

# Foul drainage assessment form (FDA1)

**Please note:** this form should be used for planning related queries only and cannot be used when applying for an environmental permit.

<b>APPLICANT DETAILS</b>
<b>Name:</b> Mr G W Jones
<b>Address:</b> c/o Bryan Thomas, Architectural Design Ltd
<b>Telephone No/e-mail :</b> 01568 7078238 bryanthomas@btconnect.com

This form should be used to establish whether non-mains drainage, either a new system or connection to an existing system, would be acceptable. Your answers to the following questions will be taken into consideration. It is important that you provide full and accurate information. Failure to do this may delay the processing of your application.

**You must provide evidence that a connection to the public sewer is not feasible.**

Other than very exceptionally, providing non-mains drainage as part of your Planning or Building Regulation application will not be allowed unless you can prove that a connection to the public sewer is not feasible. Non-mains drainage systems are not considered environmentally acceptable in publicly sewered areas. Please note that the existence of capacity or other operating problems with the public sewer are not valid reasons for non-connection where this is reasonable in other respects.

Where connection to the public sewer is feasible, agreements may need to be obtained either from owners of land over which the drainage will run or the owners of the private drain.

Government guidance contained within DETR Circular 03/99/ WO 10/99 'Planning requirements in respect of the use of non-mains sewerage incorporating septic tanks in new development' gives a hierarchy of drainage options that must be considered and discounted in the following order:

- 1 Connection to the public sewer
- 2 Package sewage treatment plant (which can be offered to the Sewerage Undertaker for adoption)
- 3 Septic Tank
- 4 If none of the above is feasible a cesspool

You must respond to all the following questions, if you wish to submit additional information please do so, marked clearly "Additional Information". **In some cases you will be required to provide a further assessment in accordance with the requirements of DETR Circular 03/99/ WO 10/99 (see Guidance Note 1).**

## Mains connection

	YES	NO
Have you provided a written explanation of why connection to the mains sewer is not feasible with this form?.	X	
<i>This should include a scaled map showing the nearest mains connection point - check with your local sewerage undertaker.</i>		

### Non-mains connection

Please provide a plan with dimensions that clearly shows the location of the whole system in relation to the proposed development and the position of the key elements e.g. septic tank, drainage fields and points of discharge.

1. Existing system	YES	NO
Do you intend to use an existing non-mains foul drainage system?	X	
If YES, does the system already have an Environmental Permit issued by the Environment Agency? (In the case of a cesspool write N/A) Please provide Environmental Permit reference number.....		X

2. Discharge	YES	NO
Do you propose to use a cesspool? If yes go to Q4		X
Do you intend to use a system that discharges solely to watercourse? (see Guidance Note 2) If yes go to Q8.		X
Alternatively, will all, or any part of, the discharge go to soakaway? (see Guidance Note 2) - this would include systems that combine a soakaway with a high level overflow to watercourse? If yes go to Q3.	X	
Have you considered having your system adopted by the sewerage undertaker? (See Guidance Note 6).		X

3. Water abstraction	YES	NO
Do you receive your water from the public mains supply? If yes go to Q5	X	
If not, where do you get your water supply from?		

4. Cesspools (For methods other than cesspools write N/A)	YES	NO
Have you provided written justification for the use of a cesspool in preference to more sustainable methods of foul drainage disposal? (see Guidance Note 3)	N/A	

5. Ground Conditions (For cesspools write N/A)	YES	NO
Have you submitted a copy of the percolation test results with this form (see Guidance Note 4)? If NO please explain the justification for not undertaking or submitting these tests.		X
Is any part of the system in land which is marshy, water logged or subject to flooding?		X
Will the soakaway be located on artificially raised, made-up ground or ground likely to be contaminated? If yes please provide details as additional information.		
Have you submitted the results of a trial hole at the site to establish that the proposed drainage field will be above any standing groundwater (see Guidance Note 5)?		X

6. Available Land	YES	NO
Is the application site plus any available area for a soakaway less than 0.025 hectares (250m <sup>2</sup> )?		X

**7. Siting of drainage field/soakaway discharge from a septic tank or package treatment plant or other secondary treatment..**

*You may need to make local enquiries to get a full answer to these questions.*

	YES	NO
Will it be at least <b>10m</b> from a watercourse, permeable drain or land drain?	X	
Will it be at least <b>50m</b> from any point of abstraction from the ground for a drinking water supply (e.g. well, borehole or spring)? <i>This includes your own or a neighbour's supply.</i>	X	
Are there any drainage fields/soakaways within <b>50m</b> ? <i>This includes any foul drainage discharge system (other than the subject of this application) on either your own or a neighbour's property..</i>		X
Will it be at least <b>15m</b> from any building?	X	
Will there be any water supply pipes or underground services within the disposal system, Other than those required by the system? <i>(For cesspools write N/A)</i>		X
Will there be any access roads, driveways or paved areas within the disposal area? <i>(For cesspools write N/A)</i>		X

**8. Siting of treatment plant, septic tank or cesspool**

	YES	NO
Is it at least <b>7m</b> from the habitable part of a building?	X	
Will there be vehicular access for emptying within <b>30m</b> ?	X	
Can the plant, tank or cesspool be maintained or emptied without the contents being taken Through a dwelling or place of work?	X	

**9. Expected flow**

Please estimate the total flow in litres per day <i>(see Guidance Note 4).</i>	1800
--	------

**10. Maintenance**

How do you propose to maintain the system? If the development consists of multiple units discharging to a shared plant, please include details of who will be responsible for the future maintenance of the system and any related legal agreements.

The treatment plant and effluent soakaway system will be maintained in accordance with the manufacturer's recommendations.

**Declaration**

I declare that the above information is factually correct.

Name	Signature	Date
Bryan Thomas		28/06/2016

## GUIDANCE NOTES:

- 1) This form is for use with **DETR Circular 03/99 (WO Circular 10/99) 'Planning Requirements in Respect of the Use of Non-Mains Sewerage Incorporating Septic Tanks in New Development'** (the Circular). It is intended to help Local Planning Authorities establish basic information about your system and decide whether you need to submit a more detailed site assessment in accordance with Annex A of the Circular. If a detailed site assessment is requested but not submitted, your planning application might be refused.
- 2) In addition to Planning Permission and Building Regulation approval you may also require an **Environmental Permit from the Environment Agency. Please note that the granting of Planning Permission or Building Regulation approval does not guarantee the granting of an Environmental Permit. Upon receipt of a correctly filled in application form the Agency will carry out investigations It can take up to 4 months before the Agency is in a position to grant a permit or not.** For further information please visit our [Environmental Permitting](#) web pages.
- 3) The use of cesspools is an option of last resort as set out in the non-mains drainage hierarchy of preference in DETR Circular 03/99/WO 10/99. This is echoed in the Building Regulations 2000 (approved document part H). The Circular notes at Annex A paragraph 8 that cesspools give rise to environmental, amenity and public health problems as a result of *"frequent overflows due to poor maintenance, irregular emptying, lack of suitable access for emptying and even through inadequate capacity."* In addition to this the requirement for frequent emptying is usually by contractor involving road transport with associated environmental costs. For these reasons, the use of cesspools cannot be considered a long-term foul sewage disposal solution. In view of the environmental risks associated with their use, any proposal to use cesspools must be fully justified to the Local Planning Authority
- 4) Typical flows

Property	Litres per person per day		Property	Litres per person per day
Domestic*	180		Offices / Factories (without canteen)	50
Hotels, B&Bs	250		Public Houses	15
Restaurants	25		Caravans (fully serviced)	180
Campsites	75		Caravans (not serviced)	100
Dayschool (without canteen)	50		Rest Homes	350
Boarding School	200		Hospitals	450

\*See guidance note 5) below.

- 5) Package treatment plants and septic tanks should be designed and sized according to the advice given in [Flows and Loads 3](#), published by British Water. Volumes for larger systems should be calculated based on expected flows arising from the development.

A treatment system for a single house with up to and including 3 bedrooms must be designed for a minimum population (P) of 5 people.

The size of a treatment system for a single house with more than 3 bedrooms must be designed by adding 1 P for each additional bedroom to the minimum single house value of 5 P, e.g.:

- House with 3 bedrooms = minimum 5 P system
- House with 4 bedrooms = minimum 6 P system (5+1)
- House with 6 bedrooms = minimum 8 P system (5+3)

For groups of small 1 and 2 bedroom houses or flats:

- Flat with 1 bedroom = allow 3 P
- Flat with 2 bedrooms = allow 4 P

A treatment system serving a group of houses shall be designed by adding together the P values for each house calculated independently, e.g.:

- For a group of two houses (3 and 4 bedrooms, respectively) the system shall be for a minimum of 11 P (5+6)

If the calculated total P for a group of houses exceeds 12 P then some reduction may be made to allow for the balancing effects on daily flow of a group of houses (round up not down):

- Where the total is 13-25 P multiply the total by 0.9 to give an adjusted P value, e.g. if there are four four-bedroom houses the total will be 24 P (4 x 6) and the adjusted P will be 22 P (24 x 0.9 = 21.6)
- Where the total is 26-50 P multiple the total by 0.8 to give an adjusted P value, e.g. if there are four three-bedroom houses and three four-bedroom houses the total P will be 38 P (4 x 5 and 3 x 6) and the adjusted P will be 31 P (38 x 0.8 = 30.4)

These are minimum recommended population (P) loads; they should not be modified downwards, and upward modification may be necessary because of particular characteristics of each property or groups of properties.

The above assessments of population (P) should be used for both existing and new properties.

- 6) You should refer to **DTLR Building Regulations 2000 Section H2 Waste Water Treatment and Cesspools** 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 and for convenience the text of these sections is repeated below:

- 1.33 A trial hole should be dug to determine the position of the standing ground water table. The trial hole should be a minimum of 1m<sup>2</sup> in area and 2m deep, or a minimum of 1.5m below the invert of the proposed drainage field pipework. The ground water table should not rise to within 1m of the invert level of the proposed effluent distribution pipes. If the test is carried out in summer, the likely winter groundwater levels should be considered. A percolation test should then be carried out to assess the further suitability of the proposed area.
- 1.34 Percolation test method – A hole 300mm square should be excavated to a depth of 300mm below the proposed invert level of the effluent distribution pipe. Where deep drains are necessary the hole should conform to this shape at the bottom, but may be enlarged above the 300mm level to enable safe excavation to be carried out. Where deep excavations are necessary a modified test procedure may be adopted using a 300mm earth auger. Bore the test hole vertically to the appropriate depth taking care to remove all loose debris.
- 1.35 Fill the 300mm square section of the hole to a depth of at least 300mm with water and allow it to seep away overnight.
- 1.36 Next day, refill the test section with water to a depth of at least 300mm and observe the time, in seconds, for the water to seep away from 75% full to 25% full level (i.e. a depth of 150mm). Divide this time by 150mm. The answer gives the average time in seconds (Vp) required for the water to drop 1mm.
- 1.37 The test should be carried out at least three times with at least two trial holes. The average figure from the tests should be taken. The test should not be carried out during abnormal weather conditions such as heavy rain, severe frost or drought.

- 1.38 Drainage field disposal should only be used when percolation tests indicate average values of  $V_p$  of between 12 and 100 and the preliminary site assessment report and hole tests have been favourable. This minimum value ensures that untreated effluent cannot percolate too rapidly into groundwater. Where  $V_p$  is outside these limits effective treatment is unlikely to take place in a drainage field. However, provided that an alternative form of secondary treatment is provided to treat the effluent from the septic tanks, it may still be possible to discharge the treated effluent to a soakaway.

7) Developers may requisition a sewer from the Sewerage Undertaker to connect their development to the public sewer. Should this not be feasible on the grounds of cost and practicability, on site treatment in the form of package plants and their associated sewers (If constructed to an acceptable standard) can be offered to the sewerage undertaker for adoption. This approach is in support of advice from the Government described in DETR Circular 3/99 and WO 10/99. Developers are urged to discuss their requirements with the Sewerage Undertaker at the earliest possible opportunity.

## 8) Glossary

### **Package treatment plant**

A package treatment plant is a system which offers varying degrees of biological sewage treatment and involves the production of an effluent which will be disposed of to ground via a soakaway or direct to a watercourse. There are many varieties of package plant but all involve settling the solids before and/or after a biological treatment stage and all use electricity. Package treatment plants usually treat sewage to a higher standard than septic tanks but are vulnerable in the event of power failures. This may make their use inappropriate in some circumstances e.g. holiday accommodation where occupation and maintenance are irregular.

### **Septic tank**

A septic tank is a two or three chamber system, which retains sewage from a property for sufficient time to allow the solids to form into sludge at the base of the tank, where it is partially broken down. The remaining liquid in the tank then drains from the tank by means of an outlet pipe.

Effluent from a septic tank is normally disposed of by soakage into the ground, provided that the disposal does not generate a pollution risk to surface waters or groundwater resources (underground water). The most commonly used form of soakaway is a subsurface irrigation area, comprising a herringbone pattern of land drains laid in shallow, shingle filled trenches. The soakaway drains should be located at as shallow a depth as possible, usually within 1 metre of the ground surface

### **Cesspool**

A cesspool is a covered watertight tank used for receiving and storing sewage and has no outlet. It relies on road transport for the removal of raw sewage and is therefore the least sustainable option for sewage disposal. Because of this, a cesspool is best regarded as a temporary measure pending a more satisfactory solution, such as the provision of mains drainage. It is essential that a cesspool is, and remains, impervious to the ingress of groundwater or surface water and has no leaks.