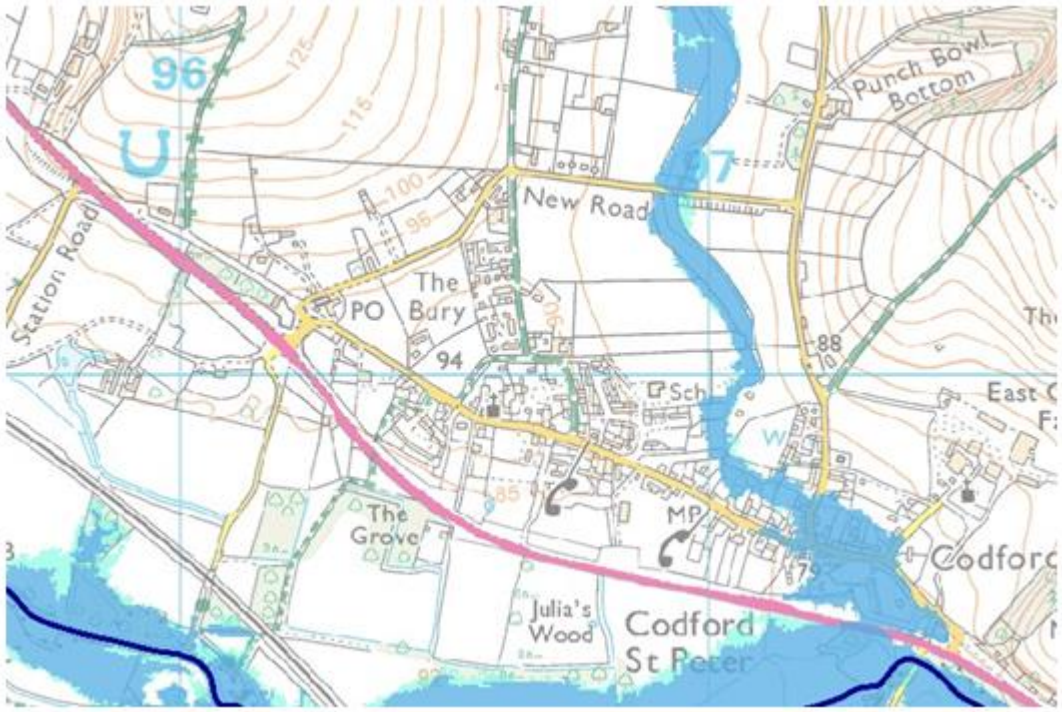
PROPOSED PAIR OF NEW DWELLINGS ON LAND TO WEST OF NORTH LODGE, HIGH STREET, CODFORD, WARMINSTER, WILTSHIRE.

DRAINAGE STATEMENT

This drainage report is submitted as part of the application for full planning permission.

The topography and site areas allow for surface drainage to be taken to soakaways, subject to final design, with the foul waste water dealt with via a treatment plant.

The site is outside all flood zones identified on the Environment Agency maps as shown below and the site is not considered to be at risk of flooding as it is in Flood zone 1, which PPS25 defines as a "low probability"zone assessed as having a less than 1 in 1000 (0.1%) annual probability of flooding in any year. PPS25 advises that all uses of land are appropriate in this zone and as such, the proposal meets the aim of the policy.

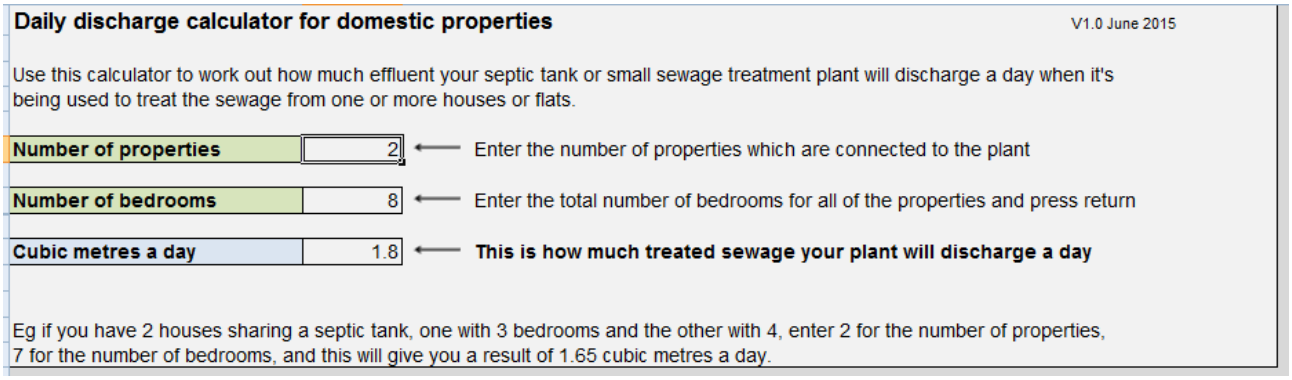


Ecological impact
This development falls within the catchment of the River Avon SAC and has potential to cause adverse effects alone or in combination with other developments through discharge of phosphorous in wastewater . The council has agreed through memorandum of understanding with Natural England and others that measures will be put in place to ensure all developments permitted between March 2018 and March 2026 are phosphorous neutral in perpetuity. To this end it is currently implementing a phosphorous mitigation strategy to offset all planned residential development, both sewer and non-sewer, permitted during this period.

Following the cabinets resolution on 5th January 2021, which secured a funding mechanism and strategic approach to mitigation, the Council has favourably concluded a generic appropriate

assessment under the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019. This was endorsed by Natural England on 7th Jan 20121. As this application falls within the scope of mitigation strategy and generic appropriate assessment, it is concluded that it will not lead to adverse impacts alone and in combination with other plans and projects on the River Avon SAC.

The proposed treatment plant is a Biodigester T12 treatment tank, suitable for 2 No. 4 bedroom properties. In accordance with the Environment Agency binding rules, the development has a daily flow rate of 1.8m3. The calculation is below.



Daily discharge calculator for domestic properties V1.0 June 2015

Use this calculator to work out how much effluent your septic tank or small sewage treatment plant will discharge a day when it's being used to treat the sewage from one or more houses or flats.

Number of properties	2	← Enter the number of properties which are connected to the plant
Number of bedrooms	8	← Enter the total number of bedrooms for all of the properties and press return
Cubic metres a day	1.8	← **This is how much treated sewage your plant will discharge a day**

Eg if you have 2 houses sharing a septic tank, one with 3 bedrooms and the other with 4, enter 2 for the number of properties, 7 for the number of bedrooms, and this will give you a result of 1.65 cubic metres a day.

The T12 tank is suitable for 12 people. – According to the calculations, for a 4 bedroom house, we should allow for 1 person per bedroom + ½ person. Therefore for 2 properties, the calculation above includes for 9 people.
A percolocation test has been carried out on the site, in accordance with Building regulations (Part H 2015). The results gave a Vp of 17.2.
From this the drainage field calculation has been applied.
9 (people) x 17.2 (Vp) x 0.25 = A (drainage field.
9 x 17,2x 0.25 = 38.7 – Assuming a drainage trench 600mm wide then this gives a 64,5 linear mtr drainage trench.

The stormwater drainage from the access drives will be contained within a permeable cellular construction. The application site also benefits from the fact of being lower than the access road level therefore will prevent any excessive rainwater run off. Rainwater from any hard surface roofs will flow into a sustainable drainage system as agreed with building control.

DATA SHEET

T12 Range - up to 12 persons

Suitable for a large house or two houses.



Why use a BIODIGESTER

- **Simple process**
  - Quiet operation
- **Simple installation**
  - No concrete back fill required in dry ground
- **Simple maintenance**
  - No moving parts underground



Installation is simple in areas with a high water table -
just cover the anchors with 4m³ concrete.

Environmental Regulations

BIODIGESTER conforms to all the normal **'Consent to Discharge'** environmental requirements of the relevant authorities in the United Kingdom.

Building Regulations

Building Regulations relevant to a BIODIGESTER sewage treatment plant:

The Building Regulations 2000 Drainage and Waste Disposal 2002 edition Part H-H2 Package Sewage treatment Works

Performance

The plant is designed to produce an effluent quality of:

- BOD 5 20mg/l
- Suspended Solids 30mg/l
- Ammoniacal Nitrogen (as N) 20mg/l

More stringent effluent qualities may also be catered for. The effluent can be discharged to a watercourse or via a soakaway, subject to approval.

Sewage flow/day 2.4 m³

What size do I need?

sizing formula (normal residential use):

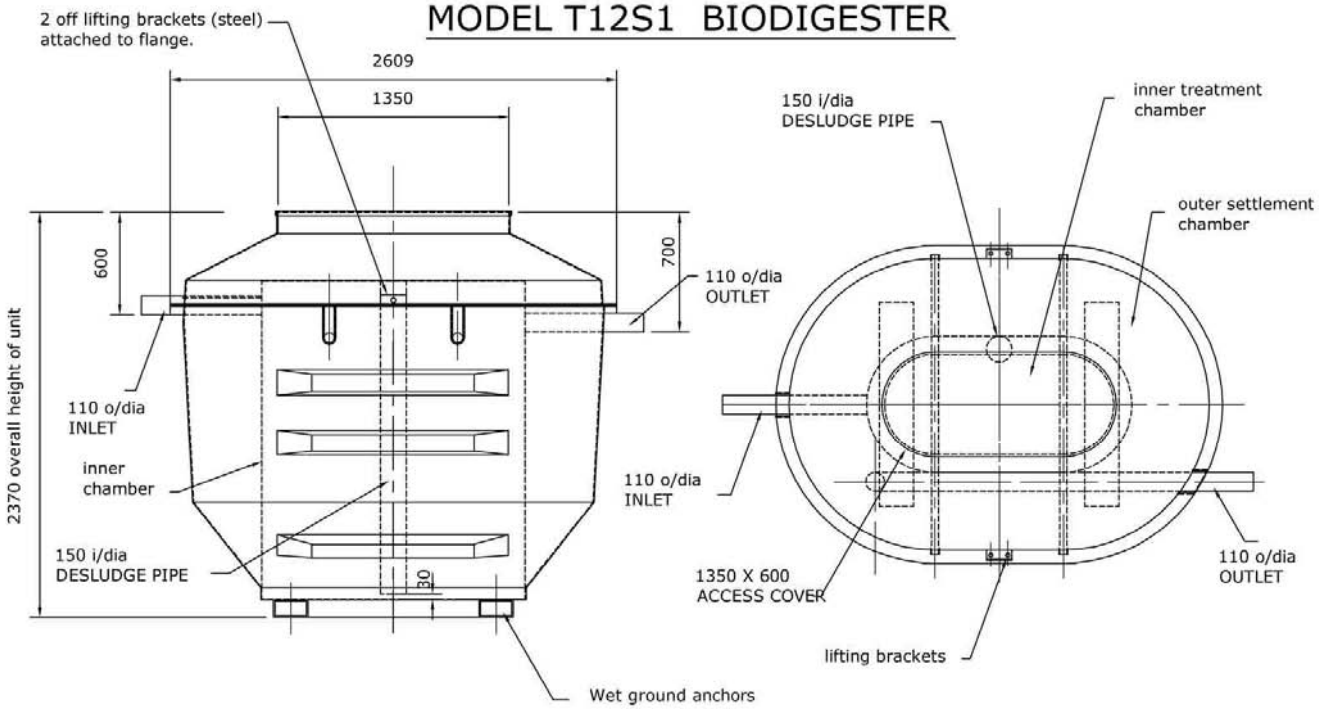
England and Wales:
1 person per bedroom
+ 0.5 person per house
(so a 4-bedroomed house would be considered as 4.5 people)

Scotland:
1 person per bedspace

www.biodigester.com Tel: 01278 786104

BIODIGESTER
sewage systems for the modern world

MODEL T12S1 BIODIGESTER



T12 References:

T12 standard	inlet drain depth	600mm	ref T12S1
T12 standard	inlet drain depth	900mm	ref T12S2
T12 standard	inlet drain depth	1200mm	ref T12S3
T12 standard	inlet drain depth	1500mm	ref T12S4
T12 integral pumping station	inlet drain depth	600mm	ref T12P1
T12 integral pumping station	inlet drain depth	900mm	ref T12P2
T12 integral pumping station	inlet drain depth	1200mm	ref T12P3
T12 integral pumping station	inlet drain depth	1500mm	ref T12P4

Dimensions: T12S1

1860 mm wide
2370 mm deep
2610 mm long
600 mm inlet drain depth
weight: 350 kg

T12 Electrical Ratings:

Air Blower:	240v	131w	Start current 0.76 amps
Integral pump:	240v	150w	Start current 2.9 amps

T12 Integral Pump Flow:

150 litres/min max | head: 5.2m max | pipe size 32mm.

To calculate running cost, see
www.energyfirst.org/runningcosts.htm

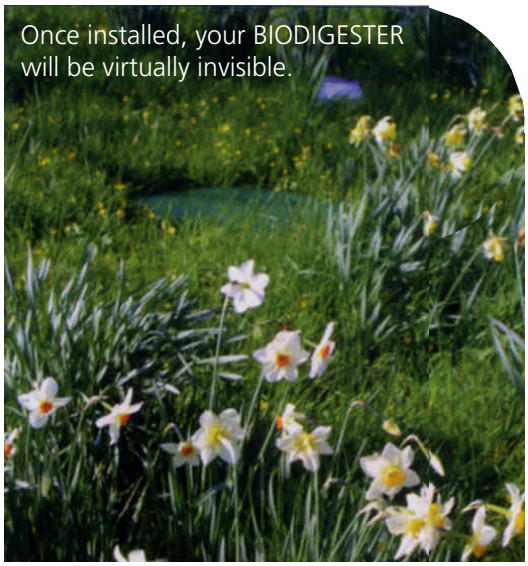
Extras available for your T12 BIODIGESTER

SAMPLE CHAMBER
When discharging to a soakaway it is a requirement that you install a sample chamber so that the effluent quality can be periodically checked. Available to suit all outlet depths of our standard range.

HIGH LEVEL ALARM
If you are relying on a pump to discharge the effluent, it is important to install a warning beacon to alert to failure. This is a flashing beacon with a float switch for installing within the pump chamber.

INTEGRAL EFFLUENT PUMP
In areas where you might have a high water table, or not enough space for a soakaway, the treated effluent can be pumped to a suitable point of discharge. The pump is 240 volt, submersible with an integrated float. It is fitted internally.

REMOTE REPORTING
You can be alerted by text to your mobile phone if any problems occur with your unit. Our new remote reporting system is based on mobile phone technology. Contact us for further details.



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