



CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

Purpose Permit number:	CPS 3227/2
Permit Holder:	Shire of Moora
Duration of Permit:	14 October 2009 to 14 October 2014

The Permit Holder is authorised to clear native vegetation subject to the following conditions of this Permit.

PART I – CLEARING AUTHORISED

1. Purpose for which clearing may be done

Clearing for the purpose of road realignment and reconstruction.

2. Land on which clearing is to be done

WHEATBIN ROAD RESERVE (MOORA 6510)

3. Area of Clearing

The Permit Holder must not clear more than 0.4 hectares of native vegetation within the area hatched yellow on attached Plan 3227/2.

4. Application

This Permit allows the Permit Holder to authorise persons, including employees, contractors and agents of the Permit Holder, to clear native vegetation for the purposes of this Permit subject to compliance with the conditions of this Permit and approval from the Permit Holder.

5. Type of clearing authorised

This Permit authorises the Permit Holder to clear native vegetation for activities to the extent that the Permit Holder has the power to clear native vegetation for those activities under the *Local Government Act 1995* or any other written law.

6. Compliance with Assessment Sequence and Management Procedures

Prior to clearing any native vegetation under conditions 1, 2 and 3 of this Permit, the Permit Holder must comply with the Assessment Sequence and the Management Procedures set out in Part II of this Permit.

PART II – ASSESSMENT SEQUENCE AND MANAGEMENT PROCEDURES

7. Avoid, minimise etc clearing

In determining the amount of native vegetation to be cleared authorised under this Permit, the Permit Holder must have regard to the following principles, set out in order of preference:

- (a) avoid the clearing of native vegetation;
- (b) minimise the amount of native vegetation to be cleared; and
- (c) reduce the impact of clearing on any environmental value.

8. Offsets

If part or all of the clearing to be done is or may be at variance with one or more of the clearing principles, then the Permit Holder must implement an *offset* in accordance with conditions 8(a) and 8(b) of this Permit with respect to that clearing..

(a) Determination of *offsets*:

- (i) in determining the *offset* to be implemented with respect to a particular area of native vegetation proposed to be cleared under this Permit, the Permit Holder must have regard to the *offset* principles contained in condition 8(b) of this Permit;
- (ii) once the Permit Holder has developed an *offset proposal*, the Permit Holder must provide that *offset proposal* to the CEO for the CEO's approval prior to undertaking any clearing to which the *offset* relates, and prior to implementing the *offset*;
- (iii) clearing may not commence until and unless the CEO has approved the *offset proposal* to which the clearing relates;
- (iv) the Permit Holder shall implement the *offset proposal* approved under condition 8(a)(iii); and
- (v) each *offset proposal* shall include a *direct offset*, timing for implementation of the *offset proposal* and may additionally include *contributing offsets*.

(b) For the purpose of this condition, the *offset* principles are as follows:

- (i) *direct offsets* should directly counterbalance the loss of the native vegetation;
- (ii) *contributing offsets* should complement and enhance the *direct offset*;
- (iii) *offsets* are implemented only once all avenues to avoid, minimise, rectify or reduce environmental impacts have been exhausted;
- (iv) the environmental values, habitat, species, *ecological community*, physical area, ecosystem, landscape, and hydrology of the *offset* should be the same as, or better than, that of the area of native vegetation being *offset*;
- (v) a ratio greater than 1:1 should be applied to the size of the area of native vegetation that is *offset* to compensate for the risk that the *offset* may fail;
- (vi) *offsets* must entail a robust and consistent assessment process;
- (vii) in determining an appropriate *offset*, consideration should be given to ecosystem function, rarity and type of *ecological community*, vegetation *condition*, habitat quality and area of native vegetation cleared;
- (viii) the *offset* should either result in no net loss of native vegetation, or lead to a net gain in native vegetation and improve the *condition* of the natural environment;
- (ix) *offsets* must satisfy all statutory requirements;
- (x) *offsets* must be clearly defined, documented and audited;
- (xi) *offsets* must ensure a long-term (10-30 year) benefit; and
- (xii) an *environmental specialist* must be involved in the design, assessment and monitoring of *offsets*.

PART III - RECORD KEEPING AND REPORTING

9. Records must be kept

The Permit Holder must maintain the following records for activities done pursuant to this Permit in relation to the *offset* of areas pursuant to condition 8:

- (a) the location of any area of *offsets* recorded using a Global Positioning System (GPS) unit set to Geocentric Datum Australia 1994 (GDA94), expressing the geographical coordinates in Eastings and Northings;
- (b) a description of the *offset* activities undertaken; and
- (c) the size of the *offset* area (in hectares).

10. Reporting

- (a) The Permit Holder must provide to the CEO, on or before 30 June of each year, a written report of records required under condition 9 of this Permit and activities done by the Permit Holder under this Permit between 1 January and 31 December of the preceding year.
- (b) Prior to 18 July 2014 the permit holder must provide to the CEO a written report of records required under condition 9 of this Permit where these records have not already been provided under condition 10(a) of this Permit.

Definitions

The following meanings are given to terms used in this Permit:

condition means the rating given to native vegetation using the *Keighery scale* and refers to the degree of change in the structure, density and species present in the particular vegetation in comparison to undisturbed vegetation of the same type;

contributing offsets has the same meaning as is given to that term in the Environmental Protection Authority's *Position Statement No.9 Environmental Offsets*, January 2006;

direct offsets has the same meaning as is given to that term in the Environmental Protection Authority's *Position Statement No.9 Environmental Offsets*, January 2006;

offset proposal means an *offset* determined by the Permit Holder in accordance with condition 8 of this Permit;

offset/s means an offset required to be implemented under Condition 8 of this Permit;

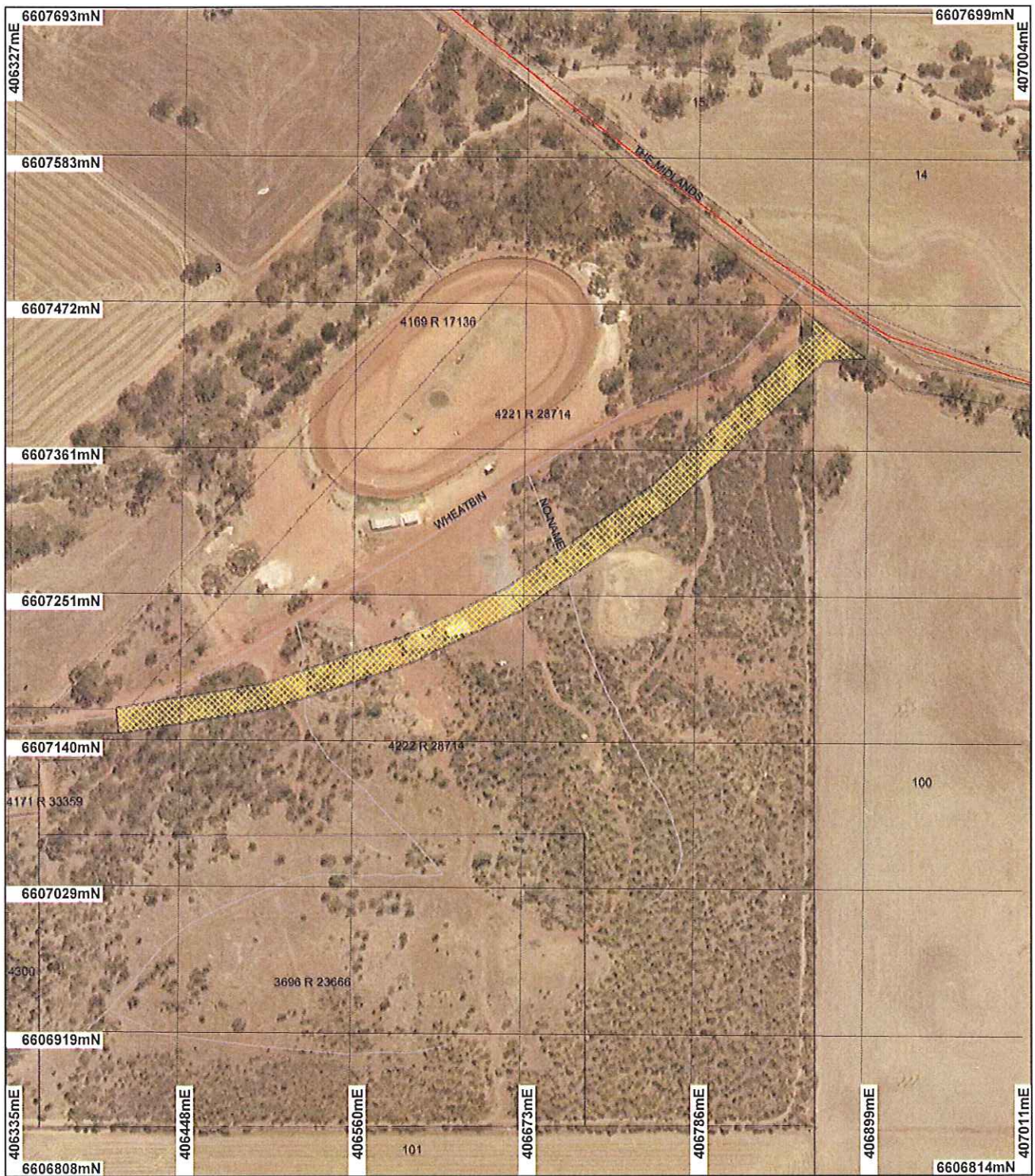


Kelly Faulkner
MANAGER
NATIVE VEGETATION CONSERVATION BRANCH

*Officer delegated under Section 20
of the Environmental Protection Act 1986*

22 October 2009

Plan 3227/2



LEGEND

- ☐ Cadastre for labelling
- ☐ Road Centrelines

FW
HY
LRO
(cont)

LRS
MR
N
TR

Clearing Instruments

☐ Areas Approved to Clear

Dandaragan 50cm
Orthomosaic - Landgate
2004



0 100 m

Scale 1:4115

(Approximate when reproduced at A4)

Geocentric Datum Australia 1994

Note: the data in this map have not been projected. This may result in geometric distortion or measurement inaccuracies.

K. Faulkner

Officer with delegated authority under Section 20 of the Environmental Protection Act 1986

Information derived from this map should be confirmed with the data custodian acknowledged by the agency acronym in the legend.



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Environment and Conservation

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1. Application details

1.1. Permit application details

Permit application No.: 3227/2
Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: Shire of Moora

1.3. Property details

Property: ROAD RESERVE (MOORA 6510)
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ROAD RESERVE (MOORA 6510)
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ROAD RESERVE (MOORA 6510)

Local Government Area:

Colloquial name:

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
0.4		Mechanical Removal	Road construction or maintenance
0.4		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 142: Medium woodland; York gum and salmon gum (Shepherd et al. 2007).	Vegetation appears to be sparse and degraded and contain small and medium sized isolated trees with no noticeable understorey (Dandaragan 50cm Orthomosaic - Landgate 2004; DEC 2009; Shire of Moora 2009).	Degraded: Structure severely disturbed; regeneration to good condition requires intensive management (Keighery 1994)	Native vegetation in the road reserve is in a degraded (Keighery 1994) condition (DEC 2009) and impacted by surrounding agricultural land uses and road networks. The condition of the vegetation has been assessed through aerial photos (Dandaragan 50cm Orthomosaics - Landgate 2004) and site photos (Shire of Moora 2009).

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 may be at variance to this Principle

An area of 0.4 ha is proposed to be cleared for the purpose of reconstruction and realignment of the Wheatbin Road. The road reserve vegetation is sparse (DEC 2009), impacted by surrounding land uses and degraded (Keighery 1994). Approximately 10% of the local area (10 km radius) contains native vegetation cover. The road reserve is part of a remnant of native vegetation in this extensively cleared landscape which has been impacted by nearby agricultural land uses and road networks.

The closest known occurrence of a Priority Flora (P4) species (*Diuris recurva*) is located approximately 1.5 km northwest of the area under application. This species occurs in the same chief soil type that is known to exist in the area under application. Other Priority Flora species known to occur on the same soil type within a radius of 10 km (local area) include *Banksia dallanneyi* subsp. *pollostia* (P3) and *Pertusaria trachyspora* (P2). Priority species such as *Calytrix ecalycata* subsp. *pubescens* (P1), *Gastrolobium rotundifolium* (P3) and *Melaleuca sclerophylla* (P3) are also known to occur at approximately 8 - 9 km from the application area, however they occur in different soil types than the applied area. Given the level of degradation within the vegetation under application it is unlikely that priority flora species occur within the applied area (DEC, 2009).

There is only 15.5% of native vegetation remaining within the Shire of Moora and 11.36% of native vegetation association 142 remaining within the Avon Wheatbelt bioregion (Shepherd 2007), as such the vegetation under application is a critical asset.

The vegetation under application is in a degraded (Keighery, 1994) condition and is in close proximity to agricultural areas and road networks, however may be providing significant biological diversity value as a remnant in this extensively cleared landscape.

As the proposal may be at variance to this principle an offset condition will be placed on the permit to mitigate the loss of the vegetation which may contain a high level of biological diversity within the local area.

Methodology DEC 2009
Keighery 1994
Shepherd 2007
GIS Databases:
- Clearing Regulations, Environmentally Sensitive Areas 30/05/05
- Dandaragan 50cm Orthomosaic - Landgate 2004
- Moora 1.4cm Orthomosaic - Landgate 2003
- NLWRA, Current Extent of Native Vegetation 20/01/01
- Soils, Statewide DA 11/99
- SAC Biodatasets - accessed 07/08/09

(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 may be at variance to this Principle

An area of 0.4 ha is proposed to be cleared within the road reserve. The width of proposed clearing is confined to approximately 20 m. Native vegetation in the road reserve is in a degraded (Keighery 1994) condition (DEC 2009) and impacted by surrounding land uses.

Four species of Threatened Fauna are known to occur within the local area (10 km radius): *Dasyurus geoffroii* (Chuditch) occurring ~ 440 km west; *Calyptorhynchus latirostris* (Carnaby's Black Cockatoo) occurring ~1.6 km northwest; *Platycercus icterotis xanthogenys* (Western Rosella inland subspecies) occurring ~3.9 km northeast; and *Idiosoma nigrum* (Shield-backed Trapdoor Spider) occurring ~ 6 km south of the area under application.

Two fauna species of conservation significance are known to occur in the local area (10 km radius): *Falco peregrinus* (Peregrine Falcon) (Specially Protected Fauna) occurring ~ 4.1 km northwest and *Hydromys chrysogaster* (Water-rat) (P4) occurring ~ 3.1 km northwest.

Given the degraded (Keighery 1994) condition of the vegetation, size (0.4ha) and habitats present within the applied area it is unlikely that the applied area is significant habitat for any conservation significant fauna.

However, considering the extensively cleared landscape of which the applied area is within and the larger remnant of which the applied area is a part the removal of the vegetation under application will incrementally degrade the fauna habitat which this remnant provides.

The remnant vegetation, of which the applied area is included may be supporting habitat for conservation significant fauna such as the Chuditch, Carnaby's Black Cockatoo and Shield-backed Trapdoor Spider (DEC, 2009) as well as facilitating movement through the landscape for other native fauna species.

Given the application area is a part of a significant remnant in a highly cleared landscape and native fauna likely utilise the vegetation under application, the proposed clearing may be at variance to this principle.

An offset condition will be placed on the permit to mitigate the loss of fauna habitat in an extensively cleared landscape.

Methodology DEC 2009
Keighery 1994
GIS Databases:
- Dandaragan 50cm Orthomosaic - Landgate 2004
- Moora 1.4cm Orthomosaic - Landgate 2003
- SAC Biodatasets - accessed 07/08/09

(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 five known occurrences of the rare flora species, *Eremophila scaberula* and one known record of *Acacia aristulata*, in the local area (10 km radius). The closest known record of *Eremophila scaberula* is approximately 2.9 km southwest while *Acacia aristulata* is known to occur approximately 9.7 km north of the area under application.

A. aristulata is not known to occur in similar soil types as the applied area however four of the E. scaberula records are known to occur in similar soil types to the applied area.

Based on the degraded (Keighery 1994) condition of vegetation and history of grazing, it is unlikely that the vegetation under application supports rare flora E. scaberula (DEC 2009), or other rare or priority flora known to occur in this region.

Methodology DEC 2009
Keighery 1994
Shire of Moora 2009
GIS Databases:
- Dandaragan 50cm Orthomosaic - Landgate 2004
- Moora 1.4cm Orthomosaic - Landgate 2003
- SAC Biodatasets - accessed 07/08/09
- 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 is one record of a Threatened Ecological Community (TEC) within the local area (10km radius) which is known as a 'Heath community on chert hills of the Coomberdale Floristic Region'. It is located approximately 1.6 km north of the proposal area on different vegetation and soil types as those within the area under application.

Vegetation appears to be sparse and degraded no noticeable understorey (DEC 2009; Shire of Moora 2009) as considering this it is unlikely that the vegetation under application represents, or is likely to be supporting any known TEC.

Therefore the clearing as proposed is not likely to be at variance to this principle.

Methodology DEC 2009
Shire of Moora 2009
GIS Databases:
- Dandaragan 50cm Orthomosaic - Landgate 2004
- Moora 1.4cm Orthomosaic - Landgate 2003
- SAC Biodatasets - accessed 07/08/09
- Soils, Statewide DA 11/99

(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 at variance to this Principle**
The area under application is mapped as the Beard Vegetation Association 142: Medium woodland; York gum and salmon gum of which there is 11.36% of its pre-European extent remaining within the Avon Wheatbelt bioregion (Shepherd, 2007). The Avon Wheatbelt IBRA Bioregion has 11.1% of its pre-European vegetation extent remaining (Shepherd, 2007).

The Environmental Protection Authority (EPA) supports a 30% threshold level of pre-European vegetation as recommended in the National Objectives Targets for Biodiversity Conservation below which species loss appears to accelerate exponentially at an ecosystem level (EPA 2000). The vegetation complexes that occur within the area under application are under the 30% threshold.

The area of application is 0.4 ha and the vegetation is in a degraded (Keighery 1994) condition (DEC 2009) however is part of a significant remnant of native vegetation in an extensively cleared landscape.

	Pre-European (ha)	Current extent (ha)	Remaining (%)	In secure tenure (%)
IBRA Bioregion*				
Avon Wheatbelt	9,517,109	1,443,690	15.2%	11.1%
Shire				
Shire of Moora	376,204	58,134	15.5%	23.0%
Beard vegetation type*				
142	711,262	192,236	27.0%	4.0%
Within Bioregion				
142	561,021	63,729	11.36	2.92

* (Shepherd 2007)

Given the above vegetation retention rates within the Avon Wheatbelt bioregion the vegetation under application is a critical asset.

Avoid, minimise and offset conditions will be placed on the permit to mitigate the loss of under represented vegetation community Beard Unit 142.

Methodology DEC 2009
EPA 2000
Keighery 1994
Shepherd 2007
Shire of Moora 2009
GIS Databases:
- Dandaragan 50cm Orthomosaic - Landgate 2004
- Interim Biogeographic Regionalisation of Australia - EA 18/10/00
- Local Government Authorities - DLI 8/07/04
- Moora 1.4cm Orthomosaic - Landgate 2003
- Pre European Vegetation - DA 01/01
- SAC Biodatasets - accessed 07/08/09
- NLWRA, Current Extent of Native Vegetation 20/01/01

(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**
The closest watercourse is Moore River, which is approximately 200 m to the north of the area under application. There are no other watercourses or wetlands within the area under application.

The width of proposed clearing is approximately 20 m and an area of 0.4 ha is to be cleared if granted. Vegetation in the proposal area is degraded and thinly distributed (DEC 2009). It is not considered likely for the removal of a narrow linear strip of degraded (Keighery 1994) condition vegetation to impact Moore River.

Methodology DEC 2009
Keighery 1994
GIS Databases:
- ANCA wetlands - Environment Australia 26/3/99
- CALM Managed Lands and Waters - CALM 01/06/05
- EPP Lakes Policy Area - DEP 14/05/97
- EPP, Wetlands 2004 (DRAFT) - EPA 21/7/04
- Clearing Regulations, Environmentally Sensitive Areas 30/05/05
- Geomorphic Wetlands (Mgt Categories) - Swan Coastal Plain
- Hydrography, linear - DoW
- Hydrography, linear (hierarchy) - DoW
- Ramsar wetlands - DEC 03

(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 applied area is located within predominately flat, fairly extensive valley floors with chief soils being hard alkaline yellow mottled soils (Northcote et al. 1960-68) which are not known to have high erodibility.

Salinity risk within the applied area is mapped from low to high risk and removal of deep rooted perennial vegetation within high risk areas can result in an increase in groundwater salinity levels.

Given that the proposal is for a small (0.4ha) area and is linear (20 m wide), the clearing as proposed is not likely to result in appreciable land degradation.

Methodology Northcote et al. 1960-68
GIS Databases:
- Average Annual Rainfall Isohyets - WRC 29/09/98
- Groundwater Salinity, Statewide - DoW
- Salinity Risk LM 25m - DOLA
- Soils, Statewide - DA
- Topographic Contours, Statewide - DOLA

(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 may be at variance to this Principle

An un-named Nature Reserve is situated approximately 800 m to the west of the area under application and a Land for Wildlife site and DEC offset site are also in close proximity to the applied area. Further clearing within this extensively cleared landscape may incrementally degrade the remnant vegetation of which the applied area is a part.

Given the clearing of the vegetation under application is likely to degrade the environmental values of the remnant of which it is a part and considering that this remnant is supporting nearby areas of conservation significance the clearing as proposed may be at variance to this principle.

An offset condition will be placed on the permit to mitigate the potential impacts of clearing on areas of conservation significance.

Methodology GIS Databases:
- Register of National Estate - EA
- CALM Managed Lands and Waters - DEC
- Systems 1-5 and 7-12 Areas - DEC

(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 may be at variance to this Principle

The applied clearing area lies within the Moore River Hydrographic Catchment. The application area is located within the Gingin Groundwater Area (RIWI Area; plan under review). The boundary of a Public Drinking Water Source Area (PDWSA) (Priority 2) lies approximately 25 m to the northeast of the proposal area.

The closest watercourse is Moore River, which is approximately 200 m to the north of the area under application.

The applied clearing area has a flat topography and a mapped groundwater salinity level of 1000-3000 mg/L with the salinity risk mapped between low and high.

The removal of 0.4ha of deep rooted perennial vegetation may incrementally degraded groundwater quality through an increase in salinity levels however it is unlikely that this impact will be significant enough to impact notably on the nearby PDWSA.

Given the above the clearing as proposed may be at variance to this principle.

Offset conditions will be placed on this permit to minimise the potential for water quality to be impacted as a result of the removal of deep rooted perennial vegetation.

Methodology GIS Databases:
- Groundwater Salinity, Statewide - DoW
- Hydrographic Catchments - Catchments - DoW
- Hydrography, linear - DoW
- Public Drinking Water Source Areas (PDWSAs) - 07/02/06
- RiWI, Areas - DoW
- Salinity Risk LM 25m - DOLA
- Topographic Contours, Statewide - DOLA

(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 proposed clearing area has a flat topography the nearest surface water expression area, Moore River, is located approximately 200 m to the north of the area under application.

The soil type is described as chiefly hard alkaline yellow mottled soils (Northcote et al. 1960-68), which are not known to hold or repel water within their A horizon. Clearing, if granted, will take place on an area of 0.4 ha in a linear, narrow (20 m wide) fashion.

Given the small size (0.4ha) and linear situation of the applied area it is unlikely that the proposal is at variance to this principle.

Methodology Northcote et al. 1960-68
GIS Databases:

- Hydrographic Catchments - Catchments - DoW
- Hydrography, linear - DoW
- Soils, Statewide - DA
- Topographic Contours, Statewide - DOLA
- Average Annual Rainfall Isohyets - WRC 29/09/98

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

Comments

The permit CPS3227/1 has been amended due to a number of administrative mistakes noted on the permit.

The applied area is designated as 'road reserve' for public roads and the Shire of Moora's town planning scheme identifies the applied area for 'road' purposes.

Methodology

GIS Databases:

- Cadastre
- Native Title Claims - LA 2/5/07

4. Assessor's comments

Comment

The application has been assessed against the clearing principles, planning instruments and other matters in accordance with s51O of the Environmental Protection Act 1986, and the proposed clearing is at variance to Principle (e), may be at variance to Principles (a), (b), (h) and (i); is not likely to be at variance to Principles (c), (d), (g) and (j) and is not at variance to Principle (f).

5. References

DEC (2009) DEC Advice for Clearing Permit Application CPS 3227/1, Wheatbin Road Reserve, Moora, Shire of Moora. Department of Environment and Conservation, Western Australia (TRIM Ref: DOC 94663)

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, Western Australia.

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

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, D.P. (2007). 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.

Shire of Moora (2009) Clearing Permit Application and additional information (TRIM Ref: DOC 91528).

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)