Department of Environment and Conservation

Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 2303/2
Permit type: Area Permit

1.2. Proponent details

Proponent's name: Mark Shane & Judith May Boardley

1.3. Property details

Property: LOT 12324 ON PLAN 203150 (BOORARA BROOK 6262)
LOT 12324 ON PLAN 203150 (BOORARA BROOK 6262)
Local Government Area: Shire Of Manjimup
Colloquial name:

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
23		Mechanical Removal	Timber Harvesting

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 is 1144; this is made up of tall forests of karri & marri (Eucalyptus diversicolor & Corymbia calophylla).	The proposal is for the selective thinning of 23 hectares of karri forest.	Excellent: Vegetation structure intact; disturbance affecting individual species, weeds non-aggressive (Keighery 1994)	The area under application consists of good quality trees in the 40 to 50m height class, as a result of heavy selective cutting in early 1930's and 40's. There are older Karri trees throughout the sites (DEC Site Visit 2008). The condition of the vegetation was determined through DEC Site Visit, 2008.
Mattiske Vegetation Complex is made up of two vegetation types, Collis and Crowea community. Collis is described as tall open forest of Eucalyptus marginata subsp. marginata-Corymbia calophylla-Banksia grandis on saddles between hills in the perhumid zone (Mattiske Consulting 1998) and Crowea, is described as tall open forest of Corymbia calophylla-Eucalyptus diversicolor on upper slopes with Allocasuarina decussata-Banksia grandis on upper slopes in hyperhumid and perhumid zones (Mattiske Consulting 1998).	The area under applications is Karri, with associated thick understorey. The forest and scrub understorey is synonymous with the surrounding State Forest and does not present any unique features (DEC Site Visit 2008).		

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

It is proposed to selectively thin 23ha of karri forest; the area is described as being in excellent (Keighery 1994) condition, with little to no weed disturbance. The area under application consists of dense under storey with good quality karri between 40 to 50m high.

There is one Priority Ecological Community (PEC) 5.3km south of the area under application (Cryptogams PEC). Is comprised of mosses, liverworts and lichens growing on mature Trymalium floribundum and Chorilaena quercifolia. It is unknown if this PEC occurs within the area under application.

DEC Regional Office advises that the PEC is well represented throughout the karri forest, persisting in areas long unburnt. The Region recommends not clearing in any riparian vegetation and leaving a suitable buffer will be sufficient to protect the community.(TRIM DOC 54735)

The northern boundary of the area under application abuts the Jane National Park; the Shannon State Forest is 1 km south of the site. Both reserves are managed by DEC for conservation purpose. Jane National Forest is a Registered National Estate (Jane Area; covering approximately 5,410 ha). The area is significant for shelter and breeding habitat for native fauna species including the Chocolate Wattled Bat, (Chalinolobus morio), the King River Eptesicus, (Eptesicus regulus), Baudin's Black Cockatoo, (Calyptorhynchus baudinii) and the Quokka, (Setonix brachyurus) (DEWHA, 2008).

There are three records of priority flora species present within a 10km radius of the area under application:

Cyathochaeta stipoides (Priority 3), Gonocarpus simplex (Priority 3) and Actinotus sp. Walpole (Priority 3). These species prefer to grow in seasonal wet flats, swamps and creek banks (Florabase 2008), as the area under application includes two watercourses the area under application contains suitable habitat for the aforementioned priority species.

The soil type is described as - chief soils are hard, and also sandy, neutral, and also acidic, yellow and yellow mottled soils (Northcote et al. 1960-68). The vegetation type can be summarised as tall forests of karri and marri (Eucalyptus diversicolor & Corymbia calophylla) with Banksia grandis on saddles between hills in the perhumid zone, Allocasuarina decussata-Banksia grandis on upper slopes in hyperhumid and perhumid zones (Mattiske Consulting 1998).

The area under application has the same vegetation type and soil type as Jane Area. Both areas are in excellent (Keighery, 1994) condition and it is likely the area under application holds the same significant fauna habitat values as Jane Area. However, given the proposal is to selectively thin 23ha of karri forest, such an activity is unlikely to have any significant impact on the nearby conservation areas

The proposed clearing of the applied area is not likely to be at variance to this Principle as the vegetation is well represented in the local area.

Methodology

DEWHA (2008)
Florabase (2008)
Keighery (1994)
Mattiske Consulting (1998)
Northcote et al. (1960-68)
Shepherd et al. (2001)
GIS Database:
CALM Managed Lands and Waters - CALM 01/06/05
SAC Biodatasets - accessed 22 April 08
Northcliffe 1.4m ORTHOMOSAIC - DLI00

(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 at variance to this Principle

Within 10km radius of the proposed clearing there are two records of threatened fauna: Galaxiella munda (Western Mud Minnow) and Phascogale tapoatafa (Brush-tailed Phascogale).

The Western Mud Minnow was last recorded in 1996, 4km east of the area under application, in a minor perennial water course connected to a minor watercourse within the application area. The Threatened Species Scientific Committee (TSSC) advises that the Western Mud Minnow is generally found in swift flowing streams and occasionally in ponds, roadside drains and swamps therefore the minor watercourse within the area under application may provide habitat for the Western Mud Minnow.

The Brush-tailed Phascogale was last recorded in 1999, 4km east of the area under application in Shannon National Park. The Brush-tailed Phascogale has been observed in dry sclerophyll forests and open woodlands that contain hollow-bearing trees with sparse ground cover(DEC 2008). As the area under application is mapped as tall open forest including Eucalyptus and Corymbia species, by both Shepherd (2006) and Mattiske Consulting (1998), the Brush-tailed Phascogale is likely to occur within the area under application.

Therefore the proposed clearing is at variance with this principle.

To mitigate any potential impacts on the Brush-tailed Phascogale, the retention of habitat trees will be a condition of the permit.

Conditions will be placed on the permit to ensure no clearing occurs within 30m of any watercourse to protect the habitat of the Western Mud Minnow (as the minimum vegetation buffer required to protect this order of water a course is 30m (WRC 1996),(DoE, 2005)).

Methodology

DEC (2008)
DEWHA (2006)
DoE (2005)
WRC (1996)
Native Forest Management Plan (2007)
GIS Database:
CALM Managed Lands and Waters - CALM 01/06/05
Northcliffe 1.4m ORTHOMOSAIC - DLI00
SAC Biodatasets - accessed 09 May 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

Within the local area (10km radius) of the site under application there are two records of rare flora - Kennedia glabrata and Meziella trifida.

The soil type of the area under application is described as: chief soils are hard, and also sandy, neutral, and also acidic, yellow and yellow mottled soils (Northcote et al. 1960-68).

The vegetation type according to the Beard Vegetation Association is described tall forests of karri and marri (Shepherd, 2006). Mattiske Consulting (1998) has mapped the area as vegetation complexes Collis and Crowea; tall open forest of E. marginata subsp marginata, C. calophylla and B. grandis on saddles between hills in the pre-humid zone and tall open forest of C. calophylla, E. diversicolor on upper slopes with A. decussata and B. grandis on upper slopes in the hyperhumid and perhumid zones, respectively.

Kennedia glabrata record is 3.1km east of the area under application and Meziella trifida is 6.5km south. Both species grow in the same soil type and different vegetation typeas the area under application.

It is unlikely that the proposed thinning will be at variance to this principle as the nearby recorded rare flora are not likely to occur within the application area.

Methodology

Mattiske Consulting (1998)
Northcote et al (1960-68)
Shepherd et al (2001)
GIS Database:
SAC Biodatasets - accessed 09 May 08
- Northcliffe 1.4m ORTHOMOSAIC DLI 00

(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 at variance to this Principle

There are no known Threatened Ecological Communities (TEC) within a 10km radius of the proposed clearing site. Therefore is not at variance to this principle.

Methodology

GIS Database
SAC Biodatasets - accessed 18 May 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 not at variance to this Principle

	Pre European	Current Area (ha)	Remaining %
IBRA Bioregion			
Warren	159,668.88	127,227.08	79.7
Shire (LGA)			
Shire of Manjimup	150,785.65	118,498.10	78.6
Beard Vegetation Association			
Beard Unit: 1144	160,315.38	127,463.00	79.5
Mattiske Vegetation			
Collis (Cod)	21,181	15,539	73.4
Crowea (CRb)	527,433	428,454	81.2

The IBRA, shire and vegetation association are well represented and are above the recommended threshold of 30% (EPA, 2000). The local area (10km radius) is approximately 90% vegetated and 90% of the native vegetation is managed by DEC. Due to the amount of surrounding vegetation present, the proposed clearing is not at variance to this principle.

Methodology

Mattiske Consulting (1998)
EPA (2000)
Shepherd et al. (2001)
GIS Database:

Interim Biogeographic Regionalisation of Australia - EA 18/10/00
CALM Managed Lands and Waters - CALM 01/06/05
Northcliffe 1.4m ORTHOMOSAIC - DLI00
Pre European Vegetation - DA 01/01
Mattiske Vegetation 1 May 1998

(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 two perennial water courses (first order streams) within the area under application.

Therefore the clearing as proposed includes native vegetation growing in association with a watercourse and is at variance to this principle.

A 30m buffer (WRC, 1996; DoW, 2005) to the streams is a recommended permit condition to mitigate any impacts on water quality to the steams and any connecting watercourses.

Methodology

WRC (1996)
DoE (2005)

GIS Database:
Hydrography linear - DOW 13/7/06
Hydrography linear (hierarchy) - 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 topography of the site is between 130-150m AHD (Australian Height Datum), with the land sloping east south-east. The soil type of the area under applications is described essentially as hard sandy, mottled soils. (Northcote et al, 2001)

The mean annual rainfall is 1200mm per annum and the evapotranspiration rate is 900mm. Given the the high rainfall and medium relief in topography, water erosion may occur on the site. However, as the proposal is for thinning a proportion of vegetation will remain after clearing making erosion unlikely to occur.

Clearing of riparian vegetation may result in water erosion of the banks of the minor watercourses within the application area which may also lead to deterioration of the water quality through sedimentation.

The groundwater salinity is 500-1000mg/L (low salinity risk). Given the catchment area has not been highly cleared salinity is not considered a risk.

As a portion of ground-cover and understorey will remain on the applied area it is not likely that the clearing as proposed will cause appreciable land degradation in any location other than the watercourse banks.

The proposed clearing may cause appreciable land degradation of watercourse banks and therefore is at variance to this principle.

A 30m vegetated buffer along the water courses will be placed on the permit to mitigate land degradation effects caused by clearing of riparian vegetation.

The proponents Native Forest Management Plan advises a retention rate of 18m2/hectare basal area of trees to be kept. The Plan also details that 2 'Habitat' trees per hectare will be retained, and this will be a condition of the permit.

Methodology

GIS Database:
Evapotransporation Isopleths - WRC 29/09/98
Groundwater Salinity Statewide DoW 13/07/06
Hydrogeology, statewide DOW 13/07/06
Mean Annual Rainfall Isohytes (1975 - 2003) - DEC 02/08/05
Topographic Contours, Statewide - DOLA 12/09/02

(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 northern boundary of the area under application abuts the Jane National Park; the Shannon State Forest is

1 km south of the site. Both reserves are managed by DEC for conservation purpose.

Jane National Forest is a Registered National Estate (Jane Area, covering approximately 5,410 ha). The area is significant for shelter and breeding habitat for native fauna species. These fauna species include the Chocolate Wattled Bat, (Chalinolobus morio), the King River Eptesicus, (Eptesicus regulus), Baudin's Black Cockatoo, (Calyptorhynchus baudinii) and the Quokka, (Setonix brachyurus), (DEWHA, 2008).

The area under application has the same vegetation type and soil type as Jane Area. Both areas are in excellent (Keighery, 1994) condition and it is likely the area under application holds the same significant fauna habitat values as Jane Area.

The proposal is to selectively thin 23ha of karri forest which will result in a proportion of vegetation remaining within the application area. This remaining vegetation will be sufficient to maintain ecological corridors into the nearby conservation areas.

The clearing as proposed may, however, result in the spread of weeds or dieback into the aforementioned conservation areas and therefore may be at variance to this principle. Weed and dieback conditions will therefore be imposed on the permit.

Methodology DEWHA (2008)
GIS Database:
CALM Managed Lands and Waters - CALM 01/06/05
- Clearing Regulations Environmentally Sensitive Areas 30 May 2005

(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

There are two perennial water courses within the proposed clearing site. The two water courses are situated in the south east and north east of the site. The two streams are first order streams which the Department of Water recommends a 30m buffer on each side of the stream be maintained for water quality purposes (WRC 1996; DoW, 2005).

The native vegetation buffers provide environmental benefits to the waterways, as they act as a filter to help protect waters from pathogens, turbidity, nutrient-enriched run-off and spreading of waterborne weed species (DoE, 2005).

The clearing as proposed includes riparian vegetation and erosion of the watercourse banks is likely to cause increased sedimentation of these watercourses.

The proposed clearing lies within the Gardener River Catchment. The salinity levels in this area are listed as being between 500-1000mg/L TDS, with an average annual rainfall of 1200mm and the soils do not have a high salt store. This indicates that salinity in local groundwater areas is not considered to be a high risk.

The clearing as proposed is at variance to this principle as the clearing of riparian vegetation is likely to result in increase sedimentation of water within the minor watercourses in the south east and north east of the site.

A 30m (WRC, 1996; DoW, 2005) buffer condition to the streams is recommended to be placed on the permit, if granted, to mitigate any impacts of clearing of riparian vegetation.

Methodology DoE (2005)
WRC (1996)
GIS Database:
Evapotransporation Isopleths - WRC 29/09/98
Groundwater Salinity Statewide DoW 13/07/06
Mean Annual Rainfall Isohytes (1975 - 2003) - DEC 02/08/05

(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 at variance to this Principle

The proposal is to selectively thin within karri forest, which will result in a proportion of native vegetation remaining within the area under application.

As such, the clearing as proposed will not cause, or exacerbate, the incidence or intensity of flooding and is therefore not at variance ot this principle.

Methodology GIS Database:
Hydrogeology, Statewide 05 Feb 2002

Groundwater Salinity Statewide DoW 13/07/06
Topographic contours statewide - DOLA and ARMY 12/09/02

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

Comments

No submissions were received regarding this application.

Methodology GIS Database:
Aboriginal Sites of Significance 26 April 2007
Native Title Claims - LA 2/5/07

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

5. References

Department of Environment (DoE) (2005), Water Quality Protection Note, Vegetation Buffers to Sensitive Water Resources

Department of Environment and Conservation (DEC) (2008), Threatened Fauna profile, Taxon Summary, Phascogale tapoata, viewed electronically via http://www.environment.gov.au/biodiversity/threatened/publications/action/marsupials/25.html last accessed 26 June 2008

Department of the Environment, Water, Heritage and the Arts (DEWHA) (2006), Galaxiella munda (Western Minnow) Advice to the Minister, unpublished

Department of the Environment, Water, Heritage and the Arts (DEWHA), (2008), Australian Heritage Database

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.

Florabase (1998) Multiple species profiles, Department of Environment and Conservation viewed electronically via http://florabase.dec.wa.gov.au/ last accessed on 5 June 2008

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.

Native Forest Management Plan (2007) Prepared by F. J. Bradshaw, Forest Consultant for M and J Boardley July 2007, Trim Ref DOC45088

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.

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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.

Water and Rivers Commission (1996) Policy and Guidelines: Granting of Licences to Clear Indigenous Vegetation in Catchments Subject to Clearing Control Legislation. Water and Rivers Commission, 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)