
Te Kahupapa Hai Tiaki i Te Mauri o Ngā Roto
East Rotoiti Rotomā Sewerage Scheme

Biolytix EcoPod
Operations & Maintenance Manual



In partnership with:

NGĀTI PIKIAO, NGĀTI RONGOMAI,
NGĀTI TARĀWHAI, NGĀTI MĀK
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ROTORUA
LAKES COUNCIL
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IMPORTANT

The Biolytix wastewater system must be maintained and repaired by a Biolytix trained and registered Technician. Untrained personnel must not attempt to undertake Biolytix EcoPod servicing.

If an alarm activates please contact Rotorua Lakes Council to assist on:

07 348 4199 (24/7)

If you have any queries or concerns regarding the operational requirements of your Biolytix EcoPod, please contact Rotorua Lake Council on:

info@rotorualc.nz

BIOLYTIX ECOPOD WASTEWATER SYSTEM

First Things First

This manual applies to the Biolytix EcoPod tanks installed within the Rotoiti – Rotomā Sewerage Scheme.

The Biolytix wastewater system uses patented biological filtration technology, relying on a diverse ecosystem of micro and macro-organisms, such as composting tiger worms (*Eisenia foetida*), to provide energy efficient treatment of domestic wastewater to a high standard. Controlled dosage of the partially-treated wastewater will be pumped via the reticulation network to the Rotoiti Waste Water Treatment Plant to complete the final treatment process.

Please read this manual carefully, and ensure the Biolytix wastewater system is operated as set out in this manual. Not doing so may compromise the performance of the system and result in unscheduled maintenance, faults/defects. If you have any questions, or would like further information, please contact Rotorua Lakes Council on **07 348 4199** or at info@rotorualc.nz.

IMPORTANT: All homeowners/tenants/visitors need to be aware that their wastewater is pre-treated onsite by a biological wastewater system. Care needs to be taken to avoid excessive water use and to avoid harsh chemicals or non-biodegradable items entering the wastewater system.

Compliance

The Biolytix wastewater system has been tested and certified in Australia as being compliant with the Australia & New Zealand Standard AS/NZS 1547:2012. The Biolytix system has completed an On-site Effluent Treatment (OSET) trial run, performed by the Bay of Plenty Regional Council at the

Rotorua Wastewater Treatment Plant. The Biolytix EcoPod has been selected by Rotorua Lakes Council for the Rotoiti scheme.

To ensure continued compliance after commissioning, it is important that the Biolytix wastewater system is operated and maintained as described in this manual.

Operation

The Biolytix wastewater system is designed for domestic (household) type wastewater only. To ensure ongoing compliance with regulations and to avoid costly repairs, some simple rules need to be followed. This section explains what should and should not go into the Biolytix wastewater system.

Maximum Wastewater Volume

Wastewater is the water that comes from toilets, bathrooms, laundry, kitchens, and dishwashing machines.

The maximum daily wastewater flow the system can take is **1,600 litres per day**. If required, the property owner can install a flow meter to better monitor how much wastewater is entering the system each day. Typically, one occupant introduces 200 litres per day into a wastewater system.

It is important that the wastewater system is not overloaded. If the wastewater system is operating close to its capacity (1,600 litres per day), or there is a risk that limit may be exceeded, we recommend the following measures:

- Installation of fittings and dual-flush toilets to help conserve water.
- Maintenance of plumbing fixtures to ensure none are leaking.
- Ensure no stormwater, pool backwash, or any wash down water (eg: paths, house, vehicles, etc) is able to enter the wastewater system.
- Reducing laundry volume/frequency when there are large numbers of visitors.

IMPORTANT: Do not exceed 1,600 litres of water per day. Do not turn the power off to the Biolytix EcoPod system.

It is important to avoid the following:

- **Frequent large gatherings:** large numbers of visitors can significantly increase the volume of wastewater and potentially overload the wastewater system.
- **Taps left running:** one tap left running overnight can waste over 10,000 litres.
- **Leaking taps and running toilets:** these can waste thousands of litres of water every day and can easily overload the wastewater system. Please check for leaks frequently and arrange for repairs to be done as soon as possible.
- **Frequent emptying of tubs and spa baths:** this can cause large volumes of water to enter the wastewater system and overload it.
- **Emptying or backwashing of swimming or spa pools:** the Biolytix wastewater system is not designed to cope with large volumes of water. Also, the disinfectants contained in the water of pools can negatively affect the biological treatment process of the Biolytix wastewater system.
- **Non-compliant connections:** do not allow downpipes, drainage pipes etc. to be connected to the Biolytix wastewater system. This will result in overloading.
- **Storm water entering the systems:** avoid landscaping around the Biolytix tanks that results in stormwater runoff flowing over the access lid. The area around each system must always be well drained.
- **Power turned off:** ensure that power to the Biolytix systems is always **ON**. If power is turned off, wastewater will not get pumped out. This can result in environmental hazards and costly repairs. In addition, the low energy consuming air diaphragm pump within the system must continuously operate to ensure the health of the worms and the biological environment within the tank.
- **Boundary Assembly valve turned off:** the valve within the boundary assembly (red lid) must not be turned off. Multiple issues can occur if the system operates against a closed valve.

Wastewater Contents

The Biolytix wastewater system uses a highly effective biological process to treat normal household wastewater, which includes wastewater from toilets,

bathrooms, laundry, kitchens, and dishwashing machines. The organisms living in each Biolytix system are resilient and can cope with conventional detergents and other household chemicals (such as dishwashing liquid, soap or kitchen cleaning spray) if they are used reasonably and according to manufacturer instructions and dosing recommendations.

Pharmaceuticals do not typically pose a problem, as long as they are not disposed of directly into the system (e.g. unused medications are not flushed down the toilet or poured down the sink). To ensure a long life of the Biolytix system, we recommend the following simple rules:

- Use eco-friendly cleaning products as sold by major retailers. Where appropriate, avoid disposing these products through the wastewater system (e.g. buckets of bleach used for soaking sheets etc should be disposed to land rather than the laundry tub).
- Use detergents that are low in phosphorus and sodium. Lanfax Laboratories investigated the phosphorus and sodium content of a wide range of laundry detergents. Their findings are published at www.lanfaxlabs.com.au
- Use biodegradable soaps.
- Wipe and place left over fat, grease and oils from plates, cutlery, pans etc in the bin rather than rinsing them directly down the drain.

IMPORTANT: Harsh chemicals and non-biodegradable materials can negatively affect the Biolytix wastewater system and result in expensive repairs.

None of the following should enter the wastewater system:

Chemicals:

- Bleach (small quantities for laundering and products like Napisan are acceptable)
- Chlorine and other harsh disinfectants
- Caustic soda (NaOH) and other highly alkaline (pH > 9.5), or acidic (pH < 4) chemicals
- Commercial cleaning products and drain cleaners
- Paints and solvents

- Chemicals that are not typically used in a household
- Pesticides and herbicides
- Fats, oils and grease (except from normal kitchen use)

Non-biodegradable materials:

- Disposable nappies and nappy liners
- Baby wipes and other wet/dry wipes
- Condoms
- Rags or clothing
- Tampons, sanitary pads/napkins etc.

General Comments

To ensure compliant and reliable performance, the Biolytix EcoPod systems must be maintained correctly.

Servicing

The Biolytix EcoPod will be serviced every 12 months by Fulton Hogan. This is very important to ensure its ongoing good performance and compliance with regulations.

Improper or infrequent maintenance could result in damage to the EcoPod or treatment process, which may require costly repairs.

Key aspects of the maintenance include: *(as per the Biolytix servicing checklist)*

- Visual structural integrity checks.
- Filter bed check (that there is no large build-up of non-organic material).
- Check for healthy worm activity.
- Pump operation checks, including alarm function.
- Maintenance inspection reported back to Rotorua Lakes Council.

Daily Up-Keep

The following recommendations will ensure that the Biolytix EcoPod system stays in good condition and provides safe treatment of your wastewater:

- Protect both the Biolytix tanks from vehicle traffic and livestock. Do not drive or park vehicles/trailers on top of the tank – unless you have had an approved trafficable system installed. The trafficable system can be identified by having a cast iron lid.
- Landscaping near or around the EcoPod (keeping weeds and long grasses off the lid).

If any of the following are noticed please call **Rotorua Lakes Council** on **07 348 4199** as soon as possible:

- Strong or unusual odours coming directly from the tanks.
- Toilets draining slowly.
- Loud or unusual noises from the tank or control panel.

Health & Safety

Never attempt to open the lid of the Biolytix EcoPod system or the Alarm Panel. This must only be completed by a trained technician. Waste material must never be directly introduced into the EcoPod tank.

Alarms

Each Biolytix system has a visual and audio alarm on each control panel. If an alarm occurs, contact **Rotorua Lakes Council** on **07 348 4199** and make them aware of the alarm situation. Please reference the **Site Number** as shown on the Alarm Panel sticker. A Council representative will help to work out the source of the issue so an appropriate fix can be actioned.



Warranties

Fulton Hogan warrants the Biolytix EcoPod systems to be free from defects in material and workmanship for the following periods of time, commencing on the date of installation, in accordance with the conditions set out below.

- The tanks: 15 years.
 - Electrical components including the Pedrollo Pump: 15 years.
 - The EcoPod filter beds: 15 years.
- 1) Biolytix will, during the warranty period, replace the equipment or such parts as are proven to be faulty in manufacture.
 - 2) This warranty applies to the Biolytix tank and covers replacement parts only.
 - 3) This warranty only covers the Biolytix system to be used to treat domestic type wastewater inflow.
 - 4) This warranty does not cover defects due to:
 - a) the connection or otherwise of any additional sources of waste into the system either directly or indirectly;
 - b) modifications of the surrounding landscape, including but not limited to landscaping and drainage works, after installation of the Biolytix system;
 - c) failure to use the system in accordance with the Owner's Manual or other instructions issued to the resident/s;
 - d) a Force Majeure Event, where a Force Majeure Event means any cause outside the reasonable control of the system installer, including but not limited to, damage resulting from earthquake, fire, flood, storm, lightning, soil subsidence, ground water table variations, electrical supply fault or plumbing fault;
 - e) the Biolytix system being overloaded by hydraulic or biological loadings greater than the design capacity;
 - f) the actions of a third party; and

- g) any modifications or repairs being undertaken to the Biolytix system by anyone other than a Biolytix accredited installer or service technician.
- 5) Rotorua Lake Council will monitor and log all non-routine call outs to properties to understand whether any trends are occurring within each individual property.

SANIFLO LIFT PUMP SYSTEM

If your onsite Biolytix system includes a Lift Pump system this box will be marked: ☐

First Things First

This manual provides a summary of the operational requirements for the Saniflo Lift Pump system that has been installed within your property.

Your property has had a Saniflo Lift Pump system installed due to the drain laying being unable to be laid and connected to the Biolytix EcoPod. The Lift Pump system is used as a pressurised sewerage transfer system, to deliver the sewerage material from the dwelling to the Biolytix EcoPod. No pre-treatment occurs within the Lift Pump system but is still completed by the Biolytix EcoPod before the material is discharged to the reticulation network.

Please read this manual carefully, and ensure the Biolytix wastewater system is operated as set out in this manual. Not doing so may compromise the performance of the system and result in unscheduled maintenance, faults/defects. If you have any questions, or would like further information, please contact Rotorua Lakes Council on **07 348 4199** or at **info@rotorualc.nz**.

Operation

The Saniflo Lift Pump system is designed for domestic (household) type wastewater only. To ensure the system continues to operate free of any faults and to avoid costly repairs, please ensure that all requirements as defined in this manual are followed.

Please follow all system requirements and limitations that are required for the Biolytix EcoPod System.

Wastewater Contents

Please refer to the Biolytix EcoPod Wastewater Contents summary on page 2, to understand what material can be introduced into the SaniFlo Lift Pump system.

NOTE: The contents that can be introduced into the Saniflo Lift Pump system do not differ to the Biolytix limitations.

General Comments

Servicing

To ensure the Saniflo Lift Pump system is performing at its best, the system will be serviced annually by Fulton Hogan at the same time as your Biolytix EcoPod.

Daily Up-Keep

The daily up-keep requirements do not differ to the Biolytix Eco Pod. Please refer to the requirements detailed under the Biolytix EcoPod section on page 5.

IMPORTANT: Ensure no vehicles/trailers are parked on or directly beside the Saniflo Lift Pump system. This can result in tank damage or collapse.

If any of the following are noticed please call **Rotorua Lakes Council** on **07 348 4199** as soon as possible:

- Strong or unusual odours coming directly from the tanks.
- Toilets draining slowly.
- Loud or unusual noises from the tank or control panel.

Health & Safety

Never attempt to open the lid of the Saniflo Lift Pump system. This must only be completed by a trained technician. Waste material must never be directly introduced into the Lift Pump tank.

Alarms

Each Saniflo Lift pump system has an audio alarm on each control panel. If an alarm occurs, contact **Rotorua Lakes Council** on **07 348 4199** and make them aware of the alarm situation. Please reference the **Site Number** as shown on the Alarm Panel sticker. A Council representative will help to work out the source of the issue so an appropriate fix can be actioned.

The below image shows where the alarm silence button can be found on the alarm panel. This can be found inside the weatherproof enclosure.



Warranties

Throughout maintenance contract period (15 years), Fulton Hogan are responsible for ensuring that the Saniflow system is free from defects in material and workmanship.

The same warranty conditions as defined for the Biolytix Eco Pod System relate to the Saniflo Lift Pump system on page 7.

More information on East Rotoiti & Rotomā sewerage scheme can be obtained at:

www.rotorualakescouncil.nz/rotoitirotomawaterways

To view a short Video on how the system works:

www.biolytix.com/wp-content/uploads/2020/11/Biolytix-How-it-Works-2D-Animation.mp4?_=1

Download a PdF version of this Manual or access replacement stickers:

www.rotorualakescouncil.nz/errssownersmanual

