

CASE STUDY

SITE INVESTIGATION



PROJECT SPECIFICATION	
LOCATION	Horsham, West Sussex
CLIENT	Geo-Environmental Services Ltd
DATE OF WORKS	August 2014
TESTING UNDERTAKEN	CPT Dissipations
RIG	UK15

In early August, 2014, Lankelma carried out three days of cone penetration testing (CPT) for new river crossings and embankments over the River Arun as part of a large housing development in Horsham, West Sussex.

Working on behalf of Geo-Environmental Services Limited (GESL) Lankelma used its 4 x 4 track-truck rig, UK15, to test 20 nr. positions to depths of 9 m. Tracking was required to access site as the route was uneven farm track, so the flexibility of the track-truck was perfect for the job. The CPT soundings pushed through alluvium and Weald Clay and performed 11 pore water dissipations within the three day period.

The dissipation tests were run to t50, where 50% of the excess pore water pressure as dissipated. The time taken to reach t50 depends on the surrounding material; typically loose silty, sands can be expected to dissipate quicker than cohesive clays.

Dissipations measure the decay in pore water pressure over time. As the cone penetrometer advances in the ground there is a build up of pore water pressure around the cone tip; when the push is paused it is the dissipation of this excess pore water pressure that is recorded. Dissipations can be carried out at any point during a piezocone sounding and do not require any additional set up.

Pore pressure dissipation testing can be used to identify the location of the groundwater table, determine soil permeability and assess settlement properties.

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