



earthworks
environmental ltd

Treatment Plants - Soak Away Solutions
Septic Tanks / Biotec - Water Harvesting



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About us

Earthworks is a family run business throughout the country. With four generations of engineers in the family we are confident in finding a solutions to any environmental issue.

We work closely with manufactures and local government bodies to insure that the customer gets the best product, and installed to meet all requirements.

Being an improved installer we guarantee all our work to ensure that every customer is left completely confident. We specialise in the installation of a wide range of products from treatment plants to water harvesting, septic tanks to pump stations.

We use all of our own plant equipment and do not sub contract any work so that you the customer will build a working relationship with ourselves from quotation to completion.

Quotation and site inspection are free of charge and full reports for insurance purposes can be supplied.

Eco Friendly

Earthworks Environmental Ltd is an approved supplier of BIOTec Treatment Plants. We specialise in the installation of septic tanks and treatment plants throughout the UK, our head office is based in Devon.

As well as installation of septic tanks and treatment plants we also offer specialist services in Water Harvesting and Soak Away Solutions.

So whether your are in need of septic tank or treatment plant products, installation or consultancy, be sure to call us for a no obligation chat.



Sales

If you are simply looking for septic tank and treatment plant products, Earthworks Devon is an approved seller of BIOtec, Kingspan, Klargestar, Entec and Titan Products.

Feel free to give us a call to discuss your needs to see what product would best suit you.

View our products page on our website for a full list and brochures of the products we can offer, if you can not find it on there please call to discuss your requirements.

Services

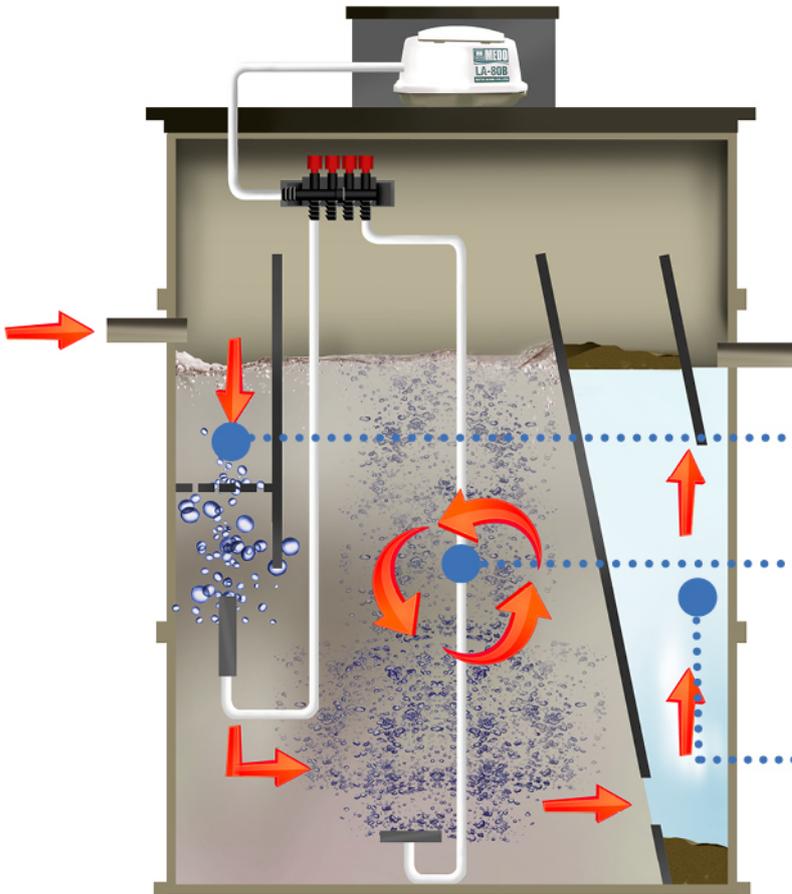
We supply a full service package on all our installation to ensure the correct running of every installation.

Please call us with your requirements for a no obligation quotation.

Refurbishment and repair of any product can be catered for, please call us on 07973 381254 with any requirements.

Treatment plants can be serviced from as little as £99 (+VAT)

VORTEX



The Vortex Treatment Process

Unlike most sewage treatment plants the Vortex is designed to treat both the solid and liquid components of wastewater. It does this by using a combination of coarse and fine air bubbles.

Wastewater from the building enters the Vibro Screen. Here coarse air bubbles are used to physically break down solid matter and form a mixed soup with the water.

The mixed soup flows into the Aeration Chamber. A bacterial culture is present in the Aeration Chamber which digests the pollutants in the wastewater. The bacterial culture must have a constant oxygen supply and this is provided by a fine bubble diffuser at the base of the tank.

The mixed soup then flows into the Clarification Chamber where it is able to separate into clear, treated effluent and sludge. The clear effluent is able to flow past the scum baffle and out of the tank.

Tank cross sections for graphical representation only

The Sludge Management System (SMS)

All Activated Sludge Process (ASP) sewage treatment plants produce sludge as part of the treatment process. The vortex's Sludge Management System is one of the elements that make it an advanced ASP.

The sludge is composed of partially digested solid matter. The Vortex is able to return the sludge back to the Aeration Chamber for further digestion by the bacteria.

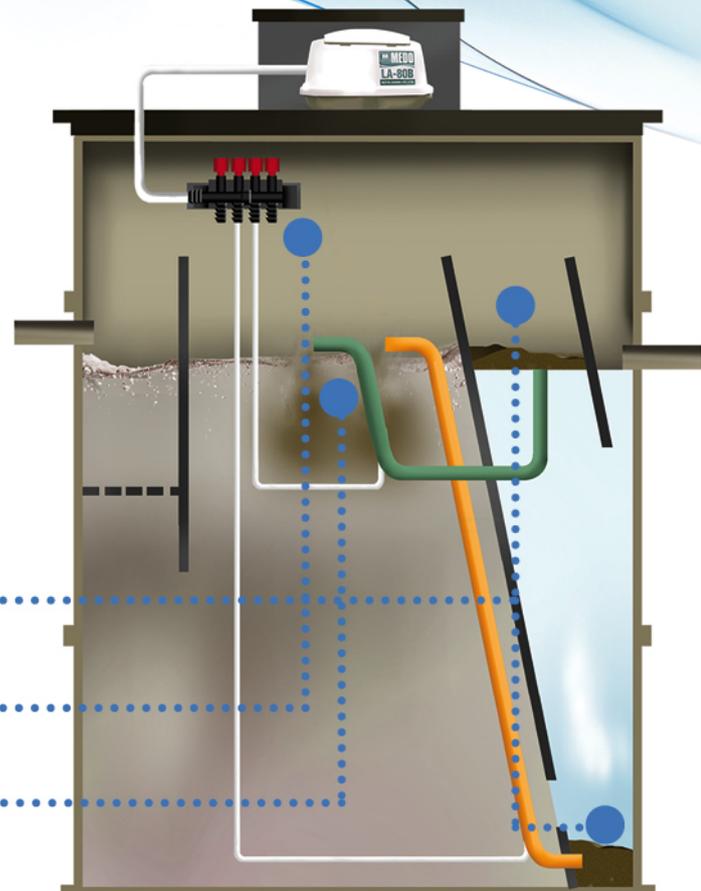
The recycling of sludge back to the Aeration Chamber gives the bacteria a food supply even when there is little or no wastewater coming from the building. This makes the Vortex better able to handle low occupation stress than other ASP sewage treatment plants.

This recycling of sludge is done without the use of electrical or mechanical components in the tank.

In the Clarification Chamber sludge accumulates at the bottom (settled sludge) and top (floating sludge) of the tank.

Air from the blower is spurred from the regulator to two sludge return pipes.

This creates a continuous vacuum that sucks the sludge from the top and bottom of the Clarification Chamber back to the Aeration Chamber.

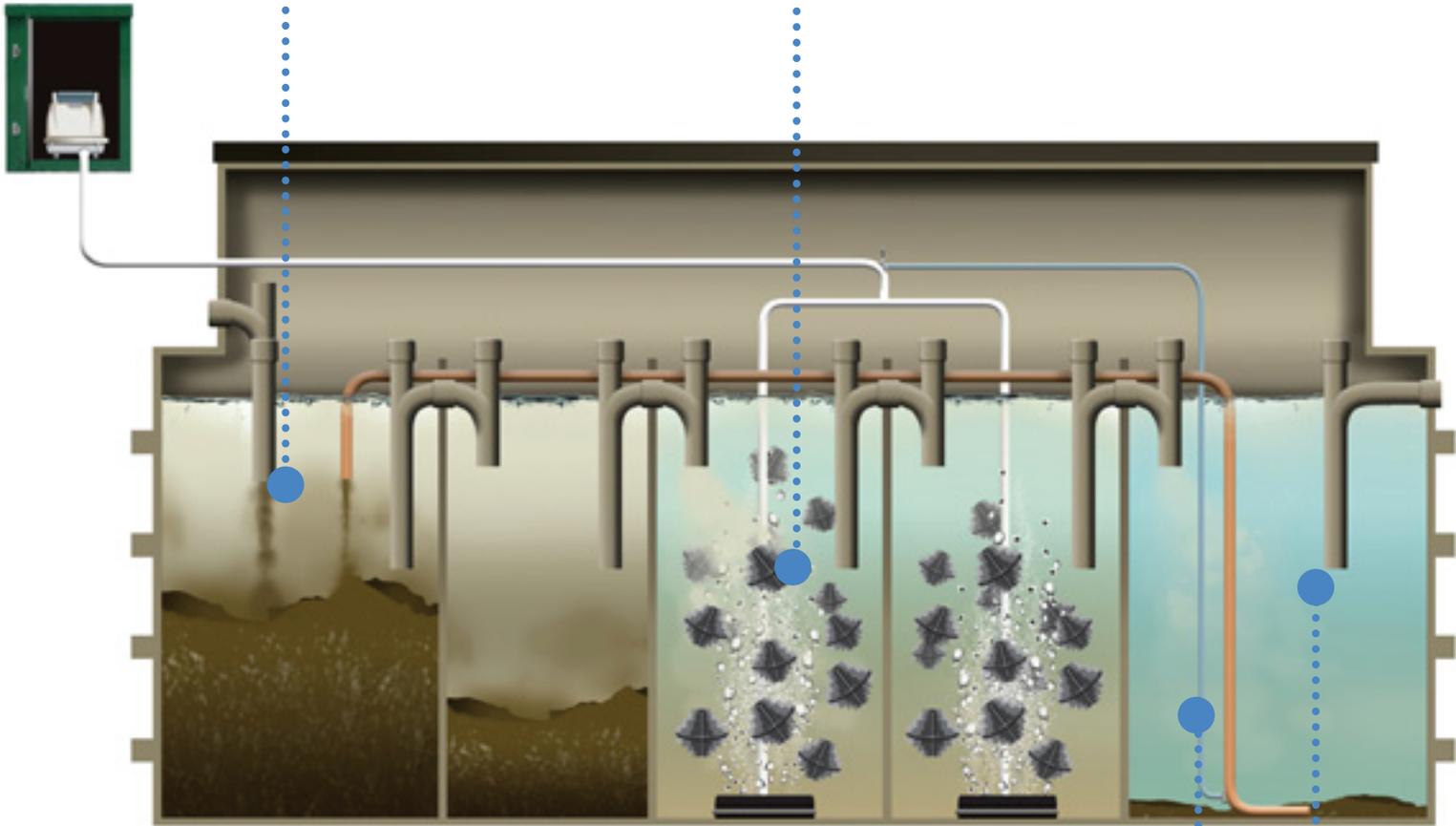


FALCON

The Falcon Treatment Process

1. Wastewater from the building(s) enters the Primary Tank. Here solids and liquids are separated with the solids being retained for periodic removal by a tanker and the liquids flowing through to the Aeration Chamber.

2. The Aeration Chamber (Biozone) is the heart of the treatment process. Here bacteria and microorganisms clean the wastewater by feeding on the pollutants. The bacteria must have a constant oxygen supply and this is provided by an external air blower.

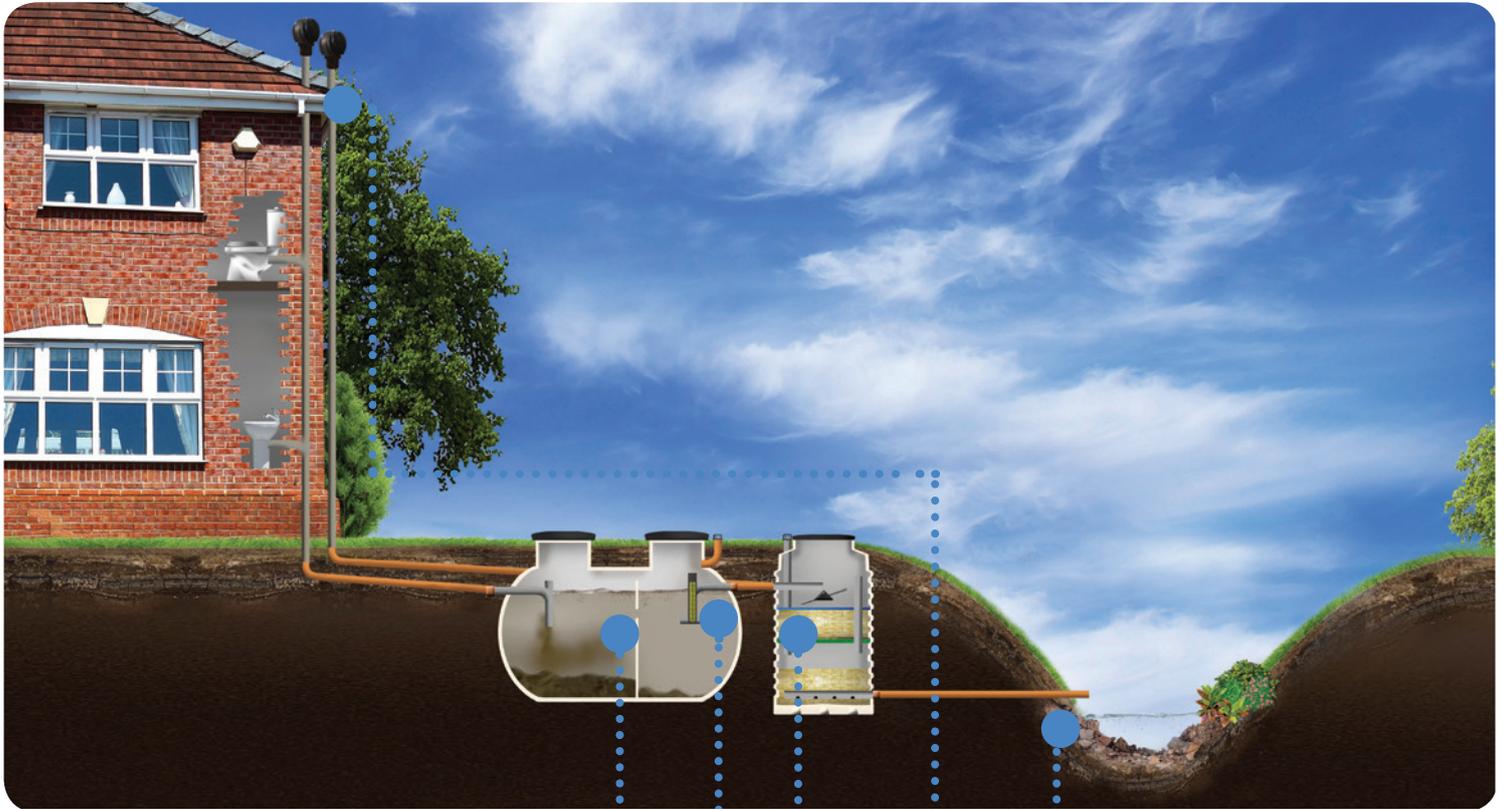


3. The wastewater then flows into the Clarification Chamber where any remaining fine solids settle, at the base of the tank, forming sludge. The clear effluent is discharged into the environment (drainage field or watercourse).

4. The settled sludge is returned to the Primary Tank via a non-mechanical air lift system. This keeps the bacteria supplied with food even when there is little or no wastewater coming from the building(s) and keeps the system working during low use and holiday periods.

FILTERPOD

The Filter Treatment Process



Tank cross sections for graphical representation only

1. Wastewater from the building enters the Primary Tank. Here solids and liquids are separated. The solids are retained and the liquid effluent flows into the FilterPod.

2. A filter in the outlet of the Primary Tank screens the wastewater preventing solids entering the FilterPod.

3. Dirty liquid effluent is distributed over the RDX media in the FilterPod.

4. The tall air outlet vent, aided by the wind fan, creates a natural draught that continuously pulls air through the tank.

5. Aerobic bacteria colonise the RDX media and digest the pollutants in the effluent. Once the effluent reaches the bottom of the tank it is clear and odourless and is discharged into the environment.

Fan Box

On a small minority of sites it may be impossible to install the required air outlet vent and in these circumstances a Fan Box may be fitted.

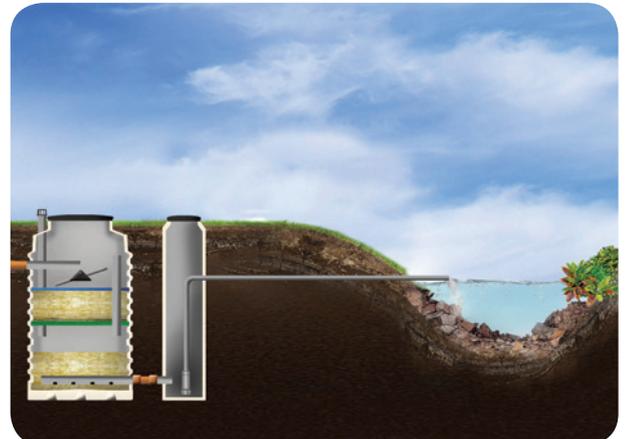
The Fan Box uses a very low wattage fan to pull air through the FilterPod.

Effluent Discharge

The standard system discharges under gravity to either a drainage field or watercourse.

If required a pump station can be installed after the filter to raise the level of the discharge.

The pump can be solar powered on many sites.



Testimonials

We were absolutely delighted with the work carried out by Andy and his earthworks team in addressing the problems with our septic tank. The matter was quickly and efficiently dealt with, on time and on budget, we hardly knew that he was there. He saved us considerable money suggesting a solution which met with both Environment Agency and Local authority approval, and handled the tricky dealing with the neighbours on whose land the tank was sited extremely diplomatically. I would definitely recommend him.

Norman Hartnell, Director, Hartnell Chanot & Partners

Andy and his team provide invaluable advice with installing the most appropriate system for our Huf Haus, holiday property on the Dorset coast. He was not defeated by many challenges presented by our unique and sensitive site. The work was carried out to budget, ahead of schedule and in sensitive manner. His team were professional at all times and got on well with other builders and our other team of ground workers. We would thoroughly recommend his services.

Mark & Anna Richards, Burton Bradstock, Dorset

Tanya and I wanted to say a big Thank You for the installation of our new Waste Treatment Plant. We were really impressed with the passion you and your team had for the job! It was great to be able to just let you get on with the work and see it all come together in such an organized and effective way. I also really appreciated the help and advice you gave on other ground works we were involved with on site, and the way you clearly had thought things through, personally adding things like sound insulation in the blower cabinet to maintain the quiet of the peaceful campsite we run – great attention to detail. You came highly recommended by the treatment plant distributor and we would not hesitate in supporting that recommendation to anyone else. Brilliant job, Effective, efficient and well tidied up afterwards. When we next need a new tank there will be no other choice of installer for us.

Andrew & Tanya Bellamy, Co-Owners, Coastal Valley Camp & Crafts, Newquay, Cornwall

Andy provided a very personal and professional service, recommending and installing a suitable treatment plant, and drainage at a very competitive price, keeping both ourselves and the building inspector happy. Since the installation a year ago, the plant has got on with its job quietly and efficiently, and with no smells! The works were carried out with the minimum of disruption and made good after. The success and quality of the service was largely due to Andy's own attention to detail, and we thank him for a job well done.

Bronwen & Julian Cox, Klargester 18 & Pum Station, Barnstable, North Devon



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VORTEX™



WTE LTD
WATER TECHNOLOGY ENGINEERING

County Cleansing
LIMITED