

From the editor

*Selga Harrington
Parsons Brinckerhoff*

Welcome, readers, to the winter 2012 issue of Australian Plant Conservation! The theme for this issue is *Bushland Restoration*. This issue examines current small scale efforts and local approaches being made in the restoration of bushland areas. The next issue will expand on this to examine restoration at a larger, landscape scale.

As our population and urban areas expand, the pressure on our natural environment increases, bushland areas become degraded and suffer from weed invasion. Management and restoration of these degraded bushland areas has typically fallen to councils, community groups and individuals but is now also being undertaken as compensation for development. This issue contains articles written from each of these perspectives.

The articles highlight the benefits of strategic planning and prioritization of areas for restoration, the importance of community involvement, innovation and experimentation in weed control and restoration methods as well as sheer perseverance. Beyond the usual tales of hard work, blood, sweat and tears, these

articles provide valuable ideas on how to undertake a successful restoration project from ways to engage the local community and stakeholders, to novel methods to employ.

The issue concludes with our regular features: Report from New Zealand Plant Conservation Network, Reports from Recent Workshops, Upcoming Conferences, Research Roundup; Book Reviews, Information Resources and Useful Websites.

Don't forget to register for the ANPC National Conference, to be held 29 October – 2 November in Canberra! The conference theme is *Plant Conservation in Australia: Achievements and Future Directions*. An apt theme for this, ANPC's 21st, year! For more information, to register or submit an abstract or proposals for workshops, go to <http://www.anbg.gov.au/anpc/conferences/2012/index.html>.

I hope you enjoy this issue on Bushland Restoration. It is overflowing with inspirational success stories and useful tips!

The south-east Queensland ecological restoration framework – the 'how to guide' for a biodiversity hotspot

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The region

Southeast Queensland (SEQ) is geographically broad and biologically diverse. In the southern portion of the bioregion are the local governments of Brisbane, Gold Coast, Logan, Redland, Ipswich, Moreton Bay, Sunshine Coast, Somerset, Scenic Rim, Lockyer Valley and Toowoomba. Combined, these local government areas within the SEQ bioregion occupy an area that is about one third the size of Tasmania.

The area has had a long history of settlement leading to the clearing of around 50 % of the region's remnant vegetation cover. Many of the fragmented patches have

been the focus of restoration efforts by a diversity of groups ranging from dedicated volunteers, to committed teams in local government, through to industry fulfilling statutory requirements.

The problem

The quality of restoration effort has been inconsistent. There are indeed many examples of excellent ecological restoration work, but similarly some efforts have yielded poor results. The local governments of the region often include ecological restoration works as part of development approvals, conduct ecological restoration works on local

conservation reserves and support individual landholders in ecological restoration efforts. These local authorities recognised the need for a 'how to guide' to direct ecological restoration efforts in the region.

Addressing the problem

At a meeting of environmental managers from local governments across SEQ, it was decided to initiate a process to achieve a level of consistency in the application and delivery of ecological restoration. SEQ Catchments, the regional Natural Resource Management body for SEQ, elected to facilitate the process in collaboration with the SEQ councils, with periodic input from other specialists from State government and industry.

The first step involved a scoping study of the stakeholders, which helped to establish the audience for communication purposes, and the broad application of a product of this nature, ranging from landholder guidance to development conditions. This helped to establish the composition of the Framework, and how information should be structured to make the product useful to all.

The other fundamental component was to clearly establish the principles of ecological restoration, and further to interpret that meaning in the SEQ landscape. The Society for Ecological Restoration International (SERI) definition, "Ecological restoration is the process of assisting the recovery of an ecosystem that has been degraded, damaged, or destroyed", provided the platform upon which a series of local policy, processes and management actions could be defined and explained in full.

The final agreed approach included the development of the "SEQ Ecological Framework" consisting of three key documents to guide the delivery of ecological restoration works in the SEQ region including:

- **Code of Practice** – a policy document providing a head of power for the subsequent Guidelines and Manual. The Code of practice reflects the SEQ policy environments where it is to be housed.
- **Guidelines** – a decision making tool to guide users to the most appropriate course of action in their project. This document guides application of the policy and links to current best practice and examples demonstrated in the Manual element.
- **Manual** – a technical but easy to use guide to all aspects of ecological restoration. This document is reflective of current best practice, and provides the minimum acceptable solutions to ecological restoration.

Developing the framework

The Framework drew not only on the experience of the authors, but also involved an extensive literature review, engagement of external parties (specifically for case studies) and, importantly, consultation with participating local governments. Consultation involved multiple reviews of the three documents and discussion at a series of workshops



'Fabricated' riparian ecological restoration in the Redland Business Park. Photo: David Francis

to reach consensus on all aspects of the Framework. Local government participants included officers involved with different aspects of ecological restoration including strategic planning, natural area management, coordination of community programs and development assessment. This enabled the integration of numerous perspectives and assisted in the development of a balanced document that reflected the requirements of multiple levels of government business and community activity.

Although the approach allowed for thorough review and the input of multiple parties, it meant the final product took over two years to develop. This included some lively debate about many aspects of ecological restoration, with most participants contributing their own restoration experiences to the group. Despite these difficulties, it was this level of rigor that resulted in a document that pooled the collective knowledge of practitioners across a broad geographic area.

The final product

The final set of documents provides a range of stakeholders including council officers, professional bush regenerators, consultants and community members with the tools to ensure that best practice ecological restoration is implemented in a range of situations. The Code of Practice and the Guidelines provide decision makers with the policy and strategies to implement a restoration project. The Manual provides users with a practical hands on approach to all facets of ecological restoration.

The Manual guides the user through the four restoration approaches from:

- *reliance on Natural Regeneration*
- *Assisted Natural Regeneration*
- *Reconstruction*, where resilience is depleted, and abiotic or biotic elements need wholesale importation or major amendment before recovery can commence
- *Fabrication*, where site conditions have been irreversibly changed and it is not possible to restore the original native plant community.



*An ecological restoration team works to spray Asparagus Fern (*Asparagus aethiopicus*) as part of an 'Assisted Natural Regeneration' project. Photo: Rhonda James*

Site assessment is detailed as a step by step process which leads the reader back to which restoration approach, or combination of approaches to implement and the preparation of an Ecological Restoration Plan to guide the project. The next step provided in the Manual is starting work on the site and includes practical tips, photographs and diagrams. Details of manual, chemical, mechanical and biological weed control methods and various methods of re-introduction of plant material to a site including planting, brush matting and direct seeding are included. Case studies provide additional local information and guidance to the reader to undertake a restoration project. The final sections of the Manual include record keeping and monitoring and reporting.

Where to from here?

The SEQ Ecological Restoration Framework represents a major step forward in setting a benchmark for ecological restoration for the SEQ region. The Framework has

received accreditation from the SEQ Council of Mayors as the regional standard for undertaking restoration, and following a midyear launch, will be available through all of the SEQ Council websites, or provided to key stakeholders as a hardcopy compilation. It is hoped that with ongoing use, and some further promotion, that the Framework will be broadly recognised and accepted as the best practice approach to ecological restoration in our region. There are opportunities to use the Framework to guide the establishment of environmental offsets in the region.

It is also hoped that our initiative can provide a template and guidance to land managers in other regions of the country. The document can be modified to local circumstances to ensure that best practice ecological restoration is successfully promoted and implemented. Importantly, our approach to developing the Framework demonstrates that expert collaboration is required to formulate the particular ecological restoration requirements for a specific bioregional area.



'Reconstructed' rainforest undertaken by the Brisbane Rainforest Action and Information Network (BRAIN). Photo David Francis

The use of mitigation planting to achieve strategic planning outcomes in local riparian restoration

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Introduction

The Logan Water Alliance (LWA) is a public and private sector alliance involving Allconnex Water, Tenix, Parsons Brinckerhoff and Cardno. Established in August 2009, it is one of the largest water infrastructure programs of its type in Australia, responsible for delivering water and

wastewater infrastructure throughout the Logan district (south-east Queensland) until at least 2013.

The LWA is a planning-led alliance that encourages consideration of ways to avoid, or mitigate, environmental impacts at a planning level, for example by choosing pipeline alignments that minimise vegetation clearing.



Francis, David, James, Rhonda, and McPherson, Darren. 2012. "The south-east Queensland ecological restoration framework - the 'how to guide' for a biodiversity hotspot." *Australasian Plant Conservation: journal of the Australian Network for Plant Conservation* 21(1), 2-4. <https://doi.org/10.5962/p.373439>.

View This Item Online: <https://www.biodiversitylibrary.org/item/324469>

DOI: <https://doi.org/10.5962/p.373439>

Permalink: <https://www.biodiversitylibrary.org/partpdf/373439>

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