



Community Celebration & Day 6 of the NGT Grand Tour: Sat 7th Oct 2023

Walker Swamp Restoration Reserve

It has been five years since the Walker Swamp Restoration Reserve was created and launched, as a private nature reserve on the Wannon River floodplain adjacent to the Grampians National Park. This handout provides a snapshot of the project over that time, forming an accompaniment to our guided tour of the site.

We wish to acknowledge the traditional custodians of the land that includes the Walker Swamp Restoration Reserve, the Djab Wurrung people, and pay our respects to elders past and present. The lunette banks around these wetlands are home to considerable evidence of past Aboriginal occupation, as they are across all of western Victoria, and remind us of the deep and ongoing connection of First Nations people to this land.

We hope you enjoy learning more about the site, and especially thank everyone for their generous support this year, which enabled NGT to expand the Reserve by 390 acres on the 30th June 2023.

Mark Bachmann, Managing Director and Founder



Stop 1: Environmental values of the 2023 land purchase area

Dr Greg Kerr, Senior Ecologist

The 390-acre land purchase area, which lies adjacent to the northern end of Walker Swamp, has been farmed since European colonisation and consists of 200 acres of remnant vegetation, with the balance cleared.

The cleared area was converted to Blue Gum plantation at the same time that Walker Swamp itself was planted with Blue Gums in approximately 2005. This plantation was harvested around 2017, with the stumps then removed by the new owners who converted it back to grazing land after the property was sold by the plantation owner in mid-2017.

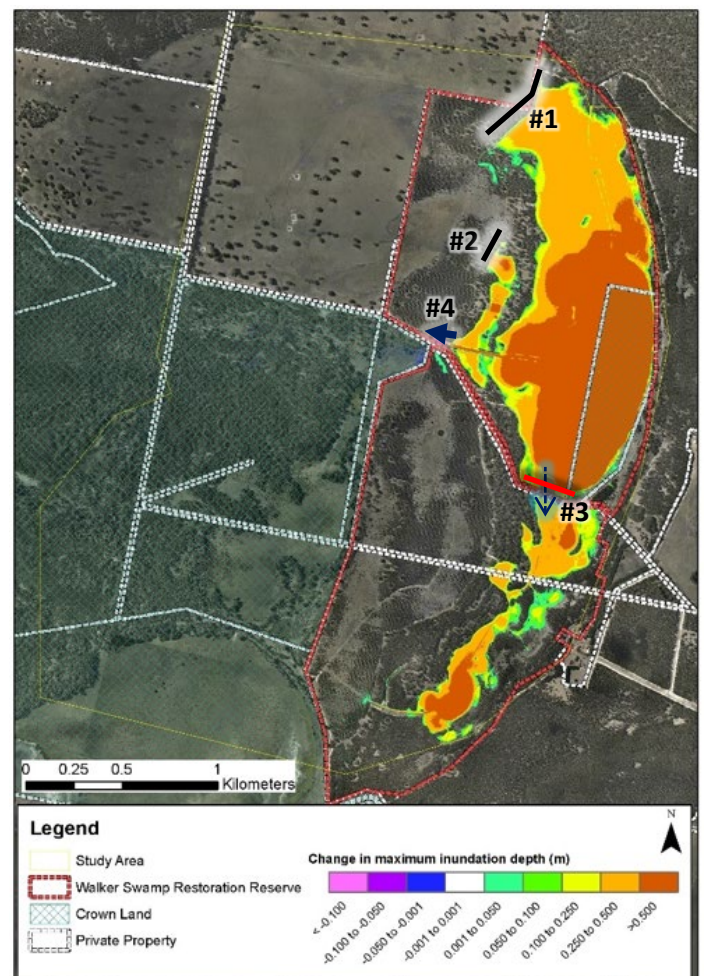


While the cleared areas provide a new woodland restoration opportunity, the remnant bushland retains some magnificent trees and a higher quality of understorey vegetation than elsewhere within the existing NGT Reserve, which is also reflected in the diversity of birds utilising this patch. The area consists of threatened Manna Gum sand forest on the elevated lunette bank adjacent to Walker Swamp, in places forming a mixed community with Red Gums throughout any lower lying areas. The initial management focus in the woodland area is managing its modest weed issues, pulling down internal fences and undertaking biodiversity surveys.

Stop 2: Hydrology

Dr Lachlan Farrington, Principal Ecologist

Prior to the commencement of remedial earthworks in 2019, a hydrological investigation, commissioned by the Glenelg Hopkins CMA, was undertaken by NGT to enable the impact of backfilling artificial drains across the property to be understood, and to inform the design, implementation and permit approvals for those works. The hydrological study allowed us to predict how drainage inflows into a restored Walker Swamp could be managed on the eastern floodplain portion of the property and, in turn highlighted key locations where additional remedial works would be required to facilitate restoration. This included reinforcement of an existing levee bank which we are visiting during this stop (black line marked #1 on the map right), which protects farmland to the west from inundation impacts associated with restoration.



Stop 3: Spontaneous vegetation recovery in former plantations

Ben Taylor, Senior Wetland Ecologist

Outside of artificial drainage, which attempted to more intensively develop the property for livestock grazing purposes from the 1950s-1990s, by far the most substantial other impact on the property was its almost complete conversion to Tasmanian Blue Gum Plantations in approximately 2005. Hence NGT inherited a property with a complex mixture of current and former plantation areas that could be broadly categorised as: (1) recently harvested areas that were coppicing, (2) standing plantations that the previous plantation manager deemed uneconomic to harvest, and (3) areas that were still subject to temporary inundation where the plantations had failed to fully establish. The area in the vicinity of this stop shows a zone where NGT inherited a combination of (1) and (2).

In the years since the blue gums have been either removed or the coppice was sprayed, in combination with the return of inundation, spontaneous vegetation recovery is occurring. A photo point at another similar location in the Reserve is shown (right) to visually demonstrate this transformation.



Restoring the floodplain at Walker Swamp: Jan 2019 image (top) showing plantation timber, high water levels in Nov 2022 (middle) as vistas of the Grampians re-appear, and wetland vegetation spontaneously returning in April 2023 (bottom).

Stop 4: Life in the Water

Dr Lauren Brown, Aquatic Ecologist

The wetting and drying regime of Walker Swamp has changed dramatically following restoration works. In its drained state, the wetland would only inundate temporarily and dry out quickly as the artificial drain was cut to its bed level. The aquatic fauna very much reflected this sporadic pulse, being mainly represented by crustaceans e.g. shield shrimp, fairy shrimp and ostracods. These species could survive as dormant eggs for long periods when the wetland was dry. Since the more recent re-establishment of a deeper and prolonged inundation regime, the representation of active swimmers e.g. damselfly larvae, water beetles, water boatmen and backswimmers, has increased.

In its original state, it seems that Walker Swamp was hydrologically disconnected from the Wannon River most of the time, except for during flood events, and so its value as a refuge site for native freshwater fish between

floods is not yet clear. Before the artificial drain was completely backfilled to fully restore the wetland in 2019, fish species (Southern Pygmy Perch and the nationally threatened Little Galaxias) were recorded in the deeper sections of the partially restored wetland (between 2014 and 2018) as a result of annual connectivity of drain flows with the river, despite the wetland also fully drying out each year. Following restoration and subsequent expansion of aquatic habitat, numbers of fish initially increased. More recent fish surveys have failed to detect these two species, noting that detection is more difficult in larger, more permanent waterbodies. During higher flows in 2022, both Southern Pygmy Perch and Little Galaxias were observed negotiating and making their way across the spillway, at the point of outflow.

The wetland supports other key aquatic species, including populations of the endangered Western Swamp Crayfish (*Gramastacus insolitus*) and endangered Growling Grass Frog (*Litoria raniformis*). The maintenance of water at Walker Swamp beyond spring and through the summer is particularly key for species such as Growling Grass Frogs which breed later in the year, as temperatures rise and shallower wetlands are typically drying out. A fantastic chorus of 'growlers' can be heard during spring to early summer. A number of Long-necked Turtles (including juveniles) have also been recorded during our surveys. The continued recovery of aquatic vegetation in the wetland will only improve habitat for these key aquatic species.



Western Swamp Crayfish

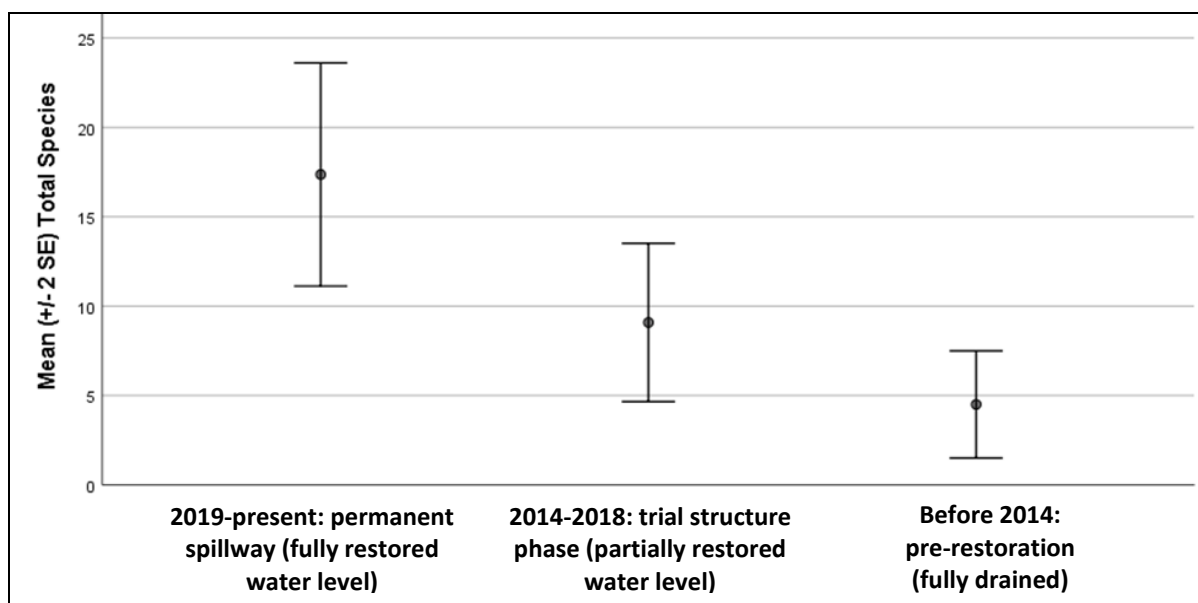


Growling Grass Frog

Stop 5: Waterbirds at the northern end of Walker Swamp

Bryan Haywood, Senior Ecologist

Initial results, after full restoration in 2019, indicate that both waterbird abundance and diversity have increased markedly in response to the increased duration and extent of water and associated changes to the diversity and abundance of wetland plants, and increased habitat and food-web complexity in Walker Swamp.



Recovery of waterbird species diversity in Walker Swamp over recent years.

Stop 6: The final piece of the puzzle adjacent to Walker Swamp

Mark Bachmann, Managing Director / Founder

On Friday the 30th June 2023, NGT completed settlement of an additional 390 acres of land at the northern end of Walker Swamp. The Restoration Reserve now totals approximately 1500 acres in size. This now includes a magnificent 200 acre area of threatened remnant Manna Gum mixed woodland that will be permanently de-stocked and managed for conservation. But that is only part of the story, as there is also a part of the land addition that is perfectly suited to a future large-scale revegetation project.

As shown right, there is a remaining final parcel of land (outlined red) that NGT is looking to secure in 2024 to add to the Reserve to create a logical final reserve boundary. Not only would this protect additional wetlands and enable us to expand the future woodland restoration project, but it protects the eastern margin of the swamp, and provides year-round access to the northern end of the Reserve.

Although we are not publicly discussing this project yet, we are privately seeking contributions towards a pool of funding that would allow us to apply for matching grant funding to secure this parcel of land in 2024. For more information or to discuss, please contact Mark Bachmann on 0421 97 8181 or email mark.bachmann@ngt.org.au.



Acknowledgements for the 2023 land purchase

Thanks to over 200 donations from a wide range of supporters in the community, we reached our 2023 land purchase fundraising target of \$500,000 in the two months leading up to settlement. The event today is our small way of saying thank you to you all! A range of private philanthropic trusts and foundations also played a leading role. Two that deserve a very special mention are the Purryburry Trust, who offered to continue to match donations when our initial pool of matching funding was running low; and the Drakensberg Trust, whose significant contribution in late June allowed us to complete the fundraiser ahead of settlement.



As well as an incredible level of community and volunteer support over the past 5 years, the project activities presented in this summary have been made possible thanks to partnerships or direct grant funding support from a range of other organisations and programs:

