



1. Application details

1.1. Permit application details

Permit application No.: 2138/1
Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: Shire of Collie

1.3. Property details

Property: LOT 2835 ON PLAN 195024 (COLLIE 6225)
Local Government Area: Shire Of Collie
Colloquial name: CROWN RESERVE 48390

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
2.034		Mechanical Removal	Building or Structure

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 (Shepherd et al. 2001; Hopkins et al. 2001).	The proposal involves clearing approximately 2.034 ha for the purpose of constructing a Shire works depot.	Good: Structure significantly altered by multiple disturbance; retains basic structure/ability to regenerate (Keighery 1994)	Description of the clearing application area is based on a site inspection conducted by DEC officers on 21 November 2007.
Mattiske: - Muja (MJ): Open woodland of Melaleuca preissiana-Banksia littoralis-Banksia ilicifolia with some Eucalyptus patens on moister sites, s24 Banksia spp. on drier sites of valley floors in the subhumid zone (Mattiske Consulting, 1998).	The applied area comprises stunted Jarrah (Eucalyptus marginata) regrowth, with the odd tea-tree (Melaleuca spp.), balga (Xanthorrhoea preissii) and a medium understorey that is weed dominated in places. The area appears to have been recently burnt (DEC Site Visit, 2007).		
Hedde: - Muja Complex: Open woodland of M. preissiana-B. littoralis with some admixtures of yarri (E. patens) dominating moister areas, and replaced by a woodland of Banksia spp. on the drier sites (Hedde et al. 1980).			

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 proposal is for the clearing of 2.034 ha for the purpose of constructing a shire works depot. The vegetation under application is considered to be in good condition (Keighery, 1994).

The local area (10 km radius) is approximately 75% vegetated with approximately 90% of that vegetation managed by DEC for conservation purposes (National Parks and State forest).

There are no known records of declared rare flora or threatened ecological communities within a 10 km radius; given the scale (2.03 ha) and percentage of surrounding vegetation the proposed clearing is not likely to hold a high level of biological diversity and is therefore not likely to be at variance to this Principle.

Methodology Keighery (1994);

GIS Databases:

- DEFL - SAC Bio Dataset - 22/8/07;
- TEC Databases - SAC Bio Dataset - 22/8/07;
- CALM Managed Lands and Waters - CALM 1/6/04;
- Bunbury 50cm ORTHOMOSAIC - DLI04

(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 at variance to this Principle**

The proposal is for the clearing of 2.034 ha for the purpose of constructing a shire works depot. The vegetation under application is considered to be in good condition (Keighery, 1994).

Within the local area (10km radius from the proposed area for clearing) there are several records of threatened and priority fauna, including but not limited to, *Calyptorhynchus baudinii* (Baudins Black Cockatoo; Threatened), *Pseudocheirus occidentalis* (Western Ringtail Possum; Threatened), *Calyptorhynchus banksii naso* (Naso Cockatoo; P3) and *Macropus irma* (Western Brush Wallaby; P4).

The local area (10 km radius) is approximately 75% vegetated with the majority being DEC managed National Park and State Forest; therefore given the scale (2.03 ha) and the surrounding local vegetation the area under application is not considered significant habitat for fauna indigenous to Western Australia and is therefore not at variance to this Principle.

Methodology Keighery (1994);

GIS Databases:

- Threatened Fauna - SAC Bio Dataset - 22/8/07;
- CALM Managed Lands and Waters - CALM 1/6/04;
- Bunbury 50cm ORTHOMOSAIC - DLI04

(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 (10 km radius); however several Priority listed species have been recorded, including *Sphaerolobium benetectum* (P1), *Tetratheca parvifolia* (P3), *Meeboldina thysanantha* (P3) and several P4 *Grevillia* spp.

The majority of significant flora communities within the Collie Basin occur in association with wetlands; woodland / open forest on sand; and woodland / open forest on laterite (Ekologica, 2007).

The soils of the area under application are described as leached sands, often containing ironstone gravels on strongly undulating land (Northcote et al. 1960-68); therefore the proposed clearing is unlikely to be necessary for the continued existence of rare flora and is therefore not likely to be at variance to this Principle.

Methodology Ekologica (2007);
Northcote et al. (1960-68);

GIS Databases:

- DEFL, SAC Bio Dataset - 22/8/07;
- Bunbury 50cm ORTHOMOSAIC - DLI04

(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 (TEC) within a 35 km radius of the applied area; therefore the proposed clearing is not likely to comprise the whole or part of, or be necessary for the maintenance of a TEC and is not likely to be at variance to this Principle.

Methodology GIS database:
- TEC Database, SAC Bio Dataset - 22/8/07;

(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 at variance to this Principle					area managed land
	Pre-European (ha)	Current extent (ha)	Remaining %	Conservation status***	% in reserves/DEC-	
Jarrah Forest		4,506,654	2,405,331	53.4*		25.7
Shire of Collie		170,253	144,173	84.7*		88.7
Beard Unit: 3		2,661,403	1,846,588	69.4*		26.4
Mattiske: - Muja (MJ)		102,018	71,998	70.6**		1.9
Hedde: - Muja Complex		N/A	N/A	N/A	N/A	

* (Shepherd, 2006)

** (Mattiske Consulting, 1998)

*** (Department of Natural Resources and Environment, 2002)

The area under application is located within the Jarrah Forest Bioregion in the Shire of Collie. The extent of pre-European vegetation within these areas is 53.4% and 84.7%, respectively (Shepherd, 2006). There is approximately 75% of native vegetation remaining in the local area (10 km radius); with the majority DEC managed National Parks and State forest.

The Muja Complexes and Beard Unit 3 represent the area proposed for clearing. These vegetation complexes retain approximately 70% of pre-1750 extent, however it is noted that less than 2% of the Muja complex is retained in formal conservation reserves (Shepherd, 2006; Mattiske Consulting, 1998).

Given the scale (2.034ha) and the remaining vegetation in the local area (75% in 10 km radius), the proposed clearing is not considered significant remnant vegetation in an extensively cleared area and is therefore not at variance to this Principle.

Methodology Shepherd (2006);
Mattiske Consulting (1998);

GIS databases:

- Interim Biogeographic Regionalisation of Australia - EM 18/10/00;
- Mattiske Vegetation - CALM 24/3/98;
- Hedde Vegetation Complexes - DEP 21/6/95;
- Pre-European Vegetation - DA 01/01;
- Local Government Authorities - DLI 8/7/04

(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 at variance to this Principle**

Several minor tributaries of the Collie River surround the applied area; however the area under application is not considered to be in association with a watercourse or wetland and is not at variance to this Principle.

Methodology GIS Databases:
- Hydrography, Linear - DoE 1/2/04;
- EPP Areas - DEP 6/95

(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 soils of the area under application are described as leached sands, often containing ironstone gravels on strongly undulating land (Northcote et al. 1960-68);

The groundwater salinity is > 500 mg/L and the hydrogeology consists of rocks of low permeability with local aquifers in fractured and weathered rock.

Given the scale (2.034 ha); the level of groundwater salinity; the hydrogeology of the area; and the surrounding native vegetation, the proposed clearing is not likely to cause appreciable land degradation and is therefore not likely to be at variance to this Principle.

Methodology Northcote et al. (1960-68);

GIS Databases:

- Hydrogeology, Statewide - DOW;
- Groundwater Salinity, Statewide - DOW;
- CALM Managed Lands and Waters - CALM 1/07/05

(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**

The Westralia Conservation Park is approximately 1.2 km south of the applied area; however given the scale (2.034 ha) and the remaining surrounding vegetation in the local area (75% in 10 km radius), the proposed clearing is unlikely to impact on the environmental values of any nearby conservation areas in the local area.

Methodology GIS Databases:

- CALM Managed Lands and Waters - CALM 1/06/04;
- Register of National Estate - EA 28/01/03;
- 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**

The soils of the area under application are described as leached sands, often containing ironstone gravels on strongly undulating land (Northcote et al. 1960-68);

The groundwater salinity is > 500 mg/L and the hydrogeology consists of rocks of low permeability with local aquifers in fractured and weathered rock.

The slope of the area under application is 215 to 220 m AHD (Australian Height Datum) over approximately 220 metres.

Given the scale (2.034 ha); the level of groundwater salinity; the hydrogeology of the area; and the surrounding native vegetation, the proposed clearing is not likely to cause deterioration in the quality of surface or underground water and is therefore not likely to be at variance to this Principle.

Methodology Northcote et al. (1960-68);

GIS Databases:

- Hydrography, linear - DOE 1/2/04;
- Topographic Contours, Statewide - DOLA 12/09/02;
- Hydrogeology, Statewide - DOW;
- 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 likely to be at variance to this Principle**

Given the scale (2.034 ha) and the remaining surrounding vegetation in the local area (75% in 10km radius), the proposed clearing is unlikely to cause or exacerbate the incidence or intensity of flooding and is therefore not likely to be at variance to this clearing principle.

Methodology GIS Databases:

- CALM Managed Lands and Waters - CALM 1/07/05;
- Register of National Estate - EA 28/1/03

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

Comments

Lot 2835 was recently rezoned from UCL to reserve and is vested to the Shire of Collie for the purpose of a depot site.

The boundaries of two Aboriginal Sites of Significance intersect the applied area. The DEC recommends

consulting with local indigenous groups about the impact of the proposed clearing on these interim sites. Aboriginal Sites of Significance will need to be managed in accordance with requirements under the Aboriginal Heritage Act 1972, and with the Department of Indigenous Affairs (this was also provided as advice in the cover letter to the proponent).

The applied area lies within Zone A of the Wellington Dam water supply catchment area, pursuant to the Country Areas Water Supply Act 1947 (CAWSA). Licences to clear within Zone A for government works are normally approved for the minimum essential clearing on the condition that an equivalent area within Zone A is reforested (Water and Rivers Commission, 1996).

If clearing is approved, an offset condition should be imposed to offset the loss of vegetation within a Zone A water supply catchment in accordance with DOW policy and guidelines.

No other approvals are required from the Department of Environment and Conservation.

No public submissions have been received by the Department.

Methodology Water and Rivers Commission (1996);

GIS Databases:

- Town Planning Scheme Zones - MFP 8/98;
- Aboriginal Sites of Significance - DIA

4. Assessor's comments

Purpose	Method	Applied area (ha)/ trees	Comment
Building or Structure	Mechanical Removal	2.034	The application has been assessed against the clearing principles, planning instruments and other matters in accordance with s51O of the Environmental Protection Act 1986, and the proposed clearing is not at variance or not likely to be at variance to all ten clearing Principles.

5. References

- DEC Site Visit (2007). Site Inspection Report, Department of Environment and Conservation (DEC). Bunbury, Western Australia. TRIM Ref: DOC40343.
- Ekologica (2007). Advice provided to assessing officer with regards to flora values for application CPS2138/1 and the Collie Basin area. TRIM Ref: DOC42496.
- 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.
- 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.
- 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.
- Sac Bio Datasets (22/8/07). Department of Environment and Conservation, Sac Bio Datasets, Kensington, Western Australia.
- 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.
- WRC (1996) Policy and Guidelines: Granting of Licences to Clear Indigenous Vegetation in Catchments Subject to Clearing Control Legislation. Water and Rivers Commission, 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)