



1. Application details

1.1. Permit application details

Permit application No.: 1563/1
Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: Department of Environment & Conservation

1.3. Property details

Property: Lot 15383 on Plan 30505 (TINCURRIN 6361)
Lot 16004 on Plan 30505 (TINCURRIN 6361)

Local Government Area: Shire Of Wickepin
Colloquial name:

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
0.17		Mechanical Removal	Restoration

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 947: Medium woodland; powderbark and mallet (Shepherd 2006)	The proposal is to clear 0.17 hectares of native vegetation for the purpose of rehabilitating a gravel pit. Shrubs from the edge of the pit will be cleared and the edges re-shaped to the surrounding land contours. The cleared vegetation will be spread over the pit to stimulate natural regeneration. The vegetation under application comprises understorey vegetation of low shrubland dominated by <i>Olearia dampieri</i> over grasses and sedges. Trees on the edge of the pit and all vegetation in the centre will be retained.	Good: Structure significantly altered by multiple disturbance; retains basic structure/ability to regenerate (Keighery 1994)	Vegetation clearing description based on site photos, a description provided by DEC Narrogin officers and a flora survey conducted by Kinhill Pty Ltd (2000) over Lot 15383 and 16004, which include the area under application. The vegetation under application ranges in condition from good to degraded nearer to the pit edges, with an average condition rating of good.

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 comprises sparse understorey vegetation on the edge of a gravel pit. During a flora survey conducted by Kinhill Pty Ltd (2000) 19 flora species, including 6 non-native species, were recorded within Lots 15383 and 16004.

Given the low species diversity of the vegetation under application, it is not considered likely that it comprises a high level of biodiversity.

Methodology Kinhill Pty Ltd (2000)

(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 Peregrine Falcon, the Western Rosella and the White-browed Babbler are species of conservation significance that have been recorded within a 15km radius of the area under application and have the potential

to utilise the vegetation under application.

The vegetation under application is in good to degraded condition and includes an understorey that has the potential to be utilised by ground-dwelling fauna.

The vegetation under application also forms part of a large remnant of vegetation that is likely to provide significant habitat for indigenous fauna in an area that has been historically extensively cleared for agriculture. However, the proposed clearing of 0.17 hectares of understorey vegetation on the edge of a gravel pit is not considered likely to impact on the habitat value of this remnant. The proposed clearing is therefore not likely to be at variance to this Principle.

In addition, the purpose of the proposed clearing is to batter the edge of the existing gravel pit, which is approximately 1.2 hectares, to enable rehabilitation and it is considered that this will mitigate any long term loss of habitat caused by the clearing.

Methodology DEC site photos
GIS Database: SAC Bio datasets - accessed 28/06/07

(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 (10km radius) there is one known population of the Declared Rare Flora (DRF) *Calectasia pignattiana* located approximately 10km south-south-east of the area under application. There are also seven known populations of Priority flora, with the closest being *Eucalyptus sparsicoma* located approximately 3.7km to the southeast.

Of these species, *C. pignattiana* (R), *Lechenaultia pulvinaris* (P4) and *Synaphea platyphylla* (P3) have been recorded within the same mapped vegetation and soil associations as the area under application.

A vegetation survey was conducted in 1999 within crown land in the Toolibin catchment, which included the area under application, and no DRF or Priority flora species were identified (Kinhill Pty Ltd 2000). Although the survey was conducted at the end of spring, the species identified above to occur in the local area are easily distinguishable throughout the year. DEC Narrogin has also advised that a subsequent flora survey by Brown and Root in 2002 did not identify any DRF or Priority flora within Lots 15383 and 16004.

Given the above, it is not considered likely that the vegetation under application includes, or is necessary for the maintenance of, rare flora.

Methodology Kinhill Pty Ltd (2000)
GIS Databases:
Pre-European Vegetation - DA 01/01
SAC Bio datasets accessed 28/06/07
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**

There are no known occurrences of Threatened Ecological Communities (TEC) within a 10km radius of the applied area. The nearest TEC is located 13.5km to the west of the area under application and has been identified as the Toolibin community - Perched wetlands of the Wheatbelt region with extensive stands of *Casuarina obesa* and *Melaleuca strobophylla*.

Given the distance to the nearest TEC, and that the vegetation within the area under application comprises a *Eucalyptus wandoo* woodland, it is therefore not considered likely that the vegetation under application comprises, or is necessary for the maintenance of, a TEC.

Methodology DEC site photos
GIS Databases:
SAC Bio datasets - accessed 28/06/07

(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 may be at variance to this Principle**

The vegetation under application is classified as Beard vegetation association 947, which has 30.0% of the pre-European extent remaining and which is classified as vulnerable (Shepherd 2006). In addition the Shire of Wickepin has 7.5% of pre-European vegetation remaining.

The State Government is committed to the National Objectives Targets for Biodiversity Conservation which includes a target that prevents clearance of ecological communities with an extent below 30% of that present pre-1750 (Department of Natural Resources and Environment, 2002; EPA, 2000).

The Shire of Wickepin has been historically extensively cleared for agriculture, with less than the recommended 30% of pre-European vegetation remaining. Given the low vegetation representation within the Shire, and that a portion of the vegetation under application is in good condition, the vegetation under application may be considered to be significant in an area that has been extensively cleared.

Given the purpose of the proposed clearing of 0.17 hectares is to enable the rehabilitation of the 1.2 hectare gravel pit, it is considered that the proposed rehabilitation will adequately offset the clearing.

	Pre-European (ha)	Current (ha)	Remaining %	Conservation status*** % in reserves
Avon Wheatbelt	9,578,995	1,536,296	16.0**	Vulnerable
Shire of Wickepin	202,347	15,120	7.5*	Endangered
Beard vegetation association				
947	34,033	10,193	30.0**	Vulnerable

* (Shepherd et al. 2001)

** (Shepherd 2006)

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

Methodology Department of Natural Resources and Environment, 2002
EPA (2006)
Heddle et al. (1980)
Shepherd (2006)

(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**
The nearest watercourse is a river located approximately 550m to the southwest of the area under application. The vegetation under application comprises *Eucalyptus wandoo* woodland and is not considered likely to be found in, or in association with, an environment associated with a watercourse or wetland.

Methodology DEC site photos
GIS Database:
Hydrography, linear (hierarchy) - DOW

(g) Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation.

Comments **Proposal may be at variance to this Principle**
Within the area under application soils have been identified as hard alkaline yellow mottled soils and hard alkaline red soils (Northcote et al. 1960-1968). The main land degradation risk associated with this soil type is considered to be water erosion. The area under application also has a low to nil risk of salinity.

Given the high risk of water erosion associated with the soil type, it is considered that the proposed clearing from the pit edges may result in water erosion causing appreciable land degradation.

The proposed clearing is for the purpose of reshaping and rehabilitating the gravel pit and it is considered that the risk of water erosion is likely to be reduced in the long term through the proposed battering of the edges and spreading the cleared vegetation over the pit to encourage regrowth.

Methodology Northcote et al. (1960-1968)
GIS Databases:
Salinity Risk LM 25m - DOLA 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**
Within a 20 km radius conservation areas include Dulbining Nature Reserve located approximately 10km to the west, and two unnamed DEC managed nature reserves located 10km to the east and 15km to the south.

Given that the proposed clearing is limited to 0.17 hectares located within a 81 hectare vegetated remnant, and given the distance to the nearest conservation reserve, it is not considered likely that the proposed clearing would have an impact on their environmental values.

Methodology GIS Databases:
CALM Managed Lands and Waters - CALM 1/07/05

(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 under application is not located within a Public Drinking Water Source Area (PDWSA) and has a nil to low risk of salinity. It is therefore not considered likely that the proposed clearing would cause a deterioration in groundwater quality through salinity.

The main land degradation risk associated with the removal of vegetation on the identified soil type is considered to be water erosion, however given that the proposed clearing is limited to 0.17 hectares of understorey vegetation, and given the distance to the nearest watercourse, it is not considered likely that it would cause a deterioration of surface water quality through erosion and sedimentation. In addition, the nearest watercourse is a river located approximately 550m to the southwest of the area under application. Given this distance, it is not considered likely that the proposed clearing would have an impact on the surface water quality of this waterbody.

Methodology GIS Database:
Hydrography, linear (hierarchy) - DOW
Salinity Risk LM 25m - DOLA 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

The area under application is located approximately 550m to the northeast of nearest river, at an elevation of 320-330m. Given this, and that the proposed clearing is limited to 0.17 hectares of understorey vegetation, it is not considered likely that the proposed clearing would impact on peak flood height or duration.

Methodology GIS Database:
Hydrography, linear (hierarchy) - DOW
Topographic Contours, Statewide - DOLA 12/09/02

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

Comments

The area under application is not part of a Native Title claim.

The Department for Planning and Infrastructure has granted the DEC access to Reserves 26202 and 5288 for the proposed rehabilitation works.

No other approvals are required for the proposal.

Methodology GIS Databases:
Native Title Claims - DLI 7/11/05

4. Assessor's comments

Purpose	Method	Applied area (ha)/ trees	Comment
Restoration	Mechanical Removal	0.17	The assessable criteria have been addressed and the clearing as proposed may be at variance to Principles e and g.

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.

Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.

Kinhill Pty Ltd (2000) Flora and vegetation survey of vacant crown land within the Toolibin Catchment. DEC TRIM ref. DOC27704.

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.

Shepherd (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
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)

