Item 2: Wānaka Stormwater Flood Map

SESSION TYPE: Workshop

PURPOSE/DESIRED OUTCOME:

The purpose of this workshop is to explain the updated 2026 Wānaka Stormwater Modelling Map, the improvements made since 2022, what the mapped results mean, and how the information will be used by residents, property owners, and Council. The desired outcome is for elected members and the community to understand and appropriately use the updated information.

DATE/START TIME:

Monday, 12 October 2026 at 10.30am

TIME BREAKDOWN:

Presentation: 20 minutes
Questions *or* Debate/Discussion: 15 minutes

PRESENTERS:

Morgana Zanotto Laner (Asset Manager 3 Waters & Waste Minimisation)

Prepared by:

Name: Morgana Zanotto Laner
Title: Asset Manager 3 Waters & Waste Minimisation
24 September 2026

Reviewed and Authorised by:

Name: Tony Avery
Title: General Manager, Property & Infrastructure
1 October 2026

ATTACHMENTS:

A	Wānaka Stormwater Flood Map Presentation

Wānaka Stormwater Flood Modelling and Maps

Date: 12th October 2026

Presented by: Morgana Zanotto Laner

QUEENSTOWN LAKES DISTRICT COUNCIL

Introduction

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Understanding stormwater conveyance into and through our urban areas is a critical part of planning for the future.

Stormwater hydraulic model → **Stormwater hazard map**

Used to:

- Improve understanding of catchment scale stormwater behaviour
- Monitor the current network
- Plan new stormwater infrastructure

Helps our community:

- Access stormwater modelling information held by Council
- Understand where water may flow or collect during rainfall
- Identify where site specific advice may be appropriate

Why and Who

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What triggered this release?

Reviews and updates of stormwater maps as:

- New information becomes available
- Catchments continue to change

Who has been involved?

- Property & Infrastructure
- Planning & Development
- Communications
- Legal
- GIS
- External consultant (DHI)

2022 Flood Map

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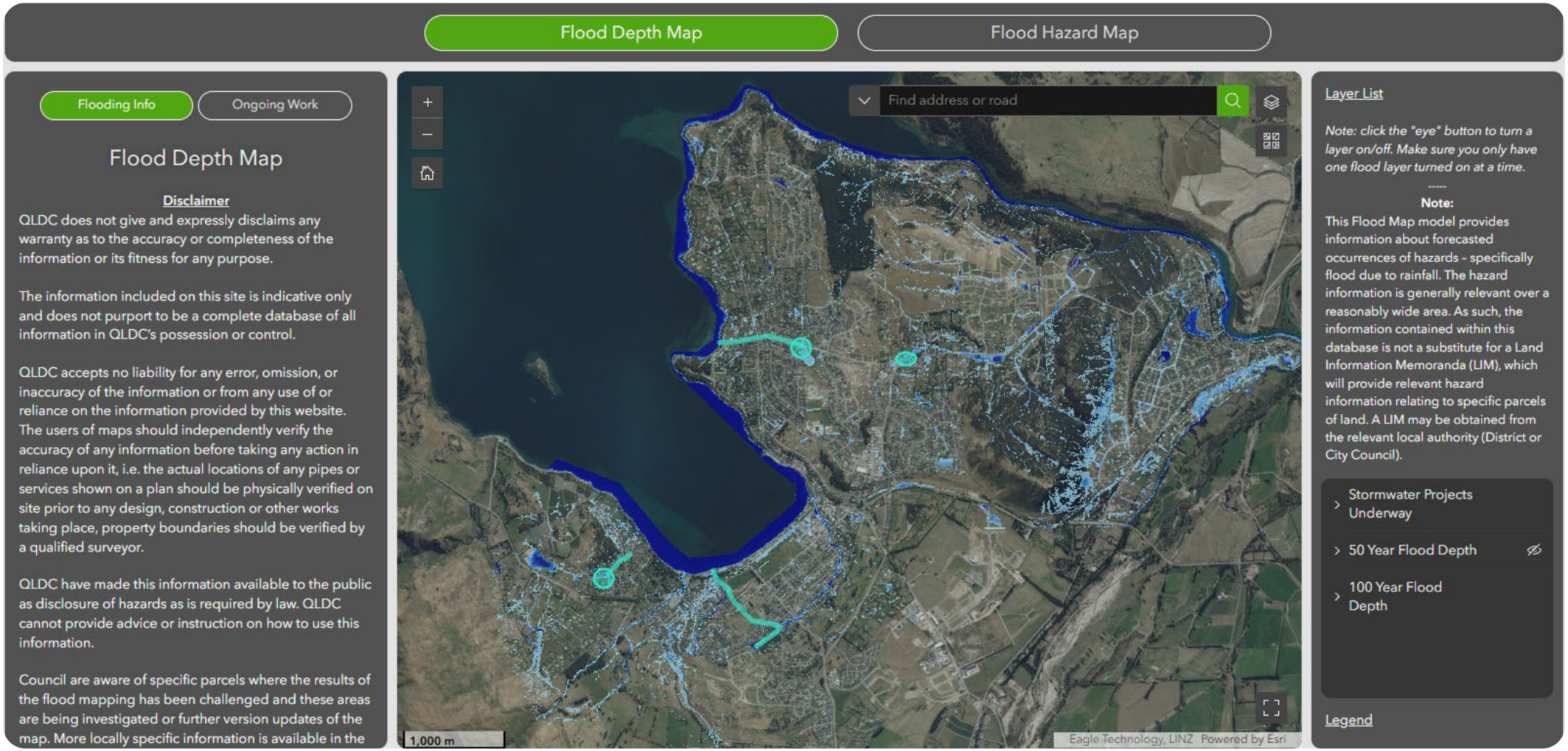

Link: [Map Navigator]

Updates

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The flood map information has been updated based on three inputs.

Community feedback

Feedback received after the 2022 map release

Better data

New survey information, as-built plans and site investigations

National experience

Lessons from other councils across New Zealand

Works Completed

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1 New LiDAR survey

New ground survey data collected in 2022/23

2 Better flood features inputs

Buildings, roads and kerbs, open channels, waterways, stormwater ponds and basins

3 Local refinements

Specific locations refined using survey information, as-built plans and site investigations

4 Updated network

Latest asset information, including newly surveyed infrastructure and recent developments

Map Comparison

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	2022 Wānaka Stormwater Flood Map	2026 Wānaka Stormwater Flood Map
Area assessed	North Wānaka and Albert Town	North and South Wānaka, and Albert Town
Results shown	• Flood depth for 50- and 100-year events • Flood hazard (depth × velocity)	• Overland flow paths • Floodplains for 20- and 100-year events • Flood prone areas
Information	Technical notes added to the map	Clear, technical & non-technical explanations

The 2026 modelling aligns with Water NZ National guidance and approaches for stormwater flood modelling.

Results

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The 2026 map shows three types of stormwater features.

Overland flow paths	Modelled or terrain derived routes stormwater may follows across the ground in heavy rain, when the network is at capacity or where no network exists
Flood prone areas	Low-lying areas where water may collect in heavy rain, especially when drains are blocked or at capacity. Actual ponding may be influenced by drainage infrastructure and site conditions.
Floodplain areas	Areas predicted to by the model to be inundated in extreme rainfall: 1% and 5% AEP events[1]

1. AEP = Annual Exceedance Probability: the chance of an event of that size occurring in any given year (1% AEP ≈ 1-in-100-year event).

2026 Wānaka Stormwater Flood Map

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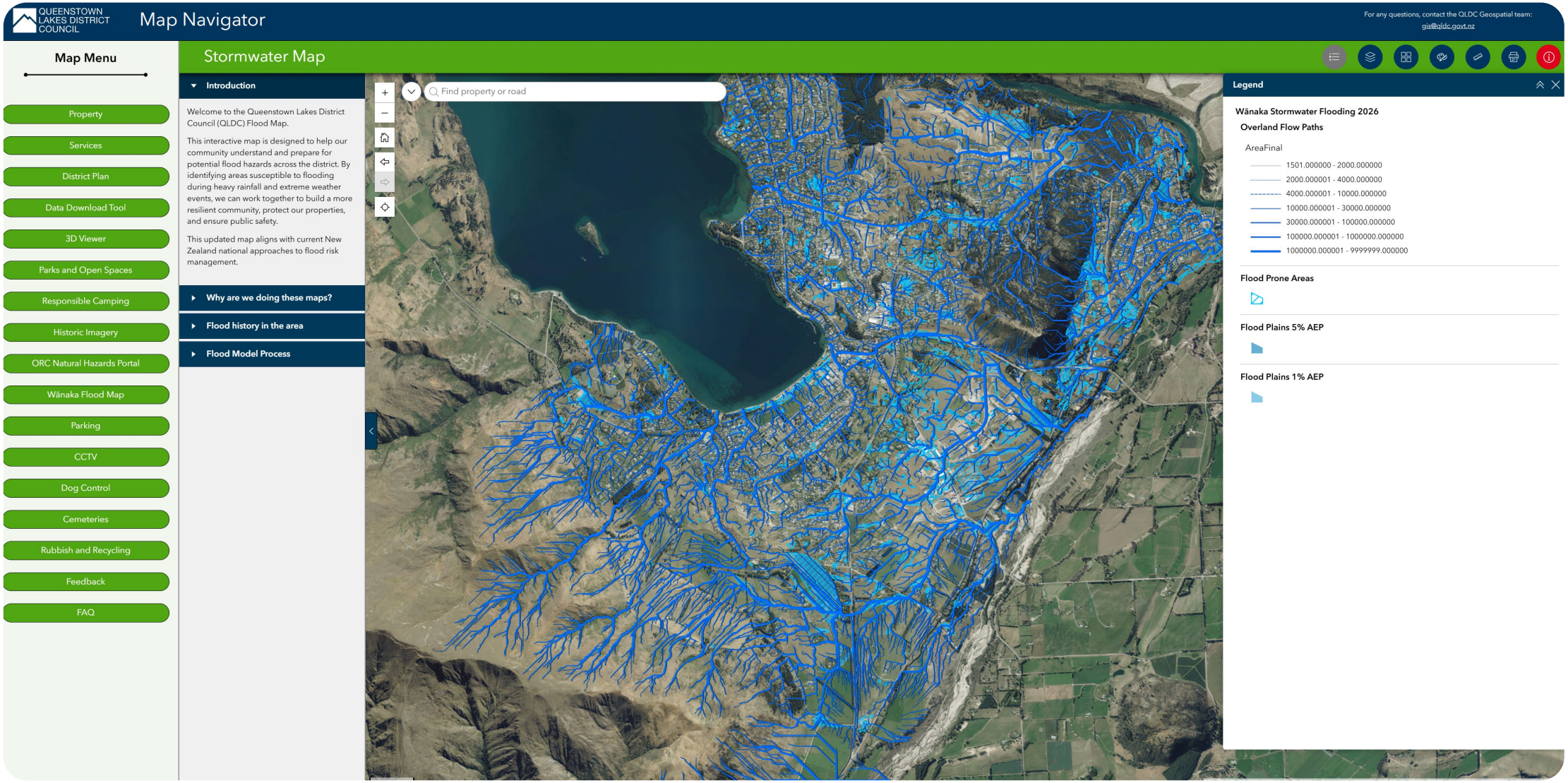

Limitations

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No model is a perfect representation of the natural environment.

Why uncertainty exists

Many inputs and complex interactions mean model predictions carry some uncertainty.

How it is managed

The process to produce this stormwater flood map followed established best practice.

What does this mean for property owners?

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If property or land is within the assessment area then this information will be included in a property's LIM[2].

Why it is on the LIM

Councils are legally mandated to include details on known or potential natural hazard- explicitly including flooding, overland flow paths, and climate change impacts on LIMs. Section 44A - Local Government Official Information and Meetings Act 1987 (LGOIMA)

- LIM records information held by Council. It is not a property specific assessment or certification of flood risk.
- Property owners should review the technical report, request the property file and obtain independent professional advice where appropriate.

2. LIM – Land Information Memorandum

Summary

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What these maps are not

- A statutory District Plan hazard overlay
- A property specific flood assessment
- Confirmation that flooding will or will not occur
- Complete record of natural hazards that might affect any property
- Substitute for engineering, planning, insurance or other professional advice

What this work delivers

- Updated stormwater modelling information for Wanaka
- Improved understanding of stormwater behaviour and extent of flooding
- Better information to support infrastructure planning and future growth
- Greater transparency by making technical information publicly available
- Supports a better understanding of stormwater behaviour over time as additional information becomes available