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YOUR REF

OUR REF

DATE

5080/RF

May 2012

Davies Architecture

28 Elliott Square

London NW3 3SU

239 HAVERSTOCK HILL

LONDON NW3

Report for the proposed underground extension to the property known as 239 Haverstock Hill, London NW3.

I would confirm that I have a degree in Civil Engineering (Bsc 1975), that I am a Chartered Engineer (C. Eng 1975), a Member of the Institution of Civil Engineers (MICE 1977) and a Fellow of the Institution of Structural Engineers (FStructE 1989).

1.0) INTRODUCTION

The property is a single family residential building with accommodation arranged on three floors. We understand that the property was constructed in the latter part of the nineteenth century.

The property is constructed in the traditional manner, namely comprising suspended timber floors, supported off load bearing masonry walls. The roof is of cut and loose laid timber rafter construction with a tiled finish.

It is proposed to construct a new basement level floor, which will extend under the footprint of the entire existing building, and also under the proposed extension to the rear. It will not extend under the garden area. The ground floor will be extended, to the rear, by approximately 3m.

Only minor, non-structural alterations are to be carried out to the first floor.

For general details refer to Davies Architecture drawings HAV-C-GA-01 to 08 incl. These have all been submitted to the London Borough of Camden, as part of Application No 2012/0591/p.

2.0) INSTRUCTION

We have been instructed by Mr Spalter, the building owner, to prepare a structural engineering report, together with supporting structural details for the new basement construction.

It is envisaged that the new basement construction will be built in conventional insitu reinforced concrete, with wall and floor slabs excavated, reinforced and concreted in small sequential sections. This will prevent undue ground movement from occurring and thus minimise potential disturbance to adjacent and surrounding properties.

3.0) SITE DESCRIPTION

The site is generally level, with a very slight slope down, from right to left, being situated towards the top end of Haverstock Hill. There are no trees of any significance within the area.

Beyond the site boundary walls, there are neighbouring residential properties, generally of similar construction and also extending to three storeys. It is unlikely that these foundations will extend down as deep as the proposed depth of 3m, for the new basement construction on this site.

It is thus proposed to underpin the Party Wall, to protect and safeguard the adjoining property.

Trial pits were excavated to ascertain the type and depth of property foundations, and to expose the soil conditions at the proposed foundation level, such that samples could be taken for testing.

As expected the soil conditions comprise fill, approx 1m deep, over brown, silty Clay.
Soil samples sent for lab analysis ?
Trial Pit Record Sheet ?

4.0) PROPOSED WORK

The proposed work has a number of elements to it, comprising, excavation and construction of new insitu reinforced concrete basement and construction of new single storey extension, with a flat roof, to the rear and other internal minor alterations..

Each stage will be constructed as a separate element, so as not to adversely impact on preceding and subsequent construction activities.

In order to minimize potential soil movement, and consequent disturbance to adjacent properties, the reinforced concrete retaining wall construction will be carried out on a sequential method, similar to that used in carrying out conventional underpinning works, whereby a 1m length of wall and base slab is excavated, shuttered, reinforced and concreted, prior to moving on to the next section in the sequence.

The sequence has been established, and is described in the attached Method Statement (5080/12) to minimize the potential for ground and building movement. The sequence is shown on detail sheet 5080/11 and the general construction details for the new basement are on detail sheet 5080/01.

To the rear, and at the rear on the left hand side, a more conventional approach to retaining wall construction can be adopted. There is space here for excavations to be battered back, and with no existing structure above the new retaining wall can be excavated, shuttered, reinforced and cast in one piece.

Temporary propping will be required, during the basement construction. This will take the form of horizontal strutting between opposing retaining walls, which would be required until the entire basement slab has been cast and reached its required design strength.

In addition vertical propping will be required to the internal load bearing masonry walls, during basement excavation and concreting. This will also have to be retained in place until the new load bearing walls have been built up and the existing walls pinned up off these new walls.

With the basement slab and walls cast, the timber floor can be installed. With the ground floor in place, the remaining internal works would be carried out. These are as shown on detail sheets 5080/02 & 03.

The reinforced concrete light well construction would be carried out at a later date, to suit the contractors programme. They do not extend down to the same depth as the main basement, and in addition they are some distance from neighbouring properties. Furthermore they do not have existing structures above them which would otherwise require to be supported during the construction period.

5.0) CONCLUSION

Tried and tested methods of construction will be used, such that the potential for building movement will be minimised.

So long as the general principals of sequencing and temporary support are followed, the existing structures will be satisfactorily supported at all times.

R. Inger

23. May 2012.