PRICE&MYERS

REPORT

22 Frognal Way
London NW3 6XE

Construction Method Statement and Basement Impact Assessment

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Job No – 23261

Date	Version	Notes / Amendments / Issue Purpose
April 2015	1	Preliminary Issue
April 2015	2	Comments incorporated from Design Team
June 2015	3	Final Issue
October 2015	4	Comments incorporated from audit review

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Appendices

1 Introduction

This Construction Method Statement has been prepared under the instruction of the Architect, KSR, on behalf of the applicant. It outlines the construction methodology for the proposed basement to 22 Frognal Way at planning application stage.

The information in this report is based upon a visual survey of the existing property, desk study searches of the area and results of the site-specific Ground Investigation and Basement Impact Assessment Report prepared by Geotechnical & Environmental Associates Limited (GEA); report reference J14302, April 2015 (Appendix A).

This report should also be read in conjunction with the report by GEA, the Architect's Drawings, the Design and Access Statement and the Planning Statement.

2 Surveys, Ground Conditions and Ground Water

Refer to Appendix A for the site-specific Ground Investigation and Basement Impact Assessment Report prepared by Geotechnical & Environmental Associates Limited (GEA); report reference J14302, April 2015.

In summary the site investigation showed a varying thickness of made ground of between 0.5m and 2.7m underlain by Claygate Member, which extends to depths of 2.0m to 6.3m. The underlying London Clay was proved to the full depth of the investigation of 20.0m. Groundwater was encountered within the made ground and Claygate Members at depths of 1.00m to 6.00m.

3 Proposals and Construction Methodology

Introduction

The existing two storey superstructure and single storey basement are to be demolished completely. The proposed superstructure will be a reinforced concrete frame with flat slabs and down stand beams where required. The proposed substructure will have reinforced concrete raft slab supported on a bored piled perimeter retaining wall and individual piles to resist uplift. The basement wall will be provided with a drained cavity to deal with any water that gets through the primary concrete structure.

A public sewer currently runs through the site. This will have to be diverted around the proposed basement. The diversion of this sewer will follow the existing boundary wall to the Garages and will require underpinning of the wall.

Permanent Works

See Appendix B for existing and proposed plans and sections of the proposed basement. Also refer to the Architects drawings.

A bored piled wall will be constructed to the perimeter of the new basement and we expect that 450mm diameter piles in combination with temporary lateral propping will be required to resist the lateral forces imposed on the sides of the excavation. All piles will be designed by a specialist piling contractor.

The basement will have a 450mm thick slab cast on a collapsible heave protection board so that any heave forces that would otherwise act on the underside of the slab can be ignored. The basement will be designed to resist uplift forces due to water pressure equivalent to a water level to ground level. Individual piles under the basement slab will be required to resist these uplift forces and will also support the vertical loads on the basement slab.

Refer to structural drawings 23261 – SK1-SK5for further preliminary information on the permanent structure.

Temporary Works

The temporary works and construction sequence will be discussed in detail with the contractor and their temporary works engineer. They will be planned such that bearing pressures from construction activities, particularly differential pressures during the works, are managed carefully. Ultimately it will be the responsibility of the contractor to provide the final temporary works design and construction sequence.

In addition, sequences and procedures will be discussed and rigorously managed, designed and agreed with the temporary works contractor and GEA Ltd. Also as recommended in the GEA report, the existing standpipes will be monitored prior to construction.

In the meantime, we have prepared an assumed sequence of construction to demonstrate how the basement could be constructed. Refer to drawing 23261 – SK10 for the assumed sequence of construction. A proposed temporary propping scheme can be found on drawings 23261 – SK11 – SK12.

Movement Monitoring Strategy

As recommended by GEA in the Basement Impact Assessment (BIA) the location of proposed monitoring points can be found on drawing 23261 – SK12. As stated in the BIA the nearby structures of The Cottage and outbuilding of No. 20 Perrin's Walk are at sufficient distance such that predicted ground movements are below the detectable limits. Therefore the monitoring points are located only on No. 20 Frognal Way, the existing garage block and the walled pathway to the northwest of the site. Monitoring should begin prior to underpinning commencing and continue for a further 2 months after the basement structure and ground floor slab have been completed. Monitoring should be carried out weekly during the construction phase and fortnightly for the additional 2 month period. The suggested vertical settlement trigger levels are outlined below and the monitoring should be carried out in accordance with the recommendations with Ciria C579.

	'Green' trigger level (mm)	'Amber' trigger level (mm)	'Red' trigger level (mm)
20 Frognal Way	5	7	10
Garage Block	3	4	6
Walled pathway	3	4	6

Health & Safety

Health and Safety on site will be managed by the contractor, and they will need to carefully consider the risks of basement construction. The temporary works will be planned rigorously to mitigate any risks to the existing building and workers on site.

Site Logistics

Good access to the site is available off Finchley Road (A41), approximately 500m west of the site. Site routes and deliveries will likely be via Frognal Way.

Site Hoardings and Security

Site hoardings will be erected such that members of the public on Frognal Way will be sufficiently protected from work to the properties. The hoardings will be made secure, and any access restricted and locked whilst the site is not in use.