Roadside Program Case Study

Kirkstall Phalaris Eradication Project

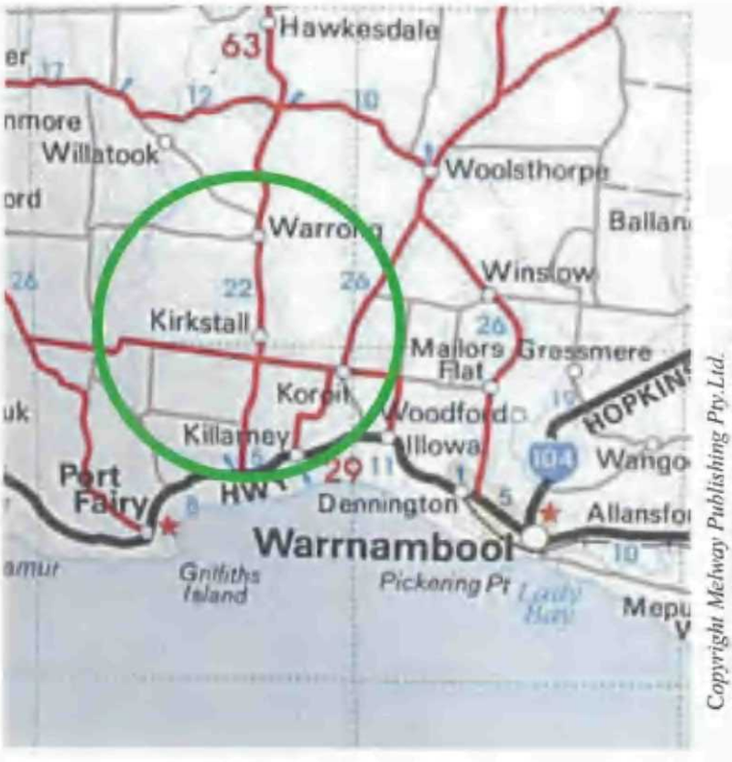
Phalaris grass on roadsides is a significant threat to the environment and fire safety.

In response to this issue, Kirkstall Fire Brigade has brought together a wide range of organisations (including Community Based Order Workers) to develop a flexible roadside treatment program that aims to replace Phalaris with local native grasses.

Compared with Phalaris, native grasses are a lower fire hazard and are easier to manage.

"Using hand tools, spot spraying and assistance from the Community Service Order people may be slower, but the result is better."

Steve Guyett, Kirkstall Brigade Captain



Kirkstall CFA Area

Photo courtesy Steve Guyett CFA and Helen Rull CFA

Kirkstall Brigade Tanker and roadside Phalaris

About the Roadside Program Case Studies

Roadsides are important for safety, the provision of services (such as electricity) and the environment. There are eight roadside fire management case studies available in this series, providing information about current roadside fire management plans, projects and programs being undertaken by CFA and other organisations. These case studies are designed to provide ideas they are not formal CFA policy or guidelines.

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THE CHALLENGE

Over the years the pasture plant Phalaris has escaped from grazing country to establish on roadsides. Phalaris is a vigorous plant that out-competes native grasses.

The long term plan of this project is to revegetate roadsides with native grasses. This will reduce the roadside fire risk and management requirements as native grasses only need to be burnt every 3 – 5 years and usually have a lower fuel load (quantity of flammable material) than introduced grasses.

> ***"The Kirkstall Brigade finds that to burn 1 km of Phalaris on a roadsides takes at least 4 CFA tankers, but 1 km of native grasses can be burnt with 1 -2 tankers in half the time."***
> **Steve Guyett, Kirkstall Brigade Captain**

Photo courtesy Steve Guyett CFA and Helen Rull CFA

Kirkstall Phalaris Eradication Work

FUEL LOAD COMPARISIONS (tones / hectare)

Phalaris	Introduced	27.5	t/ha
Wild Oats	Introduced	17.7	t/ha
Kangaroo grass	Native	2.9	t/ha
Spear grass and Wallaby grass mixture	Native	2.6	t/ha

*(Footnote: **Caution** – this information is only based on one season at one particular time of the year. Further field work is required to provide more accurate data. Colac DNRE field work November 2001)*

THE PROJECT

This project involves the eradication of Phalaris through the application of herbicides, slashing and burning over a 3 year period. The herbicide kills the existing Phalaris early to allow safe burning and it also prevents it from setting seed. As Phalaris seed can remain dormant in the soil for up to 3 years this process needs to be repeated for at least 3 years.

Central to the success of this project has been the energy and enthusiasm of the Kirkstall Brigade and the cooperation and assistance of a wide range of organisations. A particularly innovative contribution has been the use of Community Based Order Workers (CBOW) in partnership with the Department of Justice (CORE – Community Section).

This project has been recognised at a state level, receiving a Community Correctional Services Award in October 2002.

Under this project, CFA volunteers, the Department of Sustainability and Environment (DSE), Moyne Shire Council and CBOW undertake the treatment listed in Table 3. The CBOW work in teams of 2-5 people under the supervision of the Kirkstall Brigade.

Photo courtesy Steve Guyett CFA and Helen Rill CFA

Hand slashing Phalaris along fenceline

"The contribution of the CBOW to this project has been considerable. They are undertaking work that the brigade has not got the people power to achieve. This project is currently the largest single user of CBOW in South West Victoria."

Steve Guyett, Kirkstall Brigade Captain

This project taps into an under-utilised labour resource. However, it also relies heavily on the efforts of CFA volunteers to supervise the CBOW. The Kirkstall Brigade has supervised this project nearly every Saturday since March 2001. Recently the Department of Corrections has made funding available to employ a project facilitator who will supervise the CBOW for 1 day per week.

> ***"CFA Community Safety Department is continuing to support this project because we have seen the value of it for the local community. Landholders, CFA volunteers, environmental groups, CBOW are all happy with this win/win program."***
> **Paul Hill, Manager of Community Safety, CFA.**

DEVELOPING THE PROJECT

Concerned about the increasing fire risk, the Kirkstall Brigade began this project by experimenting with the control of Phalaris on roadsides. At first the brigade tried to blanket spray the Phalaris, but this only encouraged weed growth.

Through a process of communication and cooperation with other organisations as listed the brigade eventually settled on a flexible program of eradicating Phalaris and encouraging the growth of native grasses.

The CBOW have played an important part in this project. Early in the project a $15,000 Landcare Grant provided hand tools and equipment for use by the CBOW.

In the future the project will introduce what is essentially a large mechanical wick wiper. In Woorndoo the Department of Sustainability and Environment (DSE) has been trailing the use of a machine called the 'Weed Bug'. This machine minimises off target damage by bruising and wiping roundup on the taller Phalaris without damaging the shorter native grasses.

Photo courtesy Andrew Prichard Department of Sustainability and Environment

The 'Weed Bug' machine

TABLE 1: KIRKSTALL PROJECT ORGANISATIONS	
Kirkstall Fire Brigade	Planning, burning, project management, supervision of CBOW.
Department of Corrections	Community Based Order Workers
Department of Sustainability and Environment	Advice on Phalaris control, native grass identification and native grass revegetation.
Moyne Shire Council	Facilitated application for CBOW, equipment, rubbish collection, advice on occupational health and safety issues.
Greening Australia	Assistance in the selection of native species and the provision of seed.
Country Fire Authority (CFA)	Project support.
Local landholders	On ground support, such as working bees and participation in community education.
Natural Heritage Trust 2nd Generation Landcare Grant	Funding for equipment and hand tools for the CBOW.
World Wide Fund for Nature	Funding to trial the 'Weed Bug' machine to protect endangered plant species and communities.

TABLE 2: ROADSIDE TREATMENT PROGRAM

ACTIVITY	YEAR	GROUP	ACTION ON ROADSIDE
Burning	Year 1	CFA	Burning the roadside to remove the dry Phalaris and allow a general clean up, slashing and spot spraying.
Clean up	Year 1	CBOW & Moyne Shire	Cleaning up area to make it safe for machines. Removing and disposing of gathered rocks, rubbish, and wood.
Slashing	Year 1	CFA	Slashing where appropriate and safe.
Hand slashing	Year 1	CBOW	Hand slashing (whipper snipping) around plantations and trees.
Spot spraying	Year 1	CBOW	Spot spraying of weeds and any clumps of Phalaris that have re-emerged.
Revisiting areas	Year 1,2,3	CBOW	Revisiting areas spot spraying and whipper snipping as appropriate, especially areas that cannot be reached by machines.
Reseed with Silver Tussock	Year 3	CBOW	Reseeding area beginning of year 3 using Silver Tussock *(Poa labillardieri)*. This involves collecting the seed, growing in a nursery (in cell pots) and then replanting the area. Sliver Tussock was chosen because it can smother other weeds and because it suited the darker heavier soil. Kangaroo grass may be more suitable in lighter soils.
The Bug Machine	Year 2,3	DNRE	Using the 'Weed Bug' machine to selectively wipe areas of Phalaris and leave native grasses.

The project began with primary fire breaks and will be extended to cover secondary fire breaks as resources allow. Currently 25km of roadsides have been treated under this project; 9km using hand tools and 16km with a tractor.

THE BENEFITS

Replacing Phalaris with native grasses has environmental, fire safety and work load benefits.

> *"Roadsides that were treated in the first year with the 'Weed Bug' program have had a 50% reduction in Phalaris. Treating these roadsides in the second year only takes half the time."*
> **Andrew Pritchard, Threatened Species Project Officer, Department of Sustainability and Environment**

Removing the Phalaris also gives other native vegetation a chance. For example the project is protecting a native orchid *(Prasophyllum frenchii)*, that is only found at 4 known sites in Australia. The orchid has a single leaf about 70cm long and a single flower stalk with numerous green to purple flowers that are about 10mm across. It flowers in October and November.

The project also benefits CBOW and the community. The CBOW contribute to their community while gaining environmental skills and a positive exposure to a community organisation. Also, the project builds respect as the community can see CBOW undertaking positive practical work.

> *"The CBOW really enjoy this project. They, CFA and the community think that it is worthwhile."*
>
> **Sue Dawson, Senior Community Corrections Officer, Warrnambool.**

Another advantage of this project has been the involvement in local landholders in caring for roadsides. When the CBOW have cleaned up a roadside it is much easier for landholders to maintain these areas for fire safety and the environment.

HANDY TIPS

- Just burning Phalaris will not usually work, the Phalaris will return.
- Using the CBOW people needs to be well organised and consider issues such as work safety. All workers involved in this project are issued with reflective coats and proper work boots.
- The use of CBOW may be easier close to regional centres where the CBOW are often located.

FURTHER INFORMATION

- Brigades Online www.cfaonline.vic.gov.au
- Country Fire Authority. 2001. *Roadside Fire Management Guidelines.* CFA, Victoria, Australia: www.cfa.vic.gov.au

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