ECO VINEYARDS
GROWING RESILIENCE NATURALLY

CASE STUDY

ESTABLISHING NATIVE INSECTARY GRASSES IN THE MID-ROW
AT BRAESIDE VINEYARD, CLARE VALLEY, SA

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Wine Australia

retallack viticulture

ESTABLISHING NATIVE INSECTARY PLANTS

Background

The property is located on Blocks Road, Leasingham, Clare Valley and consists of 6.75 ha originally planted to Riesling (0.5 ha), Cabernet (1.5 ha) and an olive grove (2.5 ha).

Since purchasing 'Blocks Road' in 2018, our family has invested a large amount of time, effort and money revitalising the property, with a strong focus on improving biodiversity and respecting the natural habitats around the vineyard.

Our philosophy for 'Blocks Road' is for each generation to leave the land in better condition than when they arrived on it.

What were you hoping to achieve and why?

Following the EcoVineyards launch in Clare during 2019 I've been attending workshops, chatting with local EcoGrowers and taking ideas back to our vineyard to try them out. In particular, my focus has been on improving the biodiversity and overall health of our creek-side block through the establishment of native grasses in the midrow, revegetation along our boundaries and use of native insectary plants at the end of rows. This 1.2 hectare block was used as our demonstration site for the EcoVineyards project.

The project gave us access to a wealth of knowledge and a network of EcoGrowers and allowed us to:

- Compile a Biodiversity Action Plan (BAP) for the demonstration site
- Seed the demonstration site with three wallaby grasses and one windmill grass species
- Install predator perches and bat boxes at sites across the whole vineyard.

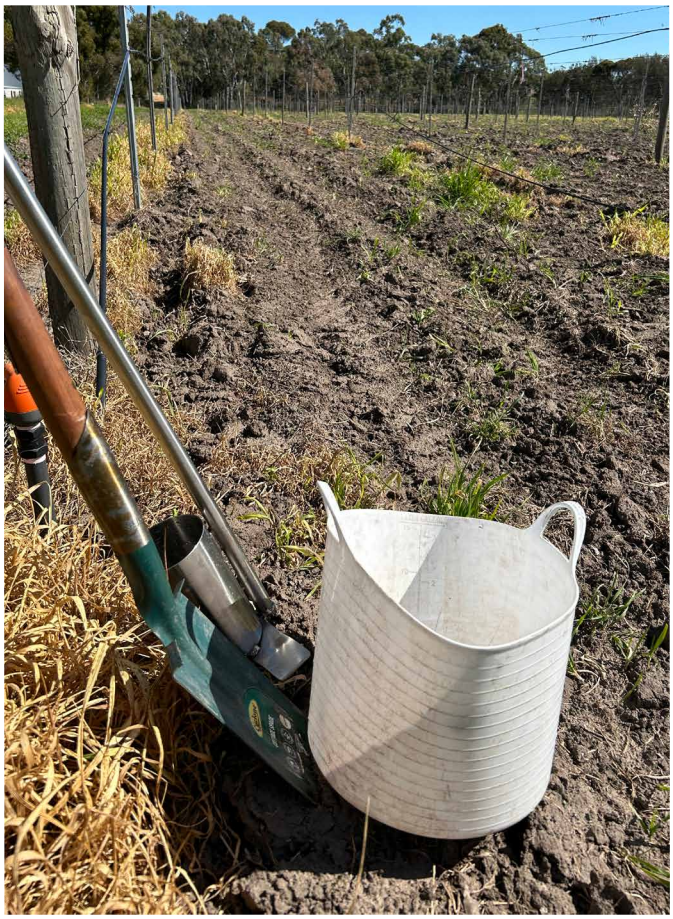

Figure 1: Soil sampling (chemical and biological) in September 2023 [Photo: Grant Carr].

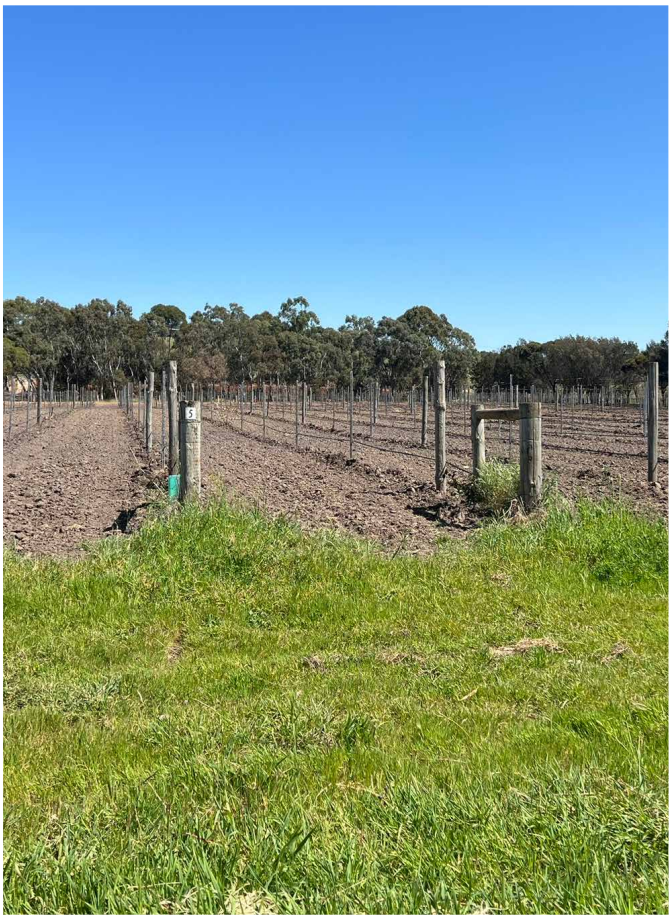

Figure 2: Site preparation for sowing native grasses in September 2023 [Photo: Grant Carr].

What did you do and when?

- **September 2023**: Preparation of seeding area by removing the weed seed bank.
- **August 2024**: Double-pass, direct seeded four species of native grasses.
  - *Chloris truncata*, windmill grass
  - *Rytidosperma caespitosum*, common wallaby grass
  - *Rytidosperma geniculatum*, kneed wallaby grass
  - *Rytidosperma setaceum*, bristly wallaby grass
- **August 2024**: Installed raptor perch (with plans to install a second this winter, 2025)
- **February 2025**: Installed microbat boxes (with plans to install a further 6 this autumn)

If you changed your project, what was the reason for the change?

Initial plans were to seed native grasses in the mid-rows and laterally or low-growing species under vine. However, since joining the project in May 2023 the Clare Valley has experienced a significant period of lower-than-average rainfall which has resulted in very tough growing conditions.

The decision was made not to explore the effectiveness of native plants under-vine as the success rate/strike rate of any seeds planted was expected to be very low due to conditions.

What worked well?

In general the project went well and we completed most of the tasks we set out to achieve. Of particular note was preparation of the midrow for planting, which took place over a 12-18month period. Multiple passes with the cultivator, responsible application of chemicals and hours of hand-weeding all helped to provide a level, weed-free midrow for seeding.

Pitfalls to avoid?

Get orders for seed/plants in earlier. As a relative newcomer to native grasses I wasn't experienced enough to understand the timeline for planting. Joining the project in May 2023 meant it wasn't possible to get our native grasses planted during the 2023/2024 season which delayed our plans by 12 months.

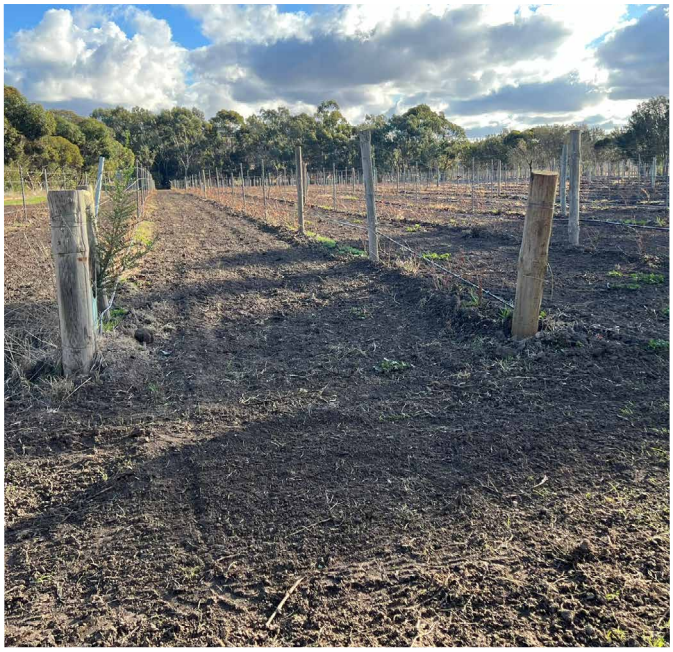

Figure 3: Site preparation for sowing native grasses in June 2024 [Photo: Grant Carr].

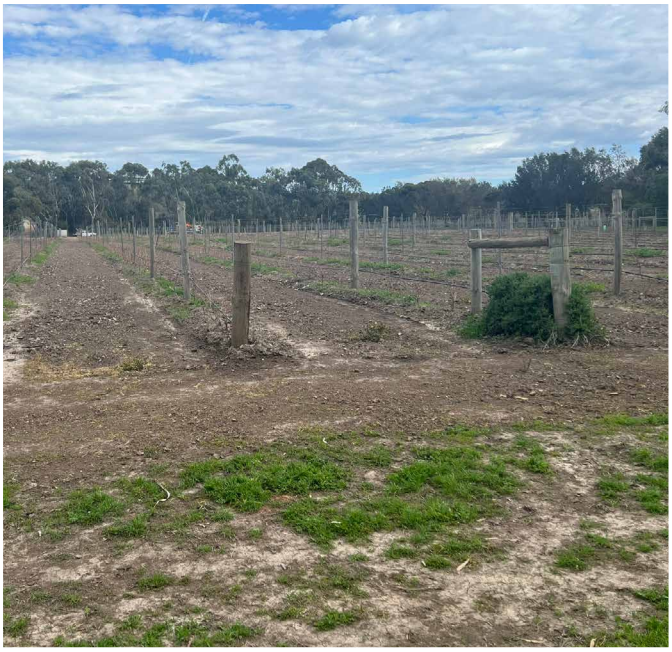

Figure 4: Site preparation for sowing native grasses in June 2024 [Photo: Grant Carr].

Figure 5: Sowing native grasses and forbs by Seeding Natives 'blue devil' specialised seeder (August 2024) [Photo: Grant Carr].

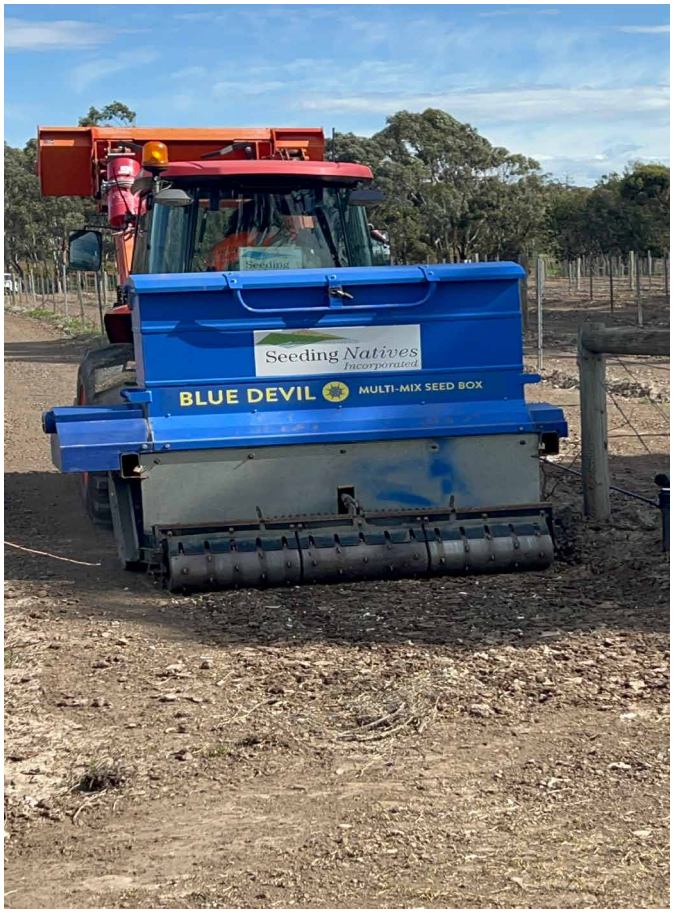

Figure 6: Sowing native grasses and forbs by Seeding Natives blue devil' specialised seeder (August 2024) [Photo: Grant Carr].

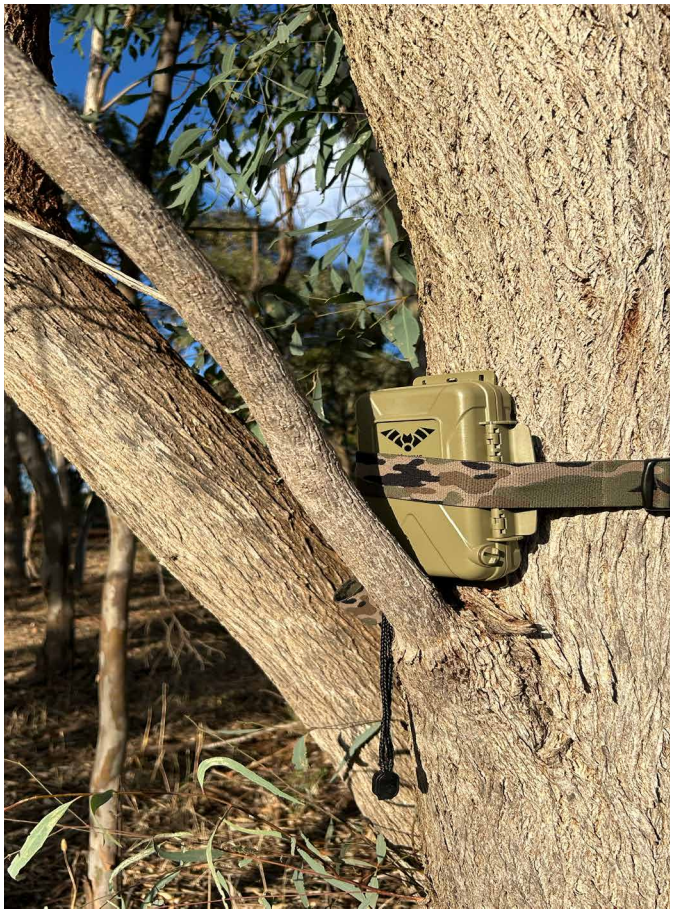

Figure 7: Chorus microbat detector (March 2024) [Photo: Grant Carr].

Any insights that you would like to share?

Native grasses typically take 16 months to establish and we are looking forward to assessing their growth in spring 2025.

***Hardenbergia violacea,* native lilac and *Enchylaena tomentosa,* ruby saltbush planted at the end of rows established well and has responded well to summer hedging with prolific additional growth. These plants are easily shaped, functional and provide aesthetic appeal in the vineyard.**

Site preparation is important and intensive. I spent 12 to 18 mths on weed control with manual removal and dodge plough undervine weed removal. Mid rows were ripped, sprayed, and had multiple cultivation passes with very dry conditions to ensure weed control. Caltrop was hand pulled and a weed wiper will be used in the future to manage standing weed competition for the natives along with hand pulling for the laterally growing weeds.

What are you more aware of now?

Timelines for establishing native grasses. Seeding Natives direct seeded a mix of grasses in August 2024, a record dry year in the Clare Valley and to date we are unable to assess establishment, relying on experience of other growers to trust they will remain dormant until favourable germination conditions. Learned to trust that the seed will remain dormant and not to panic about not seeing plants in year 1.

Where to from here ?

While EcoVineyards has provided assistance in tackling the major task of establishing native grasses in the midrow of our demonstration site, we have lots more work planned for our vineyard, including the following tasks:

- Install a second raptor perch and a further six bat boxes
- Establish native insectary plants at the end of more vineyard rows
- Carry out further revegetation on property boundaries and in Eyres Creek
- Complete all planned removal of woody weeds and identified weed species
- Look to further inclusion of natives in the vineyard at end of rows and under vine.

Once the success of the recently planted native grasses is well understood we are keen to expand our planting to other blocks across the vineyard.

Are there any outstanding knowledge gaps you would like filled?

Future plans for establishing native plants in the under-vine area will likely raise questions, which I'm confident I can get assistance with from the local networks of Clare Valley growers. Any questions around the native grasses already seeded will be passed to Andrew Fairney, who has already shown to be a very helpful. I also plan on continuing to engage with EcoVineyards Project at future sessions and workshops.

What has been the most valuable aspect of the program for you personally?

The program has allowed me to connect with like-minded individuals from within Clare Valley and further afield and has demonstrated what the hard work and dedication to responsible management of a vineyard can result in. Also of importance, has been a validation that the effort we have been putting into our vineyard/block since taking over the property in 2018 is taking us in the right direction.

"We never really own the land on which we live and work, but it is our responsibility to leave it in a better condition than when we arrived on it. The EcoVineyards project has helped us develop the knowledge and skills we need to live up to that responsibility".

Vineyard owner, Grant Carr

Costs

Date	Item	EcoVineyards costs (ex GST)	Co-contribution (landholder contribution)	In-kind contribution (time)
Aug 2023	Install Ocloc photo point and EcoVineyards signage	-		1 hr
Sep 2023 to Nov 2023	Site Preparation for midrow planting (Spring), incl. cultivation passes, spraying			+12 hrs
Dec 2023 to February 2024	Site Preparation for midrow planting (Summer), incl. hand weeding			+12 hrs
May 2024	Site Preparation for midrow planting (Autumn), incl. hand weeding	-		+12 hrs
Jun 2024 to August 2024	Site Preparation for midrow planting (Winter), incl. cultivation passes and spraying			+12 hrs
Aug 2024	Install Raptor Perch	-		1 hr
Aug 2024	Sowing native grasses – Action Area A/B	$3,500	$1,340	
Sep 2024 to Nov 2024	Weed Control post- midrow planting (Spring), incl. hand weeding			+16 hrs
Sep 2024	Removal of Desert Ash in Eyres Creek (manual labouring with contractors)		$3,894	24 hrs
Dec 2024 to Feb 2025	Weed Control post- midrow planting (Summer), incl. hand weeding	-		+16 hrs
Feb 2025	Install Bat Boxes	-		1 hr
May 2025	Soil Sampling	$500		1 hr
	EcoGrower contribution		$3,000	
	Total	**$4,000**	**$8,234**	**+108 hrs**

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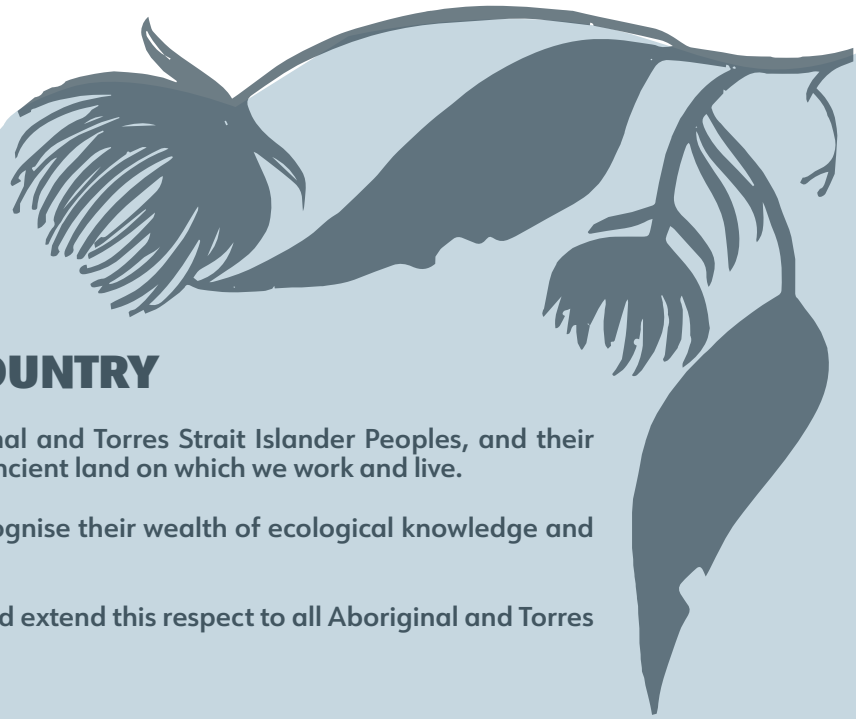
The National EcoVineyards Program is funded by Wine Australia with levies from Australia's grape growers and winemakers and matching funds from the Australian Government.



ACKNOWLEDGEMENT OF COUNTRY

EcoVineyards proudly acknowledges the Aboriginal and Torres Strait Islander Peoples, and their ongoing cultural and spiritual connection to this ancient land on which we work and live.

As the Traditional Custodians of this land, we recognise their wealth of ecological knowledge and the importance of caring for Country.

We pay our respects to elders past and present and extend this respect to all Aboriginal and Torres Strait Islander Peoples.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