



CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

PERMIT DETAILS

Area Permit Number: 6283/1
File Number: DER2014/002297-1
Duration of Permit: From 25 April 2015 to 25 April 2017

PERMIT HOLDER

Van Hua Tran
Thuc Hue Ma

LAND ON WHICH CLEARING IS TO BE DONE

Lot 6865 on Deposited Plan 167215 (Bullsbrook 6084)

AUTHORISED ACTIVITY

The Permit Holder shall not clear more than 10 hectares of native vegetation within the area cross hatched yellow on attached Plan 6283 /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) ensure that no *dieback* or *weed*-affected soil, *mulch*, *fill* or other material is brought into the area to be cleared; and
- (c) 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;

soil disease status means soil types either infested, not infested, uninterpretable or not interpreted with a pathogen.

weed/s means any plant -

- (a) that is a declared pest under section 22 of the *Biosecurity and Agriculture Management Act 2007*; or
- (b) published in a Department of Parks and Wildlife Regional Weed Rankings Summary, regardless of ranking; or
- (c) not indigenous to the area concerned.

A handwritten signature in black ink, appearing to read "M Warnock".

M Warnock
SENIOR MANAGER
CLEARING REGULATION

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

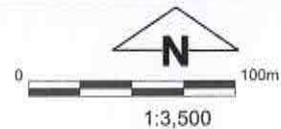
26 March 2015

Plan 6283/1



Legend

-  Cadastre
-  Roads
-  Imagery
-  Clearing Instruments Activities
-  POI



(Approximate when reproduced at A4)

GDA 94 (Lat/Long)

Geocentric Datum of Australia 1994

M Warnock Date 26-3-15

M Warnock

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



GOVERNMENT OF
WESTERN AUSTRALIA
WA Crown Copyright 2015



1. Application details

1.1. Permit application details

Permit application No.: 6283/1
Permit type: Area Permit

1.2. Proponent details

Proponent's name: Mr V H Tran and Mrs T H Ma

1.3. Property details

Property: LOT 6865 ON DEPOSITED PLAN 167215, BULLSBROOK
Local Government Authority: City of Swan

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
10		Mechanical Removal	Horticulture

1.5. Decision on application

Decision on Permit: Grant
Decision Date: 26 March 2015

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>Mapped Beard vegetation association 949 is described as low woodland; banksia (Shepherd et al 2001).</p> <p>Heddle vegetation complex - Bassendean Complex-North Vegetation ranges from woodland of <i>Eucalyptus marginata</i> (Jarrah) - <i>Allocasuarina fraseriana</i> (Sheoak) - Banksia species to low woodland of <i>Melaleuca</i> species, and sedgelands on the moister sites. This area includes the transition of <i>Eucalyptus marginata</i> (Jarrah) to <i>Eucalyptus tottiana</i> (Pricklybark) in the vicinity of Perth (Hedde et al 1980).</p>	<p>The proposed clearing of 10 hectares of native vegetation within Lot 6865 on Deposited Plan 167215, Bullsbrook, for the purpose of establishing a market garden.</p>	<p>Degraded; Structure severely disturbed; regeneration to good condition requires intensive management (Keighery 1994)</p> <p>To</p> <p>Completely Degraded: No longer intact; completely/almost completely without native species (Keighery 1994)</p>	<p>The vegetation description and condition was determined through a site inspection undertaken by the Department of Environment Regulation (DER 2014).</p> <p>The vegetation under application is in a completely degraded to degraded (Keighery 1994) condition, which predominantly consists of <i>Xanthorrhoea</i> sp. <i>Macrozamia</i> sp. and some scattered banksia sp. There is little understorey present being predominantly dominated by weeds (DER 2014).</p>

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 for the proposed clearing of 10 hectares of native vegetation within Lot 6865 on Deposited Plan 167215, Bullsbrook, for the purpose of establishing a market garden.

The vegetation under application is in a completely degraded to degraded (Keighery 1994) condition, which predominantly consists of *Xanthorrhoea* sp., *Macrozamia* sp. and some scattered Banksia sp. There is little understorey present being predominantly dominated by weeds (DER 2014).

Numerous priority flora species have been recorded within the local area (10 kilometre radius). The closest being a Priority 3 flora species located approximately three kilometres east of the area under application. This species is found on grey sand, sandy clay on swamps and creeks edges (Western Australian Herbarium 1998-). Suitable habitat for this species is not located within the area under application. The area under application is in a degraded to completely degraded (Keighery 1994) condition with limited understorey present. Therefore the clearing as proposed is not likely to impact upon the conservations status of any priority flora species.

Seven species of rare flora have been recorded within the local area (10 kilometre radius). Suitable habitat for these species is not likely to be located within the area under application. Therefore the clearing as proposed is not likely to impact upon rare flora species.

Seven fauna species listed as rare or likely to become extinct under the Wildlife Conservation Act 1950 have been recorded within the local area (10 kilometre radius) (DPaW 2007-). Given the completely degraded to degraded (Keighery 1994) condition of the vegetation under application, the application area is not likely to contain significant habitat for fauna.

The area under application is located adjacent to vegetation in very good (Keighery 1994) condition. The clearing proposed may indirectly impact this remnant vegetation through the spread of weeds and dieback. Weed and dieback management practices will help mitigate this risk.

Given the above the vegetation under application is not likely to comprise a high level of biological diversity.

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

Methodology

References:

- DPaW (2007-)
- DER (2014)
- Keighery (1994)
- Western Australian Herbarium (1998-)

GIS Databases:

- SAC Biodata sets accessed - October 2014

(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

Seven fauna species listed as rare or likely to become extinct under the Wildlife Conservation Act 1950 have been recorded within the local area (10 kilometre radius) being: Australasian Bittern (*Botaurus poiciloptilus*), Carnaby's Cockatoo (*Calyptorhynchus latirostris*), Chuditch (*Dasyurus geoffroii*), bee (*Leioproctus douglasiellus*), Southern Brush-tailed Phascogale (*Phascogale tapoatafa* subsp. *tapoatafa*), Western Swamp Turtle (*Pseudemydura umbrina*) and Australian Painted Snipe (*Rostratula benghalensis* subsp. *australis*) (DPaW 2007-).

The area under application is in a completely degraded to degraded (Keighery 1994) condition which predominantly consists of *Xanthorrhoea* sp. *Macrozamia* sp. and some scattered *Banksia* sp.

Given the condition of the vegetation under application the subject area is not likely to contain significant habitat for fauna. Suitable habitat in a better condition is located within the remnant vegetation adjacent to the north and south of the application area.

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

Methodology

References:

- DPaW (2007-)
- Keighery (1994)

GIS Databases:

- SAC Biodata sets accessed - October 2014

(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

Seven species of rare flora have been recorded within the local area (10 kilometre radius).

The first rare flora species grows in open heath in winter-wet, sand over limestone, or ironstone at sites with a high water table (Brown et al 1998). The second rare flora species grows in open heath in winter-wet, deep peaty sand with other shrubs (Brown et al 1998). The third rare flora species usually grows amongst sedges under paperbarks bordering a winter-wet swamp (Brown et al 1998). The fourth rare flora species has been recorded within winter wet areas (Western Australian Herbarium 1998-). No watercourses or wetlands are located within the area under application and therefore suitable habitat for these species is not likely to be located within the area under application.

The fifth rare flora species grows on lateritic sandy clay or yellow colluvial sand in heath or *Banksia* or jarrah woodland (Brown et al 1998). The sixth rare flora species grows in deep sand soil in mixed woodland of jarrah and *Banksia* and favours areas of lush undergrowth. The seventh rare flora species is confined to shallow grey sands over laterite. It is found amongst other low shrubs in low open woodland of jarrah, wandoo and marri over heath dominated by *Grevilleas*, *Dryandras*, *Hakeas* and *Acacias* (Brown et al 1998). Suitable habitat for these species is not present within the application area and therefore the clearing as proposed is not likely to impact upon these species.

Methodology The clearing as proposed is not likely to be at variance to this principle.
References:
- Brown et al (1998)
- Western Australian Herbarium (1998-)

GIS Databases:
- SAC Biodata sets accessed - October 2014

(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 'Communities of Tumulus Springs' located approximately one kilometre east of the area under application. The vegetation under application is not representative of this TEC.

The vegetation proposed to be cleared is not likely to be necessary for the maintenance of a threatened ecological community.

Methodology The clearing as proposed is not likely to be at variance to this principle.
GIS Databases:
- SAC Biodata sets accessed - October 2014

(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 likely to be at variance to this Principle**
The vegetation under application is within the Swan Coastal Plain IBRA Bioregion and has been mapped as comprising of Beard vegetation association 949 and Heddle vegetation complex Bassendean Complex - North. The mapped Beard and Heddle vegetation complexes under application have approximately 57 and 27 per cent respectively of their pre-European vegetation remaining (Government of Western Australia, 2013).

The local area (10 kilometre radius) surrounding the application has approximately 40 per cent of its pre-European vegetation remaining.

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).

Heddle vegetation complex Bassendean Complex - North retains less than the 30 per cent threshold. However, the vegetation within the area under application is not representative of this vegetation complex.

The vegetation under application is in a completely degraded to degraded (Keighery 1994) condition, does not comprise a high biological diversity, contain significant habitat for fauna or is likely to impact upon rare or priority flora. Therefore the vegetation under application is not considered to be a significant remnant.

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

	Pre-European (ha)	Current Extent (ha)	Remaining (%)	Extent in DPaW Managed Lands (%)
IBRA Bioregion*				
Swan Coastal Plain	1,501,221.92	586,975.23	39	36
Shire*				
City of Swan	67,698	32,088	47	50
Beard Vegetation Association in Bioregion*				
949	209,983.25	121,216.29	57	55
Heddle Vegetation Complex **				
Bassendean Complex-North	87,477	23,624	27	1

* Government of Western Australia (2013)
** Heddle (1980)

Methodology References:
- Commonwealth of Australia (2001)
- Government of Western Australia (2013)
- Heddle (1998)
- Keighery (1994)

GIS Databases:
- Perth Metropolitan Area Central 15cm Orthomosaic - Landgate 2012
- Local Government Authorities - Landgate

(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 intersect the area under application. A Resource Enhancement Wetland is located approximately 100 metres north of the area under application.

A site inspection undertaken by DER (2014) did not identify riparian vegetation.

Given the distance to the closest wetland, the vegetation under application is not considered to be growing in association with a watercourse or wetland.

Methodology The clearing as proposed is not likely to be at variance to this principle.
References:
- DER (2014)

GIS Databases:
- Geomorphic Wetlands, (Mgt Categories), Swan Coastal Plain

(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 within soil type Cb39: subdued dune-swale terrain: chief soils are leached sands (Northcote et al. 1960 - 1968).

The Commissioner of Soil and Land Conservation (2014) has advised that the risk of land degradation as a result of the proposed clearing is low. In addition there is no direct connection for surface water flow from the property to the tributary of the Ellen Brook located approximately 1.7 kilometres to the east of the application area, the likelihood of the proposed market garden exporting nutrients to the Ellen Brook is low (Commissioner of Soil and Land Conservation 2014).

The risk of wind erosion causing land degradation is high during establishment of the crops, however this risk would be reduced once horticultural crops are established. Wind erosion is unlikely on the vegetation proposed to be cleared once high density crops are established. A cover crop should be grown between horticultural crops to minimise any wind erosion risk (Commissioner of Soil and Land Conservation 2014).

Water erosion, water logging and flooding are unlikely on the soil types present within the area under application (Commissioner of Soil and Land Conservation 2014).

Methodology Given the above the clearing as proposed is not likely to be variance to this principle.
References:
- Commissioner of Soil and Land Conservation (2014)
- Northcote et al (1960 - 1968)

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**
Bush Forever Site 462 is located approximately 20 metres north of the area under application. Kirby Road separates Lot 6865 and Bush Forever Site 462.

Neaves Road Nature Reserve is located approximately 900 metres west of the area under application.

Given that Kirby Road separates the application area and Bush Forever Site 462, the clearing as proposed is not likely to impact upon any conservation areas.

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

Methodology GIS Databases:
- Bush Forever
- Parks and Wildlife, 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**
No watercourses or wetlands intersect the area under application. A Resource Enhancement Wetland is located approximately 100 metres north of the area under applicant. Given the distance to the closest wetland

the clearing as proposed is not likely to impact upon surface water quality of this wetland.

Groundwater Salinity is mapped between 500 - 1000 milligrams per litre total dissolved solids which is considered to be marginal. Given the completely degraded to degraded (Keighery 1994) condition of the vegetation under application the clearing as proposed is not likely to impact upon groundwater quality.

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

Methodology

Reference:

- Keighery (1994)

GIS Databases:

- Geomorphic Wetlands, (Mgt Categories), Swan Coastal Plain

- Groundwater salinity

- 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 sandy soils present within the application area the clearing proposed is not likely to cause or exacerbate the incidence or intensity of flooding (Commissioner of Soil and Land Conservation 2014).

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

Methodology

References:

- Commissioner of Soil and Land Conservation (2014)

Planning instruments and other relevant matters.

Comments

The City of Swan (2015) granted planning approval for the change of use to agriculture intensive on 10 March 2015.

The area under application is located within Swan Groundwater Area and Swan River System Surface Water Area proclaimed under the Rights in Water and Irrigation Act 1914 (RIWI Act). A 'Licence To Construct or Alter Well' under section 26D of the RIWI Act was issued to the application on 23 December 2014 (DoW 2014).

One submission has been received in relation to this application which raised concerns regarding impacts to significant fauna habitat, a wildlife corridor and eutrophication (Submission 2014). These issues have been addressed in principles (b) and (g).

Methodology

References:

City of Swan (2015)

DER (2014)

DoW (2014)

Submission (2014)

4. References

- Brown A., Thomson-Dans C. and Marchant N.(1998). Western Australia's Threatened Flora, Department of Conservation and Land Management, Western Australia.
- City of Swan (2015) Notice of Determination of Planning Approval – Lot 6865 Kirby Road, Bullsbrooke. Western Australia. DER Ref: A883047 – A883048.
- Commonwealth of Australia (2001) National Objectives and Targets for Biodiversity Conservation 2001-2005, Canberra.
- Commissioner of Soil and Land Conservation (2014). Advice for Clearing Permit CPS 6283/1. Department of Agriculture and Food Western Australia. DER Ref: A823071.
- DER (2014) Site Inspection Report for Clearing Permit Application CPS 6283/1, Lot 6865 on Plan 167215. Site inspection undertaken 7 November 2014. Department of Environment Regulation, Western Australia (DER Ref: A832701).
- DoW (2014) Licence to Construct or Alter Well - Lot 6865 on Plan 167215, Bullsbrook. Department of Water. Western Australia. DER Ref:A866171
- DPaW (2007 -) NatureMap: Mapping Western Australia's Biodiversity. Department of Parks and Wildlife. URL: <http://naturemap.dec.wa.gov.au/>. Accessed October 2014
- Government of Western Australia (2013) 2012 Statewide Vegetation Statistics incorporating the CAR Reserve Analysis (Full Report). Current as of October 2012. WA Department of Environment and Conservation, Perth
- Hedde, E. M., Loneragan, O. W., and Havel, J. J. (1980) Vegetation Complexes of the Darling System, Western Australia. In Department of Conservation and Environment, Atlas of Natural Resources, Darling System, 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
- 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.
- Submission (2014) Submission for Application to Clear Native Vegetation -' CPS 6283/1. Western Australia. DER Ref: A822089.
- Western Australian Herbarium (1998-) FloraBase - The Western Australian Flora. Department of Parks and Wildlife. <http://florabase.dpaw.wa.gov.au/> (Accessed October 2014).