LAING O'ROURKE

Laing O'Rourke London & SE Limited

Contract Number:

Outline Method Statement for:

105 Tottenham Court Road

Package:

Reference No.

Revision	Prepared by	Date	Approved		Date
0	G.Mercer	16/5/05	Laing O'Rourke London & SE Limited		16/5/05

Control Number	Issue Date	Received Please sign, photocopy & return	Date

Method Statement

SCOPE OF WORKS

The works include the demolition of the existing building, existing pile cap removal and pile probing. This also includes the installation of a temporary package substation and the decommissioning of an existing substation. The reconstruction works include the excavation and construction of two basements and the construction of a ground floor and six upper floor levels. The foundations are bored concrete piles with pile caps. The structure comprises of a glass clad post tensioned concrete frame. The internal finishes being primarily of painted drylined walls, raised floors and suspended ceilings. The project also includes the installation of 5 lifts and the installation of mechanical and electrical services.

WORKING HOURS

Mon to Fri : 8.00am to 6.00pm
Sat: 8.00am to1.00pm

DEMOLITION

Prior to structural demolition all statutory notifications will be in place.

Scaffolding & Protection

A fully sheeted scaffold will be erected, complete with protective fans on all exposed external facades. Such scaffolding will also be erected around those areas currently occupied (however we shall tie to the structure using Hilti ties rather than ties through window ways in such locations). The access to Cypress Place will be bridged over to maintain vehicular and plant access to the site. The internal bays immediately by the Party Walls will also be scaffolded to allow access for carefully cutting back the structure up to the Party Wall line. We shall also be erecting scaffold to the underside of the heavy perimeter beams at high level to Whitfield Street – without such scaffold decking we consider the demolition of these perimeter beams to be unsafe. We also propose to erect a 2 storey high scaffold screen in the courtyard which will run between the corners of the Third Party properties next door – the screen will be sheeted in monarflex and raked back to ground floor level within our site. All scaffold erection and dismantling will be strictly supervised by a competent scaffold foreman in conjunction with our Site Manager. All scaffold structures will be furnished with a handover certificate prior to use. The scaffold F91 register will be completed and updated weekly. The scaffold will be tied through existing window openings and around existing structural elements at approximately 25m² intervals. All scaffolds will be struck progressively along with the demolition, maintaining a height of 1.5m above all working levels. The appointed specialist scaffold sub-contractor will be experienced in demolition operations. If any scaffold is to be erected on or over Third Party property it has been assumed that permission will be obtained by the client for this. A method statement, risk assessment and training certification for scaffolding company will be provided prior to works commencing. Method Statement to comply with BS5973 standards.

Hoarding

The hoarding will be erected around the perimeter of the site to an agreed line. On completion of the demolition the scaffold will be struck and the hoarding supported along the permanent line. Safety signage will be provided on hoardings and a gated access allowed for from Maple Place into Cypress Place.

Access

Access will be from Cypress Place with allowance for pedestrian access at all times to the substation. We are aware of the 10' 6" access under Cypress Place and have chosen to live with this unless it can be demonstrated that the below ground services allow a slight reduction in ground levels to improve the headroom. We have chosen not to demolish sections of the first floor as the transfer slab and beams at first floor seem (without access to structural drawings) to be somewhat substantial and their demolition is likely to require substantial temporary works.

Asbestos Removal

We have allowed for removal of asbestos as identified in the tender survey. As the demolition progresses, we will undertake a full and destructive on-going watch to ascertain the existence of any additional asbestos in locations that were previously inaccessible - the client will be notified if any is found. Strip-out Work will commence by hand and mini plant as soon as is possible. Debris will be chuted internally to ground floor for removal by machine mounted grab. We clearly shall work around the live tenants prior to them vacating.

Enabling/Investigative Works

We shall undertake any investigative works necessary to demonstrate the floor loading capabilities of the roof and other floors prior to deciding the size of midi-excavator we plan to use on these floors. We also reserve the option of back propping these floors if required.

Preparatory Works (i.e. well holes and access for plant)

Debris chuting zones will also be created (indeed these may well be those also used for the strip out). We shall also back-prop (as may be indicated to be necessary from Engineering surveys) the locations where we plan to ramp the mini plant down from floor to floor.

Live tenants

We propose that scaffolding, hoarding and soft strip will commence prior to then, but without affecting their access.

Structural Demolition

We plan to demolish the structure entirely from within the courtyard with external scaffold screens and indeed a 2 storey screen to the courtyard. The demolition will be by a combination of mini excavators operating off the floors (for the roof, external and Party Wall bays) and high reach excavator plant for the internal perimeter bays. Conventional large excavator plant will take over form say second floor downwards. Demolition will progress thus down to and including ground slab.

Support works

The supports we envisage being required are: The tying back of the 101 Tottenham Court Road Party Wall on a floor-by-floor basis using channel sections at each floor with threaded tie rods @ 2m centres. The raking shore support of basement perimeter walls based onto the existing basement slab – required to the basement walls facing Tottenham Court Road, Maple Street and the short section facing Cypress Place. These supports become the property of the client on completion of our works.

Party Wall Monitoring

The Party Wall to 101 Tottenham Court Road will be monitored by the following process:
Installation of reflective survey targets at each floor level Monitoring of the same from a fixed external Control Point. Replacement of each level of targets as demolition and weatherproofing take place. The frequency of the monitoring we suggest is as follows:
Once every week or as each floor is demolished (whichever is the most frequent)
After demolition we suggest monthly monitoring by the main contractor unless / until other potentially disturbing works take place (eg underpinning, reduced dig, piling etc…)

Completion

As the works are completed the site will be left clean, tidy and secure for handover to the client. The S O will be notified of any necessary amendments or revisions to this Method Statement during the progress of the works.

CONSTRUCTION

Public Protection

A specific risk assessment will be written to reflect the anticipated risks to the public and what measures will be taken to reduce or eliminate those risks. As a minimum a public protection gantry will be erected along Tottenham Court Road and Maple Street. The pavement will be closed in Whitfield Street and the public redirected to give access to other end of the street. All wagons entering and leaving site will under the control of a banksman. Temporary barriers will be erected to prevent the public from entering traffic routes when deliveries are being made.

Substation

Having had discussions with Camden, with Arup in attendance, it has been agreed with the local authority that a package substation can be positioned in Whitfield Street. This is pending discussions with EDF but does provide a possible location out of the build area until the new substation can be built.

Piling

Once a suitable piling mat has been introduced piling can commence. A rotary auger piling rig will be delivered to site and erected along with all associated equipment, casings and appropriate augers. It is our intension the pile from ground level starting from the Whitfield Street side thus releasing the excavation for the basement at the earliest opportunity. Along Whitfield Street the piling rig will be used to bore the foundations for the temporary King Post wall to support the excavation for the basement.

Substructure

As soon as practicable, excavation of the basement adjacent to Whitfield Street can commence along with the installation of the temporary works. Deliveries at this stage being made via the Maple Street entrance. Until the party wall foundations on the Tottenham Court Road side are established the extent of the works here are hard to define. But again the piling here will be carried out from ground level and the area then excavated and the basement structures installed. During the installation of the Ground Floor slab a soft spot will be created as shown on the Mechanical and Electrical drawings allowing for the basement plant to be installed at a later date. The tower crane will be erected during this phase.

Superstructure

Construction of the office core walls east and west will commence First from Ground to Roof followed by the residential area core walls from ground to first. The residential slab and core wall cycle will follow during which the tables for the office structure will be formed and the office slabs will be poured following the progress of the residential slabs. It is envisaged that an infill strip allowing for access to the post tensioning strands will have to be left against the residential perimeter wall. This will have to be filled in insitu once the tensioning has occurred. It is anticipated that tensioning will occur along the Maple Street and Whitfield Street elevations, thus avoiding the busy Tottenham court Road elevation. This process will work its way up the building until the roof is poured.

The Building Envelope

Once the structure has reached roof level the installation of the curtain walling can commence. The pre-assembled unitised panels will be delivered into the loading bay in Whitfield Street where they will be lifted off by crane and placed directly onto the building. With the use of the unitised system there is no need for a perimeter scaffold and all placement of the units can be safely carried out off the floor slabs. The terracotta elevations will be installed from traditional tube and filling scaffolds as will the perimeter blockwork installation. The South elevation will as far as possible be fitted around the hoist run-off platforms, with the final elements being installed after hoist removal, and the associated interface works completed.

Roofing

Once the frame has reached roof level waterproofing can be installed during the envelope installation period, after a period allowing the roof slab to dry out sufficiently. This allows the building to be watertight at the earliest opportunity. The atrium roof will be installed in two sections. Initially the half over the scenic lifts will be installed to allow the lift installation to commence before the removal of the tower crane,

Mechanical and Electrical

It is our intention to prefabricate the mechanical and electrical floor plates and risers. Using the designated delivery area in Whitfield Street the floor units will be crane onto loading bays cantilevered from each floor level. They will be placed on trolleys, wheeled into position and then lifted and fixed in position. The risers will come as multi-storey length structures pre fitted and dropped vertically down the risers using the tower crane.

Office Toilets and Finishings

Once watertight the finishing's can commence. It would be again our intention to prefabricate the toilets to ensure speed of installation and quality of finish. The toilets would again be delivered into Whitfield Street and distributed on the floor via the floor loading platform. Associated drylining and decoration ceilings and floor installation would follow.

Residential Fitout

Residential fitout will run ahead of the office fitout, this allowing the residential areas to be finished earlier. The mechanical and electrical installation will be installed insitu and all materials will be fed via a goods hoist.

Lift Installation

Particular care will be taken for the lift installation, especially the scenic lift installation as this is exposed. As stated before, half of the atrium roof would need to be installed to allow the instillation of the scenic lifts. The goods lifts will be installed first, as these will be used during the works for vertical materials distribution, with beneficial use being negotiated with the successful lift supplier.

Site Logistics

Camden have agreed that Whitfield street and the pavement adjacent to the proposed site can be closed and brought with the site boundary. This then gives a clear open area for deliveries and site access egress. In fact, with the use of the existing Cypress Place entrance in Maple Street a circular route can be established in and out of the site.

A tower crane will be used to distribute materials around the site place concrete, install the curtain walling, distribute the prefabricated mechanical and electrical units and toilets.

A passenger goods hoist will be used to also deliver materials vertically up the building. Temporary waterproofing will be undertaken around the hoist openings to ensure the fitting out works can proceed in good conditions. This will feed both the residential and office areas of separated loading gantries. The curtain walling in this area will be installed once the hoist has been dismantled. We will arrange for beneficial use of the goods lifts in the building, so that as soon as the lifts are available, the hoist will be dismantled.

Welfare

Camden has agreed that a single layer of cabins can be installed over Whitfield Street on a scaffold gantry. This will allow us to create an area for welfare over this area. Included in this is the Aurora face recognition site access system. This allows us to control site access and display safety information to site personnel.