



1. Application details

1.1. Permit application details

Permit application No.: 1927/1
Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: Shire of Beverley

1.3. Property details

Property: ROAD RESERVE (KAURING 6302)
ROAD RESERVE (BEVERLEY 6304)
ROAD RESERVE (TALBOT WEST 6302)
ROAD RESERVE (YORK, SHIRE OF)
Shire Of Beverley

Local Government Area:
Colloquial name:

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
0.1		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
Beard vegetation association: 352: Medium woodland; York Gum. (Hopkins et al 2001, Shepherd 2006)	Clearing is proposed for the purpose of road realignment of up to 0.1ha of vegetation within the Greenhills South Road Reserve of the Shire of Beverley.	Completely Degraded: No longer intact; completely/almost completely without native species (Keighery 1994)	Vegetation clearing description based on information obtained from the Shire of Beverley (TRIM Ref: DOC31310).
	The vegetation under application is on the eastern side of the road reserve and consists of small Acacias, with an understorey of grasses.		

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 recognised as small Acacias with an understorey of grasses in a completely degraded condition. Based on the limited species diversity in the road reserve, the completely degraded condition of vegetation, it is considered the vegetation under application does not comprise of a high level of biodiversity.

Methodology GIS Databases:
- Northam 1m Orthomosaic - DLI 12/03

(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 under application is limited to 0.1ha of completely degraded vegetation and therefore not considered to represent significant habitat. The vegetation consists of small Acacias with an understorey of grasses. Given the absence of understorey it is considered the applied area does not provide significant habitat for ground dwelling fauna. In addition, tree hollows are not associated with Acacias and as such, the Acacias

under application are not considered to be significant habitat trees.

Methodology GIS Databases:
- Northam 1m Orthomosaic - DLI 12/03
- SAC Bio datasets (07/08/2007)

(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 mapped occurrences of Declared Rare Flora (DRF) or species of conservation significance within the applied area.

There are two declared rare species and four Priority species are known to occur within a 10km radius of the applied area on Greenhills South Road. Database searches indicate there are 18 occurrences of the rare *Thomasia glabripetala* and 10 occurrences of the rare *Thomasia montana* within a 10km radius of the applied area.

Given the vegetation under application is completely degraded consisting of small *Acacia* trees with an understorey of grasses, which does not include shrubs such as the DRF in the local area, the vegetation under application is not considered necessary for the continued existence of rare flora.

Methodology GIS Databases:
- CALM Managed Lands and Waters - CALM 1/07/05
- Pre-European Vegetation - DA 01/01
- SAC Bio datasets (06/08/2007)
- Soils, Statewide - DA 11/99

(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**
Database searches do not identify the applied areas to be associated with any Threatened Ecological Communities (TEC). One Priority Ecological Community (PEC) occurs on the Avon River ~18km west of the area under application. The PEC "Deep Pools of the Avon Botanical District" is described as deep pools and natural braided sections of fresh to brackish rivers of the Avon Botanical District. Given the distance to the PEC and the application is limited to small *Acacia* trees with a grass understorey, it is considered unlikely that the values of the above mentioned community will be impacted.

Methodology References:
- DEC (2004)

GIS Databases:
- Clearing Regulations - Environmentally Sensitive Areas - DOE 8/03/05
- Hydrography, linear (hierarchy) - DOW
- SAC Bio datasets (06/08/2007)

(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 area under application is located within the Shire of Beverley which has current pre-European vegetation representation of 31.9% (Shepherd et al. 2001). Vegetation within the area under application is part of Beard vegetation association 352 of which there is 16.6% of pre-European extent remaining (Shepherd 2006).

The vegetation under application is completely degraded and limited to small *Acacia* trees with a grass understorey, therefore it is not considered to be representative of the Beard vegetation association which is Medium woodland with York Gum.

Given the above, the vegetation under application is not considered to be significant as a remnant and the proposed clearing is not considered likely to be at variance to this principle.

	Pre-European (ha)	Current extent (ha)	Remaining (%)	Conservation status***	In secure tenure (%)
IBRA Bioregion: Avon Wheatbelt*	9,517,117	1,468,711	15.4	Vulnerable	10.8

Shire of Beverley**	239,896	76,566	31.9	Depleted	NA
Vegetation type: Beard: 352	724,296	119,957	16.6	Vulnerable	10.2

* (Shepherd 2006)

** (Shepherd et al. 2001)

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

- Methodology** **References:**
- Commonwealth of Australia (2001)
 - Department of Natural Resources and Environment (2002)
 - EPA (2000)
 - Shepherd et al (2001)
 - Shepherd (2006)
- GIS Databases:**
- EPA Position Paper No 2 Agriculture Region - DEP 12/00
 - 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 are no watercourses or wetlands mapped within or adjacent to the applied area on Greenhills South Road. The closest watercourses are the Mackie River (~500m west) and a minor non-perennial tributary of the Mackie River which intersects Greenhills South Road ~700m north of the applied area. Minor non-perennial watercourses are utilised for drainage flow during significant rainfall events, and thus it is considered they are unlikely to contain wetland dependant vegetation.
- Given the type of vegetation under application and the distance to the watercourses it is considered unlikely the vegetation under application is associated with a wetlands or watercourses.

- Methodology** **GIS Databases:**
- Clearing Regulations - Environmentally Sensitive Areas - DOE 30/5/05
 - 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**
- Soil mapping of the area under application identifies soils as primarily river terraces comprised of hard alkaline red soils (Northcote et al. 1960-68). Salinity risk mapping does not identify risk for the applied area, however, salinity risk is associated with the watercourses in the local area.
- Given the application is for 0.1ha, it is considered unlikely that the proposed clearing would cause appreciable land degradation.
- In addition, it is considered that the installation of appropriate roadside infrastructure (ie. table drains and culverts) in conjunction with the existing infrastructure would minimise any potential land degradation issues.

- Methodology** **Reference:**
- Northcote et al. (1960-68)
- GIS Databases:**
- Groundwater Salinity, Statewide - DOW
 - Salinity Risk LM 25m - DOLA 00
 - Soils, Statewide - DA 11/99

(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 closest conservation area is an unnamed reserve ~2.8km south east of the applied area. Other conservation areas, Rifle Range Nature Reserve (~8km south), Yandiniling Nature Reserve (~13 south), Wallaby Hills Nature Reserve (~15km north) and a further 3 unnamed reserves occur within a 20km radius of the area under application. Given the distance to the nearest conservation reserve, and the limited extent of the proposed clearing, it is considered unlikely that the conservation values of any conservation reserve would be

impacted.

Aerial photography of the local area identifies road reserves as significant ecological linkages in an area that has been extensively cleared for agriculture. However, vegetation within the applied area is described as completely degraded consisting of small Acacia trees with a grass understorey. The Road Conservation Committee (2007) advises that the proposed clearing in Greenhills South Road reserve will have limited impact on the surrounding environment.

Methodology References:
- Road Conservation Committee (2007) (TRIM Ref: DOC31047)

GIS Databases:
- CALM Managed Lands and Waters - CALM 1/07/05
- Northam 1m Orthomosaic - DLI 12/03

(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 closest watercourses are the Mackie River (~500m west) and a minor non-perennial tributary of the Mackie River which intersects Greenhills South Road ~700m north of the applied area.

Given the vegetation under application is 0.1ha consisting of small Acacia trees with a grass understorey and the distance to the nearest watercourse it is considered that the proposed clearing is unlikely to cause deterioration in the quality of surface water.

Groundwater salinity in the local area is between 7000 and 35,000mg/L and is considered brackish to extremely saline. The proposed clearing of Acacia trees and grasses is unlikely to impact the recharge and water quality of the regional groundwater.

Methodology GIS Databases:
- Groundwater Salinity, Statewide - DOW
- Hydrography, linear - DOE 1/2/04

(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 not associated with any watercourses or wetlands. The closest watercourses are the Mackie River (~500m west) and a minor non-perennial tributary of the Mackie River which intersects Greenhills South Road ~700m north of the applied area.

The existing road has adequate culverts/table drains to manage surface water flows and divert water during major rainfall events. Given the area under application is 0.1ha consisting of small Acacia trees and grasses in a road reserve, it is considered unlikely the proposed clearing will cause or exacerbate any incidence of flooding.

Methodology GIS Databases:
- Hydrography, linear - DOE 1/2/04

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

Comments
The areas under application are not associated with Aboriginal Sites of Significance or Native Title Claims.

The Shire has advised adjacent land required for the realignment of Greenhills South Road has been purchased (TRIM Ref: DOC31310).
The Shire has also advised that the northern section of the Greenhills South Road Reserve in the Shire of York which has been surveyed for the road realignment, does not support any native vegetation (TRIM Ref: DOC33120).

Methodology GIS Databases:
- Aboriginal Sites of Significance - DIA
- Native Title Claims - DLI

4. Assessor's recommendations

Purpose	Method	Applied area (ha)/ trees	Decision	Comment / recommendation
Road	Mechanical	0.1	The application has been assessed against the clearing	

5. References

- Commonwealth of Australia (2001). National Targets and Objectives for Biodiversity Conservation 2001-2005, AGPS, Canberra.
- 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.
- EPA (2000) Environmental protection of native vegetation in Western Australia. Clearing of native vegetation, with particular reference to the agricultural area. Position Statement No. 2. December 2000. Environmental Protection Authority.
- 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.
- List of Threatened Ecological Communities endorsed by the Minister for Environment (2004). Department of Environment and Conservation. <http://www.naturebase.net> (Accessed 12/08/2007)
- 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.
- Road Conservation Committee (2007) (TRIM Ref: DOC31047)
- 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.

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)