



The Ultimate Guide To
**Installing Sewage
Treatment Plants**

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Introduction



Not every householder or business owner has the luxury of being connected to a main sewerage system.

This is often the only downside to living in the countryside or being based in a rural location.

At one point, your only options were installing a basic septic tank or cesspit. These days, septic tanks have been upgraded and full sewage treatment plants are available – and at an affordable cost.

It doesn't matter whether you're seeking a sewage option for a small family home, or a business that employs hundreds of people, there are off-the-mains solutions available.

But we're sorry to muddy the waters...

It's not quite as simple as buying either a septic tank or sewage treatment plant, installing it, and being up and running.



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There are certain criteria you must meet and complications you must consider...in order to stay on the right side of the law. Our experts are here to help.

– *Grace Groundworks.*

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The rules changed a few years ago. Due to environmental protection, there are now rules and regulations which govern which type of sewerage system you can install at your property. There are certain criteria you must meet and complications you must consider...in order to stay on the right side of the law.

But don't stress, my friend. That's exactly why our team of experts here at Grace Groundworks have created this guide for you.

We have a wealth of experience in drainage and sewage management systems, installing in Essex, Suffolk, and Hertfordshire. In this short guide, we'll walk you through everything you need to know about installing sewage treatment systems at your home or business.

Sound good? Let's dive in.



Part I

A Straightforward Guide To Installing A Sewage Treatment Plant At Your Home Or Business



If you're considering installing a sewage treatment system at your home or business, a septic tank or sewage treatment plant are the two main options available – depending on your property, needs, and budget.

In this section, we'll cover the basics of both so that you have a clear understanding of how they both work.

What Is A Septic Tank?

A septic tank collects and treats wastewater at a property that is not connected to the mains sewerage system. This is why they are most commonly installed at properties in rural areas.



Installed underground, the tanks contain bacteria which break down organic waste.

A septic tank contains two compartments and receives wastewater from a property's inlet pipe.

How A Septic Tank Works

Step 1: Wastewater enters the first compartment.

Step 2: As a result of the bacterial breakdown process, the wastewater separates over time. Solids fall to the bottom, while a layer of scum rises to the top, which includes oils and greases. This leaves a middle section of relatively clear water.

Step 3: The separated wastewater enters the second compartment and then exits through an outlet pipe into a septic drain field.

Step 4: The solids and scum in the tank are broken down by the naturally occurring bacteria. What is left over should be professionally removed, ideally once a year.

What Is A Sewage Treatment Plant?

A sewage treatment plant is different from a septic tank in both the way that it operates – and the effluent it produces.

Equipped with an additional chamber, a sewage treatment plant produces clean, non-pollution effluent at source. This can then be discharged directly to a stream, ditch, or to a soakaway for dispersal into soil.

Sewerage treatment plants also come in all sizes, ranging for small domestic systems for a family of four up to large scale sewerage installations for businesses of hundreds or even thousands of people.



Installation Costs

A septic tank/sewage treatment plant is a cost-effective option for wastewater treatment at your home or business, but the price of buying and installing one can vary depending on several factors.

One of these factors is the size of the tank, which is determined by the size of the house and the number of occupants. Generally, the larger the tank, the higher the cost.

Another factor is the make and model of the tank, which can have different features and specifications. A septic tank is usually cheaper than an electric sewage treatment plant to buy, but it may require more maintenance in the long run.

The installation cost of a septic tank/sewage treatment plant is separate from the purchase cost, and it depends on the excavation work, landscaping, and access to the property. These aspects can vary widely depending on the site conditions and the local regulations.

To get an accurate estimate of how much a septic tank/sewage treatment plant would cost for your home or business, we recommend that you contact us today and arrange a free site visit. We will assess your needs and preferences, and then prepare a no-obligation quote for you.





Part II

Septic Tank Or Sewage Treatment Plant? How To Make The Choice That's Right For You



If your home or business isn't connected to a main sewer, the sewage you produce has to be treated on-site using a septic tank or sewage treatment plant. This includes waste from toilets, sinks, baths, showers, washing machine and dishwasher.

There are pros and cons to both septic tanks and sewage treatment plants. Let's compare the features and benefits so that you can make the choice that's right for you.

Septic Tanks

As explained previously, septic tanks are able to treat and discharge the liquid part of the sewage. This liquid effluent flows out of the tank and discharges to land. While some of the leftover 'sludge' is broken down by natural bacteria, the rest will need to be taken away by lorry periodically.



Most suitable for: A single house or a small development. A drainage field is required to allow the liquid effluent to be discharged. The land must also be porous enough for this process, which can be determined by a ground percolation test.

Pros: Fairly low installation and running costs. Septic tanks only require emptying once or twice a year.

Cons: May not be suitable if your ground is not porous enough to allow the waste to percolate. New laws, which came into force in 2020, have banned septic tanks from being discharged into a watercourse.

Maintenance: Natural bacteria present within septic tanks are essential for the waste breakdown process, however this bacteria can be diminished by harsh chemicals in today's wastewater. Therefore, septic tank treatments are often used to help keep the bacteria healthy, and ultimately lower your septic tank's running costs.

Sewage Treatment Plants

Sewage treatment plants are fast becoming the preferred option for off-system homes, farms, and businesses. There are small-scale affordable domestic units, as well as larger scale commercial units available.

While septic tanks operate without a power supply, sewage treatment plants require ongoing electricity to operate due to their mechanical components.

Most suitable for: Everything from small homes right up to large business premises. A sewage treatment plant is the only option if you want to discharge your treated waste to a ditch or stream.



Pros: Provides treatment of the waste, rather than just separating it.

Affordable options catering to a single household, but can also support businesses with hundreds or thousands of employees.

Sewage is treated to a higher standard so that it has a minimal negative impact on the environment.

Cons: Electricity supply is required (although this is not at a huge expense).

While the level of solid matter is greatly reduced, a lorry is still required for disposal.

Maintenance: With more compartments and various different parts than septic tanks, sewage treatment plants require more maintenance.

Overall Considerations

The main difference between the two worth noting is that a sewage treatment plant provides treatment of the waste, whereas a septic tank simply separates it.

This means that a sewage treatment plant produces cleaner wastewater which can be discharged straight to a local watercourse. This provides much more flexibility for home and business owners.

Many properties in the UK currently still have a septic tank that discharges to a local watercourse, rather than a drainage field or soakaway.

However, this is no longer legal and will require modification or replacement to stay on the right side of the law.



Part III

How To Avoid Falling Foul Of The Regulations



The rules and regulations for owners of septic tanks and sewage treatment plants are not straightforward, but in this section we'll simplify the complicated stuff as best as we can for you.

There are laws in place to make sure that drainage systems operate as they should do, and reduce the risk of the environment being polluted.

Not adhering to these regulations will not only have a potential negative impact on the environment, but you could also end up in trouble with the Environment Agency or your local council.

Their inspectors have the power to test any off mains drainage system they believe might be causing a problem – and can take action against you if they find any issues.



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Septic tanks should only discharge to a drainage field... discharges to a watercourse or ditch are no longer permitted for environmental reasons.

– *Grace Groundworks.*

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Septic Tank Regulations

Septic tanks are required to be at least seven metres away from any habitable parts of the building. The rules state that they should also be located within 30 metres of an access point so that the tank can be emptied without any problems.

Traditionally, most septic tanks will either drain into a local watercourse or ditch, a drainage field, or a soakaway system. This is all changed from January 1st, 2020.

The General Binding Rules for Small Sewage Discharges state that septic tanks should only discharge to a drainage field, and that discharges to a watercourse or ditch are no longer permitted for environmental reasons.

If you currently have a septic tank, you have three options to comply with the law:

#1 Connect to a mains sewer, if possible.



#2 Install a drainage field so that the septic tank can discharge its effluent to the ground instead.

#3 Replace your septic tank with a small sewage treatment plant.

The guidance states: "If you are buying or selling a property with a septic tank that discharges directly to a watercourse, you should agree with the buyer or seller who will be responsible for the replacement or upgrade of the existing treatment system. You should agree this as a condition of sale."

Rules on Drainage Fields

A drainage field is a perforated or slotted network of pipes which provide secondary treatment of the waste.

The drainage field should be at least 10 metres away from a watercourse, at least 15 metres from any building, and at least 50 metres from a water supply.

Drainage fields should also not be situated next to any access roads, driveways, or paved areas.

There are further rules and regulations in place around off mains drainage and all aspects of an installation – from the type of tank that is appropriate for a property through to exactly what kind of ground conditions are required.

This is why it's crucial to seek out experts, like our team at Grace Groundworks, to ensure that any septic tank installation is compliant with all regulations.

Failure to comply could result in the installation not being approved by the local council – or you could potentially risk prosecution.



Part IV

Insurance Claims: Your Questions Answered



Most householders and business owners are shocked to discover that damaged septic tanks, soakaways, and sewage treatment plants are covered by insurance policies in the majority of cases.

There is often confusion due to the complicated jargon included in insurance policy documents, but customers with most insurance companies can successfully claim on their buildings insurance where damage to the existing sewage system resulted in replacement or repair work being required.

In order for work to be insurable then it must be caused by accidental damage due to an unforeseen external event not caused by the policyholder.

Care must also be taken to ensure that this coverage plan is defined as the standard part of the policy, not just an add-on.



The most common successful claims are for:

- Cracked or bending tanks.
- Damaged and/or collapsing baffles, particularly on spherical septic tanks.
- Water ingress through a split or crack.
- Missing tee pipes.
- Tanks that have popped out of the ground.
- Root damage to tanks.

In some cases, claims can be escalated if minor damage has resulted in a major problem.

What To Do In The Event Of Damage

In all cases, it is strongly advised that you do not contact your insurance company directly – as most people invalidate their claim by saying the wrong thing.

A better option would be hiring a reputable drainage claims management agency. They are the experts in these types of cases and can cut through all the complicated jargon and barriers you often face when making complex insurance claims.

These claims management agencies will ensure you provide all the relevant details, will ensure your claim is correctly registered, and will negotiate a settlement when your problems have been fixed.



Get In Touch...

We hope that this guide has been useful in answering the questions you have around sewage storage and treatment options at your home or business.

Both septic tanks and sewage treatment plants can be the perfect solution if you are in a remote location where you cannot connect to the main drains.

And while a sewage treatment plant does require electricity, it's a very efficient system and has low running costs. This option is also better for the environment.

But please remember there are strict rules and regulations around septic tanks and sewage treatment plant installations. It's important to turn to a team of professionals to handle this tricky process, ensuring that the system is correctly installed and reducing any costly legal risks.

This is where Grace Groundworks comes in. Our expert team of staff are here for all your septic tank/sewage treatment plant installation needs.

*** If you'd like to chat with us about a septic tank or sewage treatment plant installation, please get in touch by calling 01206 581145, or by emailing info@gracegroundworks.com**

