



**NEW ZEALAND'S  
MOST ECO-FRIENDLY  
WASTEWATER  
TREATMENT SYSTEM**

**Biolytix<sup>®</sup>**   
Wastewater Naturally

# 10 REASONS WHY YOU SHOULD CHOOSE THE BIOLYTIX BIOPOD

## REASON 1

The Biolytix is an 'ecosystem in a tank' which treats the wastewater without needing costly large mechanical aerators to run, repair or replace. This results in up to 90% less energy being consumed than in most aerated sewage treatment systems thereby reducing electricity costs.

## REASON 4

Silent operation. There are no noisy blowers or pumps that can run up to 24 hours every day on other systems.

## REASON 8

Small Carbon Footprint. Negligible methane emissions (which has a global warming potential of more than 30 times CO<sub>2</sub>).

## REASON 5

Absolutely no offensive smells due to the fact that the Biolytix uses an aerobic process with no septic tank and no large blowers.

## REASON 9

100% New Zealand made by a New Zealand owned company.

## REASON 2

Unlike aerated systems the Biolytix has no smelly septic tank.

## REASON 6

Independently tested in New Zealand and Council approved.

## REASON 10

The most compact, light weight wastewater system on the market. Manufactured from 100% recycled material. Less weight and volume to transport. Ideal for sites with difficult access. Less excavation and less disruption to your landscape.

## REASON 3

Recommended servicing every 9 months which is much less frequent than other systems on the market.

## REASON 7

Treated wastewater beneficially irrigates lawns and gardens via specialised irrigation incorporating patented technologies for reliability.

# HOW THE BIOLYTIX BIOPOD WORKS

Biolytix Ltd owns the award winning patent for the Biolytic Filtration Process. This process cleverly mimics nature and turns the problem (the solid waste) into the solution (the humus that cleanses the wastewater as it trickles through it).

## EMPLOYS NATURE TO DO THE WORK

Why use high energy machines when nature can do the work for us?

The Biolytix BioPod is engineered to meet the needs of billions of hard working organisms that treat the wastewater so that it provides:

- A stable environment to live in
- Food as they would naturally find it
- An abundance of oxygen

With these ideal conditions the biolytic organisms can concentrate on what they do best – continually processing solids waste into humus.

The treatment process has no expensive moving parts to service and repair – the organisms simply breed and replenish themselves.

## HARNESS THE ENERGY IN YOUR WASTE

Like solar power Biolytix is leading the way in using nature's energy. The BioPod harnesses the energy in the waste (including the sewage, toilet paper and food waste) to feed the organisms that break down the waste.

Rather than using high energy machines – it uses the energy in your waste to operate.

In contrast to what is found in nature, mechanical wastewater systems are water-based. To drive decomposition in this oxygen-poor environment, they must use energy-intensive aerators to pump oxygen into the wastewater. Even so, only a few parts per million of oxygen is available to the process.

By comparison, in the BioPod worms and other biolytic organisms can draw oxygen directly from the 21% available in the ambient air.

- In a conventional wastewater system often less than 5 parts per million of oxygen is available
- In a Biolytix wastewater system around 210,000 parts per million of oxygen available

**IN A MECHANICAL SYSTEM... MACHINERY WORKS HARD. IN A BIOLYTIX SYSTEM... NATURE WORKS HARD.**

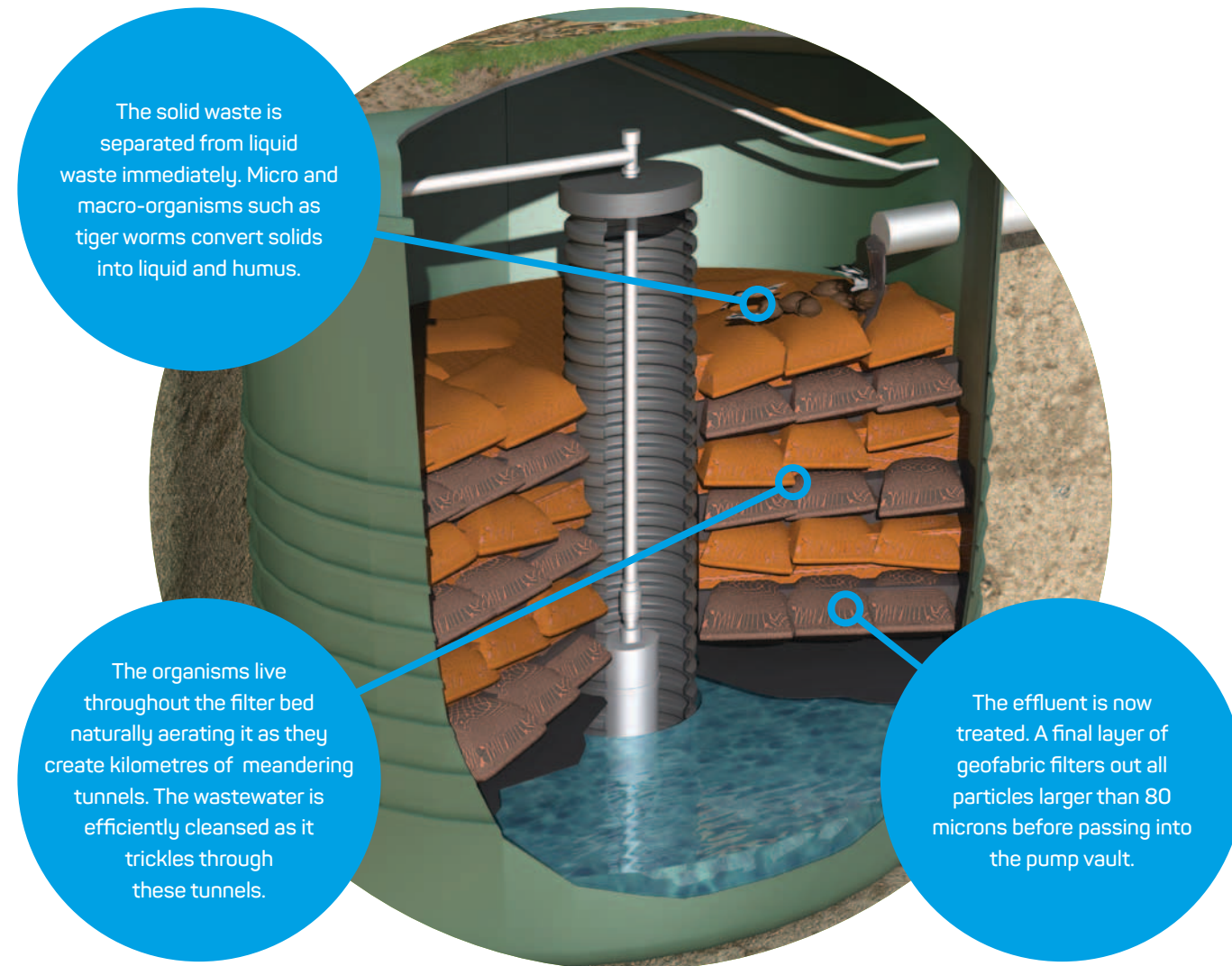
**"EVERY PARTICLE OF EARTH FORMING THE BED FROM WHICH THE TURF IN OLD PASTURE LAND SPRINGS, HAS PASSED THROUGH THE INTESTINES OF WORMS."**

Charles Darwin

BIOLYTIX TICKS ALL THE BOXES: TECHNOLOGY ✓ GREEN ✓ SAVINGS ✓



## HOW THE BIOLYTIX BIOPOD WORKS



## THE BIOLYTIX BIOPOD

### BIOLYTIX CAREFULLY RESEARCHED THE REASONS FOR THE PROBLEMS AND HIGH OPERATING COSTS OF AERATED WASTEWATER SYSTEMS AND DEVELOPED A TOTALLY NEW WAY OF TREATING WASTEWATER.

The result is the BioPod, an "ecosystem in a tank". From the outset the BioPod was engineered to be robust and built to last. It eliminates the mechanical complexity and problems of conventional wastewater systems, significantly reducing the running costs and without compromising on the quality of the treated effluent.

The BioPod treats all household wastewater to a level that is suitable for land disposal via irrigation of gardens, lawns and bush. The BioPod is contained in a single lightweight injection moulded polypropylene tank. It is the most compact biological wastewater treatment process in the world making it easier to transport and install.

Inside the BioPod, the layered aerobic filter contains over 2m<sup>3</sup> of engineered, high surface area treatment media. The media supports the organisms that quickly convert sewage into humus. Macro-organisms including worms ensure the solids are managed and the filter bed is naturally aerated avoid the smells associated with other wastewater systems.

The BioPod is essentially an advanced Trickling Filter process with Tiger Worms (*Eisenia Fetida*) added to enhance the reduction of solids in the filter. The tiger worms are at the top of the food chain in a BioPod but all the other micro-organisms typically expected in a wastewater treatment process are also present to assist with the breakdown of organic waste.

BioPods are equipped with an audible and visual alarm to alert the home occupier to an irregularity within the system that may require a service technician.

BioPods are supplied with customisable irrigation kits to disperse the secondary treated effluent to land via pressure compensating dripline irrigation. Treated effluent is evenly distributed to the aerobic topsoil layer to further polish the effluent and complete the treatment process. The highly treated effluent from the BioPod provides a valuable resource for irrigating bush, gardens and lawns.

**FOR A TYPICAL FAMILY HOME AT CURRENT NZ RESIDENTIAL ELECTRICITY PRICES, THE BIOPOD COSTS LESS THAN 20c A DAY TO RUN.**

**"IT MAY BE DOUBTED WHETHER THERE ARE MANY OTHER ANIMALS WHICH HAVE PLAYED SO IMPORTANT A PART IN THE HISTORY OF THE WORLD AS THE WORM."**

Charles Darwin



# TIGER WORMS AT WORK

When the raw sewage arrives in the Biolytix tank the Tiger Worms get to work quickly. They are one of the strongest creatures for their bodyweight, and continually break up the sewage, creating millions of aerobic channels. The tiger worms quickly turn the sewage in to humus. The wastewater is then cleansed as it trickles through the many channels in the humus. The Biolytix worms have helped turn the problem – the solid sewage, in to the solution - the humus that filters the wastewater.

## WORMS AT WORK INSIDE A BIOLYTIX TANK

To show you how effectively the worms work in a Biolytix tank - we filmed inside one! The worms break down the solid waste in just 60 hours. The breakdown has been sped up to just 15 seconds with time-lapse photography.

Please be aware: 'POO-CAM' is rated PG (Pretty Gruesome) and we recommend you do not watch it before dinner!



**TO VIEW 'POO-CAM' VISIT:**  
**BIOLYTIX.COM/POO-CAM**

**DID YOU KNOW?**  
**WORMS EAT THEIR OWN BODY WEIGHT IN WASTE EVERY DAY**



# BIOLYTIX BIOPOD FOR HOLIDAY HOMES

The BioPod is ideal for holiday homes where occupants may be away from the house for several months at a time.

- A high percentage of BioPod's are installed at holiday homes and produce highly treated effluent compliant with Council and consent requirements
- Even without loading for several months the BioPod remains a moist, aerobic environment with an abundance of organic content to sustain the populations of worms and other micro-organisms
- During unoccupied periods where there is no fresh 'food' entering the BioPod worms and other organisms feed on and break down the residual organic content in the filter
- The physical filtration process inside the BioPod continues regardless of whether the dwelling is occupied ensuring a highly treated effluent



# ENVIRONMENTALLY RESPONSIBLE

## PURCHASING A BIOLYTIX BIOPOD MAY BE THE MOST IMPORTANT HOUSEHOLD ITEM YOU CAN BUY TO REDUCE YOUR CARBON FOOTPRINT.

The life cycle advantages of the Biolytix BioPod are:

- An electricity consumption of approximately 90% less than conventional aerated wastewater systems with the associated economic and environmental advantages
- Minimal greenhouse gas production as degradation is by natural aerobic processes. Septic systems are major methane emitters
- Natural aerobic degradation process with minimal sludge accumulation
- Reduced maintenance requirement and costs with a recommended service every 9 months. Removal of accumulated non biodegradable solids along with excess humus is typically undertaken by the service technician at this visit
- The high strength injection moulded tanks are manufactured from 100% recycled material and are not susceptible to concrete corrosion often evident in septic environments. Being lightweight the tanks are more easily transported and installed
- A highly treated effluent is able to be reused for beneficial irrigation of gardens, bush and lawns

# BIOLYTIX TRIALS

## THE BIOLYTIX BIOPOD HAS EXCELLED IN INDEPENDENT TRIALS:

BF6 FILTER EFFLUENT QUALITY Mean data from AS1546.3 independent test by SAI Global	
Parameter	Result
Biochemical Oxygen Demand (BOD)	8.7mg/L
Total Suspended Solids (TSS)	5.4mg/L

BF6 FILTER EFFLUENT QUALITY Mean data from 2014 OSET trial	
Parameter	Result
Biochemical Oxygen Demand (BOD)	6.1mg/L
Total Suspended Solids (TSS)	9.8mg/L

## CONTACT BIOLYTIX

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**REDUCE  
YOUR  
CARBON  
FOOTPRINT  
WITH  
BIOLYTIX**

**"ONE OUTSTANDING ASPECT OF THIS SYSTEM WAS ITS LOW ELECTRICITY USAGE. IT USED AS LITTLE AS 5% OR LESS OF THE ELECTRICITY OF SOME OTHER SYSTEMS MEASURED."**

Environment Bay of Plenty Environmental Discharge Performance Appraisal (May 2007)

**"WORMS ARE THE INTESTINES OF THE EARTH."**

Aristotle



**AUSTRALASIA'S  
MOST AWARDED  
WASTEWATER  
SYSTEM.**

**AFTER 2.1 BILLION YEARS  
OF RESEARCH AND  
DEVELOPMENT...  
NATURE HAS THE ANSWER**

