



BRE Digest 365 Soil Infiltration Testing

Soakage tests are required in order to determine the infiltration rate and drainage capacity of the soils. This will aid the design or indeed rule out the suitability of soakaways.

The method consists of excavating a trial pit of sufficient size to represent a section of the design soakaway.

The trial pit is filled three times in quick succession whilst monitoring the rate of seepage, to represent soil moisture conditions typical of the site when the soakaway becomes operative.

The trial pit should be excavated to the same depth of the anticipated full size soakaway below the invert level of the drain.



The trial pit should be 0.3 to 1m wide and 1 to 3m long

It should have vertical sides trimmed square and, if necessary for stability, should be filled with granular material

The trial pit should be filled, and allowed to drain three times to near empty, with readings taken as follows:
 h The time in which the water level took to lower to 75% full
 h The time in which the water level took to lower to 25% full

When granular material is used, a full-height, perforated, vertical observation tube should be positioned in the pit so that water levels can be monitored with a dip tape

Small scale soakage tests are generally hand excavated and represent the soil infiltration rate to aid in the drainage design for permeable paving design.

