Department of Environment and Conservation

Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 2874/1

Permit type: Area Permit

1.2. Proponent details

Proponent's name: Annabelle Jane & Graeme David Keep

1.3. Property details

Property: LOT 11155 ON PLAN 153290 (CROWEA 6258)
LOT 11155 ON PLAN 153290 (CROWEA 6258)

Local Government Area: Shire Of Manjimup

Colloquial name:

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
1.4		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
Heddle complex CROWEA (CRy): Tall open forest of Corymbia calophylla (Marri) with mixture of Eucalyptus marginata subsp. marginata (Jarrah) and Eucalyptus diversicolor (Karri) on uplands in hyperhumid and perhumid zones. Beard Vegetation Association 1144 - Tall forest; karri & marri (Corymbia calophylla)	The application is to clear 1.4 hectares of vegetation for dam construction. The vegetation under application is comprised of mainly Agonis Flexuosa (Peppermint). The area has been heavily grazed in the past so no understorey species are present. Ground vegetation consists of introduced grasses and weeds such as cape weed and flat weed. The area appears to be in a degraded condition	Degraded: Structure severely disturbed; regeneration to good condition requires intensive management (Keighery 1994)	Vegetation condition based on DEC Site visit 2008 and orthomosaic imagery (Northcliffe 1.4m Orthomosaic - Landgate 2000)

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 proponent proposes to clear 1.4 hectares of vegetation for dam construction. The vegetation under application is mapped as Beard vegetation association 1144 and is comprised of a small area of predominately Peppermint, Karri and Marri trees (Shepherd, 2007). The native vegetation is mainly Agonis Flexuosa. The area has been heavily grazed in the past so no understorey species are present. Ground vegetation consists of introduced grasses and weeds such as cape weed and flat weed. The area appears to be in a degraded condition (DEC site visit 2008, Keighery, 1994).

There is only one priority flora species within a 10km radius and it occurs on a different soil type. There are two threatened and one priority fauna species within a 10km radius but the vegetation within the area under application is not considered to be suitable habitat. Within a 10km radius there vegetation representation is approximately 90%.

Given the size and condition of the area it is unlikely that the proposed clearing has a high level of biological diversity.

Methodology

DEC Site visit 2008
Shepherd (2007)
Keighery (1994)

GIS database:
- Northcliffe 1.4m Orthomosaic - Landgate 2000
- SAC Biodatasets - accessed 07 Jan 09
- Declared Rare and Priority Flora List - CALM 13/08/03
- Soils, Statewide DA 11/99
- 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 two threatened and one priority species with the local area (radius 10km). The nearest threatened species is the Setonix brachyurus (quokka) and it is known from 7 locations within the local area, the closest being 3.5km to the south west. The threatened Galaxiella munda (western mud minnow) is known from 2 locations, the closest being 7.2km to the south west. The priority species is the Hydromys chrysogaster (water rat) which is known from one location 4.5km to the south.

The quokka prefers densely vegetated coastal heaths, swamps and riverine habitats. The western mud minnow typically occurs in shallow pools of streams and peat flats. The water rat occupies habitat in the vicinity of permanent water.

Given the habitat requirements of the above threatened and priority species, the local area being approximately 90% vegetated and the size and degraded condition of the vegetation under application it is not considered to be significant habitat for indigenous fauna.

Methodology

GIS database:
- Northcliffe 1.4m Orthomosaic - Landgate 2000
- SAC Biodatasets - accessed 07 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 is one rare flora within the local area (10km radius) known from three populations. The species is Actinotus Sp. Walpole and the populations all occur within the same Beard vegetation association but on a different soil type. The closest population is 3km south east.

Due to the different soil types, the small area and the condition of the vegetation under application it is considered unlikely to be a significant habitat for rare flora.

Methodology

GIS database:
- Northcliffe 1.4m Orthomosaic - Landgate 2000
- Declared Rare and Priority Flora List - CALM 13/08/03
- Mattiske Vegetation (01/03/1998)
- Heddle Vegetation Complexes - DEP 22/06/95
- Pre European Vegetation - DA 01/01
- SAC Biodatasets - accessed 07 Jan 09
- Soils, Statewide DA 11/99

(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:
- Northcliffe 1.4m Orthomosaic - Landgate 2000
- SAC Biodatasets - accessed 07 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 not likely to be at variance to this Principle

The proposed clearing is located in the Shire of Manjimup and within the Warren Bioregion. The extent remaining within these areas is 89.97% and 80.85% respectively. The vegetation is a component of the Beard Vegetation Association 1144 of which 82.15% of Pre-European vegetation is remaining. In addition it is a component of Mattiske Vegetation Complex CRy of which 70% is remaining.

Within the local area (10km Radius) there is vegetation representation of approximately 90% and on the property with the proposed clearing of approximately 50%.

As none of the vegetations are represented below the target level of 30% as per the National Objectives and Targets for Biodiversity Conservation 2001-2005 (Commonwealth of Australia 2001a) it is unlikely to be considered a significant remnant of vegetation in a highly cleared area.

Methodology

Commonwealth of Australia (2001)
Shepherd (2007)
GIS Databases:
- Northcliffe 1.4m Orthomosaic - Landgate 2000
- Heddle Vegetation Complexes - DEP 22/06/95
- Interim Biogeographic Regionalisation of Australia - EA 18/10/00
- Local Government Authorities - DLI 8/07/04
- Mattiske Vegetation - CALM 1/03/1998
- Pre European Vegetation - DA 01/01
- SAC Biodatasets - accessed 07 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 at variance to this Principle

There are no mapped wetlands within the local area (10km radius). There is an unnamed minor perennial watercourse mapped through the middle of the area under application and this watercourse is a tributary of the Warren River 3.4km to the north west. There are numerous unnamed perennial watercourses within the local area and a major perennial watercourse, Dombakup Brook, is 6.6km south west of the area under application.

Vegetation on waterways filters water from pathogens, turbidity, nutrients and weeds and prevents erosion. It can provide habitat and corridors.

Therefore the vegetation is considered to be growing in a watercourse or in association with a watercourse. A condition requiring the revegetation of native vegetation surrounding the dam could be imposed to mitigate this impact.

Methodology

GIS Databases:
- ANCA wetlands - Environment Australia 26/3/99
- CALM Managed Lands and Waters - CALM 01/06/05
- EPP Lakes Policy Area - DEP 14/05/97
- EPP, Wetlands 2004 (DRAFT) - EPA 21/7/04
- Geomorphic Wetlands (Mgt Categories), Swan Coastal Plain - DEC 11/04/07
- Hydrography linear - DOW 13/7/06
- Hydrography linear (hierarchy) - DoW 13/7/06
- Ramsar wetlands - DEC 03
- South Coast Significant Wetlands - WRC 10/06/2003

(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 no mapped acid sulphate soil risk, a low salinity risk and a ground water salinity of 500-1000mg/L. The soil type consists of granitoid rocks of low permeability and the area under application is part way upslope with a medium relief. The area receives 1050-1100mm rainfall and 1200mm of evaporation.

The proposed clearing area is within the Warren River Water Reserve and this catchment has been subject to Country Areas Water Supply Act (CAWS) controls to prevent salinisation of water resources, administered by the Department of Water (DoW). The proposed clearing area is within zone D, a low salinity risk area in which DoW Policy and Guidelines for the 'Granting of Licences to Clear Indigenous Vegetation' provide for the grant of a licence subject to the retention of native vegetation on at least 10% of the owners holding. Since there will no greater than 10% of native vegetation on the holding, DoW has no objection to the grant of a clearing permit (DoW 2009).

Given the above, the size of the proposed clearing and the hard soil type wind and water erosion are considered to be unlikely. Therefore the proposed clearing is unlikely to be at variance with this principle.

Methodology

DoW (2009)
Northcote et al. (1968)
GIS database:
- Acid Sulfate Soil Risk Map, Swan coastal Plain - DEC 07/08/06

- Average Annual Rainfall Isohyets - WRC 29/09/98
- Annual Evaporation Contours (Isopleths) - WRC 29/09/98
- Hydrogeology, statewide - DOW 13/07/06
- Salinity Risk LM 25m - DOLA 00
- Soils, Statewide DA 11/99
- Topographic contours statewide - DOLA and ARMY 12/09/02
- Hydrogeology, Statewide 05 Feb 2002

(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 is surrounded by the Warren State Forest and there are three National Parks (Greater Hawke, Jane and Greater Dordagup) within a 10km radius of the proposed area. The closest of these being 6km east of the area under application. The vegetation coverage for a 10km radius from the area under application is approximately 90%.

Given the small area to be cleared, the degraded condition of the area and the multitude of vegetation linkage/corridors surrounding the area it is unlikely the proposed clearing will impact on environmental values of nearby conservation areas.

Methodology

GIS database:
- Northcliffe 1.4m Orthomosaic - Landgate 2000
- CALM Managed Lands and Waters - CALM 01/06/05
- Register of National Estate - Environment Australia, Australian and world heritage division 12 Mar 02
- System 1 to 5 and 7 to 12 areas - DEC 11/7/06

(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 area under application is within the non-assessed Warren River Water Reserve Public Drinking Water Source Area and the Warren River Catchment area. The area is in a depression and topography shows the area has medium relief. The area also has low groundwater salinity (500-1000mg/L) and an evaporation rate of 1200mm combined with a rainfall rate of 1050-1100mm. Soil geology mapping shows the area to be granitoid with low permeability.

The proposed clearing area is within the Warren River Water Reserve and this catchment has been subject to Country Areas Water Supply Act (CAWS) controls to prevent salinisation of water resources, administered by the Department of Water (DoW). The proposed clearing area is within zone D, a low salinity risk area in which DoW Policy and Guidelines for the 'Granting of Licences to Clear Indigenous Vegetation' provide for the grant of a licence subject to the retention of native vegetation on at least 10% of the owners holding. Since there will no greater than 10% of native vegetation on the holding, DoW has no objection to the grant of a clearing permit (DoW 2009).

Given the size of the proposed clearing and the soils low permeability it is unlikely to alter groundwater quality. There may be some short term increase in the sedimentation and turbidity down stream as a result of the construction of the dam and long term water quality is likely to be incrementally reduced due to the loss of the filtering function of riparian vegetation.

Methodology

DoW (2009)

GIS database:
- Evapotransporation Isopleths - WRC 29/09/98
- Groundwater Salinity Statewide DoW 13/07/06
- Hydrographic catchments, catchments - DoW 01/06/07
- Hydrography, linear - DOW 13/7/06
- Mean Annual Rainfall Isohytes (1975 - 2003) - DEC 02/08/05
- Salinity Risk LM 25m - DOLA 00
- Topographic Contours, Statewide - DOLA 12/09/02
- Hydrogeology, Statewide 05 Feb 2002

(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 soil in the area under application consists of granitoid rock with low permeability, rainfall of 1050-1100mm and an evaporation rate of 1200mm. The area also has a medium relief.

Given the similar rainfall and evaporation rate and the medium relief the proposed clearing is not likely to be at variance to this principle.

Methodology GIS database:
- Evaporation Isopleths - WRC 29/09/98
- Hydrographic catchments, catchments - DoW 01/06/07
- Mean Annual Rainfall Isohytes (1975 - 2003) - DEC 02/08/05
- Topographic Contours, Statewide - DOLA 12/09/02

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

Comments

Department of Water (DOW) advise that there is no requirement for a permit to interfere with the bend and banks (DOW, 2009). The area under application is within CAWS area (Warren River) which is zoned D. DOW advise that the they have no records of any applications or clearing history for the subject holding and that no compensation has been paid. DOW advise that there will be greater than 10% retention of native vegetation on the proponents holding. As such DOW has no objection to the proposed clearing (DOW, 2009a).

Methodology DOW (2009)
DOW (2009a)
GIS database:
- Public Drinking Water Source Areas (PDWSAs) - 07/02/06
- Country Area Water Supply Act (Part IIA) Clearing Control Catchments 29/06/2006

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 Principle (i) and not likely to be at variance to the remaining clearing Principles.

5. References

Commonwealth of Australia (2001) National Targets and Objectives for Biodiversity Conservation 2001-2005, AGPS, Canberra.

DEC (2007) DEC Fauna Habitat Notes.xls. February 2007. Department of Environment and Conservation, Western Australia.

DEC (2008) Site Inspection Report for Clearing Permit Application CPS 2874/1, Lot 1115 on plan 153290. Site inspection undertaken 19/12/2008.. Department of Environment and Conservation, Western Australia (TRIM Ref. DOC72826).

Department of Water (2009a). Water Quality and Banks Advice. DEC TRIM Ref: DOC74716.

Department of Water (2009b). Country Area Water Supply Advice. DEC TRIM Ref: DOC75288

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)