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CONSTRUCTION METHOD STATEMENT
21 CEDARS ROAD, BARNES, SW13 0HP

This Construction Method Statement is produced for submission to the London Borough of Richmond upon Thames planning department for planning application only and should not be used for any other purposes, e.g. Party Wall Awards.

SCOPE OF WORKS

A new basement is to be constructed under the existing footprint of the property creating a new family room, utility room, bathroom and study. Front and rear light wells will be created to provide both natural light and ventilation to the basement.

DESCRIPTION OF 21 CEDARS ROAD AND ADJOINING PROPERTIES

The existing property is built over four stories ranging from cellar to second floor, including an existing loft conversion. The property is an end of terrace and is of masonry construction with timber floors to all levels and timber rafters to form the roof.

The property is in a sound condition structurally. The adjoining properties are of similar construction and looks to be in sound condition from an external non – intrusive visual examination.

SOIL CONDITIONS

To support this Construction Method Statement we confirm that we have undertaken a trial hole to formation level on site to determine the local soil conditions (Please see appendices for trial hole log and description of geology). The results of the trail hole show the ground encountered generally matches that expected in the area, being Kempton Park Gravel over London Clay. The level of the London Clay is approximately 6.5m below ground level.

Clayey sands and gravel (Kempton Park) was found to formation level with some ground water present at a level approximately 500mm above formation level. The ground water in the trial hole was easily managed with a local sump pump and it is proposed that any ground water encountered during construction will be similarly managed via pumps.

Although the ground water was only at a low level of 500mm above the proposed basement formation level, the basement will be designed with the recommendations of BS8102:1990; Protection of structures against water from the ground. Clause 3.4 states that a water table should be assumed of 1.0 metre below ground level.

In addition to the measure above, the new pumps in the basement will be fitted with non-return valves to safeguard against flooding. To minimise the discharge to the existing sewers, water efficient fixtures and fittings will be installed within the basement.

CONSTRUCTION DRAWINGS

See drawing GA/01 and D/01 in the Appendices for underpinning layout, sequencing and sections to the party walls of the property.

CONSTRUCTION SEQUENCE

1. The ground bearing slab within the existing cellar will be broken out.
2. The existing ground floor joists will be broken out and removed from site.
3. A conveyor belt will be set up through the front ground floor room and bay window to convey the spoil from the excavation to a skip placed on the road for disposal.
4. The existing cellar will be underpinned in a 1 to 5 'hit and miss' underpinning sequence. See drawing MS/01 & MS/02 for the construction sequence of a typical underpin.
5. The underpins to form the new basement will require horizontal propping until completion of the basement slab.
6. As excavation progresses, the remaining ground floor joists and concrete slabs will be broken out and removed from site. Any existing foundations discovered will be broken out and removed from site to make way for the new basement construction.
7. The existing walls of the building over will be temporarily propped using steel beam needles at regular centres, as necessary. Temporary concrete pad foundations may be required beneath the props, or the props may be supported on the concrete bases of underpins already constructed, whenever the location allows.
8. New concrete pad foundations and strip foundations will be constructed, where specified on the structural drawings.
9. New steel beams and columns will be installed, as specified on the structural drawings. These will be supported on the underpins or on the new concrete foundations. Steel beams supported by existing masonry walls will bear on concrete padstones, as specified on the structural drawings. The padstones will spread the load on the existing masonry with stresses kept to acceptable levels.
10. The top of the new steel beams will be dry – packed to the underside of the existing walls above, and the existing walls will be repaired and made good, as required.
11. When the permanent steel work is in place the new ground floor structure can be installed.
12. When all the underpins to the existing property have been completed, bulk excavation to the whole site will be carried out.
13. Once the bulk excavation is down to approximately 500mm above the proposed basement level, a second level of horizontal props will be installed, if required by the design.
14. Excavation will then be carried out down to formation level.
15. The below – slab drainage for foul & ground water, sumps and pumps will then be installed. The pumps will discharge the foul / ground water into the existing sewer system to the front of the property.
16. The new basement RC slab (ground – bearing slab) will then be constructed.
17. Once the new basement slab has gained sufficient strength, the horizontal propping across the site will be removed.

18. After the new basement slab has cured, a drained – cavity layer will be laid to the slab and walls.
19. A layer of insulation will be placed on top of the drained – cavity layer on the slab, and in front of the drained – cavity layer on the walls.
20. Finally a layer of screed will be laid to form the finished basement floor.

POTENTIAL IMPACT ON THE PROPERTY AND ADJOINING PROPERTIES

The proposed basement under the existing property will be formed using an underpinning method, constructed in sections each no wider than 1000mm, with no adjacent underpins constructed within a 48 hour period. This method of construction reduces the amount of potential ground movement and so minimises the effects of settlement of the adjacent structures.

The proposed works, if executed correctly and in accordance with the appointed Engineer's details and procedures, will pose no significant threat to the structural stability of the property or indeed adjoining properties.

POTENTIAL IMPACT ON EXISTING AND SURROUNDING UTILITIES, INFRASTRUCTURE AND MAN – MADE CAVITIES

Any local services on the property's land will be maintained during construction and re – routed if necessary. The exact location of these services will not be known until the works commence. However the impact will be negligible as these services will be maintained. If it is necessary to relocate or divert any utilities, the Contractor and Design Team will be under a statutory obligation to notify the utility owner prior to any works. This will be so that they can assess the impact of the works and grant or refuse their approval. There are no known man – made cavities (e.g. tunnels) in the vicinity of the proposed basement.

POTENTIAL IMPACT ON DRAINAGE, SEWAGE, SURFACE AND GROUND WATER LEVELS AND FLOWS

All existing drainage and sewage connections will be maintained throughout the construction works so there will be no impact on these existing systems.

The proposed works will not alter the current state of the property, which will remain as part of a single residence; therefore there will be no significant change in discharge to the existing drainage and sewage systems and there will be little or no impact on the foul drainage.

Surface water will not be altered as the proposed works are underground and there will be no additional proposed 'hard surfaces' formed at ground level.

Although the trail pit shows some ground water is present, the new basement will have a negligible effect on the ground water flow as this will simply flow under and around the basement in the permeable Kempton Park gravels.

POTENTIAL IMPACT ON EXISTING AND PROPOSED TREES

No existing trees will be felled during the construction of the proposed basement.

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Approved

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Green Structural Engineering Ltd
February 2015

APPENDICES

- Drawing No GA/01, D/01
- Drawing MS/01, MS/02
- Trail pit information

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Demolition works on site comprise of the removal of a glazed bay window and various internal load and non-load bearing walls that will be removed by hand and loaded into rubbish skip container, no plant or machinery is required on site for such.

1. No construction vehicles will be required on site.
2. Skip container lorries currently access other works being carried out in Cedars Road, the same suppliers will be employed to provide skip requirements for this project.
3. Site operatives will not park in Cedars Road other than when delivering tools and materials to site.
4. Any light plant required on site along with material requirements shall be delivered kerbside at front of site.
5. Upon delivery of plant and material requirements, all such goods shall be immediately moved and stored on site, skip permits shall be obtained for skip placement to kerbside at front of property.
6. One bay only shall be required for skip placement with appropriate permits.
7. Security Hoarding shall be erected around and within the confines of the site.
8. No wheel washing facilities are required.
9. Recycling/disposing of waste shall be undertaken by New Era Recycling.
10. The use of power tools and breakers shall not commence on site before 10am each day, working times on site will be 8am to 4.30pm Monday to Friday.
11. Scaffolding has been erected on site with permits in place.
12. Works are scheduled to be completed by 9th October 2015.

Emergency Contact Numbers:

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