



## Native Vegetation Clearance

Lot 100w Boxer Rd, Wisanger

## Data Report

Clearance under Section 28 of the Native Vegetation Act 1991

6<sup>th</sup> February, 2023

Prepared by [REDACTED]



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# 1. Application information

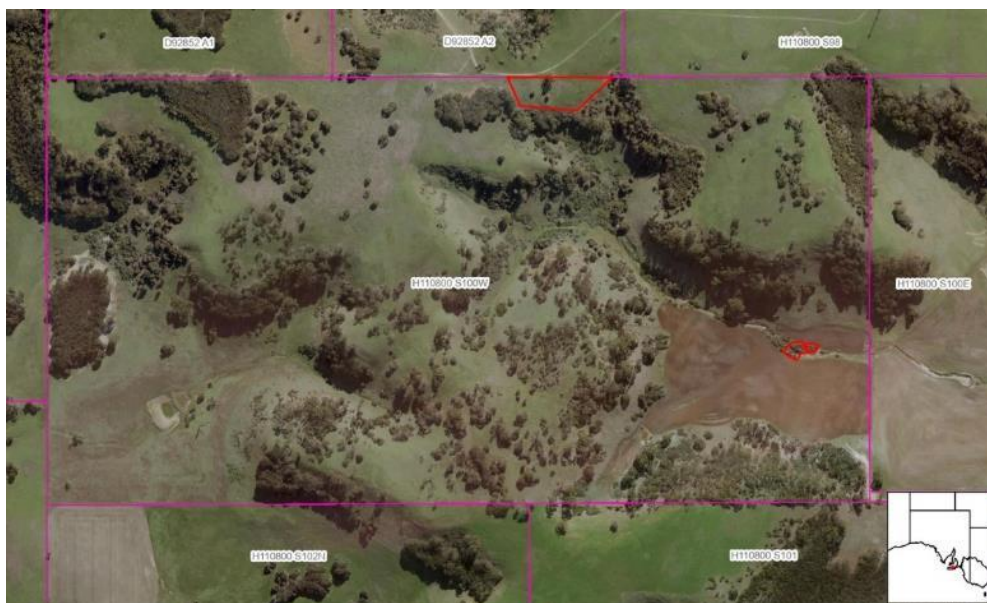
## Application Details

Applicant:	[REDACTED]		
Key contact:	[REDACTED]; Mb: [REDACTED] E: [REDACTED]		
Landowner:	[REDACTED]		
Site Address:	Lot 100w Boxer Road, Wisanger SA 5223		
Local Government Area:	Kangaroo Island	Hundred:	Menzies
Title ID:	CT/5505/836	Parcel ID	H110800 S100W

## Summary of proposed clearance

Purpose of clearance	Clearance required to remove natural regeneration from an agricultural paddock and to maintain and enlarge a dam
Description of the vegetation under application	6.81 ha of Narrow-leaf Mallee ( <i>Eucalyptus cneorifolia</i> ) woodlands in moderate condition and 0.31 ha of Slender Honey-myrtle ( <i>Melaleuca gibbosa</i> ) shrubland in poor condition
Total proposed clearance - area (ha) and number of trees	1.25 ha are proposed to be cleared.
Level of clearance	Level 4
Overlay (Planning and Design Code)	Native Vegetation Overlay

### Map of proposed clearance area



Seriously at variance with the Principles of clearance?	Site 1 and Site 2 are seriously at variance with the threatened fauna principle 1 (b)
Substantially intact	Neither Site 1 nor Site 2 can be considered to contain substantially intact stratum.
Mitigation hierarchy	Only the minimum amount of vegetation will be removed to enable maintenance of the agricultural paddock and dam.
SEB Offset proposal	Payment of \$25,056.03 or 4.07 ha on-ground

# 2. Purpose of clearance

## 2.1 Description

Clearance is required to remove natural regeneration from a continually grazed agricultural paddock to enable the improvement of the pasture within it. Clearance is also required around the perimeter of a dam to increase its capacity and to enable a larger number of stock to safely access the waters edge.

## 2.2 Background

Wisanger was largely cleared for agricultural purposes in the early days of settlement on Kangaroo Island. Lot 100w Boxer Rd was mostly cleared during this time, however due to the steep nature of the block and the creek lines that dissect it, some areas were either left uncleared or were left sparsely vegetated.

The property has been seasonally grazed since it was cleared. The remnant vegetation on the property has never been fenced off, so stock have had continual access to these areas.

The landholder has taken out a mineral claim (MC4540) on a portion of the southern side of the property with the intent of mining basalt out of the hills. A separate clearance application has been lodged for this activity. The remaining arable acres are being leased to a nearby farmer for grazing purposes.

Due to the steepness of the topography, the arable acres are difficult to regularly cultivate. This has enabled the encroachment of coloniser species such as *Acacia paradoxa* and *Orthrosanthus multiflorus* into the previously cleared areas. The landholder wishes to reclaim one of these areas, so that the productivity of the area can be improved.

## 2.3 General location map

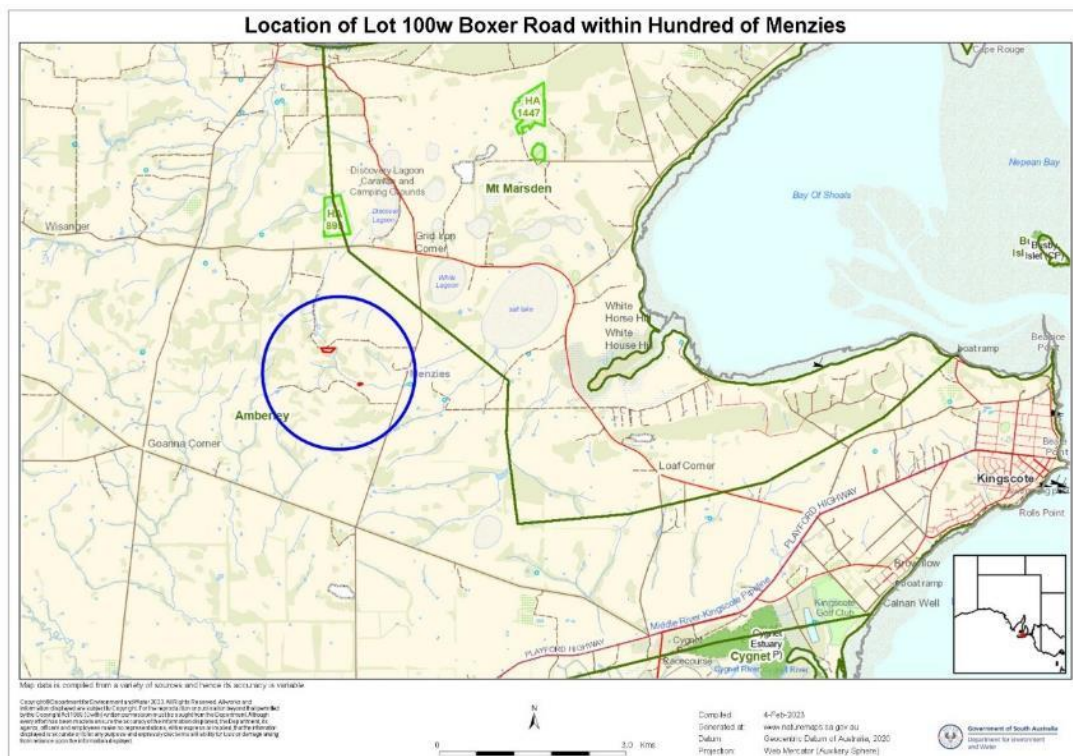


Figure 1. Location of Lot 100w Boxer Rd, Wisanger within the Hundred of Menzies. (Scale 1:72,224)



Figure 2. Clearance areas on Lot 100w Boxer Road, Wisanger. (Scale 1:9,028)

## 2.4 Details of the proposal

Several areas on Lot 100w Boxer Road, Wisanger have got natural regeneration occurring within them. This regeneration is encroaching into the arable acres on the property, thereby reducing production. The landholder wishes to improve the pasture within one of the paddocks along the northern boundary (Figure 3). For this to occur the encroaching vegetation needs to be removed.



Figure 3. Location of Site 1 (Paddock) on Lot 100w Boxer Road, Wisanger. (Scale 1:9,028)

The vegetation within Site 1 predominately consists of scattered *Acacia paradoxa* shrubs over native grasses and exotic pasture grasses. Once the native vegetation is removed, it will enable the landholder to fertilise the area and once again manage the land effectively as a grazing paddock.

A small creek that runs through part of the property was dammed many years ago to create a watering point for stock. Remnant vegetation has steadily encroached around the banks of this dam making it difficult for stock to safely reach the water. The landholder is proposing to remove the vegetation to reclaim the dam bank and ensure that stock can safely reach the waters edge without the risk of falling in. (Figure 4). As part of these works, it is proposed to clean the dam out and slightly increase its holding capacity.



Figure 4. Location of Site 2 (Dam) on Lot 100w Boxer Road, Wisanger (Scale 1:1,028)

## 2.5 Approvals required or obtained

### *Landscapes SA*

A Water Affecting Activity permit will be sought from the KI Landscape Board for the dam maintenance.

## 2.6 Development Application information (if applicable)

Lot 100w Boxer Road, Wisanger is zoned Rural (Primary Production) and subzoned Kangaroo Island. The Native Vegetation and Water Resources Overlays apply.

# 3. Method

## 3.1 Flora assessment

The Native Vegetation proposed to be cleared for the maintenance of a paddock and dam within Lot 100w Boxer Road, Wisanger, Hundred of Menzies was assessed on 22 November 2022. The flora was assessed using standard assessment techniques consisting of-

- Two native vegetation communities were identified;
- A Bushland Assessment Site was established in each vegetation community;
- A complete species list of all native and introduced plant species was produced for the identified vegetation communities;
- 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 100w Boxer Road, Wisanger, Hundred of Menzies 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 on the allotment is very sparse with minimal understory and herbaceous species present. It is providing limited habitat for fauna species. There are no records of threatened fauna within close proximity to the property, so a targeted fauna survey was not undertaken.

# 4. Assessment Outcomes

## 4.1 Vegetation Assessment

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

The Menzies Hills are located west of Kingscote and extend towards the north coast of Kangaroo Island. They are comprised of undulating uplands to an altitude of 100m and plains which contain alkaline duplex soils and grey-brown cracking clays. There are many ephemeral creeks and drainage lines throughout the area and several salt lagoons.

The Wisanger Plateau, which rises to an altitude of 180m, is wholly contained within the Menzies Hills and was formed by the upwelling of basaltic lavas during the Middle Jurassic times. The hills that make up the plateau are steep sided and are dissected by many gullies. Despite the steep nature of the area, much of it was cleared for agricultural purposes. There are, however, many pockets of semi-cleared and intact patches of vegetation throughout the area.

Lot 100w Boxer Road, Wisanger is located at the eastern end of the Wisanger Plateau and contains three major drainage lines. There are several patches of intact vegetation on the allotment as well as many sparsely vegetated areas. The areas that have been completely cleared for agricultural purposes are highly visible within the landscape.

There are two main vegetation communities found on the allotment being a *Eucalyptus cneorifolia* mid open mallee forest over *Melaleuca uncinata* (KI 1101) and a *Eucalyptus cladocalyx* mid open woodland over *Melaleuca uncinata* (KI 0508). This vegetation is in a senescent state due to a lack of ecological disturbance and is in moderate condition due to livestock having had continual access to it.

The remnant vegetation on the property lacks structural diversity and is largely of a uniform age class. Due to these factors, the vegetation is providing limited habitat for fauna species; in particular small ground dwelling mammals which require a dense shrub layer. The lack of species diversity and regeneration within the remnants is reducing the potential food sources available, which limits the number of species that can utilise the area for habitat.

The vegetation within Site 1 is in a highly modified state and represented by scattered *Acacia paradoxa* shrubs and other coloniser species such as *Allocasuarina verticillata* and *Orthrosanthus multiflorus*. The vegetation within Site 2 is in a highly degraded state, lacks structural diversity and has been invaded by *Phalaris aquatica* and the declared weed *Asparagus asparagoides*. Neither site is providing habitat for Rare and Threatened species. This vegetation is semi-isolated within the highly fragmented agricultural landscape. A heritage agreement area (HA 895) which contains similar vegetation is located 2.5km to the north.


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

Vegetation Association	KI 1101 <i>Eucalyptus cneorifolia</i> , +/- <i>Eucalyptus rugosa</i> , +/- <i>Eucalyptus odorata</i> , +/- <i>Eucalyptus diversifolia</i> ssp. <i>diversifolia</i> , +/- <i>Eucalyptus phenax</i> ssp. <i>compressa</i> mid closed mallee forest over +/- <i>Melaleuca uncinata</i> , +/- <i>Melaleuca acuminata</i> ssp. <i>acuminata</i> , +/- <i>Callistemon rugulosus</i> var. <i>rugulosus</i> (NC) over +/- <i>Thryptomene ericaea</i> , +/- <i>Acacia paradoxa</i> , +/- <i>Melaleuca gibbosa</i> , +/- <i>Rhagodia candolleana</i> ssp. <i>candolleana</i> , +/- <i>Xanthorrhoea semiplana</i> ssp. <i>tateana</i> mid open shrubland over +/- <i>Ozothamnus retusus</i> , +/- <i>Orthrosanthus multiflorus</i> low open shrubland
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Photo 5 **Direction:** 123° **Latitude:** 35° 38' 17.31" S **Longitude:** 137° 30' 51.28" E Encroaching native shrubs

General description	Scattered <i>Eucalyptus cladocalyx</i> ssp. <i>crassa</i> trees over <i>Acacia paradoxa</i> shrubs and <i>Orthrosanthus multiflorus</i> sedges in poor condition.				
Threatened species or community	No Threatened Ecological Communities were observed within the clearance area. No threatened fauna species were observed during the site assessment. There are records of Southern Brown Bandicoots ( <i>EPBC Act</i> Endangered) and Little Wattlebird ( <i>EPBC Act</i> Vulnerable) within 5km of the clearance area. No threatened flora species were observed during the site assessment. There are records of <i>Eucalyptus phenax</i> ssp. <i>compressa</i> ( <i>NPW SA Act</i> Rare) within 1km of the clearance area.				
Landscape context score	1.15	Vegetation Condition Score	19.01	Conservation significance score	1.10
Unit biodiversity Score	24.05	Area (ha)	1.11	Total biodiversity Score	26.70

Vegetation Association	KI 2101 emergent +/- <i>Allocasuarina verticillata</i> trees over <i>Melaleuca gibbosa</i> mid shrubland over <i>Acacia paradoxa</i> , <i>Prostanthera spinosa</i>				
					
Photo 6 <b>Direction:</b> 109° <b>Latitude:</b> 35° 38' 35.10" S <b>Longitude:</b> 137° 31' 14.15" E Encroaching native shrubs					
General description	<i>Melaleuca gibbosa</i> and <i>Acacia paradoxa</i> shrubs and <i>Orthrosanthus multiflorus</i> sedges in poor degraded and weedy condition.				
Threatened species or community	No Threatened Ecological Communities were observed within the clearance area. No threatened fauna species were observed during the site assessment. There are records of Southern Brown Bandicoots ( <i>EPBC Act</i> Endangered) and Little Wattlebird ( <i>EPBC Act</i> Vulnerable) within 5km of the clearance area. No threatened flora species were observed during the site assessment. There are records of <i>Eucalyptus phenax ssp. compressa</i> ( <i>NPW SA Act</i> Rare) within 1km of the clearance area.				
Landscape context score	1.13	Vegetation Condition Score	25.13	Conservation significance score	1.10
Unit biodiversity Score	31.24	Area (ha)	0.14	Total biodiversity Score	4.37

## Site map showing areas of proposed impact

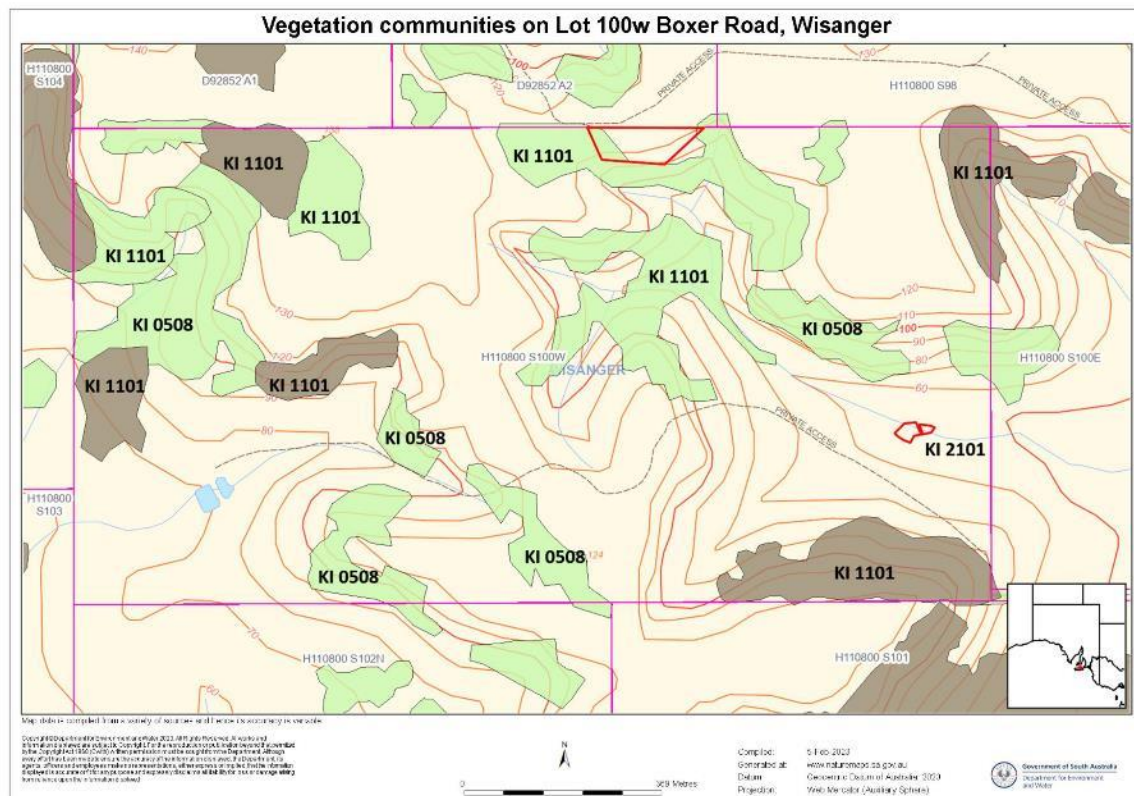


Figure 5. Vegetation communities on Lot 100w Boxer Road, Wisanger. (Scale 1:9,028)

## Photo log



Photo 1. **Direction:** 96° **Latitude:** 35° 38' 17.93" S **Longitude:** 137° 30' 52.22" E. Western side of paddock.



Photo 2. **Direction:** 248° **Latitude:** 35° 38' 17.73" S **Longitude:** 137° 30' 57.55" E. Eastern side of paddock



Photo 3. **Direction:** 328° **Latitude:** 35° 38' 35.68" S **Longitude:** 137° 31' 14.55" E Southern side of Dam



Photo 4. **Direction:** 272° **Latitude:** 35° 38' 35.66" S **Longitude:** 137° 31' 16.55" E looking toward western dam bank.

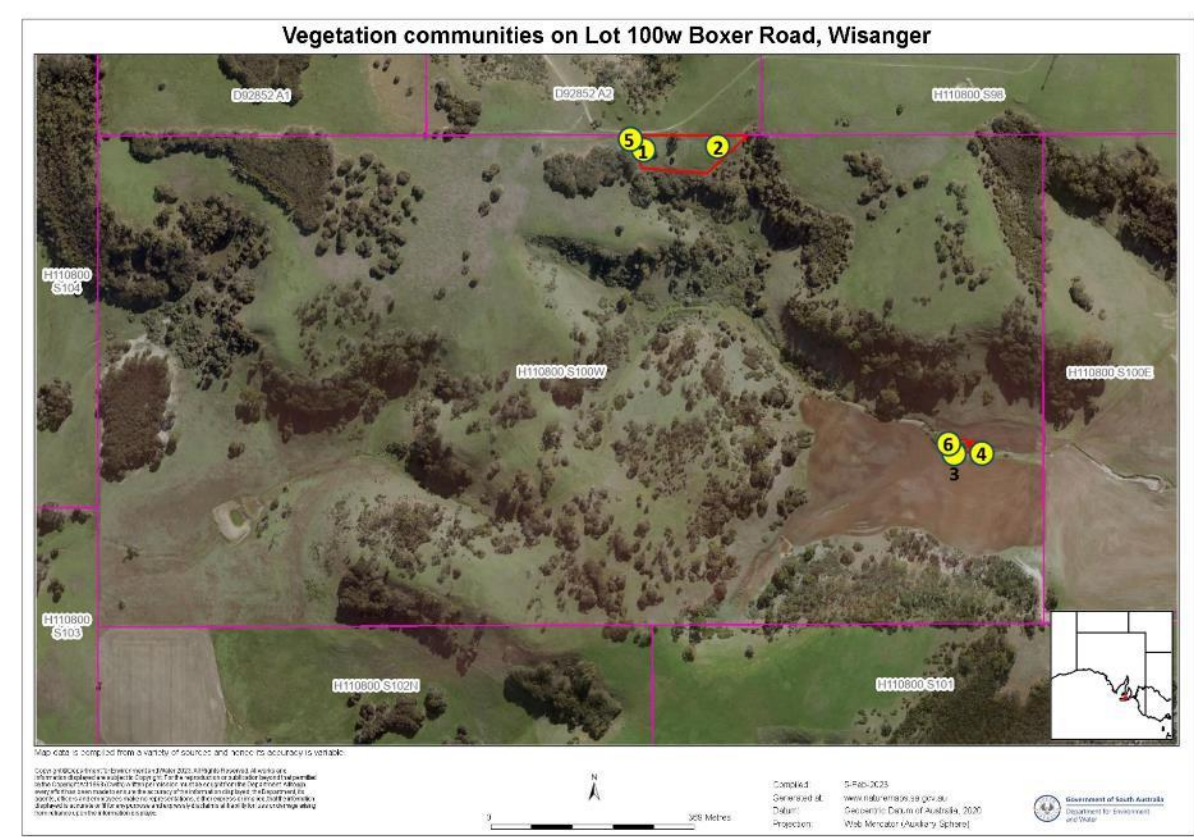


Figure 6. Location of photo points on Lot 100w Boxer Road, Wisanger. (Scale 1:9,028)

## 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>Anthochaera chrysoptera halmaturina</i> (Little Wattlebird)		VU	3	1997	Stringybark Banksia scrub; Riparian forest	Unlikely – no suitable habitat
<i>Petroica boodang boodang</i> (Scarlet Robin)	R		3	1997	Open forest, woodland, mallee and stringybark	Possible – some suitable habitat present
<i>Isoodon obesulus obesulus</i> (Southern Brown Bandicoot)	V	EN	3	2009	Forest, woodland and mallee with a heathy understory	Unlikely – not 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 Presence of Substantially Intact Vegetation

*If the vegetation is considered to represent a substantially intact stratum, the NVC cannot approve clearance, unless for the purpose of harvesting native vegetation (section 27(3)).*

### **Provide information on whether the native vegetation constitutes a continuous intact stratum.**

#### Site 1

The vegetation within Site 1 was cleared for agricultural purposes many years ago and has been maintained as a grazing paddock ever since. The property has changed hands several times in recent years and during that time some natural regeneration has occurred.

Due to this historic disturbance, the native vegetation is largely represented by scattered individuals and species diversity is very low. Neither the overstory, midstory or understory are growing at pre-European density or diversity for a *Eucalyptus cneorifolia* woodland. As the area was sown up with exotic annual pasture grasses and maintained as a paddock, it does not contain any perennial weed species, however these pasture grasses occupy greater than 20% cover across the understory stratum.

A more intact patch of remnant *Eucalyptus cneorifolia* woodland is growing adjacent to Site 1. Being a narrow linear patch, it does not meet the criteria for listing under the *EPBC Act 1999*, however it can be considered to be intact stratum despite having low species diversity.

#### Site 2

The vegetation within Site 2 would most likely have been cleared either when the surrounding paddocks were cleared for agricultural purposes or when the landholder dammed the creek to create a watering point for his stock. Since this historic disturbance event, the vegetation has been allowed to naturally regenerate along the creek/dam banks. This regenerating vegetation continues beyond the proposed clearance area upstream, however the vegetation becomes increasingly scattered the further upstream it goes.

As the area has always had a high level of disturbance from stock, the native species and structural diversity is low. There are no overstory species present and a low diversity of both mid and understory species present. The perennial pasture grass *Phalaris aquatica* and declared weed *Asparagus asparagoides* have also invaded the area and occupy more than 20% of the patch. Due to these factors species density and diversity are well below pre-European levels for a *Melaleuca gibbosa* shrubland.

### **Provide information on whether the native vegetation has been subject to degradation within the past 20 years.**

Both sites have been subject to continuous degradation as they are contiguous with pasture paddocks that have been used for grazing stock since being cleared many years ago. No fences have ever been constructed to exclude stock from them.

### **Provide a key finding on whether any or all of the area of impact could be considered as substantially intact.**

No part of either Site 1 or Site 2 can be considered as being substantially intact.

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

If the clearance is seriously at variance with one or more of the principles, the NVC cannot approve clearance, however, the Act provides the NVC with a degree of discretion in certain situations

Principle of Clearance	Considerations
<b>Principle 1a - it comprises a high level of diversity of plant species</b>	<u>Relevant information</u>  Site 1 KI 1101 <i>Eucalyptus cneorifolia</i> mid closed mallee forest over <i>Melaleuca uncinata</i> tall open shrubland  Native species: 8; Introduced species: 10  <b>Bushland Plant Diversity Score – 6</b>  Site 1 KI 2101 emergent <i>Allocasuarina verticillata</i> trees over <i>Melaleuca gibbosa</i> mid shrubland  Native species: 7; Introduced species: 14  <b>Bushland Plant Diversity Score – 15</b>
	<u>Assessment against the principles</u>  <b>At Variance</b> - KI 2101 emergent <i>Allocasuarina verticillata</i> trees over <i>Melaleuca gibbosa</i> mid shrubland  <b>Not at Variance</b> - KI 1101 <i>Eucalyptus cneorifolia</i> mid closed mallee forest over <i>Melaleuca uncinata</i> tall open shrubland
	<u>Moderating factors that may be considered by the NVC</u>  The clearance area within Site 2 is small and will result in less than 10% of the vegetation within a 5km radius being cleared.
<b>Principle 1b - significance as a habitat for wildlife</b>	<u>Relevant information</u>  No threatened fauna were observed during the site assessment.  There are records of Southern Brown Bandicoots ( <i>EPBC Act</i> Endangered), Little Wattlebird ( <i>EPBC Act</i> Vulnerable) and Scarlet Robins ( <i>NPW SA Act</i> Rare) within 5km of the clearance area.  The vegetation within both Site 1 and Site 2 is in poor condition. It would be providing limited habitat for any fauna species that may inhabit the area. Due to its fragmented state, it would not be providing a corridor for wildlife movement across the landscape, nor a refuge for fauna species.  <b>Threatened Fauna Score – 0.1</b> <b>Unit biodiversity Score – 24.05 (Site 1); 31.24 (Site 2)</b>

	<p><u>Assessment against the principles</u></p> <p><b><u>Seriously at Variance</u></b></p> <ul style="list-style-type: none"> <li>- KI 1101 <i>Eucalyptus cneorifolia</i> mid closed mallee forest over <i>Melaleuca uncinata</i> tall open shrubland</li> <li>- KI 2101 emergent <i>Allocasuarina verticillata</i> trees over <i>Melaleuca gibbosa</i> mid shrubland</li> </ul> <p><u>Moderating factors that may be considered by the NVC</u></p> <p>Neither site contains critical habitat for any fauna species that has been recorded within a 5km radius of the clearance area. Clearance of this vegetation will not lead to a long term reduction in the population size of any fauna species, nor interfere with the recovery of any fauna species.</p>
<b>Principle 1c - plants of a rare, vulnerable or endangered species</b>	<p><u>Relevant information</u></p> <p>No threatened flora was observed during the site assessment.</p> <p>There are records of <i>Eucalyptus phenax ssp. compressa</i> (NPW SA Act Rare) within 1km of the clearance area. As this is a tree species, it would have been detected if it was growing within the clearance area.</p> <p><b>Threatened Flora Score(s) - 0</b></p> <p><u>Assessment against the principles</u></p> <p><b><u>Not at Variance</u></b></p> <ul style="list-style-type: none"> <li>- KI 1101 <i>Eucalyptus cneorifolia</i> mid closed mallee forest over <i>Melaleuca uncinata</i> tall open shrubland</li> <li>- KI 2101 emergent <i>Allocasuarina verticillata</i> trees over <i>Melaleuca gibbosa</i> mid shrubland</li> </ul> <p><u>Moderating factors that may be considered by the NVC</u></p>
<b>Principle 1d - the vegetation comprises the whole or part of a plant community that is Rare, Vulnerable or endangered:</b>	<p><u>Relevant information</u></p> <p>No Threatened Ecological Communities were observed within either clearance area.</p> <p>The property does contain remnant patches of <i>Eucalyptus cneorifolia</i> woodland that would most likely qualify for protection under the EPBC Act 1999.</p> <p><b>Threatened Community Score - 1</b></p> <p><u>Assessment against the principles</u></p> <p><b><u>Not at Variance</u></b></p> <ul style="list-style-type: none"> <li>- KI 1101 <i>Eucalyptus cneorifolia</i> mid closed mallee forest over <i>Melaleuca uncinata</i> tall open shrubland</li> <li>- KI 2101 emergent <i>Allocasuarina verticillata</i> trees over <i>Melaleuca gibbosa</i> mid shrubland</li> </ul> <p><u>Moderating factors that may be considered by the NVC</u></p>
<b>Principle 1e - it is significant as a remnant of vegetation in</b>	<p><u>Relevant information</u></p> <p>IBRA Association: Amberley, 21% remnancy IBRA subregion: Kangaroo Island, 52% remnancy</p>

<p><b>an area which has been extensively cleared.</b></p>	<p>There are several remnant patches of vegetation within the surrounding area. All remnants are senescent due to a lack of ecological disturbance. Some remnants are protected from grazing livestock, whilst others remain unfenced. In the absence of appropriate disturbance events and protection from overgrazing by livestock and native herbivores, these remnants will gradually decline in health over time.</p> <p><b>Total Biodiversity Score – 26.70</b> (Site 1), <b>4.37</b> (Site 2)</p> <p><u>Assessment against the principles</u></p> <p><b>Not at Variance</b></p> <ul style="list-style-type: none"> <li>- KI 1101 <i>Eucalyptus cneorifolia</i> mid closed mallee forest over <i>Melaleuca uncinata</i> tall open shrubland</li> <li>- KI 2101 emergent <i>Allocasuarina verticillata</i> trees over <i>Melaleuca gibbosa</i> mid shrubland</li> </ul> <p><u>Moderating factors that may be considered by the NVC</u></p>
<p><b>Principle 1f - it is growing in, or in association with, a wetland environment.</b></p>	<p><u>Relevant information</u></p> <p>The vegetation within Site 1 and Site 2 is not growing within or in association with a wetland.</p> <p><u>Assessment against the principles</u></p> <p><b>Not at Variance</b></p> <ul style="list-style-type: none"> <li>- KI 1101 <i>Eucalyptus cneorifolia</i> mid closed mallee forest over <i>Melaleuca uncinata</i> tall open shrubland</li> <li>- KI 2101 emergent <i>Allocasuarina verticillata</i> trees over <i>Melaleuca gibbosa</i> mid shrubland</li> </ul> <p><u>Moderating factors that may be considered by the NVC</u></p>
<p><b>Principle 1g - it contributes significantly to the amenity of the area in which it is growing or is situated.</b></p>	<p><u>Relevant information</u></p> <p>The proposed clearance will be visible from adjoining properties, however as the area has been utilised for agricultural purposes for a very long time and contained within a Rural Zone, it is not out of character for the area.</p> <p>There are no known cultural or heritage values attached to the property.</p> <p>N/A</p> <p><u>Moderating factors that may be considered by the NVC</u></p>

[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.

## 4.5 Address the Mitigation Hierarchy

The Native Vegetation Council will consider if the applicant has avoided and minimized the clearance of native vegetation as much as practically possible.

### **a) Avoidance**

Avoidance is not possible as the native vegetation has encroached into the agricultural land on the property. The clearance will be undertaken in a careful manner so as to avoid the disturbance of the surrounding remnant vegetation.

### **b) Minimization**

Only the minimum amount of vegetation will be removed to enable the improvement of the pasture within Site 1 and to ensure the safe access to the dam for stock and enable the maintenance of the dam in site 2.

### **c) Rehabilitation or restoration**

No rehabilitation or restoration will occur within the clearance areas.

### **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 Benefit Offset will be met via payment into the SEB Fund.

## 4.6 Risk Assessment

**Determine the level of risk associated with the application**

<b>Total clearance</b>	No. of trees	several
	Area (ha)	1.25
	Total biodiversity Score	31.07
<b>Seriously at variance with principle 1(b), 1(c) or 1 (d)</b>		1 (b)
<b>Risk assessment outcome</b>		Level 4

# 5. Clearance summary

**Clearance Area(s) Summary table**

Block	Site	Species diversity score	Threatened Ecological community Score	Threatened plant score	Threatened fauna score	UBS	Area (ha)	Total Biodiversity score	Loss factor	Loadings	Reductions	SEB Points required	SEB payment	Admin Fee
A	1	6	1	0	.1	24.1	1.1	26.7	1	0	0	28.03	\$20,664.53	\$1,136.55
A	2	15	1	0	.1	31.2	.14	4.37	1	0	0	4.59	\$3,085.26	\$169.69
						<b>Total</b>	<b>1.3</b>	<b>31.07</b>				<b>32.62</b>	<b>\$23,749.79</b>	<b>\$1,306.24</b>

**Totals summary table**

	Total Biodiversity score	Total SEB points required	SEB Payment	Admin Fee	Total Payment
Application	31.07	32.62	\$23,749.79	\$1,306.24	\$25,056.03

Economies of Scale Factor	0.50
Rainfall (mm)	506

# 6. Significant Environmental Benefit

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

## ACHIEVING AN SEB

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

- ☒ Establish a new SEB Area on land owned by the proponent.
- ☐ Use SEB Credit that the proponent has established. Provide the SEB Credit Ref. No. \_\_\_\_\_
- ☐ Apply to have SEB Credit assigned from another person or body. The [application form](#) needs to be submitted with this Data Report.
- ☐ Apply to have an SEB to be delivered by a Third Party. The [application form](#) needs to be submitted with this Data Report.
- ☐ Pay into the Native Vegetation Fund.

## PAYMENT SEB

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

## ON-GROUND SEB

Ownership:	[REDACTED]		
Site Address:	Lot 100w Boxer Road, Wisanger SA 5223		
Local Government Area:	Kangaroo Island	Hundred:	Menzies
Title ID:	CT/5505/836	Parcel ID	H110800 S100W

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

The Menzies Hills are located west of Kingscote and extend towards the north coast of Kangaroo Island. They are comprised of undulating uplands to an altitude of 100m and plains which contain alkaline duplex soils and grey-brown cracking clays. There are many ephemeral creeks and drainage lines throughout the area and several salt lagoons.

The Wisanger Plateau, which rises to an altitude of 180m, is wholly contained within the Menzies Hills and was formed by the upwelling of basaltic lavas during the Middle Jurassic times. The hills that make up the plateau are steep sided and are dissected by many gullies. Despite the steep nature of the area, much of it was cleared for agricultural purposes. There are, however, many pockets of semi-cleared and intact patches of vegetation throughout the area.

Lot 100w Boxer Road, Wisanger is located at the eastern end of the Wisanger Plateau and contains three major drainage lines. There are several patches of intact vegetation on the allotment as well as many sparsely vegetated areas. The areas that have been completely cleared for agricultural purposes are highly visible within the landscape.

There are two main vegetation communities found on the allotment being a *Eucalyptus cneorifolia* mid open mallee forest over *Melaleuca uncinata* (KI 1101) and a *Eucalyptus cladocalyx* mid open woodland over *Melaleuca uncinata* (KI 0508). This vegetation is in a senescent state due to a lack of ecological disturbance and is in moderate condition due to livestock having had continual access to it. Heritage Agreement 895 which is located 2.5km to the north is conserving *Eucalyptus cneorifolia* woodland.

The remnant vegetation on the property lacks structural diversity and is largely of a uniform age class. Due to these factors, the vegetation is providing limited habitat for fauna species; in particular small ground dwelling mammals which require a dense shrub layer. The lack of species diversity and regeneration within the remnants is reducing the potential food sources available, which limits the number of species that can utilise the area for habitat.

As much of the Wisanger area was cleared for agricultural purposes, the remnant patches of vegetation on the property are largely semi-isolated within the landscape. The remnant on the western boundary is, however, contiguous with a large remnant on the adjoining property.

### Information relating to the relevant land

Wisanger was largely cleared for agricultural purposes in the early days of settlement on Kangaroo Island. Lot 100w Boxer Rd was mostly cleared during this time, however due to the steep nature of the block and the creek lines that dissect it, some areas were either left uncleared or were left sparsely vegetated.

The property has been seasonally grazed since it was cleared. The remnant vegetation on the property has never been fenced off, so stock have had continual access to these areas.

The landholder has taken out a mineral claim (MC4540) on a portion of the southern side of the property with the intent of mining basalt out of the hills. A separate clearance application has been lodged for this activity. The remaining arable acres are being grazed by sheep.

## General location map

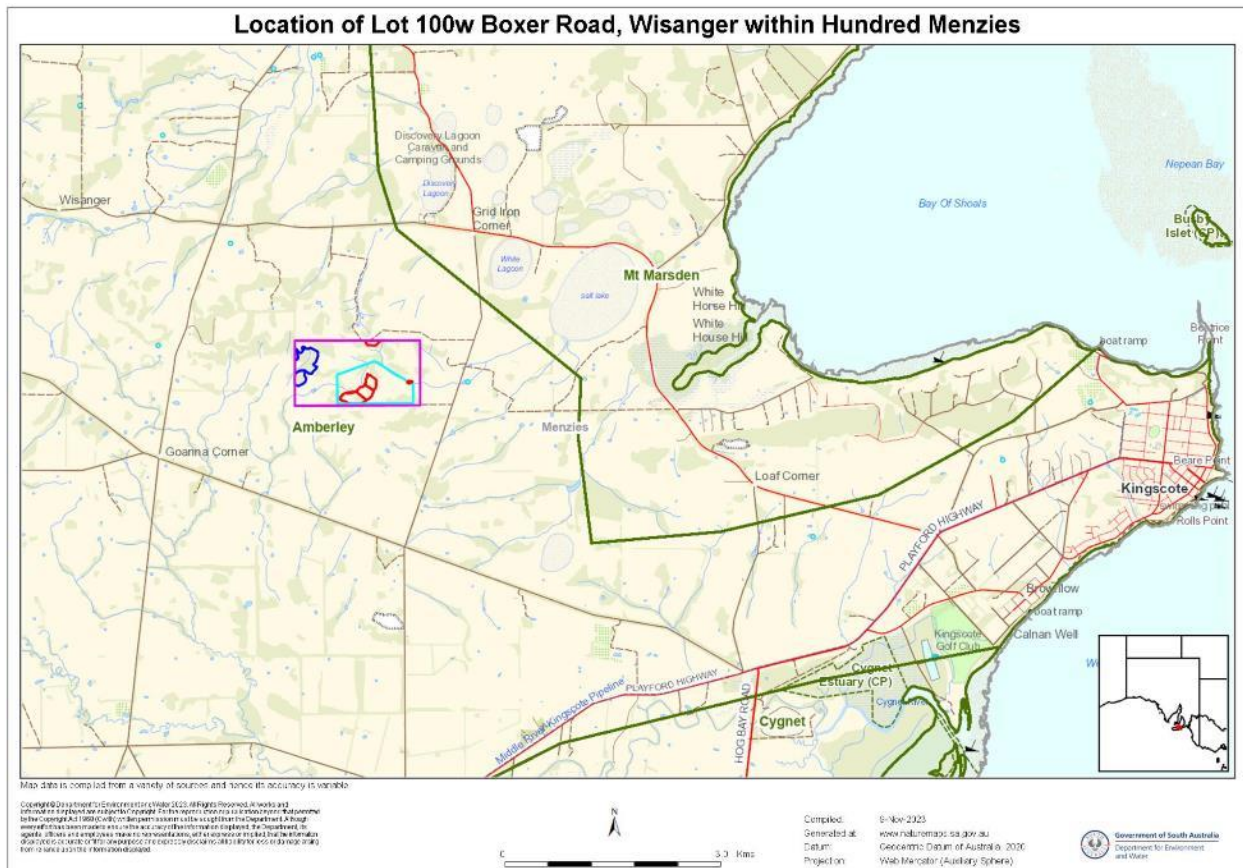


Figure 7. Location of Lot 100w Boxer Road, Wisanger within the Hundred of Menzies. (Scale 1:72,224)

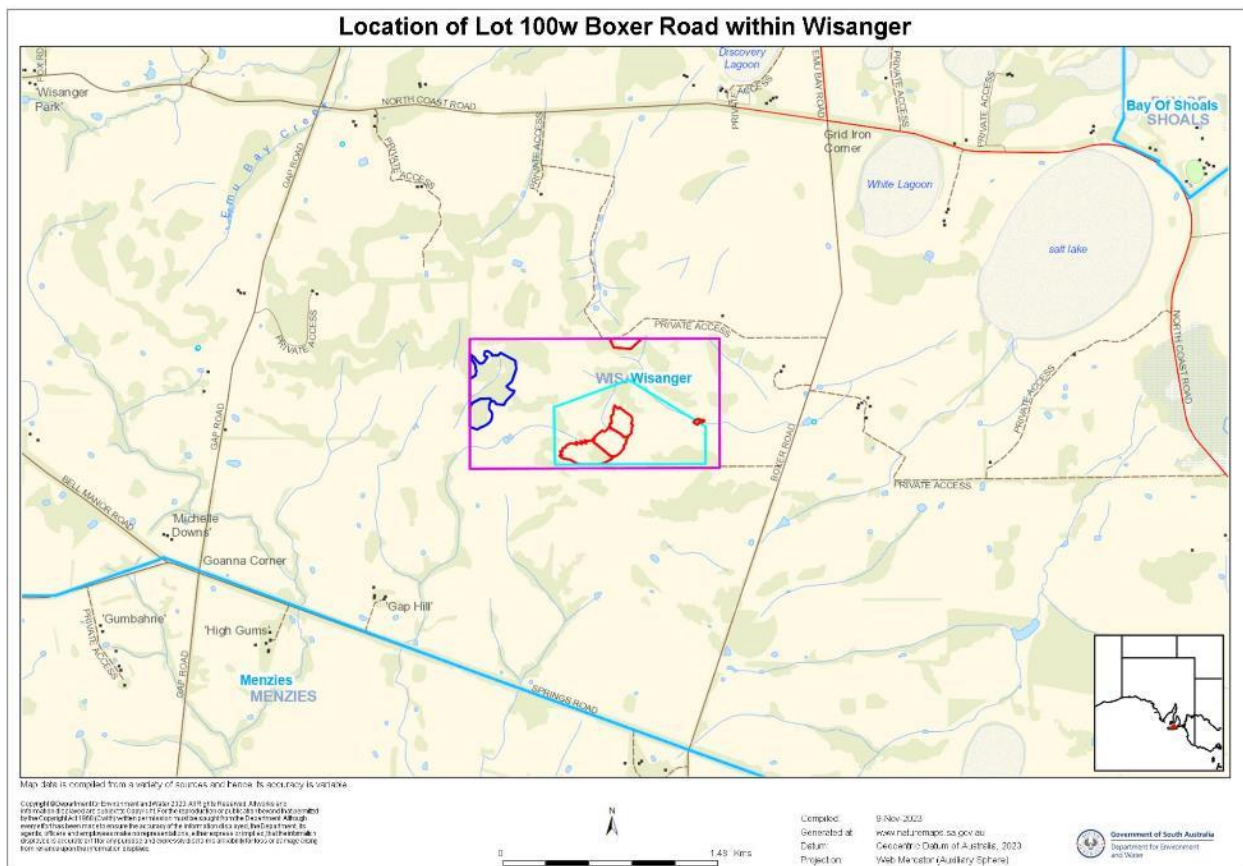



Figure 8. Location of Lot 100w Boxer Road within the locality of Wisanger. (Scale 1:36,112)


# Location of SEB area on Lot 100w Boxer Road, Wisanger



Figure 9. Location of the Significant Environmental Benefit area on Lot 100w Boxer Rd, Wisanger (Scale 1:9,028)

## Description of the vegetation

Vegetation Association	KI 0508 <i>Eucalyptus cladocalyx</i> , +/- <i>Eucalyptus diversifolia</i> ssp. <i>diversifolia</i> , +/- <i>Eucalyptus cneorifolia</i> , <i>Allocasuarina verticillata</i> mid open woodland over <i>Melaleuca uncinata</i> , <i>Allocasuarina muelleriana</i> ssp. <i>Notocolpica</i> , <i>Melaleuca gibbosa</i> , <i>Xanthorrhoea semiplana</i> ssp. <i>tateana</i> , <i>Thryptomene ericaea</i> shrubs over <i>Hibbertia australis</i> shrubs				
					
<b>Direction:</b> 134° <b>Latitude:</b> 35° 38' 22.95" S <b>Longitude:</b> 137° 30' 16.10" E <b>Photo 5</b> Typical habitat					
General description	<i>Eucalyptus cladocalyx</i> , <i>Eucalyptus cneorifolia</i> , <i>Allocasuarina verticillata</i> woodland over <i>Acacia paradoxa</i> , <i>Thryptomene ericaea</i> shrubs and <i>Dianella brevicaulis</i> and <i>Orthrosanthus multiflorus</i> tussocks in degraded condition				
Threatened species or community	No Threatened Ecological Communities were observed within the site. No threatened fauna species were observed during the site assessment. There are records of Southern Brown Bandicoot ( <i>EPBC Act Vulnerable</i> ), Red Wattlebird ( <i>EPBC Act Vulnerable</i> ) and Scarlet Robin ( <i>NPW SA Act Rare</i> ) within 5km of the site. No threatened flora species were observed during the site assessment. There are no records of threatened flora within 1km of the site.				
Landscape context score	1.12	Vegetation Condition Score	39.96	Conservation significance score	1.10
Gain Score	6.90	Area (ha)	8.43	SEB Points of Gain	58.17

Vegetation Association	<u>KI 1101</u> <i>Eucalyptus cneorifolia</i> , +/- <i>Eucalyptus rugosa</i> , +/- <i>Eucalyptus odorata</i> , +/- <i>Eucalyptus diversifolia</i> ssp. <i>diversifolia</i> , +/- <i>Eucalyptus phenax</i> ssp. <i>compressa</i> mid closed mallee forest over +/- <i>Melaleuca uncinata</i> , +/- <i>Melaleuca acuminata</i> ssp. <i>acuminata</i> , +/- <i>Callistemon rugulosus</i> var. <i>rugulosus</i> (NC) over +/- <i>Thryptomene ericaea</i> , +/- <i>Acacia paradoxa</i> , +/- <i>Melaleuca gibbosa</i> , +/- <i>Rhagodia candolleana</i> ssp. <i>candolleana</i> , +/- <i>Xanthorrhoea semiplana</i> ssp. <i>tateana</i> mid open shrubland over +/- <i>Ozothamnus retusus</i> , +/- <i>Orthrosanthus multiflorus</i> low open shrubland				
					
<b>Direction:</b> 172° <b>Latitude:</b> 35° 38' 30.45" S <b>Longitude:</b> 137° 30' 15.30" E <b>Photo 6</b> Typical habitat					
General description	<i>Eucalyptus cneorifolia</i> , <i>eucalyptus phenax</i> ssp. <i>compressa</i> woodland over <i>Acacia paradoxa</i> shrubs in senescent condition.				
Threatened species or community	Site qualifies as KI Narrow-leaved Mallee Ecological Community ( <i>EPBC Act</i> Critically Endangered). No threatened fauna species were observed during the site assessment. There are records of Southern Brown Bandicoot ( <i>EPBC Act</i> Vulnerable), Red Wattlebird ( <i>EPBC Act</i> Vulnerable) and Scarlet Robin ( <i>NPW SA Act</i> Rare) within 5km of the site. <i>Eucalyptus phenax</i> ssp. <i>compressa</i> was observed during the site assessment. There are no further records of threatened flora within 1km of the site.				
Landscape context score	1.13	Vegetation Condition Score	22.50	Conservation significance score	1.54
Gain Score	8.67	Area (ha)	3.0	SEB Points of Gain	26.01

**Site map showing areas of the proposed SEB**

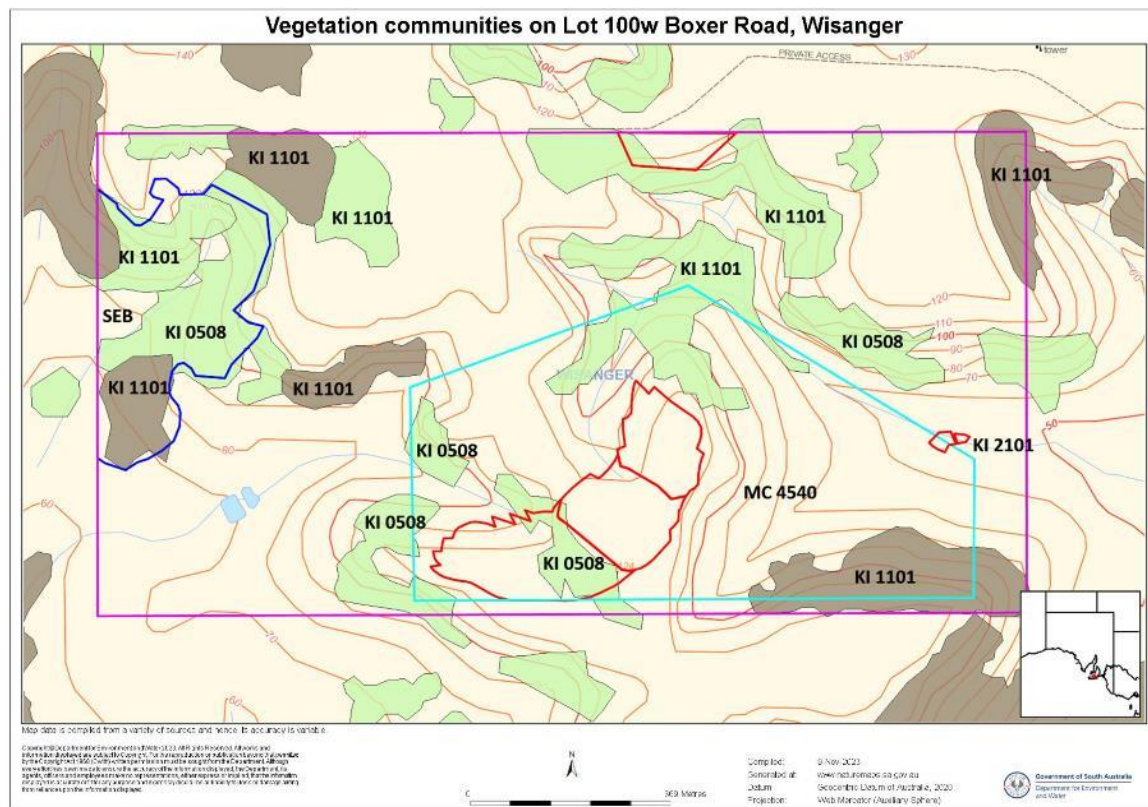


Figure 10. Vegetation communities on Lot 100w Boxer Road, Wisanger. (Scale 1:9,028)

## Photo log



Photo 1. **Direction:** 102° **Latitude:** 35° 38' 23.69" S **Longitude:** 137° 30' 16.46" E Northern side of SEB area.



Photo 2. **Direction:** 212° **Latitude:** 35° 38' 26.07" S **Longitude:** 137° 30' 18.10" E Degraded area between Sites 1 & 2.



Photo 3. **Direction:** 194° **Latitude:** 35° 38' 32.70" S **Longitude:** 137° 30' 15.47" E Site 2, central section



Photo 4 **Direction:** 339° **Latitude:** 35° 38' 26.52" S **Longitude:** 137° 30' 21.57" E Degraded area within Site 1

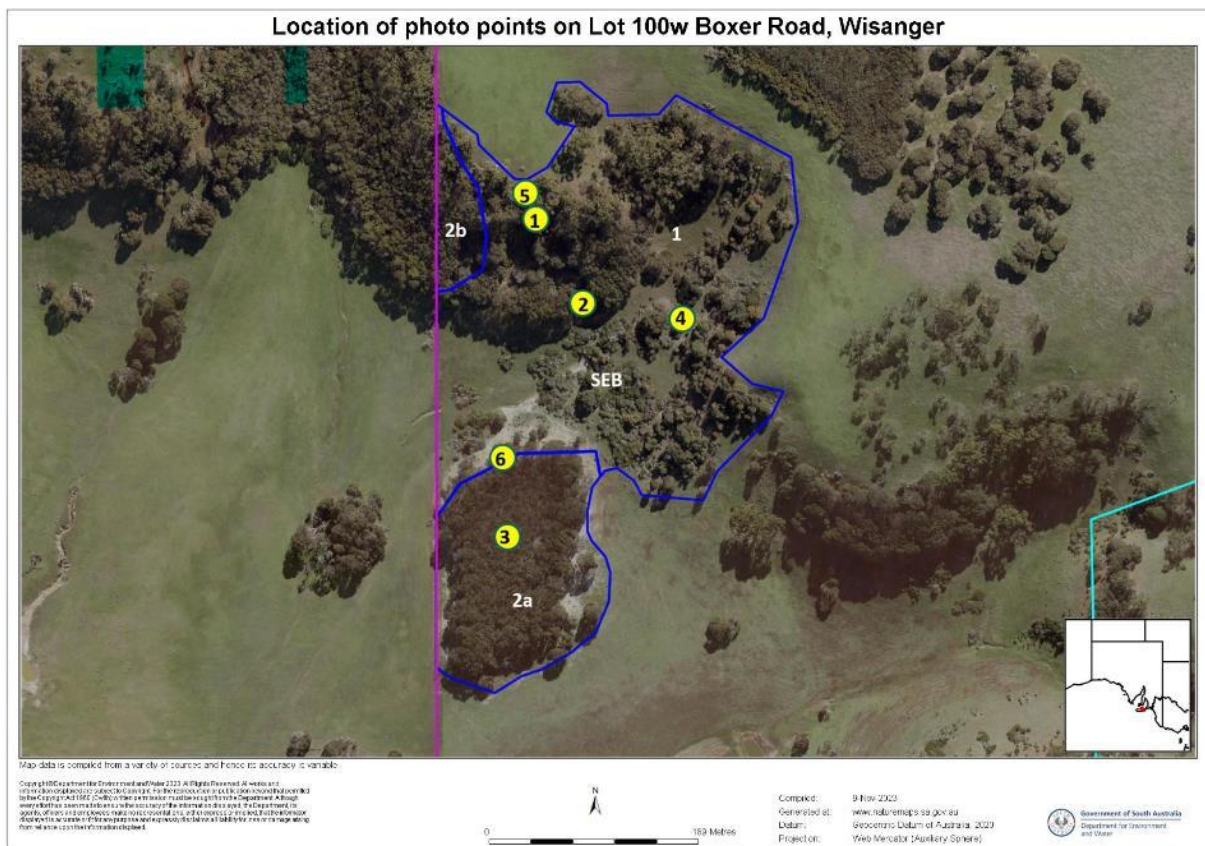


Figure 11. Location of photo points on Lot 100w Boxer Road, Wisanger. (Scale 1:4,514)

## 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
<i>Anthochaera chrysoptera halmaturina</i> (Little Wattlebird)		VU	3	1997	Stringybark Banksia scrub; Riparian forest	Unlikely – no suitable habitat
<i>Petroica boodang boodang</i> (Scarlet Robin)	R		3	1997	Open forest, woodland, mallee and stringybark	Possible – some suitable habitat present
<i>Isodon obesulus obesulus</i> (Southern Brown Bandicoot)	V	EN	3	2009	Forest, woodland and mallee with a heathy understory	Unlikely – not 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 *Eucalyptus cladocalyx* mid open woodland over *Melaleuca uncinata* and *Hibbertia australis* shrubs (KI 0508) vegetation community is not conserved within any Heritage Agreement or Reserve system within the IBRA association of Amberley. Setting Site 1 aside within a Significant Environmental Benefit area will afford this community a level of protection that it currently does not have. *Eucalyptus cladocalyx* ssp. *crassa* trees provide important nesting sites for a range of bird species including the Glossy-black Cockatoo (*EPBC Act* Endangered).

The *Eucalyptus cneorifolia* mid closed mallee forest over *Melaleuca uncinata*, *Thryptomene ericaea* and *Ozothamnus retusus* shrubs (KI 1101) is listed as Critically Endangered under the *EPBC Act 1999*. Site 2 qualifies for protection under the Act as it is greater than 60m wide. It, however, does not qualify for being considered of Higher Quality as it does not contain more than 4 native species within the understory. With protection and active management actions, the patch could be improved so as to meet this criterion.

Both Site 1 and Site 2 are currently unfenced, so stock are free to access both sites. Stock proof fencing will be erected to preclude them, thereby giving the vegetation a greater chance of regenerating. It will also enable the open areas to be revegetated, thereby increasing the species diversity and quality of the sites.

### Summary Table

Block	Site	Vegetation Association	UBS	Gain Score	Area (ha)	SEB Point of Gain
A	1	KI 0508 <i>Eucalyptus cladocalyx</i> woodland	49.23	6.90	8.43	58.17
A	2	KI 1101 <i>Eucalyptus cneorifolia</i> mallee forest	39.15	8.67	3.0	26.01
Total					11.43	84.18

### SEB Management Plan

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

## 7. Appendices

## Appendix 1. Fauna Species List (desktop)

[illegible]

## Appendix 2. Bushland Assessment Scoresheet

### Vegetation Condition Scores

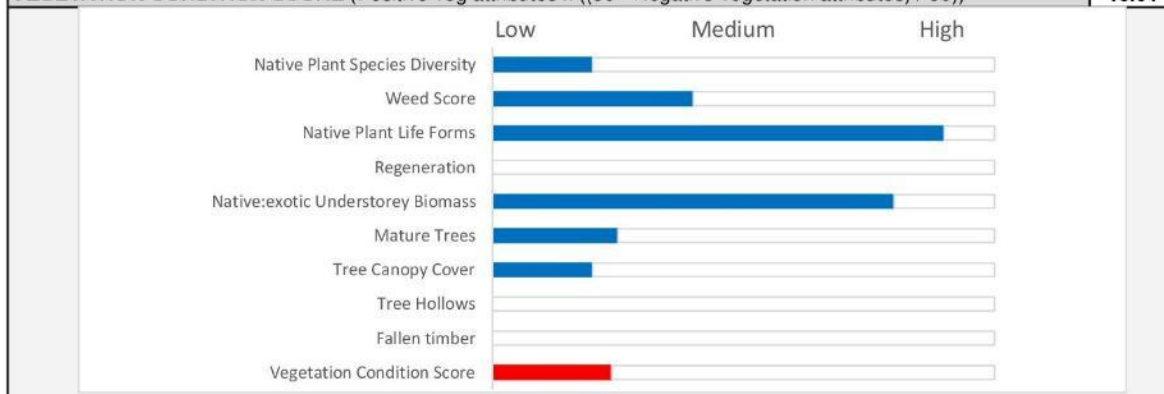
<b>SITE:</b>	Site 1 - Paddock
<b>BCM COMMUNITY</b>	KI 5.1 Mallee with an open to very open shrub understorey on clay based soils
<b>VEGETATION ASSOCIATION DESCRIPTION</b>	<i>Eucalyptus cneorifolia</i> +/- <i>Eucalyptus cladocalyx</i> over <i>Acacia paradoxa</i>
<b>SIZE OF SITE (Ha)</b>	1.11

<b>Benchmarked attributes</b> (Scores determined by comparing to a Benchmark community)				<b>Native Plant Life Forms</b>	<b>Cover rating</b>
<b>Number of Native Species</b> (Minus herbaceous annuals for spring Surveys)	8			Trees > 15m	
<b>Native Plant Species Diversity Score (max 30) from benchmark score</b> <i>weighted by a factor of 2</i>	<b>6.0</b>			Trees 5 - 15 m	
				Trees < 5m	2
				Mallee > 5m	
				Mallee < 5m	
<b>Number of regenerating native species</b>	0			Shrubs > 2m	2
<b>Regeneration Score (max 12) from benchmark community</b> weighted by a factor of 1.5				Shrubs 0.5 - 2m	3
	<b>0</b>			Shrubs < 0.5	2
				Forbs	2
<b>Weed species</b> (Top 5 Cover x Invasiveness)	Cover (max 6)	Weed Threat Rating (max 5)	C x I	Mat Plants	
Avena spp.	3	2	6	Grasses > 0.2m	
Trifolium spp.	3	2	6	Grasses < 0.2m	3
Vulpia spp.	3	2	6	Sedges > 1m	
Medicago spp.	2	2	4	Sedges < 1m	3
Bromus sp.	2	1	2	Hummock grasses	
	<b>Cover x Threat</b>		<b>24</b>	Vines, scramblers	1
<b>Weed Score (max 15) from benchmark community</b>			<b>6</b>	Mistletoe	
				Ferns	
				Grass-tree	
				<b>Total</b>	<b>18</b>
<b>Native Plant Life Forms (max 20) from benchmark score</b> <i>weighted by a factor of 2</i>					<b>18.0</b>

<b>Non-Benchmarked Attributes</b> (Scores determined from direct field observations)		<i>Is the community naturally treeless?</i>	<input type="checkbox"/>
<b>Native:exotic Understorey biomass Score (max 5)</b>	4	<b>Fallen Timber/Debris (max 5)</b>	0
		<b>Hollow-bearing trees Score (max 5)</b>	0
		<b>Mature Tree Score (max 8)</b>	2
		<b>Tree Canopy Cover Score (max 5)</b>	1

### Vegetation Condition Score calculation


<b>Positive Vegetation Attributes Score</b> = 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	26.00
<b>Negative Vegetation Attributes Score</b> = (15 - Weeds) + ((10 - Biomass score - Tree Canopy Cover Score)exp2/2)	21.50
<b>VEGETATION CONDITION SCORE</b> (Positive veg attributes x ((80 - Negative vegetation attributes) / 80))	<b>19.01</b>




## Conservation Significance Score

Is the vegetation association considered a Threatened Ecological community or Ecosystem?	Yes/No
State (Provisional List of Threatened Ecosystems of SA) <b>Rare</b> community (0.1 pt)	<input type="checkbox"/>
State (Provisional List of Threatened Ecosystems of SA) <b>Vulnerable</b> community (0.2 pts)	<input type="checkbox"/>
State (Provisional List of Threatened Ecosystems of SA) <b>Endangered</b> community (0.3 pts)	<input type="checkbox"/>
Nationally (EPBC Act) <b>Vulnerable</b> community (0.35 pts)	<input type="checkbox"/>
Nationally (EPBC Act) <b>Endangered</b> or <b>Critically Endangered</b> community (0.4 pts)	<input type="checkbox"/>
Note, all sites will score a minimum Conservation Significance Score of 1	
<b>Threatened Community Score</b>	1
<b>Number of Threatened Flora Species recorded for the site (within the site)</b>	<b>Number</b>
*If a species has both a State (NP&W Act) and National (EPBC Act) rating, it's only recorded for its National rating.	
State <b>Rare</b> species recorded (1 pt each)	0
State <b>Vulnerable</b> species recorded (2.5 pt each)	0
State <b>Endangered</b> recorded (5 pts each)	0
Nationally <b>Vulnerable</b> species recorded (10 pts each)	0
Nationally <b>Endangered</b> or <b>Critically endangered</b> 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
<b>Threatened Flora Score</b>	0
<b>Potential habitat for Threatened Fauna Species (number observed or previously recorded)</b>	<b>Number</b>
*If a species has both a State (NP&W Act) and National (EPBC Act) rating, it's only recorded for its National rating.	
State <b>Rare</b> species observed or locally recorded (1 pt each)	0
State <b>Vulnerable</b> species observed or locally recorded (2.5 pt each)	0
State <b>Endangered</b> species observed or locally recorded (5 pt each)	0
Nationally <b>Vulnerable</b> species observed or locally recorded (10 pts each)	1
Nationally <b>Endangered</b> or <b>Critically endangered</b> species observed or locally recorded (20 pts each)	1
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	30
<b>Threatened Fauna Score</b>	0.1
<b>CONSERVATION SIGNIFICANCE SCORE</b>	1.1

Total Scores for the Site		Vegetation Condition x Landscape Context x Conservation Significance =	
	Score	<b>UNIT BIODIVERSITY SCORE</b>	24.05
LANDSCAPE CONTEXT SCORE	1.15	<b>Total Biodiversity Score</b>	
VEGETATION CONDITION SCORE	19.01	<b>(Biodiversity Score x hectares)</b>	26.70
CONSERVATION SIGNIFICANCE SCORE	1.10		

<b>Photo Point and Vegetation Survey Location</b>		<b>Direction of the Photo</b>	
		123 degrees	
		<b>GPS Reference</b>	
		Datum	WGS84
		Zone (52, 53 or 54)	53
		Easting (6 digits)	727657
		Northing (7 digits)	6053274
		<b>Description</b>	
		Eucalyptus cneorifolia +/- Eucalyptus cladocalyx ssp. crassa over Acacia paradoxa shrubs in very poor degraded and weedy condition	
What is the purpose of Assessment?			
Clearance		SEB Area	
Other			
<b>Assessment for Clearance</b>		<b>Approximate hectares required</b>	
Loss Factor	1.0	<b>Economies of Scale Factor</b>	0.5
Loadings for clearance of protected areas		<b>Mean Annual rainfall for the site (mm)</b>	530
Reductions for rehabilitation of impact site		<b>Payment into the fund (GST Exclusive)</b>	\$20,664.53
<b>SEB Points required</b>	28.03	<b>Administration fee (GST Inclusive)</b>	\$1,136.55

Vegetation Condition Scores																								
SITE:		Site 2 - Dam																						
VEGETATION ASSOCIATION DESCRIPTION		Emergent Allocasuarina verticillata trees over Melaleuca gibbosa mid shr																						
SIZE OF SITE (Ha)		0.14																						
<b>Native Plant species diversity</b> Score the diversity of species present in the site as a proportion to what would be expected in a vegetation of that community in very good condition (approaching a pre-European state)		<b>Regeneration</b>																						
<5% (3 Points) <input type="checkbox"/> 5-10% (6 Points) <input type="checkbox"/> 11 - 20% (9 Points) <input type="checkbox"/> 21 - 30% (12 Points) <input type="checkbox"/> 31 - 40 % (15 Points) <input checked="" type="checkbox"/> 41 - 50% (18 Points) <input type="checkbox"/> 51 - 60% (21 Points) <input type="checkbox"/> 61 - 70% (24 Points) <input type="checkbox"/> 71 - 80% (27 Points) <input type="checkbox"/> >80% (30 Points) <input type="checkbox"/>		No regeneration present (0 Points) <input checked="" type="checkbox"/> Very low regeneration, consisting of highly scattered juvenile plants of a limited number of species (3 points) <input type="checkbox"/> Regeneration present, consisting of multiple individual juvenile plants but a limited number of species (6 points) <input type="checkbox"/> Multiple species regenerating, but low numbers of juvenile plants (9 points) <input type="checkbox"/> Multiple species regenerating with multiple individual juveniles present with varying age classes (12 points) <input type="checkbox"/> Regeneration Score (Max 12) 0																						
<b>Native Plant species diversity score</b> (max score of 30) 15		<b>Native Plant life form</b>																						
<b>Weed Scores</b> Does the site contain plant species declared under the NRM Act 2004 (1.5 points) <input checked="" type="checkbox"/> Cover rating for all declared weeds (max of 6) 3 Does the site contain environmental weeds (introduced plants with the capacity to invade and exclude native species from bushland. This typically includes species with a BCM weed threat rating of 3, 4 or 5). (1 Point) <input checked="" type="checkbox"/> Cover rating for all environmental weeds (max of 6) 3 <b>Weed Score</b> (max score of 15) 7.5		All strata of vegetation heavily impacted and native vegetation represented by only scattered plants (4 points) <input type="checkbox"/> All strata of vegetation impacted with limited structural diversity, largely uniform age classes and reduced vegetation cover (8 points) <input checked="" type="checkbox"/> At least one strata of vegetation has been impacted, with reduced structural diversity, elements may be missing (such as plant species that provide specific structural features e.g. sedges or mid layer shrubs) and reduce vegetation cover (12 points) <input type="checkbox"/> Limited impacts on native vegetation, with a diversity of structural features and a varied age class, with only a minor loss in structural diversity, vegetation cover or structural elements (16 points) <input type="checkbox"/> All strata of vegetation present, little or no sign of disturbance. A variety of life forms and associated age classes present. Vegetation cover near complete (20 points) <input type="checkbox"/> Native Plant life form score (max 20) 8																						
Is the community naturally treeless? <input checked="" type="checkbox"/> <i>Tree attributes not scored for treeless community</i>																								
<b>Native:exotic Understorey biomass score (max 5)</b> 4																								
<b>Vegetation Condition Score calculation</b>																								
<b>Positive Vegetation Attributes Score</b> = Native species diversity + Regeneration + Native Plant Life Forms + Mature Trees + Fallen timber/debris + Hollow-bearing trees <i>If the community is naturally treeless this score is multiplied by 1.24</i> 28.52																								
<b>Negative Vegetation Attributes Score</b> = (15 - Weeds) + ((10 - (Biomass score x 2))exp2/2) 9.50																								
<b>VEGETATION CONDITION SCORE</b> (Positive veg attributes x ((Negative vegetation attributes + 60) / 80)) 25.13																								
<table border="1"> <thead> <tr> <th>Attribute</th> <th>Score</th> <th>Category</th> </tr> </thead> <tbody> <tr> <td>Native Plant Species Diversity</td> <td>15</td> <td>Medium</td> </tr> <tr> <td>Weed Score</td> <td>7.5</td> <td>Medium</td> </tr> <tr> <td>Native Plant Life Forms</td> <td>8</td> <td>Low</td> </tr> <tr> <td>Regeneration</td> <td>0</td> <td>Low</td> </tr> <tr> <td>Native:exotic Understorey Biomass</td> <td>4</td> <td>Medium</td> </tr> <tr> <td>Vegetation Condition Score</td> <td>25.13</td> <td>Low</td> </tr> </tbody> </table>				Attribute	Score	Category	Native Plant Species Diversity	15	Medium	Weed Score	7.5	Medium	Native Plant Life Forms	8	Low	Regeneration	0	Low	Native:exotic Understorey Biomass	4	Medium	Vegetation Condition Score	25.13	Low
Attribute	Score	Category																						
Native Plant Species Diversity	15	Medium																						
Weed Score	7.5	Medium																						
Native Plant Life Forms	8	Low																						
Regeneration	0	Low																						
Native:exotic Understorey Biomass	4	Medium																						
Vegetation Condition Score	25.13	Low																						

Conservation Significance Score			
Is the vegetation association considered a Threatened Ecological community or Ecosystem?			Yes/No
State (Provisional List of Threatened Ecosystems of SA) <b>Rare</b> community (0.1 pt)			<input type="checkbox"/>
State (Provisional List of Threatened Ecosystems of SA) <b>Vulnerable</b> community (0.2 pts)			<input type="checkbox"/>
State (Provisional List of Threatened Ecosystems of SA) <b>Endangered</b> community (0.3 pts)			<input type="checkbox"/>
Nationally (EPBC Act) <b>Vulnerable</b> community (0.35 pts)			<input type="checkbox"/>
Contains a Nationally (EPBC Act) <b>Endangered</b> or <b>Critically Endangered</b> community (0.4 pts)			<input type="checkbox"/>
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 <b>Rare</b> species recorded (1 pt each)			0
State <b>Vulnerable</b> species recorded (2.5 pt each)			0
State <b>Endangered</b> recorded (5 pts each)			0
Nationally <b>Vulnerable</b> species recorded (10 pts each)			0
Nationally <b>Endangered</b> or <b>Critically endangered</b> 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 = 0.16pts; 20 or > = 0.2 pts			0
Threatened Flora Score			0
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 <b>Rare</b> species observed or locally recorded (1 pt each)			0
State <b>Vulnerable</b> species observed or locally recorded (2.5 pt each)			0
State <b>Endangered</b> species observed or locally recorded (5 pt each)			0
Nationally <b>Vulnerable</b> species observed or locally recorded (10 pts each)			1
Nationally <b>Endangered</b> or <b>Critically endangered</b> species observed or locally recorded (20 pts each)			1
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			30
Threatened Fauna Score			0.1
CONSERVATION SIGNIFICANCE SCORE			1.1
Total Scores for the Site			
	Score	Vegetation Condition x Landscape Context x Conservation Significance =	
LANDSCAPE CONTEXT SCORE	1.13	UNIT BIODIVERSITY SCORE	
VEGETATION CONDITION SCORE	25.13	Total Biodiversity Score	
CONSERVATION SIGNIFICANCE SCORE	1.10	(Biodiversity Score x hectares)	
		31.24	
		4.37	
Photo Point and Vegetation Survey Location		Direction of the Photo	
		109 degrees	
		GPS Reference	
		Datum	WGS84
		Zone (52, 53 or 54)	53
		Easting (6 digits)	728219
		Northing (7 digits)	6052711
Description		emergent +/- Allocasuarina verticillata trees over Melaleuca gibbosa and Acacia paradoxa shrubs in poor degraded and weedy condition	
Assessment for Clearance			
Loss Factor	1.0	Approximate hectares required	0.57
Loadings for clearance of protected areas		Economies of Scale factor	0.50
Reductions for rehabilitation of impact site		Mean Annual rainfall for the site (mm)	483
SEB Points required	4.59	Payment into the fund (GST Exclusive)	\$3,085.26
		Administration fee (GST Inclusive)	\$169.69

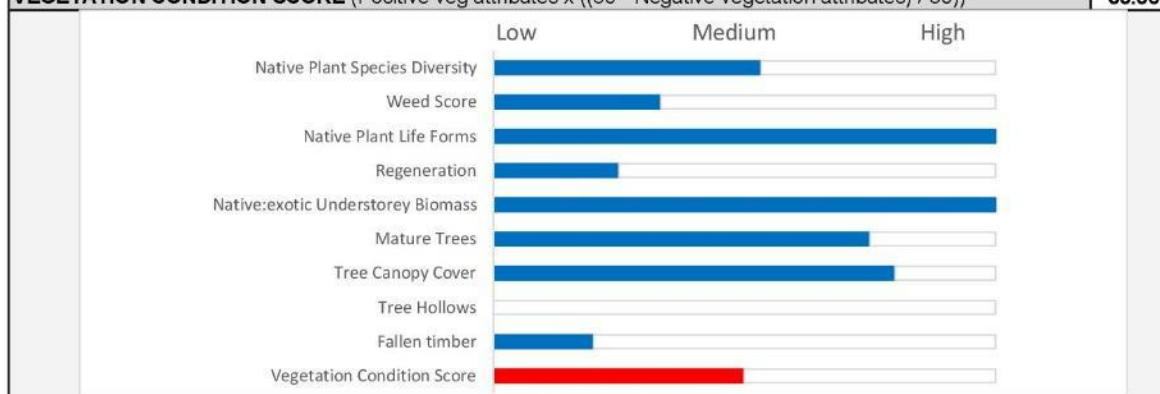
## Vegetation Condition Scores

<b>SITE:</b>	Site 1 - SEB
<b>BCM COMMUNITY</b>	KI 2 Open forests and woodlands with an open sclerophyll shrub understorey
<b>VEGETATION ASSOCIATION DESCRIPTION</b>	<i>Eucalyptus cladocalyx</i> mid open woodland over <i>Melaleuca uncinata</i>
<b>SIZE OF SITE (Ha)</b>	8.43

<b>Benchmarked attributes</b> (Scores determined by comparing to a Benchmark community)				<b>Native Plant Life Forms</b>	<b>Cover rating</b>
<b>Number of Native Species</b> (Minus herbaceous annuals for spring Surveys)	20			Trees > 15m	
<b>Native Plant Species Diversity Score (max 30) from benchmark score</b> <i>weighted by a factor of 2</i>	<b>16.0</b>			Trees 5 - 15 m	3
				Trees < 5m	
<b>Number of regenerating native species</b>	2			Mallee > 5m	3
<b>Regeneration Score (max 12) from benchmark community</b> weighted by a factor of 1.5	<b>3</b>			Mallee < 5m	3
				Shrubs > 2m	2
				Shrubs 0.5 - 2m	3
				Shrubs < 0.5	3
				Forbs	2
<b>Weed species</b> (Top 5 Cover x Invasiveness)	Cover (max 6)	Weed Threat Rating (max 5)	C x I	Mat Plants	
<i>Asparagus asparagoides</i> forma	3	5	15	Grasses > 0.2m	2
<i>Ehrharta longiflora</i>	3	2	6	Grasses < 0.2m	2
<i>Arctotheca calendula</i>	3	1	3	Sedges > 1m	
<i>Briza maxima</i>	2	2	4	Sedges < 1m	3
<i>Romulea rosea</i> var. <i>australis</i>	3	2	6	Hummock grasses	
	<b>Cover x Threat</b>		34	Vines, scramblers	1
<b>Weed Score (max 15) from benchmark community</b>			<b>5</b>	Mistletoe	
				Ferns	
				Grass-tree	
				<b>Total</b>	27
<b>Native Plant Life Forms (max 20) from benchmark score</b> weighted by a factor of 2					<b>20.0</b>

<b>Non-Benchmarked Attributes</b> (Scores determined from direct field observations)		<i>Is the community naturally treeless?</i>	<input type="checkbox"/>
<b>Native:exotic Understorey biomass Score (max 5)</b>	5	<b>Fallen Timber/Debris (max 5)</b>	1
		<b>Hollow-bearing trees Score (max 5)</b>	0
		<b>Mature Tree Score (max 8)</b>	6
		<b>Tree Canopy Cover Score (max 5)</b>	4


<b>Vegetation Condition Score calculation</b>	
<b>Positive Vegetation Attributes Score</b> = Native species diversity + Regeneration + Native Plant Life Forms	
Fallen timber/debris + Hollow-bearing trees	
- If the community Score is Not Benchmarkd (SNB) for regeneration this score is multiplied 1.24	
- If the community is naturally treeless this score is multiplied by 1.29	
	46.00
<b>Negative Vegetation Attributes Score</b> = (15 - Weeds) + ((10 - Biomass score - Tree Canopy Cover Score)exp2/2)	
	10.50
<b>VEGETATION CONDITION SCORE</b> (Positive veg attributes x ((80 - Negative vegetation attributes) / 80))	
	<b>39.96</b>



## Conservation Significance Score

<b>Is the vegetation association considered a Threatened Ecological community or Ecosystem?</b>	<b>Yes/No</b>
State (Provisional List of Threatened Ecosystems of SA) <b>Rare</b> community (0.1 pt)	<input type="checkbox"/>
State (Provisional List of Threatened Ecosystems of SA) <b>Vulnerable</b> community (0.2 pts)	<input type="checkbox"/>
State (Provisional List of Threatened Ecosystems of SA) <b>Endangered</b> community (0.3 pts)	<input type="checkbox"/>
Nationally (EPBC Act) <b>Vulnerable</b> community (0.35 pts)	<input type="checkbox"/>
Nationally (EPBC Act) <b>Endangered</b> or <b>Critically Endangered</b> community (0.4 pts)	<input type="checkbox"/>
<i>Note: all sites will score a minimum Conservation Significance Score of 1</i>	
<b>Threatened Community Score</b>	<b>1</b>
<b>Number of Threatened Flora Species recorded for the site (within the site)</b>	<b>Number</b>
<i>*If a species has both a State (NP&amp;W Act) and National (EPBC Act) rating, it's only recorded for its National rating.</i>	
State <b>Rare</b> species recorded (1 pt each)	0
State <b>Vulnerable</b> species recorded (2.5 pt each)	0
State <b>Endangered</b> recorded (5 pts each)	0
Nationally <b>Vulnerable</b> species recorded (10 pts each)	0
Nationally <b>Endangered</b> or <b>Critically endangered</b> 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	<b>0</b>
<b>Threatened Flora Score</b>	<b>0</b>
<b>Potential habitat for Threatened Fauna Species (number observed or previously recorded)</b>	<b>Number</b>
<i>*If a species has both a State (NP&amp;W Act) and National (EPBC Act) rating, it's only recorded for its National rating.</i>	
State <b>Rare</b> species observed or locally recorded (1 pt each)	1
State <b>Vulnerable</b> species observed or locally recorded (2.5 pt each)	0
State <b>Endangered</b> species observed or locally recorded (5 pt each)	0
Nationally <b>Vulnerable</b> species observed or locally recorded (10 pts each)	1
Nationally <b>Endangered</b> or <b>Critically endangered</b> species observed or locally recorded (20 pts each)	1
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	<b>31</b>
<b>Threatened Fauna Score</b>	<b>0.1</b>
<b>CONSERVATION SIGNIFICANCE SCORE</b>	<b>1.1</b>

Total Scores for the Site		Vegetation Condition x Landscape Context x Conservation Significance =	
	Score	<b>UNIT BIODIVERSITY SCORE</b>	49.23
LANDSCAPE CONTEXT SCORE	1.12	<b>Total Biodiversity Score</b>	
VEGETATION CONDITION SCORE	39.96	<b>(Biodiversity Score x hectares)</b>	415.04
CONSERVATION SIGNIFICANCE SCORE	1.10		

<b>Photo Point and Vegetation Survey Location</b>		<b>Direction of the Photo</b>	
		134 degrees	
		<b>GPS Reference</b>	
		Datum	WGS84
		Zone (52, 53 or 54)	53
		Easting (6 digits)	726768
		Northing (7 digits)	6053123
		<b>Description</b>	
		Eucalyptus cladocalyx +/- Eucalyptus cneorifolia woodland over Allocasuarina verticillata, Acacia paradoxa shrubs and Orthrosanthus multiflorus tussocks in degraded condition	
What is the purpose of Assessment?			
<input type="button" value="Clearance"/> <input checked="" type="button" value="SEB Area"/> <input type="button" value="Other"/>			
<b>SEB Area Assessment</b>			
Future UBS Negative Score	47.26	<b>Vegetation condition</b>	
Future UBS Positive Score	54.16	Likely % loss	Standard 4.0%
UBS Gain Score	6.90	Potential increase	Standard 8.0
<b>SEB Points provided</b>	<b>58.17</b>	Likelihood of outcome	Standard 50.0%

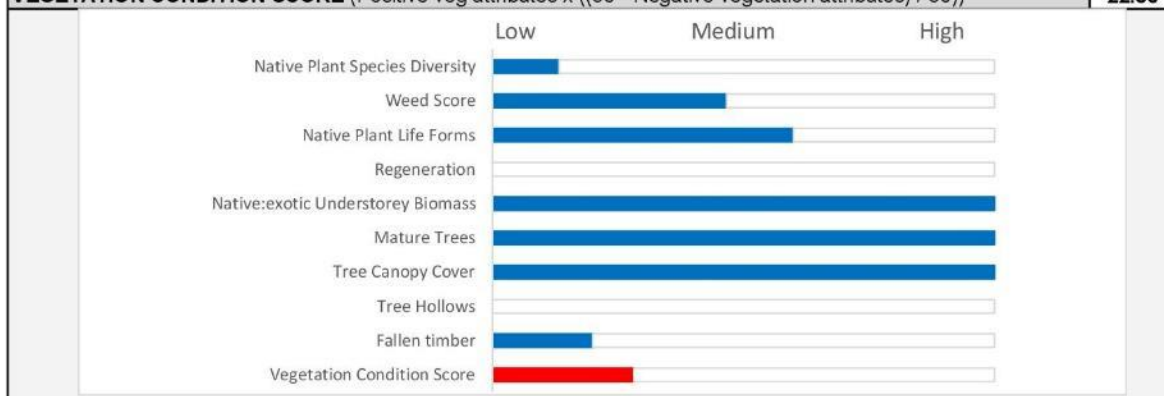
## Vegetation Condition Scores

<b>SITE:</b>	Site 2
<b>BCM COMMUNITY</b>	KI 5.1 Mallee with an open to very open shrub understorey on clay based soils
<b>VEGETATION ASSOCIATION DESCRIPTION</b>	<i>Eucalyptus cneorifolia</i> mid closed mallee forest over <i>melaleuca uncinata</i>
<b>SIZE OF SITE (Ha)</b>	3

Benchmarked attributes (Scores determined by comparing to a Benchmark community)				Native Plant Life Forms	Cover rating
<b>Number of Native Species</b> (Minus herbaceous annuals for spring Surveys)	5			Trees > 15m	
<b>Native Plant Species Diversity Score (max 30) from benchmark score</b> <i>weighted by a factor of 2</i>	4.0			Trees 5 - 15 m	
				Trees < 5m	
				Mallee > 5m	3
				Mallee < 5m	4
<b>Number of regenerating native species</b>	0			Shrubs > 2m	2
<b>Regeneration Score (max 12) from benchmark community</b> weighted by a factor of 1.5	0			Shrubs 0.5 - 2m	2
				Shrubs < 0.5	2
				Forbs	
				Mat Plants	
<b>Weed species</b> (Top 5 Cover x Invasiveness)	Cover (max 6)	Weed Threat Rating (max 5)	C x I	Grasses > 0.2m	
<i>Asparagus asparagoides</i> forma	3	5	15	Grasses < 0.2m	
<i>Ehrharta longiflora</i>	3	2	6	Sedges > 1m	
			0	Sedges < 1m	
			0	Hummock grasses	
			0	Vines, scramblers	
			0	Mistletoe	
			0	Ferns	
			0	Grass-tree	
			0	<b>Total</b>	13
<b>Weed Score (max 15) from benchmark community</b>			7		
<b>Native Plant Life Forms (max 20) from benchmark score</b> weighted by a factor of 2					12.0

Non-Benchmarked Attributes (Scores determined from direct field observations)		Is the community naturally treeless?	
<b>Native:exotic Understorey biomass Score (max 5)</b>	5	<b>Fallen Timber/Debris (max 5)</b>	1
		<b>Hollow-bearing trees Score (max 5)</b>	0
		<b>Mature Tree Score (max 8)</b>	8
		<b>Tree Canopy Cover Score (max 5)</b>	5


Vegetation Condition Score calculation	
<b>Positive Vegetation Attributes Score</b> = 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	
	25.00
Negative Vegetation Attributes Score = (15 - Weeds) + ((10 - Biomass score - Tree Canopy Cover Score)exp2/2)	
	8.00
<b>VEGETATION CONDITION SCORE</b> (Positive veg attributes x ((80 - Negative vegetation attributes) / 80))	<b>22.50</b>



## Conservation Significance Score

<b>Is the vegetation association considered a Threatened Ecological community or Ecosystem?</b>		<b>Yes/No</b>
State (Provisional List of Threatened Ecosystems of SA) <b>Rare</b> community (0.1 pt)		<input type="checkbox"/>
State (Provisional List of Threatened Ecosystems of SA) <b>Vulnerable</b> community (0.2 pts)		<input type="checkbox"/>
State (Provisional List of Threatened Ecosystems of SA) <b>Endangered</b> community (0.3 pts)		<input type="checkbox"/>
Nationally (EPBC Act) <b>Vulnerable</b> community (0.35 pts)		<input type="checkbox"/>
Nationally (EPBC Act) <b>Endangered</b> or <b>Critically Endangered</b> community (0.4 pts)		<input checked="" type="checkbox"/>
Note, all sites will score a minimum Conservation Significance Score of 1		
<b>Threatened Community Score</b>		<b>1.4</b>
<b>Number of Threatened Flora Species recorded for the site (within the site)</b>		<b>Number</b>
*If a species has both a State (NP&W Act) and National (EPBC Act) rating, it's only recorded for its National rating.		
State <b>Rare</b> species recorded (1 pt each)		1
State <b>Vulnerable</b> species recorded (2.5 pt each)		0
State <b>Endangered</b> recorded (5 pts each)		0
Nationally <b>Vulnerable</b> species recorded (10 pts each)		0
Nationally <b>Endangered</b> or <b>Critically endangered</b> 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
<b>Threatened Flora Score</b>		<b>0.04</b>
<b>Potential habitat for Threatened Fauna Species (number observed or previously recorded)</b>		<b>Number</b>
*If a species has both a State (NP&W Act) and National (EPBC Act) rating, it's only recorded for its National rating.		
State <b>Rare</b> species observed or locally recorded (1 pt each)		1
State <b>Vulnerable</b> species observed or locally recorded (2.5 pt each)		0
State <b>Endangered</b> species observed or locally recorded (5 pt each)		0
Nationally <b>Vulnerable</b> species observed or locally recorded (10 pts each)		1
Nationally <b>Endangered</b> or <b>Critically endangered</b> species observed or locally recorded (20 pts each)		1
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		31
<b>Threatened Fauna Score</b>		<b>0.1</b>
<b>CONSERVATION SIGNIFICANCE SCORE</b>		<b>1.54</b>

<b>Total Scores for the Site</b>		Vegetation Condition x Landscape Context x Conservation Significance =	
<b>LANDSCAPE CONTEXT SCORE</b>	<b>Score</b>	<b>UNIT BIODIVERSITY SCORE</b>	39.15
<b>VEGETATION CONDITION SCORE</b>	<b>22.50</b>	<b>Total Biodiversity Score</b>	
<b>CONSERVATION SIGNIFICANCE SCORE</b>	<b>1.54</b>	<b>(Biodiversity Score x hectares)</b>	117.46

<b>Photo Point and Vegetation Survey Location</b>		<b>Direction of the Photo</b>	
		172 degrees	
		<b>GPS Reference</b>	
		Datum	WGS84
		Zone (52, 53 or 54)	53
		Easting (6 digits)	726742
		Northing (7 digits)	6052892
		<b>Description</b>	
		Eucalyptus cneorifolia +/- Eucalyptus phenax ssp compressa woodland over Acacia paradoxa in senescent condition.	
What is the purpose of Assessment?			
<input type="button" value="Clearance"/> <input type="button" value="SEB Area"/> <input type="button" value="Other"/>			
<b>SEB Area Assessment</b>			
Future UBS Negative Score		36.99	
Future UBS Positive Score		45.66	
UBS Gain Score		8.67	
<b>SEB Points provided</b>		<b>26.01</b>	
<b>Vegetation condition</b>			
Likely % loss	<b>Standard</b>	5.5%	
Potential increase	<b>Standard</b>	11.5	
Likelihood of outcome	<b>Standard</b>	32.5%	

### Appendix 3. Flora Species List

#### Site 1 - Paddock

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>Eucalyptus cladocalyx</i> ssp. <i>crassa</i>	Sugar Gum						
<i>Acacia paradoxa</i>	Kangaroo Thorn						
<i>Rytidosperma</i> sp.	Wallaby-grass						
<i>Orthrosanthus multiflorus</i>	Morning Flag						
<i>Allocasuarina verticillata</i>	Drooping Sheoak						
<i>Arthropodium strictum</i>	Common Vanilla-lily						
<i>Styphelia humifusa</i>	Cranberry Heath						
<i>Convolvulus remotus</i>	Grassy Bindweed						
<i>Avena barbata</i>	Bearded Oat						*
<i>Bromus hordeaceus</i> ssp. <i>hordeaceus</i>	Soft Brome						*
<i>Medicago</i> sp.	Medic						*
<i>Vulpia</i> sp.	Fescue						*
<i>Trifolium subterraneum</i>	Subterranean Clover						*
<i>Aira</i> sp.	Hair-grass						*
<i>Hypochaeris glabra</i>	Smooth Cat's Ear						*
<i>Kickxia elatine</i> ssp.	Sharp-leaf Toadflax						*
<i>Briza maxima</i>	Large Quaking-grass						*

#### Site 2 - Dam

Plant Species Recorded (Native and Introduced)		Threatened Sp.		Introduced Species
Species	Common Name	EPBC	SA	
<i>Acacia paradoxa</i>	Kangaroo Thorn			
<i>Orthrosanthus multiflorus</i>	Morning Flag			
<i>Typha</i> sp.	Bulrush			
<i>Melaleuca gibbosa</i>	Slender Honey-myrtle			
<i>Clematis microphylla</i>	Old Man's Beard			
<i>Gonocarpus tetragynus</i>	Small-leaf Raspwort			
<i>Rytidosperma</i> sp.	Wallaby-grass			
<i>Asparagus asparagoides</i> f. <i>asparagoides</i>	Bridal Creeper			*
<i>Avena barbata</i>	Bearded Oat			*
<i>Hordeum</i> sp.				*
<i>Lolium</i> sp.	Ryegrass			*
<i>Arctotheca calendula</i>	Cape Weed			*
<i>Phalaris aquatica</i>	Phalaris			*
<i>Carduus tenuiflorus</i>	Slender Thistle			*
<i>Senecio pterophorus</i>	African Daisy			*
<i>Bromus hordeaceus</i> ssp. <i>hordeaceus</i>	Soft Brome			*
<i>Ehrharta longiflora</i>	Annual Veldt Grass			*
<i>Sonchus oleraceus</i>	Common Sow-thistle			*
<i>Hypochaeris glabra</i>	Smooth Cat's Ear			*
<i>Medicago</i> sp.	Medic			*
<i>Romulea rosea</i> var. <i>australis</i>	Common Onion-grass			*

[illegible]

[illegible]