Department of Environment and Conservation

Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 1832/1

Permit type: Area Permit

1.2. Proponent details

Proponent's name: Andrew Campbell Marsh

1.3. Property details

Property: LOT 2627 ON PLAN 129960 (KULIKUP 6244)
LOT 3599 ON PLAN 131328 (KULIKUP 6244)
LOT 2624 ON PLAN 130956 (KULIKUP 6244)
LOT 3597 ON PLAN 229129 (KULIKUP 6244)
LOT 2623 ON PLAN 129960 (KULIKUP 6244)
LOT 2626 ON PLAN 129960 (KULIKUP 6244)
LOT 2629 ON PLAN 129960 (KULIKUP 6244)

Local Government Area: Shire Of Boyup Brook

Colloquial name:

1.4. Application

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

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 Associations 3 & 4: Medium forest/woodland of jarrah-marri-wandoo (Hopkins et al. 2001; Shepherd et al. 2001).	The proposal involves clearing approximately 138 ha of native vegetation in Degraded to Completely Degraded (Keighery, 1994) condition.	Degraded: Structure severely disturbed; regeneration to good condition requires intensive management (Keighery 1994)	The description of the clearing application area is based on a site visit conducted by DEC officers on 13 June 2007.
Farrar (Fa2): Woodland of Eucalyptus wandoo over Acacia acuminata with some Eucalyptus marginata subsp. marginata and Corymbia calophylla on milder slopes with some Eucalyptus rudis on lower slopes in the arid zone (Mattiske Consulting, 1998).	The vegetation under application comprises mainly jarrah, marri and wandoo, with scattered flooded gum, grass tree and prickly moses. The area under application has been historically ring-barked, poison-grubbed and grazed since 1919; hence there is virtually no understorey. Red Hill nature reserve is located along the northern boundary.		

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

The area proposed for clearing is 138 hectares of remnant vegetation for the purpose of cropping and grazing.

The vegetation under application is located in an area that has been extensively cleared for agriculture (EPA, 2000), and contains a large remnant of the heavily cleared Dalmore 2 complex (Mattiske Consulting, 1998), with 9% pre-1750 extent remaining (Mattiske & Havel, 2002). The area is also recognised by the EPA (2000) as

containing significant biodiversity; where further clearing for agricultural purposes is not supported.

The local area (10km radius) is heavily to very heavily cleared with approximately 15% vegetation remaining; most of which is in private ownership, and the remainder vested in numerous small DEC-managed nature reserves and proposed conservation areas (pastoral leases, due to expire in 2015).

Historical management practices, i.e. heavy ring-barking, poison-grubbing and long grazing regimes, have resulted in limited native understorey and species diversity; however, a majority of the vegetation under application comprises large, mature trees (DEC Site Visit, 2007) that are likely to be utilised by local fauna as habitat value, a food source and as a stepping stone to the adjacent and nearby "A Class" Nature Reserves.

Given the above, the proposal may be at variance to this Principle.

The proponent has made a formal submission stating that the area has been historically ring barked, poison grubbed and grazed, resulting in no understorey, and therefore comprises a low level of biodiversity.

However, the vegetation under application:
- is significant as a remnant within an area that has been extensively cleared;
- contains numerous large trees with potential nesting hollows for avian fauna; and
- provides an important stepping stone to the adjacent and surrounding Nature reserves.

Methodology

DEC Site Visit (2007);
EPA (2000);
Mattiske & Havel (2002);
Mattiske Consulting (1998);
GIS Databases:
- CALM Managed Lands and Waters - CALM 1/06/04;
- Dinninup 50cm ORTHOMOSAIC - DLI04

(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 several records of threatened and priority fauna within a 5 km radius of the proposed clearing (GIS Database).

There is little vegetation linking these recorded occurrences and the area under application; the landscape has been significantly altered by previous land clearing and as a result, the vegetation has become highly fragmented.

In lieu of this, the vegetation under application is considered to provide a stepping stone between areas of remnant vegetation reserved for conservation purposes.

A majority of the vegetation under application contains large trees that possibly contain nesting hollows for avian fauna (DEC Site Visit, 2007). Given the above information, the proposal may be at variance to this Principle.

Methodology

DEC Site Visit (2007);
GIS Databases:
- Threatened Fauna Database - DEC

(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

One population of the aquatic freshwater sedge Eleocharis keigheryi (Declared Rare Flora) has been identified 3.7 km from the proposed clearing (Florabase, 2007). Given the vegetation under application is not associated with aquatic species (mainly jarrah-marri-wandoo on uplands); this species is unlikely to occur within the area under application.

There are no other records of threatened flora within the local area (10 km radius).

Given the history of grazing and the Degraded (Keighery, 1994) condition of the vegetation, it is unlikely threatened flora occur within the area under application.

The proposal is therefore unlikely to be at variance to this Principle.

Methodology

Florabase (2007);
Keighery (1994);

DEC Site Visit (2007);
GIS Databases:
- Threatened Flora Database (DEFL) - DEC 17/04/07;
- Dinninup 50cm ORTHOMOSAIC - DLI04

(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 the local area (10 km radius).

The only TEC that may share similar vegetation and soil characteristics is the Woodlands and shrublands of the alluvial soils of the upper Blackwood River - there are only 3 known occurrences, with the closest approximately 24 km distant (TEC Database, 2007); however the vegetation under application is not likely to be supporting any TEC value, given its Degraded to Completely Degraded condition (Keighery, 1994; DEC Site Visit, 2007).

Methodology

TEC Database (2007);
Mattiske & Havel (2002);
Keighery (1994);
DEC Site Visit (2007);
GIS Databases:
- Threatened Ecological Communities - CALM 12/04/05;
- Threatened Plant Communities - DEP 06/95;
- Environmentally Sensitive Areas - DoE 30/05/05

(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 occurs within the Shire of Boyup Brook, which retains approximately 45% of native vegetation. The local area is also within the Jarrah Forest Bioregion, with 58% pre-1750 extent remaining.

Mattiske et al. (1998) defines the original vegetation as the Dalmore 2 Complex, which is of an Endangered status for biodiversity conservation (Department of Natural Resources and Environment, 2002), with 9% (Havel & Mattiske, 2002) of the pre-1750 extent remaining.

The area under application is within the intensive landuse zone (ILZ), and is therefore subject to the EPA's Position Statement No. 2, Environmental Protection of Native Vegetation in Western Australia. This Position Statement recommends that further clearing within the ILZ for agricultural purposes should not be supported, unless the areas are small and alternative measures to protect biodiversity are put into place.

Due to the large size of the area under application that is considered to represent a significant remnant in an area that has been extensively cleared, the proposal is at variance to this Principle.

Methodology

Mattiske et al. (1998);
Havel & Mattiske (2002);
EPA (2000);
Department of Natural Resources and Environment (2002);
GIS databases:
- Mattiske Vegetation - CALM 24/3/98;
- Pre European Vegetation ý 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 at variance to this Principle

There are no wetlands within a 10km radius; however a minor, non-perennial watercourse intersects the area under application.

The watercourse is open to stock access with minimal protection in the form of vegetated buffers, and hence is severely degraded (DEC Site Visit, 2007).

The proposed clearing does not involve clearing any vegetation associated with the watercourse; therefore the proposal is not at variance to this Principle.

Methodology

DEC Site Visit (2007);
GIS Database:

- 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 at variance to this Principle

DAFWA (2007) advises salinity is occurring on the property to varying degrees along the existing watercourse and appears to be progressing downstream. There is a high salinity risk along the existing watercourse and the property contains a high groundwater salinity (7000 - 14000 mg/L).

Further removal of large blocks of remnant vegetation will most likely increase the level of salinity on the property, and increase off-site risks of waterlogging to other land units. The risk of land degradation is considered to be high; therefore the proposal is at variance to this Principle.

Therefore, the proposal is at variance to this Principle.

The proponent has made a formal submission stating salinity can be kept to a minimum by fencing and revegetating waterways.

DAFWA (2007) advises the property may not be suitable for development as the risk of salinity causing land degradation is high, with significant changes expected if the proposed areas are cleared.

Methodology

DAFWA (2007);
GIS Databases:
- Salinity Risk LM 25m - DOLA 00;
- Groundwater Salinity, Statewide - 22/02/00

(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 may be at variance to this Principle

The local area (10 km radius) is mainly in private ownership and heavily to very heavily cleared (Mattiske & Havel, 2002).

The area under application is providing a stepping stone ecological linkage between two DEC-managed (Class A) nature reserves: Red Hill, which abuts the northern boundary of the area under application, and Kulikup Nature Reserve, 7 km south west. A third, un-named (Class C) nature reserve is located approximately 7 km south of the area under application.

Removal of the native vegetation under application may impact on this ecological linkage and contribute to the imminent isolation of Red Hill Nature Reserve.

Therefore, the proposal may be at variance to this Principle.

Methodology

GIS Databases:
- CALM Managed Lands and Waters - CALM - 01/07/05;
- Cadastre - DLI;
- Dinninup 50cm ORTHOMOSAIC - DLI04

(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

Salinity is occurring in varying degrees, progressing downstream. One particular area along the flats is severely degraded; most likely resulting from the impacts of stock and increasing salinity (DEC Site Visit, 2007).

Three submissions received for this proposal outline the community concerns for the increasing salinity problems being experienced in the local area as a result of past land clearing activities.

The applicant has intentions to fence off the watercourse from stock and re-plant the banks to enhance its' biodiversity; however there is a high likelihood that the removal of large blocks of remnant vegetation on low-lying areas will increase the water table and salinity levels.

Therefore, the proposal is at variance to this Principle.

Methodology

DEC Site Visit (2007);
GIS Databases:
- Rainfall, Mean Annual - BOM 30/09/01;
- Salinity Risk LM 25m - DOLA 00;

- Groundwater Salinity, Statewide - 22/02/00

(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 within an area that has medium relief; experiences low average annual rainfall; and contains soil types that have high infiltration rates.

Given the above information, localised flooding associated with the removal of vegetation as proposed, is unlikely to be at variance to this Principle.

Methodology

GIS Databases:
- Topographic Contours, Statewide - DOLA 12/09/02;
- Rainfall, Mean Annual - BOM 30/09/01;
- Soils, Statewide - DA 11/99

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

Comments

The land is zoned Rural pursuant to the Shire of Boyup Brook TPS.

The Shire (2007) advises it supports the recommendations of the local LCDC. It also mentions the past clearing bans in the shire and the need for a consistent approach.

Three public submissions have been received for this proposal, all focussing on outlining the increasing salinity issues in the local area (addressed in Principle g).

The proponent was given the opportunity to provide additional comment on the outcomes of the assessment report (TRIM Ref. DOC36059), and has provided the following points:
1. The environmental sustainability of the property will be maintained by leaving areas of rock undisturbed; leaving a substantial strip of vegetation near waterways; and leaving shelter belts to protect paddocks.
2. The area comprises a low level of biodiversity, given the lack of understorey and openness, with very few large trees remaining (the trees that remain are starting to die).
3. Salinity and deterioration of underground water can be kept to a minimum with the implication of an environmentally sustainable farm management plan, i.e. fencing waterways, revegetation, drainage program to remove surface water, and a Lucerne planting program on areas prone to waterlogging.
4. The distance between the Kulikup and Red Hill Nature Reserves is 6 km, with open agricultural land in between, which would be providing no linkage at all.

In response, the DEC considers that leaving areas of rock undisturbed, etc. does not address the issue of environmental sustainability.
The remaining points have been addressed within the associated clearing Principles.

Methodology

Submission (2007) (TRIM Ref: DOC36059);
Public Submissions (2007) (TRIM Ref: DOC22964; DOC
Shire of Boyup Brook (2007) (TRIM Ref: DOC27688);
GIS Database:
- Town Planning Scheme Zones - MFP 8/98

4. Assessor's comments

Purpose	Method	Applied area (ha)/ trees	Comment
Cropping	Mechanical Removal	138.4	Assessment of the vegetation under application revealed the proposal: - is at variance to Principles (e), (g), and (l); - may be at variance to Principle (a), (b) and (h); - is not likely to be at variance to Principles (c), (d), (f) and (j).

5. References

AGPS (2001) The national objective and targets for biodiversity conservation 2001-2005. Commonwealth of Australia, Canberra.

DAFWA (2007). Land degradation assessment report. Office of the Commissioner of Soil and Land Conservation, Department of Agriculture and Food Western Australia. TRIM Ref: DOC33380.

DEC Site Visit (2007). Department of Environment and Conservation, Western Australia. TRIM Ref: DOC37167.

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.
Havel, J.J. and Mattiske Consulting Pty Ltd (2002) Review of management options for poorly represented vegetation complexes, Conservation Commission.
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.
Mattiske Consulting (1998) Mapping of vegetation complexes in the South West forest region of Western Australia, CALM.
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 Boyup Brook advice (2007). Advice on clearing application 1832/1 A Marsh. TRIM Ref: DOC27688.
Submission (2007). Clearing Permit 1832/1, Response to 30 day letter. TRIM Ref: DOC36059.

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)