



## Improvement to fish passage – Brooklands Road fish ladder

A 'rock ramp' fish ladder added to the ford at Brooklands Road in the lower reaches of Te Hāpū / Pleasant River has substantially improved fish passage to the rest of the catchment. It serves as a lighthouse project to show what is possible.



Shortfin eel © Shaun Lee

Many of Aotearoa New Zealand's freshwater fish species migrate as part of their life cycle, including tuna (longfin eel, *Anguilla dieffenbachia*, and shortfin eel, *Anguilla australis*), kanakana (lamprey) and our five whitebait species (*Galaxias spp.*). Structures placed in waterways can substantially disrupt natural flow pathways and prevent fish from moving between their juvenile, breeding and adult habitats. Barriers to fish passage (such as culverts, weirs, and tide gates) can significantly impact our freshwater species that rely on migration between fresh water and the ocean. Disruption of their migration pathways can cause localised extinction of their populations.

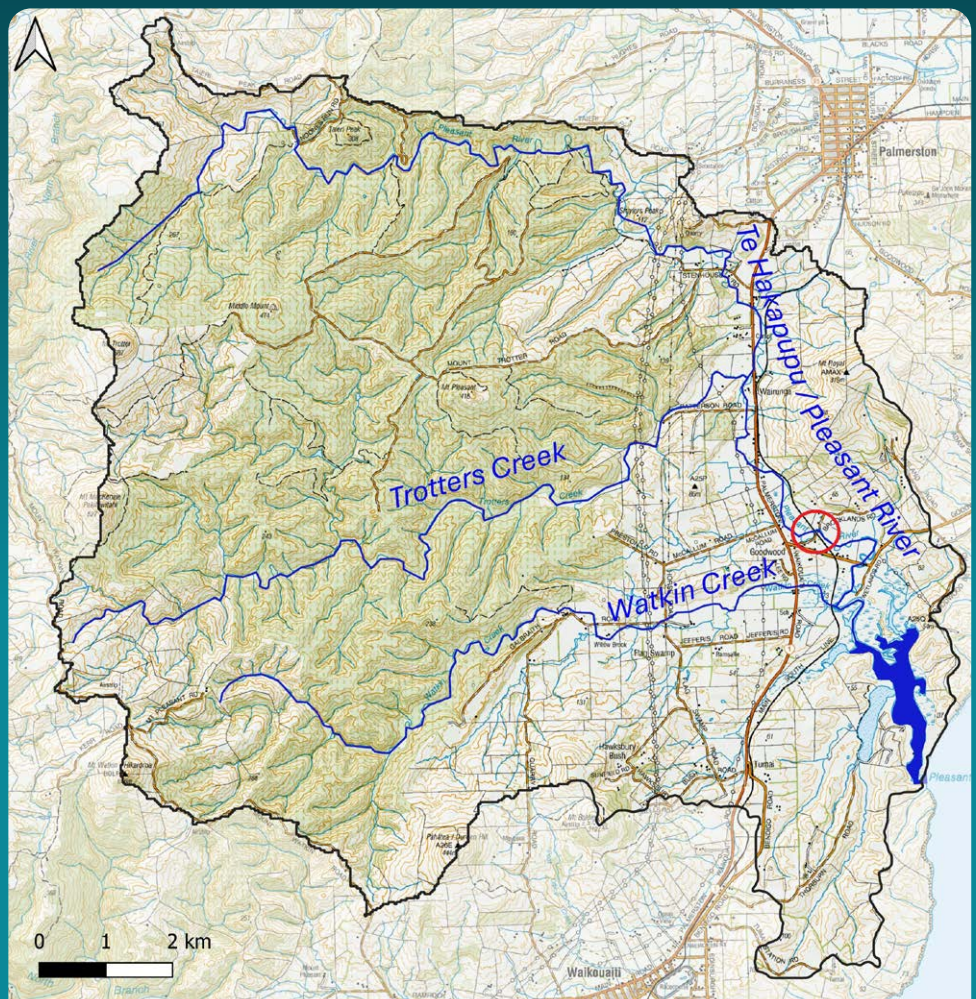


Figure 1. Location of the Brooklands Road ford (circled in red), highlighting its position at the seaward end of Te Hāpū / Pleasant River.





**Figure 2. The downstream end of the Brooklands Road ford showing poor fish passage characteristics before construction of the rock ramp. © Matt Dale, Waterscape Connections**

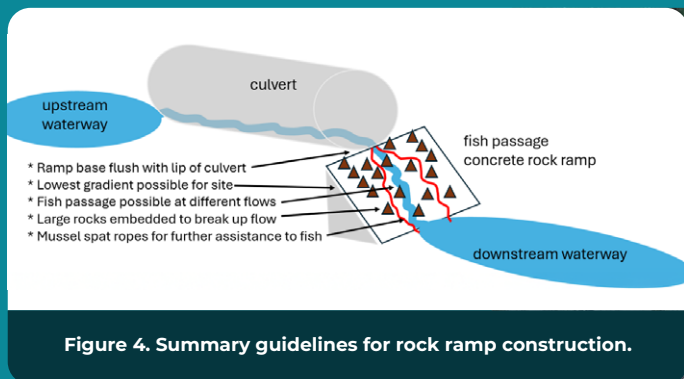


**Figure 3. Construction of the rock ramp, showing the low-gradient ramp and rocks placed to reduce water velocity and provide resting areas for fish. © Matt Dale, Waterscape Connections**

The Toitū Te Hākapupu / Pleasant River Catchment Restoration Project (2021–2025) aims to improve water quality and enhance conservation, cultural and community values throughout Te Hākapupu / Pleasant River catchment. It has been an opportunity for Otago Regional Council, Kāti Huirapa Rūnaka ki Puketeraki, the East Otago Catchment Group, and Waitaki District Council to all collaborate towards a range of positive outcomes in the catchment. One of these outcomes is

the improvement of fish passage within the catchment.

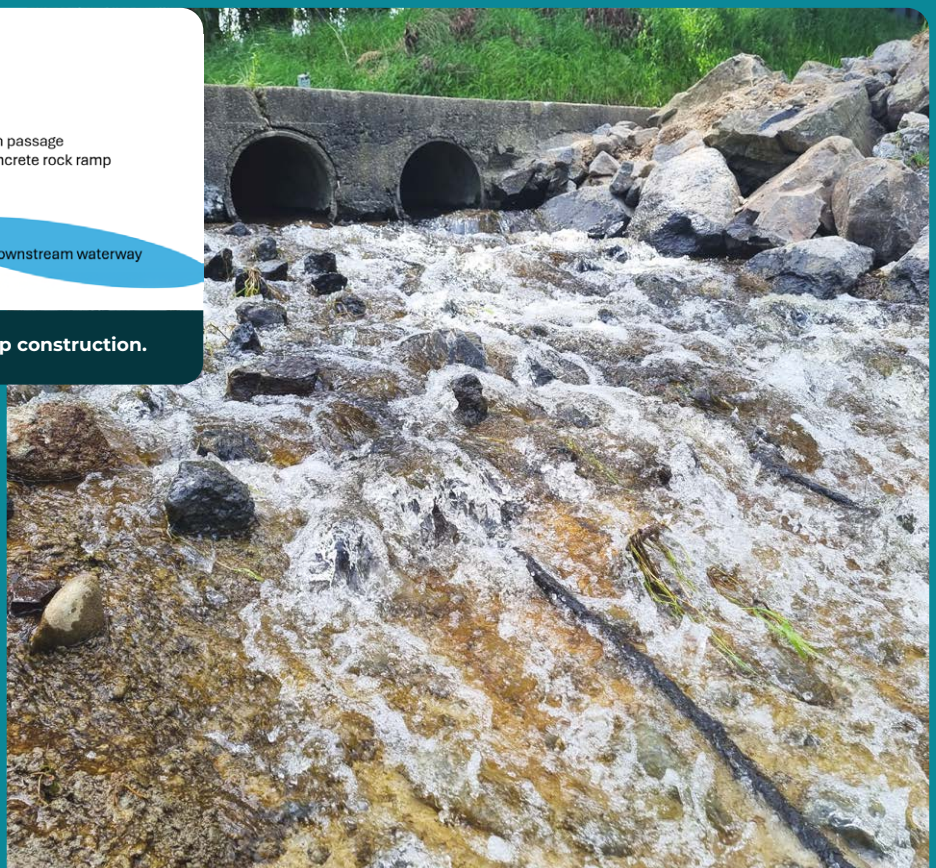
Barriers to fish passage were assessed and prioritised for remedial work. The Brooklands Road ford was an important barrier because it is close to the mouth of Te Hākapupu / Pleasant River (Figure 1). Being so close to the river mouth, it blocks access to most of the catchment's waterways for fish migrating from the sea (Figure 2).



**Figure 4. Summary guidelines for rock ramp construction.**

A rock ramp (Figure 3) was added to the ford in October 2024. It was designed in accordance with New Zealand Fish Passage Guidelines, summarised in Figure 4.

The rock ramp (Figure 5) impact was assessed by Kāti Huirapa Rūnaka ki Puketeraki. They set a net for whitebait upstream of the ford for 3–5 days per month from September to December in 2024 – before and after construction. The catch was counted each tidal cycle and released.



**Figure 5. High flow levels showing pathways to assist with fish passage through the ramp and culvert. © Matt Dale, Waterscape Connections**



## Initial results

The rock ramp has made a huge difference to fish passage (Figure 6). Before construction, the average catch was less than ten whitebait in each tidal cycle. After construction, it was over 400!

This result shows how successful and effective improvements to fish passage can be. It also highlights the importance of fish having free access to waterways in our coastal catchments. Following the work at Brooklands Road, local landowners are being approached to restore fish passage where it is blocked on their property.

Five new priority sites have been identified, with three other culverts replaced as a result — one in Te Hikapupu / Pleasant River and two in Watkin Creek. The aim, over time, is to provide unimpeded access to the whole of the catchment for all our native fish species.

Further information on fish passage can be found at:



Department of  
Conservation



NIWA



Ministry for the  
Environment

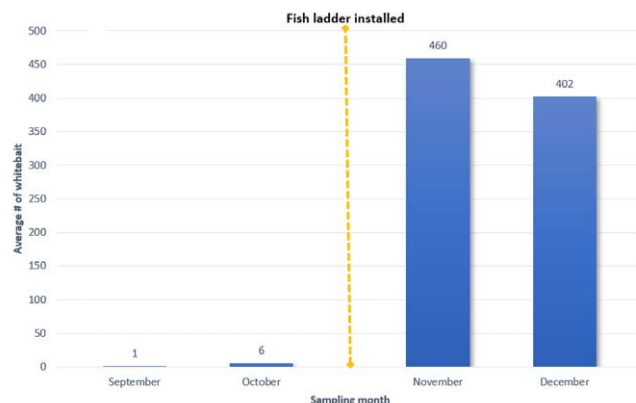


Figure 6. Average number of whitebait caught over a single tidal cycle upstream of the Brooklands Road ford between September and December 2024.



Kanakana / lamprey © NIWA

A partnership project by:



Otago  
Regional  
Council



Kāti Huirapa Runaka ki  
Puketeraki

In collaboration with:



Ministry for the  
Environment  
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