



CLEARING PERMIT
Granted under section 51E of the *Environmental Protection Act 1986*

Purpose Permit number:	CPS 3400/1
Permit Holder:	Jarrah Jacks Development Pty Ltd
Duration of Permit:	11 January 2010 – 11 January 2018

The permit holder is authorised to clear native vegetation subject to the following conditions of this Permit.

PART I – CLEARING AUTHORISED

1. Purpose for which clearing may be done

Clearing for the purpose of silvicultural thinning.

2. Land on which clearing is to be done

Lot 501 on Plan 60842 (Pemberton 6260)

3. Area of clearing

The Permit Holder must not clear more than 6.7 hectares of native vegetation within the areas cross-hatched yellow on attached Plan 3400/1.

4. Application

This Permit allows the Permit Holder to authorise persons, including employees, contractors and agents of the Permit Holder, to clear native vegetation authorised under this Permit subject to compliance with the conditions of this Permit and approval from the Permit Holder.

5. Type of clearing authorised

(a) The Permit Holder may undertake the following activities:

- (i) clearing of *understorey* within the areas cross-hatched yellow on Plan 3400/1;
- (ii) *thinning* of Karri (*Eucalyptus diversicolor*) trees;
- (iii) *culling* of unsaleable trees; and
- (iv) burning of cleared *understorey* and *culled* trees.

(b) Clearing authorised under this Permit must be completed by 11 January 2014, being four years from the date from which this Permit becomes valid.

6. Compliance with Assessment Sequence and Management Procedures

Prior to clearing any native vegetation under conditions 1, 2 and 3 of this Permit, the Permit Holder must comply with the Assessment Sequence and the Management Procedures set out in Part II of this Permit.

PART II – ASSESSMENT SEQUENCE AND MANAGEMENT PROCEDURES

7. 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. Dieback and weed control

(a) When undertaking any clearing or other activity authorised under this Permit, the Permit Holder must take the following steps to minimise the risk of the introduction and spread of *weeds* and *dieback*:

- (i) clean earth-moving machinery of soil and vegetation prior to entering and leaving the area to be cleared;
- (ii) shall not move soils in wet conditions;
- (iii) ensure that no *dieback* or *weed*-affected soil, *mulch*, *fill* or other material is brought into the area to be cleared; and
- (iv) restrict the movement of machines and other vehicles to the limits of the areas to be cleared.

(b) At least once in each 12 month period for the *term* of this Permit, the Permit Holder must remove or kill any *weeds* growing within areas cleared under this Permit.

9. Vegetation management

(a) Prior to undertaking any clearing authorised under this Permit, an *environmental specialist* must determine the species composition, structure and density of the understorey of areas proposed to be *thinned*.

(b) The Permit Holder must retain a minimum of 2 *habitat trees* within the area of clearing authorised under this Permit in each hectare authorised under this Permit.

(c) A minimum retention rate of 20m²/ha *basal area* is required within the area of clearing authorised under this Permit.

(d) Prior to undertaking any clearing authorised under this Permit, the Permit Holder must exclude all *stock* from the areas subject to *thinning* activities.

(e) Within two years of completing clearing of native vegetation authorised under this Permit, the Permit Holder must:

- (i) determine the species composition, structure and density of the *understorey* of areas subject to *thinning*; and
- (ii) where, in the opinion of an *environmental specialist*, there is evidence that *understorey* will not recover and develop towards its pre-clearing composition, structure and density determined under condition 9(e)(i), the Permit Holder must undertake *remedial action* at an *optimal time* within the next 12 months to ensure re-establishment of *understorey* prior to expiry of this Permit.

PART III – RECORD KEEPING AND REPORTING

10. Records to be kept

- (a) In relation to the clearing of native vegetation undertaken pursuant to 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 vegetation management pursuant to condition 9 of this Permit:
 - (i) prior to clearing native vegetation authorised under this Permit, the species composition, structure and density of *understorey*;
 - (ii) the species and number per hectare of *habitat trees* retained;
 - (iii) 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;
 - (iv) monitoring undertaken to ensure that the specified minimum *basal area* is retained;
 - (v) photographs of the *understorey* taken at one year, two years and three years after completing clearing authorised under this Permit; and
 - (vi) a detailed description of the nature and extent of any *remedial actions* undertaken.

11. Reporting

- (a) The Permit Holder must provide to the CEO, on or before 30 June of each year, a written report of records required under condition 10 of this Permit and activities done by the Permit Holder under this Permit between 1 January and 31 December of the preceding year.

- (b) Prior to 11 October 2017, the Permit Holder must provide to the CEO a written report of records required under condition 10 of this Permit where these records have not already been provided under condition 11(a) of this Permit.

Definitions

The following meanings are given to terms used in this Permit:

basal area is the method of expression of tree cover density in an area where the total area of tree trunk, measured at average adult human breast height, is expressed as square metres per hectares of land area;

culled/ing means the selective removal and/or killing of unsaleable trees for *thinning*, using methods including notching, felling or machine pushing;

dieback means the effect of *Phytophthora* species on native vegetation;

direct seeding means a method of re-establishing vegetation through the establishment of a seed bed and the introduction of seeds of the desired plant species;

environmental specialist means a person who is engaged by the Permit Holder for the purpose of providing environmental advice, who holds a tertiary qualification in environmental science or equivalent, and has experience relevant to the type of environmental advice that an environmental specialist is required to provide under this Permit;

fill means material used to increase the ground level, or fill a hollow;

habitat tree(s) means trees that have a diameter, at average adult human chest height, of greater than 70cm, healthy but with dead limbs and broken crowns that are likely to contain hollows and roosts suitable for native fauna, or where these are not present then healthy but with the potential to contain hollows and roosts;

mulch means the use of organic matter, wood chips or rocks to slow the movement of water across the soil surface and to reduce evaporation;

planting means the re-establishment of vegetation by creating favourable soil conditions and planting seedlings of the desired species;

optimal time means the period from April to June for undertaking *direct seeding*, and the period from May to July for undertaking *planting*;

rehabilitate/ed/ion means actively managing an area containing native vegetation in order to improve the ecological function of that area;

remedial action/s means for the purpose of this Permit, any activity that is required to ensure successful re-establishment of *understorey* to its pre-clearing composition, structure and density, and may include a combination of soil treatments and *revegetation*;

revegetate/ed/ion means the re-establishment of a cover of *local provenance* native vegetation in an area using methods such as *regeneration*, *direct seeding* and/or *planting*, so that the species composition, structure and density is similar to pre-clearing vegetation types in that area;

stock means the horses, cattle, sheep, pigs and other non-indigenous grazing animals kept or bred on a property;

term means the duration of this Permit, including as amended or renewed;

thinned/ing describes a silvicultural activity to promote the growth of selected trees by removing competing trees;

understorey means, for the purpose of this Permit, all native vegetation that does not include trees to be *culled* or subject to harvest;

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; and

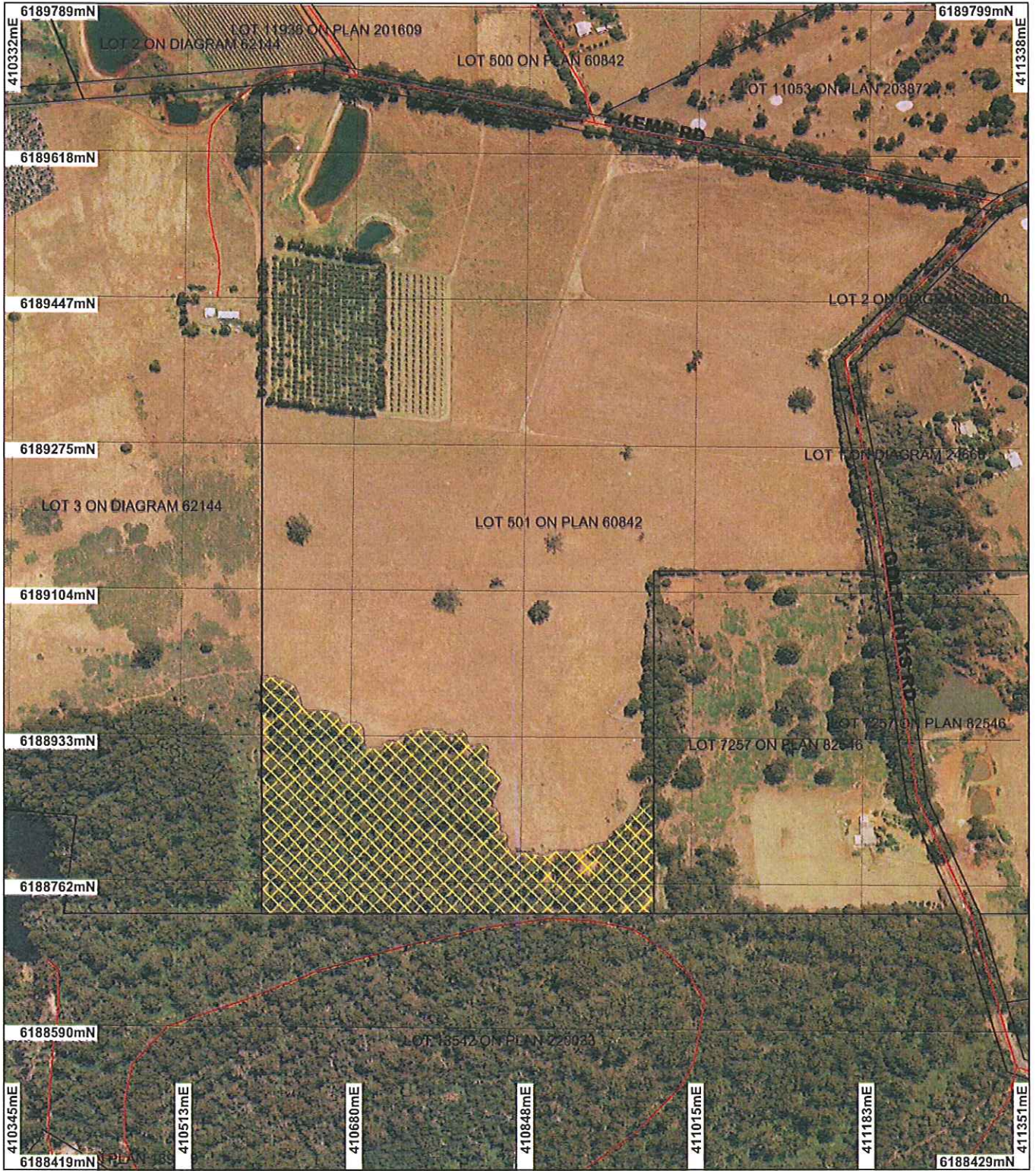


Keith Claymore
A/ ASSISTANT DIRECTOR
NATURE CONSERVATION DIVISION

*Officer delegated under Section 20
of the Environmental Protection Act 1986*

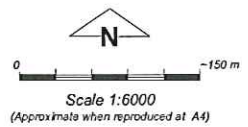
11 December 2009

Plan 3400/1



LEGEND

- Clearing Instruments
- Areas Approved to Clear
- Road Centrelines
- Manj/mup 50cm Orthomosaic - Landgate 2004
- Cadastre for labelling



Geocentric Datum Australia 1994

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

K Claymore Date 11/11/09
K Claymore

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 acknowledged by the agency acronym in the legend.



Department of Environment and Conservation

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1. Application details

1.1. Permit application details

Permit application No.: 3400/1
Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: MR Rod Liebeck Jarrah Jacks Development Pty Ltd

1.3. Property details

Property: LOT 501 ON PLAN 60842 (PEMBERTON 6260)
Local Government Area:
Colloquial name:

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
6.7		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 Type: 1144: Tall forest; karri and marri (SAC Bio Datasets 12/11/2009; Shepherd, 2007)	The application is for the clearing of 6.7 hectares of native vegetation within Lot 501 (a 46.9 ha property) for the purpose of silviculture.	Very Good: Vegetation structure altered; obvious signs of disturbance (Keighery 1994)	The condition of the native vegetation under application was sourced from the site inspection (DEC, 2009).
Mattiske Vegetation Types: Crowea (CRb) - Tall open forest of Corymbia calophylla-Eucalyptus diversicolor on upper slopes with Allocasuarina decussata-Banksia grandis on upper slopes in hyperhumid and perhumid zones.	The area under application can be described as karri closed forest in very good (Keighery, 1994) condition, with a history of grazing (DEC 2009).		
Lefroy (LF) Tall open forest of Eucalyptus diversicolor-Corymbia calophylla on slopes and low woodland of Agonis juniperina-Callistachys lanceolata on lower slopes in hyperhumid and perhumid zones. (Mattiske and Havel, 1998)			

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 clear 6.7 hectares of native vegetation for the purpose of silviculture. The vegetation under application is in very good (Keighery, 1994) condition (DEC, 2009). The area under application contains regenerated Eucalyptus diversicolor (Karri) forest with a sparse understorey and has a history of grazing (Bradshaw, 2009; DEC, 2009), and is considered to have limited habitat value.

Given history of disturbance and limited habitat value, the 6.7 ha of vegetation under application is not

considered to comprise a locally high level of biological diversity. Therefore, the clearing as proposed is considered not likely to be at variance to this Principle.

Methodology References:
- Bradshaw (2009)
- DEC (2009)
- 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 is not likely to be at variance to this Principle**

Two fauna species of conservation significance, Quenda and Brush-tailed Phascogale, have been recorded within the local area (10 km radius). During a site inspection no evidence of these animals or any tree hollows were observed (DEC, 2009). As the vegetation is regrowth and has been subjected to historical disturbances from grazing, the number of mature habitat trees is limited (Bradshaw, 2009).

As the vegetation is regrowth, the trees have limited habitat value and trees retained after thinning would provide opportunity for trees to provide habitat in the future. The local area is well vegetated, with approximately 97% native vegetation remaining including large areas of state forest and national parks. These areas are likely to be providing fauna habitat of greater local significance than the vegetation under application. Therefore, the clearing as proposed is considered not likely to be at variance to this Principle.

Methodology References:
- Bradshaw (2009)
- DEC (2009)
- Keighery (1994)
GIS Database:
- NLWRA, Current Extent of Native Vegetation
- SAC Bio Datasets 12/11/2009

(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 species *Caladenia christineae* recorded within the local area (10 km radius). This species is located 4.8 km east of the area under application.

This annual herb species is known to occur along margins of winter-wet flats, swamps and freshwater lakes (Western Australian Herbarium, 1998-). The area under application does not comprise this habitat; therefore, there is a low likelihood of this species occurring within the area under application. Therefore, it is not considered likely that clearing as proposed is at variance to this Principle.

Methodology Reference:
- Western Australian Herbarium (1998-)
GIS Database:
- SAC Bio Datasets 12/11/2009

(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 known Threatened Ecological Communities (TEC) have been recorded within the local area (10 km radius), the closest record is Scott River Ironstone Association (Endangered) located ~ 52 km west of the area under application.

Given the distance to the TEC it is not considered likely that the vegetation under application comprises or is necessary for the maintenance of a TEC.

Methodology GIS Database:
- SAC Bio Datasets 12/11/2009

(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 vegetation within the area under application is identified as a component of Beard vegetation types 1144, of which there is 82% of Pre-European extent remaining within the Warren Bioregion (Shepherd, 2007); and Mattiske vegetation types Crowea and Lefroy, of which there is 81.2% and 81.9% of Pre-European extent remaining, respectively (Mattiske and Havel, 1998).

The Environmental Protection Authority (EPA) supports a 30% threshold level as recommended in the National Objectives Targets for Biodiversity Conservation; below which species loss appears to accelerate exponentially at an ecosystem level (EPA, 2000). The vegetation associations under application retain more than this 30% threshold level.

Given the current representation levels of the Beard and Matiske vegetation types and the extensive area of remnant vegetation remaining in the local area (97%), it is not considered likely that the vegetation under application is significant as a remnant. Therefore, the clearing proposal is not likely to be at variance to this Principle.

	Pre-European (ha)	Current extent (ha)	Remaining (%)	In secure tenure (%)
IBRA Bioregion*				
Warren (W)^	835,925	675,836	80.8	
Shire of Manjimup*	697,359	595,561	85.4	
Local area (10 km radius)	31,400	~30,500	~97	
Beard vegetation type				
1144 (within W)	159,668	131,169	82.1	91.0
Matiske vegetation types				
Crowea (CRb)	527,433	428,454	81.2	N/A
Lefroy (LF)	201,286	164,947	81.9	N/A

* (Shepherd, 2007)

** (Matiske and Havel, 1998)

^ Area within Intensive Land Use Zone

- Methodology** References:
- EPA (2000)
 - Matiske and Havel (1998)
 - Shepherd (2007)
- GIS Databases:
- Interim Biogeographic Regionalisation of Australia
 - NLWRA, Current Extent of Native Vegetation
 - SAC Bio Datasets 12/11/2009

(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 not likely to be at variance to this Principle**
 There are no watercourses or wetlands located within the area under application. The closest waterbody is Lefroy Brook; a major watercourse located ~290 m south-west of the area under application. A site inspection of the area under application did not observe any riparian vegetation (DEC, 2009). Given the distance to the nearest watercourse, it is not considered likely that clearing as proposed is at variance to this Principle.

- Methodology** Reference:
- DEC (2009)
- GIS Databases:
- Hydrography, linear
 - Rivers

(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 application is for silvicultural thinning and the proponent has committed to retaining a minimum basal area of 20m²/ha (Bradshaw, 2009). Vegetation management conditions will be placed on the permit to minimise land degradation concerns.

Given the proposed clearing is for thinning and not broad scale clearing, the proposal is not considered likely to cause appreciable land degradation.

- Methodology** Reference:
- Bradshaw (2009)

(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 closest DEC managed land is Warren State Forest (State Forest 39), located ~1.2 km east of the area under application. An area (known as Pemberton National Parks) listed on the Register of National Estates is located ~150 m south of the area under application. This area is listed for its natural values and is associated with Crown Reserve 19857, which is vested with the Pemberton Tourist Centre for the purpose of recreation and tourism/historical display.

The proposed clearing may indirectly impact on the environmental values of this area listed on the Register of National Estate through the spread or introduction of weed species or dieback by machinery. The consequences associated with the spread of such exotic species and dieback, include the significant degradation of native vegetation and the potential local extinction of species.

Given the potential indirect impact through the spread of weeds and dieback; it is considered that the clearing as proposed may impact on the environmental values of nearby conservation areas. Therefore, the clearing as proposed may be at variance to this Principle.

To mitigate any impacts from the proposed clearing a weed control and dieback condition will be imposed on this permit.

Methodology GIS databases:
- Cadastre
- DEC Managed Lands and Waters

(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

There are no watercourses or wetlands located within the area under application. The closest waterbody is Lefroy Brook; a major watercourse located ~290 m south-west of the area under application.

The area under application is located in the Public Drinking Water Source Areas of Lefroy Brook Catchment Area and Warren River Catchment (DoW, 2009). The proposed clearing is located within Zone D, a low salinity risk part of the catchment (DoW, 2009).

The application is for silvicultural thinning and the proponent has committed to retaining a minimum basal area of 20m²/ha (Bradshaw, 2009). Therefore, surface and groundwater quality is unlikely to be adversely impacted by the proposed clearing.

Methodology Reference:
- Bradshaw (2009)
- DoW (2009)
GIS Databases:
- Hydrography, linear
- Public Drinking Water Source Areas (PDWSAs)
- Rivers
- Salinity Risk LM 25m - DOLA 00

(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 20m² per hectare will be maintained (Bradshaw, 2009), 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:
- Bradshaw (2009)

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

Comments

Vegetation management conditions have been added to the permit to restore the understorey disturbed by the silviculture operations, to retain mature trees and a set basal area for habitat, and to 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).

There is no RIWI Act Licence, Works Approval or EP Act Licence that affects the area under application.

The Shire of Manjimup (2009) advised that there is no objection to the clearing; the applicant is to confer with the Shire with the need to comply as relevant with all Shire requirements.

A DEC Commercial Producers Licence remains outstanding for this proposal.

Lot 501 is freehold land, zoned rural under the local Town Planning Scheme.

Methodology

References:

- DEC (2005)

GIS databases:

- Cadastre

-Town Planning Scheme Zones

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 may be at variance to Principle (h) and not likely to be at variance to the remaining clearing principles.

5. References

- Bradshaw (2009) Native Forest Management Plan. Trim Ref: DOC104286
- DEC (2009) Site Inspection Report for Clearing Permit Application CPS 3400/1, Lot 501 Kemp Road. Site inspection undertaken 23/11/2009. Department of Environment and Conservation, Western Australia. TRIM Ref. DOC110650
- Department of Environment and Conservation (2005) Silvicultural Practice in the Karri Forest. Department of Conservation and Land Management. SFM Guideline No.3
- Department of Water (DoW) (2009) Direct Interest Submission for CPS 3400/1, Lot 501 Kemp Road. TRIM Ref DOC109890
- 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. (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.
- Western Australian Herbarium (1998-). FloraBase - The Western Australian Flora. Department of Environment and Conservation. <http://florabase.dec.wa.gov.au/> (Accessed 9/12/2009).

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 (now DEC)
DMP	Department of Mines and Petroleum (ex DoIR)
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)

