STRUCTURAL REPORT

ON

PROPOSED BASEMENT EXTENSION WORKS

AT

84 SOUTH HILL PARK
LONDON
NW3 2SN

P6138

MARCH 2025

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DOCUMENT CONTROL SHEET

	84 South Hill Park, London NW3 3SN	Project No.	P6138
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0.1	Preliminary Issue	27/03/2025	

CONTENTS

1.00 INTRODUCTION

1.01 Michael Alexander has been appointed by the Building Owner to prepare a Structural Report to support the Planning Application for the proposed refurbishment works to the house at 84 South Hill Park.

1.02 This document has been prepared by Francesco Gelosi MEng CEng MICE who is a chartered structural engineer.

1.03 The existing residential property is a terraced three storey house above ground, with a single storey basement. The property is grade II Listed.

1.04 The property is bound by residential houses to either side, as part of a terrace. The property is bound by Hampstead Heath to the rear and by South Hill Park itself to the front.

1.05 The property is in a residential area and is part of a terrace built in the 1950s. Housing in the area is mainly Victorian or mid-twentieth century. The property is approximately 30m from the Hampstead Heath Ponds.

1.06 The proposed works are to extend the single storey basement underneath the existing driveway.

2.00 BASEMENT IMPACT STUDIES

2.01 A screening study was carried out in accordance with the flow charts given in the CPGB. Refer Jomas Associates' Stage 1 & 2 BIA report and Preliminary UXO Risk Assessment, issued on 25/03/2025.

2.02 This document, read in conjunction with Jomas Associates BIA, addresses the specific issues relating to the basement construction, as described in Camden Planning Guidance: Basements (CPGB) of January 2021. Reference has also been made to the Camden Geological, Hydrogeological and Hydrological Study by Arup, together with other available sources of local information.

2.03 With respect to Flooding, although the site is located within EA Flood Zone 1, it lies within South End Local Flood Risk Zone and the Hampstead Chain Catchment. Therefore, a site-specific FRA and SuDS/drainage strategy report is likely to be required, as recommended by Jomas.

2.04 With respect to Surface Water flows, no issues were identified that could impact the wider environment, as the existing front driveway is already on hardstanding. Surface water at the site will be handled in the same was as it is currently, with no increase in load on the existing sewer and drainage systems. There will be no increase in hard landscaping or surface water runoff.

2.05 The proposed development is not expected to cause significant changes to the subterranean groundwater flows, due to the presence of the impermeable London Clay strata.
This will be confirmed by a ground investigation to confirm the relative depths of the basement to the groundwater levels (if any), and whether there is a hydraulic continuity with the nearby Hampstead Ponds.

2.06 With respect to Ground Stability, the screening process identified that: -
- The site lies within a wider hillside setting.
- Shrinkable London Clay is the shallowest strata on the site.
- The work will be in close proximity to the street trees.
- The site is within 5m of a pedestrian right of way and neighbouring properties.
- The proposed basement will increase the differential depth of foundations.

2.07 The findings of the screening in respect of Ground Stability will be reflected in the Structural Design of the basement.

Any potential impacts will be mitigated by careful planning, design and execution of both the temporary and permanent works.

2.08 A Ground Movement Assessment may be required to demonstrate that potential damage to adjoining properties is 'Negligible' or 'Very Slight'

2.09 Following the Preliminary UXO Risk Assessment carried out, either a Detailed UXO Risk Assessment or UXO Supervision has been recommended due to the current risk level.

2.10 As a result of the screening study, a site investigation has been commissioned, with physical investigations as per the Trial Pit/Borehole Plan below, with a borehole at location A and trial pits at locations B, C & D.

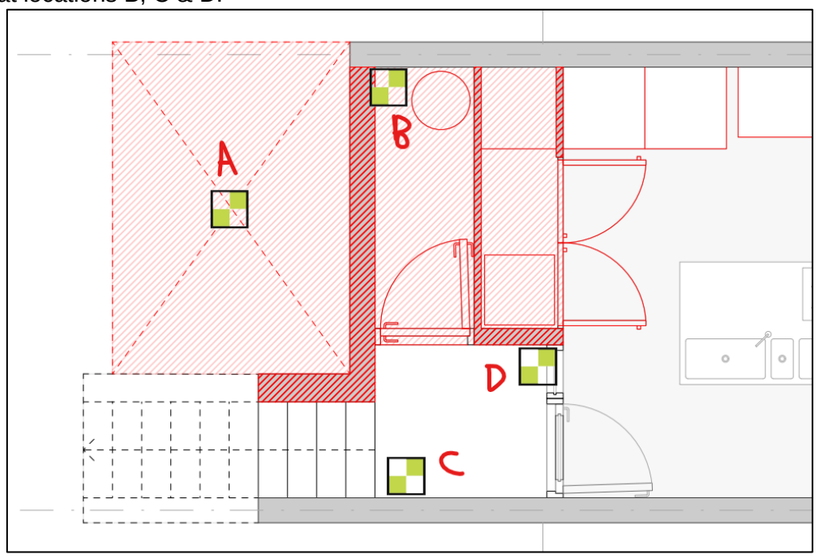


Figure 2.10 Proposed Site Soil Investigations

3.00 BASEMENT PROPOSALS

3.01 The architectural proposal for the basement is shown on the following Well St Studio drawings.
24SHP_D_P_Demolition Plans
24SHP_A_P_As Proposed Plans

3.02 The structural proposals for the proposed basement extension have been developed by Michael Alexander Engineers and shown in Outline Structural Drawings below.

3.03 The proposed works include: -

- A bored pile wall between the proposed basement extension and the public pavement. Driven piles or driven sheet piles will not be used due to the potential impacts from the vibration.
- A reinforced concrete retaining wall, to be cast in sequence, to support the existing neighbouring driveway (house no. 82 side).
- Underpinning is likely to be required under the existing retaining structure for the external staircase, as this is assumed to have stepped foundations.
- A new basement reinforced concrete slab, with a formation level approximately 3.0m below existing ground level.
- A ground level reinforced concrete slab will act as permanent prop to the excavation and to support the reconstructed driveway.

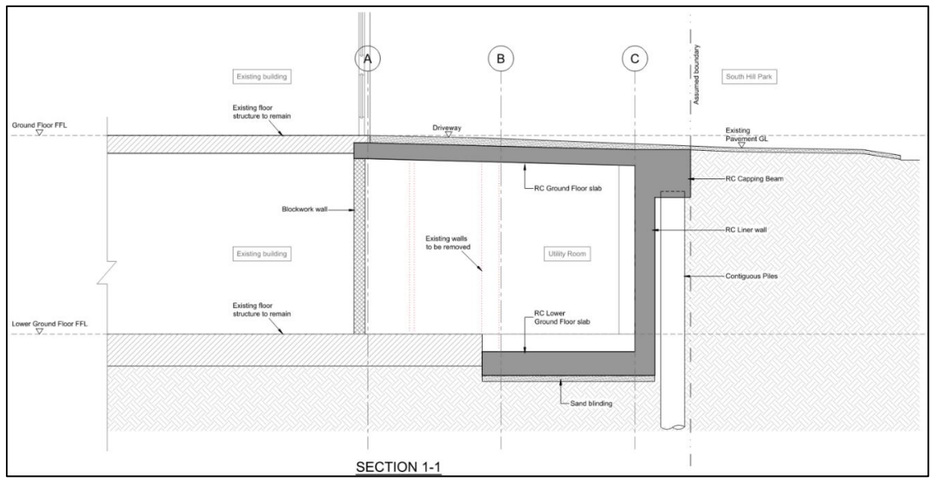
3.04 The details of the existing structure and site boundaries will be subject to detailed exploratory work prior to and during the works on site. Monitoring of adjoining structures will be carried out throughout the works.

3.05 The design and construction of the building structure shall be in accordance with current Building Regulations, British Standards, Codes of Practice, Health and Safety requirements and good building practice.

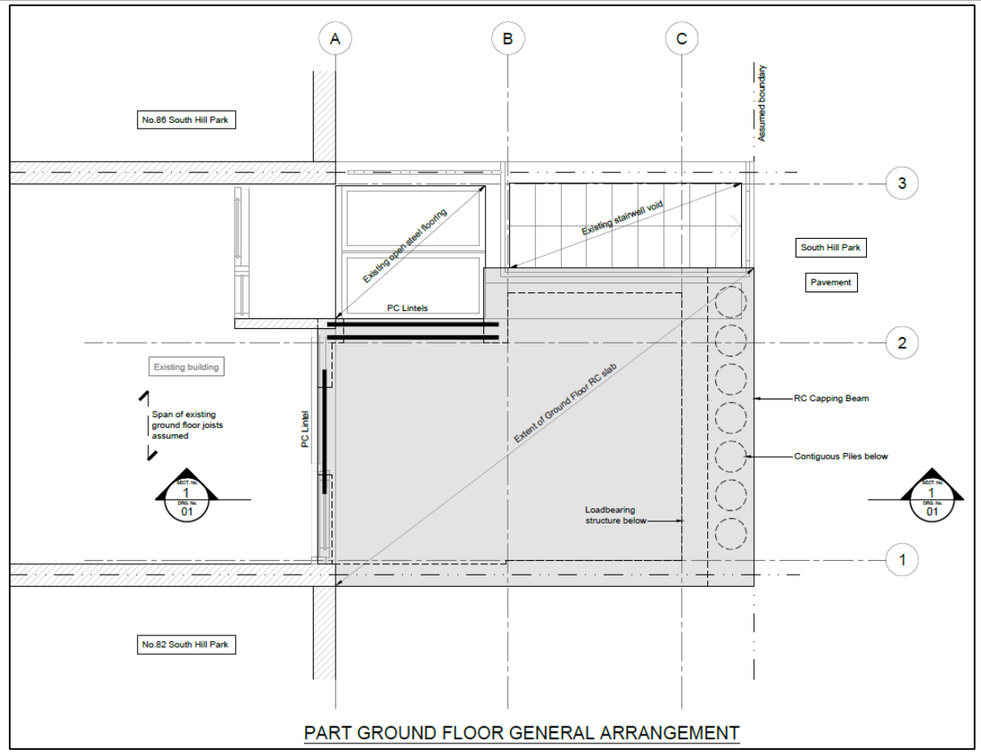
3.06 Following the site investigations commissioned as per the point 2.10 above, we will review our preliminary assessment and drawings to reflect the findings.

In addition, we will : -

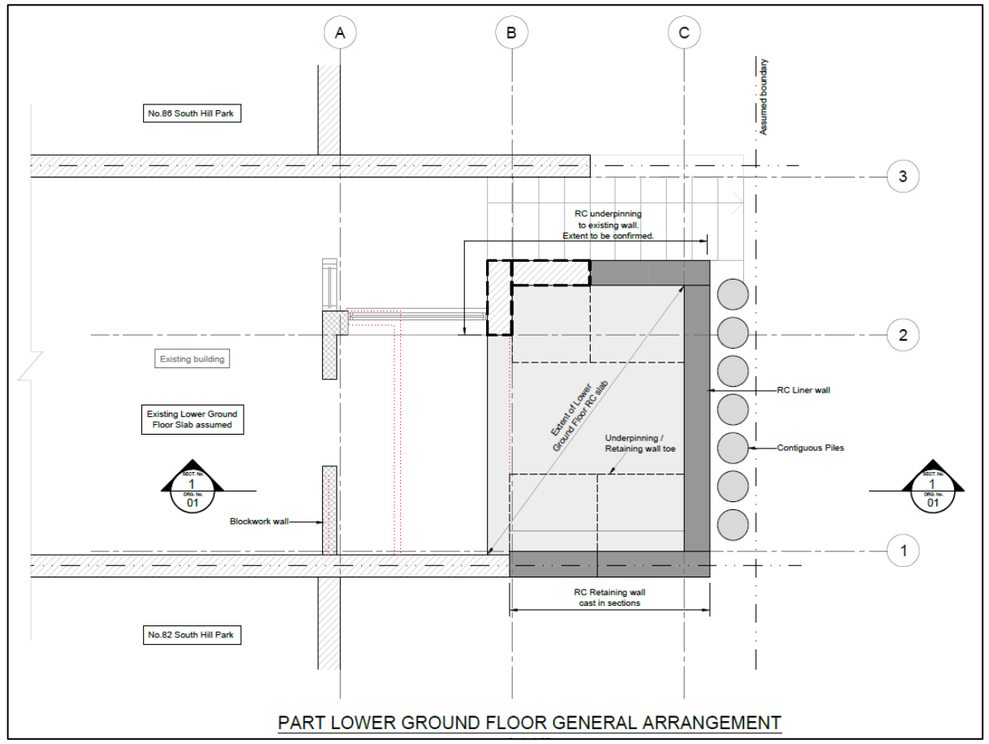
- Prepare an outline construction sequence for the Works
- Carry out preliminary structural calculations.
- Review the likely programme for the basement works.



SECTION 1-1



PART GROUND FLOOR GENERAL ARRANGEMENT



PART LOWER GROUND FLOOR GENERAL ARRANGEMENT