

Tukituki Land Care

Mangamahaki

SUB-CATCHMENT PLAN: SUMMARY

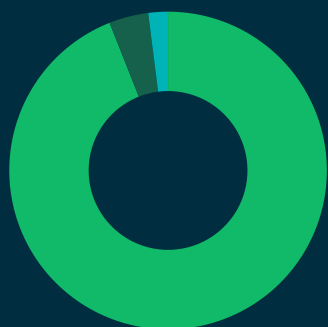
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MANGAMAHAKI AT A GLANCE

The 26,418ha Mangamahaki catchment, centred around Omakere, supports sheep and beef farming, cropping, and some forestry. In 2021, the community formed the Mangamahaki Community Catchment Group to address environmental and flood-related challenges.

Frequent extreme rainfall has worsened flooding, with dense willow infestations blocking waterways. This has caused erosion, sediment loss, and affected the water quality. At a meeting with HBRC in 2022, locals raised concerns about the stream's flood risk, business impacts, and ongoing degradation. As a result, HBRC launched a three-year willow removal project, aimed at clearing 25.5km of stream. It is now clear that more time and funds will be required to clear the length of the stream.

A 2024 TLC Demonstration Project, with support from the Cyclone Gabrielle Appeal Trust, focused on riparian planting demonstration, with over 3,000 natives established to stabilise banks, filter nutrients, and boost biodiversity post willow removal.



- Pasture
- Exotic Forest
- Other

94 percent of the catchment is in the pasture and four percent is in exotic forest.

"Tukituki Land Care (TLC) is tackling the big issues sub-catchment by sub-catchment, to piece together The Big Picture."

Richard Hilson
Chair, Tukituki Land Care



SCAN FOR FULL REPORT

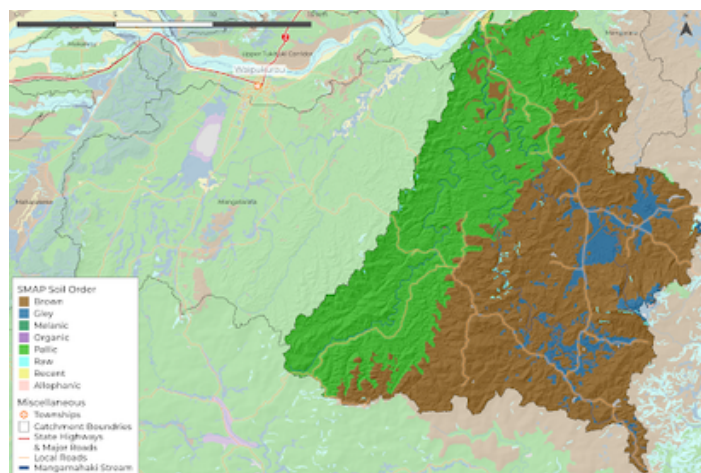


MANGAMAHAKI: CONTEXT AND

LANDSCAPE CONTEXT

The Mangamahaki catchment is dominated by flat country in the centre of the catchment with rolling to steep country in the west. Historically, the central catchment would have been wetland areas, which has left behind fertile Gley soil. The topography and soils have a particular way that they interact with nitrogen and phosphorus. The soils left behind by wetlands will have a low nitrogen loss profile and will often denitrify nitrogen rich water. However, they have a reduced ability to bind phosphorus to the soil, meaning phosphorus will easily leave the soil once in contact with water. The soils in the catchment are also susceptible to erosion, further increasing phosphorus in waterways.

The western part of the catchment is categorised as hill-country, and is highly susceptible to erosion. Much of the phosphorus lost in a catchment will be attached to soil and dung and be released as erosion in rainfall events.



SMAP Soil Order - Mangamahaki

FOR MORE INFORMATION HEAD TO WWW.TUKITUKILANDCARE/MANGAMAHAKI

WATER QUALITY

High levels of phosphorus in the catchment is likely related to sediment loss, both through landscape and streambank erosion.

The table below shows catchment water quality indicators over a five-year rolling average. The standard represents water quality levels based on the Tukituki plan or national standards.

Water Quality Parameter	Mangamahaki	Standard
Nitrogen (DIN)	0.134 mg/ L	0.8
Phosphorus (DRP)	0.024 mg/ L	0.015
Bacteria (E.coli)	110 (count)	260
Freshwater invertebrates (MCI)	54.7 (index)	100
Sediment (Turbidity)	4 mg/ L	5.6 FNU (light)

AND CHALLENGES



LOCALLY IDENTIFIED CHALLENGES

A December 2024 TLC Mangamahaki workshop focused on various environmental and land management issues facing the catchment.

Attendees highlighted the continuing challenges of flooding and the impact this has on both the environment and the community, with past flooding events damaging farmland and infrastructure and frequently forcing the closure of Omakere School and Play Centre as roads became impassable.

The group agreed that the catchment needed to have a collective vision to help support a more unified approach to their catchment planning and subsequent on-farm actions. Several focus areas were identified at the workshop, including:

- 'how-to' Toolboxes on willow removal, riparian planting and weed control,
- understanding the Emissions Trading Scheme (ETS)
- research on elders trees and erosion control,
- Information on HBRC grants.

Erosion control is a critical priority for the catchment, as the area's soil is particularly vulnerable to erosion. This vulnerability is reflected in water quality data, with elevated turbidity levels. Among the Tukituki catchment's waterways, the Mangamahaki and Mangarara have the highest estimates of suspended solids. Invasive willows are adding significant challenges to riverbank protection and flood plain management.



TLC DEMONSTRATION PROJECT

In 2024, the Mangamahaki catchment used a TLC Demonstration Grant, with additional funding from the Cyclone Gabrielle Appeal Trust, to showcase best practice for establishing and maintaining riparian planting following the removal of willows from the Mangamahaki Stream by HBRC. TLC organised two community planting days and three school planting days next to the Omakere Hall, bringing together the local community and school to plant 3,300 native plants.

SCAN FOR FULL REPORT



MANGAMAHAKI CATCHMENT: SUMMARY AND ACTIONS

Tukituki Land Care



Objective area	Land use and appropriate planting	Understand funding and support	Erosion and sediment loss	Implement good practice on farm
Challenge	Planting is a key activity to reduce soil loss, build alternative revenue through the ETS and increase flood resilience. However information is lacking to aid decision making.	The landowners in the catchment are motivated to implement change, but are unsure of the advice and funding available.	Erosion and sediment loss is likely to be widespread in the catchment.	The major challenge is to support landowners to meet the most desired outcomes.
Impact	Poor decision making can lead to investment in afforestation that doesn't meet catchment or landowners objectives.	Without appropriate advice and funding, actions will likely be delayed or reduced in effectiveness.	Loss of productive land. Impact on water quality. Erosion and sedimentation is a major driver of flooding.	The evidence is clear. Farm planning can make a marked difference for water quality.
Priority action	Build and communicate a decision support tool for planting to meet multiple outcomes. Additionally Work with TLC reps to understand HBRC grants.	Work with TLC coordinators to build relationships and communicate with HBRC and other funders.	Using the Highly Erodible Land Map and the Plant Selection Tool from The Big Picture project, work with farmers to plant highly erodible land.	Promote the use of TLC On-Farm Action Planning Tool and expert advice where needed.

WANT MORE DETAIL? HEAD TO WWW.TUKITUKILANDCARE/MANGAMAHAKI

Check out the online
TLC Farmer Toolbox
www.tukitukilandcare.org/toolbox

MANGAMAHAKI CATCHMENT: NEXT STEPS

- Get involved with the Mangamahaki Catchment Group to review The TLC Catchment Plan, share knowledge and coordinate actions.
- Continue to work with HBRC on the willow removal project.
- Share information about riparian planting trial within the catchment and implement where possible. Use [TLC's Plant Selection tool](#)*.
- Consider opportunities for income from timber, agroforestry, [ETS](#)* or biodiversity credits.
- Develop erosion management strategy. Consider poplar planting, oversowing with legumes, strategic fencing to retire or manage grazing, and native or exotic afforestation. Use [TLC's Surface Erosion Tool](#)*, [TLC's On-Farm Action Planning Tool](#)* and [Plant Selection Tool](#)*.
- Address water quality issues, in particular P and sediment. Use [TLC's On-Farm Action Planning Tool](#)*.
- Connect with [local advisors](#)* for tailored advice and potential funding opportunities.
- Commit to TLC's THR3E: three practical steps you can implement on your farm over the next three years.

* The TLC Toolbox and the full catchment report are now available on the TLC website www.tukitukilandcare.org