Department of Environment and Conservation

Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 1857/1

Permit type: Area Permit

1.2. Proponent details

Proponent's name: **Julie-Anne Elizabeth Collins**

1.3. Property details

Property: LOT 31 ON DIAGRAM 88386 (MOUNT HILL 6528)

Local Government Area: Shire Of Greenough

Colloquial name:

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
10.26		Mechanical Removal	Grazing & Pasture

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 371: Low forest; Acacia rostellifera. Beard vegetation association 379: Shrublands; scrub-heath on lateritic sandplain in the central Geraldton Sandplain Region. (Hopkins et al. 2001, Shepherd et al. 2001)	The southern half of the block comprises regrowth wattles following the abandoned horticulture with Acacia rostellifera, A. saligna and couch grass in the wetter areas and bulrushes Typha sp. around soaks. The vegetation under application in the southern half appears to be in a 'degraded' condition (Keighery, 1994).	Degraded: Structure severely disturbed; regeneration to good condition requires intensive management (Keighery 1994)	The description and condition of the vegetation were obtained through a site inspection (DEC Site Visit, 2007).
Beard vegetation association 371: Low forest; Acacia rostellifera. Beard vegetation association 379: Shrublands; scrub-heath on lateritic sandplain in the central Geraldton Sandplain Region. (Hopkins et al. 2001, Shepherd et al. 2001)	The northern half of the block has mature Banksia woodland that consists predominantly of Banksia prionotes, B. menziesii, Allocasuarina huegellinana, Grevillea candelabroides, Acacia rostellifera, A. blakelyii, Nuytsia floribunda and Macrozamia riedlei. The vegetation in the north of the property is in excellent condition.	Excellent: Vegetation structure intact; disturbance affecting individual species, weeds non-aggressive (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 at variance to this Principle

The northern half of the block consists of mature Banksia woodland of predominantly of Banksia prionotes, B. menziesii, Allocasuarina huegellinana, Grevillea candelabroides, Acacia rostellifera, A. blakelyii, Nuytsia floribunda and Macrozamia riedlei. The bottom (southern half) of the block comprises regrowth wattles following the abandoned horticulture with Acacia rostellifera, A. saligna and couch grass in the wetter areas and bulrushes Typha sp. around soaks. (DEC Site visit, 2007). The vegetation in the northern half of the property appears to be in an 'excellent' condition while the vegetation under application in the southern half appears to be in a 'degraded' condition (Keighery, 1994).

The local area (10 km radius) is highly cleared and fragmented with approximately 25% of vegetation remaining. This area is consequently part of the EPA Position Statement No.2 which identifies areas that have

been highly cleared, particularly for the purpose of agriculture. The vegetation in the north of the property is in excellent (Keighery 1994) condition and therefore, contains a high level of biodiversity in this highly cleared part of the state.

The vegetation proposed to be cleared is therefore at variance to this Principle.

Methodology DEC Site visit (2007)
EPA (2000)
Keighery (1994)
GIS Databases:
- Dongara 50cm Orthomosaic - Landgate01
- Geraldton 50cm Orthomosaic - DLI01

(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**
There are no known records of any declared threatened or other significant fauna within a radius of 10 km from the area under application.

The northern half of the block has mature Banksia woodland that consists predominantly of Banksia prionotes, B. menziesii, Allocasuarina huegellinana, Grevillea candelabroides, Acacia rostellifera, A. blakelyii, Nuytsia floribunda and Macrozamia riedlei. The southern half of the block comprises regrowth wattles following the abandoned horticulture with Acacia rostellifera, A. saligna and couch grass in the wetter areas and bulrushes Typha sp. around soaks. (DEC Site visit, 2007). The vegetation in the northern half of the property appears to be in an 'excellent' (Keighery 1994) condition while the vegetation under application in the southern half appears to be in a 'degraded' (Keighery, 1994) condition.

The local area (10 km radius) is highly cleared and fragmented with approximately 25% of vegetation remaining. This area is consequently part of the EPA Position Statement No.2 which identifies areas that have been highly cleared, particularly for the purpose of agriculture.

It is possible that the area under application in the north provides habitat for fauna, since it is in excellent condition in a highly cleared and fragmented landscape. This vegetation is part of a linkage that may assist the movement of fauna in this landscape.

Methodology DEC Site visit (2007)
EPA (2000)
Keighery (1994)
GIS Databases:
- Dongara 50cm Orthomosaic - Landgate01
- Geraldton 50cm Orthomosaic - DLI01
- SAC Biodatasets - accessed 12 Dec 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**
There are no known records of any rare or priority flora within 10 km from the area under application.

The area under application is isolated by surrounding agricultural land uses in a predominantly agricultural landscape. It is therefore unlikely that the area under application includes, or is necessary for the continued existence of rare flora.

Methodology DEC Site visit (2007)
GIS Databases:
- Dongara 50cm Orthomosaic - Landgate01
- Geraldton 50cm Orthomosaic - DLI01
- SAC Biodatasets - accessed 12 Dec 07

(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's) occurring within the local area (10km radius).

The proposal is therefore not likely to be at variance with this Principle.

Methodology GIS Databases:
- Threatened Ecological Communities - CALM 12/04/05
- SAC Bio datasets 121207

(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**

	Pre-European Extent	Current Extent	% Remaining
Beard veg type			
371	32,818	3,304	10.1
379	547,767	113,427	20.7
Shire - Greenough	177,404	26,612	16.0
(371) Within Shire	26218	962	3.7
(379) Within Shire	41528	9309	22.4

(Shepherd et al, 2001; Shepherd, 2006)

The vegetation under application consists of Beard Vegetation Association 371 and 379 (Hopkins et al, 2001) of which there is 10.1 % and 20.7 % of pre-European extent remaining, respectively (Shepherd et al, 2001; Shepherd, 2006), while the Shire of Greenough has 16.3 % of pre-European extent remaining, with 3.7% of the Beard vegetation association 371 and 22.4% of Beard vegetation association 379 of pre-European extent remaining.

The area under application falls within EPA Position Statement No. 2 which does not support the clearing of native vegetation for agriculture within the intensive landuse zone other than relatively small areas and where alternative mechanisms for protecting biodiversity are addressed (EPA, 2000). The local area (10 km radius) is highly cleared and fragmented with approximately 25% of vegetation remaining.

The Beard vegetation associations 371 and 379 have less than 30 % of Pre-European vegetation remaining which is the point at which species decline accelerates (Commonwealth of Australia 2001).

Given the condition of the vegetation, the low representation of vegetation associations and extensively cleared landscape the proposed clearing is considered to be at variance to this clearing principle.

Methodology EPA (2000)
Shepherd et al (2001)
Shepherd (2006)
GIS Databases:
- Dongara 50cm Orthomosaic - Landgate01
- Geraldton 50cm Orthomosaic - DLI01
- Interim Biogeographic Regionalisation of Australia - EA 18/10/00
- Pre-European Vegetation - DA 01/01
- Local Government Authorities - DLI 08/07/04
- EPA Position Paper No 2 Agriculture Region - DEP 12/00

(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 at variance to this Principle**
There is a minor non perennial watercourse that runs through the south east corner of the property. This watercourse is associated with a wetland (DEC site visit 2007).

As some of the vegetation proposed to be cleared in the south east of the property is associated with this watercourse and wetland the proposed clearing is at variance to this Principle.

Methodology DEC Site Visit (2007)
GIS Databases:
- Hydrography linear - 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 under application is located within the 500 mm mean annual rainfall region. Chief soils are sandy neutral yellow mottled soils.

The local area (10 km radius) is highly cleared with approximately 25% of vegetation remaining. This area is consequently part of the EPA Position Statement No.2 which identifies areas that have been highly cleared, particularly for the purpose of agriculture. The Greenough River catchment and subcatchment, of which the vegetation proposed to be cleared is within, is highly cleared (~25% of vegetation remaining) indicating that effects of salinity may occur in this catchment as the rainfall in this part of the state is low. The proposed clearing o f 10.26 ha of vegetation will incrementally add to salinity increase in this catchment (DAFWA 2007).

The northern half of the property contains the majority of the remnant vegetation under application which is a sandplain with pale deep sands, while the southern half is waterlogged wet area. The fringes of the waterlogged areas contain a well established groundcover of couch grass (DEC Site Visit, 2007; DAFWA, 2007).

DAFWA (2007) advises that the removal of remnant vegetation would increase the risk of wind erosion on the pale deep sands in the northern half of the block, however, the Banksia woodland buffer strip to be left will assist in reducing this risk.

The proposal is therefore at variance to this Principle.

Methodology

DAFWA (2007)
DAFWA (2008)
DEC Site Visit (2007)
EPA (2000)
Northcote et al. (1968)
GIS Databases:
- Dongara 50cm Orthomosaic - Landgate01
- Geraldton 50cm Orthomosaic - DLI01
- Hydrographic catchments, catchments - DoW 01/06/07
- Hydrographic catchments, subcatchments - DoW 01/06/07
- Rainfall, Mean Annual - BOM 30/09/01
- 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

There are no Nature Reserves, National Parks, Conservation Parks, Proposed National Parks or other DEC managed areas within the local area (10km radius).

Therefore, this proposal is not likely to be at variance with this Principle.

Methodology

GIS Databases:
- CALM Regional Parks - CALM 12/04/02
- CALM Managed Lands & Waters - CALM 01/07/05
- Proposed National Parks FMP-CALM 19/03/03
- Register of National Estate - EA 28/01/03

(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 at variance to this Principle

The local area (10 km radius) is highly cleared with approximately 25% of vegetation remaining. This area is consequently part of the EPA Position Statement No.2 which identifies areas that have been highly cleared, particularly for the purpose of agriculture. The Greenough River catchment and subcatchment, of which the vegetation proposed to be cleared is within, is highly cleared (~25% of vegetation remaining) indicating that effects of salinity may occur in this catchment as the rainfall in this part of the state is low. The proposed clearing o f 10.26 ha of vegetation will incrementally add to salinity increase in this catchment (DAFWA 2007).

There is a minor non perennial watercourse that runs through the south east corner of the property. This watercourse is associated with a wetland (DEC site visit 2007). As the property is low lying and flat, clearing of 10.26 ha is likely to increase recharge and waterlogging. The clearing may temporarily cause turbidity and eutrophication in this nearby watercourse.

The depth to groundwater is between 0-5m and the area under application has been mapped as potential Groundwater Dependant Ecosystem (GDE).

As the proposed clearing will add incrementally to salinity and waterlogging, may affect a potential GDE and may cause short term turbidity in the nearby watercourse, it is at variance to this Principle.

Methodology DEC Site Visit (2007)
DAFWA (2007)
EPA (2000)
GIS Databases:
- Dongara 50cm Orthomosaic - Landgate01
- Geraldton 50cm Orthomosaic - DLI01
- Hydrographic Catchments - Catchments - DOE 23/03/05
- Hydrography, linear - DoE 01/02/04
- Potential Groundwater Dependent Ecosystems - DOE 2004
- Rainfall, Mean Annual - BOM 30/09/01

(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 proposal area is situated within a region that receives an average annual rainfall of 500 mm. There is a minor non perennial watercourse that runs through the south east corner of the property. This watercourse is associated with a wetland (DEC site visit 2007).

Due to the low regional rainfall and scale of clearing the proposed clearing is unlikely to cause or exacerbate the incidence of flooding.

Methodology GIS Databases:
- Rainfall, Mean Annual - BOM 30/09/01

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

Comments

The Shire of Greenough (2007) advised that Council has not received any application for development upon this property. Lot 31 is zoned 'Special Rural' under the Shire of Greenough Town Planning Scheme No. 4 and is required to submit an application for planning consent. The applicant subsequently advised that clearing for building purposes is no longer required, however the same amount of clearing is still required.

There is no further requirement for a RIWI Act Licence, Works Approval or EP Act Licence for the area under application.

There are no Aboriginal Sites of Significance within the area under application.

There are three Native Title claims over the area under application, however, the area under application is freehold land and therefore Native Titles have been extinguished.

Three Environmental Impact Assessment (EIA) have been carried out over the area under application however none are associated with proposed clearing within the area under application.

Methodology Shire of Greenough (2007)
GIS Databases:
- Aboriginal Sites of Significance - DIA 28/02/03
- Environmental Impact Assessments - DOE 24/10/05
- Native Title Claims - DLI 7/11/05

4. Assessor's comments

Comment
Assessable criteria have been addressed and the proposal is at variance to Principles (a), (e), (f) and (i), may be at variance to Principle (b) and is not likely to be at variance to Principles (c), (d), (g), (h) and (j).

5. References

DAFWA (2007) Land degradation assessment report. Office of the Commissioner of Soil and Land Conservation, Department of Agriculture Western Australia. DEC TRIM Ref DOC29701.

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.

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. (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.
Shire of Greenough (2007) Submission. DEC TRIM Ref DOC25496.
Site Visit Report (2007) Department of Environment and Conservation (DEC), Western Australia. DEC TRIM Ref DOC40715.

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)