



1. Application details

1.1. Permit application details

Permit application No.: 878/1

Permit type: Area Permit

1.2. Proponent details

Proponent's name: Shire of Bridgetown -Greenbushes

1.3. Property details

Property: LOT 903 ON PLAN 189961 (BRIDGETOWN 6255)

Local Government Area: Shire Of Bridgetown-Greenbushes

Colloquial name:

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
0.87		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: Unit 3 - Medium forest; jarrah-marri	0.87 hectares	Very Good: Vegetation structure altered; obvious signs of disturbance (Keighery 1994)	Vegetation condition established through aerial photography.
Mattiske: Hester (HR) - Tall open forest to open forest of Eucalyptus marginata subsp. marginata-Corymbia calophylla on lateritic uplands in perhumid and humid zones.		Very Good: Vegetation structure altered; obvious signs of disturbance (Keighery 1994)	
Balingup Slopes (BL) - Open forest of Eucalyptus marginata subsp. marginata-Corymbia calophylla on slopes and woodland of Eucalyptus rudis on the valley floor in the humid zone.		Very Good: Vegetation structure altered; obvious signs of disturbance (Keighery 1994)	
Hedde: Dwellingup & Hester Complex in High Rainfall-Central and South - supports an open-forest of jarrah-marri.		Very Good: Vegetation structure altered; obvious signs of disturbance (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 vegetation proposed to be cleared is in very good condition (Keighery 1994), with 88.8% of vegetation remaining on the property. The granting of the proposed clearing would result in 85.3% of vegetation remaining on the property. The vegetation directly fringing the landfill cells is likely to be more disrupted by weed species than vegetation further from the landfill cells.

There is 58.3% of vegetation remaining within the Jarrah Forest Interim Biogeographic Regionalisation of Australia region, 67.9% of vegetation remaining within the Shire of Bridgetown-Greenbushes, 72.1% remaining within vegetation type Beard unit 3 and 82.3% remaining within Mattiske vegetation type Hester (HR).

The proposed clearing of 0.87 hectares within these highly vegetated areas is unlikely to reduce the local level of biological diversity due to the remaining high percentages of vegetation on the property.

As stated in the Field Survey of Flora & Vegetation (by Onshore Environmental Consultants), 'No plant taxa gazetted as Declared Rare Flora pursuant to subsection (2) of section 23F of the Wildlife Conservation Act (1950), nor any Priority flora, were located within the survey area.'

Methodology Onshore Environmental Consultants Field Survey of Flora & Vegetation and Desktop Fauna Survey of Waste Management Facility, Bridgetown
Keighery (1994)
GIS database:
- Bridgetown 1m Orthomosaic - DOLA 01

(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

Given the area of proposed clearing is less than 1 hectare, and that the property will have 85.3% vegetated remaining if a permit for 0.87ha is issued, it is unlikely the proposal will have a significant impact on native fauna.

As stated in the Desktop Fauna Survey (by Onshore Environmental Consultants), 'The proposed disturbance is unlikely to adversely impact on fauna with conservation significance due to, the relatively small area being disturbed (0.5ha), the wide local distribution of the vegetation complex described at the site, the current position of the survey are immediately adjacent to the existing waste management facility and the historical logging of larger trees from the site and resultant prominence of regrowth.'

Methodology GIS database:
- Bridgetown 1m Orthomosaic - DOLA 01

(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 Declared Rare Flora within the local area (10km radius) of the proposed clearing.

One Priority 1 population is mapped within the local area, *Carex tereticauis*, 4.5km south of the proposed site. There is no direct vegetative link between this population and the area proposed to clear, however they are both located within Beard unit 3.

There are no Priority 2 populations within the local area of the proposed clearing.

There are no Priority 3 populations within the local area of the proposed clearing.

There are no Priority 4 populations within the local area of the proposed clearing.

There is one population with no data within the local area, *Euchiton collinus*, 6.3km south of the proposed clearing. There is no direct vegetative link between this population and the area proposed to clear, however they are both located within Beard unit 3.

Methodology 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 Ecological Communities or Threatened Plant Communities within the local area of the proposed site.

Methodology GIS databases:
- Threatened Ecological Communities - CALM 15/7/03
- Threatened Plant Communities - DEP 06/95

(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 application is located in the Jarrah Forest Bioregion in the Shire of Bridgetown-Greenbushes. The extent of native vegetation in these areas is 58.3% and 67.9% respectively (Shepherd et al. 2001). The exact area applied to clear is located in vegetation type Mattiske Hester (HR) with 82.3% remaining.

The vegetation of the area applied to clear is a component of Beard Unit 3 (Hopkins et al. 2001) of which there is 72.1% (Shepherd et al. 2001) of the pre-European extent remaining, and Mattiske Hester (HR) of which there is 82.3% (Shepherd et al. 2001) of the pre-European extent remaining and therefore of a 'least concern' status for biodiversity conservation (Department of Natural Resources and Environment 2002).

The area applied to be cleared is less than 1 hectare granting of this application would leave 85.3% of the property vegetated.

Methodology Department of Natural Resources and Environment (2002)
EPA (2000)
Havel (2002)
Heddle et al. (1980)
Hopkins et al. (2001)
Shepherd et al. (2001)
GIS databases:
- Mattiske Vegetation - CALM 24/3/98
- Heddle 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 is not likely to be at variance to this Principle

There is a major perennial watercourse, Blackwood River, 2.7km south of the proposed site. The area proposed to be cleared is not linked by vegetation.

There are many minor perennial watercourses within the local area, however due to the size of the clearing proposed it is unlikely the clearing will impact these watercourses.

There are no wetlands within the local area.

Methodology GIS databases:
- 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

There is no information for Acid Sulphate Soils on the property. The Groundwater Salinity is mapped at 500-1000 mg/L. There is no known salinity risk for the property.

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

The Hester State Forest is located 400m north east of the proposed site, with a direct vegetation link between the two sites, Mattiske Hester (HR).

Three un-named CALM Managed Lands are located within the local area, 5.5km west, 6.2km south and 7.6km south east. There is no direct vegetation link between any of these lands and the proposed site.

The Yornup State Forest is located 5.9km south west of the proposed site, with a direct vegetation link between the two sites, Mattiske Balingup Slopes (BL).

The property under application is 88.8% vegetated; leaving 85.3% vegetated after proposed clearing occurs. The proposed clearing will occur within the middle of the property leaving all surrounding areas of the property fully vegetated. This will prevent damage to vegetation corridors between the property and surrounding vegetation for fauna species. Due to the size of the proposed clearing and the amount of vegetation remaining on the property, it is unlikely the clearing would impact directly any on CALM Managed Lands within the local area.

A System 6 Conservation Reserve is located 5.4km west of the proposed site. There is no vegetation link between this Reserve and the area under application.

Methodology GIS database:
 - CALM Managed Lands and Waters - CALM 1/06/04
 - 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 half of the Hardy Estuary - Blackwood River Hydrographic Catchment area. Due to the size of the proposed clearing it is unlikely that it would reduce water quality within the area.

The area proposed to clear is located on a thick bed of clay. Groundwater in the area has a static water level of 24m from ground water therefore minimising any possible water quality impact.

The proposed site is not within any RIWI surface water areas, ground water areas or irrigation districts.

Methodology GIS databases:
 - Hydrographic Catchments, Catchments - DoE 3/4/03

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

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

Comments
 The proposed site is zoned public purposes.
 Under the EP Act the Shire of Bridgetown-Greenbushes has a Licence to operate a landfill (L48/97) for the site under application. An EP officer from the Department of Environment confirmed 'that the EP section have no objection to the expansion of the landfill'.

Methodology GIS database:
 - Town Planning Scheme Zones - MFP 8/98
 - Perscom, Joel McShane, Department of Environment

4. Assessor's recommendations

Purpose	Method	Applied area (ha)/ trees	Decision	Comment / recommendation
Building or Structure	Mechanical Removal	0.87	Grant	The application is not at variance to any principles therefore it is recommended the application is granted

5. References

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.

Havel, J.J. and Matiske Consulting Pty Ltd (2002) Review of management options for poorly represented vegetation complexes, Conservation Commission.

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, BJ (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. Onshore Environmental Consultants Field Survey of Flora & Vegetation and Desktop Fauna Survey of Waste Management Facility, Bridgetown
- 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)