



1. Application details

1.1. Permit application details

Permit application No.: 2288/1
 Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: City of Rockingham

1.3. Property details

Property: ROAD RESERVE (BALDIVIS 6171)
 ROAD RESERVE (BALDIVIS 6171)
 Local Government Area: City Of Rockingham
 Colloquial name: Burma Road Reserve

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
	2	Mechanical Removal	Road construction or maintenance

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
Heddle Vegetation Complexes: Serpentine Complex - Closed scrub of Melaleuca species and fringing woodland of E. rudis - M. rhapsiphylla along streams.	The proposal is to clear two native trees for the purpose of extending Burma Road. The vegetation under application comprises two mature Corymbia calophylla trees with no understorey present.	Completely Degraded: No longer intact; completely/almost completely without native species (Keighery 1994)	Vegetation clearing description based on a site visit conducted by a DEC officer on 25 January 2008.
Guildford Complex - A mixture of open forest to tall open forest of C. calophylla - E. wandoo - E. marginata and woodland of E. wandoo (with rare occurrences of E. lane-polei). Minor components include E. rudis - M. rhapsiphylla.			
Dardanup Complex - Mosaic of vegetation types characteristic of adjacent vegetation complexes such as Serpentine River, Southern River and Guildford.			
Beard Vegetation Association 999: Medium woodland; marri			
(Shepherd 2006)			

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 under application is limited to two *Corymbia calophylla* trees with no understorey present, and is considered to be in completely degraded condition. It is therefore not considered likely that the applied vegetation comprises a high level of biodiversity.

Methodology DEC site visit 25/1/08

(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**

Within the local area (5km radius) there are two recorded occurrences of the following significant fauna species:
- Bush Stonecurlew - *Burhinus grallarius* (Priority 4),
- Chuditch - *Dasyurus geofroii* (Vulnerable).

The vegetation under application comprises two *Corymbia calophylla* trees, with no understorey present, and the trees are located in the middle of a partially constructed road. No hollows were observed that could potentially be utilised by fauna for habitat.

Given that the vegetation under application does not include any understorey, and given that no hollows were observed, it is not considered likely that the vegetation under application comprises significant habitat for fauna.

Methodology DEC site visit 25/1/08
GIS Database: SAC Bio datasets accessed 23/1/08

(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**

Within the local area (5km radius) there are nine known populations of the Declared Rare Flora (DRF) *Caladenia huegelii* and *Drakaea elastica*, with the closest being *C. huegelii* located 2.2km to the southeast of the area under application. There are also five known populations of Priority flora within the local area.

The vegetation under application comprises two *Corymbia calophylla* trees located in the middle of a partially constructed road, and therefore there is no understorey present. It is therefore not considered likely that the vegetation under application includes, or is necessary for the continued existence of, rare flora.

Methodology DEC site visit 25/1/08
Western Australian Herbarium (1998-)
GIS Database: SAC Bio datasets accessed 23/1/08

(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**

Within the local area there are three known occurrences of Threatened Ecological Communities (TEC) located 3.5km to the northeast, which have been identified as Floristic Community Types (FCT) 3c - *Eucalyptus calophylla* - *Xanthorrhoea preissii* woodlands and shrublands; and 9 - dense shrublands on clay flats.

The vegetation under application comprises two *Corymbia calophylla* trees located in the middle of a partially constructed road, with no understorey present, and is considered to be completely degraded. It is therefore not considered likely that the vegetation under application comprises, or is necessary for the maintenance of, a TEC.

Methodology DEC site visit 25/1/08
GIS Database: SAC Bio datasets accessed 23/1/08

(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 is not likely to be at variance to this Principle**

Hedde et al. (1980) defines the vegetation under application as Serpentine River Complex, Guildford Complex and Dardanup Complex of which there is 10.6%, 5.0% and 7.9% respectively of pre-European extent remaining (EPA 2006). The vegetation under application is also described as Beard vegetation association 999, of which there is 12.7% of pre-European extent remaining (Shepherd 2006).

The area under application is located within the City of Rockingham, within which there is 35.1% of pre-European extent remaining; and the local area (~10km radius) has approximately 31% of pre-European vegetation remaining.

The State Government is committed to the National Objectives and Targets for Biodiversity Conservation which includes a target that prevents the clearance of ecological communities with an extent below 30% of that present pre-European settlement (Commonwealth of Australia 2001).

Although the identified vegetation complexes have less than the recommended 30% of pre-European extent remaining, the vegetation under application is limited to two *Corymbia calophylla* trees with no understorey present, and is considered to be completely degraded. It is therefore not considered likely that the vegetation would be representative of the mapped vegetation complexes, and is not considered likely to be significant as a remnant in an area that has been extensively cleared.

	Pre-European (ha)	Current (ha)	Remaining %	% in
reserves/DEC- managed land				
Swan Coastal Plain	1,501,211	579,227	38.6**	10.4
City of Rockingham	24,326	8,534	35.1*	
Local Area (~10km radius)	31,400	~9,700	~31	
Hedde vegetation complex			***	
Serpentine Complex	19,855	2,103	10.6	2.8
Guildford Complex	92,497	4,662	5.0	0.2
Dardanup Complex	9,504	754	7.9	0.0
Beard vegetation association 999				
	115,706	14,707	12.7**	0.8

* (Shepherd et al. 2001)

** (Shepherd 2006)

*** (EPA, 2006)

Methodology Commonwealth of Australia (2001)
EPA (2006)
Hedde et al. (1980)
Shepherd (2006)
GIS Databases:
Hedde Vegetation Complexes
Pre-European Vegetation

(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 area under application is located within a multiple use wetland. The eastern end of the applied area is located approximately 50m west of Birriga Main Drain and 1km north of the Serpentine River.

Although the vegetation under application is located within a multiple use wetland, the vegetation is located in the middle of a partially constructed road, and it is therefore not considered likely that the vegetation under application is growing in, or in association with, a watercourse or wetland.

Methodology DEC site visit 25/1/08
Western Australian Herbarium (1998-)
GIS Databases:
Geomorphic Wetlands (Classification), Swan Coastal Plain
Hydrography, linear (hierarchy)

(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

Soils within the area under application comprise deep to deep black, olive grey and some yellowish brown cracking clays, which have a high risk of waterlogging, water erosion, phosphorus export and acid sulphate soils, and have a moderate risk of salinity (State of Western Australia 2005).

The applied area is also mapped as having a low salinity risk except for the western and eastern-most extents of the road, which have a high salinity risk.

Given that the vegetation under application is limited to two *Corymbia calophylla* trees located in the middle of a partially constructed road, it is not considered likely that their removal would result in any land degradation including waterlogging, water erosion, acid sulphate soils, salinity and phosphorus export.

Methodology State of Western Australia (2005)
GIS Databases:
Acid Sulfate Soil Risk Map, Swan Coastal Plain
Salinity Risk LM 25m - DOLA 00

(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**
Leda Nature Reserve is located approximately 5.6km to the northwest of the applied area, and there is a Bush Forever site located 430m to the west. The vegetation under application comprises two *Corymbia calophylla* trees with no understorey present and has limited connectivity to surrounding remnant vegetation.

Given the distance to the nearest conservation area and the completely degraded condition of the vegetation under application it is not considered likely that the proposed clearing would have a direct or indirect impact on the environmental values of any conservation area.

Methodology DEC site visit 25/1/08
GIS Databases:
Bushforever
CALM Managed Lands and Waters

(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 area under application is located within a multiple use wetland. The eastern end of the applied area is located approximately 50m west of Birriga Main Drain and 1km north of the Serpentine River. The applied area is not located within a Public Drinking Water Source Area (PDWSA).

The applied area is also mapped as having a low salinity risk except for the western and eastern-most extents of the road, which have a high salinity risk, however it is not considered likely that the proposed clearing of two *Corymbia calophylla* trees would result in salinity or acid sulphate soils causing a deterioration in groundwater quality.

The soils within the applied area have a high risk of wind erosion (State of Western Australia 2005), however it is not considered likely that the proposed clearing of two *Corymbia calophylla* trees located in the middle of a partially constructed road would result in water erosion causing a deterioration in the quality of surface water.

Methodology DEC site visit 25/1/08
State of Western Australia (2005)
GIS Databases:
Geomorphic Wetlands (Classification), Swan Coastal Plain
Hydrography, linear (hierarchy)
Public Drinking Water Source Areas (PDWSAs)

(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 area under application is located within a multiple use wetland approximately 50m west of Birriga Main Drain and 1km north of the Serpentine River at an elevation of 10m. Given that the vegetation under application is limited to two *Corymbia calophylla* with no understorey and is contained within a narrow, linear road reserve, it is not considered likely that the proposed clearing would impact on peak flood height or duration.

Methodology DEC site visit 25/1/08
GIS Databases:
Hydrography, linear (hierarchy) ? DOW
Topographic Contours, Statewide

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

Comments
The area under application is located within a Native Title Claim area, however is contained within an existing road reserve that is managed by, or invested in the City of Rockingham. Therefore the clearing is considered to be a secondary approval and not a future act under the Native Title Act 1993.

Methodology GIS Database: Native Title Claims

4. Assessor's comments

Purpose	Method Applied	area (ha)/ trees	Comment
Road construction or maintenance	Mechanical Removal	2	The assessable criteria have been addressed and the clearing as proposed is not likely to be at variance to the clearing principles.

5. References

- Commonwealth of Australia (2001). National Targets and Objectives for Biodiversity Conservation 2001-2005, AGPS, Canberra.
- EPA (2006) Guidance for the Assessment of Environmental Factors -level of assessment of proposals affecting natural areas within the System 6 region and Swan Coastal Plain portion of the System 1 Region. Report by the EPA under the Environmental Protection Act 1986. No 10 WA.
- Hedde, 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.
- 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 (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.
- Site Visit 25/1/08, Department of Environment and Conservation (DEC), Western Australia. TRIM ref DOCxxxx.
- State of Western Australia (2005) Agmaps Land Manager CD Rom.
- Western Australian Herbarium (1998-). FloraBase - The Western Australian Flora. Department of Environment and Conservation. <http://florabase.calm.wa.gov.au/> Accessed on Wednesday 23 January 2008.

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)

