



## **Guidance for the registration of small sewage effluent discharges**

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## Executive summary

### A quick guide to registration

You need to register your sewage discharge with us:

- If it is 5 cubic metres per day or less and is to surface water. This is roughly equivalent to the sewage generated from 33 occupants in a single property.
- If it is 2 cubic metres per day or less and is to ground. This is roughly equivalent to the sewage generated from 13 occupants in a single property.

Discharges from sewage treatment systems that started before 6 April 2010 are designated as **existing discharges** and must meet design standards at the time of installation.

Discharges from sewage treatment systems that started since 6 April 2010 are classed as **new discharges** and must meet specific British Standards. Your installer will be able to help you confirm this.

For **new discharges**, if your discharge is within 30 metres of a public sewer, you should connect to that. If there are more than one premises then the distance within which you should connect to public sewer is calculated by multiplying 30 metres by the number of premises.

Both existing and new discharges will either be:

- to surface water via a package sewage treatment plant (PTP).
- or to the ground via a septic tank / PTP and infiltration system / drainage field;

The discharge must only be domestic sewage arising from normal domestic activities (see [Appendix A](#) if you are not sure). Always take extra care with what goes down the plughole or is flushed away. See the [British Water guides](#) for further information.

We cannot register discharges that are too close to sensitive receptors and so you may need to apply for an environmental permit. If the environmental risks are too great we may not be able to issue a permit. Register as normal and we will check this for you and let you know if you have to do anything more.

The criteria for **discharges to surface waters** include the requirement to be treated first by a package sewage treatment plant (a PTP).

**Discharges to ground** must be via a septic tank and infiltration system / drainage field (a soakaway) and sometimes a PTP.

It is very important that septic tanks and PTPs are kept in good working order by their owners. The system should not cause pollution.

### Once you have your registration you must ensure:

- that new systems have been properly installed;
- maintenance is undertaken by someone who is competent and you should have a maintenance plan;
- desludging must only be carried out by an authorised person;
- clean roof or surface water does not enter the system;
- chemicals and solvents do not enter the system (see the British Water Codes of Practice); and
- you should keep any paperwork and receipts provided by service engineers, tank emptiers, etc. for at least five years.

### Moving house?

When a new occupier takes over the property and hence registration, they will not need to re-register but you will need to provide to them in writing or leave these details with your landlord:

- notice that the discharge has to continue to comply with the criteria for registration;
- a description of the system and any manuals you may have; and
- records / receipts of any servicing and desludging.

### No longer need your tank or PTP?

If in the future you connect to public sewer then all you need to do is phone up and tell us. Any old system should be decommissioned and sealed off.

More details are given in this guidance.

Or give us a call 0300 065 3000 (Mon-Fri, 8am - 6pm)

### How to register

For details on how to register please see our web site:

<https://naturalresources.wales/apply-for-a-permit/water-discharges/?lang=en>

# 1 Introduction

## 1.1 What is this guidance for?

This guidance explains in more detail the criteria for registration. It also contains design, construction, siting, installation and maintenance requirements. Discharges that are too close to environmentally sensitive sites cannot be registered as exempt. The distances that we use to protect environmentally sensitive sites are given in this guidance.

The guidance also refers to British Standards and recognised industry Codes of Practice. These documents will help you to operate and maintain your sewage treatment system in accordance with the guidance and regulations.

This guidance complements Schedule 3, Part 2 and 3 of the Environmental Permitting (England and Wales) Regulations 2016 (EPR) for registration of exempt water discharge and groundwater activities, relating to small discharges of treated sewage effluent.

## 1.2 Who is this guidance for?

This guidance is for people in Wales who need to register a discharge of domestic sewage effluent from a septic tank or package sewage treatment plant (PTP).

This guidance also applies to manufacturers, installers, maintenance engineers and others involved in the design, construction, siting, installation and maintenance of sewage treatment systems serving households and small communities in Wales. It will also be relevant to those who operate and manage septic tanks and sewage treatment plants.

## 1.3 Background

### 1.3.1 What is registration?

Free, 'one-off' registration is one of the simplest methods of regulation available to us. It is the least burdensome on applicants and to us as regulators following changes brought about by the implementation of the Environmental Permitting (England and Wales) Regulations 2010 (EPR) on the 6 April 2010. If you meet all the criteria as outlined in this document and agree to uphold these criteria then you can register your discharge as exempt from the need for an environmental permit under EPR.

The introduction of EPR changed the rules regarding discharges of domestic sewage effluent from small septic tanks and sewage treatment plants. Under EPR these are referred to as small sewage effluent discharges and are limited by volume (see Section 2.2).

Most small sewage discharges can simply be registered as exempt from the need for an environmental permit (formerly a consent to discharge under the Water Resources Act, 1991).

### 1.3.2 Why is a registration scheme needed?

Some form of control over discharges of sewage effluent is required, and in Wales, EPR is the mechanism to achieve this.

The Government has given us a duty to protect and manage water resources and we have robust evidence that septic tanks can in some circumstances cause pollution. For example, septic tanks can interfere with drinking water supplies and can harm the ecology of some rivers, wetlands and groundwater dependent terrestrial ecosystems. Pollution can occur via

pathogens, nitrate, ammonia, pesticides, pharmaceuticals and phosphate. Pollution can also arise if disposal systems are incorrectly installed, poorly maintained or badly sited. A properly designed, used and maintained sewage treatment system can be very effective at attenuating potential pollutants. We also have to consider the cumulative risk of pollution from groups of discharges, which can be significant.

To fulfil our role we need to know where discharges are so we can identify the risk and can take appropriate action. Most householders who have a properly maintained system will just need to register. The law does not necessarily require householders to install new systems or incur financial burden; just to register their discharge and agree to some general criteria for upkeep, maintenance and correct usage.

### 1.3.3 Who needs to register?

An occupier of land where a small sewage discharge activity is in operation (usually the householder or occupier<sup>1</sup>, who wishes to register the discharge as exempt should give us the details of the discharge.

In some cases the septic tank or treatment plant and/or discharge point will be sited on land that is separate from the property that the sewage comes from. In these cases we regard the occupier as being the person occupying the property where the sewage comes from. If the discharge includes sewage from more than one property, the discharge only needs to be registered once; any of the householders can register the discharge. If the treatment system is sited at one of these properties, this would be the most suitable one to register.

### 1.3.4 What is a small sewage discharge?

Some homes are not connected to a public sewer because they are too far away. Instead, they may use a septic tank or package sewage treatment plant to deal with their domestic sewage. The discharge from a septic tank goes into the ground via an infiltration system / drainage field (sometimes referred to as a soakaway). The discharge from a sewage package treatment plant may either go to ground or into surface water. The maximum size of sewage system that can be registered is:

- The maximum volume of a discharge of sewage effluent from a septic tank into ground through an infiltration system / drainage field must be 2 cubic metres per day or less; or
- The maximum volume of a discharge of sewage effluent from a package sewage treatment plant to inland freshwaters, coastal waters, or relevant territorial waters must be 5 cubic metres per day or less.

### 1.3.5 New and existing discharges

You will need to know whether your discharge is classed as existing or new.

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<sup>1</sup> It is the responsibility of the occupier to register, not the landlord.

### 1.3.5.1 What is an existing discharge?

If the discharge was already being made before 6 April 2010 it is an **existing discharge**. If you have upgraded or replaced your treatment system<sup>2</sup> (or are planning to do so) but still make the discharge to the same place, then this is still an existing discharge.

Registration of an existing discharge is conditional on them being operated and maintained properly in order to avoid pollution.

### 1.3.5.2 What is a new discharge?

All discharges made on or after 6 April 2010 are **new discharges**. If you have an existing system but plan to change or have changed the point of discharge since 6 April 2010, then this should be treated as a new discharge. All new discharges must meet the full installation and operating criteria set out in this technical guidance.

### 1.3.8 What if I already have a permit?

If you have previously been issued a 'consent to discharge' under the Water Resources Act (1991) or 'environmental permit' for your discharge then you do not need to do anything because they have been automatically changed to registrations. We have placed the details of these discharges on the register for you.

You just need to continue to make sure your system is operated and maintained properly in accordance with the criteria given in this document. But if the place to which your discharge changes then you will need to re-register, as it will be classed as a new discharge

If you are not sure whether or not you need to register, please contact us on 0300 065 3000 (Mon - Fri 8am - 6pm).

### 1.3.9 When do I have to register by?

Table 1 shows the timescales for registration of new and existing discharges to surface water and ground.

<b>Table 1 Timescales for registration of small sewage discharges as exempt Discharge</b>	<b>Registration date</b>
Discharge to surface water from a package sewage treatment plant of 5 cubic metres per day or less	From 6 April 2010
Discharge to ground from a septic tank or sewage treatment plant or package sewage treatment plant of 2 cubic metres per day or less	By 1 January 2012

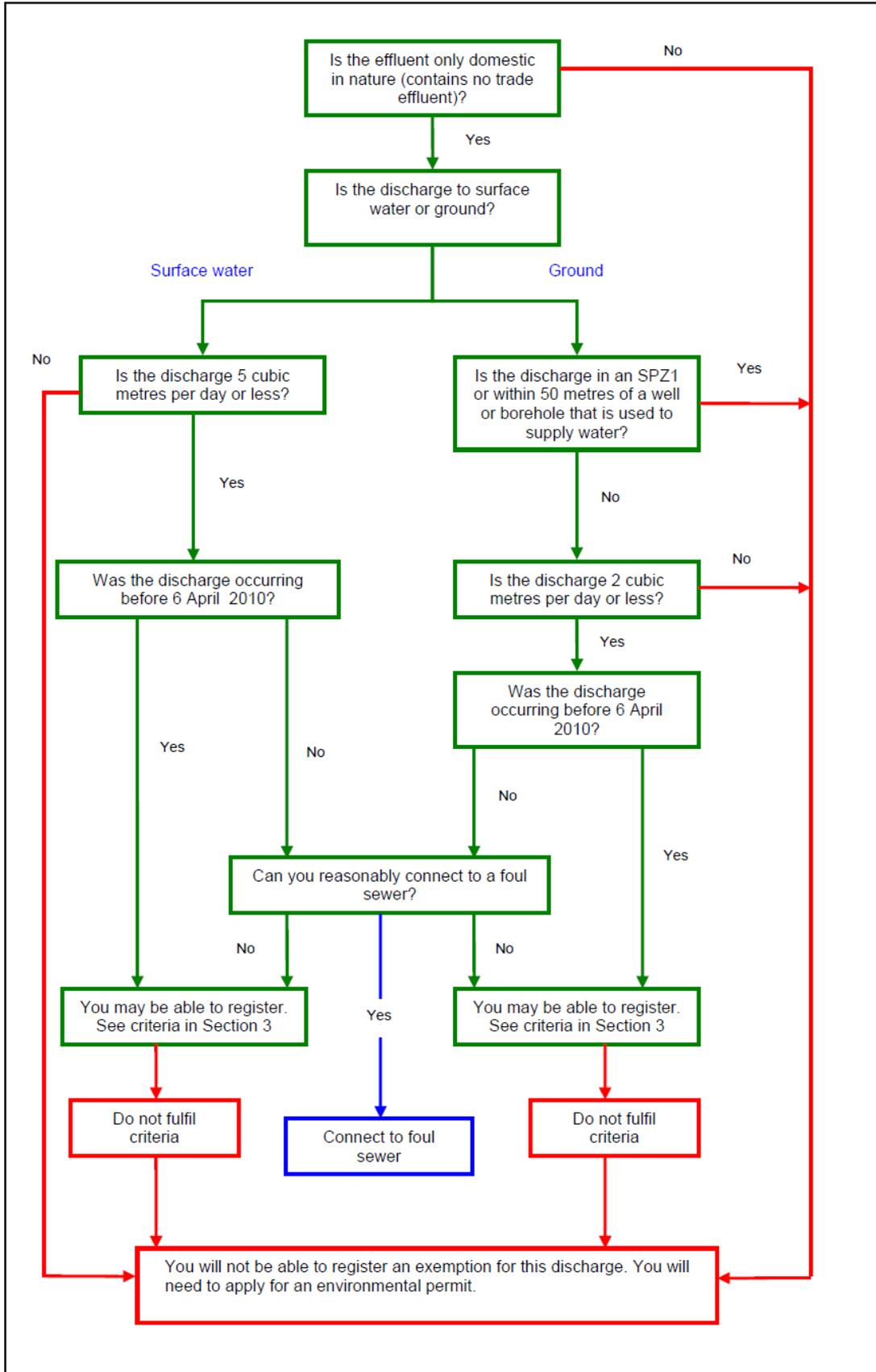
### 1.3.10 Can I register?

The flowchart (Figure A) will show you whether or not your discharge can be registered. This flowchart gives the basic criteria for registration. If you meet these criteria then you should continue to read this document to see if you can fulfil all of the criteria of registration.

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<sup>2</sup> If you are installing a different septic tank or treatment plant, you should make sure it meets the current British Standard for design, construction and installation as set out in this guidance.

Those making discharges that cannot meet the criteria in this guidance, including the minimum distances from sensitive sites (we check this for you following your registration) will not be able to register and will be required to apply for an environmental permit.



**Figure A. Eligibility for registration**

## 1.4 How to use this guidance

**Section 1** includes important definitions and information that you will need to know before you register.

**Section 2** gives a technical overview of requirements for registration and includes information on how to estimate the volume of the discharge. This Section mainly aimed at installers but you may find the information useful.

**Section 3** gives the full criteria for the registration of your small sewage discharge with supporting further information.

**Section 4** provides an outline of your obligations following registration.

A list of simple definitions are provided in the glossary.

**Appendix A** provides revised interpretations of what is classed as domestic sewage.

## 1.5 Further Reading

### 1.5.1 Application of industry agreed Codes of Practice

The UK septic tank and sewage treatment plant manufactureres and installers have produced a range of industry Codes of Practice, which have been recognised by Government and UK environmental and other regulators as industry best practice.

These codes have provided practical advice and guidance with regard to the installation, management and maintainence of sewage treatment units and are complimentary to the manufacturer's operational instructions. Where these Codes of Practice are issued, they must be followed in conjunction with any manufactuerers instructions.

These Codes of Practice are available to download from British Water's website: <http://www.britishwater.co.uk> (see publicaions: Codes of Practice and Technical Guides)

The codes currently include:

- A guide for users of sewage treatment systems
- Flows and Loads 4 – Sizing criteria and treatment capacity for sewage treatment systems
- Guide to the installation of sewage treatment systems
- Guide to the desludging of sewage treatment systems
- A guide to the maintenance requirements for sewage treatment systems (under development).

If an occupier can demonstrate that they have followed the Codes of Practice, this will be considered as a contribution to compliance with the registered exemption. To avoid any confusion, manufacturer's specific instruction, where available, will take precedence over any Codes of Practice.

### **1.5.2 Natural Resources Wales Guidance**

More information on discharges to surface water and ground water can be found in our H1 environmental risk assessment guidance.

You really only need to read this if you are applying for a bespoke environmental permit but some of the information provides useful background.

## 2 Technical background

### 2.1 Type of discharge

Discharges of sewage effluent to **surface water** must be treated by a package sewage treatment plant.

Discharges of sewage effluent into **ground**, through an infiltration system / drainage field, must be treated by either a septic tank or package sewage treatment plant. The type of treatment system will depend upon the suitability of the site and the need to protect sensitive environmental features.

Further treatment (such as a reed bed) is also available.

### 2.2 How to calculate your daily discharge flow

Daily flow is calculated using the method in British Water publication Flows and Loads 4. It is based on an assumed minimum population for a household. A total population is calculated and multiplied by the standard consumption of 0.150 cubic metres per day per person.

A 3 bedroom house has a minimum assumed population of 5. For each addition of a bedroom an additional person is added:

3 bedroom house = 5 people

4 bedroom house = 6 people

5 bedroom house = 7 people

For small 1 and 2 bedroom houses or flats the minimum assumed population is calculated using the following:

1 bedroom property = 3 people

2 bedroom property = 4 people

#### **Example – one house connected to a treatment system**

4 bedroom house flow =  $6 \times 0.15$  cubic metres per person = 0.9 cubic metres per day

#### **Example – more than one house connected to a treatment system**

For a group of 2 houses of 3 and 4 bedrooms the number of people is  $5+6 = 11$

Daily flow =  $11 \times 0.15$  Cubic metres per person = 1.65 cubic metres per day

Please refer to Flows and Loads 4 for further information.

Alternative ways of calculating design capacity and maximum daily volume may be possible for particular types of discharge but cannot be used for registration of an activity as exempt. These will require an application for an environmental permit.

If you are unsure please contact us on 0300 065 3000 (Mon-Fri 8am - 6pm).

## 2.3 Additional information for new discharges

If you want to register an **existing** discharge please go the [Section 3](#).

### 2.3.1 Planning the location of a discharge

Before installing a new sewage treatment system, you must contact the local planning authority to establish whether the siting and installation of the treatment system and/or discharge needs additional planning or building controls. The local planning authority may require supporting information or site assessment (known as a Foul Drainage Assessment) in accordance with DETR Circular 03/99, (WO Circular 10/99). This helps the local authority to consider environmental, and other planning and building matters.

The [DETR Circular and Building Regulations guidance](#) requires an adequate system of drainage to carry sewage and foul water from appliances within the building to one of the following, listed in order of preference:

- public sewer;
- a private sewer connecting with a public sewer;
- either a sewage treatment plant or septic tank, with a discharge to a properly designed drainage field or discharging to surface waters as appropriate; or
- or a cesspool or cesspit where no other option is available.

You should also refer to the guidance: [Treatment and disposal of sewage where no foul sewer is available: GPP4](#)

The local planning authority may ask applicants to consider the different connection options. Only where it can be demonstrated that the cost, practicability or sustainability preclude connection to the public foul sewer will alternative non-mains drainage, including discharges to surface water or discharges to an infiltration system / drainage field, generally be considered acceptable.

### 2.3.2 Siting and installation controls

Small sewage discharges must not interfere with sensitive environmental, groundwater or nature conservation interests. Registration of these discharges is only possible where the operation of the discharge is not considered to pose a risk of pollution to these sensitive receptors.

### 2.3.3 Design and manufacturing standards

Many package sewage treatment plants and septic tanks available within the England and Wales market are designed, manufactured and pre-constructed as modular units in accordance with British or European design standards.

The current design and construction British Standard (BSEN12566) incorporates the minimum European requirements for package treatment plants and septic tanks for up to 50 persons.

Those systems compliant with BSEN12566 have undergone extensive design, construction and / or performance testing according to British Standard requirements and are considered to be suitable for registration. Your installer will be able to help you with this or refer to any documents you should have.

Other treatment systems that are not designed or constructed to the relevant British Standard may still be available for use in Wales. However, these discharges cannot be registered as an exempt. Their use will be subject to an application for an environmental permit and the applicant will need to demonstrate that the proposed system can operate to an equivalent level of performance to those tested under the British Standard.

You should obtain confirmation of the sewage treatment system's design and construction standards from the manufacturer or their literature.

The relevant parts of the British Standard are also available from British Standard distributors or may be available from the plant manufacturers.

A list of package sewage treatment system manufacturers that may have undertaken testing of their units to BSEN12566 standards are held by the UK manufacturer's trade association (British Water). You can contact them at [www.britishwater.co.uk](http://www.britishwater.co.uk)

### **2.3.4 Installing septic tanks, sewage treatment plants and drainage fields**

The incorrect installation of sewage treatment equipment may result in inefficient operation of the system or cause pollution.

Manufacturers should provide clear installation instructions when they supply the equipment. Often the warranty supplied with the unit requires the system to be installed by a competent installation engineer.

You should follow the industry Codes of Practice for the installation of small sewage treatment systems including septic tanks and package sewage treatment plants and any local authority building regulations requirements.

## **3 Criteria for registration**

In this section you will find the criteria for registration of the discharge. Each criterion is in a box followed by a description of what it means. Some criteria apply to both new and existing discharges and some will apply to discharges to ground and surface water. This is made clear within each box.

### **3.1 Criteria for small sewage discharges**

The following criteria apply to all discharges.

If your discharge is to surface water you will also need to read Section 3.2

If your discharge is to ground you will also need to read Section 3.3

### **3.1.1 Maximum daily volumes For discharges to ground: New and Existing discharges**

The maximum volume of a discharge of sewage effluent from a septic tank or package sewage treatment plant into ground through an infiltration system / drainage field must be 2 cubic metres per day or less

### **For discharges to surface waters: New and Existing discharges**

The maximum volume of a discharge of sewage effluent from a package sewage treatment plant to inland freshwaters, coastal waters, or relevant territorial waters must be 5 cubic metres per day or less

See how to estimate the discharge in [Table 2](#).

### **3.1.2 Defining a domestic discharge**

**For discharges to ground and surface waters: New and Existing discharges**

**For registration, sewage must only be domestic in nature and contain no trade effluent**

The new system has made us look again at our definition of 'domestic sewage' and change to the one based on the Urban Waste Water Treatment Directive (UWWTD) definition, the Water Industry Act 1991 (WIA) and case law.

In this guidance, **domestic sewage** means sewage effluent from residential properties and services that originates predominantly from the human metabolism and from household activities. Domestic sewage includes wastes arising from normal domestic activities wherever these are carried out. Therefore, sewage from for example, residential homes, Bed and Breakfasts, restaurants, takeaways and nursing homes is domestic.

Determining whether a discharge contains **trade effluent** should not involve a detailed audit of the substances used by an applicant on a particular site. If the effluent is broadly of a domestic nature it is domestic sewage. If a significant proportion of the waste generated by a commercial enterprise is different from that found in a normal home then it becomes a mixture of domestic sewage and trade effluent. This would not be eligible for registration.

[Appendix A](#) provides further information on our revised interpretation of domestic or trade effluent.

### **3.1.3 Routine checks**

**For discharges to ground and surface waters:**

**New and Existing discharges**

The sewage treatment system must be operated and maintained:

(a) in accordance with a maintenance plan as specified within the manufacturer's maintenance instructions or other maintenance schedule adopted by the occupier,

with regard to the manufacturing industry Code of Practice: A guide for users of small wastewater treatment systems for package sewage treatment plants and septic tanks, and

(b) by persons who are competent in respect of the responsibilities to be undertaken by them in connection with the operation of the discharge

It is also important that routine checks are undertaken by the operator; the manufacturer should be able to suggest simple methods for checking correct operation.

Owners should obtain and check the manufacturers or suppliers operating instructions for maintenance schedules and frequencies or use the general industry standards identified within the Code of Practice: A guide for users of small wastewater treatment systems.

### 3.1.4 Desludging the treatment system

For discharges to ground and surface waters:      New and Existing discharges

Waste sludge removed from the sewage treatment system must be safely disposed of in an appropriate and controlled manner, using competent, authorised disposal contractors

All sewage treatment systems will require desludging by an authorised person at intervals as recommended by the manufacturer or provided within the package sewage treatment plant and septic tank manufacturers' and installers' Code of Practice.

Further details are available in the manufacturers' Code of Practice: Guide to desludging of package sewage treatment systems and septic tanks.

When you arrange for the disposal of your sewage sludge you have a legal and social obligation for its safe management, called the 'duty of care'. The duty of care requires you to take all reasonable steps to ensure the waste is correctly managed by an authorised person. The duty of care applies to all those involved in the handling of the sludge waste, from the person who produced it to the person who finally accepts it.

You should ensure that you use an authorised person to complete the sludge removal and disposal operation. The sludge removal contractor must be registered with us as a waste carrier and the material must be properly managed at a permitted waste facility or legitimate user of the material. All authorised waste carriers that are registered with us should have a proof of registration available for inspection. You can also search the public register on our website to see who is a registered waste carrier in Wales.

You should also ensure that you receive a duty of care transfer note from the sludge removal contractor, which describes the quantity of the material removed and details of the person receiving the waste. You should keep these notes for your records.

### 3.1.5 Record keeping

For discharges to ground and surface waters:      New and Existing discharges

Records demonstrating compliance with the maintenance requirements must be made and be legible; retained, for at least 5 years from the date when the records were made. You should pass on any records to the new occupier if you move house

Adequate records must be kept to demonstrate that the treatment system is being appropriately maintained. Maintenance records, which include details of servicing, desludging and any repair work that has been undertaken on the system, will be required and these must be passed to the next occupier if you vacate or sell the property.

### 3.1.6 Prevention of Pollution

For discharges to ground and surface waters:      New and Existing discharges

The discharge must not cause pollution of groundwater or surface water

A properly designed, constructed, installed, operated and maintained sewage treatment system should produce an effluent that can be safely discharged to the environment without causing pollution, damage to wildlife or harm to human health. It is an overarching condition of registering and operating an exempt discharge that it does not cause pollution.

### 3.1.7 Operating requirements

For discharges to ground and surface waters:      Existing discharges only

Existing discharges installed prior to 6 April 2010 must be designed and constructed in accordance with the relevant standards (for example, the British Standard) at the time of the initial installation. You must be able to confirm that the unit continues to operate in accordance with the manufacturer's operating instructions or relevant codes of practice that may be issued by the manufacturers through their trade association

For discharges to ground and surface waters:      New discharges only

From 6 April 2010, new or replacement units must be designed in accordance with:

BSEN 12566: 2000 Part I prefabricated units

BSEN 12566: 2007 Part IV for septic tanks assembled in situ from prefabricated units

BSEN 12566: 2005 Part III for package or site assembled domestic sewage treatment plants

Septic tanks and sewage treatment plants can be an effective and economical way of treating domestic sewage effluent from individual properties or small communities where connection to the public or other foul sewer is not possible. When designed and installed correctly, these systems will provide many years of service but they must also be properly maintained to ensure continued effective operation. To register as exempt, all works and equipment used for the treatment and discharge of sewage effluent must meet certain requirements in relation to:

- design and manufacturing standards;
- siting and installation; and
- operation and maintenance requirements.

### 3.1.8 Connection to public foul sewer

For discharges to ground and surface waters:      New discharges only

Premises with new discharges must not be within 30 metres of a public foul sewer. Where there is more than one property requiring sewerage, the distance from the public sewer that is considered reasonable to connect is calculated by multiplying 30 metres by the number of premises,

You must connect to the public foul sewer where the discharge is within a public sewered area. Registration of a new discharge is not possible where it is feasible to connect to a public foul sewer so we will not register a discharge if the property is within 30 metres of a public foul sewer. The distance increases proportionately where there are a number of premises requiring foul drainage.

We would normally consider that the point from which the distance to the foul sewer is measured is the point at which the drain leaves the building that it serves.

If you are in a sewered area and cannot register, but still want to discharge, you may apply for an environmental permit. You should note that we would normally only grant a permit where you can clearly demonstrate there are overall benefits for sustainability, there will be no environmental impact, and it is not feasible to connect to a public or other private foul sewer due to the cost and / or practicability.

For new applications for discharges, please also refer to: [Treatment and disposal of sewage where no foul sewer is available: PPG4](#)

### 3.1.8.1 How do I know if I am in a sewered area?

You should ask the local sewerage undertaker (normally the local water company) whether a suitable connection can be made to the foul sewer. Where the proposal is close to an existing public sewer, connection to the sewer is likely to be the most sustainable and cost effective option and the option most likely to be required by the local authority through planning and building control functions.

### 3.1.8.2 Existing systems in a sewered area

Existing small sewage effluent discharges can be registered even if they are located in a sewered area, provided that they are working satisfactorily and do not cause pollution (unless the discharge is to ground within a Source Protection Zone 1 (SPZ1) or within 50 m of any well or borehole that is used to supply water – see Section 3.3.1).

### 3.1.9 Town and Country planning and building control approval

For discharges to ground and surface waters:	New discharges only
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For new discharges, the occupier must obtain any necessary planning and building control approval for the treatment system and discharge

We expect those seeking registration of their sewage treatment system to confirm with their local planning authority whether the system requires planning and/or building control approval. Where required, approvals should be obtained before registering.

The current [Building Regulations in England and Wales 2010](#) are supported by Approved [Document H2 guidance](#) on meeting the requirements for drainage and wastewater disposal.

### 3.1.10 Protecting conservation interests

For discharges to ground and surface waters:	New discharges only
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Any new discharge must not be at a location that is within the screening distances defined for sensitive nature conservation areas

Discharges of sewage effluent can be harmful to certain sensitive sites, habitats and species. If your discharge is new and close to a sensitive nature conservation site we will check this for you. We will let you know in writing if you need to make an application for an environmental permit.

The screening distances from designated and identified nature conservation interests, used to assess whether registration will be acceptable in these areas, are shown in Table 3. An existing small sewage discharge may be registered even if it falls within the screening distances, provided that the sewage treatment system is working satisfactorily and the discharge does not cause pollution.

**Table 3. Screening distances for nature conservation sites**

Nature Conservation designation, including European Sites†	Screening Distances (metres) where registration is not possible for:	
	Discharges to ground	Discharges to surface waters
Special Area of Conservation (SAC)	50	500
Special Protection Area (SPA)	50	500
Ramsar site	50	500
Biological Site of Special Scientific Interest (SSSI)	50	500
Freshwater pearl mussel population	N/A	500
Local aquatic nature reserve	N/A	200
Local aquatic wildlife site	N/A	50
Not be in an Ancient Woodland	0*	N/A
Protected Species	N/A	500

† “European Site” means candidate or Special Area of Conservation and Special Protection Area in England and Wales, within the meaning of Council Directives 2009/147/EC on the conservation of wild birds and 92/43/EEC on the conservation of natural habitats and the Conservation of Habitats and Species Regulations 2010. Internationally designated RAMSAR sites and proposed Special Protection Areas are dealt with in the same way as European sites as a matter of Government policy and for the purpose of these rules will be considered as European sites.

\* must not be within the boundary of the site.

For **discharges to ground** please go to [Section 3.3](#)

## 3.2 Additional criteria for discharges to surface water

### 3.2.1 Tidal areas

For discharges to surface waters:	New and Existing discharges only
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In tidal areas, the discharge outfall must be located below the Mean Low Water Spring (MLWS) tide limit	
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The MLWS tide mark can usually be found on Ordnance Survey maps. Where reasonably possible, we prefer that discharges are made below this point to prevent sewage from flowing across for example, beaches, exposed river beds or mud flats.

### 3.2.2 Protection of shellfish and bathing waters

For discharges to surface waters:	New discharges only
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Any new discharges to surface waters must not be at a location that is within the screening distances defined for shellfish or bathing waters (Table 4)	
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Controls are required to protect human health and the environment, particularly in relation to faecal pollution and the risk of microbiological contamination.

Table 4 provides the screening distances for the protection of designated bathing and shellfish waters (we will check this for you).

**Table 4. Screening distances for shellfish and bathing waters**

<b>Environmental interest EC designation Bathing and Shellfish Waters</b>	<b>Screening Distances (metres) within which it is not possible to register:</b>
Shellfish water	500
Bathing Waters	500

New discharges to tidal waters with outlets above Mean Low Water Springs (MLWS) tide limit cannot be registered as an exempt activity and occupiers must apply for an environmental permit. Discharges made in tidal areas may also require a permit under the Marine and Coastal Access Act 2009 from Natural Resources Wales.

#### 3.2.2.1 Existing systems within screening distances for shellfish and bathing waters

Existing small sewage discharges may be registered even if they fall within the screening distances for shellfish and bathing waters, provided that the sewage treatment system is working satisfactorily and does not cause pollution.

### 3.2.3 Discharge to suitable surface waters

In relation to registration a surface water is defined as:

- **Inland freshwaters** (such as a river, stream, watercourse or canal);
- **coastal waters** (such as an estuary); or
- relevant **territorial waters** (the sea out to 3 miles).

You cannot register a discharge to an enclosed lake or pond.

For discharges to surface waters:	New discharges only
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The discharge must only be made to a watercourse that normally contains water throughout the year. The discharge cannot be to an enclosed lake or pond
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Treated sewage effluent requires some dilution and dispersion when discharged to surface water in order to prevent stagnation and pollution. For this reason, it is not possible to register a new discharge to a ditch or watercourse that does not contain water throughout the year in normal circumstances. We would regard normal circumstances to be anything other than a drought or abnormally prolonged period of dry weather. Discharges to watercourses that seasonally dry up cannot be registered. Also, due to the need to fully assess the potential impacts, it is not possible to register discharges to enclosed lakes or ponds; a permit application will be required.

For discharges to surface waters:	New discharges only
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Drainage systems incorporating a partial infiltration system / drainage field prior to discharge to surface water must include a package sewage treatment plant and the drainage field must be installed within 10 metres of the bank side of the watercourse
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If it is necessary to install a partial infiltration system / drainage field prior to discharging to the watercourse, a package sewage treatment plant must be used and the drainage system must be sited no further than 10 metres from the bank of the watercourse. A partial infiltration system must be registered as a discharge to surface water.

#### 3.2.3.1 Existing discharges to surface waters

An existing small sewage effluent discharge may be registered as discharging to surface water if it is a lake or pond, or is subject to seasonal drying, provided that the sewage treatment system is working satisfactorily and does not cause pollution.

If your **discharge is to surface water** you can now go to [Section 4](#).

### 3.3 Additional criteria for discharges to ground

#### 3.3.1 Protection of groundwater abstractions

For discharges to ground:

New and Existing discharges

A discharge to ground must not be located within a Source Protection Zone 1 or within 50 metres from a well or borehole that is used to supply water

You will not be able to register an existing discharge if it falls within a Source Protection Zone 1 (SPZ1) but you can apply for a permit (see Section 3.3.1.2).

##### 3.3.1.1 Source Protection Zone 1

We recognise three groundwater Source Protection Zones (SPZs) for wells, springs or boreholes that are used to supply water for domestic or food production purposes. SPZ1 is the innermost of these zones representing the area around the supply source that is most vulnerable to pollution. We apply the same approach to private drinking water supplies but as we do not hold these records the SPZ1 is based on a default radius of 50 metres. Following registration, we will check that the discharge is not within an SPZ1. However, it is up to the applicant to check prior to registration that there are no groundwater abstractions (from wells, boreholes or springs) within 50 metres of the discharge.

##### 3.3.1.2 Existing discharges in SPZ1

Existing authorised discharges in SPZ1 (consents under the WRA, 1991) automatically become environmental permits. Our position on existing, unpermitted discharges of sewage effluent to ground in SPZ1 is as follows:

- We will continue to treat permit applications for existing discharges sympathetically where there is sufficient evidence that the discharge has not or will not cause problems. If the discharge and the abstraction have co-existed for a number of years with no apparent problem we will normally permit the discharge.
- If we discover an unpermitted discharge in SPZ1 and there is evidence of pollution or a significant risk of pollution, we will serve a notice to either require a permit (if we consider the discharge can be altered / treated to avoid pollution) or prohibit the activity.

### 3.3.2 Discharges to ground from a septic tank or package sewage treatment plant through an infiltration system / drainage field

For discharges to ground:

Existing discharges only

For existing discharges, the infiltration system / drainage field must be installed in accordance with the relevant siting, design and installation requirements in force at the time of installation, including British Standard, if applicable

For discharges to ground:

New discharges only

For new discharges, the discharge outlet from the treatment system to a infiltration system / drainage field must be installed in accordance with the British Standard BS 6297 siting and installation requirements in force at the time of installation, currently BS 6297:2007+A1:2008

You must ensure that the environmental risks of the proposed discharge to ground have been considered in accordance with British Standard BS 6297+A1:2008

BS 6297:2007+A1:2008 (or subsequent amendments) are a completely revised British Standards Code of Practice providing recommendations and guidance on the design and installation of foul drainage infiltration systems for use in wastewater (sewage) treatment. This standard replaces the previous standard (BS 6297:1983) which has now been withdrawn.

BS 6297:2007+A1:2008 (or subsequent amendments) includes detailed information on preliminary site investigation and planning, construction of trial holes and percolation tests to ensure that the site is suitable for a discharge to ground. This includes guidance on how to undertake a survey of the immediate locality (often known as a Water Interest Survey) to help identify the location of any groundwater source that may be used as a source of drinking water.

Your installer will be familiar with these documents.

New discharges that cannot comply with BS 6297 (2007+A1:2008) cannot be registered as an exempt activity and occupiers will need to apply for an environmental permit.

## 4 Following your registration

### 4.1 Operation and maintenance requirements

All small sewage systems require regular maintenance and attention to ensure they continue to operate satisfactorily. Sewage treatment requires a stable environment to work well. Treatment systems should be protected against substances that might damage and kill micro-organisms that help to break down the sewage effluent.

Chemicals, oils, solvents, grease and paintbrush cleansing products, etc. should not be allowed to enter the system. You can find more information in the British Water Code of Practice – A Guide for Users of Small Wastewater Treatment Systems.

Please note:

- Most package sewage treatment plants require a continual power supply.
- Clean, uncontaminated roof or surface water must not enter the system.
- A new system should be fully commissioned to the manufacturer's specification before being started.
- There should be a formal handover from the installer to the user with instruction on the operation of the plant.

New occupiers must ensure that the manufacturer's operation manual and maintenance requirements are fully described when transferring responsibility for the operation of the system.

#### **4.2 Use of competent servicing engineers and personnel**

Most package sewage treatment systems require professional servicing every 12 months with a detailed check every 6 months. This is necessary even in the first year when components are under warranty. Regular maintenance of the system must follow the manufacturer's instructions, using service operators who are experienced in dealing with sewage treatment systems. This is often through a maintenance agreement with an authorised servicing company.

British Water has introduced a small wastewater treatment system service engineers training and certification scheme for its members. Details of this scheme are available on the British Water website.

#### **4.3 Ensuring that exempt status is maintained**

The criteria set out in this document must be met in order that a discharge can be first registered, and then to keep the registration, all of the criteria that are relevant to the discharge must be complied with. For example, the system must be reviewed if a new house or large extension is added to it. If the criteria are found not to be being complied with, the exemption may be removed from the register and we may require a permit application.

#### **4.4 Handing the registration over to a new occupier**

Once we have registered the small sewage discharge as exempt, it remains exempt as long as the above criteria are met. There is no need to inform us if the property changes hands and a new occupier takes over responsibility for the discharge. There is a duty under the regulations however, for the current occupier to provide the next occupier, in writing:

- the fact that an exempt water discharge activity or groundwater activity is being carried out on the land;

- a description of the exempt facility;
- the criteria that must be satisfied; and
- records of any maintenance and repair (minimum 5 years)

The confirmation of registration that you receive from us and a copy of this guidance (or any future updates) should normally satisfy the first 3 of these requirements.

#### **4.5 De-registering**

EPR requires occupiers to notify us if an exempt water discharge activity or groundwater activity ceases to be in operation. If you no longer need your registration (for example, if a connection to the foul sewer is made) the occupier must notify Natural Resources Wales (0300 065 3000 Mon-Fri 8am to 6pm).

The details of the discharge will then be removed from the register.

#### **4.6 Decommissioning**

Decommissioning is likely to occur when mains sewerage is made available, or when buildings are demolished.

Drainage fields may need to be decommissioned where the performance has deteriorated as a result of clogging or compaction, or because new building requires the sewage facilities to be moved. The principal dangers are to groundwater. Pollution is likely to arise where not all connections are directed to the new system and remain 'live', and where tanks are not emptied.

Decommissioning should ensure that all connections to the drainage pipe work are removed and that all necessary steps are taken to ensure that the pipe work cannot be used for other purposes. All tanks should be emptied by a specialist contractor and made safe by infilling.

#### **4.7 Data Protection Act 1998**

Natural Resources Wales is obliged to keep a public register of exemptions, under the provisions of the Environmental Permitting (England and Wales) Regulations 2016. We must keep a public register of exemptions and as result we are not in breach of the Data Protection Act 1998 in holding such information. The householder may be contacted by treatment plant manufacturers who have access to this data.

## References

British Water Code of Practice	Flows & Loads 4 - Sizing Criteria, Treatment Capacity for Small Wastewater Treatment Systems BW COP: 18.11/13
British Water Code of Practice	A Guide for Users of Small Wastewater Treatment Systems BW COP. 3/08
British Water Code of Practice	Guide to the Desludging of Small Wastewater Treatment Systems BW COP 9.3/09
British Water Code of Practice	Guide to the Installation of Small Wastewater Treatment Systems BW COP: 1/08
British Water Code of Practice	Maintenance and servicing of Small Wastewater Treatment Systems BW COP. 11/09
DETR	Planning Requirement in respect of the Use of Non-Mains Sewerage incorporating Septic Tanks in New Development. Department of the Environment, Transport and the Regions (1999)
Environment Alliance	Treatment and disposal of sewage where no foul sewer is available: GPP4 NetRegs (October, 2017)
British Standards	BSEN 12566: 2000 Part I prefabricated units  BSEN 12566: 2007 Part IV for septic tanks assembled in situ from prefabricated units  BSEN 12566: 2005 Part III for package or site assembled domestic sewage treatment plants

## Glossary

Cesspit or Cesspool	A sealed tank used to collect sewage with no discharge to the environment. It has no outlet and requires regular emptying
Dilution & Dispersion	Reduction in concentration brought about by mixing in water
Discharge	A release of treated sewage effluent to the ground or surface water
Domestic sewage	Sewage effluent from normal domestic activities and services (such as schools, restaurants, takeaways, nursing homes, etc.) that originates predominantly from the human metabolism and from household activities. See Appendix A
Drainage field	System of infiltration pipes placed in trenches and arranged so that effluent can be discharged to the ground
Groundwater	All water which is below the surface of the ground in the saturation zone and in direct contact with the ground or subsoil
Infiltration system	A series of infiltration pipes, placed in either single trenches or one large bed, used to discharge effluent in such a way that it percolates into the disposal area
Package sewage treatment plant	Package treatment plants (PTPs) are small scale sewage treatment works
Surface water	In relation to registration: Inland freshwaters (such as a river, stream, watercourse or canal), coastal waters (such as an estuary) or relevant territorial waters (the sea out to 3 miles).
Trade effluent	Effluent derived from commercial process/premises. See Appendix A

## List of abbreviations

EPR The Environmental Permitting (England and Wales) Regulations 2016. SI No. 675

MLWS Mean Low Water Spring

PTP Package Sewage Treatment Plant

RAMSAR A site of international conservation importance classified at the 'Convention on Wetlands of International Importance' 1971, ratified by the UK Government in 1976

SAC Special Areas of Conservation

SPA Special Protection Area

SPZ Source Protection Zone

SSSI Sites of Special Scientific Interest

UWWTD Urban Waste Water Treatment Directive

WRA The Water Resources Act, 1991

WFD The Water Framework Directive

# Appendix A

## Revised interpretations of domestic sewage and trade effluent

The new system has made us look again at our definition of 'domestic sewage' and change to the one based on the Urban Waste Water Treatment Directive (UWWTD) definition, the Water Industry Act 1991 (WIA) and case law.

Domestic sewage includes wastes arising from normal domestic activities wherever these are carried out. Therefore, sewage from schools, restaurants, takeaways, holiday parks and nursing homes is domestic. Determining whether a discharge contains trade effluent should not involve a detailed audit of the substances used by an applicant on a particular site. If the effluent is broadly of a domestic nature it is domestic sewage. If a significant proportion of the waste generated by a commercial enterprise is different from that found in a normal home then it becomes a mixture of domestic sewage and trade effluent.

### Box A Domestic or Trade activity analysis

Activity	Trade or Domestic
Toilet waste	Domestic
Chemical toilet waste (regardless of whether site is commercial or residential)	Trade (Note 1)
Personal washing, showering and bathing	Domestic
Domestic cooking for family and friends	Domestic
Household washing of clothes, bedding, etc using domestic detergents, etc	Domestic
Washing of dishes and cooking utensils after use on the premises	Domestic
Commercial cooking - for sale directly to consumers and consumption on or off the site (for example, restaurant, pub, fast food outlet, sandwich bar)	Domestic (Note 2)
Commercial cooking - for sale off the site (for example, manufacture of ready meals or jams, preparation of sandwiches for sale at petrol stations, canteens etc.)	Trade
Washing at commercial premises of clothes or linen from activities or residents on the site (for example, camp site launderette)	Domestic
Washing at commercial premises of clothes or linen received from off the site bedding, tablecloths, towels, etc solely for use on the site (for example, camp site launderette open to non-residents, high street launderette or centralised laundry for hotel chain)	Trade
Swimming pool filter backwash water	Domestic or Trade (Note 3)
Hospitals, vets, schools and universities	Domestic or Trade (Note 4)

## Notes on Box A

**Note 1** – It is recommended that chemical toilet waste is not discharged to a package treatment plant, as the chemicals may poison the treatment system and cause pollution.

**Note 2** - The definition of 'domestic activity' goes beyond basic activity definitions, such as 'cooking'. It also takes in the nature of the activity. Thus, cooking food to serve as a meal is a normal domestic activity, even if the meal is sold to a customer. Cooking meals in quantity for sale elsewhere, or cooking food to put in cans is not a normal domestic activity. Where a commercial enterprise generates effluent that is different to that of a normal home, then it will cease to be a domestic only activity and will be a combination of domestic sewage and trade effluent.

**Note 3** – Depends on the nature of the swimming pool. Pools at houses or hotels where they are provided free for the use of residents are domestic. Municipal or commercial pools, where the pool is a major part of a commercial activity are trade. Note that small package plants and septic tanks are unsuitable for the treatment of pool filter backwash, as it contains bactericidal chemicals that can damage the treatment process. They should only be discharged to treatment plants if they will be substantially diluted by other waste components, which is unlikely to be the case for smaller package plants. If a public sewer or large private treatment plant is not available, then the backwash should be discharged to a properly designed soakaway.

**Note 4** – Depends on the nature of the discharge and how waste and drainage is managed. For example, larger hospitals are likely to discharge trade effluent due to the kind of activities taking place on site, but a smaller hospital may well discharge solely domestic sewage. Where the discharge includes animal wastes or clinical wastes that would not be expected to occur in domestic sewage that part of the discharge will be trade effluent.