



CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

Purpose Permit number:	CPS 7289/1
Permit Holder:	City of Busselton
Duration of Permit:	From 8 April 2017 to 8 April 2022

The Permit Holder is authorised to clear native vegetation subject to the following conditions of this Permit.

PART I – CLEARING AUTHORISED

1. Purpose for which clearing may be done

Clearing for the purpose of road construction.

2. Land on which clearing is to be done

Carter Road Reserve (PIN 11476575), Wilyabrup
Commonage Road Reserve (PIN 11469288), Quindalup and Yallingup Siding
Gale Road Reserve (PINs 11471082 and 11471073), Koorup and Metricup
King Street Road Reserve (PINs 11906236 and 11435949), West Busselton
Lot 4539 on Deposited Plan 211912 (Reserve 19319), West Busselton
Miami Road Reserve (PIN 11476610), Metricup
North Jindong Road Reserve (PIN 11471104), North Jindong
Tom Cullity Drive Road Reserve (PIN 11476604), Wilyabrup

3. Area of Clearing

The Permit Holder shall not clear more than:

- (a) three native trees within the combined areas cross hatched yellow on attached Plan 7289/1a.
- (b) 0.02 hectares of native vegetation within the area cross-hatched yellow on attached Plan 7289/1b.
- (c) 0.4 hectares of native vegetation within the area cross-hatched yellow on attached Plan 7289/1c.
- (d) 0.27 hectares of native vegetation within the area cross-hatched yellow on attached Plan 7289/1d.
- (e) 0.12 hectares of native vegetation within the area cross-hatched yellow on attached Plan 7289/1e.
- (f) 0.078 hectares of native vegetation within the combined areas cross-hatched yellow on attached Plan 7289/1f.
- (g) 0.06 hectares of native vegetation within the area cross-hatched yellow on attached Plan 7289/1g.

4. Application

This Permit allows the Permit Holder to authorise persons, including employees, contractors and agents of the Permit Holder, to clear native vegetation for the purposes of this Permit subject to compliance with the conditions of this Permit and approval from the Permit Holder.

5. Type of clearing authorised

This Permit authorises the Permit Holder to clear native vegetation for the activities described in condition 1 of this Permit to the extent that the Permit Holder has the power to carry out works involving clearing for those activities under the *Local Government Act 1995* or any other written law.

PART II – ASSESSMENT SEQUENCE AND MANAGEMENT PROCEDURES

6. Avoid, minimise etc 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.

7. Weed and dieback control

When undertaking any clearing or other activity authorised under this Permit, the Permit Holder must take the following steps to minimise the risk of the introduction and spread of *weeds* and *dieback*:

- (a) clean earth-moving machinery of soil and vegetation prior to entering and leaving the area to be cleared;
- (b) ensure that no *dieback* or *weed*-affected soil, *mulch*, *fill* or other material is brought into the area to be cleared; and
- (c) restrict the movement of machines and other vehicles to the limits of the areas to be cleared.

8. Fauna management

The Permit Holder must implement and adhere to the fauna management measures contained in Annexure 1.

PART III - RECORD KEEPING AND REPORTING

9. Records to be kept

The Permit Holder must maintain the following records 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); and
- (d) purpose for which clearing was undertaken.

10. Reporting

- (a) The Permit Holder must provide to the CEO on or before 30 June of each year, a written report demonstrating adherence to all conditions of this permit, and setting out the records required under condition 9 of this permit in relation to clearing carried out between 1 January and 31 December of the previous calendar year.
- (b) If no clearing authorised under this Permit was undertaken between 1 January and 31 December of the previous calendar year, 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 each year.
- (c) Prior to 8 January 2022, the Permit Holder must provide to the CEO a written report of records required under condition 9 of this Permit where these records have not already been provided under condition 10(a) of this Permit.

DEFINITIONS

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

dieback means the effect of *Phytophthora* species on native vegetation;

fill means material used to increase the ground level, or fill a hollow;

mulch means the use of organic matter, wood chips or rocks to slow the movement of water across the soil surface and to reduce evaporation;

weed/s means any plant -

- (a) that is a declared pest under section 22 of the *Biosecurity and Agriculture Management Act 2007*; or
- (b) published in a Department of Parks and Wildlife Regional Weed Rankings Summary, regardless of ranking; or
- (c) not indigenous to the area concerned.



Emma Bramwell
A/ MANAGER
CLEARING REGULATION

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

9 March 2017

ANNEXURE 1

Fauna management measures adapted from 'CPS5012/2 Amendment to area - City of Busselton (Response to items raised)' provided to the Department of Environment Regulation on 28 January 2016

Prior to the commencement of clearing activities:

- The combined areas cross hatched yellow on attached Plans 7289/1a-g must be accurately surveyed and clearly marked.
- A fauna specialist meeting the following requirements will be identified:
 - Has suitable equipment to administer emergency care to any injured or displaced fauna (e.g. heat pack, box, blankets etc.) available at all times.
 - Has a suitable care facility or has made arrangements with an appropriate carer who can care for or rehabilitate any injured fauna.
 - Able to notify an appropriate person at the Department of Parks and Wildlife regarding any fauna going into care and provide them with details of any incident, type of injury and carer details.
 - Able to identify suitable fauna habitat adjacent to the combined areas cross hatched yellow on attached Plans 7289/1a-g.
- A permit under Regulation 15 of the *Wildlife Conservation Act 1950* (WC Act) shall be sought by a fauna specialist regarding the handling or translocation of any fauna.
- A fauna specialist will conduct a drone inspection and dusk survey of all suitable habitat trees for Carnaby's cockatoo (*Calyptorhynchus latirostris*), Baudin's cockatoo (*Calyptorhynchus baudinii*) and the forest red-tailed black cockatoo (*Calyptorhynchus banksii* subsp. *naso*) (black cockatoos) during the two evenings prior to clearing to ensure that no black cockatoos are using trees for nesting activities. Should a habitat tree be found to be used for nesting by black cockatoos, clearing must be postponed until young have fledged and left the nest.
- Immediately prior to clearing, a fauna specialist shall conduct a targeted survey of suitable habitat for the western ringtail possum (*Pseudocheirus occidentalis*; WRP) within the combined areas cross hatched yellow on attached Plans 7289/1a-g to determine the location of dreys or hollows that may be occupied by the WRP. Trees that may be occupied by the WRP shall be marked with flagging tape around the trunk, between waist and eye level, so that the tape is clearly visible from all directions. Any WRP present within hollows or dreys must be removed in accordance with a permit obtained under Regulation 15 of the WC Act.
- Machinery operators and others involved in the clearing ('operators') shall be briefed by the fauna specialist. The briefing shall include:
 - the identification of sites that may be occupied by fauna;
 - the techniques and protocols to be employed during clearing, including the means of communication between the operators and fauna specialist to identify fauna;
 - operators shall be made aware that displaced fauna may shelter in stockpiled vegetation.

During clearing activities:

- Clearing must be undertaken in a systematic manner that minimises disturbance to fauna.
- Any stockpiles of vegetation must be placed in cleared areas. These should be removed from site or chipped as quickly as possible to prevent re-occupation by fauna.

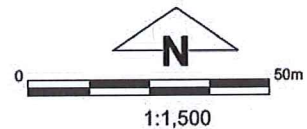
- The fauna specialist must be present during the clearing of all areas where suitable habitat for black cockatoos or the WRP exists.
- The fauna specialist shall direct the operators and ensure that any trees that are cleared are done so in a manner that allows WRP to be safely removed.
- The fauna specialist will supervise any animal handling or the rescue of any injured animals should this be required.
- All trees to be cleared, irrespective of whether fauna is seen, shall be bumped or shaken first. The operator shall wait and observe the tree for a short period of time.
- In the event that the WRP is observed in a tree to be cleared,
 - If there is suitable habitat for WRP adjacent to the area to be cleared, the tree should be gently lowered to the ground to enable the animal to safely evacuate. The fauna specialist shall ensure that WRP are encouraged to move towards adjacent habitat.
 - If there is no suitable WRP habitat adjacent to the area to be cleared, the fauna specialist shall remove and capture fauna prior to the tree being cleared. Captured fauna must be translocated in accordance with a permit obtained under Regulation 15 of the WC Act.
 - If fauna cannot be easily removed due to the density of the canopy, the machine operator shall be briefed on the slow removal of canopy, in a systematic way, to allow fauna to move away from the machine. This will allow fauna to move to outer areas of remaining canopy, where it shall be removed or captured using a cherry picker or manually as the operator slowly lowers the tree to the ground.
- If the operators encounter any injured fauna during the clearing, the fauna specialist will arrange for the care of any injured fauna.
- Stockpiles shall be checked for fauna prior to their movement or disposal. If fauna are present, they shall be removed by the fauna specialist and managed in accordance with guidelines from the Department of Parks and Wildlife.

Plan 7289/1a



Legend

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

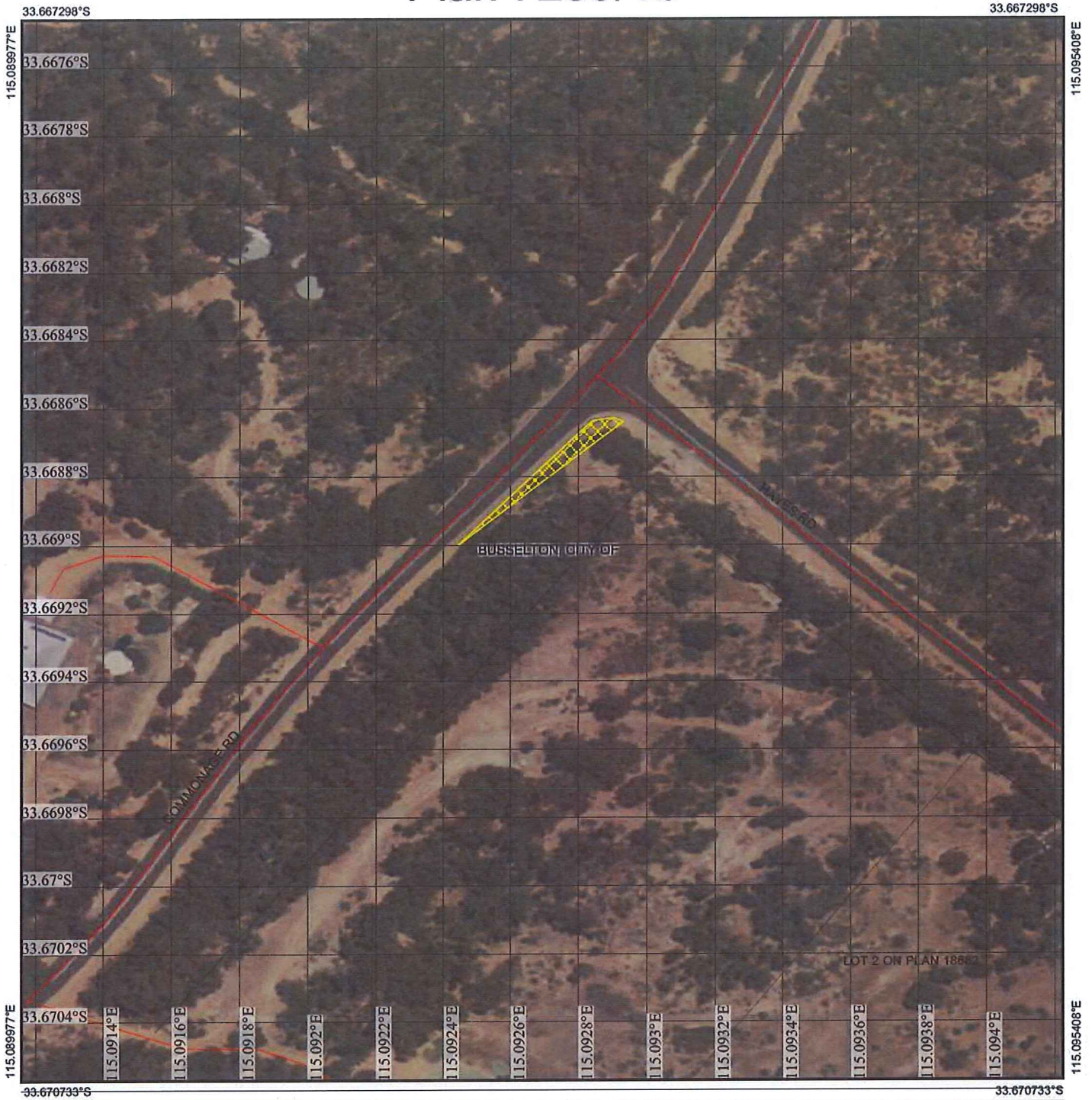


[Signature] Date 09/03/17

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

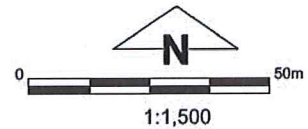


Plan 7289/1b



Legend

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



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 (Approximate when reproduced at A4)
 GDA 94 (Lat/Long)
 Geocentric Datum of Australia 1994

E. Hamwell Date *09/03/17*

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



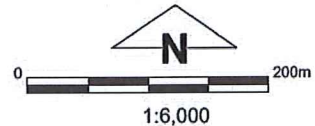
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Plan 7289/1c



Legend

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



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 (Approximate when reproduced at A4)
 GDA 94 (Lat/Long)
 Geocentric Datum of Australia 1994

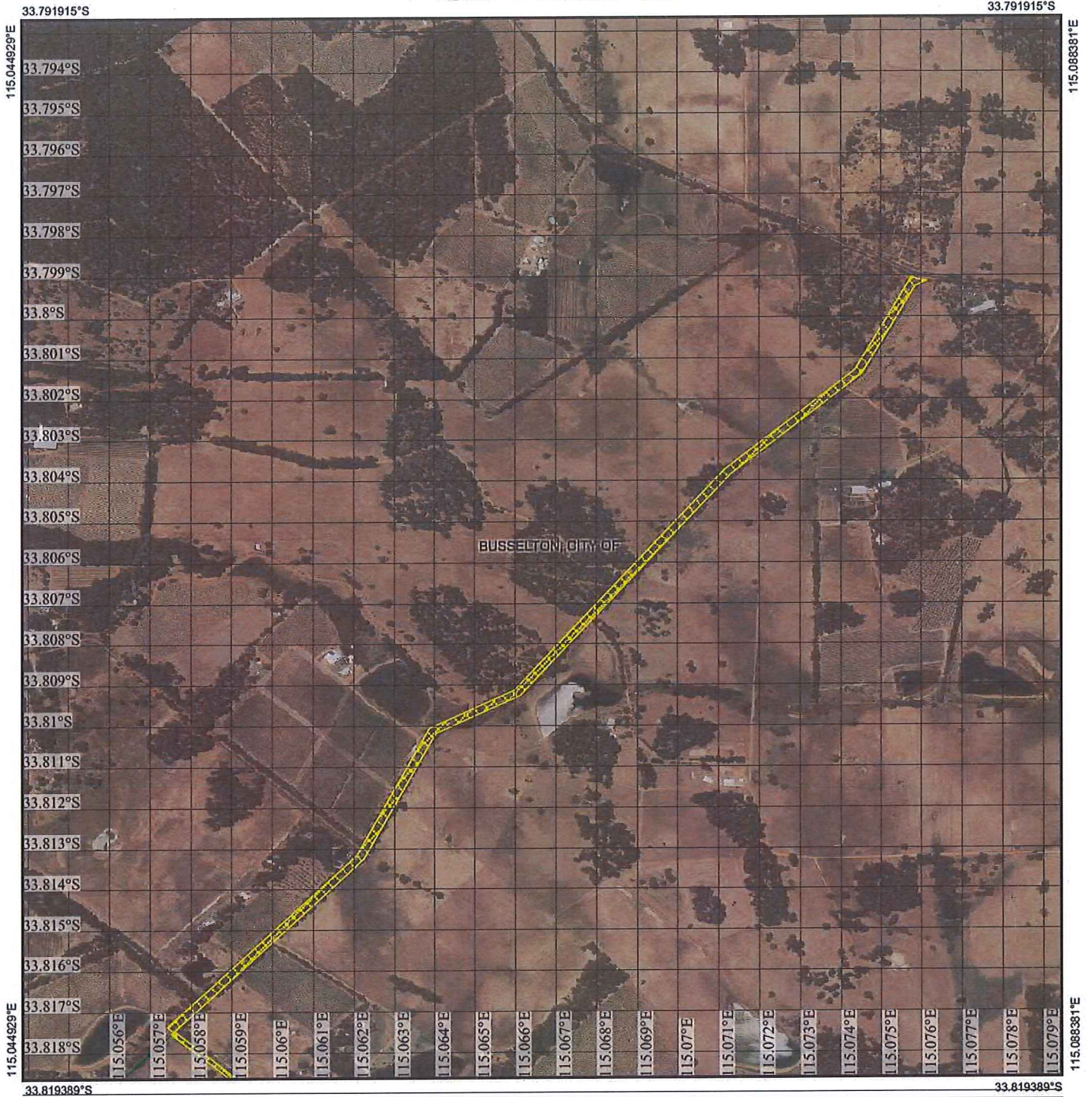
Shanwell Date *09/03/17*

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



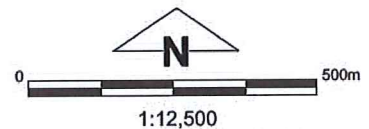
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Plan 7289/1d



Legend

-  Imagery
-  Clearing Instruments Activities
-  Local Government Authority



(Approximate when reproduced at A4)

GDA 94 (Lat/Long)

Geocentric Datum of Australia 1994

E. J. M. W. J. Date 09/03/17

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



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Plan 7289/1e



Legend

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



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(Approximate when reproduced at A4)

GDA 94 (Lat/Long)

Geocentric Datum of Australia 1994

Shanwell Date *09/03/17*

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



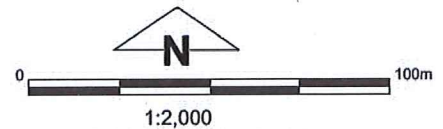
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Plan 7289/1f



Legend

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

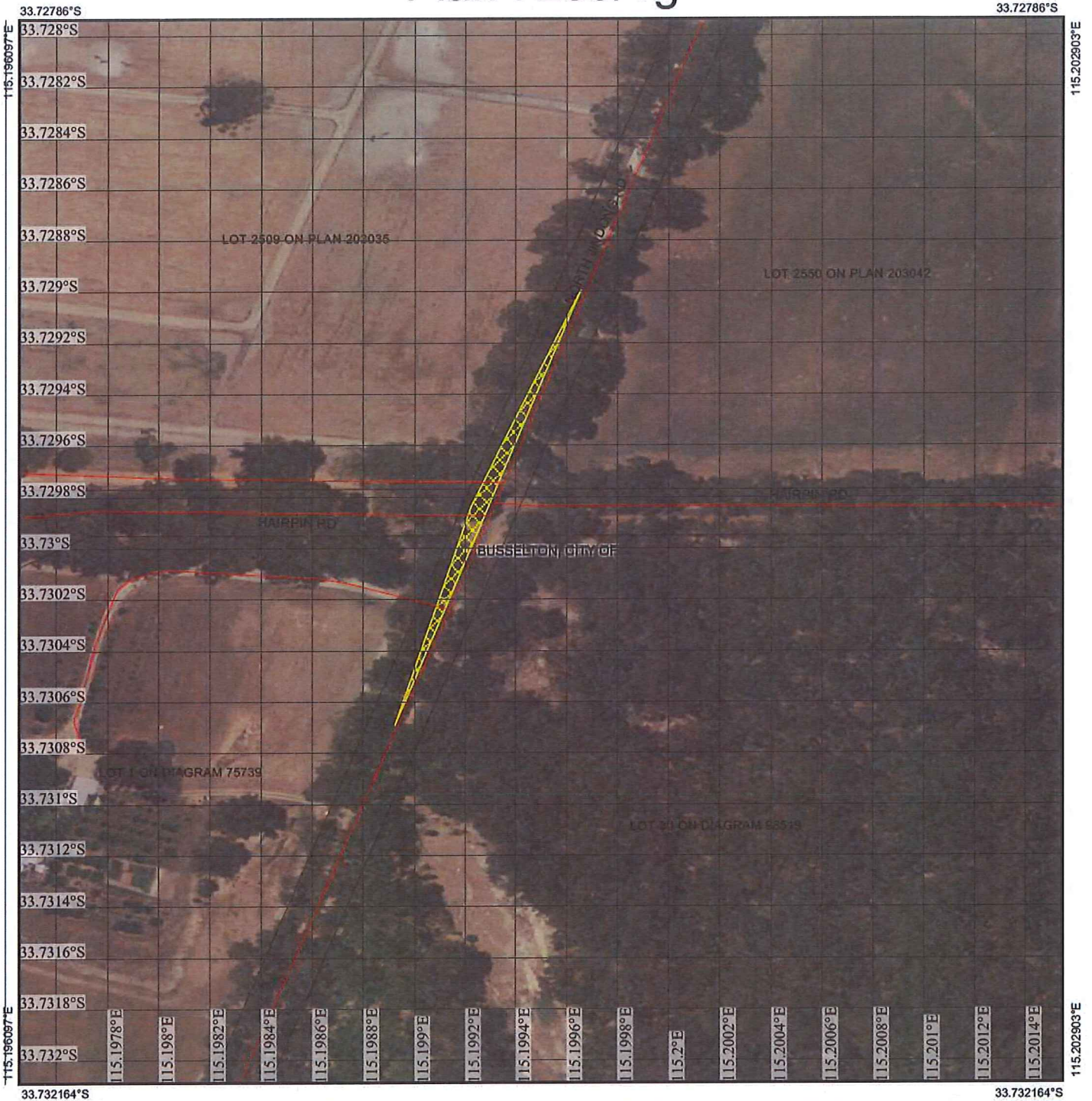


E. Ramwell Date *09/03/17*

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



Plan 7289/1g



Legend

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



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(Approximate when reproduced at A4)

GDA 94 (Lat/Long)

Geocentric Datum of Australia 1994

E. Cameron Date *09/03/17*

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



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1. Application details

1.1. Permit application details

Permit application No.: 7289/1
Permit type: Purpose Permit

1.2. Applicant details

Applicant's name: City of Busselton

1.3. Property details

Property: Carter Road Reserve (PIN 11476575), Wilyabrup
Commonage Road Reserve (PIN 11469288), Quindalup and Yallingup Siding
Gale Road Reserve (PINs 11471082 and 11471073), Kaloorup and Metricup
King Street Road Reserve (PINs 11906236 and 11435949), West Busselton
Lot 4539 on Deposited Plan 211912 (Reserve 19319), West Busselton
Miamup Road Reserve (PIN 11476610), Metricup
North Jindong Road Reserve (PIN 11471104), North Jindong
Tom Cullity Drive Road Reserve (PIN 11476604), Wilyabrup

Local Government Authority: City of Busselton
DER Region: Greater Swan
DPaW District: Blackwood
LCDC: Yallingup
Localities: Kaloorup, West Busselton, Metricup, Quindalup, Wilyabrup, Yallingup Siding and North Jindong

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
0.948	3	Mechanical Removal	Road construction

1.5. Decision on application

Decision on Permit Application: Grant
Decision Date: 9 March 2017
Reasons for Decision: The clearing permit application was received on 21 September 2016, and has been assessed against the clearing principles, planning instruments and other matters in accordance with section 51O of the *Environmental Protection Act 1986*. It has been concluded that the proposed clearing may be at variance to Principles (b), (f) and (i), and is not likely to be at variance to the remaining clearing Principles.

The Delegated Officer determined that portions of the application area contain potential black cockatoo nesting habitat and western ringtail possum (WRP) habitat. A fauna management condition has been applied to the permit to minimise impacts to WRP and black cockatoos, and reduce the risk of individual mortality. The Delegated Officer also considered that the implementation of suitable weed and dieback management measures was appropriate to address the impacts of the proposed clearing.

In deciding to grant a clearing permit, the Delegated Officer also had regard to the applicant's advice that a permit to interfere with the beds and banks of a watercourse was granted by the Department of Water.

2. Site Information

2.1. Existing environment and information

2.1.1. Description of the native vegetation under application

Vegetation Description

Four Beard vegetation associations and six Mattiske vegetation complexes have been mapped within the application area (Shepherd et al., 2001; Mattiske and Havel, 1998):

- Beard vegetation association 3 is described as 'medium forest; jarrah-marri';
- Beard vegetation association 990 is described as 'low forest: peppermint (*Agonis flexuosa*)';
- Beard vegetation association 1000 is described as 'mosaic: medium forest; jarrah-marri / low woodland; banksia / low forest; teatree (*Melaleuca* spp.)';

Clearing Description

The applicant proposes to clear up to 0.948 hectares of native vegetation and three trees for the purpose of road construction across seven sites.

Vegetation Condition

Excellent: Vegetation structure intact; disturbance affecting individual species, weeds non-aggressive (Keighery, 1994).

To:

Degraded: Structure severely disturbed; regeneration to good condition requires intensive management (Keighery, 1994);

- Beard vegetation association 1136 is described as 'medium woodland; marri with some jarrah, wandoo, river gum and casuarina';
- Mattiske vegetation complex C2 is described as 'open forest of *Eucalyptus marginata* subsp. *marginata* - *Corymbia calophylla* - *Banksia grandis* on lateritic uplands in perhumid and humid zones';
- Mattiske vegetation complex Cw2 is described as 'woodland of *Eucalyptus marginata* subsp. *marginata* - *Corymbia calophylla* on slopes and low woodland of *Melaleuca preissiana* - *Banksia littoralis* on depressions in perhumid and humid zones';
- Mattiske vegetation complex M is described as 'woodland to open forest of *Eucalyptus marginata* subsp. *marginata* - *Corymbia calophylla* on escarpment in the humid zone';
- Mattiske vegetation complex W2 is described as 'open forest of *Corymbia calophylla* - *Allocasuarina decussata* - *Agonis flexuosa* on deeply incised valleys in perhumid and humid zones';
- Mattiske vegetation complex Y is described as 'woodland of *Eucalyptus marginata* subsp. *marginata* - *Corymbia calophylla* - *Allocasuarina fraseriana* - *Agonis flexuosa* and open woodland of *Corymbia calophylla* on low undulating uplands in the humid zone'; and
- Mattiske vegetation complex Yw is described as 'woodland of *Allocasuarina fraseriana* - *Nuytsia floribunda* - *Agonis flexuosa* - *Banksia attenuata* on slopes and open forest of *Corymbia calophylla* - *Eucalyptus patens* - *Eucalyptus marginata* subsp. *marginata* on the lower slopes and woodland of *Eucalyptus rudis* - *Melaleuca raphiophylla* on valley floors in the humid zone'.

Vegetation condition was determined during a site inspection conducted by officers from the Department of Environment Regulation (DER) on 17 November 2016 (DER, 2016).

3. Assessment of application against clearing principles

Comments

The City of Busselton proposes to clear 0.948 hectares of native vegetation and three native trees for the purpose of road construction at seven sites, as follows:

Location	Proposed clearing	Application footprint	Vegetation condition (Keighery, 1996; DER, 2016)
King Street and Lot 4539 on Deposited Plan 211912	Three native trees	Three native trees	Completely Degraded
Commonage Road Reserve (PIN 11469288)	0.02 hectares	0.02 hectares	Excellent to Very Good
Carter Road Reserve (PIN 11476575)	0.4 hectares	2.106 hectares	Very Good to Degraded
Tom Cullity Drive Road Reserve (PIN 11476604)	0.27 hectares	5.096 hectares	Very Good
Miamup Road Reserve (PIN 11476610)	0.12 hectares	0.622 hectares	Degraded
Gale Road Reserve (PINs 11471082 and 11471073)	0.078 hectares	0.17 hectares	Excellent to Degraded
North Jindong Road Reserve (PIN 11471104)	0.06 hectares	0.06 hectares	Degraded

The application area does not contain any threatened or priority ecological communities (DER, 2016).

The King Street road reserve and Lot 4539 on Deposited Plan 211912 portions of the application area are parkland cleared, and is not likely to contain habitat for rare or priority flora. The Department of Parks and Wildlife (Parks and Wildlife) advised that the North Jindong Road reserve portion of the application area "will not support any flora species currently recognised as being of conservation significance", and that while the Carter Road, Tom Cullity Drive and Miamup Road reserve portions of the application area have the potential to support priority flora, "it is likely that no potential population would be of [significance]" (Parks and Wildlife, 2016). The priority 1 flora *Gastrolobium argyrotichum* has been recorded in the vicinity of the Commonage Road application area, and an inspection was conducted by DER during the flowering period for this species (DER, 2016). Parks and Wildlife advised that "it does appear from the [DER] site inspection photographs that this species is not within the applied area" (Parks and Wildlife, 2016).

Clearing activities have the potential to facilitate the spread of weeds and dieback (*Phytophthora cinnamomi*) into adjacent native vegetation. Weed species can decrease the biodiversity value of an area, as they out-compete native vegetation for available resources, contribute to land degradation and increase the frequency and intensity of fires (Department of Environment and Conservation, 2011). Potential impacts to biodiversity within and nearby the application area as a result of the proposed clearing may be minimised by the implementation of weed and dieback management practices.

With the potential exception of the southern side of Miamup Road reserve, the proposed clearing will not lead to the fragmentation of any native vegetation within road reserves (DER, 2016). Noting the vegetation condition within the Miamup Road reserve portion of the application area, fauna are more likely to utilise the northern side of the road reserve which is in better condition (DER, 2016). Noting the extent of the proposed clearing within each portion of the application area, fauna corridors within the City of Busselton are unlikely to be impacted.

Parks and Wildlife advised that the application area is on the Whicher Scarp landform, and the reserve to the south-east of the application area is "important for ecological linkage within the Whicher Scarp" (Parks and Wildlife, 2016). The proposed clearing within the Gale Road reserve portion of the application area is not likely to impact this ecological linkage.

Excluding aquatic species, a total of 15 threatened, one other specially protected and 11 priority fauna species have been recorded in the local area (10 kilometre radius) (Parks and Wildlife, 2007-). The Carter Road, Tom Cullity Drive, Miamup Road, Gale Road and North Jindong Road reserve portions of the application area contain large marri trees, which have the potential to provide nesting habitat for Carnaby's cockatoo (*Calyptorhynchus latirostris*; rare or likely to become extinct under the *Wildlife Conservation Act 1950* [WC Act]), Baudin's cockatoo (*Calyptorhynchus baudinii*; rare or likely to become extinct under the WC Act), and the forest red-tailed black cockatoo (*Calyptorhynchus banksii* subsp. *naso*; rare or likely to become extinct under the WC Act).

The majority of marri (*Corymbia calophylla*) trees observed during the DER site inspection were observed to have either no hollows or no hollows suitable for nesting by any of the aforementioned black cockatoo species (DER, 2016). One large marri within Miamup Road reserve portion of the application area was observed to contain a hollow that may be suitable for nesting by black cockatoos (DER, 2016). Chewing was observed around the rim of the hollow, indicating previous use (DER, 2016). Impacts to black cockatoo nesting habitat may be minimised by ensuring that the Carter Road, Tom Cullity Drive, Miamup Road, Gale Road and North Jindong Road reserve portions of the application area are checked for black cockatoo nesting hollows prior to clearing activities, and avoiding the clearing of all identified black cockatoo nesting trees.

The Carter Road, Tom Cullity Drive, Miamup Road, Gale Road and North Jindong Road reserve portions of the application area are mapped as having a high to medium habitat quality for the western ringtail possum (*Pseudocheirus occidentalis*; rare or likely to become extinct under the WC Act) (WRP). Parks and Wildlife advised that the three *Agonis flexuosa* trees within King Street road reserve and Lot 4539 on Deposited Plan 211912 portions of the application area "will provide resting habitat for western ringtail possums either on a daily or occasional basis" (Parks and Wildlife, 2016). The remaining portions of the application area are mapped as having a low habitat suitability for the WRP. Impacts to WRP may be minimised by implementing fauna management measures during clearing activities to avoid the mortality of individuals.

Noting the extent of the proposed clearing within each portion of the application area, the application area is not likely to provide significant habitat for other threatened or priority fauna species.

The application area is located within the Swan Coastal Plain, Jarrah Forest and Warren Interim Biogeographic Regionalisation of Australia (IBRA) bioregions. The City of Busselton retains 41 per cent of its pre-European vegetation, with some areas extensively cleared for agricultural land uses. 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). Of the mapped Beard vegetation associations, Beard vegetation association 1136 (mapped within North Jindong Road reserve) retains less than 30 per cent of its pre-European extent within the Swan Coastal Plain bioregion (Government of Western Australia, 2015). Of the mapped Matisse vegetation complexes, Yw (mapped within Gale Road reserve), and Cw2 (mapped within Carter Road, Tom Cullity Drive and Miamup Road reserves), remain at less than 30 per cent of their pre-European extent (Parks and Wildlife, 2015). Vegetation within these application areas range from degraded to very good and excellent (Keighery, 1994) condition (DER, 2016). Noting the extent of the proposed clearing and vegetation condition within the portions of the application area, the application area is not considered to be a significant remnant.

	Pre-European (ha)	Current Extent (ha)	Remaining (%)	Extent in Parks and Wildlife Managed Lands (%)
IBRA Bioregion*				
Swan Coastal Plain (King St, North Jindong Rd)	1,501,221.93	579,161.92	39	37
Jarrah Forest (Commonage Rd, Carter Rd, Tom Cullity Dr, Gale Rd)	4,506,660.26	2,422,782.95	54	69
Warren (Tom Cullity Dr, Miamup Rd)	833,985.55	660,310.82	79	85
Shire*				
City of Busselton	146,478.41	60,211.53	41	69
Beard vegetation association in bioregion*				
Swan Coastal Plain:				
990 (King St)	1,951.76	321.97	17	12
1136 (North Jindong Rd)	48,118.01	3,428.26	7	4
Jarrah Forest:				
3	2,390,591.42	1,611,061.04	67	81
1000	5,428.06	2,820.77	52	14
Warren:				
3	250,262.66	195,368.73	78	87
Mattiske vegetation complex (Jarrah Forest and Warren bioregions)**				
C2 (Carter Rd, Tom Cullity Dr, Miamup Rd)	13,687.98	4,458.61	33	6
W2 (Tom Cullity Dr, Miamup Rd)	4,108.02	1,323.54	32	2
Y (Gale Rd)	9,049.51	3,330.63	37	21
M (Commonage Rd)	823.66	551.03	67	29
Yw (Gale Rd)	4,218.92	1,192.41	28	9
Cw2 (Carter Rd, Tom Cullity Dr, Miamup Rd)	6,654.61	1,350.21	20	4

Three minor, non-perennial watercourses are mapped across the Carter Road, Tom Cullity Drive and Miamup Road reserve portions of the application area. The Department of Water (DoW) advised that these watercourses are associated with Wilyabrup Brook (DoW, 2016). The proposed clearing may impact vegetation associated with a watercourse and may impact surface water quality via increasing sedimentation during periods of inundation. Drainage infrastructure is in place within the existing road infrastructure to maintain surface water flows (DER, 2016).

There are no conservation areas within or adjacent to the application area. The nearest conservation area is Yelverton National Park, located two kilometres north of the Carter Road reserve portion of the application area. Noting the extent of the proposed clearing and the separation distance between the application area and conservation areas, the proposed clearing is not likely to impact the environmental values of any conservation area.

The proposed clearing is not likely to cause or exacerbate land degradation, impact the quality of groundwater, or increase the incidence or intensity of flooding.

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

Methodology

References:

Commonwealth of Australia (2001)
 Department of Environment and Conservation (2011)
 DER (2016)
 DoW (2016)
 Government of Western Australia (2015)
 Keighery (1994)
 Parks and Wildlife (2007-)
 Parks and Wildlife (2015)
 Parks and Wildlife (2016)

GIS Database:

- Groundwater salinity, statewide
- Hydrography, linear
- Parks and Wildlife tenure
- Remnant vegetation
- SAC bio datasets (accessed December 2016)

Planning instruments and other relevant matters.

Comments The applicant proposes to clear up to 0.948 hectares of native vegetation and three native trees within seven sites across the City of Busselton for the purpose of road construction.

The clearing permit application was advertised in *The West Australian* on 24 October 2016 for a seven day public submission period. No submissions were received.

During the assessment of clearing permit application CPS 5012/2, the City of Busselton proposed measures to minimise impacts to the western ringtail possum and black cockatoos. These measures were placed on the amended clearing permit. Given the proximity of CPS 5012/2 to the application area and the similarity in potential impacts to black cockatoos and the western ringtail possum, these fauna management measures are considered to be a relevant matter to the current application.

The Carter Road, Tom Cullity Drive and Miamup Road reserve portions of the application area intersect mapped watercourses within the Cape to Cape North Surface Water Area. DoW has issued a permit to interfere with the beds and banks of a watercourse for the Carter Road, Miamup Road and Tom Cullity Drive reserve portions of the application area (Ref: A1386907).

The bed and banks permit is subject to the following conditions to address potential impacts to riparian vegetation and surface water quality:

- the permit holder shall ensure that the culverts and creek crossing does not act as an artificial barrier or levee, causing water to pond upstream;
- the permit holder must undertake the works authorised by the permit with minimal disturbance to watercourse/creek system; and
- the permit holder is to comply with the designs submitted to the DoW.

During the DER site inspection, roadworks were observed within Tom Cullity Drive. Potential clearing of native vegetation has been lodged with DER Compliance and Enforcement for investigation (ICMS 43026). The applicant has advised that no native vegetation was cleared for the roadworks, but that the application to clear 0.27 hectares within this road reserve is for the removal of vegetation (generally isolated trees) post construction to ensure that the required lateral and vertical clearances can be achieved (Ref: A1336022).

There are no Aboriginal Sites of Significance mapped within the application areas.

Methodology GIS Databases:
- Aboriginal Sites of Significance

4. References

- Commonwealth of Australia (2001) National Objectives and Targets for Biodiversity Conservation 2001-2005, Canberra.
- Department of Environment Conservation (2011) Invasive Plant Prioritisation. Department of Environment and Conservation, Perth.
- Department of Environment Regulation (DER) (2016) CPS 7289/1 site inspection report. Department of Environment Regulation (DER REF: A1336063).
- Department of Parks and Wildlife (Parks and Wildlife) (2007-) NatureMap: Mapping Western Australia's Biodiversity. Department of Parks and Wildlife. <http://naturemap.dpaw.wa.gov.au/> (Accessed November 2016).
- Department of Parks and Wildlife (2015) 2015 South West Forest and Swan Coastal Plain Vegetation Complex Statistics: a report prepared for the Department of Environment Regulation. Current as of March 2015. Department of Parks and Wildlife, Perth, Western Australia.
- Department of Parks and Wildlife (Parks and Wildlife) (2016) Advice received from the Department of Parks and Wildlife on 25 November 2016 (DER REF: A1335277).
- Department of Water (DoW) (2016) Advice received from the Department of Water on 10 November 2016 (DER REF: A1194306).
- Government of Western Australia (2015) 2015 Statewide Vegetation Statistics incorporating the CAR Reserve Analysis (Full Report). Current as of June 2015. WA Department of Parks and Wildlife, Perth.
- Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.
- Mattiske, E.M. and Havel, J.J. (1998) Vegetation Complexes of the South-west Forest Region of Western Australia. Maps and report prepared as part of the Regional Forest Agreement, Western Australia for the Department of Conservation and Land Management and Environment Australia.
- Shepherd, D.P., Beeston, G.R. and Hopkins, A.J.M. (2001) Native Vegetation in Western Australia, Extent, Type and Status. Resource Management Technical Report 249. Department of Agriculture, Western Australia.