



CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

PERMIT DETAILS

Area Permit Number: 5825/1

File Number: 2013/000822-1

Duration of Permit: From 28 December 2013 to 28 December 2015

PERMIT HOLDER

Nicola Joseph Cinquina

LAND ON WHICH CLEARING IS TO BE DONE

Lot 291 on Diagram 83768 (Gnangara)

AUTHORISED ACTIVITY

The Permit Holder shall not clear more than 0.18 hectares of native vegetation within the area cross hatched yellow on attached Plan 5825/1.

CONDITIONS

Nil.

A handwritten signature in cursive script, appearing to read "M Warnock", written over a horizontal line.

M Warnock
MANAGER
NATIVE VEGETATION CONSERVATION BRANCH

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

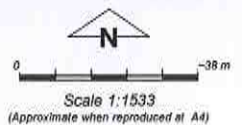
28 November 2013

Plan 5825/1



LEGEND

- Road Centrelines
- Clearing Instruments
- Areas Approved to Clear
- Cadastre
- Perth Metropolitan Area
- Central 15cm Orthomosaic - Landgate 2012
- Local Government Authorities



Geocentric Datum Australia 1994
Note: the data in this map have not been projected. This may result in geometric distortion or measurement inaccuracies.

M Warnock Date 28/11/13
M Warnock

Officer with delegated authority under Section 20 of the Environmental Protection Act 1985

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

1. Application details

1.1. Permit application details

Permit application No.: 5825/1
Permit type: Area Permit

1.2. Proponent details

Proponent's name: Nicola Joseph Cinquina

1.3. Property details

Property: LOT 291 ON DIAGRAM 83768 (House No. 50 CARMIGNANI GNANGARA 6077)
Local Government Area: City of Wanneroo
Colloquial name:

1.4. Application

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

1.5. Decision on application

Decision on Permit Application: Grant
Decision Date: 28 November 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 949: Low woodland; banksia (Shepherd et al, 2001) Mattiske vegetation complex Karrakatta Complex-Central And\South: Predominantly open forest of Eucalyptus gomphocephala (Tuart) - Eucalyptus marginata (Jarrah) - Corymbia calophylla (Marri) and woodland of Eucalyptus marginata (Jarrah) - Banksia species (Mattiske and Havel, 1998).	Clearing 0.18 hectares of native vegetation within Lot 291 Diagram 291, Gnangara, City of Wanneroo, for the purpose of extending a market garden.	Degraded: Structure severely disturbed; regeneration to good condition requires intensive management (Keighery 1994) To Very Good: Vegetation structure altered; obvious signs of disturbance (Keighery 1994)	The area under application is a low woodland of Banksia attenuata and Allocasuarina fraseriana (DER, 2013). The mid and understorey consists of Xanthorrhoea preissii, Hibbertia and Jacksonia sp. Weed species were present throughout the application area, prolific on the outskirts of the clearing area (DER, 2013). The vegetation under application is considered to be in a degraded to very good (Keighery, 1994) condition (DER, 2013) with the majority of the vegetation being in a good condition (DER, 2013). The vegetation condition and description was determined from a Department of Environment Regulation (DER) site visit undertaken on 12 November 2013 (DER, 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 is to clear 0.18 hectares of native vegetation for the purpose of extending a market garden. The length of the proposed clearing is approximately 50 metres at a width of approximately 30 metres.

The vegetation under application consist of a low woodland of Banksia attenuata and Allocasuarina fraseriana with the mid and understorey consisting of Xanthorrhoea preissii, Hibbertia and Jacksonia sp. Weed species are present throughout the application area, prolific on the outskirts of the clearing area (DER, 2013).

The vegetation under application is considered to be in a degraded to very good (Keighery, 1994) condition (DER, 2013) with the majority of the vegetation being in a good condition (DER, 2013).

Several records of priority flora have been mapped within five kilometres of the area under application. Of the recorded species, two have been recorded approximately three kilometres away on the same soil and vegetation types that occur within the area under application. Species one is known to occur within limestone breakaways and species two is known to occur on calcareous soils (WA Herbarium, 1998). The applied area comprises of leached sands (Northcote et al, 1960-68) and not limestone breakaways and calcareous soils.

Given the small size of the proposed clearing and that the area under application is unlikely to contain priority flora, the vegetation under application is not likely to contain a high level of biological diversity.

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

Methodology

References

- DER (2013)
- Keighery (1994)
- Northcote et al (1960-68)
- WA Herbarium (1998)

GIS Databases

- SAC Bio Datasets (Accessed November, 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

Within five kilometres of the area under application several fauna species of conservation significance have been recorded. These species include *Calyptorhynchus baudinii* (Baudin's cockatoo), *Calyptorhynchus latirostris* (Camaby's cockatoo), *Dasyurus geoffroi* (Western Quoll) and *Botaurus poiciloptilus* (Australasian Bittern) (DPaW, 2007-).

The application area is fenced and given the size of the proposed clearing area, it is unlikely to offer significant habitat for ground dwelling fauna.

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). One of the major threats to black cockatoo species is accumulative clearing of feeding habitat on the Swan Coastal Plain (Cale, 2003). Therefore all feeding habitat within the Swan Coastal Plain is considered significant.

The vegetation under application includes occurrences of *Banksia* species (approximately 30), therefore foraging habitat is present on site (DER, 2013). However, approximately 30 percent of these trees were of poor health with very little to no foliage present on the trees (DER, 2013). There was also no signs of foraging from black cockatoos within the applied area (DER, 2013). Additionally, other areas within close proximity to the proposed clearing, which includes the Gnaragara-Moore Rive State Forest (approximately 10000 hectares) and the Jandabup Nature Reserve (approximately 30 hectares), are considered to provide a more viable food source for black cockatoos. The vegetation within these areas is of an equal or greater condition than the proposed clearing area.

Considering the above and the relatively small amount of the proposed clearing, it is unlikely the proposed clearing will significantly reduce the amount of viable foraging habitat for black cockatoos on the Swan Coastal Plain.

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

Methodology

References

- Cale (2003)
- DPaW (2007)
- DER (2013)
- Valentine and Stock (2008)

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

Comments

Proposal is not likely to be at variance to this Principle

There are no known rare flora species occurring within five kilometres of the area under application. The closest known record of rare flora is located approximately eight kilometres from the proposed clearing area. The known species has been recorded within different soil and vegetation types to the clearing area.

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

Methodology

GIS Databases

- SAC Bio Datasets (Accessed November 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 not likely to be at variance to this Principle**
 Within a five kilometre radius of the area under application one threatened ecological community (TEC) has been recorded. The recorded TEC comprises of *Banksia attenuata* woodland over species rich dense shrublands. The TEC occurs approximately 3.5 kilometres from the proposed clearing area.

Banksia attenuata species area known to occur within the applied area, however the species below the banksia trees do not comprise of rich dense shrublands (DER, 2013).

The vegetation under application is not representative of the mapped TEC

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

Methodology **References**
 - DER (2013)
 -
GIS Databases
 - SAC Bio Datasets (Accessed November 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 proposed for clearing has been identified as Beard Vegetation Associations 949, which has 57 percent of pre-European vegetation remaining in the Swan Coastal Plain Bioregion (Government of Western Australia, 2013). The vegetation under application is also represented by Heddle Vegetation Complex Karrakatta Complex-Central and South, which has 25 percent of its pre-European vegetation remaining (Heddle et al, 1980).

The National Objectives and Targets for Biodiversity Conservation include a target that prevents the clearance of ecological communities with an extent below 30 percent of that present pre-European settlement (Commonwealth of Australia, 2001). The mapped Heddle Vegetation Complex associated with the area under application is below the 30 percent threshold.

A site inspection undertaken by DER identified the vegetation under application to be a low woodland of *Banksia attenuata* and *Allocasuarina fraseriana* with the mid and understorey consisting of *Xanthorrhoea preissii*, *Hibbertia* and *Jacksonia* sp. Weed species were present throughout the application area, prolific on the outskirts of the clearing area (DER, 2013).

The mapped Heddle vegetation complex associated with the clearing area consists of an open forest of *Eucalyptus gomphocephala* (Tuart) - *Eucalyptus marginata* (Jarrah) - *Corymbia calophylla* (Marri) and woodland of *Eucalyptus marginata* (Jarrah) - *Banksia* species (Heddle et al, 1980). This vegetation description is not represented within the proposed clearing area, therefore the proposed clearing will not further reduce the amount of Heddle Vegetation Complex Karrakatta Complex-Central and South remaining in the Swan Coastal Plain Bioregion.

The application area is located in the Swan Coastal Plain Bioregion in the City of Swan. There is approximately 35 percent of pre-European native vegetation remaining within five kilometres of the area under application.

Given the small amount of proposed clearing and that the area under application is not located within an extensively cleared landscape, the vegetation under application is not likely to be a significant remnant.

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

	Pre-European (ha)	Current Extent (ha)	Remaining (%)	Extent in DEC Managed Lands (%)
IBRA Bioregion*				
Swan Coastal Plain	1,501,221	587,708	39	35
Shire*				
City of Wanneroo	67,698	31,540	46	50.7
Beard Vegetation Association in Bioregion 949	209,983	121,247	57.7	52.6
Heddle Vegetation Complex Karrakatta Complex-Central And\South	49,735	12,788	25.7	5.8

Methodology **References**
 - Commonwealth of Australia (2001)

- DER (2013)
- Government of Western Australia (2013)
- Heddle et al (1980)
- Keighery (1994)

GIS Databases:

- Heddle Vegetation Complexes
- Interim Biogeographic Regionalisation of Australia
- 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 at variance to this Principle

There are no wetlands or watercourses mapped within the area under application. The closest hydrological feature is a multiple use wetland mapped 350 metres to the east of the vegetation under application.

A site inspection of the application area identified that the vegetation under application consists predominately of a low woodland of *Banksia attenuata* and *Allocasuarina fraseriana* with a mid and understorey consisting of *Xanthorrhoea preissii*, *Hibbertia* and *Jacksonia* sp (DER, 2013).

The vegetation under application is not growing in association with the nearby multiple use wetland or any other water course.

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

(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 soils within the applied area comprise of leached sands on low dunes (Northcote et al, 1960-68).

Sandy soils are prone to wind erosion, however given the relatively small size of the proposed clearing and that the end land use is for a market garden, it is not likely that wind erosion causing appreciable land degradation will occur.

Leached sands are highly permeable, and given the moderate average rainfall (800 millimetres) and topography on site it is not likely that the proposed clearing will result in water erosion.

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

Methodology References
- Northcote et al, 1960-68)

GIS Databases

- Topographic Contours, 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 at variance to this Principle

The closest conservation area to the application area is Gngangara-Moore River State Forest approximately 1.5 kilometres east of the area under application. The Jandabup Nature Reserve is also within close proximity to the clearing area being approximately 1.2 kilometres away from the clearing area.

Aerial imagery indicates the vegetation within the applied area and known conservation areas are not linked. In addition the application area does not act as a stepping stone to facilitate the movement of fauna between the identified conservation areas.

The application is not a variance to this principle.

Methodology GIS Databases
- Bushforever

- DEC Tenure
- Swan Coastal Plain North 20cm Orthomosaic - Landgate 2012

(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

There are no wetlands or watercourses mapped within the area under application. The closest hydrological feature is a multiple use wetland mapped 350 metres to the east of the vegetation under application.

Groundwater salinity is mapped at 500 to 1000 total dissolved salts milligrams per litre (marginal) on site.

Given this low salinity level, and the small amount of proposed clearing, it is not likely the proposed clearing will lead to a perceptible rise in the watertable and an increase in groundwater salinity levels or groundwater and surface water flows which transport nutrients.

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

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

(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 at variance to this Principle

There have been no watercourses or wetlands mapped or observed as being within the applied area (DER, 2013). The soils within the application area are of a sandy nature which are well drained.

Considering the above, the proposed clearing will not cause or exacerbate the incidence or intensity of flooding and therefore is not at variance to this principle.

- Methodology** References
- DER (2013)
- GIS Databases
- Geomorphic Wetlands (Mgt Categories), Swan Coastal Plain
 - Hydrography, linear

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

Comments

The area under application is zoned rural resource under the City of Wanneroo's town planning scheme and rural under the Metropolitan Regional Scheme.

The applicant has received planning approval under the provisions of the City of Wanneroo District Planning Scheme No.2 and the Metropolitan Region Scheme for the extension of the market garden (City of Wanneroo, 2013).

The area under application falls within the Wanneroo Groundwater Area which is a proclaimed area under the Rights in Water and Irrigation Act. The Department of Water (2013) has been advised of the proposal and provided no comments.

- Methodology** References
- City of Wanneroo (2013)
- GIS Databases
- RIWI Act, Groundwater Areas
 - RIWI Act, Surfacewater Areas
 - Town Planning Scheme
 - Metropolitan Regional Scheme

4. References

- Cale, B (2003) Carnaby's Black Cockatoo (*Calyptrorhynchus latirostris*) Recovery Plan 2002- 2012. Department of Environment and Conservation. Wanneroo WA.
- City of Wanneroo (2013) Additional information received in relation to Clearing Permit Application CPS 5825/1 - Cinquina (DER Ref:A698383)
- Commonwealth of Australia (2001) National Objectives and Targets for Biodiversity Conservation 2001-2005, Canberra.

- DER (2013) Site Inspection Report for Clearing Permit Application CPS 5825/1. Lot 291 Carmignana Road, Gnangara. Site inspection undertaken 12 November 2013. Department of Environment Regulation, Western Australia (DER Ref:A698384)
- DoW (2013) Advice received in relation to Clearing Permit Application CPS 5825/1 (DER Ref:A690109)
- DPaW (2007 -) NatureMap: Mapping Western Australia's Biodiversity. Department of Environment Regulation. URL: <http://naturemap.dec.wa.gov.au/>. Accessed November 2013
- 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.
- Valentine and Stock (2008) Food Resources of Carnaby's Black Cockatoo (*Calyptorhynchus latirostris*) in the Gnangara Sustainability Strategy Study Area. Edith Cowen University and Department of Environment and Conservation.
- Western Australian Herbarium (1998-) FloraBase - The Western Australian Flora. Department of Environment and Conservation. <http://florabase.dec.wa.gov.au/> (Accessed November 2013).