Department of Environment and Conservation

Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 2698/1
Permit type: Area Permit

1.2. Proponent details

Proponent's name: Warragull Pty Ltd

1.3. Property details

Property: LOT 854 ON PLAN 100590 (DARKAN 6392)
LOT 851 ON PLAN 100587 (DARKAN 6392)
LOT 855 ON PLAN 100591 (DARKAN 6392)
Local Government Area: Shire Of West Arthur
Colloquial name:

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
35		Burning	Hazard reduction or fire control

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: 4 - Medium woodland; marri & wandoo	Proposal is to clear Flooded Gum (Eucalyptus rudis) trees from with the applied area for the purpose of hazard reduction and fire control. During a visit site the applicant also identified that the purpose for clearing was for ease of farm management. The Site visit identified the area under application as ranging in condition from completely degraded to degraded (Keighery, 1994).	Completely Degraded: No longer intact; completely/almost completely without native species (Keighery 1994) Degraded: Structure severely disturbed; regeneration to good condition requires intensive management (Keighery 1994)	The vegetation condition was determined through a site inspection of the property (DEC, 2008b).

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 clearing as proposed is for the removal of 35ha of native vegetation within the Shire of West Arthur for the purpose of hazard reduction and fire control. The vegetation under application is in completely degraded to degraded (Keighery, 1994; DEC, 2008b) condition and the local area (10km radius) retains approximately 10% native vegetation.

The applicant advises that clearing within the 35ha area will only involve the removal of dying flooded gum trees (Eucalyptus rudis) and has proposed to undertake some revegetation works within Location 5845, Shire of West Arthur.

The vegetation under application is not considered to have a high level of biological diversity in a statewide context due to the condition of the vegetation under application however as the local area has been extensively cleared any remnant vegetation is significant for maintaining biodiversity.

The area under application is part of a stepping stone linkage in the local area which is significant for fauna movement and for flora cross pollination.

Therefore the clearing as proposed is at variance to this principle as the vegetation under application is likely to contain a high level of biodiversity in a local context.

Methodology References:
DEC (2008b)
Keighery (1994)

GIS Database:
Darkan 50cm Orthomosaic Landgate 05
NLWRA, Current Extent of Native Vegetation 20 Jan 2001
Pre European Vegetation - DA 01/01
SAC Biodatasets - accessed 14 October 08

(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**
The local landscape (10km radius) has been extensively cleared (approximately 10% native vegetation remaining), and the area under application is part of a stepping stone linkage in the local area and may be significant as habitat for native fauna.

The applicant advises that dugites (Pseudonaja affinis) and carpet pythons (Morelia spilota) are known to occur on the area under application and a site inspection identified one dugite in the north west paddock and multiple unidentified birds across the application area (DEC, 2008b).

A site inspection also identified some Flooded Gum (Eucalyptus rudis) trees within the applied area which have hollows and could be potential habitat trees (DEC, 2008b).

Given that the vegetation under application forms part of remnant vegetation linkages in an extensively cleared landscape and hollow bearing trees occur within the applied area, the clearing as proposed may impact on significant fauna habitat within the local area.

Methodology References:
DEC (2008b)

GIS Database:
NLWRA, Current Extent of Native Vegetation 20 Jan 2001
Pre European Vegetation - DA 01/01
SAC Biodatasets - accessed 14 October 08

(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 rare flora within a 10km radius of the applied area.

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

Methodology GIS Database:
SAC Biodatasets - accessed 14 October 08

(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 Threatened Ecological Communities (TECs) recorded within the local area (10km radius).

Therefore the clearing as proposed is not likely to be at variance to this principle as the vegetation under application is not part of a known TEC and is not considered necessary for the maintenance of a known TEC.

Methodology GIS Database:
SAC Biodatasets - accessed 14 October 08

(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	Current area (ha)	Remaining % extent (ha)	% in reserves/DEC-managed land
IBRA Bioregion **				
- Jarrah Forest	4,671,007	2,601,026	55.68	71.15
Shire of West Arthur*	283,204	79,145	27.95	37.25
Beard vegetation associations**				
- 4	1,054,279	254,656	24.15	25.42

* (Shepherd et al., 2001; Hopkins et al., 2001)
** (Shepherd, 2007)

The vegetation within the proposed clearing area has below 30% (Shepherd, 2001) of the vegetation type remaining statewide and is in a completely degraded to degraded (Keighery, 1994) condition (DEC, 2008b).

The area under application falls within the Intensive Land Use Zone identified in the Environmental Protection Authority (EPA) Position Statement No.2 and is for the purpose of fire reduction and agricultural farm management.

The area under application is part of a stepping stone linkage in the local area and is therefore likely to be significant vegetation for fauna and is likely to be necessary for the maintenance of nearby flora gene pools.

Therefore the clearing as proposed is at variance to this principle as the applied area is significant as a remnant of vegetation in an extensively cleared landscape.

The applicant has identified an area within Location 5845, Shire of West Arthur where he anticipates conducting some restoration works.

Methodology

References:
DEC (2008b)
EPA (2000)
Hopkins et al (2001)
Keighery (1994)
Shepherd et al. (2001)
Shepherd (2007)

GIS Database:
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 14 October 08
NLWRA, Current Extent of Native Vegetation 20 Jan 2001

(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

The area under application includes mapped minor perennial watercourses which are tributaries into the Arthur River.

As clearing involves the removal of dying flooded gums growing in association with this watercourse the clearing as proposed is at variance to this principle.

Methodology

GIS Database:
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 at variance to this Principle

The vegetation under application is in a completely degraded to degraded (Keighery, 1994) condition (DEC, 2008b) and is within a mapped high (>35,000mg/L) to medium (14,000 to 35,000 mg/L) groundwater salinity area.

Further removal of deep rooted vegetation (such as Flooded Gum (Eucalyptus rudis) trees) is likely to significantly increase groundwater salinity levels and may increase water table recharge in the local area (DEC, 2008a; DAFWA, 2008).

Clearing of the vegetation in the western areas is likely to have a significant impact on the groundwater levels below the trees and is therefore likely to result in land degradation in the form of salinity.

Therefore the clearing as proposed is at variance to this principle as removal of the vegetation under application will result in an increase in salinity through an increase in groundwater levels.

Methodology

References:
DAFWA (2008)
DEC (2008a)
DEC (2008b)
Keighery (1994)

GIS Database:
Groundwater Salinity Statewide DoW 13/07/06
Hydrography, linear - DOW 13/7/06
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

The closest area of conservation significance is the Arthur River Nature Reserve (gazetted; approximately 1.7km east of applied area).

Given the distance between the applied area and the Arthur River Nature Reserve it is unlikely that the clearing as proposed will impact on the environmental values of nearby conservation areas.

Methodology

GIS Database:
CALM Managed Lands and Waters - CALM 01/06/05

(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 at variance to this Principle

The proposal area includes mapped minor perennial watercourses which are tributaries into the Arthur River. In addition the applied area is mapped as having a moderate to high groundwater salinity area.

As the local area has been extensively cleared (approximately 10% native vegetation remaining in 10km radius) further clearing of deep rooted perennial vegetation such as Flooded Gum (E.ucalyptus rudis) trees is likely to increase water table recharge (DEC, 2008a; DAFWA, 2008) which is likely to lead to an increase in surface and groundwater salinity.

Therefore the clearing as proposed is at variance to this principle as it is likely to cause deterioration in underground water quality.

Methodology

References:
DAFWA (2008)
DEC (2008a)

GIS Database:
Groundwater Salinity Statewide DoW 13/07/06
Hydrography, linear - DOW 13/7/06
NLWRA, Current Extent of Native Vegetation 20 Jan 2001

(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 is to clear Flooded Gum (Eucalyptus rudis) trees from the area under application, therefore some vegetation will remain on the property post clearing.

Given that the area under application will retain some vegetation cover clearing is not likely to cause or exacerbate the incidence or intensity of flooding.

Methodology

GIS Database:
Hydrography, linear - DoW 13/7/06

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

Comments

Flooded Gums (E. rudis) are often affected by insects (leaf miner) which gives the appearance that the tree is dying however trees will often recover. In addition the region also identified that it was not clear how removing dying flooded gums from the proposal area would significantly reduce fire risk at the site (DEC, 2008a).

The area under application falls within the Intensive Land Use Zone identified in the Environmental Protection Authority (EPA) Position Statement No.2. Significant clearing of native vegetation has already occurred on agricultural land, accordingly, from an environmental perspective, any further reduction in native vegetation through clearing for agriculture can not be supported (EPA, 2000 Section 4.1) unless there are exceptional circumstances and alternative mechanisms to address biodiversity values have been applied (EPA, 2000 Section 4.2)

Applicant advised that the predominant reason for clearing the trees was for ease of farm management and reduction of impact to the property from fire (DEC, 2008b)

Methodology

References:
DEC (2008a)
DEC (2008b)

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 with principles (a), (e), (f), (g) and (i), may be at variance with principle (b) and is not likely to be at variance with principles (c), (d), (h) and (j).

5. References

DAFWA (2008) Advice to assessing officer on land degradation issues from Department of Agriculture and Food Western Australia, unpublished document, DOC65905.

DEC (2008a) Wheatbelt region advice to assessing officer, Department of Environment and Conservation, unpublished document, DOC65191.

DEC (2008b) Site Inspection Report for Clearing Permit Application CPS 2698/1, Lot 854 on Plan 100590 and Lot 851 on Plan 100587, Darkan. Site inspection undertaken 26/11/2008. Department of Environment and Conservation, Western Australia (TRIM Ref. DOC69734).

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.

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.

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.

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)