



1. Application details

1.1. Permit application details

Permit application No.: 2876/1
Permit type: Area Permit

1.2. Proponent details

Proponent's name: Department of Environment and Conservation

1.3. Property details

Property: KUNJIN AGRICULTURAL AREA LOT 150 (BULLARING 6373)
Local Government Area: Shire Of Corrigin
Colloquial name:

1.4. Application

Clearing Area (ha) 0.62
No. Trees
Method of Clearing Mechanical Removal
For the purpose of: Restoration

2. Site Information

2.1. Existing environment and information

2.1.1. Description of the native vegetation under application

Table with 4 columns: Vegetation Description, Clearing Description, Vegetation Condition, Comment. Row 1: Beard Vegetation Association 1023 - Medium woodland; York gum, wandoo & salmon gum (Eucalyptus salmonophloia), The proposed clearing is for 0.62 hectares to assist with rehabilitation of an unused gravel pit. The vegetation within the area proposed to be cleared appears to be in a degraded condition (Keighery, 1994) and is subject to edge effects., Degraded: Structure severely disturbed; regeneration to good condition requires intensive management (Keighery 1994), Vegetation condition has been based on aerial photography (Corrigin North 1.4m Orthomosaic - Landgate 2001).

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 area proposed for clearing comprises of 0.62 hectares of vegetation surrounding an unused gravel pit. The vegetation appears to be in degraded condition (Keighery 1994) and is subject to edge effects. The vegetation consists of the beard vegetation association 1023, which consists of a medium woodland including york gum, wandoo & salmon gum (Shepherd 2007). There are no known records of threatened fauna or threatened ecological communities occurrences and there are three known occurrences of priority flora species and three of declared rare flora within a 10km radius of the area proposed. However given the size and condition of the area it is unlikely that the proposed clearing is at variance with this principle.

Methodology: Keighery 1994, Shepherd (2007), GIS database: - SAC Biodatasets - accessed 06 Jan 09, - Declared Rare and Priority Flora List - CALM 13/08/03, - Pre European Vegetation - DA 01/01

(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. There are no known occurrences of threatened or priority fauna within the local area (10km radius). Given the

small size of the area under application and that the clearing is to enable rehabilitation of an unused gravel pit it is not considered to represent a significant habitat for fauna.

Methodology GIS database:
- SAC Biodatasets - accessed 06 Jan 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 three populations of rare flora and three populations of priority flora within the local area (10km radius). The closest being *Calothamnus brevifolius* a priority four species that is known to occur 3.4km west of the application area. The closest DRF is 7.3km south west of the application area.

On 04 September 2008 a search was undertaken of the application area by the Department of Environment and Conservation and flora specimens collected and identified with the assistance of Toolibin Catchment Recovery. No rare or priority flora were identified within or nearby to the application area.

All of the DRF and priority populations occur within the same beard vegetation association (1023) and the same soil type (Va66) and may occur within the application area.

Given the vegetation condition and the small area it is considered unlikely to be a significant habitat for rare flora.

Methodology Keighery (1994)
GIS database:
- SAC Biodatasets - accessed 06 Jan 09
- Declared Rare and Priority Flora List - CALM 13/08/03
- Soils, Statewide DA 11/99
- 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 known records of Threatened Ecological Communities (TEC) within a 10km radius of the proposed clearing. It is unlikely that the proposed clearing will impact on any known TEC's.

Methodology GIS Database:
- SAC Biodatasets - accessed 06 Jan 09

(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 proposed clearing is located in the Shire of Corrigin and within the Avon Wheatbelt Bioregion. The extent remaining within these areas is 4.8% and 15.2% respectively.

The vegetation under application is identified as Beard vegetation association 1023, which is classified as medium woodland; York gum, wandoo and salmon gum, has a representation of 6.4% of the pre-European extent remaining and is considered to be endangered (Department of Natural Resources and Environment 2002; Shepherd et al. 2001)

The conservation status of the proposed clearing, the extent of vegetation remaining in the local and regional areas and the extent of vegetation complex remaining the area under application indicate that the area be considered a significant remnant of native vegetation in an area that has been extensively cleared. Therefore the proposed clearing is at variance to this Principle.

It is noted that the proposed clearing is for a small area of regrowth to reshape a gravel pit to the surrounding contours in the landscape to allow for successful rehabilitation and revegetation of the pit. A condition will be placed on the permit to ensure the area proposed to be cleared and the gravel pit are rehabilitated and revegetated.

Methodology GIS Databases:
- Interim Biogeographic Regionalisation of Australia - EA 18/10/00
- Local Government Authorities - DLI 8/07/04
- Pre European Vegetation - DA 01/01
- SAC Biodatasets - accessed 06 Jan 09

(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 mapped wetlands within a 10km radius of the proposed clearing. However there are numerous unnamed minor non-perennial watercourses within a 10km radius. Of these only three are within a 1km radius, with the closest being 530m to the north west. There are no major watercourses mapped within a 10km radius.

Given the size, and condition of the application area and its location to nearby watercourses it is unlikely that the vegetation consists of riparian vegetation or vegetation growing in associated with a watercourse or wetland.

Methodology GIS Database:
- CALM Managed Lands and Waters - CALM 01/06/05
- Hydrography linear - DOW 13/7/06
- Hydrography linear (hierarchy) - DoW 13/7/06

(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 has a ground water salinity of 14000-35000mg/L. The soil type consists of hard alkaline yellow mottled soils and hard alkaline red soils. The area has a low rainfall of 350mm and a high evaporation rate of 2000mm. Given these conditions and the size of the clearing it is unlikely that soil erosion or salinisation is likely to occur as a result of this clearing proposal.

Given the above and that the clearing is to enable successful rehabilitation of an unused gravel pit the proposed clearing is not likely to be at variance with this principle.

Methodology Northcote et al. (1968)
GIS Database:
- Hydrography, linear - DOW 13/7/06
- Average Annual Rainfall Isohyets - WRC 29/09/98
- Annual Evaporation Contours (Isopleths) - WRC 29/09/98
- Salinity Risk LM 25m - DOLA 00
- Hydrogeology, statewide - DOW 13/07/06
- 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

There are no conservation areas within a 10km radius of the application area.

Given the distance from nearby conservation areas and the small area to be cleared it is unlikely the proposed clearing will impact on nearby conservation areas environmental values.

Methodology GIS Databases:
- CALM Managed Lands and Waters - CALM 01/06/05
- System 1 to 5 and 7 to 12 areas - DEC 11/7/06
- System 6 Conservation Reserves - DEP 06/95
- Register of National Estate - Environment Australia, Australian and world heritage division 12 Mar 02

(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 proposed area is not in any Public Drinking Water Source Area and is in the Swan Avon - Main Avon Catchment area. The area is over 500m from the nearest mapped non perennial watercourse. The area has an evaporation rate of 2000mm combined with a rainfall rate of 350mm. Hydrogeology mapping indicates the area has a low permeability.

Given the size of the area to be cleared, the low rainfall, high evaporation rates and the distance to watercourses the proposed clearing is unlikely to impact on groundwater or surface water quality.

Methodology GIS Database:
- Evapotranspiration Isopleths - WRC 29/09/98
- Hydrographic catchments, catchments - DoW 01/06/07
- Hydrography, linear - DOW 13/7/06

- Mean Annual Rainfall Isohytes (1975 - 2003) - DEC 02/08/05
- Public Drinking Water Source Areas (PDWSAs) - 07/02/06

(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 has rocks with low permeability, a rainfall of 350mm and an evaporation rate of 2000mm.

Given the small size of the area cleared, rainfall and evaporation rates the proposal is considered unlikely to be at variance with this principle

Methodology GIS database:

- Evaporation Isopleths - WRC 29/09/98
- Mean Annual Rainfall Isohytes (1975 - 2003) - DEC 02/08/05
- Hydrogeology, statewide - DOW 13/07/06

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

Comments

No submissions were received. The proposed is not within a RIWI area.

The area under application is vested as a crown reserve 16210. The Department of Environment and Conservation has a licence over crown reserve 16210 for the purpose of rehabilitation. The proposal is to enable re-shaping and ripping of the gravel pit and is considered to be consistent with the vested purpose.

Methodology GIS database

- Native Title Claims - LA 2/5/07
- RIWI Act, Areas - DOW

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 not likely to be at variance to the clearing Principles.

5. References

- 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.

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)