

## OLD STREET

**Client: Great Portland Estates | Duration: 47 Weeks | Value: £4,700,000**

Cantillon have been appointed by Great Portland Estates to undertake partial demolition, structural alterations and enabling works package for 148 Old Street. Previously the location of the Old Street Royal Mail Sorting Office, after refurbishment the building will deliver 151,000 sq. ft. of high quality office space.



Cantillon scope included asbestos removal, soft strip, facade removal, structural alterations, piling and underpinning. Work began on site in July 2015 direct with the client, a pre-agreed novation to main contractor Wates, occurred in February 2016. Works are due to fully complete in June 2016.

Asbestos removal proceeded in advance of the soft strip operations. An external scaffold was erected to encapsulate the building while the soft strip proceeded. Cantillon designed the scaffold to cater for as the main contractor's early stage cladding bracket installation to remove time from the front end of their programme. Precast façade units and external precast risers were removed along with the punched windows. Edge protection was fitted, coordinated with the main contractors follow on works. Roof finishes were removed and temporary waterproofing was installed to minimise the amount of water entering the building.

A number of key structural elements were removed as part of the structural alterations aspect of the package. Cantillon's in house engineering team designed and coordinated the temporary works scheme in coordination with the early stage permanent M&E installation to be undertaken as part of the main contractor's works to ensure that this could proceed unimpeded.

The external scaffold was cantilevered out on various elevations to allow piling works to progress within the basement area, adopting this strategy, Cantillon were able to reduce the programme and allow the main contractor to commence his critical works within the basement earlier. The majority of the piles were placed within areas of restricted headroom. Drainage slots were formed within the existing basement slabs to facilitate the installation of new drainage.

Mindful of a number of tragic incidents involving cycles and HGVs within the Old Street area, Cantillon, in conjunction with the client GPE and the Met Police, instigated a number of cycle safety events, inviting members of the public, other local construction sites and developers to participate to raise awareness of the risks and control measures.

Full asbestos removal of mainly AIB panelling from across site, mechanical and soft strip - In tandem with maintaining retained drainage the installation of weather protection was an agreed combination of 2 general approaches. Roofing structures to cap the top of exposed lift shafts, staircases and diamond cut slab openings at roof level were formed using timber and torch-on felt. Exposed slab areas were coated with a waterproof, brush applied paint which could be laid upon damp surfaces. This was of great benefit considering one of the wettest winters on record.

The technically challenging aspect of the cut and carve demolition wasn't just the sheer number of temporary work schemes, or the careful consideration of load paths and forming rigidity back into the structure when key beams, columns and shear walls had been removed. Nor was it the managing the working processes over multiple floors simultaneously. Rather, it was the TW relationship to the positioning of the permanent works.

Enabling, underpinning and piling took place within the basement arenas whilst cut and carve works progressed above. Restricted head height access points meant only small machines would fit through to do the works.



Slots through the RC slabs were diamond cut and then broken out. Some pile locations also had nominal horizontal clearance to adjacent structure. Out of the 54 piles over a third were constructed using a Super Kitten rig, the remainder with a Klemm 702. Concrete to the piles was fed from a pump via a static line. These, and the drainage enabling works, were completed on time for the main contractor.

The scope of works did change significantly upon the discovery of wood wool former (instead of the hollow pot former) within the floor construction to one of the building wings. After much coordinated deliberation of repair vs demolition costs and program, the decision was made to remove the building wing down to first floor slab.

We have worked with the client to facilitate their requests. One such request was to make space available for an initial mock up area, subject to our progress on site. They instructed us to work slightly out of sequence in one area of the footplate (soft strip, screed and precast unit removals) as well as to expose RC structural elements, install mock up lighting power supply and facilitate various visiting trade

contractors access to install, check, tweak and ultimately disassemble it.

As part of Cantillons continued local liaison and public welfare interest we organized in tandem with the MET Police and TFL a cycle safety event in November 2015. Members of the cycling public were able to take a break from their morning commute, eat a snack and take a hot drink while their bikes had a safety inspection. They were also given the opportunity to view the world from a lorry driver's point of view. A cab was parked up into which they were invited to sit in the driver's seat. From this vantage point they were able to assess blind spots, even with all the mirrors and cameras available to the driver.



On site, we combated the tight space by specifically having scaffolding designed to cantilever out of the buildings above ground floor along 3 elevations. This freed up space for materials to exit internal chute, be processed and loaded in to attending vehicles. There is also the tower goods hoist which saved on mobile crane attendance and enabled small plant and materials to be transported vertically at a moment's notice between ground and 6<sup>th</sup> floor level. Further to any more additional works, progress on site is good and we are on program for our completion date.

