Fencing to protect riparian vegetation and create livestock shelter, Gerringong

Location: Gerringong, NSW

NRM Region: Southern Rivers CMA

Industry: Wildlife Carer / Mixed Farming

Issues:
- Coral Tree and environmental weeds in riparian zone
- Bank erosion and water quality for livestock.

Landholder Vision:
- To sustainably manage the property, protect and enhance significant remnant vegetation and increase local biodiversity by minimising weeds.

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

AUSTRALIAN Government envirofund

smallfarms.net.au

Small Farms and Rural Living Network

Southern Councils Group

Background

Coral Tree infested gully with remnant rainforest vegetation in foreground.

'Southlands' is situated 1km west of Gerringong and is owned by Kay & Paul Brady. Kay, a wildlife carer for the past 11 years, has been actively managing significant areas of remnant vegetation on the property, which includes the endangered Illawarra Socketwood (*Daphnandra sp.)*

'Southlands' is similar to a large number of small properties in the Illawarra, with many suffering from weed invasion, drought related pasture issues and the location of a significant patch of remnant vegetation. This project aimed to provide some assistance to address many of these issues and become an example of successful riparian restoration and shelterbelt establishment for livestock and pasture.

The Project

<u>Riparian Restoration</u>

This project has protected a permanent feeder stream of the Crooked River by erecting 550m of fencing to exclude stock and enhance the rainforest riparian corridor. This significant corridor is less than 1km from the ocean and forms an important link to escarpment vegetation for wildlife.

Removal of invasive weeds, such as lantana, croften weed, privet and coral tree was completed using appropriate herbicide and mechanical control techniques, undertaken by the Department of Lands, the landholders and two Conservation Volunteer Australia groups.

An addition to the project was the supply of $10,000 of recycled organic mulch provided by the Department of Environment and Conservation in partnership with Soil Co, across the main project site. Approximately 640 local Illawarra rainforest tubestock and native grasses were planted into the mulch and along the gully to strengthen existing species and create a link with remnant vegetation above the gully.

A large dam located in the gully was decommissioned as part of the restoration project and will become an important habitat and biodiversity area. Off stream watering has been installed to provide water for livestock with assistance from Landcare Illawarra.

<u>Shelterbelt Establishment</u>

Kay planting the shelterbelt in 2006

This project established a 10m x 150m shelterbelt along the main western ridge of Southlands. This will provide significant protection for livestock against the predominant westerly winds. The shelterbelt is an extension of the remnant vegetation containing the endangered Illawarra Socketwood and will create a barrier for the introduction of fireweed onto "Southlands", hence improving its pastures post dry periods.

Expected Outcomes

1. Establishment of "Southlands" as a demonstration farm, centrally located in the Gerringong district, resulting in the development of more local restoration projects;
2. Effective removal of Coral Tree and other invasive weeds and successful re-establishment of a native riparian rainforest gully, which will provide a significant link between coastal and escarpment habitats;

3. Improved water quality for livestock and the Crooked River catchment; and
4. Establish an effective shelterbelt for livestock, pasture protection and as a seed trap for wind borne weed seeds.

Planning & Planting

Gully Restoration

The site was inspected and mapped by the Department of Lands, Soil Service Division. They supervised the clearing of the thick clumps of Coral Tree, designed and installed the off stream gravity feed watering system for livestock.

Trees planted into mulch provided by DEC and Soil Co, June 2007

DEC and Soil Co provided recycled organic mulch as part of regional trials examining its use to reduce runoff and improve survival rates for revegetation projects. Heavy rain delayed the spreading of the mulch and a number of attempts were made to plant after the work was completed.

Tubestock species were selected off a NPWS survey conducted in 2004, which identify the Illawarra Socketwood presence on 'Southlands'. Richard Scarborough (local horticulturalist) generously donated over 300 local rainforest tubestock, which have been used for this project and will be used for future 'Southland' projects. The planting was finally completed with the assistance of two Conservation Volunteer Australia groups in June 2007.

Shelterbelt Establishment

The location of the shelterbelt on the western boundary of 'Southlands' enabled it to be planted during Spring 2006. Species were selected by the Small Farms Coordinator from a list of plants previously used in other similar shelterbelt design projects. The species were chosen due to their fast growing nature and would provide ground to mid canopy cover and act as a barrier for wind and weed seeds.

Results so far

The shelterbelt planted in Spring 2006, has established well with a 90% survival rate with most species averaging 1m or more in height. While it will be at least another two years before the shelterbelt becomes effective in providing protection from westerly winds, visual observations suggest in combination with the thick kikuyu it has already began to catch some wind borne Fireweed seeds.

Due to unexpected wet periods in the Illawarra, clearing of weeds and planting of tubestock was restricted due to access and other projects commitment. However, the application of mulch across the main project site has improved the survival (85%) and growth rates of species despite grazing pressure from swamp wallabies and wombats. Weeds continue to be an issue with an extensive seed bank present. Natural regrowth of Lilly Pilly and Cabbage Tree Palms is encouraging to see throughout the project site.

Shelterbelt planted on western boundary, Spring 2006

Additional projects

'Southlands'

Kay and Paul expect to continue to work on the protection and enhancement of the remnant vegetation on 'Southlands' over a number of years. A major project will be the clearing of lantana and croften weed from the boundaries of the existing stand of remnant rainforest, which contains the Illawarra Socketwood. This will be strengthen by further planting around and along ridge lines to increase the overall diversity and density of rainforest on 'Southlands'. A 200m extension of the existing shelterbelt is planned to provide further livestock shelter and weed barrier once the existing project has established.

Neighbouring Properties

As a result of this project, local neighbours have expressed an interest in completing similar projects on their land as a direct response to Kay's work. An adjacent landholder has recently fenced off a 100m section of gully and planted a variety of rainforest tubestock leading down to a farm dam, Once established, this gully will create a further link to coastal areas and the escarpment. The landholder also plans to establish a 300m shelterbelt on their western boundary to achieve similar livestock and weed control goals.

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