GOVERNMENT OF
WESTERN AUSTRALIA

CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

PERMIT DETAILS
Area Permit Number: 5803/1
File Number: DER2013/000695-1
Duration of Permit: From 17 October 2015 to 17 October 2017

PERMIT HOLDER
Kamal Uddin Bhuiyan

LAND ON WHICH CLEARING IS TO BE DONE
Lot 712 on Diagram 96235, Orange Grove

AUTHORISED ACTIVITY
The Permit Holder shall not clear more than 0.15 hectares of native vegetation within the area hatched yellow on attached Plan 5803/1.

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;
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.

M Warnock
SENIOR MANAGER
CLEARING REGULATION

Officer delegated under Section 20
of the Environmental Protection Act 1986

17 September 2015

Plan 5803/1

Legend

- Cadastre
- Roads
- Imagery
- Clearing Instruments Activities
- Local Government Authority

N

0 20m

1:804

(Approximate when reproduced at A4)

GDA 94 (Lat/Long)

Geocentric Datum of Australia 1994

amended Date 17/9/15

M Warnock

Officer with delegated authority under Section 20 of the Environmental Protection Act 1986

GOVERNMENT OF WESTERN AUSTRALIA

Government of Western Australia
Department of Environment Regulation

Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 5803/1
Permit type: Area Permit

1.2. Applicant details

Applicant's name: Kamal Uddin Bhuiyan

1.3. Property details

Property: LOT 712 ON DIAGRAM 96235, ORANGE GROVE
Colloquial name:
Local Government Authority: City of Gosnells
DER Region: Swan
Localities: Orange Grove

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
0.15		Mechanical Removal	Building or structure

1.5. Decision on application

Decision on Permit Application: Granted
Decision Date: 17 September 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
Beard vegetation association 3: medium forest; jarrah-marri (Shepherd et al, 2001). Heddle vegetation complex, Forrestfield Complex: Vegetation ranges from open forest of Corymbia calophylla (Marri) - Eucalyptus wandoo (Wandoo) - Eucalyptus marginata (Jarrah) to open forest of Eucalyptus marginata (Jarrah) - Corymbia calophylla (Marri) - Allocasuarina fraseriana (Sheoak) - Banksia species. Fringing woodland of E. rudis in the gullies that dissect this landform (Heddle et al, 1980). Mattiske vegetation complex Forrestfield (F0): Mosaic of open forest of Corymbia calophylla-Eucalyptus wandoo-Eucalyptus marginata subsp. elegantella and open forest of Eucalyptus marginata subsp. marginata-Corymbia calophylla-Allocasuarina fraseriana-Banksia spp. on the erosional spurs off the Darling Scarp to woodland of Eucalyptus rudis on the dissecting gullies in humid to semiarid zones. (Mattsike & Havel, 1998).	The clearing of 0.15 hectares of native vegetation within Lot 712 on Diagram 96235, Dale Place, Orange Grove, City of Gosnells, is for constructing a house, outbuildings and landscaping.	Very Good; Vegetation structure altered; obvious signs of disturbance (Keighery, 1994). To Degraded; Structure severely disturbed; regeneration to good condition requires intensive management (Keighery, 1994).	The vegetation under application is described as a low woodland of Banksia attenuata, B. menziesii and Allocasuarina fraseriana over an understorey comprising Xanthorrhoea preissii, Allocasuarina humilis, Mesomelaena tetragona and Hibbertia hypericoides. The vegetation description and condition has been determined from aerial imagery and Department of Environment Regulation (DER) site inspection undertaken on 15 October 2013 and 21 January 2014.

3. Assessment of application against clearing principles

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

Comments

Proposed clearing may be at variance to this Principle

This application is to clear 0.15 hectares of native vegetation within Lot 712, Dale Place, Orange Grove for the purpose of constructing a house, outbuildings and landscaping. The application area has been amended so that it is located on the western side of the property in an area that has been previously disturbed. The condition of the vegetation ranges from very good to degraded (Keighery, 1994).

The vegetation under application is described as low woodland of Banksia attenuata, B. menziesii and Allocasuarina fraseriana over an understorey comprising Xanthorrhoea preissii, Allocasuarina humilis, Mesomelaena tetragona and Hibbertia hypericoides in very good (Keighery 1994) condition. The dense understorey is likely to provide suitable habitat for a range of ground dwelling fauna species, including the Quenda (Isoodon obesulus subsp. fusciventer, P5) and kangaroos, with kangaroo skats and diggings observed during the site inspection (DER, 2013).

There are sixty eight priority flora species that have been recorded within the local area (10 kilometre radius), of which one priority 3 species is found within the same vegetation complex and soil type to that found within the area under application. Priority 3 species are known from collections from several localities and are not under imminent threat, therefore the proposed clearing is not likely to impact upon the conservation status of this species if it is located within the application area.

One rare flora species is recorded within Lot 712 and part of the proposed clearing falls within the 50 metre buffer for this species. An area within 50 metres of rare flora is considered an Environmentally Sensitive Area (ESA) in accordance with the Environmental Protection (Environmentally Sensitive Areas) Notice 2005 published in the Government Gazette No. 55 dated 8 April 2005. No rare flora species were observed within the applied area during the targeted flora survey, however the Banksia vegetation was noted as resembling floristic community type SCP20a, which is recognised as a Threatened Ecological Community which comprises Banksia attenuata woodland over species rich dense shrublands (Dinglebird Environmental, 2013).

Lot 712 is located within the distribution range of Carnaby's cockatoo (Calyptorhynchus latirostris) and forest red-tailed black cockatoo (Calyptorhynchus banksii naso) and has been mapped as occurring within a confirmed Carnaby's breeding area, an unconfirmed buffered roost area, and is located approximately 90 metres from a confirmed buffered roost area. The vegetation under application comprises Banksia, Eucalyptus and Allocasuarina species which may provide foraging habitat for black cockatoos. Given the small size of the proposed clearing and the surrounding vegetation that provides higher value fauna habitat, the application area is not likely to provide significant habitat for indigenous fauna.

Given that the vegetation under application provides suitable habitat for rare flora species and is likely to be representative of a TEC, the proposed clearing may be at variance to this principle.

Methodology

References:
DER (2013)
Dinglebird Environmental (2013)
Keighery (1994)

GIS Databases:
- Pre European Vegetation
- SAC Bio datasets
- 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

Proposed clearing is not likely to be at variance to this Principle

There are numerous fauna species of conservation significance which have been recorded within a 10 kilometre radius of the area under application. This includes but is not limited to Carnaby's cockatoo (Calyptorhynchus latirostris), forest red-tailed black cockatoo (Calyptorhynchus banksii naso), Baudin's cockatoo (Calyptorhynchus baudinii), chuditch (Dasyurus geoffroii), numbat (Myrmecobius fasciatus), quokka (Setonix brachyurus), southern brushed-tailed phascogale (Phascogale tapoatafa subsp. tapoatafa) and quenda (Isoodon obesulus subsp. fusciventer) (Parks and Wildlife, 2007-).

The vegetation under application is in degraded to very good (Keighery, 1994) condition and the understorey may provide suitable habitat for ground dwelling fauna species such as the quenda, snakes and lizards.

During the Department of Environment Regulation (DER) site inspection, kangaroo skats and diggings were observed throughout the application area (DER, 2013).

Lot 712 is located within the distribution range of the Carnaby's cockatoo (rare or likely to become extinct, Wildlife Conservation Act 1950 (WC Act); endangered, Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act)) and the forest red-tailed black-cockatoo (rare or likely to become extinct, WC Act; vulnerable, EPBC Act). Black cockatoos forage on the seeds, nuts and flowers of proteaceous species

(Banksia, Hakea, Grevillea), as well as Allocasuarina and Eucalyptus species (Valentine and Stock, 2008). The vegetation under application includes occurrences of Eucalyptus (Jarrah), Banksia and Allocasuarina species, therefore foraging habitat is present on site (DER, 2013).

There are three confirmed Carnaby's roost sites and one forest red-tailed black cockatoo roost site within a six kilometre radius of Lot 712. The area under application is mapped within a confirmed Carnaby's breeding area, an unconfirmed buffered roost area, and is located approximately 90 metres from confirmed buffered roost area.

The area under application has been amended so that the proposed clearing is located within an area that has been previously disturbed, therefore it is not likely to provide significant habitat for black cockatoos.

Post clearing, the property under application will retain approximately 1.80 hectares of native vegetation that contains higher value fauna habitat. Given the small size of the proposed clearing and the surrounding vegetation that provides higher value fauna habitat, the proposed clearing is not likely to be at variance to this principle.

Methodology

References:
- DER (2013)
- Keighery (1994)
- Parks and Wildlife (2007-)
- Valentine & Stock (2008)

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

Comments

Proposed clearing may be at variance to this Principle

Twenty rare flora species have been recorded within the local area (10 kilometre radius), of which, one is found within the same vegetation complex and soil type to that of the applied area. This species is described as an erect, compact shrub, 0.6 - 2 metres tall with white flowers from May to October (Western Australian Herbarium, 1998-). It has characteristically wavy leaf margins and is found in a restricted 14 kilometre range between High Wycombe and Martin (Brown et al, 1998).

The rare flora species is mapped within Lot 712 and the application area falls within the 50 metre buffer of this species. This 50 metre buffer is designed to maintain suitable habitat around rare flora species and to insulate these species from outside threats (ie weeds, grazing, decimation by disease, indiscriminate herbicide application and inappropriate fire regimes) and is a declared Environmentally Sensitive Area (ESA).

A targeted flora survey did not locate any rare flora species within the area under application (Dinglebird Environmental, 2013). The south east corner of the application area is approximately 15 metres from a record of this species. A permit to take rare flora will need to be obtained from the Department of Parks and Wildlife if rare flora is to be taken.

The proposed clearing may be at variance to this principle.

Methodology

References:
- Brown et al (1998)
- Dinglebird Environmental (2013)
- Western Australian Herbarium (1998-)

GIS Databases:
- Soils, Statewide
- SAC BIO datasets

(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

Proposed clearing may be at variance to this Principle

There are numerous occurrences of Threatened Ecological Communities (TECs) within a 10 kilometre radius of the area under application, the closest of which is located within 600 metres and is described as Floristic Community Type (FCT) SCP20a Banksia attenuata woodland over species rich dense shrublands.

During a targeted flora survey for rare flora species, the Banksia attenuata vegetation within Lot 712 was noted as resembling FCT SCP20a (Dinglebird Environmental, 2013). An additional site inspection was undertaken by traversing Lot 712 and compiling a species list and vegetation description of flora species observed throughout the property (Parks and Wildlife, 2014a; DER, 2014).

The Department of Parks and Wildlife advise that based on the species list and report (Parks and Wildlife, 2014b), there is reasonable alignment of the vegetation within Lot 712 with TEC SCP20a Banksia attenuata woodlands over species rich dense shrublands and/or with TEC SCP20c Eastern shrublands and woodlands; and that the rare flora species identified on site is typically associated with SCP20a.

The application area has been reduced to 0.15 hectares and has been situated in an area that has been previously disturbed and therefore any impacts to the potential TEC are likely to be minimal.

The proposed clearing may be at variance to this principle.

Methodology

References:
- DER (2014)
- Dinglebird Environmental (2013)
- Parks and Wildlife (2014a)
- Parks and Wildlife (2014b)

GIS Databases:
- Soils, Statewide
- SAC BIO datasets

(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

Proposed clearing may be at variance to this Principle

The area under application (0.15 hectares) is mapped as Beard Vegetation Association 3 which has approximately 18 per cent of its pre-European extent remaining in the Swan Coastal Plain IBRA bioregion (Government of Western Australia, 2014).

Heddle Vegetation Complex 'Forrestfield Complex' and Mattiske Complex,' Forrestfield Fo', have also been mapped within the area under application. These both retain approximately 12 per cent of their pre-European vegetation extent (Parks and Wildlife, 2015).

The local area (10 kilometre radius) is approximately 30 per cent vegetated.

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

Given the statistics outlined above the application area is within an area that has been highly cleared. The area under application may be a significant remnant as it contains suitable habitat for rare flora and there is a reasonable alignment of the vegetation with a TEC. Therefore, the proposed clearing may be at variance to this principle.

	Pre-European (ha)	Current Extent (ha)	Remaining (%)	Extent in Parks and Wildlife Managed Lands (%)
IBRA Bioregion*				
Swan Coastal Plain	1 501 222	580 697	39	37
Shire*				
City of Gosnells	12 716	3 599	28	17
Beard Vegetation Association in Bioregion*				
3	17 365	3 180	18	11
Heddle Vegetation Complex **				
Forrestfield Complex	20 169	2 337	12	1
Mattiske Vegetation Complex**				
Forrestfield	11 594	1 445	12	2

Methodology

References:
- Commonwealth of Australia (2001)
- *Government of Western Australia (2014)
- **Parks and Wildlife (2015)

GIS Databases:
- 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

Proposed clearing is not at variance to this Principle

Numerous wetlands and watercourses have been recorded within a 10 kilometre radius of the area under application, the closest of which is a minor perennial watercourse located approximately 500 metres to the east and a multiple use wetland located approximately 100 metres to the west.

A site inspection of the area under application did not identify any wetlands or watercourses (DER, 2013).

Given the above and that the applied area is located higher in the landscape than the abovementioned wetland and watercourse, the proposed clearing is not at variance to this principle.

Methodology

References:
- DER (2013)

GIS Databases:
- Geomorphic Wetlands (Mgt Categories), Swan Coastal Plain
- Hydrography, linear
- Hydrography, linear (hierarchy)
- Topography

(g) Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation.

Comments

Proposed clearing is not at variance to this Principle

The chief soils within the area under application are described as sandy acidic yellow mottled soils, some of which contain ironstone gravel (Northcote et al, 1960-68). These soils are generally associated with a low risk of salinity.

The main land degradation risk associated with the removal of vegetation on the identified soil type is wind erosion, and without appropriate ground cover, windbreaks or adequate dust suppression on exposed surfaces, the clearing is likely to cause land degradation through wind erosion. However, given the proposed clearing is for the construction of a house and outbuildings and that the applied area is surrounded by vegetation on three sides, this will reduce wind velocity and the associated risk of wind erosion.

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

Methodology

References:
- Northcote et al (1960-68)

GIS Databases:
- Salinity Risk LM 25m
- 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

Proposed clearing is not likely to be at variance to this Principle

There are numerous areas set aside for conservation purposes within a 10 kilometre radius of the application area, the closest being Korung National Park which is located approximately one kilometre east. There are also a number of Bush Forever sites within the local area (10 kilometre radius), the closest being Bush Forever site 53 (Clifford Street, Bushland).

The rear of Lot 712 (approximately 100 metres south) and the neighbouring property (approximately 50 metres west), are mapped as part of a regional ecological linkage under the Western Australian Local Government Association (WALGA) Local Biodiversity Project (City of Gosnells, 2013).

Given that the area between the applied area and ecological linkage is well vegetated, and given the small size of the proposed clearing, it is unlikely to impact upon this local linkage or other conservation areas in the local area.

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

Methodology

References:
City of Gosnells (2013)

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

Proposed clearing is not at variance to this Principle

The nearest watercourse/wetland to the area under application is a multiple use wetland 100 metres west of the area under application.

The groundwater salinity within the application area ranges between 500 - 1000 total dissolved solids per milligram per litre which is considered to be a low salinity risk.

The proposed clearing will not impact upon the quality of the surface or underground water.

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

Methodology

GIS Databases:
- Geomorphic Wetlands (Mgt Categories), Swan Coastal Plain
- Groundwater Salinity, Statewide
- Hydrography, linear

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

Comments

Proposed clearing is not at variance to this Principle

The area under application is located approximately 100 metres east of a multiple use wetland and approximately 500 metres west of a minor perennial watercourse.

Given the distance to the nearest wetland and watercourse and the high infiltration rates of the sandy soils on site, the proposed clearing will not impact on peak flood height or duration.

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

Methodology

GIS Databases:
- Geomorphic Wetlands (Mgt Categories)
- Hydrography, linear
- Topographic Contours, Statewide

Planning instruments and other relevant matters.

Comments

The area under application is zoned General Rural under the Town Planning Scheme and Rural under the Metropolitan Regional Scheme.

The City of Gosnells granted a Building Permit on 31 August 2015 (City of Gosnells, 2015).

No public submissions have been received for the application.

Methodology

References:
- City of Gosnells (2015)

GIS Databases:
- Cadastre
- Town Planning Scheme
- Metropolitan Regional Scheme

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 Gosnells (2013) Comments received in relation to Clearing Permit Application CPS 5803/1 - Mainuddin Bhuiyan (DER Ref: A673390).

City of Gosnells (2015) Building Permit for Lot 712, Dale Place, Orange Grove (DER Ref: A967577).

Commonwealth of Australia (2001) National Objectives and Targets for Biodiversity Conservation 2001-2005, Canberra.

DER (2013) Site Inspection Report for Clearing Application CPS 5803/1, Lot 712 Dale Place, Orange Grove. Site inspection undertaken 15/10/2013, Department of Environment Regulation, Western Australia (DER Ref. A696202).

DER (2014) Site Inspection Report for Clearing Application CPS 5803/1, Lot 712 Dale Place, Orange Grove. Site inspection undertaken 21/01/2014, Department of Environment Regulation, Western Australia (DER Ref. A717314).

Dinglebird Environmental (2013) Conospermum undulatum Targeted Flora Survey at Lot 712 Dale Place, Orange Grove unpublished report prepared for the proponent.

Government of Western Australia (2000) Bush Forever Volumes 1 and 2. Western Australian Planning Commission, Perth WA.

Government of Western Australia (2014) 2014 Statewide Vegetation Statistics incorporating the CAR Reserve Analysis (Full Report). Current as of June 2014. WA Department of Parks and Wildlife, Perth.

Heddle, 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.

Mattiske, E.M. and Havel, J.J. (1998) Vegetation Complexes of the South-west Forest Region of Western Australia. Maps and report prepared as part of the Regional Forest Agreement, Western Australia for the Department of Conservation and Land Management and Environment 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.

Parks and Wildlife (2007 -) NatureMap: Mapping Western Australia's Biodiversity. Department of Environment and Conservation. URL: http://naturemap.dec.wa.gov.au/. Accessed 14 October 2013.

Parks and Wildlife (2014a) Site Inspection Photographs, Map and Vegetation Survey Report at Lot 712 Dale, Orange Grove, unpublished report.

Parks and Wildlife (2014b) Comments received in relation to Clearing Permit Application CPS 5803/1 - Mainuddin Bhuiyan - (DER Ref. A721765).

Parks and Wildlife (2015) 2015 South West Forest and Swan Coastal Plain Vegetation Complex Statistics: a report prepared for the Department of Environment Regulation. Current as of March 2015. Department of Parks and Wildlife, Perth, Western Australia.

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.

Valentine, L.E. and Stock, W. (2008) Food Resources of Carnaby's Black Cockatoo (Calyptorhynchus latirostris) Gnangara Sustainability Strategy Study Area. Edith Cowan University and Department of Environment and Conservation. December 2008.

Western Australian Herbarium (1998-) FloraBase - The Western Australian Flora. Department of Environment and Conservation. http://florabase.dec.wa.gov.au/ (Accessed 14/10/2013).