



CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

PERMIT DETAILS

Area Permit Number: CPS 8015/1
File Number: DER2018/000388
Duration of Permit: From 14 July 2018 to 14 July 2020

PERMIT HOLDER

City of Swan

LAND ON WHICH CLEARING IS TO BE DONE

Benara road reserve (PIN 12024803), Caversham
Road reserve (PIN 11823056), Caversham

AUTHORISED ACTIVITY

The Permit Holder shall not clear more than 0.08 hectares of native vegetation within the area shaded yellow on attached Plan 8015/1.

CONDITIONS

1. Avoid, minimise and reduce the impacts and extent of clearing

In determining the amount of native vegetation to be cleared authorised under this Permit, the Permit Holder must have regard to the following principles, set out in order of preference:

- (a) avoid the clearing of native vegetation;
- (b) minimise the amount of native vegetation to be cleared; and
- (c) reduce the impact of clearing on any environmental value.

2. Fauna management (black cockatoos)

(a) Prior to undertaking any clearing authorised under this Permit, the Permit Holder shall engage a *fauna specialist* to inspect *habitat trees* within the area shaded yellow on attached Plan 8015/1 for the presence of Carnaby's cockatoo (*Calyptorhynchus latirostris*), forest red-tailed black cockatoo (*Calyptorhynchus banksii* subsp. *naso*) and Baudin's cockatoo (*Calyptorhynchus baudinii*) (black cockatoos).

(b) Where black cockatoos are identified under condition 2 (a) of this Permit, the Permit Holder shall ensure that no clearing of, or within 10 metres of, the identified *habitat tree(s)* occurs until a *fauna specialist* has verified that the hollow(s) are no longer being utilised by black cockatoos.

3. Records must be kept

The Permit Holder must maintain the following records for activities done pursuant to this Permit, in relation to the clearing of native vegetation authorised under this Permit:

- (a) the location where the clearing occurred, 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;
- (b) the date that the area was cleared;
- (c) the size of the area cleared (in hectares);
- (d) actions taken to avoid, minimise and reduce the impacts and extent of clearing in accordance with condition 1 of this Permit; and

- (e) In relation to fauna management pursuant to condition 2 of this Permit:
- (i) 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;
 - (ii) the species name of fauna reasonably likely to utilise, or that have been observed utilising, the habitat tree(s);
 - (iii) the location and date where relocated fauna was released, 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
 - (iv) a copy of the fauna specialist's report.

4. Reporting

The Permit Holder must provide to the *CEO* the records required under condition 3 of this Permit, when requested by the *CEO*.

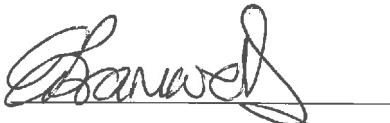
DEFINITIONS

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

CEO means the Chief Executive Officer of the Department responsible for the administration of the clearing provisions under the *Environmental Protection Act 1986*;

fauna specialist: means a person who holds a tertiary qualification specializing in environmental science or equivalent, and has a minimum of 2 years work experience in fauna identification and surveys of fauna native to the region being inspected or surveyed, or who is approved by the CEO as a suitable fauna specialist for the bioregion, and who holds a valid fauna licence issued under the *Wildlife Conservation Act 1950*; and

habitat tree(s) means a tree that has a diameter, measured at 1.5 metres from the base of the tree, of 50 centimetres or greater, that contains or has the potential to develop hollows or roosts suitable for native fauna;



Emma Bramwell
A/MANAGER
CLEARING REGULATION

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

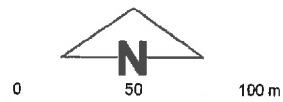
14 June 2018

Plan 8015/1



Legend

-  Areas approved to clear
 -  Roads
 -  Local Government Authority cadastre
 -  Cadastre
- WANow_Imagery



MGA 94
Geocentric Datum of Australia 1994

E. Bramwell Date 14/06/18
E. BRAMWELL

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



GOVERNMENT OF
WESTERN AUSTRALIA



1. Application details

1.1. Permit application details

Permit application No.: CPS 8015/1
Permit type: Area Permit

1.2. Applicant details

Applicant's name: City of Swan

1.3. Property details

Property: Benara Road Reserve (PIN 11823056), CAVERSHAM
Unnamed Road Reserve (PIN 12024803), CAVERSHAM

Local Government Authority: City of Swan

DBCA Region: Swan

Localities: CAVERSHAM

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
0.08	0	Mechanical Removal	Road construction or upgrades

1.5. Decision on application

Decision on Permit Application: Grant

Decision Date: 14 June 2018

Reasons for Decision: The clearing permit application was received on 7 March 2018 and has been assessed against the clearing principles, planning instruments and other matters in accordance with section 51O of the *Environmental Protection Act 1986*, and it has been concluded that the proposed clearing is at variance to clearing principle (f), may be at variance to clearing principle (b), and is not likely to be at variance to the remaining clearing principles.

The Delegated Officer noted that the proposed clearing will impact on three *Eucalyptus rudis* (flooded gum) trees and may comprise suitable breeding habitat for threatened black cockatoo species. In granting a clearing permit subject to conditions, the Delegated Officer determined that the proposed clearing is not likely to have any unacceptable environmental impacts.

2. Site Information

Clearing Description: The application is for the proposed clearing of 0.08 hectares of native vegetation within Benara Road reserve (PIN 11823056) and unnamed road reserve (PIN 12024803), Caversham, for the purposes of road widening around roundabout.

Vegetation Description: The vegetation within the application area is mapped as Southern River Complex (System 42): Open woodland of *Corymbia calophylla* (marri) - *Eucalyptus marginata* (jarrah) - *Banksia* species with fringing woodland of *Eucalyptus rudis* (flooded gum) - *Melaleuca raphiophylla* (swamp paperbark) along creek beds (Government of Western Australia, 2018).

Phorographs provided by the applicant indicate that the vegetation within the application area comprises three mature and young jarrah (one of which may contain hollows), three mature and young flooded gum, and one young marri, over minimal native understorey (Figure 2; City of Swan, 2018a).

Vegetation Condition: The condition of the vegetation within the application area is "Completely Degraded": The structure of the vegetation is no longer intact and the area is completely or almost completely without native species (Keighery, 1994).

The condition of the vegetation within the application area was determined from photographs provided by the applicant (Figure 2 and 3; City of Swan, 2018a).

Soil and Landform Type: The application area is mapped as Bassendean Phase Ksg (212Bs_Ksg), described as moderately deep light grey sand over yellow sand (sand dune) (Schoknecht et al., 2004).

The soil within the application area is mapped as Cb38, described as subdued dune-swale terrain: chief soils are leached sands on low dunes; associated are small areas of other sand soils (Northcote et al. 1960-68).

Comments: The local area referred to in the assessment of this application is defined as a 10 kilometre radius measured from the perimeter of the application area. The local area contains approximately 13 per cent native vegetation cover, the majority of which is contained in conservation areas/Bush Forever sites.

Figure 1: Map of application area (cross-hatched blue)



Figure 2: Photographs of vegetation within the application area



Photo 1: Eastern portion of the application area, comprising two jarrah and one young marri in the foreground and three flooded gum in the background, over minimal native understorey (City of Swan, 2018a).



Photo 2: Western portion of the application area, comprising a single jarrah (City of Swan, 2018a).

Figure 3: Close up of trees proposed to be cleared, numbered one to seven, from east to west of the application area (all trees have a diameter at breast height over 500 millimetres)



Photo 3: Tree number one – jarrah (City of Swan, 2018b)



Photo 4: Tree number two – jarrah (City of Swan, 2018b)



Photos 5: Tree number three - flooded gum (City of Swan, 2018b)



Photo 6: Tree number four - marri (City of Swan, 2018b)



Photo 7: Tree number five - flooded gum (City of Swan, 2018b)



Photo 8: Hollow on tree number five (circled in yellow) (City of Swan, 2018b)



Photo 9: Tree number six - flooded gum (City of Swan, 2018b)



Photo 10: tree number seven - jarrah (City of Swan, 2018b)

3. Assessment of application against clearing principles

According to available databases, nine rare flora species and 43 priority flora species have been recorded within the local area. Based on the mapped soil and vegetation types within application area, one rare flora species, one Priority 1 flora species (being species that are known from one or a few locations (generally five or less) which are potentially at risk (Jones, 2015)), two Priority 2 flora species (being species that are known from a few populations, some occurring within conservation lands such as nature reserves or national parks (Jones, 2015)) and four Priority 3 flora species (being species that are known from several locations, and the species does not appear to be under imminent threat, or from few but widespread locations with either large population size or significant remaining areas of apparently suitable habitat, much of it not under imminent threat (Jones, 2015)), could potentially occur within the application area:

- *Acacia benthamii* (Priority 2) is known from a total of 36 records between Cataby and Pinjarra, at sites generally associated with sandy soils with *Banksia* species and *Eucalyptus* species woodlands (Western Australian Herbarium, 1998-). The nearest record of this species is approximately 1.5 kilometres from the application area. Noting the number of records and distribution of this species, the proposed clearing is not likely to impact the conservation status of this species should any individuals occur within the application area.
- *Macarthuria keigheryi* (Threatened) is known from a total of 27 records between Dandaragan and Canning, at sites generally associated with white or grey sandy soils with low open woodlands associated with *Banksia* and *Melaleuca* species (Western Australian Herbarium, 1998-). The nearest record of this species is approximately 6.1 kilometres from the application area. Noting the condition of the vegetation within the application area, this species is not likely to occur within the application area.

- *Stachystemon* sp. Keysbrook (R. Archer 17/11/99) (Priority 1) is known from a total of four records in Whiteman Park, Keysbrook and Busselton area, at well drained sites generally associated with grey sandy soils with humus and open scrub to marri open low woodlands over mixed herbs (Western Australian Herbarium, 1998-). The nearest record of this species is approximately 6.1 kilometres from the application area. Noting condition of the vegetation within the application area, this species is not likely to occur within the application area.
- *Cyathochaeta teretifolia* (Priority 3) is known from a total of 39 records between Toodyay and Manjimup, at flat wetland sites generally associated with grey sandy soils with open low woodlands associated with *Melaleuca preissiana* (Moonah) (Western Australian Herbarium, 1998-). The nearest record of this species is approximately 6.8 kilometres from the application area. Noting the condition of the vegetation within the application area, this species is not likely to occur within the application area.
- *Lepyrodia curvescens* (Priority 2) is known from a total of 19 records between Coorow and Gosnells, at seasonally inundated sites generally associated with sandy or lateritic soils and marri woodlands over sparse shrubs and dense sedges (Western Australian Herbarium, 1998-). The nearest record of this species is approximately 6.8 kilometres from the application area. Noting the condition of the vegetation within the application area, this species is not likely to occur within the application area.
- *Dampiera triloba* (Priority 3) is known from a total of 15 records from Cunderdin, Gnangara, Gibson, North Lake and Bayswater areas, at sites generally associated with grey sandy soils with high organic matter and jarrah low woodlands (Western Australian Herbarium, 1998-). The nearest record of this species is approximately 7.4 kilometres from the application area. Noting the distance to this record and the condition of the vegetation within the application area, this species is not likely to occur within the application area.
- *Platysace ramosissima* (Priority 3) is known from a total of 15 records between Damdaragan and Bunbury, at sites generally associated with dry, white/grey sandy soils with *Banksia* species and *Eucalyptus* species low open woodlands (Western Australian Herbarium, 1998-). The nearest record of this species is approximately 7.9 kilometres south of the application area. Noting the distance to this record and the condition of the vegetation within the application area, this species is not likely to occur within the application area.
- *Banksia pteridifolia* subsp. *vernalis* (Priority 3) is known from a total of 31 records between Coorow and Kalamunda, at sites generally associated with white/grey sandy soils having a lateritic base with *Banksia attenuata* (candlestick banksia) and jarrah associated woodlands (Western Australian Herbarium, 1998-). The nearest record of this species is approximately 9.6 kilometres from the application area. Noting the distance to this record and the condition of the vegetation within the application area, this species is not likely to occur within the application area.

According to available databases, 14 threatened fauna species, 12 priority fauna species, two other specially protected fauna species and nine fauna species protected under international agreement have been recorded within the local area (DBCA, 2007-). The application area is mapped as Carnaby's cockatoo (*Calyptorhynchus latirostris*) unconfirmed breeding and roosting area. Forest red-tailed black cockatoo (*Calyptorhynchus banksii* subsp. *naso*) and Baudin's cockatoo (*Calyptorhynchus baudinii*) have also been recorded from the local area (DBCA, 2007-). Carnaby's cockatoo is listed as endangered and Baudin's cockatoo and forest red-tailed cockatoo are listed as vulnerable under the *Commonwealth Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). These species nest in hollows in live or dead trees, generally in woodland or forest, but may also breed in former woodland or forest now present as isolated trees (Commonwealth of Australia, 2012). Photographs provided by the applicant (Figures 2 and 3) indicate that a number of trees within the application area are likely to fit the criteria for black cockatoo roosting habitat and may contain hollows suitable as black cockatoo nesting habitat. A hollow was recorded on one flooded gum (tree number five, Figure 3 photos 7 and 8), which appears to be large enough to be utilised by black cockatoos. Inspection of suitable habitat trees for the presence of black cockatoos will assist in identifying any potential impacts and necessary management measures. Noting the extent of the proposed clearing and the condition of the vegetation within the application area, the application area is not likely comprise significant habitat for indigenous fauna, including species of conservation significance.

According to available databases, nine threatened ecological communities (TEC) and one priority ecological community (PEC) have been recorded in the local area. The Commonwealth-listed TEC 'Banksia Dominated Woodlands of the Swan Coastal Plain IBRA Region' (Banksia Woodlands TEC) (listed as endangered) occurs approximately 68 metres west of the application area, and the other TECs and PEC occur more than 3.3 kilometres from the application area. Noting the species composition of these TECs and PEC, the mapped vegetation type within the application area, and the extent of the proposed clearing, the application area is not likely comprise these TECs or PEC. The application area is not likely to comprise the whole or part of, or be necessary for the maintenance of, a TEC.

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). The Environmental Protection Authority (EPA) recognises the Perth Metropolitan Region to be a constrained area, within which a minimum 10 per cent representation threshold for ecological communities is recommended (EPA, 2008). The application area is located within the mapped extent of the Perth Metropolitan Region Scheme. Noting that the EPA considers a constrained area to be an area where there is an expectation that development will proceed, and that the cleared area is zoned 'Urban' in the Perth Metropolitan Region Scheme, the 10 per cent threshold applies in this instance. The application area is mapped as Heddle Vegetation Complex 'Southern River Complex', which retains approximately 10,828 hectares (18 per cent) of its pre-European extent within the Swan Coastal Plain IBRA Bioregion (Government of Western Australia, 2018). On this basis, and noting the extent of the proposed clearing and that the application area is not likely to include flora or ecological communities of conservation significance or comprise significant habitat for indigenous fauna, the application area is unlikely to be significant as a remnant of native vegetation in an area that has been extensively cleared.

According to available databases, no natural watercourses intersect the application area, however a major urban drain is mapped within the application area. The application area is approximately 69 metres from a 'conservation category' wetland (West Bennett Brook), and 73 metres and 110 metres from 'multiple use' wetlands. Three flooded gum trees occur within the application area (Figure 2), which are typically associated with watercourses, and may have comprised fringing vegetation to the above wetlands prior to development in the local area. However, noting the size of the application area, and that the surrounding area has been extensively cleared (refer to Figure 2), impacts to riparian vegetation and water quality as a result of the proposed clearing are expected to be minimal.

According to available databases, the nearest conservation area is Bush Forever site 305, adjacent to the western perimeter of the application area and associated with West Bennett Brook and occurrences of the Banksia Woodlands TEC. Two river reserves managed by the Swan River Trust are located approximately two kilometres and 2.4 kilometres from the application area. Bush Forever sites within the local area form ecological linkages across the landscape, however the portion of Bush Forever site 305 that is adjacent to the application area has been parkland cleared and the nearest continuous tree canopy within this conservation area is approximately 47 metres from the application area. Noting the size of the application area and surrounding urbanised landscape, the proposed clearing is not likely to impact on the environmental values of these nearby conservation areas.

According to available databases, the application area has relatively flat topography, an average rainfall of 800 millimetres per annum, and groundwater salinity between 500-1,000 total dissolved solids (milligrams per litre). Noting this, the extent of the proposed clearing, the condition of the vegetation within the application area and the urbanised landscape, the proposed clearing is unlikely to cause appreciable land degradation, or cause deterioration in the quality of surface or underground water, or cause or exacerbate the incidence or intensity of flooding.

Given the above, the proposed clearing is at variance to clearing principle (f), may be at variance to clearing principle (b) and not likely to be at variance to the remaining clearing principles.

Planning instruments and other relevant matters

The application was advertised on the Department's website on 26 March 2018, inviting submissions from the public within a fourteen day period. No submissions were received in relation to this application.

There is one registered Aboriginal site of significance within the application area. It is the applicant's responsibility to comply with the *Aboriginal Heritage Act 1972* and ensure that no Aboriginal sites of significance are damaged through the clearing process.

4. References

- City of Swan (2018a). Photographs of the application area sent by the applicant on request (DWER Ref: A1678800).
- City of Swan (2018b). High resolution photographs of the application area sent by the applicant, including additional information (diameter at breast height measurements) on trees within the application area (DWER Ref: A1687730 and A1687736).
- Commonwealth of Australia (2001) National Objectives and Targets for Biodiversity Conservation 2001-2005, Canberra.
- Commonwealth of Australia (2012). EPBC Act referral guidelines for three threatened black cockatoo species. Department of Sustainability, Environment, Water, Populations and Communities, Canberra.
- Department of Biodiversity, Conservation and Attractions (DBCA) (2007-) NatureMap: Mapping Western Australia's Biodiversity. Department of Parks and Wildlife. URL: <http://naturemap.dpaw.wa.gov.au/>. Accessed May 2018.
- Environmental Protection Authority (EPA) (2008) Environmental Guidance for Planning and Development. Guidance Statement No. 33. Environmental Protection Authority. Western Australia.)
- Government of Western Australia (2018) 2017 South West Vegetation Complex Statistics. Current as of October 2017. WA Department of Biodiversity, Conservation and Attractions, Perth, <https://catalogue.data.wa.gov.au/dataset/dbca>
- Jones, A. (2015) Threatened and Priority Flora List, 11 November 2015. Department of Parks and Wildlife: Kensington, WA.
- 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.
- Schoknecht, N., Tille, P. and Purdie, B. (2004) Soil-landscape mapping in South-Western Australia – Overview of Methodology and outputs' Resource Management Technical Report No. 280. Department of Agriculture.
- Western Australian Herbarium (1998-). FloraBase - the Western Australian Flora. Department of Biodiversity, Conservation and Attractions. <https://florabase.dpaw.wa.gov.au/> Accessed May 2018

GIS Databases:

- Aboriginal Sites of Significance
- Bush Forever Sites
- Clearing Regulations - Environmentally Sensitive Areas
- Carnaby's cockatoo: breeding, roosting, feeding
- Department of Biodiversity Conservation and Attractions, Tenure
- Geomorphic Wetlands, Swan Coastal Plain
- Groundwater salinity, statewide
- Heddle Vegetation
- Hydrology, linear
- IBRA Australia
- Land for Wildlife
- PDWSA, CAWSA, RIWI Act Areas
- Remnant vegetation
- SAC Biodatasets (accessed May 2018)
- Soils, statewide
- Town Planning Scheme Zones