Septic tanks, cesspools and small sewage treatment works are used for the disposal of sewage in many rural communities, usually from premises where connection to a public sewer is difficult. This leaflet contains information for owners of septic tanks regarding their maintenance needs, problems which might occur and also the responsibilities of the owner.

If your home or property is in Wales and has a septic tank or package sewage treatment plant, it must be registered with the Natural Resources Wales.

Please visit the link below for information on the new requirement by the EA in relation to septic tanks;

**Septic Tanks**

Septic tanks are simple to operate. A septic tank consists of the tank itself and a soakaway below ground level. A septic tank is a type of settlement tank intended to provide suitable conditions for the decomposition of organic matter which allows solids to settle at the bottom as sludge. Often a hard scum or crust forms on the top of the liquid.

Liquid effluent from the septic tank then flows into a soakaway. A soakaway can be either a large permeable chamber, or a system of perforated drains which allow the liquid to ‘soakaway’ beneath the ground level.

Tanks can be of various types. Those with more than one compartment produce better quality effluent than single compartment tanks.

Recommended criteria for the design and installation of septic tanks are given in BS 6297:2007+A1:2008 (Code of practice for the design and installation of drainage fields for use in wastewater treatment). BS 6297 has been amended and replaces BS 6297:1983 which is now withdrawn.

BS 6297 gives recommendations and guidance on the design and installation of drainage fields and infiltration systems for use in wastewater treatment. BS 6297 is applicable to systems for handling discharges from domestic and commercial sources from single households and upwards. These sources are typically septic tanks and package treatment plants.

This Code of Practice gives general advice on good design and installation practices. Particular requirements are determined by local conditions. The recommendations are supplemented, as required, by specialist advice.
Who should use BS 6297?

- Designers
- Specifiers and procurement officers
- Pollution and building control officers
- Local authorities
- Environment agencies
- Manufacturers of small wastewater treatment systems

Guidance is also available from the Natural Resources Wales (NRW); ‘Pollution prevention guidelines – Treatment and disposal of sewage where no foul sewer is available: PPG4’

### How they work

Raw sewage from the home is fed into the septic tank. Naturally occurring bacteria, which thrive in the absence of oxygen, partially digest the raw sewage. The primary purpose of the tank is to separate the solids from the liquids, as sewage flows through it. Sludge accumulates at the bottom of the tank and has to be removed periodically. Liquid effluent then flows into a soakaway.

### Signs of Septic Tank Failure

- Smell of sewage near tank
- Sluggish drainage in the home
- Plumbing backups
- Gurgling sounds in pipes and drains
- Odour around soakaway area
- Grey cloudy discharge of untreated sewage to adjoining ditches / watercourses
- Sodden ground or greener grass in area of soakaway
- Overgrown with stinging nettles
- Lack of crust on top of contents of septic tank

### Causes of Septic Tank Failure

1. Destruction of bacteria caused by use of cleaning materials, e.g. detergents, bleaches, polishes, disinfectants, acids, sink tub cleaner, toilet cleaner.

   It is better to use products which are ‘eco-friendly’, and to minimise the use of any of the other cleansing products, in particular putting neat bleach down the toilet.

2. Build up of solid material at the bottom of the tank, which reduces liquid capacity.

3. Flushing down the toilet of sanitary towels, tampons, nappies, condoms.

4. Too much water flowing through the Septic Tank will eventually overflow, if the rain/surface water is connected to the tank. (‘Friendly’ sludge forming bacteria will be flushed away).
5. Structural damage to tank

6. Lack of adequate ventilation to tank.

It is normally not the capacity of the septic tank which gives rise to problems it is the effectiveness of the soakaway system serving it that’s vital. When the surrounding land becomes saturated with ground water, has poor drainage qualities or when solids from the septic tank start to silt up the soakaway, then the septic tank will start to fail.

**HOW TO AVOID SEPTIC TANK FAILURE**

Many factors influence the degree of efficiency of a septic tank. These factors include the size of the tank and frequency of cleaning. To properly maintain a septic tank these guidelines should be followed;

1. Check internal state of tank regularly (monthly)

2. Check condition of outfall and final effluent from time to time

3. The general advice from the NRW recommends that septic tanks should be emptied, or “de-sludged”, once a year by a ‘suitable contractor’ who should examine the structure at the same time and carry out any necessary works. In practice, desludging should take place on a regular basis and as deemed necessary by the contractor. The contractor will normally advise on the optimum schedule for this work, based on the size of your household and the design of your tank, and provide a free annual inspection of the system.

A ‘suitable contractor’ must be registered for the carriage of the waste sludge by the NRW. They will transport and dispose of the sludge in a proper manner.

Contacts for registered carriers may be found on the internet or in Yellow Pages under ‘Sewage Consultants’ and ‘Drain and Pipe Cleaning’.

4. Don’t allow cross-connections between the foul water and rainwater collecting systems for your house as this will overload your septic tank.

5. Don’t allow large amounts of grease and fat to enter the septic tank system. This will lead to blockages and may permanently damage the soakaway. Restaurant, hotel and public house kitchens should have grease traps fitted to their kitchen waste systems.

6. Don’t wash paint brushes in the sink or allow waste solvents, such as white spirit, or waste oils to enter your drains and septic tank.

7. Do not flush unsuitable material down the toilet.


9. Where possible, leave the surface crust intact after desludging.
If you do not maintain your septic tank this could lead to the following:

- Substantial costs to replace the system or to clear waste.
- If pollution of a water course (or groundwater) occurs, this could lead to prosecution by the NRW.
- Problems with smell, etc, causing a nuisance to any neighbours leading to Environmental Health involvement and possible prosecution.
- Backing up of sewage in house drains demonstrated by slowly draining sinks and toilets.

**Responsibilities of the Owners**

If a septic tank overflows and causes nuisance to neighbours, discharges to watercourses or pollutes land outside the control of the owner, action may be taken by either Wrexham County Borough Council or by the NRW to require the fault to be remedied.

**Further Advice**

Don’t enter an empty septic tank for any reason; the atmosphere is hazardous to health. If you believe an inspection is necessary consult a suitable contractor in the first instance.

If you plan to install a new system or alter your existing system of sewage disposal you should contact the Planning Department (Building Control) at Wrexham County Borough Council and your environmental regulator (the Natural Resources Wales) at an early stage to discuss your plans.

If you are in doubt, further advice can be obtained by contacting a surveyor, consultant, drainage contractor or, in severe circumstances, the Environment and Planning Department:

Telephone: 01978 298989
Email: contact-us@wrexham.gov.uk