Card Geotechnics Limited

Undercliff, St Leonard's on Sea

Our Services

- Site Investigation
- Landslip Modelling
- Remediation Design

Geotechnical Investigation for Landslip and Retaining Wall Failure

Pyle Consulting engaged **CGL** to provide expert geotechnical advice following a substantial retaining wall failure during the construction of a new residential development in St Leonard's on Sea, East Sussex.

During development of the site on the down slope side, the existing passive support for the existing retaining wall was removed and replaced in part by alternative support. Due to inadequate design of new support the part sheet pile, part steel gabion retaining wall failed and rotated seaward into the development under construction. This movement in turn caused a substantial landslip within the residential gardens on the upper slope side, and put the existing residential properties on the upper side at potential risk.

In order to accurately model the underlying geology and determine the potential for further movement a phased site investigation was designed and undertaken by **CGL**. The initial phase comprised window sampling and dynamic probing through both the slip surface and upper slope. This provided information on the superficial soils down to the rockhead at approximately 5m depth. Inclinometers were installed within the window sample boreholes to provide ongoing rotational measurements.

The second phase of investigation comprised the construction of boreholes by rotary drilling methods to between 20m and 30m depth, to allow geotechnical lab testing of the underlying rock for modelling purposes.

A series of topographic surveys throughout the period of works identified the rate and degree of slope and wall movement.

Upon completion of the investigation works a full remedial scheme was designed and implemented.

Client: Pyle Consulting