

2017-2018 Tiromoana Bush report

Introduction

This report highlights some of the outcomes of the Tiromoana Bush Restoration Project over the 2017-2018 management year. Management is guided by the goals outlined in the 2017-2022 Tiromoana Bush Restoration Management Plan.

Landscape photo points

Thirteen landscape photo points were established in December 2004 and are re-photographed annually, providing a good overview of vegetation change associated with restoration management. The December 2017 photos represent 13 years and changes are now starting to become very apparent. The following image of Kate Pond (Figure 1) illustrates some of the changes, with a greatly increased cover of woody vegetation including restoration plantings around the pond itself.



Figure 1. December 2004 (left) and December 2017 (right) views across part of Tiromoana Bush (Kate Pond is in the 2017 image).

Avifaunal monitoring

We completed five years of bird monitoring from 2005-2009 which established a good baseline of the birds present and their abundance. 2017 is the first year of three further bird surveys that we are currently undertaking, and we will continue to repeat these at regular intervals as we track progress with restoration in terms of outcomes for birds. The 2017 survey recorded the same range of species, but abundances were at the lower end of the 2005-2009 range for some species, but comparable or higher for other species, perhaps reflecting seasonal differences (Figure 2). In 2017, two observers were involved, as the original observer is now retiring and passing the surveys over to a new observer and this allowed for calibration.

Deer fence completion and control of deer and pigs

A major achievement in this management year was completion of the 15km deer fence around Tiromoana Bush, followed up by an intensive one-week deer and pig hunt. Two deer and 29 pigs were killed (Figure 3), with a further six pigs killed the following weekend in or adjacent

to Tiromoana Bush. While there are still likely to be some pigs present, having numbers substantially reduced will significantly reduce impacts and make ongoing control easier.

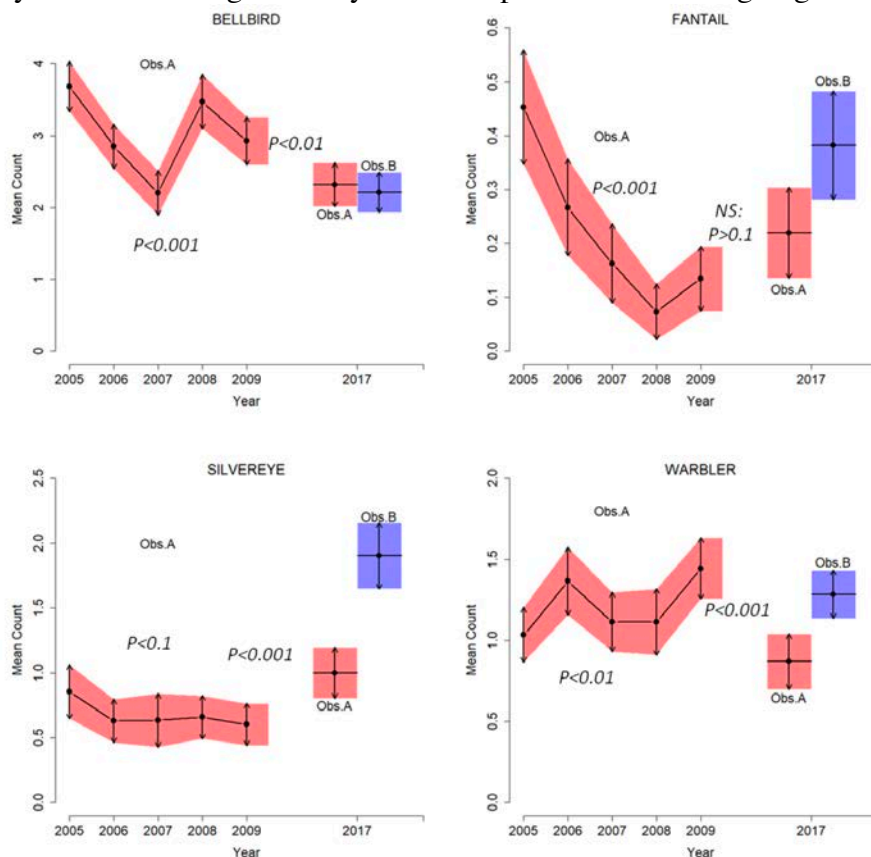


Figure 2. Abundance of four native bird species from 2005-2009 and 2017 monitoring.

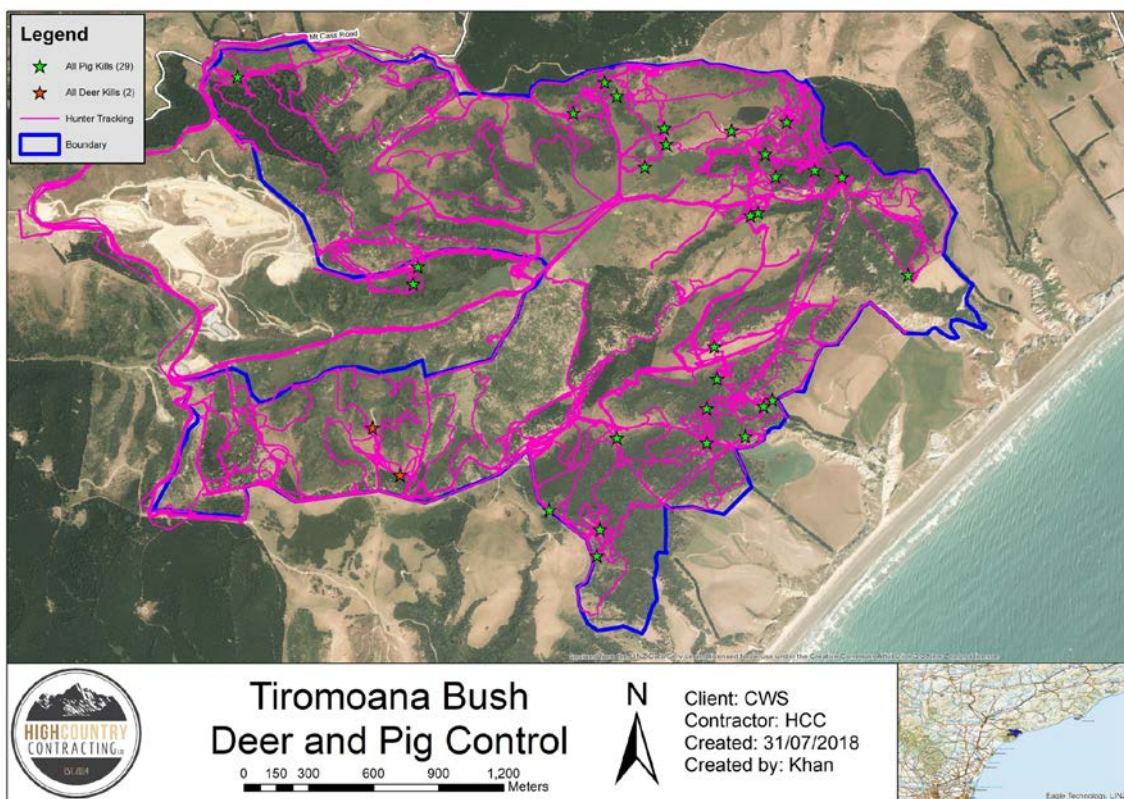


Figure 3. Hunting effort and location of pig and deer kills.

Restoration plantings

We continue with our annual restoration plantings, covering about 1 ha each year (although plants are spread around different areas of Tiromoana Bush). We are now shifting our attention in restoration planting to the main valley floor of Tiromoana Bush where we are planning to establish an extensive kahikatea dominated forest. Early (2006) plantings of kahikatea around Kate Pond are now 4-6 m tall and up to 5 cm in diameter, suggesting that within a 10-15 year period we are likely to be able to establish a well-developed young kahikatea forest. Existing restoration stands are also developing well with subsequent regeneration establishing under their shade (Figure 4). We are now considering interplanting some of these with tōtara to try and speed up the progression towards a more diverse forest structure.



	2008	2012	2016	2008	2012	2016	Canopy
	Survival %	Survival %	Survival %	Height (m)	Height (m)	Height (m)	Cover %
Plot 1	100	78	69	0.45	2.19	4.14	84
Plot 2	100	86	82	0.39	1.65	3.08	49
Plot 3	100	81	81	0.48	1.87	3.73	113

Figure 4. Restoration development over eight years, Tiromoana Bush.

Walkway

The walkway upgrade with new signs and tracks has now been completed. A highlight of this has been installation of a new information board at the carpark and the building of the coastal viewing platform (Figure 5). We have also commissioned and had a pou whenua (land post) built by Ngāi Tūāhuriri carver for this platform, but because of factors beyond our control this will not be installed and blessed until the end of 2018. We have also installed a track counter which is telling us that around 60 people on average are walking the track each week.



Figure 5. Coastal platform, information board and finger signs on walkway.

2018-2019 work plan

Introduction

The following Work Plan is based on the goals in the 2017-2022 Tiromoana Bush Restoration Management Plan and is for the financial year commencing 1 July 2018.

1. Management Planning

Action 1.1: Annual Work Plan Preparation

- Review 2018-2019 restoration work and prepare 2019-2020 work plan in line with 2017-2022 management plan.

Action 1.2: Tiromoana Advisory Group Meetings

- Review role of Tiromoana Bush Advisory Committee in terms of what best suits the future needs of the project and resource consent requirements.

2. Monitoring

Action 2.1: Photopoints

- Re-photograph landscape photopoints in December 2018.
- Re-photograph restoration plot photopoints.

Action 2.2: Permanent Plots

- Remeasure all existing restoration monitoring plots.
- Establish additional permanent plots to monitor restoration plantings in new planting areas.

- Establish two permanent plots in areas of gorse shrubland.

Action 2.3: Faunal Monitoring

- Undertake second year of measurements in new round of avifaunal monitoring.

3. Plant and Animal Pest Control

Action 3.1: Weed Control

- Survey for and remove woody weeds as per management plan.
- Undertake aerial control of gorse along deer fence above the water supply dam access track.

Action 3.2: Animal Pest Control

- Continue with rabbit, hare and Canada goose control as required.
- Undertake initial mammal predator monitoring to establish densities.

Action 3.3: Fencing

- Continue to control pigs as required.
- Undertake annual fence inspection and any maintenance work arising from this.

4. Plant Restoration

Action 4.1: Restoration Propagation

- Continue with restoration plantings with a focus on the floor of Kate Valley.
- Continue appropriate maintenance for earlier plantings.

5. Recreation and Community Relations

Action 5.1: Public Walking Track

- Undertake ongoing maintenance of walkway.
- Install two interpretation panels (Barbara's Lookout and Kate Pond).
- Install pou whenua and interpretation at coastal lookout.
- Hold formal opening of upgraded walkway with Ngāi Tūāhuriri.

Action 5.2: Newsletter, Brochures and Web Page

- Upgrade the Tiromoana Bush web site.
- Prepare new brochure on Tiromoana Bush restoration project to coincide with the ten-year project review and to reflect track improvements.

Action 5.3: School Liaison

- Make presentation on the Tiromoana Bush project to at least one high school.

Action 5.4: Voluntary Workers

- Facilitate voluntary input from individuals and groups to assist with the Tiromoana Bush project as the opportunity arises.

Action 5.5: Research

- Support research relevant to the objectives of the Tiromoana Bush project on a case-by-case basis.
- Prepare a scientific article for publication on the first ten years of the Tiromoana Bush restoration project.