

Foul Drainage Assessment Form

Planning Guide for use only in EA West
Midlands Area.

Last updated: May 2022

Contact: Environment Agency, Sustainable Places Team, West Midlands
Area. WestMidsPlanning@environment-agency.gov.uk

Overview.

The Environment Agency is a statutory consultee for major developments which do not use the services of a sewerage undertaker for the disposal of sewage proposals as defined in Schedule 4, Paragraph zd, of The Town and Country Planning (Development Management Procedure) (England) Order 2015.

This Planning Guide and Foul Drainage Assessment form is Standing Advice for your use. It applies to the following types of development:

- Major Residential development, which do not use the services of a sewerage undertaker for the disposal of sewage (i.e. non-mains foul drainage proposals), including those of less than 80 dwellings proposing non-mains foul drainage, unless located within Source Protection Zone 1 (SPZ1);
- All non-residential development proposing non-mains foul drainage, unless located within Source Protection Zone 1 (SPZ1) and/or it is for the disposal of trade effluent where the building is +1000m² / site area is +1ha.

This is provided in accordance with our provision of 'standing advice' as in the meaning of making a 'substantive response' described in Part 4 – Consultation, Paragraph 22 (5) (c) of The Town and Country Planning (Development Management Procedure) (England) Order 2015.

For Non-Major Development we would advise you utilise the foul drainage assessment form to assist you and developers in the determination of relevant planning applications.

This guidance may also be used when providing pre-application advice to proposers.

Please do not hesitate to contact us if there are any queries:

WestMidsPlanning@Environment-Agency.gov.uk

Key Principles.

Any planning application that proposes non-mains foul drainage should be accompanied by sufficient information to understand the potential implications for the water environment.

Domestic Drainage

The utilisation of non-mains drainage as part of your planning proposal will only be allowed in exceptional circumstances and you must provide evidence that a connection to the sewer is not practicable.

Government guidance contained within paragraph 20 of subsection 2 of the Water Supply Wastewater and Water Quality section of the [Planning Practice Guidance \(PPG\)](#), gives a hierarchy of drainage options that should be considered and discounted in the following order:

1. Connection to the public sewer;
2. Package sewage treatment plant (PTP) (This could either be adopted in due course by the sewerage company or owned and operated under a [new appointment or variation](#));
3. Septic tank (discharging to soakaway);

Requirement H1 of the [Building Regulations \(Approved Document H - Drainage and Waste Disposal](#) - 2002 Edition incorporating 2010 and 2015 amendments) has a similar hierarchy. This is also a requirement of the general binding rules for small sewage discharges and is reiterated in our [approach to Groundwater Protection](#) (2018).

Trade Effluent

The utilisation of non-mains disposal of part of your planning proposal will only be allowed in exceptional circumstances and you must provide evidence that a connection to the sewer is not practicable.

Key Points to Consider.

This foul drainage assessment (form as follows) should be submitted with the planning application, detailing how foul drainage will be safely disposed of from the proposed development, through consideration of a number of factors. A map showing the location of the proposed disposal mechanisms (incl. treatment plants with point of discharge/soakaway, septic tanks and soakaways) and where relevant porosity test results must be provided. The application may be considered invalid or recommended for refusal without this information.

Paragraph 20 in subsection 2 of the Water Supply Wastewater and Water Quality section of the PPG states "When drawing up wastewater treatment proposals for any development, the first presumption is to provide a system of foul drainage discharging into a public sewer to be treated at a public sewage treatment works (those provided and operated by the water and sewerage companies). This should be done in consultation with the sewerage company of the area."

- It also states that "Where a connection to a public sewage treatment plant is not feasible (in terms of cost and/or practicality) a package sewage treatment plant can be considered."
- The relevant sewerage utility company should be contacted to confirm that connection to the foul drainage sewerage system is available. If there are capacity issues a bilateral or unilateral S106 obligation may include contributions to upgrade the system to accommodate the development.
- If a mains foul sewer connection is not feasible, a PTP is considered the next most sustainable option. Some development types warrant the use of a septic tank rather than a PTP, an example of this would be a holiday let/s where effluent volumes would be more intermittent than a residential use or where there is an isolated single dwelling, preventing effective operation of the PTP. Additionally, isolated single dwellings may be best served by septic tank and soakaway, subject to appropriate justification. Where connection to the public sewer is considered unfeasible, it is recommended you provide a minimum of

two quotes from independent contractors to ascertain the cost of connection to the sewer, with comparable costings for the installation of a non-mains drainage system. This will not be required where developments are located an excessive distance from the sewer or where there are overriding physical constraints preventing connection. When considering the relative costs of connection to the mains or a non-mains system, it is recommended that a 'correction figure' of between £4000-£8000 per property be added to the cost of non-mains systems, in order to account for the maintenance and environmental impacts of providing a non-mains system. This figure will vary depending on the scale and nature of development. The total costs of each system will then be compared and the non-mains system permitted only if it is considered to be financially unfeasible to connect to the foul sewer.

- If it is proposed to utilise alternative or a combination of foul sewage treatment and disposal techniques including reed beds, these may be acceptable only where a mains sewer connection is not available. Full details of these should be provided with the planning application.

Foul Drainage Assessment

A. Mains Sewer

Are you proposing a connection to the mains foul sewer?

Y/N

If YES, a map showing the nearest mains connection point (check with your local sewerage undertaker) should be submitted, with confirmation of capacity. If mains connection is available and has confirmed capacity no further question need be answered.

If NO because of capacity issues you should discuss a S106 obligation with utility company/LPA.

If NO because of physical constraints and you have provided quotations for connection to the mains sewer and non-mains system or have valid overriding reasons for not connecting to the sewer (as outlined in the 'key points to consider' on page one), go to part B.

If you are yet to obtain the necessary quotations, there is insufficient information to assess the drainage proposals. You should seek this information prior to the submission of a planning application.

Connection to the public foul sewer should be considered to be potentially feasible where the distance from the development site to the sewer is less than the number of properties multiplied by 30m, as explained in the guidance on the [General Binding Rules](#).

B. Non-Mains

Are you proposing a development which is intended to be permanently occupied, for example residential dwellings (not including a single isolated dwelling) or commercial/industrial building?

Y/N

If YES, please complete part B1 with the consideration of a package sewage treatment plant (PTP) with discharge to watercourse or soakaway.

If NO, please complete part B2 with consideration of a septic tank discharging to soakaway.

B1. Private means of sewage disposal from development with permanent/ non seasonal occupation

Discharge to watercourse

1. Are you proposing to discharge to a watercourse / stream from the proposed development?

Y/N

If YES, go to point 2.

If NO, go to point 7 regarding a ground soakaway.

2. Is the watercourse / receiving waters a SSSI designated by Natural England, or important for water quality reasons? e.g. a salmonid or cyprinid fisheries designation*

Y/N

If YES, it is unacceptable to discharge foul effluent to the watercourse and a soakaway should be considered. Go to point 7.

If NO, go to point 3.

3. Will the treatment plant be sited at least 7 metres from the habitable part of any new or existing building?

Y/N

If YES, go to point 4.

If NO, the proposal is NOT ACCEPTABLE and should be reconsidered.

4. Will the treatment plant be sited at least 10 metres from any watercourse, permeable drain or land drain?

Y/N

If YES, go to point 5.

If NO, the proposal is NOT ACCEPTABLE and should be reconsidered.

5. Will the treatment plant be sited at least 50 metres from any point of abstraction from the ground for a drinking supply (including your own or your neighbour's supplies), lake, pond or other water feature?

Y/N

If YES, go to point 6.

If NO, the proposal is NOT ACCEPTABLE and should be reconsidered.

6. Based upon your answers, and submission of scaled details of the drainage system, and constraints/water features at this stage, a package treatment plant discharging to the watercourse would be acceptable in principle, subject to the following important note:

Under the Environmental Permitting Regulations (2010) an Environmental Permit may be required from the Environment Agency for the discharge of treated effluent to a watercourse. This permit may be withheld. Please note that if the discharge is of 5m³/day or more, or the General Binding Rules cannot be met ([General binding rules: small sewage discharge to a surface water - GOV.UK \(www.gov.uk\)](http://www.gov.uk)), then a permit has to be applied for. The applicant should liaise with the Environment Agency, in order to obtain a permit to discharge and provide sufficient detail to enable the Council to inform decision making and subsequently discharge relevant foul drainage conditions imposed on the planning permission.

Discharge to soakaway (see Notes on '[porosity and drainage fields](#)' below)

7. Will the treatment plant and ground soakaway be sited at least 10 metres from any watercourse, permeable drain or land drain and at least 1.0 metres above the maximum water table level?

Y/N

If YES, go to point 8.

If NO the proposal is NOT ACCEPTABLE, and should be reconsidered.

8. Will the treatment plant and ground soakaway be sited at least 50 metres from any point of abstraction from the ground for a drinking supply (including your own or your neighbour's supplies), lake, pond or other water feature, and outside any Inner Groundwater Protection Zone (Source Protection Zone 1)?

Y/N

If YES, go to point 9.

If NO, the proposal is NOT ACCEPTABLE, and should be reconsidered.

NOTE: Where discharge would be within 250metres of such an abstraction, a risk assessment may be required by the Environment Agency as part of an Environmental Permit application. (Pre-Permitting application discussion is advised at this stage).

9. Will the treatment plant ground soakaway be at least 15 metres from any building?

Y/N

If YES, go to point 10.

If NO, the proposal is NOT ACCEPTABLE, and should be reconsidered.

10. Will the treatment plant be at least 7 metres from the habitable part of any new or existing building?

Y/N

If YES, go to point 11.

If NO, the proposal is NOT ACCEPTABLE, and should be reconsidered.

11. Are porosity test results submitted, which fall within the acceptable range of between 15 and 100 seconds Vp (percolation value) (see Porosity Test Advice Note)?

Y/N

If YES, go to point 12.

If NO, reconsider location of soakaway, go to part B1 "Discharge to watercourse" or otherwise go to part B3.

12. Based upon your answers, and submission of scaled details of the drainage system, constraints/water features and porosity tests at this stage, a package treatment plant discharging to a soakaway would be acceptable in principle, subject to the following important note:

Under the Environmental Permitting Regulations (2010) an Environmental Permit may be required from the Environment Agency for the discharge of treated effluent to ground. This permit may be withheld. Please note that if the discharge is of 2m³/day or more, or the General Binding Rules cannot be met ([General binding rules: small sewage discharge to the ground - GOV.UK \(www.gov.uk\)](http://www.gov.uk)), then a permit has to be applied for. The applicant should liaise with the Environment Agency in order to obtain a permit, to inform decision making and subsequently enable the Council to discharge relevant foul drainage conditions imposed on the planning permission.

B2. Private means of sewage disposal from development utilising septic tank

(NB. septic tanks cannot discharge into the watercourse and must receive additional treatment from a drainage field).

1. Will the septic tank and ground soakaway be at least 10 metres from any watercourse, permeable drain or land drain and at least 1.0 metres above the maximum water table level?

Y/N

If YES, go to point 2.

If NO, the proposal is NOT ACCEPTABLE, and should be reconsidered.

2. Will the septic tank and ground soakaway be sited at least 50 metres from any point of abstraction from the ground for a drinking supply (including your own or your neighbour's supplies), lake, pond or other water feature, and outside any Inner Groundwater Protection Zone (Source Protection Zone 1)?

Y/N

If YES, go to point 3.

If NO, the proposal is NOT ACCEPTABLE, and should be reconsidered.

NOTE: Where discharge would be within 250metres of such an abstraction, a risk assessment may be required by the Environment Agency as part of an Environmental Permit application. (Pre-Permit application discussion is advised at this stage).

3. Will the septic tank ground soakaway be at least 15 metres from any building?

Y/N

If YES, go to point 4.

If NO, the proposal is NOT ACCEPTABLE and should be reconsidered.

4. Will the septic tank be at least 7 metres from the habitable part of any new or existing building?

Y/N

If YES, go to point 5.

If NO, the proposal is NOT ACCEPTABLE and should be reconsidered.

5. Are porosity test results submitted, which fall within the acceptable range of between 12 and 100 seconds Vp (percolation value) (see Porosity Test Advice Note on page 5)?

Y/N

If YES, go to point 6.

If NO, reconsider location of soakaway, or otherwise go to point B3.

6. Based upon your answers, and submission of scaled details of the drainage system, constraints/water features and porosity tests at this stage a septic tank discharging to a soakaway would be acceptable in principle, subject to the following important note:

Under the Environmental Permitting Regulations (EPR, 2010) an Environmental Permit may be required from the Environment Agency for the

discharge of treated effluent to ground – Groundwater Activity. This permit may be withheld. Please note that if the discharge is of 2m³/day or more, or the General Binding Rules cannot be met ([General binding rules: small sewage discharge to the ground - GOV.UK \(www.gov.uk\)](http://www.gov.uk)), then a permit has to be applied for. The applicant should liaise with the Environment Agency in order to obtain a permit, to inform decision making and subsequently discharge relevant foul drainage conditions imposed on the planning permission.

B3. Discharge to ground where soakaway porosity test results not within acceptable range.

Reference should also be made to 'Approved document H 2002 Edition incorporating 2010 and 2015 amendments', Section H2, to consider alternative systems of soakaway design, which upon consideration may mean that, whilst the porosity test result is not within the required range, an enhanced system would be acceptable. Details should be submitted to demonstrate this is a 'Groundwater Activity' (under EPR - sewage discharges) and is acceptable.

Can an enhanced system be implemented?

Y/N

If YES, go to point B1. 12; or B2. 6 (above).

If NO, the proposal is NOT ACCEPTABLE and should be reconsidered, go to B4.

B4. Private means of sewage disposal incorporating a combination of treatments including reed beds

A bespoke assessment may need to be undertaken for proposals incorporating a combination of alternative foul sewage disposal methods such as reed beds. Within this assessment the locational constraints outlined in part B1 and B2 should be considered in order to determine whether the disposal method is suitable. This should be submitted with details of the systems to be utilised, to the Council with your planning application. Under the Environmental Permitting Regulations (2010) an Environmental Permit may be required from the Environment Agency for such proposals. This permit may be withheld.

Advice Notes.

Planning advice for non-mains sewage.

1. **Contravention of recognised practices** – the assessment must consider any evidence that the proposal may cause, in respect of environmental damage, in the light of: any statute, regulation, directive (e.g. Groundwater), bye law, water quality objective, or authoritative standard (e.g. British Standard, Environment Agency's 'Policy and Practice for the Protection of Groundwater').
2. **Adverse effect on water sources/resources** – the assessment must consider information in the area, such as geological formations which may allow pollution of: rivers / streams ditches/ surface waters including riparian owners downstream, groundwater, public, private (boreholes and abstractions) and agricultural water supply, water features (wells, lakes, ponds).
3. **Health hazard or nuisance** – the assessment must consider any risk to public health or nuisance.
4. **Damage to controlled waters** – the assessment must consider any risk of pollution to controlled waters.
5. **Damage to environment and amenity** – the assessment must consider any risk of pollution (from effluent) to: any land with environmental or amenity value, Site of Special Scientific Interest (SSSI), Area of Outstanding Natural Beauty (AONB) or candidate Special Area of Conservation (cSAC), public open space.
6. **Overloading existing capacity of the area** – the assessment must provide evidence regarding the consideration of on any risk of ponding, sewage flooding, or pollution or nuisance from the scale of the proposal or any existing capacity problems.
7. **Absence of suitable outlets** – the assessment must provide evidence to show that there is a suitable watercourse or adequate land for soakage to accommodate the disposal of effluent. The location of the treatment plant, or septic tank, as well as the route of discharge (soakaway location and design, or route of pipe to watercourse).
8. **Unsuitable soakage characteristics** – the assessment must include the full results of percolation (porosity) tests carried out in accordance with BS 6297. See porosity note below.

9. **High Water table** – the assessment must provide details of any 'rest water levels' in trial holes, which may indicate that the water table is high.
10. **Rising groundwater levels** – the assessment must detail any ground water levels that have been rising consistently and which may interfere with the effluent dispersal and may cause damage to other land or property.
11. **Flooding** – the assessment must consider flood risk. If the system is located with Flood Zone 3 (1% annual probability flooding), a known flood risk area (historic flooding) or surface water problem area, then there may be a risk of environmental or amenity damage.

Environmental Permit.

For discharge to surface waters (watercourse) or groundwater.

You may require an [Environmental Permit from the Environment Agency](#) or contact the Environment Agency for an Environmental Permit application form and further details on 03708 506506. The granting of planning permission does not guarantee the granting of a permit under the Environmental Permitting Regulations 2010. [GOV.UK Permits you need for septic tanks](#)

1. [General Binding Rules](#) – Formerly Exemptions - for discharges of sewage less than 2 cubic metres a day to ground or 5 cubic metres a day discharging to a watercourse. If the General Binding Rules are not met, then a permit should be applied for. Please see [General Binding Rules](#) for more detail.
2. [Standard Rules Permit](#) – normally applies for discharges of treated sewage greater than 5 cubic metres a day (discharging to a watercourse) but less than 20 cubic metres a day. There are exceptions – e.g. within 1km of a European Habitats site.
3. [Bespoke Permit](#) – for discharges of treated sewage greater than 2 cubic metres (m³) a day to ground and greater than 20 cubic metres a day to watercourse.

Please see the '[general binding rules](#)' for small sewage discharges (including criteria for sites where discharges will require an environmental permit, to ground or surface waters).

Trade Effluent - the discharge of trade effluent will normally require an Environmental Permit under the Environmental Permitting Regulations 2010 (EPR 2010) from the Environment Agency. All trade effluent discharges to ground will require a bespoke permit. You should be aware that the permit may not be granted. A permit will only be granted where the risk to the environment is acceptable.

A permit is required for any discharge to ground in an SPZ1 and this may not be granted.

Porosity Tests.

You should refer to Building Regulations Section H2 (Approved Document H Edition incorporating 2010 and 2015 amendments) with regard to the general requirements for construction of non-mains sewerage systems. Sections 1.33 to 1.38 deal with the test requirements for trial holes and percolation tests.

Porosity tests must detail a satisfactory Vp (percolation value) result (12 - 100 seconds Vp). However, if the results are not within the suggested range, either due to the ground conditions being too fast (meaning that effluent would be reaching underlying groundwater) or too slow (leading to effluent ponding on the surface), the following should be noted:

- Porosity test values may be reconsidered for treated effluent under BS6297.

Reference should be made to The Building Regulations Approved document H, Section H2 (2002 Edition incorporating 2010 and 2015 amendments), to consider alternative systems of soakaway design, which upon consideration may mean that, whilst the porosity test result is not satisfactory, the enhanced system would be acceptable.

Drainage fields and discharge to ground.

Drainage fields are an important component of a non-mains wastewater treatment system, as they use the biologically active soil beneath the system to provide additional treatment of the effluent in the ground before it enters groundwater. Designs used for surface water soakaways (including the use of soakaway crates) are not appropriate for foul effluent drainage.

Deep infiltration systems (boreholes, wells, concrete ring structures) for discharges to ground pose a higher risk of groundwater pollution by concentrating the discharge in one small area and bypassing the soil layers and are not in line with BS6297:2007. These systems are not appropriate as an alternative to a shallow infiltration system where the only reason for

their use is to maximise the proportion of available land that can be built on. All such discharges require an environmental permit and will not be permitted unless the full requirements of our [approach to Groundwater Protection](#) (2018) position statement G9 - "Use of deep infiltration systems for surface water and effluent disposal", can be met. In cases where a deep infiltration system is necessary/proposed we strongly recommend pre-permit discussions.

For these and other more complex proposals, 'twin tracking' of the permit and planning application may be advisable. See our [Guidance for developments requiring planning permission and environmental permits](#).

Further advice and contact.

The views of your Local Authority, Environmental Health Officer and Building Control Officer should also be sought to ensure that any proposal submitted is feasible.

The relevant Environment Agency Land and Water or Biodiversity team may also be contacted (03708 506506), to provide assistance with the provision of the above information e.g. salmonid and cyprinid fishery designations. In relation to point B1. 2*, you are advised to contact Natural England and the local planning authority to ascertain whether there are any significant nature conservation designations /SSSIs relevant to the proposal.

- [GOV.UK Environment Agency advice and guidance](#)
- [GOV.UK Flood Zone Maps and Groundwater and Source Protection Zones](#)