



CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

PERMIT DETAILS

Area Permit Number: 5155/1
File Number: 2011/006917-1
Duration of Permit: From 5 October 2012 to 5 October 2014

PERMIT HOLDER

Town of Cambridge

LAND ON WHICH CLEARING IS TO BE DONE

Lot 520 on Deposited Plan 35670 (Jolimont 6014)

AUTHORISED ACTIVITY

The Permit Holder shall not clear more than 0.5 hectares of native vegetation and 56 native trees within the area hatched yellow on attached Plan 5155/1.

CONDITIONS

1. Fauna management

- (a) Prior to undertaking any clearing authorised under this Permit, the area(s) shall be inspected by a *fauna specialist* who shall:
 - (i) identify *habitat trees* suitable to be utilised by Carnaby's cockatoo (*Calyptorhynchus latirostris*), and Red-tailed black cockatoo (*Calyptorhynchus banksii*); and
 - (ii) inspect *habitat trees* identified under condition 1(a)(i) for the presence of Carnaby's cockatoo (*Calyptorhynchus latirostris*), and Red-tailed black cockatoo (*Calyptorhynchus banksii*); and
- (b) Within one week prior to undertaking any clearing authorised under this Permit, the Permit Holder shall engage a *fauna clearing person* to remove and relocate fauna identified under condition 1(a)(ii).

2. Records must be kept

The Permit Holder must maintain the following records for activities in relation to fauna management pursuant to condition 1 of this Permit:

- (a) the location of each *habitat tree* identified recorded using a Global Positioning System (GPS) unit set to Geocentric Datum Australia 1994 (GDA94), expressing the geographical coordinates in Eastings and Northings or decimal degrees; and
- (b) the species name of fauna reasonably likely to utilise, or that have been observed utilising, the *habitat/habitat tree(s)*.

3. Reporting

- (a) The Permit Holder must provide to the CEO on or before 30 June of each year, a written report:
- (i) of records required under condition 2 of this Permit; and
 - (ii) concerning activities done by the Permit Holder under this Permit between 1 January and 31 December of the preceding year.
- (b) Prior to 5 July 2014, the Permit Holder must provide to the CEO a written report of records required under condition 2 of this Permit where these records have not already been provided under condition 3(a) of this Permit.

DEFINITIONS

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

fauna clearing person means a person who has obtained a licence from the Department, issued pursuant to the *Wildlife Conservation Regulations 1970* authorising them to take fauna;

fauna specialist means a person with training and specific work experience in fauna identification or faunal assemblage surveys of Western Australian fauna; and

habitat tree(s) means trees that have a diameter, measured at 1.5m above the ground, of 50cm or greater, healthy but with dead limbs and broken crowns that are likely to contain hollows and roosts suitable for native fauna, or where these are not present then healthy but with the potential to contain hollows and roosts.



Roxane Shadbolt
A/MANAGER
NATIVE VEGETATION CONSERVATION BRANCH

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

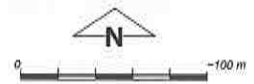
13 September 2012

Plan 5155/1



LEGEND

- Road Centrelines
- Clearing Instruments
- Areas Applied to Clear
- Areas Subject to Conditions
- Areas Approved to Clear
- Cadastre for labelling
- Perth Metropolitan Central 15cm Orthomosaic - Landgate 2011



Scale 1:3918
(Approximate when reproduced at A4)

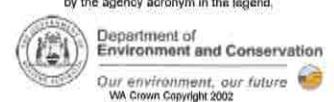
Geocentric Datum Australia 1994

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

R. Shadbolt Date 13/9/12

R Shadbolt
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.



* Project Data. This data has not been quality assured. Please contact map author for details.



1. Application details

1.1. Permit application details

Permit application No.: 5155/1
Permit type: Area Permit

1.2. Proponent details

Proponent's name: Town of Cambridge

1.3. Property details

Property: LOT 520 ON PLAN 35670 (House No. 199 SALVADO JOLIMONT 6014)
Local Government Area: Town of Cambridge
Colloquial name:

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
0.5	56	Mechanical Removal	Building or Structure

1.5. Decision on application

Decision on Permit Application: Grant
Decision Date: 13 September 2012

2. Site Information

2.1. Existing environment and information

2.1.1. Description of the native vegetation under application

Vegetation Description	Clearing Description	Vegetation Condition	Comment
Mapped Beard vegetation association 6 is described as Medium woodland; tuart & jarrah (Shepherd et al 2001)	The application proposes to clear 0.5 ha of native vegetation and 56 native trees for the purpose of redeveloping Wembley Sports Complex.	Completely Degraded: No longer intact; completely/almost completely without native species (Keighery 1994)	The description and condition of the vegetation was determined by a Preliminary Tree Survey Assessment completed by Arbor logic (2012) and a site inspection undertaken by the Department of Environment and Conservation (2012).
Mapped Heddle vegetation complex Karrakatta Complex Central and South is described as Predominantly open forest of Eucalyptus gomphocephala (Tuart) - Eucalyptus marginata (Jarrah) - Corymbia calophylla (Marri) and woodland of Eucalyptus marginata (Jarrah) - Banksia species (Heddle 1980).	The majority of the application consists of scattered mature trees including Eucalyptus Marginata, Callistemon 'Kings Park Special', Agonis flexuosa, Eucalyptus spathulata, Eucalyptus erythrocoris and Corymbia calophylla around the boundary of Lot 520 and associated ovals and netball courts. The groundcover consists of grass and weeds. In the north-eastern corner, the middle storey consists of scattered Banksia grandis and Banksia sp over a scattered shrubland of Calothamnus sp and 2 other unidentified shrubs over Macrozamia sp. The groundcover consists of a combination of bare ground, leaf litter and weeds.	To Degraded: Structure severely disturbed; regeneration to good condition requires intensive management (Keighery 1994)	

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 applicant proposes to clear native vegetation for the purpose of redeveloping the Wembley Sport Complex.

The application area contains native vegetation, non-indigenous vegetation and native vegetation which has been intentionally planted. Non-indigenous and intentionally planted vegetation is not considered native vegetation under the Environmental Protection Act 1986 and therefore cannot be assessed as part of this clearing permit application.

Given this, a review of the Preliminary Tree Survey Assessment (Arbor Logic 2012) and a site inspection conducted by the Department of Environment and Conservation (2012) determined that 56 trees and 0.5 hectares within the application area is native vegetation. The application has been revised from 205 trees and 2.5 hectares to reflect this.

The condition of vegetation under application ranges from completely degraded to degraded (Keighery, 1994).

Twenty three priority flora have been recorded within the local area (5 km radius). The closest record being *Melaleuca viminalis* (P2) located approximately 400m east of the application area. Suitable habitat for this species is not present within the application area.

Fourteen species of fauna declared as rare or likely to become extinct under the Wildlife Conservation Act 1950 have been recorded within the local area (5km) (DEC 2007-). Given the completely degraded to degraded (Keighery 1994) condition of the vegetation under application and the lack of understorey present within the application area (DEC 2012) the proposed clearing is unlikely to have an impact on habitat for ground dwelling fauna. Mature trees located within the application area may provide suitable habitat for avian fauna including *Calyptorhynchus banksii* subsp. *naso* (Forest Red-tailed Black-Cockatoo) and *Calyptorhynchus latirostris* (Carnaby's Cockatoo). Fauna management practices will ensure that no fauna is harmed during the clearing process.

Given the above the vegetation under application is not considered to comprise a high level of biological diversity. Therefore the clearing as proposed is not likely to be at variance to this principle.

Methodology

References:

- Arbor Logic (2012)
- DEC (2012)

GIS Database:

- Sac Biodata sets - accessed 31 August 2012

(b) Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of, a significant habitat for fauna indigenous to Western Australia.

Comments

Proposal may be at variance to this Principle

Fourteen species of fauna declared as rare or likely to become extinct under the Wildlife Conservation Act 1950 have been recorded within the local area (5km).

The vegetation under application is considered to be in a completely degraded to degraded (Keighery 1994) condition. A site inspection (DEC 2012) identified very few understorey species within the application area. Given this, it is unlikely the vegetation under application is suitable habitat for ground dwelling fauna.

The vegetation proposed to be cleared consists mostly of mature trees which may provide habitat for avian fauna including *Calyptorhynchus banksii* subsp. *naso* (Forest Red-tailed Black-Cockatoo) and *Calyptorhynchus latirostris* (Carnaby's Cockatoo). The application area is also located within the buffer zone for a Carnaby's Cockatoo roost site.

Carnaby's Cockatoos (*Calyptorhynchus latirostris*) are listed as threatened under the Environment Protection and Biodiversity Conservation Act 1999 and as rare or likely to become extinct under the Wildlife Conservation Act 1950, with populations declining dramatically due to land clearing for agriculture in regional areas and for urban development around Perth (Shah, 2006). Clearing of feeding habitat on the Swan Coastal Plain poses a significant threat to the long term survival of Carnaby's Cockatoos (Shah, 2006).

A Preliminary Tree Survey Assessment conducted within the application area identified approximately 20 native trees suitable for either breeding or foraging habitat for black cockatoo species. A number of non native species suitable for black cockatoo species have also been identified within the application area (Arbor Logic 2012). Given the small number of trees suitable for habitat for black cockatoo species it is unlikely the clearing as proposed will have a significant impact on habitat for these species, vegetation located within Bush Forever site 119 approximately 0.12km south west of the application contains vegetation in better condition which will provide suitable habitat for black cockatoo species. Fauna mitigation practices will help mitigate impacts from the proposed clearing to these fauna species.

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

Methodology

References:

- Arbor Logic (2012)
- DEC (2012)

GIS Database:

- Sac Biodata sets - accessed 31 August 2012

(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

Two records of rare flora have been recorded within the local area (5 km radius). *Caladenia huegelii* and *Diuris drummondii* have been recorded approximately 4.6 km south east of the application area on the same

vegetation and soil type.

Caladenia huegelii is described as a tuberous, perennial, herb, 0.25-0.6 m high (Western Australian Herbarium 1998-). This species grows in deep sandy soil, in mixed woodland of jarrah (*Eucalyptus marginata*) and banksia. It occurs in scattered localities over a range of 315 km, commonly found in areas of lush undergrowth (DEC 1998). Given the majority of the vegetation under application is in a completely degraded to degraded (Keighery 1994) condition it is unlikely suitable habitat for this species occurs within the application area.

Diuris drummondii is described as tuberous, perennial, herb, 0.5-1.05 m high located within Low-lying depressions and swamps (Western Australian Herbarium 1998-). The vegetation proposed to be cleared is not considered to be associated with a watercourse or wetland, therefore it is unlikely suitable habitat for this species occurs within the application area.

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

Methodology References:
- DEC (1998)
-Keighery (1994)
- Western Australian Herbarium (1998-)

GIS Database:
- Sac Biodata sets - accessed 31 August 2012

(d) Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of a threatened ecological community.

Comments **Proposal is not likely to be at variance to this Principle**
No threatened ecological communities (TEC's) have been recorded within the application area. The closest record of a TEC is "Northern Spearwood shrub lands and woodlands" located approximately 2.5 km west of the application area.

Given the distance to the closest TEC and the completely degraded to degraded (Keighery 1994) condition of the vegetation under application, it is unlikely the vegetation proposed to be cleared is necessary for the maintenance of a TEC.

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

Methodology References:
- Keighery (1994)

GIS Database:
-Sac Biodata sets accessed - 30 August 2012

(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 6 and Hedde vegetation complex, Karrakatta Complex Central and South. The mapped Beard and Hedde vegetation complexes under application both have approximately 25 per cent of their pre-European vegetation remaining.

The local area (5km radius) appears to be extensively cleared, with approximately 15 per cent of its pre-European vegetation remaining.

The National Objectives and Targets for Biodiversity Conservation include a target that prevents the clearance of ecological communities with an extent below 30 per cent of that present pre-European settlement (Commonwealth of Australia, 2001). The mapped Beard vegetation complex associated with the area under application is below the 30 per cent threshold. However, the Environmental Protection Authority (EPA) recognises the Perth Metropolitan Region as a constrained area, which provides for the reduction of vegetation complexes to a minimum of 10 per cent of the pre-European extent (EPA, 2006).

The condition of vegetation under application ranges from completely degraded to degraded (Keighery, 1994) and has been subject to a range of impacts over an extended period, and therefore is not considered a significant remnant.

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

Pre-European	Current Extent	Remaining	Extent in DEC Managed
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	(ha)	(ha)	(%)	Lands (%)
IBRA Bioregion*				
Swan Coastal Plain	1,501,209.20	587,832.98	39.16	34.79
Shire*				
Town of Cambridge	2,174.39	557.31	25.63	0.00
Beard Vegetation Association in Bioregion*				
6	56,343.00	14,018.91	24.88	35.63
Heddlle Vegetation Complex **				
Karrakatta Complex Central and South	49,735.38	12,788.88	25.71	5.86

*Government of Western Australia (2011)

*Heddlle (1980)

Methodology

References:

- Commonwealth of Australia (2001)
- EPA (2006)
- Government of Western Australia (2011)
- Heddlle (1980)

GIS Databases:

- Perth Metropolitan Area Central 15cm Orthomosaic - Landgate 2011
- Local Government Authorities - Landgate
- Pre-European Vegetation

(f) Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland.

Comments

Proposal is not likely to be at variance to this Principle

Numerous wetlands are located within the local area (5 km radius). The closest being a conservation category wetland located approximately 0.18km east of the application area.

Herdsmen Lake an ANCA wetland is located approximately 1.3km north of the application area

Given the distance to the closest watercourse the vegetation under application is not considered to be growing in association with a watercourse. The 0.18 km buffer to the conservation category wetland in the adjacent lot is adequate to mitigate impacts from the proposed clearing.

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

Methodology

GIS Databases:

- ANCA wetlands
- Geomorphic Wetlands (Mgt Categories), Swan Coastal Plain
- Hydrology, linear

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

Comments

Proposal is not likely to be at variance to this Principle

The soil under application is mapped as soil type JK9 and is described as 'undulating dune landscape with some steep dune slopes and underlain by aeolianite at depth: chief soils are brown sands (Northcote et al 1960 - 1968).

Given the completely degraded to degraded (Keighery 1994) condition of the vegetation under application the clearing of 0.5 ha of native vegetation and 56 native trees within a much larger footprint is not expected to cause appreciable land degradation.

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

Methodology

References:

- Keighery (1994)
- Northcote et al (1960 - 1968)

GIS Database:
-Soils, statewide

(h) Native vegetation should not be cleared if the clearing of the vegetation is likely to have an impact on the environmental values of any adjacent or nearby conservation area.

Comments **Proposal is not likely to be at variance to this Principle**
Numerous conservation areas are located within the local area (5 km). The closest being Bush Forever site 119 which is located approximately 0.12km from the application area.

Herdsmen Lake Regional Park is located approximately 1.3km north of the application area.

Given the completely degraded to degraded (Keighery 1994) condition of the vegetation under application the proposed clearing of 0.5 ha of native vegetation and 56 native trees within a much larger footprint (16.4 ha) is not expected to have an impact on the environmental values of conservation reserves located within the local area.

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

Methodology References:
-Keighery (1994)

GIS Databases:
-DEC Tenure
- CALM, Regional Parks
-Bush Forever sites

(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**
Numerous wetlands are located within the local area (5 km radius). The closest being a conservation category wetland located approximately 0.18km east of the application area.

Herdsmen Lake an ANCA wetland is located approximately 1.3km north of the application area

Given the distance to the closest wetland the clearing as proposed is not likely to cause deterioration in the quality of surface water. The vegetation under application is in a completely degraded to degraded (condition) and therefore the proposed clearing of 0.5 ha of native vegetation and 56 native trees within a much larger footprint (16.4 ha) is unlikely to cause deterioration in the quality of underground water.

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

Methodology References:
-Keighery (1994)

GIS Databases:
- ANCA wetlands
- Geomorphic Wetlands (Mgt Categories), Swan Coastal Plain
- Hydrology, 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 relatively small area under application and the completely degraded to degraded (Keighery 1994) condition of the vegetation under application, the clearing as proposed 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 application proposes to clear 0.5 ha of native vegetation and 56 native trees for the purpose of redeveloping the Wembley Sport Complex. The original application proposed to clear 2.5 hectares of native vegetation including approximately 205 native trees. A review of the Preliminary Tree Survey Assessment (Arbor Logic 2012) and a site inspection conducted by the Department of Environment and

Conservation (2012) determined that of that applied to be cleared, approximately 56 trees and 0.5 hectares of vegetation is considered native vegetation under the Environmental Protection Act 1986.

The Town of Cambridge (2012) has proposed as part of planning for the site approximately 227 new trees and large shrubs will be planted within the Wembley Sports Park precinct. In addition approximately 710 trees and shrubs suitable to be utilised by Carnaby's Cockatoo will be planted outside the Sports Park in a number of Town of Cambridge conservation reserves.

Seven public submissions were received for this application raising concerns regarding significant fauna habitat in particular for Black Cockatoo species, aesthetic values, biodiversity, significant remnant in an extensively cleared area, impacts on environmental values of nearby conservation reserves. Impacts to significant fauna habitat is addressed in principle (b), impacts on a significant remnant in an extensively cleared area is addressed in clearing principle (e), impacts on biodiversity is addressed in clearing principle (a), impacts on conservation reserves is addressed in principle (h), and aesthetic values are not taken into consideration within the assessment of native vegetation.

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

Methodology References:
- Arbor Logic (2012)
- Town of Cambridge (2012)

4. References

- Arbor Logic (2012) Preliminary Tree Survey Assessment, Matthews Netball Centre, Jolimont. Western Australia. (DEC Ref: A522451)
- DEC (2007 -) NatureMap: Mapping Western Australia's Biodiversity. Department of Environment and Conservation. URL: <http://naturemap.dec.wa.gov.au/>. Accessed 31 August 2012.
- DEC (2012) Site Inspection Report for Clearing Permit Application CPS 5155/1, Lot 520, Salvado Road, Jolimont. Site inspection undertaken 14 July 2012. Department of Environment and Conservation, Western Australia (DEC Ref: A543672).
- Government of Western Australia (2011); 2011 Statewide Vegetation Statistics incorporating the CAR Reserve Analysis (Full Report). 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.
- Town of Cambridge (2012) Tree Replacement Strategy - Wembley Sports Complex. Western Australia. (DEC Ref: A543673)
- Western Australian Herbarium (1998-) FloraBase - The Western Australian Flora. Department of Environment and Conservation. <http://florabase.dec.wa.gov.au/> (Accessed 31 August 2012).

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)