



CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

PERMIT DETAILS

Area Permit Number: 8090/1
File Number: 2018/000929-1
Duration of Permit: From 10 February 2019 to 10 February 2021

PERMIT HOLDER

Mr Scott Dunnet.

LAND ON WHICH CLEARING IS TO BE DONE

Lot 5073 on Deposited Plan 229257, Yeagarup
Lot 5074 on Deposited Plan 229257, Yeagarup

AUTHORISED ACTIVITY

The Permit Holder shall not clear more than 19.4 hectares of native vegetation within the area hatched yellow on attached Plan 8090/1.

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. Dieback and weed 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.

3. Fauna management

The Permit Holder shall not clear *Black Cockatoo habitat trees* found within the area cross hatched yellow on attached Plan 8090/1.

4. 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); and
- (d) actions taken to avoid, minimise and reduce the impacts and extent of clearing in accordance with condition 1 of this Permit.

5. Reporting

The Permit Holder must provide to the *CEO* the records required under condition 4 of this Permit, when requested by the *CEO* or delegated officer

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.

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

 Ryan Mincham
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Ryan Mincham
MANAGER
NATIVE VEGETATION REGULATION

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

11 January 2019

Plan 8090/1

34.460987°S

34.460987°S

115.910515°E

115.926786°E








115.910515°E

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Legend

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



1:7,919

(Approximate when reproduced at A4)

GDA 94 (Lat/Long)

Geocentric Datum of Australia 1994

Ryan Mincham

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Date

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.: 8090/1
Permit type: Purpose Permit

1.2. Applicant details

Applicant's name: Mr Scott Dunnet

1.3. Property details

Property: LOT 5074 ON PLAN 229257, YEAGARUP
LOT 5073 ON PLAN 229257, YEAGARUP
Local Government Authority: SHIRE OF MANJIMUP
DWER Region: South Coast
DBCA District: DONNELLY
Localities: YEAGARUP

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
19.4		Mechanical Removal	Grazing and horticulture.

1.5. Decision on application

Decision on Permit Application: Granted
Decision Date: 11 January 2019
Reasons for Decision:

The clearing permit application was received on 1 June 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*. It has been concluded that the proposed clearing may be at variance to Principles (b) and (h), not at variance to Principle (f) and not likely to be at variance to any of the remaining clearing principles.

During the assessment of the application, the applicant reduced the proposed clearing size removing areas of concern that may have resulted in an unacceptable risk to the environment. After revising the application, the Delegated Officer considers that the proposed clearing of 19.4 hectares is not likely to have any significant environmental impacts.

During the assessment, it was noted that the application area contains habitat trees of a suitable size for black cockatoo breeding. In order to ensure that these are not impacted upon and avoid potential impacts to black cockatoos, the delegated officer has imposed a condition on the permit to mitigate impacts to habitat for black cockatoos.

The Delegated Officer also determined that the proposed clearing may also increase the spread of weeds and dieback into conservation areas. To minimise this impact, a condition has been placed on the permit requiring the implementation of weed and dieback management measures.

2. Site Information

Clearing Description: The application is to clear up to 19.4 hectares of native vegetation within Lots 5073 and 5074 on Deposited Plan 229257, Yeagarup, for the purposes of grazing and horticulture.

Vegetation Description: The application area is mapped as three Mattiske vegetation complexes:
CRy: Tall open forest of *Corymbia calophylla* with mixture of *Eucalyptus marginata* subsp. *marginata* and *Eucalyptus diversicolor* on uplands in hyperhumid and perhumid zones;

CL1: Mosaic of open forest of *Eucalyptus marginata* subsp. *marginata*-*Banksia* spp. on well drained sites, with some *Eucalyptus decipiens* on lower slopes in southern areas, woodland of *Eucalyptus rudis*-*Melaleuca preissiana*-*Banksia littoralis* on depressions in perhumid and humid zones and;

YN1: Mixture of tall open forest of *Eucalyptus diversicolor* and tall open forest of *Corymbia calophylla*-*Eucalyptus patens*-*Eucalyptus marginata* subsp. *marginata* over *Agonis flexuosa* and *Agonis juniperina* on valleys in perhumid and humid zones.

(Mattiske and Havel, 1998).

The vegetation under application is predominately Karri (*Eucalyptus diversicolor*) Marri (*Corymbia calophylla*) forest over *Allocasurina* sp. (DWER, 2018). There was very little midstorey and ground cover was predominately bare of native vegetation with large amounts of leaf and tree bark build up (DWER, 2018).

The condition and structure of the vegetation within the application area was obtained via a site inspection undertaken by officers of the Department of Water and Environment Regulation (DWER) (DWER, 2018).

Vegetation Condition: Good; Vegetation structure altered; obvious signs of disturbance (Keighery, 1994).
To Degraded; Basic vegetation structure severely impacted by disturbance. Scope for regeneration but not to a state approaching good condition without intensive management (Keighery, 1994).

The application areas are in a predominately degraded (Keighery, 1994) condition (DWER, 2018). The site inspection determined the vegetation condition was attributed to the historical disturbance to the area from past clearing activities and cattle grazing.

Soil and Landform Type: The application area is mapped within the following land subsystems:

- **Yanmah Subsystem (Pimelia):** Shallow (5-20 metres) minor valleys, usually U-shaped with gentle sideslopes (3-10 per cent) and broad swampy floors. Soils are loamy gravels, sandy gravels and deep sands with non-saline wet soils on the valley floors (approximately 65 per cent).
- **Crowea Subsystem (Pimelia), yellow duplex Phase:** Gravelly yellow duplex soils; jarrah-marri forest (approximately 30 per cent).
- **Corbalup Subsystem (Dwalganup):** Gently undulating rises over sedimentary deposits, relief 5-15 metres, slopes one to five per cent. Soils are loamy gravels and sandy gravels (approximately five per cent).
- (Schoknecht et al., 2004; DPIRD, 2017).

Comment: The local area referred to in this assessment is defined as the area within a 10 kilometre radius of the application area. Aerial imagery indicates that the local area retains approximately 80 per cent native vegetation cover.

Figure 1: Map of application area



Figure 2: Photographs of vegetation within the application area



Photo 1: Vegetation representative of the vegetation within the western application area.



Photo 2: Vegetation representative of the vegetation within the eastern application area.

3. Minimisation and mitigation measures

On the 28 September 2018, DWER wrote to the applicant to advise that the proposed clearing had the potential to result in several environmental impacts based on advice received from the Department of Primary Industries and Regional Development (DPIRD) and Department of Biodiversity Conservation and Attractions (DBCA). These impacts included the following:

- The application is likely to provide breeding habitat for black cockatoos;
- The clearing of suitable habitat and potential occurrence of threatened flora;
- A wetland is located within the western section and that the vegetation assemblages of this wetland system are known to be diverse and often unique, some of which are known to be rare and endangered; and
- Based on soil types, clearing within the wetland section is likely to lead to appreciable land degradation in the form of waterlogging.

The applicant subsequently modified the clearing area by decreasing the amount of clearing proposed within the western area, with the overall clearing reduced from 60 hectares to 19.4 hectares. The applicant removed the areas associated with the wetland which addressed the concerns surrounding the potential impacts to the wetland and other wetlands in the local area, threatened flora and land degradation. The concerns surrounding black cockatoo breeding habitat are addressed in the assessment below.

4. Assessment of application against clearing principles

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

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

The application is to clear up to 19.4 hectares of native vegetation for the purposes of grazing and horticulture. As indicated within Figure 1, and as determined during the site inspection the application areas are currently being used for agricultural purposes.

As discussed in Section 2, the vegetation within the application area comprises predominately a Karri and Marri forest, with little understorey or ground cover (DWER, 2018).

According to available databases, *Calyptorhynchus banksii subsp. naso* (Forest Red-tailed Black-Cockatoo), *Calyptorhynchus baudinii* (Baudin's Cockatoo), *Calyptorhynchus latirostris* (Carnaby's Cockatoo), *Galaxiella munda* (Western Mud Minnow), *Pseudocheirus occidentalis* (Western Ringtail Possum) and *Setonix brachyurus* (Quokka) have been recorded within the local area. Fauna habitat and conservation significant fauna species are discussed under Principle (b).

According to available databases, three priority flora species and one threatened flora species have been recorded within the local area. The mapped priority flora species and the mapped threatened flora have been recorded within a different soil and vegetation complex as the application area. Noting this and the vegetation being in a predominately degraded (Keighery, 1994) condition with high amounts of leaf and bark matter on the ground, it is unlikely the application areas will impact upon these priority or rare flora species or be necessary for the continued existence of, priority and rare flora species. Rare flora are discussed further under Principle (c).

According to available databases, no priority or threatened ecological communities have been recorded within the local area. Noting this, the application area is unlikely to comprise the whole or part of, or be necessary for the maintenance of, a priority or threatened ecological community. Threatened ecological communities are discussed in more detail under principle (d).

Given the above, the application area is unlikely to comprise 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 indigenous to Western Australia.

Proposed clearing may be at variance to this Principle

According to available databases, six fauna species specially protected under the *Biodiversity Conservation Act 2016* (as listed under principle a), one fauna species protected under international agreement and five priority fauna have been recorded within the local area (DBCA, 2007-). Based upon the application area comprising of a Karri and Marri forest over *Allocasuarina sp.* it is considered that the application areas could provide foraging and breeding habitat for black cockatoos (DWER, 2018).

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). The Recovery Plan for Baudin's cockatoo and forest Red-tailed black-cockatoo states that critical habitat for the survival of important populations of these species comprises all marri, karri and jarrah forests, woodlands and remnants in the south-west of Western Australia receiving more than 600 millimetres of annual average rainfall (DEC, 2008).

Potential nesting trees for black cockatoos are defined as "trees of species known to support breeding within the range of the species which either have a suitable nest hollow or are of a suitable diameter at breast height (DBH) to develop a nest hollow. For most tree species, suitable DBH is 500 millimetres". A site inspection of the application area conducted by DWER observed a number of large marri and karri trees which either contained hollows or had the potential to develop hollows suitable for breeding by black cockatoos (DWER, 2018). The application area may contain significant breeding habitat for Carnaby's cockatoo, forest Red-tailed black cockatoos and Baudin's cockatoo. A condition to avoid clearing trees with a DBH of 500 millimetres will mitigate impacts on black cockatoos.

Noting the vegetation types present within the application area, the application area contains suitable foraging habitat for black cockatoos. However given the extent of vegetation in the local area, the application area is not likely to contain significant foraging habitat for these species. In addition to this, noting the vegetation under application and the extent of vegetation in the local area, it is unlikely the application area comprises the whole or a part of, or is necessary for the maintenance of, a significant habitat for fauna indigenous to Western Australia.

The application area occurs in an area of vegetation is in close proximity to an ecological linkage as defined by the South West Regional Ecological Linkage (SWREL) Report (Molloy et al, 2009). These linkages provide an important corridor for the dispersal of native fauna as well as consisting of significant breeding and foraging habitat for local fauna. The proposed clearing is unlikely to degrade the quality of the ecological linkage given that it is surrounded by vegetation in a good or better condition.

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

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

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

According to available databases, one threatened flora species has been recorded within the local area, approximately 5.5 kilometres from the application area.

Caladenia harringtoniae favours sandy loam, winter-wet flats, margins of lakes, creeklines, granite outcrops (WA Herbarium, 1998). Noting the vegetation type identified during the site inspection and that no wetlands or watercourses are within the application area (DWER, 2018), the application area is not likely to contain suitable habitat for these species.

Noting the vegetation type within the application area and the distance of the rare flora species to the application area, the vegetation is not likely to include, or be necessary for the continued existence of rare flora.

Given the above, 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) are known to occur within the local area. The closest TEC is the 'Scott Ironstone Associations' located approximately 34 kilometres west of the application area.

Noting the vegetation type within the application area and the distance to the closest known TEC, the application area is unlikely to comprise the whole or part of, or be necessary for the maintenance of, a TEC.

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

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).

As indicated in Table 1, the remaining extents of native vegetation within the bioregion, local government authority and mapped vegetation complexes are above the 30 per cent threshold.

Aerial imagery indicates that the local area retains approximately 80 per cent native vegetation cover, with large proportion of this vegetation occurring within Department of Biodiversity Conservation and Attractions (DBCA) managed lands.

Noting the vegetation extents, the application area is unlikely to be significant as a remnant within an extensively cleared area. The proposed clearing is not likely to be at variance to this Principle.

Table 1: Vegetation extents

	Pre-European (ha)	Current Extent (ha)	Remaining (%)	Current Extent in DBCA Managed Lands (%)
IBRA Bioregion*				
Warren	833,985	659,438	79	85.5
Local government authority*				
Shire of Manjimup	697,368	586,344	84	94
Mattiske Vegetation Complex in Bioregion **				
CRy:	33,764	24,441	72	78
YN1:	8,620	7,598	88	58

Government of Western Australia. (2018a)*

Government of Western Australia. (2018b)**

(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 at variance to this Principle

According to available databases, a number of wetlands and watercourses have been recorded within the local area. A site inspection did not identify any watercourses or wetlands within the application area.

Noting the above, the vegetation under application is not growing in, or in association with, an environment associated with a watercourse or wetland.

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

As discussed in Section 2, the application area is located within the Corbalup Subsystem, Yanmah Subsystem and Crowea Subsystem (Schoknecht et al., 2004).

The Commissioner of Soil and Land Conservation advised that these map units have a low risk of land degradation in the form of wind erosion, waterlogging, water erosion, flooding, eutrophication and salinity as a result of the proposed clearing (Commissioner of Soil and Land Conservation, 2018).

The Commissioner of Soil and Land Conservation also advises that the soils west of the current application area have a high risk of waterlogging. This is discussed further under planning and other matters.

Given the above, the proposed clearing is unlikely to cause appreciable land degradation. The proposed clearing is not likely to be at variance to this Principle.

(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 may be at variance to this Principle

According to available datasets, a number of conservation areas have been recorded within the local area, most notably being the Warren National Park, mapped approximately 40 metres south and east of the application area and the Hawke National Park

approximately 350 west of the application areas. It is noted that the application areas are surrounded by conservation areas, with the Warren National Park approximately one kilometre north, and the Donnelly State Forest approximately 900 metres north of the application areas.

As discussed under principle (b), the South West Regional Ecological Linkage (SWREL) is located approximately 1.3 kilometres east of the application areas. The ecological linkage is defined as a series of both contiguous and non-contiguous patches of vegetation which, by virtue of their proximity to each other, act as stepping stones of habitat which facilitate the maintenance of ecological processes and movement of organisms within, and across a landscape (Molloy et al., 2009).

Remnant vegetation within the SWREL boundary can be assigned a 'proximity analysis' group. A patch of vegetation with an edge touching, or less than 100 metres from a linkage is assigned to proximity analysis group 1(a) which is the highest category group (Molloy et al., 2009). Noting that the application area is a part of a patch of contiguous vegetation that touches the axis line, the proposed clearing could degrade the quality of the linkage. However the proposed clearing will not sever this linkage and noting the linkage is surrounded by vegetation in a good or better condition, it is unlikely the proposed clearing will significantly impact on the values of this linkage.

The disturbance caused by the proposed clearing may increase the risk of weeds and dieback spreading into the nearby conservation areas associated with the ecological linkage. Weed and dieback management practices will assist in reducing the potential impacts.

Given the above, the proposed clearing may 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

As discussed under Principle (f), no watercourses or wetlands occur within the application area.

Noting that the application will not remove vegetation associated with the watercourse, and the presence of largely permeable soils within the application area (based on landform mapping and the assessment findings), the proposed clearing is not likely to impact on the water quality of the abovementioned wetlands via sedimentation or other hydrological changes.

Groundwater salinity within the application area is mapped between 500 and 1000 milligrams per litre total dissolved solids, which is considered marginal. Noting this, and that the local areas retains approximately 80 per cent vegetation cover, the proposed clearing is not likely to deteriorate the quality of surface and/or groundwater via increased salinity.

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

The Commissioner of Soil and Land Conservation advised that the risk of flooding occurring as a result of the proposed clearing is low (Commissioner of Soil and Land Conservation, 2018).

Given the above, the proposed clearing is unlikely to cause, or exacerbate, the incidence or intensity of flooding. The proposed clearing is not likely to be at variance to this Principle.

5. Planning instruments and other relevant matters.

The Shire of Manjimup (2018) has advised the following;

- no objection to the application and that there are no planning or other matters which would affect the proposal;
- the land is zoned by Local Planning Scheme No. 4 as "Priority Agriculture" and planning approval for clearing of vegetation is not required; and
- the purpose (agriculture/horticulture) does not require local government planning approval.

On 28 September 2018, (DWER) wrote to the applicant advising if the application was to be assessed in its current state (60 hectares), it is likely that the application would have a number of environmental impacts. In response to DWER's letter, on 26 November 2018, the applicant agreed to remove the areas associated with the wetland and watercourse and reduce the clearing size to 19.4 hectares.

The application was advertised on the Department of Water and Environmental Regulation's website on 15 May 2018 for a 21 day public submission period. No submissions were received during this period.

No registered Aboriginal Sites of Significance occur within the application area.

6. References

- Commonwealth of Australia (2001) National Objectives and Targets for Biodiversity Conservation 2001-2005, 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 August 2018
- Department of Biodiversity Conservation and Attractions (2018a). Wetland advice received in relation to Clearing Permit Application CPS 8090/1 – DWER Ref:A1722856
- Department of Biodiversity Conservation and Attractions (2018b). Flora advice received in relation to Clearing Permit Application CPS 8090/1 – DWER Ref: A1753533
- Department of Environment and Conservation (DEC) (2008) Forest Black cockatoo (Baudin's cockatoo) (*Calyptorhynchus baudinii*) and forest red-tailed back cockatoo (*Calyptorhynchus banksii naso*) Recovery Plan. Department of Environment and Conservation, Perth, Western Australia.
- Department of Primary Industries and Regional Development (2017). NRInfo Digital Mapping. Department of Primary Industries and Regional Development. Government of Western Australia. URL: **Error! Hyperlink reference not valid.** (accessed November 2018)
- Department of Primary Industries and Regional Development (2018). Advice received from the Commissioner of Soil and Land Conservation in relation to Clearing Permit Application CPS 8090/1 – DWER Ref:1703189
- Department of Water and Environmental Regulation (2018). Site Inspection Report for Clearing Permit Application CPS 8090/1 – Mr Scot Dunnet. DWER Ref:A1753541
- Government of Western Australia. (2018a). 2017 Statewide Vegetation Statistics incorporating the CAR Reserve Analysis (Full Report). Current as of December 2017. WA Department of Biodiversity and Attractions, Perth
- Government of Western Australia. (2018b). 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>
- 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.
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- 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.
- 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.
- Shire of Manjimup (2018) Advice received in relation to Clearing Permit Application CPS 8090/1 - Mr Scott Dunnet. DWER Ref:A1701901.
- Valentine, L.E. and Stock, W. (2008) Food Resources of Carnaby's Black Cockatoo (*Calyptorhynchus latirostris*) in the Gnangara Sustainability Strategy Study Area. Edith Cowan University and Department of Environment and Conservation. December 2008.
- Western Australian Herbarium (1998-) FloraBase - The Western Australian Flora. Department of Parks and Wildlife. <http://florabase.dpaw.wa.gov.au/> (Accessed November 2018).

GIS Databases:

Aboriginal Sites of Significance
DBCA Estate
Groundwater salinity
Hydrography, linear
Remnant vegetation
SAC bio datasets (accessed November 2018)
Soils, Statewide
Topographic contours