GOVERNMENT OF
WESTERN AUSTRALIA

CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

PERMIT DETAILS
Area Permit Number: 5187/1
File Number: 2012/005496-1
Duration of Permit: From 19 October 2012 – 19 October 2018

PERMIT HOLDER
Thomas Apollon Chvojka
Hana Ruzena Chvojka

LAND ON WHICH CLEARING IS TO BE DONE
Lot 8160 on Deposited Plan 201586 (QUINNINUP 6258)

AUTHORISED ACTIVITY
The Permit Holder shall not clear more than 6.6 hectares of native vegetation within the combined areas hatched yellow on attached Plan 5187/1.

CONDITIONS

1. **Period in which clearing is authorised**
   The Permit Holder shall not clear any native vegetation after 19 October 2015.

2. **Application**
   This Permit allows the Permit Holder to authorise persons, including employees, contractors and agents of the Permit Holder, to clear native vegetation for the purposes of this Permit subject to compliance with the conditions of this Permit and approval from the Permit Holder.

3. **Type of clearing authorised**
   To the extent authorised under authorised activity of this Permit, the Permit Holder may undertake the following activities within the area cross-hatched yellow on Plan 5187/1:
   (a) clearing and burning of *understorey*;
   (b) *thinning* of Marri (*Corymbia calophylla*) and Karri (*Eucalyptus diversicolor*); and
   (c) *culling* and burning of unsaleable trees.

4. **Avoid, minimise etc clearing**
   In determining the amount of native vegetation to be cleared authorised under this Permit, the Permit Holder must have regard to the following principles, set out in order of preference:
   (a) avoid the clearing of native vegetation;
   (b) minimise the amount of native vegetation to be cleared; and
   (c) reduce the impact of clearing on any environmental value.

8. Records must be kept

The Permit Holder must maintain the following records for activities done pursuant to this Permit:

(a) In relation to the clearing of native vegetation authorised under this Permit:
   (i) the species composition, structure and density of the cleared area;
   (ii) the location where the clearing occurred, recorded using a Global Positioning System (GPS) unit set to Geocentric Datum Australia 1994 (GDA94), expressing the geographical coordinates in Eastings and Northings;
   (iii) the date that the area was cleared; and
   (iv) the size of the area cleared (in hectares).

(b) In relation to fauna management pursuant to condition 6 of this Permit:
   (i) the location of each habitat tree identified recorded using a Global Positioning System (GPS) unit set to Geocentric Datum Australia 1994 (GDA94), expressing the geographical coordinates in Eastings and Northings or decimal degrees;
   (ii) the species name of fauna reasonably likely to utilise, or that have been observed utilising, the habitat/habitat tree(s);
   (iii) the location and date where relocated fauna was released, recorded using a Global Positioning System (GPS) unit set to Geocentric Datum Australia 1994 (GDA94), expressing the geographical coordinates in Eastings and Northings or decimal degrees; and
   report.

(c) In relation to vegetation management pursuant to condition 7 of this Permit:
   (i) the species and number per hectare of *habitat trees* retained;
   (ii) the location of *habitat trees* retained, recorded using a Global Positioning System (GPS) unit set to Geocentric Datum Australia 1994 (GDA94), expressing the geographical coordinates in Eastings and Northings;
   (iii) monitoring undertaken to ensure that the specified minimum *basal area* is retained;
   (iv) photographs of the *understorey* taken at one year, two years and three years after completing clearing authorised under this Permit;
   (v) a detailed description of the nature and extent of any *remedial actions* undertaken; and

9. Reporting

(a) The Permit Holder must provide to the CEO on or before 30 June of each year, a written report:
   (i) of records required under condition 8 of this Permit; and
   (ii) concerning activities done by the Permit Holder under this Permit between 1 January and 31 December of the preceding year.

(b) Prior to 19 July 2015, the Permit Holder must provide to the CEO a written report of record required under condition 8 of this Permit where these records have not already been provided under condition 9(a) of this Permit.

weed/s means a species listed in Appendix 3 of the "Environmental Weed Strategy" published by the Department of Conservation and Land Management (1999), and plants declared under section 37 of the *Agriculture and Related Resources Protection Act 1976*.

Wildlife Conservation (Specially Protected Fauna) Notice means those fauna taxa gazetted as rare fauna pursuant to section 14(4)(a) of the *Wildlife Conservation Act 1950* (as amended).

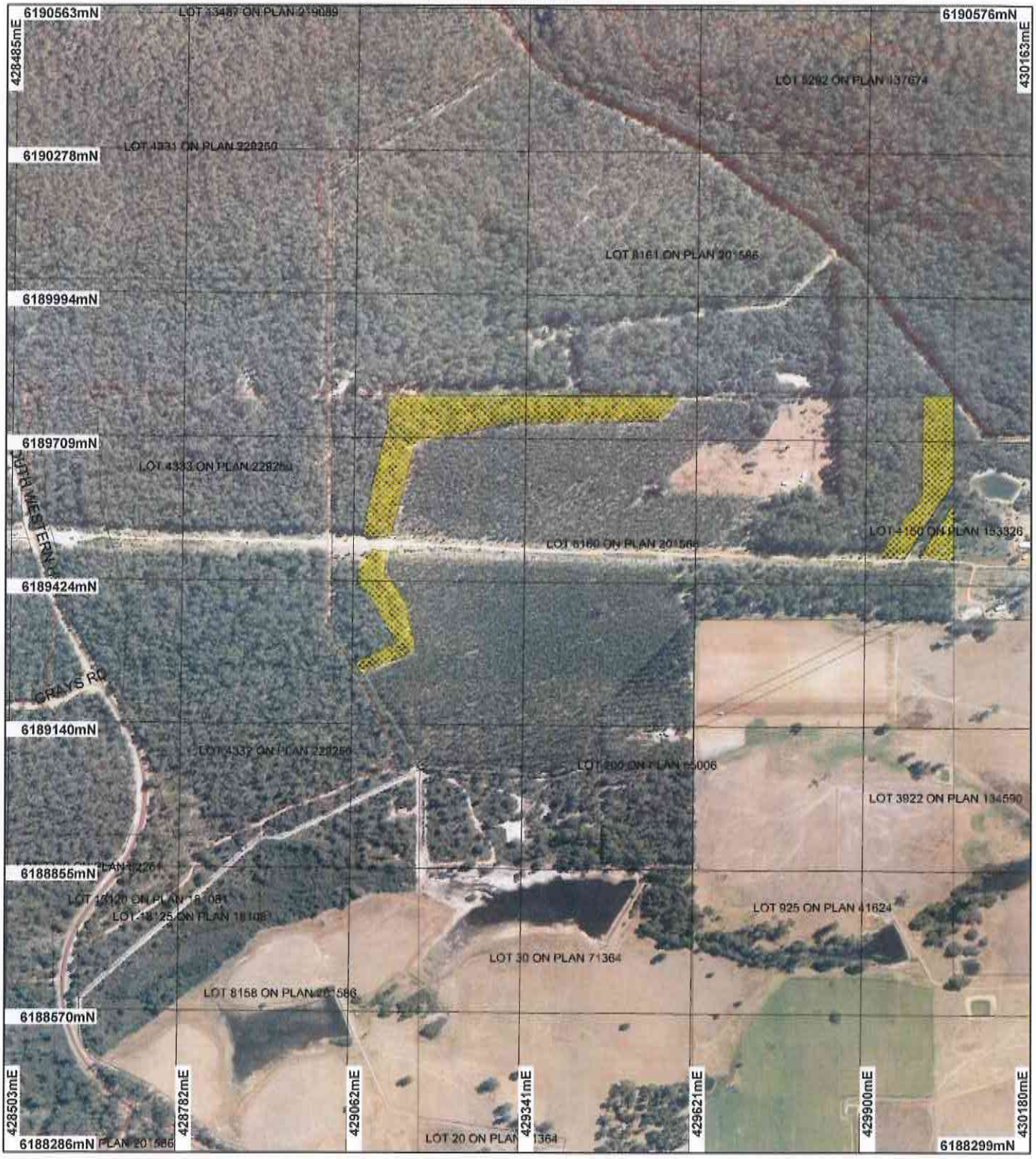
Roxane Shadbolt

Roxane Shadbolt
A/MANAGER
NATIVE VEGETATION CONSERVATION BRANCH

Officer delegated under Section 20
of the Environmental Protection Act 1986

27 September 2012

Plan 5187/1



LEGEND

Clearing Instruments

- Areas Approved to Clear
- Road Centrelines
- Cadastre

Cadastre for labelling

Manjimup 50cm Orthomosaic - Landgate 2007

N

0 ~300 m

Scale 1:10000
(Approximate when reproduced at A4)

Geocentric Datum Australia 1994

Note: the data in this map have not been projected. This may result in geometric distortion or measurement inaccuracies.

R. Shadbolt Date 27/9/12

Roxane Shadbolt

Officer with delegated authority under Section 20 of the Environmental Protection Act 1986

Information derived from this map should be confirmed with the data custodian acknowleged by the agency acronym in the legend.

Department of Environment and Conservation

Our environment, our future

Department of Environment and Conservation

Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 5187/1
Permit type: Area Permit

1.2. Proponent details

Proponent's name: Thomas Apollon and Hana Ruzena Chvojka

1.3. Property details

Property: LOT 8160 ON PLAN 201586 (Lot No. 8160 SOUTH WESTERN QUINNINUP 6258)
Local Government Area: Shire of Manjimup

1.4. Application

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

1.5. Decision on application

Decision on Permit Application: Grant
Decision Date: 27 September 2012

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
The vegetation under application is mapped as: Beard Vegetation Association: 1144: Tall forest; karri and marri; and 3: Medium forest; jarrah marri (Hopkins et al 2001; Shepherd 2009). Mattiske vegetation complex: (Lf): Tall open forest of Corymbia calophylla with mixture of Eucalyptus marginata subsp. Marginata and Eucalyptus diversicolor on uplands in hyperhumid and perhumid zones; and (Cry): Tall open forest of Corymbia calophylla wth mixture of Eucalyptus marginata subsp. marginata and Eucalyptus diversicolor on uplands in hyperhumid and perhumid zones (Mattiske and Havel 1998).	The proposed clearing of 6.6 ha is for the purpose of silvicultural thinning. The vegetation proposed to be cleared consists of Marri / Karri overstorey and a dense understorey with evidence of weed invasion. The vegetation is in very good (Keighery 1994) condition.	Very Good: Vegetation structure altered; obvious signs of disturbance (Keighery 1994)	The condition and the description of the vegetation under application has been determined by aerial imagery (Manjimup 50cm - Orthomosaic Landgate 2007) and supporting information supplied by the applicant (Chvojka 2012).

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 application is to selectively thin within 4 areas totalling 6.6 hectares of native vegetation for the purpose of silvicultural thinning.

The proposed clearing area is predominately Karri (Eucalyptus diversicolor) and Marri (Corymbia calophylla) regrowth forest with overgrown understorey and some weed invasion.

There is one species of priority flora mapped within the local area (10km radius) which is Meeboldina decipiens subsp. depilata (Priority 3), recorded 7.5km south-west of the application area. This species grows in wet areas such as riverbanks and areas prone to flooding (Western Australian Herbarium 1998). A minor watercourse occurs in one of the four areas proposed to be cleared, however the Forest Management Plan states that a buffer of at least 30m to watercourses will be maintained. Therefore, it is not considered likely for the proposed clearing to impact on priority flora habitat.

No priority ecological communities have been mapped within the local area (10km radius).

Several fauna species have been recorded within a 10 km radius. As the proposal is for thinning rather than broad scale clearing, the trees retained after thinning will provide habitat in the future. In addition, The vegetation within the local area surrounding the application is well represented with approximately 70 percent of its pre-

European vegetation remaining. It s considered for the local area to contain similar habitat as the area under application. The applicant has also advised habitat trees will be retained at a rate of two per hectare (Chvojka 2012).

Given that the local area has a high level of vegetation remaining and that the application is for silvicultural thinning as opposed to broad scale clearing, the proposed clearing is not likely to comprise of a high level of biodiversity, nor is it likely to impact upon the biological diversity of the area. Therefore, the application as proposed is not likely to be at variance to this principle.

Methodology

References:
- Chvojka (2012)
- Keighery (1994)
- Western Australian Herbarium (1998)

GIS Database:
- Manjimup 50cm Orthomosaic - Landgate 2007
- SAC Bio Datasets - accessed 20 July 2012

(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

Several fauna species which are rare or likely to become extinct under the Wildlife Conservation Act 1950 have been recorded within the local area (10km radius), including Cacatua pastinator subsp. pastinator (Western Corella), Calyptorhynchus banksii subsp. naso (Forest Red-tailed Black Cockatoo), Dasyurus geoffroii (Chuditch), Galaxiella munda (Western Mud Minnow), Setonix brachyurus (Quokka) and Hydromys chrysogaster (Water-rat).

The area under applciction contains regrowth as it was logged in 1950's to 1960's (Chvojka 2012) . It is considered for the majority of the trees to be immature and are unlikley to contain well developed hollows. The Native Forest Management Plan states that approximately 2 habitat trees per hectare will be retained (Chvojka 2012) if possible.

There is a large amount of native vegetation remaining (approximately 70 per cent) within the local area (10 km radius). Aerial photography indicates that adequate vegetation and associated corridors within the area under application (and adjoining land parcels) will remain post thinning. Therefore, the area under application is not likely to contain significant habitat or be necessary for the maintenance of significant habitat for native fauna.

The proposed clearing is not likely to be at variance to this principle.

Methodology

References:
- Chvojka (2012)
- DEC (2007-)

GIS Databases:
- Manjimup 50cm Orthomosaic - Landgate 2007

(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

Two rare flora species have been mapped within the local area (10km radius). These include Kennedia glabrata and Caladenia winfieldii, located 6km and 8km south of the application area respectively.

Kennedia glabrata grows in small soil pockets associated with granite outcrops and Caladenia winfieldii grows in winter-wet flats and swamps (Western Australia Herbarium 1998-).

The area under application consist of predominately Karri (Eucalyptus diversicolor) and Marri (Corymbia calophylla) regrowth forest on acid yellow mottled soils (Northcote et al 1960-68).

As the application area does not contain granite outcrops or winter wet flats and swamps, it is not considered likely for the proposed clearing to impact on the preferred habitat for these two rare flora species.

Considering the above, the application is not likely to be at variance to this principle.

Methodology

References:
-Chvojka 2012
-DEC (2012)
-Western Australian Herbarium (1998-)
-Northcote et al (1960-68)

GIS Databases:

-SAC Bio Datasets - accessed 06/09/2012
-Soils, statewide

(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

No threatened ecological communities have been mapped within the local area (10km radius).

The closest ecological community mapped is a Priority 3 community located 15km north of the application area and known as Epiphytic Cryptogams of the karri forest. Given the distance to the nearest recording of this community, it is not considered likely for it to occur in the application area.

Given the above, the proposed clearing is not likely to be at variance to this principle.

Methodology

GIS databases:
- SAC Biodatasets (Accessed 06/09/2012)
- Mattiske Vegetation
- Soils, Statewide

(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 area under application is located within the Warren Interim Biogeographic Regionalisation of Australia (IBRA) bioregion. This IBRA bioregion has approximately 80 per cent of its Pre European vegetation extent remaining (Government of Western Australia 2011). The application occurs within the Shire of Manjimup which has approximately 84 per cent of its pre- European vegetation extent remaining (Government of Western Australia 2011).

The vegetation under application is mapped as Beard Vegetation Associations 3 and 1144 both of which have approximately 80 per cent of their Pre European extent remaining in the Warren bioregion (Government of Western Australia 2011). The vegetation under application is also mapped as Mattiske Vegetation Complexes Lf and Cry which have approximately 83 and 74 per cent of their Pre European extent remaining, respectively (Mattiske and Havel 1980).

Digital imagery indicates that the local area (10 km radius) surrounding the area under application retains approximately 70 per cent vegetation cover.

The Beard vegetation association retains more than the threshold level (30%) recommended in the National Objectives Targets for Biodiversity Conservation, below which species loss appears to accelerate exponentially at an ecosystem level (Commonwealth of Australia 2001).

Given the above, the vegetation under application is not regarded as significant as a remnant in an extensively cleared landscape.

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

	Pre-European (ha)	Current Extent (ha)	Remaining (%)	Extent in DEC Managed Lands (%)
IBRA Bioregion*				
Warren Region	833,982	664123	80	83
Shire*				
Shire of Manjimup	287,390	242,922	85	93
Beard Vegetation Association in Bioregion*				
3	250,262	198,873	80	85
1144	159,668	126,978	80	91
Mattiske Vegetation Complex ***				
Cry	33,764	25,111	74	67
LF	20,125	16,811	83	74

*Government of Western Australia (2011)
**Mattiske and Havel (1998)

Methodology

References:

-Government of Western Australia (2011)
-Commonweath of Australia (2001)
- Mattiske and Havel (1998)

GIS Databases:
- IBRA Australia
- Local Government Authority
- Manjimup 50cm Orthomosaic - Landgate 2007
- Pre-European vegetation
- NLWRA, Current Extent of Native Vegetation

(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 may be at variance to this Principle

A minor perennial watercourse runs through the eastern side of one of the application area, which is a tributary of Quinninup Brook. Quinninup Brook is approximately 90m to the east of the proposed clearing areas.

Given this, the application area may contain riparian vegetation growing in association with a watercourse.

The Forest Management Plan (Chvojka 2012) provided by the applicant advises no harvesting of native vegetation will occur within 30 metres of creek lines and swamps.

However, as the application area contains vegetation growing in association with a watercourse, the proposed clearing may be at variance to this principle.

Watercourse management practices will help mitigate the impact on watercourses within the application area.

Methodology

References:
- Chvojka (2012)
GIS Databases:
- Hydrology, linear

(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 under application is mapped as soil type Tc6 and Uc1 . Both of these soil types are described as containing dissected lateritic plateau with acidic yellow mottles soils on hilly relief (Northcote et al 1960-8).

The application is within Zone C of the Warren River Water Reserve area of the Country Areas Water Supply Act 1947. Zone C poses a moderate salinity risk to the catchment.

The application is for silvicultural thinning and the proponent has committed to retaining a minimum basal area of 14 to 16 meters squared per hectare (Chvojka 2012). Given the proposed clearing is for thinning rather than broad scale clearing and a forest management plan will be in place, the proposal is not considered likely to cause appreciable land degradation.

The application is not likely to be at variance to this principle.

Methodology

References:
- Northcote et al (1960-8)
- Chvojka (2012)
GIS Database:
- Soils, statewide

(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 application area is within close proximity to 4 conservation areas, particularly the Warren State Forest which is located on the western property boundary and the Tone State Forest which is located 200m to the north-east. Sir James Mitchell National Park is also located 400m to the west of the application area and Greater Dordagup National Park is 1km to the south-east.

As the clearing proposed is for silvicultural thinning it is unlikely that it will sever any ecological linkages between these conservation areas. The Native Forest Management Plan provided by the applicant (Chvojka 2012) states the intention to maintain wildlife habitat and water quality; and retain a basal area of approximately 14 to 16m2/ha and 2 habitat trees per hectare.

However, given the close proximity of the application area to the conservation areas there is a likelihood of weed and dieback spreading into these areas from the clearing activities. Weed and dieback management practices will help mitigate this risk.

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

Methodology GIS Databases:
-DEC Tenure

(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 not likely to be at variance to this Principle

The clearing under application falls within Warren River and Tributaries Surface Water Area as proclaimed under the Rights in Water and Irrigation Act 1914.

The application area also falls within the Warren River Water Reserve catchment area covered by the Country Areas Water Supply Act, 1947. The proposed clearing is within Zone C of this catchment which is an area of moderate salinity risk. The Department of Water guidelines for clearing within Zone C are as follows; the proponent must:
- adhere to a sustainable Forest Management Plan
- retain a native vegetation basal area of 10m2 uniformly distributed over te forest management area
- exclude riparian areas and associated buffers
- exclude grazing by livestock.

The Native Forest Management Plan (Chvojka 2012) conforms with these guidelines and therefore the Department of Water has advised that adherence to these guidelines will be sufficient to protect water quality (DoW 2012).

A minor perennial watercourse runs through the eastern side of the application area, which is a tributary of Quinninup Brook. The Native Forest Management Plan states that a 30 meter buffer to watercourse will be maintained.

Given the above, the clearing as proposed is not likely to be at variance to this principle.

Methodology References:
Dow (2012)
GIS Databases:
- CAWSA Part IIA Clearing Control Catchments
- Hydrology, linear
- RIWI Act, Areas

(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

Given the application is for silvicultural thinning and a minimum basal area of 14 to 16 meters squared per hectare will be maintained (Chvojka 2012), the proposal is not likely to cause or exacerbate the incidence or intensity of flooding.

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

Methodology Reference:
- Chvojka (2012)

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

Comments

The area under application is zoned as 'general agriculture' under the Town Planning Scheme Zones.

No public submissions have been received.

A Commercial Producer's licence under the Wildlife Conservation Act 1950 from the Department of Environment and Conservation is required for the purpose of selling harvested logs.

Application area falls within the Warren River and Tributaries Surface Water Area under the Rights in Water Irrigation Act 1914.

The proposed clearing site lies within Warren River Water Reserve gazetted under the Country Areas Water

Supply Act 1947 (CAWS Act) (DoW, 2012). The lot is not currently located in a Public Drink Water Source Area hence no priority source protection has been assigned or is proposed. The application area is located in Zone C, a moderate salinity risk part of the catchment. Department of Water Policy and Guidelines for the 'Granting of Licences to Clear Indigenous Vegetation' provide for the grant of a licence for millable timber and silviculture works. The CAWS Act requires the adherence to a sustainable Forest Management Plan; retention of a least a native vegetation basal area of 10m2 uniformly distributed over the forest management area; exclusion of riparian areas and associated buffers and exclusion of grazing by livestock (DoW 2012).

Vegetation management conditions have been added to the permit to restore the understorey disturbed by the silviculture operations, retain mature trees and a set basal area for habitat and exclude stock to ensure the remaining vegetation can continue to function due to the disturbance and will recover in the future. These conditions are consistent with DEC Sustainable Forest Management (DEC, 2005).

Methodology

References:
- DEC (2004)
- DEC (2005)
- DoW (2012)

GIS Databases:
- Town Planning Scheme Zones

4. References

Chvojka (2012) Native Forest Management Plan. TA & HR Chvojka. Manjimup.

DEC (2005) Silvicultural Practice in the Karri Forest. Department of Environment and Conservation. SFM Guideline No.3

DEC (2007 -) NatureMap: Mapping Western Australia's Biodiversity. Department of Environment and Conservation. URL: http://naturemap.dec.wa.gov.au/. Accessed 06/09/2012.

DoW (2012) Advice regarding CPS 5187/1. Department of Water (DEC Ref: A548687).

Government of Western Australia (2011); 2011 Statewide Vegetation Statistics incorporating the CAR Reserve Analysis (Full Report). WA Department of Environment and Conservation, Perth.

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.

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., Beeston, G.R., and Hopkins, A.J.M. (2001), Native Vegetation in Western Australia. Technical Report 249. Department of Agriculture Western Australia, South Perth.

Western Australian Herbarium (1998-) FloraBase - The Western Australian Flora. Department of Environment and Conservation. http://florabase.dec.wa.gov.au/ (Accessed 06/09/2012).

5. 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)