



CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

PERMIT DETAILS

Area Permit Number: 5279/1

File Number: 2011/006844-1

Duration of Permit: From 7 December 2012 to 7 December 2019

PERMIT HOLDER

Shire of Esperance

LAND ON WHICH CLEARING IS TO BE DONE

Lot 1610 on Deposited Plan 167649 – Reserve 25883, Myrup

AUTHORISED ACTIVITY

The Permit Holder shall not clear more than 3.71 hectares of native vegetation within the area hatched yellow on attached Plan 5279/1.

CONDITIONS

1. Period in which clearing is authorised

The Permit Holder shall not clear any native vegetation after 7 December 2014.

2. 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.

3. 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 5279/1 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 3(a) on the cleared area
- (c) within 24 months of laying the vegetative material and topsoil on the cleared area in accordance with condition 3(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 3(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 3(c)(ii) of this permit, the Permit Holder shall repeat condition 3(c)(i) and 3(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 3(c)(i) and 3(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 3(c)(ii), the CEO may require the Permit Holder to undertake additional *planting* and *direct seeding* in accordance with the requirements under condition 3(c)(ii).

PART III - RECORD KEEPING AND REPORTING

4. 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 the *revegetation* and *rehabilitation* of areas pursuant to condition 3 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.

5. 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 4 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 7 September 2019, the Permit Holder must provide to the CEO a written report of records required under condition 4 of this Permit where these records have not already been provided under condition 5(a) of this Permit.

DEFINITIONS

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

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

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

dry conditions means when soils (not dust) do not freely adhere to rubber tyres, tracks, vehicle chassis or wheel arches;

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

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

local provenance means native vegetation seeds and propagating material from natural sources within 50 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;

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; and

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

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*.



M Warnock
MANAGER, COMPLIANCE AND AUDIT SECTION
NATIVE VEGETATION CONSERVATION BRANCH

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

15 November 2012

Plan 5279/1



LEGEND

- | | |
|-----------------------------|---|
| Clearing Instruments | <input type="checkbox"/> Recently added |
| Areas Approved to Clear | <input type="checkbox"/> Coverage |
| Road Centrelines | Esperance Causeway 50cm |
| Cadastre | Orthomosaic - Landgate |
| Image Index | 2007 |
| (cont) | |



Scale 1:9396
(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.

M. Warnock Date *15/11/12*

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.



1. Application details

1.1. Permit application details

Permit application No.: 5279/1

Permit type: Area Permit

1.2. Proponent details

Proponent's name: Shire of Esperance

1.3. Property details

Property: LOT 1610 ON PLAN 167649 (Lot No. 1610 QUARRY MYRUP 6450)

Local Government Area: Shire of Esperance

Colloquial name:

1.4. Application

| | | | |
|--------------------|-----------|--------------------|---------------------|
| Clearing Area (ha) | No. Trees | Method of Clearing | For the purpose of: |
| 3.71 | | Mechanical Removal | Extractive Industry |

1.5. Decision on application

Decision on Permit Application: Grant

Decision Date: 15 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: 931 - Medium woodland; yate (Shepherd et al. 2001). | The application is to clear up to 3.71 hectares of native vegetation within Lot 1610 on Plan 167649 - Reserve 25883, Myrup for the purpose of rock quarrying. | Completely Degraded: No longer intact; completely/almost completely without native species (Keighery 1994) To Good: Structure significantly altered by multiple disturbance; retains basic structure/ability to regenerate (Keighery 1994) | Vegetation description and condition were determined through aerial imagery (Esperance Causeway 50cm Orthomosaic - Landgate 2007). |

3. Assessment of application against clearing principles

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

Comments

Proposal is not likely to be at variance to this Principle

The application is to clear up to 3.71 hectares of native vegetation within Lot 1610 on Plan 16749 - Reserve 25883, Myrup, for the purpose of rock quarrying. The vegetation ranges from good to completely degraded (Keighery 1994) condition.

The area under application has previously been disturbed through quarrying and the development of numerous tracks (DEC 2012).

There are numerous records of priority flora within the local area (10 kilometre radius). The closest species is located approximately three kilometres from the application area. There are no records of priority flora species that occur on the same soil and vegetation complex as the application area within the local area (10 kilometre radius).

The application area is located within a highly cleared and fragmented landscape. The local area (10 kilometre radius) has approximately 25 per cent of the native vegetation remaining. The proposed clearing is within a landscape that 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.

The proposed clearing is not likely to be at variance to this principle.

Methodology References:
DEC 2012
Keighery 1994

GIS Databases:
- Esperance Causeway 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 five threatened, three priority, two specially protected and numerous protected under international agreement fauna species recorded within the local area (10 kilometre radius) (DEC 2007-).

The majority of these species are marine birds and marine reptiles, and are therefore unlikely to be impacted by the proposed clearing.

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). A Department of Environment and Conservation site inspection concluded that the vegetation under application is unlikely to provide feeding and breeding habitat for cockatoos (DEC 2012).

The proposed clearing is not likely to be at variance to this principle.

Methodology References:
DEC 2007
DEC 2012

(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 may be 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 25 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 application area is mapped as Beard Vegetation Association 931, which retains approximately 10 305 hectares (49 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).

The local area retains less than the national recommended threshold therefore the proposed clearing may be at variance to principle (e).

| | Pre-European (ha) | Current Extent Remaining (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 931 | 20 857 | 10 305 | 49 | 17 |
| *Government of Western Australia 2011 | | | | |

Methodology References:
Commonwealth of Australia 2001
Government of Western Australia 2011

GIS Databases:
- Esperance Causeway 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:
- Hydrography, Linear
- Esperance Causeway 50cm Orthomosaic - Landgate 2007

(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 area is mapped as having soil types Xd1 and VA68.

Xd1 is described by Northcote et al. (1960-1968) 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.

Va68 is described by Northcote et al. (1960-1968) as stream valleys--broken terrain with some steep and often rocky valley side slopes, mesas and buttes, stream terraces and levees, some swamps: chief soils of the valley side slopes seem to be hard alkaline and neutral yellow mottled soils which may contain ironstone gravel.

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. Given the application area is surrounded by vegetation, wind erosion is likely to be minimal.

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 closest conservation area to the proposed clearing is the Woody Lake Nature Reserve, which is located approximately one kilometre from the application area. This nature reserve is one of several conservation areas

associated with the Lake Warden system.

Given the distance to the nearest conservation area the application is not likely to be at variance to this principle.

Methodology GIS Databases:
- DEC Managed Lands

(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 500 - 1000 milligrams per litre of Total Dissolved Solids. This level of groundwater salinity is considered to be marginal.

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:
- ANCA Wetlands
- Groundwater Salinity
- Hydrography, Linear
- RAMSAR wetlands

(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 rainfall and porous nature of the soils, the proposed clearing is not likely to increase the incidence or intensity of flooding.

Therefore the application is not likely to be at variance to this principle.

Methodology GIS Databases:
- Esperance Causeway 50cm Orthomosaic - Landgate 2007
- Soils, Statewide

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

Comments

The area under application falls within the Esperance Groundwater Area which is an area proclaimed under the Rights in Water and Irrigation Act 1914. The Department of Water has advised that a licence to construct a bore/well/soak and the taking of groundwater is required (DoW, 2012). The Department of Water confirms that it has not received a ground water licence application from the Shire of Esperance (DoW, 2012).

Reserve 25883 is reserved for the purpose of 'quarry'. The Shire of Esperance holds a management order over this property.

Two Aboriginal Sites of Significance cover the area under application, being Bukenerup Road and Coramup. The applicant will be notified of their responsibilities under the Aboriginal Heritage Act 1972.

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

Methodology References:
DoW 2012

GIS Database:
- RIWI, Groundwater Areas
- Aboriginal Sites of Significance

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 October 2012
- DEC (2012) Regional Advice for Clearing Permit Application CPS 5279/1, Lot 1610 on Plan 16749 - Reserve 25883, Myrup. Department of Environment and Conservation, Western Australia (DEC REF: A559056).
- DoW (2012) Advice for Clearing Permit Application CPS 5279/1. Department of Water, Western Australia (DEC Ref: A560514).
- 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) |