



GOVERNMENT OF
WESTERN AUSTRALIA

CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

PERMIT DETAILS

Area Permit Number: 5616/1
File Number: 2013/003066-1
Duration of Permit: From 10 August 2013 to 10 August 2015

PERMIT HOLDER

Minister for Education

LAND ON WHICH CLEARING IS TO BE DONE

Lot 2152 on Deposited Plan 45018 (Secret Harbour 6173)

AUTHORISED ACTIVITY

The Permit Holder shall not clear more than 0.096 hectares of native vegetation within the area hatched yellow on attached Plan 5616/1.

CONDITIONS

1. 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*:

- (a) clean earth-moving machinery of soil and vegetation prior to entering and leaving the area to be cleared;
- (b) ensure that no *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:

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 any plant -

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

B. Walker

Belinda Walker
A/MANAGER
NATIVE VEGETATION CONSERVATION BRANCH

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

11 July 2013

Plan 5616/1



LEGEND

- Road Centrelines
- Cadastre for labelling
- Clearing Instruments
- Areas Approved to Clear

Perth Metropolitan Area
South 15cm Orthomosaic -
Landgate 2012



0 30 m

Scale 1:1600

(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.

B. Walker Date *11/7/13*

B Walker

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.



Government of Western Australia
Department of Environment Regulation

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Clearing Permit Decision Report

Government of Western Australia
Department of Environment Regulation

1. Application details

1.1. Permit application details

Permit application No.: 5616/1
Permit type: Area Permit

1.2. Proponent details

Proponent's name: Department of Education

1.3. Property details

Property: LOT 2152 ON PLAN 45018 (Lot No. 2152 BLUESTONE SECRET HARBOUR 6173)
Local Government Area: City of Rockingham
Colloquial name:

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
0.096		Mechanical Removal	Hazard reduction or fire control

1.5. Decision on application

Decision on Permit Application: Grant
Decision Date: 11 July 2013

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 3048 is described as Mosaic: Low woodland; Allocasuarina huegeliana & jam around granite rocks (Shepherd et al 2001).	The application proposes to clear 0.096 hectares of native vegetation within Lot 2152 on Plan 45018, Secret Harbour, for the purpose of a establishing bushfire protection zone to a school building.	Degraded: Structure severely disturbed; regeneration to good condition requires intensive management (Keighery 1994)	The condition of the native vegetation under application was determined by digital imagery (Perth Metropolitan Area South 15 cm Orthomosaic - Landgate 2012) and a site inspection undertaken by the Department of Environment Regulation (DER 2013).
Hedde vegetation complex 'Quindalup Complex' is described as Coastal dune complex consisting mainly of two alliances - the strand and fore-dune alliance and the mobile and stable dune alliance. Local variations include the low closed forest of Melaleuca lanceolata (Rottnest Teatree) - Callitris preissii (Rottnest Island Pine) and the closed scrub of Acacia rostellifera (Summer-scented Wattle) (Hedde 1980).	The BPZ within the wetland reserve (including the application area) will require vegetation modification to achieve the adequate standards. The vegetation management strategies within this area include: <ul style="list-style-type: none"> - Slashing of grass and weed fuels to 50mm in height - Removing all dead shrubs and dry branches, twigs and leaf material - Removing branches from trees that are within 2 metres of the ground - Removing dead material from shrubs and pruning lower branches and - Removing all ground fuels from the area and maintaining low ground fuel levels. Shrubs and trees can remain in the BPZ, but they require maintenance to remain in a low fuel state. (Bushfire Safety Consulting 2013)	To Good: Structure significantly altered by multiple disturbance; retains basic structure/ability to regenerate (Keighery 1994)	
	The application area consists of predominantly of Melaleuca species, Acacia species and wetland sedges and shrubs. There is a high abundance of weeds within the understorey (DEC 2013).		

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 proposes to clear 0.096 hectares of native vegetation within Lot 2152 on Plan 45018, Secret Harbour, for the purpose of establish a building protection zone to a school building. The proposed clearing will consist of reducing fuel loads within the application area by slashing grass and weeds, removing all dead shrubs, dry branches, twig and leaf material and removing all ground fuels from the area.

Numerous priority flora have been recorded within the local area (five kilometre radius). The closest record being located approximately 1.6 kilometres north of the application area. Given the small area under application and the degraded to good (Keighery) condition of the vegetation, the clearing as proposed is not likely to have a significant impact on the conservation status of priority flora.

One rare flora species has been recorded within the local area (five kilometre radius), approximately 4.9 kilometres from the application area. Suitable habitat is not present within the area under application for this species and therefore the vegetation proposed to be cleared is not considered necessary for the continued existence of rare flora.

Numerous fauna species listed as rare or likely to become extinct under the Wildlife Conservation Act 1950 have been recorded within the local area (five kilometre radius), including: *Bettongia penicillata* subsp. *ogilbyi* (Woylie), *Calyptorhynchus latirostris* (Carnaby's Cockatoo), *Dasyurus geoffroii* (Chuditch), *Phascogale tapoatafa* subsp. *tapoatafa* (Southern Brush-tailed Phascogale). Given the small size of the area under application and the degraded to good (Keighery 1994) condition, the vegetation proposed to be cleared is not likely to consist of significant habitat for fauna indigenous to Western Australia.

A Threatened Ecological Community (TEC) 'Woodlands over sedgeland in Holocene dune swales of the southern Swan Coastal Plain' (SCP19b) and associated Conservation Category Wetland (CCW) is located within a portion of the application area. Approximately 0.04 hectares (12 per cent) of this TEC and CCW has been proposed to be cleared. The TEC and associated wetland have been severely compromised by clearing that has already occurred surrounding the application area, and will be further compromised by the proposed clearing to the extent that the future of the site is seriously at risk. However given the impacts from past clearing the future of this small remnant is questionable (DPAW 2013).

Given the area under application represents a TEC, the proposed clearing may consist of an area of high biodiversity and may be at variance to this principle.

Methodology

References:

- DEC (2007-)
- DPAW (2013)
- Keighery (1994)

GIS Databases:

- SAC Biodata sets - accessed July 2013

(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

Numerous fauna species listed as rare or likely to become extinct under the Wildlife Conservation Act 1950 have been recorded within the local area (five kilometre radius), including: *Bettongia penicillata* subsp. *ogilbyi* (Woylie), *Calyptorhynchus latirostris* (Carnaby's Cockatoo), *Dasyurus geoffroii* (Chuditch), *Phascogale tapoatafa* subsp. *tapoatafa* (Southern Brush-tailed Phascogale).

Southern Brush-tailed Phascogale occurs in dry sclerophyll forests and open woodlands that contain hollow-bearing trees. It occurs more rarely in wetter forests (DEC 2012).

Chuditch predominantly occurs in Jarrah (*Eucalyptus marginata*) forest (Department of Sustainability, Environment, Water, Population and Communities 2013a).

Woylie populations may be found throughout the Jarrah forest in the south-west corner of the Western Australia, *Gastrolobium* thickets may provide refuges for Woylies against introduced predators (Department of Sustainability, Environment, Water, Population and Communities 2013b).

Carnaby's Cockatoo require eucalypt woodland, comprising principally of salmon gum or wandoo for breeding. The Carnaby's Cockatoo feeds on a variety of species including banksias, dryandra, hakea, grevillea and also marri seeds. They have also adapted to feeding on exotic species such as pines and cape lilac and some weeds such as wild radish and wild geranium (Department of Sustainability, Environment, Water, Population and Communities 2013c).

Given the above suitable habitat is not likely to occur within the area under application for the above fauna

species.

Given the small size of the area under application and the degraded to good (Keighery 1994) condition, the vegetation proposed to be cleared is not likely to consist of significant habitat for fauna indigenous to Western Australia.

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

- Methodology** References:
- DEC (2007-)
 - DEC (2012)
 - Department of Sustainability, Environment, Water, Population and Communities (2013a)
 - Department of Sustainability, Environment, Water, Population and Communities (2013b)
 - Department of Sustainability, Environment, Water, Population and Communities (2013c)
 - Keighery (1994)
- GIS Databases:
- SAC Biodate sets - accessed July 2013

(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 rare flora species has been recorded within the local area (five kilometre radius). The closest record being approximately 4.9 kilometres from the area under application.

This rare flora species grows in deep sandy soil in banksia woodland in low-lying areas alongside winter wet swamps. This species likes open sites and the decline of some populations could be due to increased shading and competition by other species (Brown et al 1998).

Given the area under application occurs within a depression, is densely vegetated by native vegetation and weed species and the vegetation type is not consistent with banksia woodlands the area under application is not likely to provide suitable habitat for this rare flora species.

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

- Methodology** References:
- Brown et al (1998)
- GIS Databases:
- SAC Biodate sets - accessed July 2013

(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 at variance to this Principle

A Threatened Ecological Community (TEC) 'Woodlands over sedgeland in Holocene dune swales of the southern Swan Coastal Plain' (SCP19b) is located within a portion of the application area. Approximately 0.04 hectares (12 per cent) of this TEC has been proposed to be cleared.

The majority of this TEC and associated wetland have already been cleared for school infrastructure adjacent to the application area. Approximately 0.34 hectares of the TEC now remains.

A site visit of the application area identified good (Keighery 1994) condition vegetation representative of this TEC occurring within the area proposed to be cleared (DER 2013).

The TEC and associated wetland have been severely compromised by the clearing that has already occurred, and will be further compromised by the proposed clearing to the extent that the future of the site is seriously at risk. Given the clearing that has already occurred within this area the future of this small remnant of TEC may be questionable (DPAW 2013).

Given the proposed clearing is to selective clear native vegetation to reduce fuel load, the area under application will not be clear felled and not all values of the TEC will be removed.

The proposed clearing may cause weeds to spread into the adjacent TEC and contribute to further degradation of the TEC. Weed management practices will help mitigate this risk.

Given the above the clearing as proposed is at variance to this principle.

The Applicant will be advised that weed management undertaken within the remaining TEC will enhance

environmental values and reduce the fuel load within the remaining TEC.

Methodology References:
 - DEC (2007-)
 - DPAW (2013)
 - Keighery (1994)

GIS Databases:
 - SAC Biodata sets - accessed July 2013

(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 area under application is located within the Swan Coastal Plain Interim Biogeographic Regionalisation of Australia (IBRA) bioregion. This IBRA bioregion has approximately 39 per cent of its Pre European vegetation extent remaining (Government of Western Australia 2013).

The vegetation under application is mapped as Beard Vegetation Association 3048 and Heddle Vegetation Complex 'Quidalup', which have approximately 31 and 61 per cent of their Pre-European extent remaining in the Swan Coastal Plain bioregion respectively (Government of Western Australia 2013).

Digital imagery (Perth Metropolitan Area South 15 cm Orthomosaic - Landgate 2012) indicates that the local area (five kilometre radius) surrounding the area under application retains approximately 50 per cent vegetation cover.

Given the vegetation representation within the local area it is unlikely that the vegetation under application is significant as a remnant in an extensively cleared landscape.

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

	Pre-European (ha)	Current Extent Remaining (ha)	Remaining (%)	Extent in DEC Managed Lands (%)
IBRA Bioregion*				
Swan Coastal Plain	1,501,221.92	587,708.08	39.15	35.08
Shire*				
City of Rockingham	26,335.39	7,994.08	30.35	10.17
Beard Vegetation Association in Bioregion*				
3048	10,417.98	3,316.97	31.84	25.19
Heddle Vegetation Complex **				
Quidalup	49,028.19	30,128.95	61.45	6.19

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

Methodology References:
 - Government of Western Australia (2013)
 - Heddle (1980)

GIS Databases:
 - IBRA Australia
 - Local Government Authority
 - Perth Metropolitan Area South 15 cm Orthomosaic - Landgate 2012
 - 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 at variance to this Principle

A portion of the application area (approximately 0.015 hectares) is located within a CCW. CCW's are highest priority wetlands, which are considered to support a high level of ecological attributes and functions (Water and Rivers Commission 2001).

A site inspection undertaken by DER (2013) identified vegetation growing in association a water course or wetland.

The wetland and associated TEC have been severely compromised by the clearing that has already occurred, and will be further compromised by the proposed clearing to the extent that the future of the site is seriously at risk. However, given the clearing that has already occurred within this area the future of this small remnant of TEC may be questionable. Significant management is required to proactively manage the site (DPaW 2013).

The proposed clearing may cause weed and dieback to spread into the adjacent remnant vegetation. Weed and dieback management practices will help mitigate this risk.

Given the above the clearing as proposed is at variance to this principle.

Methodology References:
- DER (2013)
- DPaW (2013)
- Waters and Rivers Commission

GIS Databases:
- Geomorphic Wetlands, 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**
Soils (Northcote et al 1960 - 1968) type A13 is described as Coastal dune formations backed by the low-lying deposits of inlets and estuaries: chief soils are calcareous sands.

The propose selective clearing of 0.097 hectares of native vegetation in degraded to good (Keighery 1994) condition is not likely 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 (1960-1968)

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**
The closest nature reserve is Rockingham Lakes Regional Park (Bush forever site 379) which is located approximately 1 km west of the application area.

Given the small area (0.097) proposed to be cleared in a degraded to good (Keighery 1994) condition, the selective clearing of native vegetation to reduce fuel load is not likely to have an impact on the environmental values of any nearby conservation areas.

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

Methodology References:
- Kegnery (1994)

GIS Databases:
- Bush Forever sites
- CALM, Regional Parks
- 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 may be at variance to this Principle**
A portion of the application area (approximately 0.015 hectares) is located within a Conservation Category Wetland (CCW). CCW's are highest priority wetlands, which are considered to support a high level of ecological attributes and functions (Water and Rivers Commission 2001).

Although the area under application occurs on the slope of this wetland, the proposed clearing is to selective clear native vegetation to reduce fuel load, the area under application will not be clear felled. Therefore not all vegetation will be removed and root structures will still be intact reducing the surface water runoff into the CCW.

Given the small area (0.097 hectares) proposed to be cleared and the selective clearing of native vegetation to reduce fuel load, it is not likely to have an impact on surface water of this wetland or cause deterioration of groundwater.

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

Methodology

References:

- Waters and Rivers Commission

GIS Databases:

-Geomorphic Wetlands, Swan Coastal Plain

(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 small area under application (0.097 hectares) and the degraded to good (Keighery 1994) condition of vegetation under application the selective clearing of native vegetation to reduce fuel load is not likely to cause or exacerbate the incidence or intensity of flooding.

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

Methodology

References:

- Keighery (1994)

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

Comments

The Fire Management Plan prepared by Bushfire Safety Consulting (2013) has rated the bushfire hazard level within the application area as extreme and moderate due to the existence of scrub and unmanaged grass and weeds. A number of fires have occurred within the application area and adjacent wetland scrub in recent years. Bushfire Safety Consulting (2013) have advised a Bushfire Protection Zone (BPZ) of 27 metres to the west of the proposed building and 20 metres north of the proposed building is required to provide adequate fire hazard control.

The BPZ within the wetland reserve (including the application area) will require vegetation modification to achieve the adequate standards. The vegetation management strategies within this area include:

- Slashing of grass and weed fuels to 50mm in height
- Removing all dead shrubs and dry branches, twigs and leaf material
- Removing branches from trees that are within 2 metres of the ground
- Removing dead material from shrubs and pruning lower branches and
- Removing all ground fuels from the area and maintaining low ground fuel levels.
- Shrubs and trees can remain in the BPZ, but they require maintenance to remain in a low fuel state. (Bushfire Safety Consulting 2013)

The Minister of Education was issued approval to commence development for the construction of a year 7 learning accommodation for Comet Bay College from the Western Australian Planning Commission (2013) on 15 May 2013.

No submissions have been received.

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

Methodology

References:

- Bushfire Safety Consulting (2013)

- Western Australian Planning Commission (2013)

4. References

- Bushfire Safety Consulting (2013) Fire Management Plan - Development Proposal - Year 7 Classroom Building Comet Bay College, Secret Harbour, Western Australia. DER Ref: A630680
- DEC (2007 -) NatureMap: Mapping Western Australia's Biodiversity. Department of Environment and Conservation. URL: <http://naturemap.dec.wa.gov.au/>. Accessed July 2013
- DEC (2012) Fauna Profiles - Brush-tailed Phascogale (Phascogale tapoatafa). Department of Environment and Conservation, Western Australia.
- Department of Sustainability, Environment, Water, Population and Communities (2013a). Dasyurus geoffroi in Species Profile and Threats Database, Department of Sustainability, Environment, Water, Population and Communities, Canberra. Available from: <http://www.environment.gov.au/sprat>. Accessed July 2013).
- Department of Sustainability, Environment, Water, Population and Communities (2013b). Bettongia penicillata ogilbyi in Species Profile and Threats Database, Department of Sustainability, Environment, Water, Population and Communities, Canberra. Available from: <http://www.environment.gov.au/sprat>. Accessed July 2013).

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- 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.
- Water and Rivers Commission (2001) Position Statement: Wetlands, Water and Rivers Commission, Perth.
- Western Australian Planning Commission (2013) Approval to Commence Development - Lot 2152 on Plan 45018. Western Australia. DER Ref: A635193

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)