

## **1 - 2 LINCOLN'S INN FIELDS WC2A 3AA**

**SUBMISSION BY FWA LONDON RESIDENCES AS A RESPONSE TO THE  
CONDITIONS FORMING PART OF THE PLANNING CONSENT**

# **CONSTRUCTION METHOD STATEMENT**

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# **1 - 2 LINCOLN'S INN FIELDS WC2A 3AA**

## **SUBMISSION BY FWA LONDON RESIDENCES AS A RESPONSE TO THE CONDITIONS FORMING PART OF THE LISTED BUILDING CONSENT**

### **Introduction**

During the tender period we have reviewed the tender documents and visited the site with our core management team to understand the condition of the existing building and the logistical constraints of the site.

From this understanding we have produced a project specific document which outlines our proposed logistics, programme and construction methodology.

### **Site Access.**

Construction Traffic will approach the site via the A4200 Kingsway and make a right turn onto Remnant Street which leads into Lincolns Inn Fields. Delivery vehicles will unload directly in front of the site and for structural components for the roof works to the side of the site will be offloaded in Gate Street. The road configuration dictates that the traffic will flow in an anti-clockwise loop if accessing Whetstone Park. On leaving the site vehicles will continue on Lincoln fields and turn right into Newman Row / Serle St before exiting onto Carey Street.

There will only be a single point of entry into site for construction personnel which will be via the front basement entrance. A gateman will be in attendance during site hours to administer a controlled access regime for operatives and sign in visitors.

### **Construction Vehicle Management & Offloading**

The road size and configuration within the locality of the site means that all materials will be delivered on flat bed type vehicles, articulated lorries will not be suitable for this project. On reaching the site delivery vehicles will be met by a traffic marshal who will guide them into the unloading zone and will be in two way radio contact with the site management team.

In order to lift materials up to roof level we are proposing to locate a hoisting provision on the Lincoln's Inn elevation. Scaffold loading decks & walkways will be configured to allow safe access for operatives to receive materials at all high levels through protected window openings and to distribute them to the workfaces.

Deliveries will be scheduled by site management, since there is only sufficient space in the unloading zone for one vehicle at any one time, In the event of unscheduled vehicles arriving whilst the loading bay is occupied, the vehicles will be sent for re-circulation and the driver notified of a revised delivery time.

## **Site Set Up**

Initially we are proposing to locate our site offices and welfare facilities inside the building until such a point in the programme that the new slab and service trench in the lightwell is complete at this point a scaffold and gantry would be erected on the Lincoln's Inn Fields elevation. It would then be the intention to have offices and welfare operational on the gantry for the beginning of 2015. We would propose to double stack cabins and for the gantry setup to comprise 4 cabins altogether. Access to the offices would be from a hoarded off stair enclosure at street level controlled by key code access. The enclosure would be configured to maintain a pedestrian access route along the footpath. We have completed similar projects in the area where we have utilised this sort of set up and successfully negotiated all the necessary permission with the local authority

## **Programme Summary**

Our Construction Programme is calculated to be 75 calendar weeks however the Listed Building Consent requires, under condition 5, that the central staircase be carefully taken out and stored prior to commencement of the main programme. An enabling programme will therefore be used to reach agreement for and to carry out the staircase removal and to undertake any other necessary activities such as asbestos removal.

## **Mobilisation**

During the enabling works period we will undertake our normal mobilisation activities to ensure an efficient start on site as follows:-

- Contact would be made with the local authority in order to obtain the necessary permissions for scaffold, hoarding and skips etc.
- The supply chain would be engaged in the detail programming of the works to enable a contract programme to be finalised this would be used to develop an information required schedule for agreement with the design team.
- A formal Health and safety plan would be established for the project
- Initial sub contract orders would placed in line with our proposed procurement schedule

A package of opening up works and detailed survey would be undertaken to further familiarise the construction team with the nature and condition of the existing building. Externally a schedule of conditions and a photographic survey would be carried out and agreed to all external areas, including the roads, pavements, adjacent buildings and in particular the existing façade and roof.

Before commencing on site the method statements for working with and adjacent to the heritage features will be put in place together with protection measures and permits to work.

## **Construction Methodology**

### **Soft Strip**

Soft strip will generally be confined to the basement areas. The existing front door will be removed and replaced with a temporary secure door. The existing door will then be stored and refurbished off site. Protection measures will be undertaken to heritage features.

### **Demolition**

The major element of demolition will be the existing lift shaft and spine wall. The key to commencing this operation will be providing a temporary roof to the rear portion of the site thus allowing the lift shaft motor room to be demolished at roof level without compromising the weathertightness of the building.

Once the listed staircase is removed (pre-contract) off site, then the external walls to create the new light well can be progressively demolished down to the ground floor.

### **Scaffolding & Temporary Roof**

The scope of roof works dictates that the building will need a temporary roof until the demolition, structural remedials and re-roofing works are complete. To support this roof structure an independent scaffold will be required. We have considered the constraints on each façade. The scaffold to the front of the building will need to be founded at basement level. Accordingly we have sequenced our programme to progress the front underpinning, service trench works and new slab before this front scaffold is erected.

Scaffold to the side elevation (Gate Street) will be contained on the footpath. We would propose that this footpath be closed to pedestrians.

Scaffold to the rear elevation will be designed to have the standards inset on the narrow footpath. Approximately 5m above the carriageway the scaffold will cantilever out this will require substantial tying to the existing structure and ladder beaming at high level.

Since the works to the light well could delay the front elevation scaffold from being erected for the first 4 months of the project and given the criticality of the removal of the existing lift motor room, we would propose to erect the rear and side elevation scaffold to enable the rear portion of the temporary roof to be erected at an earlier stage in the project. Considerable design work will need to be undertaken to ensure stability in the temporary condition and to maintain weathertightness of the exposed area of roof.

### **Basement Structural Works**

Underpinning will be commenced at the very earliest stage in the programme within the front area and vaults before progressing inside the building. The underpinning will be carried out with an optimum labour resource to a carefully planned 'hit 1 miss 2' sequence.

The lift pit rear of the site is programmed to be progressed as soon as the adjacent underpinning has been completed. Lowering of the basement formation level would then

be undertaken using a mini excavation plant. Material will be loaded out through the light well and up to street level either by using a conveyor or a small platform hoist in the corner of the front area.

Service trench excavation and blinding will follow, work areas and access routes will be coordinated to allow underground drainage operations to progress concurrently. The completion of service trench walls will allow filling to formation in preparation for the new basement slab. Temp ply covers will be installed to the service trench, the precast covers are scheduled to be installed much later in the programme after the installation, lagging and testing of services within the trench.

### **Structural Works To Upper Floors**

Structural works on the floors will be carried out top down to progressively follow the soft strip. Floor strengthening works will be undertaken in defined work zones where the temp ply floor will be removed. The new joists will be fixed into position and steel plates bolted in where required. As soon as the floor structure has been completed in the defined zones, reinstatement of temporary ply floors will be essential to prevent a fall hazard.

Where loadbearing walls are removed a temporary works regime will be implemented to prop the floors in the temporary condition until the new structural steel beams are in place, in some locations new columns are founded down at basement level to pick up beams at ground floor level, accordingly the installation of these columns would be coordinated with basement works albeit the specific baseplate connection detail would dictate the timing of installation.

Once the floor strengthening is complete and the timber floors have been reinstated, redundant openings will be filled with masonry and stitched into the existing structure.

### **Roof Works**

Our programme splits the roof works down in to 4 key areas which have different constraints:-

- Flat roof to rear of the building around lift shaft
- New Roof Terrace to Third Floor
- Rooflight over main stair well
- Re-roofing to existing pitched roof

The roof works will be progressed when all sections of the temporary roof are in place. Work will commence with a strip off of the existing coverings. Detailed inspection will be carried out of the existing roof timbers and the scope of remedial works agreed with the CA. It is suspected that some of the roof slates contain asbestos which will have to be dealt with by a managed process.

The rear section of new flat roof around the lift shaft is dependent on raising the level of the external wall and construction of the new masonry lift shaft. New RC beams and

steel support angles will be installed to provide support for the reconfigured roof structure and decking in the new terrace area and around the new rooflight structure.

New tiled roof coverings, single ply membrane and leadwork will follow the structural remedials and decking. Weather sensitive finishes will not be progressed on the floors until the new roof coverings are finished, ensuring the building is completely sealed and temperature and humidity levels are suitable.

### **Façade Works**

Facade works are dependant up on scaffolding being in place, in the case of the front faced this will be after the light well works are complete. The facade renovation works comprise minor masonry remedials, repointing and cleaning. A programme of window restoration and replacement where required will be undertaken before the final clean is done. All works to the façade are effectively off the critical path of work and striking of the scaffold will be dependent on completion of the roof works.

Security will be of paramount importance. All scaffolding will be alarmed and access points at street level will be fully secured. It is envisages that the scaffolding will be struck in advance of high quality finishes being installed.

### **BWIC M & E and Fit Out**

Following on from the completion of floor strengthening works and masonry infill's etc. builders works will be undertaken. This in part will have been done within the structural works time frame i.e. trimming out the floor joists to form the new service risers. The new service trench around the perimeter of the upper floors will be undertaken at this stage. Primary services distribution will then follow in advance of the main fit out works on the floors. Fit out will generally progress top down albeit internal works in the basement will not be subject to a resource lag and will effectively continue on from the completion of the structural works.

We recognise the intent to advance a sample room in one of the en-suite bathrooms on the second floor (R204). This will serve to rationalise key interface details at an early stage of the project and establish a quality bench mark with all fit out trades. It will also be an opportunity to showcase a finished area and manage the clients aesthetic and quality expectations.

An example of the activity breakdown on our programme within the bedroom / reception areas is as follows.

- First Fix Electrical Services
- Insulation Within Floor Void
- Install Perimeter Trench Heater Units
- Noggings Between Joists to Support Ply Infills
- Lay Ply Infills Between Joists
- Install Jupiter U/F Heating System & 12mm Firmax Board
- Temp Floor Boards
- Remove Exg Lining Paper to Walls & Ceilings Where present
- Hack Off Loose / Defective Plaster

- Strip Paint From Cornicing & Shutters
- Plaster Repairs to Walls
- Lime Plaster Repairs to Ceilings & Cornices
- Dry Lining To False Wall In TV Room
- Dry Lining to Box In Services Risers
- New Plasterboard M/F Ceiling & Skim to TV Room
- Drying Out Time for Lime Plaster Works
- Preparation & Initial Decoration of Walls & Ceilings
- Joinery Repairs
- Second Fix Electrical
- Fit Reclaimed Timber Floor Boards
- Hang Doors & Fit Ironmongery
- Final Decorations
- Final Fix Services inc AV Final Fix
- Fixtures & Fittings

Inspections and snagging will be an ongoing process as the areas are progressively finished, we have allowed a period of time beyond the completion of the last floor to ensure all areas are completed and fully cleaned and all building services have been commissioned and witness tested prior to handover.