



GOVERNMENT OF
WESTERN AUSTRALIA

CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

Purpose Permit number:	CPS 4153/1
Permit Holder:	Jack O'Donnell
Duration of Permit:	21 March 2011 – 21 March 2019

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 sustainable forest management.

2. Land on which clearing is to be done

Lot 5 on Diagram 91511
Lot 6 on Diagram 91511
Lot 8325 on Plan 201624
Lot 8326 on Plan 201624

3. Area of Clearing

The Permit Holder must not clear more than 33.16 hectares of native vegetation within the area hatched yellow on attached Plan 4153/1.

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 4153/1:

(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 0.1 hectares in size;
- (iii) *thinning* of Karri (*Eucalyptus diversicolor*) trees; and
- (iv) *culling* and burning of unsaleable trees.

(b) The Permit Holder shall not clear any native vegetation after 21 March 2015.

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 only move soils in *dry 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

The Permit Holder shall not clear native vegetation within 30 metres of the *riparian vegetation* of any *watercourse* or *wetland* within and/or adjacent to the area cross-hatched yellow on Plan 4153/1.

10. 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 18m²/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 completing clearing, 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 21 March 2015, 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 10(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

11. 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 10 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.

12. 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 11 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 21 January 2018, 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 12(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;

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;

local provenance means native vegetation seeds and propagating material from natural sources within 20 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;

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;

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

24 February 2011

Plan 4153/1



- Cadastral
- Clearing Instruments
- Areas Approved to Clear
- Local Government Authorities
- Road Centrelines
- Northcliffe 50cm Orthomosaic - Landgate 2007



0 250 m

Scale 1:9231

(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.

[Signature] Date 24/9/11

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.: 4153/1
Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: Jack O'Donnell

1.3. Property details

Property: LOT 5 ON DIAGRAM 91511 (MEERUP 6262)
LOT 6 ON DIAGRAM 91511 (MEERUP 6262)
LOT 8325 ON PLAN 201624 (MEERUP 6262)
LOT 8326 ON PLAN 201624 (MEERUP 6262)

Local Government Area: Shire of Manjimup
Colloquial name:

1.4. Application

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

1.5. Decision on application

Decision on Permit Application: Grant
Decision Date: 24 February 2011

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 Associations: 23 - Low woodland; jarrah-Banksia	The vegetation under application is described as karri regrowth. Some of the older trees are reported to originate from wildfire, while much of the younger regrowth originates from earlier clearing and ringbarking which was allowed to regenerate from the 1950s and 1960s. Selective cutting for transmission poles was undertaken in the 1980s (Bradshaw, 2010).	Excellent: Vegetation structure intact; disturbance affecting individual species, weeds non-aggressive (Keighery, 1994)	The vegetation condition was determined from orthomosaic imagery, report from a site visit conducted in February 2011 (DEC, 2011) and information provided in the Native Forest Management Plan (Bradshaw, 2010).
1144 - Tall forest; karri & marri (Corymbia calophylla) (shepherd, 2007)	Stand density is variable with basal area varying from 14 to 45 square meters per hectare. Stand top height varies from 35 to 45 meter with tree diameter generally in the range of 30 to 90 cm. The stocking of potential habitat trees is variable (Bradshaw, 2010).	To	
Mattiske Vegetation Complex: Collis (Cob) - Tall open forest of Eucalyptus diversicolor-Corymbia calophylla on crests of hills arising above the southern coastal plain in the hyperhumid zone. (Mattiske, 1998)	Three small areas in locations 8325 and 8326 (3ha) have been open to grazing and the understorey is low and open (Bradshaw, 2010). Vegetation in these areas is in good (Keighery, 1944) condition (DEC, 2011). The remainder of the area has a dense under storey to 3m in height in good condition with no obvious weed invasion. The understorey has not been burnt for many years (Bradshaw, 2010). Vegetation in these areas is in excellent (Keighery, 1994) condition (DEC, 2011).	Good: Structure significantly altered by multiple disturbance; retains basic structure/ability to regenerate (Keighery, 1994)	
	The Native Forest Management Plan (Bradshaw, 2010) for this proposal includes the following commitments: - 18 to 20 square meters per hectare of basal area will be retained, with all trees retained where basal area is equal or less than this density. - Where habitat trees exist, they will be retained at a rate of 2 per hectare. - A 30m buffer to all streams will be demarcated and retained. - Stock will be excluded and exotic weeds will be controlled if observed.		

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 proposal is to selectively thin 33.16 hectares (in 9 separate areas) of karri regrowth forest for silviculture within Lots 5 and 6 on Diagram 91511 and Lots 8325 and 8326 on Plan 201624, Meerup.

The applicant's objectives are to produce a periodic yield of wood products while maintaining wildlife habitat and water quality and forest areas in healthy and aesthetically attractive condition (Bradshaw, 2010).

The 9 application areas range from 0.4 to 8.1 hectares in size.

The Native Forest Management Plan (Bradshaw, 2010) for this proposal includes the following commitments:

- 18 to 20 square meters per hectare of basal area will be retained, with all trees retained where basal area is equal or less than this density.
- Where habitat trees exist, they will be retained at a rate of 2 per hectare.
- A 30m buffer to all streams will be demarcated and retained.
- Stock will be excluded and exotic weeds will be controlled if observed.

The majority of the vegetation is in excellent (Keighery, 1994) condition, with only areas where grazing has occurred (approximately 3 hectares) in good (Keighery, 1994) condition (DEC, 2011).

Two of the application areas adjoin Boorara-Gardner National Park, while the rest are islands of remnant vegetation surrounded by agricultural land uses (open farmland, planted areas).

The vegetation consists of *Eucalyptus diversicolor* (Karri) forest, regenerated after clearing in the 1950s and 1960s (Bradshaw, 2010). Stand density is variable with basal area varying from 14 to 45 square meters per hectare and the proposal is to thin to a basal area of approximately 18 to 20 square meters per hectare.

The local area (10km radius) has approximately 80% remaining native vegetation, and contains several state and national reserves likely to be in the same or better condition than the application area. The 33.16 hectares of regrowth vegetation under application is therefore not considered to comprise a locally high level of biological diversity.

There are numerous records of rare and priority flora in the local area (10km radius) with 9 priority and 4 rare flora species having been recorded in same soil and vegetation associations as the vegetation under application. Based on particular habitat requirements and the habitats present in the applied area, the vegetation under application is not likely to provide significant habitat for flora of conservation significance.

Eight fauna species of conservation significance are mapped as occurring within the local area. Five of these are aquatic animals and, as the Native Forest Management Plan specifies a 30m buffer to all watercourses will be retained (Bradshaw, 2010), aquatic species are not likely to be adversely impacted by the proposed clearing. The vegetation under application may provide suitable habitat for Forest Red-tailed black cockatoo, Quokka and Little Bittern.

Approximately 1.3 hectares of the application areas on Lots 5 and 6 is within an Environmentally Sensitive Area. The Lot 5 application area extends to just within the mapped boundary of the wetland and the remaining areas is within the 50m buffer to this floodplain wetland. Given that the application is for silviculture and that a 30m buffer around the adjacent low lying areas is to be maintained (Bradshaw, 2010), it is considered that no significant impacts to the wetlands will occur.

There are two records of the priority 1 ecological community *Reedia spathacea* - *Empodisma gracillimum* - *Schoenus multiglumis* dominated peat paluslopes and sandy mud floodplains of the Warren IBRA region in local area, with the closest approximately 9.9km south of the application area in the same mapped vegetation and soil type. The application area is not likely to be representative of this community type.

The introduction and spread of weeds and dieback has the potential to compromise the biological diversity of the application area and the adjacent Boorara-Gardiner National Park. Weed and dieback conditions minimise this risk.

Methodology

References:

DEC, 2011

Keighery, 1994

Bradshaw, 2010

GIS Databases:

- DEC Managed Lands & Waters - DEC 28/10/09

- Evapotranspiration, Area Actual - BOM 30/09/01

- Groundwater Salinity, statewide - DoW 13/07/06

- Hydrogeographic Catchments, Catchments - DoW 01/06/07

- Hydrogeology, statewide - DoW 13/07/06
- Hydrography, linear - DoW 13/7/06
- Northcliffe 50cm Orthomosaic - Landgate 2007
- Rainfall, Mean Annual - BOM 30/09/01
- Pre-European vegetation - DA 01/01
- SAC Biodatasets - 08/02/11
- Soils, Statewide - 30/11/99

(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

The vegetation under application is regrowth karri forest with the majority of the vegetation in excellent (Keighery, 1994) condition, with a dense understorey to 3m in height and no signs of weed invasion (Bradshaw, 2010). Approximately 3 hectares (of the 33.16 hectares applied for) has been open to grazing and in these areas the vegetation is in good (Keighery, 1994) condition, with an understorey of introduced grasses and weeds (DEC, 2011).

Eight fauna species of conservation significance are known to occur within the local area.

The main habitat for mainland populations of the Quokka (*Setonix brachyurus*) (Vulnerable, Environment Protection and Biodiversity Conservation Act 1999; Vulnerable, Wildlife Conservation Act 1950) is dense streamside vegetation, however the species is also found in a variety of habitats ranging from heaths and shrublands on the mainland coast (DSEWPC, 2011). Habitat for this species also includes regrowth areas of the Karri (*E. diversicolor*) forest (DSEWPC, 2011), and therefore the vegetation under application is likely to provide suitable habitat for this species. The closest record of the Quokka is 3.8km west-northwest of the application area, within the Boorara-Gardner National Park. Provided a buffer of 30m either side of any creek systems is retained, the proposed thinning operations is not expected to significantly impact quokkas, if present in the area (DEC, 2011).

Two Forest Red-tailed black cockatoos were observed roosting in an application area on Lot 8326 (DEC, 2011). The vegetation under application is likely to provide suitable habitat for this species. Where habitat trees exist, they will be retained at a rate of 2 per hectare (Bradshaw, 2010).

Balston's Pygmy Perch, Western Mud Minnow, Black-stripe Minnow and the crustaceans *Calamoecia elongata* and *Fibulacamptus bisetosus* are aquatic species and, as watercourse and wetland buffer conditions will be imposed on the permit, are not likely to be impacted by the proposed clearing.

The local area retains approximately 80% native vegetation, including wetland areas within national parks and state forests, which is likely to provide fauna habitat of greater local significance than the vegetation under application.

Considering the above, the vegetation under application is not considered to be significant as habitat for indigenous fauna and the clearing as proposed is not likely to be at variance to this principle.

Methodology

References:

- Bradshaw, 2010
- DEC, 2011
- DSEWPC, 2011
- Keighery, 1994
- GIS Databases:
 - Northcliffe 50cm Orthomosaic - Landgate 2007
 - Pre-European vegetation - DA 01/01
 - SAC Biodatasets - 08/02/11
 - Soils, Statewide - 30/11/99

(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

Four declared rare flora species have been recorded within the local area (10km radius), with the closest record of *Meziella Trifida* approximately 5.4km south-southeast of the application area and *Kennedia glabrata*, *Reedia spathacea* and *Rhacocarpus rehmannianus* var. *webbianus* approximately 10km to the south of the application area.

Kennedia glabrata is not likely to be present within the application area as it grows in association with granite outcrops (Western Australian Herbarium, 2011).

Meziella trifida, *Reedia spathacea* and *Rhacocarpus rehmannianus* var. *webbianus* are all associated with

winter-wet flats, swamps and watercourses (Western Australian Herbarium, 2011). Based on particular habitat requirements and the habitats present in the applied area, it is considered unlikely that any of these taxa will be within the applied area.

The Native Vegetation Management Plan specifies a 30m buffer to watercourses will be demarcated and maintained (Bradshaw, 2010).

The vegetation under application is therefore not likely to be necessary for the continued existence of rare flora, and the proposed clearing is not likely to be at variance to this principle.

Methodology References:
Bradshaw, 2010
Western Australian Herbarium, 2011
GIS Databases:
- Northcliffe 50cm Orthomosaic - Landgate 2007
- Pre-European vegetation - DA 01/01
- SAC Biodatasets - 08/02/11
- Soils, Statewide - 30/11/99

(d) Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of a threatened ecological community.

Comments **Proposal is not likely to be at variance to this Principle**
There are no known threatened ecological communities recorded within a 10km radius of the application area. Therefore the clearing as proposed is not likely to be at variance to this principle.

Methodology GIS Databases:
- Northcliffe 50cm Orthomosaic - Landgate 2007
- Pre-European vegetation - DA 01/01
- SAC Biodatasets - 08/02/11
- Soils, Statewide - 30/11/99

(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**
The application lies within the Shire of Manjimup and the Warren IBRA Bioregion, which retain approximately 84% and 80% of native vegetation respectively (Shepherd, 2009).

The vegetation under application is of Beard vegetation associations 23 and 1144, which retain 74% and 79% of their pre-European extent (Shepherd, 2009). The vegetation also consists of Matisse vegetation complex Collis (COB) which retains 90% of its pre-European extent (Shepherd, 2007).

	Pre-European (ha)	Current extent (ha)	Remaining (%)	% In reserves DEC Managed Land
IBRA Bioregion				
Warren*	833,981	667,164	80%	82% (550,362ha)
Shire of Manjimup*	697,370	589,248	84%	92% (544,063ha)
Beard Vegetation Association within Bioregion*				
23 (~50% of application area)	37,735	27,966	74%	72% (20,401ha)
1144 (~50% of application area)	159,668	127,144	79%	91% (115,514ha)
Matisse Vegetation Complex**				
Cob (Collis)	21,839	19,611	90%	82% (17,870ha)

* (Shepherd, 2009)

** (Shepherd, 2007)

Orthomosaic imagery indicates the local area (10km radius) is approximately 80% vegetated.

Approximately 60% of the vegetation in the local area is held in secure land tenure including National Parks and

State Forests.

The area is not considered to be extensively cleared, and therefore the vegetation under application is not a significant remnant in an extensively cleared area. Additionally, the proposal is to manage the remnant for silvicultural thinning and as such a minimum basal area of 18 to 20 square meters per hectare will be retained (Bradshaw, 2010).

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

Methodology References:
Bradshaw, 2010
Shepherd, 2009
Shepherd, 2007
GIS Databases:
- Northcliffe 50cm Orthomosaic - Landgate 2007
- Pre-European vegetation - DA 01/01
- SAC Biodatasets - 08/02/11

(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

There are several minor, perennial watercourses on the property, one of which is mapped as terminating at the boundary of the western application area on Lot 6.

Additionally, approximately 0.04 hectares of the Lot 5 application area is within the mapped boundary of a wetland (seasonally inundated floodplain) of conservation significance (Augusta to Walpole) and an additional 1.26 hectare is within the 50m buffer to this wetland. This wetland and the 50 meter buffer outside the wetland boundary is an Environmentally Sensitive Area (ESA) and protected under the Environmental Protection Act 1986.

Considering the above, the application area may contain areas of riparian vegetation and therefore the proposal may be at variance to this Principle.

Methodology References:
Bradshaw, 2010
GIS Databases:
- ANCA, Wetlands - 26/03/99
- Hydrogeology, statewide - DoW 13/07/06
- Hydrography, linear - DoW 13/7/06
- Northcliffe 50cm Orthomosaic - Landgate 2007
- RAMSAR, Wetlands - 15/10/09

(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 18 to 20 square meters per hectare (Bradshaw, 2010). Vegetation management conditions will minimise the risk of land degradation.

The proposed clearing is therefore not likely to cause appreciable land degradation.

Methodology References:
Bradshaw, 2010
GIS Databases:
- Acid Sulfate Soils Risk Map, 50k - DEC 02/07/10
- Evapotranspiration, Area Actual - BOM 30/09/01
- Groundwater Salinity, statewide - DoW 13/07/06
- Hydrogeology, statewide - DoW 13/07/06
- Rainfall, Mean Annual - BOM 30/09/01
- Soils, Statewide - 30/11/99
- 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

Approximately 0.04 hectares of the Lot 5 application area is within the mapped boundary of a wetland of conservation significance (Augusta to Walpole) and an additional 1.26 hectare is within the 50m buffer to this wetland. This wetland and the 50 meter buffer outside the wetland boundary is an Environmentally Sensitive Area (ESA) and protected under the Environmental Protection Act 1986. Given that the application is for silviculture and that the Native Forest Management Plan stipulates that a 30m buffer around the adjacent low lying areas is to be maintained (Bradshaw, 2010), it is considered that no significant impacts to the wetland will occur.

The application areas on Lot 6 lie adjacent to the Boorara-Gardner National Park. The proposed clearing increases the risk of weed and dieback introduction or spread in this conservation area. Weed and dieback management conditions will minimise these risks.

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

Methodology References:

Bradshaw, 2010

GIS Databases:

- DEC Managed Lands & Waters - DEC 28/10/09

- Pre-European vegetation - DA 01/01

- Soils, Statewide - 30/11/99

(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 several minor, perennial watercourses on the property, one of which is mapped as terminating at boundary of the western application area on Lot 6.

Additionally, approximately 0.04 hectares of the Lot 5 application area is within the mapped boundary of a wetland (seasonally inundated floodplain) of conservation significance (Augusta to Walpole) and an additional 1.26 hectare is within the 50m buffer to this wetland.

However, as the application is for silvicultural thinning and the proponent has committed to retaining a minimum basal area of 18 to 20 square meters per hectare (Bradshaw, 2010), significant impacts from sedimentation, increased runoff or salinity are not likely to result from the proposed clearing.

Given that the application is for silviculture and that the Native Forest Management Plan stipulates that a 30m buffer around the adjacent low lying areas is to be demarcated and maintained (Bradshaw, 2010), it is considered that no significant impacts to the wetland will occur.

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

Methodology References:

Bradshaw, 2010

GIS Databases:

- Hydrogeographic Catchments, Catchments - DoW 01/06/07

- Hydrogeology, statewide - DoW 13/07/06

- Public Drinking Water Source Areas (PDWSAs) - DoW 07/02/06

- Rainfall, Mean Annual - BOM 30/09/01

- RIWI Act, Areas - DoW 05/04/02

- RIWI Act, Groundwater Areas - DoW 13/07/06

- RIWI Act, Irrigation Districts - DoW 13/07/06

- Soils, Statewide - 30/11/99

- Topographic Contours, Statewide - DOLA 12/09/02

(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 application is for silvicultural thinning and a minimum basal area of 18 to 20 square meters per hectare will be maintained (Bradshaw, 2010).

The proposal is not likely to cause or exacerbate the incidence or intensity of flooding and the clearing as proposed is not at variance to this principle.

- Methodology** References:
Bradshaw, 2010
GIS Databases:
- Evapotranspiration, Area Actual - BOM 30/09/01
- Hydrogeology, statewide - DoW 13/07/06
- Pre-European vegetation - DA 01/01
- Rainfall, Mean Annual - BOM 30/09/01
- Soils, Statewide - 30/11/99
- Topographic Contours, Statewide - DOLA 12/09/02

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

Comments

The applicant is the legal landowner of Lots 5 and 6 on Diagram 91511 and Lots 8325 and 8326 on Plan 201624, Meerup.

A Commercial Producers Licence has been applied for and is awaiting the outcome of this clearing permit application.

The property is zoned Rural.

The Shire of Manjimup (2011) requested that, in any approval granted by DEC, the following footnote be included: "The applicant is advised to confer with the Shire of Manjimup with respect to the need to comply as relevant with all requirements to its Town Planning Scheme, local laws and legislation relating to the movement of heavy vehicles and the repair of road damage resultant from the use of those vehicles".

There are no known Aboriginal Sites of Significance within the application area.

No public submissions were received regarding this application.

- Methodology** References:
Shire of Manjimup, 2011
GIS Databases:
- Aboriginal Sites of Significance - DIA 02/10
- Cadastre - Landgate 12/09
- Country Area Water Supply Act (Part IIA) Clearing Control Catchments - DoW 29/06/06
- Environmental Impact Assessments - EPA 08/03/05
- Native Title Claims - LA 02/5/07
- Public Drinking Water Source Areas (PDWSAs) - DoW 07/02/06
- RIWI Act, Areas - DoW 05/04/02
- RIWI Act, Groundwater Areas - DoW 13/07/06
- RIWI Act, Irrigation Districts - DoW 13/07/06
- Town Planning Scheme Zones - MFP 31/08/98

4. References

- Bradshaw, F.J. (2010) Native Forest Management Plan for Jack O'Donnell. Gabbedy Road, Northcliffe (DEC Ref: A359605).
DEC (2011) Site inspection report for clearing permit application CPS 4153/1. Department of Environment and Conservation 11/02/2011. DEC Ref: A368517
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Keighery, B.J. (1994) *Bushland Plant Survey: A Guide to Plant Community Survey for the Community*. Wildflower Society of WA (Inc). Nedlands, Western Australia.
Matiske, 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: Matiske, 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. (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 (2011) Direct interest submission for CPS 4153/1. Received 02/02/2011. DEC Ref: A365644
Western Australian Herbarium (1998-) *FloraBase - The Western Australian Flora*. Department of Environment and Conservation. <http://florabase.dec.wa.gov.au/> (Accessed 21/02/2011).

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)