

Urban fringe weed management initiative in the Dandenong Ranges: multi-agency, strategic weed control achievements and learnings

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Summary The Victorian State Government developed a strategic weed management project called the Urban Fringe Weed Management Initiative (UFWMI). This project worked on the principles of being multi-agency, tenure blind, asset based and to follow the state's biosecurity approach (Department of Primary Industries 2009). It is the process of interpretation, and subsequent application, of these terms by the Dandenong Ranges UFWMI project that is the main focus of this paper.

Keywords Urban Fringe Weed Management Initiative, biosecurity approach, multi agency, tenure blind, asset based, Dandenong Ranges.

INTRODUCTION

The Dandenong Ranges has a complex interaction between urban population and a range of forest communities including tall damp mountain ash (*Eucalyptus regnans* F.Muell.) forest. Around 3500 hectares of this forest is protected by the Dandenong Ranges National Park with approximately 900 hectares more in Melbourne Water's Silvan Reservoir. The vegetation of the Dandenong's form an important habitat link between Westernport Bay and the Yarra Valley, and part of the upper catchment for two of the major river systems that supply Melbourne, the Yarra River and Dandenong Creek.

Located only 45 km from the City of Melbourne, the Dandenongs attract millions of visitors each year. With a long history of European gardens, the Dandenongs are certainly picturesque, however the spread of environmental weeds such as English ivy *Hedera helix* L., sycamore maple *Acer pseudoplatanus* L. and agapanthus *Agapanthus praecox* Willd. have resulted in a continuing environmental impact on the forest. The highly fertile growing conditions create high weed biomass, placing resource drains on agency and private landholders alike with constant weed re-infestation undermined the efforts of individual land managers.

Compounding this problem has been a complex mixture of land tenure. This includes sites within National Park boundaries that are managed by Melbourne Water, or sometimes even under private ownership. On other sites, three or four different agencies manage small subsections within one reserve. There are even 'lost' parcels of land where no one has taken responsibility

for management for long periods of time. This situation has posed challenges for neighbouring agencies, residents and environmental volunteer groups seeking to have problem weed loads attended to.

The above combination of challenges eventually led to the unfortunate tag of 'The Weedyngs'. Frustrated local environmental volunteer groups, residents and local government appealed for a more strategic approach. The Victorian State Government, in conjunction with Yarra Ranges Council, developed the UFWMI program in response.

In 2009 the State sought expressions of interest for \$4,000,000 over four years for weed control projects on Melbourne's peri-urban fringe. The projects were to be administered by multi-agency working groups with a dollar for dollar matched funding ratio. Seven municipalities applied and Yarra Ranges Council offered to match \$1,000,000. The result was a \$2,000,000 investment into weed control on the Dandenong Ranges from 2010–2014.

Now in the final year, the program has shown significant downward trends in weed occurrence. There has been an overall reduction in the percentage of Parks Victoria quadrats surveyed that register weed presence (Figure 1). The statistics are particularly encouraging when you consider that 2009 saw the end

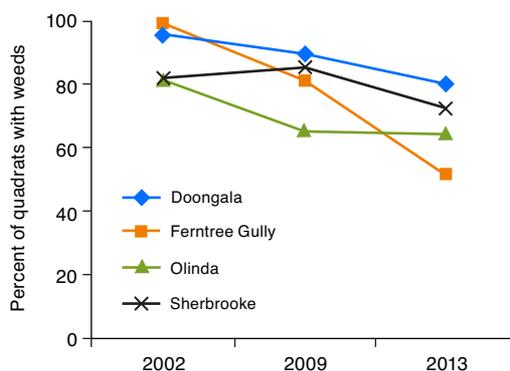


Figure 1. Graph showing the reduction in quadrat numbers with weeds present on Parks Victoria sites over the three survey repeats, the last one corresponding to the UFWMI project activities (Yuen and Keatly 2014).

of a long drought that typically would have triggered a spike in weed spread and abundance.

On ground weed removal is a key component of what the UFWMI project has contributed, but it is not the only achievement and not the focus of this report. The following pages will explore the development of the Dandenong Ranges working group and their journey in implementing strategic policy to on ground action.

DISCUSSION

Working group: policy, people and patience Yarra Ranges Council has been hosting annual inter-agency meetings for several years, which aided the development of the UFWMI working group. The key stakeholders for the Dandenong Ranges project were the Department of Environment and Primary Industries (funding provider), Yarra Ranges Council (lead agency), Parks Victoria and Melbourne Water. These organisations formed the UFWMI working group core. The organisations had worked together in the past on small grants and localised sites, however UFWMI represented the first tenure blind, landscape scale collective funding.

There was an enormous amount of learning to be done to make a project work across multiple agencies. Different governance and procedures alone created challenges in everything from transferring funds, engaging contractors to works planning schedules. A whole new governance system had to be developed to deal with the Urban Fringe process. The project employed a project officer to handle the workload, maintain the momentum and to develop the Operational Plan and other reporting requirements.

More than simply being multiagency, the project working group was a fusion between strategic thinkers and people with operational expertise. To succeed there had to be an acknowledgement that policy means nothing unless it can be interpreted, and is interpreted well into on ground action. Although frustrating at times, this dynamic provided a vital balance between a tendency toward reactive weed control and a tendency to make lofty statements that were difficult to implement in the real world.

The collaborative model acted as its own peer review and lead to the development of a robust plan of actions. This plan was no longer constrained by the once limiting borders and resources. The group was able to combine the strategic thinking skills and on-ground implementation knowledge to maximise the success of the four year weed program.

In retrospect there was an omission in the early planning phase of a community representative on the UFWMI working group. At the time the primary focus

was on the interaction of the agencies. There was also uncertainty as to whom within the community should provide representation. As such the UFWMI journey is also one of the evolution of the Community Weed Alliance Dandenongs (CWAD) and the strengthening of that group's capacity to represent its members and affiliates, and to engage with agencies at a strategic planning level.

The increased networking of agency staff and environmental volunteer groups has seen the relationships mature and enabled the identification of additional opportunities to leverage investment in weed control in the area. This has included joint community education opportunities, alignment of contractors to allow for more holistic site management and streamlined communications into other departments within partner agencies.

Biosecurity approach unravelled One of the initial tasks for the working group was to establish what the biosecurity approach that governed the UFWMI program meant, and to what scale it should be applied. Written by the Department of Primary Industries (2009), the approach aims to protect highest conservation assets first, where the greatest resilience to weed threat can be obtained. The group identified similarities to the tried and tested Bradley method of bush regeneration (Bradley 2002), but on a scale in the thousands of hectares, different factors needed to be considered. These factors included vegetation connectivity and catchment processes.

The first cut was a detailed desktop mapping exercise which broke the landscape up into five Land Management Units (LMUs). The LMUs were primarily based on sub catchments and included vegetation from mixed land tenures. Each LMU was a more manageable scale at between 100 and 1900 hectares in size. However, even with the large injection of UFWMI funds, the group agreed that the scale was still too large to treat all five LMUs in four years.

The working group developed a prioritisation matrix to provide some rigor and accountability to the way sites were selected. As can be seen in the abridged version of the matrix in table 1, values were assigned to a range of natural, financial and support attributes. These values were set to determine sites that not only held the highest conservation significance but also the greatest chance of attaining long term resilience due to factors such as lower neighbouring weed threat and greater existing support from agency and volunteer groups. Through this process, three priority LMUs were identified to become the focus of UFWMI funding.

Table 1. Table showing an abridged version of the prioritisation matrix developed by UFWMI Project Working Group – Dandenong Ranges, used to prioritise weed control sites by a range of natural, financial and support attributes where high scores deemed to be of greater value to the landscape than low score.

		Data			Score			
		Site:	A	B	C	A	B	C
		Total area (ha):	810.5	63.4	172.1			
Vegetation condition / site quality	Large patches of 51–75 surrounded by a buffer of 41–50	✓						
	Large patches of 41–50 with 1–40 surrounding			✓	3	1	2	
	Scattered patches of 41–50 with cleared/exotic vegetation		✓					
Importance as a corridor	High value		✓					
	Medium value	✓		✓	2	3	2	
	Low value							
PWG Collaboration (High = 4, Medium = 2, Low = 1)	Parks Victoria	4	2	4				
	Yarra Ranges Council	1	4	4	7	10	12	
	Melbourne Water	2	4	4				
Weed threat from private land	High		✓					
	Medium			✓	3	1	2	
	Low	✓						
Friends of and Landcare groups	Multiple groups working over whole site	✓						
	1 group working over whole site				4	2	2	
	Multiple groups covering part of site		✓	✓				
	1 group working in small area of site							
Community grants / incentive programs	Bordering/impacting on site with history of funding	✓	✓	✓				
	Not bordering/impacting on site with no history of funding.				2	2	2	
	Bordering/impacting on site with no past funding							
Total scores					21	19	22	

Predictably perhaps, the highest conservation assets within each LMU often occurred within the National Park. These Parks Victoria sites received the majority of the state UFWMI money with lower conservation assets around the perimeters treated only where they were deemed to be a pathway of threat, where they could provide a buffer zone to the high conservation sites or where they could leverage additional funds.

Reporting and adaptive management The detailed financial and evaluation reporting required by the state government for the UFWMI project has provided the working group with a regular self checking mechanism. Through this feedback loop and data, the group has been able to adapt its strategic direction and on ground actions throughout the four years where necessary. This has allowed a sense of confidence to evolve from both inside and out of the working group that money has been spent on time, with transparency and adaptively. It has also allowed the working group to continuously check in on the work of the planning phase and ensure that the principles underpinning the project were properly interpreted and working on the ground.

CONCLUSION

There have been many examples where collaborative opportunities have arisen from the UFWMI program that would potentially never have been recognised were the various working group members not in the same room, and with opportunity for open dialog. These opportunities go well beyond the immediate UFWMI program and have led to a huge amount of additional co-investment in time and grants.

The advantages of this open dialog, and the dedicated project officer to keep developing new networks, has strengthened relationships between the various agencies as well as the active and vocal environmental volunteer community groups of the Dandenong Ranges. This relationship has evolved to a point where the UFWMI working group now has community representatives. These representatives already

add invaluable knowledge and connectivity to the local community. This will be particularly important as we move into the next round of UFWMI funding, and the next LMUs, where it is predicted that private land will feature more strongly.

The UFWMI project was based on sound policy settings. It provided some obstacles, but more freedoms, in being able to think and plan tenure blind. UFWMI challenged land managers to think beyond their own borders and budgets towards what is best for the whole landscape and how best biosecurity could be achieved. It challenged land managers to focus strategically on the high quality assets, even if it missed their patch of land and or restricted the number of hectares able to be treated.

With patience, trust, good reporting processes and a huge collection of skill sets, the Dandenong Ranges project working group was able to adapt these policies into positive on ground outcomes with a whole range of add on outcomes as a bonus.

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