

ILONA ROSE HOUSE

Client: Soho Estates | Duration: 87 weeks | Value: £20,500,000

In preparation of the major construction project to follow, Cantillon were awarded to undertake the demolition and clearance of the existing buildings and subsequent formation of the proposed basement at circa 17m below street level. The demolition works refer to 11 buildings overall, including Goldbeaters House, Trefoil Building, 113-119 Charing Cross Road (former Foyles bookshop), 111 Charing Cross Road, 1-4 Wedgewood Mews, 12-13 Greek Street and 14 Greek Street.



Cantillon took possession of the site in March 2017. The detailed scope of works included the asbestos removal and soft strip activities, demolition and associated temporary works, pile enabling works as well as the installation of a Hybrid Ground Energy Collector system by forming an open loop system with four borehole wells, two abstractions, two re-injection wells and a closed loop thermal pile system which consisted of 81No. piles. Additionally, the proposed works include the formation of the secant piled wall and installation of bearing piles followed by the reduced excavation and subsequent formation of the proposed basement ahead of the construction phase.

The site development involved the demolition of 12-13 Greek Street behind a retained façade that formed part of the Soho Conservation Area, as well as the removal of the 14 Greek Street rear extension maintaining the listed staircase due to its heritage significance.

The plan of works was developed, taking into consideration the high flow of traffic along the perimeter of the site by developing a robust traffic management system. Early demolition activities were undertaken to enable the formation of a dedicated turning circle to remove the need for reversing manoeuvres on the highway and contain site movement within the site boundary.

Detailed noise models were undertaken in advance of the demolition activities, identifying areas of high noise impact. Following various noise trials and consultation meetings with the local community and stakeholders Cantillon developed a 3D model which identified the various type / areas of works for the duration of the project.



This has enabled Cantillon to get a better understanding of when each neighbouring property might be affected by the nature of the scope of works, in order to take the appropriate robust measures to try and mitigate any impact. The demolition techniques included traditional floor by floor methods, as well as high reach methodologies. Pile testing was undertaken at this stage.

KEY PROJECT ITEMS

The project duration consisted of an overall 87 weeks which included circa 30 weeks of demolition and pile enabling operations; 30 weeks of piling operations and 27 weeks of excavation works for the formation of the proposed basement. The piling works required:

- Secant Piles: CSP cased secant pile wall. Diameters: 900mm / Length: 17-24m - BG40 piling rig in CSP mode (CFA rig)
- Load Bearing Piles: Diameters - 600, 750, 900mm / Length: 26.5-51.5m – LDA (Large Diameter Auger) Polymer Piling - BG40 piling rig & Soilmec SR70 Piling Rig
- Mini-Piles: Diameters - 450mm / Length - 15-24m Klemm KR709-2 Piling rig in CFA drilling mode

Due to the complexity and duration of the project, Cantillon’s strategy included the formation of two key areas across the site (West & East), to allow overlap between the various activities and minimise the overall project duration.

The demolition and formation of the pile mat was undertaken on the West site first. This enabled the formation of the first two boreholes (open loop system) and relevant pump tests, while the remaining demolition and pile enabling operations were ongoing on the East site. Following up the completion of these works, the remaining two boreholes were formed on the East site and the construction of the proposed secant pile wall commenced on the West site.

On completion of the open loop system and while the secant pile wall was formed, a separate piling rig was constructing the bearing piles in conjunction with the thermal piles (close loop system). Following on, the capping beam was constructed around the perimeter of the site and the area progressively excavated maintaining support to the highways.