

Omaha stormwater news

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Omaha Stormwater News



Kia ora Omaha community,

On Friday 27 January, Auckland saw its biggest rain event on record and had severe impacts on people, property, and infrastructure.

The rainfall exceeded all previous records, with over 200mm falling in a 4-hour period and has affected most of Auckland. Average rainfall for Auckland in January is about 70mm. We have since had two more significant rain events – the last being cyclone Gabrielle.

As a result, we are left with an unprecedented amount of floodwater trying to soak into the ground and drain into the sea. This means we are currently experiencing extremely high groundwater levels.

What is groundwater?

Groundwater is the term given to water that is present beneath the Earth's surface at any given time. Rainwater naturally soaks into the ground across Auckland and travels from high areas through layers of soil and rock, down towards the coast. The layer of sand containing the groundwater is known as an aquifer.

Why has groundwater been flooding parts of Auckland?

Groundwater flooding happens after wet weather when more rainwater than normal soaks down into the sand. The aquifer fills with water and the water table rises, eventually reaching the surface. Groundwater is being pushed out of cracks and holes in the ground, as well as porous wall and floor surfaces within properties that sit lower than the water table.

Why is this affecting Omaha?

In large rain events, the normal drainage systems become overwhelmed. Overland flow paths are activated, which is the natural path water will take to escape to the harbours. Floodplains begin to

fill until the water can escape. This information is shared with the public on council's Geomaps website <https://geomapspublic.aucklandcouncil.govt.nz/viewer/index.html>.

As Omaha drainage operates with a system of soakage holes to manage stormwater, rainwater soaks into the ground and the sand to join the aquifer. The unprecedented flooding event has increased the groundwater table to a much higher level and the soakage system has now become overwhelmed.

As sea level is very close to the current ground water levels, it may take several months for groundwater levels to return to normal. It is a completely natural process. Unfortunately, this may take longer if the wet weather continues.

What have we been doing?

Hundreds of Auckland Council staff and contractors have been on the ground across our region to assist Auckland Emergency Management, emergency services and those hit hard by the impacts of intense rain since the Anniversary weekend and subsequent floods in Auckland.

Our Healthy Waters operations team put a temporary pump in place at the Darroch Slope Reserve to try and prevent habitable floor flooding. As the extreme weather and the risk of habitable floor flooding has eased, we removed this pump on Wednesday 16 February. This was due to a combination of vandalism of the pump and risk of erosion to the sand dunes.

As a temporary short-term measure, we will be putting a larger pump in its place on or before Monday 20 February. This will be used to allow access to the lower properties.

We will not be pumping groundwater out of any other sand dune reserves. These reserves are designated flood plains and are operating as they should be during this extreme series of events. These reserves do not pose a threat to habitable floor flooding, so is not a high priority for the council at the moment while we are responding other urgent requests. The water will recede naturally.

It is important that residents keep out of the flood water as it may be contaminated from overflowing or flooding septic tanks, and there could be hidden hazards.

For more information about flooding, visit the Auckland Council website on www.aucklandcouncil.govt.nz/flooding or Auckland Emergency Management www.aucklandemergencymanagement.org.nz

Omaha stormwater projects update

Darroch Slope

The stormwater project at the upper end of Darroch Slope was completed in late 2022. This included installing channel drains across existing concrete driveways and footpaths, a stormwater pipe crossing across Kitty Frazer Lane, swales and soakage pits across both sides of Darroch Slope and at the walkaway between 4 Shamrock Crescents and 3 Darroch Slope.

The lower end of Darroch Slope is characterised by flat terrain and a high ground water level. This presents technical challenges in creating a solution. The previous feasibility design was found to not be fit for purpose or cost effective. We are currently working with our consultants GHD Ltd to investigate the feasibility and effectiveness of another option.

Omaha outfall development

The key to your stormwater network is the stormwater outfall at the Omaha boat ramp. The purpose of this project is to help mitigate current flooding and ponding issues along Omaha Drive which affect private properties and cause erosion to the beach.

The detailed design review has been completed and has been sent back to our consultants GHD Ltd. We are currently in the process of applying for landowner approval and completing the tender

documents.

Resource consent was applied for in January 2022 and we are currently waiting on its approval. We will contact residents with an update once we receive resource consent.



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