

Cornwall House Steel Intensive Basement

Contract No: C712

Client: Ellmer Construction

Location: Allsop Place, London, NW1

Value: Approximately £333,300.00

Summary: Design ,supply and installation of approximately 141 No SM-J zero piles 10metres long to form the permanent walls of a steel intensive basement.

Sheet Piling (UK) Ltd were approached by the client to assist with the design and construction of a steel intensive basement, within an existing brick basement, following demolition of the existing building. The basement was to be used for car parking, and space was critical, therefore the wall thickness of the new basement structure was required to be kept to a minimum.

Sheet Piling (UK) Ltd designed the new basement walls using SM-J zero piles which can be installed against an existing wall using the Giken Zero Piler. The existing brick walls were supported by the installation of adjustable raking props, which were removed as the pile installation progressed. Pea gravel was placed to fill the void between the new sheet piles and the existing walls immediately following sheet pile installation.

In order to carry out the works a 30 tonne telescopic jib crawler crane was lifted into and out of the site. This avoided the construction and removal of an access ramp in the limited space available.

The soils consisted of approximately one metre of made ground, overlying two metres of medium dense sand, overlying very stiff dark grey silty clay. The design length of the sheet piles was 10 metres and Water jetting was required to assist with the sheet pile installation. This was achieved by attaching a removable jetting lance to the sheet piles prior to installation.

The total of 141 SM-J sheet piles 10 metres long were installed in 14 working days at an average of 10 No piles per day. During the course of the sheet pile installation Sheet Piling (UK) Ltd commenced the fixing of steel walings and struts to support the excavation.

Project Images



