



Investigating manuka-dominated ecosystems to improve water quality



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Develop manuka ecosystems to improve the water quality in Lake Waikare.

This five-year project seeks to develop demonstration plots that use mānuka (*Leptospermum scoparium*) based ecosystems to improve the water quality in Lake Waikare.

The project's vision is that these plots will improve the effectiveness of spending on the rehabilitation of waterways by demonstrating that mānuka-based ecosystems effectively reduce pathogens, plant nutrients and sediment entering the lake.

Two 2-hectare sites will be prepared involving:

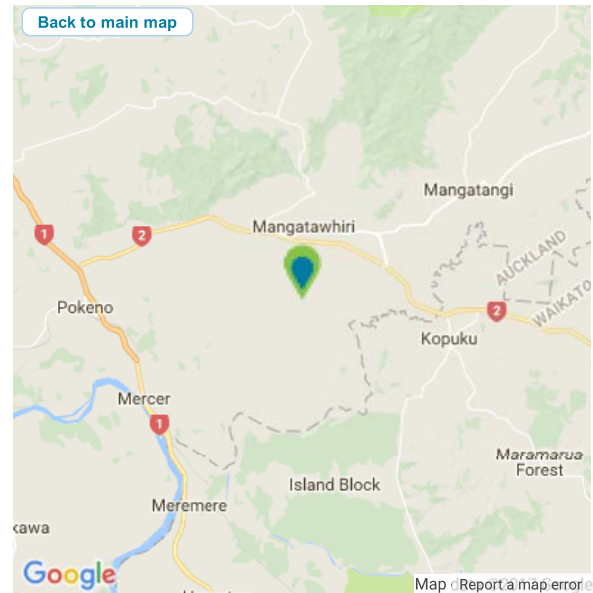
- identification of valuable native species that can be left on-site and removal of the few wilding alder and willows
- fencing to ensure that stock is excluded
- 5 soil pore-water samplers and 5 sediment traps will be installed prior to planting. In adjacent unplanted areas, samplers and traps will be installed as controls.

Seedlings, with plant-guards, of swamp-mānuka (7000 plants/ha), harakeke (*Phormium tenax* - 500 plants/ha), tī kōuka (*Cordyline australis* - 500 plants/ha) and selected other species (2000 plants/ha), will be planted.

In years 2-5 the site will be maintained by weeding and spot-spraying.

Data from the monitoring equipment will be collected and collated by Dr Maria Jesus Guitarrez-Gines. Results will be available on the website www.kiwiscience.com, in scientific articles and public reports. The functioning mānuka-based ecosystem will be left in perpetuity.

This project received funding from the Waikato River Authority (WRA 16-008).



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