

Community and government working together for effective weed management – the Eastern Hills case study

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Summary Weed management is a crucial component of any effective bushland management or restoration project. There are however, more weeds than any individual or collective government organisation/s can manage. Therefore the involvement of community in ongoing weed management is an essential requirement for effective conservation of our natural biodiversity.

This paper outlines the relationship created by community and Local Government in the eastern hills to work together at strategic planning, site management and active participation levels to effectively manage weeds within the Shire of Mundaring and Kalamunda.

The Local Government Authorities work with the community and supports them by:

1. Developing a strategic approach or framework for targeted, safe and effective weed control.
2. Providing opportunities for building the communities skills and knowledge base (as well as its own).
3. Developing a technical approach to providing assistance to community groups to actively participate in weed management.

As weed control demands far exceed the capability of available resources, it is essential for Friends Groups and Catchment Groups to work in partnership with the Local Government on weed management. In the Shires of Mundaring and Kalamunda, there are currently 84 Friends Groups and seven Catchment Groups that collectively undertake in excess of 2000 hours of weed control activities in the region each year. It is this level of active community involvement that is the key success factor in achieving cooperative and effective weed control outcomes.

Keywords Community partnerships, capacity building, communication, technical/physical assistance, strategic weed management.

INTRODUCTION

This paper discusses the involvement of community in weed management on public lands. The 'community' can be individuals interested in controlling a particular weed or organised groups of individuals such as Friends Groups or Catchment Groups who take a targeted approach to managing weeds in bushland reserves.

In contrast to Local Government which is a hierarchical and structured organisation, Friends Groups are characterised by the lack of formal structure, fluctuating membership levels and a small core of active members (sometimes as low as two or three people) that do the bulk of the on-ground weed management activities.

To effectively manage weeds on public lands in partnership with the community, Local Government needs to set up a strategic approach to their relationship with the community and their approach to weed control on public lands. Both the Shire of Mundaring and the Shire of Kalamunda have undertaken programs to support community participation in weed management activities on public lands. Their initiatives are an excellent model for other Local Governments to follow.

BACKGROUND

In the late 1980s there was widespread community concern over proposals for the subdivision and development of bushland reserves in the Shires of Mundaring and Kalamunda. There had also been incidents where for example, Shire contractors had undone hours of community effort by parking their machinery on native plantings. Primarily as a result of poor communication and lack of clarity regarding Local Government processes, these incidents caused the community to develop a level of frustration and distrust of Local Government. The community held the expectation that volunteer labour should be rewarded by a government process that allowed for effective and meaningful two-way communication. They demanded a greater degree of transparency about local government processes and insisted on being kept informed of the status of bushland reserves and the ways in which the Shires of Mundaring and Kalamunda were seeking to protect these reserves.

APPOINTMENT OF DEDICATED BUSHCARE OFFICERS

Prior to the appointment of dedicated Bushcare Officers at the Shires of Mundaring and Kalamunda, Environmental Officers and Parks Officers met the needs of Friends Groups as an additional responsibility to their day-to-day workloads. The community felt that

the Shire did not fully appreciate the value of the work undertaken by volunteers and as the number of Friends Groups increased the workloads for the Environmental Officers and Parks Officers increased beyond their capacity to provide adequate support. It became increasingly apparent that the Shires had become 'victims of their own success' necessitating the appointment of dedicated officers to undertake support of community bushcare volunteers (Kirchner *et al.* 2001).

The Shire of Mundaring Bushcare Coordinator was appointed in April 1999 and the Shire of Kalamunda Bushcare Officer in November 2000 providing the Friends Groups with a specific officer within the Shires to deal with all inquiries relating to bushland reserves, attend volunteer meetings and workdays. It is these Shire Officers that provide assistance and motivate the community to undertake weed management activities on public lands by providing strategic planning, capacity building and technical support.

STRATEGIC PLANNING FRAMEWORK

In order that community weed management activities are undertaken on public lands in a coordinated and strategic manner the Shires of Mundaring and Kalamunda have developed guidelines, policies and strategies outlining the expectations, roles and responsibilities of all parties involved.

Friends group manual For community and government to work effectively together on weed management two-way communication and a clear understanding of everyone's role and responsibility is needed. Local Government's primary concern regarding community involvement in weed management was the fact that it had little control of the "quality of work" being undertaken on its land or any understanding of the level of competency of the community volunteers doing the work.

To address this issue the Shire of Mundaring developed a *Friends Group Manual* that clearly outlined the community and Council's role in bushcare activities. The document was the first of its kind in Local Government and has since been used as a model for other councils to develop Friends Group Manuals or Policies.

The *Friends Group Manual* addresses issues including a safe working environment for volunteers; provides a framework and process for Shire support; and seeks to ensure that work undertaken on bushland reserves enhances conservation and community values (Kirchner *et al.* 2001). The manual also provides a detailed description of three levels of work activity for groups to choose from – ranging from physical weed removal to control through the use of herbicides. Adoption of the manual represented a major step

forward in clarifying the roles and responsibilities of both volunteers and the Local Governments in bushcare activities.

The Shire of Kalamunda is in the process of preparing a Friends Group Manual that will incorporate weed control guidelines. Currently the Shire utilises a series of application forms to monitor and guide the activities of community groups on their land. The groups are required to fill out an application form for both chemical and physical removal activities and sign their agreement to adhere to the listed safety requirements. The Bushcare Officer (or other designated officer) must formally approve the activity before any weed activity is undertaken.

Weed management guidelines The finalisation of the *Friends Group Manual*, the growing numbers of Friends Groups and their increasing level of experience highlighted the need for a detailed policy on weed management for community groups working on public lands. The Shire of Mundaring developed *Weed Management Guidelines for Friends of Reserves Groups* and relate particularly to chemical weed control activities on Shire vested bushland reserves and road verges. The guidelines are based on the precautionary principle and outline alternatives to herbicide control, recommended situations for the use of herbicides, permitted chemicals (Roundup Biactive and Fusilade) within the Shire, appropriate procedures for the safe use of herbicides, safety and insurance requirements, assistance in hiring a contractor, if required, and procedures specific to road verge spraying. This is the guiding document for on ground works for Friends Groups undertaking weed control in the Shire of Mundaring.

Weed control strategy Although community groups working on individual reserves can be very effective for a particular bushland area there needs to be a strategic approach to weed management across Local Government boundaries that incorporates community knowledge and participation. The Shires of Mundaring and Kalamunda in association with the Eastern Metropolitan Regional Council acquired the services of ECOSCAPE Environmental Consultants to develop a weed control strategy for the two Shires. The Shires adopted a combined approach as many of the major weeds invading road sides and bushland reserves were the same and many of the Shires characteristics were similar such as, land use, vegetation types, soil types and geomorphology (Ecoscape, 2001).

The *Weed Control Strategy Shires of Kalamunda and Mundaring* aims to identify weed species with the highest priority for control due to their invasiveness and threat to remnant bushland and mapped these species in selected reserves in each Shire. Cost effective

control strategies for priority weeds were identified taking into account vegetation condition, land tenure and ownership and annual costing schedules up to five years for the implementation of recommended weed control strategies were prepared. Performance targets aimed at demonstrating the effectiveness of control strategies, reductions in weed populations and improvement in bushland condition were incorporated into the recommended implementation schedules.

The community were involved in the consultation process and invited to attend public meetings during the initial development stages of the Weed Control Strategy. The community provided invaluable baseline data on the presence of weeds within each Shire.

Management plans Community Groups are encouraged to work with the Council in developing either Action Plans or long term Management Plans for the area of bushland or creekline they have adopted. This provides the group with a structured and ecologically sound approach to managing weeds and other environmental impacts whilst providing the Shire with a clear understanding of what the community will be doing. Action plans can be as brief as one A4 page and outline activities for a one-year period. Management Plans are detailed documents that outline the appropriate management activities for a five year period. Shires of Mundaring and Kalamunda Management Plans encourage the formation of community groups to assist with management of the reserve wherever a current group does not exist.

Insurance Accident and Public Liability Insurance is prohibitively expensive for Friends Groups that do not have access to funds for administrative expenses. The Shires provide this insurance for the volunteers working on their land and have developed weed management guidelines to ensure a safe working environment for the community. As long as Friends Groups keep a register of all those working on the reserve at any given time and wear appropriate protective clothing, they are covered by insurance in the Shire of Mundaring. At the Shire of Kalamunda groups are also required to fill in a simple request form that is distributed to the Parks Manager, Rangers Department and Bushcare Officer to gain approval prior to the activity starting. Any activities that come under the Advanced Bushcare activities outlined in the *Friends Group Manual* (such as use of chainsaws, whipper snippers and other heavy equipment) will require at least one member of the group to be qualified in that activity and all certificates must be viewed by the designated Shire staff member prior to that group member undertaking the activity.

Funding Both the Shires of Mundaring and Kalamunda provide financial assistance to community

groups undertaking weed control activities. However, they do differ in their approach concerning the distribution of annually budgeted funds. Once a year all Friends Groups within the Shire of Mundaring are invited to submit budget requests for the forthcoming financial year. This information is then used to assist Council in budget planning. The provision of an annual budgeting process appears to be working well with the Friends Groups now having a much clearer idea of the need for volunteer groups to plan ahead in terms of funding requests so as to enable Council to include requests in the budget process.

The Shire of Kalamunda has a less formal system where groups apply to the Bushcare Officer directly at different times through the financial year. The Bushcare Officer in consultation with the group determines the feasibility of the request. The environmental budget is broken into different tasks and estimated yearly requirements allotted accordingly.

The Councils also help reduce the Friends Groups ABN and GST compliance requirements by purchasing herbicides and other goods on behalf of the groups.

COMMUNITY CAPACITY BUILDING

Taking account of unique characteristics Each group undertaking weed control and each bushland area requiring weed control is unique. Friends Groups have varying knowledge base, physical capabilities and time availability. Some groups do not approve of the use of chemicals to control weeds and favour the use of physical or other non-chemical forms of weed control. Unless there is a long-term negative effect derived from not using herbicides to control the focus area or species, the Council will respect the groups wishes and assist them in undertaking physical removal wherever possible.

Other groups may be comfortable in using herbicides but not have the necessary skills to undertake the activity safely. As outlined in the Shire of Mundaring *Friends Group Manual* and Shire of Kalamunda *Works Application Forms* only competent (as determined by the Bushcare Officer) individuals are allowed to use herbicides on Shire land. Therefore the community members of this group would be provided with technical assistance and encouraged to attend training courses prior to undertaking chemical control.

Weed control programs that involve the community need to not only be adapted to the particular weeds being targeted, but to the desires and capabilities of the group or individual undertaking the work. The Local Government is careful to ensure that the community understands that weed management is a long-term process and that there is no quick fix. Community groups are encouraged to plan to undertake their weed

management activities at a pace which they can sustain over time and avoid burnout.

Getting information to the community Each Shire produces a monthly newsletter, which is mailed (sent electronically to those with e-mail), to members of Friends Groups, Councillors, Shire Officers, Regional Council Officers and the general community (through the local libraries). The newsletters assist in keeping people informed about current activities and news, including the achievements of individual groups. The newsletters also inform community groups of training opportunities and new technologies available in weed control and other bushcare activities. This has proved to be a very effective way of maintaining regular contact with in excess of 800 community volunteers and Local Government Officers and Councillors in the Eastern Hills Region.

Training The Bushcare Officers from the Shires of Mundaring and Kalamunda have worked closely with the Coordinator of the Eastern Hills Catchment Management Project (EHCMP) to establish a series of workshops to assist community groups in gaining the skills required to undertake effective weed control and other bushcare activities. The *Bush Skills for the Hills* workshop series are held on weekends and are free to the public to allow as many community members to attend as possible. The series is advertised in the local papers and radio stations to ensure the general public, as well as the community volunteers, are aware of the series.

All workshops are facilitated by experienced practitioners within their respective fields (e.g. officers undertaking weed control, weed mapping in their daily tasks) and provide attendees with information on current theory and practice. All workshops include a short theory session in the morning followed by a hands-on practical exercise. For example, the workshop on weed mapping involves a presentation on the why and how of weed mapping and the use of aerial photographs. The second half of the workshop develops individual skills by teaching participants how to map a particular weed species in a local bushland reserve using the principles learned in the morning. This method of training is very successful as the practical session reinforces the theory from the morning session and gives community members the confidence to undertake the task on their reserves.

In addition to *Bush Skills for the Hills*, all community groups are informed of other training opportunities such as the *Skills for Nature Conservation* Program run by the Swan Catchment Centre, Ecoplan and Greening Australia.

All training programs utilise accepted methodologies and standards developed by experts, for example,

vegetation condition mapping methodology developed by Bronwyn Keighery (Department of Environmental Protection) and Weed Mapping methodology developed by Kate Brown (EWAN). This ensures that information collected and used is accurate, true and meaningful to the community, local government, regional and state government bodies.

Physical assistance One of the greatest challenges for Local Government and community groups in terms of weed control is the significant investment of time and effort required to successfully manage large and/or difficult weed infestations. However, there are a number of programs available to community organisations and government authorities to assist them in weed control activities. Firstly, there is Green Corps, which provides six to ten, 17 to 20 years olds to undertake a range of bushcare activities. Community Groups apply for Green Corps Teams under a competitive grants system. If the Groups application is successful, there is no cost for the team on the understanding that the tasks the team undertake will provide them with skills development. Other free labour programs available to local governments and community groups include Work for the Dole Schemes, Ministry for Justice Work Teams and Corporate Work Days in which companies pay their staff to be involved in volunteer programs.

Local schools, guides/scouts and service groups are also available to do work on small weed control projects for both the community and council. The students are able to assist in physical weed control. In return the students develop nature conservation knowledge and skills that they can build upon in the future. The Shire of Mundaring is involved in a partnership program with the Guildford Grammar School who offered the services of a class of students one afternoon a week for a 13 week period. The school students (who are able bodied and energetic) provide a significant amount of work for the community groups in the region. This program is particularly helpful for Friends Groups with a high proportion of older members who may not be strong enough to undertake some highly physical weed control activities.

There are also skilled and semi skilled teams available for hire on a daily or hourly rate such as Green Skills and Conservation Volunteers Australia (CVA). The Shires of Mundaring and Kalamunda have utilised the CVA program extensively in consultation with community groups to undertake weed control.

The Bushcare Officers may arrange for contractors to undertake some or all of the weed control program through reserve or bushland management budgets. Contractors are often utilised when physical removal of large woody weeds is required or the area to cover (spray) is extensive. Often community

groups will work in conjunction with the contractor to implement a program involving both physical and chemical control. The Friends Group may also manage the contractor directly with the cost covered by the Council or an external funding body. There are a number of good weed control contractors that are sensitive to the bush environment and provide value for money service.

A great partnership project involving a Friends Group, Council, State Government Departments (CALM) and contractors in undertaking weed control is occurring in Piesse Brook, Kalamunda. The Friends of Piesse Brook formed a year ago (2001) and adopted sections of bushland vested with the Shire of Kalamunda (Schippe Road Reserve) and CALM (Kalamunda National Park). The area has a significant weed problem. The main species infesting the area include *Watsonia*, Blackberry and Bamboo. A Shire contractor sprayed the blackberry to get it under control to a point where the group could maintain control and work on spraying, wiping and physically removing other weed species previously buried under the Blackberry. The CALM Officers also undertook chemical and physical control within their section of bushland bordering the Schippe Road Reserve and assisted the group to manage other weeds within this area. The group also enlisted the assistance of Ecoplan and organised a "Bushland Care Day" or 'busy bee' on Piesse Brook Bushland areas. The Piesse Brook Friends Group took full advantage of this opportunity and planned a very efficient and fun work-day and accomplished an extraordinary amount of work. The Shire assisted with providing advice when required and equipment such as herbicides, stakes and a portable toilet for volunteers.

Technical approach and assistance All community groups working within the Shires have ready access to technical advice. The Bushcare Officers provide advice on weed identification and management and access additional information for the groups. The precautionary principle and the Bradley Method guides the type of advice provided and is tailored to the abilities of the group. The precautionary principle simply states that when in doubt – do not proceed without better information. For example, a local group completed a very effective weed control program (e.g. eradicated every single plant of this species from an entire section of the reserve), but unfortunately it was revealed that the plant was a native shrub not a weed. No one in the group had clarified that the plant they were removing was the weed it was thought to be.

The other guiding principle or methodology is the Bradley Method of Bush Regeneration which recommends working from areas of good vegetation (with

minor weed infestations) to areas of poor vegetation (with significant weed infestations). This allows for the most effective weed control while protecting the conservation of the good stands of vegetation and allowing natural regeneration.

Each community group's site is assessed on its individual merit and weeding programs are established for that particular site based on:

- The type of weed/s.
- The weed presence, density and distribution (To determine the success of any weed control program baseline data is required).
- Prioritisation of significant weeds by their invasiveness, current distribution, environmental impact or ability to alter the current natural vegetation community and the significance of the surrounding vegetation.
- Current and potential impact of the species.
- Difficulty to control.
- Group and Shire capabilities and resources.

Groups are encouraged to select a management approach according to:

- Species lead control.
- Site lead control.
- Threatened species or communities lead control
- Human/resource lead control (financial, skills, labour, physical, experience, time).
- Cause lead control.
- Or a combination of the above.

All Action and Management Plans developed with the community are aimed at preventing, eliminating and reducing the establishment, infestation and dispersal of new and current weed species.

The Bushcare Officer helps the community to identify management issues and techniques including the benefits and limitations of physical weed control, the use of herbicides, woody weed treatments, slashing or mowing, biological control, scalping, smothering treatments and in rare occasions grazing as a weed control method. In consultation, the most effective control method is identified. For example spot spraying may be the most time effective method but the group may not have the experience to undertake this task without damaging native flora. A better alternative may be to carefully remove the weeds by hand.

In areas where there are significant bulbous weeds (i.e. *Watsonia*) on steep banks the nature of the site dictates that staged herbicide control is the best method as physical removal may result in considerable erosion. Groups are educated to recognise that whilst a weed may be an environmental pest, in certain instances it may also provide an ecosystem service such as soil stabilisation or habitat. Weed control and revegetation need to be undertaken concurrently.

It is also important to provide groups with information/technology resources to assist in weed identification and weed control. To a limited extent, training programs improve the community's ability to identify weeds. In addition, the Eastern Metropolitan Regional Council's Ecologist is developing a Herbarium for the Eastern Hills Region. The Herbarium has high quality colour photocopies of native and weed plant specimens collected by both staff and community group members. This herbarium is the basis of plant identification files which will soon be distributed to all community groups in the region. The herbarium has taken over 300 hours of volunteer time to complete. Both Shires also have a pamphlet (with photos) that highlight the most significant weeds within their boundaries. The pamphlets describe weed biology and control methods and is distributed to community groups and residents.

Information management Over time the community has acquired a significant body of knowledge about weed control and other bushcare activities. The Eastern Metropolitan Regional Council, the Shires of Mundaring and Kalamunda and the City of Swan have researched ways in which community knowledge can be accessed and managed for the benefit of the wider community, the Councils and the region. A software package called *CatchMan* (originally developed as a simple, farm-based Geographical Information Systems (GIS) and mapping package) is being established in the Eastern Hills Region. Shire officers are currently developing a series of templates that the community will utilise to enter site-specific data they have collected over time on issues such as weed species and their distribution; the control measures they have undertaken and successes they have experienced over time. The *CatchMan* program also has the ability to link management documents to the mapping information for the reserve. This will mean that the community will have access to comprehensive, up-to-date and related information on their reserve and be able to update the information at will. This new system is anticipated to be up and running by the end of this year (2002).

THE ESSENTIAL REQUIREMENTS FOR SUCCESSFUL COMMUNITY AND GOVERNMENT PARTNERSHIPS

What is required for government and community to work effectively together on weed control strategies?

- Employment of professional staff who have good communication and interpersonal skills and are willing to deal with people in a friendly manner.
- Employ staff willing to spend time with community groups after hours as most groups are not available during 9–5 on weekdays.

- Where possible have officers dedicated to working with the community.
- Keep individual volunteers motivated through positive feedback and appreciation.
- Ensure that both parties do not promise more than they can deliver to maintain trust
- Be aware of and respect each other's strengths and limitations.
- Work around limitations or difficulties to prevent confrontations and accusations

CONCLUSION

Weed management is far more effective when Friends Groups and Catchment Groups work in partnership with the managing authority. It is essential that there is two way communication between the local government and the community so that there is an understanding of roles and expectations. It is also useful to assess and accommodate the capabilities and desires of the community group and provide them with appropriate assistance to develop an effective weed control program that suits the group. By providing this level of support the Local Government can ensure that management responsibilities are met and that formal guidelines for insurance and safety issues are clearly understood and complied with by all parties. Successful weed management on public land relies on a level of understanding, mutual respect and trust between Local Government and the community. Community groups provide a valuable service with assistance from their local government authority and should not be perceived as a free labour force. The most effective approach is for Local Government to work in partnership with community on weed management issues. Together they can ensure that the quality of the local environment is maintained and enhanced for future generations to enjoy.

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