

# Breaking long-term deadlocks to restore wetlands on public and private land

Mark Bachmann<sup>1</sup>

<sup>1</sup>Nature Glenelg Trust, PO Box 2177 Mt Gambier, SA, Australia, 5290

Corresponding author: [mark.bachmann@ngt.org.au](mailto:mark.bachmann@ngt.org.au)

## Abstract

The science of environmental restoration in many respects is extremely well advanced, but how do we turn the science into practice? How do we work with a wide range of people from different backgrounds to deliver on-ground action? When confronted with doubt and opposition, scientists often retreat to what they know and come back later with more data and evidence to prove that they are ‘right’, only to meet the same resistance. There are also times when information gaps exist that prevent people from ever being able to have all the answers they need before they begin, meaning restoration options may need to be trialled first. Fortunately, as well as what people know, achieving on-ground action also relies on how confident people feel about the issue; which means building trust is crucial. This paper explores how trust is built, by looking at the way scientific ideas are shared and communicated, and how people – both within management agencies and the wider public – can become part of a restoration journey. Practical examples of wetland restoration projects are used to illustrate how long-term deadlocks, hampering the progress of restoration projects on both public and private land, can be overcome; in some cases, shifting positions or mindsets that had been entrenched for decades.

## Introduction

Nature Glenelg Trust (NGT) has been working to restore habitats across a broad geographic area (specifically NRM regions situated between Melbourne, Victoria and Adelaide, SA) of south-eastern Australia, since the launch of the organisation in January 2012. NGT is a registered charity and not-for-profit organisation that applies ecological expertise to fill the gaps that often emerge between academia, policy and practice. This approach, combined with a willingness to tackle issues across all land tenures, demands maximum flexibility; hence project delivery by the organisation deliberately varies according to the individual circumstances and needs of each site, including their socio-political context. This unique approach has brought NGT into contact with some difficult, at times seemingly irresolvable, and complex issues – particularly those that involve working with water on public land, or those at the public/private land interface.

Indeed, water management is a crucial theme in western Victoria and south-eastern South Australia, where over 60% and 90% respectively of the original wetland extent has been lost since European settlement as a result of drainage and development. The biodiversity impact of this landscape-scale change has been dramatic, and hence the restoration and recovery of the ecological values of modified wetlands in this region, especially on public land given its already reserved status, is a clear immediate priority. With this background in mind, the two wetland systems that are the focus of this paper are those associated with the upper Wannon River, near Dunkeld (Victoria) and Long Swamp, near Nelson (Victoria).

## Background to the case study sites

Gooseneck Swamp and Brady Swamp are two of four floodplain wetlands (about 1000 hectares in total area) associated with the upper Wannon River, at the terminus of an inland delta that has formed over a large, flat area where the river reaches the plains after exiting the mountains of the Grampians. The destination for flows from the Wannon River, en route to the ocean after it joins the Glenelg River, is the coastal estuary at Nelson, near the border with South Australia. It is here that Long Swamp, a 15km long wetland system (over 1000 hectares in size), also discharges fresh water flows into the Glenelg River estuary near its mouth. To understand the ecological issues and socio-political context surrounding both systems, please refer to Table 1.

**Table 1.** Characteristics of the two case study wetland sites.

| Characteristic   | Upper Wannon Wetlands | Long Swamp          |
|--|-----------------------|---------------------|
| <i>Large, functional (albeit modified) wetland system</i>                                    | Yes                   | Yes                 |
| <i>Important remnant populations of nationally threatened species</i>                        | Yes                   | Yes                 |
| <i>Decades-old artificial drainage impacting on water regime and biodiversity values</i>     | Yes                   | Yes                 |
| <i>Local communities supportive of restoration, but hit institutional barriers to action</i> | Yes (for 25 years)    | Yes (for 15 years)  |
| <i>Land tenure</i>   | Public & Private      | Public              |
| <i>Restoration efforts stalled due to government agency caution about impacts on:</i>        | Neighbouring land     | Biodiversity values |

Studies were commissioned but no on-ground restoration action occurred because of ongoing uncertainty within government about the options for works, their potential impacts and the perceived risks. Hence despite strong community support, restoration efforts at both sites stalled; leading to an escalation of community frustration.

**The method for a way forward – it all comes down to good communication**

Resolving these issues required a process of flexible, effective communication, tailored to suit the needs of each site. Some methods common to both sites that helped to diffuse tension and create an atmosphere between parties conducive to finding a way forward included:

- Talking openly to all the players and listening to their concerns, in a place where they are comfortable;
- Doing the homework necessary to identify if the obstacles to action were perceived or real;
- Removing or addressing active sources of tension (e.g. pulling the issue out of the political arena); and,
- Providing a fresh, independent, scientific and well-informed perspective on the issue.

Throughout this process, NGT worked as both an informed intermediary and active participant, building the necessary trust with all parties; something that is often easier to do when not a historical player in the issue and also greatly assisted by being independent of government (for building trust with the community). Reaching the next stage, where everyone is listening and open to receiving new information, is a critical step because this type of trust is the pre-requisite for finding solutions. Confidence levels can then further grow, as:

- A strategy is agreed to address real information gaps;
- A way forward that everyone can support is devised and communicated;
- Trial measures are employed to test ideas and assumptions (learning by doing) when still in doubt;
- The difference between real and perceived risks becomes clearer; and,
- Lasting options often then emerge that everyone can agree to work towards.

**Results at the case study sites**

After working through this approach, the steps towards restoration at our case study sites are explained in Table 2.

**Table 2.** Working towards lasting restoration at the case study sites.

| Steps towards lasting restoration   | Upper Wannon Wetlands  | Long Swamp   |
|---|--|--|
| 1. Key information gaps addressed   | <ul style="list-style-type: none"> <li>• Drainage history</li> <li>• Elevation data</li> <li>• Communication with neighbours</li> </ul>  | <ul style="list-style-type: none"> <li>• Baseline Survey</li> <li>• Review of historic change</li> <li>• Elevation data evaluation</li> </ul>  |
| 2. Restoration trials initiated (led by NGT, reducing risk to government) | <ul style="list-style-type: none"> <li>• 3 geo-fabric sandbag structures installed in 2013 and 2014 (these are reversible, adjustable, and not a fixed asset)</li> </ul>   | <ul style="list-style-type: none"> <li>• 1 major geo-fabric sandbag structure in 2015 (after 2 earlier trials in 2014)</li> <li>• Final structure level adjusted upwards during the trial to improve results</li> </ul>          |
| 3. Reviewing outcomes of the trials                                       | <ul style="list-style-type: none"> <li>• Hydrological (and ecological) response quickly answered key questions</li> <li>• All parties confident to move immediately towards a permanent solution</li> </ul>                                      | <ul style="list-style-type: none"> <li>• Extended monitoring period showing positive hydrological and ecological response trajectory</li> <li>• Growing interest in converting the trial to a more permanent solution</li> </ul> |
| 4. Lasting restoration  | <ul style="list-style-type: none"> <li>• Outcomes justified the case to seek funding for permanent works (complete backfilling of drains)</li> <li>• 3 wetlands permanently restored in early 2015, with a Victorian Government grant</li> </ul> | <ul style="list-style-type: none"> <li>• A project to assess project outcomes so far and design a permanent solution commenced in 2017, led by NGT and funded by the Glenelg-Hopkins CMA</li> </ul>                              |

**Discussion**

Wetland restoration is particularly suited to trial solutions, to build confidence of all parties. Not only are geo-fabric sandbag structures reversible, adjustable and able to withstand a range of conditions, they also provide an opportunity for hands-on community participation. This type of practical activity, directly contributing towards a lasting solution is also therapeutic for community members frustrated by the preceding years of inaction. As so, after 25 and 15 years respectively of waiting for action, progress was made in a short space of time at our case study sites. At the upper Wannon Wetlands, permanent restoration works have occurred, while at Long Swamp (Fig. 1), the final steps towards a permanent restoration solution are now in place.



**Fig. 1.** The Long Swamp Restoration Trial

**Conclusion**

From working through these complex issues that at first seemed intractable, it is clear that if you (a) do your homework and earn respect, (b) bring everyone together and then along on the journey, and (c) invite the community to participate in the solution, then great things in wetland restoration become possible. This story has been shared in the hope it will inspire similar action at other important wetlands in the future.

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