

22 September 2021

Liang Wei Ming, Cheung Cara Cheuk Man
277A Meola Road
Point Chevalier
Auckland 1022

Enquiries to: Amanda or Lisa
Phone: 07 885 0340 or 07 883 7189
Email: info@southwaikato.govt.nz
Reference: 768/0547335800

Dear Sir/Madam

FLOOD HAZARD INFORMATION UPDATE AS IT RELATES TO YOUR PROPERTY

As a result of Council's planning to assess the capacity and capability of our three waters infrastructure (wastewater, water supply and stormwater) in Tokoroa, a computer modelling exercise was undertaken.

Part of this assessment looked specifically at stormwater capacity and capability, including flood hazard areas.

This desk top exercise shows which properties in Tokoroa are less likely or more likely to be affected during extreme rainfall events.

The updated information shows that your property located at 19 Dalmeny St, Tokoroa (valuation number: 0547335800) is in an area that is potentially at risk of flooding in an extreme rainfall event. As a result of the recent assessment, the flood hazard information has been updated.

The map enclosed shows a portion of the Tokoroa township that includes your specific property.

It is important to note that this potential flood hazard is for an extreme rainfall event only. For a definition of 'extreme rainfall event', otherwise known as a 100-year event, please read the information flyer enclosed.

Your property has been identified as having 10 to 24.99 percent of its land area covered with water during the modelled 100-year event. The average depth of the water is modelled to be less than 500 mm and the maximum depth is less than 500 mm. **Please note that the attached map will only show areas where inundation is over 100mm.**

Please remember this information was derived using a computer modelling exercise of a specific rainfall pattern. The model is not a site-specific assessment of flooding for each property in the catchment areas. What is important to realise is this information indicates that your property could be at risk from an extreme rainfall event. To help determine this risk, refer to your property specific information above and the attached map. Council will pay for a survey to assess the floor height of your main building to see how close this is to the 100-year flood level.

Please register your interest to have a height assessment done on the main dwelling or building on your property by calling Amanda in Tokoroa on 07 885 0340 or Lisa in Putāruru on 07 883 7189 or completing the online survey form. This survey is at Council's expense. Please register by 5 November 2021.

Link – www.surveymonkey.com/r/TokoroaandTirauheightassessment2021

It is part of normal Council business to know the effects of natural hazards that could impact our community. This enables Council and our community to better prepare for high rainfall events. Flood hazard maps for South Waikato District have been evolving since the late 1990s. The information is used for building consents, planning new subdivisions and improving our infrastructure planning.

Council is required to include this information on our property files, Land Information Memoranda (LIM) reports and live on our electronic mapping and document systems. This information has to be public under various pieces of legislation.

Council has contacted you as the property owner. If you rent or lease your property, it is expected that you will notify your tenant or lessee about the contents of this letter and the attached information.

If you have questions, please contact Council on 07 885 0340 or 07 883 7189 between the hours of 9am and 4pm and ask to speak with [name] or feel free to attend one of six drop-in sessions that have been arranged.

Venue: Tīrau Memorial Hall
Date: 5 October, 2021
Times: 3pm to 4pm and 5pm to 6pm

Venue: South Waikato Sport and Events Centre
Date: 6 October, 2021
Times: 3pm to 4pm and 5pm to 6pm

Venue: South Waikato Sport and Events Centre
Date: 7 October, 2021
Times: 3pm to 4pm and 5pm to 6pm

Yours faithfully



Phil Burt

THREE WATERS AND SOLID WASTE MANAGER

Questions and Answers about Flood Hazard Mapping

As a result of Council's planning to assess the capacity and capability of our three waters* infrastructure, a modelling exercise was undertaken in Tokoroa and Tīrau.

Part of this assessment looked specifically at stormwater capacity and capability, including identifying flood hazard areas.

The flood hazard information shows which properties are less likely or more likely to be affected during extreme rainfall events.

This information allows Council to better understand how flooding from extreme rainfall affects each area in Tokoroa and Tīrau. The map updates flood hazard information that Council has previously held about Tokoroa and Tīrau. Using more accurate technology, the potential floodable area is shown to have changed since our records were last updated.

** three waters refers to stormwater, water supply and wastewater*

Why update flood hazard information?

Flood hazard maps show which areas of Tokoroa and Tīrau might be flooded in an extreme rainfall event, and to what extent.

Updating our flood hazard maps ensures Council is in a better position to plan for stormwater management.

It is part of normal Council business to know the effects of natural hazards that could impact our community. This enables Council and our community to better prepare for high rainfall events. Flood hazard maps for South Waikato District have been evolving since the late 1990s. The information is used for building consents, planning new subdivisions and improving our infrastructure planning.

What is a 100-year rainfall event?

An extreme rainfall event doesn't happen very often.

The flood hazard map is modelled for a 100-year rainfall event. The term '100-year event' can be confusing because such an event could actually occur more than once every 100 years. Technically, a 100-year event means there is a 1% chance that it might happen in any given year.

Council has modelled flood hazard maps for the 100-year event because it will allow us to consider building consent applications under the Building Act 2004 and subdivision consent applications under the Resource Management Act 1991.

The rainfall event used to develop the 100-year flood uses a High Intensity Rainfall Database from NIWA* to create a set of 100-year events of differing durations, from 10 minutes to 24 hours.

**NIWA – National Institute of Water and Atmospheric Research*

How are the flood hazard maps prepared?

The area of land being studied is called a catchment. When rain hits the ground, it all drains downhill to a particular stream or outlet. The stormwater catchment is the defined area of land that contains and collects all that water.

To plot the potential flood hazard we build a computer model of the area that we wish to study. The flood hazard map predicts what happens to the water in the catchment under extreme rainfall conditions. We then use computer software to simulate different rainfall intensity on that catchment.

The basis of the flood hazard information is the ground surface which has been measured using a system called LIDAR (Light Detection and Ranging). This measures the ground levels of the land using laser pulses and generates an accurate contour map, which we place into the stormwater computer model. LIDAR is very reputable technology used by most councils in New Zealand.

Our first job is to work out which criteria we enter into the computer model. The sorts of questions we consider include:

- How hard is it raining?
- How long has it rained for?
- What is the contour of the ground?
- Where will rain water soak into the ground (eg, grass)?
- Where will rain water flow over hard surfaces (eg, roofs, roads)?
- How long will it take for rain water to flow from one part of the catchment to another?
- What stormwater systems (ie, pipes and ponds) are already in place?

Technology is able to take all of these variables into account. Once the criteria are set we can run the flood hazard model. There is a huge amount of information to be computed so it takes longer than real time for the software to process each model. We run the model to calculate how, when and where the rainwater flows. The result tells us which parts of the catchment are likely to be covered by water, and to what depth.

When the model is complete it gets loaded into our GIS (Geographical Information System) mapping system to display the potential flood hazard information. The updated flood hazard map is now available online at <https://southwaikato.intramaps.co.nz>.

What is Council doing about flood management?

Council's strategy to flood management is to:

- Provide comprehensive flood information and technical advice to aid stormwater management.
- Take the flood hazard information into account when managing its assets and planning future stormwater improvements. Decisions on the priority and timing of stormwater upgrade spending are undertaken via the Annual Plan and Long Term Plan processes.
- Ensure that flood emergency plans consider the appropriate responses for a 100-year flood.
- Provide for main building height assessments (please register interest).

Does this flood hazard information go on my property file?

Yes, the updated information has been stored on the files relating to your property and on our GIS mapping system. Flood hazard information for every property has always been publically available on request. It is noted in Land Information Memorandum (LIMs) reports.

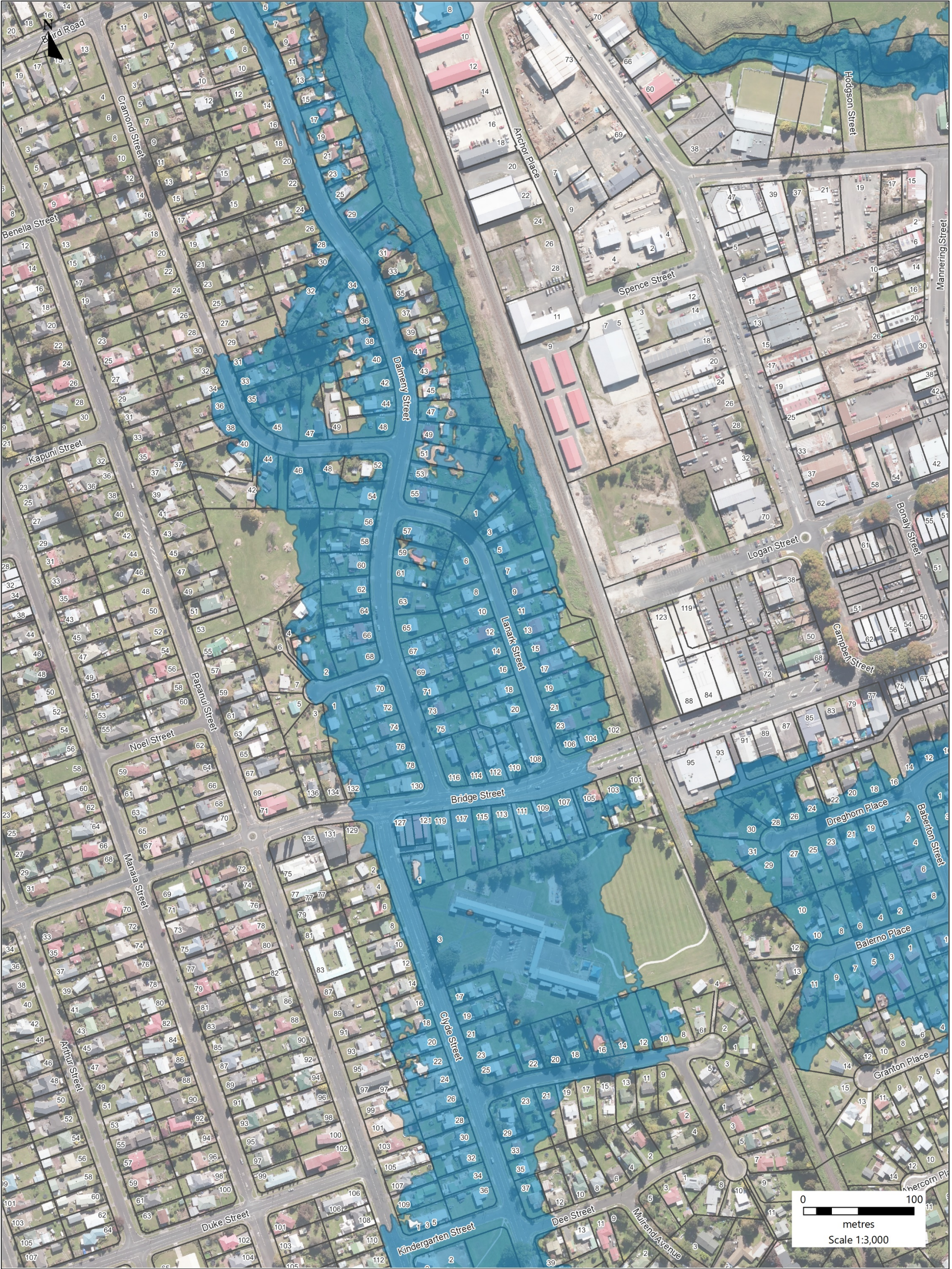
Council is required by several acts of Parliament to hold this information and to make it publically available. As custodians of this information we will always provide the most up to date information that we have available about your property.

Will this affect my insurance?

Council cannot advise you about any effect that this information might have on insurance. In this matter you may wish to contact your insurance company.



For more information visit www.southwaikato.govt.nz - Maps - Online Mapping Tool
or contact Lisa McKinnon on 07 883 7189



**TOKOROA FLOOD HAZARD MAP
(100-YEAR EVENT) - UPDATE
AUGUST 2021 (MAP 8)**

Legend

-  Flood Extent
-  Land Parcel

Disclaimer:
Information shown on this map is a result of 2D stormwater catchment modelling. This map is compiled based upon an assessment of the best available information at the time modelling was undertaken. South Waikato District Council does not guarantee the accuracy and completeness of information and does not accept responsibility for any loss or damage incurred by a user in reliance on the information. SWDC will not be liable or responsible on any basis (including negligence) for any expense, loss, damages arising in connection with your use of the information provided by the map. Information from this map may not be used for the purposes of any legal disputes.



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