

Mauao Project Progress Report

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Summary

Since 2020, EcoResto has partnered with Tauranga City Council (TCC) to restore previously unmanaged areas of native bush on Mauao. The purpose of this partnership is to create a resilient and self-sustaining ecosystem where native plants and wildlife can thrive, while protecting the natural and cultural heritage of Mauao for the benefit of current visitors and future generations.

Together with TCC, EcoResto has adopted a practical, cost-effective, and methodical approach to ecological restoration. The programme began with baseline pest plant and animal monitoring to identify pressures on the environment and to inform future work. Building on this foundation, the scope of activity has since expanded to include systematic pest plant management and targeted pest animal control. These interventions have been designed to address the most immediate ecological threats, alleviate persistent pressure, and provide the conditions necessary for native biodiversity to recover.

The results to date demonstrate significant progress. Native forest areas are showing substantial improvement in overall health and regeneration is increasingly evident in areas where interventions have been sustained. Equally important, the work completed has established a framework for long-term ecological management creating the potential for more coordinated and effective pest control in the future. The outcomes achieved reflect the value of a strategic partnership between EcoResto and TCC and highlight the opportunity to continue building on this success in the years ahead.

Current Progress

Pest Plant Control

Asparagus Fern



The majority of EcoResto's work on Mauao has focused on controlling the significant infestation of Asparagus fern. Initial densities were extreme. Climbing Asparagus Fern is a highly invasive vine. It smothers trees and shrubs by climbing into the canopy, blocking light and weighing down branches, while also forming dense mats on the forest floor that prevent native seedlings from establishing. Over time, this leads to a collapse in forest structure, loss of biodiversity, and long-term degradation of natural ecosystems.

Initially, our efforts were concentrated on areas with the highest levels of Asparagus fern infestation, prioritizing the release of native trees and shrubs that had been smothered by the invasive growth (Polygon 0, Figure 1). Once these priority areas had been brought under initial control, the focus shifted to ongoing suppression using targeted herbicide applications, ensuring the newly freed native vegetation could continue to recover. With this approach providing consistent results and consolidating earlier gains, we were then able to extend control efforts into additional areas, applying the lessons learned to maximize effectiveness across a broader section of the site. Ongoing follow-up, typically three times per year, is essential to adequately suppress regrowth and minimise collateral damage. Regular treatment progressively depletes the underground bulbs, preventing regrowth over time.

Hawthorn

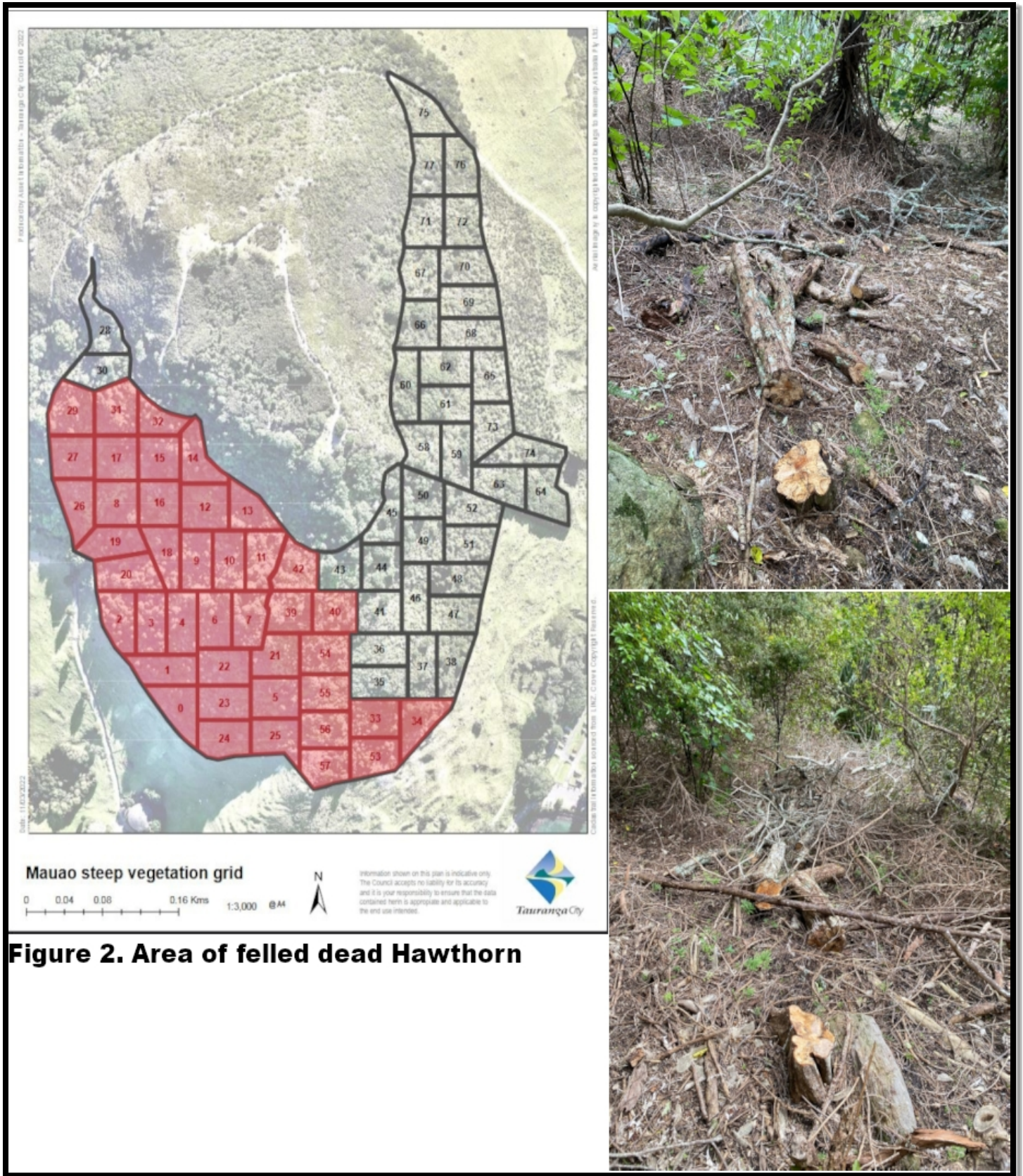


Figure 2. Area of felled dead Hawthorn

During this reporting period, we identified potential shortcomings in our earlier approach to managing the extensive mature Hawthorn infestation within the western and southwestern polygons (Figure 2). Hawthorn is a hardy invasive tree that spreads rapidly in New Zealand's native forests, forming dense thickets that outcompete native species for light and space. Its deep root systems and prolific seed production enable it to dominate large areas, suppressing natural regeneration and altering native forest structure.

Our initial method involved bore-cutting and poisoning the trees, leaving them standing dead to minimize immediate disturbance to surrounding vegetation and to reduce the time and cost of the work. However, this approach proved less than ideal, as the eventual collapse of these trees risked significant soil disturbance, including the uprooting of root masses.

To address this issue, we have since returned to these polygons and proactively felled the dead standing trees before they could cause further damage to the soil or potentially disturb archaeological features. Thanks to the earlier control efforts, the trees had already desiccated, shedding smaller limbs over time, which reduced both their size and mass. As a result, felling at this stage caused considerably less damage to the surrounding vegetation and left the treated areas in a more stable condition.

Japanese Honeysuckle

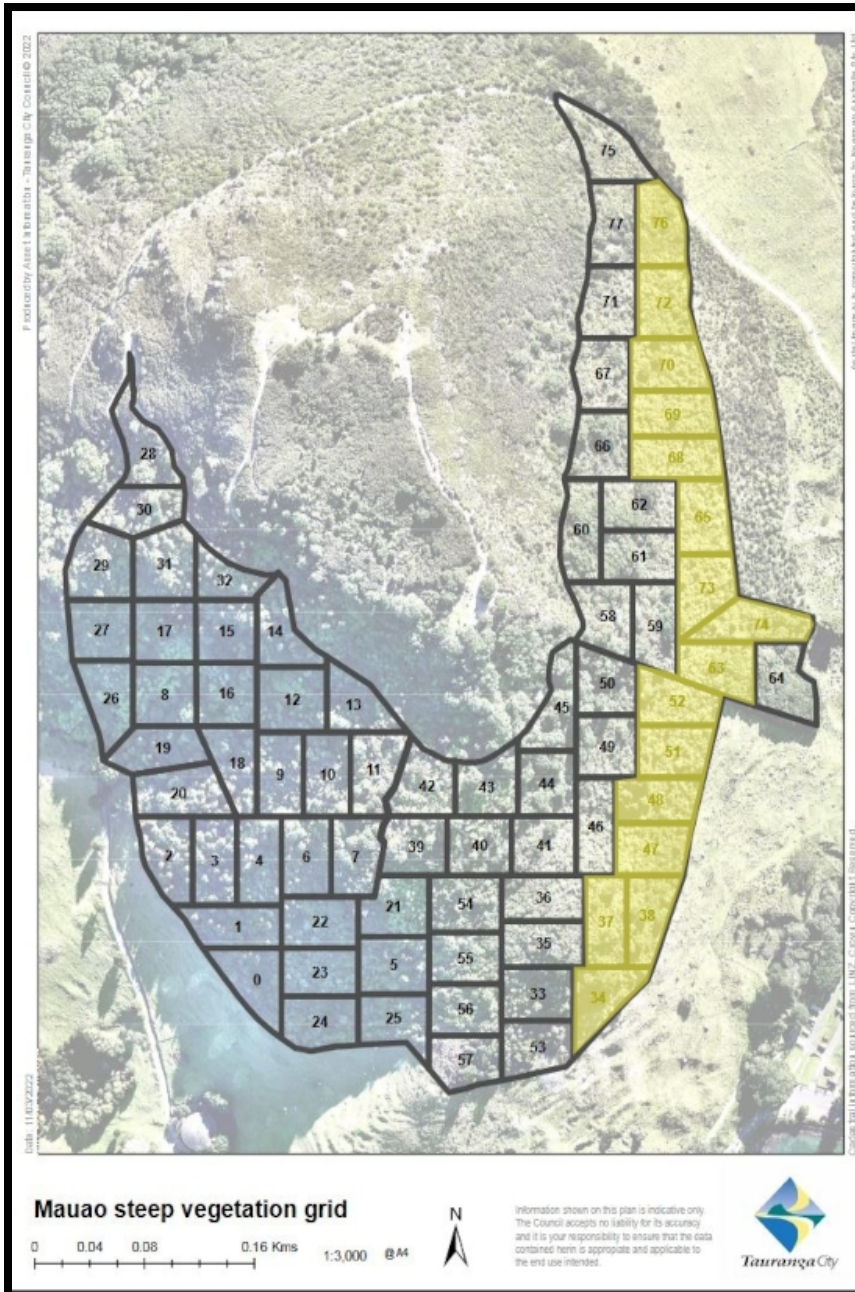


Figure 3. Area of initial control on Japanese Honeysuckle

As we have reduced our expansion of Asparagus fern control, during the days with poorer weather we have been controlling Japanese Honeysuckle in the polygons along the bottom edge of the eastern/southeastern side of Mauao (Figure 3). Japanese honeysuckle is an aggressive climbing vine that rapidly overtakes native trees and shrubs, smothering them and blocking access to sunlight. Its dense growth prevents the regeneration of native seedlings, ultimately reducing forest biodiversity and altering natural ecosystem dynamics. We have made great progress in controlling this invasive vine and removing it from the affected trees. The bulk of this work does not require agrichemicals, meaning we can undergo these works with minimal equipment, allowing us to go into harsher terrain and through more difficult vegetation.

Amongst the honeysuckle infestations we have found smaller infestations of moth plant, which have been removed from native trees and the seed pods from these vines have been collected and disposed of.

Miscellaneous small pest plants

There is a large variety of smaller pest plant species popping up in areas throughout Mauao, species like boneseed, wattle, cherry and buckthorn. These species are not currently having large detrimental effects on the native habitats of Mauao but have the potential to become large infestations that will threaten the current native plant life. The polygons north of our asparagus control area up to the tip of our contracted area were filled with species such as this, not large current problems but potentially damaging threats, nonetheless.

We have moved through these polygons controlling these smaller species in an attempt to get the entire western side of our contracted area to an acceptable state so we can then shift our focus over to areas in need of treatment.

Pest Animal Efforts

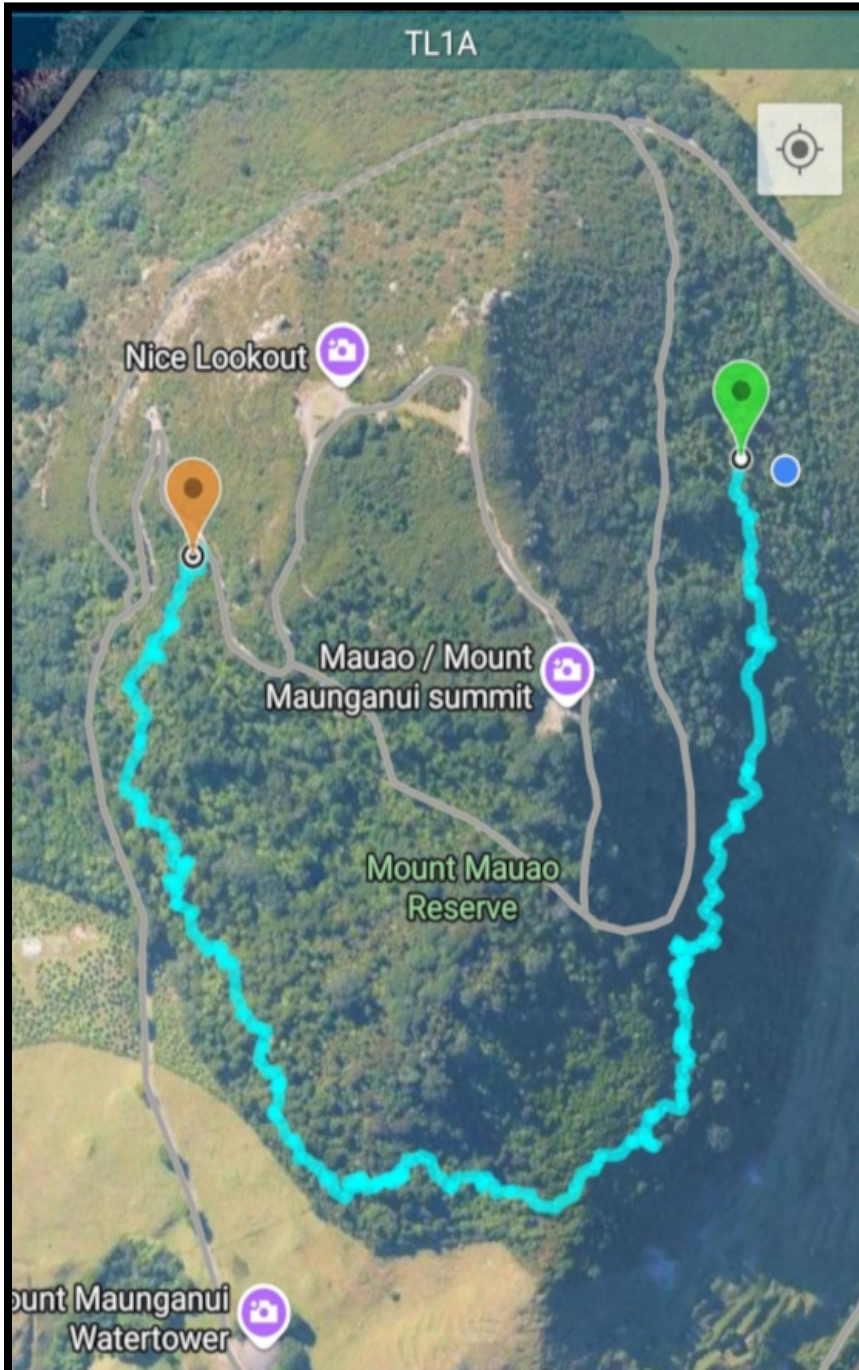


Figure 4. DOC200 trap line and track adjustment

Since 2022 we have been tasked with the cutting and maintenance of a trap line spanning the length of our contracted area (Figure 4), this line has been maintained and improved over time. This period we have installed 27 DOC200 traps and handed the line over to Wildlands staff for ongoing maintenance of the traps.

This period we have also cut small footholds into the track in the parts deemed most hazardous to reduce chances of injury on this hazardous terrain. This has been in conjunction with the regular tree pruning to retain access as well as spraying the tracks to kill off pests like blackberry and rose that were threatening the accessibility.

A lot of hard work has gone into the establishment of this track, maintaining it and installing the traps, so it was a great moment for us to show the Wildlands staff around and hear positive feedback of our efforts.

During this period, we have also been undergoing pest animal monitoring efforts in the form of tracking cards in our previously installed tracking tunnels. We continue to maintain and improve the tracks for these tunnels every year and have made good progress on access this period.

Planned Works

Looking ahead, our primary focus will remain on the control of climbing asparagus fern, with the aim of bringing the western side of the Maunga to the highest ecological standard achievable. During recent work, we identified a significant infestation of pampas grass within the western polygons, located in close proximity to sensitive native vegetation. To manage this, we will cut and treat the stumps with targeted herbicide to prevent regrowth while minimising any risk to surrounding natives.

In addition, we will continue to address the widespread presence of Japanese honeysuckle on the eastern side of the Maunga. Although this species presents considerable challenges, our objective is to contain its spread and progressively reduce its extent through ongoing follow-up treatments.

Finally, within the southeastern polygons, a large clearing below the asparagus fern control zones is becoming increasingly infested with woolly nightshade, blackberry, and thistle. We will undertake control of these species and collaborate with TCC to identify longer-term management solutions that reduce the level of intervention required in the future.

Conclusion

Works on Mauao are progressing well and major improvements have been made to native habitat since we have started. We look forward to continuing our efforts to restore our contracted areas to a state that can support healthy native biota and be a good example of what native forested areas on Mauao should be.