



*Western section of Waihi Harbour Wildlife Management Reserve*

## **Waihi Harbour Wildlife Management Reserve Biodiversity Management Plan**

**Annual Report 2015-16**

### Period Covered

This project was started in January 2015, with the BMP starting on July 1st 2015. This report will therefore cover the 18 months through to June 30th 2016.

### Overview

The Waihi Harbour Wildlife Management Reserve is a DOC reserve covering 65 hectares on the south side of Waihi Harbour. It is divided in two by the Pongakawa Stream with the area to the east being largely natural saltmarsh, while the area to the west, which is bounded by the Wharere and Kaikokupu streams, is divided in two by an east-west causeway, the land to the north of this being natural saltmarsh, while the land to the south is an area that was farmed some 15 years ago and has since reverted to fresh/brackish water wetland with mixed vegetation including significant areas of pampas and mercer grass with a few willows..

At the start of the project there was access along the southern stopbank to the Pongakawa Stream and from there down the stream bank to Waihi Harbour, this latter section was overgrown with pampas and gorse. The western stopbank down the Wharere Canal and the Kaikokupu Stream was completely blocked with a near 100% covering of pampas. There were in excess of 100 mature black wattle trees, some of significant size on both sides of the western section of the reserve..

### The Work Programme

The initial programme, starting in January '15, was to remove the pampas and wattle trees along the western stopbank and across the east/west causeway. The pampas on the stopbank was piled into windrows, while that along the causeway was pushed into the channel on the saltmarsh side. This channel had been dug in the construction of the causeway so is not a natural feature. After the initial die-back, any surviving pampas was sprayed with Haloxypop.



*First day of operations - Wharere Canal stopbank.*

Once the area had been cleared and surviving pampas growth sprayed, we used a chain harrow to smooth the area and then sowed rye grass along the stopbank and the causeway, ensuring that there was access on both sides of the pampas windrows to facilitate future management. This sowing has been very largely successful and can be managed by regular mowing.

While the plan was then to burn the dead pampas, the first two windrows were actually fired by an unknown party on the eve of the duck-hunting season and the word put out that MOWS had been responsible. The third section was fired later in the year by DOC. In hindsight this appears not to have been a good plan as the firing appears to have speeded up weed germination with luxuriant growths of inkweed and *Solanum nigrum*. The latter being an annual is not as big a problem as inkweed which grows to a prodigious size very quickly and is only somewhat susceptible to frost. The pampas along the causeway was controlled on an ongoing basis by spraying.

Once we had dealt with the major infestation on the western side and on the causeway, we used the digger to clear the eastern side of the main reserve, removing mainly pampas and gorse from the western bank of the Kaikokupu Stream. As on the western side, we then sprayed any regrowth and harrowed and sowed the area with rye grass.



*The Causeway looking east.*



*Western Stopbank, Day 2*

#### Eastern Section

The initial plan was to deal with this area in year two as the stopbank was impassable with pampas, gorse and bramble, however in January 2016, the Drainage Society sent a digger down the stockbank along the Pukehina Drain and the Pongakawa Stream, all the way to the harbour. While the drainage job was probably fine, no effort was made to clear the mess including leaving sizeable trees lying in situ. In order to prevent a takeover by weeds, we decided to bring back our own digger to clear the place, harrow it and sow with rye grass. This operation was completed in April 2016 allowing us to start the pest control programme on that side of the reserve. We maintain regular weed control programme on both sections of the reserve.



*Stopbank on the eastern section of the reserve - looking south up the Pongakawa stream.*

### Native Wildlife

Being part of the Waihi Harbour ecosystem the reserve is an important area for waterside and wetland birds, specifically Australasian bittern, fernbird, banded rail, marsh or spotless crake, pied stilt, shoveler and royal spoonbill. All of these, with the exception of spoonbill, breed in the reserve. Mallard and grey teal are also present in the reserve, the former breeds, the latter may do, but we have no evidence at present. We have not yet conducted a reptile survey, but we anticipate that we will find either skink or gecko within the reserve. An invertebrate survey will also be conducted. There are significant numbers of waterfowl using Waihi Harbour and visible from the reserve, these include, paradise shelduck, black swan, bar-tailed godwit and a wide range of other migratory waders.

### Pest Animals

The wetland has pretty much the full complement. Before setting up the traps we set out 22 track-tunnels. Surprisingly only 2 indicated the presence of rats, the others were pristine apart from a probable crake footprint in a tunnel beside the Kaikokupu Stream. The reason for the absence of rats was quickly shown to be due to the presence of numbers of mustelids. Trapping started in September 2015 using 16 double set DOC200 traps as well as six GN12 self-setting Possum traps. Unfortunately a technical accident resulted in the loss of our trapping data for 2015, though we know that at least 13 possum were trapped during that period.

Ferret	Stoat	Weasel	Hedgehog	Rat	Mouse	Possum	Cat	Myna
3	13	7	15	22	6	Nil	1	1

*Waihi WMR Western Section: trapping figures January through to June 30 2016.*

This is a total of 67 critters at an average of 2.6 per week. Since then the average has dropped to 1.23 during the first quarter, though the most recent period shows a spring increase.

Trapping in the eastern section started in April 2016, this was due to the amount of work that needed to be clearing the stopbank and dealing with the pampas. The results show a generally lower level of infestation but much of the area is saltmarsh and not natural pest habitat.

Ferret	Stoat	Weasel	Hedgehog	Rat	Mouse	Possum	Cat	Myna
nil	4	1	nil	2	1	nil	nil	nil

*Waihi WMR eastern Section; trapping April through June 30th 2016*

We have not looked to trap possum in this section though we may consider doing so in the future, we may also need to consider cat control though at present we have no evidence of them being present or a problem.

### Pest Plants

The major pest plant that we have dealt with to date has been pampas, this plant was completely blocking the western stopbank and the east-west causeway. The

initial work involved a digger working for 7 full days to remove this pampas much of which was piled in windrows along the western stopbank. Further digger work was required to clear more of the eastern stopbank, and a further four days of digger time was used to clear and tidy the stopbank on the eastern side of the reserve. In February we used a helicopter to spray the pampas in the enclosed southern section of the reserve. This has been largely successful. Pest plant control is one of the three main focuses of the plan, the other two being animal pest control and planting of native species.



*Helicopter spraying pampas and mercer grass in the freshwater wetland.*

Along the harbour margins there is a significant infestation of sea couch, fortunately we are able to access this area with our ATV at low tide and sprayed all of the sea couch along the western section of the reserve in 2016, this will need a follow-up in 2016/17 and we will start dealing with the infestation in the eastern section of the reserve.

### Water Levels

There is just one culvert connecting the southern area to the Pongakawa stream. One of the first tasks was to clear the flapgate which was silted up. Since then we have had a fish-friendly mechanism attached and have also repaired the weir inside the culvert which controls the water levels. BOPRC have also installed some level measures to enable us to manage the water levels effectively. Early on we left the gate open for about a month, this did not appear to create any problems as the weir ensured that the water level within the wetland remained fairly steady. One effect we think this had was to kill the willows that were found in the enclosed southern section of the western reserve.

The fish friendly attachment ensures that the flapgate is always open between half-tide and low tide, this ensures plenty of opportunity for fish to move in and out of the wetland, and ensures a good interchange of water.



*Fish-friendly device on Flapgate.*

### Planting

Most of the flat areas on the stopbanks and causeway were harrowed and seeded with rye grass, this was largely for ease of maintenance. The grass is mowed on a regular basis, twice a year by Fish and Game, on other occasions by MOWS. This strategy has been largely successful and has ensured that much of the cleared area is relatively low maintenance.

In September 2015, we planted some 600 native plants along the inside of the south western stopbank. The current plan is to continue this programme, initially down the western stopbank and on the pampas windrows, before progressing along the causeway and then along the western causeway along the western bank of the Pongakawa Stream. We not intend to do any significant planting in the eastern section until we have sorted the western section.



*First Plantings - October 2015*

### Monitoring

The BMP does not include any specific wildlife monitoring other than surveys for reptiles and invertebrates, however photopoints have been set up around the reserve to record the transformation from a pest ridden disaster zone to an easily accessible wetland with significant educational and eco-tourism potential.

The western section of the Wetland is very accessible, access is down Wharere Road, off SH2, there is an 800m. walk along the stopbank from the gate to the pumphouse at the south-western corner of the reserve. The eastern section is accessible via farm tracks off Cutwater Road but does not have easy public access except by boat.

### Hunting

The reserve is used by hunters and Fish & Game are involved in the BMP and assist with the mowing of the stopbanks. Most hunting occurs during the first 6 weeks of the season and we have an MOU with F&G on the level and timing of restoration work, mainly during April and May. We had some trouble in May with one trap and a photo point post being shot up, and a maimai on the Kaikokopu stream was shot up and vandalised. We have discussed the issues with F&G who are as concerned as we are by this sort of irresponsible behaviour.

### The Year Ahead

The main focus for the next couple of years will be weed and pest control and the planting of native species. Once we have established a degree of control, we will be able to develop additional programmes. We have already used the site for our educational programme with visits from Maketu and Pongakawa schools. We hope that this will become a regular feature of our programme, we will also look to establish a number of bird hides around the reserve to allow birdwatching by locals and national and international visitors to become a major feature of the site in the future

Two young bitterns have recently been released into the reserve by DOC, this happened after the end of the year in question and so will be reported on more fully in the next annual report.

### Thanks

We could of course not achieve any of this without our partners in this project, the department of Conservation who own the reserve, Bay of Plenty Regional Council and Western Bay of Plenty District Council who are the main funders for the project and Fish & Game whose interest in, and contribution to, the reserve is of fundamental importance. Organisations are one thing, but it the people with whom we work that really make the difference, so very many thanks to Mark Anderson, Brad Angus, Kate Miller and Karl McCarthy from DOC, to John Meikle for F&G and Glenn Ayo from WBOPDC. Above however thanks to Ryan Standen and Hamish Dean from BOPRC who helped set up the [project and have been invaluable in

keeping it moving. Without their understanding and appreciation of the difficulties we have encountered, we would not have made the progress we have.

Many thanks to Forest & Bird te Puke Branch who have made a significant financial contribution to the project and to our other regular supporters, Bay Trust and TECT. Together we have made an excellent start on transforming what could only have been described as a wasteland, into something of real cultural, biological, and maybe one day, economic value.

Thanks also to the members of the Waihi Harbour Drainage Society who have been supportive of and cooperative with, the projects, special thanks to Scott Pammit who farms immediately south of the reserve and Dennis Wilson their spray contractor with whom we have a good working relationship.

This is a very special site with real potential in a number of areas, our work has already enabled us to lobby successfully for Waihi Harbour to be upgraded to Category A in the Regional Coastal Environment Plan. While the changes in wildlife numbers are not yet fully apparent, the very fact that we can now visit, observe and monitor is a huge step forward. Ten years hence it will be amazing.

Julian Fitter  
Maketu  
31 October 2016.