



CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

PERMIT DETAILS

Area Permit Number: 5094/1
File Number: 2011/006889-1
Duration of Permit: From 17 August 2012 to 17 August 2014

PERMIT HOLDER

Shire of Quairading

LAND ON WHICH CLEARING IS TO BE DONE

Lot 28882 on Plan 216451 (Reserve 16405) (QUAIRADING 6383)
Strickland Road reserve (PIN: 1309557) (QUAIRADING 6383)

AUTHORISED ACTIVITY

The Permit Holder shall not clear more than 4 hectares of native vegetation within the area hatched yellow on attached Plan 5094/1.

CONDITIONS

1. 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*:
 - (i) clean earth-moving machinery of soil and vegetation prior to entering and leaving the area to be cleared;
 - (ii) ensure that no *weed*-affected soil, *mulch*, *fill* or other material is brought into the area to be cleared; and
 - (iii) 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.

DEFINITIONS

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

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; and

weeds 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, appearing to be "Kelly Faulkner", written over a horizontal line.

Kelly Faulkner
MANAGER
NATIVE VEGETATION CONSERVATION BRANCH

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

26 July 2012

Plan 5094/1



LEGEND

-  Road Centrelines
 -  Clearing Instruments
 -  Areas Approved to Clear
 -  Cadastre for labelling
- Corrigin North 1.4m
Orthomosaic - Landgate 2001



Scale 1:24000
(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.

 Date 26/7/12

Kelly Faulkner
Officer with delegated authority under Section 20 of the Environmental Protection Act 1988

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.: 5094/1
Permit type: Area Permit

1.2. Proponent details

Proponent's name: Shire of Quairading

1.3. Property details

Property: LOT 28882 ON PLAN 216451 (QUAIRADING 6383)
ROAD RESERVE (QUAIRADING 6383)

Local Government Area: Shire of Quairading
Colloquial name: Strickland Road

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
4		Mechanical Removal	Fence Line Maintenance

1.5. Decision on application

Decision on Permit Application: Grant
Decision Date: 26 July 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
Mapped Beard vegetation association 1049 is described as Medium woodland; wandoo, York gum, salmon gum, morrel & gimlet (Shepherd et al 2001).	The application proposes to clear 4 ha of native vegetation for the purpose of constructing a rabbit proof fence and track maintenance.	Very Good; Vegetation structure altered; obvious signs of disturbance (Keighery 1994)	The condition of the vegetation was determined by digital imagery (- Corrigin North 1.4m Orthomosaic - Landgate 2001)
Mapped Beard vegetation association 1147 is described as Shrublands; scrub-heath in the south-east Avon-Wheatbelt Region (Shepherd et al 2001).			

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 proposes to clear 4 ha of native vegetation for the purpose of constructing a rabbit proof fence and track maintenance around a local government reserve managed for conservation that contains known populations of priority flora species.

Numerous priority flora have been recorded within the local area (5km) including *Austrostipa pycnostachya*, *Leucopogon cymbiformis*, *Stylidium squamellosum*, *Acacia lirellata* subsp. *Lirellata*, *Banksia horrida*, *Gunniopsis rubra*, *Hemiandra coccinea*, *Hibbertia glabriuscula*, *Opercularia rubiodes*, *Synaphea tripartite* and *Thysanotus tenuis* which have been identified as possibly being in close proximity to the proposed fence construction. The impacts on these priority flora are considered to be low. This is based on low likelihood of the species occurring within the area of application and the low impact (i.e. 4 ha over a long and linear area) the clearing is expected to have on these populations (DEC 2012). In addition, the proposed clearing to construct the rabbit proof fence around a reserve will largely follow existing tracks and firebreaks and therefore should minimise vegetation being cleared. The construction of the fence is expected to have an overall positive effect on populations of priority flora species that occur within this reserve by reducing the impact of rabbits.

Six species of Declared Rare Flora (DRF) have been recorded within the local area (5km). *Hakea aculeata* may occur within the application area, however impact of the clearing is considered minimal as there are approximately 1000 mature plants outside and in close proximity to the proposed clearing area (DEC 2012).

Two Priority Ecological Communities (PEC) Tamma-Dryandra-Eremaea shrubland on cream sands of the Ulva Landform Unit and *Banksia prionotes* and *Xylomelum angustifolium* low woodlands on transported yellow sands - 'low level sand plains' have been mapped within the application area. The proposed rabbit proof fence has been developed in liaison with the DEC regional and district staff and is for the purpose of increasing

protection to the PEC's and significant flora species from rabbits and other impacts. The fence construction may have some minimal impact on the PEC's but is expected to improve conservation outcomes for the significant biodiversity assets that occur within the boundary of the proposed clearing area.

Three fauna species listed as rare or likely to become extinct (Wildlife Conservation Act 1950) have been recorded within a 20 km radius of the application area; Shield-backed trapdoor spider (*Idiosoma nigrum*), Bilby (*Macrotis lagotis*) and Red-tailed Phascogale (*Phascogale calura*) (DEC 2007-). However given the proposed clearing is long and linear and occurs within a vegetation remnant that is 237 hectares in size containing vegetation in similar of better condition, it is not considered for the application area to contain significant fauna habitat.

The proposed clearing area may impact upon priority flora, DRF and two possible PEC's, however the impact is considered to be low and it is not expected to have an impact on the conservation status of the flora species and priority ecological communities within the reserve (DEC 2012).

Given the above the clearing as proposed may be at variance to this principle. Weed management will reduce the impacts of the proposed clearing

Methodology

References:

- DEC (2012)
- Keighery (1994)
- DEC (2007-)
- Government of Western Australia (2011)

GIS Databases:

- Corrigin North 1.4m Orthomosaic - Landgate 2001
- SAC Biodatasets - Accessed 22 June 2012

(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

Three species listed as rare or likely to become extinct under the Wildlife Conservation Act 1950 have been recorded within a 20km radius of the proposed clearing; Shield-backed trapdoor spider (*Idiosoma nigrum*), Bilby (*Macrotis lagotis*) and Red-tailed Phascogale (*Phascogale calura*) (DEC 2007-)

The vegetation proposed to be clearing is in a Very Good (Keighery 1994) condition and therefore may provide habitat for fauna indigenous to Western Australia. However given the proposed clearing is long and linear and occurs within a vegetation remnant that is 237 hectares in size containing vegetation in similar of better condition, it is not considered for the application area to contain significant fauna habitat.

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

Methodology

Reference:

- DEC (2007-)
- Keighery (1994)

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

Comments

Proposal may be at variance to this Principle

Six species of Declared Rare Flora (DRF) have been recorded within the local area. (5km)

One population of *Hakea aculeata* occurs within the application areas. The Shire of Quairading has advised approximately 1000 senescent mature plants are located within the reserve. The Shire of Quairading does not intend to take any plants and have applied for a DRF permit to cover accidental damage that may occur during the installation of the rabbit proof fence (DEC 2012a). Therefore, the proposed clearing is considered to have low impact on this DRF species may impact on habitat for rare flora.

The proposed clearing is for a rabbit proof fence which is aimed at reducing the impacts rabbits have on the DRF (DEC 2012).

Acacia volubilis, *Banksia cuneata* and *Calectasia pignattiana* and *Jacksonia quairading* all occur within the local area (5km radius). The application has been surveyed and none of these surveys located these species of DRF within the application area. The clearing as proposed is unlikely to have a significant impact on these DRF (DEC 2012).

Conospermum galeatum has been recorded within the application area. However this species is only known from one extant population within the reserve to the north east of the Quairading town centre. The application area has been surveyed by DEC for this species of DRF and it has not been relocated within the application area. Therefore it is unlikely the clearing as proposed will have a significant impact on the conservation status of the DRF (DEC 2012).

Given the above the clearing as proposed may be at variance to this principle

Methodology Reference:
DEC (2012)

GIS Databases:
-Sac Biodata sets - accessed 22 June 2012

(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

The closest threatened ecological community (TEC) is the Critically Endangered 'Toolibin - Perched wetlands of the Wheatbelt Region with extensive stands of Casuarina obesa and Melaleuca strobophylla.' This community has been recorded approximately 44km (to the buffer) south west of the applied clearing area within different mapped vegetation types.

Given the distance to the nearest TEC, the vegetation under application is not likely to comprise the whole or a part of, or is necessary for the maintenance of a TEC and therefore the proposed clearing is considered not likely to be at variance to this principle.

Methodology GIS Databases:
-SAC Biodatasets - Accessed 22 June 2012
-Pre-European Vegetation

(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 area under application is located within the Avon Wheatbelt Interim Biogeographic Regionalisation of Australia (IBRA) bioregion. This IBRA bioregion has approximately 18 per cent of its Pre European vegetation extent remaining (Government of Western Australia 2011). The application occurs within the Shire of Quairading which is extensively cleared with approximately 9 per cent of its Pre European vegetation extent remaining.(Government of Western Australia).

The vegetation under application is mapped as Beard Vegetation Associations 1049 and 1147 which have approximately 7 and 9 per cent of their Pre European extent remaining in the Warren bioregion respectively (Government of Western Australia 2011).

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

The area under application may contain a high level of biological diversity, may impact rare flora and may impact upon two priority ecological communities. However, given the proposed clearing is to occur along existing tracks and firebreaks the clearing as proposed is not considered to have a significant impact on the conservation status of these species.

Given the above, the proposed clearing may at variance to this principle. It is noted that the main purpose of the proposed clearing is to construct a rabbit proof fence around a local government reserve managed for conservation . The construction of the fence is expected to have an overall positive effect on threatened flora value of the reserve.

	Pre-European (ha)	Current Extent Remaining (ha)	Remaining (%)	Extent in DEC Managed Lands (%)
IBRA Bioregion*				
Avon Wheatbelt	9,517,110	1,736,215	18%	10%
Shire*				
Shire of Quairading	201,679	18,906	9%	8%
Beard Vegetation Association in Bioregion*				
1049	833,385	56,987	7%	6%
1147	42,855	4,074	9%	10%

*Government of Western Australia (2011)

Methodology References:

- Commonwealth of Australia (2001)
- Government of Western Australia (2011)

GIS Databases:

- Corrigin North 1.4m Orthomosaic - Landgate 2001
- Local Government Authorities - Landgate
- Pre-European 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

No watercourses or wetlands are located within the application area. The closest minor watercourse is located approximately 100m north of the application area.

An unnamed wetland is located approximately 1.5km west of the application area.

Given the distance to the closest watercourse, the application area is long and linear and occurring on existing tracks and firebreaks the clearing as proposed is not likely to be growing in an environment associated with a watercourse or wetland.

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

Methodology GIS Databases:
-Hydrology, linear

(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

There are two soil types mapped within the application area which Northcote et al (1960-68) describes as:

Ms7 :Gently sloping to gently undulating plateau areas with long and very gentle slopes and, in places, abrupt erosional scarps: chief soils are on gently convex slopes of the plateau, sandy yellow earths containing ironstone gravels and with clay D horizons; on depositional slopes flanking erosional sites, yellow earthy sands sometimes with ironstone gravels at depth; on erosional ridges and slopes, leached sands containing ironstone gravels and overlying mottled or pallid-zone clays; and sandy depressions of leached sands with some soils.

Qb29: Rolling to hilly with some steep slopes; gneissic rock outcrops common: chief soils are hard neutral red soils. Associated are soils on slopes; patches of and soils with some gilgai also on slopes.

Given the application area is long and linear and mostly follows existing tracks and firebreaks the clearing as proposed is not expected to cause appreciable land degradation.

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

Methodology References:
- Northcote et al (1960-68)

GIS Databases:
- 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

Numerous nature reserves are located within the local area (5km). The closest nature reserve being Quairading Spring Nature Reserve is located approximately 2.5 km south of the application area.

Given the distance to the closest nature reserve the clearing as proposed is not likely to have an impact on the environmental values of nearby conservation areas.

Given the above, the clearing as proposed 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 areas under application lies within the Swan Avon_ Salt River Catchment of the Avon River Basin

No watercourses or wetlands are located within the application area. The closest minor watercourse is located approximately 100m north of the application area.

The salinity risk across the site ranges from low to high with a groundwater salinity ranging from 14000 - 35000mg/L total dissolved solids. The salinity risk across the site ranges from low to high with a groundwater salinity ranging from 14000 - 35000mg/L total dissolved solids.

Given the application area is long and linear and occurring on existing tracks and firebreaks the clearing as proposed is not likely to cause deterioration in the quality of surface and underground water.

Methodology GIS Databases:
-Hydrology linear
-Groundwater Salinity

(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 proposed clearing of 4 ha over a long and linear area located within a large reserve (237ha) of predominately Very Good (Keighery) vegetation is not expected to increase the incidence or intensity of flooding.

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

Methodology Reference:
-Keighery (1994)

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

Comments

The application proposes to clear 4 ha of native vegetation for the purpose of constructing a rabbit proof fence and track maintenance. It is noted that the main purpose of the proposed clearing is to construct a rabbit proof fence around a local government reserve managed for conservation, the construction of the fence is expected to have an overall positive effect on all vegetation within this area.

The applicant has obtained a 'Permit to Take' from the Species and Communities Branch, Department of Environment and Conservation, for accidental damage of *Hakea aculeata* (DEC, 2012).

The area under application is zoned as 'Farming'.

The Shire holds a management order for the property under application for the purpose of "Water Catchment and Landscape Protection" only.

No Aboriginal Sites of Significance are located within the application area.

Methodology GIS Database:
-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 22 June 2012
- DEC (2012) Species and Communities Advice (Flora Advice) for Clearing Permit CPS 5904/1. Department of Environment and Conservation. Species and Communities Branch. Western Australia. (DEC Ref: A526616)
- 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)