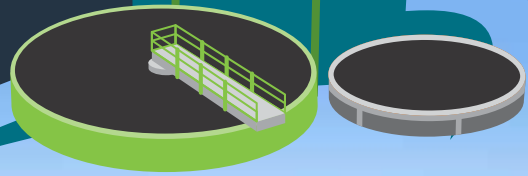


WHANGĀREI *Wastewater Treatment Plant* CONSENT RENEWAL



**Have
your
say!**

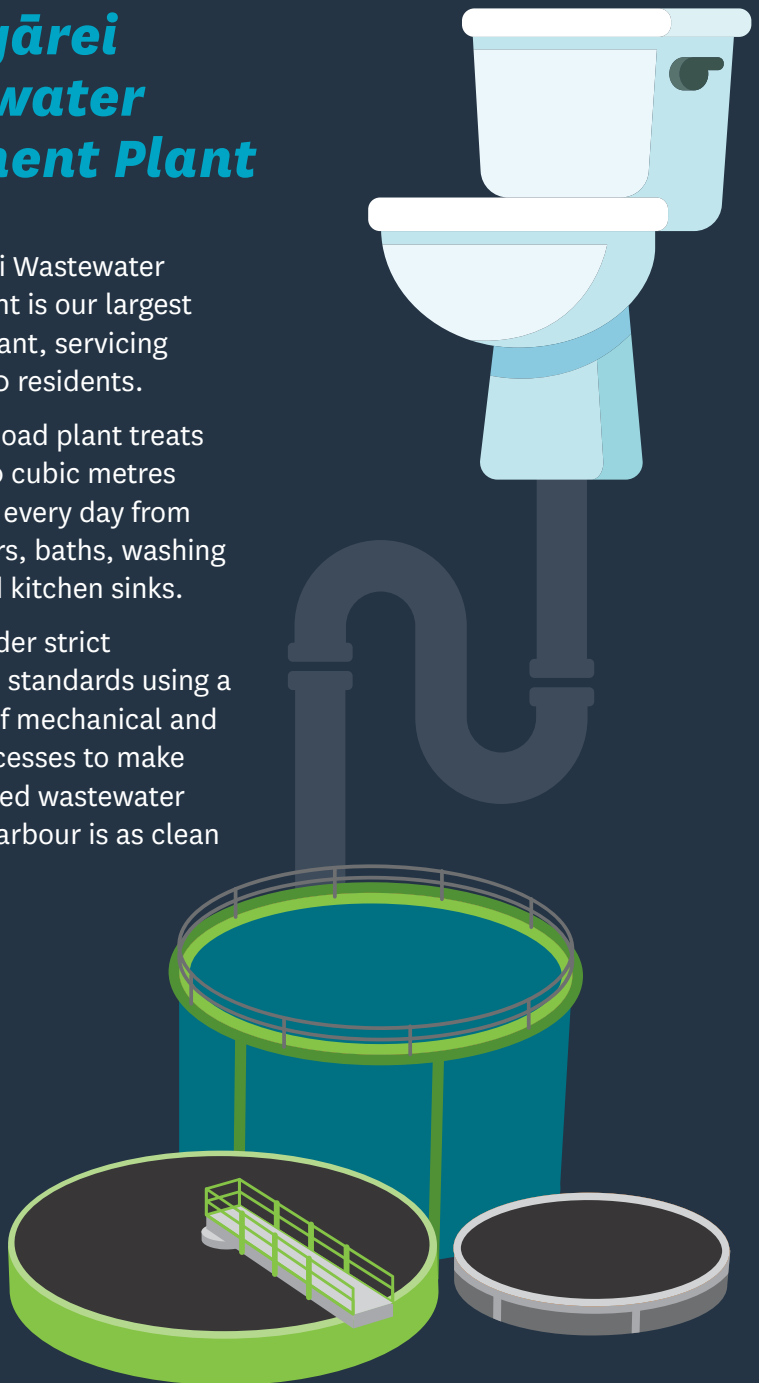
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Whangārei Wastewater Treatment Plant

The Whangārei Wastewater Treatment Plant is our largest wastewater plant, servicing around 65,000 residents.

The Kioreroa Road plant treats around 21,000 cubic metres of wastewater every day from toilets, showers, baths, washing machines, and kitchen sinks.

It operates under strict environmental standards using a combination of mechanical and biological processes to make sure that treated wastewater entering the harbour is as clean as possible.



Whangārei Wastewater Treatment Plant Consent Renewal

Whangārei's Wastewater Treatment Plant (WWTP) discharge consent is expiring in 2022 and we need to apply to the Northland Regional Council to renew it.

Our goal is to provide this necessary waste treatment service to the community with the least impact on the surrounding environment.

We want to make sure the discharge into the environment stays the same as it currently is or if possible is improved over the term of the consent.

We are not proposing to increase discharges or change the discharge locations in Limeburners Creek.

The maximum permitted discharge volume is expected to stay the same as it is under the current consent at 140,000 cubic metres a day (on a normal day we process around 21,000 cubic metres a day but this increases during heavy rainfall).



Get involved and share your views

As part of the consent process we want to talk to you, consider the issues you feel are important and explore possible solutions.

Our goal is to provide this necessary waste treatment service to the community with the least impact on the surrounding environment.

We want to hear your concerns and expectations. Your input will help us as we develop our consent application over the next year.

We will also be involving local hapū and other groups such as Department of Conservation, Forest and Bird, Fish and Game and the Whangārei Harbour Advisory Catchment Group.

Visit: www.wdc.govt.nz/HaveYourSay to find out more.



Improving harbour water quality

We are always looking for ways to improve the wastewater system.

In the past during heavy rain, extra stormwater and groundwater flooded into the wastewater system and caused sewage spills in the harbour.

Over the last decade we've invested more than \$60 million to improve harbour water quality, including installing storage tanks to hold and treat extra water during storms. We've also boosted UV treatment at WWTP so no untreated water goes from here into the harbour during storms.

The multi-million dollar projects completed to date include:

- New storage and treatment facilities at Whareora Rd and Tarewa Park which contain and treat extra water that enters the system during storms
- Major upgrades to the WWTP which means all wastewater receives UV and other treatments before being discharged into the wetlands
- Upgrades to the Okara Park pump station and pipeline
- Wastewater pipe renewals across the network

These improvements have dramatically reduced the number of sewer spills into the harbour and improved harbour water quality.

Council has also increased spending on stormwater as part of the 2018-28 Long term Plan to further improve harbour water quality.



A natural floating filter

Treated wastewater receives a final filter through thousands of native plants in the Limeburner Creek Wetlands. In 2014, these man-made wetlands had a major makeover and instead of the plants being planted in the ground they are now planted on floating mats, their roots extending down into the water. The wetlands, which provide a great habitat for native birds, can be explored via a timber boardwalk.



WWTP Consent FAQs

DOES UNTREATED WATER STILL GO INTO THE HARBOUR DURING STORMS?

Untreated water does not go into the harbour from the wastewater treatment plant. When it rains extra water enters the wastewater system and the plant struggles to cope with the extra flow. On a normal day discharged water goes through the full treatment process but during storms this process is shortened. During storms wastewater, as a minimum undergoes screening, settlement, UV and wetland treatment.



IS THERE ANYTHING YOU CAN DO TO FIX THE SMELL?

Reducing the odour of the plant is something we will be considering as part of the consent process and the best practicable options analysis. Technology is improving all the time and we are always looking for ways to reduce the smell. One option could be to cover part of the plant to reduce smells.

DOES THIS FUTURE PROOF US?

Yes, future growth is something we will be considering as part of the consent process and the best practicable options analysis.

ARE CLIMATE CHANGE AND SUSTAINABILITY BEING CONSIDERED?

Yes, climate change and sustainability is something we will be considering as part of the consent process and the best practicable options analysis.



What to do with all that poo?

Whangārei produces tonnes and tonnes of poo every year. Around 6.5 million cubic metres of it is piped to the Whangārei WWTP every year for treatment.

When you flush your loo, your poo races down the sewer system, joined by wastewater from showers, baths, washing machines and kitchen sinks, to the plant for processing.

Here it is strained, mixed, filtered, feasted on by live bacteria, dried and disinfected. Solid waste is taken to landfill and treated water is discharged into the Limeburners Creek Wetlands.



Keeping your pipes clean

Things can go wrong when people flush wet wipes, cooking fat or other rubbish down their wastewater pipes.

Grease and fat lump can together with other trash as giant 'fatbergs' in the sewer system, causing raw sewage overflows into the environment and costly repair bills for ratepayers. One of the largest 'fatbergs' ever discovered was a 130 tonne, 250m long monster, found in a London sewer.

These things can block drains:

- baby wipes
- cotton buds
- band-aids
- sanitary products and nappies
- fats, cooking oil and food scraps

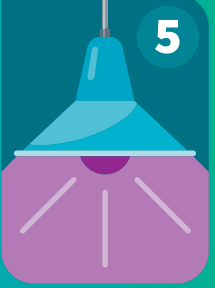


The wastewater treatment process



LIQUIDS

SOLIDS



1 SCREENING

Screening removes paper and other debris.

2 SEPARATING

In large settling tanks the solids (sludge) sink to the bottom, while fats and oils float to the top.

3 MAGICAL MICROBES

Our wastewater treatment plant uses natural biological process – millions of microbes that clean the water by eating the bugs. These bugs are our heroes, doing all the hard work for us without the need for nasty chemicals. These living organisms are very susceptible to chemicals which is why it is important not to flush things like paint down our drains!

4 SUPERBUG SOUP

Two giant aerators add oxygen to the wastewater to create a nutrient-rich soup for superbugs that continue the cleaning process.

5 UV TREATMENT

Filters remove fine particles from the water before ultraviolet (UV) tubes kill any remaining bugs.

6 A FINAL FILTER

Thousands of native wetland plants give the treated water a final filter.

7 SLUDGE DIGESTORS

Solid waste is heated and dried. Two biogas generators harness the poo power created by methane gas during the sludge treatment process and turn it into electricity.

8 LANDFILL

The treated sludge is taken away to landfill.



Private Bag 9023, Whangarei 0148, New Zealand
Forum North Building, Rust Avenue, Whangarei
Ruakaka Service Centre, Takutai Place, Ruakaka

P 09 430 4200 | 0800 932 463 (24/7)
mailroom@wdc.govt.nz | www.wdc.govt.nz
Facebook.com/WhangareiDC