

BOROUGH VIADUCT WIDENING SCHEME

LONDON SE1

Skanska appointed Clifford Devlin to carry out the enabling works at Borough Viaduct which involves the demolition of several structures to make way for a new section of viaduct and accommodate additional through traffic from London Bridge Station.

The project, which is part of the £5.5 billion Thameslink programme, is designed to upgrade London Bridge Station and allow for an extra 50 percent rail capacity at peak times. The enabling works were sequenced in four distinct phases:

Phase 1: 16-26 Borough High Street

Following the strip out of various arches and removal of a few small structures (to make way for piling works) we commenced the demolition of a block of four-storey buildings on Borough High Street.

Demolition was carried out in a careful, progressive manner on a top-down, floor-by-floor basis using hand-held tools to minimise noise, dust and vibration emissions to the surrounding area.

A T3 possession enabled us to erect a scaffold screen to the rail-facing elevation to prevent debris and dust from entering the live rail environment while the high level structure was demolished. This allowed most of the works to be completed alongside the operational railway in normal working hours.

Phase 2: Borough Market

A section of the new viaduct will pass through a section of the Borough Market and the next phase involved the removal of part of the Market's iconic roof (by others).

A number of traders were relocated before we commenced carefully removing the polycarbonate glazed sections of the industrial roof which is not to be retained, concrete channels and finally dismantling and removing the roof's steel trusses. Our Asbestos Division was called in to remove ACMs from roof vents under controlled conditions.

Discipline: Demolition & Asbestos Removal

Duration: 9 months

Value: £1.2m

Principal Contractor: Skanska

Client: Network Rail



Phases 3/4

Phases 3 and 4 involved the demolition of 3 blocks in Bedale Street, the removal of the roof and top floor of the Wheatsheaf Public House and the demolition of a 4-storey retail/office block at 11-15 Borough High Street.

This required the installation of a steel-frame temporary works to support the adjacent structure which borders the main road.

Health & Safety

Despite discharging one of the more high risk and technically demanding phases of the project Clifford Devlin was awarded Skanska's monthly safety award for topping its sub-contractor health & safety league table at the Borough Viaduct project.

The health and safety league scheme, which has been introduced to all Skanska UK Civil Engineering sites is designed to implement the company's health and safety procedures across all of its sub-contractors and create some uniformity within its supply chain.



Environment

A number of environmental measures were implemented to minimise disturbance to the local community and ensure daily life in the area continues unabated during the course of the project. We were able to apply our experience of inner-city demolition and, in particular our expertise in pollution control, to the rail environment.

The demolition techniques we used were better described as deconstruction as they involved careful, progressive dismantling of the structures, typically using hand-held tools to minimise noise and vibration. Dust was suppressed by erecting independent scaffold screens and by applying a fine water spray to the workface - using special air/water blowing machinery - that forms a mist minimising the dispersal of air-borne dust particles.

A traffic plan to minimise disruption to the local traffic system was submitted to and approved by the London Borough of Southwark / TFL.

Clifford Devlin via Skanska liaised regularly with the market traders to ensure they were fully informed and had a means to air any comments. Given the intrusive nature of the project on the local environment remarkably few complaints were received.

Waste management was targeted as a key issue for this project. Each type of waste created by the project was quantified and recorded in a Site Waste Management Plan which tracked their recovery and destination. Demolition arisings were segregated into individual waste streams on-site or at Clifford Devlin's London-based depot.

Timber, glass, ferrous and non-ferrous metals and plasterboard were placed into skips and removed to local recycling centres. Over 100,000 bricks were recovered and stacked for re-use. Concrete aggregate was crushed and used on-site for infill or as a piling mat.



We found Clifford Devlin to be a very professional and competent partner during the enabling phase of the Borough Viaduct project. They were pro-active in devising solutions to the many obstacles we have encountered and successfully minimised disruption to the local community during the demolition of High Street premises with very few, if any, complaints raised by occupants of the adjoining Borough Market.

Susan Fitzpatrick, Project Manager, Skanska