



CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

PERMIT DETAILS

Area Permit Number: 6275/1
File Number: 2011/006794-1
Duration of Permit: From 27 June 2015 to 27 June 2027

PERMIT HOLDER

City of Mandurah

LAND ON WHICH CLEARING IS TO BE DONE

Lot 503 on Deposited Plan 51932, Dawesville

AUTHORISED ACTIVITY

The Permit Holder shall not clear more than 1.6 hectares of native vegetation within the area hatched yellow on attached Plan 6275/1.

CONDITIONS

1. Type of clearing authorised

The Permit Holder shall not clear any native vegetation after 27 June 2017.

2. Offsets – management order

Prior to undertaking any clearing authorised under this Permit, the Permit Holder shall:

- (a) amend the management order over Reserves 44300 and 48428, Dawesville, for the dual purpose of Public Recreation and Conservation; and
- (b) provide to the CEO a copy of the amended management order.

3. Management plan - revegetation

The Permit Holder must implement and adhere to the document "Westbury Way Reserve, Dawesville, Revegetation Plan - May 2015", submitted to the Department of Environment Regulation on 18 May 2015.

4. Records to be kept

The Permit Holder must maintain a description of the activities undertaken in relation to the offset of areas pursuant to condition 3 of this permit.

5. 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 4 of this Permit; and
 - (ii) concerning activities done by the Permit Holder under this Permit between 1 January to 31 December of the preceding year.
- (b) If no clearing authorised under this Permit was undertaken between 1 January to 31 December of the preceding, a written report confirming that no clearing under this permit has been carried out, must be provided to the CEO on or before 30 June of each year.

- (c) Prior to 20 March 2027, the Permit Holder must provide to the CEO a written report of records required under condition 5 of this Permit where these records have not already been provided under condition 5(a) of this Permit.



M Warnock
SENIOR MANAGER
CLEARING REGULATION

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

28 May 2015

Plan 6275/1



Legend

-  Areas approved to clear
-  Roads
-  Local Govt. Authorities (LGA)
Virtual Mosaic (LGATE-V001)
-  Cadastre



1:3,000

MGA 84
Geocentric Datum of Australia 1994

M Wamock Date 28/5/15
M Wamock

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





1. Application details

1.1. Permit application details

Permit application No.: 6275/1
Permit type: Area Permit

1.2. Proponent details

Proponent's name: City of Mandurah

1.3. Property details

Property: LOT 503 ON DEPOSITED PLAN 51932, DAWESVILLE
Colloquial name:
Local Government: MANDURAH, CITY OF
Authority:
DER Region: Greater Swan
DPaW District: SWAN COASTAL
LCDC:
Localities: DAWESVILLE

1.4. Application

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

1.5. Decision on application

Decision on Permit: Granted
Application:
Decision Date: 28 May 2015

2. Site Information

2.1. Existing environment and information

2.1.1. Description of the native vegetation under application

Vegetation Description	Clearing Description	Vegetation Condition	Comment
<p>The vegetation under application is mapped as:</p> <p>Beard vegetation association 997: Shrublands; melaleuca heath (Shepherd et al., 2001).</p> <p>Hedde complex: Cottesloe Complex - Central and South: Mosaic of woodland of Eucalyptus gomphocephala (Tuart) and open forest of Eucalyptus gomphocephala (Tuart) - Eucalyptus marginata (Jarrah) - Corymbia calophylla (Marri); closed heath on the Limestone outcrops (Hedde et al., 1980).</p> <p>ArMs: Banksia attenuata scattered low trees over Acacia rostellifera, Spyridium globulosum open to closed scrub over Melaleuca systema open shrubland (in open areas) over Hibbertia hypericoides low shrubland to low open heath over Trachymene pilosa, Podolepis lessonii open herbland. This vegetation unit is mapped as occurring in the northwest half of the application area (Morgan, 2005).</p> <p>AfBa: Allocasuarina fraseriana, Banksia attenuata low open woodland over Acacia rostellifera tall shrubland to</p>	<p>The application is to clear 1.6 hectares of native vegetation within Lot 503 on Deposited Plan 51932, Dawesville, for the purpose of providing public recreation space and facilities.</p>	<p>Very Good; Vegetation structure altered; obvious signs of disturbance (Keighery, 1994).</p>	<p>The condition of the vegetation under application was determined via a site inspection (DEC 2014).</p>

high open scrub over Melaleuca
systema open shrubland to shrubland
over Hibbertia hypericoides open heath
over Trachymene pilosa, Podolepis
lessonii open herbland. This vegetation
unit is mapped as occurring in the
southeast half of the application area
(Morgan, 2005).

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 at variance to this Principle

Application CPS 6275/1 is to clear 1.6 hectares of native vegetation within Lot 503 on Deposited Plan 51932, Dawesville, for the purpose of providing public recreation space and facilities, including the extension of the adjacent oval. The application area comprises vegetation in very good (Keighery, 1994) condition.

Several priority and one rare flora species are mapped within the local area (five kilometre radius) in the same vegetation association and soil type as the application area. No priority or rare flora were recorded within the application area during a flora and vegetation survey of the site (Morgan, 2005). Although no priority or threatened ecological communities are mapped within the local area, modelling undertaken by Morgan (2005) identified vegetation within the survey area as being most similar to Floristic Community Type (FCT) 25 with affinities to FCT 21a. FCT 25 is listed as a priority ecological community, with a category of Priority 3.

The application area is associated with the Yoongarillup landform and Morgan (2005) concluded that 'the vegetation of the survey area has high conservation value because of the diversity of the vegetation on that landform unit, the restricted distribution and area of the landform unit, the small part of that landform unit vegetation that is secured and the excellent condition of the survey area vegetation.'

There is approximately 40 per cent of native vegetation remaining in the local area.

The application area consists of suitable foraging habitat for black cockatoo species (DER, 2014 and Morgan, 2005) and encroaches on an ecological linkage. The clearing proposed is likely to contribute to the degradation or disruption of this linkage.

Given the application area contains vegetation in very good (Keighery, 1994) condition, habitat for fauna of conservation significance and encompasses an ecological linkage, the proposed clearing is at variance to this clearing principle.

To offset the residual impacts of the proposed clearing, the City of Mandurah has provided a Revegetation Plan (Eco Logical 2015) which involves the revegetation and conserving in perpetuity of 3.56 hectares of land approximately one kilometre from the application area. This protection is to be achieved through placing a management order for the dual purpose of Public Recreation and Conservation.

Methodology

References:

- Eco Logical (2015)
- Keighery (1994)
- DER (2014)
- Morgan (2005)

GIS Datasets:

- Carnaby's Cockatoo breeding, roost, feeding sites
- NLWRA, Current Extent of Native Vegetation
- Sac Bio datasets - accessed October 2014
- SWERL-AL

(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 at variance to this Principle

Fauna species listed as rare or likely to become extinct under the Wildlife Conservation Act 1950 have been recorded in the local area. These include *Calyptorhynchus banksii* subsp. *naso* (forest red-tailed black-cockatoo), *Calyptorhynchus baudinii* (Baudin's cockatoo), *Calyptorhynchus latirostris* (Carnaby's cockatoo), *Charadrius mongolus* (Lesser Sand Plover) and *Pseudocheirus occidentalis* (Western Ringtail Possum) (DPaW, 2007-).

Being an intact remnant of vegetation in an otherwise cleared/partly cleared landscape, the application area is likely to contain significant fauna habitat.

Carnaby's cockatoo is listed as endangered under the Commonwealth Environment Protection and Biodiversity

Conservation Act 1999 (EPBC Act). Carnaby's cockatoos nest in large hollows of eucalyptus trees and forage on the seeds, nuts and flowers of a large variety of plants including Proteaceous species (Banksia, Hakea, Grevillea), as well as Allocasuarina and Eucalyptus species, Corymbia calophylla and a range of introduced species, especially seeds from cones of Pinus species (Shah, 2006; Valentine and Stock, 2008).

No suitable nesting hollows for black cockatoo species were noted within the application area. However, the area consists of suitable foraging habitat for these species (DER, 2014 and Morgan, 2005). Confirmed Carnaby's cockatoo breeding and roosting areas are mapped approximately eight kilometres northeast, and 700 metres south, respectively, of the application area.

The Carnaby's Cockatoo Recovery Plan (DEC, 2012) states that, 'Success in breeding is dependent on the quality and proximity of feeding habitat within 12 kilometres of nesting sites. Along with the trees that provide nest hollows, the protection, management and increase of this feeding habitat that supports the breeding of Carnaby's cockatoo is a critical requirement for the conservation of the species.'

The application area is within the Swan Coastal Plain Interim Biogeographic Regionalisation of Australia bioregion. Foraging habitat on the Swan Coastal Plain is considered just sufficient to support the current population of Carnaby's cockatoo. Therefore, any reduction in foraging habitat will result in a reduction in the carrying capacity of the region and therefore a decline in the population of Carnaby's cockatoo. A study involving population analysis modelling suggests that if clearing continues to occur at its current rate without effective habitat restoration, the species is likely to decline to extinction in fewer than 20 years (Cockerill et al. 2013).

The Western Ringtail Possum is usually associated with stands of myrtaceous trees growing near swamps, watercourses or floodplains (Jones, 2000). The Lesser Sand Plover is a migratory species, breeding in the Northern Hemisphere and flying south for the winter, particularly to the northern, coastal regions of Australia (DotE, 2013). The application area is therefore not likely to contain significant habitat for either the Western Ringtail Possum or the Lesser Sand Plover.

The application area transects the axis line of an ecological linkage identified in the South West Regional Ecological Linkage Technical Report (Molloy et al., 2009) which is endorsed by the Environmental Protection Authority (EPA, 2009). These linkages are recognised for their significance in facilitating indigenous fauna movement across the landscape (Molloy et al., 2009). This linkage is considered to be significant, as there is limited vegetation remaining in the narrow peninsula to facilitate the movement of fauna and maintain the integrity of persisting native vegetation remnants. The clearing proposed is likely to contribute to the degradation or disruption of this linkage.

As the application area forms significant habitat for black cockatoo species, and may be regionally significant for the movement of endemic fauna, the application is at variance to this clearing principle.

To offset the residual impacts to black cockatoos, the applicant has proposed an offset to revegetate 3.56 hectares of native vegetation approximately one kilometre from the application area (Eco Logical 2015). This site will be conserved in perpetuity through a management order for the dual purpose of Public Recreation and Conservation.

Methodology

References:

- Cockerill et al. (2013)
- DEC (2012)
- DER (2014)
- DotE (2013)
- DPaW (2007-)
- Eco Logical (2015)
- EPA (2009)
- Jones (2000)
- Molloy et al. (2009)
- Morgan (2005)
- Shah (2006)
- Valentine and Stock (2008)

GIS Datasets:

- Carnaby Cockatoo breeding, roost, feeding sites
- SWERL-AL

(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 is mapped approximately one kilometre from the application area within the same vegetation association and soil type as the application area. No rare flora species were recorded during a flora and vegetation survey of the application area (Morgan, 2005). More recently, the Department of Parks and Wildlife (2014) stated that, given the application area comprises a soil type of 'pale yellow-brown sand. Some limestone outcropping' (Morgan, 2005, cited) and is centred on the Spearwood and Quindalup Dune system, the rare flora species is not likely to occur within the application area as its preference is for habitat found in the

Bassendean sand vegetation system.

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

Methodology References:
- Department of Parks and Wildlife (2014)
- Morgan (2005)

GIS Dataset:
- SAC Bio datasets - accessed October 2014

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

Comments **Proposal is not likely to be at variance to this Principle**

There are no threatened ecological communities mapped within the local area, therefore the application area is not likely to comprise the whole or part of, or be necessary for the maintenance of a threatened ecological community.

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

Methodology GIS Dataset:
- SAC Bio datasets - accessed October 2014

(e) Native vegetation should not be cleared if it is significant as a remnant of native vegetation in an area that has been extensively cleared.

Comments **Proposal may be at variance to this Principle**

The area under application is located within the Swan Coastal 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 997 of which there is approximately 68 per cent of its pre-European extent remaining within the Swan Coastal Plain bioregion (Government of Western Australia, 2013). The application area is also mapped as comprising Heddle Vegetation Association, Cottesloe Complex - Central and South of which approximately 41 per cent of its pre-European vegetation remains.

The area under application is located within the City of Mandurah, within which there is approximately 49 per cent of pre-European extent remaining (Government of Western Australia, 2013). The local area (five kilometre radius) retains approximately 40 per cent of its pre-European vegetation.

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).

Although vegetation complexes identified within the applied area have current representations above the minimum 30 per cent recommended by the Commonwealth of Australia (2001), the application area contains habitat for fauna of conservation significance and encompasses an ecological linkage, and is therefore considered to be a significant remnant.

The proposed clearing therefore may be at variance to this clearing principle.

	Pre-European (ha)	Current Extent (ha)	Remaining (%)	Extent in DPaW Managed Lands (%)
IBRA Bioregion*				
Swan Coastal Plain	3,443.56	2,363.21	68	63
Shire*				
City of Mandurah	16,797	8,245	49	44
Beard Vegetation Association in Bioregion* 997	3,443	2,363	68	63
Heddle Vegetation Association in Bioregion** Cottesloe Complex ' Central and South	44,995	18,474	41	8

Methodology References:
- Commonwealth of Australia (2001)
- *Government of Western Australia (2013)
- ** Heddle et al (1980)

GIS Dataset:
- Sac Bio datasets - accessed October 2014

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

Comments **Proposal is not likely to be at variance to this Principle**
No wetlands or watercourses have been mapped within the application area. The coastal waterline is located approximately 850 metres west of the application area and Harvey Estuary is approximately 830 metres to the east.

Given the distance to the nearest water body, and the absence of riparian vegetation on site, the proposed clearing is not considered likely to impact vegetation growing in, or in association with, a watercourse or wetland.

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

Methodology GIS Datasets:
- Hydrography linear
- Geomorphic Wetlands

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

Comments **Proposal may be at variance to this Principle**
The soils within the application area have been mapped by Northcote et al (1960-68) as chiefly siliceous sands. Given the sandy nature of soil, the proposed clearing will increase the risk of wind erosion. This is expected to be short-term while progress is made towards the completion of the proposed development.

Given the soil type present, the relatively flat nature of the site and that no watercourses are located within the application area, the proposed clearing is not likely to cause water erosion.

The proposed clearing may be at variance to this principle.

Methodology Reference:
- Northcote et al (1960-68)

GIS Datasets:
- Hydrography linear
- 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 may be at variance to this Principle**
The application area encompasses the axis line of an ecological linkage identified in the South West Regional Ecological Linkage Technical Report. These linkages are recognised for their significance in facilitating indigenous fauna movement across the landscape (Molloy et al., 2009). Linkages in the local area have already been compromised by private land development. The proposed clearing is likely to contribute further to the degradation or disruption of this linkage.

The Yalgorup National Park is located approximately 2.7 kilometres to the south of the area under application. It is possible that the disruption to the north-south ecological linkage, resulting from the proposed clearing, could impact on the environmental values of this conservation area.

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

To address the impacts mentioned above, the applicant has proposed an offset to revegetate 3.56 hectares of native vegetation approximately one kilometre south of the application area (Eco Logical 2015). This is expected to strengthen the north-south linkage.

Methodology References:
- Eco Logical (2015)
- Molloy et al (2009)

GIS Datasets:
- DPaW Tenure
- SWERL-AL

(i) Native vegetation should not be cleared if the clearing of the vegetation is likely to cause deterioration in the quality of surface or underground water.

Comments **Proposal is not likely to be at variance to this Principle**
No wetlands or watercourses have been mapped within the application area. The coastal waterline is located approximately 850 metres west of the application area and Harvey Estuary is approximately 830 metres to the east.

Groundwater salinity is mapped at 500-1000 Total Dissolved Solids milligrams per litre.

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

Methodology GIS Datasets:
- Hydrography, Linear
- Soils, 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 likely to be at variance to this Principle**
Given there are no watercourses or wetlands within the application area, its relatively small scale, flat profile and predominance of sandy soils, the proposed clearing is not likely to cause, or exacerbate, the incidence or intensity of flooding.

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

Methodology GIS Datasets:
- Geomorphic Wetlands
- Hydrography linear
- Soils, Statewide
- Topographic Contours, Statewide_1

Planning instruments and other relevant matters.

Comments This project was referred by the City of Mandurah to the Department of the Environment (Commonwealth) and it was decided that it was not a controlled action.

The City of Mandurah has proposed an offset for the project which includes the revegetation of 3.56 hectares of native vegetation and 18 additional trees within Westbury Way Reserve (Reserves R44300 and R48428), Dawesville. The offset will also involve the placement of a management order over the reserves for the dual purpose of Public Recreation and Conservation.

The application area covers an area in which there exists one registered Indigenous Heritage Site. The proponent is advised to liaise with the Department of Aboriginal Affairs regarding their obligations under the Aboriginal Heritage Act 1972.

The application area is within the land use of 'Urban Development' according to the Town Planning Scheme Zones.

The application area was the subject of a previous application (CPS 405/1) which was withdrawn in February 2009 due to delays in the project relating to water supply. The City of Mandurah reapplied for a clearing permit in September 2010 (CPS 3988/1). A proposed offset package was received by the former Department of Environment and Conservation in May 2011 but this was considered to be insufficient in its demonstration of 'no net loss' of environmental values against the proposed clearing. The application was withdrawn in March 2012 because of unresolved issues regarding the securing of a sustainable water supply. The City of Mandurah has recently been issued a Licence to Construct or Alter a Well (DoW, 2014).

No submissions from the public have been received for the current application.

Methodology Reference:
- DoW (2014)

GIS Datasets:
- Aboriginal Sites of Significance
- Town Planning Scheme Zones

4. Recommendation

Recommendation

The clearing application has been assessed against the clearing principles, planning instruments and other matters in accordance with s51O of the Environmental Protection Act 1986, and it has been concluded that the proposed clearing is at variance to clearing principles (a) and (b), may be at variance to principles (e), (g) and (h) and is not likely to be at variance to the remaining clearing principles.

5. References

- Cockerill, A., Lambert, T., Conole, L. and Pickett, E. (2013) Carnaby's Cockatoo Population Viability Analysis Model Report. Report funded by the Department of Sustainability, Environment, Water, Population, and Communities through the Sustainable Regional Development Program. Parsons Brinckerhoff, Perth.
- Commonwealth of Australia (2001) National Objectives and Targets for Biodiversity Conservation 2001-2005, Canberra.
- DEC (2012) Carnaby's cockatoo (*Calyptorhynchus latirostris*) Recovery Plan. Department of Environment and Conservation, Perth, Western Australia.
- Department of Parks and Wildlife (2014) Advice received in relation to clearing permit application CPS 6275/1, received 26 September 2014. Department of Parks and Wildlife, Western Australia (DER Ref: A819625).
- DER (2014) Site Inspection Report for Clearing Permit Application CPS 6275/1, Lot 503 on Deposited Plan 51932, Dawesville. Site inspection undertaken 7 October 2014. Department of Environment Regulation, Western Australia (DER Ref: A819558).
- DotE (2013) *Charadrius mongolus* - Lesser Sand Plover, Mongolian Plover. http://www.environment.gov.au/cgi-bin/sprat/public/publicspecies.pl?taxon_id=879. Accessed October 2014.
- DoW (2014) Licence to Construct or Alter Well, received 20 October 2014. Department of Water, Western Australia (DER Ref: A820314).
- DPaW (2007-) NatureMap: Mapping Western Australia's Biodiversity. Department of Environment and Conservation. URL: <http://naturemap.dec.wa.gov.au/>. Accessed January 2015.
- Eco Logical (2015) Westbury Way Reserve, Dawesville, Revegetation Plan (DER Ref: A910155).
- EPA (2009) South West Regional Ecological Linkages. Environmental Protection Bulletin No 8. Environmental Protection Authority, Western Australia.
- 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.
- Heddl, 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.
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- Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.
- Molloy, S., Wood, J., Hall, S., Wallrodt, S. and Whisson, G. (2009) South West Regional Ecological Linkages Technical Report. DEC, WALGA and Planning South West.
- Morgan, B. (2005) Flora and Vegetation Survey of Florida Bushland. Prepared for the City of Mandurah (DEC Ref: A334292).
- 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.
- Shah, B. (2006) Conservation of Carnaby's Black-Cockatoo on the Swan Coastal Plain, Western Australia. December 2006. Carnaby's Black-Cockatoo Recovery Project. Birds Australia, 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. & Stock W. (2008) Food Resources of Carnaby's Black-Cockatoo (*Calyptorhynchus latirostris*) in the Gngara Sustainability Strategy study area. Unpublished report to the Forests Products Commission. Available online: <http://ro.ecu.edu.au/ecuworks/6147>.