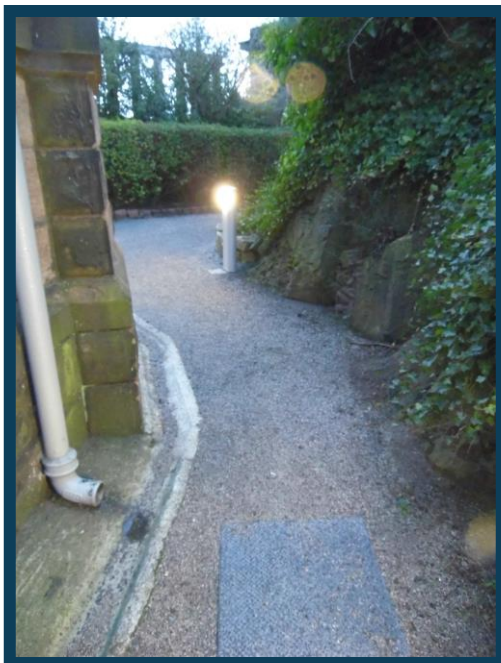




**SETTING UP THE ROTARY DRILLING RIG.**

**THE CITY DOME IS TO THE LEFT, THE NATIONAL MONUMENT OF SCOTLAND AND ARTHUR'S SEAT IN THE BACKGROUND, THE NELSON MONUMENT AND PLAYFAIR BUILDING ON THE RIGHT.**



**TIGHT ACCESS BETWEEN THE CITY OBSERVATORY ON THE LEFT AND EXPOSED BEDROCK ON THE RIGHT.**

## Ground Investigation

### City Observatory, Calton Hill, Edinburgh

Causeway Geotech were appointed by Geovia Ltd consulting engineers to complete a ground investigation to provide geotechnical input to the design and construction of a proposed gallery and restaurant at the City Observatory on Calton Hill, one of Edinburgh's iconic landmarks. The site is in the New Town Conservation Area of the city's UNESCO World Heritage Site.

The clients were Edinburgh City Council and Collective, an organisation which supports new and emerging artists to exhibit their work in Edinburgh.

The scope of the works included seven rotary boreholes, ten trial pits and in situ tests to determine the nature of ground conditions inside the observatory complex. The clients plan to develop this site to provide new facilities for artists and visitors by excavating the ground in front of the Playfair Building which sits at the top of the hill.

The site is enclosed within a boundary wall, with narrow paths between existing buildings, presenting access challenges both for the ground investigation, and the future development. As heavy machinery will not be an option during construction, detailed geotechnical information was required to aid excavation of the site.

Works were carried out under the supervision of a Site Engineer from Causeway Geotech who liaised with the Client's Representative from Geovia.

The boreholes were put down using a tracked Comacchio 205, a compact drilling rig capable of squeezing into the site without causing any damage to the existing historically important buildings. The rig also has the advantage of being able to drill very quietly so as to cause no disturbance at what is a popular tourist locality even in December.

## Project Summary

The site operations were carried out under the supervision of a Site Engineer from Causeway Geotech who directed the experienced drilling crews on site. A representative from Geovia visited the site and maintained communication with the site engineer to ensure the works were being carried out in accordance with the specification.

The works were conducted within a relatively small area at the top of Calton Hill in Edinburgh inside the City Observatory's boundary wall.

Inspection pits were dug in the shallow topsoil and the boreholes were put down through rock to their required depths. The bedrock consisted of basaltic tuff, an extrusive igneous rock formed during explosive eruptions.

Trial pits were excavated to investigate the made ground and surface deposits around the edge of the site.

Causeway Geotech's impeccable safety record was furthermore boosted by completing the works with zero incidents.

The subsequent reporting phase, comprising a factual report, was also completed on schedule, thus completing another successful contract to the Client's satisfaction.



DRILLING IN FRONT OF THE PLAYFAIR BUILDING.

## Project Overview

- Geotechnical ground investigation completed over December 2014 to January 2015
- 7 no. rotary cored boreholes to a maximum depth of 7.5m
- 10 no. trial pits dug by hand
- Installation of ground water monitoring standpipe
- Site works completed within one week
- Geotechnical and environmental sampling and testing
- Laboratory testing
- Factual Reporting
- Completed on programme
- Zero incidents



EXCELLENT CORE RECOVERY