WAIORA MANUHEREKIA

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Manuherekia wetland network

Buster Creek Wetland

Site Details

- **Landowner:** Andrew Paterson – Matakanui Station
- **Primary contact:** Andrew Paterson
- **Location**
  - Coordinates: Easting 1325525, Northing 5004190
  - Ecological District: Maniototo
  - Ecological Region: Central Otago
- **Wetland dimensions:** Approximately 50m width and 800m long in low relief area

Site Map

existing fencing lines are indicative only

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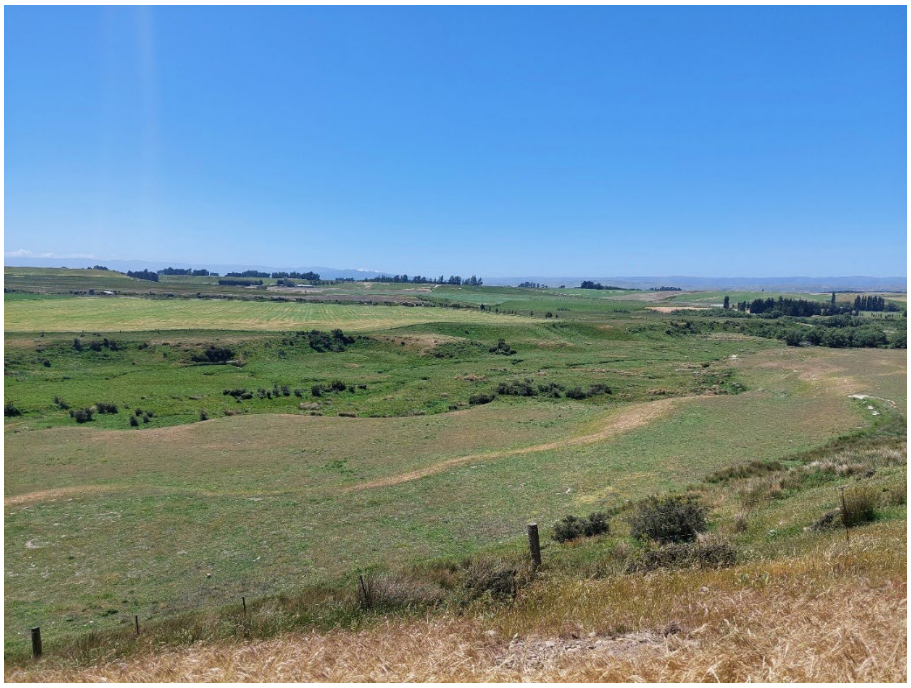
Current wetland condition photo

Photo taken 29th of November 2024.



Site Description

General

Primary hydrosystem: Riverine
Secondary hydrosystem: Palustrine
Primary wetland class: Marsh
Secondary wetland class: Swamp
Primary wetland form: Gently sloping
Secondary wetland form: Alluvial fan
Primary structural class: Grassland
Secondary structural class: Rushland/Tussockland

Topography

Description: Wetland contained within a terraced basin with fast flowing watercourse (Buster Creek) bisecting. The stream originates from the Dunstan Range at high elevation with stream gaining groundwater as it channels through the terraces.
Soils: Information retrieved from S-Map Online.

Flaxton*f* (Sib 105)
Moderately deep, poorly drained, sand
Area: 60% – Confidence: Low
German*f* (Sib 2)
Very shallow, moderately well drained, sand
Area: 40% - Confidence: Low

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Current Vegetation

Dominated by exotic grasses and woody weeds trees that include elderberry (*Sambucus nigra*) and Crack Willow (*Salix x fragilis*). Some isolated *Coprosma*. Pockets of *Carex* and *Juncus* in low lying areas. Upstream gully has extensive Matagouri (*Discaria toumatou*) and *Muehlenbeckia* with occasional *Olearia lineata*.

Special Features

Links with upstream fenced area that has lots of woody vegetation values. Provides good habitat for native fish and wetland birds.

Nearby Natural Areas

Fenced gully immediately above contains good woody plant values. Catchment originates in the Dunstan Range that has exceptional vegetation values, including kōwhai, tōtara, *Leptinella albida* and *Ranunculus maculatus*.

Wildlife

See https://s3.ap-southeast-2.amazonaws.com/wilderlab.openwaters/reports/318168a7315f6c2d.html
Native fish values include Central Otago (CO) roundhead Galaxias (*Galaxias anomalus*), Upland bully (*Gobiomorphus* breviceps) and Longfin eel (*Anguilla dieffenbachii*). Other fish values include brown trout. eDNA results suggest kōaro but this is likely to be CO roundhead Galaxias. Upland bullies were abundant throughout the creek, with few brown trout captured (~80-100 mm). Juvenile roundhead galaxias were visually observed in backwaters along creek margins. Two large longfin eels (> 1m) were also observed.

Site History

Prior to land development and agriculture, it is believed that the site was likely to have been Cool Forest and scrub (CLF13; Otago Regional Council Otago Ecosystems and Habitat Mapping). This ecosystem could have included Matai and broadleaf species.

Description of water flow and drainage

The flow is perennial with the basin likely absorbing flood flows and reducing flood impacts downstream. Likely that culvert at downstream end also holds water back during high flow events. Otherwise, creek has an unconfined flow and is actively eroding and depositing sediment/gravel throughout its course, which facilitates habitat heterogeneity for freshwater fauna and wetland plants.

Current condition

The wetland is currently being impacted by stock access, woody weeds, exotic grasses and sports fish. Stock have unrestricted access along the southern (true right) margin of the wetland as the paddock is un-fenced. However, grazing pressure appears low and wetland is in good

condition.

Enhancement Proposal

Vision

Allow wetland area to retain and improve native vegetation values, extend the revegetation efforts of the upstream area and continue to support healthy native fish populations.

Objectives

Remove all woody weeds from wetland area. Fence remaining unfenced margin to prevent stock access into wetland areas. Remove trout from catchment to enhance native fish values and secure Central Otago round head Galaxias population.

Expected outcomes

Fencing & Planting

The true left side of the wetland is already fenced. 806 m along the true right requires fencing. Fencing on top of terrace will allow woody native vegetation to establish and further enhance the biodiversity values of this wetland. This will also prevent stock from impacting sloped areas that are susceptible to erosion and lessen sedimentation further.

Weed control

A small number of large cracked willows and elderberry will require poisoning and can be left in situ dead.

Sedimentation

Sedimentation from surrounding land use will accumulate in wetland vegetation along the margins of this wetland before it can enter the waterway. Floods will continue to re-mobilise these sediments, but as vegetation re-establishes, the effects of sediment remobilisation will lessen. Preventing stock from accessing waterway will also prevent the re-mobilisation of sediments.

Total Investment

Fencing: $9,722
Weeds: $5,750
Planting: $15,000
Total: $30,472

Funding source

Fencing materials, planting & weed control – Waiora Manuherekia
Fencing installation & ongoing weed maintenance – Matakanui Station

Monitoring

Annual photopoint monitoring to be used to track changes in the wetland.

Annual SHMAK monitoring can be used to track improvements in ecosystem health.
Native galaxias population should be surveyed to understand habitat use and distribution within the catchment and scope feasibility of trout removal.