

YOUR GUIDE TO  
**SEPTIC TANKS**  
and  
PRIVATE SEWAGE SYSTEMS

Let's keep  
our river healthy

**River Char Community Project**

**River Char Community Project**  
**Clean, Revive, Restore**



This guide has been adapted, with thanks, from one produced by the *Conserving Coniston & Crake* project.

## PRIVATE SEWAGE TREATMENT SYSTEMS

Anyone within the River Char catchment not on mains sewage will have their own system, either a septic tank, a package sewage plant or a cesspit.

It's not just your toilets that flush into a septic tank; water from your sink, shower, washing machine and dishwasher all drain into it too.

Private sewage systems are designed to take sewage and dirty water from your house and treat it before it goes into the environment. Bacteria break down the sewage -- then the liquids drain to a field or soakaway or even a stream/river (subject to certain conditions). Solids are eventually removed by a licensed contractor, who will take the contents to an official sewage disposal site.

### Your sewage can end up in our river!

These systems should not normally damage the environment or pollute the River Char. If they are properly looked after, they will last for years. All systems need to be checked and emptied regularly - preferably every year and at least every two years to keep them working properly. Poor maintenance can cause blockages and leaks, which can give off very unpleasant smells and add raw sewage directly into the river.



You have a legal and social responsibility to keep your system in good order. The Environment Agency can prosecute if your tank causes a pollution incident.

There are hundreds of private systems dotted around the Char Valley. We want to make sure that they are working properly, with as little sewage and nutrient pollution as possible ending up in our river.

A healthy, clean river with abundant and varied wildlife is a wonderful resource for us all.

We want a river free from pollution and safe to play in. We want to see wildlife thrive and we want people to be able to paddle or swim in it without worrying about the cleanliness of the water or getting ill.

## NUTRIENT POLLUTANTS AND WATER

The main nutrient pollutant is phosphate which is found in cleaning products, fertilisers, animal excrement and our own sewage. Some phosphates are removed from waste water at larger sewage treatment works, but smaller works or domestic sewage systems don't have this facility. Phosphate removal from the settled solids can only be done at official sewage disposal sites.

Phosphates pollute water, leading to excessive algae which favour some invasive plants and change the natural balance in the river.

When algal blooms die back, oxygen is stripped from the water by the organisms that break them down. The decaying invasive plant matter leads to a decline in fish numbers and a decline in the numbers of birds and animals that rely on fish for food.



# TYPES OF SEWAGE TREATMENT SYSTEMS

## SEPTIC TANK

A septic tank is usually made up of two chambers and is buried underground. They can be built from brick, fibreglass or plastic.

The tank holds the sewage, so the solids will either fall to the bottom or float to the top. Bacteria in the tank help with decomposition of solids. The liquid drains through a pipe into a soakaway system or drainage field. This drainage is important as it removes any remaining pollutants before the liquid reaches groundwater. The solids build up and it is these that need removing.

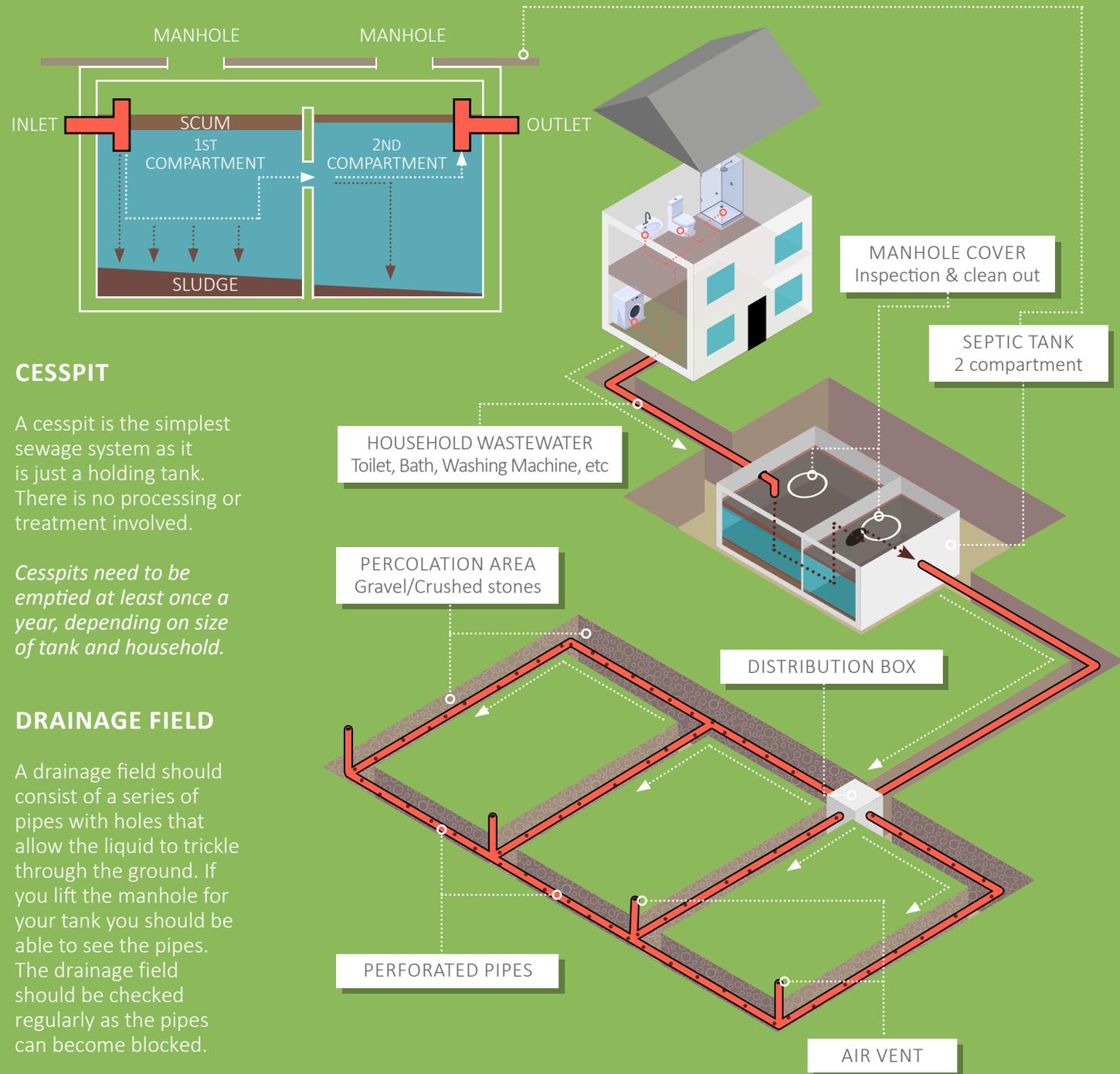
*Septic tanks should be emptied at least every two years - and preferably every year - depending on the size of the tank and household.*

## PACKAGE SEWAGE TREATMENT PLANT

A package sewage treatment plant is more advanced than an ordinary septic tank- it's like a mini version of a Utility Company-run sewage works.

This type of plant usually needs an electric supply and will have a larger cover above ground. The sewage is biologically treated within the system. Bacteria break down the sewage, resulting in a treated liquid that can be released straight into a watercourse (subject to certain conditions and/or permits) A drainage field is not normally required so suits properties with limited outdoor space.

*Package sewage treatment plants should be serviced annually and emptied at least every two years.*



## CESSPIT

A cesspit is the simplest sewage system as it is just a holding tank. There is no processing or treatment involved.

*Cesspits need to be emptied at least once a year, depending on size of tank and household.*

## DRAINAGE FIELD

A drainage field should consist of a series of pipes with holes that allow the liquid to trickle through the ground. If you lift the manhole for your tank you should be able to see the pipes. The drainage field should be checked regularly as the pipes can become blocked.

# SEWAGE SYSTEMS ETIQUETTE

**What goes into your system will make a difference to how well it works.**

## WASH & CLEAN WISELY!

Bacteria in the tanks help break down the waste so:

- Please only use cleaners and detergents that are suitable for septic tanks and are phosphate-free. (A wide variety of phosphate-free products are available, priced from cheap to premium.)
- Please do not use bleach and other harsh chemicals as these will kill off the working bacteria in your tank.



## BE KITCHEN SAVVY!

- Please don't pour food waste and cooking oils down your sink.
- As with toilets, please don't use harsh chemicals or bleach.

## FLUSH FRIENDLY!

Keep it simple when it comes to your toilet and

- Only flush the 3 Ps – pee, poo and (toilet) paper.
- **Never** flush cleaning wipes, wet wipes, facial wipes, cotton buds, sanitary products, nappies or condoms.



*Just some of the products to consider: Ecover, Magnum from Aldi, Bio-D, Method and Ecozone.*

## USE YOUR SENSES!

Take the time to check, maintain and empty your system regularly. It will save you money in the long run and help prevent sewage leaking into our natural environment.

Check your system regularly for issues like dark, smelly pipe discharge or slowly clearing drains. Does it smell? Look out for signs that your drainage field may be clogged up. Is the area spongy? Has it got lots of lush vegetation?

Your system should be emptied regularly by a licensed contractor, who will transport the contents to a local sewage works. *Emptying by farmers is now illegal unless they are a registered waste carrier.*

If you are not sure about how well your system is working, then ask your emptying contractor for advice – they may be able to carry out a system health check.

## ANYTHING ELSE?

1. Check your plumbing and drainage connections. Make sure that rainwater runs into the surface drain network **and NOT** into your septic tank. Water from sinks, toilets and washing machines must always go into the sewage system.

Pipe misconnections can often be found in older properties, extensions and outbuildings/garages if washing machines have been plumbed in.

- Please don't pour paints, oils and chemicals down the drains.
- If you wash your car, try to use eco-friendly cleaning materials.
- In the garden, do not use chemical fertilisers and pesticides like slug pellets and weed-killers - these can all wash off into the surface drain systems and then into our river.

## REPLACING/UPGRADING YOUR TANK

If your tank no longer meets legal requirements or is failing, then you do need to act.

A good licensed contractor should be your first call as they usually have the experience of what is wrong or needed. There are also specialist firms who can also give advice.

Like any important purchase, it pays to do your research. It may be a daunting prospect, so overleaf is a recent installation [in the Lake District] to give you some ideas

## LOCAL CASE STUDY - REPLACING AN OLD TANK

A tank shared between 5 houses (one permanent resident, others second homes/lets) and the local Village Hall. In 2018 it became apparent that the tank was not working efficiently, was too small for the number of properties it served and was not up to current standards (based on Environment Agency data).

It was a small brick septic tank with a pump chamber of some age. The liquid waste was pumped through a pipe across a stream to a filtration area situated beneath a lawn. There was also an overflow directly into the stream. However rainwater and ground water entered the tank as house gutters fed directly into it. There were many leaky joints in the underground pipes, the pump repeatedly burnt out whenever there was heavy rain and occasionally untreated waste discharged into the stream!

The homeowners and the Village Hall Committee agreed that something had to be done and began with quotes from three specialists. A BioPure Sewage Treatment System was chosen. This is basically a large plastic tank inside which waste is aerated by a pump and broken down more efficiently and quickly than in the old septic tank. The liquid waste leaving the tank is so clean that it can be discharged straight into the stream without the need for a filtration area.

Due to its location planning permission was needed (this won't always be necessary) but as Environment Agency binding rules were met a discharge permit was not required. The contractor liaised with local building control as the work needed to be certified.



A specialist drainage firm was used to fix and clean the underground pipes, treating the insides of the pipes with a special coating. This was preferable to having pipes dug up and replaced. Removal of the old tank and installation of the new system took about 2 weeks. The new tank was installed on the site of

the old tank and was cemented into place to prevent any movement in the event of flooding. The existing electricity supply was kept for the new tank and is separately metered so costs are recharged to each property. The invoice for the work was split between the properties and each property paid the supplier directly.



Installation was straightforward and the properties were only disconnected from a waste system for one night. The area was re-turfed as there was heavy rain during the installation.



One year on, the lawn looks as it did before, the new turf having bedded in well. One of the neighbours made a wooden cover for it and added small plant pot.

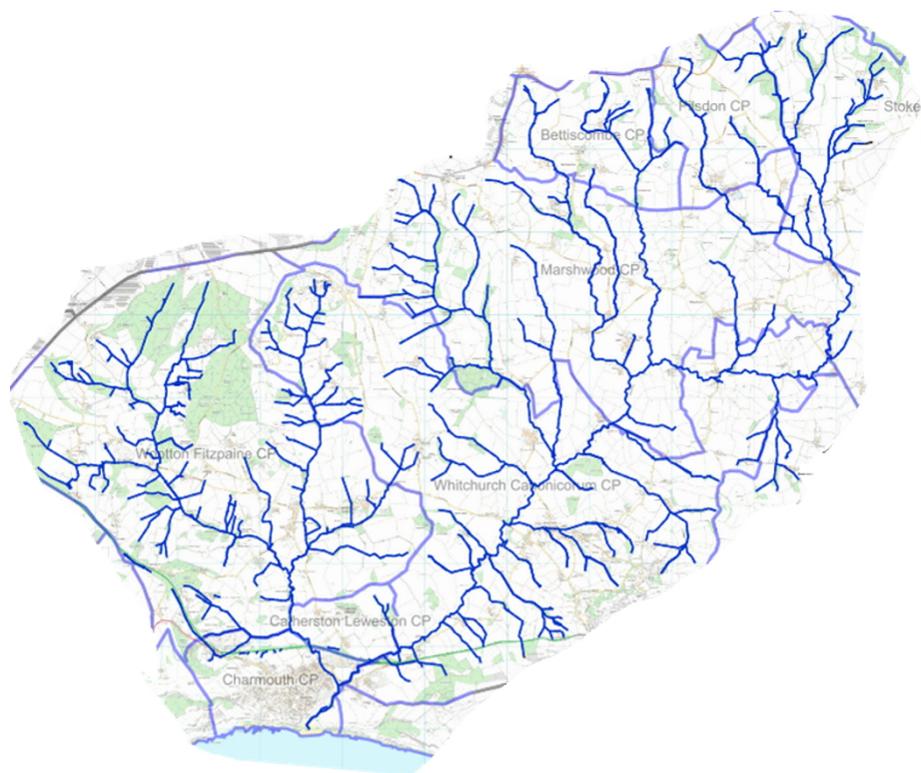
You wouldn't know it was there!

The system now meets legal requirements and is no longer at risk of polluting the stream and the main river. There is a recommended maintenance schedule for the tank which will only need to be emptied by a licensed contractor every two years.

# SEPTIC TANK GROUP EMPTYING SCHEME

The *River Char Community Project* encourages groups of neighbours to get together and co-ordinate the emptying of their septic tanks. Usually four or five tanks can be emptied in one visit resulting in savings between £20 and £50 per household.

So, talk to your neighbours before you get your tank emptied.



# SEPTIC TANK GOOD PRACTICE

- ✓ Know your tank- what type and where it is
- ✓ Get it emptied at least every two years by a licensed contractor
- ✓ If you have a drainage field look out for signs of problems- smells, lush growth
- ✓ Use phosphate-free products in your sinks, dishwashers and washing machines
- ✓ Follow the 3 Ps rule. Only flush:  
Pee  
Poo  
(Toilet) paper

## WELL-MANAGED TANKS, CLEANER WATER, HEALTHIER RIVERS AND LAKES

The *River Char Community Project* is also working with land managers and farmers across the catchment to look at ways in which they can reduce the amount of phosphate and sediment run-off, and protect watercourses on their land.

[www.charvalley.org/riverchar](http://www.charvalley.org/riverchar)

## FOR FURTHER INFORMATION:

[www.gov.uk/permits-you-need-for-septic-tanks](http://www.gov.uk/permits-you-need-for-septic-tanks)

[www.britishwater.co.uk/Publications/codes-of-practise.aspx](http://www.britishwater.co.uk/Publications/codes-of-practise.aspx)

[www.callofnature.info](http://www.callofnature.info)

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

[www.charvalley.org](http://www.charvalley.org)

## FOR POLLUTION INCIDENTS:

The Environment  
Agency Incident  
Hotline 0800 807060

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