



**Clearwater**  
POLLUTION CONTROL

# Wastewater Solutions

Efficient and reliable wastewater solutions for domestic and commercial applications



**Free Delivery**  
Mainland UK Only

[www.cwpc.co.uk](http://www.cwpc.co.uk)

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0844 225 0514

# Clearwater offers efficient and reliable wastewater solutions for domestic and commercial applications

For more than 30 years, Clearwater has been delivering tried and tested water management solutions. Our range includes sewage treatment and storage systems, pump stations, fuel and oil separators.

For the most up to date technical details, installation guidelines, or specialist advice, please call us on **0844 225 0514\*** or visit **[www.clearwatertanksolutions.com](http://www.clearwatertanksolutions.com)**

\*Calls to 0844 numbers are broken down into two parts: the access charge and the service charge. Access charges vary per network (between 10p-60p per minute) as do service charges (up to 7p per minute) so please check this with your network provider.

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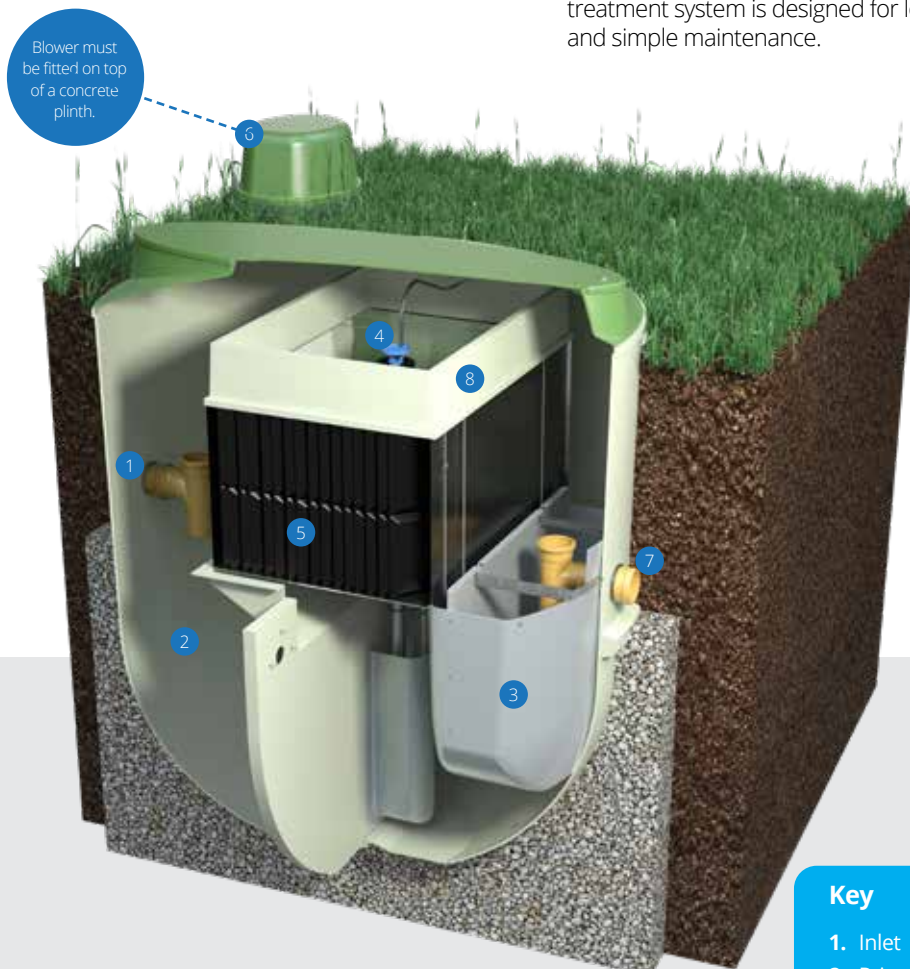
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# Domestic Sewage Treatment systems

## BTA E-Range Sewage Treatment System

Clearwater sewage treatment systems are a versatile and cost effective solution. Using trusted aerobic biological processes for the treatment of sewage, the BTA E-Range treatment system makes for an affordable and environmentally responsible solution.

Quick and easy to install, the BTA E-Range treatment system is designed for low-cost and simple maintenance.



### Key

- |                       |                 |
|-----------------------|-----------------|
| 1. Inlet              | 5. Media        |
| 2. Primary settlement | 6. Blower       |
| 3. Final settlement   | 7. Outlet       |
| 4. Distributor        | 8. Splash Guard |

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**Features:**

- Third party certified to EN12566-3 standard.
- No mechanical or electrical components within the system (Gravity option only)
- Affordable running and maintenance costs.
- Improved effluent quality, with better BOD<sub>5</sub> and TSS removal.
- Low level visibility in the garden with a lockable child-proof cover.
- Controlled ventilation - minimises risk of odour nuisance.
- Easy to install and maintain with annual desludging / emptying.
- Isolator and failure lights for peace of mind.



▪ Third party certified to EN12566-3 standard

▪ BOD<sub>5</sub> – 96.2%  
SS – 97%  
Ammonia – 82.4%

▪ Fully CE marked in line with the CPR 2013

Model	BTAUE-1 Gravity	BTAUE-1 IPS	BTAUE-2 Gravity	BTAUE-2 IPS	BTAUE-3 Gravity	BTAUE-3 IPS	BTAUE-4 Gravity	BTAUE-4 IPS	BTAUE-5 Gravity	BTAUE-5 IPS
PE	6	6	9	9	12	12	18	18	25	25
Outside Diameter (m)	1.8	1.8	1.8	1.8	1.8	1.8	2.6	2.6	2.6	2.6
BOD <sub>5</sub> Load (kg/day)	0.36	0.36	0.54	0.54	0.72	0.72	1.08	1.08	1.5	1.5
Weight Empty (kg)	250/270	260/280	275/295	285/305	275/295	285/305	390/435	420/455	430/475	450/495
Depth (m)	2.2/2.7	2.2/2.7	2.7/3.2	2.7/3.2	2.7/3.2	2.7/3.2	2.1/2.6	2.1/2.6	2.6/3.1	2.6/3.1
Inlet Invert (m)	1.0*	1.0*	1.0*	1.0*	1.0*	1.0*	0.875**	0.875**	1.0*	1.0*
Inlet Invert to Base (m)	1.2	1.2	1.7	1.7	1.7	1.7	1.233	1.233	1.615	1.615
Outlet Invert (m)	1.1	0.55	1.1	0.55	1.1	0.55	0.975	0.5	1.15	0.6
Blower (kW)	0.04	0.04	0.04	0.04	0.04	0.04	0.115	0.115	0.115	0.115

Note: \* There are two depths of Inlet Invert 1.0m and 1.5m  
\*\* There are two depths of Inlet Invert 0.875m and 1.375m

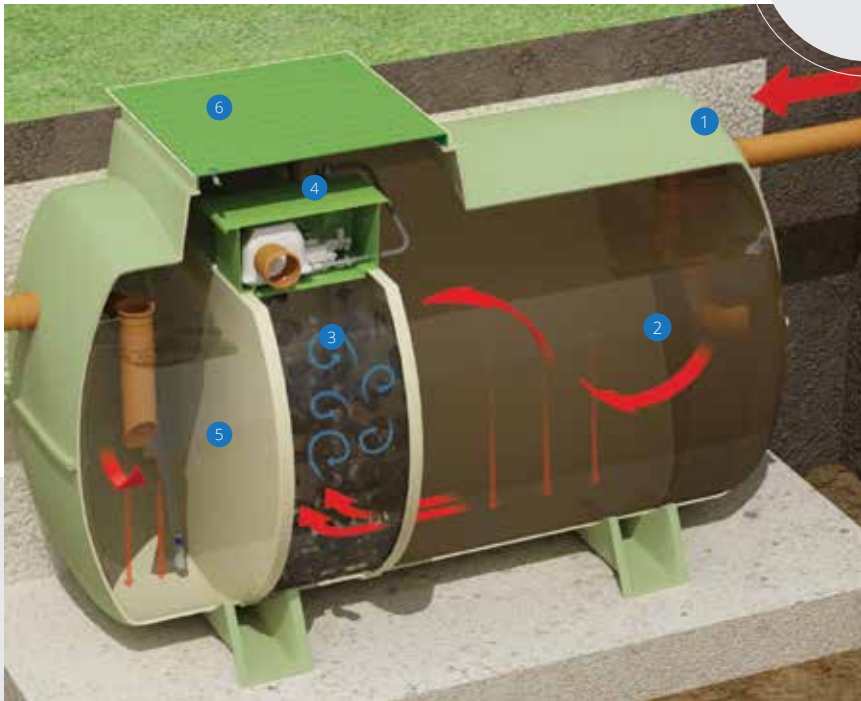
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# Domestic Sewage Treatment systems

## Delta Sewage Treatment System

The simple design of the Delta sewage treatment system from Clearwater offers an efficient solution for the off-mains homeowner. Fluidised, fixed film Biozones are used as the operating process, helping to ensure a quiet and reliable wastewater treatment solution.

**INCLUDES  
PPFDS ALARM  
AS STANDARD**



### Key

- |                              |                          |
|------------------------------|--------------------------|
| 1. Inlet                     | 4. Blower housing        |
| 2. Primary settlement tank   | 5. Final settlement tank |
| 3. Biozone treatment process | 6. Cover                 |

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#### Features:

- Unobtrusive below ground installation.
- Suitable for varying invert levels.
- Low profile results in shallow depth excavation.
- Simple maintenance with easy desludging.
- Sludge recycle pump in the final settlement tank.
- Certified to EN-12566 Part 3.
- Includes Power Pressure Failure Detection System (PPFDS) Alarm.

- Third party certified to EN12566-3 standard

- Standards of discharge - 20mg/l BOD, 30mg/l S.S. and 20mg/l ammonia in domestic applications.



	Number of Turrets	Inlet Invert (mm)	Outlet (mm)	Overall Length (mm)	Height (inc. feet) (mm)	Overall Diameter (mm)	Invert & Outlet Diameter (mm)
<b>Delta 1</b> 6PE	1	450	550	2720	1727	1530	110
	1	750	850	2720	2027	1530	110
	1	1000	1100	2720	2277	1530	110
<b>Delta 2</b> 12PE	3	750	850	3244	2470	1916	110
	3	1000	1100	3244	2720	1916	110
<b>Delta 3</b> 18PE	3	750	850	3976	2470	1916	110
	3	1000	1100	3976	2720	1916	110
<b>Delta 4</b> 25PE	3	750	850	5550	2470	1916	160
	3	1000	1100	5550	2720	1916	160

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# Septic Tanks

## Clearwater STS Septic Tank

Clearwater septic tanks are designed to meet both the installation requirements and the standards of discharge specified by EN 12566 Part 1

Clearwater tanks are used for domestic sewage disposal where connection to a mains sewer is not practical. In some cases, a septic tank may not be the best choice for managing your wastewater and a sewage treatment plant may be the preferred option. Please ask our team for advice, specific to your site.

### Features:

- Manufactured from GRP - strong, light and watertight.
- Suitable for homes with between 5-17 occupants.
- Performance tested to EN 12566 Part 1.



Ordering Code	Capacity (Ltrs)	No. People (150 Ltrs/head/day)	Width (mm)	Inlet Level to Base (mm)	Height (mm)
<b>STS02810</b>	2800	5	1905	1565	2599
<b>STS03810</b>	3800	12	2070	1795	2810
<b>STS04610</b>	4600	17	2080	2035	2984

This is a basic guide. For product selection you will also need to know the depth of inlet required. This is the distance between sewage drain pipe and ground level. For further advice on product selection please contact our team.





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## Clearwater STH Septic Tank

Clearwater STH septic tanks provide a reliable and economic solution for homes not connected to mains drainage. It is ideal for shallow dig applications. Manufactured from robust GRP, it is suitable for properties with up to 47 people.

### Features:

- Reduced installation costs - less soil disposal and excavation costs.
- Manufactured from GRP and EN approved. 99.7% efficient.
- Suitable for pea shingle gravel backfill for dry sites.



Ordering Code	Capacity (Ltrs)	Empty Weight (kg)	No. People (150 Ltrs/head/day)	Diameter (mm)	Length (mm)	Standard Invert Height (mm)
STH028	2800	165	5	1225	3020	500
STH038	3800	185	12	1225	3900	500
STH048	4800	195	18	1425	3775	500
STH057	5700	205	24	1425	4275	500
STH071	7150	280	34	1920	3230	500
STH091	9150	325	47	1920	3965	500

# Commercial Sewage Treatment Systems

Clearwater sewage treatment plants are a reliable and effective solution for a range of commercial applications.

The plant is designed for large domestic and commercial applications such as campsites, hotels or industrial units. It employs a plug flow combination of aerobic and anoxic processes in a fluidised bed arrangement.

This operates in conjunction with an advanced system of air diffusers and selected media to deliver optimum levels of purification.

## Typical Applications

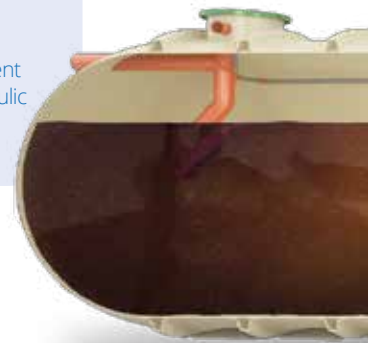
1. Public sector
2. Leisure
3. Transport
4. Hospitality
5. Campsites
6. Offices
7. Multi-housing developments

## Performance and Compliance

- › Compliant with EN12255 and EN12566-3 (up to 50 PE).
- › Designed and sized in accordance with British Water Code of Practice Flows and Loads but can be sized to suit local site conditions.

### Features:

- Minimal footprint area.
- Single piece tank, modular systems up to 1000 PE available
- Bespoke units available in almost any configuration.
- Flow management to both stabilise influent volume variations and to minimise hydraulic impact on the final settlement process.



	6	17	23	34H	38H	42H	47H	55H	67H	80H
Max Flow (ltrs/day)	4.5	8	11	15	20	25	30	40	50	60
Overall Length (m)	6220	7381	9312	7376	8150	8917	9684	11222	13528	15833
Height (m)										
500mm inlet / 650mm outlet invert	2275 (630 O.I.)	2275 (600 O.I.)	2275 (600 O.I.)	2960	2960	2960	2960	2960	2960	2960
800mm inlet/950mm outlet invert	N/A	N/A	N/A	3260	3260	3260	3260	3260	3260	3260
1000mm inlet/1100mm outlet invert	2775 (1130 O.I.)	2775	2775	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1500mm inlet/1650mm outlet invert	3275 (1630 O.I.)	3275 (1600 O.I.)	3275 (1600 O.I.)	3960	3960	3960	3960	3960	3960	3960
2000mm inlet/2150mm outlet invert	N/A	3775 (2100 O.I.)	3775 (2100 O.I.)	4460	4460	4460	4460	4460	4460	4460
Volume (m <sup>3</sup> )	6	17	23	34	38	42	47	55	67	80
Weight approx (kg)	700	1200	1450	3000	3200	3400	3800	4200	4700	5400

Note: \* This relates to max. hydraulic flow. Do not use to calculate PE



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## Treatment Process

- 1. Primary Settlement Chamber**  
This is the initial stage of treatment and simply involves the retention of coarse solids present in raw sewage and wastewater for subsequent gradual breakdown. The system features two chambers to ensure efficient operation with a flow balancing facility.
- 2. Biozone 1**  
The liquor enters the first stage of Biological treatment where the active bacteria within the fluidized bed begin to break down organic solids, majority of BOD removal occurs here.
- 3. Biozone 2**  
Within the second stage of Biological treatment the second fluidized bed continues to clean the liquor giving further BOD reduction along with removal of nitrogen.
- 4. Final Settlement Tank**  
A natural by-product of biological treatment is humus sludge and this is separated for further treatment. The treated effluent is discharged via the outlet or to disinfection stage.



# Water Storage Tanks, Silage Tanks and Cesspools

## Water storage tanks, silage tanks and cesspools

Clearwater below ground storage tanks provide a reliable solution for the collection and retention of sewage (cesspool), surface water, veterinary / animal waste, firefighting reservoirs and rainwater harvesting reservoirs.

The tanks are easy to install and delivered as a complete unit ready for installation. Every storage tank is factory tested to ensure that it is watertight and structurally sound.

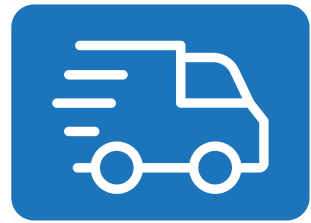
### Features:

- Available in various sizes.
- Easy installation.
- High level alarm option.
- Lockable manhole cover.



Nominal Litres	Length (mm)	Diameter (mm)
2800	3020	1225
3800	3900	1225
4800	3775	1425
5700	4275	1425
7150	3230	1920
9150	3965	1920
10000	3960	1917
12000	4750	1917
15000	5780	1917
18,000	4317	2620
22,000	5073	2620
26,000	5837	2620
34,000	7376	2620
46,000	9684	2620
54,000	11,222	2620
59,000	11,991	2620
63,000	12,760	2620
71,000	14,295	2620
79,000	15,833	2620

# Pumping Stations



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Clearwater pumping systems are designed for homes that are built below the level of the mains sewage system.

Pump Stations are used in connection with sewage treatment systems, septic tanks and rainwater harvesting systems.

The unique design of our pump station range allows for easier installation, with low maintenance ongoing. To find out more about Clearwater Pumping Systems and how one could be used for your next on or off-mains project, talk to one of our team.

**Features:**

- Available in various sizes to suit application type: effluent, sewage or rainwater.
- Manufactured from GRP.
- Pre-fabricated systems ready for installation are available, dependent on distance from mains and height required to pump.

Domestic Pumping Station

Compact Pumping Station



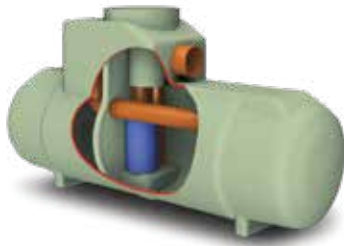
Chamber Size (mm)	Capacity (Ltrs)	Tank Material	Control Panel	Alarm	Pump Type
610 x 700	200	GRP	N/A	Optional	Single
560 x 1,650	400	GRP	N/A	Optional	Single

Chamber Size	Capacity	Tank Material	Control Panel	Alarm	Pump Type
900 x 1580	900	GRP	Included	Optional	Single/Twin
900 x 2160	1250	GRP	Included	Optional	Single/Twin
900 x 2670	1600	GRP	Included	Optional	Single/Twin

# Fuel and Oil Separators

## Bypass Separators

Designed to cover 99% of all rainfall events, our Bypass Separators are suitable for situations where the likelihood of heavy rain and the risk of large spillages are unlikely.



Third party certified to EN 858-1. Our bypass separator range offers flow rates from 3-125 litres per second.

## Full Retention Separators

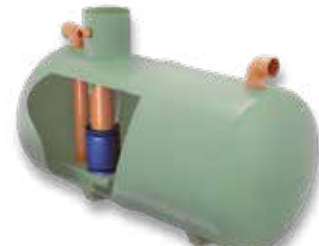
Our Full Retention Separators are designed to manage rain flow of up to 65mm/hr in sites where short term flooding can occur.



Third party certified to EN 858-1. Our full retention separator range offers flow rates from 7-285 litres per second.

## Forecourt Separators

Our range of Forecourt Separators are designed with safety and environmental protection in mind, for applications where full pollution prevention is needed. Typical applications include petrol and diesel filling stations.



Third party certified to EN 858-1. Our forecourt separator range offers flow rates from 10- 20 litres per second.

Range	Storage Requirements	Applications	Tank Material	Oil Alarm Probe Tube	Fitted Inlet/Outlet Connectors	Vent Points within Necks	Maintenance from Ground Level	Automatic Closure Device
Bypass (NSB)	Oil separation, Oil storage, Silt storage, Coalescer (Class 1)	Surface car parks, Roadways, Lightly contaminated commercial areas	GRP or PE dependent on model	Optional Extra	✓	✓	✓	
Full Retention (NSF)	Oil separation, Oil storage, Silt storage, Coalescer (Class 1)	Fuel distribution depots, Vehicle workshops, Scrap yards	GRP or PE dependent on model	Optional Extra	✓	✓	✓	✓
Washdown	Oil separation, Silt storage	Car wash, Tool hire depots, industrial cleansing points	GRP	Optional Extra	✓	✓	✓	
Car Wash Silt Trap	Silt removal before separation	Car wash, Tool hire depots, industrial cleansing points	GRP				✓	
Forecourt	Oil separation, Oil storage, Silt storage	Petrol station forecourts	GRP	Optional Extra	✓	✓	✓	✓

This is a basic guide. For further advice on product selection please contact Clearwater.

# Grease Separators



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## Grease Separators

Clearwater grease separators are designed for commercial and industrial applications such as restaurants and hotels. It is an effective and hygienic method of separating fat and grease from wastewater flow.

The units are sized based on the site's advised number of meals per day. The waste discharged into the unit is expected to come from pot washing sinks, dishwashers and other kitchen wash sinks.

### Features:

- Greatly reduces drain blockages, for maximum operational efficiency.
- Helps improve performance of septic tanks and field drains for best results.
- Manhole cover for easy access for maintenance.
- Protects mains drainage system from grease blockages.



Separator Model	Width of Unit	Length of Unit	Capacity	Approx Weight		Shipping Height	Fall Across The Unit
				Empty	Full		
<b>NSG01</b>	700	1300	500L	70kg	570kg	1100	75
<b>NSG02</b>	1000	1600	1000L	90kg	1090kg	1175	75

Separator Model	Length of Tank Body	Distance Between Necks	Capacity	Approx Weight		Shipping Height	Fall Across The Unit
				Empty	Full		
<b>NSG04</b>	2072	872	2000L	120kg	1860kg	1570	70
<b>NSG06</b>	3018	1818	3000L	160kg	2820kg	1570	70
<b>NSG09</b>	3895	2690	4000L	190kg	3760kg	1570	70
<b>NSG14</b>	4418	3173	6000L	211kg	5480	1745	70
<b>NSG18</b>	3231	1931	8000L	300kg	7162kg	2120	70
<b>NSG24</b>	4386	3086	11000L	380kg	9885kg	2120	70

# We're here to help!

## **Clearwater Pollution Control**

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