



# **NATURE-BASED SOLUTIONS INVESTIGATION**

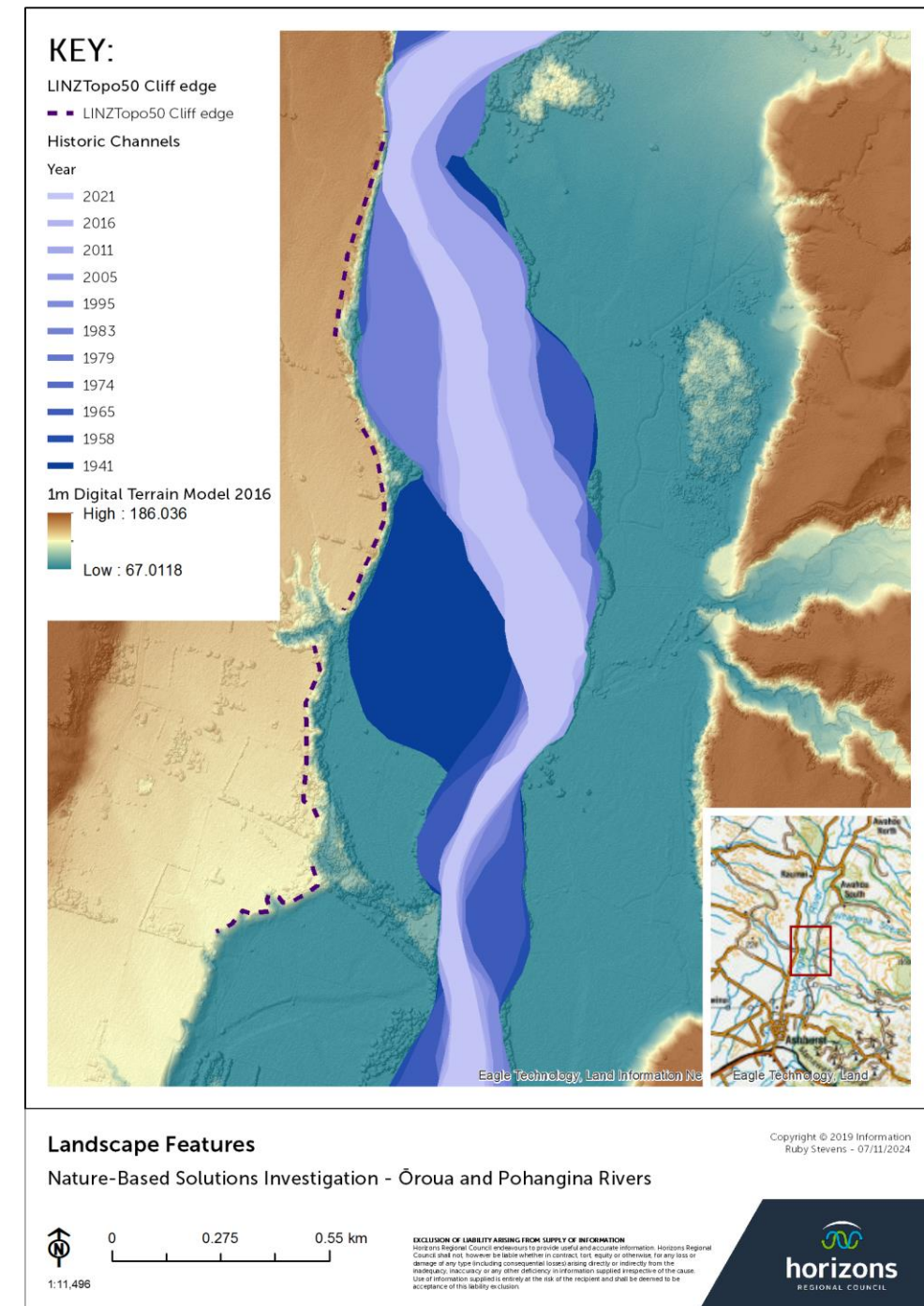
Ōroua and Pohangina Rivers



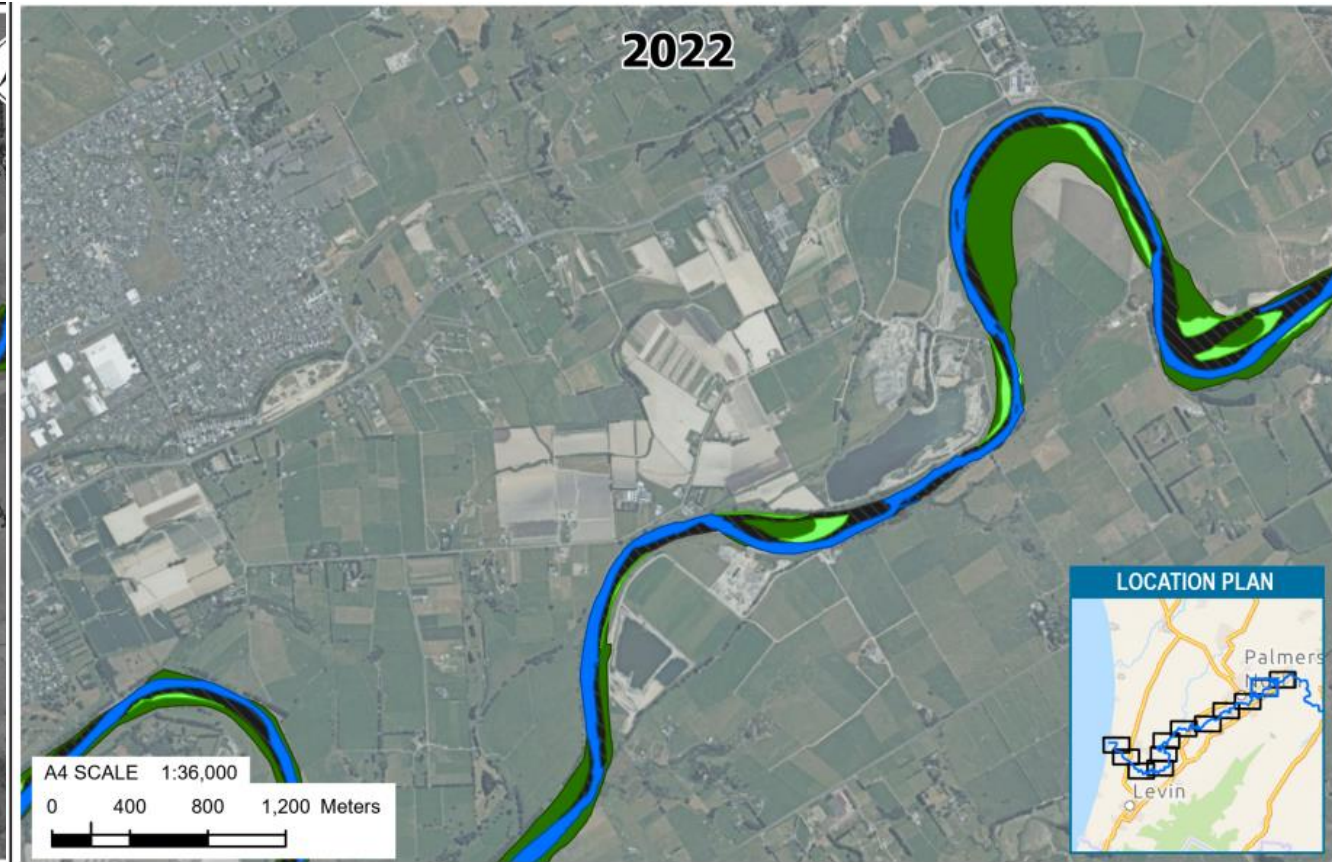
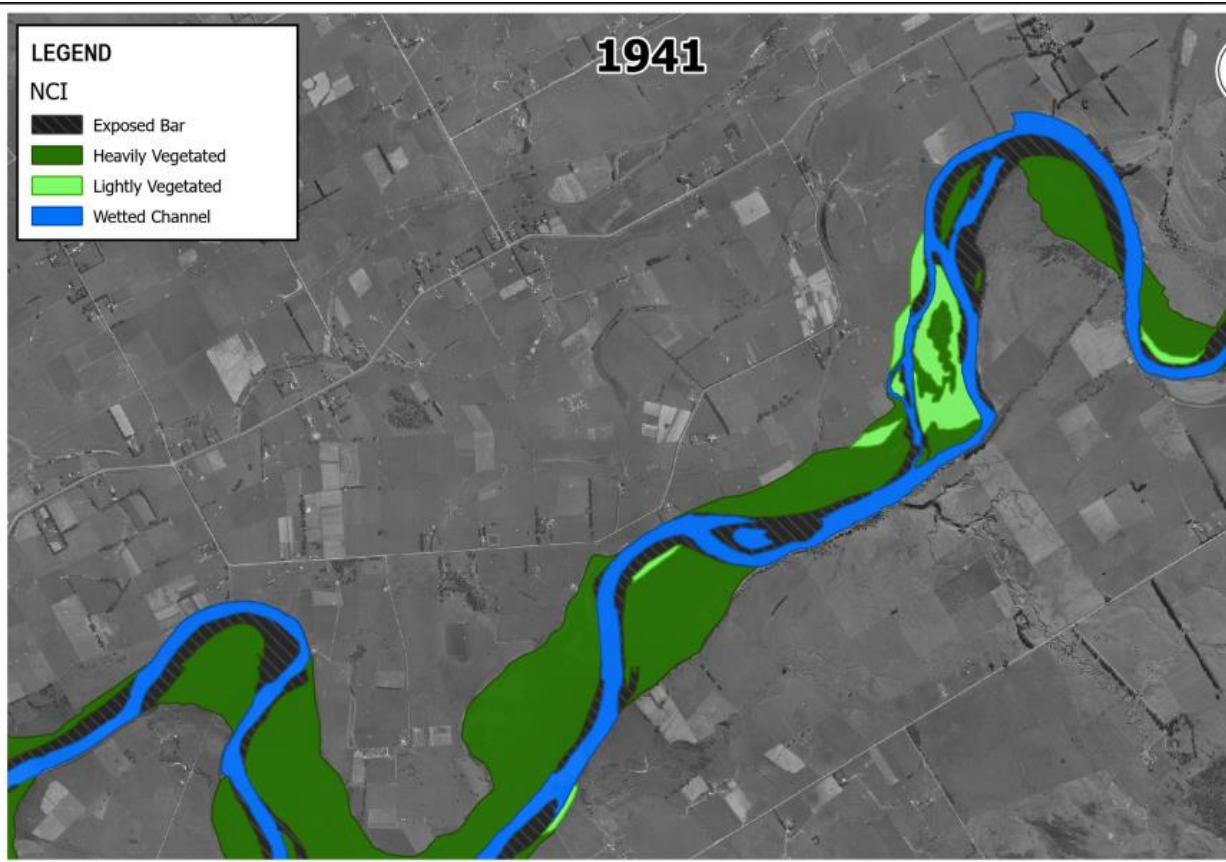
# WORK PROGRAMME UPDATE

## Timeframes and Milestones

- Ōroua and Pohangina NCI work;
- Identification and mapping of hard geological features;
- Digitization of current river management lines;
- Review of previous river management scheme report;
- Letters to landowners that border the rivers; and
- Scoping of programme for Mātauranga input into the Room for the River concept.

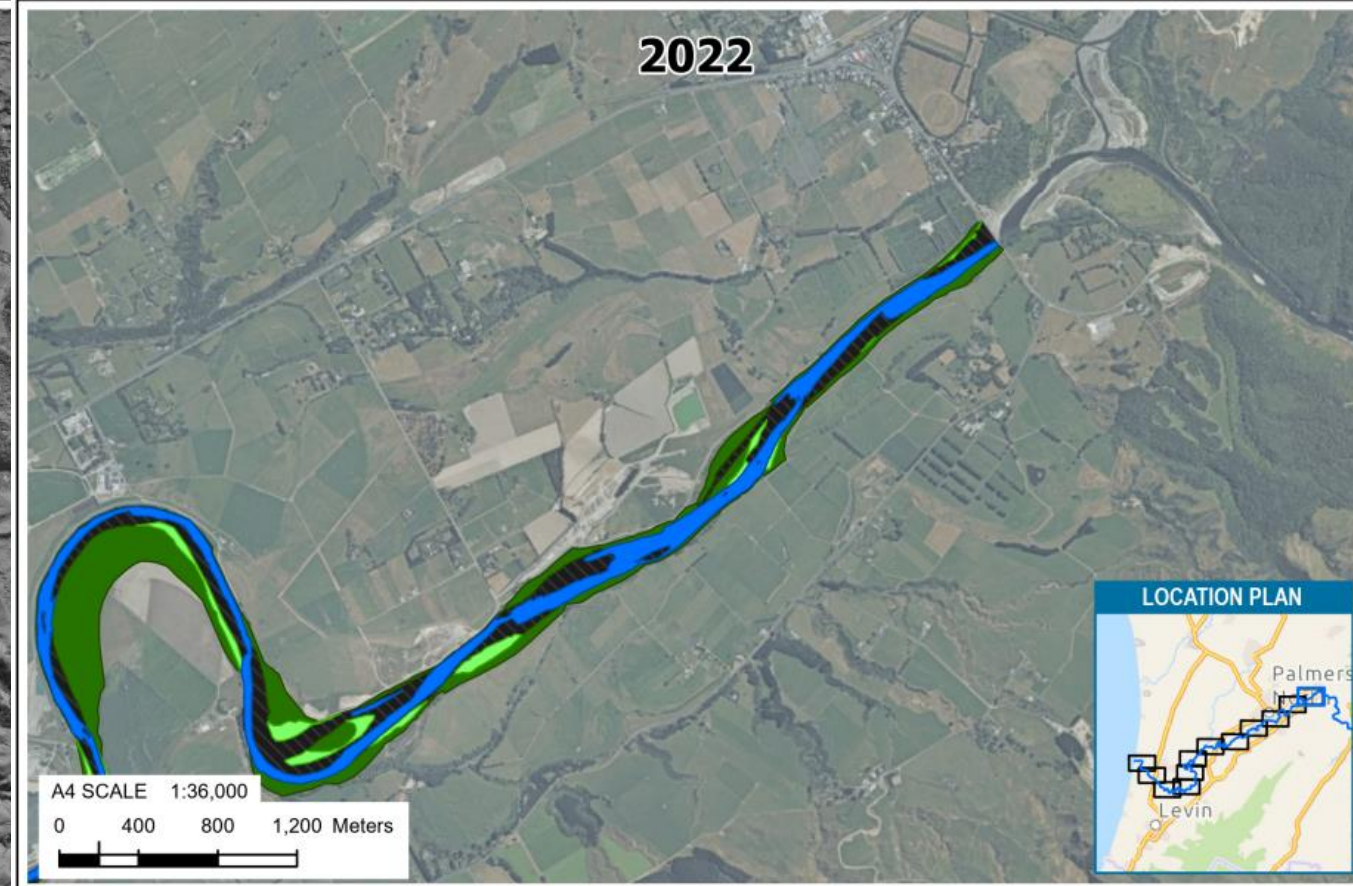
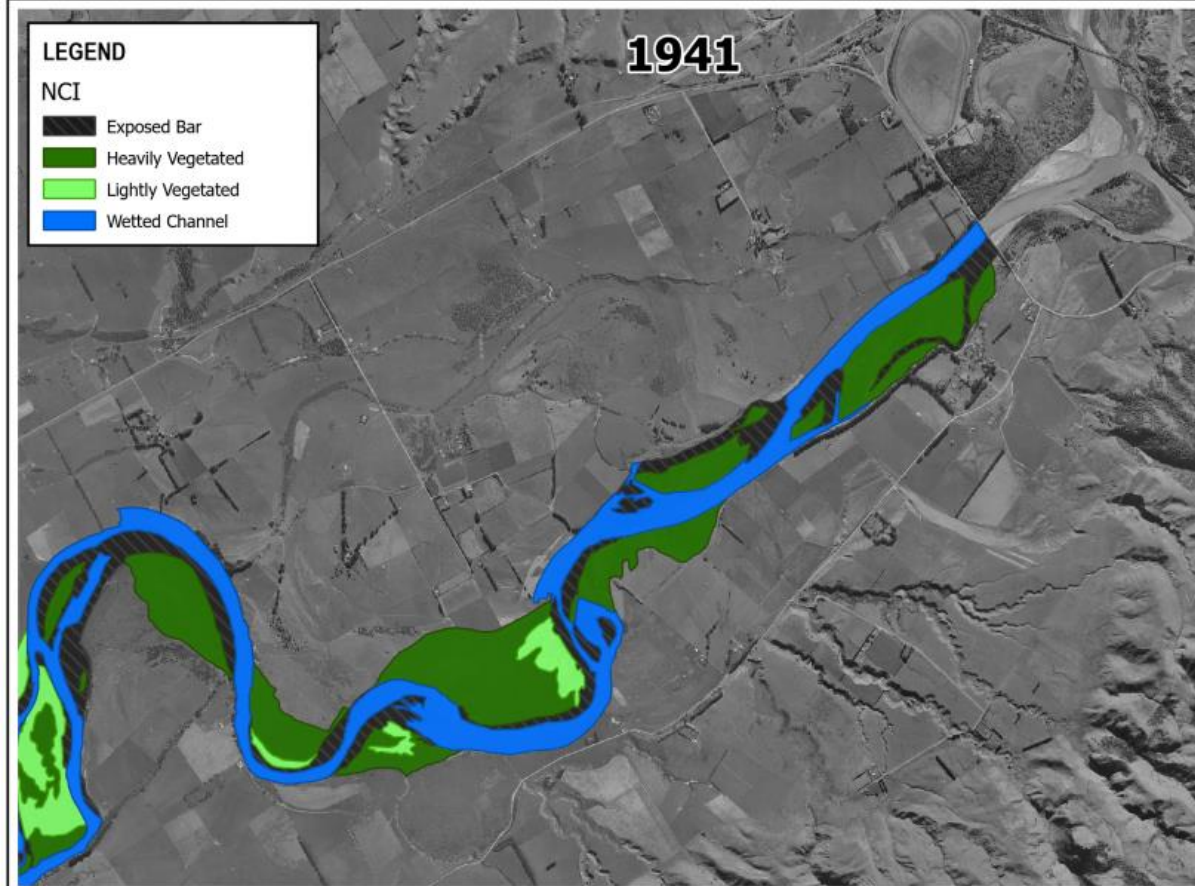


# MANAWATU NATURAL CHARACTER INDEX (NCI)



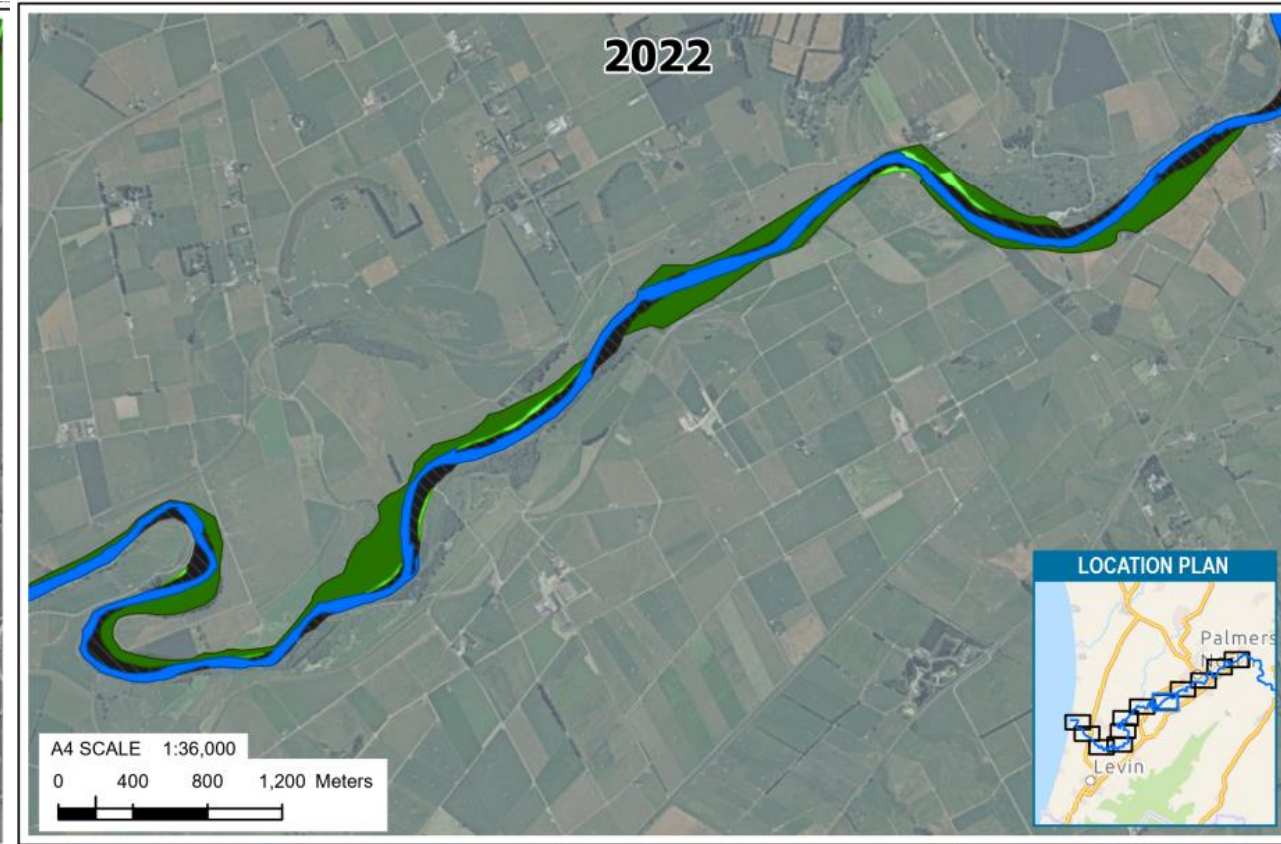
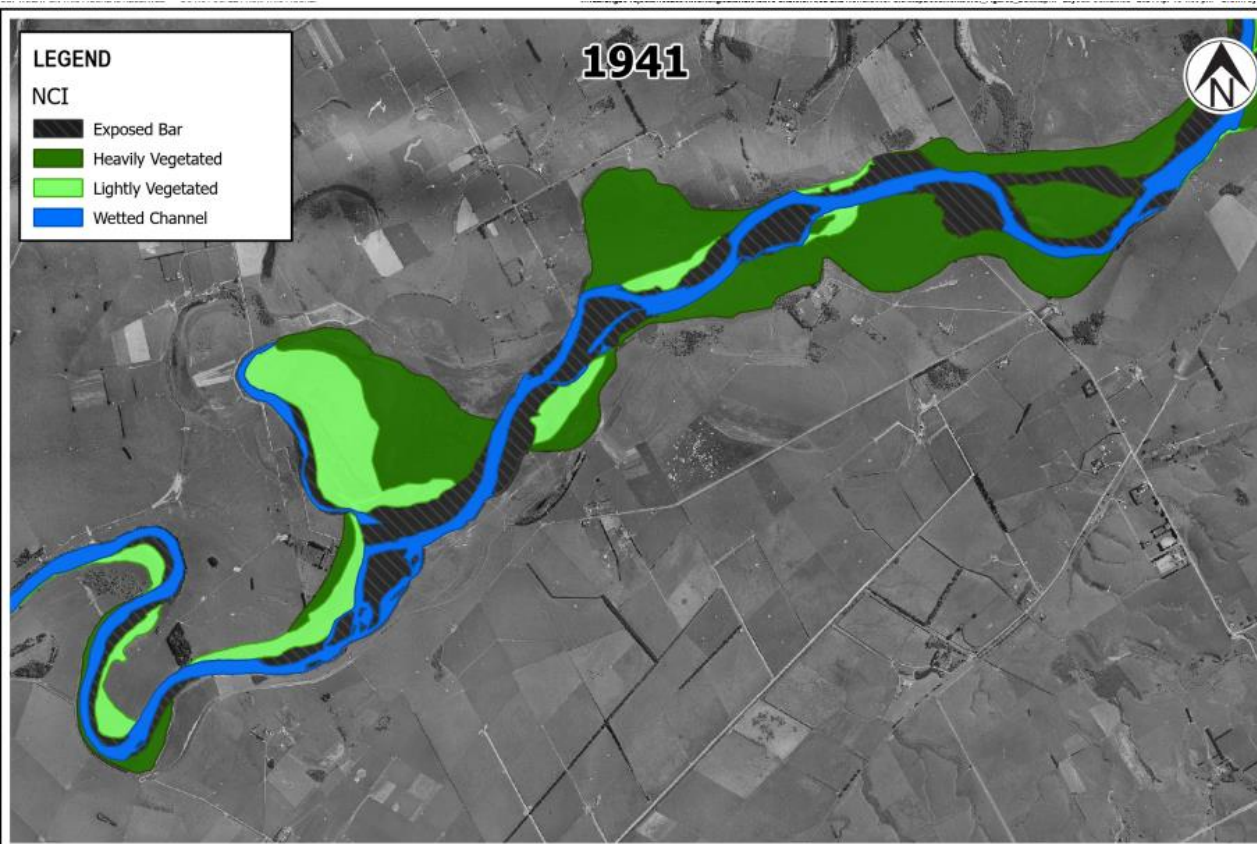


# MANAWATU NATURAL CHARACTER INDEX (NCI)





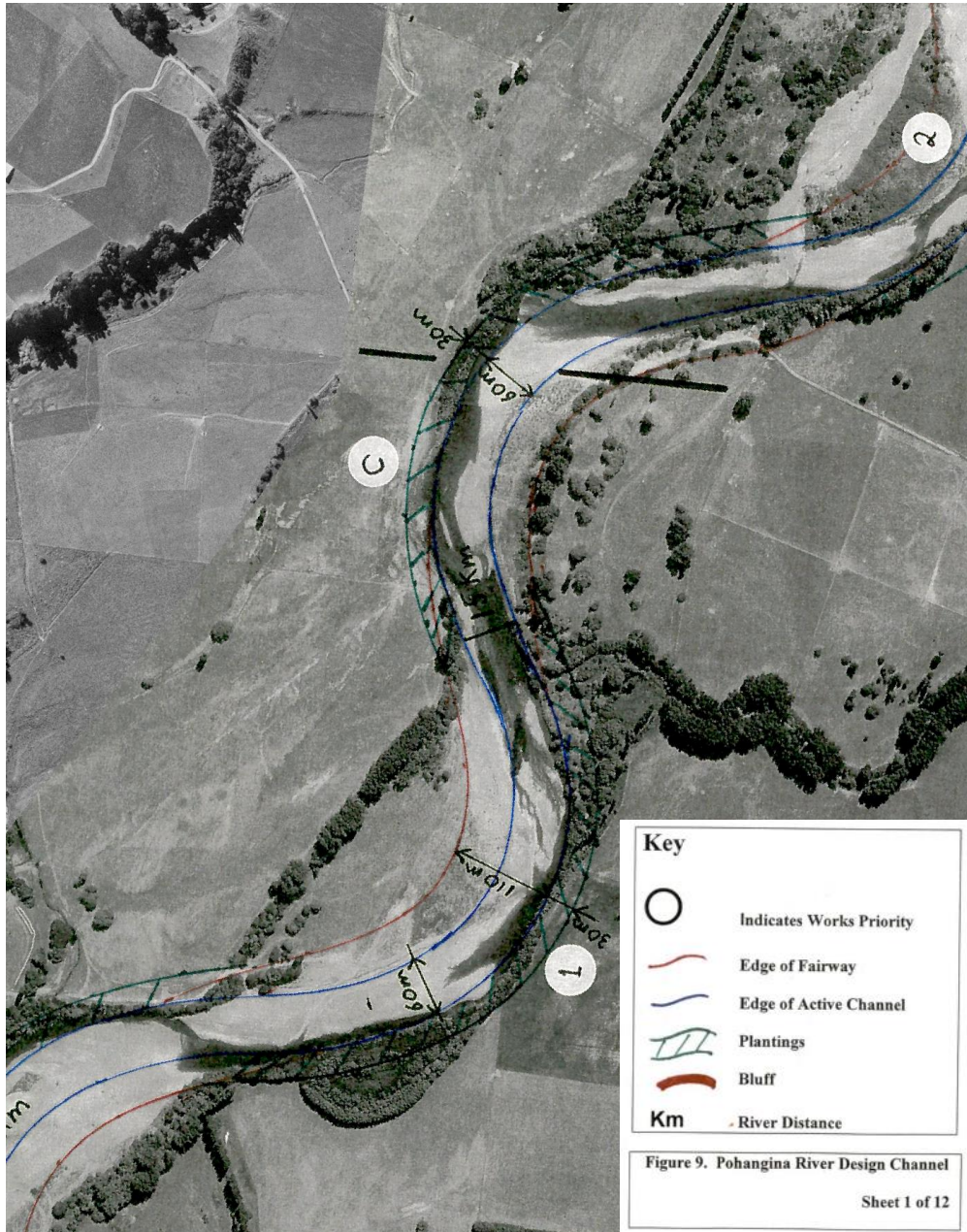
# MANAWATU NATURAL CHARACTER INDEX (NCI)





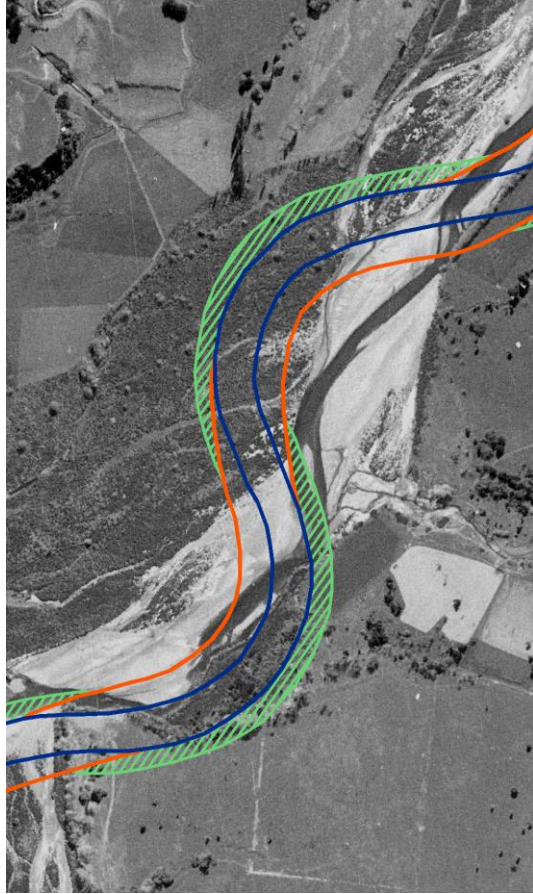
# RIVER MANAGEMENT LINES

- River Management lines aren't a new concept;
- The Ōroua and Pohangina mainstems already have river management lines in the scheme management report;
- Reproduced these lines electronically.

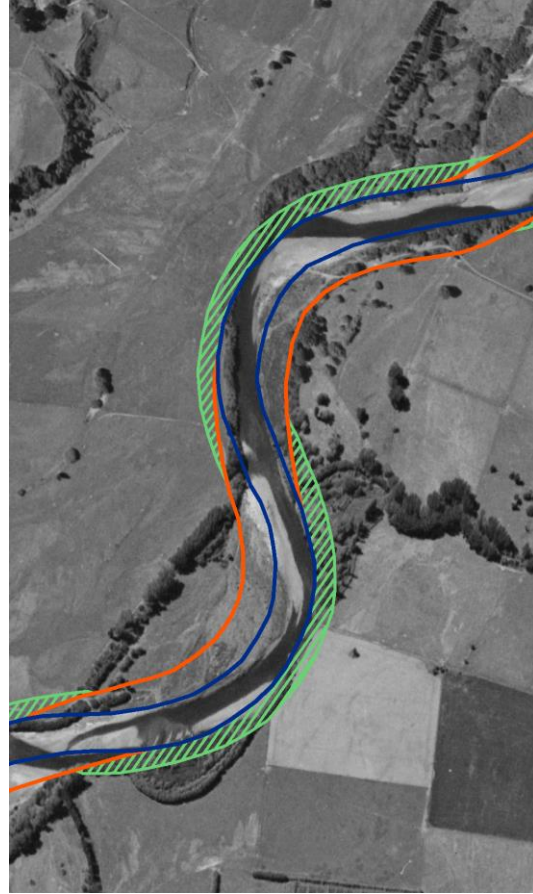




1958



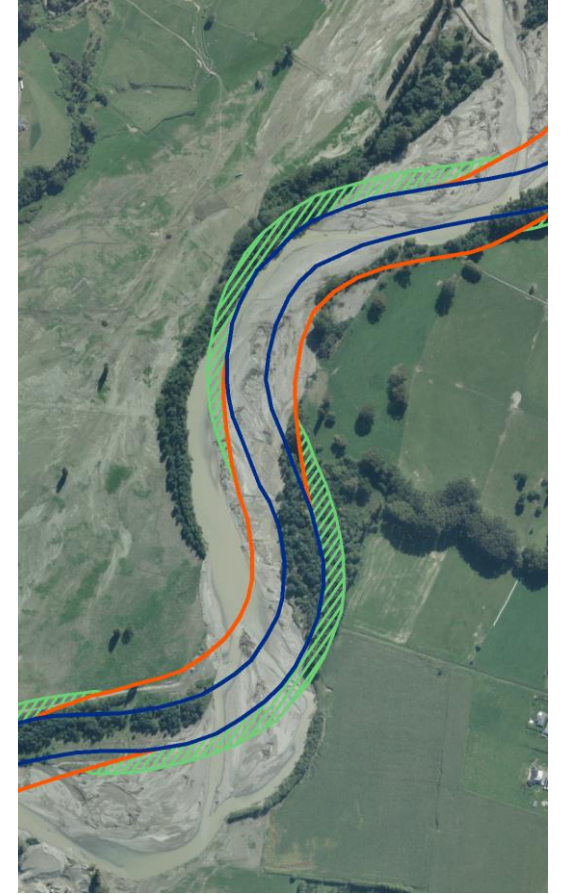
1999



2010



2023



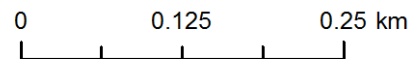
## KEY:

- Active Channel
- Fairway
- ▨ Planting

## Pohangina-Ōroua Scheme Review 2002 - Design Channel Nature-Based Solutions Investigation - Ōroua and Pohangina Rivers



1:5,877



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Ruby Stevens - 23/07/2024

25 October 2024

EWQ0303  
2024NBS LB

«Company»  
«Address\_»  
«Address\_1»  
«Address\_2»

Dear Sir/Madam,

#### NATURE-BASED SOLUTIONS INVESTIGATION – ŌROUA AND POHANGINA RIVERS

After Cyclone Gabrielle, the Ministry for the Environment opened a contestable round of funding for Nature-Based Solutions for Resilience Planning, which councils could apply to. Horizons submitted an application, based on investigating applying the Room for the River concept to the Ōroua and Pohangina Rivers. Horizons was successful in receiving \$300,000 over two years, with the investigation due for completion in June 2025. The study area has been since been extended to include the main stem of the Manawatu River between the confluence with the Pohangina and Ōroua Rivers, with co-funding from Horizons.

The Room for the River concept looks at historic channel positions, geology, river processes, community and cultural values, and existing infrastructure within the floodplains. From these factors, river management lines are developed. Inside the management lines, the river is given space to move, and minimal works are undertaken to increase management efficiency – outside the lines, the river can be more intensively managed, for example by using hard engineering to protect key infrastructure. In many situations, this provides more room for the river to safely re-establish natural processes and can result in a range of benefits, including costs effectiveness, rather than the highly confined states some of the region's rivers are in now. At this point in time, no new management lines have been created – we are in the information-collecting phase of the study.

As a landowner of property that runs down to or alongside these rivers, we are writing to let you know about this investigation. Included with this letter is a brief description of the investigation, and a map of the area that the study will cover. We realise people will have questions and comments around the investigation, and so we have set up a number of ways for people to access information around the study:

1. A Governance Group for the investigation has been established made up of representatives from various partners and stakeholders. This includes representatives from Horizons, Manawatu District Council, Palmerston North City Council, iwi, Fish and Game, Federated Farmers, Pohangina Catchment Care Group, and the Ōroua-Pohangina River Management Scheme.
2. A webpage has been created for the project, which can be found here: <https://www.horizons.govt.nz/managing-natural-resources/nature-based-solutions-investigation-oroua-and-poh>. As reports are finalised, they will be uploaded to the project webpage. This will become the main source of information for this study. We



## Nature-Based Solutions Investigation – Ōroua and Pohangina Rivers

In February 2023, Cyclone Gabrielle caused significant damage to flood infrastructure along lengths of the Ōroua and Pohangina Rivers. Much of this damage occurred where floodwaters escaped the current channel and connected with historical flow paths and floodplains; this raised questions around whether highly restricting and controlling rivers is sustainable in the long term.

Shortly after Cyclone Gabrielle, Horizons was granted \$300,000 from the Ministry for the Environment, through Nature-Based Solutions for Resilience Planning, to conduct a study looking at how the Room for the River concept could be applied to the Ōroua and Pohangina Rivers.

At the end of the project (July 2025), a report will be presented to Council with recommendations for the most effective nature-based solutions going forward, i.e., a holistic and sustainable flood protection model for the Pohangina, Ōroua and Manawatu (between the Pohangina and Ōroua confluences) Rivers.

### What does "Nature-Based Solutions" mean?

Nature-Based Solutions (NBS or NbS) are actions that work with natural processes to address environmental challenges and build community and ecosystem resilience.

NBS is an internationally-used term, and a full definition can be found on the United Nations Environment Programme website<sup>1</sup>.

### What does "Room for the River" mean?

Rivers are dynamic and diverse – they naturally meander and express their mauri, so constantly trying to keep a river in its "original" channel can be costly, ineffective, and have negative impacts downstream.

The Room for the River concept takes a holistic approach to managing flood and erosion risk. In 2007, the Dutch Government developed a Room for the River Programme to improve flood management; this involved giving floodwaters more room by restoring the natural floodplain of rivers where possible. The Room for the River Guidelines<sup>2</sup> apply this concept to Aotearoa New Zealand rivers and streams.

Extending the space that we allow for the river's natural processes can be more cost effective and improve overall river health and mauri. Some flood protection assets, such as stopbanks, can be moved further away from the river to decrease the likelihood of erosion and failure during a flood event; this also increases floodwater carrying capacity, which generally results in lower flood depths and velocities, reducing the risk to assets and lives.

To apply the Room for the River concept, we need to first better understand the rivers' channels and floodplains; then, stakeholders need to agree on whether we can allow the rivers to meander more before an intervention is required, and whether we can increase the flood corridor.

The overall goal is to increase cost efficiency and climate resilience, by striking a balance between the benefits of allowing the river to migrate freely within the river corridor, and the benefits derived from protecting property and infrastructure.

We are aiming to work with the natural environment, minimising the need for engineering interventions and ongoing maintenance.

### Where can I find out more?

Contact us via email at: [NatureBasedSolutions@horizons.govt.nz](mailto:NatureBasedSolutions@horizons.govt.nz) or scan the QR code to visit our project webpage<sup>3</sup> on the Horizons website.



<sup>1</sup> United Nations Environment Programme, (2022), Resolution adopted by the United Nations Environment Assembly on 2 March 2022.

<sup>2</sup> Christensen Consulting Limited, (2023), Application of Room for the River for NZ Rivers & Streams: NZ River Managers Guidelines.

<sup>3</sup> <https://www.horizons.govt.nz/managing-natural-resources/nature-based-solutions-investigation-oroua-and-poh>

# MAIL DROP

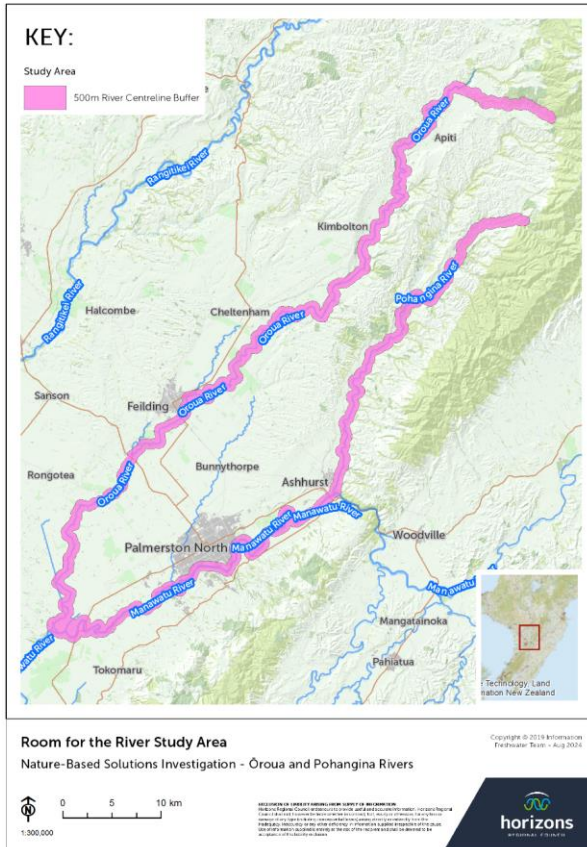
- Letters sent to 329 parties;
- Email address set up for project;
- Offer to meet with Catchment Group and individuals if they wish;
- Press release in Farmers Weekly.



## Mātauranga Māori

The Governance Group ensures that Te Tiriti, Mātauranga Māori, Te Mana o Te Wai, and iwi management plans are honoured. Iwi and hapū planning documents, taiao strategies and other documents that describe the values and aspirations of those with mana whenua over a rohe can be found [here](#).

### Nature-based Solutions Study Area



# MĀTAURANGA MĀORI

Mana Whenua:

Rangitāne o Manawatū

Rangitāne o Tamaki nui-ā-Rua

Ngāti Apa

Ngāti Hauiti

Ngāti Kauwhata



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# GOVERNANCE GROUP

Next Meeting...



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REGIONAL COUNCIL



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