

GUIDANCE FOR FORM WO2

FOR APPLICATIONS TO DISCHARGE SEWAGE EFFLUENT FROM SINGLE DOMESTIC DWELLINGS



An Agency within the Department of the
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APPLICATION FORM (WO2)

Application Guidance

*This application form should be used **only** when applying for consent to discharge sewage effluent from a single domestic dwelling.*

This form can be used for both existing and proposed sewage treatment facilities. Such facilities may include proprietary septic tanks, constructed septic tanks or packaged sewage treatment works (STW).

Part A

Enter your name and contact details. Any consent issued by the Department will be in the name of the applicant. If an agent is acting on your behalf, enter their contact details also. Please indicate if you would prefer us to contact you by e-mail and enter a valid e-mail address. This will be the Department's preferred method of communication with the applicant/agent. If an agent is acting, the Department will contact them in relation to any matters concerning the processing of the application.

Part B

Enter the postal or site address and postcode of the property from which the discharge is to be made. Enter either an accurate Irish grid-reference of the discharge point stating both the grid square reference letter and at least eight digits, e.g. J 26236463, or provide grid reference in eastings and northing format. For discharge to underground stratum, the discharge point is taken as the starting point of the sub-surface irrigation. For discharge to a waterway or

waterway via underground stratum, the discharge point is taken as the point where the discharge enters the waterway.

Your application must also include;

- 1) A site location map (scale no larger than 1:2,500 and no larger than A3 size) outlining the site for the premises to be consented in red and showing it in relation to the surrounding area, including named roads in the vicinity. Only the site of the premises to be consented should be outlined. Nearby waterways should also be identified.

- 2) A site plan (scale no larger than 1:500 and no larger than A3 size) clearly showing;
 - a) The location of the STW or septic tank, the location, extent and layout of the sub-surface irrigation system (SSIS)

 - OR** the location of the STW and the route to the waterway to which the discharge is to be made,
 - b) The location of the effluent discharge point,
 - c) The location of the effluent sampling point.

Part C

Please mark if there is a foul sewer available into which the discharge could be made. If unsure, please contact NI Water on 0845 7440088 to check.

The Department requires that all sewage discharges are made to the Northern Ireland Water foul sewerage system where this option is available. If there is a foul sewer/ private sewer within 30 metres of the development, and connection not be made, you must detail the reasons why connection is not practical or feasible on the application form.

For applications for discharge to sub-surface irrigation system (soakaway), please complete page 2 of the application form.

For applications for discharge to waterway, please complete page 3 of the application form.

Page 2 Discharge to sub-surface irrigation system (Parts D – G and Appendix 1)

Part D

Tick the box corresponding to the type of sewage treatment facility installed or proposed.

Existing constructed septic tanks will only be consented where it can be demonstrated that they meet the criteria in part G and the Department is satisfied that the system is fit for purpose. If any part of the treatment system is on land not owned by the applicant, it is recommended that the appropriate wayleave is obtained.

Part E

Please mark if the sewage treatment system is already in place or is proposed for a new site. Where an existing system without discharge consent is being replaced, relocated or upgraded you should complete the application form as per a proposed installation.

- For proposed or new systems, please complete part **F**
- For replacement, upgrade or relocation of systems without discharge consent, please complete part **F**
- For existing systems, please complete part **G**

Part F

For proposed systems only

Please mark if system meets each of the criteria. Where any of these criteria is not met, you must submit further supporting information giving specific detail and reasons why any of the criteria could not be met. The Department will make a determination on the information provided in the application and any supporting documentation only.

Please mark if septic tank or package plant carries BSEN12566 certification

For packaged STW please mark if the proposed plant is certified to BS 12566-3 as capable of 95% removal of biological oxygen demand (BOD). This information should be stated on the system test certification documents, available from the supplier or installer of the package treatment plant. **A copy of the CE certification must be submitted with the application.** This information should be available from the supplier of the treatment system.

It is recognised that there are treatment technologies available for which the appropriate British Standard has not yet been agreed and adopted. If such a system is proposed, please submit full details of the proposed system in support of the application. Again, this information should be available from the supplier of the treatment system.

Enter the percolation test value (V_p) as derived from the percolation test performed as per the guidance given in Annex 1 of this document. The results of the percolation test must be recorded in table in Appendix 1 of the form.

Enter the total length of drainage trench, in metres, installed as per the guidance given in Annex 1.

Part G

For existing systems only.

If applying for a STW, please mark if the system has been maintained according to the manufacturer's instructions. It will be a condition of any consent issued that you enter into a maintenance contract with the manufacturer, the installer of the system or other competent person to ensure effective operation of the system at all times.

Please state if the sub-surface irrigation system installed is capable of dispersing all the effluent discharged. There should be no "ponding" of effluent on the ground surface immediately above or around the sub-surface irrigation system at any time. Sewage effluent must never escape from the sub-surface irrigation system to the surrounding area or any waterway.

Page 3 Discharge to waterway (Parts H – J)

Part H

Please mark if the sewage treatment system is already in place or is proposed for a new site. Where an existing system without discharge consent is being replaced, relocated or upgraded you should complete the application form as per a proposed installation.

Part I

Please provide full details of the type of treatment system, either existing or to be installed. This should include details of any tertiary treatment to be employed as part of the process (e.g. reedbed system).

Part J

Please tick whether or not the treatment system complies with BSEN 12566-3:2005. **Please note that all new packaged STW must comply with this standard. Where any part of the system does not comply with this standard, a detailed description of the proposed system must be supplied.**

Please state the BS 12566-3 certification for removal of biological oxygen demand (BOD) that the STW has attained. This information should be stated on the system test certification documents, available from the supplier or installer of the package treatment plant. **A copy of the CE certification must be submitted with the application.** This information should be available from the supplier of the treatment system.

It is recognized that there are treatment technologies available for which the appropriate British Standard has not yet been agreed and adopted. If such a system is proposed, please submit full details of the proposed system in support of the application. Again, this information should be available from the supplier of the treatment system.

NOTE: The Department accepts that it may not be possible to obtain the above documentation for existing systems. However, should the Department determine that an existing system is not fit for purpose as part of the application process, the applicant will be required to install a STW compliant with BSEN 12566-3:2005 or a system which can demonstrate an equivalent level of environmental protection.

Part K

Please sign and date the declaration.

In signing this declaration you are making a legal statement that you have not provided any information that you know to be false or do not believe to be true. If the Department subsequently discovers any false information has been provided, it will refuse consent and render any consent issued invalid. Please note that it is an offence under the Water (Northern Ireland) Order 1999 to knowingly or recklessly make a statement which is false or misleading in any material particular for the purpose of obtaining a discharge consent.

The Department will have no hesitation in taking enforcement action if it is discovered that false information has been provided in support of the application. The applicant will be responsible for any remedial action.

The applicant must sign the application.

Applicant Checklist

Please ensure that all the documentation listed below is sent to the Department in support of the discharge consent application;

- a fully completed, signed and dated application form (WO2)
- a cheque for the relevant fee made payable to "Department of Environment"
- a site location map (no larger than A3 size)
- a site plan (no larger than A3 size)
- Full details of proposed treatment system, including CE certification if applicable

ANNEX 1 PERCOLATION TEST PROCEDURE

To determine the area of the sub-surface irrigation system (soakaway) and length of percolation trenches required to disperse the effluent, it is essential to carry out a percolation test.

A percolation test must be undertaken by someone who is familiar with the requirements of British Standard BS 6297:2007.

Soil porosity can vary across a site and the percolation test should be carried out at the intended location of the proposed system. Avoid carrying out this test in extreme weather conditions such as drought, frost and heavy rain.

The test hole should be left in test condition and covered over, so that it may be inspected, if required.

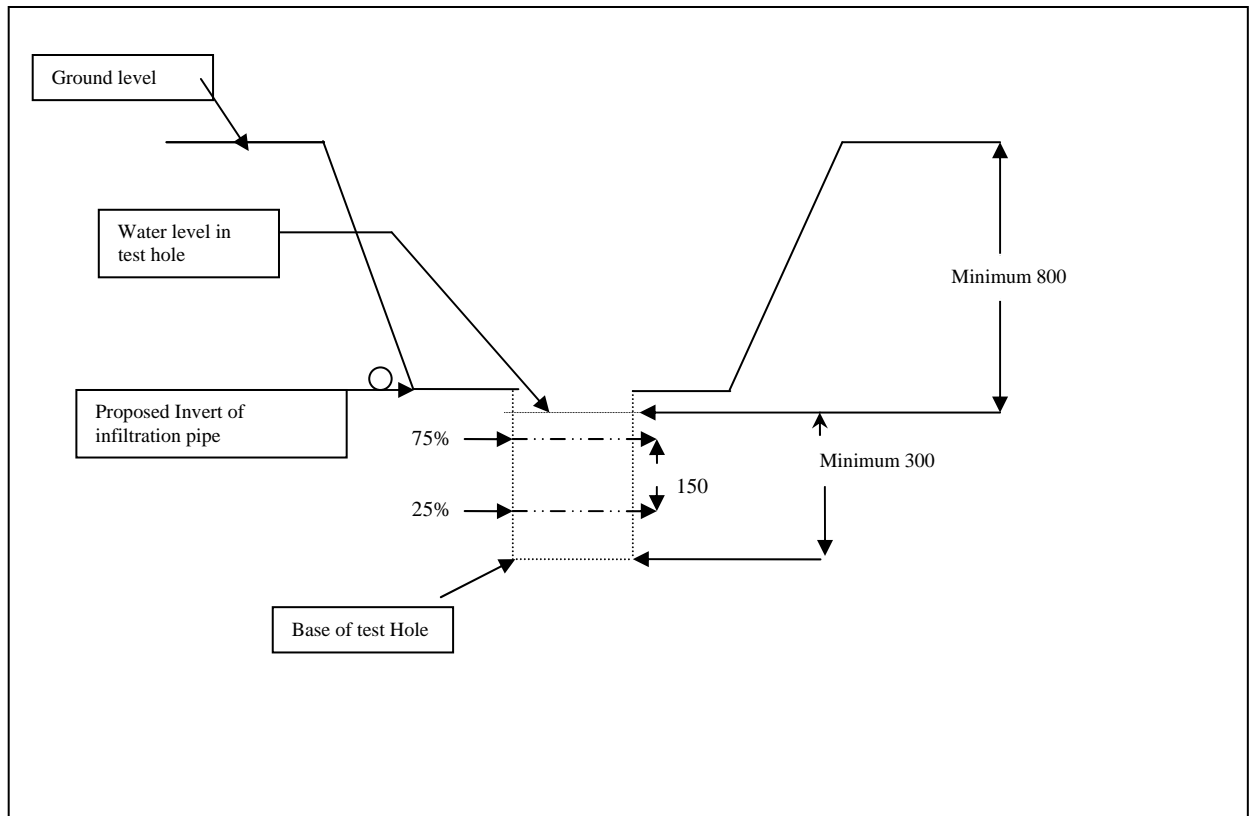
- Excavate at least two holes 300 mm square to a depth at least 300 mm below the proposed invert level (bottom of pipe) of the infiltration pipe and space them evenly along the proposed line of the sub-surface irrigation system.
- Saturate the local soil by filling each hole with water to a depth of at least 300mm and allow this to seep away completely.
- If the water drains rapidly (within 10 minutes) the hole should be refilled up to a maximum of 10 times. If the water continues to drain away rapidly the ground is unsuitable.
- If the water has not soaked away within 6 hours the area is not suitable.
- Determine the percolation rate by refilling each hole with water to a depth of at least 300 mm and observe the time in seconds for the water to seep away from 75% full to 25% full (i.e. a depth of 150 mm).
- Divide this time by 150. This answer gives the time in seconds required for the water to drop 1mm.

- The test should be carried out at least three times in each of at least two percolation holes in the location of the proposed trenches.
- The percolation value (V_p) is obtained by summing all the values, from a minimum of three tests in at least two holes, and dividing by the number of values used (a minimum of 6).

NIEA will only consent the use of a sub-surface irrigation system when V_p value is between 15 and 100. (However for V_p values between 5 and 14 NIEA may permit the installation of a package STW followed by a sub-surface irrigation system.)

The cross section layout of a percolation test hole can be seen on the following page.

Diagram 1 Cross Section Layout of a Percolation Test Hole



- The results from the percolation test must be tabulated as set out below. This table is contained in Appendix 1 of the application form.

1. Table 1 Percolation Test Recording Table

Percolation test results and Calculation of Vp.								
Hole No.	Test Date	TEST NO.	START TIME	FINISH TIME	ELAPSED TIME			Vp (seconds/mm) (Seconds divided by 150)
					Hours	Minutes	Seconds	
1		1						
		2						
		3						
Average value for Hole 1								
2		1						
		2						
		3						
Average value for Hole 2								
3		1						
		2						
		3						
Average value for Hole 3								

Calculating Trench Area and Trench Length

The layout of the trench network will depend upon the soil porosity and the availability of land. The floor area of the drainage field required may be calculated as follows:

$$A = p \times Vp \times 0.25 \text{ for septic tanks}$$

For effluents which have received secondary treatment, the area can be reduced by 20%

$$A = p \times Vp \times 0.20 \text{ for package STW}$$

Where;

- A is the required drainage field floor area in square metres (m²)
- p is the number of people served by the tank (this should be the maximum number of people that could live in the dwelling).
- Vp is the percolation value.

The drainage field floor area should then be converted to an amount of linear trench based on the width of the trench, see the table below. Drainage trenches widths should be between 0.3 m to 0.9 m.

Table 2 Field Floor Area To Linear Trench Length Conversion Table

Floor area to linear trench length			
Drainage Field floor Area (A) in m²	Linear trench length (in metres)		
	0.3 m width trench	0.6 m width trench (recommended)	0.9 m width trench
20	66	33	22
30	100	50	33
40	133	67	44
50	167	83	56
60	200	100	66
70	233	117	78
80	266	134	88
90	300	150	100