

Basement Screening Report

8-9 Belsize Terrace,
London, NW3 4AX

Job No.: 2435
Client: XUL
Date: August 2014

Concept Consultancy

Chartered Civil & Structural Consulting Engineers

1.0 INTRODUCTION

Concept Consultancy has been commissioned by XUL to carry out a basement Impact Assessment for the site at 8-9 Belsize Terrace, London, NW3 4AX. The intention is to make some structural modifications to an existing basement in the form of lowering the existing basement floor slab level by approximately 1.0m. There are internal renovation works to be carried out to the basement and superstructure but this report is concerned only with the lowering of the basement slab.

2.0 Site Location

The site is located approximately midway along Belsize Terrace between Belsize Lane and Belsize Avenue, London NW3. The site is roughly rectangular in shape and measures approximately 11.0m x 16.0m. The site presently contains a four-storey terrace (3 storeys' over Basement) commercial building, currently operating as a Pharmacy.

The building has been constructed entirely within the London Clay formation.

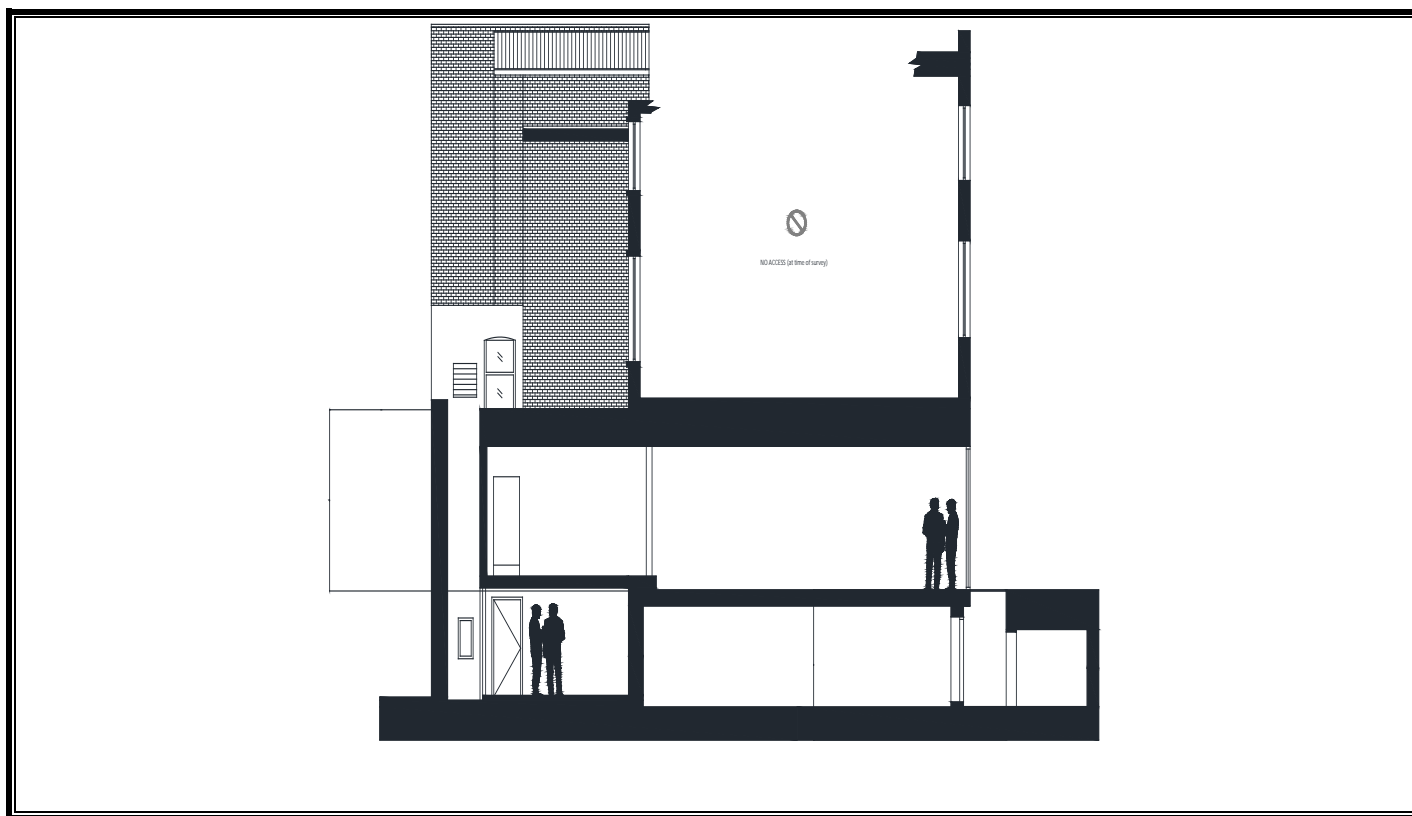


Fig 1: Original Long Section Through Property

The site is essentially a level site from front to back, however, the ground level of Belsize Terrace, to the front of the site has a fall across the front of approximately 0.6m. but this will have no influence over the proposed works (see Fig 1). The rear boundary of the property is formed by a

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masonry/concrete retaining wall up to first floor level. The properties to the rear are a set of terraced domestic dwellings/mews.

2.1 Basement Works

The existing building is supported off the existing basement walls and slab within the London Clay stratum with the foundation formation level being approximately 3.0m below existing ground level. It is intended to increase the height of the headroom of the basement by lowering the basement floor level by approximately 1.0m (see Fig2).

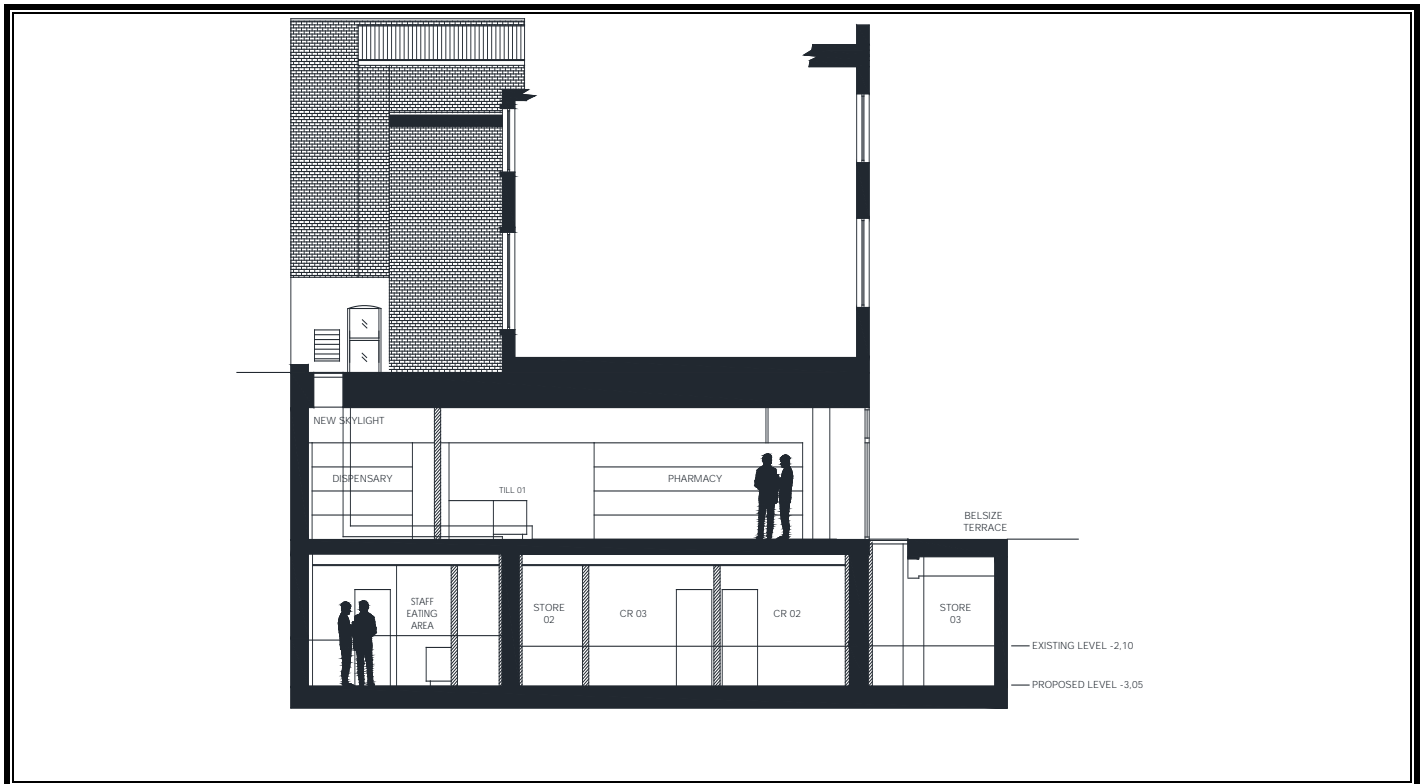


Fig 2: Proposed Long Section Through Property

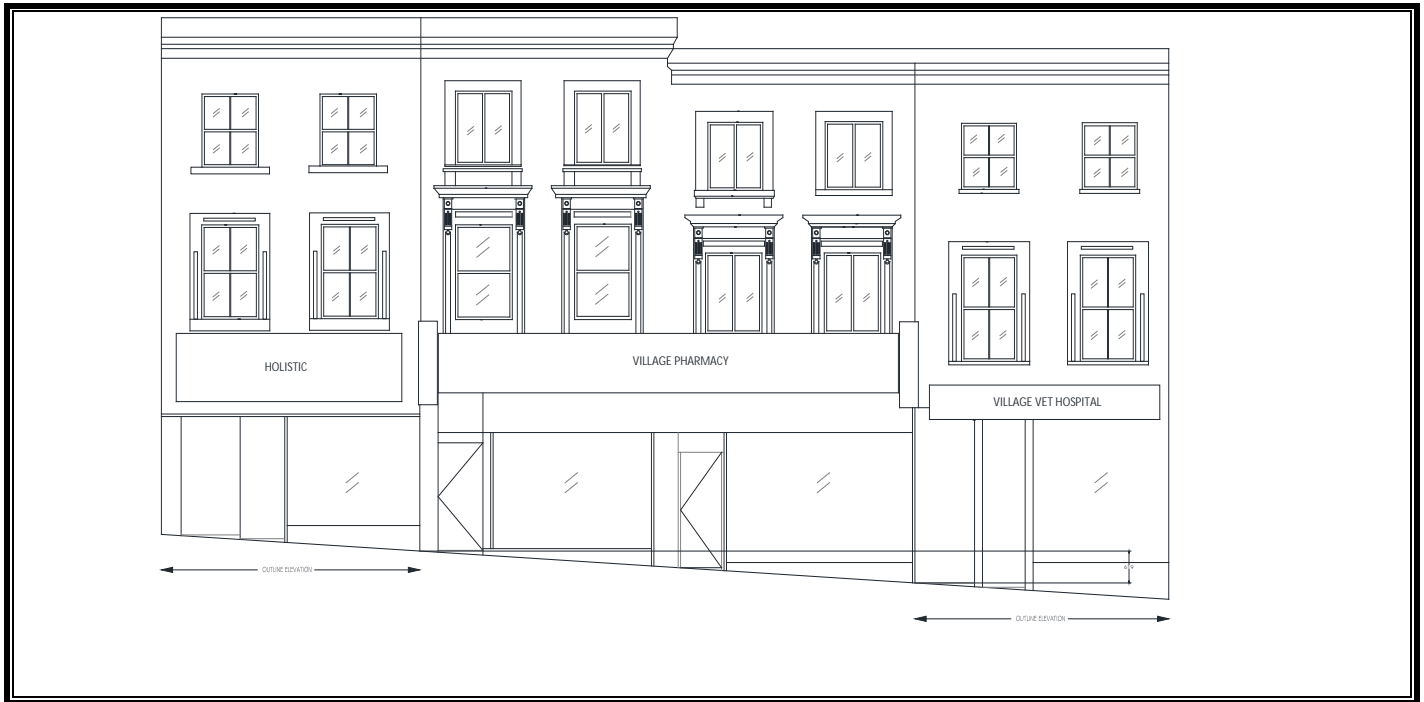


Fig 3: Front Elevation

3.0 Ground Conditions

3.1 Soil Conditions

Current information indicates London Clay close to the surface. This underlying London Clay formation is in line with the Geological Survey Map for the area which indicates same.

3.2 Groundwater Conditions

The site is in an area which is entirely within the London Clay formation in which Groundwater flow is near to non-existent because of the low permeability of the clay stratum and would be expected to have negligible significance for water supply or river base flow”.

3.3 Surface Water Features

No culvert, rivers and or other water bodies are known within the immediate vicinity of the site.

4.0 Stage 1 - Screening

The London Borough of Camden guidance suggests that any development proposal that includes a subterranean basement should be screened to determine whether or not a full BIA is required.

The following screening is based on a series of questions as set out in the Camden Planning Guidance - Basement & Light Wells (CPG 4).

4.1 Ground Water Flow:

Question 1a: Is the site located directly above an aquifer?

No. The site is not located within or above an aquifer that could be affected by the proposed works. Refer to point 2. in report prepared by Water Environment Ltd in appendix A.

Question 1b: Will the proposed basement extend beneath the water table surface?

No. See point 4 of Water Environment Ltd report.

Question 2: Is the site within 100m of a watercourse, well (used/disused) or potential spring line?

No. There is no known watercourse, spring or well within 100 m of the site. See point 6 of Water Environment Ltd report.

Question 3: Is the site within the catchment area of the pond chains on Hampstead Heath?

No. Refer point 7 of Water Environment Ltd report.

Question 4: Will the proposed basement development result in a change in the proportion of hard surfaced / paved areas?

No. The proposed works will not change the footprint of the existing basement.

Question 5: As part of the site drainage, will more surface water (e.g. rainfall and run off) than at present be discharged to the ground (e.g. via soakaways and or SUDS)?

No. There will be no change in the catchment area for rain fall or to the existing surface drainage arrangement.

Question 6: Is the lowest point of the proposed excavation (allowing for any drainage and foundation space under the basement floor) close to or lower than, the mean water level in any local pond (not just the pond chains on Hampstead Heath)?

No. Refer point 8 of Water Environment Ltd report.

The above assessment has identified that there are no potential issues that need to be assessed

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4.2 Slope Stability:

Question 1: Does the existing site include slopes, natural or manmade, greater than 7 degrees? (Approximately 1 in 8)

No. The existing ground level falls across the site at approximately 1 in 18

Question 2: Will the proposed re-profiling of landscaping at site change slopes at the property boundary to more than 7 degrees? (Approximately 1 in 8)

No.

Question 3: Does the development neighbour land, including railway cuttings and the like, with a slope greater than 7degs? (Approximately 1 in 8)

No.

Question 4: Is the site within a wider hillside setting in which the general slope is greater than 7degrees? (Approximately 1 in 8)

No.

Question 5: Is the London Clay the shallowest strata at the site?

Yes. The existing basement is within the existing London Clay layer.

Question 6: Will any tree/s be felled as part of the proposed development and/or are any works proposed within any tree protection zones where trees are to be retained?

No. There are no trees on the site.

Question 7: Is there a history of seasonal shrink-swell subsidence in the local area, and/or evidence of such effects at the site?

No. We have no evidence indicating any possible shrink-swell subsidence in the local area.

Question 8: Is the site within 100m of a watercourse or a potential spring line?

No. There is no known watercourse, spring or well within 100 m of the site. See point 6 of Water Environment Ltd report.

Question 9: Is the site within an area of previously worked ground?

Yes. This is an existing basement, to be extended downwards further into the London Clay

Question 10: Is the site within an aquifer? If so, will the proposed basement extend beneath the water table such that dewatering may be required during construction?

No. Refer point 8 of Water Environment Ltd report.

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Question 11: Is the site within 50m of the Hampstead Heath Ponds?

No.

Question 12: Is the site within 5m of a highway or pedestrian right of way?

Yes. The front wall of the basement is on the same line of the edge of the footpath on Belsize Terrace

Question 13: Will the proposed basement significantly increase the differential depth of foundations relative to the neighboring properties

Yes. The depth to the new foundations will be increased by approximately 1.0m to that of the surrounding buildings, underpinning will be carried out as required.

Question 14: Is the site over (or within the exclusion zone of) any tunnels, e.g. railway lines?

No. There are no railway networks in close proximity of the property.

The above assessment has identified the following issues to be assessed:

Question 12 The existing property fronts directly on to Belsize Terrace with the existing basement projecting out below the pavement level. This existing arrangement will remain unchanged. The new works will have no impact on the right of way on the public road or foot path.

Question 13 By lowering the existing basement slab by approximately 1.0m will mean that the new foundations will be lowered by the same amount relative to the surrounding buildings. Any potential impact on the foundations of the surrounding buildings will be address at design stage and underpinning will be carried out where necessary.

4.3 Surface Flow & Flooding:

Question 1: Is the site within the catchment area of the pond chains on Hampstead Heath?

No. Refer point 7 of Water Environment Ltd report.

Question 2: As part of the site drainage, will surface water flows (e.g. volume of rainfall and peak run off) be materially changed from the existing route?

No. There will be no change in the catchment area for rain fall or to the existing surface drainage arrangement.

Question 3: Will the proposed basement development result in a change in the proportion of hard surfaced / paved areas?

No. This will remain unchanged.

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Question 4: Will the proposed basement result in changes to the profile of the inflows (instantaneous and long term) of surface water being received by adjacent properties or downstream.

No. There will be no change in the catchment area for rain fall, existing surface drainage arrangement or area of hard standing areas.

Question 5: Will the proposed basement result in changes to the quality of surface water being received by adjacent properties or downstream water courses?

No.

Question 6: Is the site in an area known to be at risk from surface water flooding such as South Hampstead, West Hampstead, Gospel Oak and Kings Cross, or is it at risk from flooding, for example because the basement is below the static water level of a nearby surface water feature?

No. Refer point 10 of Water Environment Ltd report.

The above assessment has identified that there are no potential issues that need to be assessed

Nothing further occurs.

Sincerely,



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Chartered Engineer for and on behalf of

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