

Technical Data –Plate Bearing & Plate Bearing CBR Tests

We offer a range of in-situ testing services which include CBR and Plate Bearing Tests with fast mobilisation, professional onsite testing on a nationwide basis and rapid reporting of results.



For Ground Bearing Pressure testing in support of TEMPORARY WORKS, PILING MATS, CRANE BASES and related works we conduct:

Plate Bearing Test

When designing any permanent or temporary structures, Plate bearing tests, defined in Eurocode 7 and BS1377/9 are used to establish the load bearing capacity of near surface materials, in order to ensure safe loading.

Plate Bearing tests are used primarily in relation to temporary structures and working platforms:

- DESIGN AND SAFETY TESTING OF WORKING PLATFORMS, PILING MATS & CRANE BASES
- TESTING OF BASES & SHALLOW FOUNDATIONS FOR TEMPORARY BUILDINGS AND STRUCTURES

The test is conducted by jacking a steel plate of known area against a resistance (kentledge) load, usually a heavy, tracked excavator. The size of plate is selected based on the scope of test and design load required, as well as the the reaction weight (excavator) available.

By measuring and, subsequently, plotting the pressure (load/area) against deformation, the load bearing and settlement characteristics of the ground can be established.

Subject to site conditions and loading requirements, Plate Bearing tests conducted in accordance with the standard will generally take up to 2 hours per location; we typically expect to complete 4-5 tests in a shift and provide the tabulated and plotted results the next working day.

Plate Bearing CBR Test

Where a CBR value is required for design purposes but the formation layer is either too coarse (>20mm aggregate) or a deeper loading profile is required, an equivalent CBR value may be obtained from plate bearing testing by using the modulus of sub grade reaction, via a mathematically derived formula.

Readings are taken for 5 increments of displacement (settlement) between 0 and 1.5mm and plotted against load. The approximate CBR equivalent value is then calculated from the load required to obtain 1.25mm displacement.



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