Xanthorrhoea presii, Corymbia calophylla & Personia micranthera (DEC site inspection 2008). The vegetation is comprised of mature Jarrah (Eucalyptus marginata) and Marri (Corymbia calophylla) trees up to 10m high. There are few middle storey species present, with understorey species being limited to a sparse collection of low growing herbaceous plants (Stewart 2008).		
BASSENDEAN COMPLEX - CENTRAL AND SOUTH: Vegetation ranges from woodland of Eucalyptus marginata (Jarrah) - Allocasuarina fraseriana (Sheoak) - Banksia species to low woodland of Melaleuca species, and sedgelands on the moister sites. This area includes the transition of Eucalyptus marginata (Jarrah) to Eucalyptus todiana	Wirrup location: Mallee-heath of jarrah (Eucalyptus marginata) with an understorey of shrubs		

(Pricklybark) in the vicinity of Perth. consisting of *Agonis theiformis*, *Melaleuca striata* and *Taxandria spathulata*, and sedges such as *Anthria prolifera* and *Mesomelaena stygia* (Hickman 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 may be at variance to this Principle**

The vegetation under application can be divided up into three sites. The Wilcox Road location, which consists of two sections, both of which are in a good to very good (Keighery 1994) condition. The clearing at the Wilcox Road location is for the purpose of road straightening and smoothing. The Takenup Road location, which also consists of two sections, both are in good to very good (Keighery 1994) condition. The third site on Warriup road is in a good (Keighery 1994) condition. Both the Takenup and Warriup Road location clearing is for the purpose of gravel extraction.

The total area of the three sites is 6.6 hectares. While this is a relatively small area, especially when taking into consideration that the proposed clearing is spread over three separate locations, the cumulative impacts of such clearing will diminish the values offered by remnant vegetation if continued clearing is allowed to continue.

Takenup Road location has potential habitat trees for fauna species and the Wilcox Road location is known to be utilised by the Quenda (*Isoodon obesulus fusciventer*) (DEC site visit 2008).

To mitigate the impact of clearing weed and dieback control conditions will be placed on the permit to minimise the spread of weeds and disease.

Methodology DEC site visit (2008)
Keighery (1994)
GIS DataSets:
- Albany Mount Barker Orthomosaic (9/10/07)

(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**

The vegetation under application can be divided up into three sites. The Wilcox Road location, which consists of two sections, both of which are in a good to very good (Keighery 1994) condition. The Takenup Road location, which also consists of two sections, both are in good to very good (Keighery 1994) condition. The third site on Warriup road is in a good (Keighery 1994) condition.

Fauna species have been recorded within the local area (10km radius) of all locations. The Quenda (*Isoodon obesulus fusciventer*) and the Forest Red-tailed Cockatoo (*Calyptorhynchus banksii naso*) were recorded 4.6km south west of the Wilcox Road location. The closest fauna species to the Takenup Road location was the Forest Red-tailed Cockatoo, which was recorded 6.9km south west.

The Green westwind katydid (*Windbalae viride*) was recorded 2.8km south east and the Quokka (*Setonix brachyurus*) was recorded 4.4km north east of the Warriup location.

During a DEC site visit (2008) a Quenda (*Isoodon obesulus fusciventer*) was observed crossing from the southern section of the Wilcox location, into the northern section.

Within the Takenup Road location, numerous habitat trees were observed, as well as two Boobook owls (*Ninox novaehollandiae*) (DEC site visit 2008).

No inspection was carried out within the Warriup location. GIS Data showed one fauna species recorded within the local area (10km radius). The Quokka (*Setonix brachyurus*) was recorded 4.4km from the application area.

To minimise potential adverse impacts to significant habitat, it is recommended that fauna management conditions & revegetation conditions be placed on the permit.

Methodology Keighery (1994)
DEC site visit (2008)
GIS DataSets:
- Albany Mount Barker Orthomosaic (9/10/07)
- CALM Managed Lands and Waters - CALM 01/06/05

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

Comments Proposal is not likely to be at variance to this Principle

In flora surveys conducted during July & September 2008, there were no rare or priority listed flora species identified within the Wilcox Road Reserve location application area (Stewart 2008). At the Takenup Road location, no rare or priority listed species were documented (Stewart 2008a). There was also no rare or priority flora species identified within the Warriup Road Reserve location (Hickman 2008).

The combined area of all locations is 6.6 hectares. Given that no rare or priority listed flora were identified within any of the locations under application, it is considered unlikely that the proposed clearing is at variance to this principle.

Methodology Hickman (2008)
Keighery (1994)
Stewart (2008)
Stewart (2008a)
GIS DataSets:
- Albany Mount Barker Orthomosaic (9/10/07)
- SAC Biodatasets - accessed 15 Dec 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 known Threatened Ecological Communities (TECs) located within any of the three locations under application. It is considered unlikely that the proposed clearing is at variance to this principle (DEC site visit 2008; Stewart 2008; Stewart 2008a; Hickman 2008).

Methodology DEC site visit (2008)
Hickman (2008)
Stewart (2008)
Stewart (2008a)
GIS DataSets:
- SAC Biodatasets - accessed 12 DEC 08

(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 mapped beard vegetation associations present at the 3 locations under application are all above the recommended 30% threshold for retained vegetation (Commonwealth 2001; Shepherd et al 2007). The proposed clearing is to take place within the agricultural area where the clearing of native vegetation for agricultural purposes is not supported (EPA 2000). However the proposed clearing is for gravel extraction/road straightening and the area under application is relatively small.

The vegetation under application at the Wilcox Road location has a southern section within the road reserve that contributes to a roadside linkage corridor, which may be utilized by fauna species.

The Takenup Road location is comprised of two sections, both of which are stands of remnant vegetation within a highly cleared landscape (DEC site visit 2008). While the applied area is relatively small the cumulative impacts of such clearing will diminish the values offered by remnant vegetation if continued clearing is allowed to continue.

The vegetation under application at the Wirrup location does contribute to a road side linkage corridor, however the local area (10km radius) is relatively well vegetated with approximately 70% remaining vegetation.

It is recommended that revegetation conditions be placed on a permit to minimise the potential impacts that clearing may have on the area.

Methodology Commonwealth (2001)
DEC site visit (2008)
EPA (2000)
Shepherd et al. (2007)
GIS DataSets:
- Albany Mount Barker Orthomosaic (9/10/07)
- SAC Biodatasets - accessed 15 Dec 08

(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 may be at variance to this Principle

Riparian vegetation was observed within close proximity to the Wilcox Road locations eastern boundary, consisting mainly of a small number of tea trees (DEC site visit 2008). No riparian vegetation was identified within or near any of the other locations under application.

Methodology DEC site visit (2008)

GIS DataSets:

- Hydrography linear - DOW 13/7/06
- Hydrography linear (hierarchy) - DoW 13/7/06

(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 proposed clearing of 6.6 hectares of native vegetation at various locations is unlikely to cause land degradation issues. To mitigate the possibility of increased surface runoff (DEC site visit 2008), revegetation conditions will be placed on the permit.

Methodology DEC site visit (2008)

GIS DataSets:

- Hydrogeology, 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
- Rainfall, Mean Annual - 30/09/01
- 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 is not likely to be at variance to this Principle

No conservation areas are within the immediate proximity or linked to the Takenup and Wilcox Road locations. The Tinkeleup Nature Reserve is located 52m west of Warriup location, however due to the small size of this vegetation under application, it is considered unlikely to contribute to the environmental values of the nearby nature reserve.

Methodology GIS DataSets:

- CALM Managed Lands and Waters - CALM 01/06/05
- Albany Mount Barker Orthomosaic (9/10/07)

(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

While it was noted that there may be a increase in surface runoff at the Takenup Road location (DEC site visit 2008), the proposed clearing of 6.6 hectares of native vegetation over the 3 locations is considered unlikely to reduce the quality of surface or groundwater in the local area.

Methodology DEC site visit (2008)

GIS DataSets:

- 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
- Rainfall, Mean Annual - 30/09/01
- 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

It is considered unlikely that the proposed clearing of 6 hectares of native vegetation, over 3 separate locations

will exacerbate flooding.

Methodology GIS DataSets:
- Rainfall, Mean Annual - 30/09/01
- Soils, Statewide DA 11/99

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

Comments

Rehabilitation and Decommissioning programs have been supplied by the applicant (Trim Ref: DOC 67866).

Permission has been obtained from landholders to commence works (Trim Ref: DOC 70326).

Methodology

4. Assessor's comments

Comment

The clearing application has been assessed against the clearing principles, planning instruments and other matters in accordance with s51O of the Environmental Protection Act 1986 and has found:

- Principles (a), (b), (e) & (f) may be at variance
- All other principles are not likely to be at variance

5. References

- DEC (2000) Site Inspection Report for Clearing Permit Application CPS 2852/1, Wilcox Road Reserve, Takenup Road Reserve & Lot 4 on Diagram 90014 Takenup Road . Site inspection undertaken 01/11/2008. Department of Environment and Conservation, Western Australia (TRIM Ref. DOC72248).
- Hickman, E (2008) Flora Survey: Portion of Warriup Road Reserve (Trim Ref: DOC67866)
- Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.
- 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.
- Stewart . P (2008a) Flora Survey: Takenup Rd Gravel Pit SO16 (Trim Ref: DOC67859).
- Stewart. P (2008) Flora Survey: Wilcox Road Reserve Gravel Pit SO23 (Trim Ref: DOC67881)

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)