



the conder range of **Oil Separators**

clereflo™ bypass separator

clereflo™ full retention separator

forecourt, washdown & silt separators

alarm systems

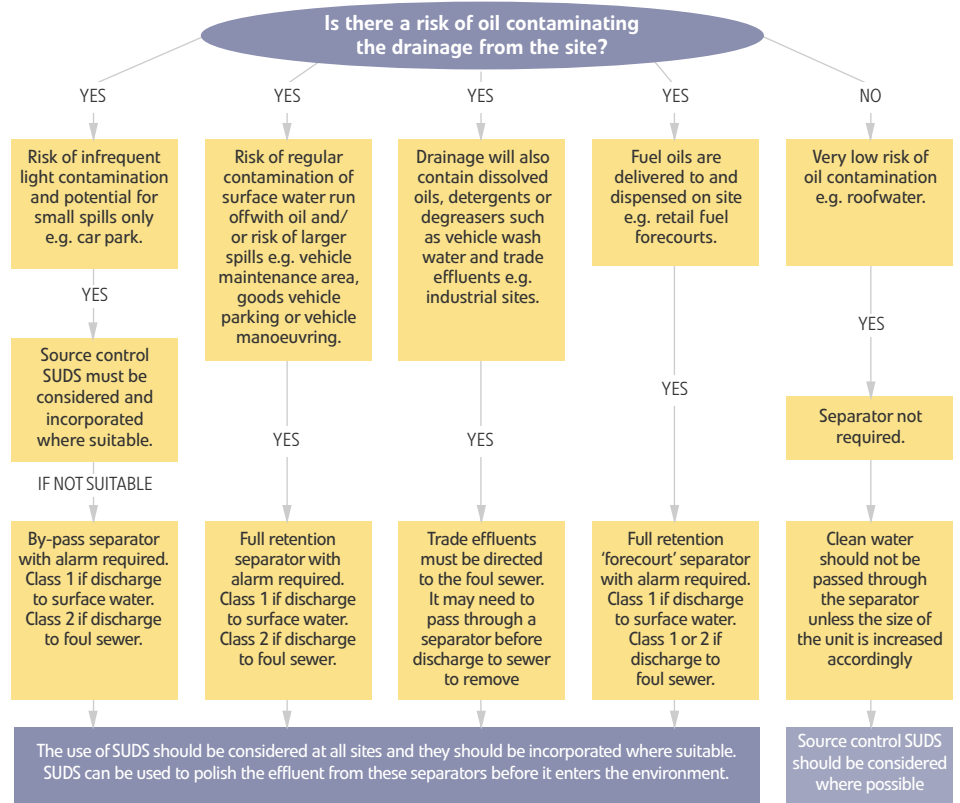


demand special treatment

# product selector

This chart, prepared by the Environment Agency and other Environmental alliance members can be used to identify the correct type of Conder Oil Separator your project requires. Guidance is given for the use of Separators in surface water drainage systems that discharge to rivers and soakways.

**NB:** Although discharge to foul water sewer is generally not covered by this chart, a Conder Separator should still be used. Please call for further advice.



# separators

Pollution prevention is a critical part of sustainable drainage systems and verified oil separators are designed to protect the environment and prevent the pollution of our rivers and streams, by containing hydrocarbons (eg diesel, petrol or engine oil) that have entered a drainage system.

There are statutory regulations in force to control the discharge of hydrocarbons, with severe penalties imposed for non-compliance. The Environment Agency's PPG3 guidelines are issued to enable you to comply fully with the relevant current legislation on environmental protection. The Clereflo range of oil separators from Conder Products fully conform to both the Environment Agency's latest PPG3 guidelines and European standard BSEN-858-1-2 and are proven to effectively separate oil and water. Under test, the Conder Bypass Separator performed to less than 1 mg/l and can, therefore, protect the environment and public safety.

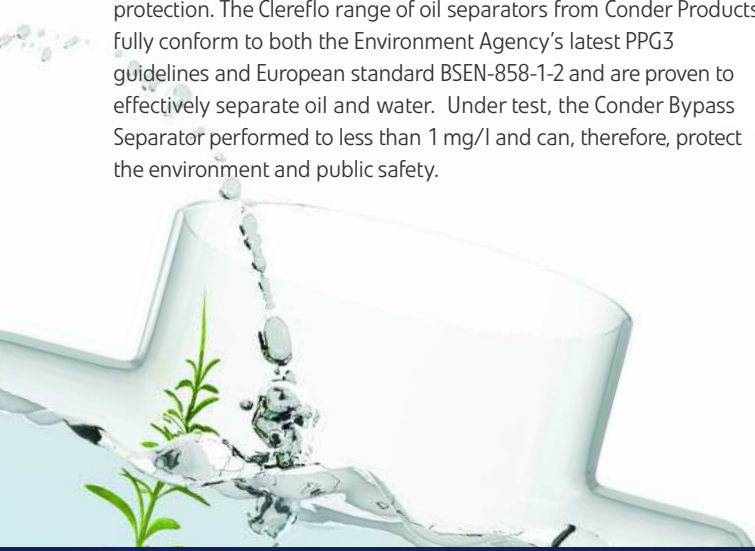
## THE EUROPEAN STANDARD REFERS TO TWO 'CLASSES' OF SEPARATOR:

Class 1 separators are designed to achieve a concentration of less than 5mg/l of oil under standard test conditions. These separators are required for discharges to surface water drains and the water environment.

Class 2 separators are designed to achieve a concentration of less than 100mg/l oil under standard test conditions and are suitable for dealing with discharges where a lower quality requirement applies such as discharges to the foul sewer (with consent from your sewer provider).

Both classes can be produced as 'Full Retention', 'By-Pass' or 'Forecourt' separators.

All oil separators are required by legislation to be fitted with an oil level alarm system and it is recommended that this alarm is installed, tested, commissioned and regularly serviced by a qualified technician. This automatic warning device will indicate when the separator is in need of immediate maintenance in order for it to continue to work effectively. Conder Products can offer a full technical and service package for a variety of alarm options through its service partner, Pims Service. (see separate section).



# clereflo bypass separator

Bypass separators fully treat all flows generated by rainfall rates of up to 6.5mm/hr. These separators are used when it is considered an acceptable risk not to provide full treatment for high flows, for example where only small spillages occur and the risk of spillage is small such as on short stay car parks.

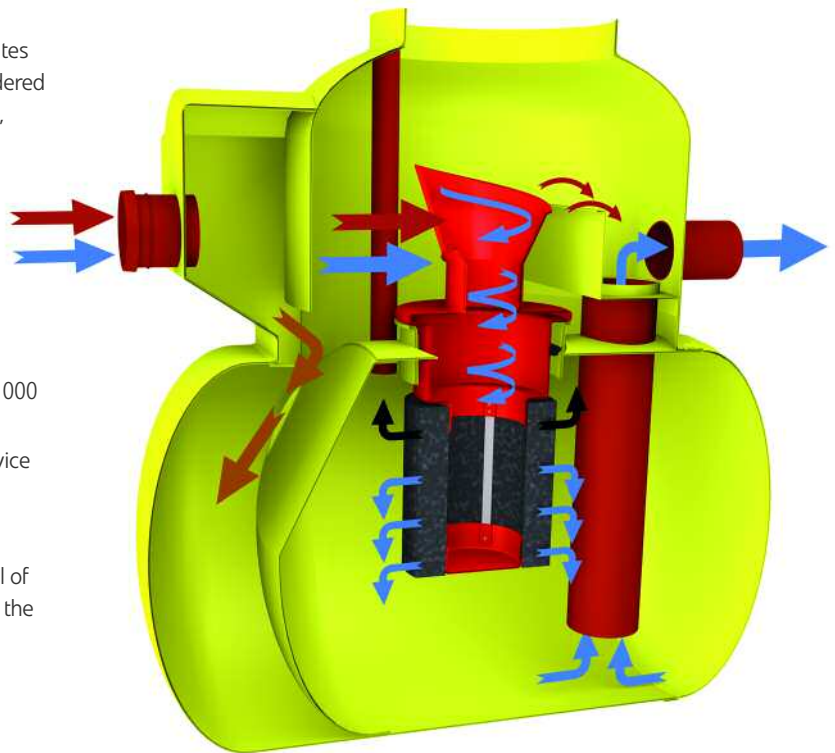
## FEATURES & BENEFITS

- Innovative design • Small & easy to handle
- Competitively priced • Fully compliant to the Environment Agency's PPG3 guidelines • Major installed cost savings
- Fully tested and verified with a range from CNSB 3 to CNSB 1000 (class 1) • Full BSI certification • Exceeds industry standards
- An Environment Agency verified manufacturer • Easy to service

## PROCESS & PERFORMANCE

The Conder range of Bypass separators are designed to treat all of the flow up to the designed nominal size. Any flow in excess of the nominal size is allowed to bypass the separation chamber thus keeping the separated and trapped oil safe.

During the early part of a rain storm which is a time of high oil contamination, all of the contaminated water flow passes through a sediment collection chamber and enters the separation chamber through a patented oil skimming and filter device. This ensures that all of the oil proceeds to the separation chamber where it is separated to the Class 1 standard of 5 mg/l and safely trapped. As the rain storm builds up to its maximum and the level of oil contamination reduces significantly, the nominal size flow continues to pass through the separation chamber and any excess flow of virtually clean water is allowed to bypass directly to the outlet.



## APPLICATION AREAS

- Car parks
- Roadways & major trunk roads
- Light industrial & goods yards
- Discharge to sensitive environment

### KEY

- RED** = Bypass flow path
- BROWN** = Silt
- BLUE** = Treated flow
- BLACK** = Oil separation

## BYPASS SEPARATOR – CORE RANGE. CLASS 1. TECHNICAL DATA

Larger models up to CNSB 1000 are available

AREA DRAINED (M <sup>2</sup> )	TANK CODE INCL. SILT	LENGTH INCL. SILT (mm)	SILT CAPACITY (L)	OIL STORAGE CAPACITY (mm)	DIAMETER (mm)	HEIGHT (mm)	BASE TO INLET INVERT (mm)	BASE TO OUTLET INVERT (mm)	ACCESS (mm)
1667	CNSB3s/21	1400	300	45	1026	2150	1680	1630	750
2500	CNSB4.5s/21	1785	450	67.5	1026	1825	1220	1170	600
3333	CNSB6s/21	1975	600	90	1026	1825	1220	1170	600
4444	CNSB8s/21	2165	800	120	1026	1825	1220	1170	600
5555	CNSB10s/21	2485	1000	150	1026	1825	1220	1170	600
8333	CNSB15s/21	2670	1500	225	1210	2100	1400	1350	600
11111	CNSB20s/21	3115	2000	300	1210	2100	1400	1350	600
13889	CNSB25s/21	3555	2500	375	1210	2100	1400	1350	600
16667	CNSB30s/21	3520	3000	450	1510	2640	1720	1670	750
22222	CNSB40s/21	4090	4000	600	1510	2640	1720	1670	750
27778	CNSB50s/21	4655	5000	750	1510	2640	1720	1670	750
33333	CNSB60s/21	4415	6000	900	1880	3300	2025	1975	2 x 600
38889	CNSB70s/21	4835	7000	1050	1880	3300	2025	1975	2 x 600
44444	CNSB80s/21	5225	8000	1200	1880	3300	2025	1975	2 x 600
50000	CNSB90s/21	5620	9000	1350	1880	3300	2025	1975	2 x 600
55556	CNSB100s/21	6010	10,000	1,500	1880	3300	2025	1975	2 x 600

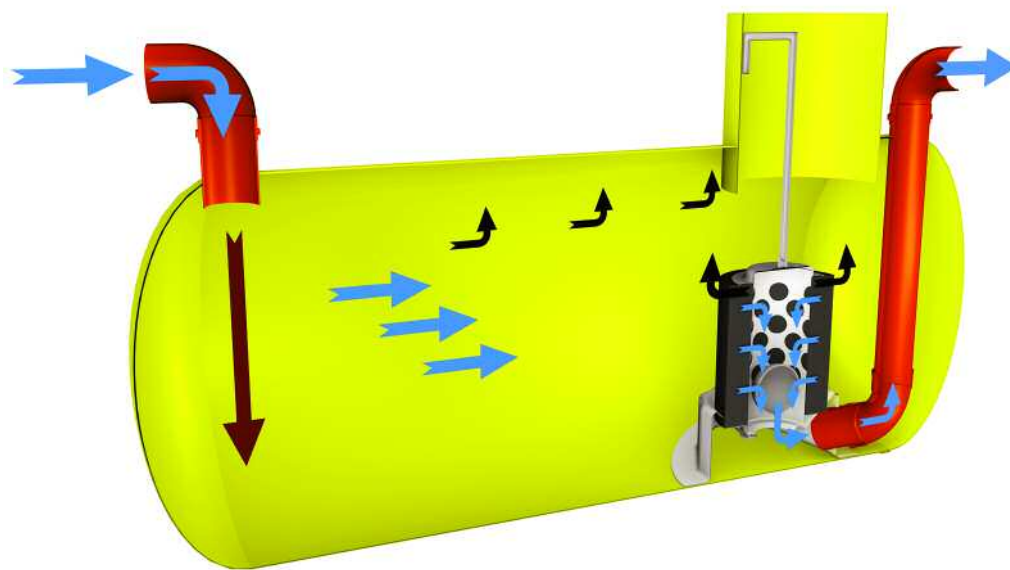
**NOTE:** It is a requirement of PPG3 that you have a silt capacity either in your tank or in an upstream catch pit.

# clereflo full retention separator

Full retention separators treat the full flow that can be delivered by a drainage system, which is normally equivalent to the flow generated by a rainfall intensity of 65mm/hr. Full retention separators are used where there is a risk of regular contamination with oil and a foreseeable risk of significant spillages eg vehicle maintenance areas and retail fuel forecourts. All full retention separators have an automatic closure device (ACD) fitted as standard. Compulsory for all PPG3 compliant full retention separators, the ACD prevents accumulated pollutants flowing through the unit when maximum storage level is reached.

## PROCESS & PERFORMANCE

Contaminated water enters the separator, the liquid is retained for a sufficient period to ensure that the lighter than water pollutants, such as oils and petrol, separate and rise to the surface of the water and are retained within the separator. Decontaminated water is discharged. Retained oil must be emptied from the separator once the level of oil is reached, or the oil level alarm is activated and the closure device operated.



Separator waste is a "special waste" and should be removed from the separator under the terms of The Waste Management Code of Practice.

### KEY

**BROWN** = Silt

**BLUE** = Treated flow

**BLACK** = Oil separation

AREA DRAINED (M <sup>2</sup> )	TANK CODE INCL. SILT	LENGTH INCL. SILT (mm)	SILT CAPACITY (L)	TANK CODE EXC SILT	LENGTH EXC SILT (mm)	OIL STORAGE CAPACITY	DIAMETER (mm)	HEIGHT (mm)	BASE TO INLET INVERT (mm)	BASE TO OUTLET INVERT (mm)
222	CNS4s/**	2319	400	CNS4/**	1810	40	1010	1300	1075	1025
333	CNS6s/**	3414	600	CNS6/**	2650	60	1010	1300	1075	1025
444	CNS8s/**	3197	800	CNS8/**	2489	80	1210	1500	1275	1225
556	CNS10s/**	3957	1000	CNS10/**	3073	100	1210	1500	1275	1225
833	CNS15s/**	3844	1500	CNS15/**	2995	150	1510	1800	1550	1500
1111	CNS20s/**	5060	2000	CNS20/**	3929	200	1510	1800	1550	1500
1667	CNS30s/**	5639	3000	CNS30/**	4190	300	1880	2100	1850	1800
2222	CNS40s/**	7059	4000	CNS40/**	5487	400	1880	2100	1850	1800
2778	CNS50s/**	4792	5000	CNS50/**	3778	500	2600	2800	2550	2500
3333	CNS60s/**	5673	6000	CNS60/**	4450	600	2600	2800	2550	2500
3889	CNS70s/**	6549	7000	CNS70/**	5123	700	2600	2800	2550	2500
4444	CNS80s/**	7425	8000	CNS80/**	5795	800	2600	2800	2550	2500
5000	CNS90s/**	8301	9000	CNS90/**	6467	900	2600	2800	2550	2500
5556	CNS100s/**	9177	10,000	CNS100/**	7139	1,000	2600	2800	2550	2500

/\*\* Enter 11 for Class 1 Full Retention Separators /\*\* Enter 12 for class 2 Full Retention Separators

**NOTE:** It is a requirement of PPG3 that you have a silt capacity either in your tank or in an upstream catch pit.

## FEATURES & BENEFITS

- All surface water treated
- Available in Class 1 & 2
- ACD Fitted as standard

## APPLICATION AREAS

- Sites with hi-risk of oil contamination
- Fuel storage depots
- Refuelling facilities
- Petrol Forecourts
- Vehicle maintenance areas/workshops



# forecourt separator

Forecourt separators are full retention separators specified to retain on site the maximum spillage likely to occur on a petrol filling station. They are required for both safety and environmental reasons and will treat spillages occurring during the vehicle refuelling and road tanker delivery. The size of the separator is increased in order to retain the possible loss of the contents of one compartment of a road tanker, which may be up to 7,600 litres. Forecourt separators can be Class 1 or 2 and may not need a coalescing filter if discharging, with water authority consent, into a foul sewer.

## FEATURES & BENEFITS

- All surface water treated
- Available in Class 1 & 2
- ACD Fitted as standard
- Includes 2000L silt capacity

## APPLICATION AREAS

- Petrol forecourts
- Refuelling facilities
- Fuel storage depot

## FORECOURT SEPARATORS

TANK CODE	VOLUME (L)	LENGTH (mm)	DIAMETER (mm)	HEIGHT (mm)	BASE TO INLET (mm)	BASE TO OUTLET (mm)	ACCESS (mm)
ANO/11*	10000	4250	1800	2100	1600	1550	750
LNO/11**	10000	4250	1800	2100	1600	1550	750
ANT/12***	10000	4250	1800	2100	1600	1550	750

\*Class 1 Forecourt Separator suitable for discharging to surface water drains \*\*Class 1 Forecourt Separator suitable for installation in granular materials

\*\*\*Class 2 Forecourt Separator suitable for discharging to foul drains only

# wash down & silt separators

## CWS WASH DOWN SEPARATOR

The Environment Agency's PPG13 requires that discharge from pressure washers must discharge to a foul drainage system. Where there is no foul drainage available, the effluent must be contained within a sealed drainage system or catchpit for disposal by a licensed waste contractor.

Silt build-up is the main problem with wash down facilities, the Conder CWS range of wash down and silt separators are used to remove the silt and will allow some separation of hydrocarbons.

Detergents that are used in wash down areas will break down and disperse the hydrocarbons, hindering the separation process. Therefore it is important to remember that the main function of wash down separators is to remove silt.

Although it is recognised that single stage separators give the most efficient separation, 2 and 3 chamber CWS silt separators are available on request.

## APPLICATION AREAS

- Car wash facilities
- Tool hire depots
- Pressure washer facilities

## FST SILT TRAP

Large quantities of silt can be associated with Wash down areas. The Conder FST silt trap is ideal for easy removal of silt either manually or by a waste disposal contractor.

The FST range of silt traps are available with varying grades of covers from B125 up to E600 to allow installation in all types of vehicle or plant wash down facilities.

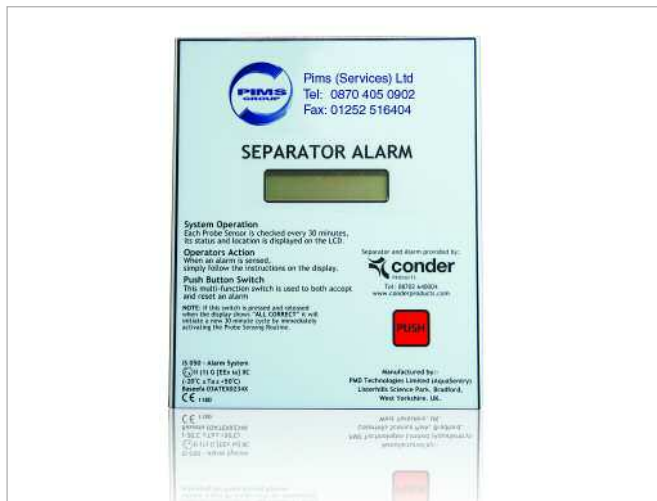
TANK CODE	CAPACITY (L)	SILT STORAGE	DIAMETER (mm)	LENGTH (mm)	ACCESS DIAMETER (mm)	BASE TO INLET INVERT (mm)	BASE TO OUTLET INVERT (mm)
CWS2/12	2000	1000	1000	2713	600	1240	1190
CWS3/12	3000	1500	1200	2853	600	1375	1325
CWS4/12	4000	2000	1200	3737	600	1375	1325
CWS6/12	6000	3000	1500	3636	600	1725	1675
CWS8/12	8000	4000	1800	3443	600	2030	1980
CWS10/12	10000	5000	1800	4250	600	2030	1980
CWS12/12	12000	6000	1800	5015	600	2030	1980
CWS14/12	14000	7000	1800	5800	600	2030	1980
CWS16/12	16000	8000	1800	6587	600	2030	1980
CWS18/12	18000	9000	2500	4117	600	2725	2675
CWS20/12	20000	10,000	2500	4524	600	2725	2675

## alarm systems

According to the Environment Agency's PPG3 guidelines, all separators must be provided with a robust device to provide visual and audible warning (if necessary to a remotely located supervisory point) when the level of oil reaches 90% of the oil storage volume. This automatic warning device indicates that the separator is in need of immediate emptying for it to continue to work effectively.

Conder can supply a full range of visual and audible warning devices including: mains powered, solar powered alarms (with flashing beacon) or solar GSM (sends txt message to a mobile phone of your choice). Three probes are fitted in the separator to automatically monitor the oil, silt and liquid levels. The probes will also indicate exactly when the Separator needs emptying, eliminating unnecessary waste management visits.

If site conditions permit, the control can be used to monitor multiple probes in a number of different separators.



### MAINS POWERED SYSTEM

This option is best suited to new build situations or sites where installation of the necessary cabling and ducting is straightforward and economical.

### SOLAR POWERED SYSTEM – FLASHING BEACON

This option requires no mains power supply or any significant cabling and ducting making it economical for large sites and retro fitting alarms to existing oil separators. A High Intensity Beacon will flash when a problem is detected.

### SOLAR GSM ALARM

The Solar GSM alarm sends a status report of your separator to a mobile phone number of your choice. The status of the GSM alarm can also be tested at any time by simply sending a pre-recorded text message via your dedicated mobile phone.

## service & accessories

The Environment Agency's PPG3 guidelines stipulate that, every six months, according to manufacturer's instructions, experienced personnel should:

- Physically inspect the integrity of the separator and all mechanical parts
- Assess the depth of accumulated oil and silt
- Service all electrical equipment such as alarms and separator management systems
- Check the condition of any coalescing device and replace it if necessary
- Keep a detailed log of when the separator is inspected, maintained, emptied and serviced.

Conder, through its approved service provider, Pim Service, can offer a full technical and service package including separator and alarm installation, commissioning, oil & silt removal, and routine service contracts.

### SEPARATOR ACCESSORIES

#### Coalescing Filters

This filter (a cylindrical cartridge of open cell material – with handle for easy removal and cleaning) separates residual oil in already separated oil/water and ensures discharge quality of less than 5mg/litre of oil in water under test conditions. It is simple to maintain and replace.

### ALARM ACCESSORIES

- Flashing beacons
- Flashing beacons with siren kit
- Kiosks
- Probe brackets
- Bas1000 intrinsically safe junction box
- High level probe
- Silt level probe
- Oil level probe



# about conder environmental solutions

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Protecting the water environment has been the mission of Conder Environmental Solutions, since it was established in the early 1970s. The business is organised into specialist divisions: Conder Products, Conder Technical Solutions, Conder Pumping Solutions. Our full capability extends beyond our successful range of 'sealed-design' commodity products, to providing expert consultancy and design for hi-specification bespoke systems across all areas of wastewater pollution control. Conder works closely with engineers, architects, specifiers, developers and self-builders. Providing support from detailed site surveys, plant selection, full technical proposals and liaison with regulatory bodies where necessary, we will ensure that our client achieves the most environmentally sound and cost-effective solution.

## CONDER PRODUCTS

Our specialist commodity division offers a portfolio of products ranging from oil separators and package sewage treatment plant, to pumping stations and attenuation or storm water balancing tanks. Our Clereflo range of small-scale domestic sewage treatment plants serve 6-50 population equivalents, utilising either Activated Sludge Plant (ASP) or Submerged Aerated Filter (SAF) technology. Highly price-competitive, with minimal running costs, the Clereflo range is the low energy solution for applications where access to mains drainage is not available.

## CONDER TECHNICAL SOLUTIONS

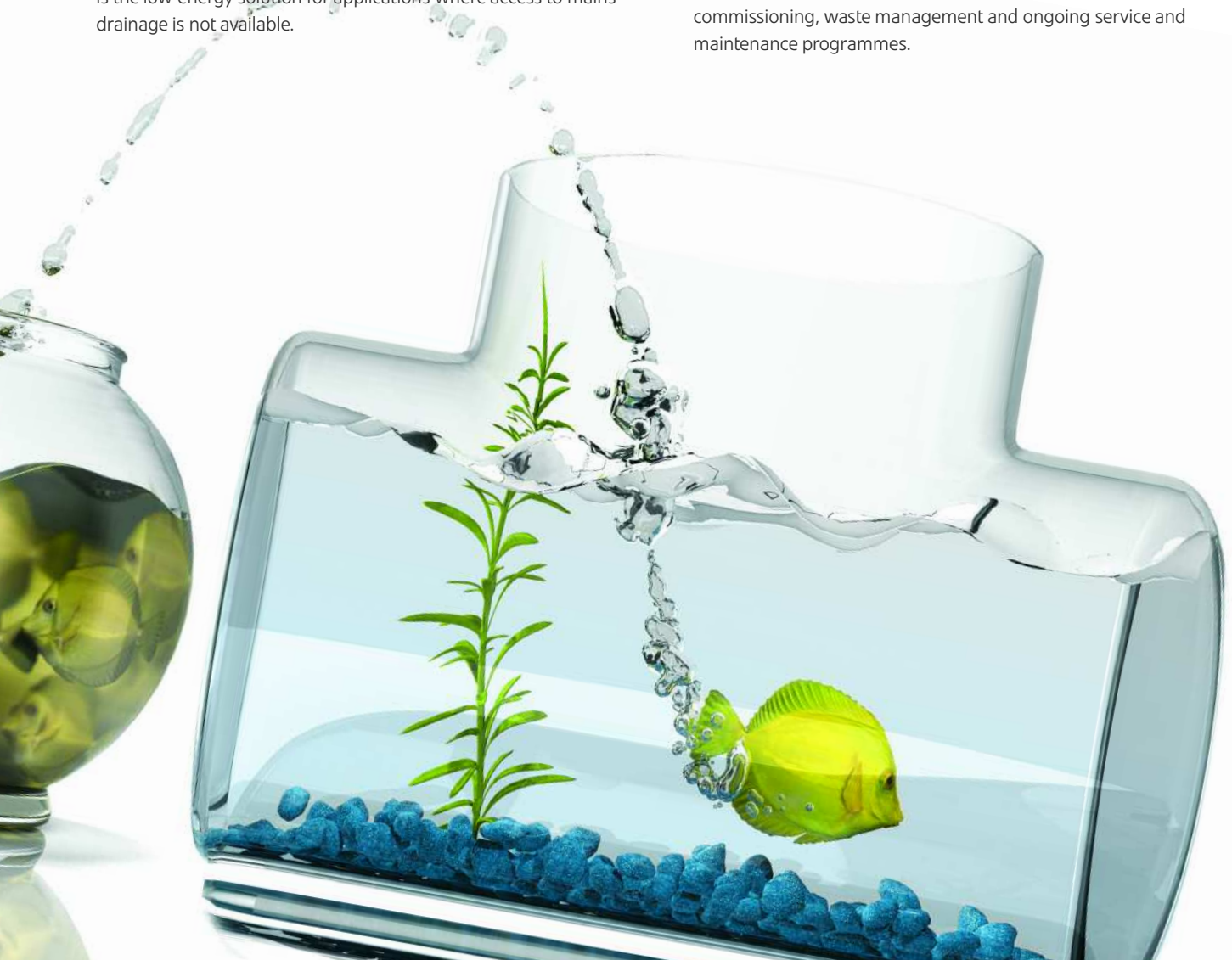
The capability of Conder's Technical Solutions division illustrates the breadth of the company's expertise and has established Conder as the authority in hi-specification projects. As a solutions provider our expertise extends across a product range that includes SAF technology unitank and modular sewage treatment systems up to 1800pe, Membrane BioReactor sewage treatment systems up to 5000pe, attenuation, engineered vessels and other specialist tanks.

## CONDER PUMPING SOLUTIONS

We offer a range of water and wastewater pumping solutions for domestic, commercial and industrial applications from off the shelf packages, through to custom-built pumping solutions.

## SERVICE

Products installed to protect the environment must be maintained and serviced regularly to ensure that they continue to operate efficiently and effectively. Failure to do this will undoubtedly lead to pollution of the water environment, which is an offence and may result in prosecution. Through a nationwide network of British Water accredited engineers, Pims Service, Conder's service partner, offers a full service and technical package which can include product support, commissioning, waste management and ongoing service and maintenance programmes.



let us make your environment  
a better place to be...  
demand special treatment



ASP 6-20pe Package Sewage Treatment Plant



NSAF 25-50pe



Techflo SAF 60-600pe single-stream and multi-stream up to 1800pe



MBR Membrane Technology Package Sewage Treatment Systems (up to 5000pe)



General Underground Storage Tanks



Attenuation & Storm Water Balancing



Class 1&2 Bypass & Full Retention oil/water separators



Package Pump Stations

For product enquiries, specification advice, project assessments or further information, please contact the Conder team on:



t: 08702 640004 f: 08702 640005 e: sales@conderproducts.com

[www.conderproducts.com](http://www.conderproducts.com)

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South West Industrial Estate, Peterlee, Co Durham SR8 2RA

For nationwide service enquiries please contact:



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t: 0870 405 0902 f: 01252 516404 e: sales@pimsgroup.co.uk

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

**Plus:**

- Double Wall Tanks
- Fuel Tanks
- Cesspools & Septics
- Rainwater Harvesting Systems
- Grease/Oil Separators
- Bucket Lift Elevators
- Screenpack CSOs
- ConderCell Modular Storage
- Above Ground Engineered Vessels
- Sprinkler Tanks

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We reserve the right to alter specification without prior notice.

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