Department of Environment and Conservation

Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 2396/1

Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: MR Rodney John Bamess

1.3. Property details

Property:
LOT 1 ON PLAN 15226 (CHANNYBEARUP 6260)
LOT 1 ON PLAN 15226 (CHANNYBEARUP 6260)
LOT 300 ON PLAN 44382 (CHANNYBEARUP 6260)

Local Government Area: Shire Of Manjimup

Colloquial name:

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
9		Mechanical Removal	Dam 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 Vegegtation Association: 1144 - Tall forest; karri & marri (Corymbia calophylla) Beard Vegegtation Association: 3 - Medium forest; jarrah-marri Beard Vegegtation Association: 1 - Tall forest; karri (Eucalyptus diverscolor) Mattiske Vegegtation Complex: Wheatley (WH1) - Tall open forest of Eucalyptus diversicolor/Corymbia calophylla on slopes and tall open forest of Eucalyptus patens on valley floor in prehumid and humid zones.	The proposal involves the clearing of vegetation, within a watercourse, to construct a dam and the resultant taking of vegetation by flooding, totalling 9ha.	Good: Structure significantly altered by multiple disturbance; retains basic structure/ability to regenerate (Keighery 1994)	Vegetation, based on the orthophoto, appears to be in good condition.

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 under application is a vegetated minor perennial watercourse. The area under application consists of approximately 9ha of linear vegetation (approximately 750m in length and 190m wide, at its widest) which is well represented in the immediate and broader area (between 69.4 - 79.5% Pre-European, medium to tall forest of karri, jarrah and marri) and appears, from the orthophoto, to be in good condition (Keighery 1994). The freehold land immediately adjacent to the north and south of the area under application is mostly cleared, whilst that to the east and west is well vegetated conservation estate.

Two Priority 1, one Priority 3 and one Priority 4 flora species are recorded within a 10km radius of the area under application. The closest, Thomasia brachystachys (P1), occurs 3km to the east of the area under application and shares the same soil (Uc1) and vegetation (WH1) type as the area under application. This species does not grow in such habitat as the area under application presents, i.e. a water course. The remaining flora species share the same soil type only and occur between 1.5 and 9.6km from the area under

application.

The area under application is more likely to be used as a transport corridor or short-term refuse for small mammals or avian fauna.

Being surrounded by relatively uniform and well represented forested land, the loss of this 9ha of vegetation is not likely to have any significant impact on the biodiversity values of the immediate or broader area.

Methodology GIS datasets:
Donnelly 50cm Orthomosaic - DLI04
Manjimup 50cm Orthomosaic - DLI04
Mattiske Vegetation Complex (CALM 23/3/98)
Beard Vegetation Complex Hopkins et al. (2001), Shepherd et al (2001)
CALM Managed Lands and Waters - CALM 01/06/05
Keighery 1994

(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**
Four Threatened (Quokka, Western Ringtail Possum, Red-tailed Black Cocokatoo and the Western Mud Minnow) and five Priority (Western Brush Wallaby, Quenda, Pouched Lamprey, Black-stripe Minnow and Water-rat) listed fauna species are recorded from within a 10km radius of the area under application.

The vegetation complex of the area is described as tall open forest of Eucalyptus diversicolor-Corymbia calophylla on slopes and tall open forest of Eucalyptus patens on valley floor in perhumid and humid zones (Mattiske). (Beard - medium to tall forest: mix of karri, marri and jarrah)

The area under application, being a vegetated watercourse, is more likely to be habitat/short term shelter/transport corridor for avian fauna or small mammals such as the Quokka, Quenda or Western Brush Wallaby.

The nearest location of the Pouched Lamprey is approximately 2km from the area under application (1996); the remainder of the fish species are between 6-10km from the area under application.

The loss of this vegetation (as a fauna corridor/shelter) may be at variance to this principle.

Revegetation conditions will be placed on the permit to establish vegetation around the dam. Weed and dieback conditions will also be placed on the permit to ensure the clearing does not spread weeds and dieback in to nearby remnants and compromise fauna habitat.

Methodology GIS datasets:
Donnelly 50cm Orthomosaic - DLI04
Manjimup 50cm Orthomosaic - DLI04
Mattiske Vegetation Complex (Mattiske Vegetation - CALM 24/03/98)
Beard Vegetation Complex [Shepherd et al (2001), Hopkins et al. (2001)]
SAC Bio dataset - Fauna

(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**
As no rare flora are known from within a 10km radius of the area under application, the proposal to clear is not likely to be at variance to this principle.

Methodology GIS dataset:
Mattiske Vegetation (Mattiske Vegetation - CALM 24/03/98)
Soils, Statewide DA 11/99
SAC Bio dataset - DEC DEFL database March 2008
SAC Bio dataset - WAHERB March 2008

(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**
As no Threatened Ecological Communities are recorded from within a 10km radius of the area under application, the proposal to clear is not likey to be at variance to this principle.

Methodology GIS dataset:

TEC & PEC March 2008; accessed April 2008

(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 not likely to be at variance to this Principle

The percentage of Pre-European vegetation remaining in each of the criteria assessed - Warren IBRA Region, Beard Vegetation Association and Mattiske vegetation Complex - is between 69.4% to 79.5%, well above the minimum retention figure of 30%. The Manjimup Shire, in which the area under application occurs, contains 84.6% of Pre-European vegetation.

Therefore, the loss of this relatively small area of vegetation (9ha) is not likely to be at variance to this principle.

Land	Pre-European (ha)	Current extent (ha)	Remaining (%)	% In reserves DEC Managed
IBRA Bioregions*				
Warren	833,981	663,141	79.5	N/A
Shire*				
Manjimup	696,702	589,728	84.6	N/A
Mattiske Vegetation Complex**				
WH1	183,280	142,945	78.0	N/A
Beard Vegetation Complex***				
1144	160,315	127,463	79.5	N/A
3	2661403	1,846588	69.4	N/A
1	72,409	57,115	78.9	N/A

* Statistics from AGWA 2006 (Shepherd et al.) - within Bioregion
** Mattiske Consulting 1998
*** Beard

Methodology

GIS datasets:
Donnelly 50cm Orthomosaic - DLI04
Manjimup 50cm Orthomosaic - DLI04
Mattiske Vegetation Complex (CALM 23/3/98)
Beard Vegetation Complex Hopkins et al. (2001), Shepherd et al (2001)
Pre European Vegetation - 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 at variance to this Principle

Proposal is to clear vegetation within a watercourse to construct a dam, and hence impact the remaining vegetation as a result of flooding.

The area under application consists of riparian vegetation associated with Five Mile Brook, a minor, perennial watercourse. This brook forms part of the" Donnelly River and tributaries catchment". Five Mile Brook has been previously dammed at approximately 400m and 1km upstream from the area under application. Aerial photography shows vegetation (re-) growing within the watercourse bed.

Three major perennial watercourses, Lefroy Brook, Carey Brook and Donnelly River exist between 4-9kms from the area under application.

The vegetation of the area under application acts as a riparian buffer particularly to the plantation land use on the northern side of Lot 1.

A condition requiring the retention and/or planting of vegetation along the watercourse, and adjacent buffer, will be placed on the permit to mitigate any effects on the watercourse.

The clearing of vegetation within this watercourse is at variance to this principle.

Methodology

GIS datasets:

Hydographic Catchments - (DoW 01/06/07)
Hydrography - Linear (DOW 13/7/06)
RAMSAR, Wetlands (DEC 2003)
ANCA Wetlands (Environment Australia 26/3/99)
EPP Lakes Policy Area - DEP 14/05/97

(g) Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation.

Comments

Proposal may be at variance to this Principle

It is proposed to construct a third dam within 400m of a previously constructed dam; a second dam also exists 1km upstream from the area under application.

Salinity, siltation, soil wind erosion (during periods when the dam is empty) are possible future issues. Future flooding/over flow situations could release accumulated/concentrated impurities down stream from the area under application.

The natural, seasonal flow of this watercourse will be further impeded if this dam is constructed.

Future waterlogging, flooding or an increase in salinity levels of the immediate area of the area under application are potential impacts; revegetation of the area may mitigate these impacts.

Given the above potential impacts, the proposed clearing of vegetation may be at variance to this principle.

Methodology

GIS datasets:

Salinity Risk LM 25m - DOLA 00
Acid Sulfate Soil Risk Map, 07/08/06
Soils, Statewide DA 11/99
Topographic contours statewide - DOLA and ARMY 12/09/02
Annual Evaporation Contours (Isopleths) - WRC 29/09/98
Average Annual Rainfall Isohyets - WRC 29/09/98

(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 area under application is part of a vegetated corridor between the Karri Management Priority Area, Greater Beedelup National Park and State forest within 4km to the west, and Big Brook and Donnelly State Forest immediately to the east.

Some level of connectivity between the conservation estate to the west and State forest to the east will be lost should clearing occur. Land to the north and south of the area under application is freehold with limited remnants and no direct connectivity to the above mentioned conservation estates.

Given that the remaining vegetation complexes in the surrounding area are well represented, the loss of this 9ha is not likely to have any significant impact on the nearby conservation areas.

A revegetation condition for the dam water body, with a surrounding buffer, is recommended to mitigate effects on the loss of this linkage.
Therefore, the proposed clearing is not likely to be at variance to this principle.

Methodology

GIS datasets

CALM Managed Lands and Waters - CALM 01/06/05
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 may be at variance to this Principle

The natural, seasonal flow of Five Mile Brook, a minor, perennial watercourse , is to be further impeded if a dam is constructed; this brook has been previously dammed approximately 400m and 1km up-stream from the area under application.

Increase in salinity and nutrients (leading to eutrophication within the dam) and siltation in-situ may result. Any overflow from the proposed dam may be detrimental to the watercourse downstream.

Revegation of the dam area with a suitable buffer may help to mitigate these impacts.

Therefore, clearing as proposed may be at variance to this principle.

Methodology GIS datasets:

Hydrographic catchments, catchments - DoW 01/06/07
Public Drinking Water Source Areas
Evapouration Isopleths - WRC 29/09/98
Groundwater Salinity Statewide ? DoW 13/07/06
Mean Annual Rainfall Isohytes (1975 - 2003) - DEC 02/08/05
Salinity Risk LM 25m - DOLA 00
Topographic Contours, Statewide - DOLA 12/09/02

(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 subject to rainfall of 1300mm/annum and evaporation of 1200mm/annum.

Given the area under application is a watercourse, that it is proposed to dam the watercourse, some minor, localised flooding could result. The incidence or intensity would be influenced by the capabilities of the watercourses dams at 400m and 1km upstream from the area under application.

However, the proposed clearing is not likely to have a significant impact and so is not likely to be at variance to this principle.

Methodology GIS dataset:

Evapouration Isopleths - WRC 29/09/98
Evapotranspiration Area Actual BOM
Mean Annual Rainfall Isohytes (1975 - 2003) - DEC 02/08/05

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

Comments

A history exists regarding matters relating to a proposed land exchange, suggested by DoE in 2004, to compensate for the loss of ca. 1.7ha of UCL (Lot 300) after damming. Various correspondence has been entered into between DoE/DoW/DEC. To date this issue has not been resolved to the satisfaction of DEC (TRIM DOC DOC55129).

Methodology

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 (f)
- may be at variance to Principles (b), (g) and (i); and
- is not or is not likely to be at variance to the remaining clearing Principles.

5. References

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.

Mattiske, E.M. and Havel, J.J. (1998) Vegetation Complexes of the South-west Forest Region of Western Australia. Maps and report prepared as part of the Regional Forest Agreement, Western Australia for the Department of Conservation and Land Management and Environment Australia.

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.

Western Australian Herbarium (1998). FloraBase - The Western Australian Flora. Department of Environment and Conservation. http://florabase.dec.wa.gov.au/ (Accessed 27/10/2008).