

# A Buyer's Guide to... Septic Tanks

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**The vast majority of homes in England and Wales are connected to mains drainage, which is a public sewer system maintained by water companies such as Severn Trent and for which a charge is made to the householder through their water rates.**

There are, however, a significant number of properties which because of their location are not connected to the public sewer system. These generally tend to be older, more rural properties. In the case of more modern developments, unless a connection to the public system is completely unfeasible, the local planning authority will have insisted on a connection.

On average we each produce in the region of 200 litres of waste water every day and where connection to the public sewer system is not possible an alternative means of disposal is required.

There are three alternatives to mains drainage; septic tanks, sewage treatment plants (biodiscs) and cesspools.

### **What is a Septic Tank?**

A tank into which waste water and matter flows; the solids then break down through a natural bacteriological process, reducing volume and particle size, allowing the treated sewage (effluent) to pass through an outlet and into a soakaway, where it is further broken down by natural means.

The broken-down solids that remain too large in volume to pass through the outlet sink to the bottom of the tank and are called sludge, whilst lighter elements, such as soap scum or grease, float to the top of the liquid level in the tank.

Waste liquid from the septic tank is dispersed into a soakaway, or land drain. Not all sites are suited to soakaways; for example, the prevalent soil type may be heavy clay that prevents water dispersal, or there may be a high water table that would cause the effluent to break through the ground surface. Before installing a tank the soil should be tested for suitability through a percolation test, which measures how quickly water discharges into the ground.

Below ground an outlet pipe leads from the tank to a series of perforated pipes running at a shallow angle into a series of gravel-filled trenches. The perforations allow the effluent to be released into the gravel over an area sufficient to allow proper dispersal and further breakdown of the waste matter.

A septic tank should be sited away from the house and not too close to a watercourse. Your local authority Building Control department and the Environment Agency should be consulted in this regard as there are prescribed distances that must be observed.

### **What is a Sewage or Package Treatment Plant (Biodisc)?**

As with septic tanks, these also work by breaking down sewage using natural bacteria, but will also include some means of adding air to the effluent to increase the amount by which the sewage breaks down and producing cleaner effluent as a result. These systems generally require a power supply and are suited to more environmentally sensitive areas, or where the effluent may be discharged into a watercourse.

Where discharging to a watercourse the effluent can be passed through a reed bed, which acts as a further filtering system so that the effluent is then safe to pass into the water.

Older septic tanks will be made out of brick, or blocks. Modern tanks will be of reinforced, pre-formed fibreglass.

### What is a Cess Pool?

Cess pools/pits are underground tanks, which hold the sewage until being emptied; there is no outlet. They may be made out of brick, blocks, steel, or glass fibre and must have a minimum capacity of 18,000 litres. Cesspools should be sited as far away from the house that they serve as possible.

### What maintenance may be required?

It is important that cesspools are emptied regularly, as they can overflow or leak, which is an offence under the 1936 Public Health Act and if it pollutes a water course, ground waters or the land the Environment Agency can prosecute as well, leading to significant fines and even imprisonment.

A septic tank or treatment plant should be pumped out annually.

If a leak or overflow is discovered, a drainage engineer should be called immediately to clear the waste and to fix the tank.

A specialist contractor should be employed to deal with any problem arising in a treatment plant and in the first instance it would be prudent to contact the manufacturer or the company that installed the tank, if known.

### Do I need any special permissions or consents?

Under the Water Resources Act 1991, as amended by the Environment Act 1995, any discharge to water, inland waters, tidal waters, or land (subject to specific exceptions) requires a Consent to Discharge, for which application is made to the Environment Agency. The Agency has stated that this requirement applies retrospectively to existing septic tanks, as well as proposed installations and to discharge otherwise is an offence.

There are many, many old tanks that work perfectly well, but for which Consent to Discharge will not have been obtained, having been installed before the current legislation came into force. Most will benefit from the exceptions mentioned below, but should the situation arise where it is not exempt we would discuss your options with you at that time.

The installation of a new septic tank, cess pool, or treatment plant will be subject to Building Regulations, to which end you should consult your local authority Building Control department before commencing the installation; however a reputable manufacturer/installer will be able to guide you through this process and application for Consent to Discharge, if needed.



### What are the exceptions when consent is not required?

You will not need consent to discharge, if:

- It is not into a Groundwater Protection Zone
- It has a volume of less than 2 cubic metres per day
- The installation was designed and installed to the standards applicable at the date of installation
- It is properly maintained

### Handy Hints

You should check the level in a cesspool regularly; never let it overflow. It should be emptied at regular intervals.

Avoid using large quantities of household detergents or bleaches, as these chemicals can inhibit or prevent the natural biological processes that break down the waste matter.

Do not flush nappies, or similar items into the tank or treatment plant, as these can block the outlet and in a treatment plant also damage any pump installed.

Surface water drains or storm drains should not be connected, as these will overload the systems.

Always follow the manufacturer's instructions.

This guide is only intended as an overview of non-mains drainage systems. More detailed guidance can be obtained from your local authority and the Environment Agency.

**For more information and to speak to a member of our Residential Property Division call mfg Solicitors LLP on **0845 55 55 321**.**

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