

WHITE COLLAR FACTORY

Client: DERWENT | Duration: 32 weeks | Value: £3,000,000

As the only contractor to identify problematic issues at tender stage and offer a well executed programme, Cantillon were awarded the 100 City Road project from Derwent. The site was located between City Road and Old Street roundabout junction and consisting of five buildings, each of varying size and construction. The largest building, 9-storey Transworld House located on City Road alongside the smaller, 6-storey Sophia House and 6-storey Featherstone House.



Scaffold was erected to the entire perimeter of the site to provide protection to the busy surrounding roads and footpaths - approximately 270 linear metres spanning 5-9 storeys. One elevation had a subway access running the full length which was extremely congested and kept live for the duration of the works, TFL consent had to be sought prior to erection of the scaffold. Noise, dust and vibration monitors were positioned around the site perimeter targeting the most sensitive positions where residential properties were extremely close by.

Internally the scaffold was designed to cantilever out from the second floor to allow central site demolition of the lower structures to progress as well as high level demo to the buildings on the perimeter of site.

The asbestos division gained access to site and carried out a full asbestos survey to supplement the surveys done previously. This survey identified additional AIB panels in various locations which were all removed within the existing programme. The main areas of asbestos identified on the original survey included wall debris in the boiler room and asbestos lagging in the car park. Due to the size of the site the asbestos removal and soft strip worked concurrently with strict procedures in place to provide segregation and a safe working environment for all whilst maintaining a tight programme.

The site itself was a large island site and in addition to the buildings above a marketing suite had been erected for sales for the follow on stage. Located in the central area of the site, a single floor constructed on a metal framework standing 20m high with access through Communication House.

During the initial phase on site the marketing suite had to remain operational with safe access provided at all times, while carrying out the asbestos removal, soft strip and low level demolition. The marketing suite was then demolished later in the duration of the project.

Demolition commenced with low rise structures to create an access point to site, then the central buildings were demolished using a high reach excavator to create working room and processing areas for the demolition to the perimeter buildings, scaffolding was being erected to the 9-storey tower (transworld) followed by the remaining buildings around the perimeter of the site. Due to the high level of public pedestrian and vehicle traffic surrounding the site these buildings were demolished on a floor by floor basis using mini plant.

Starting with the tower and as the demolition reached the levels of the other buildings they would also be demolished bringing them all down together.

Due to the high volume of foot traffic as well as two entrance ramps to Old Street tube station, heavy duty gantry protection was erected to enable demolition of a cantilevered slab over the public footpath of 100 City Road, while maintaining access at all times.

The whole project was carried out around three live sub-stations, the most critical one in Featherstone Street fed a vast number neighbouring properties including restaurants, offices and residential accommodation. All substations were protected by scaffold crash decks and waterproofing to enable them to continue working unaffected throughout the works. All demolition was completed around them before they were eventually disconnected.

Following the demolition the basement slab had to be broken out where new piles were positioned and the ground probed and obstructions removed. This included a slot around the entire perimeter of the site for the new secant wall. Prior to demolition the team installed steel raking props to the basement walls to retain the walls followed ground slab removal. When breaking the perimeter slot out additional propping had to be installed in the trench as it was broken out and following probing a special pile mix concrete was used to backfill the trench.

To aid the following construction process a piling mat was installed designed to a level so the props could be removed and the basement wall could safely cantilever and support the footpath and roads beyond enabling the piling to be undertaken unobstructed.

Featherstone House 1 required the façade and bay immediately behind retaining. The remaining part of the square building was demolished in to an L-shape one behind the façade. Our engineer designed bespoke steel cross bracing located between steel channels with back propping between the floors to reinforce the façade and stabilize the remaining part of the building. This design was developed so all temporary works were internal to provide the best possible solution for the client and the following building works.

Featherstone House 2 was only soft stripped but due to the demolition of the buildings butted up to it internal structural partitions were design and installed to provide additional stability.

