

CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

PERMIT DETAILS

Area Permit Number: 8675/1 File Number: DWERVT3435 Duration of Permit: 26 June 2020 to 26 June 2022

PERMIT HOLDER

Beau Tye Pty Ltd

LAND ON WHICH CLEARING IS TO BE DONE

Lot 7 on Diagram 92442, Benjinup

AUTHORISED ACTIVITY

The Permit Holder shall not clear more than 1.42 hectares of native vegetation within the area cross-hatched yellow on attached Plan 8675/1.

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. Direction of clearing

The Permit Holder shall conduct clearing in a slow progressive manner from one direction to the other (e.g. west to east) to allow fauna to move into adjacent native vegetation ahead of the clearing activity.

4. Record keeping

The Permit Holder must maintain the following records for activities done pursuant to this Permit: (a) In relation to the clearing of native vegetation authorised under this Permit:

- (i) 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;
- (ii) the date(s) that the area was cleared;
- (iii) the size of the area cleared (in hectares);
- (iv) actions taken to avoid, minimise and reduce the impacts and extent of clearing in accordance with condition 1 of this Permit; and
- (v) actions taken to minimise the risk of the introduction and spread of *dieback* and *weeds* in accordance with condition 2 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*.

DEFINITIONS

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

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

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

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.

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Ryan Mincham MANAGER NATIVE VEGETATION REGULATION

Officer delegated under Section 20 of the Environmental Protection Act 1986

3 June 2020



base layers Road Centrelines

LGA Boundaries (LGATE-233)



GOVERNMENT OF WESTERN AUSTRALIA



1. Application details					
1.1. Permit application details					
Permit application No.:	8675/1				
Permit type:	Area Permit				
1.2. Applicant details					
Applicant's name: Application received date:	licant's name: Beau Tye Pty Ltd lication received date: 12 September 2019				
1.3. Property details					
Property: Local Government Authority: Localities:	Lot 7 on Diagram 92442, Benjinup Shire of Boyup Brook Benjinup				
1.4. Application					
Clearing Area (ha) No. Tree 1.42	Mechanical Removal	Purpose category: Building or structure			
1.5. Decision on application	n				
Decision on Permit Application:	Grant				
Decision Date:	3 June 2020				
Reasons for Decision:	The clearing permit application has been assessed against the clearing principles, planning instruments and other matters in accordance with section 510 of the <i>Environmental Protection Act 1986</i> (EP Act). It has been concluded that the proposed clearing may be at variance with principle (b), and is not likely to be at variance with the remaining principles.				
	The assessment has identified that the application area contains 1.42 hectares of suitable foraging habitat for Carnaby's cockatoo (<i>Calyptorhynchus latirostris</i>) Forest red-tailed black cockatoo (<i>Calyptorhynchus banksii naso</i>) and Baudin's cockatoo (<i>Calyptorynchus baudinii</i>) (black cockatoos), however, the impacts on foraging habitat have not been assessed as significant. The application area may also contain potential breeding habitat for black cockatoos, however, based on site photographs and anecdotal evidence, the application area has previously been logged and consists of secondary regrowth jarrah and marri which are considered too young to form suitable nesting hollows.				
	To minimise direct impacts to terrestrial fauna species, a condition has been placed on the clearing permit which requires the applicant to undertake slow, progressive one directional clearing to allow fauna to move into adjacent habitat ahead of the clearing activity.				
	The proposed clearing may increase the spread of weeds and dieback into adjacent native vegetation. To minimise this impact, a condition has been placed on the clearing permit requiring the implementation of weed and dieback management measures.				
	Given the above, the Delegated Officer decided to grant a clearing permit subject to fauna, weed and dieback management conditions.				
	In determining to grant a clearing permit subject to the above management conditions, the Delegated Officer found that the proposed clearing is unlikely to lead to an unacceptable risk to the environment				
2. Site Information					
Clearing Description	The application is to clear 1.42 hectares of 92442, Benjinup for the purpose of building a reduction (figure 1).	of native vegetation within Lot 7 on Diagram a house, shed and associated bushfire hazard			
Vegetation Description	One Beard vegetation association is located within the application area. Vegetation association 3: Medium forest; jarrah-marri (Shepherd et al. 2001).				
	The vegetation within the application area intersect two mapped vegetation complexes (Mattiske and Havel 1998):				



Figure 2 and Figure 3: Site photographs of the application area

3. Minimisation and mitigation measures

The original area applied to clear was 3.17 hectares. However, based on the Department of Water and Environmental Regulation's (DWER) consultation with the applicant and the Shire of Boyup Brook regarding the Bush Fire attack level (BAL) ratings, the clearing area was subsequently reduced to 1.42 hectares.

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

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

No biological surveys have been undertaken within the application area. Based on site photographs and a description provided in the Bushfire Attack Level (BAL) report (Environmental Ecoplan Consultants, 2020) the vegetation within the application area consists of secondary growth jarrah (*Eucalyptus marginata*) and marri (*Corymbia calophylla*) forest with midstorey grass trees (*Xanthorrheoa* sp.) and lignotuber regrowth over a herbaceous understorey. The condition of the vegetation within the application area was determined by photographic evidence (Beau Tye Pty Ltd 2019), and was considered to be in good condition (Keighery, 1994).

No threatened or priority ecological communities have been recorded within the application area, or in the local area (10 km radius from the boundary of the application area). The vegetation under application is not likely to comprise or be necessary for the maintenance of a threatened or priority ecological community.

A Naturemap report indicated a total of 288 plant species and 183 fauna species recorded in the local area.

No threatened flora species have been recorded within the local area, while two Priority flora species have been recorded from within the local area. The closest known record of Threatened flora is *Caladenia dorrienii* (Endangered) located approximately 13 km south-east of the application area. Two Priority flora *Melaleuca incana* subsp. Gingilup (N. Gibson & M. Lyons 593) (Priority 2) and *Acacia parkerae* (Priority 3) have been recorded approximately 4 km and 9 km from the application area, respectively. *Melaleuca incana* subsp. Gingilup (N. Gibson & M. Lyons 593) was recorded growing in association with *Eucalyptus rudis* over open low woodland of *Melaleuca preissii* and *Banksia littoralis* on grey-brown sand. It is also associated with red-grey sand, sandy clay over ironstone on seasonally wet flats (Florabase 2007-). *Acacia parkerae* was recorded in *Eucalyptus wandoo* (wandoo) woodland/forest on grey brown loam, granite rock. Based on the site description, vegetation and soil types mapped within the application area, no threatened or priority flora species are considered likely to occur within the application area.

A total of eight Threatened fauna species and two Priority fauna species have previously been recorded within the local area. Species recorded include: Carnaby's black cockatoo (*Calyptorhynchus latirostris*), Baudin's black cockatoo (*Calyptorhynchus baudinii*), Forest red-tailed black cockatoo (*Calyptorhynchus banksii naso*), Woylie (*Bettongia penicellata ogilbyi*), Chuditch (*Dasyurus geoffroii*), Numbat (*Myrnecobius fasciatus*), South-western Brush-tailed Phascogale (*Phascogale tapoatafa wambenger*), Western ringtail possum, (*Pseudocheirus occidentalis*), Quenda (*Isoodon fusciventer*) and Western brush wallaby (*Notamacropus irma*). There are no conservation significant fauna records located within the application area.

The application area is located within the predicted breeding range for the Carnaby's black cockatoo and Baudin's black cockatoo and within the modelled distribution for the Forest Red-tailed black cockatoo (Commonwealth of Australia 2012). All of the vegetation within the application area represents good quality foraging habitat for all three species of black cockatoo and could be considered suitable roosting habitat. The closest known roosting sites of black cockatoos is approximately 7.5 km north-west and 10 km south-east of the application area. No targeted black cockatoo breeding trees present. Based on the description of vegetation present within the application area and photographic evidence, the jarrah and marri trees are considered too young to form nesting hollows suitable for black cockatoo breeding. The closest known breeding area for Carnaby's black cockatoo is located more than 50 km south-east of the application area.

The local area retains approximately 51% of pre European vegetation and the application area is situated within 280 metres of an extensive tract of excellent quality, similar habitat secured within conservation estate. Clearing of the application area will not impact on the environmental values of surrounding ecological linkages.

The vegetation in the application area is unlikely to contain a high level of biodiversity and is not likely to be at variance with 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 may be at variance with this Principle

A total of eight Threatened fauna species and two Priority fauna species have previously been recorded within the local area (10 kilometer radius). Species recorded include: Carnaby's black cockatoo (*Calyptorhynchus latirostris*), Baudin's black cockatoo (*Calyptorhynchus baudini*), Forest red-tailed black cockatoo (*Calyptorhynchus banksii naso*), Woylie (*Bettongia penicellata ogilbyi*), Chuditch (*Dasyurus geoffroii*), Numbat (*Myrnecobius fasciatus*), South-western Brush-tailed Phascogale (*Phascogale tapoatafa wambenger*), Western ringtail possum, (*Pseudocheirus occidentalis*), Quenda (*Isoodon fusciventer*) and Western brush wallaby (*Notamacropus irma*). There are no conservation significant fauna records located within the application area.

Based on site photographs and broad vegetation mapping of the application area, one habitat type (jarrah-marri forest) is present within the application area. The application area shows evidence of past logging and consists of secondary growth jarrah and marri trees. The vegetation is considered to be in good condition and is surrounded by contiguous remnant vegetation which links to surrounding State forest and nature reserves. Neighboring properties have been cleared and contain pine and blue gum (*Eucalyptus globulus*) plantations. The habitat present within the application area is considered to be suitable for all fauna species of conservation significance identified in the local area. However, all of these species are highly mobile and would not rely on the habitat present within the application area. The proposed clearing is not likely to significantly impact on these species. To minimise direct impacts to terrestrial fauna species, a condition has been placed on the clearing permit which requires the applicant to undertake slow, progressive one directional clearing to allow fauna to move into adjacent habitat ahead of the clearing activity.

The Carnaby's black cockatoo and Baudin's black Cockatoo are listed as Endangered and the Forest red-tailed black cockatoo is listed Vulnerable under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) and State *Biodiversity Conservation Act 2016* (BC Act). Black cockatoos breed in large hollow-bearing trees, generally within woodlands or forests or in isolated trees, including 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). Black cockatoos have a preference for feeding habitat that includes jarrah and marri woodlands and forest heathland and woodland dominated by proteaceous plant species such as Banksia, Hakea and Grevillea species (Commonwealth of Australia, 2012).

The application area is located within the predicted breeding range for the Carnaby's black cockatoo and Baudin's black cockatoo and within the modelled distribution for the Forest Red-tailed black cockatoo (Department of Sustainability Environment Water Population and Communities 2013). No fauna habitat assessment or targeted black cockatoo assessments have been undertaken within the application area. Based on site photographs and anecdotal evidence, the application area has previously been logged and consists of secondary regrowth jarrah and marri which are considered too young to form suitable nesting hollows i.e. trees of a suitable diameter at breast height (DBH) to develop a nest hollow. For jarrah and marri trees the suitable DBH is 50 centimetres. The closest known breeding area for Carnaby's black cockatoo is located more than 50 km south-east of the application area. Based on these factors, it is therefore considered unlikely that the application provides suitable breeding habitat for black cockatoo's.

All of the vegetation within the application area represents good quality foraging habitat for all three species of black cockatoo and could potentially provide suitable roosting habitat. The closest known roosting sites for black cockatoos are approximately 7.5 km north-west and 10 km south-east of the application area. The area proposed to be cleared does not contain any water sources and while suitable foraging habitat exists within the application area, is not likely to represent significant foraging habitat for black cockatoos given the availability of foraging resources within the local area.

The local area retains approximately 51% of pre European vegetation and the application area is situated within 280 metres of an extensive tract of excellent quality, similar habitat secured within conservation estate. Clearing of the application area will not impact on the environmental values of surrounding ecological linkages.

The clearing is of a small scale and within an area that is well vegetated, containing similar vegetation types in similar and/or better condition. The proposed clearing may be at variance with 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 with this Principle

No threatened flora has been recorded within the local area (10 kilometre radius). The closest known record of Threatened flora is *Caladenia dorrienii* (Endangered) located approximately 13 km south-east of the application area. This species is known to occur in clayey loam soils in moist sites adjacent to rivers and seasonal creeks (Florabase 2007-).

No threatened flora are considered likely to occur within the application area based on the vegetation and soil types present.

The application area is not likely to contain, or be necessary for the continued existence of threatened flora, and the proposed clearing is not likely to be at variance with 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 with this Principle

There are no State listed threatened ecological communities recorded within the local area (10 kilometre radius).

The vegetation within the application area consists of jarrah/marri forest. The vegetation under application is not likely to comprise or be necessary for the maintenance of a threatened ecological community.

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

The area under application is located within the Jarrah Forest Interim Biogeographic Regionalisation of Australia (IBRA) bioregion. This IBRA bioregion has approximately 53 per cent of its pre-European vegetation extent remaining (Government of Western Australia, 2019).

The vegetation under application is mapped as South West Forest vegetation complexes Collie (CI) and Wilga (WG) (Mattiske and Havel, 1998) of which there is approximately 66.8 and 66.9 per cent of their pre-European vegetation extents remaining within the Jarrah Forest bioregion respectively (Government of Western Australia 2019).

The area under application is located within the Shire of Boyup Brook of which there is approximately 42 per cent pre-European vegetation extent remaining (Government of Western Australia, 2019). The Collie (CI) and Wilga (WG) vegetation complexes retain approximately 92.51 and 63.34 per cent of their pre-European vegetation extent within the Shire of Boyup Brook.

The local area (10 kilometre radius) retains approxmiately 51 per cent native vegetation .

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).

Given the vegetation representations outlined above, the area under application is not considered to be a significant remnant located within an extensively cleared area.

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

Table 1: Remnant native vegetation extents (Government of Western Australia, 2019)

	Pre- European (ha)	Current Extent (ha)	Remaining (%)	Extent remaining in DBCA managed lands (%)		
IBRA Bioregion						
Jarrah Forest	4,506,660.25	2,399,838.15	53.25	39.43		
Shire*						
Shire of Boyup Brook	282,642.20	118,969.04	42.09	21.25		
Vegetation Complexes – South West Forests						
Collie (CI) (Bioregion)	11,004.73	7,354.88	66.83	58.62		
Wilga (WG) (Bioregion)	38,161.73	25,542.24	66.93	48.02		
Collie (CI) (Boyup Brook LGA)	1,659.95	1,535.61	92.51	-		
Wilga (WG) (Boyup Brook LGA)	25,492.38	16,147.05	63.34	-		
Local Area						
10 kilometre radius	31916.07	16213.87	50.8			

(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 with this Principle

There are no wetlands or watercourse within or adjacent to the application area. The vegetation within the application area consists of jarrah-marri forest. No riparian vegetation has been identified within the application area.

No vegetation growing in, or in association with, an environment associated with a watercourse or wetland will be impacted as a result of the proposed clearing. The proposed clearing is not likely to be at variance with 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 with this Principle

The Boyup Brook area is characterised by a series of low rises seperated by broad, drainage lines, whilst the soils are generally lateritic and gravelly. There are two soil subsystems within the application area:

- Collie subsystem (CI): consists of broad lateritic divides with deep sands and sandy gravels. Land associated with this soil type is well drained. The sands and sandy gravels have poor to moderate moisture and nutrient retention (Tille et al., 1996).
- Wilga subsystem Wilga wet flats Phase (WGw): are poorly drained flats and depressions with some sandy and gravelly rises. Although non-saline wet soils and sands dominate, gravels are still common. Paperbarks, flooded gum, sedges and rushes are often present (Tille et al., 1996).

The Collie subsystem is described as having highly permeable soil types and therefore is not likely to cause appreciable land degradation in the form of water erosion or water logging. However the Wilga wet flats Phase soil type is poorly drained and more likely to be subject to waterlogging and water erosion.

Based on the vegetation type present within the application area (jarrah-marri forest) and the absence of vegetation growing in association with wet flats, the soils within the application area are considered to be of a permeable nature and the proposed clearing is not likely to cause or exacerbate the incidence or intensity of flooding.

While the risks of wind and water erosion for the mapped soil types are acknowledged, the proposed clearing of 1.42 hectares is not likely to result in appreciable land degradation.

Based on the above, the proposed clearing is not likely to be at variance with 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 is not likely to be at variance with this Principle

The application area is located approximately 280 m south of the Wilga State Forest which is managed for multiple purposes, including conservation (GIS database).

The closest conservation reserve is Wilga Nature Reserve, located approximately 8.8 km north of the application area (GIS Database). Based on the distance between the Nature Reserve and the application area, and the small scale of clearing required, it is unlikely that the environmental values of this Nature Reserve will be compromised.

The proposed clearing may increase the risk of weeds and dieback being spread into adjacent native vegetation, including the Wilga State Forest. To minimise this impact, a condition has been placed on the clearing permit requiring the implementation of weed and dieback management measures.

Based on the above, the proposed clearing is not likely to be at variance with 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 with this Principle

The application area is not located within a Public Drinking Water Supply Area (GIS Database).

There are no wetlands or watercourses located within or adjacent to the application area. The closest watercourse is a minor, non perennial river located approximately 450 m south of the application area. The small scale of clearing is unlikely to to cause the deterioration in the quality of surface water.

The groundwater salinity within the application area is approxmiately 1000-3000 milligrams per litre of Total Dissolved Solids (GIS Database). This represents fresh to brackish ground water quality. Given the small scale of clearing required, the proposed clearing is unlikely to increase groundwater salinity levels, or result in the surface expression of salinity.

Based on the above, the proposed clearing is not likely to be at variance with 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 with this Principle

The application proposes the clearing of 1.42 ha of native vegetation. The application area is situated on two soil types, the Collie subsystem and the Wilga Subsystem (Wilga wet flats Phase). The Collie Subsystem consists of broad lateritic divides with deep sands and sandy gravels. Land associated with this soil type is well drained. The sands and sandy gravels have poor to moderate moisture and nutrient retention (Tille et al., 1996). The Wilga Subsystem consists of broad, gently undulating (1-5% gradients) plains and low rises. The terrain is lateritic and has formed over sedimentary deposits believed to be of the Eocene epoch. Drainage is often restricted and swampy depressions are common. Sandy gravels and loamy gravels are the most common soils although there are some deep sands, sandy earths and non-saline wet soils (Tille et al. 1996).

There are no wetlands or watercourses located within or adjacent to the application area. Based on the vegetation type present within the application area (jarrah-marri) and the absence of vegetation growing in association with wet flats, the soils within the application area are considered to be of a permeable nature and the proposed clearing is not likely to cause or exacerbate the incidence or intensity of flooding.

Based on the above, the proposed clearing is not likely to be at variance with this principle.

Planning instruments and other relevant matters.

A Development Approval under the *Planning and Development Act 2005* for the building envelope (vegetation clearing, single house, outbuilding and water tank) for Lot 7, Four Forty Road Benjinup was approved by the Shire of Boyup Brook on 19 March 2020. The approval is subject to one condition:

1. Development is to be carried out within the approved building envelope (dated March 2020), to achieve a maximum heat rating of 29kW/m².

An agreement to reserve under Part IVA, Section 30 (B) of the *Soil and Land Conservation Act 1945* has been identified on the property. The agreement, for the purpose to promote land conservation, is to retain 31.8 hectares in perpetuity in the designated areas on the land described as a portion of Nelson Location 8994 on the Certificate of Title Volume 1956 Folio 610. The application area does not occur within these designated areas.

No Aboriginal sites of significance have been mapped within the application area.

The clearing permit application was advertised on the DWER website on 5 November 2019 with a 21 day submission period. No public submissions have been received in relation to this application.

Subsequent to the advertising period, the clearing area was reduced from 3.17 hectares to 1.42 hectares.

4. 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-) NatureMap: Mapping Western Australia's Biodiversity. Department of Parks and Wildlife. URL: http://naturemap.dpaw.wa.gov.au/. Accessed March 2020.

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 Parks and Wildlife (Parks and Wildlife) (2013) Carnaby's cockatoo (*Calyptorhynchus latirostris*) Recovery Plan. Department of Parks and Wildlife, Perth, Western Australia.

- Environmental Ecoplan Consulatnts (2020) Bushfire Attack Level (BAL) assessment of Lot 7 Four Forty Road, Benjinup, Shire of Boyup Brook.
- 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, Perth. https://catalogue.data.wa.gov.au/dataset/dbca-statewide-vegetation-statistics
- Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.
- Tille, P J, Wilson, G, and National Landcare Program (Australia) (1996) Wellington-Blackwood land resources survey. Department of Agruiculture and Food, Western Australia, Perth. Report 14.
- Western Australian Herbarium (1998-2019) FloraBase the Western Australian Flora. Department of Biodiversity, Conservation and Attractions. https://florabase.dpaw.wa.gov.au/ Accessed November 2019.