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2023**

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## **JUDGES' REPORT**

### **LANDSCAPE & HABITAT**

### **NELSON MARLBOROUGH FISH & GAME PARA WETLAND**

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#### **INTRODUCTION**

Para Wetland is a nationally significant wetland complex alongside State Highway 1 between Koromiko and Tua Marina. It covers about 120 ha, with land parcels primarily owned by or vested in Fish & Game (105 ha), and the rest in private land.

It is the only remaining significant area of lowland freshwater wetland in Marlborough and is classed as having high ecological value. However, the wetland has been severely degraded by willow infestation and altered hydrology.



Fish & Game NZ maintains and enhances sports fish and game birds and their habitats for the long-term interests of anglers and hunters. They are a not-for-profit organisation, funded by fishing and hunting licence fees.

Fish & Game originally acquired Para Wetland to preserve waterfowl habitat from drainage and protect gamebird hunting opportunities. But over the last 15 years the focus has grown to include preservation and restoration of the wetland ecosystem.

## GENERAL INFORMATION

Para Wetland was originally predominantly a flax and carex wetland with scattered stands of kahikatea, swamp maire, lowland ribbonwood and areas of raupo.

The Tua Marina River, which feeds into the wetland, has been straightened over time, and the original meandering river is now a channel through the wetland, reducing water supply to the wetland area. Marlborough District Council (MDC) manages the river as part of their flood protection plan.

Land use in the catchment is dominated by pasture on the river flats and production forestry on the lower hills. With the development of the wider catchment, introduced grey and crack willow have replaced native species in the wetland. A survey carried out in 1998 revealed that only 15% of the wetland remained in native plant communities. The rate of sedimentation is likely to have increased, altering the hydrology of the wetland. MDC State of the Environment monitoring at the bottom of the catchment has shown that water quality is in the marginal category.

The primary purpose of Fish and Game's management of the wetland is to enhance waterfowl habitat and gamebird hunting opportunities. Excavated ponds with artificially elevated islands were created and open water is maintained to provide for hunting. Less than 10% of the wetland is actively managed for this purpose, the rest remains wetland habitat.

In 2010 a \$120,000 grant from the Gamebird Habitat Trust, a fund created from annual gamebird licence sales, allowed an extensive willow control programme to begin. Additional funding for planting was also received.

The approach of poisoning willow and leaving them standing to naturally decay was the most practical, cost effective and a lower impact method of controlling willows in the wetland. However, there was a lack of understanding within the community of the benefits to this approach, and visually it was not appealing, particularly given its proximity to State Highway 1 and the tourist route. Fish & Game were criticised by some of the public.

A Restoration and Development Plan was commissioned by Fish & Game in 2013.

This extensive document provided recommendations for hydrological management, water quality, community education and engagement, pest and weed control, research and monitoring.



Fish & Game's vision for the wetland is that:

*"Para Wetland will be a healthy, flourishing, productive and predominantly indigenous wetland ecosystem. It will provide outstanding habitat for a range of wetland bird species - both threatened natives and waterfowl. The project will be a shining national example of the relationship between hunting and wetland conservation/restoration. It will be celebrated by the community as the largest restored remnant of the once extensive lowland wetland landscape of the lower Wairau and appreciated for its intrinsic values. It will provide opportunities for recreational use, education and research, and sustainable harvest of appropriate species."*

Due to the expense of willow control and limited capacity and resources of Fish & Game, most of the actions undertaken to date have been limited to willow control, planting and creation of artificial ponds for waterfowl. Most of the control of mature willow has been completed, and now work primarily involves spraying of regrowth.

Fish & Game have partnered with various organisations including Forest & Bird, Queen Charlotte College, Pernod Ricard Winemakers, Conservation Volunteers and Outward Bound, for some planting and maintenance. Other schools and educational organisations have also been involved.

Planting has largely been successful, but requires post-planting maintenance and ongoing weed control, primarily of *Muehlenbeckia australis* which is beginning to smother some of the plantings.

Recreational use of the wetland is mainly by hunters and to a lesser extent by anglers, kayakers and birdwatchers, due to limited access points, visitor facilities and possibly lack of awareness by the wider community.

Fish & Game use the analogy that you need to break eggs to make an omelette and this has been the case for this project. The willow control has been visually unappealing and there has been some conflict from adjacent landowners about the willow removal and hydrological management of flood risk.

### THE JUDGES WERE IMPRESSED BY:

- The success of the control programme: Fish & Game have, without doubt, been successful at controlling the original willow trees and regrowth. Five blocks in the wetland have been developed with progressive stages of willow control evident. This work is transformational with large tracts of the wetland now predominantly willow-free and reverting to indigenous-dominated plant communities.
- Commitment and investment in the project beyond what is required to increase waterfowl numbers for hunting: Their planting programme has resulted in 10,000 plants in the ground, including 4000 kahikatea with seed sourced from forest remnants within the wetland.
- Engagement with youth: Fish & Game's aims to connect with young people and provide future generations with a pathway to engage with the organisation's objectives - gaining



social licence for game bird hunting, introducing children to the outdoor environment and raising awareness of wetlands as a special habitat.

- Working with the Whale Trail Trust: Providing safe access off State Highway 1 was proving difficult for Fish & Game. Using the opportunity to negotiate with the Whale Trail cycleway project and the subsequent development of a Memorandum of Understanding has mitigated concerns for potential impacts to both hunters and wildlife. This collaboration will result in increased public access, enjoyment and potential education opportunities around Para Wetland.

## PROBLEMS AND HOW THEY HAVE BEEN TACKLED

- Neighbouring land use: Para Wetland is vulnerable to sediment from adjacent land use, including forestry and farming. As part of the flood plain, flood protection methods have impacted on the wetland, and perversely, may reduce the wetland's ability to protect adjacent land from flooding. Relationships with some of these stakeholders has by admission been acrimonious in the past.
- Site conditions: Undertaking willow control in a wetland habitat is operationally difficult due to access. Finding contract labour prepared to undertake the extremely challenging problem of spraying and/or cut and pasting of willow in the wetland was difficult. Aerial control was the most effective method of control and required ground control is currently largely done by Fish & Game staff.
- Capacity to expand the project: With only one field staff member in the district, Fish & Game have found it difficult to maximise the many opportunities that present themselves, such as community engagement. Teaming up with other groups, such as Conservation Kids NZ, has worked well.
- Muehlenbeckia: This native vine is having a significant impact on natural and planted regeneration. Control is by hand and occurs when time and resources allow.
- Management of the wetlands: the need to strike a balance between maintaining some open water for gamebird hunting and restoring ecological values of the wetland.

## SUMMARY

Fish & Game's achievement in controlling willow throughout the 120ha wetland has been outstanding and should be considered a significant ecological success.

This controversial project came with significant reputational risk and financial investment. With time and an active planting programme, the wetland is starting to recover, and the benefits are beginning to emerge.

What was once seen as an eyesore, the wetland has become a significant landscape feature of the State Highway 1/KiwiRail route. Fish & Game is now in the position of sharing key learnings with others and taking the project to the next step in ecological restoration.

## SUGGESTIONS

- Review and update the 2013 Restoration Plan. Restoration plans should be a fundamental driver of operations, and therefore this review should be an internal process to ensure ownership of the goals. A revised Restoration Plan will assist with

work planning, prioritisation of actions and funding applications beyond willow control.

- Plant stream and pond edges with overhanging vegetation. Lack of shading and cooling of the waterbodies appears to be one of the major impacts on water quality. Continued planting, focusing on stream and open water edges, would provide shade as well as habitat for macroinvertebrates, fish and waterfowl. Shading will also reduce macrophytes (including oxygen weed) and therefore sediment accumulation, reducing the use of herbicides.
- Develop a Memorandum of Understanding with MDC to clearly outline and align agreed actions on hydrological management, flood management and water quality monitoring, and meet at least annually to maintain the relationship and progress actions.
- Build on current knowledge by setting up monitoring and inventory programmes for more effective monitoring of changes in the wetland and to aid management decisions, for example:
  - Undertake at least one year of predator monitoring (tracking tunnels, four times a year) to determine species and density to inform any potential trapping programme.
  - Undertake eDNA sampling. Seek funding opportunity through [EPA's eDNA community programme](#).
  - Kahikatea forest regeneration assessment [Kahikatea Green Wheel](#).
  - Regular effective monitoring of bird species present, both game birds and indigenous species.
- Undertake proactive engagement with stakeholders:
  - Host annual community meetings with farmers, forestry, Waka Kotahi, KiwiRail and iwi to create a more sympathetic working relationship, foster potential collaboration and aid future resource consents.
  - Building relationships and being transparent on hydrological management could remove some of the misunderstanding and stigma regarding Para Wetlands contribution to flood impact.
  - Consider using an external facilitator to assist with conflict management.
- Host technical field days. Demonstrate leadership by showcasing success and sharing knowledge and experience of willow control in wetlands and riparian zones. This will also potentially help resource consent renewals in the future.
- Continue to work with the Whale Trail Trust. Provide an innovative wetland experience through short boardwalks, viewing hides and interpretation. Increasing educational and recreational opportunities will not only have intrinsic benefits but would make the project more attractive to sponsors and collaborative partners which in return can result in increased restorative actions. This will enable other aspects of the Management Plan to be realised aside from weed control and planting.

- Continue underplanting the Kahikatea stands to reduce weed growth. A useful resource is [Forest-Fragment-factsheet](#).
- Continue to explore ways of involving tangata whenua in a meaningful way with the site.