Native Vegetation Clearance

Raidis Estate Data Report

Clearance under the *Native Vegetation Regulations 2017*

February 2021

Prepared by Peter Tucker

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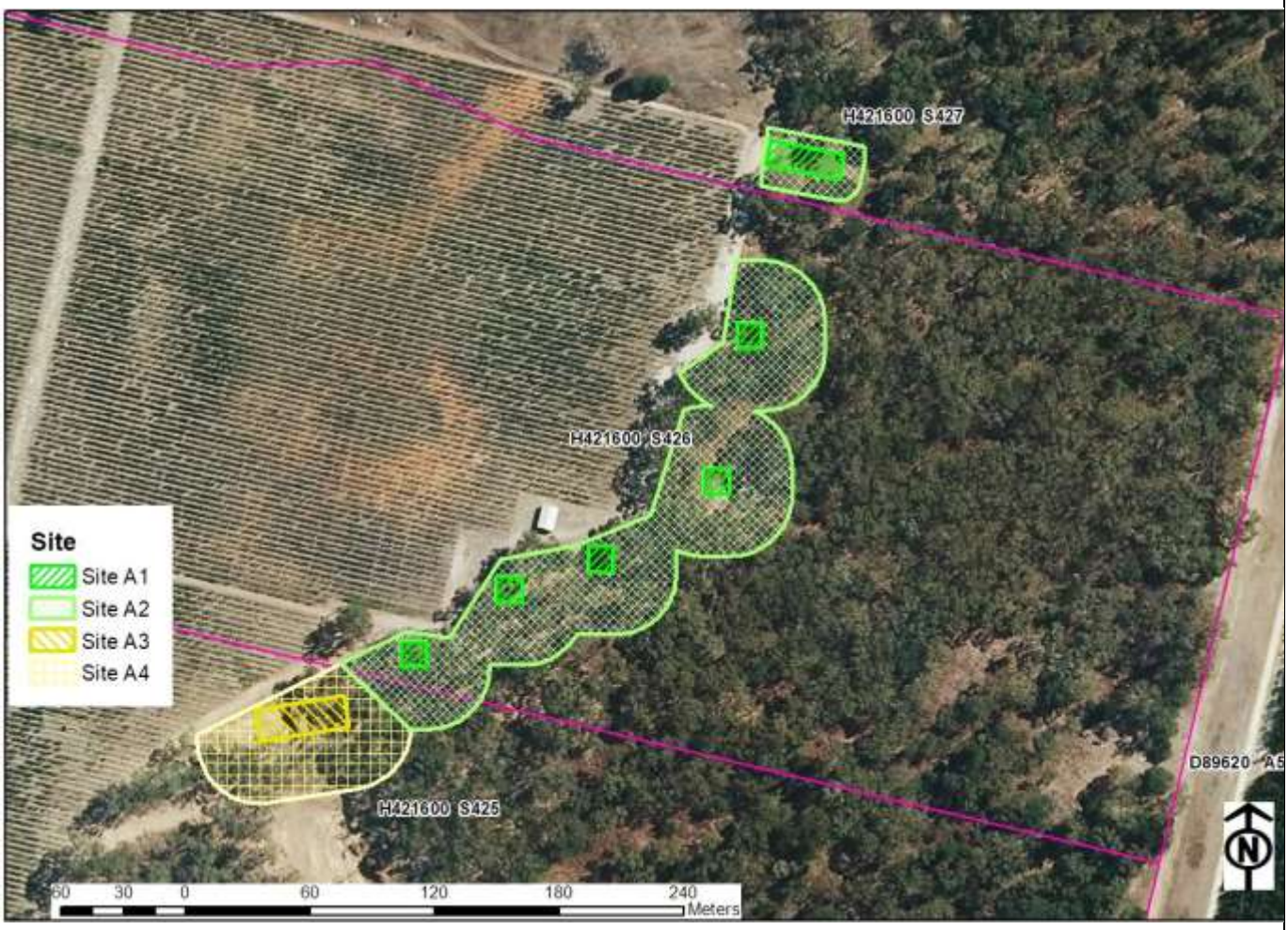
1. Application information

Application Details

Applicant:	Raidis Investment Trust		
Key contact:	Steven Raidis		
Landowner:	Raidis Investment Trust		
Site Address:	16663 Riddoch Highway, Penola		
Local Government Area:	Wattle Range Council	Hundred:	Penola
Title ID:	CT/5920/209 CT/5943/483	Parcel ID	Sec 426 Sec 425

Summary of proposed clearance

Purpose of clearance	The proposed clearance is required for construction of a world class luxury, 10-star energy rated eco retreat and five villas that operate completely off grid and embrace the local environment and surroundings. Its purpose is to create an immersive bushland experience, showcasing the best of Coonawarra Wine Region and the greater Limestone Coast. And to demonstrate that green energy can also be luxurious. An equipment shed is also proposed. All buildings will be permanent structures.
Native Vegetation Regulation	Regulation 12, Schedule 1; clause 33, new dwelling or building.
Description of the vegetation under application	1.553 hectares of Rough-barked Manna Gum (*Eucalyptus viminalis* ssp. *cygnetensis*) Open Forest over Bracken Fern (*Pteridium esculentum*) in moderate to poor condition, of which 1.432 hectares will be only partially cleared to meet CFS requirements. 0.065 hectares of Rough-barked Manna Gum Low Woodland over Slender Wallaby-grass (*Rytidosperma racemosum*) and Scabiosa (*Scabiosa atropurpurea*) in very poor condition. 0.381 hectares of Rough-barked Manna Gum Low Woodland over Bracken Fern and Slender Wallaby-grass in poor condition to be only partially cleared to meet CFS requirements.
Total proposed clearance - area (ha) and number of trees	1.999 hectares is proposed to be cleared.
Level of clearance	Level 4 (Level 3 if recommended moderations are accepted by NVC)
Overlay (Planning and Design Code)	Native Vegetation Overlay

Map of proposed clearance area  	
Mitigation hierarchy	**Avoidance** – The primary purpose of the vegetation clearance is to build permanent structures for luxury tourist accommodation (Raidis Retreat) that provides visitors a feeling of being immersed in bushland. Greater clearance has been avoided by locating the project next to an existing vineyard roadway. Part of the project has been placed over an old quarry site with limited native vegetation, clumps of Bracken Fern. The clearance has been sighted on the bushland edge, which comprises the area of worst impact from several decades of grazing by domestic stock, currently goats. Alternative locations have been considered but deem unsuitable due to a greater area of native vegetation required to be removed, or did not meet the primary purpose of providing a feeling of being immersed in bushland. This included an area where grape vines are currently grown. **Minimisation** – Vegetation clearance has been minimised by selecting the most degraded areas and where least vegetation will be impacted. A CFS required 30m fuel management zone will retain all trees, except for eight near The Retreat and six near villas one and five. The CFS zone representing 1.813 hectares (89.7%) of the 1.999 vegetation clearance proposal. Avoiding the clearance of trees is critical to the success of the tourism project. Clearance in CFS required zone will be limited to one species, Bracken Fern. There is no structural vegetation layer between the tree canopy and Bracken Fern. The remaining bushland vegetation has a uniform layer of Bracken Fern. All buildings are within 10m of an adjoining vineyard roadway, except one (villa No. 4) which is 25m from the roadway. Placing any of the buildings

	closer to the roadway would result in more trees needing to be cleared and result in gaps in the canopy. The project design requires a total of 14 trees to be removed out of the 1.999 hectares to accommodate the project with the remaining clearance being Bracken Fern. (All vegetation is required to be cleared within the 0.186 footprint of all seven buildings) **Rehabilitation or restoration** – the proposed clearance is the minimum required to complete Raidis Retreat. Natural regeneration will be encouraged within CFS requirements. Targeted revegetation around the villas and main accommodation building ("The Retreat") will be undertaken to ensure privacy where required and improve bird habitat. The owners want to improve vegetation condition across the remainder of the bushland and unconnected to this project have committed to planting over 400 seedlings under the direction and guidance of the Communities Helping Cockies Project. Additionally, they have already removed a substantial number of large mature pine tree wildlings in the greater bushland area. **Offset** – It is proposed to offset vegetation clearance with a payment into the Native Vegetation Fund.
SEB Offset proposal	Payment of **$55, 119.45** into the Native Vegetation Fund.

2. Purpose of clearance

2.1 Description

Raidis Investment Trust seek to establish Raidis Retreat a luxury eco-tourism accommodation facility that will provide visitors with an immersive bushland experience. The accommodation will consist of one large building (The Retreat) comprising four accommodation suites plus additional facilities, and five stand-alone permanent villa units. An equipment shed is also included.

2.2 Background

The property is located at 16663 Riddoch Highway, Penola and has been owned by Raidis Investment Trust for 17 years. When purchased the property was approximately have pasture and half native vegetation, which domestic stock had access to and regularly grazed. After purchase Raidis Investment Trust turned the pasture into vineyard, retaining the native vegetation and continued grazing it. A vegetation clearance application was lodged to remove paddock trees, but was denied. Those trees remain amongst the vineyard, although one has since died, but remains in situ.

Currently land use in the surrounding area comprises commercial forestry, dryland pasture, limited areas of irrigated pasture, gas extraction and processing and large patches of native vegetation. A commercial pine tree plantation adjoins the southern and eastern boundaries of the property and includes tracts of native vegetation. Beach Energy maintains several gas wells (Haselgrove Wells) in the adjoining forestry land. The Union Dairy Company has a large processing facility 500 metres to the south and Penola Golf Course is 1.8 kilometres to the south east. Nangwarry Native Forest Reserve is located one kilometre to the south east. Penola township is located 7.5 kilometres to the north.

This vegetation clearance application comprises the total requirement for vegetation clearance for the Raidis Retreat project. No additional or associated vegetation clearance is required to complete the project.

2.3 General location map

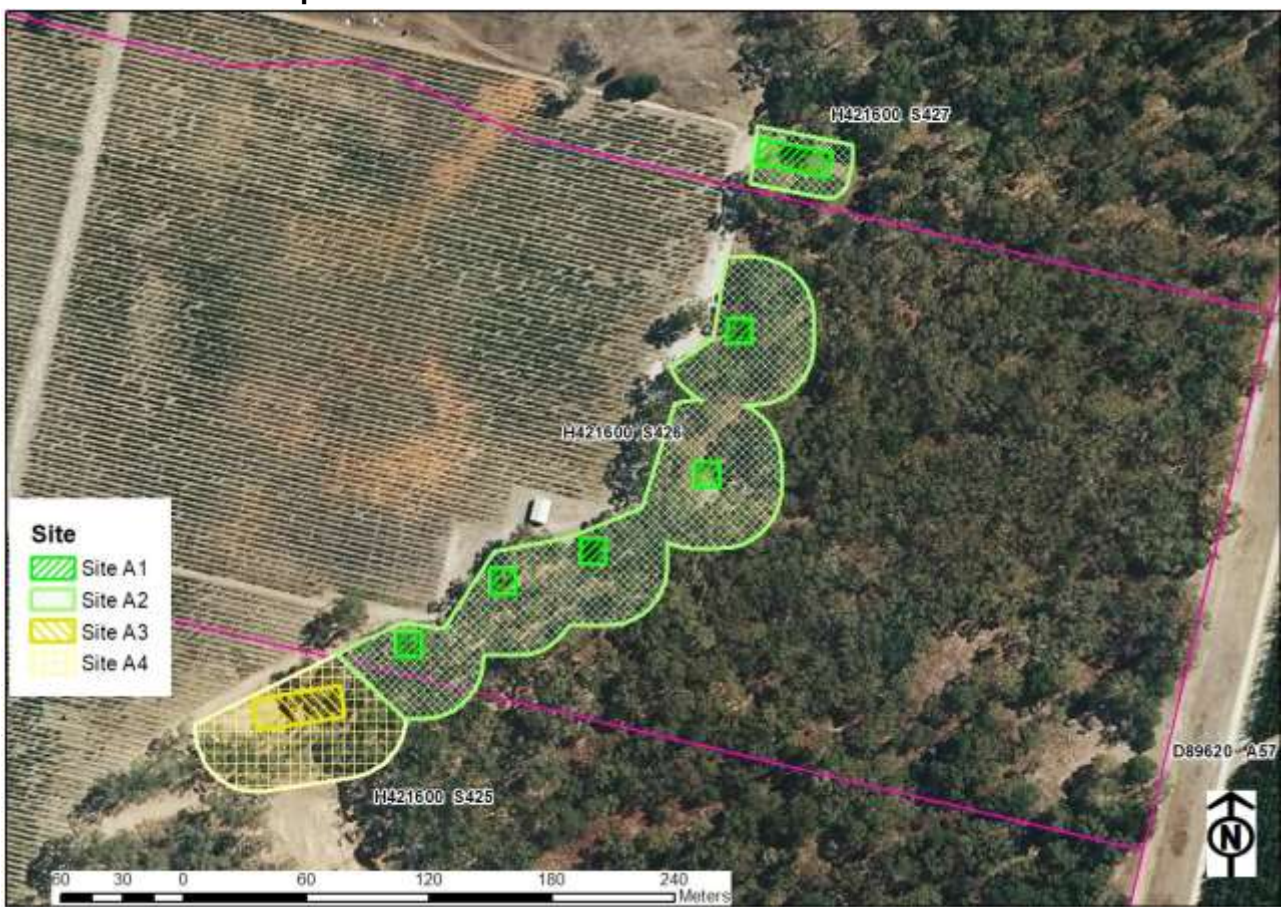


Figure1. Site map of vegetation included in this application. Note; proposed clearance lies within Sections 426 and 425. Cadastre and aerial image layers do not line up correctly.

Figure 2. Location map showing surrounding land use. Red circle identifies the location of vegetation discussed in this proposal.

2.4 Details of the proposal

The concept of Raidis Retreat is to provide a world class luxury, 10-star energy rated eco retreat and five villas that are completely off grid and embrace the local environment and surroundings. Its purpose is to create an immersive bushland experience, showcasing the best of Coonawarra Wine Region and the greater Limestone Coast. And to demonstrate that green energy can also be luxurious.

Currently there are no opportunities in the Limestone Coast for luxury tourist accommodation that can also provide an immersive bushland experience. Most similar opportunities are restricted to camping or where the accommodation is remote from a bushland setting. Raidis Retreat would provide a unique tourism experience for visitors to the Limestone Coast and provide an opportunity to learn about the local bushland and the animals that rely on it.

This proposal is to clear 1.999 hectares of native vegetation for the purpose of creating luxury eco-tourism accommodation, Raidis Retreat. Complete vegetation removal is required for 0.502 hectares to accommodate building footprints;

- The Retreat 43m x 15m;
- Five discrete villas, each 12m x 12m; and
- One equipment shed 36m x 12m.

The remaining 1.813 hectares of vegetation is required for partial clearance to meet CFS fuel management requirements; 30m for accommodation buildings and 10m for the equipment shed.

All buildings will be permanent structures and located in degraded vegetation on the boundary between an established vineyard and native vegetation. All buildings will be located close to an existing vineyard roadway which separates the vineyard from bushland. Each villa will be accessed by this vineyard roadway and are located to avoid tree removal. At least one view from each villa will provide a feeling of being immersed in bushland. This is a very important component of the project design, consequently a minimum number of trees will be removed from the native vegetation. Early discussions on site with Niall Stephens – Active Bushfire Safety Officer (CFS) determined that the CFS do not require trees to be removed to meet CFS fuel management criteria.

The accommodation will be self-sufficient in water and electricity with underground rainwater tanks for The Retreat and one each above ground for the villas. Electricity will be provided via a large solar array on the equipment shed. All electrical cabling requirements will be buried on currently cleared land along a pre-existing vineyard roadway. All accommodation buildings will front the roadway, except for villa number four, which will be set back further in the native vegetation to avoid unnecessarily clearing large trees. Electrical cables will be trenched along a short, 25m vehicle access track to this villa. The access track will not be a formed road and low vegetation will be encouraged to grow back over the track. The project will be connected to the mains electricity supply in order to deliver surplus electricity back to the general community.

Each accommodation building will have its own Biocycle unit to process waste water. Discharge from each Biocycle will exit within the 30m CFS required clearance zone (Sites A2 and A4). Any potential impact from increased weed growth will be addressed within regular site maintenance.

Native vegetation in the proposed area ranges in condition from moderate-poor to very poor condition.

Architect design drawings are provided in the appendices.

2.5 Approvals <u>required</u> *or* <u>obtained</u>

Native Vegetation Act 1991.

This application addresses the approval process required under the Native Vegetation Act 1991. No future vegetation clearance applications are envisioned for this property.

Approximately 17 years ago, a clearance application was lodged to clear a small number of trees prior to establishing the current vineyard. Clearance approval was denied and the trees are still present, although one has since died, but remains in situ.

Planning, Development and Infrastructure Act 2016.

This data report will form part of a development application under the Planning, Development and Infrastructure Act 2016. Wattle Range Council have expressed support for this tourist accommodation project, subject to it meeting various requirements including NVC approval to clear native vegetation. A letter of support for the project is included in the appendices.

Environment Protection and Biodiversity Conservation Act 1999

The Environment Protection and Biodiversity Conservation Act 1999 is addressed in this application.

National Parks and Wildlife Act 1972

The National Parks and Wildlife Act 1972 is addressed in this application.

2.6 Native Vegetation Regulation

Vegetation clearance approval is sought under Regulation 12 (33) – *New dwelling or building*.

2.7 Development Application information (if applicable)

Overlay: Native vegetation

Zone: Rural

3. Method

3.1 Flora assessment

Prior to site inspection a desktop search was conducted using NatureMaps, Atlas of Living Australia and an EPBC Protected Matters Search to determine possible presence of plant species listed under the EPBC Act 1999 or NP&W 1972 Act. A radius of five kilometres around the site was used for the desktop search.

The site was inspected on 5 January 2021 using the methods outlined in the Native Vegetation Council Bushland Assessment Manual (July 2020). The survey involved walking the site for four hours and included targeted survey of nearby areas outside the proposed clearance where grazing protection was available amongst large fallen branches where evidence of palatable species may have been present.

3.2 Fauna assessment

Prior to site inspection a desktop search was conducted on NatureMaps, Atlas of Living Australia and an EPBC Protected Matters Search to determine possible presence of fauna species listed under the EPBC Act 1999 or NP&W 1972 Act. A radius of five kilometres around the sites was used for the desktop searches. In addition, a search of birds likely to use vegetation within the Dismal Swamp IBRA Environmental Association was undertaken (Source: G. Carpenter, Biodiversity Assessment Section, Department of Water, Land and Biodiversity Conservation).

The site was surveyed for fauna on 5 January 2021, which included walking the site searching for the presence of potential threatened species or evidence of their recent presence, such as scats and tracks. The survey was conducted concurrently with the flora assessment.

All fauna captured in the desktop fauna assessments that could potentially use the site for habitat have been included in the NVC Bushland Assessment Scoresheets (attached). Fauna species unsuited to the habitat were excluded from the assessment scoresheet as per agreement with the Native Vegetation Management Branch.

4. Assessment Outcomes

4.1 Vegetation Assessment

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

The vegetation is located at the edge of a Rough-barked Manna Gum (*Eucalyptus viminalis* ssp. *cygnetensis*) Open Forest and adjoins a vineyard, which fronts onto Riddoch Highway. It represents the transition zone between River Red Gum (*Eucalyptus camaldulensis* ssp. *camaldulensis*) Woodland to the west and Brown Stringybark (*Eucalyptus baxteri*) Open Forest to the east. The area is flat and soil within the proposed clearance is sandy.

The vegetation comprised two main associations, but is treated as four associations because the CFS required clearance zones are treated separately as 30% of the understory and all of the canopy will be retained. The area has a long history of domestic stock grazing and is currently grazed by goats. The vegetation associations are;

1. Site A1 Rough-barked Manna Gum (*Eucalyptus viminalis* ssp. *cygnetensis*) Open Forest over Bracken Fern (*Pteridium esculentum*) in moderate to poor condition;
2. Site A2 Rough-barked Manna Gum (*Eucalyptus viminalis* ssp. *cygnetensis*) Open Forest over Bracken Fern (*Pteridium esculentum*) in moderate condition
3. Site A3 Rough-barked Manna Gum (*Eucalyptus viminalis* ssp. *cygnetensis*) Low Woodland over Slender Wallaby-grass (*Rytidosperma racemosum*) and Scabiosa (*Scabiosa atropurpurea*) in very poor condition; and
4. Site A4 Rough-barked Manna Gum (*Eucalyptus viminalis* ssp. *cygnetensis*) Low Woodland over Slender Wallaby-grass (*Rytidosperma racemosum*) in poor condition.

The vegetation occurs in a landscape comprising forestry, dryland pasture, limited areas of irrigated pasture and large patches of native vegetation. Nangwarry Forest Reserve is located one kilometre to the south east. The Union Dairy Company has a processing plant 500 metres to the south and Penola Golf Course is 1.8 kilometres to the south east. Penola township is 7.5 kilometres to the north.

Despite thorough searching, including amongst locations protected from grazing outside the proposed clearance area, no evidence of threatened flora was observed. No evidence of any geophytes was observed, e.g., old seed capsules amongst fallen branches.

Details of the vegetation associates/scattered trees proposed to be impacted

SITE A1

Vegetation Association	Vegetation Association One: Site A1 Rough-barked Manna Gum (*Eucalyptus viminalis* ssp. *cygnetensis*) Open Forest over Bracken Fern (*Pteridium esculentum*)				
 *Figure 1. Representative photograph of Site A1 (Villa No. 5) looking west north west, vineyard is in the background. GPS 486062 5855247. Additional photographs of all villa locations are provided in the appendices.*					
General description	The dominant native species on Site A1 is Bracken Fern (*Pteridium esculentum*) under a canopy of Rough-barked Manna Gum (*Eucalyptus viminalis* ssp. *cygnetensis*). Overall condition of the native vegetation in Site A1 was moderate to poor. Goats were present and their impact was clear with no regeneration observed and limited number of native ground layer species present. Additional photographs of all villas and equipment shed locations within Site A1 are provided in the Appendices.				
Threatened species or community	No threatened flora nor fauna were observed (EPBC Act 1999, or NPW Act 1972).				
Landscape context score	1.14	Vegetation Condition Score	23.96	Conservation significance score	1.10
Unit biodiversity Score	30.05	Area (ha)	0.121	Total biodiversity Score	3.64

SITE A2

Vegetation Association	Vegetation Association Two: Site A2 Rough-barked Manna Gum (*Eucalyptus viminalis* ssp. *cygnetensis*) Open Forest over Bracken Fern (*Pteridium esculentum*)

Figure 2. Representative photograph of Site A2 from location of Villa No. 2, looking to the south east. GPS 485946 5855125. Site A2 extends 39m into the middle background after the first trees.

General description	The dominant native species on Site A2 is Bracken Fern (*Pteridium esculentum*) under a canopy of Rough-barked Manna Gum (*Eucalyptus viminalis* ssp. *cygnetensis*). Overall condition of the native vegetation in Site A2 was moderate. Goats were present and their impact was clear with no regeneration observed and limited number of native ground layer species present. Additional photographs of all villas and equipment shed locations within Site A2 are provided in the Appendices.				
Threatened species or community	No threatened flora nor fauna were observed (EPBC Act 1999, or NPW Act 1972).				
Landscape context score	1.14	Vegetation Condition Score	33.06	Conservation significance score	1.10
Unit biodiversity Score	41.46	Area (ha)	1.432	Total biodiversity Score	59.37

SITE A3

Vegetation Association	Vegetation Association Three: Site A3 Rough-barked Manna Gum (*Eucalyptus viminalis* ssp. *cygnetensis*) Low Woodland over Slender Wallaby-grass (*Rytidosperma racemosum*) and Scabiosa (*Scabiosa atropurpurea*).

Figure 3. Representative photograph of Site A3 looking to the south west, vineyard is in the background. GPS 485899 5855085.

Figure 4. Representative photograph of Site A3 within an old quarry looking to the north east toward the location of Figure 3. GPS 485823 5855057.

General description	The dominant native species on Site A3 is Slender Wallaby-grass (*Rytidosperma racemosum*) under a canopy of sparse Rough-barked Manna Gum (*Eucalyptus viminalis* ssp. *cygnetensis*). The dominant exotic species is Scabiosa (*Scabiosa atropurpurea*). Overall condition of the native vegetation in Site A3 was very poor. Goats were present and their impact was clear with no regeneration observed and only three native ground layer species present. The site location includes part of an old quarry site.				
Threatened species or community	No threatened flora nor fauna were observed (EPBC Act 1999, or NPW Act 1972).				
Landscape context score	1.14	Vegetation Condition Score	11.33	Conservation significance score	1.10
Unit biodiversity Score	14.21	Area (ha)	0.065	Total biodiversity Score	0.92

SITE A4

Vegetation Association	Vegetation Association Four: Site A4 Rough-barked Manna Gum (*Eucalyptus viminalis* ssp. *cygnetensis*) Low Woodland over Slender Wallaby-grass (*Rytidosperma racemosum*).

Figure 5. Representative photograph of Site A4 looking to the east. GPS 485847 5855056.

General description	The dominant native species on Site A4 is Slender Wallaby-grass (*Rytidosperma racemosum*) under a canopy of sparse Rough-barked Manna Gum (*Eucalyptus viminalis* ssp. *cygnetensis*). Overall condition of the native vegetation in Site A4 was poor. Goats were present and their impact was clear with no regeneration observed and only three native ground layer species present.				
Threatened species or community	No threatened flora nor fauna were observed (EPBC Act 1999, or NPW Act 1972).				
Landscape context score	1.14	Vegetation Condition Score	14.50	Conservation significance score	1.10
Unit biodiversity Score	18.18	Area (ha)	0.381	Total biodiversity Score	6.93

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

Figure 6. Site map identifying area of impact for the proposed tourist accommodation project. Areas A2 and A4 represent 30m CFS required fuel management zones where trees will be retained, but Bracken Fern limited to 30% cover.

4.2 Threatened Species assessment

Species observed on site, or recorded within 5km (50km in the arid zone) 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
Fauna						
Isoodon obesulus ssp. *obesulus (*Southern Brown Bandicoot)	V	EN	5, 6		Scrubby habitat with plenty of low ground cover and shelter.	Unlikely – site unlikely to provide suitable habitat.
Calyptorhynchus banksii ssp. *graptogyne* (SE Red-tailed Black Cockatoo)	E	EN	5		Feeding, *Eucalyptus arenacea/baxteri or Allocasuarina luehmannii.* Perching, any tree.	Highly likely- feeding habitat (Nangwarry Forest Reserve) adjoins bushland containing Sites.
Litoria reniformis (Southern Bell Frog)	V	VU	5		Near permanent or ephemeral	Unlikely – site unlikely to

					waterbodies or flood plains.	provide suitable habitat.
Pteropus poliocephalus (Grey-headed Flying-fox)	R	VU	3	2020 satellite tracking	Utilises a range of native and exotic trees for feeding and camping.	Highly likely- recorded by satellite tracking. Suitable habitat available.
Myiagra cyanoleuca (Satin Flycatcher)	E		6		Tall forests, preferring wetter habitats such as heavily forested gullies.	Likely – limited suitable habitat.
Falsistrellus tasmaniensis (Eastern False Pipistrelle)	E		3, 4	2020	Hollow trunks of Eucalypt trees over 20 m high in wet sclerophyll forest and coastal mallee. Occasional old wooden buildings.	Likely – recorded in Nangwarry Forest Reserve. Feeds in or amongst tree canopy.
Nyctophilus gouldi (Gould's Long-eared Bat)	E		3, 4	2020	Sclerophyll forests and woodland, including forest remnants.	Likely – recorded in Nangwarry Forest Reserve.
Calyptorhynchus funereus (Yellow-tailed Black Cockatoo)	V		6		Eucalypt woodlands and pine plantations.	Highly likely- commonly seen in the area, but no recorded sightings.
Neophema chrysostoma (Blue-winged Parrot)	V		2, 3, 6	2008	Coastal, sub-coastal and inland areas, favouring grassy habitats. And altered environments such as airfields, golf-courses and paddocks.	Highly likely – suitable open patches nearby.
Hirundapus caudacutus caudatus (White-throated Needletail)	V		3	1997	Aerial birds that will roost in trees.	Possible – suitable roosting habitat, but no recent records.
Antechinus flavipes (Yellow-footed Antechinus)	V		2, 3	2020	Leaf litter and fallen logs in forests, heath, woodlands and coastal plains.	Possible – site unlikely to have suitable habitat. Recent observation in Nangwarry Forest Reserve, suitable habitat may occur nearby.
Coracina papuensis (White-bellied Cuckooshrike)	R		2, 3, 6	2018	Mostly forests and woodlands, also grasslands.	Highly likely – suitable habitat.

Drysdalia coronoides (White-lipped Snake)	R		6		Most areas, including heaths, sclerophyll forests and woodlands.	Possible – suitable habitat, but no recent records.
Falcunculus frontatus (Crested Shriketit)	R		2, 3, 6	2018	Eucalypt forests and woodlands and sometimes seen in parks and gardens, on farms with scattered trees, and in pine plantations.	Highly likely – suitable habitat present and recent recording nearby, Tower Road.
Petaurus breviceps (Sugar Glider)	R		2, 3, 6	2006	Open woodlands and forests.	Possible – limited feeding resources present.
Petroica boodang (Scarlet Robin)	R		6		Forests and woodlands with open understorey, can be found in grassland, farmland and urban areas.	Possible – suitable habitat, but no recent records.
Trichosurus vulpecula (Common Brushtail Possum)	R		2, 3, 6	1997	Open dry eucalypt forest, woodlands, heath and urban areas.	Possible - suitable habitat, but no recent records.
Turnix varius (Painted Buttonquail)	R		6		Eucalypt woodland with deep leaf litter.	Possible - suitable habitat (leaf litter) in adjoining bushland
Zoothera lunulata (Bassian Thrush)	R		6		Damp, densely forested areas and gullies, usually with a thick canopy and leaf-litter.	Unlikely - site unlikely to provide suitable habitat.
Oriolus sagittatus sagittata (Olive-backed Oriole)	R		3	1995	Forests, woodlands and well-treed urban areas.	Possible - suitable habitat, but no recent records.
Stipiturus malachurus polionotum (Southern Emuwren (South East))	R		2, 3	2004	Heaths and swampy vegetation.	Unlikely – no suitable habitat.
Corcorax melanorhamphos (White-winged Chough)	R		2, 3	2006	Open forests, woodlands and mallee, preferring wetter areas, with lots of leaf-litter.	Likely – limited leaf litter available.
Entomyzon cyanotis cyanotic (Blue-faced Honeyeater)	R		2, 3	2005	Open forests and eucalypt woodlands, farmland, urban areas	Likely – suitable habitat.
Amphibolurus muricatus (Jacky Lizard)	R		2, 3	2018	Sclerophyll forests, coastal woodlands, usually in areas with some native vegetation	Highly likely – suitable habitat.

Flora						
Thelymitra matthewsii	E	VU	5		Heathy Open Forest, Woodland or Mallee on limestone or in calcareous sands.	Unlikely. Marginal habitat, grazed by goats.
Wahlenbergia gymnoclada (Naked Bluebell)	V		2	2017	light forest or heathland on sandy soils	Possible. Suitable habitat, but grazed by goats.
Corybas unguiculatus (Small Helmet-orchid)	R		2, 3	2017	Damp sand in Stringybark Forest.	Unlikely. No suitable habitat.
Microtis atrata (Yellow Onion-orchid)	R		2, 3	2016	Boggy soil or around swamp margins in high rainfall districts.	Unlikely. No suitable habitat.
Stylidium beaugleholei (Beauglehole's Trigger-plant)	R		2	2019	Moist lowland heaths and drying swamps.	Unlikely. No suitable habitat.
Sphaerolobium minus (Leafless Globe-pea)	R		2, 3	2002	Sclerophyll forests, woodlands and heathlands.	Possible. Suitable habitat, but grazed by goats.
Juncus procerus (Tall Rush)	R		2, 3	2013	Edge of permanent or seasonal wet areas such as swamps, dams and roadside swales.	Unlikely. No suitable habitat
Eryngium vesiculosum (Prostrate Blue Devil)	R		2, 3	2013	Sandy flats in low-lying damp areas.	Unlikely. No suitable habitat
Thelymitra aristata (Great Sun-orchid)	R		2, 3	2015	Damp sands around swamp margins or in clay or gravel soils in forest or scrubland	Unlikely. No suitable habitat
Thelymitra flexuosa (Twisted Sun-orchid)	R		2	2020	Open forest or heathland in soil which is very wet in winter.	Unlikely. No suitable habitat
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 provides 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 provides 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.

Direct Impacts

This clearance application is to permanently remove 0.186 hectares of native vegetation to establish six accommodation buildings and an equipment shed, including ancillary requirements such as rainwater tanks, electricity supply and vehicle access where necessary. The native vegetation comprises;

- 0.121 ha of Rough-barked Manna Gum (*Eucalyptus viminalis* ssp. *cygnetensis*) Open Forest over Bracken Fern (*Pteridium esculentum*); and
- 0.065 of Rough-barked Manna Gum Low Woodland over Slender Wallaby-grass (*Rytidosperma racemosum*) and Scabiosa (*Scabiosa atropurpurea*).

A further 1.813 hectare will be partially cleared to meet CFS fuel management criteria: 30m for accommodation buildings and 10m for an equipment shed. All trees will be retained within this area. Two trees may be trimmed back, removing less than 20% of the current canopy. Bracken Fern will be reduced to 30% cover in total and comprised of discrete clumps. Ground layer plants will be retained. Native vegetation in this fuel management zone consists of;

- 1.432 hectares of Rough-barked Manna Gum (*Eucalyptus viminalis* ssp. *cygnetensis*) Open Forest over Bracken Fern (*Pteridium esculentum*); and
- 0.381 hectares of Rough-barked Manna Gum Low Woodland over Bracken Fern and Slender Wallaby-grass.

Indirect Impacts

No additional indirect impacts are envisioned. Impacts from building will be limited to the proposed construction envelopes with vehicles and machinery restricted to existing vineyard roadways. All waste created during construction will be contained within the clearance envelope and then removed from site.

Cumulative Impacts

Cumulative impacts are not expected to occur. Dust may increase during construction, but will cease once construction is finalised. Each accommodation building will have its own Biocycle unit to process waste water. Discharge from each Biocycle will exit within the 30m CFS required clearance zone (Sites A2 and A4). Any potential impact from increased weed growth will be addressed within regular site maintenance, including weed control.

Areas around the accommodation buildings will be planted with local native species wherever possible, ensuring CFS requirements are maintained. No exotic garden plants will be introduced that could potentially escape into the surrounding vegetation and cause degradation of the habitat.

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 primary purpose of Raidis Retreat is to provide visitors a feeling of being immersed in bushland. To achieve this, the accommodation needs to be nestled amongst native vegetation, but done in way that avoids clearance as much as possible.

Placing Raidis Retreat in the adjoining vineyard next to the bushland was determined to be unviable. It would not provide a feeling of being immersed in bushland. Additionally, the cost of removing the vines and restraining wire on 120 rows of grape vines ($12, 176.00) and the projected loss of income from the vineyard ($5, 768, 100.00) over 30 years) would make the project unviable. The chosen placement also screens the accommodation from the pine tree plantation on the southern boundary of the property.

Great care was taken when considering the project's location to limit the area and extent of vegetation clearance. Access to each building will utilise current roadways within the vineyard. Villa No. 4 is set back 25m into the bushland to avoid clearance of mature Rough-barked Manna Gum trees. The chosen location will result in the tree canopy remaining intact. The western end of the main building will project over an old degraded quarry site containing little native vegetation. Small clumps of Bracken Fern were the only native plants identified in this area. Placing the main building in this location avoids clearing native vegetation elsewhere on the property.

The property and bushland have a long history of being grazed by domestic animals and the bushland is currently grazed by goats. The grazing impact is greatest along the western edge of the bushland where the buildings are proposed to be located.

Raidis Retreat is reliant on maintaining habitat for all existing fauna which are critical to the success of the project and its ability to provide a genuine bushland experience. The owners have already engaged with the local Communities Helping Cockies Project (funded by National Landcare Program 2) with a view to improving habitat quality. Under guidance of the project officer, over 400 local native plants have been selected to improve habitat value in key areas of the remaining bushland away from the project site. The owners have also removed a substantial number of large mature pine tree wildlings.

During construction all vehicles and machinery will be required to meet strict biosecurity standards to protect the vineyard and bushland. They will not enter the bushland, but remain on existing roadways. All building waste generated during construction will be removed from the site. After construction the property will monitored to ensure no new weeds were brought onto site, including the bushland area.

Currently there are no opportunities in the Limestone Coast for luxury tourist accommodation that can also provide an immersive bushland experience. Most similar opportunities are restricted to camping or where the accommodation is remote from a bushland setting. Raidis Retreat would provide a unique tourism experience for visitors to the Limestone Coast and provide an opportunity to learn about the local bushland and the animals that rely on it.

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).

To establish Raidis Retreat, vegetation clearance is unavoidable. However, siting the buildings in the most degraded area, on the bushland edge adjoining a vineyard roadway, avoids clearing better quality vegetation. The project's total clearance area is 1.999 hectares, of which 0.186 hectares (10.3%) will be permanently cleared. The remaining 1.813 hectares will be partially cleared to meet CFS fuel management criteria; 30m from each accommodation building and 10m from the equipment shed. The owners have had on site discussions with the

CFS and confirmed all trees could remain within the CFS required area. The canopy will remain intact and clearance will be limited to one species, Bracken Fern which will be restricted to 30% cover comprised of discrete clumps. Minimising vegetation clearance was very important for the owners and considered critical for Raidis Retreat to provide an immersive bushland experience.

A total of 14 trees will be removed for the project. Siting villas and the retreat closer to the vineyard roadway would necessitate more trees to be removed. The current design reduces tree removal to a minimum. Buildings are nestled in open areas under the tree canopy. Similarly, the equipment shed is positioned to take advantage of a gap in the tree canopy and a solar panel array will be installed on the roof to provide power for all the other buildings. Two trees on the southern side of the shed may require trimming of less than 20% of their canopy (one Rough-barked Manna Gum and one Black Wattle (*Acacia mearnsii*)). Access into the shed will be from the northern side, between the property boundary and the shed.

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.

The proposed vegetation clearance is the minimum required to establish Raidis Retreat, avoiding clearance of more vegetation. Natural regeneration will be encouraged within CFS requirements. Targeted revegetation around the villas and main accommodation building will be undertaken to ensure privacy where required. These plantings will provide additional habitat and encourage birds to frequent closer to the buildings, thus providing a richer experience for guests. Planting will meet CFS requirements and utilise local native species as a priority.

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 NVC will only consider an offset once avoidance, minimization and restoration have been documented and fulfilled. The SEB Policy explains the biodiversity offsetting principles that must be met.

It is proposed to offset vegetation clearance with a payment into the Native Vegetation Fund.

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 Number of plants species recorded Native Species / Introduced Species Site A1: 14 / 22 Site A2: 19 / 24 Site A3: 6 / 15 Site A4: 6 / 16 Bushland Plant Diversity Score Site A1 – 12.0 Site A2 – 16.0

<table>
<tr><td></td><td>Site A3 – 4.0
Site A4 – 4.0</td></tr>
<tr><td></td><td><u>Assessment against the principles</u>
At Variance
Site A1 - Rough-barked Manna Gum (Eucalyptus viminalis ssp. cygnetensis) Open Forest over Bracken Fern (Pteridium esculentum).
Site A2 - Rough-barked Manna Gum (Eucalyptus viminalis ssp. cygnetensis) Open Forest over Bracken Fern (Pteridium esculentum)</td></tr>
<tr><td></td><td><u>Moderating factors that may be considered by the NVC</u>
The proposed vegetation clearance represents a very small area compared to the amount of remnant native vegetation within a 5km radius of the site. Native vegetation covers 24% of the surrounding area (5km radius), which equates to 1, 885 hectares. The proposed clearance of 1.999ha represents 0.106% of native vegetation within the local vicinity. The vegetation condition of Sites A1 and A2 is moderate to poor with no middle story present and the understory represented by one species: Bracken Fern. No evidence of any geophytes was observed including beyond the immediate impact areas despite thorough targeted searching, including locations protected from grazing such as under large fallen branches. Therefore, it is recommended to moderate Sites A1 and A2 from At Variance to Not at Variance.</td></tr>
<tr><td>Principle 1b - significance as a habitat for wildlife</td><td><u>Relevant information</u>
No threatened fauna were observed during the field survey.
The following 15 threatened fauna were identified from a desktop survey as likely to use the area for habitat;
• South East Red-tailed Black Cockatoo (AUS EN, State E);
• Grey-headed Flying-fox (AUS VU, State R);
• Gould's Long-eared Bat (State E);
• Eastern False Pipistrelle (State E);
• Satin Flycatcher (State E);
• Blue-winged Parrot (State V);
• White-throated Needletail (State V);
• Yellow-tailed Black Cockatoo (State V);
• Blue-faced Honeyeater (State R);
• Common Brushtail Possum (State R);
• Crested Shriketit (State R);
• Jacky Lizard (State R);
• Painted Buttonquail (State R);
• White-bellied Cuckooshrike (State R); and
• White-winged Chough (State R).
<table><tr><th></th><th>Threatened Fauna Score</th><th>Unit Biodiversity Score</th></tr><tr><td>Site A1</td><td>0.1</td><td>30.05</td></tr><tr><td>Site A2</td><td>0.1</td><td>41.46</td></tr><tr><td>Site A3</td><td>0.1</td><td>14.21</td></tr><tr><td>Site A4</td><td>0.1</td><td>18.18</td></tr></table></td></tr>
<tr><td></td><td><u>Assessment against the principles</u>
Seriously at Variance
Site A1 – Rough-barked Manna Gum (Eucalyptus viminalis ssp. cygnetensis) Open Forest over Bracken Fern (Pteridium esculentum)
Site A2 – Rough-barked Manna Gum (Eucalyptus viminalis ssp. cygnetensis) Open Forest over Bracken Fern (Pteridium esculentum)</td></tr>
</table>

	Site A3 – Rough-barked Manna Gum Low Woodland over Slender Wallaby-grass (*Rytidosperma racemosum*) and Scabiosa (*Scabiosa atropurpurea*) Site A4 - Rough-barked Manna Gum Low Woodland over Slender Wallaby-grass (*Rytidosperma racemosum*).
	<u>Moderating factors that may be considered by the NVC</u> The proposed clearance area is 1.999 hectares of native vegetation historically grazed by domestic stock and currently grazed by goats. Nangwarry Forest Reserve occurs approximately one kilometre to the south east and provides higher quality and wider range of habitats. It is unlikely the threatened species listed above would be impacted by the proposed vegetation clearance. Sites A1 to A4 are considered to be non-essential habitat for the listed threatened species, therefore it is recommended to moderate the sites from Seriously at Variance to **At Variance.**
Principle 1c - plants of a rare, vulnerable or endangered species	<u>Relevant information</u> No threatened flora were recorded for Sites A1, A2, A3 nor A4. Database searches identified two species that may be present, but not detectable; • Naked Bluebell (State V); and • Leafless Globe-pea (State R). No evidence of threatened flora nor any geophytes was observed including beyond Sites A1, A2, A3 and A4, despite thorough targeted searching, including locations protected from grazing such as under large fallen branches. Threatened Flora Score(s) Site A1 – 0.00 Site A2 – 0.00 Site A3 – 0.00 Site A4 – 0.00
	<u>Assessment against the principles</u> Not at Variance.
	<u>Moderating factors that may be considered by the NVC</u> Historical grazing by domestic stock and currently by goats means it is unlikely any palatable plant species remain within the area of the proposed vegetation clearance.
***Principle 1d - the vegetation comprises the whole or part of a plant community that is Rare, Vulnerable or endangered*:**	<u>Relevant information</u> No EPBC listed or State threatened ecosystems occur on Sites A1, A2, A3 nor A4. *Eucalyptus viminalis* ssp. *cygnetensis* and/or *E. viminalis* ssp. *viminalis* Woodland on alluvial soils in moist areas are State listed as VULNERABLE in IBRA Regions NCP2 and NCP3. Although the vegetation communities subject of this clearance proposal are *Eucalyptus viminalis* ssp. *cygnetensis* Open Forest (Sites A1 and A2) or Low Woodland (Sites A3 and A4) they do not occur on alluvial soils and therefore do not meet the criteria of a Vulnerable plant community. Threatened Community Score Site A1 – 1.00 Site A2 – 1.00 Site A3 – 1.00 Site A4 – 1.00
	<u>Assessment against the principles</u>

	Not at Variance
	<u>Moderating factors that may be considered by the NVC</u> Not Applicable
Principle 1e - it is significant as a remnant of vegetation in an area which has been extensively cleared.	<u>Relevant information</u> Sites A1 and A2 are in moderate to moderate-poor condition. Sites A3 and A4 are in poor to very poor condition. All sites consist of a tree layer, a Bracken Fern layer and a ground layer with limited species diversity. No regeneration was observed. Remnancy; IBRA Association Dismal Swamp – 8% IBRA Subregion Glenelg Plain – 10% Within 5km radius – 24% Total Biodiversity Score Site A1 – 3.64 Site A2 – 59.37 Site A3 – 0.92 Site A4 – 6.93 Total – 70.86
	<u>Assessment against the principles</u> **Seriously at Variance** All sites are Seriously at Variance due to the percentage of remaining native vegetation in the IRRA Association and Subregion being less than or equal to 10%.
	<u>Moderating factors that may be considered by the NVC</u> All sites have limited structural diversity containing trees and bracken with a restricted diversity of ground layer plants, resulting in their condition ranging from moderate to very poor. All trees and ground layer plants will be retained within the CFS fuel management zone, Sites A2 and A4. These two sites represent 89.7% of the vegetation clearance and 66.30 out of 70.86 Total Biodiversity Score. The impact significance will be limited to the layer of Bracken Fern. Considering these moderating factors, Sites A1, A2, A3 and A4 are recommended to be moderated from Seriously at Variance to **At Variance.**
Principle 1f - it is growing in, or in association with, a wetland environment.	<u>Relevant information</u> Sites A3 and A4, according to NatureMaps Data, occur across the northern edge of Wetland Number S0106480 (Wetland Name: InverLoch), which does not have an Environmental Value Assessment (EVA) due to No Data. And a Decision Description of *Unknown ecological values, spatial unit has low to moderate naturalness and connectivity values.* On the ground, this area is an old large quarry site that has been excavated two to three metres below the natural ground level. Since the owners have been on the property, approximately 17 years, this area has never held water. The next closest wetland is S0115654, similarly named Inverloch Wetland and also has no EVA. It occurs 100m south east of Site A2 and 150m south east of Site A4.
	<u>Assessment against the principles</u> The area has never held water for at least the past 17 years. No wetland species typically associated with wet or damp areas were found growing within Sites A3 and A4. There was no change in plant species in this area except for more general exotic species. After on ground assessment of all sites were considered, it was determined they were not growing in, or in association with, a wetland environment. And therefore, **Not at Variance** with this principle.
	<u>Moderating factors that may be considered by the NVC</u> Not Applicable.

	(Representative photographs of the area are provided in the appendices.)
Principle 1g - it contributes significantly to the amenity of the area in which it is growing or is situated.	Relevant information The proposed Raidis Retreat project is located approximately 500m to the east of Riddoch Highway within the tree line of a patch of bushland adjoining a pine tree plantation and United Dairy Company processing facility. A mature vineyard occurs between the highway and the tree line. To the west of the highway occurs dryland pasture with many scattered River Red Gum (*Eucalyptus camaldulensis* ssp. *camaldulensis*) trees. Infrastructure associated with the Katnook Gas Plant is also located in the western paddock with its entrance approximately 300m south of the proposed entrance to Raidis Retreat.
	N/A
	Moderating factors that may be considered by the NVC Both Wattle Range Council and South Australian Tourism Commission are supportive of the project, subject to Development and Planning and Native Vegetation Council approval. Raidis Estate have consulted with Limestone Coast Landscape Board's Bush Management Advisor, prior to proceeding with the project concept. Letters of support from Wattle Range Council and South Australian Tourism Commission are provided in the appendices.

Principles of Clearance (h-m) will be considered by comments provided by the local NRM Board or relevant Minister. The Data Report should contain information on these principles where relevant and where sufficient information or expertise is available.

4.6 Risk Assessment

Determine the level of risk associated with the application

Total clearance	No. of trees	
	Area (ha)	1.999
	Total biodiversity Score	70.86
Seriously at variance with principle 1(b), 1(c) or 1 (d)		b)
Risk assessment outcome		Level 4

5. Clearance summary

Clearance Area(s) Summary table

Block	Site	Species diversity score	Threatened Ecological community Score	Threatened plant score	Threatened fauna score	UBS	Area (ha)	Total Biodiversity score	Loss factor	Loadings	Reductions	SEB Points required	SEB payment	Admin Fee
A	1	12	1	0	0.1	30.05	0.121	3.64	1			3.82	$3, 298.30	$182.01
A	2	16	1	0	0.1	41.46	1.432	59.37	0.8			49.87	$43, 082.47	$2, 369.54
A	3	4	1	0	0.1	14.21	0.065	0.92	1			0.97	$837.61	$46.07
A	4	4	1	0	0.1	18.18	0.381	6.93	0.8			5.82	$5, 027.54	$276.51
						Total	**1.999**	**70.86**				**60.49**	**$52, 245.92**	**$2, 873.53**

Totals summary table

	Total Biodiversity score	Total SEB points required	SEB Payment	Admin Fee	Total Payment
Application	70.86	60.48	$52, 245.92	$2, 873.53	$55, 119.45

Economies of Scale Factor	0.5
Rainfall (mm)	655

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:

☐ Establish a new SEB Area on land owned by the proponent.

☐ Use SEB Credit that the proponent has established. Provide the SEB Credit Ref. No. _____

☐ Apply to have SEB Credit assigned from another person or body. The application form needs to be submitted with this Data Report.

☐ Apply to have an SEB to be delivered by a Third Party. The application form needs to be submitted with this Data Report.

☒ 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:

Raidis Estate propose to achieve the required SEB by paying into the Native Vegetation Fund. Based on requirements to achieve **60.48 SEB points** within the Limestone Coast Landscape Board (**Economies of Scale 0.5**) and an average rainfall of **655mm**, based on data obtained from NatureMaps, the required payment into the fund is $52, 245.92 (GST exclusive), plus $2, 873.53 Administration Fee (GST inclusive): total **$55, 119.45.**

7. Appendices

Appendix 1. Bushland Assessment Scoresheets associated with the proposed clearance (to be submitted in Excel format)

Appendix 2. Letters of Support

Appendix 3. Projected Income Loss From Vine Removal Alternative (submitted as Excel file)

Appendix 4. Additional Site Photographs

Proposed Villa No. 1

Figure 7 View from proposed Villa No.1 looking to the north west, GPS 485900 5855094.

Figure 8 View from proposed Villa No.1 looking to the south east, GPS 485900 5855094.

Proposed Villa No. 2

Figure 9 View from proposed Villa No.2 looking to the north, GPS 485946 5855125.

Figure 10 View from proposed Villa No.2 looking to the south east, GPS 485946 5855125.

Figure 11 View from proposed Villa No.2 looking toward proposed Villa No 3. (north east), GPS 485946 5855125.

Proposed Villa No. 3

Figure 12 View from proposed Villa No.3 looking to the east, GPS 485990 5855140.

Figure 13 View from proposed Villa No.3 looking to the west, GPS 485990 5855140.

Proposed Villa No. 4

Figure 14 View from proposed Villa No.4 looking to the south east, GPS 486046 5855178.

Figure 15 View from proposed Villa No.4 looking to the south west, GPS 486046 5855178.

Proposed Villa No. 5

Figure 16 View from proposed Villa No.5 looking to the east, GPS 486062 5855247.

Figure 17 View from proposed Villa No.5 looking to the west, GPS 486062 5855247.

Proposed Equipment Shed.

Figure 18 View from the proposed equipment shed looking to the north east into the adjoining neighbour's property, GPS 486092 5855327.

Figure 19 View from the proposed equipment shed looking to the west, GPS 486088 5855331.

Database Listed Wetland

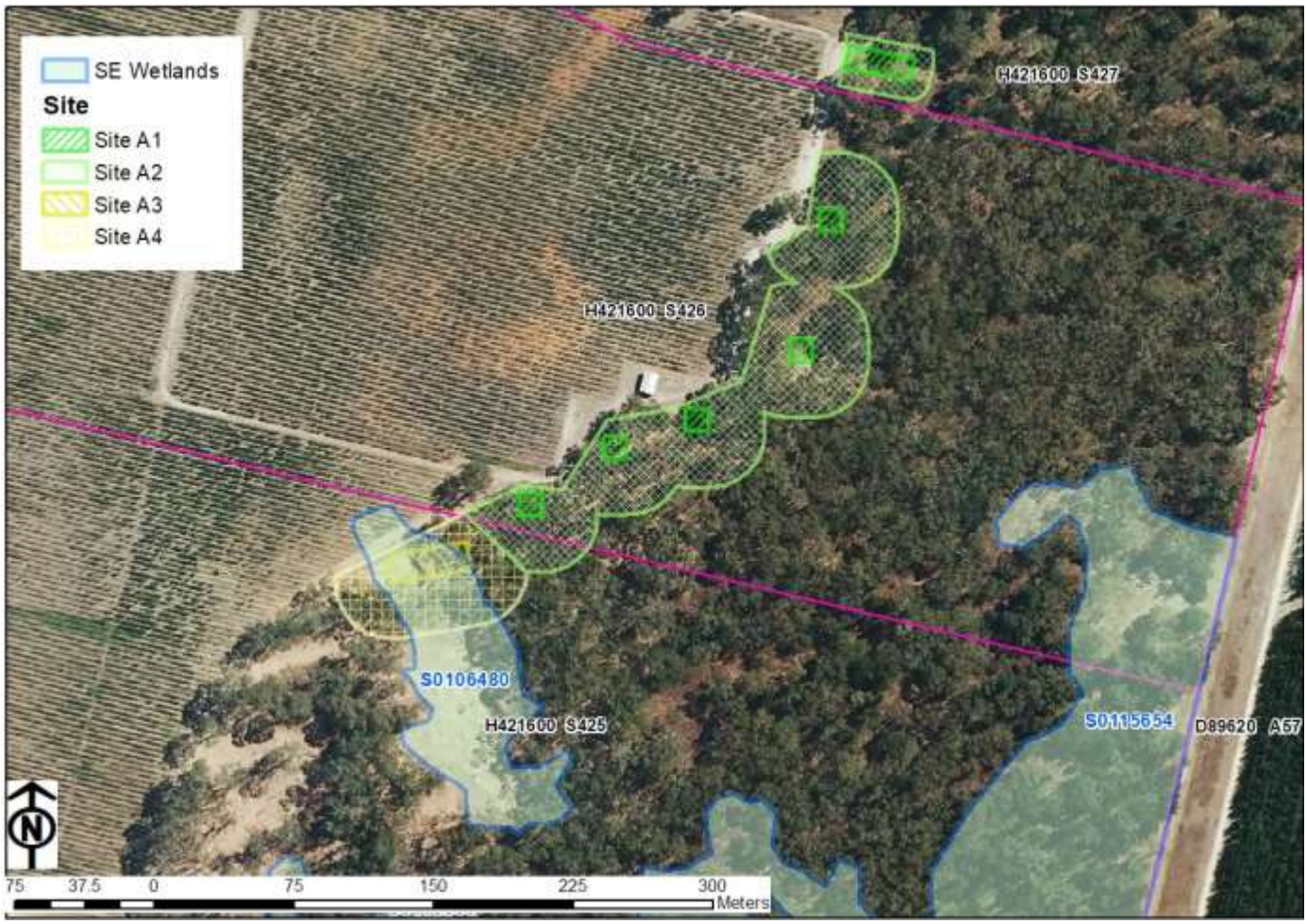


Figure 20 Map of NatureMaps listed wetlands No. S0106480 and S0115654. Both are identified as Inverloch Wetland with no Environmental Value Assessment. S0106480 is an old quarry site which does not hold water.

Figure 21 View of NatureMaps listed wetland S0106480 (Site A3) looking to the north east, GPS 485829 5855059.

Figure 22 View of NatureMaps listed wetland S0106480 to the south of Sites A3 and A4, GPS 485839 5855033.