



CLEARING PERMIT

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

Purpose Permit number:	CPS 2966/1
Permit Holder:	Adrian Rhett Dusseldorp
Duration of Permit:	5 April 2009 – 5 April 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 silvicultural thinning.

2. Land on which clearing is to be done

LOT 102 ON DEPOSITED PLAN 32474 (NORTHCLIFFE 6262)

3. Area of clearing

The Permit Holder must not clear more than 6.5 hectares of native vegetation within the areas hatched yellow on attached Plan 2966/1.

4. Application

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

5. 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

6. Type of clearing authorised

- (a) The Permit Holder may undertake the following activities:
- (i) clearing of *understorey* within the areas cross-hatched yellow on Plan 2966/1;
 - (ii) *thinning* of Karri (*Eucalyptus diversicolor*) trees;
 - (iii) *culling* of unsaleable trees; and
 - (iv) burning of cleared *understorey* and *culled* trees.
- (b) Clearing authorised under this Permit must be completed by 5 April 2013, being four years from the date from which this Permit becomes valid.

7. Avoid, minimise etc clearing

In determining the amount of native vegetation to be cleared authorised under this Permit, the Permit Holder must have regard to the following principles, set out in order of preference:

- (a) avoid the clearing of native vegetation;
- (b) minimise the amount of native vegetation to be cleared; and
- (c) reduce the impact of clearing on any environmental value.

8. Dieback and weed control

- (a) When undertaking any clearing or other activity authorised under this Permit, the Permit Holder must take the following steps to minimise the risk of the introduction and spread of *weeds* and *dieback*:
- (i) clean earth-moving machinery of soil and vegetation prior to entering and leaving the area to be cleared;
 - (ii) shall not move soils in wet conditions;
 - (iii) ensure that no *dieback* or *weed*-affected soil, *mulch*, *fill* or other material is brought into the area to be cleared; and
 - (iv) restrict the movement of machines and other vehicles to the limits of the areas to be cleared.
- (b) At least once in each 12 month period for the *term* of this Permit, the Permit Holder must remove or kill any *weeds* growing within areas cleared under this Permit.

9. Vegetation management

The Permit Holder shall not clear native vegetation within 30 metres of the *riparian vegetation* of any *watercourse* or *wetland* within the area cross-hatched yellow on Plan 2966/1.

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 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 10(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

11. Records to be kept

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

12. 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 11 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 5 January 2017, the Permit Holder must provide to the CEO a written report of records required under condition 11 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;

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

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

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

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

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

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

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

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

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

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

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

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

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;

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;

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 Agricultural and Related Resources Protection Act 1976; and

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.



Keith Claymore
A/ ASSISTANT DIRECTOR
NATURE CONSERVATION DIVISION

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

5 March 2009

Plan 2966/1



LEGEND

- Clearing Instruments
- Cadastral
- Northcliffe 1.4m Orthomosaic
- Landgate 2000



Scale 1:5390
(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.

K Claymore Date *5/3/09*

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

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



Department of Environment and Conservation

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1. Application details

1.1. Permit application details

Permit application No.: 2966/1
 Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: Adrian Rhett Dusseldorp

1.3. Property details

Property: LOT 102 ON PLAN 32474 (Lot No. 102 DOUBLE BRIDGE 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:
6.5		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 Association: 3 - Medium forest; jarrah-marri	The application is for the clearing of 6.5 hectares of native vegetation for the purpose of silviculture.	Very Good: Vegetation structure altered; obvious signs of disturbance (Keighery 1994)	The vegetation condition was determined from orthomosaic imagery and site inspection (TRIM ref DOC77477).

23 - Low woodland; jarrah-banksia

Mattiske Vegetation Complex:
 Blackwater - Mosaic of low open woodland of *Melaleuca preissiana*, low open woodland of *Melaleuca cuticularis*, open heath of Myrtaceae-Proteaceae spp. and sedgelands of Restionaceae spp. on low lying flats in hyperhumid and perhumid zones.

Collis 1 - Tall open forest to woodland of *Eucalyptus marginata* subsp. *marginata*-*Corymbia calophylla*-*Banksia grandis*-*Allocasuarina fraseriana* on low hills and with *Allocasuarina decussata* on slopes in perhumid and humid zones.

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 to clear 6.5 hectares of native vegetation for the purpose of silviculture. The vegetation under

application is in very good condition (Keighery 1994, DEC 2009). The area under application contains regenerated *Eucalyptus diversicolor* (Karri) forest, and was previously cleared for agriculture approximately 70 years ago (Management Plan 2009).

The application area is surrounded by 6 conservation areas, and the local area (10km radius) is approximately 80% vegetated with native vegetation.

Of the 13 priority flora species mapped within the local area, one was recorded within the same soil and vegetation types. *Hemigenia rigida*, however, grows in granite outcrops (Florabase 2009) and therefore is not likely to be affected by scrub rolling activities required for silviculture. Additionally, given the past history of disturbance and clearing across the application area, it is unlikely to persist in the area.

Introduction of weeds and dieback has the potential to compromise the biological diversity of the application area and neighbouring native vegetation, and as such may be at variance to this principle. Therefore, weed and dieback conditions will be imposed on the permit.

Methodology Management Plan 2009 (TRIM ref DOC75364)
Florabase 2009
DEC (2009)
GIS database:
- SAC Biodatasets - accessed 9 February 09
- Mattiske Vegetation (01/03/1998)
- Declared Rare and Priority Flora List - CALM 13/08/03
- Pre European Vegetation - DA 01/01

(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**
One rare fauna species mapped within the local (10km radius) area could be using the application area as habitat. *Setonix brachyurus* (Quokka) has been recorded 9.8km north of the application area. Quokkas mostly inhabit densely vegetated swamps and sometimes tea-tree thickets on sandy soils along creek systems and dense heath on slopes (Naturebase 2009). As there is riparian vegetation present along the southern boundary of the application area, the Quokka may be occur within the applied area. However, a 30 metre vegetated buffer will be retained to protect this vegetation.

Methodology Naturebase 2009
Shepherd 2007

GIS database:
- Mattiske Vegetation (01/03/1998)
- Pre European Vegetation - DA 01/01
- SAC Biodatasets - accessed 11 Feb 08
- Hydrography linear - DOW 13/7/06

(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**
No rare flora species are mapped within the local (10km radius) area. The clearing as proposed is therefore not likely to be at variance to this principle.

Methodology GIS database:
- Mattiske Vegetation (01/03/1998)
- Pre European Vegetation - DA 01/01
- SAC Biodatasets - accessed 11 Feb 08
- Soils, Statewide DA 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 (TECs) 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 database:
- SAC Biodatasets - accessed 11 Feb 08

(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 85.40% and 80.8% native vegetation respectively (Shepherd 2007). Orthomosaic imagery suggests the local (10km radius) area is approximately 80% vegetated.

The vegetation under application is of Beard Vegetation Associations 3 and 23, which retain 81% and 74% of their pre-European extent (Shepherd 2007). The vegetation is also Mattiske Vegetation Complexes Blackwater and Collis which both have more than 80% their pre-European extents remaining (Mattiske Consulting 1998).

The area is not considered to be extensively cleared, and therefore the vegetation under application is not a significant remnant in the local area. The clearing as proposed is therefore not at variance to this principle.

Methodology Mattiske Consulting 1998
Shepherd 2007
Shepherd et al 2001

GIS database:

- Northcliffe 1.4m Orthomosaic - Landgate 2000
- Interim Biogeographic Regionalisation of Australia - EA 18/10/00
- Local Government Authorities - DLI 8/07/04
- Mattiske Vegetation - CALM 1/03/1998
- Pre European Vegetation - DA 01/01
- NLWRA, Current Extent of Native Vegetation 20 Jan 2001

(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

During a DEC conducted site inspection, it was noted that riparian vegetation occurred along the southern boundary of the application area. There are no trees suitable for thinning in this area and the proponent has agreed to fence the area in order to protect the riparian vegetation from grazing (DEC, 2009). A 30 metre vegetated buffer will also be imposed on the permit to ensure the adequate protection of riparian vegetation.

The closest mapped watercourse is a significant stream which flows 1.5km north east of the application area. Additionally, the closest wetland is a Paluslope 240m north, which is therefore outside the recommended buffer for a wetland (100m).

Methodology GIS database:
- Geomorphic Wetlands, Augusta to Walpole
- Hydrography linear - DOW 13/7/06
- Hydrography linear (hierarchy) - DOW 13/7/06

(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 18m²/ha (Management Plan 2009). Vegetation management conditions will be placed on the permit to minimise land degradation concerns. The proposed clearing is therefore not likely to cause appreciable land degradation.

Methodology Management Plan 2009 (TRIM ref DOC75364)

GIS database:

- Hydrography, linear - DOW 13/7/06
- Salinity Risk LM 25m - DOLA 00
- Soils, Statewide DA 11/99
- Topographic contours statewide - DOLA and ARMY 12/09/02
- Hygrogeology, Statewide 05 Feb 2002

(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 is not likely to be at variance to this Principle

The application area is surrounded by conservation areas, the closest being Boorara National Park (2.3km west), Gardner State Forest (4km south east), Jane National Park (9.2km north east) and Greater Hawke

National Park (5km north).

The proposed clearing is not likely to be acting as a significant linkage between these conservation areas, as the local area is well vegetated (with approximately 80% native vegetation remaining in a 10km radius).

Additionally, as the vegetation under application is surrounded by cleared agricultural land, the introduction or spread of weeds and dieback into nearby conservation areas is not likely to result from the proposed clearing.

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

Methodology GIS database:
- CALM Managed Lands and Waters - CALM 01/06/05
- North Cliffe 1.4m Orthomosaic - Landgate 2000

(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**
A significant stream lies 1.5km north east, Gardner river 3.4km east and a major river 4km south of the application area. The potential sedimentation of the waterways by the proposed clearing will be mitigated through retention of a minimum basal area of 18m² per hectare (Management Plan 2009) and no clearing will occur within 30 metres of any watercourses. The clearing as proposed is therefore not likely to be at variance to this principle.

Methodology Management Plan 2009 (TRIM ref DOC75364)

GIS database:
- Hydrographic catchments, catchments - DoW 01/06/07
- Hydrography, linear - DOW 13/7/06

(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 18m² per hectare will be maintained (Management Plan 2009), the proposal is not likely to cause or exacerbate the incidence or intensity of flooding. The clearing as proposed is therefore not likely to be at variance to this principle.

Methodology Management Plan 2009 (TRIM ref DOC75364)

GIS database:
- Mean Annual Rainfall Isohytes (1975 - 2003) - DEC 02/08/05
- Topographic Contours, Statewide - DOLA 12/09/02

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

Comments
Vegetation management conditions have been added to the permit to restore the understorey disturbed by the silviculture operations, 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)

4. Assessor's comments

Comment
The application has been assessed against the clearing principles, planning instruments and other matters in accordance with s51O of the Environmental Protection Act 1986, and the proposed clearing may be at variance to Principles (a), (b) and (f), is not at variance to Principle (e) and is not likely to be at variance to the remaining clearing Principles.

5. References

- DEC (2009) Site Inspection Report for Clearing Permit Application CPS 2966/1, Lot 102 Double Bridges Road, Northcliffe. Site inspection undertaken 25/02/2009. Department of Environment and Conservation, Western Australia (TRIM Ref. DOC77477).
- DEC (2009) Naturebase Species Profile; *Setonix brachyurus* (Quokka) Department of Environment and Conservation viewed electronically via www.dec.wa.gov.au/component/option,com_docman/Itemid,/gid,131/task,doc_download, accessed on 22/02/09
- Flora base (2009) Flora Species Profile; *Hemigenia rigida*. Department of Environment and Conservation viewed electronically

via <http://florabase.dec.wa.gov.au/browse/profile/6184> accessed on 20/02/2009

Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.

Mattiske, E.M. and Havel, J.J. (1998) Vegetation Complexes of the South-west Forest Region of Western Australia. Maps and report prepared as part of the Regional Forest Agreement, Western Australia for the Department of Conservation and Land Management and Environment Australia.

Shepherd, D.P. (2007). Adapted from: Shepherd, D.P., Beeston, G.R., and Hopkins, A.J.M. (2001), Native Vegetation in Western Australia. Technical Report 249. Department of Agriculture Western Australia, South Perth. Includes subsequent updates for 2006 from Vegetation Extent dataset ANZWA1050000124.

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)