

77 Welbeck Street, London

John F Hunt



Marylebone Lane LP



£16m



91 weeks

Project Overview

Deconstruction of an architecturally prominent, brutalist style 10-storey pre-cast concrete car park behind Oxford Street, close to the underground station. Piling, bulk excavation of 20,593 m³ and construction of a 17 meter deep, 4-storey basement box.

Scope of work

Demolition of architecturally prominent 10 storey reinforced concrete car-park in a confined, heavily pedestrianised area.

Asbestos removal, soft-strip, service isolations.

Top down demolition of the structure using a range of techniques due to the constrained location of the site, through the ground floor including below ground demolition of two basement levels.

Pile Probe to perimeter of the site ready for the secant piled wall.



Challenges

This is a logistically challenging, city-centre location in a sensitive, busy area surrounded by occupied commercial and residential buildings.

The site is located close to Oxford Street, one of the busiest pedestrian streets in the UK. It sits adjacent to the Stratford Place Conservation Area requiring collaboration with environmental officers and to Grade I and II listed buildings to the western edge.

Working close to Historic England listed buildings and within a conservation area: we contributed information to obtain extensive party wall agreements and ensured our methodology is in line with the requirements of these agreements.

Logistical constraints confining the programme: we proposed and implemented an alternative logistics strategy, installation of a corner gantry allowing tippers access directly from the road, which resulted in a four-week programme reduction and large commercial saving. We liaised extensively to arrange licensing and agreements for pavement, hoarding



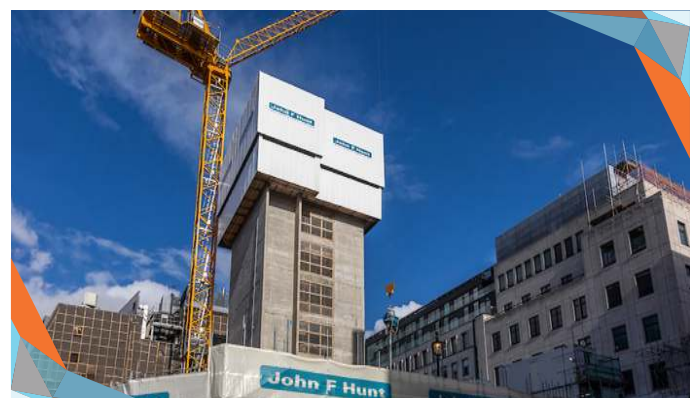
Backfill basement with crushed concrete to form a piling mat platform.

Design, supply and installation of temporary works.

Construction of a 17m deep 4, storey basement box back to ground level, requiring a 900mm secant piling enclosure.

Excavation of 20,590 m³ of spoil for substructure formation.

Slipform construction of central core and 9 storey reinforced concrete frame.



and parking bay suspension. Our logistics plans were created collaboratively to ensure that deliveries did not impact the local businesses.

Maintaining good pedestrian flow in areas of heavy footfall: Oxford Street is one of the UK's busiest pedestrian locations therefore maintaining good pedestrian access was crucial when working nearby. Brightly lit pedestrian gantry's surrounding our site allowed for this.

Working with an extensive multi-stakeholder team: we are using Adoodle to successfully manage design information within a multi-stakeholder team. Document Management and workflow was a key factor of acquiring this software in order to streamline the process of gaining comments, responses and amendments from various members of the team, who were placed on different sites and offices.

The key function we incorporated and still use on this contract is the workflow function. By creating a workflow for drawings, these could be uploaded and tasked to our design build team as well as to the principle designer and the architect.

By setting up the workflow we were able to manage the movement of documents to the relevant people and see at a glance where the document was within the process.

The software managed version control throughout, which greatly reduced any confusion and eliminated work being duplicated.

Another function which proved useful during this contract was the X-Ref Management tool which allowed us to upload documents directly from AutoCAD onto the document management system for approvals and amendments.

Drawings could be linked to master documents meaning that any changes which were made to drawings were automatically updated within the documentation throughout the lifetime of the project.

Achievements

During a value engineering exercise, we proposed a design change, amending the secant piled wall design to work with 2 levels of props being installed from a reduced piling platform level. This converted the semi-top down "Doughnut" basement solution to a traditional bottom up basement construction.

The logistics strategy was also amended to include a corner gantry allowing tippers access directly from the road and speed up the excavation period.

These changes resulted in a 4-week programme reduction and seven-figure saving for our client.

The site was registered with considerate constructors' scheme with a rating of 'Excellent'.

Due to our in-house expertise we phased demolition and enabling works concurrently to save time on the programme.

In excess of 6,000m³ of demolition arisings were removed from site for recycling.

