
Hepburn Bio Mass Waste Water System

Pre-treatment and a simple, cost efficient, modular, clip-on system requiring minimum engineering and space ensures no smells and a substantial reduction of loading on the existing system.



Caring for:

- Our planet
- Your health
- Our children's future
- Shareholder interests
- Stakeholder interests
- Public image

Features:

- Decarbonising your supply chain
- Minimal engineering costs
- Modular/Clip on system
- Compatible with all systems
- Eliminating solids and smells
- Compliance at minimal cost



Introduction



Hepburn Bio Care is a global company of people who care... and we are committed to giving you the best advice and the best results without hurting you, your budget, your personnel or our planet.

Our passion, for over 20 years, has been delivering certified environmental and sustainable cleaning and wastewater treatment solutions, protecting YOU, your WORKPLACE and the future of our PLANET by working in harmony with nature.

One way to be better informed is to read the MSDS of the chemicals you are using; as recent research in the UK has proven, daily use of traditional chemicals is equivalent to smoking and inhaling 20 cigarettes a day. It's time for us all to say NO to big corporations who have been selling us toxic chemicals for too long. Time to say YES to protecting our health and our environment.

Investors prioritize companies that are committed to genuine Environmental Social Governance and so will vacationers. If nothing, the COVID experience has made us all aware that we need to respect ourselves and our planet more.

The Challenges facing waste water systems

Cities are growing exponentially, resulting in substantial increases on the loading of municipality drainage systems and the waste treatment plants. As a result of this growth in persons, restaurants and food consumption we are seeing a dramatic increase in sewage and FOG and as research has demonstrated using aggressive, often toxic cleaning chemicals can not only affect our health – a study in the UK has proven that cleaners using traditional chemicals to clean on a daily basis is equivalent to inhaling 20 cigarettes a day, creating serious health costs in the future – but that these chemicals plus the increased use of/obsession with sanitising and disinfecting everything has now created a biological disaster in our sewage systems.

With currently little possibility to physically modify or expand the existing drainage wastewater systems or treatment plants the most cost effective solution is to put the onus on the creator of the wastewater, the public and introduce the Hepburn System which pre-treats the waste water at it source.

Many of the good bacteria required to biodegrade the grease, fat and sewage in our wastewater treatment systems are being killed in massive numbers, making the systems anaerobic and unable to fulfil their very reason for being there; to biodegrade and break down our solids. Resulting in smells, toxic gases and wastewater being released into our waterways and oceans. We have also seen an increase in noisy diesel trucks sucking out wastewater from traps and tanks around the cities while massive fatbergs (A fatberg is a rock-like mass of waste matter in a sewer system formed by the combination of flushed non-biodegradable sewage solids, wet wipes, fat, oil and grease (FOG) deposits) are growing faster than before blocking the drains. End results, more pollution and toxics into our air.

Existing issues with traditional treatment

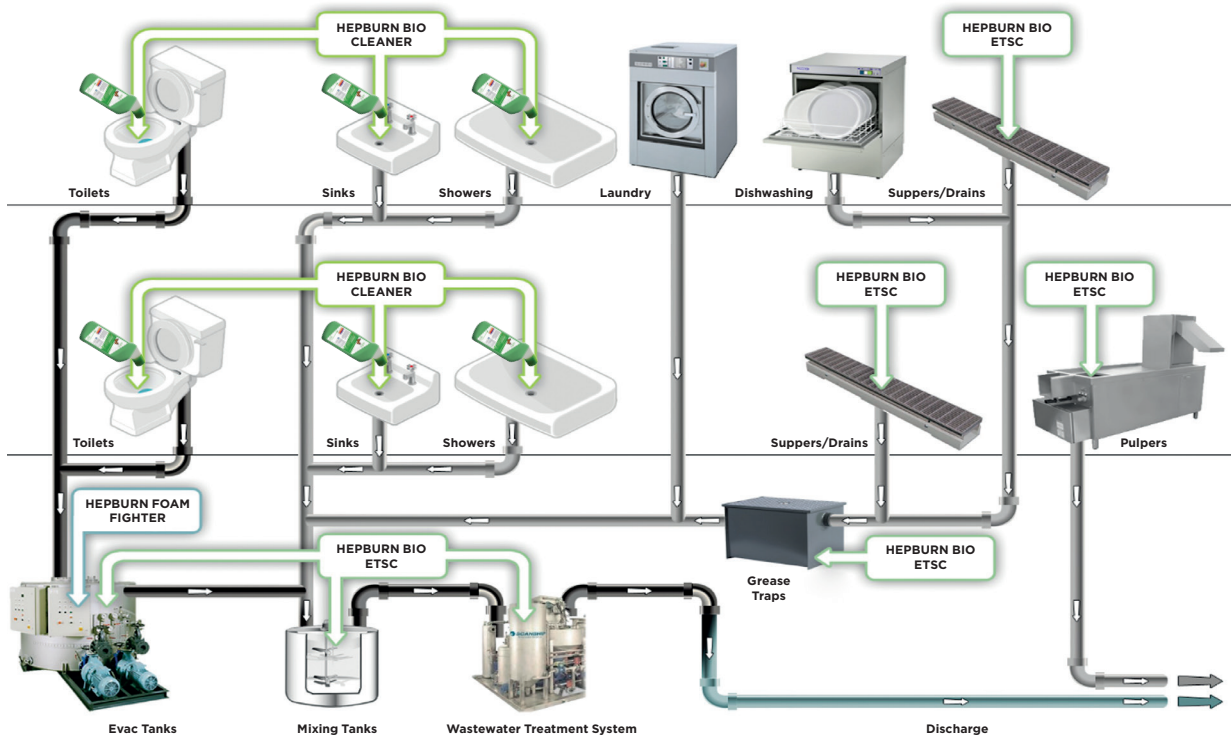


Results using the Hepburn System



History has proven that the only way to cost effectively eliminate organic waste is by aerobic biodegradation. Hepburn has developed a unique biological wastewater pre-treatment and treatment system which uses the existing drains and pipes in every building, school, home, hotel etc, to create a massive bioreactor which pre-treats all waste water in situ. This eliminates the cost of moving the waste water elsewhere and the risk to our health and our environment. The Hepburn Systems are in use on most cruise ships, RCL, NCL, Carnival, AIDA, COSTA etc. since 2005.

Hepburn pre-treatment System



The Hepburn Bio Cleaner is full of level one non-toxic naturally occurring bacteria designed to biodegrade all types of wastewater streams, Used to clean sinks, basins and toilets it allows the build-up of aerobic bacteria through out the drainage systems. Substantially reducing the build-up of scale and solids in the drainage pipes.

Hepburn dispenser



Hepburn Bio Cleaner manual WC application



Hepburn Bio Cleaner automatic dosing system

Hepburn Bio Mass System

The pre-treatment is supported by the Hepburn Bio Mass System, which can be added at minimal cost around the city to existing traps and tanks used to collect wastewater.

A modular, clip on, system requiring minimal engineering and service, it is more cost effective than traditional methods and can substantially reduce solids eliminating the need for diesel operated trucks aggrassing city life.

Scale and solids in pipes are reduced naturally



To achieve discharge compliance, existing systems are kept operational, connecting pipework is reconfigured, aeration is introduced along with the Hepburn Bio Mass Waste Water System – and that's it, no more smells, no more solids.

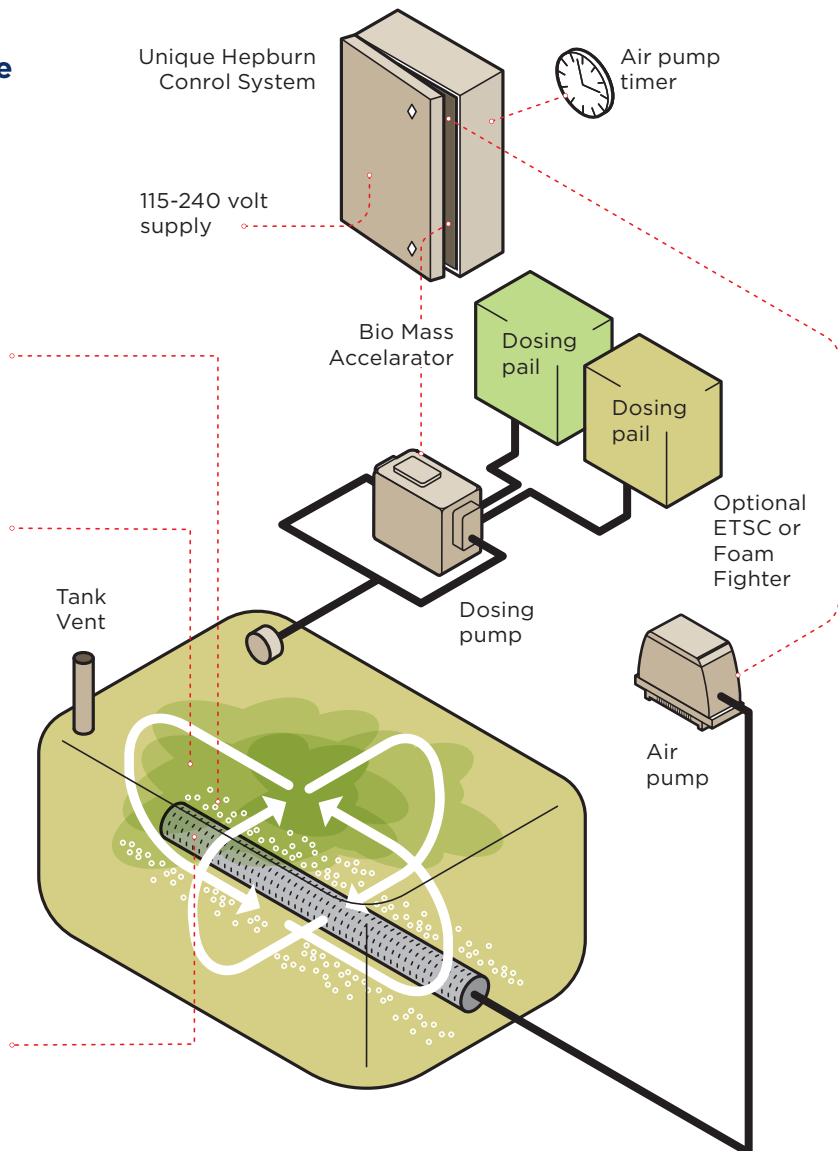
Schematic: Simple but cost effective

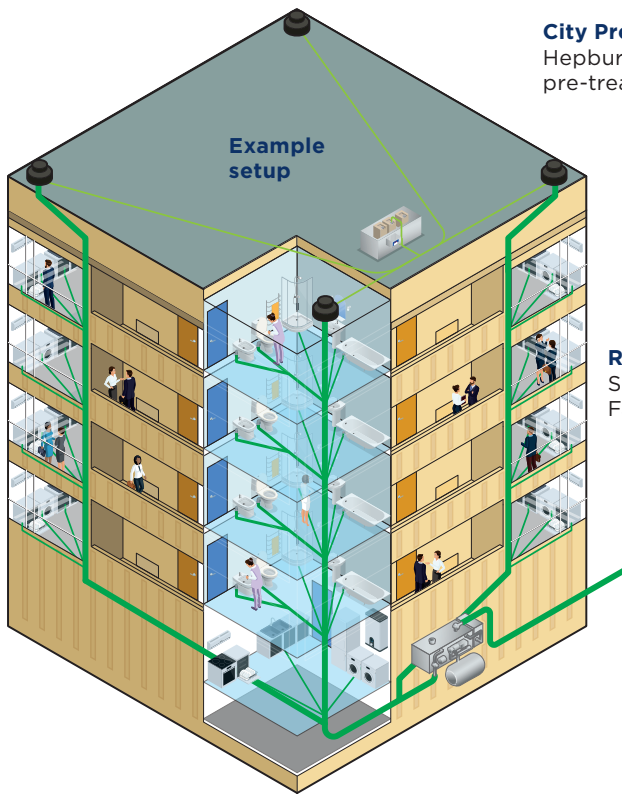
The Hepburn BioMass System

Diffuser air lift effect on the waste water promotes mixing of effluent sludge and bio mass

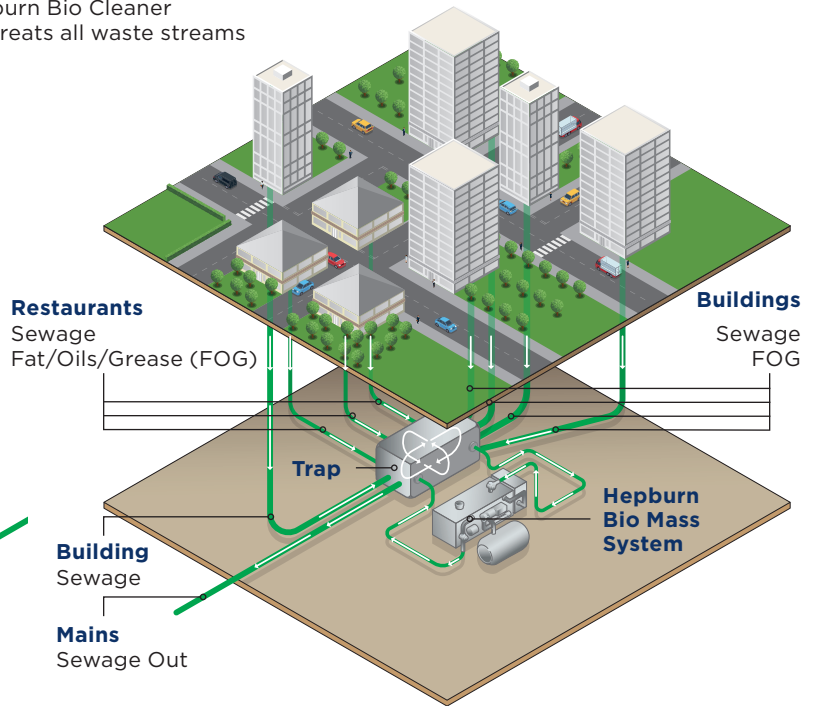
Existing tank
BioMass accelerator creates a healthy strong Bio Mass to effectively consume the organic waste

Fine air bubbles provide an increased surface area for oxygen to feed the good bacteria boosted by the Bio Mass accelerator promoting a rapid growth in the effective bio mass to consume the organic waste.





City Pre-treatment
Hepburn Bio Cleaner
pre-treats all waste streams



Pre-treatment makes sense scientifically, saves money and reduces pollution.

Waste water is collected by gravity in pipes and drains around the city, it is mostly anaerobic releasing toxic gases and solids seldom being decreased in volume.

Waste solids are often sucked out by the diesel trucks and then moved somewhere else. When the vehicles remove the waste ready for transportation, hydrogen sulphide gas is released into the air, this is a colourless gas with a pungent odour. It is extremely flammable and highly toxic. The sewage that does make it up and down inclines and declines of a city or town drainage system may enter a sewage treatment plant.

Which by definition of the original design is usually undersized and mostly anaerobic. Meaning that one of the by-products is toxic gases, smells and poor efficiency, so about 40% of the solids need to be disposed of by other means.



Truck sucking out fat and grease

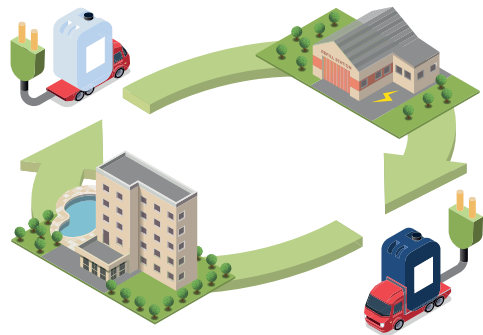


Giant fatberg

All our products are formulated with passion and care for your Investment, your budget, your health and our environment.

We have been providing the cruise marine industry with proven wastewater solutions that work since 2005. The beauty of the Hepburn Bio Mass System is that it can be adapted for any size of building, town, city or area, for any waste stream that needs a boost, treating all waste water in situ. Implemented correctly there will be no solids to discharge on a daily or weekly basis.

Hepburn Bio Care products have the Ecolabel and or the OECD certification, as non-toxic to aquatic life and are unique in that they are biodegradable, non-corrosive, and phosphate free. Our products support your companies drive to decarbonise your supply chain, meet your ESG compliance and sustainability policies while supporting the health and safety of your personnel, clients, and our planet.



Hepburn delivers a circular economy Reduce | Reuse | Recycle

1. Vehicles deliver Hepburn Bio Mass product.
2. No toxic chemicals or plastics into the environment. Deliveries every quarter.
3. Electric vehicles return drums to the refill station.

Our clients range from cruise, hospitality, super yachts, container ships, OSF to cleaning companies



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