Bank Stabilisation in Shoalhaven/Broughton Creek Catchment, Two Figs Winery

Location: Shoalhaven Heads, NSW

NRM Region: Southern Rivers CMA

Industry: Viticulture / Beef farming

Issues:
- Erosion control
- Shelter for stock
- Linking remnant vegetation

Landholder Vision:
- The farm to be sustainable with some balance between the environment and the business plans for the property

Funding:
- The Australian Government Envirofund is the local action component of the Australian Government's $3 billion Natural Heritage Trust.

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Southern Councils Group

Background

Two Figs Winery is located above the junction of Broughton Creek and the Shoalhaven River, 8km south east of Shoalhaven Heads. The property is 57 hectares in size, which includes significant river frontage on the Shoalhaven River extending over 800m in length.

A social bus trip to Two Figs Winery for Small Farm Network members included promoting the benefits of the project.

The property is dominated by hard clay soils, shale deposits and exposed to severe westerly winds, which has been a major factor in the decline of existing remnant vegetation, in particular mature Spotted Gums (*Corymbia maculata).*

Shayne Bricker (the landowner), while completing PROGRAZE in 2006, identified a number of NRM issues, and this is one of many projects currently being implemented to improve the overall sustainability and biodiversity of the property.

The Project - Erosion in two main gullies

Two major gullies on the property, which feed into Broughton Creek, have eroded due to a lack of vegetation (drought induced) and stocking pressure. This project involved:

1. Erecting 1.04km of fencing around two gullies on the eastern aspect of the property;
2. Planting over 1,000 tubestock and stabilising approximately 1.86ha of excluded land with a mixture of native tubestock and grass species. These plantings will link existing remnant vegetation (stands of regenerating Spotted Gums) along the two gullies.
3. Three minor dams that are located in the two gullies will be decommissioned and revegetated. This work will allow the watercourses to withstand increased flow conditions, which can occur on the coast area during normal weather conditions.

Expected Outcomes

The project has three major outcomes:

1. Stabilisation of eroded stock tracks through out the two gullies and establishment of a variety of native tubestock and grasses;
2. Reduce water velocity in the gully areas to limited the amount of sedimentation entering Broughton Creek; and
3. Increase biodiversity and shelter for livestock including the linking of remnant vegetation along the gullies, which may also trap wind borne weed seeds, such as Fireweed.

Planning & Planting

Due to the dry exposed nature of the site, the planting of the two gullies has been completed in a number of stages. The heavy clay soils have provided difficult planting conditions and the species selected for the project matched this environment. The strong westerly winds which batter the project site determined the design of the plantings to ensure larger trees which may fall due to wind damage will not affect fencing and access to the site in the future.

Conservation Volunteers Australia team from the United Kingdom. A group shot after planting out the project site.

A variety of native grasses were chosen and planted to complement existing patches of *Poa* species present along the gully.

The persistence of native grass species in the project area will be monitored closely as they compete against vigorous and dominate temperate species such as Kikuyu and Giant Parramatta Grass.

Results so far

Due to soil and site conditions, the two gullies were planted out over an extended period of time, taking advantage of seasonal soil moisture and a Conservation Volunteer Australia (CVA) group who were available in Spring 2007.

Gully 1 was partially replanted six months after it was originally established due to an extended dry period. The original survival rate was 65% and on the hard clay soils, this was an excellent outcome. Secondary plantings have proven to be very successful and favourable conditions has seen overall survival around 90%. While growth rates are slow, species establishment is very encouraging.

Gully 1 – Bottom of the gully looking towards the winery with existing remnant vegetation in lower gully.

Gully 1 (March 2006) with limited grass cover and some remnant vegetation evident in the background.

Gully 1- 18 months from planting. Increased grass cover through out gully, stabilising the soil.

Gully 2 was planted in Winter/Spring 2007 with the assistance of the CVA and favourable conditions have resulted in survival rates around 86%. Unfortunately many of the native grass species planted have not survived well accounting for a large percentage of the failures.

Gully 2 – Bottom of the gully looking towards the winery with a single line of planting visible inside the fence.

Gully 2 – Looking down the gully which is now covered in ground cover including some Kangaroo Grass

Looking across from Gully 2 to Gully 1 and some isolated and dying Spotted Gums.

Throughout the two gullies, improved ground cover, mainly kikuyu and carpet grass have re-established, colonising the bare soil evident in the pre-project photographs. One of the large existing isolated Spotted Gums has died since beginning the project, further emphasising the importance of the revegetation project.

Additional projects – *Shoalhaven River Rehabilitation*

Two Figs Winery includes significant river frontage on the Shoalhaven River. The Southern Rivers CMA is making a significant commitment to rehabilitating the Shoalhaven River, and Shayne's eroding riverbanks was one of many sites identified by the Shoalhaven River Foreshore Definition Study. Through the Southern Rivers CMA program, Shayne was able to stabilise and revegetated 550m of eroding riverbanks with long stem River She-Oaks (*Casuarina cunninghamiana*) with the help of Shoalhaven River Care.

For more information on this project, download the Southern Rivers CMA Case Study 3 on "*Support for large scale river rehabilitation*" from the website: www.southern.cma.nsw.gov.au

More Details

For more details about this project or to plan your own revegetation project, contact Andrew Britton, Small Farms Coordinator on (02) 4232 3200 or email abritton@southerncouncils.nsw.gov.au