GOVERNMENT OF
WESTERN AUSTRALIA

CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

Purpose Permit number:	CPS 2935/1
Permit Holder:	Ronald Alywn Pepper
Duration of Permit:	19 March 2009 – 19 March 2017

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 silviculture, fence line construction and paddock tree removal.

2. **Land on which clearing is to be done**
   Lot 2 on Diagram 9778

3. **Area of Clearing**
   (a) The Permit Holder must not clear more than 1 hectare of native vegetation for the purpose of fence line construction and paddock tree removal within the area hatched yellow on attached Plan 2935/1.
   (b) The Permit Holder must not clear more than 4.1 hectares of native vegetation for the purpose of thinning within the area hatched red on attached Plan 2935/1.

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**
   (a) The Permit Holder may undertake the following activities:
      (i) clearing of *understorey* within the areas cross-hatched red on Plan 2935/1;
      (ii) clearing for the establishment of a *log landing* no larger than 0.04 hectares in size;
      (iii) *thinning* of Karri (*Eucalyptus diversicolor*),
      (iv) *culling* of unsaleable trees;
      (v) burning of cleared *understorey* and *culled* trees; and
      (vi) clearing of up to 1 hectare for the purpose of fence line construction and paddock tree removal.

   (b) Clearing authorised under this Permit must be completed by 19 March 2013 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

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 not move soils in wet 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. Vegetation management

The Permit Holder must undertake the following activities within the area cross-hatched red on Plan 2935/1:

(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) a minimum retention rate of $21m^2$/ha *basal area* is required within the area of clearing authorised under this Permit;
(c) prior to undertaking any clearing authorised under this Permit, the Permit Holder must exclude all *stock* from the areas subject to *thinning* activities;
(d) 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; and
(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 must be kept

(a) The Permit Holder must maintain the following records for activities done pursuant to this Permit 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 9 of this Permit:
  (i) prior to clearing native vegetation authorised under this Permit, the species composition, structure and density of *understorey*;
  (ii) monitoring undertaken to ensure that the specified minimum *basal area* is retained;
  (iii) number of *log landings* established;
  (iv) 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;
  (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 19 December 2016, 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;

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

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;

local provenance means native vegetation seeds and propagating material from natural sources within 10-40 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*;

regenerate/ed/ion means *revegetation* that can be established from in situ seed banks 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 *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 *Agricultural and Related Resources Protection Act 1976*.

Keith Claymore
A/ASSISTANT DIRECTOR
NATURE CONSERVATION DIVISION

Officer delegated under Section 20
of the Environmental Protection Act 1986

19 February 2009

Plan 2935/1

LEGEND

Clearing Instruments
- Areas Approved to Clear

Road Centrelines

Cadastre

Clearing Instruments_1
- Areas Approved to Clear

Northcliffe 1.4m Orthomosaic - Landgate 2000

N

0 ~200 m

Scale 1:7167
(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.

Kim Claymore Date 19/2/09

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 acknowleged by the agency acronym in the legend.

Department of Environment and Conservation

Department of Environment and Conservation

Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 2935/1

Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: **Mr Ronald Alwyn Pepper**

1.3. Property details

Property: LOT 2 ON DIAGRAM 9778 (CROWEA 6258)

Local Government Area: Shire Of Manjimup

Colloquial name:

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
5.1		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 Marri and Karri Mattiske Complex V1: Tall Open Forest of Eucalyptus diversicolor and Corymbia calophylla on slopes, grading down through, Eucalyptus patens open forest to thickets of Taxandria juniperina ms in wettest areas Allocasuarina decussata and Agonis flexuosa on slopes, Callistachys lanceolata on stream lines Acacia pentadenia, Crowea angustifolia, Bossiaea aquifolium subsp. laidlawiana, Chorilaena quercifolia, Billardiera variifolia, Trymalium floribundum, Hovea elliptica, Pteridium esculentum on slopes, Taxandria linearifolia ms, Meeboldina scariosa ms on terraces Mattiske Vegetation Complex CRy: Tall Open Forest of Corymbia calophylla, Eucalyptus marginata subsp. marginata with some Eucalyptus diversicolor Xylomelum occidentale Banksia grandis and Persoonia longifolia Bossiaea linophylla, Bossiaea aquifolium subsp laidlawiana, Acacia myrtifolia, Acacia pulchella Hovea elliptica, Macrozamia riedlei, Xanthorrhoea preissii, Pteridium esculentum and Leucopogon verticillatus	The area to be thinned is in very good (Keighery, 1994) condition and contains an upper storey of Karri (E. Diversicolor) and Marri (Corymbia calophylla).	Very Good: Vegetation structure altered; obvious signs of disturbance (Keighery 1994)	Condition of vegetation has been assessed upon photos and descriptions provided by the proponent, as well as a site visit (DEC, 2009).
As above	The area to be cleared in an a completely degraded (Keighery, 1994) condition with paddock trees which consist of large Karri (Eucalyptus diversicolor) and Peppermint trees (Agonis flexuosa).	Completely Degraded: No longer intact; completely/almost completely without native species (Keighery 1994)	As above

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 may be at variance to this Principle

The application is for silvicultural thinning (4.1ha) and clearing for farm maintenance (fence line construction and paddock tree removal).

The area to be thinned consists mainly of regrowth trees and is described as closed Karri (Eucalyptus

diversicolor) forest over Agonis flexousa over a ground cover of Pteridium esculentum and Clematis pubescens (DEC, 2009). There is evidence of past grazing within the area applied to be thinned, however stock is currently excluded from the area (DEC, 2009).

The area to be cleared consist predominately of paddock trees and can be described as open Karri and Marri (Corymbia calophylla) forest, over Agonis flexousa over a groundcover of grasses and weeds (DEC, 2009).

Site photographs and vegetation description provided by the proponent and a site visit (DEC, 2009) indicate that the vegetation in the area to be thinned is in very good (Keighery, 1994) condition. The vegetation is dense and likely to be diverse, as the area is relatively undisturbed. This area consists of 35-40m tall karri stands suitable to be thinned to down to 18m square basal area. Most trees are young with very few mature karris in stands (DEC, 2009).

There was no evidence of priority flora or ecological communities on site (DEC, 2009).

Given the above the proposal may be at variance to this principle. Vegetation management conditions will be placed on the permit to ensure stock is excluded from thinned areas.

Methodology DEC (2009)
Keighery (1994)
GIS Layer:
Northcliffe 1.4m Orthomosaic - Landgate 2000
Sac Biodatasets (DEFL and WA Harbarium accessed 16 February 2009)

(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 may be at variance to this Principle**
The area to be cleared (1ha) contains predominately paddock trees of Karri and Marri, which are possible roosting sites for birds (DEC, 2009). In particular, Baudin's Black Cockatoo (Calyptorhynchus baudinii) which are located within the local area (10km radius) feeding on the seeds of eucalypts and nest in tree hollows (primarily in Marri). The area to be thinned (4.1ha) is mainly regrowth trees still developing as suitable habitat trees (DEC, 2009).

Setonix brachyurus (Quokka) is also known within the local area (10km radius), however are currently restricted to densely vegetated coastal heaths, swamps and riverine habitats where they are less vulnerable to predation.

Given the above, the area applied to be cleared and thinned may be necessary, in whole or part, for the maintenance of a significant habitat for fauna. To limit/mitigate any impact the thinning activities may have on the remaining habitat, a vegetation management condition has been placed on the permit.

Methodology DEC (2007)
DEC (2009)
GIS Layer:
Sac Biodatasets (Fauna accessed 16 February 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 are no known rare flora species within the local region (10km radius). Tenure across the local area and nearby vegetation complexes is relatively secure with approximately 80% of local land vested as State Forest or National Park. It is unlikely that the proposed clearing will be at variance to this principle.

Methodology SAC Biodatasets, accessed 2 Feb 09
GIS Databases:
- DEC Managed Lands and Waters
- Mattiske Vegetation

(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 threatened ecological communities (TEC's) within the local area (10 km radius). The area proposed to be cleared does not appear to contain likely habitat for TEC's. It is unlikely that the proposed clearing is at variance to this principle.

Methodology SAC Biodatatsets, (TEC accessed 21 January 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**

	Pre-European %	Extent remaining %	% in IUCN
Warren IBRA:	835,925.47	675,836.26	80.85
Shire of Manjimup:	697,359.72	595,561.57	85.40
Beard Vegetation type 1144:	160,314.85	131,412.09	81.97
amount within bioregion 1144	159,668.18	131,169.09	82.15
Mattiske Vegetation type: CRy (Crowea)	33786.001	24388.520	72.2
V1 (Granite Valleys)	2286.967	2219.943	97.1

Vegetation within the application contains mature and juvenile vegetation, and is considered to be dense and diverse. Much of the clearing is for the purpose of silviculture and will not remove all vegetation.

The numerous National Parks and State Forests within the local area (10 km radius) result in an approximate 80% cover of vegetation in secure tenure.

Given the type of clearing and surrounding vegetation the clearing as proposed is unlikely to be at variance to this principle.

Methodology
Mattiske, 1998
Shepherd, 2007
SAC Biodatasets, accessed 2 Feb 09
GIS Databases:
- Mattiske Vegetation
- Manjimup 50cm Orthomosaic - Landgate 2004
- Northcliffe 1.4m Orthomosaic - Landgate 2000
- DEC Managed Lands and Waters

(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 mapped watercourses or wetlands within the proposed clearing area. Vegetation within the application area is not considered to be associated with riparian vegetation and the clearing is therefore not likely to be at variance to this principle.

Methodology
Native Forest Management Plan, 2008
GIS Databases:
- Hydrography linear
- Manjimup 50cm Orthomosaic - Landgate 2004
- Northcliffe 1.4m Orthomosaic - Landgate 2000

(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 majority of the application is for slilvicultural thinning (4.1ha) so it is unlikely that erosion will increase as the vegetation is proposed to be selectively cleared (ie not clear felled).

The area proposed to be cleared lies within Zone D of the Country Areas Water Supply Act 1947. DoW (2009) advise that this is a low salinity risk area where no salinisation of the water resources will result subject to the retention of at least 10% on the holding area to native vegetation. The vegetation remaining on the property will be greater than 10%. There is no evidence of salinity or water logging within the application area (DEC, 2009).

Therefore, the proposal is unlikely to be at variance to this principle.

Methodology DEC (2009)
DoW (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

State Forest and National Park occupies approximately 80% of land tenure within the local area (10km radius). These are:-
* Greater Hawke National Park
* Jane National Park
* Greater Dordagup National Park
* Gloucester National Park
* Warren State Forest
* Tone State Forest

Warren State Forest is in close proximity, with the boundary approximately 100 metres from the proposed clearing area. Logging operations are occurring in the state forest.

The application area is likely to be habitat for native fauna species, however as the proposal is for a small area (1ha) and for selective thinning it is unlikely that clearing will result in increased competition for fauna within the state forest.

There is a likelihood of weed and dieback spread from the clearing activities. Vegetation between the application area and state forest will provide buffering functions and decrease the risk. Weed management and Dieback conditions will be placed upon the permit to minimise the impact of clearing.

The proposed clearing may be at variance to this principle.

Methodology SAC Biodatasets, accessed 2 February 2009
GIS Databases:
- DEC Managed Lands and Waters
- Northcliffe 1.4m Orthomosaic - Landgate 2000
- Manjimup 50cm Orthomosaic - Landgate 2004

(i) Native vegetation should not be cleared if the clearing of the vegetation is likely to cause deterioration in the quality of surface or underground water.

Comments

Proposal is not likely to be at variance to this Principle

The area proposed to be cleared lies within Zone D of the Country Areas Water Supply Act 1947. DoW (2009) advise that this is a low salinity risk area where no salinisation of the water resources will result subject to the retention of at least 10% on the holding area to native vegetation. The vegetation remaining on the property will be greater than 10%. There is no evidence of salinity or water logging within the application area (DEC, 2009).

There are no watercourses or wetlands within the proposed clearing area so it is unlikely that surface water quality will be impacted by the proposal to selectively clear. Additionally, the surrounding area is well vegetated (80% cover) and likely to provide buffering functions to any increased runoff resulting from the proposed clearing. There is no evidence of surface water runoff onto adjacent properties (DEC, 2009).

Given the small size of clearing (1ha) and thinning (4.1ha) it is unlikely that the proposal is at variance to this principle.

Methodology GIS Databases:
- Hydrography, linear
- Hydrography, linear (hierachy)
- Geodata, Lakes
- Manjimup 50cm Orthomosaic - Landgate 2004
- Northcliffe 1.4m Orthomosaic - Landgate 2000

(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

Clearing within the application area is primarily for the purpose of silviculture which does not result in removal of all vegetation. As some vegetation will be remaining, it is not likely that there will be a significant increase in surface water runoff, therefore flooding levels are unlikely to be impacted.

Methodology Native Forest Management Plan (2008)

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

Comments

The area proposed to be cleared lies within Zone D of the Country Areas Water Supply Act 1947. There are no records of clearing history on the property, and no CAWS Act compensation paid to retain native vegetation there (DoW, 2009).

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

Methodology DEC (2005)
DoW (2009)

4. Assessor's comments

Comment

The application has been assessed against the clearing principles, planning instruments and other matters in accordance with s51O of the Environmental Protection Act 1986, and the proposed clearing is not likely to be at variance to any of the clearing Principles.

5. References

Bradshaw (2008). Native Forest Management Plan, TRIM ref DOC 72861

DEC (2007) DEC Fauna Habitat Notes.xls. February 2007. Department of Environment and Conservation, Western Australia.

DEC (2009) Site Inspection Report for Clearing Permit Application CPS 2935/1, Lot 2 on Location 8770, Northcliffe. Site inspection undertaken 4/2/2009. Department of Environment and Conservation, Western Australia (TRIM Ref. DOC76224).

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

DoW (2009). Advice from the Department of Water. February 2009. DOC75520

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. (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.

6. Glossary

Term	Meaning
BCS	Biodiversity Coordination Section of DEC
CALM	Department of Conservation and Land Management (now BCS)
DAFWA	Department of Agriculture and Food
DEC	Department of Environment and Conservation
DEP	Department of Environmental Protection (now DEC)
DoE	Department of Environment
DoIR	Department of Industry and Resources
DRF	Declared Rare Flora
EPP	Environmental Protection Policy
GIS	Geographical Information System
ha	Hectare (10,000 square metres)
TEC	Threatened Ecological Community
WRC	Water and Rivers Commission (now DEC)