



CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

PERMIT DETAILS

Area Permit Number: 3193/1
File Number: DEC11869
Duration of Permit: From 3 October 2009 to 3 October 2011

PERMIT HOLDER

Shire of Manjimup

LAND ON WHICH CLEARING IS TO BE DONE

ROAD RESERVE (CHANNYBEARUP ROAD, CHANNYBEARUP 6260)

AUTHORISED ACTIVITY

Clearing of up to 24 trees within the 3.47 hectare area hatched yellow on attached Plan 3193/1.

CONDITIONS

1. 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.

Definitions

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

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

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

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;

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*.

A handwritten signature in blue ink, reading "Keith Claymore".

Keith Claymore
A/ ASSISTANT DIRECTOR
NATURE CONSERVATION DIVISION

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

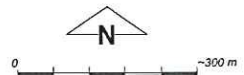
3 September 2009

Plan 3193/1



LEGEND

- | | |
|---|--|
| <ul style="list-style-type: none"> Clearing Instruments Areas Approved to Clear Road Centrelines Cadastre | <ul style="list-style-type: none"> Donnelly 50cm Orthomosaic - Landgate 2004 Hydrography, linear (hierarchy) |
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Scale 1:12000
(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.

Keith Claymore 3/2/09
K Claymore Date

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.



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1. Application details

1.1. Permit application details

Permit application No.: 3193/1

Permit type: Area Permit

1.2. Proponent details

Proponent's name: Shire of Manjimup

1.3. Property details

Property: ROAD RESERVE (CHANNYBEARUP 6260)

Local Government Area: Shire of Manjimup

Colloquial name: Channybearup Road Reserve

1.4. Application

Clearing Area (ha)

24 trees within a 3.47ha area

Method of Clearing

Mechanical Removal

For the purpose of:

Road construction or maintenance

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
<p>The vegetation under application along Channybearup Road Reserve is mapped as two Beard Vegetation Associations, Associations 1144 and 3.</p> <p>Beard Vegetation Association: 1144 - Tall forest; karri (<i>Eucalyptus diversicolor</i>) and Marri (<i>Corymbia calophylla</i>).</p> <p>Beard Vegetation Association: 3 - Medium forest; jarrah (<i>Eucalyptus marginata</i>) and marri (<i>Corymbia calophylla</i>).</p>	<p>The vegetation proposed to be cleared comprises 24 trees within a 3.47ha area for the purposes of road reconstruction. The vegetation is in a 'degraded' (Keighery, 1994) condition consisting of individual trees of <i>Eucalyptus diversicolor</i>, <i>Corymbia calophylla</i>, <i>Eucalyptus marginata</i> and <i>Agonis flexuosa</i> over introduced weed and grass species (DEC, 2009).</p>	<p>Degraded: Structure severely disturbed; regeneration to good condition requires intensive management (Keighery 1994)</p>	<p>Vegetation condition was confirmed during DEC site inspection on 31/07/2009 (DEC, 2009).</p>
<p>The vegetation under application for Channybearup Road Reserve is mapped as components of three Mattiske Vegetation Complexes - Pemberton (PM1), Crowea (CRd) and Crowea (CRy).</p>		<p>Degraded: Structure severely disturbed; regeneration to good condition requires intensive management (Keighery 1994)</p>	
<p>Mattiske Vegetation Complex: Pemberton (PM1) - Tall open forest of <i>Eucalyptus diversicolor</i> with mixtures of <i>Corymbia calophylla</i> on valley slopes and low forest of <i>Agonis juniperina</i>-<i>Banksia seminuda</i>-<i>Callistachys lanceolata</i> on valley floors in the perhumid zone.</p>			
<p>Mattiske Vegetation Complex: Crowea (CRd) - Open forest to tall open</p>			

forest of *Eucalyptus marginata* subsp. *marginata* - *Corymbia calophylla* on uplands in hyperhumid and perhumid zones.

Mattiske Vegetation Complex: *Crowea* (CRy) - Tall open forest of *Corymbia calophylla* with mixture of *Eucalyptus marginata* subsp. *marginata* and *Eucalyptus diversicolor* on uplands in hyperhumid and perhumid zones. (Mattiske & Havel, 1998).

3. Assessment of application against clearing principles

(a) Native vegetation should not be cleared if it comprises a high level of biological diversity.

Comments **Proposal is not at variance to this Principle**

The vegetation under application along Channybearup Road Reserve is in 'degraded' (Keighery, 1994) condition (DEC, 2009). Channybearup Road Reserve consists predominantly of individual Karri (*Eucalyptus diversicolor*), Marri (*Corymbia calophylla*), Jarrah (*Eucalyptus marginata*) and Peppermint trees (*Agonis flexuosa*) over non-indigenous grass and weed species (DEC, 2009).

The vegetation within the reserve has evidence of disturbance attributed to the construction of the original Channybearup Road (DEC, 2009).

The most northern tip of the applied clearing area is directly adjacent to an environmentally sensitive area associated with the Pemberton National Parks registered on the Register of National Estate (DEWHA, 2009). The clearing itself does not encroach on this area, as the clearing is restricted to individual trees within the road reserve which has agricultural properties either side of the applied clearing area, therefore the clearing is not likely to impact upon these areas.

No threatened or priority ecological communities have been recorded within the local area (10km radius).

Six priority flora species were recorded within the local area (10km radius) of the applied clearing area on similar vegetation and soil types to the area under application with the closest being *Asplenium aethiopicum* (Priority 4), approximately 3.3km west. Due to the understorey consisting of introduced grasses and weed species, it is unlikely that any of these priority species occur within the applied clearing area (DEC, 2009).

Due to the small scale of the proposed clearing, the previous disturbance of the vegetation, the dominance of non-native weed and grass species within the understorey and the 'degraded' (Keighery, 1994) condition of the vegetation, the vegetation is not considered to comprise a high level of biological diversity.

Methodology **References:**
- DEC (2009)
- DEWHA (2009)
- Keighery (1994)
GIS Databases:
- Register of National Estate
- SAC Biodatasets - Accessed 14/07/2009 & 3/08/2009
- Donnelly 50cm Orthomosaic - Landgate 2004

(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**

Four threatened and priority fauna species are known to occur within the local area (10km radius) with the closest record being the Pouched lamprey (*Geotria australis*) approximately 3.4 km from the applied clearing area. This fish species is threatened, mainly attributed to river damming (Burbidge, 2004) and would only be impacted if the vegetation under application is growing in association with a watercourse in which this species inhabits, which in turn could impact upon the quality of the watercourses in the local area, or if the watercourse is blocked during the clearing or road construction process. Given the closest watercourse is approximately 430m east of the applied clearing area, this species will not be impacted by the clearing of individual trees along this road reserve.

Given the scale of clearing required for the re-construction of Channybearup Road, the 'degraded' (Keighery, 1994) condition (DEC, 2009) of the vegetation and the amount of vegetation in the local area in secure tenure, which is in better condition and would be more suitable habitat for indigenous fauna, the vegetation under application would not be deemed significant habitat for indigenous fauna in the local area.

- Methodology** References:
- Burbidge (2004)
- DEC (2009)
- Keighery (1994)
GIS Databases:
- CALM Managed Lands and Waters - DEC
- Hydrography, linear - DoW
- SAC Biodatasets - Accessed 14/07/2009
- Donnelly 50cm Orthomosaic - Landgate 2004

(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**
One declared rare flora species, *Caladenia harringtoniae* has been recorded within the local area (10km radius) of Channybearup Road Reserve, within similar vegetation and soil types to the applied clearing area.

The preferred habitat for *Caladenia harringtoniae* is usually *Melaleuca* sp. (paperbark) and flooded gum (*Eucalyptus rudis*) swamps and flats which are inundated for several months of the year, however, they are also found along creeklines in jarrah (*Eucalyptus marginata*) and karri (*Eucalyptus diversicolor*) forest (Brown et al, 1998). Given the 'degraded' (Keighery, 1994) condition of the vegetation under application, the fact that there are no watercourses within the applied clearing area and the vegetation not comprising the species preferred habitat (DEC, 2009), it is unlikely that this species will be found within the applied clearing area.

- Methodology** References:
- Brown et al (1998)
- DEC (2009)
- Keighery (1994)
GIS Databases:
- Mattiske Vegetation - CALM
- SAC Biodatasets - Accessed 3/08/2009
- Soils, Statewide - DA
- Topographic Contours, Statewide - DOLA

(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 at variance to this Principle**
There are no threatened ecological communities (TEC) located within the local area (10km radius) of the applied clearing area. It was also noted during the site visit that no TECs were present (DEC, 2009).

It is therefore concluded that the vegetation under application does not comprise a whole or a part of, or is necessary for the maintenance of a threatened ecological community and therefore the proposal is not at variance to this principle.

- Methodology** References:
- DEC (2009)
GIS Databases:
- SAC Biodatasets - Accessed 14/07/2009

(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 at variance to this Principle**
The proposed clearing area along Channybearup Road Reserve is mapped within two Beard Vegetation Associations, association 1144 - Tall forest; karri and marri and association 3 - Medium forest; jarrah and marri of which there is 82.2% and 81.0% of their pre-European extent within the Warren IBRA Region remaining (Shepherd, 2007).

The vegetation along Channybearup Road Reserve is also mapped as components of three Mattiske Vegetation Complexes - Pemberton (PM1), Crowea (CRd) and Crowea (Cry), as described in section 2.2.1 'Description of the native vegetation under application' in this report, of which there is 67.3%, 80.2% and 74.4% of their pre-European extents remaining respectively (Mattiske & Havel, 1998).

The road reserve lies within the Shire of Manjimup in the Warren IBRA Region which have 92.2% and 82.4% of their pre-European extent remaining respectively (Shepherd, 2007).

The Environmental Protection Authority (EPA) supports a 30% threshold level as recommended in the National Objectives Targets for Biodiversity Conservation; below which species loss appears to accelerate exponentially at an ecosystem level (EPA, 2000). All the vegetation associations have more than 30% of their pre-European extent remaining and the vegetation consists of individual trees in a 'degraded' (Keighery, 1994) condition (DEC, 2009). For this reason the vegetation is not deemed significant as a remnant of native vegetation in an area that has been extensively cleared.

	Pre-European (ha)	Current extent (ha)	Remaining (%)	In secure tenure (%)
IBRA Bioregion*				
Warren Shire*	835,925	675,836	80.8%	82.4%
Shire of Manjimup	697,360	595,562	85.4%	92.2%
Beard vegetation type*				
1144	159,668	131,169	82.2%	91.1%
3	252,196	204,296	81.0%	85.0%
Mattiske**				
PM1 - Pemberton	25,801	17,373	67.3%	59.0%
CRy - Crowea	33,765	25,112	74.4%	67.4%
CRd - Crowea	1,904	1,526	80.2%	73.2%

* (Shepherd, 2007)

** (Mattiske & Havel, 1998)

Methodology

References:

- DEC (2009)
- EPA (2000)
- Keighery (1994)
- Mattiske & Havel (1998)
- Shepherd (2007)

GIS Databases:

- Interim Biogeographic Regionalisation of Australia - EA
- Local Government Authorities - DOLA
- Mattiske Vegetation - CALM
- SAC Biodatasets - Accessed 14/07/2009

(f) Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland.

Comments

Proposal is not likely to be at variance to this Principle

The closest watercourse to the applied clearing area is Fly Brook, which is approximately 430m to the east. There are also a number of small watercourses near to Channybearup Road Reserve however all of them are dammed on the adjacent property and therefore do not reach or cross the applied clearing area.

The applied clearing area is just outside the extent of wetland mapping from Augusta to Walpole undertaken by V & C Semeniuk Research Group in 1997. There are approximately 20 separate mapped wetlands within the local area (10km radius) with the closest being a Paluslope (seasonally inundated slope) approximately 2.4km south west of the applied clearing area.

Given the proximity of the applied clearing area to wetlands and watercourses in the local area, and the fact that the applied clearing area consists of scattered individual karri, marri, jarrah and peppermint trees over paddock grasses and weed species (DEC, 2009), it is concluded that the vegetation is not growing in nor is it associated with any watercourses within the local area.

Methodology

References:

- DEC (2009)
- V&C Semeniuk Research Group (1997)

GIS Databases:

- Geomorphic Wetlands (Mgt Categories) - Swan Coastal Plain
- Hydrography, linear - DoW
- Hydrography, linear (hierarchy) - DoW

(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 chief soils within the applied clearing area have been described by Northcote et al. (1960-68) as "hard, and also sandy, neutral, and also acidic, yellow and yellow mottled soils, with conspicuous but relatively smaller areas of red earths" and associated "areas of block laterite, gravelly and bouldery soils on tops of rises and their colluvial slopes."

The salinity risk at this site is mapped as low with groundwater salinity ranging between 500-1000mg/L total dissolved solids. The topography along Channybearup Road reserve ranges from 160-170m AHD and is of a medium relief.

Surface water run-off from the road onto neighbouring properties was evident during the site inspection (DEC, 2009).

Given the medium relief, surface water run-off along the roadsides is likely to increase through the clearing of the vegetation, however, with the appropriate management in the form of constructed table drains, given the small scale and 'degraded' (Keighery, 1994) condition of the vegetation under application (DEC, 2009), it is unlikely that the clearing will cause appreciable land degradation through water erosion at this site.

Methodology References:

- DEC (2009)
 - Keighery (1994)
 - Northcote et al (1960-68)
- GIS Databases:
- Groundwater Salinity, Statewide - DoW
 - Salinity Risk LM 25m - DOLA
 - Soils, Statewide - DA
 - Topographic Contours, Statewide - DOLA

(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

Approximately 80% of the local area (10km radius) is located within either DEC managed lands (National Park or State Forest), Systems 1-5 or 7-12 conservation areas or listed (interim and registered) on the Register of National Estate. The closest conservation areas to the applied clearing area are the Pemberton National Park and Giblett-Hawke Area which encompasses the Pemberton National Park, which are directly adjacent to the north-western end of the applied clearing area and the Greater Beedelup Region which lies directly north of the applied clearing area. The Pemberton National Park is recognized within the Systems 1-5 and 7-12 conservation areas and registered on the Register of National Estate and the Giblett-Hawke Area and Greater Beedelup National Park are on the interim list of the Register of National Estate.

Due to the close proximity of these conservation areas to the applied clearing area, it is a condition of the permit that measures to reduce the introduction and spread of weeds and dieback at and from this site be implemented.

Given the vegetation comprises individual karri (*Eucalyptus diversicolor*), marri (*Corymbia calopylla*), jarrah (*Eucalyptus marginata*) and peppermint (*Agonis flexuosa*) trees over non-native grasses and weeds species (DEC, 2009) and the fact that the clearing will be kept within the road reserve, it is unlikely that the clearing of the vegetation along this road reserve will be at variance to this principle.

Methodology References:

- DEC (2009)
- GIS Databases:
- Register of National Estate - EA
 - CALM Managed Lands and Waters - DEC
 - Systems 1-5 and 7-12 Areas - DEC

(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 applied clearing area lies within the Donnelly River Hydrographic Catchment within the Donnelly River Basin. The vegetation under application also lies within the Donnelly River and tributaries RIWI Area managed by the Department of Water.

The closest watercourse to the applied clearing area is Fly Brook, approximately 430m to the east. There are also a number of small watercourses near to Channybearup Road Reserve however, all of them are dammed on the adjacent properties and therefore do not reach the applied clearing area.

The topography across the applied clearing area ranges from 160-170m AHD and is of a medium relief. The mapped groundwater salinity for the site ranges between 500-1000mg/L total dissolved solids with the salinity risk for the area mapped as low.

Due to the vegetation comprising individual native trees over predominantly non-native grasses and weed species (DEC, 2009) and the distance to the local watercourses, it is unlikely that the proposal will cause deterioration in the quality of surface or underground water.

- Methodology** **References:**
- DEC (2009)
- GIS Databases:**
- Groundwater Salinity, Statewide - DoW
 - Hydrographic Catchments - Basins - DoW
 - Hydrographic Catchments - Catchments - DoW
 - Hydrography, linear - DoW
 - Hydrography, linear (hierarchy) - DoW
 - RiWI, Areas - DoW
 - Salinity Risk LM 25m - DOLA
 - Topographic Contours, Statewide - DOLA

(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**
The Channybearup Road reserve ranges in topography from 160-170m AHD and is of a medium relief. The nearest watercourse to the applied clearing area is Fly Brook, a minor river approximately 430m east of this road reserve.

Given that the vegetation under application is paddock trees over non-native grasses and weed species (DEC, 2009) and due to the proximity of watercourses to the applied clearing area, it is unlikely that the clearing of the vegetation at this site will cause, or exacerbate, the intensity or incidence of flooding in the local area.

- Methodology** **References:**
- DEC (2009)
- GIS Databases:**
- Donnelly 50cm Orthomosaic - Landgate 2004
 - Hydrography, linear - DoW
 - Hydrography, linear (hierarchy) - DoW
 - Topographic Contours, Statewide - DOLA

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

Comments Cadastral information states the applied clearing area to be within 'road reserve' designated for public roads.

- Methodology** **GIS Databases:**
- Cadastre

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 Principles (b), (c), (f) (g), (h), (i) and (j) and not at variance to Principles (a), (d) and (e).

5. References

- Brown A., Thomson-Dans C. and Marchant N.(1998). Western Australia's Threatened Flora, Department of Conservation and Land Management, Western Australia.
- Burbidge, A. (2004) Threatened Animals of Western Australia, Department of Conservation and Land Management, Perth, Western Australia.
- DEC (2009) Site Inspection Report for Clearing Permit Application CPS 3193/1, Middlesex and Channybearup Road Reserves, Shire of Manjimup. Site inspection undertaken 31/07/2009. Department of Environment and Conservation, Western Australia (TRIM Ref. DOC93473).
- DEWHA (1997) Australian Heritage Database: Pemberton National Parks, Vasse Hwy, Pemberton and Beedelup National Park and Adjacent Area, Beedelup Road, Peerabeelup via Pemberton, Western Australia, <http://www.environment.gov.au/heritage/ahdb/index.html>. Accessed 21/08/2009. Department of Environment, Water, Heritage and the Arts, Canberra, Australia.
- EPA (2000) Environmental protection of native vegetation in Western Australia. Clearing of native vegetation, with particular reference to the agricultural area. Position Statement No. 2. December 2000. Environmental Protection Authority, Western Australia.

- Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.
- Mattiske, E.M. and Havel, J.J. (1998) Vegetation Complexes of the South-west Forest Region of Western Australia. Maps and report prepared as part of the Regional Forest Agreement, Western Australia for the Department of Conservation and Land Management and Environment Australia.
- 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., Nicoils 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.
- V & C Seminiuk (1997) Mapping and classification of wetlands from Augusta to Walpole in the South-West of Western Australia : report to the Water and Rivers Commission / by the V. & C. Seminiuk Research Group, East Perth, Western Australia.

6. Glossary

Term	Meaning
CALM	Department of Conservation and Land Management (now DEC)
DAFWA	Department of Agriculture and Food
DEC	Department of Environment and Conservation
DEP	Department of Environmental Protection (now DEC)
DoE	Department of Environment
DEWHA	Department of Environment, Water, Heritage and the Arts
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)