

CASE STUDY Barton On Sea

The Contract:

The coastline at Barton On Sea has suffered from ongoing issues with coastal erosion for many years. The Client required an investigation to enable the Engineer to develop the ground model including cliff stability assessment, risk assessment and enable the design of site-instability management plan. The investigation included the construction of eighteen boreholes plus surface geophysical surveys, down hole geophysical logging and the installation of multilevel vibrating wire piezometers, inclinometers and slip indicators.

The Challenge:

The required works interfaced with private and public land, the public, roadways and areas of instability. Relations with the public were a high priority for the Client. Much of the site was within the Highcliffe to Milford Cliffs Site of Special Scientific Interest (SSSI) and required the development of an environmental protection plan to allow the Client to obtain consent from Natural England. Detailed description and identification of recovered samples and fossils from the Barton Group was required to allow borehole correlation and identification of potential failure surfaces.

The Solution:

Geotechnical Engineering Ltd provided a compliant and alternative approach to the investigation by carrying out a thorough document review and site visit prior to tender submission. The alternative cost-effective and technically compliant submission was accepted based upon GELs approach to use their multipurpose dynamic sampling and rotary coring tracked Pioneer rig in place of traditional cable-tool boring techniques. The advantages of using the Pioneer rigs can be summarised:

- The lightweight machines minimised damage to ground surfaces
- Budgetary concerns associated with LCP chiselling were avoided
- The drilling technique provided a complete sequence of material for detailed geological logging.
- Eurocode (EC7) Class 1 samples were available from subsampling
- Correlation of the complete cored section and geophysical log added significant technical benefit to the project.
- The alternative proposal was cost neutral to the client.

The Result:

The investigation was delivered safely, in accordance with all safe systems of work, to a high technical standard, within budget.

Project Overview

Project Name:

Barton On Sea

Project Type:

Geotechnical Ground Investigation

Client Name:

New Forest District Council

Date:

May 2013



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