1 Elm Park Road, Chelsea

Construction Method Statement

August 2014
CONTENTS

1. Introduction
2. Site Logistics
3. Communication
4. Site Security
5. Construction Sequencing and Methodology
6. Environmental Issues
1. Introduction

Content
This Construction Method Statement provides details of sequencing and construction techniques proposed for the construction of the proposed development.

In particular, the Method Statement sets out to address potential risks and impacts associated with subterranean construction in a dense urban environment.

To address these risks and impacts, the Method Statement addresses temporary works and construction techniques which take account of site investigations and soil testing carried out recently. This is essential to ensure the geology is capable of supporting the loads and construction techniques to be imposed, and to address the impact of the development on surrounding structures, utilities, infrastructure, etc.

The Method Statement further provides an overview of the project, outlining the sequencing for the general construction works. It also identifies anticipated site facilities, access provisions and other information necessary for the safe and proper running of the site.

Background Information
The existing property at No.1 Elm Park Road, Chelsea, consists of a two storey house over ground level. It is located in the Chelsea Park / Carlyle Conservation Area.

Planning Consent was granted (ref PP/12/04617) for a 3 storey property above ground, with a 2 levels of basement structure below.

Proposals for development of Construction Methods
Although this Method Statement addresses key construction methods, construction techniques will develop throughout the course of the construction programme, and as such Trade sub-contractors will be required to submit their Task Method Statements and supporting information to the Principal Contractor, for specific work activities as the work progresses.

When package trade contractors submit their task specific method statements, they will be required to provide the following level of detail;

- Description of the work and relevant drawing & specification
- Sequence of the work operations and details of the access & egress of the workforce and materials
- Details of any plant and equipment to be utilized
- Labour levels to be used including relevant skills & training requirement
- Appropriate risk assessment of the operations
- Levels of supervision

The Method Statement also identifies for all concerned parties the manner in which the site will be run. This will ensure that all parties are aware of site organisational arrangements.

The Project Outline Construction Method Statement that follows includes information regarding the following areas:

- Site Roadway / access & egress / cleanliness
- Vehicle parking for site operatives and visitors
- Security and Site Induction
- Perimeter Security Fencing/Hoarding
- Temporary offices/Welfare/Accommodation
- Materials Deliveries and Storage
- Noise / Dust
- General Construction Sequence

2. Site Logistics
2.1. Site Establishment

Following Demolition of the existing house, site setup and welfare facilities will be erected to minimize disruption to the surrounding properties and traffic route. A 2 storey gantry supporting welfare cabins will be erected above the pavement to the right of the existing driveway. This will maximize space within the boundary and enable site traffic vehicles to enter the site and keep off Elm Park Road.

Site access and egress will for all operatives and visitors will be via the pedestrian gate, located immediately the right hand side of the vehicular access gate. Both gates will remain securely locked out of site hours.

During the demolition phase a 2.4m hoarding will be erected around the perimeter of the site, constructed of waterproof plywood and solid timber supports. In addition, an 800mm debris netting will be fixed to the top of the hoarding to maintain light to adjacent properties but provide additional protection. On completion of the demolition works, the basement contractor will review all hoarding and improve / adjust to the satisfaction of the Principle Contractor.

Due to the width of Elm Park Road and tight turning circle, it will be necessary to suspend 2no. parking bays directly in front of the site. This will enable vehicles to enter and exit site along the one way street. This requirement will be monitored throughout the duration of the works.

The top-down construction method (further detailed below) will also provide and clean working surface at ground level for storage and deliveries on the site itself. This is inclusive of concrete deliveries and removal of soil during excavation works.

The site office and welfare facilities will be located on the gantry and access via a scaffold staircase within the site boundary. Liaison with the local authority for the appropriate hoarding & skip licences and for parking bay suspensions will be concluded prior to implementing such works.

Existing services will be removed prior to demolition works and isolated by the relevant authorities. New services will be installed as works progress when required. A temporary builder’s supply will be installed upon commencement of the basement package to provide power for the welfare facilities and contractors.

2.2. Site Access and Egress

Site access and egress for all persons and vehicles will be made via the existing entrance to 1 Elm Park Road.

All pedestrian access will be made via a separate gate to the right hand side of the vehicular entrance. A designated safe route will be made to the site and welfare areas. Under no circumstances will operatives access site without signing in at the main entrance. Any changes to routes or procedures will be relayed to all staff via tool box talks and clear signage.

All site plant and delivery vehicles will enter via the main gates and be located off the site entrance. Under no circumstances will deliveries or site plant be located on Elm Park Road or block the local area. All vehicles must also comply with the Project Traffic Management Plan – see Appendix B. A call-off procedure will be implemented to ensure local roads are no impacted by construction traffic.

No contractor car parking facilities will be possible on site or be provided adjacent to site for any vehicles whatsoever. All site personnel and visitors will have to make their own way to site and be responsible for their own parking arrangements, if using their own or company transport. They will also be actively encouraged to use Public Transport via Tube (South Kensington / Earls Court / Gloucester Road) or Bus.

All Contractor plant and vehicles exiting site will also be required to have wheels washed via hose at the main gate. The Principal Contractor will also be responsible for maintaining the cleanliness condition of the local pavement and road throughout the day, with a final hose down before site closure.

Signage positioned external to the site will reflect traffic management information for deliveries and skip drop offs/pick ups and the like. Due consideration to site access and the traffic management plan will be
required when scheduling larger vehicular deliveries by package contractors and for any mobile crane operations.

2.3. Site Working Hours

The site working hours are Monday to Friday 08:00 to 18:30 and Saturdays 08:00 to 13:00.

No work to take place on Bank Holidays, unless with prior agreement with RBKC and The Developer.

2.4. Site Deliveries

Hours for delivery / collection restricted to between 09:30 and 15:00 due to close proximity to the Church nursery and school on Park Walk.

Deliveries of materials outside these hours will be rejected, unless prior arrangements have been made with the Principle Contractor.

2.5. Traffic Management

Access for all vehicles to site will be via Park Walk and left into Elm Park Road. Vehicles exiting site will leave along Elm Park Road (one way) and left on to Beaufort Street, then left again onto the Fulham Road toward Brompton Cemetery.

Please refer to Vehicle Route Plan in Appendix B

2.6. Materials Storage

Storage on site will be located on the newly cast ground floor slab. Under no circumstances will materials be stored outside the site boundary. To minimise the quantities of materials stored on site all deliveries will be made on a ‘just in time’ basis, and taken to the work area.

2.7. Materials Handling and Distribution

Generally we envisage that materials handling will be performed by the Principal Contractor and their subcontractors. It is anticipated that the parties employed to carry out the following operations i.e. roofing, Lift Installation and M&E services plant suppliers will provide their own means of lifting equipment / plant (e.g. possible mobile craneage) to move materials around the site. The Principal Contractor will review the requirement of a common use hoist, driver and lifting beam up to the 3rd floor for contractors to use for material distribution up and around the building, although this will be of limited loading capacity.

2.8. Waste Management

The Principal Contractor will produce a Site Waste Management Plan (SWMP) for the project which will highlight the types of waste likely to be generated and propose whether the waste management action will be disposal, re-use or recycle etc for each type.

Removal of excavated materials from the basement ground works will be lifted out of the basement up to the skip at ground level via a grab machine and small plant. Excavated material will be removed from the skip periodically and disposed of appropriately.

2.9. Access Equipment

Test certification for all lifting and access equipment must be supplied to the Principle Contractor upon arrival on site. Trade Contractors must also provide evidence of regular/weekly checks of plant and equipment. Only competent personnel will be permitted to operate the equipment.

The use of step ladders/ladders will not be permitted, unless a written method statement/risk assessment is submitted and agreed, which confirms why other alternative means of access is not viable.
Subcontractors will be responsible for providing their own internal access equipment (eg, mobile towers, podium steps etc.)

3. **Communication**

In addition to the above noted site arrangements, the following issues/areas will also be addressed:

3.1. **Local Authority**

The Local Authority will be contacted if/as necessary in order to agree any signage requirements external to the site to ensure smooth flow of construction traffic making deliveries to the site. Subsequent meetings can be held as required to ensure that the Traffic Management System is working and to address any issues arising. They will also be contacted with regards to suspending the car park bays and also for the erection of the gantry in front of the property.

3.2. **Local Residents - Awareness and Liaison**

If/as required, handout information/ newsletters can be prepared indicating brief project updates of key dates, traffic routes agreed with the Local Authority, and also the site’s contact details, for issue to interested parties.

3.3. **Emergency Services**

The local emergency services will be contacted and will be made aware of the traffic routes agreed with Local Authority as applicable.

4. **Site Security**

The Principle Contractor will make adequate arrangements to provide all reasonable measures for securing the site against unauthorized entry onto the site from a Health and Safety point of view, and also for the prevention of theft from site and to prevent vandalism.

4.1. **Hoarding**

The main external working areas of the site will be secured to its full front and rear boundary with solid timber hoarding to a height of approx. 2.4m. These hoardings will be checked for security and adapted as necessary.

The main gate for vehicles will be constructed of steel and securely locked out of site hours. It will also be constantly monitored and only opened to allow access and egress.

The pedestrian gate will be controlled during working hours, and locked out of working hours.

4.2. **Security Guards**

As works progress Synergy and the Developer will review the requirements of a security guard to be in attendance during site opening hours. This will provide a ‘front line’ for the site’s security during the later stages of the project when quality finishes are being installed. The security guard will be positioned at the site entrance. One of his duties will be to ensure that people entering and exiting the site sign in and out. He will also make sure that anyone entering the site is authorised to do so, as well as patrolling the site to monitor the integrity of the security measures. He will also be performing the role of the overall site reception, having the responsibility for safely directing people to the site offices and welfare facilities.

The duties typically to be undertaken by the Security Guard will include:

a. Control vehicle deliveries to site
b. Personnel Access Control
c. Overall site reception
d. Issuing and management of site access passes
e. Emergency site evacuation.
f. Working in tandem with the Principle Contractor’s Site Management on induction and the issue of site passes.
4.3. Access to the Construction Site

Due to the site being in a residential area, all material deliveries will be agreed 24hrs in advance of their delivery to ensure that the surrounding highways are not congested with vehicles. This will also be in accordance with the agreed Construction Traffic Management Plan – refer to Appendix A.

5. Construction Sequencing and Methodology

The general project sequence is identified below although this may be subject to modification as the scheme evolves.

In particular, the sequencing and methodology of the basement substructure works include specific details of the excavation, temporary works and construction techniques as well as potential impact of the subterranean development on the existing and neighbouring structures. These are included in section 5.4.

The detailed programme will be developed so as to give continuity to trades thus aiding efficiency of the operations.

The programme has been divided into a number of areas. These areas of work are as follows:

- Asbestos Testing / Removal
- Strip Out / Landscape Foliage Removal / Site Clearance
- Demolition
- Piling
- Basement Concrete Works & Excavating
- Basement shell construction
- Concrete Superstructure
- Envelope Works
- Fit Out/ Finishes
- External Works/ Landscaping

Primarily the sequence of the work will be governed by the new basement construction as it forms the critical path of the programme. Following site clearance and demolition, the only activity taking place on site will be the basement and superstructure works. The sequence for these works is detail in section 5.4.

5.1. Asbestos Removal

An asbestos report was commissioned prior to the demolition of the existing property. No asbestos was found.

5.2. Strip Out / Landscape Foliage Removal

The strip out of the property will be carried out in 2 separate elements. Initially the garden will be stripped out and all shrubbery and foliage removed. Once this is complete the soft strip of the house will commence, followed by fixed items.

5.3. Demolition

Due to the construction of the property being predominantly brick (built 1959) a significant portion of the demolition will be carried out by hand tools. Once all services have been removed and isolated, mechanical plant will remove the final large portions and foundations.

The demolished material will be removed from site at regular intervals to ensure the site remains a tidy and safe environment. Each potential noise generating activity will be carried out with the appropriate noise reduction equipment with the use of baffles and silencers. During these works a limited use of a controlled water spray will be used to mitigate the possibility of dust migration occurring.

5.4. Basement & Superstructure Works
5.4.1 Site Investigations and Soil Test Results

In determining the design, sequencing and methods of constructing the subterranean works, it has been necessary to carry out site investigation works to determine:

- If the existing geology is capable of supporting the loads and construction techniques to be used.
- Impact of the subterranean development on existing and surrounding structures, utilities, man made cavities, etc.
- The possibility of instability, affecting adjacent properties.
- Impact of the subterranean development on drainage, sewage, surface water and ground water flows and levels.
- How geological, hydrological and structural concerns are to be satisfactorily addressed.
- Sequencing of temporary works, etc.

These site investigation works, including borehole sampling, trial pits, etc, are referred to in the subterranean Engineering Report by CDS and sequencing plans and sections included in Appendix B.

5.4.2 Sequencing of subterranean works

The general sequence for works will be:

- Install secant piled walls
- Construct capping beams
- Construct underpinning to boundary walls where appropriate
- Construct GF Slab
- Begin reduce level dig for basement.
- Cast basement slab.
- Construct basement lining walls.
- Begin reduce level dig for sub-basement.
- Install below ground drainage.
- Cast sub-basement slab.
- Construct lining walls.
- Construction of RC superstructure frame will progress simultaneously with basement structure following construction of ground floor slab.

Sequencing of the subterranean works is particularly important due to the potential risks involved. These risks, and mitigation of the risks, together with the sequencing works are referred to in the subterranean contractor’s Method Statement ref MS 038 included in appendix C, and sequencing of underpinning as shown on the drawings contained in appendix B.

5.4.3 Methodology associated with constructing the subterranean works

Construction Methods for each of the key subterranean activities, including piling, excavation, construction of slabs, construction of wall linings, etc are included in the subterranean contractor’s Method Statement ref MS 038 included in appendix C.

Supporting calculations are included to support the contractor’s proposed engineering methods and which take account of the findings of the Site Investigation works referred to above, and potential impacts outlined in the following section. These calculations are contained in appendix D.

5.4.4 Potential impact of the subterranean development on the existing and neighboring structures
Potential Impacts of the proposed subterranean development and methods on the structural integrity and natural ability for movement of existing and surrounding structures, utilities, etc are referred to in the subterranean Engineering Report by CDS included in Appendix B.

5.5. Envelope Works

The envelope works consist of:

- External cavity brickwork
- Roof lights
- Glazing
- Doors
- Single ply roof
- Green roof
- Cornicing and stone effect cladding

5.6. Internal Areas (Fit Out)

Following completion of the site clearance & demolition, the basement and superstructures the project is ready to commence with the building envelope and fit out phase.

The general sequence of works for the fit out will be

- Setting out
- External Walls
- M&E First Fix
- Internal Walls
- Pool Structure
- Lift
- Ceilings
- Closing up
- M&E Second Fix
- White Box Finishes
- Joinery
- Stone tiling
- Timber flooring
- Joinery
- Decorative finishes
- External decorative finishes
- Fixtures Furnishings & Equipment

5.7. External Works / Landscaping

External works and landscaping will commence toward the back end of the programme. The scope of works is not extensive, however, there are several planting areas that will be backfilled with soil. The front entrance, driveway and rear patio areas will be paved.

The outline scope of works will be:

- Insulation and waterproofing
- Soil backfilling
- Tree Planting
- Shrubbery
- Paving
- Boundary Walls
6. Environmental Issues

Methods of construction will be selected to minimize disruption and nuisance to the local environment. The selection methods for construction and items of plant and equipment suitable for the works, will be used to minimize nuisance such as noise, vibration and dust.

6.1. Dust

During the strip out, demolition, structural alteration and builders-work operations, a limited use of a controlled water spray will mitigate the possibility of dust migration occurring. Dust which is generated from other construction works will be controlled by damping down with water, dust sheets, etc. All rubbish, dust and debris will be cleared away and not allowed to accumulate on site.

Where ever possible plant that provides dust extraction will be used.

6.2. Noise

Where ever possible we will ensure that each potential noise generated activity is carried out with the appropriate noise reduction equipment, by the careful selection of plant, at times compliant with agreed working periods and that all plant and equipment will be fitted with suitable baffles and silencers.

Noise levels will be closely monitored throughout the period of construction. Where working adjacent to occupied areas we will undertake test drilling to establish acceptable noise levels. We can also agree noisy work periods following the aforementioned tests.

6.3. External Temporary Lighting

Temporary lighting for construction activities will be located to minimize disturbance to adjacent properties. The gantry housing the welfare and offices will be lit at night at all times as per Highways requirements.

6.4. Footpath

The footpath at the front of the property is to be maintained at all times. The footpath will remain open and run below the gantry and welfare / office units. The Principle Contractor will ensure that this route is protected at all times and kept in good condition.

The Principle Contractor will also monitor the condition of the site entrance pavement due to the heavy loads expected to enter and exit the site. If required this will be protected or replaced with a temporary hard wearing surface, prior to reinstatement.
APPENDIX A – Construction Traffic Management Plan, including Vehicle Route Plan

APPENDIX B – Subterranean Contractor’s Engineering Report (CDS)

APPENDIX C - Subterranean Contractor’s Method Statement and Risk Assessment (Trenchco)

APPENDIX D – Engineer’s design calculations (Fluid)