

CASE STUDY

St. John's Wood, London

Project: To form a contiguous piled wall creating extra living space in an existing 3 storey townhouse.

Van Elle Involvement: Designing the piling mat and designing & installing the load bearing piles & contiguous piled retaining wall around the restricted access limitations of the existing building and site.

Location: St. John's Wood, London.

Client: The London Basement Company working on behalf of the main contractor.

As one of the UK's leading piling contractors we work closely with The London Basement Company on projects in some of the country's most prestigious areas and on many beautiful and sometimes listed homes.

Project Overview

This particular project involved creating a substantial basement for an existing 3-storey townhouse in one of the most affluent streets in London. The new living space was eventually to become the staff living accommodation, gun room, utility dog room, toy store, play room and a cinema.



Our remit was to design a piling mat suitable for our proposed rigs and the subsequent contiguous piled wall and bearing/anchor piles. The original scope of the works were designed to be carried out in 2 visits over a 4 week period, however, due to changes in the foundation design and the requirement for 3 different rigs to be used we carried out the works in 3 visits over the 4 weeks. This not only enabled us to work in the most efficient manner despite the difficult access conditions but allowed the other contractors on site to work simultaneously.



The temporary steel shown in this image on top of the load bearing piles is to enable the excavator access to dig out the basement.

An existing fire escape ladder meant that headroom was restricted on part of the site so we designed around this using a Kitten restricted access rig to install 9No. 300mm diameter piles of the 58 in total. The remaining 49 piles were 450mm diameter and were installed by the Soiltec S45. These were also used to temporarily support steel upon which the site plant could operate allowing easy access to all sides of the basement. The 144 No. piles forming the contig. wall were 450mm diameter and were installed by a combination of the Soiltec S45 and the Klemm 702 to an average depth of 12m.

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The Soiltec, being a rotary rig, meant that the piles didn't have to be cast at groundlevel. The concrete could be left low to reduce wastage and to save the breaking down of the piles.



Result

Being involved at an early stage allowed us to make cost-saving suggestions to our client influencing the foundation design and utilising the rigs and available programme more efficiently. Using our experiences of similar sites and understanding the needs of the homeowner, who was living in the property throughout, enabled works to progress without any problems, meeting deadlines and ensuring a smooth handover once the piling was complete.

Due to the design preparation, the communication with The London Basement Company and our team approach to the project, we achieved the required production rates and all were extremely happy with the service we provided. The value of this contract to Van Elle was £90k.

Technical information

- Contiguous Piled Wall: 144No. 450mm diameter piles.
- Bearing Piles: 9No. 300mm diameter piles.
- Bearing Piles: 49No. 450mm diameter piles.
- Rigs Used: 2 ton Kitten restricted access rig, Klemm 702 & a 15 ton Soiltec S45 rotary rig.

