



CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

PERMIT DETAILS

Area Permit Number: 5259/1

File Number: 2011/006844-1

Duration of Permit: From 16 November 2012 to 16 November 2020

PERMIT HOLDER

Shire of Esperance

LAND ON WHICH CLEARING IS TO BE DONE

Neridup Location 262 - Reserve 32804, Howick

AUTHORISED ACTIVITY

The Permit Holder shall not clear more than 7.7 hectares of native vegetation within the area shaded yellow on attached Plan 5259/1.

CONDITIONS

1. Period in which clearing is authorised

- (a) The Permit Holder shall not clear more than 2 hectares of native vegetation within a 12 month period.
- (b) The Permit Holder shall not clear native vegetation unless actively mining within 3 months of the authorised clearing being undertaken.
- (c) The Permit Holder shall not clear any native vegetation after 16 November 2015.

2. 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.

3. Dieback and weed control

When undertaking any clearing or other activity authorised under this Permit, the Permit Holder must take the following steps to minimise the risk of the introduction and spread of *weeds* and *dieback*:

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

4. Flora management

- (a) Prior to undertaking any clearing authorised under this Permit, the Permit Holder shall engage a *botanist* to inspect that area for the presence of *priority flora*.
- (b) Where *priority flora* are identified in relation to condition 4(a) of this Permit, the Permit Holder shall ensure that:
 - (i) no clearing of identified *priority flora* occurs, unless approved by the CEO; and

- (ii) no clearing occurs within 20 metres of identified *priority flora*, unless approved by the CEO.

5. Retain vegetative material and topsoil, revegetation and rehabilitation

The Permit Holder shall:

- (a) retain the vegetative material and topsoil removed by clearing authorised under this Permit and stockpile the vegetative material and topsoil in an area that has already been cleared.
- (b) within 3 months following completion of extractive activities, *revegetate* and *rehabilitate* the area shaded yellow on attached Plan 5259/1 by:
 - (i) re-shaping the surface of the land so that it is consistent with the surrounding 5 metres of uncleared land; and
 - (ii) laying the vegetative material and topsoil retained under condition 5(a) on the cleared area
- (c) within 24 months of laying the vegetative material and topsoil on the cleared area in accordance with condition 5(b) of this Permit:
 - (i) engage an *environmental specialist* to determine the species composition, structure and density of the area *revegetated* and *rehabilitated*; and
 - (ii) where, in the opinion of an *environmental specialist*, the composition structure and density determined under condition 5(c)(i) of this Permit will not result in a similar species composition, structure and density to that of pre-clearing vegetation types in that area, *revegetate* the area by deliberately *planting* and/or *direct seeding* native vegetation that will result in a similar species composition, structure and density of native vegetation to pre-clearing vegetation types in that area and ensuring only *local provenance* seeds and propagating material are used.
- (d) Where additional planting or direct seeding of native vegetation is undertaken in accordance with condition 5(c)(ii) of this permit, the Permit Holder shall repeat condition 5(c)(i) and 5(c)(ii) within 24 months of undertaking the additional planting or direct seeding of native vegetation.
- (e) Where a determination by an *environmental specialist* that the composition, structure and density within areas *revegetated* and *rehabilitated* will result in a similar species composition, structure and density to that of pre-clearing vegetation types in that area, as determined in condition 5(c)(i) and 5(c)(ii) of this permit, that determination shall be submitted for the CEO's consideration. If the CEO does not agree with the determination made under condition 5(c)(ii), the CEO may require the Permit Holder to undertake additional *planting* and *direct seeding* in accordance with the requirements under condition 5(c)(ii).

PART III - RECORD KEEPING AND REPORTING

6. 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 flora management pursuant to condition 4 of this Permit:
 - (i) the location of each *priority flora* recorded using a Global Positioning System (GPS) unit set to Geocentric Datum Australia 1994 (GDA94), expressing the geographical coordinates in Eastings and Northings or decimal degrees;
 - (ii) the species name of each *priority flora* identified; and
 - (iii) a copy of the botanists flora survey report.
- (c) In relation to the *revegetation* and *rehabilitation* of areas pursuant to condition 5 of this Permit:
 - (i) the location of any areas *revegetated* and *rehabilitated*, recorded using a Global Positioning System (GPS) unit set to Geocentric Datum Australia 1994 (GDA94), expressing the geographical coordinates in Eastings and Northings or decimal degrees;
 - (ii) a description of the *revegetation* and *rehabilitation* activities undertaken;

- (iii) the size of the area *revegetated* and *rehabilitated* (in hectares);
- (iv) the species composition, structure and density of *revegetation* and *rehabilitation*, and
- (v) a copy of the environmental specialist's report.

7. 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 6 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 16 August 2020, the Permit Holder must provide to the CEO a written report of records required under condition 6 of this Permit where these records have not already been provided under condition 7(a) of this Permit.

DEFINITIONS

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

botanist means a person with specific training and/or experience in the ecology and taxonomy of Western Australian flora;

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;

local provenance means native vegetation seeds and propagating material from natural sources within 30 kilometres of the area cleared;

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;

priority flora means those plant taxa described as priority flora classes 1, 2, 3 or 4 in the *Department's Declared Rare and Priority Flora List for Western Australia* (as amended);

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;

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; and



Roxane Shadbolt
A/MANAGER
NATIVE VEGETATION CONSERVATION BRANCH

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

25 October 2012

Plan 5259/1



LEGEND

- Cadastral
- Road Centrelines
- Clearing Instruments
- Howick 50cm Orthomosaic - Landgate 2007



Scale 1:10000
(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.

R. Shadbolt Date 25/10/17
Roxane Shadbolt

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.: 5259/1

Permit type: Area Permit

1.2. Proponent details

Proponent's name: Shire of Esperance

1.3. Property details

Property: NERIDUP LOCATION 262 (HOWICK 6450)

Local Government Area: Shire of Esperance

Colloquial name:

1.4. Application

Clearing Area (ha)

No. Trees

Method of Clearing

For the purpose of:

7.7

Mechanical Removal

Extractive Industry

1.5. Decision on application

Decision on Permit Application: Grant

Decision Date: 25 November 2012

2. Site Information

2.1. Existing environment and information

2.1.1. Description of the native vegetation under application

Vegetation Description	Clearing Description	Vegetation Condition	Comment
Beard Vegetation Association: 516 - Shrublands; mallee scrub, black marlock (Shepherd et al. 2001).	The application is to clear up to 7.7 hectares of native vegetation within Neridup Location 262 - Reserve 32804,	Degraded: Structure severely disturbed; regeneration to good condition requires intensive management (Keighery 1994).	Vegetation description and condition were determined through aerial imagery (Howick 50cm Orthomosaic - Landgate 2007).
Beard Vegetation Association: 4801 - Shrublands; heath with scattered <i>Nuytsia floribunda</i> on Sandplain (Shepherd et al. 2001).	Howick, for the purpose of base course material extraction.	To Excellent: Vegetation structure intact; disturbance affecting individual species, weeds non-aggressive (Keighery 1994).	

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 up to 7.7 hectares of native vegetation in degraded to excellent (Keighery 1994) condition within Neridup Location 262 - Reserve 32804, Howick for the purpose of base course material extraction. The majority of the vegetation is in excellent (Keighery 1994) condition. Two edges of the application area extend approximately 5 metres into degraded (Keighery 1994) vegetation.

There are several priority flora within the local area (10 kilometre radius). The closest of these is located approximately 1.4 kilometres from the application area. The application area may provide suitable habitat for this species.

The application area is located within a highly cleared and fragmented landscape. The local area (10 kilometre radius) has approximately 10 per cent of the native vegetation remaining. The landscape has been impacted by nearby agricultural land uses and road networks.

The disturbance caused by the proposed clearing will increase the risk of weeds and dieback being introduced into surrounding areas of vegetation. Weed and dieback management practices will assist in mitigating this risk.

Given the excellent condition of the vegetation and possibility for priority flora, the proposed clearing may be at variance to principle (a). An appropriately timed flora survey would be required to determine the presence of priority flora.

Methodology

References:
Keighery 1994

- GIS Databases:
- Howick 50cm Orthomosaic - Landgate 2007
 - Pre-European Vegetation
 - SAC Biodatasets
 - Soils, Statewide

(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

There are two fauna species of conservation significance recorded within the local area (10 kilometre radius).

The local area (10 kilometre radius) provides habitat to Carnaby's Cockatoo (*Calyptorhynchus latirostris*; rare or likely to become extinct, Wildlife Conservation Act 1950; endangered, Environment Protection and Biodiversity Conservation Act 1999). However, given that the vegetation under application is not suitable for roosting or feeding, it is unlikely that the application area provides significant habitat for this species.

The Common Sandpiper (*Actitis hypoleucos*) is a migratory, waterbird protected under international agreement. Given there are no watercourse or wetlands within close proximity to the application area, it is unlikely to be significant habitat for this species.

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

Methodology References:
DEC 2007 -

(c) Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, rare flora.

Comments Proposal is not likely to be at variance to this Principle

There are no rare flora species recorded within the local area (10 kilometre radius). Therefore, the proposed clearing is not likely to be at variance to this principle.

Methodology GIS Databases:
- SAC Biodatasets

(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 records of threatened ecological communities within 10 kilometres of the application area and therefore the proposed clearing is not likely to be at variance to this principle.

Methodology GIS Databases:
- SAC Biodatasets

(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 at variance to this Principle

The application area is located within an extensively cleared and fragmented landscape, with the local area (10 kilometre radius) retaining approximately 10 per cent native vegetation. The IBRA Bioregion (Esperance Plains) and the local government agency (Shire of Esperance) retain approximately 51 per cent and 71 per cent of their respective pre-European extents (Government of Western Australia 2011).

The majority of the application area is mapped as Beard Vegetation Association 5116, which retains approximately 218 908 hectares (69 per cent) of its pre-European extent within the Esperance Plains IBRA Bioregion. A small portion of the application area is mapped as Beard Vegetation Association 4801, which retains approximately 6 305 hectares (11 per cent) of its pre-European extent within the Esperance Plains IBRA Bioregion.

The national objectives and targets for biodiversity conservation in Australia has a target to prevent clearance of ecological communities with an extent below 30 per cent of that present pre-1750, below which species loss appears to accelerate exponentially at an ecosystem level (Commonwealth of Australia 2001).

Given that the local area and vegetation type 4801 retain less than the nationally recommended level of 30 per cent, the proposed clearing is at variance to principle (e).

The applicant proposes to progressively clear and rehabilitate the area under application. This staged approach to clearing and rehabilitation will ensure that there is no further reduction in vegetation.

	Pre-European (ha)	Current Extent (ha)	Remaining (%)	Extent in DEC Managed Lands (%)
IBRA Bioregion* Esperance Plains	2 899 950	1 489 289	51	54
Shire* Shire of Esperance	4 459 701	3 187 495	71	30
Beard Vegetation Association in Bioregion*				
516	318 747	218 908	69	41
4801	58 196	6 305	11	31

*Government of Western Australia 2011

Methodology References:
Commonwealth of Australia 2001
Government of Western Australia 2011
GIS Databases:
- Howick 50cm Orthomosaic - Landgate 2007
- NLWRA, Current extent of Native Vegetation

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

Comments **Proposal is not likely to be at variance to this Principle**
There are no watercourses or wetlands intersecting the application area. Therefore, the proposed clearing is unlikely to be at variance to this principle.

Methodology GIS Databases:
- ANCA Wetlands
- Hydrography, Linear
- Howick 50cm Orthomosaic - Landgate 2007
- Ramsar Wetlands

(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 soil type of the application area is mapped as Xd1, which Northcote et al. (1960-68) describes as gently undulating plain or plateau at low elevation with small granitic hills, some flats, seasonal swamps and talus; and some more strongly undulating land where dissection has begun: chief soils are sandy neutral yellow mottled soils containing variable amounts of ironstone gravel in the surface sand, with leached sands sometimes containing ironstone gravel and underlain by clay substrate at depths of 3-5 ft.

The area under application has an average rainfall of 600mm per annum. Given the low rainfall and porous nature of the soils, the proposed clearing is not likely to cause water erosion.

Due to the sandy nature of the soils, the proposed clearing has a risk of wind erosion due to relative ease at which these materials can be transported by wind.

The applicant proposes to progressively clear and rehabilitate the area under application. This staged approach to clearing will minimise the risk of appreciable land degradation.

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

Methodology References:
Northcote et al. (1960 - 1968)
GIS Databases:
- Mean Annual Rainfall
- Soils, Statewide

(h) Native vegetation should not be cleared if the clearing of the vegetation is likely to have an impact on the environmental values of any adjacent or nearby conservation area.

Comments **Proposal is not likely to be at variance to this Principle**
The nearest DEC managed land to the application area is Alexander Nature Reserve, which is located approximately 10 kilometres southwest of the application area.

This application is not likely to be at variance to this principle.

Methodology GIS Databases:
- DEC Tenure

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

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

The groundwater salinity within the application area is 14000 - 35000 milligrams per litre of Total Dissolved Solids. This level of groundwater salinity is considered to be highly saline. By progressively clearing and rehabilitating the area under application, increases in groundwater salinity are likely to be minimised.

There are no watercourses or wetlands in close proximity to the application area, therefore surface water is not likely to be negatively impacted by the proposed clearing.

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

Methodology GIS Databases:
- Groundwater Salinity, Statewide
- Hydrography, Linear

(j) Native vegetation should not be cleared if clearing the vegetation is likely to cause, or exacerbate, the incidence or intensity of flooding.

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

Given the low annual rainfall (600mm per annum) and the porous nature of the soils mapped over the application area, the proposed clearing is not likely to increase the incidence or intensity of flooding.

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

Methodology GIS Databases:
- Mean Annual Rainfall
- Soils, Statewide

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

Comments

No public submissions have been received in response to this application.

ICMS 10217 is located over the vegetation proposed to be cleared. This ICMS concerns illegal clearing by the Shire of Esperance.

Methodology GIS Databases:
- ICMS polygons

4. References

- Commonwealth of Australia (2001) National Objectives and Targets for Biodiversity Conservation 2001-2005, Canberra.
- DEC (2007 -) NatureMap: Mapping Western Australia's Biodiversity. Department of Environment and Conservation. URL: <http://naturemap.dec.wa.gov.au/>. Accessed 26/09/2012.
- Government of Western Australia (2011); 2011 Statewide Vegetation Statistics incorporating the CAR Reserve Analysis (Full Report). WA Department of Environment and Conservation, Perth.
- Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western 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., Beeston, G.R., and Hopkins, A.J.M. (2001), Native Vegetation in Western Australia. Technical Report 249. Department of Agriculture Western Australia, South Perth.

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)