

# 1 Great Cumberland Place, Marble Arch, Westminster

John F Hunt



Portman Estates



£6.5m



53 weeks

## Scope of work

Façade retention scheme to the South and East including graveling foundations

Demolition of an eight storey structure

Underpinning existing vaults

Pile enabling works

Design, supply and installation of temporary works

Tower crane

Spider crane

Onsite mobile crushing



**Constrained site logistics:** the entire project site was serviced from a single 20m long pitlane, with limited transient material laydown areas. Due to the highly populated area and the Marble Arch elevation being a red route careful Traffic Management Plans were devised. Careful planning and collaboration were required with the party wall occupier and adjacent construction site.

**Neighbouring construction site:** the project site shared a boundary with a live Multiplex construction site. Various deliverables for both projects were contingent on works being completed by the opposing project site, resulting in daily coordination and collaboration, with the ability to adapt as needed to progress.

**Design change:** The size and depth of existing foundations prohibited the use of piled foundations for the new façade retention system. This resulted in a redesign of the foundations from a piled foundation solution to mass footings.



## Challenges

**Working in a confined, heavily populated location with party walls:** we demolished the building from the roof down with 5T excavators on a floor by floor basis with pulverising attachments to reduce noise, dust and vibration. Different types of party wall protection were installed in sequence, such as; scaffold ranch boarding, scaffold decking, and normal weathering with felt and batten. We appointed a professional surveying company to monitor any movement of the party walls and the façade.

**Complex Façade Retention:** due to the minimal footpath width, height of façade to be retained, major roads immediately bounding site, services within the footpath, and the need to accommodate the welfare cabins within the façade retention structure; the design solution was a very fabrication intensive and complex install with heavy steel sections.



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## Achievements

To minimise costs and eliminate the programme impacts of relocations and imposed phasing, an integrated steel frame system was designed to:

- Retain the façade
- Accommodate the site offices and welfare cabins
- Support the conveyor
- Provide additional area above the gantry for temporary storage, accessible directly from the pit lane

Over 330T and 2000 individual sections of steel used to construct the façade retention framework

Double shifts were employed and spider crane mobilised to accelerate install of the façade retention system

By proposing a hybrid façade retention kentledge design (concrete blocks in lieu of reinforced concrete), we were able to provide time and programming savings to the client

We expedited completion of boundary and party wall detailed demolition and strengthening works, to de-risk the demolition floor cycle times

In excess of 8,000 tonnes of demolition arisings were removed from site for recycling

Within one of the busiest roads in London with high traffic and pedestrian flows, public protection, pedestrian management and vehicles logistics planning was paramount. The façade retention was installed while successfully maintaining safe continuous public passage

Document Controller is a locally recruited Apprentice who has retained employment with John F Hunt

10% local employment achieved

