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PERCOLATION TEST FOR FOUL WATER TREATMENT FACITILTIES

The test should not be carried out during abnormal weather conditions such as heavy rain, severe frost or drought.

Preparing the test hole

A trial hole should be dug to determine the position of the standing ground water table. The trial hole should be a minimum of $1m^2$ 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 proposed area.

Percolation test method

1. A hole 300mm square should be excavated to a depth 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.
2. Fill the 300mm square section of the hole to a depth of at least 300mm with water and allow it to seep away overnight.
3. 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 the 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 1 mm.
4. The test should be carried out at least three times per trial hole with at least two trial holes. The average figure from the tests should be taken.
5. Drainage field disposal should only be used when percolation tests indicate average values of Vp of between 12 and 100 and the preliminary site assessment report and trial hole tests have been favourable. This minimum value ensures that untreated effluent cannot percolate too rapidly into ground water.
6. Where Vp 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 tank, it may still be possible to discharge to a soakaway. Please contact Building Control if your Vp falls outside this 12 – 100 band.

PERCOLATION TESTS – RESULTS & DRAINAGE FIELD CALCULATION

I, *(name)*……on behalf of *(applicant)*……..…… have carried out percolation tests in accordance with the guidance provided with this form on (date)……in respect of premises at:
……
……
……
……
……
……
The overall depth of the trial holes dug were: *(state in metres/millimetres)*

Trial Hole 1	***Trial Hole 2***

I confirm that the water table did not rise to within 1 metre of the invert of the proposed land irrigation scheme.

The weather conditions on the day were……

The results of the percolation tests were:

Trial Hole 1				***Trial Hole 2***			
	Time in seconds		*Vp*		*Time in seconds*		*Vp*
Test 1		*÷150*		*Test 1*		*÷150*	
Test 2		*÷150*		*Test 2*		*÷150*	
Test 3		*÷150*		*Test 3*		*÷150*	
Trial Hole 1 - Average Vp				*Trial Hole 2 - Average Vp*			
Average Vp of Trial Holes 1 & 2							

Use this averaged Vp figure in the following formula P x Vp x 0.25 = A_t
where
P = no of people served by the tank
A_t = floor area of the drainage field in square metres)

P x Vp x 0.25 = A_t

..... x ..... x 0.25 = ... m^2 of drainage field.

Assuming a 600mm wide drainage trench then .....m^2 ÷ 0.6 =…….linear metres.

I am aware that I require a Consent to Discharge from the Environment Agency and this is attached / or has been requested *(delete as appropriate).*

Signed:…….. Address:……..
……..
Date: …… ……..
……..
Telephone No…….. …….....