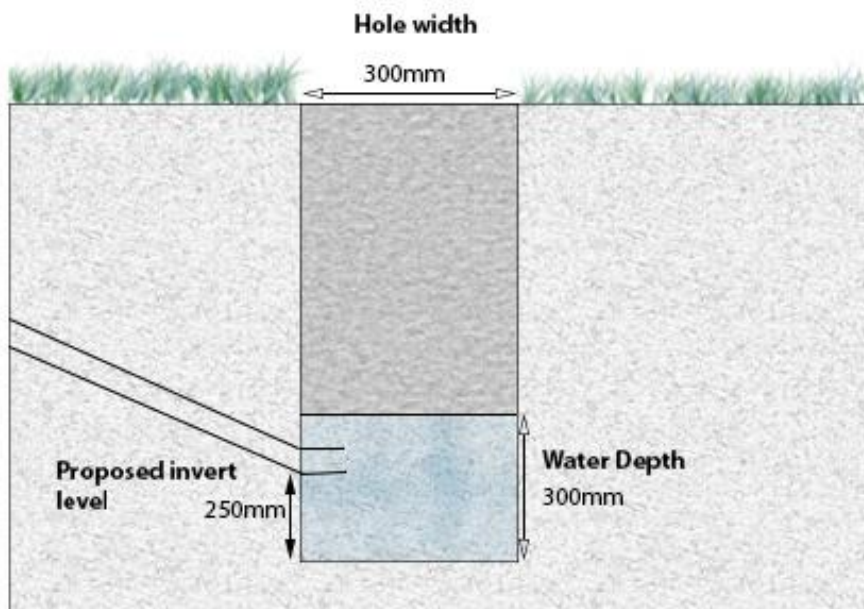


Soil Percolation Test

The soil percolation rate is used to evaluate the ability of the soil to absorb effluent, indicated by how quickly water is able to move through the soil.

The percolation 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.

- a. Excavate three holes 300mm square to a depth 250mm below the proposed invert level (bottom of pipe) of the land drain and space them evenly along the proposed line of the subsurface irrigation system.
- b. Fill each hole with water and allow to seep away overnight.
- c. Next day, refill each hole with water to a depth of no more than 300mm and observe the time in seconds for the water to seep away completely.
- d. Divide each figure by the depth of water in millimetres placed in the hole. This answer gives the time required (in seconds) for the water to drop 1mm. This is the percolation value (in seconds).



e. The average figure for the percolation value (V) is obtained by summing all three values and dividing by three.

f. If the percolation value exceeds 100sec/mm, then ground conditions may be unsuitable for discharge from a sewage treatment system and an alternative means of disposal will have to be considered to avoid ponding of septic effluent on the surface due to inefficient soakage.

g. For domestic premises, the floor area of soakaway land drains (A in square metres) required may be calculated from: $A = P \times V \times 0.20$

Where P is the number of persons served by the tank. V is the percolation value described above.