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Construction Method Statement

Contents

Appendices

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Job No - 21999

1 Introduction

The existing site is located at 9 Ellerdale Road. It encompasses an area on the South corner of Ellerdale and Prince Arthur Road.

This Construction Method Statement has been prepared under the instruction of the architect, Lee Davidson, on behalf of the client, Mrs Yan Jing. It outlines the proposed basement to 9 Ellerdale Road 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 J14075, May 2014 (Appendix A).

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

2 Surveys, Ground Conditions and Ground Water

Refer to the site-specific Ground Investigation and Basement Impact Assessment Report prepared by Geotechnical & Environmental Associates Limited (GEA); report reference J14075, May 2014.

3 Proposals and Construction Methodology

Introduction

The existing superstructure of the house, which varies between two to three-storeys tall, comprises of loadbearing masonry walls with timber floors spanning in between. There is an existing single-storey basement beneath the Southeastern half of the house

The house next door (North East of the existing house at 9 Ellerdale Road), No 18 Prince Arthur Road has been recently refurbished to include a new basement. This also included new full-length underpinning to the existing party wall adjacent to 9 Ellerdale Road.

Permanent Works

See Appendix B for existing and proposed plans and sections of the proposed basement. Also refer to the Architects drawings. The basement works will involve 2 primary structural areas:

- Excavation of the existing basement to the southeastern part of the house, to a lower depth, including adjacent to the existing party wall which has already been underpinned. The depth of the proposed basement will not extend below the depth of the existing recent underpinning to the existing party wall.

- Excavation of the remaining proposed basement to a lower depth to the existing external walls, and beyond the footprint of the existing house above.

The existing external and internal loadbearing walls of the house will be resupported on new reinforced concrete beams, columns and walls. This new reinforced concrete structure will be supported on new strip footings and pad foundations at basement slab level to bear the loads onto the Claygate Member. Reinforced concrete retaining walls will be constructed to retain the ground around the basement.

The slab design will also be discussed and agreed with GEA Ltd, particularly with regards to heave both during the temporary and permanent works. It is likely that the slab will need to be suspended in areas. Refer to structural drawings 21999 – SK01 to SK04 for further preliminary information on the permanent structure.

Temporary Works

The temporary works and construction sequence will be discussed in detail with the contractor and the temporary works engineer. They will be planned such that bearing pressures, particularly differential pressures during the works, are managed carefully.

In addition, sequences and procedures will be discussed and rigorously managed, designed and agreed with the temporary works contractor and GEA Ltd. Heave, both during the construction and in the permanent structure will also be considered in more detail. Also as recommended in the GEA report, the existing standpipes will be monitored prior to construction, in conjunction with carrying out a number of trial excavations to provide an indication of the immediate groundwater conditions with regards to perched water.

In the meantime, we have prepared an assumed sequence of construction to demonstrate how the basement would most likely be constructed. Refer to drawing 21999 – SK05 for the assumed sequence of construction.

Stage A
Existing section showing the existing party wall already underpinned. It is anticipated that minimal temporary works will be required along the existing party wall which has already been underpinned as part of the basement works to 18 Prince Arthur Road. The bulk of the main temporary works will be needed to support the existing house whilst the new basement is being constructed.

Stage B
Install sheet piles to the perimeter of the proposed basement footprint.

Stage C
Mass concrete pads will be excavated and cast either side of the loadbearing walls at approx. 2-3m c/c. Props will be supported off the pads, with beams spanning parallel to the walls, in between the props. Needles will then be installed in between the beams to support the walls in the temporary condition.

Stage D
The new permanent reinforced concrete structure including beams, columns, walls and strip footings will be cast in place underneath the temporarily supported walls and structure.

It is likely that Stages C and D will have to be carried out in phased sections, particularly to take into account heave and differential pressures during the construction. The exact sequencing and timing will be discussed and agreed with the temporary works contractor and GEA Ltd.

Stage E
Excavate and construct basement slab.

Stage F
Remove propping and temporary works.

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 the Finchley Road (A41), approximately 500m south of the site. Site routes and deliveries will likely be off Ellerdale Rd, and the temporary suspension of parking bays may be required. There is an existing garage space on site, including space above the garage where it is likely that materials will be delivered and stored.

Site Hoardings and Security

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