

Royal Central School of Speech and Drama – Phase 5 NW3 3HY

Construction Method Statement

Contents

	Page
1 Introduction	2
2 Surveys, Ground Conditions and Ground Water	2
3 Proposal and Construction Methodology	2
3.1 Introduction.....	2
3.2 Permanent Works	2
3.3 Temporary Works	3
3.4 Risks and Mitigations	3
3.5 Health & Safety	3
3.6 Site Logistics	3
3.7 Site Hoardings and Security	4

Appendix A: Ground Investigation and Basement Impact Assessment by GEA Ltd. Ref – J14069

Appendix B: Basement Impact Assessment by CGL. Ref – CG08798

Appendix C: Proposed Structural Drawings, 22479 – SK25 to SK 38

Prepared by: Joanna Boyle
Job Number: 22479

Date	Version	Notes / Amendments / Issue Purpose
October 2014	1	

1 Introduction

The existing site is located on the corner of College Crescent and Buckland Crescent. There is currently an existing 2 storey building located on the site which is to be demolished before Phase 5 of the development commences.

This construction method statement has been prepared to submit with the Basement Impact assessment of the proposed development. This report is limited to the basement construction of the proposed Phase 5 development of the RCSSD only.

This report is based on information acquired through a desk study of the area and results of the site-specific Ground Investigation and Basement Impact assessment as prepared by Geotechnical & Environmental Associates (GEA) Ltd. and the Basement Impact Assessment prepared by Card Geotechnics Limited (CGL).

This report should be read in conjunction with both of the above mentioned reports and the structural engineering drawings from sub-basement to ground floor level (refer to Appendices).

2 Surveys, Ground Conditions and Ground Water

For this information please refer to the site-specific Ground Investigation and Basement Impact assessment found in Appendix A.

3 Proposal and Construction Methodology

3.1 Introduction

The existing Phase 4 building to the SW is on the site boundary line. The building is a 6 storey high RC frame with pile foundations. There are pile foundations and ground beams along the edge but the building has no subterranean levels. There is an existing terraced property to the East of the site which is 3 stories high with an existing basement level.

The results of the site-specific ground investigations and the recommendations provided in the GEA report were considered in the structural design of the basement. The structural design and suggested construction sequence was sent to CGL to complete a ground movement analysis and further recommendations were made to the construction methodology of the proposed development.

3.2 Permanent Works

See Appendix C for the proposed structural drawings and refer to the architects drawings. The proposed design for phase 5 RCSSD is an RC frame structure. The basement construction consists of an auger drilled, contiguous pile perimeter retaining wall with a 300mm RC lining wall and a 350mm RC ground bearing slab. As recommended in the GEA Ltd. report the Ground slab sits on compressible material to reduce the effect of heave pressure and tension piles are located under the studio space. The retaining walls will be designed to ensure the stability of the public pathway and the adjacent properties.

The perimeter contiguous pile wall will act as a retaining wall and will also support the load transfer from the RC columns of the super-structure. The piles will be installed and the capping beams constructed before the excavation of the basement commences. As advised in the CGL BIA the perimeter piles are to be cast as soon as possible after excavation and a 'hit and miss' methodology, specifically along the Phase 4 boundary edge, is to be adopted to keep the

settlement of the existing piles of the Phase 4 building to a minimum. The internal piles will be carefully broken down in sections as the excavation progresses.

Once the basement excavation is complete the pile caps, internal columns, sub-basement floor slab and lining walls are to be cast. The basement floor slab is to be cast on a compressible heave protection layer to reduce the moment in the slab due to heave. Once the basement construction is completed the rest of the super structure can be constructed.

3.3 Temporary Works

The temporary works and the construction sequence will be discussed in depth with the contractor and the temporary works engineer. The temporary works will be designed to maintain the stability of the surrounding buildings and public pathways. The sequence of works and procedures will be discussed with the temporary works contractor once the proposals have been finalised. A suggested construction sequence has been prepared to demonstrate how we envisage the construction of the basement to take place. Please refer to drawing 22479/SK25B in Appendix C.

1. Permanent trench sheeting is to be installed along the north and west edge of the site to retain the footpath during construction.
2. Excavate site to pile mat level of approximately 58.0m
3. Install all piles
4. Construct the perimeter RC capping beam
5. Excavate the site a further 1.5m and install props at capping beam level.
6. Excavate the rest of the basement to formation level, installing lower level propping where required. Carefully remove the internal piles as excavation progresses.
7. Cast the sub-structure of the building removing the propping as necessary to install basement and ground floor slabs.

3.4 Risks and Mitigations

Certain outstanding risks were flagged up in the GEA Ltd and the CGL Basement Impact Assessments and they have been summarised in the following table;

Risk	Mitigation
Ground Condition changes	Ground conditions to be reviewed as work proceeds to ensure any variations from the information provided in the reports are taken into consideration
Groundwater Equilibrium Level	Although no water has been found in the stand pipes, the stand pipes should continue to be monitored and further analysis should be carried out with regards to heave associated with excavation
Damage to Surrounding Properties	It is recommended that a condition survey is undertaken prior to construction and that a monitoring routine is set up to manage the risk of potential damage to surrounding properties during construction.

3.5 Health & Safety

Health & 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 surrounding existing buildings and workers on site.

3.6 Site Logistics

Good access to the site is available off Finchley Road (A41), approximately 100m south of the site. Site routes, deliveries and construction vehicles will likely access the site off Buckland Crescent, and the temporary suspension of parking bays may be required. There is existing space

immediately to the South of the site with access from Buckland Crescent to the east. It is likely that materials and construction machinery will be delivered and stored in this area.

3.7 Site Hoardings and Security

Site Hoardings will be erected such that members of the public on College and Buckland Crescent will be sufficiently protected from the works on site. The hoardings will be made secure, and access restricted and locked whilst the site is not in use.

Appendix A

Ground Investigation and Basement Impact Assessment by GEA Ltd. Ref – J14069

Appendix B

Basement Impact Assessment by CGL. Ref – CG08798

Appendix C

Proposed Structural Drawings, 22479 – SK25 to SK 38