



## TYPICAL INFILTRATION TEST PIT

### TRENCHES

More than one test pit will be required and the trenches should be in the location of the proposed drainage field.

Basically the aim is to safely carry out the tests using 300mm x 300mm x 300mm test pits with the top of them being at the proposed invert of the discharge pipe so two alternative trench methods are shown.

In the first instance carry out 2 tests approximately 6.0m apart. Review the need for additional tests as results are known for the first two.

Likely discharge pipe invert depth 'D1' -

Although often a 600mm discharge pipe invert is a good starting point, here we have chosen a 700mm invert to provide 600mm cover above. If the drainage field is in an agricultural environment then agree the invert depth with the farmer.

The trenches only need to be large enough to gain access to dig the 300mm x 300mm x 300mm test pit.

Above the test levels the sides of the trench are to be sloped back at approx 45° for safety. Do not enter a trench with tall vertical sides.

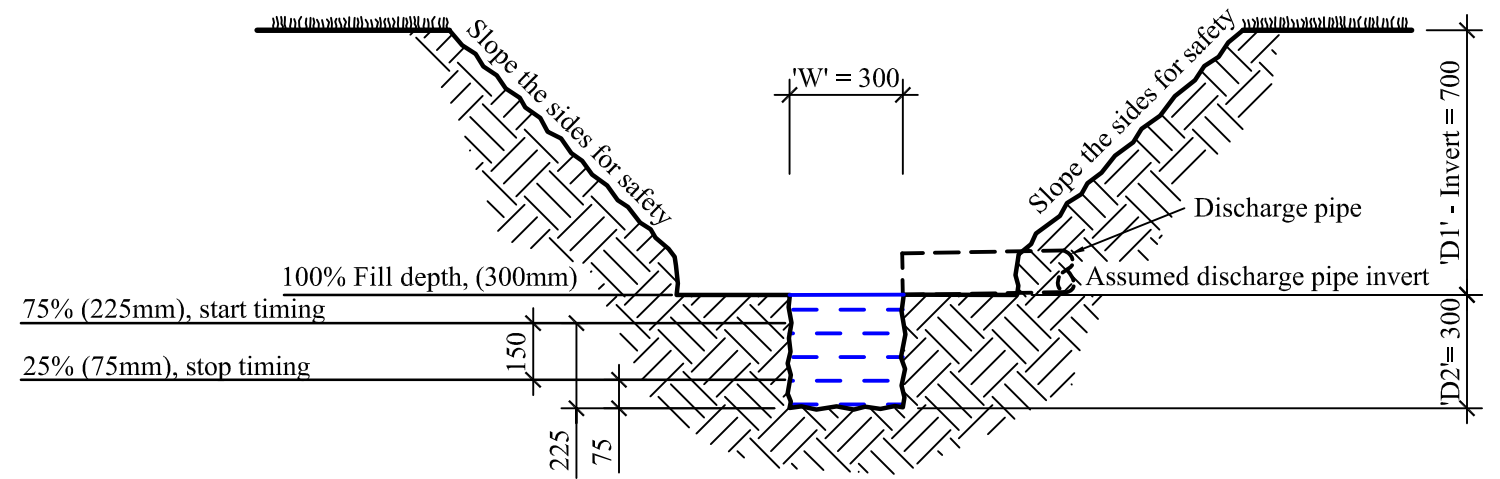
### TEST PITS

Although the initial trenches can be dug with a machine the 300mm x 300mm x 300mm deep test pits must be dug by hand to keep the sides clean and square.

### DRAINAGE FIELD LOCATIONS AND RESTRICTIONS:

1. Must be at least 10m from any watercourse or permeable drain
2. Must be at least 50m from the point of abstraction of any ground water supply and not in a Zone 1 ground water protection zone.
3. Must be at least 15m from a building, (assume the same for a road or a boundary).
4. Sufficiently far from any other drainage fields or mounds to avoid the ground becoming over saturated.
5. The drainage field should be downslope of ground water sources.
6. No water supply pipes or underground services other than those required by the disposal system itself should be located within the drainage field.
7. No access roads, driveways or paved areas to be located with the drainage field area.
8. The site should be level or with a slope of less than 1:10

Be mindful of tests on the top of banks etc. i.e. in a field near a boundary with a drop down to a road, or behind a retaining wall. If in doubt contact an Engineer. The location of the trenches will need to be marked on a site plan.



## TYPICAL INFILTRATION TEST PIT SECTION

To be used for Septic tank / BioDisc drainage field calculations only. NOT for surface water drainage

### THE TESTS:

The tests should not be carried out in abnormal weather such as; heavy rain, severe frost or drought.

### FOR EACH TEST PIT:

Fill only the 300mm x 300mm x 300mm deep test hole with water to a depth of 300mm and allow to seep away over night.

Next day refill only the 300mm x 300mm x 300mm deep test hole with water to a depth of 300mm. Wait for the depth to drop to 225mm, (75%), then start the clock and record the time in seconds, (or minutes and seconds), for the level to drop to 75mm, (25%).

Wait for it to drain and you may just need to clean the bottom of the pit.

Repeat the test another 2 times preferably on the same day or at least on consecutive days.

Ideally we are looking an average time between 30 minutes and 4 hours.

If it is less than 30 minutes then do not worry we may be able to overcome the problem by selecting a BioDisc rather than a Septic tank.

If it more than say 60 minutes then we should consider additional test pits.

Be honest with the results obtained to avoid environmental disasters and unpleasant odours.

### THIS IS ONLY A GUIDE:

This guide is a starting point and each site is different. Many factors influence the final drainage field design and they in turn influence variation of the percolation test location and depth etc.

### CHECK STILL CURRENT:

The guide is based Approved Document Part H (2015). It remains the responsibility of the person carrying out the tests to check it is still current and that this guide is still suitable.

### ADDITIONAL CHECK - GROUND WATER LEVEL CHECK:

Prior to carrying out the above percolation tests a ground water trial hole should dug and be a minimum of 1.0m<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. So in our case detailed above with D1 being 700mm the hole would be dug 2.2m deep and the water should not rise any higher than within 1.7m when measured down from the top.

### DISCLAIMER:

Pawsey Design Ltd will not be liable for any loss or injury resulting from the use of this guide when not under the supervision of an agreed representative of Pawsey Design Ltd.

### HEALTH AND SAFETY:

Do NOT enter the trench.  
Do a risk assessment to prevent collapse of the trench or: people, buildings, machinery etc falling into it.

Rev: 'A' - 26/02/17 - Ground water check added | Rev: 'B' - 10/04/17 - Max slope of site to be 1:10 | Rev: 'C' - 19/03/19 - Pit sketch replaced with photograph | Rev: 'D' - 05/08/21 - Address Change | Rev: 'E' - 20/02/23 - Title block changes

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### TYPICAL INFILTRATION TEST METHOD GUIDE

FOR DRAINAGE FIELDS FOR SEPTIC TANKS AND SEWAGE TREATMENT PLANTS (BIODISCS). Also for surface water areas below 25m<sup>2</sup> with approval.

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