Matatā Wastewater Scheme

WHAKATĀNE District Council

PROGRESS UPDATE
17 JANUARY 2014

Resource Consents

Resource consent and land designation applications for the Matatā Wastewater Scheme have now been lodged with the Bay of Plenty Regional Council and Whakatāne District Council.

The four separate resource consents required are:

- A Discharge Permit for air contaminants (odour) from the Wastewater Treatment Plant site and the pump station at the Land Application Field;
- A Discharge Permit for the discharge of treated wastewater from the Matatā Wastewater Treatment Plant into land, where it may enter water, at the Land Application Field (maximum discharge of up to 605m3 per day);
- A Land Use Consent for –
  - Approximately 5,500m3 of earthworks on land within the Erosion Hazard Zone at the Land Application Field;
  - Disturbance of land and soil resulting from approximately 4.6 hectares of vegetation clearance on land within the Erosion Hazard Zone at the Land Application Field;
- A Discharge Permit for the discharge of stormwater to water and/or land from urban or residential/rural development.

Land Designation applications required are for:

- The construction, operation, maintenance and upgrading of the Matatā Wastewater Treatment Plant and associated facilities (located on Allot. 6A Matatā Parish – ML 9665);
- The environmental protection buffer for the Matatā Wastewater Treatment Plant and associated facilities;
- Access to the Wastewater Treatment Plant Site; and
- The installation, operation, maintenance and upgrading of the treated wastewater Land Application Field and associated facilities (Pt. Allot. 273 Rangitāiki Parish – SO 332912).

The resource consent applications were publicly notified on 20 December. In the meantime, to ensure that we meet the Ministry of Health's subsidy deadlines, work is continuing on all aspects of the project.

WHAKATĀNE District Council

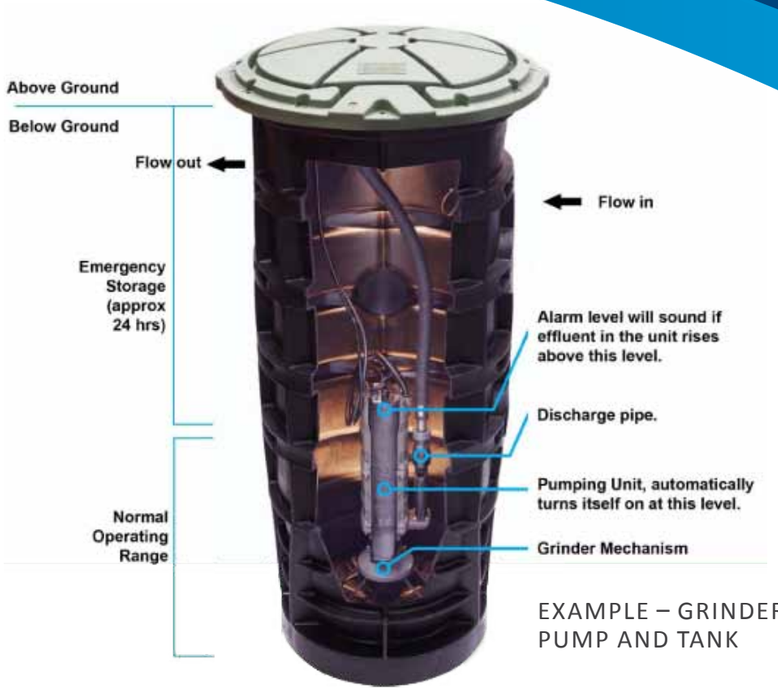
Pressure Sewer System

Right now, the waste from your toilet, sink, shower, bath, washing machine and dishwater is gravity-fed into a septic tank. There, the solids settle and the liquid flows into a soakage field where it is absorbed into the ground.

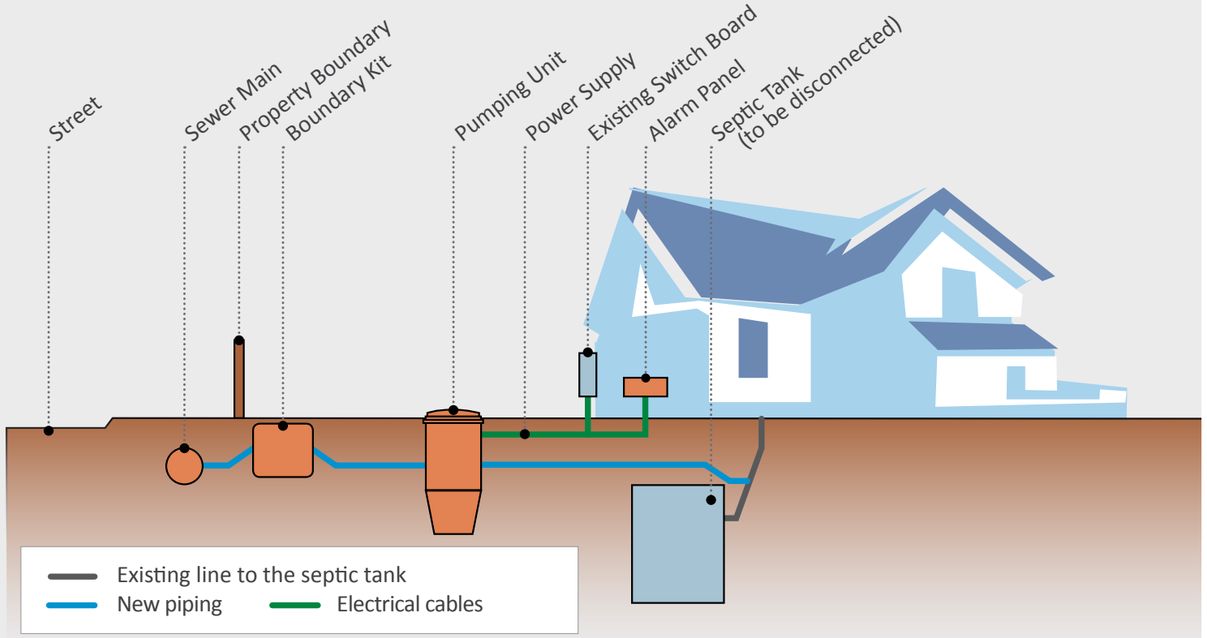
The pressure sewer system will see each household's liquid waste diverted into a tank where a pumping unit grinds any solids into a slurry and pumps it into the reticulation network. The combined effect of all of the individual pumping units pressurises the system and transfers the waste to the Treatment Plant, where it is processed for disposal.

Pressure sewer systems have been used in New Zealand for close to 10 years, but have been commonly used elsewhere in the world for more than 40 years. Typically, pressure sewers are installed in areas where the terrain is difficult, or there are other issues such as a high water table or extreme environmental or cultural sensitivity. They are very reliable and robust, with little that can go wrong or require attention. However, to ensure that blockages and damage do not occur, you will be asked not to put the following items into the system: glass; metal; sand or gravel (including kitty litter); shells; socks, rags or clothes; plastic; nappies, sanitary napkins or tampons; flammable liquids, petrol, diesel, lubricating oil or grease. To avoid overloading the system, it is also important to prevent stormwater infiltration.

In the event of a power cut or an operating problem requiring maintenance, the space between the alarm level and the top of the tank will give you approximately 24 hours of emergency storage. That means you can continue to use the system for a day without having to worry about overflows, although it is recommended that anyone in that situation minimises water use until their pump is operating normally.



EXAMPLE – GRINDER PUMP AND TANK



Reticulation Network – Connection Details

The design of the reticulation (piping) network is now nearing completion and we will be looking to finalise the details of individual property connections over the next few months. This will involve a site meeting with the owners of each property to agree the preferred location for the grinder pump tank unit and control box and confirm that the existing power supply will be adequate to run the new system. Note that if any electrical upgrading is required, this will be undertaken at no cost to the property owner. Details relating to any work required to decommission and secure existing septic tanks will also be confirmed.

Site visits are expected to begin early next month and property owners will be contacted to schedule a suitable time.

Questions and answers

The following are the answers to some frequently asked questions about pressure sewer systems.

Q: WHAT IS A PRESSURE SEWER SYSTEM?

A: A pressure sewer system consists of a series of below-ground grinder pump stations (one for each connected property) which receive household wastewater, grind any solid material into a fine slurry and then pump it under low pressure through the reticulation network of small-diameter polyethylene pipes.

Q: HOW IS A PRESSURE SEWER SYSTEM DIFFERENT TO A GRAVITY SEWER?

A: Gravity sewer pipelines are laid with a downhill gradient to pumping stations or large diameter trunk sewer mains. Minimum pipeline grades must be achieved to ensure that wastewater velocities are sufficient to prevent solids from settling. This means deeper trenches, greater environmental impacts and cost viability problems where the terrain is difficult.

A pressure sewer system does not require a downhill pipeline gradient and the flow velocities achieved mean that pipes are smaller and can be laid closer to the ground surface. To maintain the pressure within the system, the piping network is completely sealed, with no possibility of seepage or infiltration. All pipe connections are welded and there will be no manholes or vents.

Q: IS A PUMP GRINDER TANK THE SAME AS A SEPTIC TANK?

A: No - a grinder pump grinds waste from the home and pumps it into a public sewer system, usually laid along the road edge outside your home. Septic tanks settle-out solid material, which has to be removed every few years, and leach the wastewater into the ground.

Q: WHERE IS THE PUMP STATION UNIT LOCATED WITHIN A PROPERTY AND HOW MUCH OF IT IS VISIBLE?

A: Pump stations are usually installed in a location agreed with the property owner. They have a small control panel, which can be mounted on the dwelling wall, or remotely on a post. A control panel colour can be selected to suit the location. The top of the pump station is less than a metre in diameter and protrudes from the ground by less than 100mm. It typically has a green lid to suit gardens and lawn areas.

Continued on back page

Questions and answers (continued)

Q: HOW IS POWER SUPPLIED TO THE PUMP STATION UNIT?

A: A separate circuit needs to be installed from the property's existing switchboard and runs to the pump station unit control panel.

Q: HOW MUCH POWER DOES A PUMP STATION UNIT CONSUME?

A: A typical 4-person household will produce about 800 litres of wastewater a day. Pumps operate at approximately 550W and discharge 0.5 litres per second, which would result in a power cost of about $18 a year.

Q: WHAT HAPPENS IF THERE IS A POWER FAILURE?

A: All pressure sewer pump stations have about 24 hours of emergency storage capacity, but during power failures, residents are advised to minimise their water usage until power is restored.

Q: WHAT HAPPEN IF A PUMP UNIT BREAKS DOWN?

A: The grinder pump is an electro-mechanical device that will eventually require servicing. If a unit does break down, the alarm will sound when the tank contents reach the trigger level. In that event, the householder would be assisted by the Wastewater Scheme operator to diagnose the problem and repairs or replacement would be undertaken within the 24-hour emergency storage period.

Q: HOW OFTEN DO PUMP STATIONS OPERATE?

A: Pump operation is dependent on how much wastewater a dwelling produces. At times of peak use on an average property, the pump will usually operate up to 10 times daily and run for between one and three minutes each pumping cycle.

Q: IS IT EASY FOR ANYONE TO ACCESS THE PUMP STATION AND ITS CONTROLS?

A: Pump stations are fitted with tamper-proof bolts to control access into the pump chamber. Control panels either have padlocks or internal locks.

Q: HOW LOUD IS THE PUMP STATION AND WILL IT SMELL?

A: Pump stations are very quiet, because the pumps are located at the bottom of the station chamber, which is about a metre below ground level. There should never be a noticeable odour. The chamber is vented through both the property drain and the pump station lid, which helps dissipate any build-up, and because the pump operates whenever the chamber is about quarter-full, wastewater is usually not held for long before it is pumped away.

Q: WHAT DISRUPTION SHOULD I EXPECT WHEN THE PRESSURE SEWER SYSTEM IS BEING CONSTRUCTED?

A: Pump stations are relatively small and installation on your property should take less than two days to complete. Construction of the pressure sewer reticulation network will utilise 'trenchless' installation and with smaller diameter pipes, the construction timeframe is far less than a typical gravity sewer.

For further information, contact:

INKA KRAWCZYK
Project Manager, Matatā Wastewater Scheme
P. (07) 306 0500
E. Inka.Krawczyk@whakatane.govt.nz

WHAKATĀNE
District Council

www.whakatane.govt.nz