



CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

Purpose Permit number:	CPS 4753/1
Permit Holder:	Daubney Estate Pty Ltd
Duration of Permit:	20 February 2012 – 20 February 2022

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

Lots 12080 and 12081 on Deposited Plan 163017 (Boorara Brook 6262)

Lot 1 on Diagram 9776 (Boorara Brook 6262)

Lots 10024 and 10025 on Deposited Plan 203144 (Boorara Brook 6262)

Lot 10026 on Deposited Plan 203143 (Boorara Brook 6262)

Lot 12239 on Deposited Plan 163136 (Boorara Brook 6262)

Lots 9998, 10030, 10031, 10035 and 12287 on Plan 203143 (Boorara Brook 6262)

Lots 12321, 12322 and 12323 on Deposited Plan 203139 (Boorara Brook 6262)

3. Area of Clearing

The Permit Holder must not clear more than 240 hectares of native vegetation within the area hatched yellow on attached Plan 4753/1.

4. Application

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

5. Type of clearing authorised

To the extent authorised under condition 3 of this Permit, the Permit Holder may undertake the following activities within the area cross-hatched yellow on Plan 4753/1:

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

- (i) clearing and burning of *understorey*;
- (ii) clearing for the establishment of a *log landing* no larger than 0.3 hectares in size;
- (iii) *thinning* of Jarrah (*Eucalyptus marginata*) and Marri (*Corymbia calophylla*) and Karri (*Eucalyptus diversicolor*) and Blackbutt (*Eucalyptus patens*) trees; and
- (iv) *culling* and burning of unsaleable trees.

(b) The Permit Holder shall not clear any native vegetation after 20 February 2017.

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

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*:

- (a) clean earth-moving machinery of soil and vegetation prior to entering and leaving the area to be cleared;
- (b) shall only move soils in *dry conditions*;
- (c) ensure that no *dieback* or *weed*-affected soil, *mulch*, *fill* or other material is brought into the area to be cleared; and
- (d) restrict the movement of machines and other vehicles to the limits of the areas to be cleared.

9. Watercourse Management

The Permit Holder shall not clear native vegetation within 30 metres of the *riparian vegetation* of any *watercourse*, dam or *wetland* within the area cross-hatched yellow on attached Plan 4753/1.

10. Fauna management

- (a) Prior to undertaking any clearing authorised under this Permit, the areas shall be inspected by a *fauna specialist* who shall identify *habitat tree(s)* suitable to be utilised as habitat by fauna listed in the *Wildlife Conservation (Specially Protected Fauna) Notice*.
- (b) Prior to undertaking any clearing authorised under this Permit, *habitat tree(s)* identified by condition 10(a) shall be inspected by a *fauna specialist* for the presence of fauna listed in the *Wildlife Conservation (Specially Protected Fauna) Notice*.
- (c) Where fauna are identified in relation to conditions 10(b) of this Permit, the Permit Holder shall ensure that no taking of identified fauna occurs unless authorised under Regulation 15 of the *Wildlife Conservation Regulations 1970*.

11. 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 3 *habitat trees* within the area of clearing authorised under this Permit in each hectare authorised under this Permit.
- (c) A minimum retention rate of 15m²/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 one month of 20 February 2017, the Permit Holder must *rehabilitate* any *log landings* established within native vegetation by scarifying the soil surface to reduce compaction and facilitate natural regeneration.
- (f) Within two years of 20 February 2017, 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 11(f)(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

12. 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 vegetation management pursuant to condition 11 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) number of *log landings* established;
 - (vi) the location of *log landings*, recorded using a Global Positioning System (GPS) unit set to Geocentric Datum Australia 1994 (GDA94), expressing the geographical coordinates in Eastings and Northings;
 - (vii) photographs of the *understorey* taken at one year, two years and three years after completing clearing authorised under this Permit; and
 - (viii) a detailed description of the nature and extent of any *remedial actions* undertaken.

13. 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 12 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 20 November 2011, the Permit Holder must provide to the CEO a written report of records required under condition 12 of this Permit where these records have not already been provided under condition 13(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;

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;

dry conditions means when soils (not dust) do not freely adhere to rubber tyres, tracks, vehicle chassis or wheel arches;

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;

fauna specialist means a person with training and specific work experience in fauna identification or faunal assemblage surveys of Western Australian fauna;

habitat tree(s) means trees that have a diameter, measured at 1.5m above the ground, of 50cm or greater, 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;

local provenance means native vegetation seeds and propagating material from natural sources within 50 kilometres of the area cleared.

log landing/s means an area established for the purpose of stockpiling commercially harvested trees, to enable loading for collection;

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

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

regenerate/ed/ion means re-establishment of vegetation from in situ seed banks and propagating material (such as lignotubers, bulbs, rhizomes) contained either within the topsoil or seed-bearing *mulch*;

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 natural *regeneration*, *direct seeding* and/or *planting*, so that the species composition, structure and density is similar to pre-clearing vegetation types in that area.

riparian vegetation has the meaning given to it in Regulation 3 of the Environmental Protection (Clearing of Native Vegetation) Regulations 2004;

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

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.

watercourse has the meaning given to it in section 3 of the *Rights in Water and Irrigation Act 1914*;

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*.

wetland/s means an area of seasonally, intermittently or permanently waterlogged or inundated land, whether natural or otherwise, and includes a lake, swamp, marsh, spring, dampland, tidal flat or estuary.



Kelly Faulkner
MANAGER
NATIVE VEGETATION CONSERVATION BRANCH

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

25 January 2012

CPS 4753/1



LEGEND

-  Road Centrelines
-  Clearing Instruments
-  Areas Approved to Clear
-  Cadastre for labelling
-  Northcliffe 50cm Orthomosaic - Landgate 2007



0 1 km

Scale 1:36310
(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.

 Date 25/1/12
K Faulkner

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.: 4753/1
Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: Daubney Estate Pty Ltd

1.3. Property details

Property:

- LOT 12080 ON PLAN 163017 (BOORARA BROOK 6262)
- LOT 12081 ON PLAN 163017 (House No. 728 MUIRILLUP BOORARA BROOK 6262)
- LOT 1 ON DIAGRAM 9776 (BOORARA BROOK 6262)
- LOT 10024 ON PLAN 203144 (House No. 169 BASHFORD BOORARA BROOK 6262)
- LOT 10025 ON PLAN 203144 (House No. 237 BASHFORD BOORARA BROOK 6262)
- LOT 10026 ON PLAN 203143 (BOORARA BROOK 6262)
- LOT 12239 ON PLAN 163136 BOORARA BROOK 6262)
- LOT 12287 ON PLAN 203143 (BOORARA BROOK 6262)
- LOT 10035 ON PLAN 203143 (BOORARA BROOK 6262)
- LOT 10031 ON PLAN 203143 (BOORARA BROOK 6262)
- LOT 10030 ON PLAN 203143 (House No. 1159 MUIRILLUP BOORARA BROOK 6262)
- LOT 9998 ON PLAN 203143 (BOORARA BROOK 6262)
- LOT 12321 ON PLAN 203139 (BOORARA BROOK 6262)
- LOT 12322 ON PLAN 203139 (House No. 1248 MUIRILLUP BOORARA BROOK 6262)
- LOT 12323 ON PLAN 203139 (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:
240		Mechanical Removal	Timber Harvesting

1.5. Decision on application

Decision on Permit Application: Grant
Decision Date: 25 January 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
Four Beard vegetation types are mapped within the applied area:	The application is to clear within 240 ha of native vegetation for the purpose of silvicultural thinning.	Very Good: Vegetation structure altered; obvious signs of disturbance (Keighery 1994)	The condition and the description of the vegetation under application has been determined through a site visit conducted by Department of Environment and Conservation officers on the 11 December 2011. (DEC 2011)
Mapped Beard vegetation association 3 is described as Medium forest; jarrah-marri (Shepherd 2009)	The vegetation under application comprises of a closed forest of The vegetation under application comprises of a closed forest of Karri - Marri - Jarrah. The Middle story of vegetation comprises of Acacia pentadenia, Trymalium florbundum and Banksia sp. (DEC 2011)		
Mapped Beard vegetation association 23 is described as Low woodland; jarrah-banksia. (Shepherd 2009)			
Mapped Beard vegetation association 1134 is described as Medium woodland; jarrah (south coast) (Shepherd 2009)			
Mapped Beard vegetation association 1144 is described as Tall forest; karri & marri (Corymbia calophylla) (Shepherd 2009)	The vegetation under application is considered to be in a Very Good (Keighery, 1994) condition		

Mattiske Vegetation Complex Quagering (Q) is described as: Mosaic of low open woodland of *Eucalyptus marginata* subsp. *marginata*-*Banksia ilicifolia*-*Nuytsia floribunda* and low open woodland of *Eucalyptus patens*-*Melaleuca preissiana*-*Nuytsia floribunda* on less undulating flats in hyperhumid and perhumid zones (Mattiske and Havel 1998) (DEC 2011).

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 240 ha of native vegetation for the purpose of silvicultural thinning.

The vegetation under application consists of a Karri-Marri-Jarrah closed forest, with a middle storey of *Acacia pentadenia*, *Trymalium floribundum* and *banksia*. (DEC, 2011). There is evidence of past ring barking throughout the application area (DEC, 2011). The vegetation under application is considered to be in a very good (Keighery, 1994) condition (DEC, 2011).

Eleven priority flora species have been recorded within the local area (10 km). The closest known record being *Actinotus* sp. Walpole (P3) recorded approximately 1 km south west of the application. Given the application is for silvicultural thinning a high level of biodiversity will remain.

A site inspection of the area under application observed tree hollows within some large Marri trees (DEC 2011). As the proposal is for thinning rather than broad scale clearing, it is considered that the trees retained after thinning would provide habitat in the future. The applicant has also advised habitat trees will be retained at a rate of three to five per hectare where possible (Daubney, 2011).

The vegetation within the local area (10km) surrounding the application is well represented with approximately 80 percent of its pre-European vegetation remaining.

Given that the local area (10km) has a high level of vegetation remaining and that the application is for silvicultural thinning 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 considered not likely to be at variance to this Principle.

Methodology

References:

- Daubney(2011)
- DEC (2011)
- Keighery (1994)

GIS Database:

- Northcliffe 50cm Orthomosaic - Landgate 2007
- SAC Bio Datasets 12/1/2012

(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**

Numerous fauna species which are rare or likely to become extinct under the Wildlife Conservation Act 1950 including; *Calyptorhynchus baudinii* (Baudin's Cockatoo), *Calyptorhynchus latirostris* (Carnaby's black cockatoo), *Dasyurus geoffroii* (Western Quoll), *Galaxiella munda* (Western Mud Minnow), *Moggridgea tingle* (Tingle Trapdoor Spider), *Nannatherina balstoni* (Balston's Pygmy Perch), *Phascogale tapoatafa* subsp. ssp. (Brush-tailed Phascogale), *Pseudocheirus occidentalis* (Western Ringtail Possum) and *Setonix brachyurus* (Quokka) (DEC 2007-) have been recorded within the local area (10km radius).

A site inspection conducted by DEC (2011) advised there were a number of large habitat trees present that contain hollows. However it is proposed within the Native Forest Silvicultural Thinning Plan that approximately 3 to 5 habitat trees per hectare will be retained where possible (Daubney 2011).

There is a large amount of native vegetation remaining (approximately 80%) within the local area. Aerial photography indicates that adequate vegetation and associated corridors within the area under application (and adjoining land parcels) will remain post thinning. Therefore, the proposed thinning is unlikely to affect fauna habitat within the local area.

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

Methodology References:
- Daubney (2011)
- DEC (2011)
- DEC (2007-)

GIS Database:
- Northcliffe 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**

Six rare flora species have been recorded within the local area (10 km). Numerous records of *Kennedia glabrata*, have been recorded within 2 km of the application area.

Kennedia glabrata consists of a pea flower and is a creeper that has a scarlet standard petal, with a yellow eye and a cerise keel. It inhabits shallow pockets of soil on granite outcrops, in association with mosses and herbs (Brown et al, 1998).

The recorded *Kennedia glabrata* species has been mapped as occurring within the same soil and vegetation type as the application area. However, the soil within the application area comprises of, steep hilly to hilly dissected lateritic plateau with steep valley side slopes: chief soils are hard, and also sandy, neutral, and also acidic, yellow and yellow mottled soils, with conspicuous but relatively smaller areas of red earths (Northcote et al, 1960 - 1968). *Kennedia glabrata* prefer shallow pockets of soil on granite outcrops. A site inspection completed by DEC (2011) confirmed no granite outcrops were observed.

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

Methodology Reference:
- Brown et al (1998-)
- DEC (2011)
- Northcote et al (1960 - 1968)

GIS Database:
- Pre European Vegetation
- SAC Bio Datasets 12/1/2012
- Soils, Statwide

(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 is one Threatened Ecological Community (TEC) located within the local area (10km radius). The Southern granite community (Muirillup Rock) is located approximately 500 m south east of the southern most proposed clearing area. A site inspection completed by DEC (2011) did not identify any granite out crops within the application area.

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

Methodology Reference:
- DEC (2011)

GIS Database:
- SAC Bio Datasets 12/1/2012

(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 (Shepherd, 2009).

The vegetation under application is mapped as Beard Vegetation Associations 3,23,1134 and 1144 all of which have over 70 per cent of their Pre European extent remaining in the Warren bioregion (Shepherd, 2009).

Digital imagery (Northcliffe 50cm Orthomosaic - Landgate 2007) indicates that the local area (10 km radius) surrounding the area under application retains approximately 80 per cent vegetation cover.

Given the vegetation representation within the local area and the type of clearing (thinning) is unlikely that the vegetation under application is 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 Remaining (ha)	Remaining (%)	Extent in DEC Managed Lands (%)
IBRA Bioregion*				
Warren	833,982	667,165	80%	82%
Shire*				
Shire of Manjimup	697,371	589,249	84%	92%
Beard Vegetation Association in Bioregion*				
3	250,263	200,891	80%	85%
23	37,736	27,966	74%	73%
1134	14,409	12,782	89%	87%
1144	159,668	127,144	80%	92%

Methodology References:
Shepherd (2009)

GIS Database:
-IBRA Australia
- Local Government Authority
- Northcliffe 50cm Orthomosaic - Landgate 2007
- Pre-European 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 is at variance to this Principle

Numerous minor watercourses intersect the proposed clearing area. A major watercourse 'Boorara Brook' runs adjacent to the eastern boundary of the proposed clearing.

Given vegetation proposed to clear is growing in association with a number of watercourses, a 30 m buffer will mitigate risks associated with clearing riparian vegetation.

Given the above the clearing as proposed is at variance to this principle.

Methodology 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 is Uc1 and Wd8. Soil type UC1 is described as 'Soils Steep hilly to hilly dissected lateritic plateau with steep valley side slopes: chief soils are hard, and also sandy, neutral, and also acidic, yellow and yellow mottled soils, with conspicuous but relatively smaller areas of red earths.' Soil type Wd8 is described as 'Gently undulating drainage divides developed on quartzite: chief soils are sandy acidic yellow mottled soils and with leached sands often associated with deep deposits of water-worn quartz sand and grit. Sometimes ironstone gravelly and soils are associated.' (Northcote et al, 1960 - 1968).

The application is for silvicultural thinning and the proponent has committed to retaining a minimum basal area of 15 to 18 m²/ha (Daubney 2011). Given the proposed clearing is for thinning and not broad scale clearing, 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:
- Daubney (2011)
- Northcote et al (1960-8)

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 is adjacent to various nature reserves including Gardner State Forest, Jane National Park and Shannon State Forrest.

As the clearing proposed is for silvicultural thinning it is unlikely that it will sever any ecological linkages. 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 may be at variance to this Principle

Numerous minor watercourses intersect the proposed clearing area. However, a recent site inspection undertaken by DEC (2011) did not observe any evidence of surface water runoff onto adjacent properties.

There is potential for deterioration in surface water quality given the proximity of numerous minor watercourses recorded within the application area. However, as the clearing is for silvicultural thinning it is unlikely that erosion will increase as the vegetation is proposed to be selectively cleared.

Given the above, the clearing as proposed may be at variance to this principle.

Methodology Reference:
DEC (2011)

GIS Databases:
- Hydrology, linear

(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 15 to 18 meters squared per hectare will be maintained (Daubney, 2011), 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:
- Daubney (2011)

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

Comments

The Shire of Manjimup has advised that there is no planning or other matters which would affect the proposal (Shire of Manjimup, 2012)

A Commercial Producer's licence under the Wildlife Conservation Act 1950 from DEC is required for the purpose of selling harvested logs. DEC has confirmed no licence has been applied for.

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, 2004; DEC, 2005).

Methodology Reference:
DEC (2004)
DEC (2005)
Shire of Manjimup (2012)

4. References

- Brown A., Thomson-Dans C. and Marchant N. (1998). Western Australia's Threatened Flora, Department of Conservation and Land Management, Western Australia.
- Daubney, Mathew (2011) Bannister Downs - Native Forest Silviculture Thinning Plan. Western Australia. DEC Ref: DEC (2007 -) NatureMap: Mapping Western Australia's Biodiversity. Department of Environment and Conservation. URL: <http://naturemap.dec.wa.gov.au/>. Accessed 12/1/2012
- DEC (2011) Site Inspection Report for Clearing Permit Application CPS 4753/1. Site inspection undertaken 11/12/2011. Department of Environment and Conservation, Western Australia. DEC Ref A46682
- Department of Environment and Conservation (2004) Silvicultural Practice in the Jarrah Forest, Department of Conservation and Land Management. SFM Guideline No.1
- Department of Environment and Conservation (2005) Silvicultural Practice in the Karri Forest. Department of Conservation and Land Management. SFM Guideline No.3
- 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. (2009) 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.
- Shire of Manjimup (2012) Direct Interest Submission for Clearing Permit Application CPS 4753/1. DEC Ref A464682

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)