



NATIVE VEGETATION MANAGEMENT PLAN

for a Significant Environmental Benefit
pursuant to the *Native Vegetation Act 1991*
or the *Native Vegetation Regulations 2017*

SEB Area Reference Name: 6890 Clay Wells Road, Monbulla

Registered Proprietor: Mrs Rosalie Skeer

Period of Management Plan: 2022-2032

Plan authored by: P. Tucker

1 RECITAL

- 1) In this Plan, unless the contrary intention appears –
 - a) "Native fauna" means an animal or animals of a species indigenous to South Australia
 - b) "SEB Area" means an area of land that is protected and managed for conservation to provide a significant environmental benefit to offset the impacts of clearance of native vegetation that has been approved or may be approved sometime in the future
 - c) "Owner" means the person who has executed this Agreement as the proprietor of the land containing the SEB Area and includes all successors in title and occupiers of the land. Where two or more persons are named as the Owner the rights and liabilities under this Agreement will pass to all such persons jointly and each of them severally
 - d) "the Act" means the *Native Vegetation Act 1991*
 - e) Words and phrases defined in the Act, shall for the purposes of this Agreement have the meanings defined in that Act.
- 2) This Management plan commences upon approval from the Native Vegetation Council (NVC) and may not be varied or terminated except by a written Agreement signed by both the NVC and the Owner.
- 3) This management plan is binding on, and enforceable against all owners and subsequent owners of the land described in Section 2 and remains operational in perpetuity or until it is rescinded by mutual agreement of the NVC and the Owner.
- 4) The obligations described in this management plan specifically applies to the land delineated as the "SEB area" in Section 2.4.
- 5) The Owner shall notify the NVC if any activity on the land is likely to result in damage to the environment or biodiversity assets of the area or if there is any breach or potential breach of this Management Plan.
- 6) The NVC, any agent of the NVC or any employee or contractor of the Crown, authorised by the NVC may, at any reasonable time, having first notified the landholder:
 - a) enter the SEB Area for the purpose of inspecting the land or any fence on the land
 - b) enter the SEB Area for the purposes of monitoring the conservation values and condition of the native vegetation and Native fauna protected by this Agreement
- 7) If the Owner is in breach of this Management plan, the NVC may by notice in writing served on the Owner, specify the nature of the breach and require the Owner to remedy the breach within a reasonable period of time specified in the notice.

2 SEB AREA

2.1 Land Owner and Location Details

Property name	6890 Clay Wells Road, Monbulla SA 5277		
Registered owner	Name: Mrs Rosalie Skeer		
	Postal address: PO Box 144 Penola SA 5277		
SEB site manager / provider contact	Name: Mr James Skeer		
	Postal address: PO Box 144 Penola SA 5277		Phone: 8736 6094
			Mobile: 0402 798 480
	Email: james.skeer@gmail.com		

Landscape Board region¹	Limestone Coast	Local government area	Wattle Range Council
IBRA² region	Naracoorte Coastal Plain	Total SEB area (ha)	4.88
IBRA sub-region	Lucindale	SEB points	21.83
IBRA association(s)	Callendale		

2.2 Land Parcels

Parcels whole or in part which comprise the SEB area

Title (e.g CT/CL)	Volume	Folio	Parcel ID	Hundred	Site ID
CT	6202	266	S242	Monbulla	Site A1

¹ Landscape SA region, see <https://landscape.sa.gov.au/>

² IBRA = Interim Biogeographic Regionalisation of Australia

2.3 Introduction and SEB Area Description

Background/reason for establishing the SEB area

The SEB area is being established to offset vegetation clearance of seven paddock trees (Appl No. NVCCAxxxxx). The clearance application is for a proposed pivot irrigator located approximately 200m to the east.

Current and past land use history and events impacting the site

The land has been owned by the Skeer family since the 1940s and has been used for cattle and sheep grazing since this time. Currently, the property is used for cattle grazing only. Several patches of remnant vegetation on the property totalling 186 ha of which four (75ha) have been fenced to exclude stock.

The proposed SEB area was fenced from stock approximately ten years ago in an effort to protect badly declining trees. However, most of the trees died and little recruitment has occurred, likely due to pasture grasses. Utilising this area for a SEB will result in an increase in native on the property.

There are no mining leases, Heritage Agreements, easements or other contractual arrangements on the property.

General description of the features within the SEB area

The SEB area is located within a flat plain which is periodically wet in winter with several small areas that become inundated. The SEB area is slightly more elevated than the surrounding area and remains dry throughout the year. Soil in the SEB is comprised of sand over clay.

The property contains several patches of remnant vegetation (186ha) of which four (75ha) have been fenced to exclude stock. Large Tasmanian Blue Gum plantations occur to the south and west of the SEB area and include large areas of remnant vegetation. Penola Conservation Park is 4km to the north east. Several Heritage Agreements and Management Agreement areas occur nearby.

Average annual rainfall is 634mm.

Summary of the conservation significance of the SEB area

Each year, the EPBC Act listed (Endangered) South East Red-tailed Black Cockatoo (*Calyptrorhynchus banksii* ssp. *graptogyne*) is frequently observed on the property utilising Brown/Desert Stringybark (*Eucalyptus arenacea/baxteri*) habitat. A small number of Brown/Desert Stringybark occur in the SEB area, but are not visited by the birds.

The SEB area retains many dead trees, standing and fallen, with hollows suitable for the NPW Act listed (Vulnerable) Blue-winged Parrot (*Neophema chrysostoma*).

Management Actions for the SEB include revegetation, including Brown/Desert Stringybark, and weed control to provide additional future habitat for these threatened species plus several common species.

2.4 SEB Area Map




Figure 1. SEB Map depicting Site A1.


3 BIODIVERSITY

3.1 Native Vegetation Associations

The SEB Area comprises a total of **4.88 ha of vegetation** and **21.83 SEB points** as outlined in the following table(s). SEB points are calculated from a vegetation assessment undertaken on 29 July 2021 by Peter Tucker. A plant species list is given in Appendix 1.

Site Number	Vegetation Association	Area (ha)	SEB pts
A1	Sand-heath Yacca (<i>Xanthorrhoea caespitosa</i>) Shrubland with emergent Desert/Brown Stringybark (<i>Eucalyptus arenacea/baxteri</i>).	4.88	21.83
General description Site A1 occurs as two patches separated by a 12m wide raceway. The dominant native species are Sand-heath Yacca (<i>Xanthorrhoea caespitosa</i>), Bare Twig-rush (<i>Baumea juncea</i>) with emergent Desert/Brown Stringybark (<i>Eucalyptus arenacea/baxteri</i>). Also present, but in fewer numbers are Black Wattle (<i>Acacia mearnsii</i>), Blackwood (<i>Acacia melanoxylon</i>) and Rough-bark Manna Gum (<i>E. viminalis</i> ssp. <i>cygnetensis</i>). Overall, there is a low diversity of native plants. Pre-European vegetation is likely to have been a Desert/Brown Stringybark +/- Rough-bark Manna Gum Low Open Forest and restricted to this small area of elevated land. The dominant exotic species are Yorkshire Fog (<i>Holcus lanatus</i>), Great Brome (<i>Bromus diandrus</i>) and Rough Cat's Ear (<i>Hypochaeris radicata</i>). Overall vegetation condition was poor. No clear signs of disturbance were observed, but kangaroo scats were noted.			

Site Number	Vegetation Association	Area (ha)	SEB pts
			
<p>Figure 2. Site A1 looking to the east. GPS 468157 5863105.</p>			

Site Number	Vegetation Association	Area (ha)	SEB pts
			
<p>Figure 3. Site A1 looking to the north. GPS 468122 5863142.</p>			

3.2 Threatened Flora and Fauna³

Plant Species	Common Name	Site/s	Conservation status		
			AUS	SA	Region
NIL					

Vegetation Association	Site	Conservation status		
		AUS	SA	Region
NIL				

Fauna Species	Common Name	Recorded during survey (list site/s)	Suitable habitat ⁴	Conservation status		
				AUS	SA	Region
<i>Neophema chrysostoma</i>	Blue-winged Parrot	N	A1		V	VU

³ **BDBSA** = Biological Databases of South Australia. **AUS** = Australia *EPBC Act 1999*: CR = Critically Endangered, EN = Endangered, VU = Vulnerable; **SA** = South Australia *NPW Act 1972*: E = Endangered, V = Vulnerable, R = Rare; **Region (Plants)**: E=Endangered, T=Threatened, V=Vulnerable, R=Rare, K=status uncertain, but considered likely to be either rare, vulnerable or endangered, U=Uncommon, Q=Not yet assessed but flagged as being of possible significance, N=Common; **Region (Fauna)**: RE = Regionally Extinct, CR = Critically Endangered, EN = Endangered, VU = Vulnerable, RA = Rare, NT = Near Threatened, LC = Least Concern, DD = Data Deficient, NE = Not Evaluated

⁴ Not recorded during latest survey but has been recorded previously at the site or within 5 km (e.g. BDBSA or Atlas of Living Australia record) and the site is deemed suitable habitat

4 MANAGEMENT ISSUES AND ACTIONS

4.1 Minimum Management Obligations

During the term of this Plan, the SEB area is dedicated to the conservation of native vegetation and Native fauna on the land and, subject to this Plan, shall not be used in a manner inconsistent with that dedication.

The landholder must not undertake, or permit to occur, any activity that is likely to damage, injure or endanger the native vegetation or native fauna on the SEB area (except as provided for within this Management Plan, or where approved by the NVC).

In particular, the Owner shall not, without the written consent of the Native Vegetation Council, undertake or permit on the SEB area (except as may be provided for within this Management Plan):

- the clearance of native vegetation;
- the planting of exotic vegetation;
- the construction of a building or other structure;
- fertiliser application or artificial feeding;
- cropping or soil disturbance;
- dumping of rubbish, unwanted machinery or plant material;
- new dams or drainage alterations;
- removal of rocks;
- removal of standing or fallen timber;
- vehicle access beyond that which is required to manage and monitor the biodiversity value of the site;
- any other activity that, in the opinion of the NVC, is likely to damage, injure or endanger the native vegetation or habitat of native fauna on the SEB area.

Grazing

Stock are to be excluded from the SEB area at all times, with the exception of any ecologically-beneficial grazing strategy identified within this plan and approved by the NVC.

Fencing

Fencing must be maintained in a stock proof condition. Where fencing is only to standard to delineate the location of the SEB Area (e.g., one plain wire fence) or there is an unfenced boundary (e.g., a site borders a conservation reserve), the boundary needs to be monitored for stock access. If stock are able to access the area at any time in a manner not approved by this plan, a fence will need to be constructed or upgraded.

Controlling pests

The Owner is responsible for the control and, if possible, eradication of declared plant and animal pests pursuant to Section 192 (1) of the *Landscape South Australia Act 2019*. All methods used must minimise off-target damage, minimise soil disturbance and comply with the *Native Vegetation Act 1991* and the *Landscape South Australia Act 2019*. Monitoring should aim to detect any new weeds or pests and management action taken to prevent these from becoming established.

Overabundant native animals

If control of a native species is required due to negative impacts (e.g., excessive kangaroo grazing), it must be conducted under permit from the SA Department for Environment and Water where applicable.

Fire prevention

The Owner will take all reasonable steps to prevent fire on their land, provided these steps are not inconsistent with their commitments under this Plan. All works must be compliant with the *Native Vegetation Act 1991* and the *Landscape South Australia Act 2019*.

4.2 Threats - Weeds and Pest Animals

Weed and feral animal species present that pose a threat to the flora/fauna⁵

Weed species	Common name	Declared (Y/N)	BCM threat rating	Site/s
<i>Phalaris aquatica</i>	Phalaris	N	3	A1

Pest animal species (declared)	Common name	Recorded on site/s (Y/N)	Likely to occur at site/s (Y)	Site/s
<i>Vulpes vulpes</i>	Fox	N	Y	A1

⁵ A weed or pest is considered a management issue if it is Declared under the *Landscapes SA Act 2019* or if the weed has a Bushland Condition Monitoring Weed Threat Rating of 3, 4 or 5 for the region in which it is located

4.3 Other Threats and Issues Impacting the SEB Area

Threat or Issue	Description of sites / species affected and the severity of impact (where known)
Inappropriate total grazing pressure (e.g., stock access, feral grazing animals and/or kangaroos)	The SEB Area is fenced to exclude stock. However, is periodically used house sick cattle.
Artificial water source(s)	No.
Areas with a lack of native vegetation due to past disturbance	Yes, many trees have died since being fenced from grazing. Sand-heath Yacca is prominent in lower strata. Very limited natural regeneration present.
Changed hydrology, salinity, acidity or waterlogging	No.
Inappropriate fire regime	No.
Damage from public access (e.g., use of bike trails, off-road vehicles, rubbish dumping, pollution)	No.
Disease (e.g., <i>Phytophthora</i>)	No.
Other:	No.

4.4 Management Goals and Objectives

- The goal(s) below outline the intent / desired outcome(s) of managing the SEB area over the long term.
- The management objectives define the strategies that must be undertaken in the first 10 years to address threats/issues and progress towards achieving the overall goal.
- The targets and indicators of success clarify what is expected to be achieved and/or observable at the site with 10 years of site management.
- Specific actions, methods and monitoring are detailed in later sections.

Goal 1: Increase plant species diversity.

Management objectives:

- Reconstruct a *Eucalyptus arenacea/baxteri* +/- *E. viminalis* ssp. *cygnetensis* Low Open Forest with a diverse mid and understory
- Reduce weed competition.
- Monitor rabbits and total kangaroo numbers and prevent grazing pressure.

Targets/Indicators of success:

- At year 10, vegetation is consistent with a Low Open Forest, comprising 40% tree cover and 40 - 50% shrub cover over 75% of the site.
- At least 90% of species planted are present at Years 5 and 10, with a survival rate of 80% and 70% respectively.

Goal 2: Improve vegetation condition from poor to medium and maintain that condition thereafter.

Management objectives:

- Reduce competition from pasture grasses.
- Maintain total grazing pressure to low levels that cause minimal impact.

Targets/Indicators of success:

- Bushland assessments at Year 5 and 10 show improved vegetation condition scores due to reduced weed cover, greater structural diversity, higher native plant cover/biomass and regeneration.
- Vegetation condition score to improve by 50% by year 5 and to score 45 or higher at Year 10.

Goal 3: Protect native fauna from feral predation.

Management objectives:

- Ensure feral predator populations remain low through active monitoring and control.

Targets/Indicators of success:

- Observations show no net increase in numbers based on rolling three-year averages.

4.5 Revegetation

Unless otherwise agreed by the NVC, any revegetation must:

- be with species indigenous to the local area;
- use seed or plant material collected from as close as possible to the planting site;
- aim to be representative of the structure and composition of the relevant pre-European vegetation benchmark community.

Reveg Site ID	Area of reveg (ha)	Description of the key structure and composition of the relevant pre-European vegetation benchmark community	
1	2.46	Stage 1 - Reconstruct a <i>Eucalyptus arenacea/baxteri</i> +/- <i>E. viminalis</i> ssp. <i>cygnetensis</i> Low Open Forest (40% tree cover) with a shrubby understory (40-50% cover):	
		Initially planted to	After 10 years thinned to
		Canopy 5 – 10m spacing between trees.	15 – 20m spacing between trees.
		Sub-canopy 2 – 8m spacing	5 – 15m spacing
		Shrubs 2 - 4m spacing	4 -10m spacing (discrete clusters)
2	2.42	Ground layer Encourage natural regeneration of existing sedges and grasses.	
		Less planting will be required where <i>Xanthorrhoea caespitosa</i> are dense.	
		Due to erosion potential the site will not be blanket sprayed with herbicide, but dense plantings will be used to outcompete pasture weeds over the long-term. After 10 years, plants will be thinned to target densities leaving vegetation to breakdown on site.	
		Initially planted to	After 10 years thinned to
		Canopy 5 – 10m spacing between trees.	15 – 20m spacing between trees.
		Sub-canopy 2 – 8m spacing	5 – 15m spacing
		Shrubs 2 - 4m spacing	4 -10m spacing (discrete clusters)
		Ground layer	Encourage natural regeneration of existing sedges and grasses.
		Less planting will be required where <i>Xanthorrhoea caespitosa</i> are dense.	
		Due to erosion potential the site will not be blanket sprayed with herbicide, but dense plantings will be used to outcompete pasture weeds over the long-term. After 10 years, plants will be thinned to target densities leaving vegetation to breakdown on site.	

Reveg Site ID: Sites 1 and 2

Management Action	Methods	Timing
Weed control	Avoid potential wind/soil erosion and do not spray revegetation area with herbicide until 8 weeks before ready to plant.	See below, Ground preparation.
Initial pest control	Monitor for rabbits and if present control using 1080 baits.	Summer prior to planting, then ongoing.
Seed collection / purchase	Consult www.saseedbank.com.au for info on seed collection or engage professional contractor as soon as possible	Start early, in the year prior to the year of planting; collect seeds to enable propagation by late spring/summer
Seedling propagation / purchase	Engage contractor/nursery to grow tubestock (especially for species that have limited seed supply or are delicate ground layer species)	Propagation to start 6-9 months prior to planting
Weed control	Spot spray weeds where seedlings will be planted.	8 weeks prior to planting.
Plant establishment	Plant tubestock at required densities and protect with tree guards.	Winter/early spring (after adequate rainfall and weed control) and within 24 months of commencement of this plan.
Aftercare	Apply snail bait.	At planting.
	Monitor rabbits and other grazers and control as required.	Begin straight after planting, then ongoing until plants are established
	Spot spray herbicide around tree guards.	2-month intervals after planting until summer.
	Water seedlings if required. Do not water in a heatwave. No watering after January.	Before end of December.
	Remove tree guards once plants are 10 – 20cm above guards and able to withstand most threats.	January – April.
Supplementary replanting	Monitor for plant losses. Seek professional advice if reason for losses are not apparent. Begin revegetation process again to add additional species or replace losses where required.	In autumn or winter in the two years following initial planting

Species to be revegetated

Species selection and planting density is driven by site conditions, primarily a high proportion of Yorkshire Fog (*Holcus lanatus*) and Rough Cat's Ear/Flat Weed (*Hypochaeris radicata*). Consequently, larger or colonising species have been chosen for revegetation using relatively high planting densities. Overtime, it is expected these plants will shade out and weaken the two dominant weed species. After 10 years, the canopy will be thinned to achieve target densities listed in the table below, ensuring maximum growth potential specifically for Desert/Brown Stringybark, which may provide an additional food resource for South East Red-tailed Black Cockatoo.

High planting numbers will create rapid dense habitat for small birds, which are likely to provide a vector for additional native species via their droppings.

Currently, Sand-heath Yacca has a projected cover of 20% across the SEB site.

Botanical Name	Common Name	Method [#]	Target Density (per ha)	Initial density (per ha) *
CANOPY				
<i>Eucalyptus arenacea/baxteri</i>	Desert/Brown Stringybark	T	20	90
<i>Eucalyptus viminalis</i> ssp. <i>cygnetensis</i>	Rough-bark Manna Gum	T	10	50
<i>Allocasuarina verticillata</i>	Drooping Sheoak	T	15	50
SUBCANOPY				
<i>Acacia mearnsii</i>	Black Wattle	T	10	50
<i>Acacia melanoxylon</i>	Blackwood	T	15	50
<i>Banksia marginata</i>	Silver Banksia	T	10	10
<i>Bursaria spinosa</i>	Sweet Bursaria	T	10	10
SHRUBS				
<i>Acacia pycnantha</i>	Golden Wattle	T	10	60
<i>Dodonaea viscosa</i> ssp. <i>spatulata</i>	Sticky Hop-bush	T	10	20
<i>Acacia paradoxa</i>	Kangaroo Thorn	T	5	10
<i>Leptospermum continentale</i>	Prickly Tea- tree	T	20	20
<i>Acacia myrtifolia</i>	Myrtle Wattle	T	20	40
<i>Allocasuarina paludosa</i>	Swamp Oak-bush	T	10	10
GROUND LAYER				
<i>Clematis microphylla</i>	Old Man's Beard	T	10	10
<i>Ficinia nodosa</i>	Knobby Club-rush	T	20	20
<i>Juncus pallidus</i>	Pale rush	T	20	20

* Plants to be thinned to target density after 10 years.

Method - T = Tubestock, M = Machine Direct Seed, H = Hand Direct Seed

4.6 Risk Management and Contingencies

This section identifies the major risks that have a potential to threaten the successful implementation of the Management Plan or the associated on-ground outcomes, the likelihood of such an event occurring (High, Medium and Low) and steps that will be taken to mitigate or address these risks.

Relevant mitigating actions identified here are included in the Action Table

Risk	Likelihood	Mitigating measures or contingency
Insufficient seed available for all species.	Low	Consult early with revegetation nursery/seed collector.
Revegetation failure	Medium	Revegetation will occur in two stages: south patch planted first, followed by north patch the following year to minimise impact of potential failure. Ensure thorough weed and pest control at all stages. Plant early in season to take advantage of winter rainfall. Water seedlings for first year. Additional planting will be conducted to account for any significant losses, >10% of seedlings.
Stock accidentally accessing the site.	Low	Revegetation will be inspected for evidence of stock activity during each maintenance activity. Fences will be checked thoroughly twice a year.

4.7 Action Table

This table lists the 10-year management objectives, associated actions and resources required to achieve the Management Goals. Detailed methods are included in the appendices.

10-Year Management Objective	Management Action	Methods	Timing
Improve plant health and regeneration by reducing total grazing pressure to level that causes minimal impact	Construct and maintain fencing to exclude stock	Construct a 150m internal fence to a sufficient standard to permanently exclude stock. The Owner will erect or arrange to erect a fence and gate(s) to the SEB Area in the location delineated in Map 4.8 Perimeter fencing to SEB area has already been constructed. Fencing should be erected at least 5 m away from existing vegetation to provide for fence maintenance access and firebreak. Once the fence and gates are erected, the Owner will maintain the fence and gates in a stock proof condition.	To be completed within 6 months of the commencement of this plan
	Monitor the area for rabbits and control if found present.	Monitor for the presence of Rabbit and if observed, implement an effective control program. Undertake an integrated and effective rabbit control program. Bait with either 1080 or Pindone poison bait where allowable and safe to do so. The best results are obtained if three free feeds (oats with no poison) are laid prior to baiting, with a three or four day interval between each feed. Baits should be laid within the rabbit feeding areas. Laying the baits on disturbed soil (ripped or scratched with a mattock or similar) is usually recommended to attract the rabbits. All 1080 baiting must be undertaken as per the Directions of Use. Follow up baiting with warren destruction and fumigation of those burrows that reopen. Start warren destruction as soon as practical after poisoning. Contact your local Landscape Board to seek advice and to purchase baits.	Ongoing monitoring required. Late summer or autumn is the best time to bait rabbits, as at this time alternative food is scarce and rabbit numbers are low. Warren or den destruction should be undertaken in conjunction with baiting programs where possible. The best time to fumigate is after the opening rains, when the

10-Year Management Objective	Management Action	Methods	Timing
			soil is less porous
	Monitor impact of kangaroos and wallabies, reduce numbers if damage to plants is significant	Conduct spotlight surveys to determine population size and trends. If rabbits have been controlled, kangaroos and wallabies may still impact on native plant health. If grazing impacts become significant and surveys indicate numbers are high, obtain advice and if necessary, a destruction permit from DEW. Any control activities must be undertake as stipulated by the destruction permit.	As required
Reduce competition from high threat weeds	Control Phalaris (reduce cover by at least 70% of its current extent)	<p>Correct identification of weed grasses is important, as weed and native grasses can look similar.</p> <p>Dig out isolated plants before they seed. Cut around root zone with knife. If there are any rhizomes make sure they are removed. If they have already begun to produce seed, bag seeds as well as rhizomes for careful disposal.</p> <p>Harvest flower-heads in spring / early summer to limit seeding. This can be done by hand-pulling or clipping isolated plants or small patches. For large infestations, carefully slash dense stands (avoid slashing any native plants). Regular slashing reduces vigour, but should not be done while plants are seeding. Slashing can be undertaken using a brush cutter or hedge shears.</p> <p>Spot spray with herbicide late winter to early spring, before flowering. For plants scattered amongst native plants, trim to ground level then apply herbicide immediately using wick-wipers or a weed brush.</p> <p>Follow up that season and future years.</p>	<p>Dig or hand-pull when soil is moist.</p> <p>Harvest/slash/clip typically in spring to early summer, when in flower to limit seeding.</p> <p>Apply herbicide when plants are actively growing before flowering (late winter to early spring).</p> <p>There may be opportunities to apply herbicide in autumn if identification is possible.</p>
	Monitor and control any new weeds.	Search site for new weeds. If observed, refer to Appendix 2 for a range of possible weed control methods or seek advice if required and subsequently plan and implement a control program based on greatest threats.	Search once per season for first 5 years then annually.
Reconstruct a diverse <i>Eucalyptus arenacea/baxteri</i> +/- <i>E. viminalis</i>	Revegetate 4.88ha	Revegetate the SEB area using methods as per the Revegetation Plan – engage specialist contractors in Year 1 for advice and to carry out timely seed collection and seedling propagation etc.	Initial planting within 2 years of commencement of the management

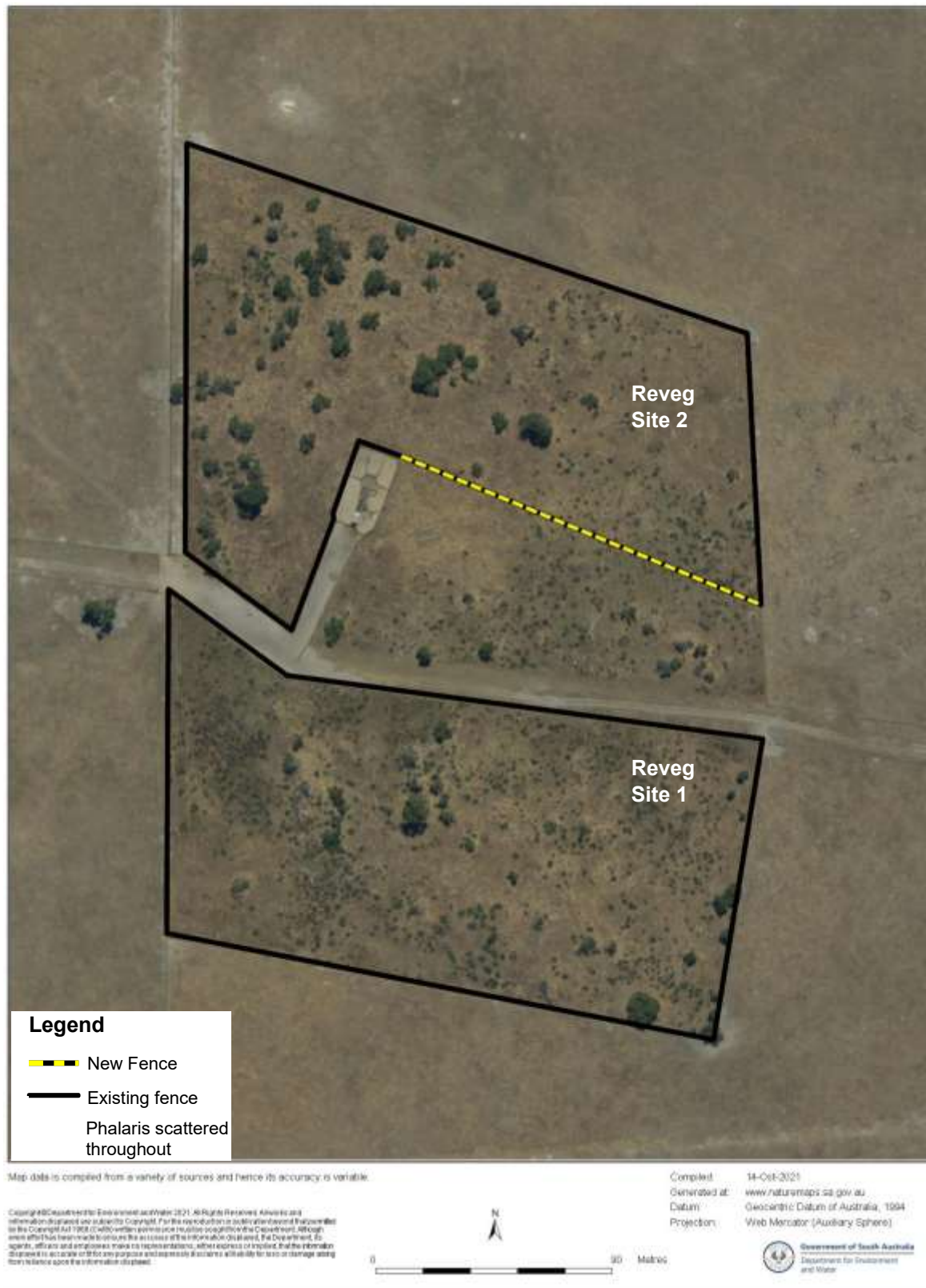
10-Year Management Objective	Management Action	Methods	Timing
<i>ssp. cygnetensis</i> Low Open Forest with a shrubby understory.			plan; losses replaced or supplementary planting within a further 2 years
Reduce feral predator populations	Monitor the area for foxes and control if found.	Contact your local Landscape Board office to seek advice to plan and implement an effective fox control program. Participate in a regional fox control program if one is implemented.	Fox baiting in spring can be used to target foxes during their reproductive stage, when females require more food to sustain their young.
Monitor results	Refer to Monitoring section	Refer to Monitoring section	Annually in October

4.8 Works Calendar Summary

Year(s) that each management action is to be carried out in order to achieve the 10-year Management Objectives, plus any monitoring and reporting required.

Action Item	Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	Yr 6	Yr 7	Yr 8	Yr 9	Yr 10
Construct and Maintain fencing to exclude stock	X	X	X	X	X	X	X	X	X	X
Rabbit monitoring and control if required.	X	X	X	X	X	X	X	X	X	X
Monitor impact of kangaroos, reduce numbers if required.	X	X	X	X	X	X	X	X	X	X
Phalaris control	X	X	X	X	X	X	X	X	X	X
Monitor/control new weeds or pests	X	X	X	X	X	X	X	X	X	X
Engage revegetation nursery	X	X								
Spot weed control south: Reveg Site 1		X								
Spot weed control north: Reveg Site 2			X							
Plant south site: Reveg Site 1		X								
Plant north site: Reveg Site 2			X							
Seedling aftercare and supplementary planting (if required)			X	X	X	X	X	X		
Fox monitoring and control if required	X	X	X	X	X	X	X	X	X	X
Standard monitoring	X	X	X	X	X	X	X	X	X	X
Complementary monitoring					X					X
Reporting to NVC	X	X	X		X					X

4.9 Management Action Map



5 MONITORING AND REPORTING

5.1 Standard Monitoring

Observing, documenting and analysing the outcomes of management actions are required. If monitoring shows that the goals of this Plan are not being achieved, the owner or the NVC may request a review and update of the Plan. The following standard monitoring data is required:

- Record of management actions undertaken
- Photographs from at least one representative photographic monitoring site or 'photo-point' for each vegetation association (i.e., each 'site')
- A map and/or list showing the location of each photo-point and the photo direction
- Annual photographs showing the same field of view as the first (baseline) photograph at each photo-point.
- Record of dominant species and species of interest occurring in the photographs with notes of key changes compared to the baseline.
- Record of seasonal conditions (e.g., rainfall) to assist with evaluating changes.

5.2 Additional Monitoring

If the number of SEB points generated is >150 points (or if stipulated by the NVC) additional assessments of vegetation condition will be undertaken by an accredited consultant at years 5 and 10 of the Management Plan. The method used will be the NVC's Bushland or Rangelands Assessment Method as appropriate, unless otherwise approved by the NVC.

5.3 Complimentary Monitoring

If **revegetation**, **management of threatened species** or an **ecological grazing/burning strategy** are a part of this plan, then the following sections outline the relevant monitoring goals and methods that will be used to guide management and document outcomes.

Monitoring goal/s (e.g., what questions will be answered by monitoring the site?)
Monitoring Goal 1: Is the revegetation likely to mature into a Desert/Brown Stringybark Low Open Forest?

Ecological indicators

Monitoring goal no.	Ecological indicators	Methods
1	Vegetation Condition Score	Carry out NVC Bushland Assessment Method (July 2019) at two locations within the revegetation in September of Years 5 and 10.

Evaluation

Ecological indicator	Year of Plan	Target
Vegetation Condition Score	5	Vegetation condition score 30-40 (poor to medium) with native plant life forms score of at least 12 and total 'weed cover x threat' rating <7. The revegetation will be immature, but if these scores are not met then management may need to look causes (e.g., may need to intensify weed/pest control and replace any seedling losses with further planting).
	10	All components of the vegetation condition score should have increased compared to Year 5, except 'weed cover x threat' rating which should have either not changed or decreased. Target vegetation condition score at Year 10 is 50. If this score is not met then an analysis of the individual elements that make up the score will show what requires further management.

Roles and responsibilities

Monitoring action	Timing	Person(s) / organisation(s) responsible
New weeds/pests	Search once per season for first 5 years then least annually	Site manager
Standard monitoring	Annually in September	Site manager
Bushland Assessment (Revegetation Monitoring)	Years 5 and 10 in September	Land owner to engage accredited consultant
Review and, if required, update Management Plan	Years 5 and 10	Land owner, with approval from NVC

5.4 Reporting and review

Progress reports will be submitted to the NVC each year for the first 3 years and as requested by the NVC thereafter. Reports are to include:

- a description of works undertaken for the previous year for each Management Goal
- standard monitoring data as outlined in Section 5.1, photographs and evaluation of outcomes.

Year 5 and 10 assessment reports will be submitted to the NVC and include:

- summary of works undertaken to date
- an evaluation of the condition of the vegetation compared to the baseline/benchmark including photographs and monitoring data
- a review of whether management actions have achieved the management objectives to the extent expected
- suggested changes to management plan (if required)

Type of report	Report required to be sent to the NVC? (Y/N)	Due dates	Person(s) / organisation responsible
Progress	Yes, for first 3 years	Nov of 2022, 2023 and 2024	Land owner
Year 5 Assessment	Yes	Nov 2027	Accredited Consultant engaged by Land Owner
Year 10 Assessment	Yes	Nov 2032	Accredited Consultant engaged by Land Owner

6 EXECUTION OF THE PLAN

SEB Area Reference Name:

Signed: Date:
(“the Decision Date”)

Print Name:

☐ **PRESIDING MEMBER, NATIVE VEGETATION COUNCIL**

☐ **DELEGATE TO NATIVE VEGETATION COUNCIL**

Signature of Landowner(s) or seal of Company and authorised signatory:

Signed: Date:

Print Name:

Signed: Date:

Print Name:

APPENDIX 1: PLANT SPECIES LIST

The following plant species were found at the site on 29 July 2021, survey undertaken by Peter Tucker.

Species Name	Common Name	Site/s
Assessment Quadrat		
<i>Baumea juncea</i>	Bare Twig-rush	1, 2
<i>Eucalyptus arenacea/baxteri</i>	Desert/Brown Stringybark	1, 2
<i>Eucalyptus viminalis</i> ssp. <i>cygnetensis</i>	Rough-bark Manna Gum	1, 2
<i>Juncus pallidus</i>	Pale Rush	1
<i>Lomandra micrantha</i>	Small-flower Mat-rush	1
<i>Leptocarpus tenax</i>	Slender Twine-rush	1, 2
<i>Xanthorrhoea caespitosa</i>	Sand-heath Yacca	1, 2
* <i>Arctotheca calendula</i>	Cape Weed	1, 2
* <i>Bromus diandrus</i>	Great Brome	1, 2
* <i>Holcus lanatus</i>	Yorkshire Fog	1, 2
* <i>Hypochaeris glabra</i>	Smooth Cat's Ear	1, 2
* <i>Hypochaeris radicata</i>	Rough Cat's Ear	1, 2
* <i>Leontodon saxatilis</i>	Lesser Hawkbit	1, 2
* <i>Lolium rigidum</i>	Wimmera Ryegrass	1, 2
* <i>Malva parviflora</i>	Small-flower Marshmallow	1, 2
* <i>Phalaris aquatica</i>	Phalaris	1, 2
* <i>Romulea</i> sp.	Onion-grass	1, 2
* <i>Rumex acetosella</i>	Sorrel	1, 2
Outside Quadrat		
<i>Acacia mearnsii</i>	Black Wattle	2
<i>Acacia melanoxylon</i>	Blackwood	2
<i>Hypolaena fastigiata</i>	Tassel Rope-rush	1, 2
<i>Imperata cylindrica</i>	Blady Grass	1
<i>Themeda triandra</i>	Kangaroo Grass	1

Weed Control Methods in Native Vegetation - Template

June 2020

Purpose

This template outlines key weed control principles and methods that may be copied into a Native Vegetation Council SEB Management Plan (e.g., as an Appendix) where appropriate.

Key principles

- **Improving the condition of native vegetation in an SEB area often requires the control of weeds. Removing weeds reduces competition, shading and other unwanted effects.**
- Weed control is a long-term project. Numerous follow-up treatments are often required to deplete weed seeds that have accumulated in the soil and control new invaders.
- To promote the replacement of weeds by native plants, rather than more weeds, start weed control work in the best areas of native vegetation and work in stages towards the more degraded areas. The exception may be if an isolated occurrence of a new invading weed species occurs, to eradicate it before it spreads.
- Minimise disturbance to existing native plants and to the soil as weeds are often favoured in disturbed areas.
- Where native animals are using the weed infestations as habitat, remove those weeds slowly so that the habitat can be replaced by native species.
- Consider slope stability and the risk of soil erosion if weeds are removed.
- If dead weeds are left standing consider how you will manage access for follow up work, particularly for dense prickly infestations.
- For local weed management advice, the local Landscape Board office may be contacted.

Herbicides

If using herbicides, it is recommended that you complete a basic Chemical Handling training session first to keep yourself, other people and your property safe.

Native Vegetation Branch

Department for Environment and Water

T (08) 8303 9777

E nvc@sa.gov.au

www.environment.sa.gov.au/nativevegetation

Follow these key principles when using herbicides:

- Always read and follow the label on the herbicide container. It is a legal requirement that you act in accordance with the instructions and information on the label, or in some cases, in accordance with an Off-label Permit for that herbicide as issued by the Australian Pesticide and Veterinary Medicines Authority. Material Safety Data Sheets can provide further safety information.
- Always use the recommended safety equipment/clothing and have water available for washing should there be any herbicide contact with your skin.
- Only mix up the amount of herbicide that you will use in each weeding session.
- It is very important to mix herbicides to the correct dilution for the target weed, as per the label instruction, or in some cases the Off-label Permit instructions.
- Check on the label to see if a surfactant / wetting agent / penetrant is recommended.
- Weeds are often best treated when they are actively growing, but check label information for most effecting timing.

Methods

Hand Pull Soft annual weeds and seedlings of woody weeds	Tools and Equipment: Gloves
	Safety Equipment: None
	Firmly grip the stem of the weed near ground level and pull the root out of the ground. Beware of back injury. Care must be taken to minimise soil disturbance by for example putting one foot on the ground on either side of the weed to keep the surrounding soil from lifting up and/or waiting until after rain when the soil is wet so the plant comes up more easily.

Digging or Grubbing Individual weeds with underground bulbs or tubers	Tools and Equipment: Narrow trowel, small grubbing tool
	Safety Equipment: None
	Dig out <u>all</u> of the underground part of the weed and remove it from the site. Replace dislodged soil and leaf litter after the weed is removed to minimise disturbance.

Cut and Swab Small to medium woody weeds	Tools and Equipment: Cut using secateurs, loppers, a handsaw or chainsaw depending on weed size. Herbicide application using a sponge-topped plastic bottle similar to a shoe polish bottle.
	Safety Equipment: Safety glasses, strong rubber gloves, water for washing
	Systemic herbicides are used in this method which move to and kill the roots of the weed. Cut the stem(s) close to or at ground level. Apply the herbicide to the cut stump <u>within 30 seconds</u> . Keep the applicator sponge clean as contact with the soil may inactivate the herbicide.

	Stem Scrape and Swab: If the underground parts of the weed are extensive, more herbicide will be needed to kill it. In this case cut the stems higher above the ground and after cutting, scrape off the outer layer (skin) of the remaining part of the stem and apply herbicide to this area as well as to the cut.
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Ringbark Trees that do not resprout (e.g., pines)	Tools and Equipment: Hatchet, machete, hand saw or chainsaw
	Safety Equipment: Safety glasses, gloves
	Close to the ground chop out a 2-5cm wide section of the bark and sap wood, exposing the heart wood, to form a cut ring that completely encircles the tree. For pines, no herbicide need be applied. For other treat as per the Cut and Swab information above. Ensure that when the tree dies and eventually falls that it will fall into safe place.

Wipe On Strap-leaf species such as <i>Watsonia</i> in areas where they are surrounded by native plants	Tools and Equipment: Wick-wand, or 'Tongs of Death' (kitchen tongs with sponges securely attached), and plastic squeeze bottle with a long narrow tube coming out of the lid
	Safety Equipment: Safety glasses, strong rubber gloves, water for washing
	Apply herbicide to the wick-wand or Tongs of Death and then wipe the leaves of the weed. Both sides of the leaf should be coated with herbicide.

Drill and Fill Larger woody weeds and medium to large trees that may re-shoot	Tools and Equipment: Cordless/battery drill with 6 mm drill bit. Plastic squeeze bottle with long narrow tube coming out of the lid.
	Safety Equipment: Safety glasses, strong rubber gloves, water for washing
	<p>The weed can be left standing after treatment to minimise the labour required and maximise the habitat value.</p> <ol style="list-style-type: none"> 1. Clear any low branches away to allow good access to the base of the weed. 2. Clear soil and leaf litter away from the base of the trunk. 3. Drill a series of holes: <ol style="list-style-type: none"> a. at 2 – 4 cm spacing around the base of the trunk or lignotuber (this is a type of storage organ which looks like a swollen lump at the base of the trunk) b. drill to a depth of 0.5 - 1 cm at a 45° angle (or steeper if possible). 4. Fill the holes with herbicide immediately. 5. Before leaving to start on another plant check the holes and refill them with herbicide if some has been absorbed.

	Frill and Fill variation: A hatchet or machete is used to make lots of angled cuts ‘frills’ into the sap layer all around the base of the trunk so that each cut can hold the herbicide. Apply the herbicide as soon as possible after cutting.
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Spot Spray Infestations of small to medium weeds where off-target damage to native species (e.g., spray drift) is unlikely	Tools and Equipment: Hand-held spray bottle and/or backpack spray unit or vehicle-mounted spray unit
	Safety Equipment: Safety glasses, mask or ventilator, strong rubber gloves, water for washing, other equipment as specified on the herbicide label.
	<p>Big open areas may just fill up with weeds again. Only spray an area that is of manageable size to follow-up with either further weed control to promote native regeneration or to prepare for revegetation.</p> <p>Spray cautiously in small target area and ensure a good cover of the herbicide on both sides of the leaves.</p> <p>To minimise off-target damage from spray drift, adjust the nozzle to get droplets of the correct size to cover the leaf (not too small to blow away between the nozzle and the leaf and not too big to dribble off the leaf once it hits), use a shield over the spray nozzle and don't spray on windy days. Don't spray when rain is expected (refer to the label).</p>

Acknowledgement

The NVC has adapted this information from a guide produced by departmental Bush Management Advisors.

Further information

Biosecurity SA (2018) *'Weed Control Handbook for Declared Plants in South Australia'* (see https://www.pir.sa.gov.au/biosecurity/weeds_and_pest_animals/weeds_in_sa)

Robertson, M., Grant, I. and Cragie, A. (2005) *Stop Bushland Weeds: A Guide to Successful Weeding in South Australian Bushland*, Nature Conservation Society of SA

For local advice, contact your local Landscape Board office: [Department for Environment and Water | Landscape Boards](#)