



CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

Purpose Permit number:	CPS 8431/1
Permit Holder:	Shire of Boddington
Duration of Permit:	12 July 2019 to 12 July 2024

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 reducing fuel loads for fire mitigation

2. Land on which clearing is to be done

Crossman Road Reserve (PIN 11351582), Boddington
Crossman Road Reserve (PIN 11351581), Boddington
Crossman Road Reserve (PIN 1290757), Ranford
River Road Reserve (PIN 11351588), Ranford
Tanning Place Road Reserve (PIN 11351590), Ranford
Crossman Road Reserve (PIN 11052867), Ranford
Crossman Road Reserve (PIN 11351597), Ranford
Bobo Court Road Reserve (PIN 11052868), Ranford
Lot 16006 on Plan 33381, Ranford
Lot 16007 on Plan 33381, Ranford
Lot 173 on Plan 243154, Boddington

3. Area of Clearing

The Permit Holder must not clear more than 4 hectares of native vegetation within 8.325 hectares clearing footprint within the area cross hatched yellow on attached Plan 8431/1.

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 –MANAGEMENT CONDITIONS

6. 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.

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 known *weed* and *dieback*-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 shall not clear *Black Cockatoo habitat trees* found within the area cross hatched yellow on attached Plan 8431/1.

PART III - RECORD KEEPING AND REPORTING

9. 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 6 of this Permit;
- (e) actions taken to minimise the risk of the introduction and spread of *weeds* and *dieback* in accordance with condition 7 of this Permit; and
- (f) actions in accordance with condition 8 of this permit.

10. Reporting

The Permit Holder must provide to the CEO the records required under condition 9 of this Permit, when requested by the CEO.

DEFINITIONS

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

black cockatoo habitat tree(s): means trees that have a diameter, measured at 1.5 metres from the base of the tree, of 50 centimetres or greater (or 30 centimetres or greater for *Eucalyptus wandoo*);

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

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 Biodiversity, Conservation and Attractions Regional Weed Rankings Summary, regardless of ranking; or
- (c) not indigenous to the area concerned.



Samara Rogers
MANAGER
NATIVE VEGETATION REGULATION

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

17 June 2019

Plan 8431/1



Legend

-  CPS areas approved to clear base layers
-  Cadastre
-  Road Centrelines
-  Local Government Authorities
- Image

0 100 200 300 400 m

MGA 94
Geocentric Datum of Australia 1994

Samara Rogers

Samara Rogers
2019.06.17 07:19:07 +08'00'

Officer delegated under Section 20 of the Environmental Protection Act 1986



GOVERNMENT OF
WESTERN AUSTRALIA



Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 8431/1
Permit type: Purpose Permit

1.2. Applicant details

Applicant's name: Shire of Boddington
Application received date: 25 March 2019

1.3. Property details

Property:
ROAD RESERVE - 11351582, BODDINGTON
ROAD RESERVE - 11351581, BODDINGTON
ROAD RESERVE - 1290757, RANFORD
ROAD RESERVE - 11351588, RANFORD
ROAD RESERVE - 11351590, RANFORD
ROAD RESERVE - 11052867, RANFORD
ROAD RESERVE - 11351597, RANFORD
ROAD RESERVE - 11052868, RANFORD
LOT 16006 ON PLAN 33381, RANFORD
LOT 16007 ON PLAN 33381, RANFORD
LOT 173 ON PLAN 243154, BODDINGTON
BODDINGTON, SHIRE OF
BODDINGTON and RANFORD

Local Government Authority:
Localities:

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	Purpose category:
4		Mechanical Removal	Hazard reduction or fire control

1.5. Decision on application

Decision on Permit Application: Grant
Decision Date: 17 June 2019
Reasons for Decision:

The clearing permit application has been assessed against the clearing principles, planning instruments and other matters in accordance with section 51O of the *Environmental Protection Act 1986* (EP Act). It has been concluded that the proposed clearing may be at variance to principle (e) and not likely to be at variance to the remaining clearing principles.

Through the assessment, it was determined that the proposed clearing may impact pockets of remnant vegetation that will be retained within the application area. A weed and dieback management condition has been placed on the clearing permit to minimise the risk of weeds and dieback spreading into adjacent areas of remnant vegetation.

In determining to grant a clearing permit subject to conditions, the Delegated Officer determined that the proposed clearing is not likely to lead to any unacceptable impacts on the environment.

2. Site Information

Clearing Description

The application is to clear 4 hectares of native vegetation within 8.325 hectare clearing footprint within Crossman road reserve (PINs 11351582, 11351581, 11052867, 1290757 and 11351597), Ranford and Boddington, Tanning Place road reserve (PIN 11351590), River Road reserve (PIN 11351588), and Bobo Court road reserve (PIN 11052868), Ranford, Lot 173 on Plan 243154 (Crown Reserve 26566), Boddington, Lot 16006 on Plan 33381 (Crown Reserve 42234), Ranford, and Lot 16007 on Plan 33381 (Crown Reserve 42234), Ranford, for the purpose of reducing fuel loads for fire mitigation (Figure 1).

Vegetation Description

The application area has been mapped within the South West (previously Mattiske) Michibin and Williams vegetation complexes, which are described as the following;

- Michibin: Open woodland of *Eucalyptus* wandoo over *Acacia acuminata* with some *Eucalyptus loxophleba* on valley slopes, with low woodland of *Allocasuarina huegeliana* on or near shallow granite outcrops in arid and perarid zones (Mattiske, 1998); and
- Williams: Mixture of woodland of *Eucalyptus rudis*-*Melaleuca raphiophylla*, low forest of *Casuarina obesa* and tall shrubland of *Melaleuca spp.* on major valley systems in arid and perarid zones (Mattiske, 1998).

Vegetation Condition

Degraded: Basic vegetation structure severely impacted by disturbance, scope for regeneration but not to a state approaching good condition without intensive management (Keighery, 1994);

Good: Vegetation structure significantly altered with obvious signs of multiple disturbances. Retains basic vegetation structure or ability to regenerate (Keighery, 1994).

Soil type

- Williams Subsystem (Quindanning) which is described as “Valley floor subtended by the steep slopes of the Michibin unit; yellow duplex soils and a lower sandy terrace” (Schoknecht et al., 2004); and
- Michibin Subsystem (Quindanning) which is described as “Hillslopes containing soils formed by the weathering of fresh rock. Rock outcrop is common” (Schoknecht et al., 2004).

The local area considered in the assessment of this application is defined as a 10 kilometre radius measured from the centre of the application area.

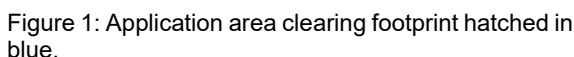




Figure 2: Vegetation within Crown Reserves.



Figure 3: Vegetation within Crown Reserves.



Figure 4: Vegetation within Crown Reserves.



Figure 5: Vegetation within Crown Reserves.

3. Minimisation and mitigation measures

The Shire of Boddington will be leaving pockets of remnant vegetation throughout the clearing footprint area. They have also advised that they propose to only clear weeds within the understorey and do intend to clear trees (Shire of Boddington, 2019b). However due to the method of mechanical mulching, it is likely that some native species will be indirectly cleared, thus the reason for submitting a clearing permit application. The Shire advised the intention is to clear out weeds and dead trees leaving areas of remnant bushland. The Shire of Boddington is in consultation with the “Friends of the Reserves” to achieve the best possible outcome (Shire of Boddington, 2019b).

4. Assessment of application against clearing principles

(a) Native vegetation should not be cleared if it comprises a high level of biodiversity.

Proposed clearing is not likely to be at variance to this Principle

The local area retains approximately 41.55 per cent (approximately 14988 hectares) of native vegetation cover.

According to available databases, no threatened flora and six priority flora were mapped within the local area. *Goodenia katabudjar* (Priority 3), *Senecio leucoglossus* (Priority 4) and *Halgania corymbosa* (Priority 3) have been mapped within similar soil and vegetation types than that mapped within the application area. The remaining flora have been mapped within different soil and vegetation types.

Priority 4 flora species are considered to have been adequately surveyed, or for which sufficient knowledge is available, and that are considered not currently threatened or in need of special protection, but could be if present circumstances change (Smith & Jones, 2018). Priority 3 flora species are known from several locations, do 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. Noting the vegetation and soil type mapped within the application area, three priority flora species may have the potential to occur, however it is not likely that the proposed clearing will have significant impact on the conservation status of these priority species.

According to available databases, no threatened ecological communities (TEC) or priority ecological communities (PEC) have been mapped within the local area.

According to available databases, ten threatened fauna species and five priority fauna species have been mapped within the local area. These are woylie (*Bettongia penicillata subsp. ogilbyi*), forest red-tailed black cockatoo (*Calyptorhynchus banksii subsp. naso*), Baudin's cockatoo (*Calyptorhynchus baudinii*), Carnaby's cockatoo (*Calyptorhynchus latirostris*), chuditch (*Dasyurus geoffroii*), malleefowl (*Leipoa ocellata*), bilby (*Macrotis lagotis*), numbat (*Myrmecobius fasciatus*), western ringtail possum (*Pseudocheirus occidentalis*), dell's skink (*Ctenotus dellii*), western false pipistrelle (*Falsistrellus mackenziei*), water-rat (*Hydromys chrysogaster*), western brush wallaby (*Notamacropus irma*) and western rosella (inland) (*Platycercus icterotis subsp. xanthogenys*). The application area may comprise of suitable habitat for black cockatoos. Fauna will be discussed in more detail under Principle (b).

The vegetation within the application area is not likely to be representative of a TEC, and is not likely to contain threatened and priority flora. Given the local area retains 41.55 per cent remnant native vegetation and the understorey within the application predominately in a degraded (Keighery, 1994) condition, the vegetation is not likely to comprise of a high level of biological diversity.

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

(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.

Proposed clearing is not likely to be at variance to this Principle

As discussed under Principle (a), ten threatened fauna species and five priority fauna species have been mapped within the local area. These are woylie (*Bettongia penicillata subsp. ogilbyi*), forest red-tailed black cockatoo (*Calyptorhynchus banksii subsp. naso*), Baudin's cockatoo (*Calyptorhynchus baudinii*), Carnaby's cockatoo (*Calyptorhynchus latirostris*), chuditch (*Dasyurus geoffroii*), malleefowl (*Leipoa ocellata*), bilby (*Macrotis lagotis*), numbat (*Myrmecobius fasciatus*), western ringtail possum (*Pseudocheirus occidentalis*), dell's skink (*Ctenotus dellii*), western false pipistrelle (*Falsistrellus mackenziei*), water-rat (*Hydromys chrysogaster*), western brush wallaby (*Notamacropus irma*) and western rosella (inland) (*Platycercus icterotis subsp. xanthogenys*).

Carnaby's cockatoo and Baudin's cockatoo are listed as endangered and forest red-tailed cockatoo is listed as vulnerable under the *Environment Protection Biodiversity Conservation Act 1999* (EPBC Act). Black cockatoos breed in large hollow-bearing trees, generally within woodlands or forests or in isolated trees (Commonwealth of Australia, 2012). These species nest in hollows in live or dead trees of karri, marri, wandoo, tuart, salmon gum, jarrah, flooded gum, York gum, powder bark, bullich and blackbutt (Commonwealth of Australia, 2012). The vegetation within the application area may comprise of potential breeding for black cockatoos. A fauna management condition to retain any potential breeding trees for black cockatoo will mitigate any direct impacts to black cockatoo breeding habitat.

Black cockatoos have a preference for foraging habitat that includes jarrah and marri woodlands and forest heathland and woodland dominated by proteaceous plant species such as *Banksia sp.*, *Hakea sp.*, and *Grevillea sp.* (Commonwealth of Australia, 2012). A review of aerial imagery and photographs provided by the applicant identified *Banksia grandis* scattered throughout Crown Reserves 26566 and 42234, which may be utilised by foraging black cockatoos. However, due to *Banksia grandis* being only scattered throughout the application area, vegetation within the application area is not considered significant black cockatoo foraging habitat.

The South West Regional Ecological Linkage (SWREL) report (Molley et al., 2009) defined an ecological linkage as "A series of (both contiguous and non-contiguous) patches which, by virtue of their proximity to each other, act as stepping stones of habitat to facilitate the maintenance of ecological processes and the movement of organisms within, and across, a landscape". Axis lines from the SWREL report are used to identify patches of remnant vegetation with high connectivity of linkage value; the emphasis for biodiversity planning and conservation becomes the protection and management of the patches identified using the linkage lines, rather than the area defined by the line itself.

Remnant vegetation within the SWREL boundary can be assigned a 'proximity analysis' level. A group of vegetation with an edge touching or less than 100 metres from a linkage (axis line) is assigned to proximity analysis level 1a, which is the highest category group. Two SWREL axis lines are within close proximity to the application area; the eastern end of the application area overlaps the SWREL axis lines and one is located 129 metres south of the SWREL axis line, giving the application area a proximity analysis level of 1 and 2 respectively. Despite this, the vegetation patches within the linkage have been cleared to the east, west and north of the application area. Additionally, a more intact ecological linkage is located north of the application area. Given the above, and noting that the applicant aims to retain pockets of native vegetation within the application area, vegetation within the application area is not considered to represent a significant ecological linkage.

Noting the condition and type of vegetation present within the application area, it is considered unlikely that the vegetation within the application area is likely to comprise significant habitat for conservation significant fauna, due to the predominately degraded (Keighery 1994) condition of the understorey and the abundance of weed species.

Noting the above, the application area is not likely to comprise of significant habitat for fauna, and is not likely to represent a significant ecological linkage. Therefore, the vegetation within the application area is not likely to be necessary for the maintenance of significant habitat for fauna.

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

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

Proposed clearing is not likely to be at variance to this Principle

According to available databases, no threatened flora has been mapped within the local area. Therefore the application area is not likely to include or is necessary for the continued existence of threatened flora.

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

(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.

Proposed clearing is not likely to be at variance to this Principle

According to available databases, no threatened ecological communities (TEC) have been mapped within the local area. Therefore the application area is not likely to comprise the whole or a part of, or is necessary for the maintenance of a TEC.

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

(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.

Proposed clearing may be at variance to this Principle

The National Objectives and Targets for Biodiversity Conservation include a target to prevent the clearance of ecological communities with an extent below 30 per cent of that present pre-European settlement (Commonwealth of Australia, 2001).

The local area retains approximately 41.55 per cent (approximately 14988 hectares) native vegetation cover.

The application area falls within the Jarrah Forest Interim Biogeographic Regionalisation of Australia (IBRA) bioregion and is mapped as the South West (previously Mattiske) Michibin vegetation complex and Williams vegetation complex, retaining 53.41 per cent, 25.59 per cent and 25.93 per cent respectively. The Shire of Boddington retains 65.34 per cent of its pre-European extents (Table 1) (Government of Western Australia, 2018a; Government of Western Australia, 2018b).

Noting the two vegetation complexes are below the 30 per cent threshold, given the degraded condition of the vegetation in the application area the vegetation may be representative of these complexes. Noting that the vegetation in the application area is in a degraded condition and does not comprise of threatened and priority flora and significant habitat for fauna and TECs, the vegetation is not considered significant as a remnant.

Given the extensively cleared vegetation complexes within the application area, the proposed clearing may be at variance to this Principle.

Table 1: Bioregion, south west vegetation complex, and local government statistics (Government of Western Australia, 2018a; Government of Western Australia, 2018b).

	Pre-European Extent	Current Extent Remaining		Current Extent Remaining in DBCA Managed Lands
	(ha)	(ha)	(%)	(%)
IBRA Bioregion				
Jarrah Forest	4,506,660.26	2,406,938.58	53.41	37.13
Vegetation Complex				
Michibin	168,040.13	42,998.36	25.59	5.07
Williams	28,984.04	7,516.52	25.93	0.34

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

Proposed clearing is not likely to be at variance to this Principle

According to available databases, no wetlands or watercourses have been mapped within the application area. Given this, vegetation within the application area is not likely to be growing in, or in association with, an environment associated with a watercourse or wetland.

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

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

Proposed clearing is not likely to be at variance to this Principle

The application area is mapped as the following land subsystems (Schoknecht et al., 2004):

- Williams Subsystem (Quindanning): Valley floor subtended by the steep slopes of the Michibin unit; yellow duplex soils and a lower sandy terrace.
- Michibin Subsystem (Quindanning): Hillslopes containing soils formed by the weathering of fresh rock. Rock outcrop is common.

The land degradation risk categories that apply to these subsystems are demonstrated in Table 2. Based on the mapped land degradation risk outlined in Table 2, the application area has a relatively low likelihood of wind and water erosion, salinity, flood risk and water logging risk.

Soils mapped as the Michibin Subsystem (Quindanning) have a moderate salinity risk (30-50% of map unit has a moderate to high salinity risk or is presently saline). Given that the applicant plans to retain some remnant vegetation within the application area and that no trees are proposed to be cleared, the proposed clearing is unlikely to increase the risk of salinity in the area. Therefore the proposed clearing is unlikely to lead to appreciable land degradation.

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

Table 2: Land degradation risk categories for the Williams subsystem and Michibin subsystems (Schoknecht et al., 2004)

Risk categories	Williams Subsystem (Quindanning)	Michibin Subsystem (Quindanning)
Wind erosion	10-30% of map unit has a high to extreme wind erosion risk	10-30% of map unit has a high to extreme wind erosion risk
Water erosion	3-10% of map unit has a high to extreme water erosion risk	10-30% of map unit has a high to extreme water erosion risk
Salinity	10-30% of map unit has a moderate to high salinity risk or is presently saline	30-50% of map unit has a moderate to high salinity risk or is presently saline
Flood risk	10-30% of the map unit has a moderate to high flood risk	<3% of the map unit has a moderate to high flood risk
Water logging	10-30% of map unit has a moderate to very high waterlogging risk	<3% of map unit has a moderate to very high waterlogging risk

(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.

Proposed clearing is not likely to be at variance to this Principle

According to available databases, one conservation area, being a Timber Reserve, located approximately 2765 metres southwest of the application area has been mapped within the local area. Given the multiple roads between this Timber Reserve and the application area, the proposed clearing is not likely to have an impact on the environmental values of any adjacent or nearby conservation area.

A weed and dieback management condition placed on the permit will minimise the spread of weeds and dieback throughout the application area and into any remnant vegetation that is retained.

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

(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.

Proposed clearing is not likely to be at variance to this Principle

Groundwater salinity within the application area is mapped between 1000 and 3000 total dissolved solids, milligrams per litre. This level of groundwater salinity is classified as "brackish" or borderline "saline". Given that the majority of vegetation within the application is considered degraded (Keighery, 1994) and that no trees are proposed to be cleared, the proposed clearing is not likely to increase underground salinity.

As discussed in Principle (f), the application area does not contain any wetlands or vegetation growing in association with a watercourse, therefore the proposed clearing is not likely to cause the deterioration in the quality of surface water.

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

(j) Native vegetation should not be cleared if clearing the vegetation is likely to cause, or exacerbate, the incidence or intensity of flooding.

Proposed clearing is not likely to be at variance to this Principle

As discussed in Principle (g), given that the mapped land degradation risk is between 3 per cent and 30 per cent and the sandy nature of the soils identified within the application area, the proposed clearing is not likely to cause, or exacerbate, the incidence or intensity of flooding.

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

Planning instruments and other relevant matters.

The application falls within two Aboriginal Sites of Significance, being Castle Rock and Pool and Hotham River. It is the applicant's responsibility to comply with the *Aboriginal Heritage Act 1972* and ensure that no Sites of Aboriginal Significance are damaged through the clearing process.

The clearing permit application was advertised on the DWER website on 3 April 2019 with a 21 day submission period. One public submission has been received in relation to this application.

He submission objects to the clearing for the following reasons (summarised) (Submission, 2019):

- Does not see a reason to clear native vegetation;
- Believes that the native trees and shrubs are not the issue and that it's the tall grass; and
- There are adequate fire breaks in the form of roads that surround this strip.

The Shire of Boddington advise that these reserves create a fire risk to the town site, therefore creating a low fuel zone within these reserves, using the natural breaks via clearing will reduce this fire risk (Shire of Boddington, 2019c). The submitters remaining concerns have been address in Part 3 – Minimisation and Mitigation Measures – of this report.

5. References

- 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 -) Nature Map: Mapping Western Australia's Biodiversity. Department of Parks and Wildlife. URL: <https://naturemap.dpaw.wa.gov.au/> . Assessed December 2018.
- Government of Western Australia (2018a) 2017 Statewide Vegetation Statistics incorporating the CAR Reserve Analysis (Full Report). Current as of February 2018. WA Department of Parks and Wildlife, Perth
- Government of Western Australia (2018b) 2017 South West Vegetation Complex Statistics. Current as of October 2017. 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 Regional 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.
- Molloy, S., Wood, J., Hall, S., Wallrodt, S. and Whisson, G. (2009) South West Regional Ecological Linkages Technical Report, Western Australian Local Government Association and Department of Environment and Conservation, Perth.
- Schoknecht, N., Tille, P. and Purdie, B (2004) Soil-landscape mapping in south-Western Australia: an over of methodology and outputs, Department of Agriculture and Food, Perth.
- Submission (2019) Submission in relation to the clearing permit application received 3 April 2019, Western Australia, DWER A1778436.
- Shire of Boddington (2019a) Photographs provided by applicant received 4 April 2019, Shire of Boddington
- Shire of Boddington (2019b) Email correspondence in response to public submission, 8 April 2019, Shire of Boddington, DWER A1783239.
- Shire of Boddington (2019c) Application Form Excerpt, Shire of Boddington.
- Smith M.G. & Jones A. (2018) Threatened and Priority Flora List, 16 January 2018. Department of Biodiversity, Conservation and Attractions: Kensington, WA.

6. GIS databases

- Aboriginal Sites of Significance
- Carnaby's cockatoo: breeding, roosting, feeding
- Department of Biodiversity, Conservation and Attractions
- SAC bio datasets (accessed April 2019)