

MANAWHENUA ASSESSMENT OF THE PUDDING HILL INTAKE STOCKWATER RACE

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1. Who is Arowhenua

Kāi Tahu are Takata¹ Whenua of the Canterbury Region. Kāi Tahu means “people of Tahu”. Kāi Tahu is the iwi comprised of Kāi Tahu Whānui; that is the collective of the individuals who descend from the five primary hapū; Ngāti Kurī, Ngāti Irakehu, Kāti Huirapa, Ngāi Tūāhuriri and Ngāi Te Ruahikihiki. The Charter of Te Rūnanga o Ngāi Tahu established under the Te Rūnanga o Ngāi Tahu Act 1996 (TRoNT Act) constitutes Kāi Tahu as kaitiaki of the tribal interests.

Papatipu Rūnaka are defined in Section 9 of the TRoNT Act. This includes Te Rūnanga o Arowhenua (Arowhenua). Aoraki Environmental Consultancy Limited (AECL) is a legal entity that has been given the mandate by Arowhenua to represent their interests in all environmental matters.

Arowhenua is the representative body of the takata whenua and who hold manawhenua in the traditional takiwā that includes the area between the Rakaia River and the Waitaki River which includes the Ashburton District Council.

Arowhenua also share the area with Ngāi Tūāhuriri and Te Taumutu Rūnanga who have a common interest in the area to the Hakatere (Ashburton River). The Rūnaka have agreed Arowhenua will respond on behalf of all three Rūnaka on Ashburton District Council transitioning away from stockwater delivery.

2. Purpose of this Report

The purpose of this report is to provide a manawhenua assessment of the Pudding Hill Intake Stockwater Race. This report further provides considerations for the Stockwater Transition Working Group in making recommendations to Ashburton District Council as they seek to exit a system that provides stockwater through a stockwater network.

This report has been informed by the following information sources:

- A site visit by AECL along with the Ashburton District Council Infrastructure Services Support Lead on 16 April 2025;
- Information provided by Ashburton District Council including photos and annotated maps;
- Stockwater Exit Transition Plan – Exit of stockwater service 2024-2027; adopted by Ashburton District Council 18 December 2024;
- BECA, 11/03/2025, Summary of Findings Report - Pudding Hill Water Race Network (Ecological Snapshot); and
- Knowledge and information from Arowhenua Rūnaka.

3. Background

On 26 June 2024, Council adopted its 2024-2034 Long Term Plan (LTP) which included the decision to divest itself from the delivery of the stockwater services by 30 June 2027. To inform the effects of the closures Ashburton District Council established a working group and prepared a plan on how to investigate each of the closures. Ashburton District Council further determined that alongside seeking feedback from the community of the assessments that would be initiated to look at ecological, archaeological, stormwater and cultural reports. With a formal assessment being prepared by AECL on behalf of Te Rūnaka o Arowhenua being a part of this.

This report relates to the Pudding Hill (including Washpen Creek) stockwater race. Figure 1 below is taken from page 30 of the Stockwater Transition Plan.

¹ Note on dialect: In Ngai Tahu/Kai Tahu dialect, 'k' is used interchangeably with 'ng'.



Figure 1: Pudding Hill including Washpen Creek Intake

4. Manawhenua Description of Area

For Kāti Huirapa there has been considerable loss of the environment that their ancestors knew and alongside that the species of plants and animals that used to live in the habitat. The following describes the landscape as it was to the tupuna (ancestors) of Arowhenua.

The Pudding Hill stockwater race is largely located alongside the Rakaia River. The name Rakaia referring specifically to the section of the river from the mouth to the junction of the Wilberforce and Mathias Rivers. The remaining sections of the Rakaia have their own names: Rakaia-wai-pākihi is the Mathias River, Waitāwhiri is the Wilberforce River, and Rakaia-wai-ki is the southern branch of the Rakaia.

The Rakaia was part of the ara tawhito (traditional travel route) that went over Nōti Raureka (Browning Pass), connecting with the Arahura River on Te Tai Poutini (the West Coast). It was named after Raureka, a Kāti Wairaki woman credited with discovering the icy pass. From Te Tai Poutini, Raureka travelled over the pass, down the Rakaia River, and into the Arowhenua region.

The stockwater race also sits under Huirapa / Ōpuke (Mount Hutt), which rises to the west of Kā Pākihi-whakatekateka-a-Waitaha (the Canterbury Plains. Along with the nearby mountains, forests, lakes, and wetlands of Ōtūwharekai (the Ashburton Lakes), Huirapa/Ōpuke was part of a rich mahika kai (food-gathering) area. During the 1879 Smith-Nairn Royal Commission of Inquiry into the Kāi Tahu land claims, Kāi Tahu kaumātua recorded the foods gathered here included kiore (Polynesian rat), weka, kākā, kererū, tūī; and the berries of the native forest trees mātai and hīnau/pōkakā. This included kaika (settlements) associated with mahika kai along the river and near the intake area.

The stockwater races are part of Ōuetō is the plain between the Rakaia River and Hakatere (Ashburton River). In 1880 Kāi Tahu kaumātua recorded Ōuetō as a mahika kai where kiore (Polynesian rat), koreke (quail) and tiroki were gathered.

5. Assessment of Effects on Values of Arowhenua

5.1 Indigenous Species Habitat

Stockwater raceways are managed with the primary purpose of keeping water flowing to properties. This means they are periodically cleared of weed growth, debris and silt. Also, while fenced to exclude stock and having setbacks from cultivation stockwater races typically contain limited or no riparian habitat. Despite this stockwater race networks can still contain habitat that supports indigenous plant and animal species.

The primary concern for Arowhenua is that stockwater races can, in the absence of other waterways, provide habitat for indigenous plant and animal species. With land use altering natural habitats indigenous plant and animal species have diminished in number and locations making any habitat in which they are now living potentially important. Therefore, consideration needs to be given to any closure of stockwater races on indigenous plant and animal species.

AECL did not undertake its own investigations of species within the stockwater races, choosing to rely on the ecological snapshot prepared by BECA. AECL did however on the site visit look at the suitability of habitat for the species present within the sections of stockwater race that where BECA had identified indigenous species were present.

The ecological snapshot prepared by BECA indicated that higher quality of water in the upper network races compared to the middle and lower network races. Water in the middle and lower network races appear generally appearing to carry higher loads of nutrients and faecal matter than the upper network area. The upper network races have a high ecological value while the middle and lower races were moderate.

The ecological snapshot found through eDNA testing the following species in the network upland bullies, Canterbury galaxias and longfin tuna (eel) in the lower catchment.

AECL, when examining the stockwater race, noted they do provide habitat in which tuna can live. Tuna being a hardy species. However, the presence of a tuna within a network that is far down the stockwater network with no obvious access to a river system was unexpected. Though it is noted in the BECA report that 2022 work by the Canterbury Regional Council (Environment Canterbury) also discovered tuna². It was recommended that the Arowhenua Mātaaitai Committee could set nets in the area to investigate the presence of tuna further.

Arowhenua supports the recommendation by BECA that a fish salvage and relocation plan is developed to support any closure plan. The fish salvage work being done in a phased manner with the closure providing sufficient time for fish species to move habitat.

² BECA, 11/03/2025, Summary of Findings Report - Pudding Hill Water Race Network (Ecological Snapshot). Pp6.



Figure 2: Stockwater raceway on Pudding Hill showing extent of modification.

5.2 Water Returned to the Rivers

Arowhenua has also consistently raised concerns about the irrigation network mixing water with water in the system coming from as far away as the Rakitata River. Arowhenua considers water has its own mauri (life force). Water is known for what it supports with each waterway supporting different species within it flowing through different habitats. The tūpuna of Arowhenua also put water to different uses depending on where it came from and what was needed of that water body or what it provided. Arowhenua respected the waterbody for the uses that water needed from it – whether for food, drinking water or spiritual uses. For Arowhenua there are also the unknowns and the effects that can be had, for example to tuna who can track to a specific river across the ocean.

Arowhenua has consistently requested as raceways are permanently closed that the water is returned to rivers from which they come from.

At the time of writing this report, Arowhenua has been unable to ascertain the effect of removing the water in the stockwater race that augments Mount Harding stream. Arowhenua is however concerned with unnatural mixing of water where water from one water source would not naturally find its way into another, and this would need to be considered in any proposal to augment water.

5.3 Stopping Raceways

Where raceways are closed, there is a preference by Arowhenua that these are filled in. Where this is not practical, for example because of land drainage functions, then they are closed so there is no flow of water into the closed portion from a river or drain.

If the closed raceway terminates at a river, then this portion is closed or managed so there is no risk of fish getting into the closed raceway. Where this section remains open to convey drainage / stormwater then it is managed to ensure sediments and contaminants cannot enter the river.