



GROUND TECHNOLOGY



Permeability

The permeability (or hydraulic conductivity) of soils is most commonly required for detailed quantitative environmental risk assessments, as part of hydrogeological assessments, or for groundwater control schemes. Tests can be performed within open sections of cable percussive, rotary or window sampler boreholes, within standpipes installed in boreholes with adequate response zones, or across a series of monitored boreholes in larger scale pumping tests.

We are experienced in carrying out two main types of small-scale test prescribed in current British Standards; the variable head (falling or rising) and constant head method. In both instances, a response zone is created in the soil horizon of interest by leaving a section of the borehole uncased, or installing a monitoring standpipe to the required depth.

Water is then added or pumped out and the levels monitored at regular intervals, or the volume of water required to maintain constant head over a given time period recorded. The rate at which the water rises/falls or volume lost over a given time period can be used to calculate the soils permeability. We are also able to drill and install a series of wells for large scale pumping tests, as well as carry out and provide pumping test data and interpret the results.

All our lead drillers and engineers are experienced in completing permeability tests in a wide range of soils and have adequate knowledge to determine the most appropriate test for the ground conditions and engineering problem.