GOVERNMENT OF
WESTERN AUSTRALIA

# CLEARING PERMIT

*Granted under section 51E of the Environmental Protection Act 1986*

## PERMIT DETAILS

Area Permit Number: CPS 9447/1

File Number: DWERVT8771

Duration of Permit: From 9 January 2022 to 9 January 2024

## PERMIT HOLDER

City of Albany

## LAND ON WHICH CLEARING IS TO BE DONE

Down Road West road reserve (PIN 1274152), Drome

## AUTHORISED ACTIVITY

The permit holder must not clear more than 0.326 hectares of native vegetation within the area cross-hatched yellow in Figure 1 of Schedule 1.

## CONDITIONS

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

In determining the *native vegetation* authorised to be cleared under this permit, the permit holder must apply the following principles, set out in descending 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. Weed and dieback management

When undertaking any clearing authorised under this permit, the permit holder must take the following measures to minimise the risk of 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 *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. Directional clearing

The permit holder must conduct clearing activities in a slow, progressive manner from east to west to allow fauna to move into adjacent *native vegetation* ahead of the clearing activity.

## 4. Records that must be kept

The permit holder must maintain records relating to the listed relevant matters in accordance with the specifications detailed in Table 1.

**Table 1: Records that must be kept**

| No. | Relevant matter | Specifications |
|---|---|---|
| 1. | In relation to the authorised clearing activities generally | (a) the species composition, structure, and density of the cleared area;<br>(b) 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;<br>(c) the date that the area was cleared;<br>(d) the size of the area cleared (in hectares); and<br>(e) actions taken to avoid, minimise, and reduce the impacts and extent of clearing in accordance with condition 1; and<br>(f) actions taken to minimise the risk of the introduction and spread of *weeds* and *dieback* in accordance with condition 2.<br>(g) actions taken in accordance with condition 3. |

## 5. Reporting

The permit holder must provide to the *CEO* the records required under condition 4 of this permit when requested by the *CEO*.

## DEFINITIONS

In this permit, the terms in Table  have the meanings defined.

**Table 2: Definitions**

| Term | Definition |
|---|---|
| CEO | Chief Executive Officer of the department responsible for the administration of the clearing provisions under the *Environmental Protection Act 1986*. |
| clearing | has the meaning given under section 3(1) of the EP Act. |
| condition | a condition to which this clearing permit is subject under section 51H of the EP Act. |
| dieback | means the effect of *Phytophthora* species on native vegetation. |
| department | means the department established under section 35 of the *Public Sector Management Act 1994* (WA) and designated as responsible for the administration of the EP Act, which includes Part V Division 3. |
| EP Act | *Environmental Protection Act 1986* (WA) |
| fill | means material used to increase the ground level, or to fill a depression |
| 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. |
| native vegetation | has the meaning given under section 3(1) and section 51A of the EP Act. |
| weeds | means any plant –<br>(a) that is a declared pest under section 22 of the *Biosecurity and Agriculture Management Act 2007*; or<br>(b) published in a Department of Biodiversity, Conservation and Attractions species-led ecological impact and invasiveness ranking summary, regardless of ranking; or<br>(c) not indigenous to the area concerned. |

**END OF CONDITIONS**

Ryan Mincham
2021.12.17
14:52:45
+08'00'

Ryan Mincham
MANAGER
NATIVE VEGETATION REGULATION

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

17 December 2021

# SCHEDULE 1

The boundary of the area authorised to be cleared is shown in the map below


**Figure 1: Map of the boundary of the area within which clearing may occur**

Government of Western Australia
Department of Water and Environmental Regulation

# Clearing Permit Decision Report

## 1 Application details and outcome

### 1.1. Permit application details

| | |
|---|---|
| **Permit number:** | CPS 9447/1 |
| **Permit type:** | Area permit |
| **Applicant name:** | City of Albany |
| **Application received:** | 5 October 2021 |
| **Application area:** | 0.326 hectares of native vegetation |
| **Purpose of clearing:** | Accommodating road widening for a slip lane and access road, roadside open swale drains and earthworks |
| **Method of clearing:** | Mechanical Removal |
| **Property:** | Down Road West road reserve (PIN 1274152) |
| **Location (LGA area/s):** | City of Albany |
| **Localities (suburb/s):** | Drome |

### 1.2. Description of clearing activities

The area proposed to be cleared is a 0.326-hectare patch within a continuous tract of native vegetation in the intensive land use zone of Western Australia. The proposed clearing area is within an approximate 2.7 kilometres strip of remnant vegetation along a road reserve connecting to a larger area of remnant vegetation (approximately 100 hectares). The proposed clearing area is located between the Down Road West and Lot 5780 which is being proposed for the Albany Motorsport Park (see Figure 1, Section 1.5).

### 1.3. Decision on application

| | |
|---|---|
| **Decision:** | Granted |
| **Decision date:** | 17 December 2021 |
| **Decision area:** | 0.326 hectares of native vegetation, as depicted in Section 1.5, below. |

### 1.4. Reasons for decision

This clearing permit application was submitted, accepted, assessed and determined in accordance with sections 51E and 51O of the *Environmental Protection Act 1986* (EP Act). The Department of Water and Environmental Regulation (DWER) advertised the application for 14 days and no submissions were received.

In making this decision, the Delegated Officer had regard for the site characteristics (see Appendix B), relevant datasets (see Appendix F.1), information provided by the applicant, the clearing principles set out in Schedule 5 of the EP Act (see Appendix C) and any other matters considered relevant to the assessment (see Section 3). The Delegated Officer also took into consideration the applicant's efforts to avoid and minimise clearing and mitigate its impact.

In particular, the Delegated Officer has determined that:

- clearing could introduce and spread weeds and dieback into adjacent vegetation, which could impact on the quality of the adjacent vegetation and its habitat values. The likelihood of introduction and spread of weed and dieback could be reduced by applying weed and dieback management measures
- the application area may be utilised by conservation significant fauna, including Western Ringtail Possum (*Pseudocheirus occidentalis)* and black cockatoos (*Calyptorhynchus sp*). However, given the habitat conditions, the proximity of larger remnant vegetation patches in better condition and the limited extent of clearing area, it is unlikely to comprise significant habitat within the context of the local area (20 kilometre radius from the centre of the area proposed to be cleared).

After consideration of the available information, as well as the applicant's minimisation and mitigation measures (see Section 3.1), the Delegated Officer determined the proposed clearing is unlikely have long-term adverse impacts on environmental values.

The Delegated Officer decided to grant a clearing permit subject to conditions to:

- avoid, minimise and reduce the impacts and extent of clearing
- take hygiene steps to minimise the risk of the introduction and spread of weeds and dieback
- undertake slow, progressive one directional clearing to allow terrestrial fauna to move into adjacent habitat ahead of the clearing activity.

## 1.5. Site map


**Figure 1 Map of the application area**

The area cross-hatched yellow indicates the area authorised to be cleared under the granted clearing permit.

## 2 Legislative context

The clearing of native vegetation in Western Australia is regulated under the EP Act and the *Environmental Protection (Clearing of Native Vegetation) Regulations 2004* (Clearing Regulations).

In addition to the matters considered in accordance with section 51O of the EP Act (see Section 1.4), the Delegated Officer has also had regard to the objects and principles under section 4A of the EP Act, particularly:

- the precautionary principle
- the principle of intergenerational equity
- the principle of the conservation of biological diversity and ecological integrity.

Other legislation of relevance for this assessment include:

- *Biodiversity Conservation Act 2016* (WA) (BC Act)
- *Conservation and Land Management Act 1984* (WA) (CALM Act)
- *Environment Protection and Biodiversity Conservation Act 1999* (Cth) (EPBC Act)

The key guidance documents which inform this assessment are:

- *A guide to the assessment of applications to clear native vegetation* (DER, December 2013)
- *Procedure: Native vegetation clearing permits* (DWER, October 2019)

## 3 Detailed assessment of application

### 3.1. Avoidance and mitigation measures

The applicant indicated that during the planning stages of the application, consideration was given to alternative locations for the access to the property. Due to road safety constraints and the proposed use of the area as a motor park, only Down Road West is suitable for the proposed level of access from a road safety perspective. Also, consideration was given to road design such as line of sight and distances to other accesses and intersections. The area that would result in the least disturbance to significant trees was selected as the preferred location for the access road.

The Delegated Officer was satisfied that the applicant has undertaken reasonable measures to avoid and minimise potential impacts of the proposed clearing on environmental values.

### 3.2. Assessment of impacts on environmental values

In assessing the application, the Delegated Officer has had regard for the site characteristics (see Appendix BB) and the extent to which the impacts of the proposed clearing present a risk to biological, conservation, or land and water resource values.

The assessment against the clearing principles (see **Error! Reference source not found.**) identified that the impacts of the proposed clearing present a risk to biological values (fauna, adjacent flora and vegetation). The consideration of these impacts, and the extent to which they can be managed through conditions applied in line with sections 51H and 51I of the EP Act, is set out below.

#### *3.2.1. Biological values (flora and vegetation) - Clearing Principles (a & c)*

Assessment

A review of available databases indicates that a total of 81 conservation significant flora species have been recorded within the local area (see Appendix B). These species were listed as threatened under the state BC Act and/or Commonwealth EPBC Act, or as Priority (P) species by the Department of Biodiversity Conservation and Attractions (DBCA). Based on the habitat preferences of the above species, the condition of the vegetation within the application area, adjacent land uses, and the distribution and extent of existing records, the application area was not considered likely to comprise significant habitat for the majority of these flora species, however, the application area was considered to potentially provide suitable habitat for one threatened species; *Banksia goodii.*

*Banksia goodii* (Good's banksia): the Florabase website (Western Australian Herbarium, 1998-) describes this species as a lignotuberous, prostrate shrub to 0.2 metres high, with orange, brown and red flowers in May or November, growing in white or grey sand over laterite. The species occurs between Albany and the Porongurup Range, with a geographical range of less than 25 km. It grows in sandy soil in low woodlands of banksias and the Albany Blackbutt (*Eucalyptus staen*). Good's Banksia forms noticeable dense stands in low open forest and low woodland of Jarrah (*Eucalyptus marginata*) and Western Sheoak (*Allocasuarina fraseriana*) over Agonis heath

((DEWHA 2008). The nearest record is approximately 3.2 kilometres from the application area, from a soil type broadly consistent with that mapped within the application area.

The species and its habitat requirements are represented in the DBCA estate Mill Brook Nature Reserve (approximately 8 km northeast of the application area) with nine populations located within the reserve and additional populations present with in the Denmark Catchment State Forest (approximately 14 km northwest of the application area). There are 60 records of the species within the local area. The two above mentioned conservation areas and their direct surroundings represent the majority of records for this species (approximately 90% of records). The clearing of 0.326 ha of vegetation within the application area is not likely to impact critical habitat for *Banksia goodii.*

Conclusion
For the reasons set out above, it is considered that impacts to conservation significant flora species are unlikely to result from the proposed clearing and that this does not constitute a significant residual impact. Based on the above assessment, the Delegated Officer has determined that the proposed clearing is considered acceptable subject to relevant conditions in relation to this environmental value.

*Phytophtora* dieback is known to be a threat to vegetation in the Albany region (Sandiford and Barrett, 2010). The proposed clearing may indirectly impact the surrounding vegetation due to introduction of dieback and weeds. It is considered that the impacts of the proposed clearing to flora and vegetation can be managed through the implementation of weed and dieback hygiene management conditions.

Conditions
To address the above impacts, the following management measures will be required as conditions on the clearing permit:
- Take hygiene steps to minimise the risk of the introduction and spread of weeds and dieback to adjacent vegetation.

### *3.2.2. Environmental value: biological values (fauna) – Clearing Principle* (a & *b)*

The local area contains a total of 5,589 records from 79 different species of conservation significant fauna. These species are either listed under the state BC Act and/or Commonwealth EPBC Act, as Priority species by DBCA, or are migratory species listed under International Agreements. Any aquatic marine species would be unlikely to be directly impacted by the proposed clearing. Migratory birds may use the vegetation in the proposed clearing area in their transits. Given the small clearing extent and presence of considerably similar vegetation within the local area, the vegetation proposed to be cleared is unlikely to comprise significant habitat for the migratory birds. *Pseudocheirus occidentalis* (Western Ringtail Possum) is the most common recorded species with 704 records, with *Calyptorhynchus latirostris* (Carnaby's cockatoo) comprising 522 records. The nearest record of conservation significant fauna is for a Western Ringtail Possum, located approximately 2.3 km from the application area within the DBCA managed Down Road Nature Reserve.

Of the conservation significant fauna species recorded within the local area, the following have the potential to be found within the application area based on habitat preferences (see Appendix B.4):
- *Calyptorhynchus banksii naso* (Forest red-tailed black cockatoo)
- *Calyptorhynchus baudinii* (Baudin's cockatoo)
- *Calyptorhynchus latirostris* (Carnaby's cockatoo)
- *Falco peregrinus* (Peregrine falcon)
- *Isoodon fusciventer* (Quenda)
- *Phascogale tapoatafa wambenger* (South-western brush-tailed phascogale)
- *Pseudocheirus occidentalis* (Western ringtail possum)

**Black Cockatoos**
The forest red-tailed black cockatoo, Baudin's cockatoo, Forest red-tailed black cockatoo and Carnaby's cockatoo, collectively known as black cockatoo species, are known to nest in hollows of live and dead trees, including marri (*Corymbia calophylla*), jarrah (*Eucalyptus marginata*), karri (*Eucalyptus diversicolor*), wandoo (*Eucalyptus wandoo*), tuart, flooded gum (*Eucalyptus rudis*), and other *Eucalyptus* spp. (Commonwealth of Australia, 2012). 'Breeding habitat' for black cockatoos includes trees of these species that either have a suitable nest hollow or are of a suitable diameter at breast height (DBH) to develop a nest hollow, where suitable DBH for nest hollows is 500 millimetres for most tree species (Commonwealth of Australia, 2012). While breeding, black cockatoos also generally forage within a 6 to 12-kilometre radius of their nesting site (Commonwealth of Australia, 2012). According to available datasets, mapped black cockatoo foraging habitat is recorded within a 12-kilometre radius of the application area, making it a suitable location for breeding if appropriate hollows are present (Commonwealth of Australia, 2012). According to

available databases, the closest confirmed breeding site is approximately 50 kilometres east of the application area. Assessment of photographs supplied by the applicant (see Appendix E) indicate the potential for Black Cockatoos to utilise species within the application area for foraging, breeding, and roosting. Given the size of the trees, it is unlikely that they will contain hollows which could be utilised for breeding purposes.

There are no *Calyptorhynchus latirostris* (Carnaby's Cockatoo) roosting sites within the local area, with the closest site recorded approximately 5 km away. Roosting is typically noted to occur within suitable trees close to an important water source and within an area of quality foraging habitat (Commonwealth of Australia, 2012). As the application area does not transect any watercourses and contains a small area of foraging habitat within an extensively transformed landscape, it is not considered likely that the application area contains significant roosting habitat for any black cockatoo species.

A significant amount of area mapped as feeding habitat for Black Cockatoos surrounds the application area (see Figure 2). The clearing area represents an extremely small proportion (0.0015%) of the mapped feeding habitat. Two DBCA managed estates, namely Down Road Nature Reserve and Mill Brook Reserve, provide a substantially larger amount (3.79%) of the foraging habitat available within the local area.

Foraging habitat within a 12-kilometre radius of breeding sites and a 6-kilometre radius of roosting sites is noted as being of particular importance for black cockatoo species (Commonwealth of Australia, 2012). According to available datasets, the application area occurs approximately 50 kilometres from the closest confirmed breeding site and 5 kilometres from the closest confirmed roost site.

Given the small scale of the proposed clearing (0.326 ha) and the extent of foraging resources available in adjacent remnant vegetation, the clearing is unlikely to present a significant impact to the local availability of foraging and roosting resources for Black Cockatoos, or impact on their ability to move through the landscape.

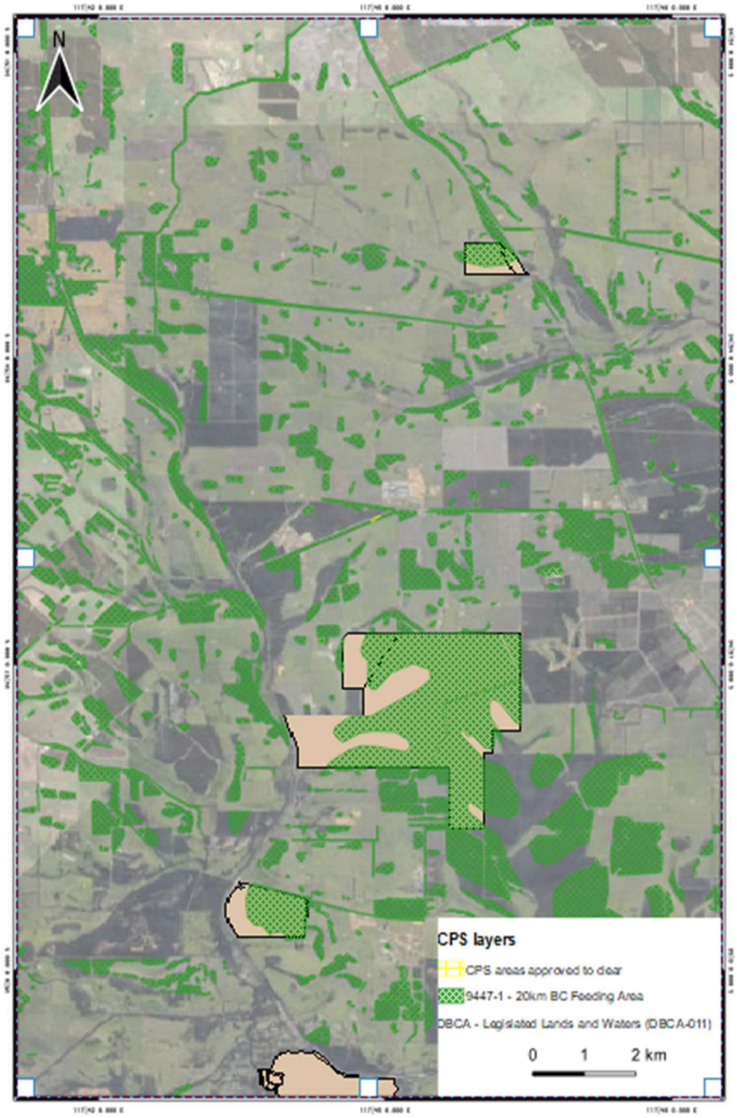


**Figure 2:** Aerial imagery showing the extent of mapped Black Cockatoo feeding habitat (green areas) and DBCA estate (brown areas) surrounding the application areas.

**Peregrine falcon**

The species is found in most habitats, from rainforests to the arid zone and at most altitudes, from the coast to alpine areas. It requires abundant prey and secure nest sites and prefers coastal and inland cliffs or open woodlands near water and may even be found nesting on high city buildings (Australian Museum, 2020). This species is widespread, highly mobile and is found in various habitats. The application area may comprise suitable habitat for this species but noting habitat preferences and the small extent of the proposed clearing, the application area is unlikely to comprise a significant habitat for this species.

**Quenda**

Quenda are ground-dwelling marsupials, typically associated with forest or woodlands near watercourses, where understorey consists of dense scrub and leaf litter is abundant (DEC, 2012a). Given the application area contains remnant marri and jarrah woodland, it is likely to contain suitable habitat for quenda. However, it is acknowledged that the application area comprises 0.326 hectares of remnant vegetation in a disturbed area. It is therefore unlikely that the application area would provide sufficient understorey cover and leaf litter to comprise preferred habitat for

the species. Further, the application area is located within 2.3 km of larger remnants of suitable habitat for quenda including Down Road Nature Reserve and Mill Brook Reserve, and it is expected that individuals will be able to disperse into this vegetation at the time of clearing, given the application of slow, progressive directional clearing. Given the extent of the proposed clearing, the condition of the vegetation and the extent of suitable habitat available in the local area, the application area is not considered likely to comprise significant habitat for quenda.

**Western ringtail possum**
The western ringtail possum (WRP) is an arboreal foliovore, associated with a diverse range of habitats in the South Coast management zone from Walpole to east of Albany, characterised by high canopy cover and connectivity (DPAW, 2017). Assessment of spatial data identified 704 records of Western Ringtail Possum within the local area, with the nearest record approximately 2.252 km south-east and 2.304 km north of the application area. Assessment of supplied photographs (Applicant, 2021) indicated the vegetation within the application area may be utilised by WRP for supporting habitat (connectivity, dreys).

Given the extent of the proposed clearing, the open canopy structure of the application area, the location of larger remnants of suitable habitat for WRP approximately 2.3 km from the application area (including Down Road Nature Reserve and Mill Brook Reserve) and the extent of suitable habitat available in the local area, the application area is not considered likely to comprise significant habitat for the western ringtail possum and the proposed clearing is unlikely to result in significant impacts to western ringtail possum habitat in the local area. Should individuals be present within the application area at the time of clearing, it is expected that individuals will be able to disperse into adjacent areas of suitable area, given the application of slow, progressive directional clearing.

**South-western brush-tailed phascogale**
The south-western brush-tailed phascogale is an arboreal dasyurid, associated with dry sclerophyll forests and open woodlands that contain hollow-bearing trees, characterised by high canopy cover and connectivity (DEC, 2012b). As discussed above, canopy structure within the application area is patchy and there are more suitable intact remnants of native vegetation in the local area. It is likely that the larger remnants of native vegetation in the local area comprise a suitable canopy structure and appropriate habitat resources to support the south-western brush-tailed phascogale. It is expected that individuals will be able to disperse into adjacent vegetation if present at the time of clearing, given the application of slow, progressive directional clearing. Given the extent of the proposed clearing, the canopy structure of the application area, and the extent of suitable habitat available in the local area, the application area is not considered likely to comprise significant habitat for the south-western brush-tailed phascogale and the proposed clearing is unlikely to significantly impact south-western brush-tailed phascogale habitat in the local area.

Conclusion
Based on the above assessment, the proposed clearing is unlikely to significantly impact breeding, roosting or feeding habitat for black cockatoo species or significant habitat for conservation significant fauna species in the local area. Whiles not considered significant habitat, impacts to individuals of these species may occur at the time of clearing. For the reasons set out above, it is considered that potential direct impacts to fauna resulting from the proposed clearing can be managed through a directional clearing condition.

Conditions
To address the above impacts, the following management measures will be required as conditions on the clearing permit:

- Slow, directional clearing allowing fauna to move into adjacent vegetation ahead of the clearing activity to minimise impact to individuals.

## 3.3. Relevant planning instruments and other matters

The clearing permit application was advertised on the Department of Water and Environmental Regulation's website on 22 October 2021, inviting submissions from the public within a 14-day period. No submissions were received in relation to this application.

It is the permit holder's responsibility to comply with the *Aboriginal Heritage Act 1972* (WA) and ensure that no Aboriginal Sites of Significance are damaged through the clearing process.

**End**

## Appendix A. Additional information provided by applicant

| Summary of comments | Consideration of comment |
|---|---|
| Applicant provided additional information on consideration of alternatives for access to Lot 5780. | Avoidance and mitigation measures undertaken by the applicant have been described under section 3.1. |

## Appendix B. Site characteristics

### B.1. Site characteristics

| Characteristic | Details |
|---|---|
| Local context | The area proposed to be cleared is a 0.326-hectare patch within a continuous tract of native vegetation in the intensive land use zone of Western Australia. It is located between the Down Road West and agricultural grazing pastures. The proposed clearing area is within a 2.7 kilometres strip of remnant vegetation along a road reserve connecting to a larger area of remnant vegetation (approximately 100 hectares) in an otherwise cleared landscape. The intended land use of Lot 5780 is for the proposed Albany Motorsport Park.<br><br>Aerial imagery indicates the local area (20-kilometre radius from the centre of the area proposed to be cleared) retains approximately 34.46 per cent of the original native vegetation cover. |
| Ecological linkage | The clearing area falls within the South Coast Macro corridor, Strategic Zone A. At a landscape level, the removal of the small amount of vegetation proposed to be cleared will not result in disruption to ecological linkage values. |
| Conservation areas | The application area is not located within any conservation areas. Several conservation areas are recorded within 20 km radius from the application area.<br>The closest conservation areas are Down Road Nature Reserve (approximately 2 kilometres south) and Philips Brook Nature Reserve (approximately 4.6 kilometres north-east). |
| Vegetation description | Photographs supplied by the applicant indicate the vegetation within the proposed clearing area consists of a canopy of *Corymbia calophylla* (marri), *Eucalyptus marginata* (jarrah) and sparsely distributed *Allocasuarina fraseriana* (sheoak), over an understorey of sedges and weeds. Representative photos are available in Appendix E.<br><br>This is consistent with the Pre-European mapped vegetation type(s):<br>• Beard Jarrah Forest (978), which is described as Low forest; jarrah, *Eucalyptus staeri & Allocasuarina fraseriana* (Shepherd et al, 2001)<br><br>The mapped Beard Jarrah Forest (978) vegetation type retain approximately 35.37 per cent of the original extent (Government of Western Australia, 2019).<br><br>The Albany Regional Vegetation Survey classifies the area as a patch of Jarrah/Marri/Sheoak Laterite Forest within a strip of a mixture of Jarrah/Sheoak/*E.staeri* Sandy Woodland and Jarrah/Marri/Sheoak Laterite Forest.<br><br>Key identifying Features of Jarrah/Marri/Sheoak Laterite Forest is a canopy of *Eucalyptus marginata* and *Allocasuarina fraseriana* over a relatively open though diverse understorey dominated by *Bossiaea linophylla, Agonis theiformis and Xanthosia rotundifolia* with *Banksia grandis* often present as a tall shrub strata. Open sedgeland of *Tetraria octandra, Tetraria capillaris, Desmocladus fasciculatus* and *Anarthria prolifera.* The vegetation of the application area is consistent with this classification.<br><br>Local area retains 34.36% of pre-European vegetation. |

<table>
<tr><th>Characteristic</th><th>Details</th></tr>
<tr><td>Vegetation condition</td><td>Photographs supplied by the applicant indicate the vegetation within the proposed clearing area is in Very good (Keighery, 1994) condition, described as:<ul><li>Very good: Vegetation structure altered, with obvious signs of disturbance. For example, disturbance to vegetation structure caused by repeated fires, the presence of some more aggressive weeds, dieback, logging and/or grazing.</li></ul>The full Keighery (1994) condition rating scale is provided in Appendix D. Representative photos are available in Error! Reference source not found..</td></tr>
<tr><td>Climate and landform</td><td>Local climate is characterised by mean annual rainfall of 930 mm and evapotranspiration 800 mm. The application area is at an altitude of 70 meters above sea level.</td></tr>
<tr><td>Soil description</td><td>The soils of the application area are mapped: 90% of the area is 242KgS7h and 10% of the area is 242ReDMc.<br>242KgS7h is described as broad valleys in sedimentary rocks; 30 m relief; smooth slopes. Deep sands and iron podzols on slopes; Albany Blackbutt-jarrah-sheoak woodland. Podzols and yellow duplex soils on floors; paperbark woodland, teatree heath. With pale deep sands and grey deep sandy duplexes<br><br>242ReDMc described as sands and laterite on elongate crests; Jarrah-Albany Blackbutt-Marri forest.</td></tr>
<tr><td>Land degradation risk</td><td>Land degradation risk ratings mapped over the application area are provided in the table below (DPIRD 2017).
<table>
<tr><th>Risk categories</th><th>South Coast and hinterland landforms and soils (242ReDMc) (10% of site)</th><th>South Coast and hinterland landforms and soils (242KgS7h) (90% of site)</th></tr>
<tr><td>Wind erosion</td><td>>70% of map unit has a high wind erosion risk</td><td>>70% of map unit has a high wind erosion risk</td></tr>
<tr><td>Water erosion</td><td><3% of map unit has a low water erosion risk</td><td>3-10% of map unit has a low water erosion risk</td></tr>
<tr><td>Salinity</td><td><3% of map unit has a low salinity risk or is presently saline</td><td><3% of map unit has a low salinity risk or is presently saline</td></tr>
<tr><td>Subsurface Acidification</td><td>>70% of map unit has a high subsurface acidification risk or is presently acid</td><td>>70% of map unit has a high subsurface acidification risk or is presently acid</td></tr>
<tr><td>Flood risk</td><td><3% of the map unit has a low flood risk</td><td>3-10% of map unit has a low flood risk</td></tr>
<tr><td>Waterlogging</td><td>10-30% of map unit has a moderate waterlogging risk</td><td><3% of the map unit has a low waterlogging risk</td></tr>
<tr><td>Phosphorus export risk</td><td>3-10% of map unit has a low phosphorus export risk</td><td>10-30% of map unit has a medium waterlogging risk</td></tr>
</table></td></tr>
<tr><td>Waterbodies</td><td>The desktop assessment and aerial imagery indicated that no watercourses transect the area proposed to be cleared. The Marbellup Flats categorised as South Coast Significant Wetlands is located 400 metres southwest of the application area and an unnamed tributary of Marbellup Brook is located 380 metres in the same direction.</td></tr>
</table>

| Characteristic | Details |
|---|---|
| | Due to the small size of the application area, the clearing of vegetation would not likely affect the local surface water resources. |
| Hydrogeography | The application area is located within the Albany Groundwater Area as proclaimed under the *Rights in Water and Irrigation Act 1914* (RIWI Act). Groundwater salinity within the application ranges between 500-1,000 milligrams per litre (mg/L) total dissolved solids (TDS).<br>The application area is located within the Public Drinking Water Marbellup Brook Catchment Area and within the boundaries of the Hay River Land Conservation District.<br>Due to the small size of the application area, the clearing of vegetation would not likely affect the local groundwater resources. |
| Flora | There are 350 records from 81 species of conservation significant flora within the local area, with one species found on the same vegetation and soil type as the application area. The nearest record is *Banksia brownii*, a Threatened species, located approximately 3.2 kilometres from the application area.<br><br>None of these flora species are recorded within the application area, or in close proximity. |
| Ecological communities | The application area does not intersect any mapped Threatened Ecological Communities (TECs) or Priority Ecological Communities (PECs). There are 173 mapped occurrences of PECs within the local area, the nearest being a priority 1 *Banksia coccinea* thicket located approximately 2 kilometres away, on the other side of a large tract of cleared and cultivated land. |
| Fauna | The local area contains a total of 5,589 records from 79 different species of conservation significant fauna. However, 23 of these species are mainly marine or freshwater migratory species. *Pseudocheirus occidentalis* (Western Ringtail Possum) is the most common recorded species with 704 records, with *Calyptorhynchus latirostris* (Carnaby's cockatoo) comprising 522 records. The nearest record of conservation significant fauna is, located approximately 2.3 km from the application area.<br><br>There are no *Calyptorhynchus latirostris* (Carnaby's Cockatoo) roosting sites within the local area. The closest roosting site is recorded approximately 5 km away. The application area is located within a mapped Black Cockatoo feeding areas. |

## B.2. Vegetation extent

| | Pre-European extent (ha) | Current extent (ha) | Extent remaining (%) | Current extent in all DBCA managed land (ha) | Current proportion (%) of pre-European extent in all DBCA managed land |
|---|---|---|---|---|---|
| IBRA bioregion* | | | | | |
| Jarrah Forest | 53,016.57 | 18,751.03 | 35.37 | 5,024.08 | 9.48 |
| Vegetation complex | | | | | |
| Jarrah Forest (978) | 53,016.57 | 18,751.03 | 35.37 | 5,024.08 | 9.48 |
| Local area | | | | | |
| 20km radius | 111825.61 | 38422.49 | 34.36 | - | - |

*Government of Western Australia (2019a)

## B.3. Flora analysis table

| Species name | Conservation status | Suitable habitat features? [Y/N] | Suitable vegetation type? [Y/N] | Suitable soil type? [Y/N] | Distance of closest record to application area (km) | Number of known records (total) | Are surveys adequate to identify? [Y, N, N/A] |
|---|---|---|---|---|---|---|---|
| *Banksia goodii* | T | Y | Y | Y | 6.72 | 60 | N/A |
| *Andersonia sp. Jamesii (J. Liddelow 84)* | 4 | N | Y | Y | 6.49 | 19 | N/A |
| *Synaphea preissii* | 3 | N | Y | Y | 6.61 | 8 | N/A |
| *Schoenus sp. Grey Rhizome (K.L. Wilson 2922)* | 1 | N | Y | Y | 8.70 | 1 | N/A |

## B.4. Fauna analysis table

| Species name | Conservation status | Suitable habitat features? [Y/N] | Suitable vegetation type? [Y/N] | Distance of closest record to application area (km) | Number of known records (total) | Are surveys adequate to identify? [Y, N, N/A] |
|---|---|---|---|---|---|---|
| *Calyptorhynchus baudinii* (Baudin's cockatoo) | EN | Y | Y | 6.48 | 284 | N/A |
| *Calyptorhynchus latirostris* (Carnaby's cockatoo) | EN | Y | Y | 2.74 | 522 | N/A |
| *Calyptorhynchus banksii naso* (forest red-tailed black cockatoo) | VU | Y | Y | 3.74 | 27 | N/A |
| *Calyptorhynchus sp. 'white-tailed black cockatoo'* (white-tailed black cockatoo) | EN | Y | Y | 7.11 | 236 | N/A |
| *Falco peregrinus* (peregrine falcon) | OS | Y | Y | 9.59 | 35 | N/A |
| *Isoodon fusciventer* (Quenda, southwestern brown bandicoot) | P4 | Y | Y | 3.74 | 212 | N/A |
| *Phascogale tapoatafa wambenger* (South-western brush-tailed phascogale, wambenger) | CD | Y | Y | 12.79 | 8 | N/A |
| *Pseudocheirus occidentalis* (Western ringtail possum, ngwayir) | CR | Y | Y | 2.25 | 704 | N/A |

T: threatened, CR: critically endangered, EN: endangered, VU: vulnerable, P: priority

## Appendix C. Assessment against the clearing principles

| Assessment against the clearing principles | Variance level | Is further consideration required? |
|---|---|---|
| **Environmental value: biological values** | | |
| Principle (a): *"Native vegetation should not be cleared if it comprises a high level of biodiversity."*<br>Assessment:<br>The area proposed to be cleared does not intersect any federally listed threatened ecological communities or state listed priority ecological communities. There are several state listed priority ecological communities and federally listed threatened ecological communities in local proximity of the application area. Noting the extent of the application area, and the condition and composition of the vegetation proposed to be cleared, and with regard for nearby remnant vegetation, the vegetation within the application area is not likely to contain locally or regionally significant flora, fauna, habitats, or plant assemblages. | Not likely to be at variance | Yes<br>*Refer to Section 3.2.1 and 3.2.2, above.* |
| 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."*<br>Assessment:<br>Several conservation significant fauna have been recorded from the local area. The application area may be utilised by Western Ringtail Possum and Black cockatoo species. Given the small extent of clearing and the availability of larger remnants within the local area, the application area is unlikely to comprise significant habitat for these fauna species. | Not likely to be at variance | Yes<br>*Refer to Section 3.2.2, above* |
| Principle (c): *"Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, threatened flora."*<br>Assessment:<br>The nearest record is *Banksia brownii*, a Threatened species, located approximately 3.2 kilometres from the application area. The small scale of clearing proposed is unlikely to impact critical habitat for threatened flora which necessary for their continued existence. | Not likely to be at variance | Yes<br>*Refer to Section 3.2.1, above.* |
| 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."*<br>Assessment:<br>The area proposed to be cleared does not intersect any mapped threatened ecological communities listed under the BC Act within the local area<br>. | Not likely to be at variance | No |
| **Environmental value: significant remnant vegetation and conservation areas** | | |
| 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."*<br>Assessment:<br>The extent of native vegetation in the local area is consistent with the national objectives and targets for biodiversity conservation in Australia. The vegetation proposed to be cleared is not considered to be part of a significant ecological linkage in the local area. | Not likely to be at variance | No |

| Assessment against the clearing principles | Variance level | Is further consideration required? |
|---|---|---|
| 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."*<br><br>Assessment:<br><br>Given the distance to the nearest conservation area, the proposed clearing is not likely to have an impact on the environmental values of nearby conservation areas. | Not likely to be at variance | No |
| **Environmental value: land and water resources** | | |
| Principle (f): *"Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland."*<br><br>Assessment:<br><br>The application area does not intersect any wetlands or watercourses The Marbellup Flats categorised as South Coast Significant Wetlands is located 400 metres southwest of the application area and an unnamed tributary of Marbelup Brook 380 metres in the same direction. Given the amount of clearing and the distance to watercourses or wetlands, it is unlikely the clearing will have a significant impact on watercourse or wetland hydrology, or riparian vegetation. | Not likely to be at variance | No |
| Principle (g): *"Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation."*<br><br>Assessment:<br><br>The mapped soils are highly susceptible to wind and subsurface acidification risk. Noting the extent and location of the application area, the proposed clearing is not likely to have an appreciable impact on land degradation. | Not likely to be at variance | No |
| 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."*<br><br>Assessment:<br><br>The Marbellup Flats categorised as South Coast Significant Wetlands is located 400 metres southwest of the application area and an unnamed tributary of Marbelup Brook 380 metres in the same direction. The application area is located within the Albany Groundwater Area as proclaimed under the *Rights in Water and Irrigation Act 1914* (RIWI Act). The application area is located within the Public Drinking Water Marellup Brook Catchment Area and within the boundaries of the Hay River Land Conservation District.<br><br>Due to the small size of the application area, it is not believed the clearing of vegetation would affect the local surface and groundwater resources. | Not likely to be at variance | No |
| Principle (j): *"Native vegetation should not be cleared if the clearing of the vegetation is likely to cause, or exacerbate, the incidence or intensity of flooding."*<br><br>Assessment:<br><br>The mapped soils and topographic contours in the surrounding area do not indicate the proposed clearing is likely to contribute to increased incidence or intensity of flooding or waterlogging. | Not likely to be at variance | No |

## Appendix D. Vegetation condition rating scale

Vegetation condition is a rating given to a defined area of vegetation to categorise and rank disturbance related to human activities. The rating refers to the degree of change in the vegetation structure, density and species present in relation to undisturbed vegetation of the same type. The degree of disturbance impacts upon the vegetation's ability to regenerate. Disturbance at a site can be a cumulative effect from a number of interacting disturbance types.

Considering its location, the scale below was used to measure the condition of the vegetation proposed to be cleared. This scale has been extracted from

Keighery, B.J. (1994) *Bushland Plant Survey: A Guide to Plant Community Survey for the Community*. Wildflower Society of WA (Inc). Nedlands, Western Australia.

**Measuring vegetation condition for the South West and Interzone Botanical Province (Keighery, 1994)**

| Condition | Description |
|---|---|
| Pristine | Pristine or nearly so, no obvious signs of disturbance. |
| Excellent | Vegetation structure intact, with disturbance affecting individual species; weeds are non-aggressive species. |
| Very good | Vegetation structure altered, with obvious signs of disturbance. For example, disturbance to vegetation structure caused by repeated fires, the presence of some more aggressive weeds, dieback, logging and/or grazing. |
| Good | Vegetation structure significantly altered by very obvious signs of multiple disturbances. Retains basic vegetation structure or ability to regenerate it. For example, disturbance to vegetation structure caused by very frequent fires, the presence of some very aggressive weeds at high density, partial clearing, dieback and/or grazing. |
| Degraded | Basic vegetation structure severely impacted by disturbance. Scope for regeneration but not to a state approaching good condition without intensive management. For example, disturbance to vegetation structure caused by very frequent fires, the presence of very aggressive weeds, partial clearing, dieback and/or grazing. |
| Completely degraded | The structure of the vegetation is no longer intact and the area is completely or almost completely without native species. These areas are often described as 'parkland cleared' with the flora comprising weed or crop species with isolated native trees or shrubs. |

## Appendix E. Representative photographs of the vegetation

Down Road, looking towards Lot

Down Road, looking towards Lot 5780

Location of road widening, Lot 5780

Lot 5780, looking towards Down Road

Lot 5780, looking towards Down Road

# Appendix F. Sources of information

## F.1. GIS databases

Publicly available GIS Databases used (sourced from www.data.wa.gov.au):

- 10 Metre Contours (DPIRD-073)
- Aboriginal Heritage Places (DPLH-001)
- Aboriginal Heritage Places (DPLH-001)
- Cadastre (LGATE-218)
- Cadastre Address (LGATE-002)
- Contours (DPIRD-073)
- DBCA – Lands of Interest (DBCA-012)
- DBCA Legislated Lands and Waters (DBCA-011)
- Directory of Important Wetlands in Australia – Western Australia (DBCA-045)
- Environmentally Sensitive Areas (DWER-046)
- Flood Risk (DPIRD-007)
- Groundwater Salinity Statewide (DWER-026)
- Hydrography – Inland Waters – Waterlines
- Hydrological Zones of Western Australia (DPIRD-069)
- IBRA Vegetation Statistics
- Imagery
- Local Planning Scheme – Zones and Reserves (DPLH-071)
- Native Title (ILUA) (LGATE-067)
- Offsets Register – Offsets (DWER-078)
- Pre-European Vegetation Statistics
- Public Drinking Water Source Areas (DWER-033)
- Ramsar Sites (DBCA-010)
- Regional Parks (DBCA-026)
- Remnant Vegetation, All Areas
- RIWI Act, Groundwater Areas (DWER-034)
- RIWI Act, Surface Water Areas and Irrigation Districts (DWER-037)
- Soil Landscape Land Quality – Flood Risk (DPIRD-007)
- Soil Landscape Land Quality – Phosphorus Export Risk (DPIRD-010)
- Soil Landscape Land Quality – Subsurface Acidification Risk (DPIRD-011)
- Soil Landscape Land Quality – Water Erosion Risk (DPIRD-013)
- Soil Landscape Land Quality – Water Repellence Risk (DPIRD-014)
- Soil Landscape Land Quality – Waterlogging Risk (DPIRD-015)
- Soil Landscape Land Quality – Wind Erosion Risk (DPIRD-016)
- Soil Landscape Mapping – Best Available
- Soil Landscape Mapping – Systems

Restricted GIS Databases used:

- ICMS (Incident Complaints Management System) – Points and Polygons
- Threatened Flora (TPFL)
- Threatened Flora (WAHerb)
- Threatened Fauna
- Threatened Ecological Communities and Priority Ecological Communities
- Threatened Ecological Communities and Priority Ecological Communities (Buffers)

## F.2. References


Australian Museum (2021) Peregrine Falcon. Government of New South Wales. Available at: https://australianmuseum.net.au/learn/animals/birds/peregrine-falcon/.

Atlas of Living Australia (2021) Banksia Goodii. Available at https://bie.ala.org.au/species/https://id.biodiversity.org.au/node/apni/2889114

City of Albany (2021) *Clearing permit application CPS 9447/1*, received 5 October 2021 (DWER Ref: DWERVT8771).

City of Albany (2021 b) Supporting information for clearing permit application CPS 9447/1, received 9 November 2021 (DWER Ref: A2064620)

Commonwealth of Australia (2012) EPBC Act referral guidelines for three threatened black cockatoo species. Department of Sustainability, Environment, Water, Populations and Communities, Canberra.

Commonwealth of Australia (2001) *National Objectives and Targets for Biodiversity Conservation 2001-2005*, Canberra.

Department of Environment Regulation (DER) (2013). *A guide to the assessment of applications to clear native vegetation*. Perth. Available from: https://www.der.wa.gov.au/images/documents/your-environment/native-vegetation/Guidelines/Guide2_assessment_native_veg.pdf.

Department of Environment and Conservation (DEC) (2012a) *Fauna profiles: Quenda, Isoodon obesulus fusciventer*. Department of Environment and Conservation, Western Australia.

Department of Environment and Conservation (DEC) (2012b) *Fauna profiles: Brush-tailed phascogale, Phascogale tapoatafa.* Department of Environment and Conservation, Western Australia.

Department of the Environment, Water, Heritage and the Arts (DEWHA)(2008). *Approved Conservation Advice for Banksia goodii (Good's Banksia). Canberra: Department of the Environment, Water, Heritage and the Arts.* Available from: http://www.environment.gov.au/biodiversity/threatened/species/pubs/16727-conservation-advice.pdf.

Department of Parks and Wildlife (DPAW) (2017). Western Ringtail Possum (Pseudocheirus occidentalis) Recovery Plan. Perth.

Department of Primary Industries and Regional Development (DPIRD) (2019). *NRInfo Digital Mapping. Department of Primary Industries and Regional Development.* Government of Western Australia. URL: https://maps.agric.wa.gov.au/nrm-info/ (accessed 30 June 2020).

Department of Water and Environmental Regulation (DWER) (2019). *Procedure: Native vegetation clearing permits*. Joondalup. Available from: https://dwer.wa.gov.au/sites/default/files/Procedure_Native_vegetation_clearing_permits_v1.PDF.

Government of Western Australia (2019) *2018 South West Vegetation Complex Statistics. Current as of March 2019*. WA Department of Biodiversity, Conservation and Attractions, Perth, https://catalogue.data.wa.gov.au/dataset/dbca

Government of Western Australia. (2019) *2018 Statewide Vegetation Statistics incorporating the CAR Reserve Analysis (Full Report). Current as of March 2019.* WA Department of Biodiversity, Conservation and Attractions. https://catalogue.data.wa.gov.au/dataset/dbca-statewide-vegetation-statistics

Heddle, E. M., Loneragan, O. W., and Havel, J. J. (1980) *Vegetation Complexes of the Darling System, Western Australia*. In Department of Conservation and Environment, Atlas of Natural Resources, Darling System, Western Australia.

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.

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.

Northcote, K. H. with Beckmann G G, Bettenay E., Churchward H. M., van Dijk D. C., Dimmock G. M., Hubble G. D., Isbell R. F., McArthur W. M., Murtha G. G., Nicolls K. D., Paton T. R., Thompson C. H., Webb A. A. and Wright M. J. (1960-68) *Atlas of Australian Soils*, Sheets 1 to 10, with explanatory data. CSIRO and Melbourne University Press: Melbourne.

.

Sandiford, E.M. and Barrett, S. (2010). Albany Regional Vegetation Survey, Extent Type and Status, A project funded by the Western Australian Planning Commission (EnviroPlanning "Integrating NRM into Land Use Planning" and State NRM Program), South Coast Natural Resource Management Inc. and City of Albany for the Department of Environment and Conservation. Unpublished report. Department of Environment and Conservation, Western Australia.

Schoknecht, N., Tille, P. and Purdie, B. (2004) *Soil-landscape mapping in South-Western Australia – Overview of Methodology and output*s 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.

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.

Trudgen, M.E. (1991) *Vegetation condition scale* in National Trust (WA) 1993 Urban Bushland Policy. National Trust of Australia (WA), Wildflower Society of WA (Inc.), and the Tree Society (Inc.), Perth.

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 Biodiversity, Conservation and Attractions, Western Australia. https://florabase.dpaw.wa.gov.au/ (Accessed 9 November 2021)