



Native Vegetation Clearance

Lot 111 Seagers Road, MacGillivray

Data Report

Clearance under the *Native Vegetation Regulations 2017*

11th August, 2022

Prepared by Michelle Haby



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1. Application information

Application Details

Applicant:	Kangaroo Island Council		
Key contact:	John Fernandez Mb: [REDACTED]		
Landowner:	[REDACTED]		
Site Address:	Lot 111 Seagers Road, MacGillivray SA 5223		
Local Government Area:	Kangaroo Island	Hundred:	MacGillivray
Title ID:	CT/6270/701	Parcel ID	H110600 S111

Summary of proposed clearance

Purpose of clearance	Clearance required for the extraction of Limestone material
Native Vegetation Regulation	Regulation 12, Schedule 1; clause 28, Operations
Description of the vegetation under application	27.4 ha of Coastal White mallee (<i>Eucalyptus diversifolia ssp. diversifolia</i>) mid mallee Woodland in moderate condition.
Total proposed clearance - area (ha) and number of trees	0.87 ha are proposed to be cleared.
Level of clearance	Level 4
Overlay (Planning and Design Code)	State Significant Native Vegetation Overlay

Map of proposed clearance area



Mitigation hierarchy	The clearance of native vegetation will be avoided until the unvegetated areas have been exhausted of material. The quarry will then be expanded into areas of degraded vegetation to avoid the clearance of the intact vegetation on the property.
SEB Offset proposal	Draw down of Credit Accrual # 2006_2028 by 41.98 points

2. Purpose of clearance

2.1 Description

Kangaroo Island Council has the care and control of 1,150km of unsealed roads across the Kangaroo Island. The council undertakes a rolling maintenance regime that re-sheets these roads with assistance from the South Australian State Government. Crushed limestone is required to undertake this re-sheeting work, however there is a shortage of this material on the island as most areas that contain good road quality material are vegetated. Clearance is therefore required to expand an existing quarry site on Lot 111 Seagers Road, MacGillivray.

2.2 Background

The Hundred of MacGillivray was proclaimed in 1906 and by 1908 many farmers had begun clearing the land for agricultural purposes. In 1948 the Soldier Settlers scheme began on Kangaroo Island with the Hundreds of MacGillivray and Seddon being the first areas to be intensively cleared due to the “interminable scrub” being lighter in this area compared to the west end of the island.

Lot 111 Seagers Road is part of a large farming enterprise called Hawk’s Nest which is located on the western, northern and eastern sides of Murray Lagoon. By the late 1950’s a good portion of the land within Hawks Nest to the north of Seagers Road had been cleared and attentions were turning to the southern side of the road where Lot 111 is located. This allotment was cleared in its entirety by 1964.

Around half of the allotment was converted into productive agricultural land, whilst the eastern and southern sides were mostly maintained as managed regrowth. By the 1980’s several portions had been allowed to regenerate back to their former intact state. One of these intact areas is growing on a limestone ridge that runs across the eastern side of the allotment. Whilst most of this ridge is covered in intact native vegetation, there are areas of cleared and semi-cleared land on the extreme south-western end.

In 2012 the former owners of the allotment applied to the Native Vegetation Council (2012_3109) to clear the managed regrowth that surrounded the limestone ridge to aid in the eradication of weeds (Figure 1). A 10 year management plan was written that allowed them to chain the vegetation and run stock on it.

The Kangaroo Island Council has created a small quarry for the extraction of limestone material for road construction purposes on the north-eastern end of the ridge (Figure 1). Whilst there is more material that could be extracted at this site, it would require the clearance of the intact vegetation that is growing around the site. Council is therefore proposing to create a new extraction site at the south-eastern end of the ridge. Material will initially be extracted from the area that is mostly devoid of native vegetation, but once that is exhausted, they wish to expand the quarry in a westward direction into the area that has degraded vegetation growing on it.

There is potentially more suitable material around the south-eastern side of the ridge. KI Council intend to undertake small scale prospecting in areas that are devoid of native vegetation throughout this area to ensure a continuation of supply of material for road construction and maintenance purposes. If suitable material is found, further clearance applications will be lodged for this area.



Figure 1. Location of Clearance Application Management Area and existing quarry site (purple circle) on Lot 111 Seagers Road, MacGillivray. (Scale 1:10,000).

2.3 General location map

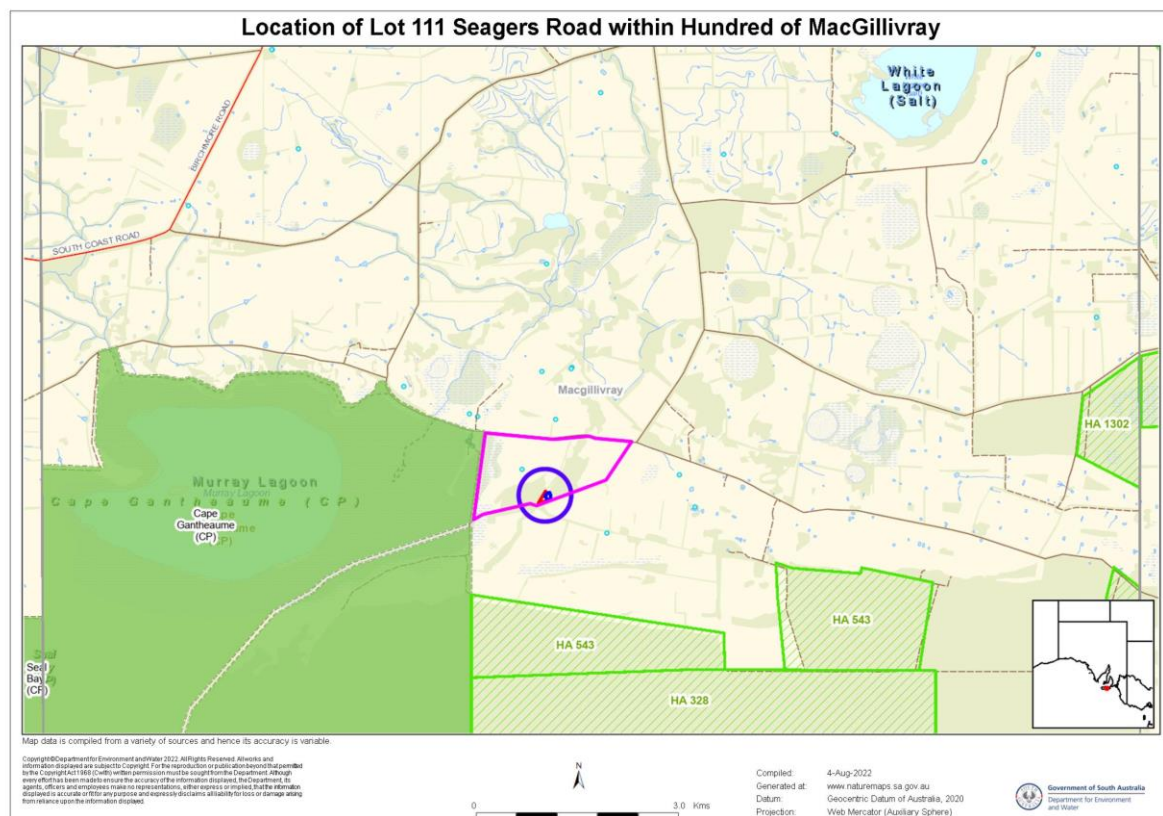


Figure 2. Location of Lot 111 Seagers Road within the Hundred of MacGillivray. (Scale 1:72,224)

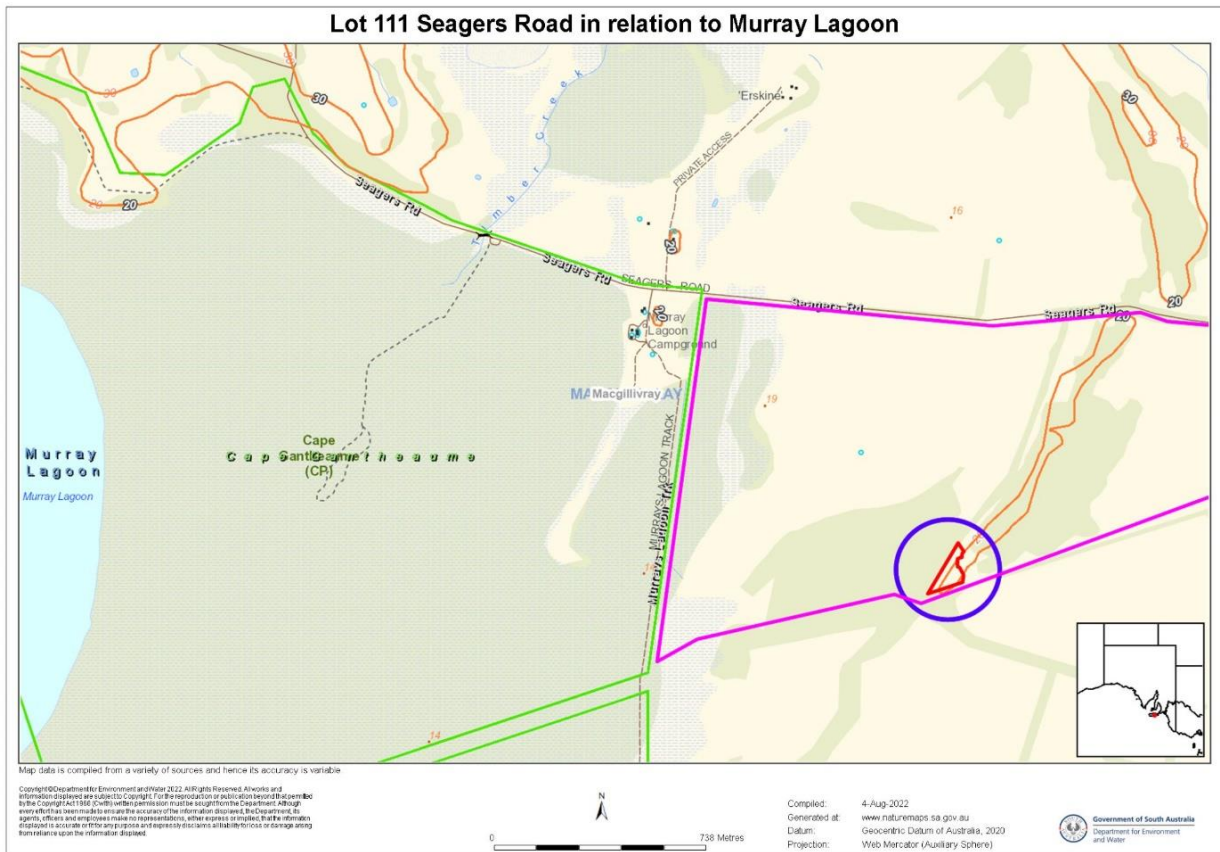


Figure 3. Location of Lot 111 Seagers Road, MacGillivray in relation to Murray Lagoon. (Scale 1:18,056)

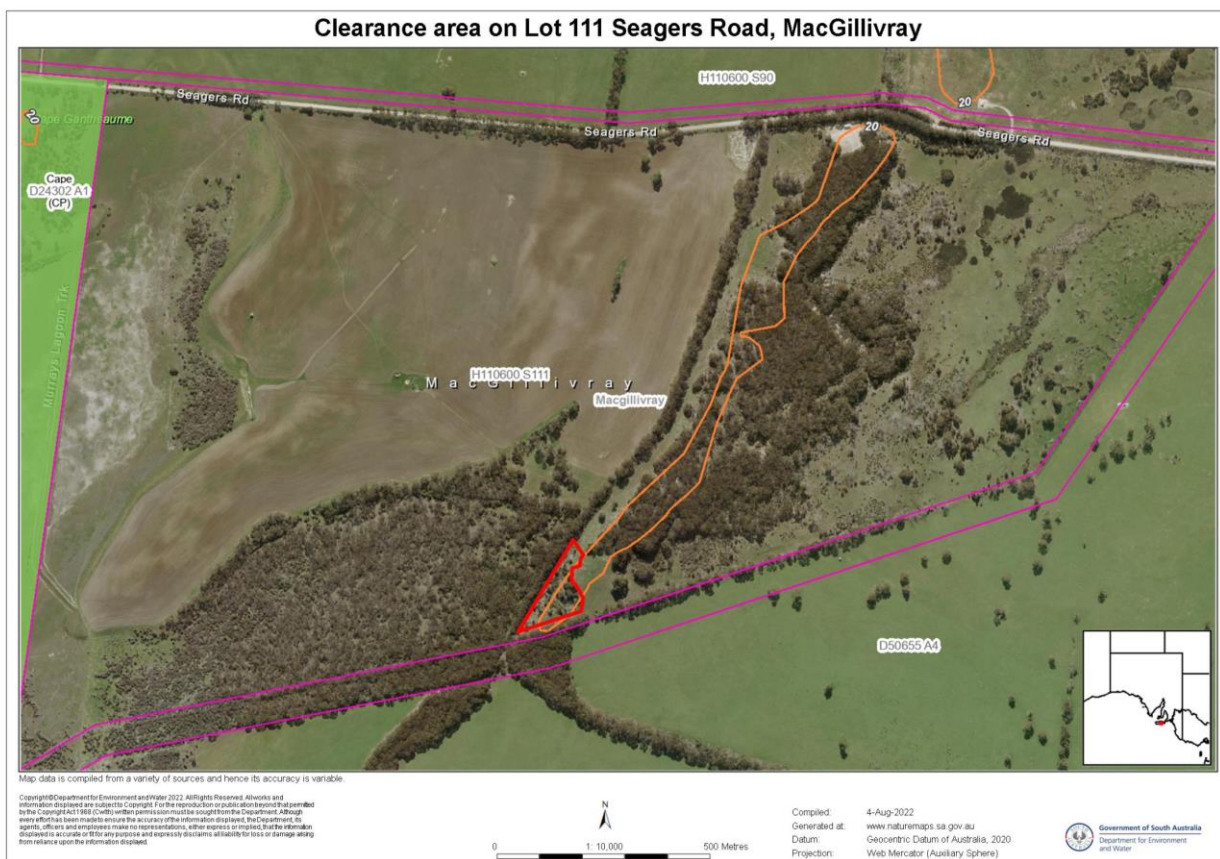


Figure 4. Location of the clearance area on Lot 111 Seagers Road, MacGillivray. (Scale 1:10,000)

2.4 Details of the proposal

The Kangaroo Island Council are proposing to create a new quarry site for the extraction of limestone material for the maintenance of the unsealed road network on Kangaroo Island. These works will be carried out under the Provisions of the *Local Government Act 1999* Section 294, which allows councils to extract minerals from private land for the purpose of road construction and or maintenance without obtaining a Mining Tenement or other authorisation under the *Mining Act 1971*.

It is proposed to undertake extraction activities in stages with a rolling program of quarry opening and closing/rehabilitating to ensure a continual supply of material over the coming years. Works will initially begin in the south-western corner of the allotment within an area that is mostly devoid of native vegetation (Figure 5, blue polygon). When the Stage 1 site is nearing depletion, works will begin within the Stage 2 (Figure 5, red polygon) area.

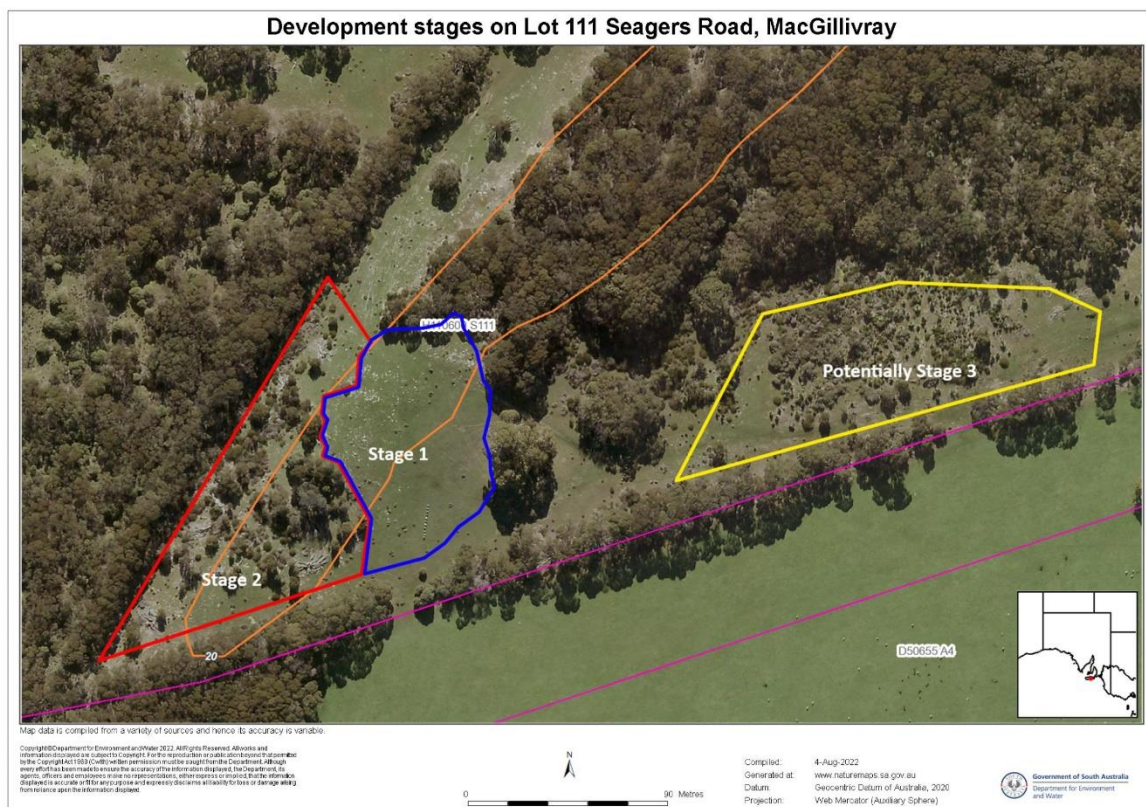


Figure 5. Proposed stages for the extraction of limestone from Lot 111 Seagers Road, MacGillivray. (Scale 1:2,257)

Standard operating procedures for the opening and closing of a quarry will be followed. The topsoil (overburden) will first be removed and stockpiled in an unvegetated part of the allotment. Once no more suitable limestone material can be extracted from the site the area will be rehabilitated. This entails leveling the site off, before then evenly spreading the stockpiled overburden back across the site. The overburden typically contains a viable seed bank, (pasture grasses in the cleared areas, native seeds in the wooded areas) that will germinate and establish over the following winter and spring. The landholder wishes to continue to graze the paddock as has been done in the past.

Prospecting activities will also be undertaken in other areas within the allotment to identify future extraction sites. Priority will be given to the areas of highly degraded vegetation in the first instance. These activities will be conducted within un-vegetated pockets so as not to impact any of the remnant vegetation on the allotment. Once suitable sites have been located, clearance applications will be lodged for them.

2.5 Approvals required or obtained

Permission has been granted from the landowner to apply to clear vegetation for the purpose of mineral extraction on their behalf.

KI Council extracts minerals under the Provisions of the *Local Government Act 1999* – Section 294, therefore a Development Act process does not need to be followed.

No other approvals are required.

2.6 Native Vegetation Regulation

This proposal falls under Regulation 12(28) as it is for a Mining Operation.

Schedule 1, Division 5, Regulation 12(28) – Operations

To allow the clearance of native vegetation for operations authorised under a Mining Act or the *Petroleum and Geothermal Energy Act 2000*.

2.7 Development Application information (if applicable)

Lot 111 Seagers Road, MacGillivray is within a Rural Zone and contained with the Kangaroo Island subzone. The Native Vegetation, Significant Native Vegetation and Medium Bushfire Risk Overlays apply to the allotment.

3. Method

3.1 Flora assessment

The Native Vegetation proposed to be cleared for a limestone mining operation at Lot 111 Seagers Road, MacGillivray, Hundred of MacGillivray was assessed on 29 July 2022. 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 on Lot 111 Seagers Road, MacGillivray, Hundred of MacGillivray 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 clearance area is in a disturbed state as a result of past clearance on multiple occasions. It is providing limited habitat for rare or threatened species. As such, it was felt that a full fauna assessment was not required.

4. Assessment Outcomes

4.1 Vegetation Assessment

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

The locality of MacGillivray is largely flat and contains many lagoons and depressions, the largest of which is Murray Lagoon. The few creeks that are in the area drain into these depressions. As there are no outlets that allow the water to drain into the ocean, salts and minerals have built up over the years turning most of them brackish.

Undulating hills comprised of ironstone gravel based sandy to sandy loam soils can be found in the north part of the locality. A massive carbonate sand dune system lies between Murray Lagoon and the south coast of the island. The southern part of the locality contains shallow calcareous loam soils over calcrete with occasional limestone ridges protruding into the landscape. The clearance area is located within this later topographical feature and soil type.


The vegetation that is found on these calcareous soils is dominated by *Eucalyptus diversifolia* ssp. *diversifolia*, *Eucalyptus rugosa* mid mallee woodland over *Melaleuca lanceolata* and a diverse range of limestone loving understory species. Due to the vast area that has been conserved by the Cape Gantheaume Wilderness Protection Area and the lack of disturbance due to the poor nature of the soils this vegetation is in excellent mostly weed free condition.

The vegetation on Lot 111 Seagers Road, MacGillivray is consistent with the majority of the Cape Gantheaume WPA, however as it has been previously cleared it has become degraded over time. The more intact vegetation that is found on the limestone ridge has become infested by the declared weed *Asparagus asparagoides* to varying degrees, however it is still supporting a good diversity of species including several orchids.

As the vegetation within the clearance area has been actively chained and grazed since the 1960's it is now in a highly degraded state with limited structural diversity, low species diversity and a high number of weed species including several pasture grasses and three declared weed species (*Asparagus asparagoides* f. *asparagoides*, *Asparagus declinatus* and *Marrubium vlgare*).

Lot 111 Seagers Road, MacGillivray is located adjacent to Cape Gantheaume Conservation Park and 1.5km north of several Heritage Agreement areas and the Cape Gantheaume Wilderness Protection Area. The vegetation contained within the southern portion of Cape Gantheaume CP and the Heritage Agreement Areas is consistent with the clearance area, albeit in far worse condition. The patch of vegetation contained within it is semi-isolated in the landscape. It would, however, provide limited services as a corridor for fauna species in assisting their movement from the intact conservation areas to the south into the mosaic of remnant vegetation contained within the surrounding farmland to the north.

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

Vegetation Association	<i>Eucalyptus diversifolia</i> ssp. <i>diversifolia</i> , <i>Eucalyptus rugosa</i> , +/- <i>Eucalyptus albopurpurea</i> , +/- <i>Eucalyptus oleosa</i> ssp. <i>ampliata</i> mid mallee woodland over <i>Melaleuca lanceolata</i> , +/- <i>Hakea mitchellii</i> , +/- <i>Hakea vittata</i> , +/- <i>Acacia myrtifolia</i> var. <i>myrtifolia</i> (NC), +/- <i>Grevillea ilicifolia</i> var. <i>ilicifolia</i> (NC) shrubs over <i>Beyeria lechenaultii</i> , +/- <i>Pomaderris obcordata</i> , +/- <i>Correa eburnea</i> , +/- <i>Acrotriche cordata</i> , +/- <i>Logania ovata</i>				
<div></div> <div><p>Direction: 233°</p><p>Latitude: 35° 54' 41.28" S</p><p>Longitude: 137° 27' 57.14" E</p><p>Photo 5 Typical habitat</p></div>					
General description	<i>Eucalyptus diversifolia</i> ssp. <i>diversifolia</i> , <i>Eucalyptus albopurpurea</i> very open woodland over <i>Melaleuca lanceolata</i> , <i>Melaleuca acuminata</i> ssp. <i>acuminata</i> shrubs over <i>Acacia paradoxa</i> and <i>Pimelea stricta</i> shrubs over <i>Orthrosanthus multiflorus</i> sedges in poor weedy condition				
Threatened species or community	Southern Brown Bandicoot, Short-beaked Echidna (<i>EPBC Act</i> Endangered) and Heath Goanna (<i>NPW Act</i> Vulnerable) have been recorded within 5km of the clearance area <i>Correa backhouseana</i> var. <i>orbicularis</i> and <i>Myoporum parvifolium</i> (<i>NPW Act</i> Rare) have been recorded within 1km of the clearance area No threatened species or communities were observed within the clearance area				
Landscape context score	1.15	Vegetation Condition Score	36.33	Conservation significance score	1.10
Unit biodiversity Score	45.96	Area (ha)	0.87	Total biodiversity Score	39.98

Site map showing areas of proposed impact

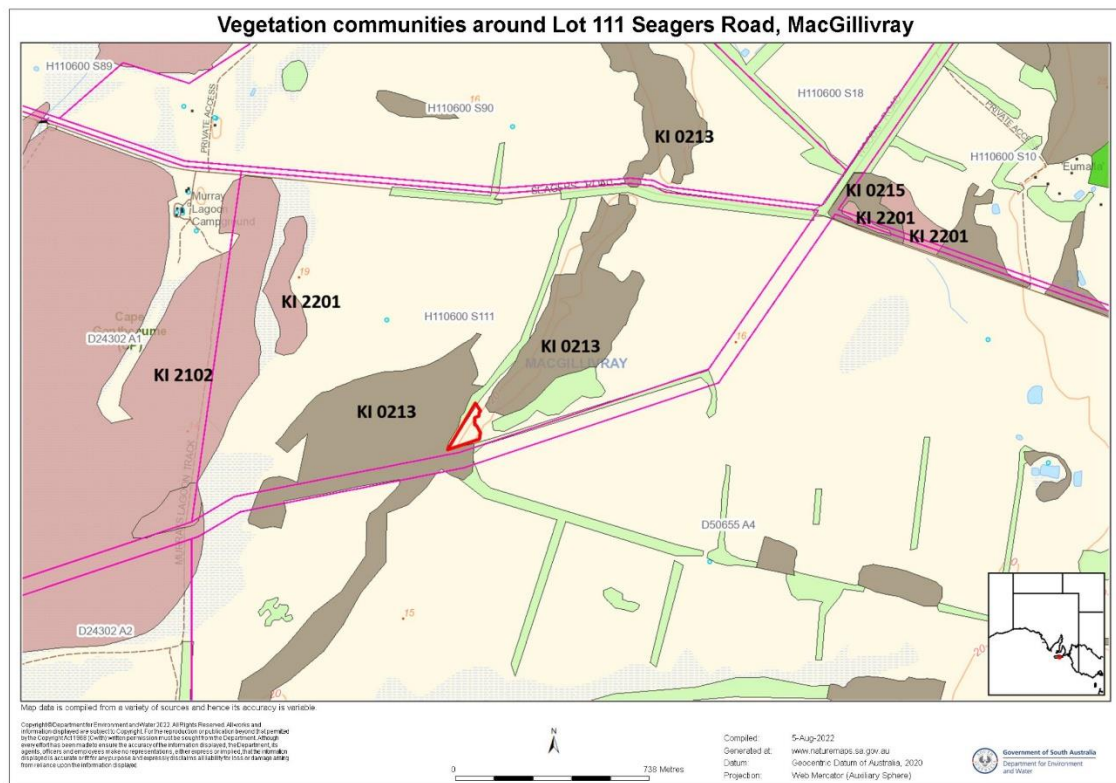


Figure 6. Vegetation communities surrounding Lot 111 Seagers Road, MacGillivray. (Scale 1:18,056)

Photo log



Photo 1. **Direction:** 217° **Latitude:** 35° 54' 40.90" S **Longitude:** 137° 27' 56.81" E. Northern end of clearance area



Photo 2. **Direction:** 112° **Latitude:** 35° 54' 41.65" S **Longitude:** 137° 27' 55.88" E. Weeds in remnant vegetation.



Photo 3. **Direction:** 227° **Latitude:** 35° 54' 43.64" S **Longitude:** 137° 27' 57.34" E. Eastern edge of clearance area.



Photo 4. **Direction:** 299° **Latitude:** 35° 54' 44.31" S **Longitude:** 137° 27' 55.59" E. Southern part of clearance area

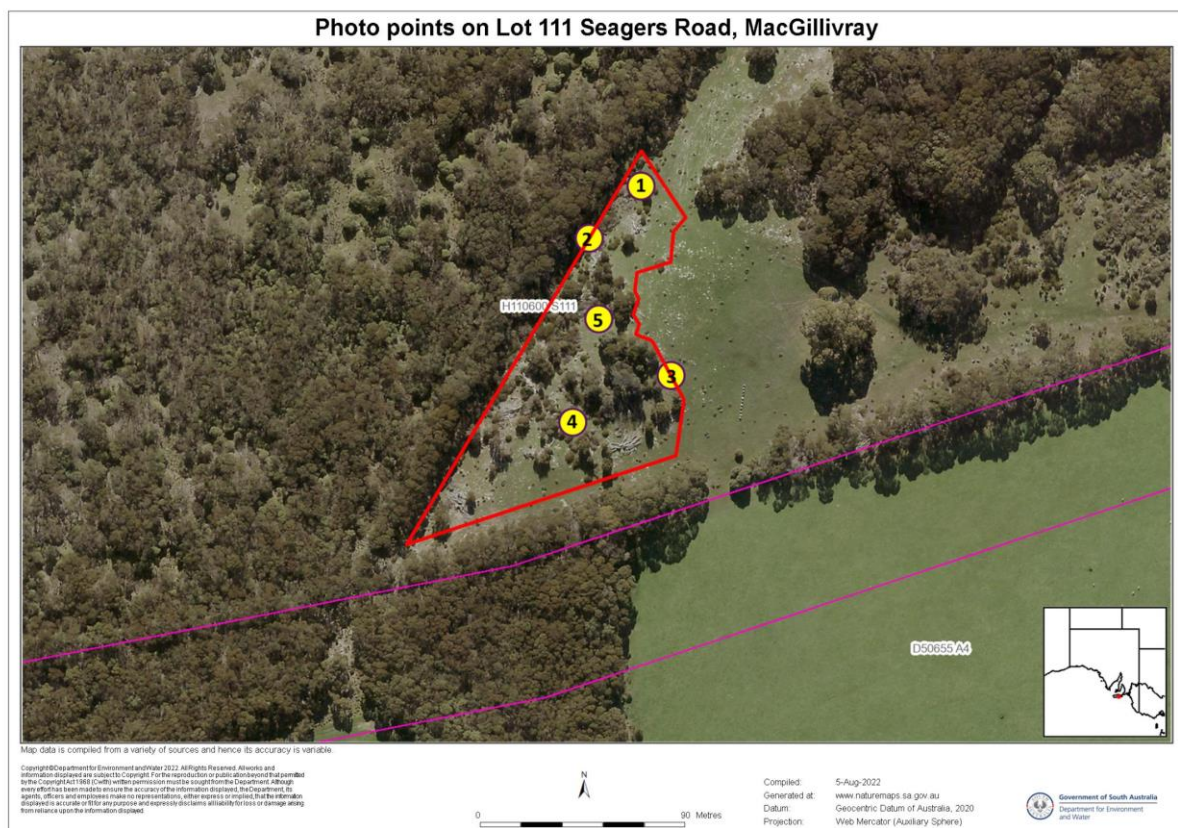


Figure 7. Location of photo points on Lot 111 Seagers Road, Macgillivray. (Scale 1:2,257)

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
<i>Cereopsis novaehollandiae novaehollandiae</i> (Cape Barren Goose)	R		3	2012	Grasslands around watering points	Likely – limited suitable habitat
<i>Myiagra inquieta</i> (Restless Flycatcher)	R		3	2019	Open forest and woodland near riparian zones	Likely – limited suitable habitat
<i>Isoodon obesulus obesulus</i> (Southern Brown Bandicoot)	V	EN	3	2021	Heathy open forest and woodland	Likely – limited suitable habitat
<i>Tachyglossus aculeatus multiaculeatus</i> (Short-beaked Echidna)	E	EN	3	2021	Forest, woodland, mallee, heathland	Likely – suitable habitat present
<i>Varanus rosenbergi</i> (Heath Goanna)	V		3	2021	Forest, woodland, mallee, heathland	Likely – suitable habitat present
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.

Clearance is required to create an open pit quarry for the extraction of limestone material for road construction and maintenance. This clearance will be undertaken in a sensitive manner to minimise the impact on the surrounding vegetation. Existing vehicular access tracks will be utilised and overburden will be stockpiled within areas that are devoid of native vegetation.

The clearance and mining operation will generate some dust, however this will have a minimal impact on the surrounding vegetation as the soils are predominately heavy and the surrounding vegetation is able to withstand moderate levels of smothering by dust.

There are no creeks in the immediate vicinity, so the clearance and subsequent earthworks will not have an impact on the hydrology of the area.

The outer limit of the quarry will not go closer than 10m to the remnant vegetation to ensure that the root zones of this vegetation is not damaged during excavation works.

It is anticipated that further clearance will be required in the future when the current proposed site has been exhausted of limestone material. As with this application, the native vegetation and character of the area will be taken into consideration during the site selection process.

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

Areas on the allotment that contain suitable limestone material that are devoid of native vegetation will be exhausted first, to avoid the clearance of vegetation until it becomes necessary to do so. When clearance becomes unavoidable, suitable material will be extracted from areas of degraded vegetation to avoid the clearance of the intact vegetation contained within the allotment.

Existing vehicle access tracks will be upgraded thus negating the need to clear vegetation to access the new quarry site.

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).

An area of highly degraded vegetation has been selected to minimise the clearance of pockets of more intact vegetation. The overburden from the extraction site will be stockpiled on existing or previously cleared areas to further minimise vegetation clearance.

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.

Once all suitable limestone material has been extracted from the site the area will be passively rehabilitated. This will be achieved by firstly levelling of the extraction site and then spreading the overburden across it. The overburden typically contains a seedbank, which will germinate and establish over the ensuing winter and spring.

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.

The Significant Environmental Offset will be achieved via the use of some of Credit Accrual # 2006_2028. This emanated from the Section 41, Hundred of Gosse Agreement between KI Council/Crown Lands (Geoff Vanderzwan)/Minister for Environment (Department of Environment and Water).

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	<p><u>Relevant information</u></p> <p>KI 0213 <i>Eucalyptus diversifolia</i> ssp. <i>diversifolia</i> mid mallee woodland over <i>Melaleuca lanceolata</i> shrubs over <i>Beyeria lechenaultii</i> shrubs</p> <p>Native species: 21; Introduced species: 10</p> <p>Bushland Plant Diversity Score – 16</p>
	<p><u>Assessment against the principles</u></p> <p>At Variance - KI 0213 <i>Eucalyptus diversifolia</i> ssp. <i>diversifolia</i> mid mallee woodland over <i>Melaleuca lanceolata</i> shrubs over <i>Beyeria lechenaultii</i> shrubs</p>
	<p><u>Moderating factors that may be considered by the NVC</u></p> <p>The clearance area is very small and only consisting of sparse degraded vegetation. Less than 0.25% of the vegetation within the area will be cleared.</p>
Principle 1b - significance as a habitat for wildlife	<p><u>Relevant information</u></p> <p>No threatened fauna were observed within the clearance area.</p> <p>Southern Brown Bandicoot, Short-beaked Echidna (<i>EPBC Act</i> Endangered), Heath Goanna (<i>NPW SA Act</i> Vulnerable), Cape Barren Goose and Restless Flycatchers (<i>NPW SA Act</i> Rare) have been recorded within 5km of the clearance area.</p> <p>As the clearance area is highly degraded it would support a limited number of species. There are large areas of intact vegetation nearby that native fauna would preferentially utilise as corridors over the clearance area.</p> <p>Patches; Threatened Fauna Score – 0.1 Unit biodiversity Score – 45.96</p>
	<p><u>Assessment against the principles</u></p> <p>Seriously at Variance - KI 0213 <i>Eucalyptus diversifolia</i> ssp. <i>diversifolia</i> mid mallee woodland over <i>Melaleuca lanceolata</i> shrubs over <i>Beyeria lechenaultii</i> shrubs</p>

	<p><u>Moderating factors that may be considered by the NVC</u></p> <p>The threatened species that have been recorded within 5km of the clearance area are highly mobile and the clearance area is small and within an area of degraded vegetation. Because of these factors, the clearance will have minimal impact on the threatened species.</p>
<p>Principle 1c - plants of a rare, vulnerable or endangered species</p>	<p><u>Relevant information</u></p> <p>No threatened flora species were observed within the clearance area.</p> <p><i>Correa backhouseana</i> var. <i>orbicularis</i> and <i>Myoporum parvifolium</i> (NPW SA Act Rare) have been recorded within 1km of the clearance area. Both species would have been detected during the site assessment if they were growing within the clearance area.</p> <p>Threatened Flora Score(s) - 0</p> <p><u>Assessment against the principles</u></p> <p><u>Not at Variance</u></p> <p>- KI 0213 <i>Eucalyptus diversifolia</i> ssp. <i>diversifolia</i> mid mallee woodland over <i>Melaleuca lanceolata</i> shrubs over <i>Beyeria lechenaultii</i> shrubs</p> <p><u>Moderating factors that may be considered by the NVC</u></p>
<p>Principle 1d - the vegetation comprises the whole or part of a plant community that is Rare, Vulnerable or endangered:</p>	<p><u>Relevant information</u></p> <p>No threatened ecological communities or ecosystems were observed within the clearance area.</p> <p>Threatened Community Score - 1</p> <p><u>Assessment against the principles</u></p> <p><u>Not at Variance</u></p> <p>- KI 0213 <i>Eucalyptus diversifolia</i> ssp. <i>diversifolia</i> mid mallee woodland over <i>Melaleuca lanceolata</i> shrubs over <i>Beyeria lechenaultii</i> shrubs</p> <p><u>Moderating factors that may be considered by the NVC</u></p>
<p>Principle 1e - it is significant as a remnant of vegetation in an area which has been extensively cleared.</p>	<p><u>Relevant information</u></p> <p>IBRA Association: MacGillivray, 26% remnancy IBRA subregion: Kangaroo Island, 52% remnancy</p> <p>There are vast tracks on intact vegetation that is protected within Wilderness Protection Areas, Conservation Parks and Heritage Agreement Areas within the IBRA Association of MacGillivray. Due to the large size of this patch, the lack of historic and/or current disturbance and low weed levels these areas are likely to remain healthy and remain intact for many years to come.</p> <p>Total Biodiversity Score – 39.98</p> <p><u>Assessment against the principles</u></p> <p><u>Not at Variance</u></p> <p><u>Moderating factors that may be considered by the NVC</u></p>

Principle 1f - it is growing in, or in association with, a wetland environment.	<u>Relevant information</u> The vegetation on Lot 111 Seagers Road, MacGillivray is not growing in a wetland.
	<u>Assessment against the principles</u> Not at Variance - KI 0213 <i>Eucalyptus diversifolia</i> ssp. <i>diversifolia</i> mid mallee woodland over <i>Melaleuca lanceolata</i> shrubs over <i>Beyeria lechenaultii</i> shrubs
	<u>Moderating factors that may be considered by the NVC</u>
Principle 1g - it contributes significantly to the amenity of the area in which it is growing or is situated.	<u>Relevant information</u> The clearance area is not visible from Seagers Road due to the limestone ridge that runs across the property. There are several extraction sites, both present and past, within close proximity, so clearance for this purpose is not out of character for the area.
	N/A
	<u>Moderating factors that may be considered by the NVC</u>

[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)	0.87
	Total biodiversity Score	39.98
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 details have 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	16	1	0	.1	46	.87	39.98	1	0	0	41.98	\$29,195.70	\$1,605.76
						Total	.87	39.98				41.98	\$29,195.70	\$1,605.76

Totals summary table

	Total Biodiversity score	Total SEB points required	SEB Payment	Admin Fee	Total Payment
Application	39.98	41.98	\$29,195.70	\$1,605.76	\$30,801.46

Economies of Scale Factor	0.5
Rainfall (mm)	520

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. 2006_2028**
- ☐ 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:

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	
<i>Cereopsis novaehollandiae novaehollandiae</i>	Cape Barren Goose		R	Yes		
<i>Chalcites basal</i>	Horsfield's Bronze Cuckoo			Yes		
<i>Epthianura albifrons</i>	White-fronted Chat			Yes		
<i>Gymnorhina tibicen</i>	Australian Magpie			Yes		
<i>Hirundo neoxena</i>	Welcome Swallow			Yes		
<i>Myiagra inquieta</i>	Restless Flycatcher		R	Yes		
<i>Threskiornis moluccus</i>	Australian White Ibis			Yes		
<i>Vanellus miles</i>	Masked Lapwing			Yes		
<i>Felis catus</i>	Domestic Cat (Feral Cat)			Yes		*
<i>Isodon obesulus obesulus</i>	Southern Brown Bandicoot (S)	EN	V	Yes		
<i>Tachyglossus aculeatus multiaculeatus</i>	Short-beaked Echidna (Kangaroo)	EN	E	Yes		
<i>Varanus rosenbergi</i>	Heath Goanna		V	Yes		

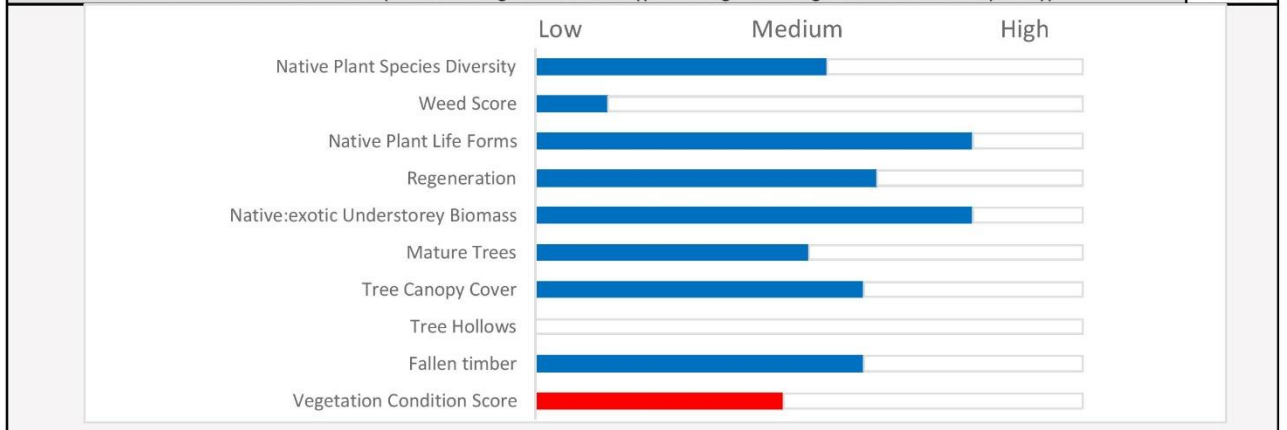
Vegetation Condition Scores

SITE:	South-west Cnr
BCM COMMUNITY	KI 4 Mallee and woodlands with a mid dense shrub and sedge understorey on limestone based soils
VEGETATION ASSOCIATION DESCRIPTION	KI 0213 Eucalyptus diversifolia ssp diversifolia over Melaleuca lanceola
SIZE OF SITE (Ha)	0.87

Benchmarked attributes (Scores determined by comparing to a Benchmark community)				Native Plant Life Forms	Cover rating
Number of Native Species (Minus herbaceous annuals for spring Surveys)	21			Trees > 15m	
Native Plant Species Diversity Score (max 30) from benchmark score <i>weighted by a factor of 2</i>	16.0			Trees 5 - 15 m	
				Trees < 5m	
				Mallee > 5m	
				Mallee < 5m	3
Number of regenerating native species	4			Shrubs > 2m	2
Regeneration Score (max 12) from benchmark community weighted by a factor of 1.5	7.5			Shrubs 0.5 - 2m	3
				Shrubs < 0.5	2
				Forbs	2
Weed species (Top 5 Cover x Invasiveness)	Cover (max 6)	Weed Threat Rating (max 5)	C x I	Mat Plants	
Asparagus asparagoides forma	3	5	15	Grasses > 0.2m	2
Asparagus declinatus	2	5	10	Grasses < 0.2m	
Marrubium vulgare	2	2	4	Sedges > 1m	
Phalaris sp.	2	3	6	Sedges < 1m	3
Avena spp.	2	2	4	Hummock grasses	
	Cover x Threat		39	Vines, scramblers	2
Weed Score (max 15) from benchmark community			2	Mistletoe	
				Ferns	
				Grass-tree	
				Total	19
Native Plant Life Forms (max 20) from benchmark score <i>weighted by a factor of 2</i>					16.0

Non-Benchmarked Attributes (Scores determined from direct field observations)		<i>Is the community naturally treeless?</i>	<input type="checkbox"/>
Native:exotic Understorey biomass Score (max 5)	4	Fallen Timber/Debris (max 5)	3
		Hollow-bearing trees Score (max 5)	0
		Mature Tree Score (max 8)	4
		Tree Canopy Cover Score (max 5)	3

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	46.50
Negative Vegetation Attributes Score = (15 - Weeds) + ((10 - Biomass score - Tree Canopy Cover Score)exp2/2)	17.50
VEGETATION CONDITION SCORE (Positive veg attributes x ((80 - Negative vegetation attributes) / 80))	36.33



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)		<input type="checkbox"/>
State (Provisional List of Threatened Ecosystems of SA) Vulnerable community (0.2 pts)		<input type="checkbox"/>
State (Provisional List of Threatened Ecosystems of SA) Endangered community (0.3 pts)		<input type="checkbox"/>
Nationally (EPBC Act) Vulnerable community (0.35 pts)		<input type="checkbox"/>
Nationally (EPBC Act) Endangered or Critically Endangered community (0.4 pts)		<input type="checkbox"/>
<i>Note; all sites will score a minimum Conservation Significance Score of 1</i>		
Threatened Community Score		1
Number of Threatened Flora Species recorded for the site (within the site)		Number
<i>*If a species has both a State (NP&W Act) and National (EPBC Act) rating, it's only recorded for its National rating.</i>		
State Rare species recorded (1 pt each)		0
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		0
Threatened Flora Score		0
Potential habitat for Threatened Fauna Species (number observed or previously recorded)		Number
<i>*If a species has both a State (NP&W Act) and National (EPBC Act) rating, it's only recorded for its National rating.</i>		
State Rare species observed or locally recorded (1 pt each)		2
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)		0
Nationally Endangered or Critically endangered species observed or locally recorded (20 pts each)		2
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		44.5
Threatened Fauna Score		0.1
CONSERVATION SIGNIFICANCE SCORE		1.1

Total Scores for the Site		Vegetation Condition x Landscape Context x Conservation Significance =	
LANDSCAPE CONTEXT SCORE	Score	UNIT BIODIVERSITY SCORE	45.96
	1.15		
VEGETATION CONDITION SCORE	36.33	Total Biodiversity Score	
CONSERVATION SIGNIFICANCE SCORE	1.10	(Biodiversity Score x hectares)	39.98

Photo Point and Vegetation Survey Location		Direction of the Photo	
		233 degrees	
		GPS Reference	
		Datum	WGS84
		Zone (52, 53 or 54)	53
		Easting (6 digits)	722513
		Northing (7 digits)	6023062
Description		Eucalyptus diversifolia ssp. Diversifolia, Eucalyptus albopurpurea mid mallee woodland over Melaleuca lanceolata, Melaleuca acuminata ssp acuminata over Orthrosanthus multiflorus in	

What is the purpose of Assessment?

Clearance

SEB Area

Other

Assessment for Clearance

Loss Factor	1.0	Approximate hectares required	5.25
Loadings for clearance of protected areas		Economies of Scale Factor	0.5
Reductions for rehabilitation of impact site		Mean Annual rainfall for the site (mm)	520
SEB Points required	41.98	Payment into the fund (GST Exclusive)	\$29,195.70
		Administration fee (GST Inclusive)	\$1,605.76

Appendix 3. Flora Species List

Plant Species Recorded (Native and Introduced)		Listed Species			Natives only		Introduced Species
Species	Common Name	EPBC	SA	Not in quadrat	Regen	Annual Herbs Spring survey	
<i>Orthrosanthus multiflorus</i>	Morning Flag						
<i>Acacia paradoxa</i>	Kangaroo Thorn				Yes		
<i>Eucalyptus diversifolia</i> ssp. <i>diversifolia</i>	Coastal White Mallee						
<i>Eucalyptus albopurpurea</i>	Purple-flowered Mallee Box						
<i>Pimelea stricta</i>	Erect Riceflower				Yes		
<i>Vittadinia australasica</i> var. <i>australasica</i>	Sticky New Holland Daisy						
<i>Comesperma volubile</i>	Love Creeper						
<i>Clematis microphylla</i>	Old Man's Beard				Yes		
<i>Lasiopetalum schulzenii</i>	Drooping Velvet-bush						
<i>Dianella brevicaulis</i>	Short-stem Flax-lily						
<i>Hibbertia pallidiflora</i>	Round-leaf Guinea-flower				Yes		
<i>Austrostipa</i> sp.	Spear-grass						
<i>Melaleuca acuminata</i> ssp. <i>acuminata</i>	Mallee Honey-myrtle						
<i>Melaleuca lanceolata</i>	Dryland Tea-tree						
<i>Hardenbergia violacea</i>	Native Lilac						
<i>Rytidosperma</i> sp.	Wallaby-grass						
<i>Leucopogon parviflorus</i>	Coast Beard-heath						
<i>Gahnia deusta</i>	Limestone Saw-sedge						
<i>Beyeria lechenaultii</i>	Pale Turpentine Bush						
<i>Senecio odoratus</i>	Scented Groundsel						
<i>Lasiopetalum behrii</i>	Pink Velvet-bush						
<i>Lagurus ovatus</i>	Hare's Tail Grass						*
<i>Arctotheca calendula</i>	Cape Weed						*
<i>Romulea rosea</i> var. <i>australis</i>	Common Onion-grass						*
<i>Asparagus asparagoides</i> f.	Bridal Creeper						*
<i>Hypochaeris glabra</i>	Smooth Cat's Ear						*
<i>Watsonia</i> sp.	Watsonia						*
<i>Avena barbata</i>	Bearded Oat						*
<i>Asparagus declinatus</i>							*
<i>Marrubium vulgare</i>	Horehound						*
<i>Phalaris aquatica</i>	Phalaris						*