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Native Vegetation Clearance

[redacted], Ashbourne

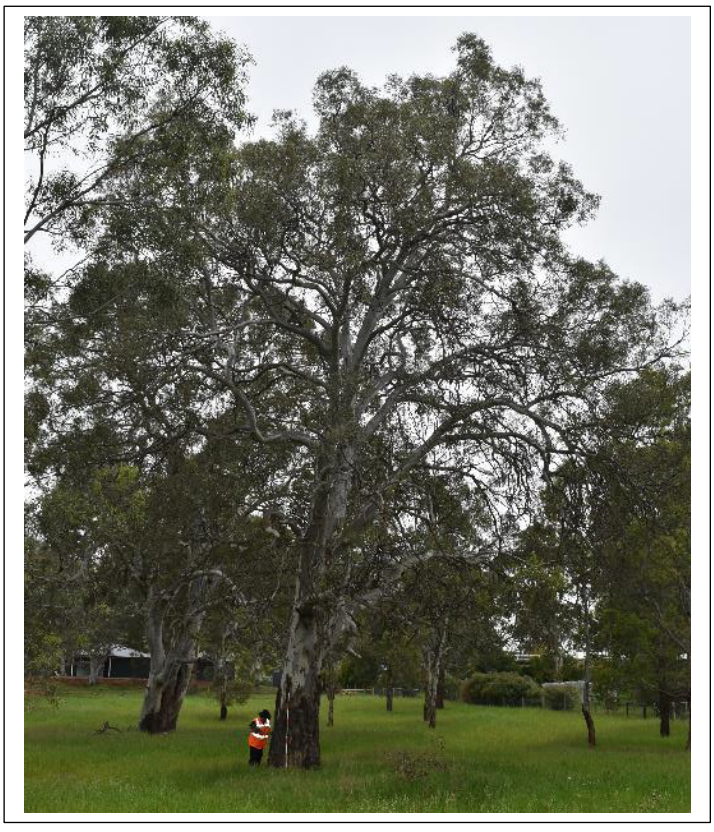
Proposed Subdivision

Data Report

Clearance under the *Native Vegetation Regulations 2017*

28 November 2021

Prepared by Jackie Ayre



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1. Application information

Application Details

Applicant:	Adam and Liam Stirling		
Key contact:	Adam and Liam Stirling [redacted]Ashbourne [redacted] [redacted]		
Landowner:	Adam Stirling		
Site Address:	[redacted], Ashbourne		
Local Government Area:	Alexandrina Council	Hundred:	Kondoparinga
Title ID:	CT/6182/635	Parcel ID	D112344 A51

Summary of proposed clearance

Purpose of clearance	Clearance required for a residential subdivision, including dwelling sites and all associated infrastructure likely to be necessary as part of the subdivision.
Native Vegetation Regulation	Regulation 12, Schedule 1; clause 35, Residential Subdivision
Description of the vegetation under application	Size, type and general condition – 28 scattered River Red Gum (*Eucalyptus camaldulensis var camaldulensis*) trees, including 13 individuals and 5 clumps. Size ranges from saplings to mature trees, and condition ranges from fair to good.
Total proposed clearance - area (ha) and number of trees	28 scattered trees are proposed to be cleared.
Level of clearance	Level 4
Overlay (P and D Code)	Native Vegetation Overlay
Mitigation hierarchy	Access location amended to avoid impact to trees on road reserve; creation of building envelopes to reduce number of trees impacted within the property
SEB Offset proposal	Payment of **$47,314.40**

2. Purpose of clearance

2.1 Description

The property of 2.6076 ha is proposed to be subdivided into an additional four allotments aligned east/west and located south of the existing dwelling. An all-weather access will be provided from the current right-of-way easement located to the south of the property and will include a CFS turnaround point at the northern end of the access.

Internal boundary fencing will be required. Generous building envelopes have been designed to avoid and minimise impact. Twenty-eight River Red Gums are potentially impacted by this, and clearance for fencelines; to meet fire hazard reduction; driveways; and other ancillary infrastructure associated with future development by the new owners.

2.2 Background

The land is used for sheep grazing and fodder crops. Surrounding the site to the east are five small landholdings which appear to have been developed within the last 10 years. A private easement travels from north to south along this boundary. The assessment has considered likely clearance anticipated for future development of the blocks and seeks to include all major impact within building envelopes and the proposed access to the west of the property.

An initial concept proposed an access which hugged the western boundary, but this was discarded due to the high potential for impact to vegetation on the road reserve adjacent.

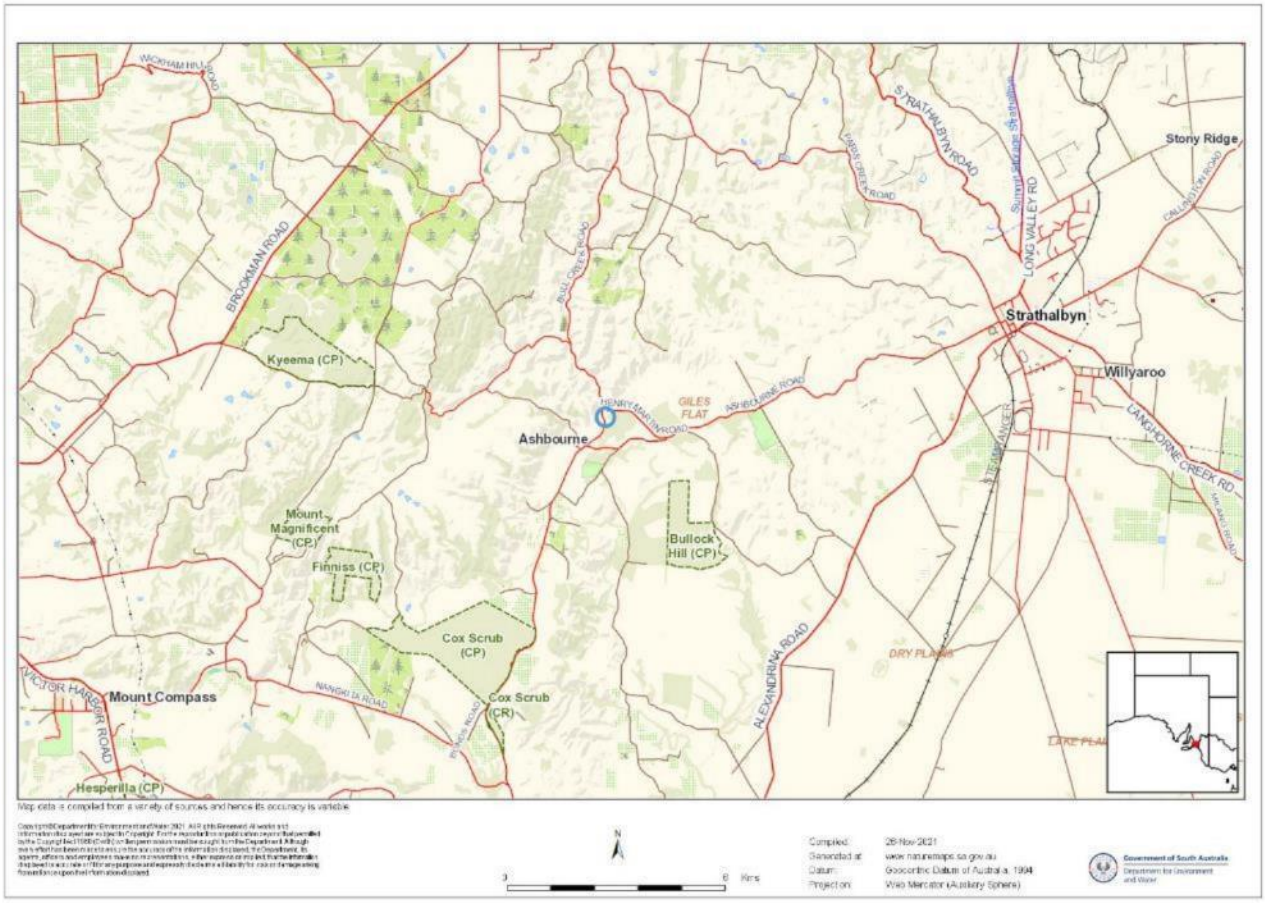


Figure 1. Location of the assessment site

Figure 2. Site of assessment – many of the trees within the blue outline will be impacted

2.3 Details of the proposal

The property of 2.6076 ha is proposed to be subdivided into an additional four allotments aligned east/west and located south of the existing dwelling. An all-weather access will be provided from the current right-of-way easement located to the south of the property and will include a CFS turnaround point at the northern end of the access. See Figure 3 for details.

Twenty-eight River Red Gums are potentially impacted by potential clearance for construction; to meet fire hazard reduction requirements; for driveways, and ancillary infrastructure associated with future development by the new owners. Internal boundary fencing will be required. Perimeter fencing is effective and should not require upgrading, however impacts have been included as worst case scenario. Generous building envelope plans (BEP's) on each block are proposed and have been designed to reduce impact. These will be submitted for approval under the *Planning, Development and Infrastructure Act, 2016*, as part of the Development Application.

The application (and potential approval) for clearance of scattered trees does not compel their removal. Where tree removal can be avoided (i.e. some trees within 5m of fencelines) they could be retained. Two of the blocks are to be purchased by family members, who have expressed their intention of keeping as many trees as possible.

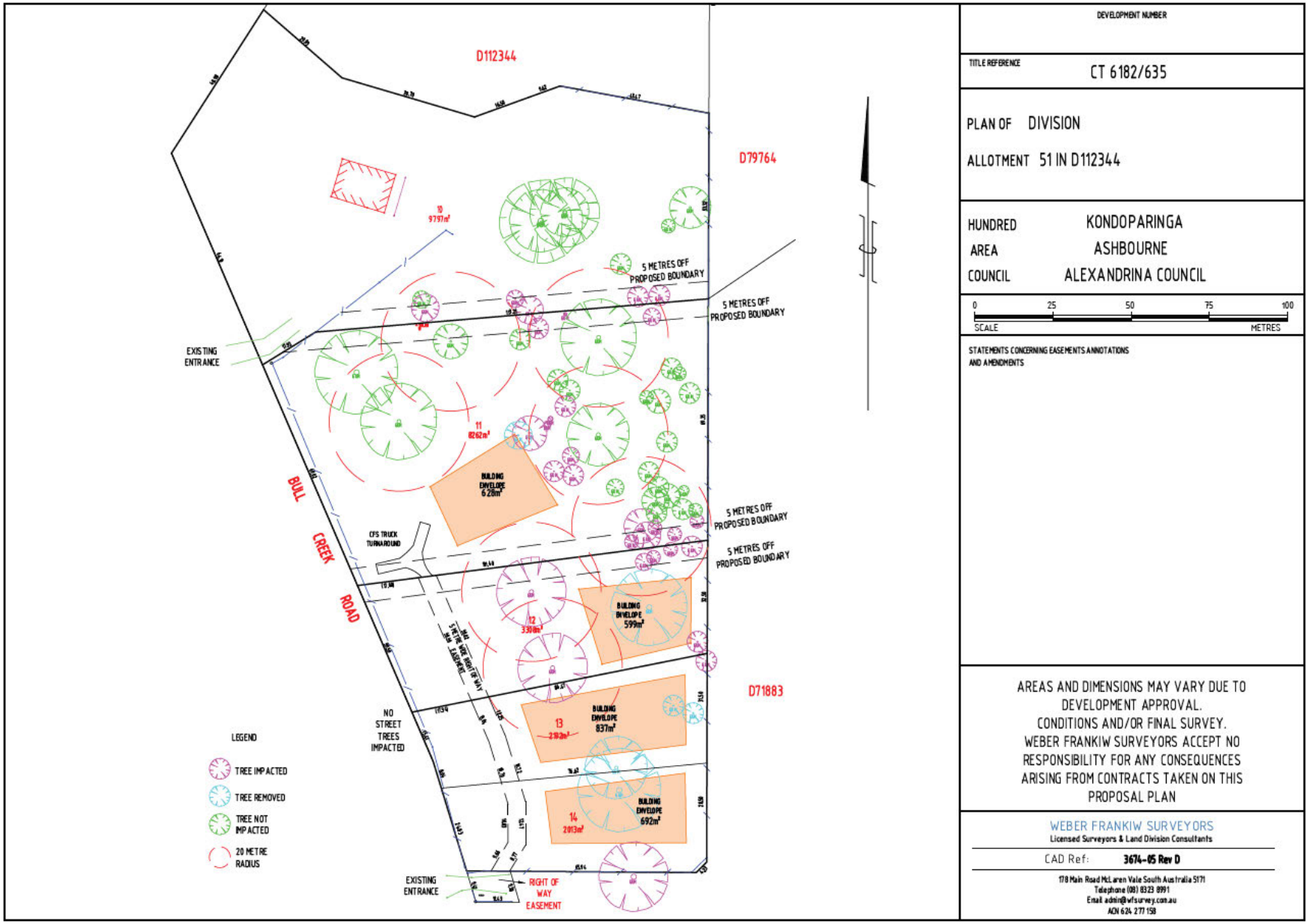


Figure 3. Division plan showing building envelopes, access and boundaries proposed

2.4 Approvals **required** ***or*** **obtained**

Provide details of the following approvals or applications under the follow legislation, where relevant:

- Native Vegetation Act 1991 – this report is in part fulfillment of the requirements of this Act
- Planning, Development and Infrastructure Act 2016 (Development Application No. pending)
- Aboriginal Heritage Act 1988 – N/A, the site is previously disturbed farmland an no sites or objects are likely to be present.

2.5 Native Vegetation Regulation

Regulation 12, Schedule 1; clause 35, Residential Subdivision.

2.6 Development Application information (if applicable)

Zone: Rural Settlement
Overlay: Native Vegetation Overlay, High Risk Bushfire Overlay

3. Method

3.1 Flora assessment

Following a review of background information and literature, a 4.5 hour field survey was undertaken on 6th October 2021 by Jackie Ayre of JS Ayre & Associates. The scope of works was outlined by the client prior to the field survey and informed by research using Naturemaps and Google Earth street view. The survey involved a general assessment of the site and scattered trees, including identification of possible habitat for species of conservation significance.

An online search was undertaken for Environment Protection and Biodiversity Conservation (EPBC) Act "Matters of Environmental Significance" and an interrogation of the Atlas of Living Australia (AoLA) and the BDBSA databases was completed as background to the field assessment. Nine threatened plant species were recorded in the database search. No threatened flora species were found on the site, and except for the Pink and Manna Gums, are unlikely to be present in the vicinity, given the history of grazing and cultivation.

3.2 Fauna assessment

A review of databases including the EPBC Act "Matters of Environmental Significance", AoLA and BDBSA was undertaken prior to the site visit to establish fauna species known, or considered likely, to occur at the site. Approximately 0.75 hours of the total assessment time was spent searching for evidence of fauna, or in observing active fauna across the site.

All observations, calls and evidence of presence were recorded as field notes. Bird species were recorded when heard calling, or when observed within, adjacent to, or flying over the site. Evidence of fauna species presence was searched for and recorded when observed. If hollows were found, closer inspection with binoculars was undertaken. Twenty-two listed species were recorded within 5km since 1995 (see Part 4.2 and Appendix 1 for further details).

Species observed onsite include the Superb fairywren; Yellow-tailed Black-cockatoo; Magpie; Black-faced Cuckoo-shrike; Wedge-tailed Eagle; New Holland Honeyeater; White-plumed Honeyeater; Rainbow Lorikeet; Sulphur-crested Cockatoo; Adelaide Rosella; White Ibis and Corella sp.

4. Assessment Outcomes

4.1 Vegetation Assessment

General description of the vegetation, the site and matters of significance

Provide a general description of the site including the following;

- *Landform, geography and soils*

Soils are described as thin greyish sandy loams overlying yellowish friable clay subsoil. Landforms are crests and slopes of undulating to rolling low hills of the Southern Mt Lofty Ranges

- *Landform feature of significance (rivers, creeks, rocky outcrops, etc.)*

Bull Creek runs to the west of the site parallel to Bull Creek Road; this is fed by a stream order 3 to the north, and stream order 2 to the south. Bull Creek feeds the Finniss River, approximately 2.5km south of the assessment site.

- *General overview of the vegetation under application as a whole*

The scattered trees assessed are part of a River Red Gum Woodland with a grassy understorey. In this case the understorey is exotic and cultivated, but on roadsides and less degraded sites the understorey is likely to include a broader range of native species including *Acacia pycnantha, Acacia paradoxa* and *Themedia triandra*, species which were noted off site but adjacent.

- *General description of the vegetation relating to type and condition*

Vegetation in the surrounding district varies considerably depending on location and includes some good quality remnants on hills and drainage lines. Within the site and across more developed land nearby, the vegetation consists of scattered remnant trees in paddocks, usually mature with little regeneration evident. The site assessed contains several groups of younger trees which are estimated to be around 10 years old; suitable weather or changed cultural practices may have stimulated regeneration in the paddock assessed.

- *Provide a description of the landscape context for the vegetation*

The trees represent a snapshot of the landscape in the general area, consisting of dense to widely spaced scattered trees with little or no remnant understorey. Small scale grazing and hobby farm pursuits maintain tis landscape outside of road reserves or other public land.

Several Heritage Agreements occur within 4km northwest of the site; Bullock Hill Conservation Park lies approximately 2.5km southeast; and Cox Scrub Conservation Park is within 6km southwest.

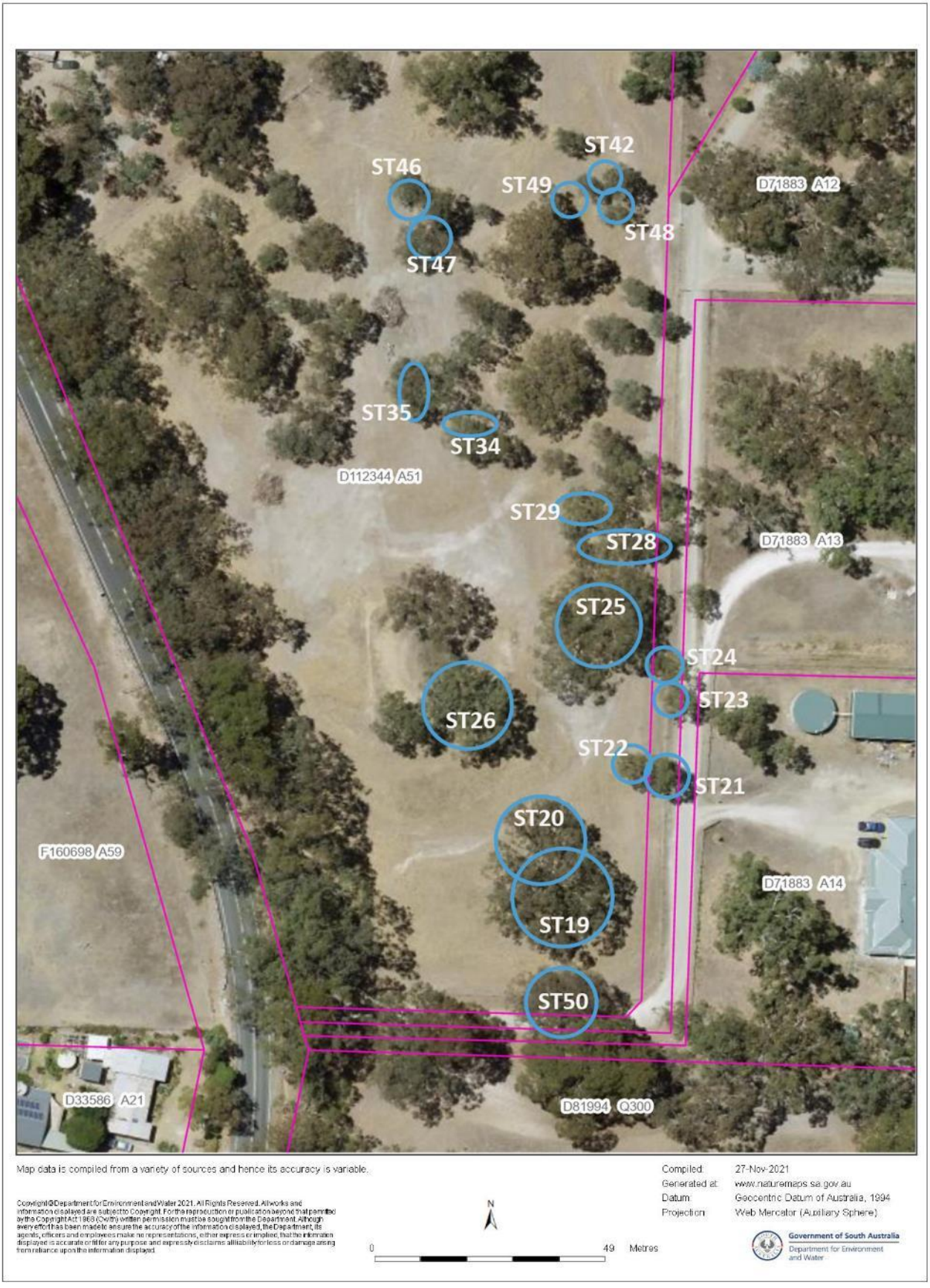
Details of the scattered trees proposed to be impacted

Tree #	Tree spp.	No. of trees	Height (m)	Hollows	Diameter (cm)	Canopy dieback (%)	Biodiversity Score	General comments	Photo #
19	Eucalyptus camaldulensis var camaldulensis	1	20.0	3 small	100	25	**5.87**	Large tree in good condition with three small hollows which contribute to habitat value for a number of threatened species. Within the proposed building envelope.	1
20	Eucalyptus camaldulensis var camaldulensis	1	16.0	-	63	20	**2.60**	Large tree in good condition providing potential habitat for a number of threatened species. Within 5m of a proposed fenceline.	2
21	Eucalyptus camaldulensis var camaldulensis	1	14.0	-	45	5	**1.39**	Medium tree in good condition providing potential habitat for a number of threatened species. Within 5m of an existing fenceline (with potential to be upgraded).	3
22	Eucalyptus camaldulensis var camaldulensis	1	16.0	-	45	10	**1.97**	Medium tree in good condition providing potential habitat for a number of threatened species. Within 10m of a dwelling (proposed).	4
23	Eucalyptus camaldulensis var camaldulensis	1	14.0	-	40	10	**1.40**	Medium tree in good condition providing potential habitat for a number of threatened species. Within 5m of an existing fenceline (with potential to be upgraded).	5
24	Eucalyptus camaldulensis var camaldulensis	1	12.0	-	40	5	**1.32**	Small tree in good condition providing potential habitat for a number of threatened species. Within 5m of an existing fenceline (with potential to be upgraded).	6
25	Eucalyptus camaldulensis var camaldulensis	1	20.0	3 medium	195	20	**9.55**	Large tree in good condition with 3 hollows contributing to habitat value for a number of threatened species. Within the proposed building envelope.	7

Tree #	Tree spp.	No. of trees	Height (m)	Hollows	Diameter (cm)	Canopy dieback (%)	Biodiversity Score	General comments	Photo #
26	Eucalyptus camaldulensis var camaldulensis	1	20.0	-	85	15	**4.33**	Large tree in good condition providing habitat for a number of threatened species. Within 5m of a proposed fenceline.	8
28	Eucalyptus camaldulensis var camaldulensis	4	12.0	-	27	5	**3.99**	Small trees in good condition providing potential habitat for a number of threatened species. Within 5m of a proposed fenceline.	9
29	Eucalyptus camaldulensis var camaldulensis	3	12.0	-	35	10	**3.43**	Small trees in good condition providing potential habitat for a number of threatened species. Within 5m of a proposed fenceline.	10
34	Eucalyptus camaldulensis var camaldulensis	4	12.0	-	35	10	**4.57**	Small trees in good condition providing potential habitat for a number of threatened species. Within 20m of a dwelling (proposed).	11
35	Eucalyptus camaldulensis var camaldulensis	2	14.0	-	40	20	**2.6**	Medium trees in good condition providing potential habitat for a number of threatened species. Within 10m of a dwelling (proposed).	12
42	Eucalyptus camaldulensis var camaldulensis	1	10.0	-	25	0	0.59	Small tree in good condition providing potential habitat for a number of threatened species. Within 5m of a proposed fenceline.	13
46	Eucalyptus camaldulensis var camaldulensis	2	14.0	-	42	40	2.26	Medium trees in fair to good condition providing potential habitat for a number of threatened species. Within 5m of a proposed fenceline.	14
47	Eucalyptus camaldulensis var camaldulensis	1	9.0	-	20	0	**0.50**	Small tree in good condition providing potential habitat for a number of threatened species. Within 5m of a proposed fenceline.	15
48	Eucalyptus camaldulensis var camaldulensis	1	10.0	-	30	5	**0.64**	Small tree in good condition providing potential habitat for a number of threatened species. Within 5m of a proposed fenceline.	16

Tree #	Tree spp.	No. of trees	Height (m)	Hollows	Diameter (cm)	Canopy dieback (%)	Biodiversity Score	General comments	Photo #
49	Eucalyptus camaldulensis var camaldulensis	1	12.0	-	50	10	**1.41**	Small tree in good condition providing potential habitat for a number of threatened species. Within 5m of a proposed fenceline.	17
50	Eucalyptus camaldulensis var camaldulensis	1	20.0	-	75	5	**4.33**	Large tree in good condition providing habitat for a number of threatened species. Within 5m of an existing fenceline (with potential to be upgraded).	18

<u>Site map</u> showing areas of proposed impact



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4.2 Threatened Species assessment

Species observed on site, or recorded within 5km of the application area since 1995, or the vegetation is considered to provide suitable habitat

Species (common name)	NP&W Act	EPBC Act	Data source	Date of last record	Species known habitat preferences	Likelihood of use for habitat – Comments
Pseudophryne bibronii (Brown Toadlet)	R	-	3	2001	Wide variety of habitats, including dry forests, woodland, shrubland, grassland, coastal swamps under rocks and logs, breeding in grassy areas beside creeks	Likely – lower parts of the site were damp and contain grassy areas and small rocks
Cereopsis novaehollandiae novaehollandiae (Cape Barren Goose)	R	-	3	2013	Found on offshore islands, usually granite, in areas of pasture, tussock grass or low heathy scrub.	Highly likely -have been recorded in the vicinity and pasture present
Coturnix ypsilophora australis (Brown Quail)	V	-	3	2013	Prefers dense grasslands, often on the edges of open forests, and bracken. Sometimes seen alongside roads.	Likely - although more suitable habitat occurs elsewhere
Falco peregrinus macropus (Peregrine Falcon)	R	-	3	2006	Found in most habitats; rainforests, arid zone, coast to alpine areas. Requires abundant prey and secure nest sites, prefers coastal and inland cliffs or open woodlands near water, and may even be found nesting on high city buildings.	Likely – breeding and roosting habitat available
Falco subniger (Black Falcon)	R	-	3	2003	Found along tree-lined watercourses and in isolated woodlands, mainly in arid and semi-arid areas. It roosts in trees at night and often on power poles by day	Possible – habitat not optimum
Falcunculus frontatus frontatus (Eastern Shriketit)	R	-	3	2001	Found in eucalypt forests and woodlands, forested gullies and along rivers in drier areas. It can also be found in rainforests. Sometimes seen in parks and gardens, on farms with scattered trees, and on pine plantations.	Likely – habitat available although not seen for 20 years

Species (common name)	NP&W Act	EPBC Act	Data source	Date of last record	Species known habitat preferences	Likelihood of use for habitat – Comments
Gallinago hardwickii (Latham's Snipe)	R	-	3	1998	Seen in small groups or singly in freshwater wetlands on or near the coast, generally among dense cover. Found in any vegetation around wetlands, in sedges, grasses, lignum, reeds and rushes and also in saltmarsh and creek edges on migration. They also use crops and pasture.	Unlikely - habitat present on site would not support the species' requirements
Melanodryas cucullata cucullata (Hooded Robin)	R	-	3	2019	Prefers open eucalypt woodlands, acacia scrub and mallee, with tall native grasses, often near clearings or open areas.	Likely – sub optimum habitat present but recorded recently nearby
Melithreptus gularis (Black-chinned Honeyeater)	ssp	-	3	2004	Upper levels of eucalypt forests/woodlands with box and ironbarks, sometimes gardens and street trees	Possible – not optimum habitat
Microeca fascinans (Jacky Winter)	ssp	-	3	1999	Open woodland with open shrub layer and bare ground	Possible – shrub layer not present
Myiagra inquieta (Restless Flycatcher)	R	-	3	1997	Open forests and woodlands, frequently seen in farmlands	Likely - habitat available, although not recorded for 24 years
Neophema elegans elegans (Elegant Parrot)	R	-	3	2020	Found in a wide variety of habitats, including grasslands, shrublands, mallee, woodlands and thickets, bluebush plains, heathlands, saltmarsh and farmland.	Highly likely – recent records, habitat available
Northiella haematogaster (NC) (Blue Bonnet)	ssp	-	3	1999	Arid and semi-arid areas, on plains with saltbush or bluebush and sometimes scattered trees or open woodland with Myall, Mulga or native pine. Also found on lightly timbered grasslands and sand-dune areas. Common in sparse areas of mallee on roadsides and on partly cleared farmlands.	Possible – part of habitat needs are met at the site or nearby

Species (common name)	NP&W Act	EPBC Act	Data source	Date of last record	Species known habitat preferences	Likelihood of use for habitat – Comments
Parvipsitta pusilla (Little Lorikeet)	E	-	3	2013	Forest, woodland, trees along watercourses and in open paddocks. Mainly found in dry, open sclerophyll forests and woodlands, dominated by Eucalypts.	Highly likely – habitat present and recently recorded
Petroica boodang boodang (Scarlet Robin)	R	-	3	2005	Open forests and woodlands; open habitats such as grasslands, farmland and urban parks and gardens	Likely – habitat available on or near the site
Stagonopleura guttata (Diamond Firetail)	V	-	3	2019	Open grassy woodland, heath and farmland or grassland with scattered trees.	Highly likely – habitat present on site
Strepera versicolor (Grey Currawong)	ssp	-	3	2020	A wide range of habitats from the coast to the semi-desert, including forests, woodlands, mallee, coastal and other heaths. Also found in remnant vegetation on roadsides and farms, in orchards, and in suburban areas.	Unlikely – this record refers to the NW SA subspecies, not found in the southern part of SA
Turnix varius varius (Painted Button-quail)	R	-	3	2010	Grassy eucalypt woodland, open forest, mallee, grasslands	Likely – habitat present on the site
Zanda funerea whiteae (Yellow-tailed Black Cockatoo)	V	-	4	2020	A variety of habitat types, but favours eucalypt woodland and pine plantations	Known – small group observed during the site assessment
Zoothera lunulata halmaturina (Bassian Thrush)	SP	VU	5	2002	Favours damp, densely forested areas and gullies, usually with a thick canopy overhead and leaf-litter below.	Possible, though habitat present is not suitable on site
Isoodon obesulus obesulus (Southern Brown Bandicoot)	V	EN	5	2011	A range of habitats including heathland, shrubland, sedgeland, heathy open forest and woodland	Possible, but likely to favour denser and more diverse habitat in the area

Species (common name)	NP&W Act	EPBC Act	Data source	Date of last record	Species known habitat preferences	Likelihood of use for habitat – Comments
Tachyglossus aculeatus **(Short-beaked Echidna)**	**ssp**	**ssp**	5	**2020**	Usually found in open heathland, forests, woodlands, scrublands and grasslands, among vegetation or in hollow logs. Often shelter under bushes or burrow into the soil.	Unclear which ssp is referred to. Likely, potential habitat exists in the vicinity
Source; 1- BDBSA, 2 - AoLA, 3 – NatureMaps 4 – Observed/recorded in the field, 5 - Protected matters search tool, 6 – others NP&W Act; E= Endangered, V = Vulnerable, R= Rare EPBC Act; Ex = Extinct, CR = Critically endangered, EN = Endangered; VU = Vulnerable						

Criteria for the likelihood of occurrence of species within the Study area.

Likelihood	**Criteria**
Highly Likely/Known	Recorded in the last 10 years, the species does not have highly specific niche requirements, the habitat is present and falls within the known range of the species distribution or; The species was recorded as part of field surveys.
Likely	Recorded within the previous 20 years, the area falls within the known distribution of the species and the area provides habitat or feeding resources for the species.
Possible	Recorded within the previous 20 years, the area falls inside the known distribution of the species, but the area provide limited habitat or feeding resources for the species. Recorded within 20 -40 years, survey effort is considered adequate, habitat and feeding resources present, and species of similar habitat needs have been recorded in the area.
Unlikely	Recorded within the previous 20 years, but the area provide no habitat or feeding resources for the species, including perching, roosting or nesting opportunities, corridor for movement or shelter. Recorded within 20 -40 years; however, suitable habitat does not occur, and species of similar habitat requirements have not been recorded in the area. No records despite adequate survey effort.

4.3 Cumulative impact

When exercising a power or making a decision under Division 5 of the Native Vegetation Regulations 2017, the NVC must consider the potential cumulative impact, both direct and indirect, that is reasonably likely to result from a proposed clearance activity.

The cumulative impacts must consider all the clearance that is likely to result from the application, including the following;

- *clearance directly required for the development (e.g. access, building footprints, associated infrastructure – power and water, etc.),*
  The assessment includes the potential clearance under Regulations 8(1) clearance within 10m of a dwelling; 8(13) clearance for vehicle access tracks; 8(14) clearance for fences; 9(1)(17) fire prevention and control (excluding trees greater than 2m circumference); and 12(33) clearance for a new dwelling or building. Subdivision of the property requires a new access for the four blocks proposed. An unsealed road on the eastern boundary of the site is not available to the properties and an alternative is needed. Generous building envelope plans have been included in the design supporting the development application; these are intended to include all likely associated infrastructure required in the future development of the allotments. Driveways will come off the proposed access and do not require any clearance. It is anticipated that services will run alongside the access track, or on property boundaries, clearance for which is included in the assessment.
- *subsequent clearance that will be permitted or required (e.g. 10m around a building, 20m around a dwelling, clearance for fire protection*),
  The building envelopes include 10m around a building, and 20m around a dwelling for fire hazard protection has also been included in the assessment.
- *indirect clearance that may occur as a result of the development (e.g. dust generation smoothing vegetation, altered hydrology inundating or drying vegetation, impacting on tree root zones (the application of fill) impacting on tree health),*
  All potential impacts, direct or indirect, are considered to be covered by the assessment. Short term impacts such as dust generation during construction is considered to have low impact as the vegetation is scattered trees with tall canopies (generally) and dust should bot be a significant impact. Tree root impacts are included and should be minimal, and mostly contained within the building envelopes proposed.
- *future stages or associated components of a development (noting, the clearance for future stages of a development does not need to be assessed as part of this application, only discussed to provide the NVC with the full context of the proposed clearance).*
- Future stages are not anticipated. The assessment includes any likely development for the construction of dwellings and associated infrastructure.

4.4 Address the Mitigation Hierarchy

When exercising a power or making a decision under Division 5 of the Native Vegetation Regulations 2017, the NVC must have regard to the mitigation hierarchy. The NVC will also consider, with the aim to minimize, impacts on biological diversity, soil, water and other natural resources, threatened species or ecological communities under the EPBC Act or listed species under the NP&W Act.

a) Avoidance – outline measures taken to avoid clearance of native vegetation

The initial draft of the subdivision plan included an access track adjacent the western property boundary. This was found to have potential root impacts to 17 mature River Red Gums and 2 SA Blue gums on the road reserve of Bull Creek Road. Discussion with the proponent resulted in an alternate location for access, which avoids impacting the roadside vegetation.

In addition, the potential for impact from clearance for fire hazard reduction of 20m around a dwelling was seen to be unacceptable, and the option of building envelope plans was developed to define the area within which impact from dwelling construction and management would be contained.
The outcome of these changes was a reduction in impacts from a potential 94 trees, to 28

b) Minimization – if clearance cannot be avoided, outline measures taken to minimize the extent, duration and intensity of impacts of the clearance on biodiversity to the fullest possible extent (whether the impact is direct, indirect or cumulative).

Building envelopes have been positioned to avoid removal of scattered trees, especially the more mature, ecologically and visually significant trees. Whilst some large trees are impacted, the overall attempt has reduced potential impact to a minimum.

c) Rehabilitation or restoration – outline measures taken to rehabilitate ecosystems that have been degraded, and to restore ecosystems that have been degraded, or destroyed by the impact of clearance that cannot be avoided or further minimized, such as allowing for the re-establishment of the vegetation.

This is not considered an option on the site. Clearance of most of the trees assessed is likely to occur and is permanent. Regeneration of young River Red Gums has occurred on the block in the recent past and those not impacted by the subdivision proposal could be retained, but once ownership changes, there is no guarantee of their retention. A payment into the NV fund will be made to offset impacts.

d) Offset – any adverse impact on native vegetation that cannot be avoided or further minimized should be offset by the achievement of a significant environmental benefit that outweighs that impact.

The appropriate offset will be made.

4.5 Principles of Clearance (Schedule 1, *Native Vegetation Act 1991*)

The Native Vegetation Council will consider Principles 1(b), 1(c) and 1(d) when assigning a level of Risk under Regulation 16 of the Native Vegetation Regulations. The Native Vegetation Council will consider all the Principles of clearance of the Act as relevant, when considering an application referred under the *Planning, Development and Infrastructure Act 2016*.

Principle of clearance	Considerations
Principle 1a - it comprises a high level of diversity of plant species	Relevant information N/A – the assessment concerned scattered trees of only one species – *Eucalyptus camaldulensis var camaldulensis*
	Assessment against the principles Seriously at Variance – N/A At Variance – N/A
	Moderating factors that may be considered by the NVC – N/A
Principle 1b - significance as a habitat for wildlife	Relevant information See part 4.2 and Appendix 1 for threatened species recorded or observed. Of 22 listed species recorded, the following assessment is made regarding likely use of the habitat provided: Known – 1 Highly likely – 4 Likely – 9 Possible – 6, and Unlikely - 2 It is not considered to support a high diversity of fauna species due to the degraded nature of the site, with an understorey devoid of native species and grazing and cropping occurring. The vegetation does not appear to represent a corridor for movement of wildlife but is more the fringe of three larger remnant patches which show higher density than the site assessed. More diverse and denser potential habitat refuges exist in the surroundings, however the scattered trees may provide short term roosting or feeding resources for translocating individuals. Trees; Fauna Habitat Score – all trees scored 1.8 Biodiversity Score - ranging from 0.5 (tree 47) to 9.55 (tree 7)
	Assessment against the principles Seriously at Variance – All scattered trees/clumps assessed are SAV; numbered 19, 20, 21, 22, 23, 24, 25, 26, 28, 29, 34, 35, 42, 46, 47, 48, 49 and 50 At Variance – N/A
	Moderating factors that may be considered by the NVC – Impact significance; non-essential habitat

Principle 1c - plants of a rare, vulnerable or endangered species	Relevant information See part 4.2 and Appendix 1 for threatened species recorded or observed. Of the following species, only *E. fasciculosa* and *E. viminalis ssp. viminalis* were consider likely to be present. However, no threatened species were observed during the site assessment. *Lythrum salicaria;* *Eucalyptus fasciculosa* *Eucalyptus viminalis ssp. viminalis* *Caladenia leptochila ssp. leptochila* *Caladenia reticulata* *Diuris behrii* *Pterostylis curta* *Thelymitra flexuosa* *Thelymitra grandiflora* Threatened Flora Score(s) – all trees scored 0
	Assessment against the principles Seriously at Variance – N/A At Variance – N/A
	Moderating factors that may be considered by the NVC – N/A
***Principle 1d - the vegetation comprises the whole or part of a plant community that is Rare, Vulnerable or endangered*:**	Relevant information The following threatened communities were listed in the searches: • Peppermint Box Grassy woodland • River Murray and associated wetlands • Swamps of the Fleurieu Peninsula No threatened ecosystems were present at or near the site. Threatened Community Score – N/A
	Assessment against the principles Seriously at Variance – N/A
	Moderating factors that may be considered by the NVC – N/A
Principle 1e - it is significant as a remnant of vegetation in an area which has been extensively cleared.	Relevant information IBRA Association (Sandergrove) remnancy figure - 11% IBRA Subregion (Fleurieu) remnancy - 12 % Discuss the health and likely longevity of remnants. The scattered trees represent the outcome of continued clearance across the region since settlement. Nearby patches of vegetation exhibit greater density and better health, more like that expected of a more intact remnant, but the trees remaining in the area are unlikely to contribute to regeneration as grazing, cropping, or residential development pressures are applied. Recent development adjacent this site has most likely reduced the number of scattered trees in the area. Total Biodiversity Score – 53.73
	Assessment against the principles Seriously at Variance – N/A At Variance – Clearance of all scattered trees assessed is at variance with this principle
	Moderating factors that may be considered by the NVC – Impact significance; quality of remnant

Principle 1f - it is growing in, or in association with, a wetland environment.	Relevant information N/A
	Assessment against the principles Seriously at Variance – N/A At Variance – N/A
	Moderating factors that may be considered by the NVC – N/A
Principle 1g - it contributes significantly to the amenity of the area in which it is growing or is situated.	Relevant information The site is adjacent Bull Creek Road less than one kilometre from Ashbourne. The trees are not easily observed from the road because the vegetation on the road reserve obscures paddock trees, and the road requires significant concentration to navigate safely at this point. There are no known or likely cultural or historical values associated with the trees. Removal of the trees assessed wis not anticipated to dramatically alter the landscape character observable from outside the property.
	N/A
	Moderating factors that may be considered by the NVC – N/A

4.6 Risk Assessment

Determine the level of risk associated with the application

Total clearance	No. of trees	28
	Area (ha)	N/A
	Total biodiversity Score	52.74
Seriously at variance with principle 1(b), 1(c) or 1 (d)		1(b)
Risk assessment outcome		Level 4

4.7 NVC Guidelines

Provide any other information that demonstrates that the clearance complies with any relevant NVC guidelines related to the activity.

N/A

5. Clearance summary

Scattered trees Summary table

Tree or Cluster ID	Number of trees	Fauna Habitat score	Threatened flora score	Biodiversity score	Loss factor	SEB Points required	SEB Payment (incl admin)
19	1	1.8	0	5.87	1	6.16	$5,237.53
20	1	1.8	0	2.60	1	2.73	$2,324.78
21	1	1.8	0	1.39	1	1.46	$1,244.42
22	1	1.8	0	1.97	1	2.07	$1,756.60
23	1	1.8	0	1.40	1	1.47	$1,252.40
24	1	1.8	0	1.32	1	1.39	$1,181.82
25	1	1.8	0	9.55	1	10.03	$8,526.57
26	1	1.8	0	4.33	1	4.54	$3,862.30
28	4	1.8	0	3.99	1	4.19	$3,559.43
29	3	1.8	0	3.43	1	3.60	$3,061.65
34	4	1.8	0	4.57	1	4.80	$4,082.21
35	2	1.8	0	2.60	1	2.73	$2,317.78
42	1	1.8	0	0.59	1	0.62	$530.25
46	2	1.8	0	2.26	1	2.37	$2,016.10
47	1	1.8	0	0.50	1	0.52	$442.99
48	1	1.8	0	0.64	1	0.67	$570.62
49	1	1.8	0	1.41	1	1.48	$1,260.41
50	1	1.8	0	4.33	1	4.54	$3,862.30
Total	**28**			**52.74**		**55.38**	**$47,314.40**

Totals summary table

	Total Biodiversity score	Total SEB points required	SEB Payment	Admin Fee	Total Payment
Application	52.74	55.38	$44,847.78	$2466.63	$47,314.40

Economies of Scale Factor	0.5
Rainfall (mm)	614

6. Significant Environmental Benefit

A Significant Environmental Benefit (SEB) is required for approval to clear under Division 5 of the *Native Vegetation Regulations 2017*. The NVC must be satisfied that as a result of the loss of vegetation from the clearance that an SEB will result in a positive impact on the environment that is over and above the negative impact of the clearance.

ACHIEVING AN SEB

Indicate how the SEB will be achieved by ticking the appropriate box and providing the associated information:

☒ Pay into the Native Vegetation Fund.

PAYMENT SEB

If a proponent proposes to achieve the SEB by paying into the Native Vegetation Fund, summary information must be provided on the amount required to be paid and the manner of payment:

- Payment amount required (including admin. fee) **$47,314.40**

7. Appendices

Appendix 1. Fauna and Flora Species List

CLASS NAME	SPECIES	COMMON NAME	NATIONAL RATING	STATE RATING	DATE OF LAST RECORD
AMPHIBIA	Pseudophryne bibronii	Brown Toadlet		R	11-Jul-2001
AVES	Cereopsis novaehollandiae novaehollandiae	Cape Barren Goose		R	18-Oct-2013
AVES	Coturnix ypsilophora australis	Brown Quail		V	18-Oct-2013
AVES	Falco peregrinus macropus	Peregrine Falcon		R	28-May-2006
AVES	Falco subniger	Black Falcon		R	12-Jul-2003
AVES	Falcunculus frontatus frontatus	Eastern Shriketit		R	28-May-2001
AVES	Gallinago hardwickii	Latham's Snipe		R	18-Jan-1998
AVES	Melanodryas cucullata cucullata	Hooded Robin (YP, MN, AP, MLR, MM, SE)		R	28-Oct-2019
AVES	Melithreptus gularis	Black-chinned Honeyeater		ssp	01-Aug-2004
AVES	Microeca fascinans	Jacky Winter		ssp	02-Oct-1999
AVES	Myiagra inquieta	Restless Flycatcher		R	15-Feb-1997
AVES	Neophema elegans elegans	Elegant Parrot		R	09-May-2020
AVES	Northiella haematogaster (NC)	Bluebonnet (Eastern and Naretha)		ssp	14-Jun-1999
AVES	Parvipsitta pusilla	Little Lorikeet		E	17-Oct-2013
AVES	Petroica boodang boodang	Scarlet Robin		R	27-May-2005
AVES	Stagonopleura guttata	Diamond Firetail		V	28-Oct-2019
AVES	Strepera versicolor	Grey Currawong		ssp	14-Jan-2020
AVES	Turnix varius varius	Painted Buttonquail		R	25-Mar-2010
AVES	Zanda funerea whiteae	Yellow-tailed Black Cockatoo		V	08-Jan-2020
AVES	Zoothera lunulata halmaturina	Bassian Thrush (southern FR, MLR, KI)	VU	SP	31-Mar-2002
MAMMAL	Isoodon obesulus obesulus	Southern Brown Bandicoot (SA mainland and KI)	EN	V	31-Oct-2011
MAMMAL	Tachyglossus aculeatus	Short-beaked Echidna	ssp	ssp	09-May-2020

FAMILY NAME	SPECIES	COMMON NAME	NATIONAL RATING	STATE RATING	DATE OF LAST RECORD
LYTHRACEAE	Lythrum salicaria	Purple Loosestrife		R	20-Jun-1997
MYRTACEAE	Eucalyptus fasciculosa	Pink Gum		R	07-Oct-2019
MYRTACEAE	Eucalyptus viminalis ssp. viminalis	Manna Gum		R	06-Oct-2000
ORCHIDACEAE	Caladenia leptochila ssp. leptochila	Narrow-lip Spider-orchid		R	07-Oct-2019
ORCHIDACEAE	Caladenia reticulata	Veined Spider-orchid		R	07-Oct-2019
ORCHIDACEAE	Diuris behrii	Behr's Cowslip Orchid		V	28-Sep-2010
ORCHIDACEAE	Pterostylis curta	Blunt Greenhood		R	27-Sep-2011
ORCHIDACEAE	Thelymitra flexuosa	Twisted Sun-orchid		R	01-Oct-2003
ORCHIDACEAE	Thelymitra grandiflora	Great Sun-orchid		R	27-Oct-2017

Appendix 2. Scattered Tree Assessment Scoresheet

SEB Required for Scattered Trees

(Version - 1 July 2020)

Landscapes Region	**H&F**	**Total Biodiversity Score**	52.74
Mean Annual Rainfall (mm)	**614**	**Total SEB Points required**	**55.38**
Economies of Scale factor	**0.5**	**Total SEB $ required**	**$47,314.40**

IBRA Association	**Sandergrove**

Tree Species	Number of Trees	Total SEB Points required	Payment in NV Fund (GST Exclusive)	Administration fee (GST Inclusive)	Total
Eucalyptus camaldulensis	18	55.38	$44,847.78	$2,466.63	$47,314.40
0	0	0.00	$0.00	$0.00	$0.00

Ashbourne
Scattered Tree Score

Appendix 3. Scattered Tree Photographs

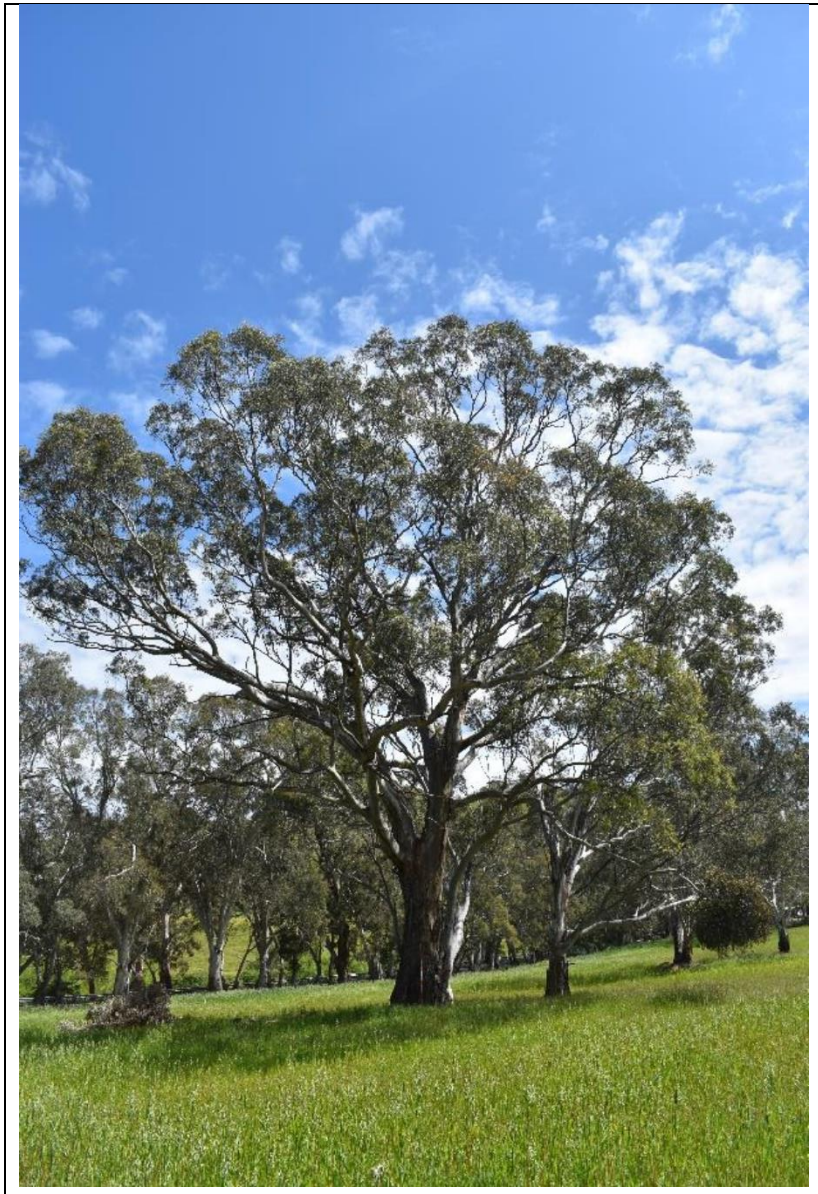

Photo 1

Photo 2

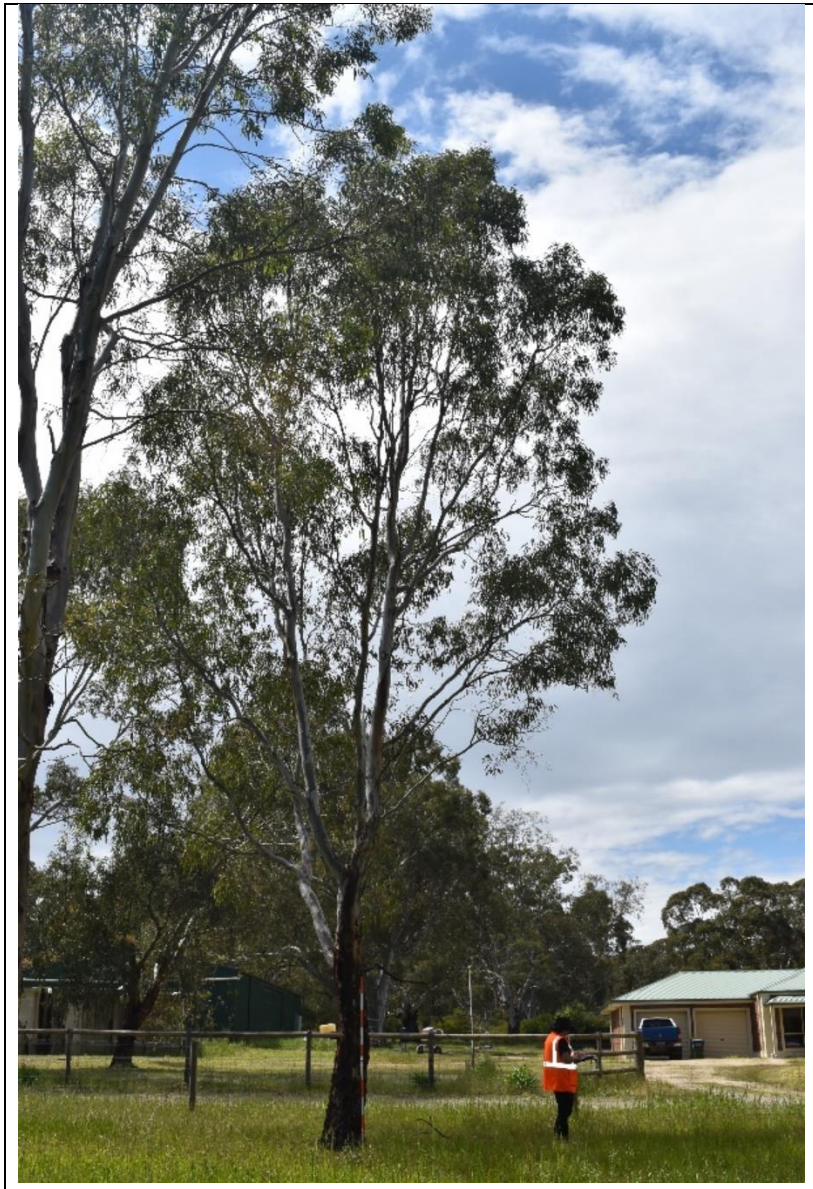

Photo 3

Photo 4

Photo 5

Photo 6

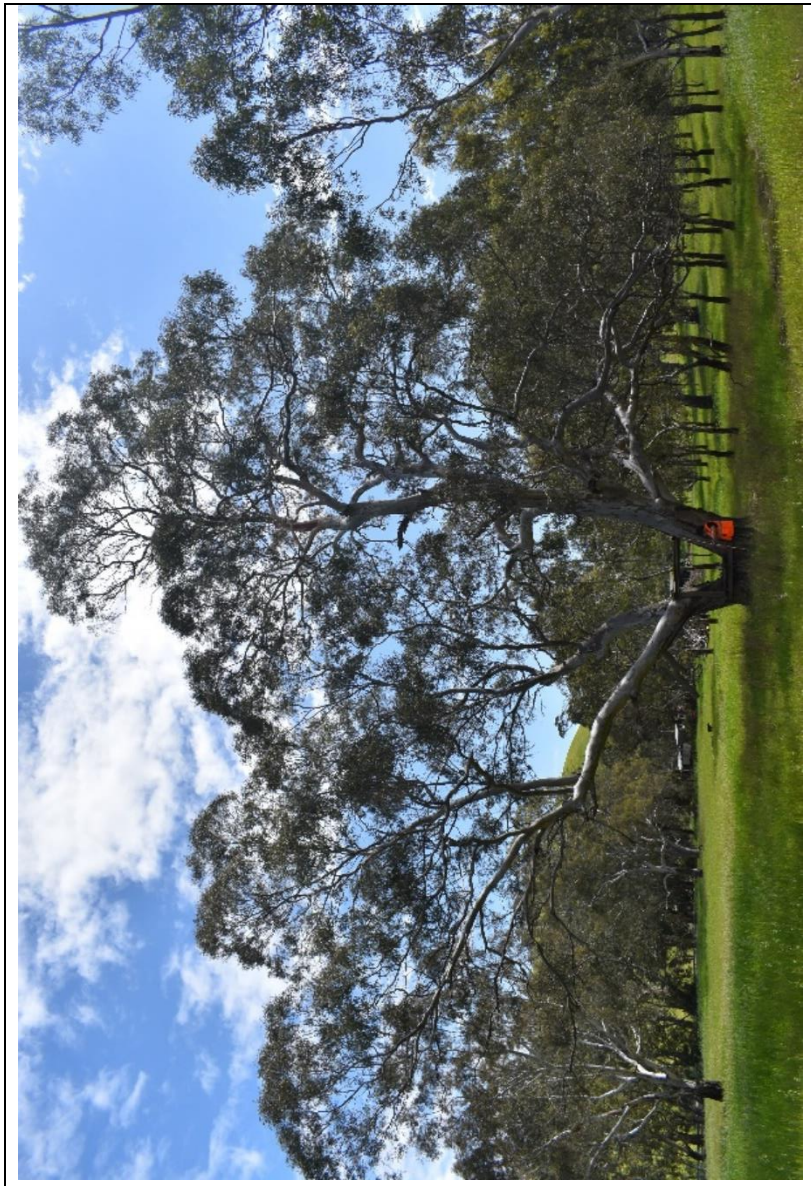

Photo 7

Photo 8

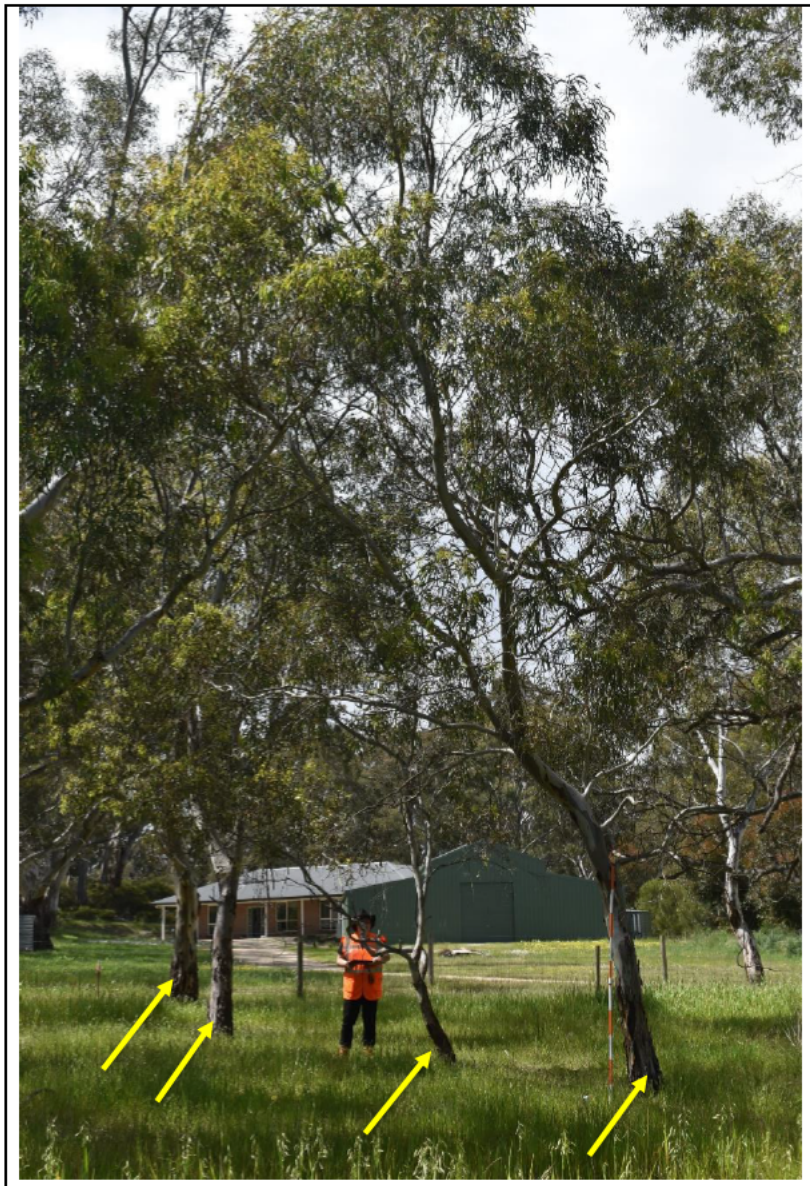

Photo 9

Photo 10

Photo 11

Photo 12

Photo 13

Photo 14

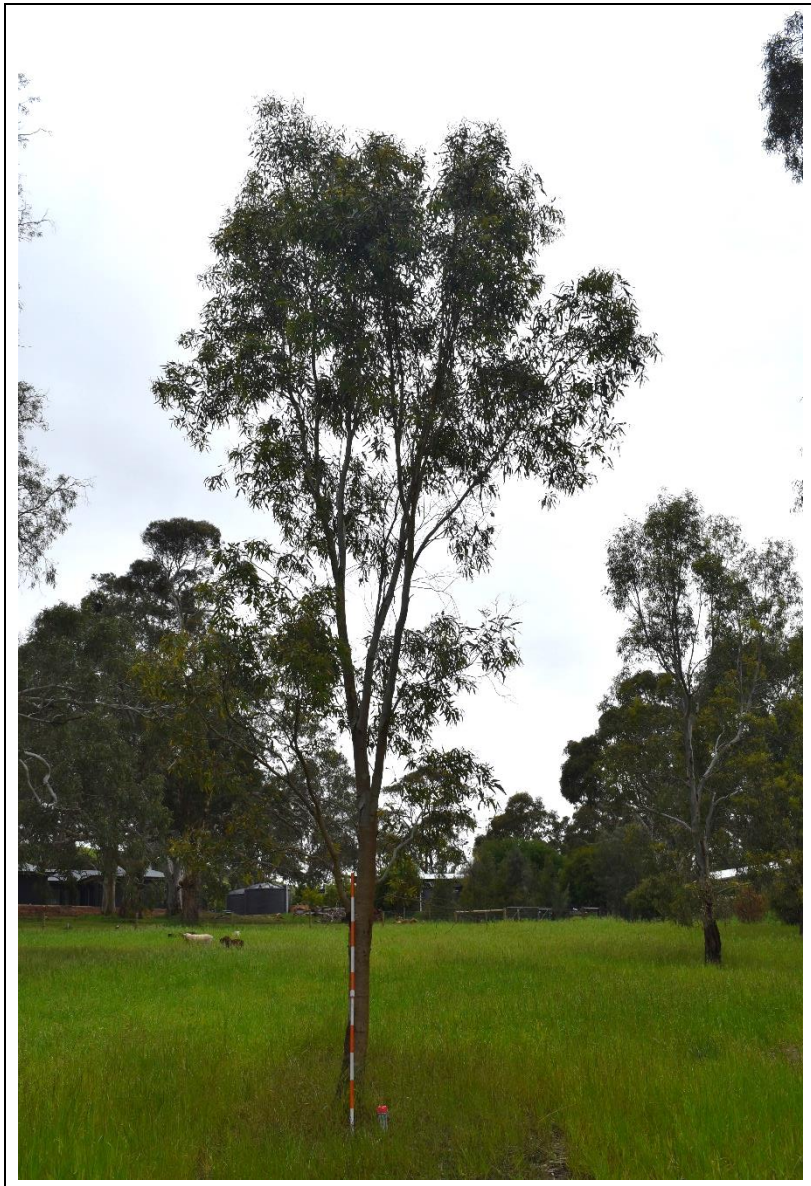

Photo 15

Photo 16

Photo 17

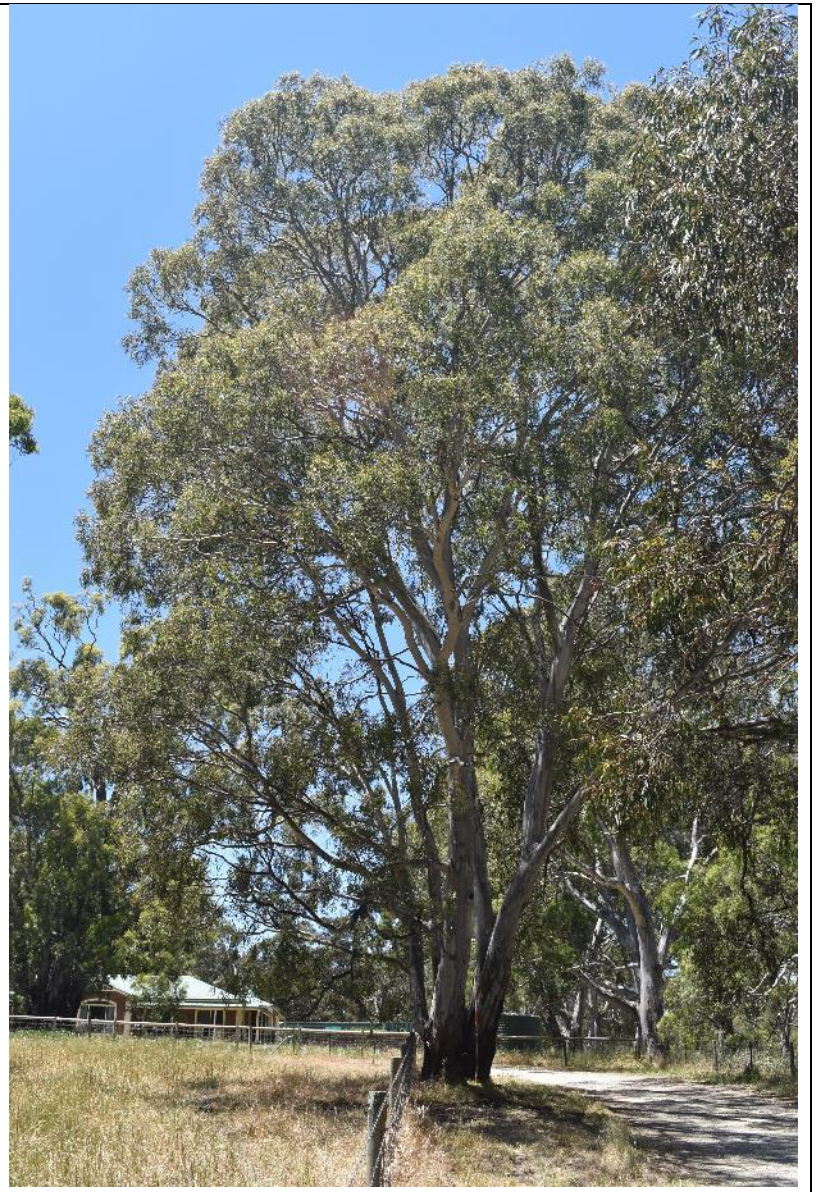

Photo 18

Appendix 4. Copies of associated approvals