



Australian Association of Bush Regenerators Inc.
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AABR'S SUBMISSION TO THE NSW WEEDS MANAGEMENT REVIEW

The Australian Association of Bush Regenerators (AABR) has nearly 3 decades of on-ground experience in successfully turning around weedy environments into sustainable, low maintenance native vegetation communities. The techniques and principles were first tried in the 1960s in Sydney.

From an essentially volunteer base in 1986, AABR membership now has a considerable number of experienced, accredited bush regenerators, in state and local government positions including bushland management, representing many contractors, working in a multitude of ecosystems, on small and large scale projects.

Bush regeneration, an Australian form of ecological restoration, is now a serious and expanding industry.

This submission will focus on the strategies required for effective and efficient on-ground weed management outcomes, based on the skills, knowledge and experience developed over the long history of the bush regen industry - 50 years.

It will focus on those parts of the landscape that have the potential to enhance biodiversity and habitat outcomes. This is much more than designated natural area such as national parks and bushland reserves: everywhere there are vestiges of the original vegetation that are now weed-infested but capable of restoration without onerous long-term maintenance demands.

AABR is very confident that with the right approach, a much more manageable and positive situation than is current, can be achieved for the problem of weeds in NSW.

BASIC PRINCIPLES

1. Generally, healthy, robust natural areas will not be degraded by weeds

Weeds are a symptom of ecological decline. Assisting the natural regeneration of degraded areas will expand the areas of better quality bushland and hence reduce weed invasion, weed spread, and total area of affected land. It will also lead to a reduction of resources needed to maintain it weed-free. By relying largely on the system's own ability to recover means more efficient use of resources. Leaving areas to degrade to the point where revegetation is the only option may lead to less floral diversity as approximately only 50% of Australia's flora can be propagated.

2. Long term approach is absolutely essential

Over two centuries of mismanagement of weeds can only be reversed with a long term, methodical, effective and consistent (but adaptively-managed approach).

3. The issue of weeds is extremely complex

Each roadside, creekline, neglected farmland, or degraded bush adjacent to suburbia requires its own individual approach, but it must be within the context of a broader landscape/regional approach. Local

knowledge of weeds and their behaviour, native vegetation, climate, local land management issues are required for successful weed management.

4. What will replace the weeds?

Weeds will generally be replaced by more weeds unless there are appropriate replacements planned or the site is able to regenerate.

- Spraying leads to more spraying and often more insidious weeds unless practitioners are skilled in assisted natural regeneration techniques. (For example it is easy to spray large areas of lantana, but without a long term strategy to regenerate, other weeds will replace it. Costs will be ongoing with no long term gains in biodiversity.)
- Some weed control techniques have the potential to reduce biodiversity over the longer term and reduce that area's ability to recover (eg continual use of residual herbicides can lead to long term tree death and canopy decline).
- Often weeds can be useful in recovering degraded landscapes as they can be a buffer to weeds which are harder to control (lantana is a good buffer against ehrharta). Also weeds may be important habitat. These scenarios require skilled bush regeneration practitioners. Spraying should only be done by highly skilled operators who know the local native species, especially grasses that are often fundamental to successful, sustainable outcomes.

5. Prevent New Weeds

AABR endorses the Invasive Species Council recommendation of a well-legislated Permitted Species List, allowing only species on that list to be imported/sold. Additions to the list would require rigorous testing to ensure they will not become invasive. A State list would be a starting point but to be effective it must be a National list.

SUGGESTED STRATEGIES

1. Take what is working well, and improve on it

NSW Weed Action Plans have had very positive results, albeit with very small budgets compared with the scale of the problem.

A legislated overarching independent State authority, with governance over regional plans is a similar framework. It needs to have a strong systematic and strategic approach with strong management.

2. Blind tenure approach

All lands, private, public and utilities must be dealt with equally as any weed scheme will be as ineffective as the weakest link. Probably the highest priority would be road and rail corridors as these are major vectors in the spread of many weeds, and currently these lands seem to be immune from proper weed management.

3. Secure ongoing funding (not ad hoc as in one off grants)

Unless weed management is outcome- and resource-focused at the start, money and effort will be wasted. Areas treated then left will result in a worsening situation. It is more efficient to leave areas untreated until the right resources are in place.

4. Weed legislation

Give equal importance to environmental and agricultural weeds. Move control of weed legislation to the proposed independent authority. This is in line with a blind tenure approach.

5. Change focus from weeds to biodiversity

Removing weeds is easy but is perpetual and requires ongoing funding. Strategies which result in more sustainable outcomes (reduction of ongoing funding) are required.

A change in management approach is needed.

Natural Area Restoration (also known as Bush Regeneration and Assisted Natural Regeneration) is a long-proven management system which is applicable at all scales in the landscape and there are ample demonstrations of its efficacy and efficiency. It results in continuing improvement in biodiversity values - and less weeds - with reducing resources. See appendix 1 – analysis shows that traditional methods (mowing, spraying, brushcutting) cost the same as on-going bush regen maintenance (after the initial primary weed treatment). However continuing with the traditional regime leads to further degradation, and eventually may require more costly restoration to deal with the weeds. A less machine-based approach will also help reduce greenhouse emissions.

With skilled management and a long term approach, incremental gains will continue to produce stronger natural systems which will be increasingly resistant to weeds.

6. Use the strengths of a system to build in greater resilience

Determine if native vegetation can be readily restored or not (this requires specialist skills).

Prioritise areas of high resilience - less effort, high sustainability outcomes (simply put, work outwards from the good bush towards the weeds. The bush will then provide the seed source etc to extend the bush area). Fire may be appropriate, and is likely to increase the rate and diversity of regeneration.

Very weedy areas should not be treated unless there are the management structures and resources in place to produce the desired long-term outcomes. However target weeding may be appropriate in some cases as an interim measure.

Building more resilient systems will better equip the natural environment to cope with the changing climate.

7. Training

Upskill people at all levels of management - from land managers to practitioners and supervisors on the ground. There is a surprising paucity of knowledge of native species and weeds (and how to deal with them) among decision makers, particularly at the level of allocation of funds. Contractors frequently complain of the inappropriate requirements of contracts, knowing they will not have the long-term beneficial outcomes.

AABR has an accreditation system for practitioners to encourage sound and effective work practices.

8. Enforcement and Education should go hand in hand

Current weed legislation is weakly enforced, particularly on private land. This seems to be partly because local councils don't want to be seen as the enforcers (particularly when their own reserves are weed-infested). This adds weight to AABR's suggestion of an independent legislated body.

Weeds are not easily recognised by the general population, making it more difficult to deal with weeds on private property. New ways of getting the message across are needed.

9. New Weed Sightings

Gain early warnings from bush regenerators of the existence of new weeds and move quickly to list these as 'Potential noxious weeds' so that incentive is increased for land management to prioritise their treatment.

10. Construction Activities

Any on-ground works must have plans that ensure the affected area is effectively remediated, not just at the end of the job, but must be incorporated into ongoing management so the gains continue.

11. Improve/Remediate/Retrofit existing infrastructure

Apply innovative and well-established techniques to address drainage and nutrient causes of weed invasion and spread, both in existing and proposed works.

AABR looks forward to the next stage of this review.

Yours faithfully

Jane Gye
Secretary
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APPENDIX 1

The report below provides evidence that an ecological approach to weed problems is equivalent in effort in the long-term to traditional spray, mow, brushcut methods. (Take into consideration that this is an urban creekline with the attendant problems of excessive nutrients and runoff, and one of the most difficult situations to control)



The stats add up: bush regen gives the best value

Rymill Abell

In 2005 I published some statistics demonstrating the cost effectiveness of bush regeneration and the importance of good project management. Four years on, a review of the work hours for the site showed that maintenance requirements were even lower than predicted.

The article *Bush Regeneration of Paddy Pallin Reserve A comment on the importance of reliability and flexibility of funding to deliver ecological outcomes*. Featured in the journal *Ecological Restoration & Management* Vol. No 2 August 2005.

EMR Editor Tein McDonald explains "The article showed that there was a reducing level of regeneration inputs needed at the site, giving weight to the proposition that more sensitive maintenance of bushland well might cost council no more than traditional expenditure on 'park maintenance'. It seems that no-one had formally tested that—comparing regen costs with council inputs prior to the regen project starting—until Rymill published this article, drawing on the rigorous records kept by the bush regeneration contractors over the years."

The reserve, in urban Lindfield on Sydney's North Shore, contains a small remnant of the endangered ecological community Sydney Turpentine Ironbark Forest. Previous management had been inconsistent and at times damaging. Weeds were well established when the project began in 2000. Ehrharta covered most of the site and tradescantia, morning glory, madeira vine, fishbone fern, agapanthus were also extensive.

Secure, consistent funding and well directed bush regeneration turned the situation around. Beginning in 2000, a few years of intense work had the weeds under control, and maintenance requirements were decreasing. In 2005 I predicted 20 hours of skilled bush regeneration each quarter would be necessary to maintain the quality of the bushland.

This was double what reserve manager Ku-ring-gai Council was estimated to have been investing in the previous mowing and spraying maintenance approach. We felt, however, that even if costs are higher, the bush regeneration approach represents a better long term investment as it actually achieves substantial regeneration of a natural asset.

Paddy Pallin Reserve in 2004. After the first four years of consistent bush regeneration the diverse grassy understorey, typical of Sydney Turpentine Ironbark Forest, is almost weed free.

New figures

We have now updated the figures to include the hours for the last 4 years, and found that the reduction in required maintenance has been sharper than predicted. It would seem that my prediction of 20 hours of skilled bush regeneration each quarter being necessary to maintain the quality of the bushland, was more than has been found to be necessary. The actual figure as determined over the past four years is close to 9 hours each quarter. As estimated in the original note, this is the same amount of time for the Council employees' previous quarterly involvement in working in that bushland area. Thus the original case of bush regeneration being a superior long-term investment for the maintenance of urban bushland has, in this situation, been verified.

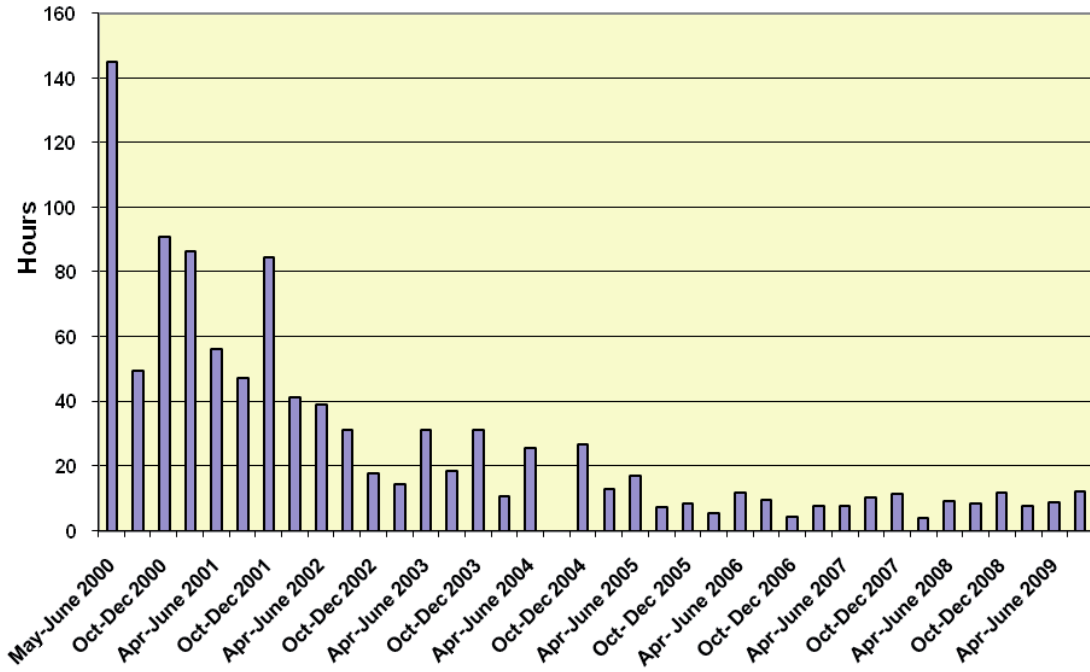
Paddy Pallin Reserve bushland area has continued to receive bush regeneration by the same contractors mentioned in the early EMR article (the Lane Cove Bush Regenerators Cooperative Ltd). Due to receiving regular bush regeneration maintenance and the current good season, the reserve is, at this time, in excellent condition. Maintenance efforts are scheduled for about 9 visits each year with decisions as to timing being affected by consideration of the weather and seasonal variations.

A major factor in the good results achieved in Paddy Pallin Reserve is the respect and trust between the contractor and the corporate sponsor funding the work (Paddy Pallin Pty Ltd, whose founder was commemorated when the reserve was dedicated in 1985, now the Paddy Pallin Foundation). Work has been done at appropriate times when natural events or changing seasons have given rise to the need to deal with particular problems.

The updated results show that, after the restoration phase, bush regen-type maintenance dropped to a level that is equal to the 'maintenance' that council carried out prior to restoration. (i.e. that was the main factor degrading the site in the first place: council's mowing, whipper snipping and spraying of edges etc.)

This adds further weight to the idea that, if you retain the bushland and maintain it as a bush regen site, you may well avoid the need for a more costly restoration phase. Even more importantly, however, it provides some strong figures to counter the argument that traditional park maintenance is necessary because Councils don't have the funds to maintain bushland to a high standard.

I am grateful for access to the good record keeping of Fay Fennell, the supervisor who has overseen the bush regeneration being done in Paddy Pallin Reserve and the bushland south of Highfield Road.



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END OF SUBMISSION