
Percolation Test Method

1. **Excavate your hole**

Dig a hole 300mm square to a depth at least 300mm below the proposed invert level (bottom of the infiltration pipe), spacing them along the proposed line of the subsurface irrigation system. While digging the hole, note and record changes in soil characteristics at measured depths and the position of the water table if reached.



2. **Saturate the local soil**

Fill each hole with water to a depth of at least 300mm and allow this to seep away completely.

3. **If the water drains rapidly**

If the water drains 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.

4. **If the water has not soaked away**

If the water hasn't drained away within 6 hours, the area is not suitable.

5. **Determine the percolation rate**

Refill each hole 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 (i.e. a depth of 150mm).

6. **Divide this time**

Divide this time in seconds by 150. This gives the average time in seconds required for the water to drop 1mm.

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7. Repeat the test

Repeat the test at least three times in each hole at different times in the day.



8. Take the average

Take the average figure from the tests to produce the percolation value V_p (in seconds). Obtain the average figure for the percolation value (V_p) by summing all the values and dividing by the number of values used.

9. If results vary

Where the V_p results vary widely (50% above or below the average figure), make further tests on a minimum of three different locations in the proposed area for a soakaway.

Understanding these results

Drainage field disposal can only be used when percolation tests indicate average values of V_p between 15 and 100 and the preliminary assessment of the trial hole tests have been favourable.

The minimum value of 15 ensures that untreated effluent cannot percolate too rapidly into the ground potentially resulting in the pollution of groundwater. Where V_p is above the limit of 100, effective treatment is unlikely to take place in the drainage field as there will be inefficient soakage leading to wastewater ponding on the surface.

If the V_p is between 1 and 15, or greater than 100, the regulator should be consulted to identify alternative options for disposal.

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