



GROUND TECHNOLOGY



Infiltration Testing and Soakaway Design

Rain falling onto on impermeable surfaces and roofs requires management. Traditionally, storm water arising from developments remote from suitable public sewer systems or watercourses is channelled to a soakaway to infiltrate into the ground. An effective soakaway therefore requires sufficient storage capacity to handle the immediate run-off volume from a storm, but also to be constructed within soil of sufficient drainage capacity to allow the stored water to disperse sufficiently before the next rainfall event. In order to achieve this, the drainage capacity of the soil is required.

Soil Infiltration tests are completed in accordance with BRE Digest 365, which are generally undertaken within machine excavated trial pits.

Following excavation the trial pits are filled with clean gravel, to ensure sidewall stability during the test, before adding a sufficient head of clean water from a rapid filling water tanker or bowser. The soil infiltration rate is determined by measuring the length of time for 75% of the volume of water to drain away. Three consecutive tests should be undertaken within each location, to ensure at least one full test is completed within saturated soil conditions. The calculated soil infiltration rate is used to determine the feasibility of soakaway drainage, and also the design storage volume and number of soakaways required.

Ground Technology has significant experience in undertaking testing in accordance with BRE 365, and also the design of soakaway drainage systems. We are also able to offer deeper borehole soakaway testing and installation should the site conditions prevent the use of shallow systems.