



1. Application details

1.1. Permit application details

Permit application No.: 1584/1

Permit type: Area Permit

1.2. Proponent details

Proponent's name: Paul William Barnsby

1.3. Property details

Property: LOT 5 ON DIAGRAM 96347 (EASTBROOK 6260)

LOT 9424 ON PLAN 203806 (EASTBROOK 6260)

Local Government Area: Shire Of Manjimup

Colloquial name:

1.4. Application

Clearing Area (ha)

6.08

No. Trees

Method of Clearing

Mechanical Removal

For the purpose of:

Dam 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
Beard Vegetation Association 1144: Tall forest; karri and marri (<i>Corymbus calophylla</i>) (Hopkins et al. 2001; Shepherd et al. 2001).	The proposal involves clearing 6.08ha of relatively undisturbed riparian vegetation for construction of a dam.	Excellent: Vegetation structure intact; disturbance affecting individual species, weeds non-aggressive (Keighery 1994)	The description of the clearing application area is based on a site visit conducted by DEC officers on 5 January 2007.
Mattiske Vegetation Complex - Wheatley (WH1): Tall open forest of <i>Eucalyptus diversicolor</i> - <i>Corymbia calophylla</i> on slopes and tall open forest of <i>Eucalyptus patens</i> on valley floor in perhumid and humid zones (Mattiske Consulting 1998).	The vegetation under application is dense riparian vegetation, dominated by thick grasses, sedges and rushes (eg. <i>Lepidosperma</i> spp.), bracken fern (<i>Peridium esculentum</i>), <i>Taxandria</i> spp. and other <i>Melaleuca</i> spp. Some weed invasion is evident, including <i>Rubus ulmifolius</i> (blackberry) and numerous grasses (DEC Site Visit 2007).		
	The vegetation of the majority of the area to be cleared appeared to be relatively intact, with the exception of the perimeter of the remnant vegetation where the effects of grazing were observed. The density of vegetation prevented stock access to the much of the watercourse, however some areas had been accessed. Dense blackberry bushes and bracken fern lined the perimeter of the area under application. Regenerating Karri-Marri forest lies in the upper reaches of the catchment.		

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 condition of the vegetation within the clearing application area appeared to range from Good, around the existing dam, to Excellent, down stream (Keighery, 1994; DEC Site Visit, 2007).

The vegetation under application is located in a valley comprised of Beard Vegetation Unit 1144 (Hopkins et al. 2001) of which there is 69.7% (Shepherd et al. 2001) of the pre-1750 extent remaining. The local area (10km radius) is approximately 70% vegetated with approximately 95% of that vegetation in DEC managed State Forest. Despite the application area containing vegetation that is of good or excellent condition, it is unlikely that the vegetation represents an area of higher biological diversity than other, larger areas of remnant vegetation within the local area.

Based on the scale of the proposed clearing and the above information, it is unlikely the proposal is at variance to this Principle.

Methodology Keighery (1994);
DEC Site Visit (2007);
Hopkins et al. 2001
Shepherd et al. 2001
GIS Databases:
- CALM Managed Lands and Waters - CALM 1/06/04;
- Manjimup 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 likely to be at variance to this Principle**

The area proposed to be cleared contains dense vegetation, including riparian vegetation in Very Good condition (Keighery 1994), which may hold habitat value for native fauna in the local area.

The local area (10km radius) is approximately 70% vegetated, most of which is DEC-managed forest, including the Warren, Big Brook and Donnelly State Forests and Gloucester National Park, which are likely to offer equal or better habitat than that within the application area.

Local advice from the Nature Conservation Coordinator, Donnelly District (2007) indicates there is a high likelihood of species of conservation significance utilising the vegetation contained within the application area, including the Southern Brush-tailed Phascogale, Western Ringtail Possum, Forest Red Tailed Black Cockatoo and Baudin's Cockatoo.

It is understood that the Karri trees contained within the application area are non-mature and are therefore unlikely to have suitable nesting hollows. Given that the trees within the application area are not mature, that there is an area of consolidated vegetation adjacent to the application area and that there is high percentage of DEC-managed forest within the local area, the vegetation of the application area is not likely to represent significant habitat.

Methodology Keighery (1994);
DEC Site Visit (2007);
Nature Conservation Coordinator, Donnelly District (2007);
GIS Databases:
- CALM Managed Lands and Waters - CALM 1/06/04;
- Manjimup 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**

Within the local area there is one record of a Declared Rare Flora. This record is of *Caladenia christineae* which is a perennial herb that occurs in the margins of winter-wet flats, swamps and freshwater lakes (Florabase). Although the area of application may exhibit suitable characteristics, this species was recorded within the local area (10km radius) in 1956 and has not been recorded within the area since that time. Records of this species also indicate that it predominantly occurs further north-west, outside of the Nornalup Vegetation System in which the application area is located. The likelihood of this species now occurring within the local area is negligible.

Therefore, it is unlikely that the proposed clearing is at variance to this Principle.

Methodology Florabase (DEC 2007)

GIS Databases:

- Threatened Flora Database (DEFL) - DEC 17/04/07
- Herbarium Specimen Collection Database (WAHerb) y DEC 01/05/07

(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 records of Threatened Ecological Communities (TECs) within the vicinity of the proposed clearing (the nearest is approximately 39 kilometres away).

Therefore, it is unlikely that the proposed clearing is at variance with this Principle.

Methodology GIS Databases:

- Threatened Ecological Communities - CALM 12/04/05;
- Threatened Plant Communities - DEP 06/95;
- Environmentally Sensitive Areas - DOE 30/05/05

(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 at the site is a component of Beard Vegetation Association 1144 (Hopkins et al. 2001) of which there is 69.7% of the pre-European extent remaining (Shepherd et al. 2001). This vegetation type is therefore of "least concern" for biodiversity conservation (Department of Natural Resources and Environment & Conservation 2002).

The vegetation at the site is also a component of Mattiske Vegetation Complex Wheatley (WH1) (Mattiske Consulting 1998) of which there is 78% of the pre-European extent remaining. This vegetation type is therefore of "least concern" for biodiversity conservation (Department of Natural Resources and Environment & Conservation 2002).

The local area (10km radius) is approximately 70% vegetated - therefore the area proposed to be cleared is not considered to be a significant remnant within an extensively cleared area.

- Methodology** Hopkins et al. (2001);
Shepherd et al. (2001);
Department of Natural Resources and Environment (2002);
Havel (2002);
GIS databases:
- Mattiske Vegetation - CALM 24/3/98
- Local Government Authorities - DLI 8/07/04
- Pre European Vegetation - DA 01/01

(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 at variance to this Principle

There are no EPP areas, EPP lakes, RAMSAR or ANCA wetlands, or any mapped wetlands within the local area (10km radius) of the proposed clearing.

The purpose of the proposed clearing is for extending an existing dam, therefore the area under application is within an environment associated with a watercourse.

To mitigate the loss of vegetation associated with a watercourse due to the proposed clearing, the proponent has committed to revegetate an equivalent a 1.7ha area at the tail of the dam once construction is complete and to fence the area to prevent stock access to the watercourse.

Although these conditions will minimise further degradation of the watercourse, the clearing of riparian vegetation is at variance to this Principle.

- Methodology** DEC Site Visit (2007);
GIS databases:
- ANCA, Wetlands - CALM 08/01
- EPP Areas - DEP 06/95
- EPP Lakes - DEP 28/07/03
- Geomorphic Wetlands (Mgt Categories) Swan Coastal Plain - DoE 15/9/04
- Hydrography Linear - DoE 1/2/04

(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 area proposed to be cleared has a low salinity risk (GIS Database) and a groundwater salinity of 500-1000 mg/L (GIS Database). The application area is within Zone D of a Country Areas Water Supply Act 1947 area y the Warren River Water Reserve (GIS Database). Zone D has a low stream salinity hazard (Waters and Rivers Commission, 1996). Given the low salinity risk, groundwater salinity and the zonation under the CAWS Act, the proposal is not likely to cause appreciable land degradation.

Due to the scale of the proposed clearing, appreciable land degradation is unlikely to occur.

Methodology Waters and Rivers Commission, 1996
GIS databases:
- Salinity Risk LM 25m - DOLA 00
- Groundwater Salinity, Statewide 22/02/00
- CAWSA Part IIA Clearing Control Catchments - DoE 17/11/05

(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 local area in which the application area occurs contains a high percentage of forested land that is managed by DEC. The Eastbrook Nature Reserve is located approximately 100m east of the proposed dam wall and is vegetatively linked to the area under application. The Gloucester National Park is located approximately 800m southwest of the proposed clearing. The Whistler Nature Reserve and an unnamed nature reserve are located approximately 2km northeast of the application area. The Warren, Donnelly and Big Brook State Forests surround the property and several small timber reserves are also located in the local area (10km radius).

Notwithstanding the aforesaid, due to the contextually small scale of the proposed clearing, it is unlikely clearing of the proposed area will impact on the environmental values of any nearby conservation 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
- System 1-5 and 7-12 Areas - DEP 06/95
- Manjimup 50cm ORTHOMOSAIC - DLI04

(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 is located within the Lefroy Brook subcatchment of the Warren River Catchment. The area proposed to be cleared has a low salinity risk (GIS Database) and a groundwater salinity of 500-1000mg/L (GIS Database).

Due to the scale of the proposed clearing and given the high percentage of vegetation remaining within the local area, the proposed clearing is not likely to cause deterioration of water quality.

Methodology GIS databases:
- CAWSA Part2A clearing control catchment - DoE 17/11/05
- Evaporation Isopleth - BOM 09/98
- Hydrogeology, statewide - WRC 05/02/02
- Hydrographic Catchments, Catchments - DoE 3/4/03
- PDWSA, Gazetted - WRC 01/11/02
- Public Drinking Water Source Areas (PDWSAs) - DOE 29/11/04
- Rainfall, Mean Annual - BOM 30/09/01
- RIWI Groundwater Areas - WRC 13/06/00;
- RIWI Surface Water Areas - WRC 18/10/02;

(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

Given the size of the application area and the high percentage of vegetation within the local area, the proposed clearing is unlikely to cause or exacerbate the incidence or intensity of flooding.

Methodology GIS databases:
- Topographic Contours, Statewide - DOLA 12/09/02

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

Comments

The proposed clearing is within the East Brook surface water catchment area gazetted for surface water management under the Rights in Water and Irrigation Act 1914 (RIWI). Department of Water (DoW) Manjimup advise that a current surface water licence (SWL) is held by the applicant for 10ML per year. A proposal to interfere with beds and banks (PMB) has been assessed by DoW who have advised that they undertake to grant approval to allow an increase in capacity to 160ML per year, pending the grant of a clearing permit (DoW 2007).

The Shire of Manjimup advised that they have no comment to make on this application (Shire of Manjimup 2006).

No public submissions have been received to date by the Department for this proposal.

Methodology DoW Advice (2007);
Shire of Manjimup (2006)

4. Assessor's comments

Purpose	Method	Applied area (ha)/ trees	Comment
Dam construction or maintenance	Mechanical Removal	6.08	Assessable criteria have been addressed and the assessment of the vegetation under application revealed the proposal is at variance to Principle (f), is unlikely to be at variance to Principles (a), (b), (c), (d), (e), (g), (h), (i) and (j). Revegetation and fencing (related to the revegetation) conditions are recommended to be imposed on this permit.

5. References

- DEC Site Visit (2007). Department of Environment and Conservation, Western Australia. TRIM Ref: DOC13130
- Department of Environment and Conservation (2007). Florabase Website. Site accessed on 3 May 2007.
- Department of Natural Resources and Environment (2002) Biodiversity Action Planning. Action planning for native biodiversity at multiple scales; catchment bioregional, landscape, local. Department of Natural Resources and Environment, Victoria.
- DoW Advice (2007). Department of Water, Western Australia. TRIM Ref: DOC20213
- 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.
- Nature Conservation Coordinator, Donnelly District (2007). Department of Environment and Conservation, Western Australia. TRIM Ref: DOC20246
- 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.
- Shire of Manjimup (2006). Comments on clearing proposal. TRIM Ref: DOC9446
- Waters and Rivers Commission (1996). Policy and Guidelines: Granting of Licences to Clear Indigenous Vegetation in Catchments Subject to Clearing Control Legislation.

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)

