



1. Application details

1.1. Permit application details

Permit application No.: 825/1
Permit type: Area Permit

1.2. Proponent details

Proponent's name: MR Kimberley John Hough

1.3. Property details

Property: LOT 4 ON DIAGRAM 45560 (Lot No. 4 MEREDITH COOKERNUP 6220)
Local Government Area: Shire Of Harvey
Colloquial name:

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
0.2		Mechanical Removal	Fence Line 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
Hedde: Bassendean Central and South - Ranges from woodland of jarrah-sheoak-banksia on the sand dunes, to a low woodland of Melaleuca spp. and sedgelands on the low-lying depressions and swamps.	This area has previously been cleared to put in the existing fence. It is degraded due to the stock access to the area.	Degraded: Structure severely disturbed; regeneration to good condition requires intensive management (Keighery 1994)	Vegetation condition established through aerial photography, and phone conversation with Mr Hough (07 December 2005). Mr Hough said that his stock have full access to the areas near the fence line.
Beard: Unit 1000 - Mosaic: Medium forest; jarrah-marri / Low woodland; banksia / Low forest; tea-tree (Melaleuca spp.)		Degraded: Structure severely disturbed; regeneration to good condition requires intensive management (Keighery 1994)	

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 areas directly surrounding the area proposed to be cleared are considered to hold a high level of biological diversity. However the area under application is considered to hold little biological diversity due to a history of stock access and has previously been cleared.
	The purpose of the proposed clearing is to enable maintenance of an existing fence, bordering the Riverdale Nature Reserve. Replacing and maintaining the fence will therefore protecting surrounding biodiversity levels.
	CALM advice (2006) states: 'If the proposed clearing was refused, and the fence remained in a state of disrepair, the potential damage that the proponent's cattle could have on the adjoining Riverdale Nature Reserve would far outweigh the likely impacts of the 200m ² that he has applied to clear.'
Methodology	CALM report (2006) TRIM ref SWD46813 GIS database: - Swan Coastal Plain South 1m Orthomosaic - DLI01/04

(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 is unlikely to hold significant habitat for native fauna species, as it has already been previously cleared.
The replacement and maintenance of the existing fence line is important in maintaining habitat for fauna species within the Riverdale Nature Reserve.
Due to the history of stock grazing and clearing of the area under application, it is unlikely the proposed clearing comprises the whole or a part of, or is necessary for the maintenance of, a significant habitat for fauna indigenous to Western Australia.

Methodology GIS database:
- Swan Coastal Plain South 1m Orthomosaic - DLI 01/04

(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 Priority 1 populations within the local area (10km radius) of the proposed clearing.

There are two Priority 2 populations within the local area, the closest being Haloragis aculeolata, 8.6km north west of the area proposed to be cleared.

There are six Priority 3 populations within the local area, the closest being Acacia semitrullata, 6.1km north east of the area proposed to be cleared.

There are five Priority 4 populations within the local area, the closest being Caladenia speciosa, 5.9km north east of the area proposed to be cleared.

There are no vegetation links between local Priority 2, 3 or 4 populations and the area proposed to be cleared. It is therefore unlikely the area proposed to be cleared would impact on local Priority Flora populations.

There are four Declared Rare Flora (DRF) populations within the local area, the closest being Drakaea elastica, 1.1km south east of the area under application. A vegetation link exists between the DRF populations and the area proposed to be cleared, Beard unit 1000. However, due to the distance between recorded DRF populations and the area proposed to be cleared, it is unlikely the proposed clearing is necessary for the continued existence of rare flora.

CALM advice (2006) states:
'There is a slim possibility that these taxa might occur within the area that is proposed to be cleared, however it would be reliant upon the local catchment experiencing a succession of (well) below average winter rainfalls.'

Methodology CALM report (2006) TRIM red SWD46813
GIS databases:
- Declared Rare and Priority Flora List - CALM 13/08/03
- Pre European Vegetation - DA 01/01

(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 Threatened Plant Communities within the local area of the proposed clearing.

There are four Threatened Ecological Communities within the local area, the closest being WELR01, 7.4km south east of the area proposed to be cleared. There are no vegetation links between local TEC's and the area proposed to be cleared.

Therefore the area proposed to be cleared is unlikely to be at variance to this Principle.

Methodology GIS databases:
- Threatened Ecological Communities - CALM 15/7/03
- Threatened Plant Communities - DEP 06/95
- Pre European Vegetation - DA 01/01

(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**
The application is located in the Swan Coastal Plain in the Shire of Harvey. The extent of native vegetation in these

areas is 41.8% and 60.1% respectively (Shepherd et al. 2001).

The vegetation of the area applied to clear is a component of Beard Unit 1000 (Hopkins et al. 2001) of which there is 24.6% (Shepherd et al. 2001) of the pre-European extent remaining, therefore of a 'vulnerable' status for biodiversity conservation (Department of Natural Resources and Environment 2002).

The vegetation of the area applied to clear is a component of Hedde Bassendean Central and South Complex (Hedde et al. 1980) of which there is 27.0% of the pre-European extent remaining and therefore of a 'vulnerable' status for biodiversity conservation (Department of Natural Resources and Environment 2002).

The proposed clearing is not considered to be a significant remnant within the local area and the maintenance of the existing fence will protect the neighbouring nature reserve.

Methodology Department of Natural Resources and Environment (2002)
Hedde et al. (1980)
Hopkins et al. (2001)
Shepherd et al. (2001)
GIS databases:
- Hedde Vegetation Complexes - DEP 21/06/95
- Interim Biogeographic Regionalisation of Australia - EM 18/10/00
- 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 may be at variance to this Principle

Within the local area, there is a major perennial watercourse, Harvey River, 8.7km south east, a RAMSAR wetland 6.8km west and an ANCA lake 8.9km west of the area proposed to be cleared. There are no vegetation links between the area proposed to be cleared and local watercourses, RAMSAR and ANCA wetlands.

A resource enhancement wetland and a multiple use wetland are located within the same property as the area under application. However, no direct vegetation links exist between the two wetlands and the area proposed to be cleared.

The area proposed to be cleared is located within a conservation category wetland (an EPP lake).

CALM advice (2006) indicates that:

'If the proposed clearing was refused, and the fence remained in a state of disrepair, the potential damage that the proponent's cattle could have on the adjoining Riverdale Nature Reserve would far outweigh the likely impacts of the 200m² that he has applied to clear.'

Although the proposed clearing lies within a wetland, the maintenance of the existing fence to protect neighbouring reserves, mitigates any resulting impacts the clearing may impose.

Methodology CALM report (2006) TRIM ref SWD46813
GIS databases:
- ANCA, Wetlands - CALM 08/01
- EPP Lakes - DEP 28/07/03
- Geomorphic Wetlands (Mgt Categories) Swan Coastal Plain - DoE 15/9/04
- Hydrography Linear - DoE 1/2/04
- RAMSAR, Wetlands - CALM 21/10/02

(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 is within a high risk area for Acid Sulphate Soils (ASS), it has a groundwater salinity level of 500-1000 mg/L and a low salinity risk.

It is unlikely the proposed clearing will cause appreciable land degradation.

Methodology GIS databases:
- Acid Sulfate Soil Risk Map, SCP - DoE 01/02/04
- Salinity Risk LM 25m - DOLA 00.
- Groundwater Salinity, Statewide - 22/02/00

(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

Myalup State Forest is located 1.7km west of the area proposed to be cleared. The Harvey Flats Nature Reserve is located 2.6km north east of the area proposed to be cleared. There is a direct vegetation link between the Myalup State Forest, the Harvey Flats Nature Reserve and the area under application. However, due to the size of the proposed clearing, it is unlikely the proposal would impact on the environmental values of the reserves.

The Yalgorup National Park is located 6.6km north west of the area proposed to clear. There are no vegetation links between this National Park and the area under application.

The Riverdale Nature Reserve is located on the south, western boundary of the property under application. This is also a System 6 Conservation Reserve.

CALM advice (2006) states:

'If the proposed clearing was refused, and the fence remained in a state of disrepair, the potential damage that the proponent's cattle could have on the adjoining Riverdale Nature Reserve would far outweigh the likely impacts of the 200m² that he has applied to clear.'

As CALM advice indicates, the fence requires maintenance to help protect the neighbouring reserve from stock, and therefore protect the environmental values of the reserve.

Therefore the maintenance of the existing fence to protect neighbouring reserves, mitigates any resulting impacts the clearing may impose.

Methodology CALM report (2006) TRIM ref SWD46813

GIS database:

- 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 area proposed to be cleared is within the southern part of the Harvey Estuary - Harvey River Hydrographic Catchment area and the South West Coastal RIWI ground water area.

Due to the small scale clearing proposed, it is unlikely the proposal would have a significant impact on groundwater in the local area.

Methodology GIS databases:

- Hydrographic Catchments, Catchments - DoE 3/4/03
- Public Drinking Water Source Areas (PDWSAs) - DOE 29/11/04
- RIWI Act Groundwater Areas WRC 13/06/00

(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

Flooding impacts are unlikely to occur as a result of the proposed clearing due to its size.

Methodology GIS database:

- Topographic Contours, Statewide - DOLA 12/09/02

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

Comments

The property under application is zoned general farming.

The Shire of Harvey has raised no issues in relation to the proposed clearing.

CALM advice (2006) states:

'If the proposed clearing was refused, and the fence remained in a state of disrepair, the potential damage that the proponent's cattle could have on the adjoining Riverdale Nature Reserve would far outweigh the likely impacts of the 200m² that he has applied to clear.'

For these reasons CALM would not object (on biodiversity grounds) to this clearing application being approved provided that the permit includes conditions requiring the permit holder to;

1. only use equipment that is free of soil and weeds (and seeds) AND
2. all debris to be windrowed onto the proponent's land (not the CALM reserve).'

Conditions have been attach to this permit and agreed to by the proponent in alignment with CALM advice.

Methodology CALM report (2006) TRIM ref SWD46813
GIS database:
- Town Planning Scheme Zones - MFP 8/98

4. Assessor's recommendations

Purpose	Method	Applied area (ha)/ trees	Decision	Comment / recommendation
Fence Line Maintenance	Mechanical Removal	0.2	Grant	The proposal is not at variance to the clearing Principles. Replacing the existing fence line is necessary to protect neighbouring Reserves and therefore biodiversity. Conditions have been placed on the permit addressing the equipment used to clear and the removal of debris

5. References

- CALM Land clearing proposal advice. Advice to A/Director General, Department of Environment (DoE). Department of Conservation and Land Management, Western Australia. DoE TRIM ref SWD46813.
- 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.
- Hill, A.L., Semenuik, C. A, Semenuik, V. Del Marco, A. (1996) Wetlands of the Swan Coastal Plain. Volume 2b, Wetland mapping, classification and evaluation. Wetland Atlas. WRC and DEP. Perth WA.
- 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.
- 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.

6. Glossary

Term	Meaning
CALM	Department of Conservation and Land Management
DAWA	Department of Agriculture
DEP	Department of Environmental Protection (now DoE)
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 DoE)