Native Vegetation Clearance

2332 Cape Willoughby Road, Willoughby

Data Report

Clearance under the *Native Vegetation Regulations 2017*

27th February, 2024

Prepared by Michelle Haby

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1. Application information

Application Details

Applicant:	[redacted]		
Key contact:	[redacted]		
Landowner:	[redacted]		
Site Address:	2332 Cape Willoughby Road, Willoughby SA 5222		
Local Government Area:	Kangaroo Island	Hundred:	Dudley
Title ID:	CT/5869/459	Parcel ID	H110200 S385

Summary of proposed clearance

Purpose of clearance	Clearance required for the construction of an access driveway along an unmade road reserve
Native Vegetation Regulation	Regulation 12, Schedule 1; clause 34, Infrastructure
Description of the vegetation under application	2.50 ha of Narrow-leaf Mallee (*Eucalyptus cneorifolia*) Woodland in poor weedy and senescent condition
Total proposed clearance - area (ha) and number of trees	0.66 ha are proposed to be cleared.
Level of clearance	Level 4
Overlay (Planning and Design Code)	Native Vegetation Overlay
Map of proposed clearance area	
Mitigation hierarchy	Avoidance is not possible as there is no practicable safe alternative access to the allotment.
SEB Offset proposal	Payment of $15,084.56 or 2.82 ha on-ground

2. Purpose of clearance

2.1 Description

Clearance is required to construct a vehicle access road through an unmade road reserve to the north-western boundary of 2332 Cape Willoughby Road, Willoughby.

2.2 Background

The locality of Willoughby was first officially settled in the mid 1800's with the construction of the Cape Willoughby Lighthouse. Farming practises soon followed in the area to sustain the small population of settlers. The area was surveyed and gazetted in 1882. At this time a public road was surveyed to allow access to Sections 386 and 385 (2332 Cape Willoughby Road) and Cape Hart, however it is believed that the road was never constructed beyond a few meters off Cape Willoughby Road. Since this time, these allotments have been accessed via an unofficial "right of way" through the cleared farmland adjacent to the eastern side of the road reserve. An attempt to formalise access to the allotments was made in 2006, however due to one reason or other it was not successful.

Section 385 has since been sold and the new landholders wished to create a safe all-weather access track to their property. Based on advice from various agencies, they cleared a narrow track from the end of the formally constructed road to the northern end of their property. Until this track was created, the only access to their allotment was via Dead Man Track (Figure 4). This fire track, which initially runs through and then skirts the northern boundary of Leseur Conservation Park, is very rough due to the surface limestone that is present throughout the area and traverses through a steep gully, which is impassable in winter. The CFS have advised that this track does not meet their standards as a safe all-weather access track.

2.3 General location map

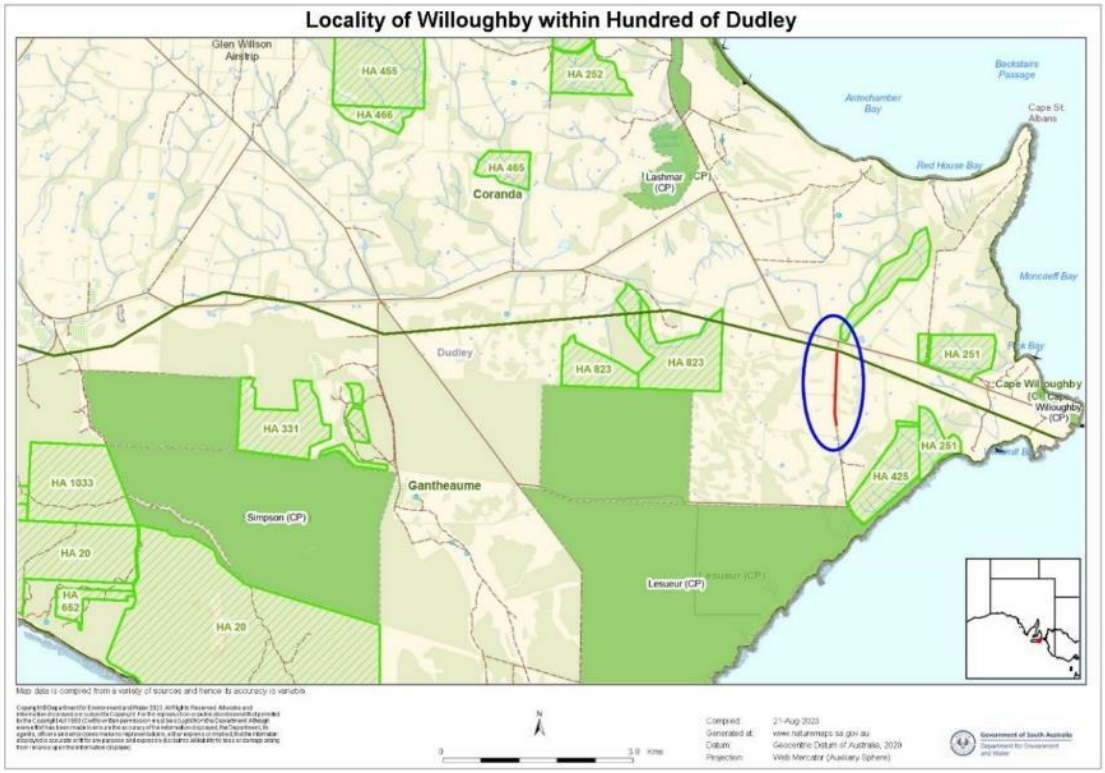


Figure 1. Location of the 2332 Cape Willoughby Rd, Willoughby within the Hundred of Dudley. (Scale 1:72,224)

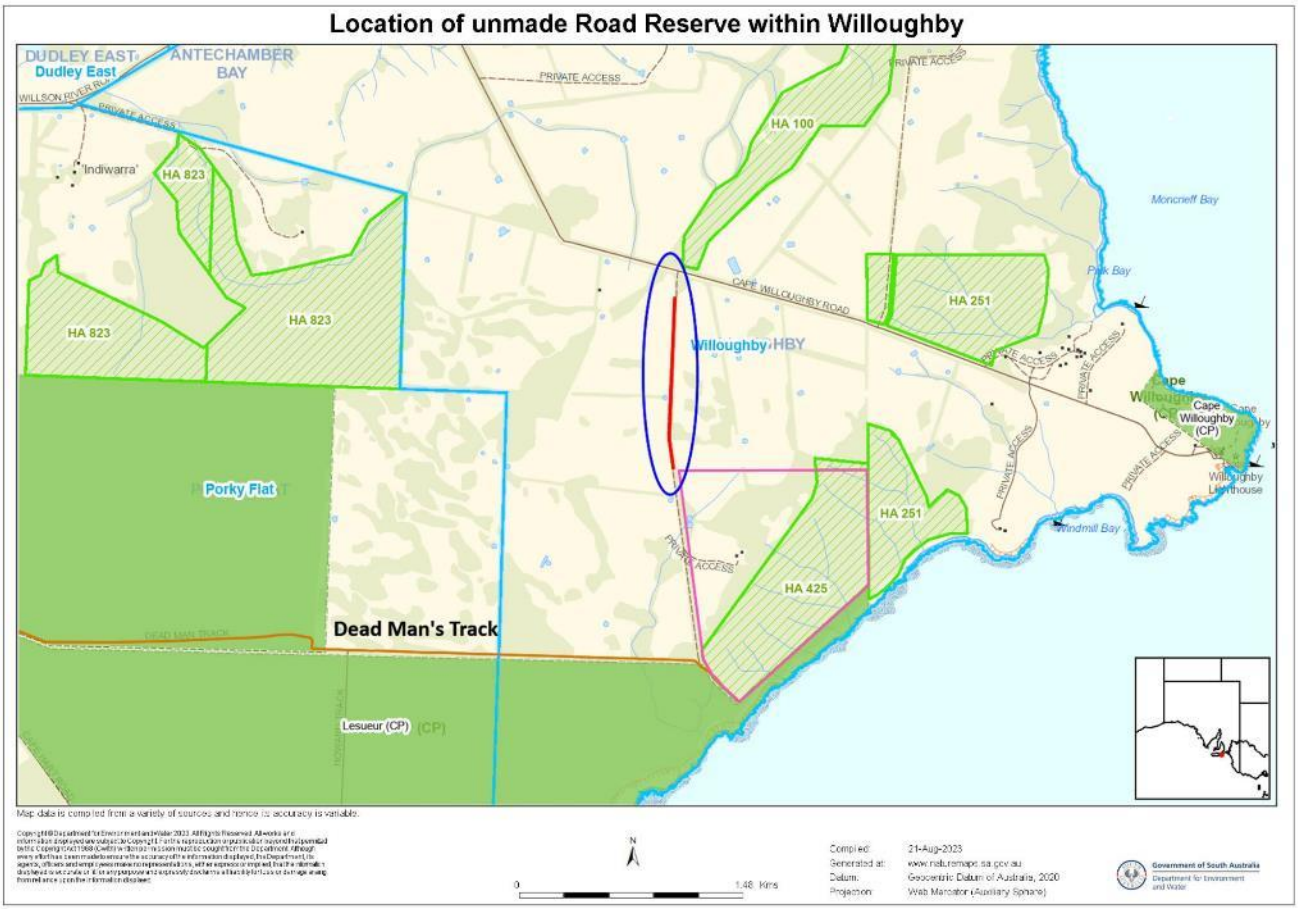


Figure 2. Location of the unmade Road Reserve within the locality of Willoughby. (Scale 1:36,112)

Figure 3. Location of clearance area on the unmade Road Reserve to 2332 Cape Willoughby Rd, Willoughby. (Scale 1:9,028)

2.4 Details of the proposal

The landholders wished to construct a track through an unmade road reserve to their property. Following meetings with multiple stakeholders a narrow track was created that wound through the trees that are growing on the reserve. As due process was not followed, works have been halted until the matter is resolved. Prior to the narrow track being constructed, the only access available to the property was via Dead Man's Track (Figure 4).

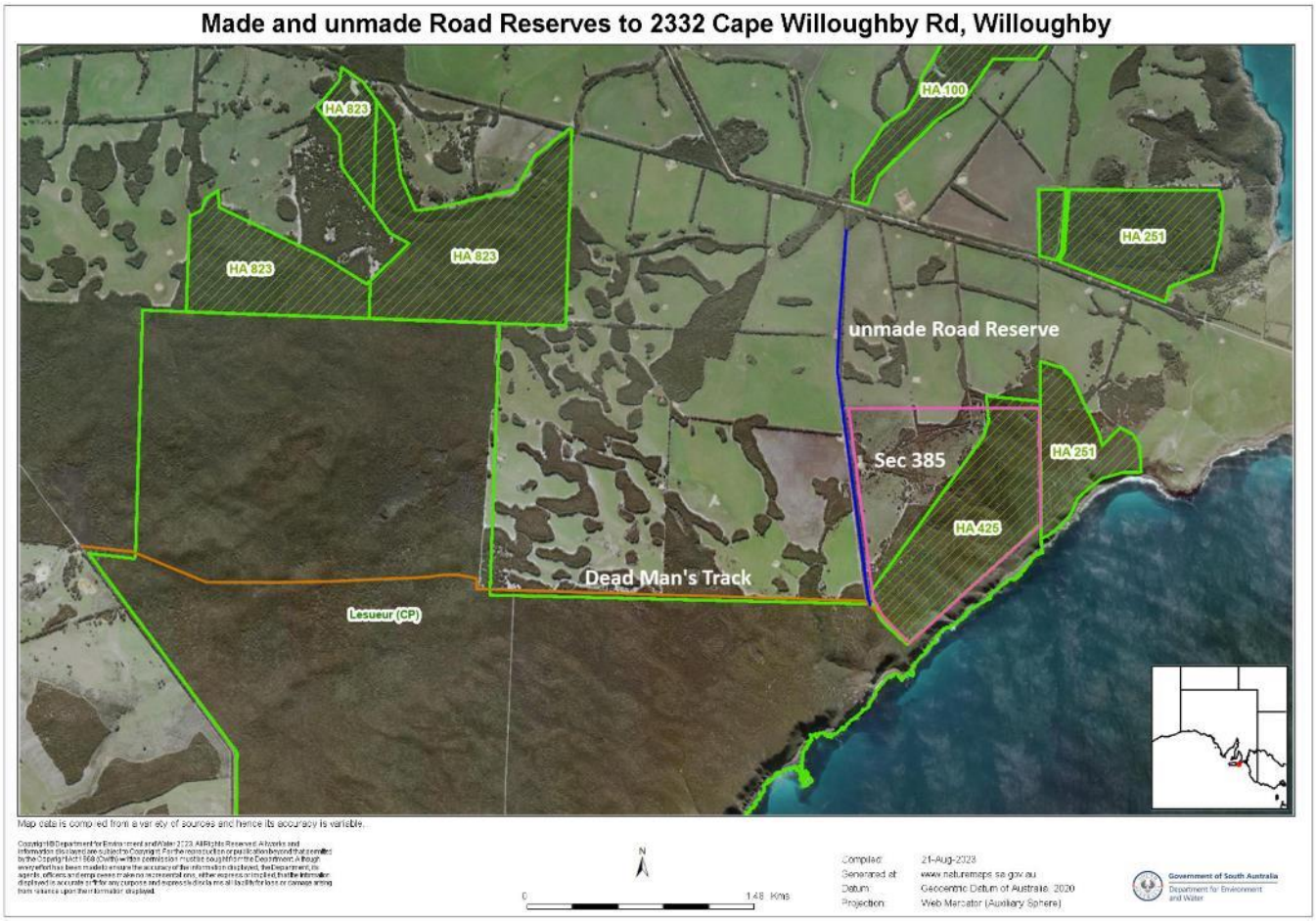


Figure 4. Made and unmade access Road Reserves to 2332 Cape Willoughby Road, Willoughby (Scale 1:36,112)

To comply with The Planning Code and CFS requirements for Medium Bushfire Risk areas, the access road must be 6m in width with a minimum of 4m overhead clearance. To this end, further clearance is required to widen the existing track to 6m in width. The track will then be formed up and sheeted in limestone marle to ensure that it is traversable all year round.

The road will be constructed from where the existing formed road ends to the northern boundary of the property, thereby minimising vegetation clearance. It is proposed to link the newly formed road up with the existing vehicle track within the property to access the established dwelling.

2.5 Approvals required *or* obtained

Landholder

Permission will be sought from Kangaroo Island Council to undertake clearance and earthworks on their behalf.

Any other relevant approvals will be sought from the relevant authorities.

2.6 Native Vegetation Regulation

This proposal falls under Regulation 12, Schedule 1; clause 34, Infrastructure as it is for the construction of an unmade Road Reserve and not associated with a Development.

Regulation 12(34) - Infrastructure
To allow clearance of vegetation incidental to the construction or expansion of a building or infrastructure (and associated services) where the Minister has declared that the clearance is in the public interest.

2.7 Development Application information (if applicable)

The clearance area is located within the Rural Zone and the Kangaroo Island subzone. The Native Vegetation and Medium Bushfire Risk Overlays apply.

3. Method

3.1 Flora assessment

The Native Vegetation proposed to be cleared for the construction of an access road within an unmade Road Reserve for 2332 Cape Willoughby Road, Willoughby, Hundred of Dudley was assessed on 6 July 2023. The flora was assessed using standard assessment techniques consisting of-

- One native vegetation community was identified;
- A Bushland Assessment Site was established in the vegetation community;
- A complete species list of all native and introduced plant species was produced for the identified vegetation community;
- Nationally Threatened, State Listed or Regionally Significant plant species populations were identified and their location recorded with a hand-held GPS to an accuracy of <5m;
- Proclaimed introduced plant species populations were identified and their location recorded with a hand-held GPS to an accuracy of <5m; and
- Survey data relating to records of Nationally Threatened, State Listed or Regionally Significant plant species was recorded, following BDBSA Minimum Data Standards, and provided to BDBSA for uploading.

Appendix 3 contains the flora list for the site.

3.2 Fauna assessment

The potential fauna to occur within the unmade Road Reserve for 2332 Cape Willoughby Road, Willoughby, Hundred of Dudley was determined utilising the following-

- Fauna recorded within 5km of the site;
- Observations of fauna including, tracks and traces, while undertaking the flora assessment.

The comprehensive list from above was then added to the Bushland Assessment Spreadsheet, Appendix 2.

The vegetation within the Reserve is in a senescent condition with minimal understory species present. Being a thin linear strip, it would be providing limited habitat for fauna species, however it would be providing a corridor for wildlife movement. A targeted fauna survey was not undertaken as the area does not contain critical habitat for fauna species.

4. Assessment Outcomes

4.1 Vegetation Assessment

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

The unmade road reserve traverses over relatively flat country from Cape Willoughby Road to Dead Man's Track, which then slopes steeply towards the coast. The soils around the northern end of the reserve are composed of acidic sandy loams over clay, however towards the southern end it is mostly composed of shallow sandy loam over calcrete with areas of exposed limestone.

An ephemeral creek crosses over the lower portion of the reserve as it drains towards the coast. It is this same creek that prevents Dead Man's Track from being passable in the winter months. This creek is below the proposed clearance area however, so any earthworks will not have an impact upon it. There are no other creeks or wetlands within the area.

The sandier soils within the northern portion of the road reserve supports a *Eucalyptus cneorifolia +/- Eucalyptus diversifolia ssp. diversifolia* mid open mallee forest over *Melaleuca uncinata* and *Xanthorrhoea semiplana ssp. tateana* shrubs. Towards the southern end of the reserve where calcrete has a greater influence on the soil, the vegetation morphs into a *Eucalyptus diversifolia ssp. diversifolia +/- Eucalyptus cneorifolia* mid mallee woodland over *Acacia myrtifolia* shrubs. The clearance area is entirely within the former vegetation community.

As the land surrounding the northern end of the road reserve has been subjected to historic disturbance, the vegetation within this area is in poor, degraded and weedy condition with a lack of structural and species diversity. The understory is almost devoid of native species and has been invaded by exotic pasture grasses. It is unlikely that the soil seedbank in this area contains a diversity of species that that would be capable of regenerating the patch given appropriate disturbance.

The vegetation gradually improves in quality within the southern portion of the reserve, due to this area being subjected to less historic disturbance. The vegetation within the southern extreme of the reserve is in good condition with good structural and species diversity and low numbers of weeds present.

The Narrow-leaf Mallee Ecological Community is listed as Endangered under the *EPBC Act 1999*, however the vegetation patch must meet a set of criteria to be protected by this Act. The vegetation within the clearance area is too narrow and does not contain sufficient understory species to qualify.

Heritage Agreement 100, which is located 200m to the north and Heritage Agreement 251, which is located 1.2km to the east contain the same vegetation community as the clearance area. The road reserve provides a linkage between the roadside vegetation along Cape Willoughby Road to Heritage Agreement 425 on 2332 Cape Willoughby Rd, Willoughby and Lesueur Conservation Park in the south. It also provides connectivity to several other smaller patches of vegetation in the area.

Details of the vegetation association proposed to be impacted

Vegetation Association	KI 1109 +/-*Eucalyptus fasciculosa, Eucalyptus cneorifolia, Eucalyptus diversifolia ssp. diversifolia, Eucalyptus albopurpurea*, +/-*Eucalyptus leucoxylon ssp. leucoxylon* mid open mallee forest over *Melaleuca uncinata, Xanthorrhoea semiplana ssp. tateana* tall open shrubland over *Thryptomene ericaea, Acacia paradoxa*, +/-Calytrix tetragona, +/-Choretrum glomeratum var. glomeratum, +/-Grevillea ilicifolia ssp. ilicifolia

Direction: 180° **Latitude:** 35° 50′ 3.88″ S **Longitude:** 138° 5′ 32.90″ E. **Photo 3** Typical habitat

General description	*Eucalyptus cneorifolia* mallee over *Xanthorrhoea semiplana ssp. tateana* in poor, degraded and weedy condition.				
Threatened species or community	No Threatened Ecological Communities were observed during the site assessment. No threatened fauna species were observed during the site assessment. There are records of White-bellied Whipbird, SA Bassian Thrush, Southern Brown Bandicoot, Short-beaked Echidna (*EPBC Act* Endangered), Striated Thornbill, Shy Heathwren (*EPBC Act* Vulnerable) and Heath Goanna (*NPW SA Act* Vulnerable) within 5km of the clearance area. *Xanthorrhoea semiplana ssp. tateana* (*NPW SA Act* Rare) was observed during the site assessment. There are no recent records of threatened flora within 1km of the clearance area.				
Landscape context score	1.08	Vegetation Condition Score	28.39	Conservation significance score	1.12
Unit biodiversity Score	34.35	Area (ha)	0.66	Total biodiversity Score	22.67

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

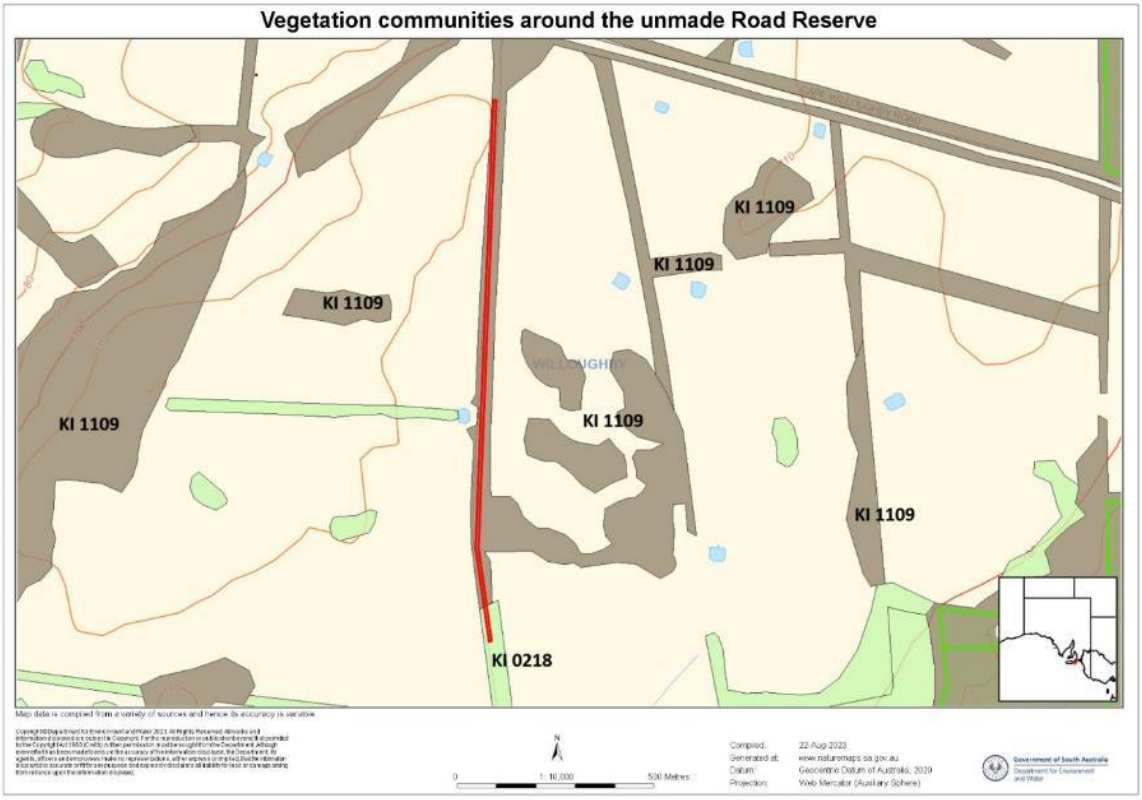


Figure 5. Vegetation communities around the unmade Road Reserve to 2332 Cape Willoughby Rd, Willoughby (Scale 1:10,000)

Photo log

Photo 1. **Direction:** 184° **Latitude:** 35° 50′ 0.66″ S **Longitude:** 138° 5′ 33.10″ E. Northern end of clearance area

Photo 2. **Direction:** 190° **Latitude:** 35° 50′ 27.51″ S. **Longitude:** 138° 5′ 31.66″ E. Southern end of clearance area

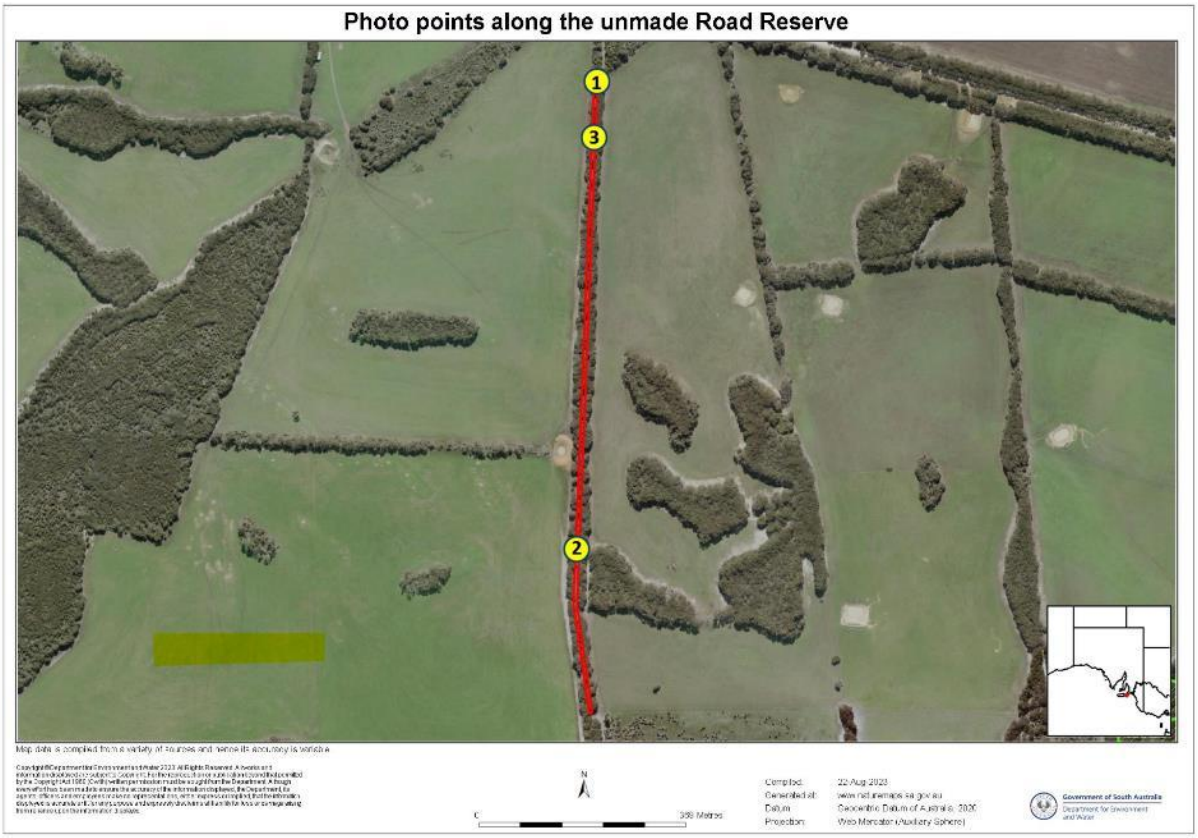


Figure 6. Location of photo points along the unmade Road Reserve to 2332 Cape Willoughby Rd, Willoughby. (Scale 1:9,029)

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
Acanthiza lineata whitei (Striated Thornbill)		VU	3	2017	Most mallee formations except coastal mallee heath	Possible – some suitable habitat present
Burhinus grallarius (Bush Stonecurlew)	R		3	2021	Remnant mallee adjacent to grassland	Unlikely – no suitable habitat present
Hylacola cauta halmaturina (Shy Heathwren)	R	VU	3	2021	Stunted mallee; coastal and subcoastal mallee	Unlikely – no suitable habitat present
Petroica boodang boodang (Scarlet Robin)	R		3	2016	Open forest, woodland, mallee	Possible – some suitable habitat
Psophodes leucogaster lashmari (White-bellied Whipbird)	R	EN	3	2020	Dense coastal and sub coastal mallee	Unlikely – no suitable habitat present
Zoothera lunulata halmaturina (SA Basian Thrush)		EN	3	2021	Dense damp forest	Unlikely – no suitable habitat
Isoodon obesulus obesulus (Southern Brown Bandicoot)	V	EN	3	2007	Forest, woodland, mallee with heathy understory	Unlikely – no suitable habitat present
Tachyglossus aculeatus multiaculeatus (Short-beaked Echidna)	E	EN	3	2021	Forest, woodland, mallee, heathland	Possible – some suitable habitat
Trichosurus vulpecula (Common Brushtail Possum)	R		3	2020	Forest, woodland, mallee	Possible – some suitable habitat
Varanus rosenbergi (Heath Goanna)	V		3	2022	Forest, woodland, mallee	Unlikely – no suitable habitat
Source; 1- BDBSA, 2 - AoLA, 3 – NatueMaps 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.

Further clearance is required for the construction of an all-weather access road that complies with the Planning Code and CFS bushfire risk requirements. Partial clearance has already occurred.

Clearance is required to construct an all-weather access road that complies with the Planning Code and CFS bushfire standards. This clearance will be undertaken in a careful manner to minimise the impact on the root systems of the surrounding vegetation.

Due to a lack of ecological disturbance, the Narrow-leaf Mallee within the patch is in a senescent state. As the adjoining land has mostly been cleared for agricultural purposes and the road reserve is only one chain in width, the patch of vegetation is narrow and linear. The combination of these two factors puts the trees at a greater risk of being blown over during wet and windy weather. The only way to prevent this from occurring is to pollard the remaining trees within road reserve to allow them to regenerate.

As there are no creeks crossing the road reserve within the clearance area and the land is relatively flat, it is unlikely that this clearance will have a negative impact on the hydrology of the area. It is also unlikely that it will cause any water erosion to occur that could expose the roots of the surrounding vegetation.

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

Avoidance is not possible as the unmade road reserve is fully vegetated. There is no other safe all-weather access available to the property.

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).

Only the minimum amount of vegetation will be removed to construct the access to the Planning Code and CFS bushfire requirements. The road will only be constructed to the northern edge of the property to minimise the amount of vegetation being removed to construct the all-weather access road.

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.

No rehabilitation or restoration is proposed for the road reserve.

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.

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 KI 1109 *Eucalyptus cneorifolia* mid open mallee forest over *Melaleuca uncinata* and *Thryptomene ericaea* mid open shrubland Native: 7; Introduced: 1 **Bushland Plant Diversity Score - 6**
	Assessment against the principles **Not at Variance** - KI 1109 *Eucalyptus cneorifolia* mid open mallee forest over *Melaleuca uncinata* and *Thryptomene ericaea* mid open shrubland
	Moderating factors that may be considered by the NVC
Principle 1b - significance as a habitat for wildlife	Relevant information No threatened fauna were observed during the site assessment. There are records of Striated Thornbill (*EPBC Act* Vulnerable), Bush Stonecurlew, Scarlet Robin and Common Brushtail Possum (*NPW SA Act* Rare) within 5km of the clearance area. The area also contains suitable habitat for Restless Flycatcher (*NPW SA Act* Rare). The vegetation is in poor, degraded and weedy condition, so would only provide habitat for a limited range of fauna species. It would however, provide a corridor for wildlife movement across the landscape as it links several remnant vegetation patches together. **Threatened Fauna Score – 0.08** **Unit biodiversity Score – 34.35**
	Assessment against the principles **Seriously at Variance** - KI 1109 *Eucalyptus cneorifolia* mid open mallee forest over *Melaleuca uncinata* and *Thryptomene ericaea* mid open shrubland
	Moderating factors that may be considered by the NVC The clearance area does not contain critical habitat for any fauna species. The clearance of it will not have a negative impact on the population size or long term survival of any fauna species.

Principle 1c - plants of a rare, vulnerable or endangered species	Relevant information *Xanthorrhoea semiplana ssp. tateana* (*NPW SA Act* Rare) was observed within the clearance area. Several *X. semiplana ssp. tateana* plants will be removed as part of the clearance, however this will not have a detrimental impact on the longevity of the local population of this species. The area does not contain suitable substrate for *S. daphnoides*. **Threatened Flora Score – 0.04**
	Assessment against the principles **At Variance** - KI 1109 *Eucalyptus cneorifolia* mid open mallee forest over *Melaleuca uncinata* and *Thryptomene ericaea* mid open shrubland
	Moderating factors that may be considered by the NVC *Xanthorrhoea semiplana ssp. tateana* is not considered Regionally Rare. The species is widespread across Kangaroo Island. This clearance will not have a detrimental impact on the long term survival of the species.
***Principle 1d - the vegetation comprises the whole or part of a plant community that is Rare, Vulnerable or endangered*:**	Relevant information The Narrow-leaf Mallee Ecological Community is listed as Endangered under the *EPBC Act 1999*, however the patch must meet threshold criteria to qualify for protection under this Act. The vegetation within the clearance area does not meet the minimum width criteria. **Threatened Community Score - 1**
	Assessment against the principles **Not at Variance** - KI 1109 *Eucalyptus cneorifolia* mid open mallee forest over *Melaleuca uncinata* and *Thryptomene ericaea* mid open shrubland
	Moderating factors that may be considered by the NVC
Principle 1e - it is significant as a remnant of vegetation in an area which has been extensively cleared.	Relevant information IBRA Association: Gantheaume, 88% remnancy IBRA subregion: Kangaroo Island, 52% remnancy The remnant vegetation within Willoughby is predominately in good condition and has relatively low levels of weeds. Large areas are protected by Lesueur Conservation Park and several Heritage Agreement Areas. They will likely remain in a similar state for a long time to come given the large size of the remnants and relative lack of disturbance. **Total Biodiversity Score – 22.67**
	Assessment against the principles **Not at Variance**

	- KI 1109 *Eucalyptus cneorifolia* mid open mallee forest over *Melaleuca uncinata* and *Thryptomene ericaea* mid open shrubland
	Moderating factors that may be considered by the NVC
Principle 1f - it is growing in, or in association with, a wetland environment.	Relevant information The vegetation growing along the unmade Road Reserve is not growing within or in association with a wetland.
	Assessment against the principles **Not at Variance** - KI 1109 *Eucalyptus cneorifolia* mid open mallee forest over *Melaleuca uncinata* and *Thryptomene ericaea* mid open shrubland
	Moderating factors that may be considered by the NVC
Principle 1g - it contributes significantly to the amenity of the area in which it is growing or is situated.	Relevant information The clearance for the construction of a road will not be visible from Cape Willoughby Road or the surrounding landscape. As it is within an unmade Road Reserve it is not out of character for the area. There are no known cultural or heritage values attached to the land.
	N/A
	Moderating factors that may be considered by the NVC

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	Several
	Area (ha)	0.66
	Total biodiversity Score	22.67
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.

All relevant information has been discussed above.

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	6	1	.04	.08	34.4	.66	22.67	1	0	0	23.80	$15,068.94	$828.79
						Total	.66	22.67				23.80	$15,068.94	$828.79

Totals summary table

	Total Biodiversity score	Total SEB points required	SEB Payment	Admin Fee	Total Payment
Application	22.67	23.80	$15,068.94	$828.79	$15,897.73

Economies of Scale Factor	0.35
Rainfall (mm)	606

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.

ON-GROUND SEB

Ownership:	Kristen Wicks		
Site Address:	2332 Cape Willoughby Road, Cape Willoughby SA 5222		
Local Government Area:	Kangaroo Island	Hundred:	Dudley
Title ID:	CT/5869/459	Parcel ID	H110200 S385

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

Several North-east South-west thrust fault waves occur along the eastern side of Dudley Peninsula, which have created several ridgelines. The eastern most of these drops relatively quickly from an altitude of 100m to sea level. 2332 Cape Willoughby Road, Cape Willoughby is located on the seaward side of this fault line. Many small, mostly ephemeral creek lines dissect the south-eastern side of the property and immediate area as the landscape drops down to sea level.

The soils within the upper reaches of the ridge lines are mostly composed of acidic sandy loam over clay on igneous and/or metamorphic rock. The lower reaches are composed of sandy loam soils over calcrete. Due to the change in parent material, two distinct vegetation communities occur within the area. The sandstone/granitic based soils support *Eucalyptus cneorifolia* woodland over *Melaleuca uncinata* shrubs (KI 1109), whilst the calcrete based soils support *Eucalyptus diversifolia ssp. diversifolia* woodland over *Acacia myrtifolia* and *Logania ovata* shrubs (KI 0218).

Cape Willoughby light station was established in 1852. The surrounding area began to be cleared for agricultural purposes soon after and now approximately half of the locality is farmland. Several large remnant remain in the area with the largest of these being protected under Heritage Agreements. Due to the large size of these remnants, they are mostly in good condition. A large bushfire swept across much of eastern Dudley in 1954, which burnt many of these remnants. As there has been no ecological disturbance within these areas since, most patches are now becoming senescent and the structural and plant diversity within in them is declining.

2332 Cape Willoughby Road is mostly vegetated. A mosaic of open pasture, regenerating native vegetation and remnant vegetation occurs across the north-western portion of the property. The remainder contains a large remnant patch that is protected by Heritage Agreement 425. Two-thirds of the property was burnt during the 1954 bushfire event.

The property is mostly vegetated with remnant *Eucalyptus diversifolia ssp. diversifolia* woodland, however the north-western portion contains *Eucalyptus cneorifolia* woodland. Whilst the *E. diversifolia ssp. diversifolia* remnant is in good condition, the *E. cneorifolia* woodland was largely cleared for agricultural purposes. The remaining small remnant patches are in poor condition and the regenerating areas are in highly degraded condition. The Narrow-leaf Mallee Ecological Community is listed as Endangered under the *EPBC Act 1999*, however the vegetation patch must meet a set of criteria to be protected by this Act. The vegetation within this area is too narrow and does not contain sufficient understory species to qualify.

Heritage Agreement 100, which is located 200m to the north and Heritage Agreement 251, which is located 1.2km to the east contain the same vegetation community as the clearance area. The road reserve provides a linkage between the roadside vegetation along Cape Willoughby Road to Heritage Agreement 425 on 2332 Cape Willoughby Rd, Willoughby and Lesueur Conservation Park in the south. It also provides connectivity to several other smaller patches of vegetation in the area.

Information relating to the relevant land

Areas within the north-eastern portion of the property were historically used for agricultural purposes by former landholders. The current owners do not undertake any farming; instead utilise the allotment as a lifestyle block enjoying the natural values that the property affords.

There are no known encumbrances on the property. 80ha of the south-eastern portion of the property contains Heritage Agreement 451, which was established in 1990 by a previous landholder.

General location map

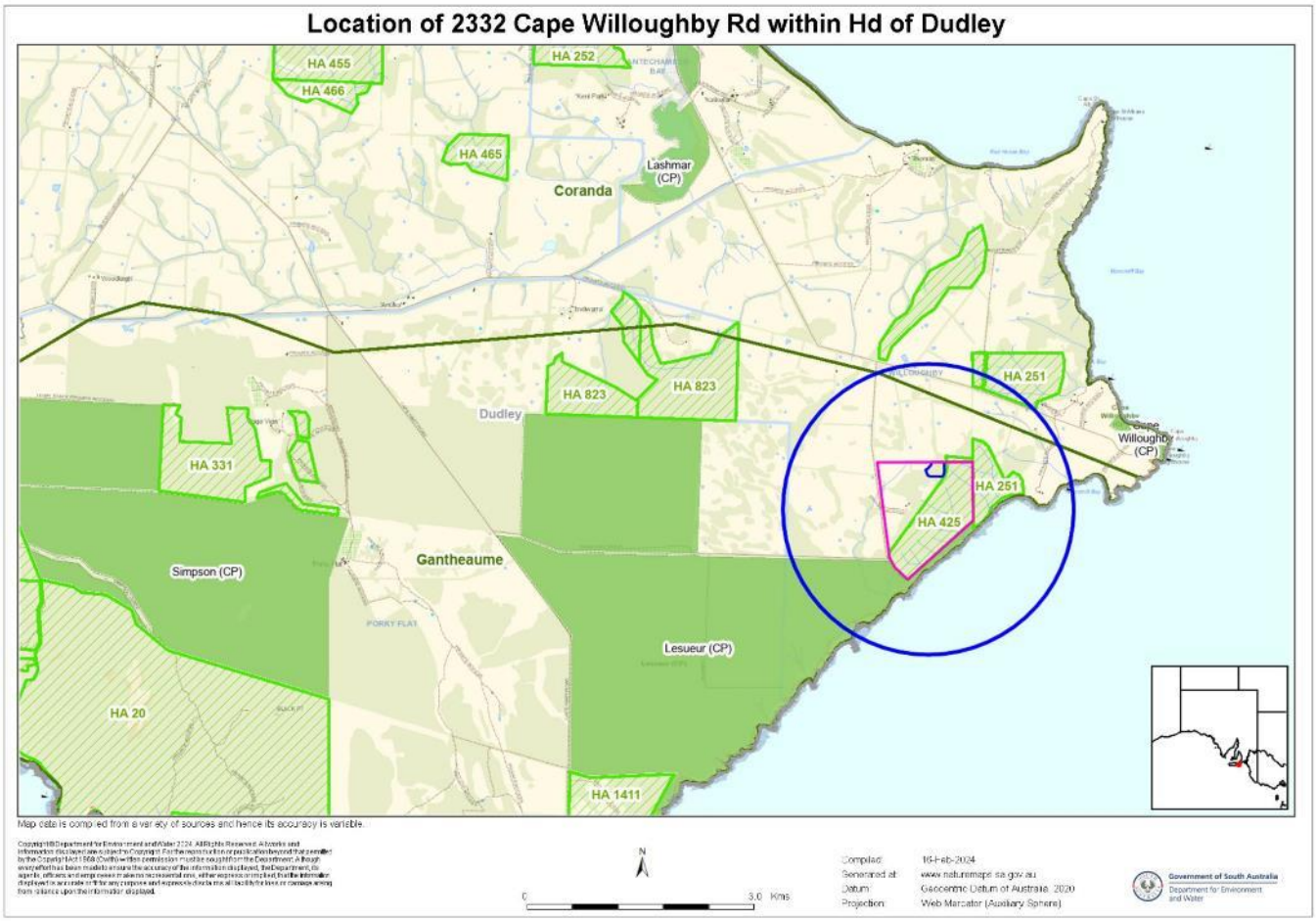


Figure 7. Location of 2332 Cape Willoughby Road, Cape Willoughby within the Hundred of Dudley. (Scale 1:72,224)

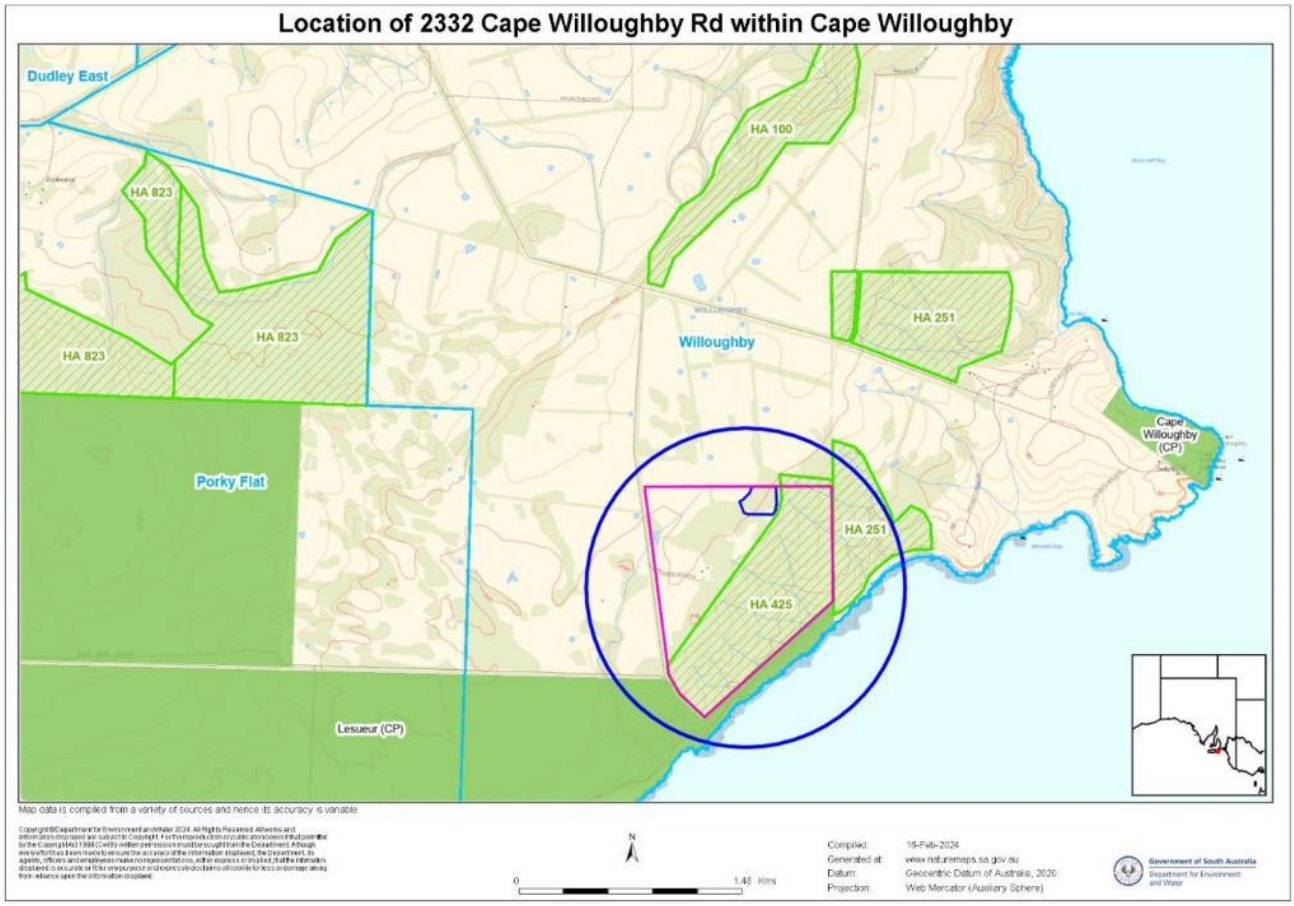


Figure 8. Location of 2332 Cape Willoughby Road within the locality of Cape Willoughby. (Scale 1:36,112)

Figure 9. Location of the proposed SEB area on 2332 Cape Willoughby Road, Cape Willoughby. (Scale 1:5,000)

Description of the vegetation

Vegetation Association	KI 1109 *+/-Eucalyptus fasciculosa, Eucalyptus cneorifolia, Eucalyptus diversifolia ssp. diversifolia, Eucalyptus albopurpurea*, *+/-Eucalyptus leucoxylon ssp. leucoxylon* mid open mallee forest over *Melaleuca uncinata, Xanthorrhoea semiplana ssp. tateana* tall open shrubland over *Thryptomene ericaea, Acacia paradoxa*, *+/-Calytrix tetragona*, *+/-Choretrum glomeratum var. glomeratum*, *+/-Grevillea ilicifolia ssp. ilicifolia*

Direction: 251° **Latitude:** 35° 50′ 42.29″ S **Longitude:** 138° 6′ 1.14″ E. **Photo 10:** Typical habitat

General description	*Eucalyptus cneorifolia* woodland over *Melaleuca uncinata* and *Xanthorrhoea semiplana ssp. tateana* shrubs in moderate to poor condition.
Threatened species or community	No Threatened Ecological Communities were observed during the site assessment. No threatened fauna species were observed during the site assessment. There are records of White-bellied Whipbird, SA Bassian Thrush, Southern Brown Bandicoot, Short-beaked Echidna (*EPBC Act* Endangered), Striated Thornbill, Shy Heathwren (*EPBC Act* Vulnerable) and Heath Goanna (*NPW SA Act* Vulnerable) within 5km of the clearance area. *Xanthorrhoea semiplana ssp. tateana* (*NPW SA Act* Rare) was observed during the site assessment. There are no recent records of any threatened flora species within 1km of the SEB area.

Landscape context score	1.08	Vegetation Condition Score	26.10	Conservation significance score	1.14
Gain Score	6.47	Area (ha)	3.69	SEB Points of Gain	23.87

<u>Site map</u> showing areas of the proposed SEB

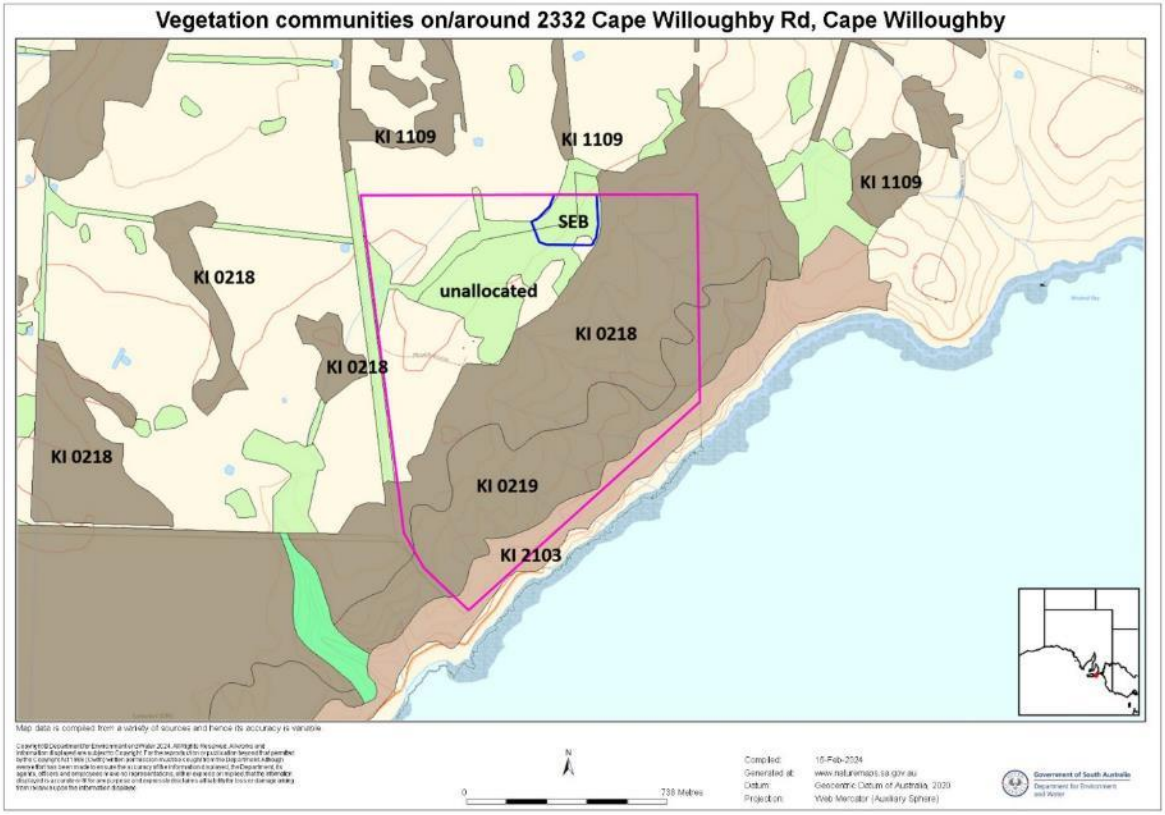


Figure 10. Vegetation communities on and around 2332 Cape Willoughby Road, Cape Willoughby. (Scale 1:18,056)

Photo log

Photo 6. **Direction:** 144° **Latitude:** 35° 50′ 36.95″ S **Longitude:** 138° 6′ 7.38″ E. Northern edge of SEB area

Photo 7. **Direction:** 159° **Latitude:** 35° 50′ 38.67 **Longitude:** 138° 6′ 6.94″ E. Historically cleared area within SEB

Photo 8. **Direction:** 164° **Latitude:** 35° 50′ 37.67″ S **Longitude:** 138° 6′ 4.01″ E. Central remnant vegetation

Photo 9. **Direction:** 110° **Latitude:** 35° 50′ 39.63″ S **Longitude:** 138° 6′ 2.88″ E. Remnant vegetation

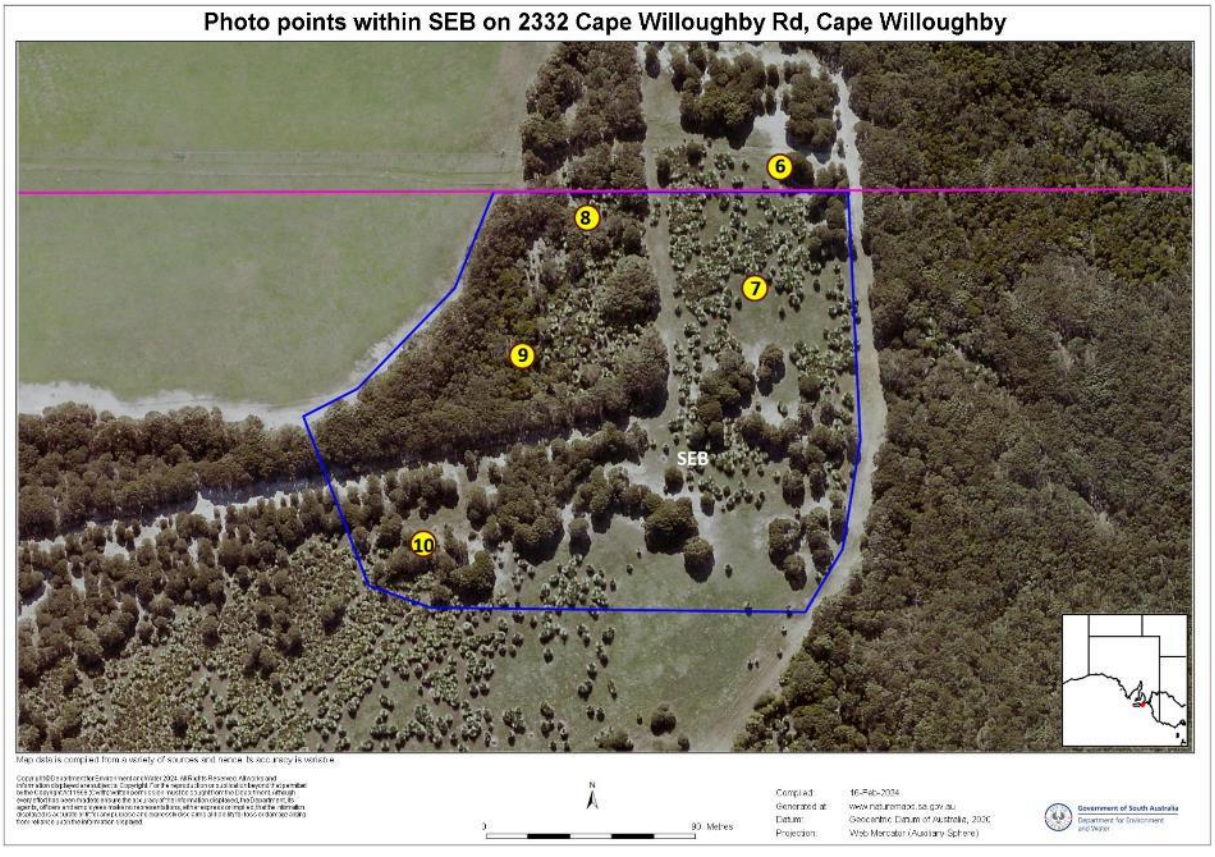


Figure 11. Location of photo points within the proposed SEB on 2332 Cape Willoughby Rd, Cape Willoughby (Scale 1:2,257)

Fauna and Flora 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
Acanthiza lineata whitei (Striated Thornbill)		VU	3	2017	Most mallee formations except coastal mallee heath	Possible – some suitable habitat present
Burhinus grallarius (Bush Stonecurlew)	R		3	2021	Remnant mallee adjacent to grassland	Unlikely – no suitable habitat present
Hylacola cauta halmaturina (Shy Heathwren)	R	VU	3	2021	Stunted mallee; coastal and subcoastal mallee	Unlikely – no suitable habitat present
Petroica boodang boodang (Scarlet Robin)	R		3	2016	Open forest, woodland, mallee	Possible – some suitable habitat
Psophodes leucogaster lashmari (White-bellied Whipbird)	R	EN	3	2020	Dense coastal and sub coastal mallee	Unlikely – no suitable habitat present
Zoothera lunulata halmaturina (SA Basian Thrush)		EN	3	2021	Dense damp forest	Unlikely – no suitable habitat
Isoodon obesulus obesulus (Southern Brown Bandicoot)	V	EN	3	2007	Forest, woodland, mallee with heathy understory	Unlikely – no suitable habitat present
Tachyglossus aculeatus multiaculeatus (Short-beaked Echidna)	E	EN	3	2021	Forest, woodland, mallee, heathland	Possible – some suitable habitat
Trichosurus vulpecula (Common Brushtail Possum)	R		3	2020	Forest, woodland, mallee	Possible – some suitable habitat
Varanus rosenbergi (Heath Goanna)	V		3	2022	Forest, woodland, mallee	Unlikely – no suitable habitat
Source; 1- BDBSA, 2 - AoLA, 3 – NatueMaps 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.

Environmental Benefits

The creation of this SEB area will further protect the north-western end of Heritage Agreement 425 by creating a buffer between it and the agricultural land to the north-west. Some of the area within the proposed SEB site was cleared for agricultural purposes many years ago. Aside from *Xanthorrhoea semiplana ssp. tateana* and *Eucalyptus cneorifolia* no other native species have regenerated in the area. The landholders are proposing to undertake diverse infill revegetation works within these areas to improve the structural and species diversity within the SEB area.

There is an overabundance of native herbivores within the property which are preventing any natural regeneration from occurring. It is proposed to actively manage these numbers to reduce them to a sustainable level. This will give any natural regeneration and the revegetation a better chance of surviving.

Whilst *Eucalyptus cneorifolia* is the dominant mallee species within the proposed SEB area, the vegetation patch is not of sufficient size or diversity to meet the selection criteria for being protected under the *EPBC Act 1999*. Given appropriate management and revegetation the area could be improved sufficiently to enable coverage by the Act.

Summary Table

Block	Site	Vegetation Association	UBS	Gain Score	Area (ha)	SEB Point of Gain
A	1	KI 1109 *Eucalyptus cneorifolia* woodland	32.13	6.47	3.69	23.87
				Total	3.69	23.87

SEB Management Plan

The Management Plan for the proposed SEB area is attached in the appendices.

7. Appendices

Appendix 1. Fauna Species List (desktop)

Threatened or Introduced Animal Species Recorded or Observed (Native and Introduced)		Threatened Species				Introduced Species
Species	Common Name	EPBC	SA	Past Record	Observed	
Acanthiza lineata whitei	Striated Thornbill (KI)	VU		Yes		
Acanthiza pusilla zietzi	Brown Thornbill (KI)			Yes		
Acanthorhynchus tenuirostris halmaturinu	Eastern Spinebill (KI, MLR, southern			Yes		
Anthochaera carunculata clelandi	Red Wattlebird (KI)			Yes		
Aquila audax audax	Wedge-tailed Eagle			Yes		
Burhinus grallarius	Bush Stonecurlew		R	Yes		
Cacomantis flabelliformis flabelliformis	Fan-tailed Cuckoo			Yes		
Colluricincla harmonica	Grey Shrikethrush			Yes		
Corvus mellori	Little Raven			Yes		
Eolophus roseicapilla	Galah			Yes	Yes	
Gymnorhina tibicen	Australian Magpie			Yes	Yes	
Hirundo neoxena neoxena	Welcome Swallow			Yes		
Hylacola cauta halmaturina	Shy Heathwren (Kangaroo Island)	VU	R	Yes		
Lichenostomus cratitius	Purple-gaped Honeyeater			Yes		
Malurus cyaneus ashbyi	Superb Fairywren (KI)			Yes		
Pachycephala fuliginosa fuliginosa	Western Whistler			Yes		
Pardalotus punctatus	Spotted Pardalote			Yes		
Pardalotus striatus substriatus	Striated Pardalote			Yes		
Pavo cristatus	Indian Peafowl			Yes		
Petroica boodang boodang	Scarlet Robin		R	Yes		
Phaps elegans elegans	Brush Bronzewing			Yes		
Phylidonyris pyrrhopterus halmaturinus	Crescent Honeyeater (KI and MLR)			Yes		
Psophodes leucogaster lashmari	White-bellied Whipbird (KI)	EN	R	Yes		
Rhipidura albiscapa	Grey Fantail			Yes		
Sericornis maculatus ashbyi	Spotted Scrubwren (KI)			Yes		
Strepera versicolor halmaturina	Black-winged Currawong (KI)			Yes		
Trichoglossus moluccanus moluccanus	Rainbow Lorikeet			Yes		
Zoothera lunulata halmaturina	South Australian Bassian Thrush (s	EN		Yes		
Zosterops lateralis	Silvereye			Yes		
Cercartetus concinnus	Western Pygmy-possum			Yes		
Felis catus	Domestic Cat (Feral Cat)			Yes		
Isoodon obesulus obesulus	Southern Brown Bandicoot (SA mai	EN	V	Yes		
Macropus (Notamacropus) eugenii eugen	Tammar Wallaby			Yes		
Macropus fuliginosus fuliginosus	Western Grey Kangaroo (KI)			Yes		
Mus musculus	House Mouse			Yes		
Rattus fuscipes	Bush Rat			Yes		
Tachyglossus aculeatus multiaculeatus	Short-beaked Echidna (Kangaroo Is	EN	E	Yes		
Trichosurus vulpecula	Common Brushtail Possum		R	Yes		
Christinus marmoratus	Marbled Gecko			Yes		
Hemiergis peronii	Four-toed Earless Skink			Yes		
Lampropholis guichenoti	Garden Skink			Yes		
Lerista bougainvillii	Bougainville's Skink			Yes		
Liopholis multiscutata	Bull Skink			Yes		
Liopholis whitii	White's Skink			Yes		
Varanus rosenbergi	Heath Goanna		V	Yes		

Appendix 2. Bushland Assessment Scoresheets associated with the proposed clearance and SEB Area

Vegetation Condition Scores

SITE:	Unmade road reserve
BCM COMMUNITY	KI 5.1 Mallee with an open to very open shrub understorey on clay based soils
VEGETATION ASSOCIATION DESCRIPTION	*Eucalyptus cneorifolia mid open mallee forest*
SIZE OF SITE (Ha)	0.66

Benchmarked attributes
(Scores determined by comparing to a Benchmark community)

Number of Native Species (Minus herbaceous annuals for spring Surveys)	7
Native Plant Species Diversity Score (max 30) from benchmark score *weighted by a factor of 2*	**6.0**
Number of regenerating native species	0
Regeneration Score (max 12) from benchmark community weighted by a factor of 1.5	**0**

Weed species (Top 5 Cover x Invasiveness)	Cover (max 6)	Weed Threat Rating (max 5)	C x I
Ehrharta longiflora	3	2	6
			0
			0
			0
			0
	Cover x Threat		6
Weed Score (max 15) from benchmark community			**14**

Native Plant Life Forms	**Cover rating**
Trees > 15m	
Trees 5 - 15 m	
Trees < 5m	
Mallee > 5m	4
Mallee < 5m	3
Shrubs > 2m	
Shrubs 0.5 - 2m	2
Shrubs < 0.5	
Forbs	
Mat Plants	
Grasses > 0.2m	
Grasses < 0.2m	
Sedges > 1m	
Sedges < 1m	2
Hummock grasses	
Vines, scramblers	
Mistletoe	
Ferns	
Grass-tree	3
Total	14

Native Plant Life Forms (max 20) from benchmark score *weighted by a factor of 2* **14.0**

Non-Benchmarked Attributes
(Scores determined from direct field observations)

Native:exotic Understorey biomass Score (max 5)	**3**

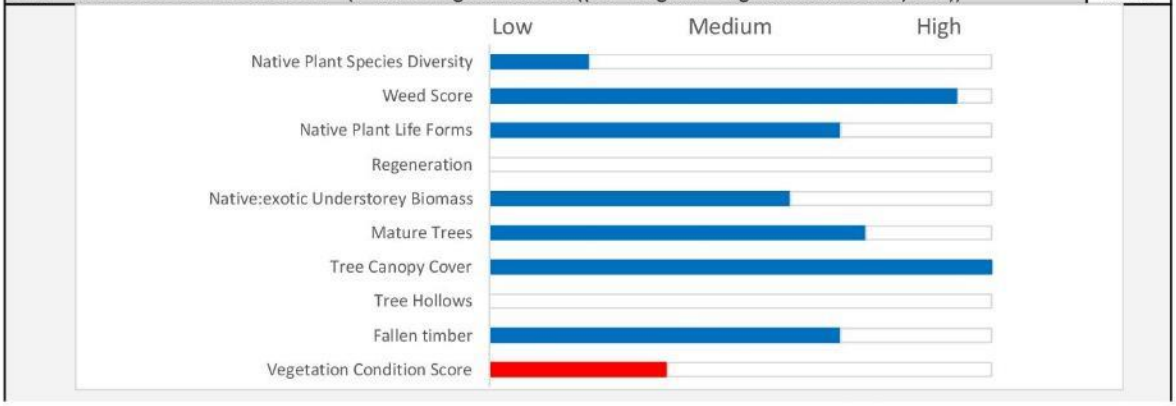
Is the community naturally treeless?	☐
Fallen Timber/Debris (max 5)	**3.5**
Hollow-bearing trees Score (max 5)	**0**
Mature Tree Score (max 8)	**6**
Tree Canopy Cover Score (max 5)	**5**

Vegetation Condition Score calculation

Positive Vegetation Attributes Score = Native species diversity + Regeneration + Native Plant Life Forms Fallen timber/debris + Hollow-bearing trees

- *If the community Score is Not Benchmarked (SNB) for regeneration this score is multiplied 1.24*
- *If the community is naturally treeless this score is multiplied by 1.29*

	29.50
Negative Vegetation Attributes Score = (15 - Weeds) + ((10 - Biomass score - Tree Canopy Cover Score)exp2/2)	3.00
VEGETATION CONDITION SCORE (Positive veg attributes x ((80 - Negative vegetation attributes) / 80))	**28.39**



Conservation Significance Score

Is the vegetation association considered a Threatened Ecological community or Ecosystem?	Yes/No
State (Provisional List of Threatened Ecosystems of SA) **Rare** community (0.1 pt)	☐
State (Provisional List of Threatened Ecosystems of SA) **Vulnerable** community (0.2 pts)	☐
State (Provisional List of Threatened Ecosystems of SA) **Endangered** community (0.3 pts)	☐
Nationally (EPBC Act) **Vulnerable** community (0.35 pts)	☐
Nationally (EPBC Act) **Endangered** or **Critically Endangered** community (0.4 pts)	☐
Note; all sites will score a minimum Conservation Significance Score of 1 **Threatened Community Score**	1

Number of Threatened Flora Species recorded for the site (within the site)	Number
**If a species has both a State (NP&W Act) and National (EPBC Act) rating, it's only recorded for its National rating.*	
State **Rare** species recorded (1 pt each)	1
State **Vulnerable** species recorded (2.5 pt each)	0
State **Endangered** recorded (5 pts each)	0
Nationally **Vulnerable** species recorded (10 pts each)	0
Nationally **Endangered** or **Critically endangered** species recorded (20 pts each)	0
0 = 0 pts; <2 = 0.04 pts; 2 - <5 = 0.08 pts; 5 - <10 = 0.12 pts; 10 - <20 = 0.16 pts; 20 or > = 0.2 pts	**1**
Threatened Flora Score	0.04

Potential habitat for Threatened Fauna Species (number observed or previously recorded)	Number
**If a species has both a State (NP&W Act) and National (EPBC Act) rating, it's only recorded for its National rating.*	
State **Rare** species observed or locally recorded (1 pt each)	4
State **Vulnerable** species observed or locally recorded (2.5 pt each)	0
State **Endangered** species observed or locally recorded (5 pt each)	0
Nationally **Vulnerable** species observed or locally recorded (10 pts each)	1
Nationally **Endangered** or **Critically endangered** species observed or locally recorded (20 pts each)	0
0 = 0 pts; <2 = 0.02 pts; 2 - <5 = 0.04 pts; 5 - <10 = 0.06 pts; 10 - <20 = 0.08pts; 20 or > = 0.1 pts	**14**
Threatened Fauna Score	**0.08**
CONSERVATION SIGNIFICANCE SCORE	**1.12**

Total Scores for the Site

	Score
LANDSCAPE CONTEXT SCORE	**1.08**
VEGETATION CONDITION SCORE	**28.39**
CONSERVATION SIGNIFICANCE SCORE	**1.12**

Vegetation Condition x Landscape Context x Conservation Significance =	
UNIT BIODIVERSITY SCORE	34.35
Total Biodiversity Score (Biodiversity Score x hectares)	22.67

Photo Point and Vegetation Survey Location	Direction of the Photo
	180 degrees
	GPS Reference
	Datum: WGS84
	Zone (52, 53 or 54): 54
	Easting (6 digits): 237369
	Northing (7 digits): 6030514
	Description
	Eucalyptus cneorifolia over Xanthorrhoea semiplana ssp. tateana in poor degraded and weedy condition.

What is the purpose of Assessment? Clearance | SEB Area | Other

Assessment for Clearance

Loss Factor	1.0
Loadings for clearance of protected areas	
Reductions for rehabilitation of impact site	
SEB Points required	**23.80**

Approximate hectares required	2.98
Economies of Scale Factor	0.35
Mean Annual rainfall for the site (mm)	606
Payment into the fund (GST Exclusive)	**$15,068.94**
Administration fee (GST Inclusive)	**$828.79**

Vegetation Condition Scores

SITE:	SEB site
BCM COMMUNITY	KI 5.1 Mallee with an open to very open shrub understorey on clay based soils
VEGETATION ASSOCIATION DESCRIPTION	*Eucalyptus cneorifolia mallee woodland over Melaleuca uncinata*
SIZE OF SITE (Ha)	3.69

Benchmarked attributes
(Scores determined by comparing to a Benchmark community)

Number of Native Species (Minus herbaceous annuals for spring Surveys)	9
Native Plant Species Diversity Score (max 30) from benchmark score *weighted by a factor of 2*	**8.0**
Number of regenerating native species	0
Regeneration Score (max 12) from benchmark community weighted by a factor of 1.5	**0**

Weed species (Top 5 Cover x Invasiveness)	Cover (max 6)	Weed Threat Rating (max 5)	C x I
Trifolium spp.	3	2	6
Vulpia spp.	3	2	6
Arctotheca calendula	3	1	3
Hordeum sp.	3	1	3
			0
	Cover x Threat		18
Weed Score (max 15) from benchmark community			**9**

Native Plant Life Forms	**Cover rating**
Trees > 15m	
Trees 5 - 15 m	
Trees < 5m	
Mallee > 5m	
Mallee < 5m	4
Shrubs > 2m	3
Shrubs 0.5 - 2m	2
Shrubs < 0.5	
Forbs	
Mat Plants	
Grasses > 0.2m	
Grasses < 0.2m	3
Sedges > 1m	
Sedges < 1m	
Hummock grasses	
Vines, scramblers	1
Mistletoe	
Ferns	
Grass-tree	4
Total	17

Native Plant Life Forms (max 20) from benchmark score *weighted by a factor of 2* **16.0**

Non-Benchmarked Attributes
(Scores determined from direct field observations)

Native:exotic Understorey biomass Score (max 5)	4

Is the community naturally treeless?	☐
Fallen Timber/Debris (max 5)	**1**
Hollow-bearing trees Score (max 5)	**0**
Mature Tree Score (max 8)	**4**
Tree Canopy Cover Score (max 5)	**4**

Vegetation Condition Score calculation

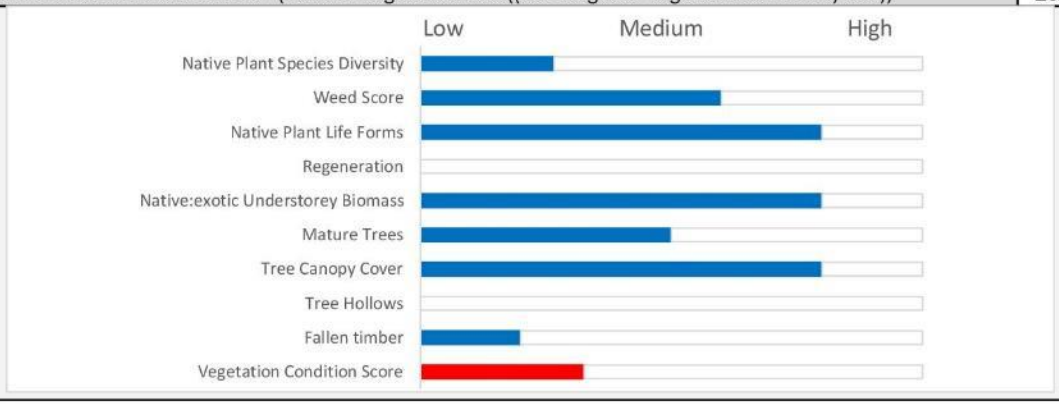
Positive Vegetation Attributes Score = Native species diversity + Regeneration + Native Plant Life Forms Fallen timber/debris + Hollow-bearing trees

- If the community Score is Not Benchmarked (SNB) for regeneration this score is multiplied 1.24

- If the community is naturally treeless this score is multiplied by 1.29 29.00

Negative Vegetation Attributes Score = (15 - Weeds) + ((10 - Biomass score - Tree Canopy Cover Score)exp2/2) 8.00

VEGETATION CONDITION SCORE (Positive veg attributes x ((80 - Negative vegetation attributes) / 80)) **26.10**



Conservation Significance Score

Is the vegetation association considered a Threatened Ecological community or Ecosystem?	Yes/No
State (Provisional List of Threatened Ecosystems of SA) **Rare** community (0.1 pt)	☐
State (Provisional List of Threatened Ecosystems of SA) **Vulnerable** community (0.2 pts)	☐
State (Provisional List of Threatened Ecosystems of SA) **Endangered** community (0.3 pts)	☐
Nationally (EPBC Act) **Vulnerable** community (0.35 pts)	☐
Nationally (EPBC Act) **Endangered** or **Critically Endangered** community (0.4 pts)	☐
Note; all sites will score a minimum Conservation Significance Score of 1 **Threatened Community Score**	1

Number of Threatened Flora Species recorded for the site (within the site)	Number
**If a species has both a State (NP&W Act) and National (EPBC Act) rating, it's only recorded for its National rating.*	
State **Rare** species recorded (1 pt each)	1
State **Vulnerable** species recorded (2.5 pt each)	0
State **Endangered** recorded (5 pts each)	0
Nationally **Vulnerable** species recorded (10 pts each)	0
Nationally **Endangered** or **Critically endangered** species recorded (20 pts each)	0
0 = 0 pts; <2 = 0.04 pts; 2 - <5 = 0.08 pts; 5 - <10 = 0.12 pts; 10 - <20 = 0.16 pts; 20 or > = 0.2 pts	**1**
Threatened Flora Score	0.04

Potential habitat for Threatened Fauna Species (number observed or previously recorded)	Number
**If a species has both a State (NP&W Act) and National (EPBC Act) rating, it's only recorded for its National rating.*	
State **Rare** species observed or locally recorded (1 pt each)	3
State **Vulnerable** species observed or locally recorded (2.5 pt each)	1
State **Endangered** species observed or locally recorded (5 pt each)	0
Nationally **Vulnerable** species observed or locally recorded (10 pts each)	2
Nationally **Endangered** or **Critically endangered** species observed or locally recorded (20 pts each)	4
0 = 0 pts; <2 = 0.02 pts; 2 - <5 = 0.04 pts; 5 - <10 = 0.06 pts; 10 - <20 = 0.08pts; 20 or > = 0.1 pts	**105.5**
Threatened Fauna Score	**0.1**
CONSERVATION SIGNIFICANCE SCORE	**1.14**

Total Scores for the Site

	Score
LANDSCAPE CONTEXT SCORE	**1.08**
VEGETATION CONDITION SCORE	**26.10**
CONSERVATION SIGNIFICANCE SCORE	**1.14**

Vegetation Condition x Landscape Context x Conservation Significance =	
UNIT BIODIVERSITY SCORE	32.13
Total Biodiversity Score (Biodiversity Score x hectares)	118.58

Photo Point and Vegetation Survey Location	Direction of the Photo
	251 degrees
	GPS Reference
	Datum: WGS84
	Zone (52, 53 or 54): 54
	Easting (6 digits): 238113
	Northing (7 digits): 6029352
	Description
	Eucalyptus cneorifolia woodland over Melaleuca uncinata and Xanthorrhoea semiplana ssp. tateana shrubs in moderate to poor condition

What is the purpose of Assessment? Clearance | SEB Area | Other

SEB Area Assessment

Future UBS Negative Score	30.46
Future UBS Positive Score	36.93
UBS Gain Score	6.47
SEB Points provided	**23.87**

Vegetation condition

Likely % loss	**Standard**	5.2%
Potential increase	**Standard**	10.8
Likelihood of outcome	**Standard**	36.1%

Appendix 3. Flora Species List

Plant Species Recorded (Native and Introduced)		Listed Species			Natives only		
Species	Common Name	EPBC	SA	Not in quadrat	Regen	Annual Herbs Spring survey	Introduced Species
Eucalyptus cneorifolia	Kangaroo Island Narrow-lea						
Xanthorrhoea semiplana ssp. tateana	Tate's Grass-tree		R				
Lepidosperma congestum							
Eucalyptus diversifolia ssp. diversifolia	Coastal White Mallee						
Callistemon rugulosus	Scarlet Bottlebrush						
Correa reflexa var. insularis	Round-leaf Correa						
Melaleuca uncinata	Broombush						
Ehrharta longiflora	Annual Veldt Grass						*

Clearance area

Plant Species Recorded (Native and Introduced)		Listed Species			Natives only		
Species	Common Name	EPBC	SA	Not in quadrat	Regen	Annual Herbs Spring survey	Introduced Species
Eucalyptus cneorifolia	Kangaroo Island Narrow-lea						
Xanthorrhoea semiplana ssp. tateana	Tate's Grass-tree		R				
Rytidosperma sp.	Wallaby-grass						
Acacia paradoxa	Kangaroo Thorn						
Clematis microphylla	Old Man's Beard						
Thryptomene ericaea	Heath Thryptomene						
Allocasuarina muelleriana ssp. notocolpic	Kangaroo Island Oak-bush						
Melaleuca uncinata	Broombush						
Correa reflexa var. insularis	Round-leaf Correa						
Hordeum sp.							*
Trifolium sp.	Clover						*
Arctotheca calendula	Cape Weed						*
Vulpia sp.	Fescue						*

SEB area

Appendix 4. SEB Management Plan