













# Synergy

WASTEWATER TREATMENT  
P R O D U C T S

-  Sewage Treatment Plants
-  Septic Tanks
-  Cesspools / Storage Tanks
-  Rainwater Harvesting Systems
-  Package Pump Stations
-  Oil/Water Separators
-  Silt Traps
-  Grease Traps
-  Storm Water Attenuation Tanks
-  Dirty Water Settlement Tanks
-  Silage Effluent Storage Tanks
-  Above Ground Storage Tanks





## SEPTIC TANKS

Four decades on from the first Pre Fabricated GRP Septic Tank and still going strong. Domestic tanks start @ 2800 litre which are suitable for a single three bedroomed property accommodating 3 to 4 persons. The 2,800L to 6,000L (3 to 22 persons) range are generally of a spherical design. Larger capacities of up to 54,000L are also available, and are of a cylindrical design. Given suitable ground conditions, the Septic Tank still provides an economic solution to domestic foul waste disposal.



## CESSPOOLS / STORAGE TANKS

Sealed Cesspools are used where the discharge of sewage effluent is not permitted. A Cesspool stores all of the influent. They are by nature of larger capacity (min 18,000 litres for 2 persons) and are consequently more expensive to purchase, install, and operate. We strongly recommend that a site survey be carried out by ourselves to explore all other alternatives, before opting for the installation of a Cesspool.

Synergy Wastewater Treatment Products offer a range of storage tanks from 2,800 litres through to 275,000 litre capacity in a single (unitank) design. These may be used for a wide variety of containment applications such as, storage of chemicals, silage effluent, or even potable water. Contact us with your particular application for further details.

## SEWAGE TREATMENT PLANTS

The Sewage Treatment Plants offered by Synergy fall into three categories:-



### Extended Aeration Plants

To serve Population Equivalents (pe) of 6, 12, 16, & 20. This range covers the domestic market from a single house, through to say a four house development, dependant on property type/size etc. These plants have been independently tested to EN 12566-3:2005. A key feature of these plants is that they have no moving parts within the tank, and typically only require desludging every 1-3years. Because of the minimal maintenance requirements, these plants are the ideal choice for the smaller development. They offer an odour free, economic solution, whilst producing a high quality 20:30:20 effluent.



### Submerged Aerated Filter Plants (SAF)

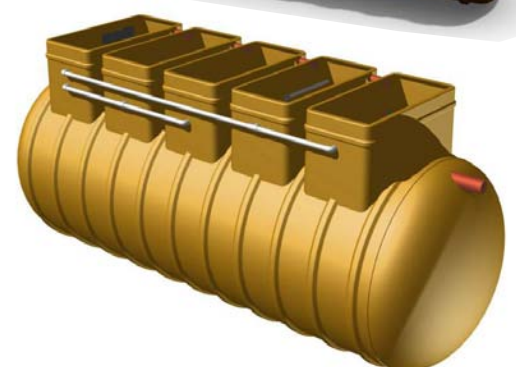
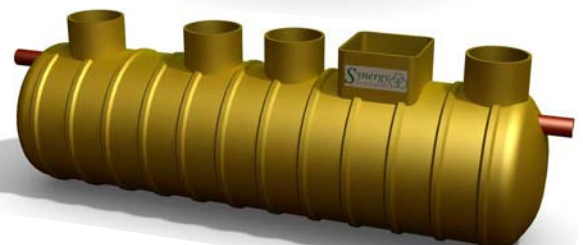
A range of eleven models from 25 pe through to 200 pe, are offered. These plants are of a single unitank design, which enables a simple, compact, and cost effective installation. The qualifying SAF plants have also been tested, and approved to EN 12566-3:2005  
NB. EN12566-3:2005 Covers Sewage Treatment Plants up to and including 50 pe



### Modular Membrane Bioreactor Plants (MBR)

Using two or three tank modules, and incorporating the KUBOTA membrane technology, a range of plants serving between 250 pe and 5,000 pe are offered.

This product range accommodates the larger development, and consequently are very much a contract based application. Please contact us with your project detail; we will be only too pleased to provide a no obligation, site specific fully detailed proposal for your consideration.





## OIL / WATER SEPARATORS

Separators fall into three categories, and two classes. Class 1 and 2. In the interest of clarity, Synergy will always quote a Class 1 separator c/w Silt storage capacity in all cases, unless expressly asked not to do so by the client.



### Bypass Separators

Are used in hard standing areas where there is a light risk of hydrocarbon contamination to the surface water run off, i.e. Car Parks, Roadways, Industrial Estates, Goods Yards etc. These units are designed to treat the influent up to the design nominal size of the Separator. Excess flows over and above this, are allowed to 'bypass' the oil retention chamber, ensuring the stored pollutants remain within the separator. A standard range of sixteen models are available from: - NSB3, draining an area of 1,667 M<sup>2</sup> through to: - NSB 100, draining an area of 55,556 M<sup>2</sup>. Larger models up to NSB 1000 are also available to order.



### Full Retention Separators

Unlike the Bypass Separators, these units treat 100% of the flow. They are used where there is a foreseeable risk of oil/hydrocarbon pollution. Such as:-vehicle maintenance areas, fuel dispensing points, oil depots etc. The range of Full Retention Separators' extends to fourteen standard models from an NS4 draining 222 M<sup>2</sup>, through to NS100 draining an area of 5,556 M<sup>2</sup>. The Class 1 Full Retention Separators, have silt storage capacity, a coalescing filter, and Automatic Closure Device, this is to prevent any stored pollutants being discharged from the separator.



### Forecourt Separators

Similar in design to the Full Retention separators, only with a minimum volume of 10,000litres. This is to provide sufficient storage capacity to contain the entire contents of a road delivery tanker compartment (7600litres).



NB. The separators offered by Synergy have been independently tested and are fully compliant with Environment Agency PPG3 guidelines. Please be aware it is not legal to install a separator that does not fully comply with the required standards.



## SILT TRAPS / WASH DOWN SEPARATORS

A Silt Trap with an expanded mesh cover is available. Two types of cover are offered, Standard duty: - B125 Rating. Heavy Duty: - D400 Rating.

A range of Single, Double, and Triple chamber Wash Down Separators are also available for the removal of silt and debris from the surface water run off.



## ALARMS

PPG3 requires all Separator Installations to have a visual and audible alarm fitted. This is to advise when the oil level in the separator reaches 90% of the storage volume. Mains and solar powered alarms are available, as is a GSM model. This unit will send a signal to a mobile phone number of your choosing.



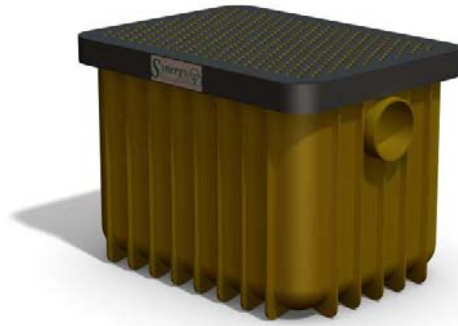
**This brochure is a brief overview of the products and services offered by Synergy Wastewater Treatment Products. For more detailed information please contact us.**



## GREASE TRAP / INTERCEPTORS

Building Regulations part H1 Section 2, 2002 requires commercial kitchens to have an effective means of Fats Oils and Grease removal/treatment from the drainage system. This legislation is generally aimed at new developments, and refurbishments. However, pressure is mounting to make Grease Traps mandatory for existing catering premises.

Where a private off mains drainage system is installed i.e. a Sewage Treatment Plant or similar, then it is a very necessary pre requisite that a Grease Trap is installed to prevent grease contaminated effluent being discharged from the sewage system. Synergy offers an extensive range of Grease Traps from free standing under sink units serving from 50 covers upwards, to larger capacity underground units to serve the larger catering establishment. It is recommended that Synergy carry out a survey of your premises to establish the optimum, most cost effective system. NB. It is imperative that the proposed Grease Trap is sized correctly for the application, for it to work effectively.



## DOSING SYSTEMS

Synergy offers a programmable automated dosing system to compliment Grease Trap installations. These systems inject a pre determined quantity of Bio Grease Digester fluid at pre set time(s). This fluid contains bio cultures which digest the grease that has been intercepted, vastly reducing the need for emptying / cleansing of the Grease Trap. These dosing systems may be purchased as a stand alone item, to serve existing Grease Traps.



## PUMPING STATIONS

Standard and bespoke systems are offered to pump both foul, and surface water. Pump stations are used to raise the level of the discharge to the invert of a local gravity mains or private system. Single pump systems are generally available from stock, to serve the smaller domestic project. Larger capacity duplex systems manufactured to meet site specific criteria, are also readily available on short lead times. Building Regulations require that the pump chamber should have sufficient storage volume to contain a 24 hour inflow. In the case of domestic systems, a figure of 150 litres per person per day is used to determine the chamber capacity.



## PUMPS & SPARES

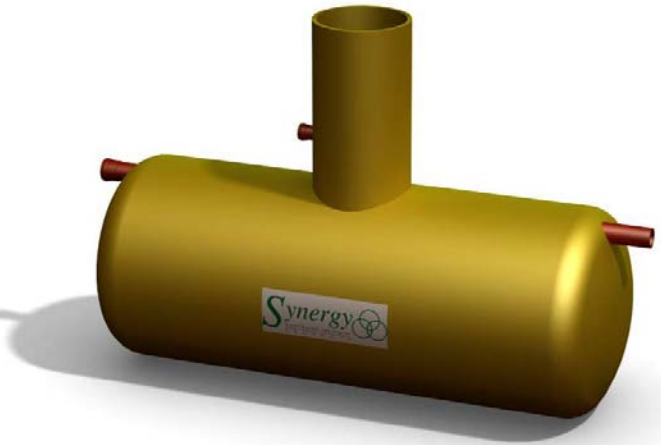
Synergy carries stocks of Boxed Pumps, which are available for installation into existing systems or for upgrades. We are also stockists of compressors (Blowers) widely used by many of the manufacturers in their Sewage Treatment Plants. If you have a blower requirement, provide us with the details and we will endeavour to source the same unit for you, or offer a suitable alternative.





## RAIN WATER RECOVERY

Demand for rainwater recovery / harvesting systems is increasing dramatically, as awareness for water conservation increases. Stored rainwater can be used for toilet flushing, clothes washing, and general outside tap use i.e. garden irrigation, car washing etc. Budget systems for garden use only can be supplied, as can the more sophisticated systems for domestic or commercial applications. The permutations for rainwater reuse are endless; we would certainly urge you to contact Synergy to enable us to provide an obligation free, tailored proposal.



## STORM WATER ATTENUATION

A substantial range of one piece vessels from 1,000L through to 275,000L are offered. These tanks can be supplied with baffles, access ladders, multiple access shafts etc. if required. The attenuation tank can be manufactured with an integral Flow Control Device (FCD) sized to the specific outflow requirement. Alternatively, the FCD can be fitted into a separate chamber, or supplied loose to be installed into an existing outlet manhole chamber by others. Where levels prevent the use of a gravity fed (FCD) the Attenuation tank can be supplied with a pumped discharge, again sized to the permitted outflow criteria.



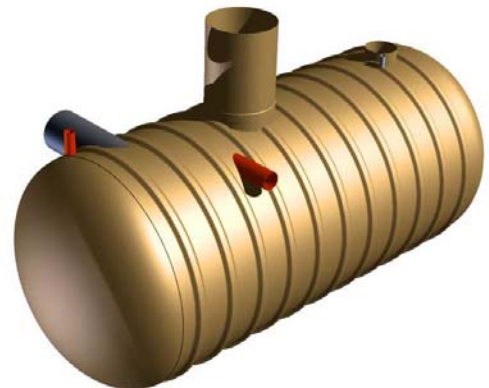
## ABOVE GROUND TANKS

Through our network of trading partners, we are able to supply both vertical and cylindrical tanks for installation above ground. These can be manufactured with chemical resin rich liners, in a variety of different capacities. Please contact us with your requirements.



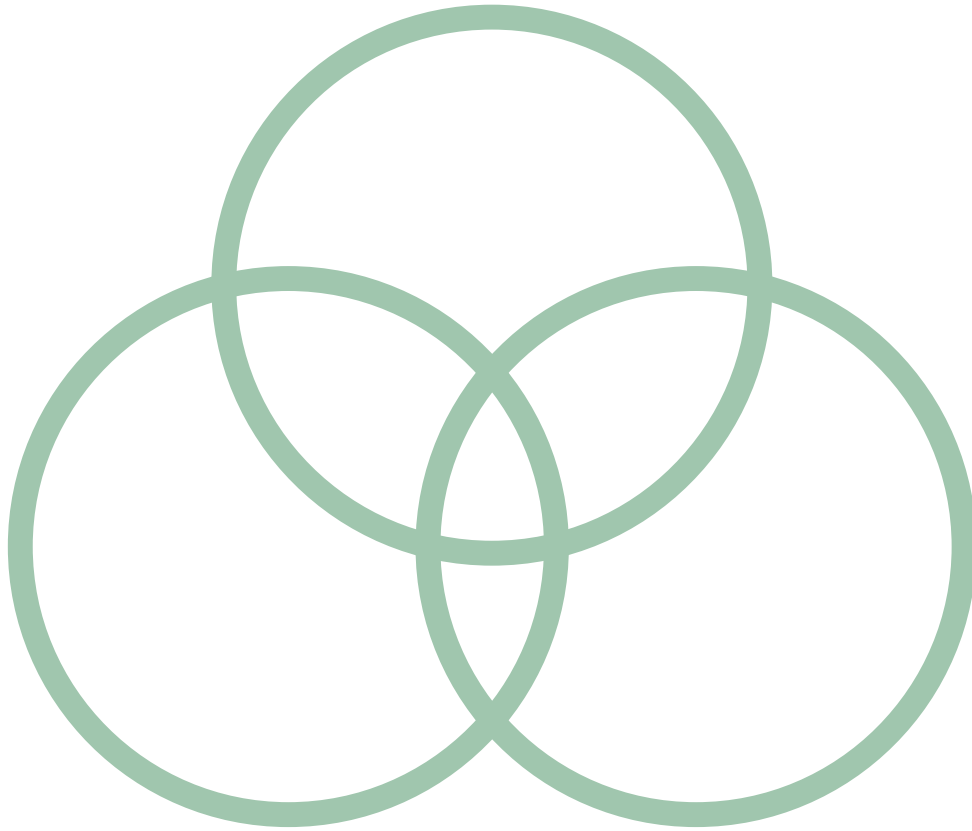
## SPECIALS

Due to our flexible approach, and 'solve the problem' attitude we are always receptive to enquiries that cannot be met by a standard product type. NB. Because of the way in which we as a company are structured, the non standard product does not mean premium cost. We enjoy a challenge, so please contact us with your initial ideas, we are here to help.



## MAINTENANCE & COMMISSIONING

We offer a full maintenance and commissioning service on all our own products, and those supplied by others where possible. We are also able to offer an upgrade solution to existing plants / tanks (subject to satisfactory survey)



**Synergy**   
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P R O D U C T S

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For more detailed information please contact us for the appropriate drawing / data sheet.  
Synergy Wastewater Treatment Products reserve the right to change specifications without notice



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