Job Number: 15-139
Date: 24 June 2015 – Rev A 16 10 15

Basement Structural Method Statement

Planning Application for 63 Goldhurst Terrace, London, NW6 3HB

Author:

Jeff Walker, CEng, MIStructE
AND Designs Limited
90 Mearow
Godalming, Surrey
GU7 3HY

To be read in conjunction with Stephen Buss Environmental Report attached (please see qualifications of key people).

Additional contributions by QTS Environmental and Chelmers Site Investigations

Property Details:

63 Goldhurst Terrace
London
NW6 3HB

Revision	Date	Comment
-	24/76/15	First Issue

Table of Contents

1. Design Information - Structural

Existing Property

The existing building is a terraced 3-storey Victorian residence. The external walls are constructed from brickwork. Some of the internal walls are also constructed from masonry and these are assumed to be load-bearing. Structural steelwork is also assumed to exist within the building. There is a front yard and a rear garden.

Figure 1:Front View

Figure 2: View from rear garden

Figure 3: Existing from stairwell

Figure 4: Site plan

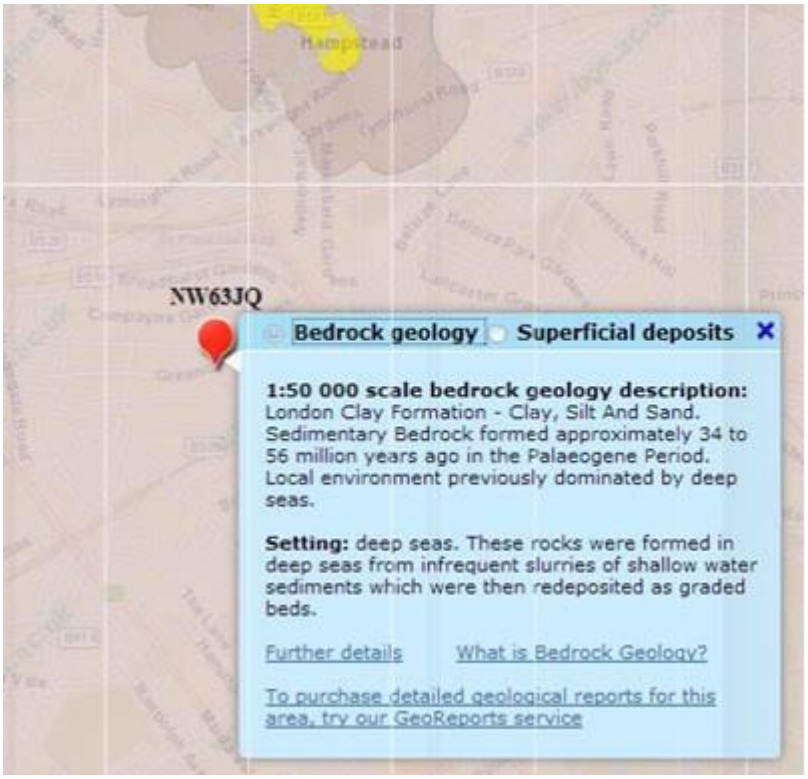


Figure 5: British Geological (BGS) Maps showing underlying strata

A **Maintain Structural Stability of the building & Neighbouring Properties**.

The appended drawings show the reinforcement and construction required to maintain stability of the property, the neighbouring buildings and the garden.

Both adjacent properties have been granted permission for and have executed basement extensions. Since we will be enclosing onto the underpinned walls of both of these adjoining properties, it is our view that this development is in effect an infill basement which will not impact the adjacent buildings in a meaningful way when considered in the context of CPG4 and, subsequently, this BIA.

B **Avoid Adversely Affecting drainage and Run off.**

There will be a minor increase in the area of hard standing. The run off will not be altered significantly.
The property will not affect the main aquifer.

See Screening Stage information

C **Avoid Cumulative Impact upon Structural Stability or the water environment.**

See screening stage that indicates the location in relation to water course and Hampstead Heath catchment.

See Stage 10 Impact Assessment and drawings. The structure is designed to take account of a hydrostatic head on the basement.

D **Harm the Amenity of Neighbours**

Noise and nuisance has been considered in Stage 10

E **Loss of Open Space or Trees**

There is no loss of open space.

2. Basement Impact: Screening

The questions below are taken from the Camden CPG 4 – Basements and Lightwells as well as from Appendix E of the Arup Hydrology report

Figure 1 – Subterranean flow screening chart

Groundwater flow

1a. Is the site located directly above an aquifer?

No. The Environment Agency maps do not show the site to lie above principal aquifer or a groundwater source protection zone. However, studies from these maps indicate the presence of a secondary aquifer below.

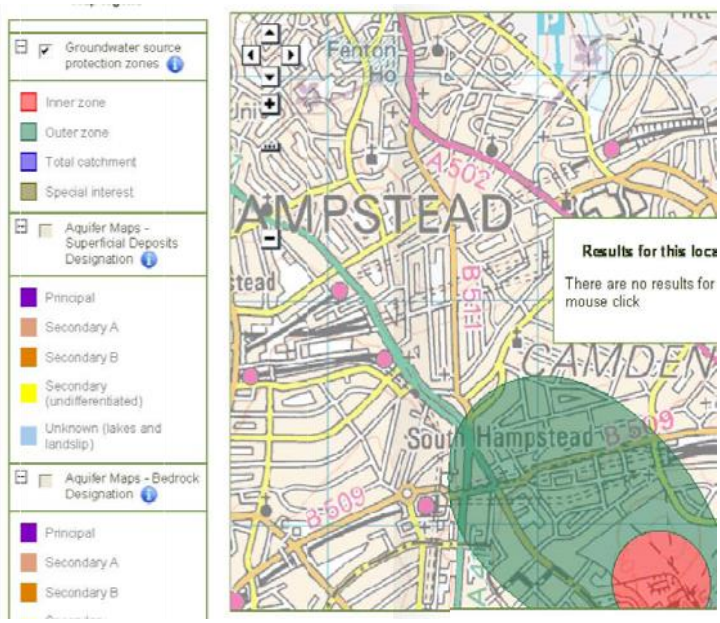


Figure 6: Environment Agency map showing primary and secondary aquifers

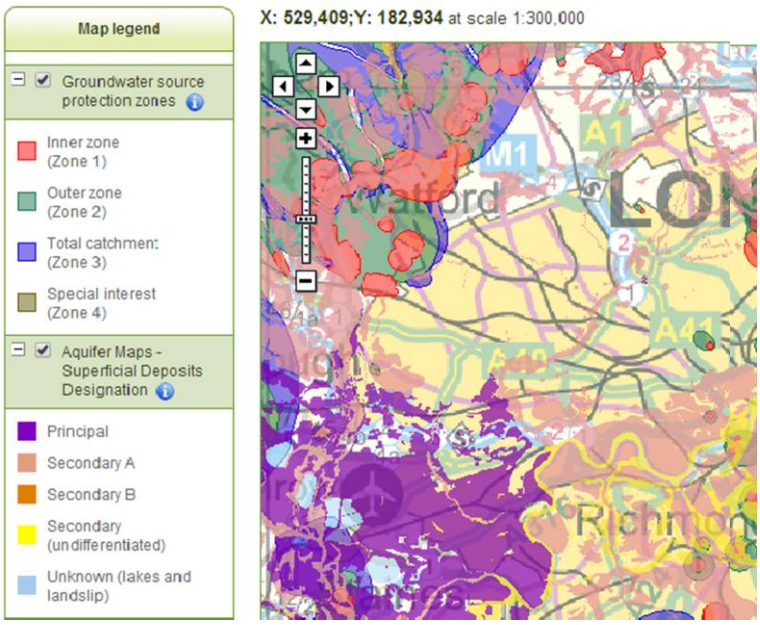


Figure 7: Environment Agency map showing aquifers

1b. Will he proposed basement extend beneath the water table surface?

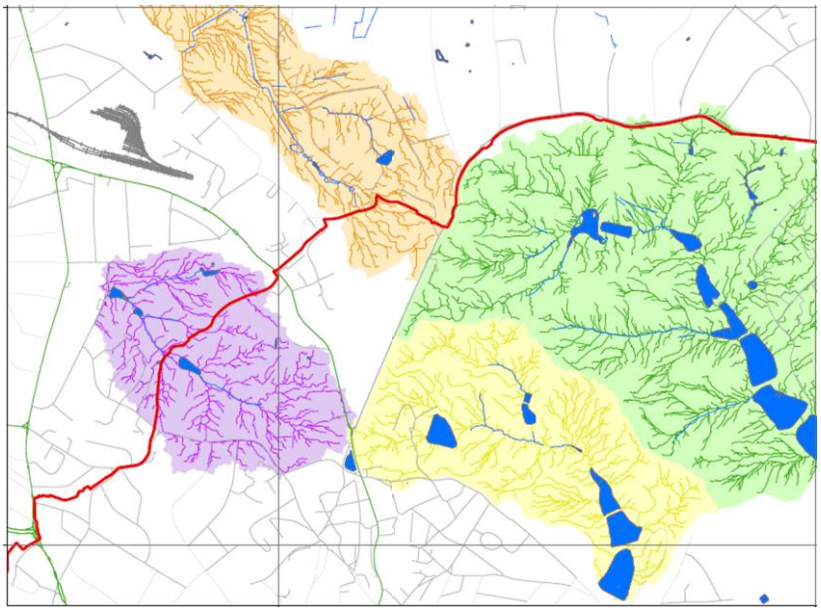
No. Geological maps indicate that the site lies on London Clay. This is not capable of carrying a water table. Borehole logs show no water strikes up to 15.0m. Carry forward to scoping stage.

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

No. Maps and local walkover survey show no wells, watercourses close to the site. The nearest potential springline approximately 1000m to the north-east of the site, at the boundary between the London Clay and the more permeable Claygate Beds.

3. Is the site within the catchment of the pond chains on Hampstead Heath?

No. The site lies outside the areas which feed into the pond chains on Hampstead Heath, as shown in Figure 14 of The Guidance for subterranean development (Arup, November 2010).



Slope Stability

Figure 2 – Slope Stability screening flowchart

1. Does the existing site include slopes, natural or man-made greater than 7° (approximately 1 in 8)?

No,

Figure 9: Figure 16 of Arup's report showing slope angle

2. Will the proposed reprofiling of landscaping at the site change slopes at the property boundary to more than 7° (approximately 1in 8)?

No. The proposed profile at the boundary of the property will remain unchanged.

2. Does the development neighbouring land including railway cuttings and the like with a slope greater than 7° (approximately 1 in 8)?

No. The slope of the adjacent properties appears to match the site.

3. Is the site within a wider hillside setting in which the general slope is greater than 7° (approximately 1 in 8)?

No. The slope of the wider hillside setting is as per the property, less than 7°. From Figure 16 the slope angle is shown less than 7°

4. Is the London Clay the shallowest strata on site?

Yes. The site sits on the London Clay formation.

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

No. No local trees are to be felled.
Carry forward to scoping stage.

6. Is there a history of seasonal shrink-swell subsidence in the local area, and/ or evidence of such effects at the site?
No. From the walk over survey, subsidence was not considered an issue.

The site is on shrinkable ground and as such has an increased risk to subsidence. The basement and all foundations will be designed to take account of the ground conditions. The basement construction places
the loads of the property on to deep ground.
The depth further
protects the building from the seasonal changes in the ground.

7. Is the site within 100m of a watercourse or a potential spring line?
No. OS maps and a local walkover survey show no wells, watercourses. BGS maps show that the nearest soil boundary is over 100m away. Environment Agency data (below) shows that the site experienced flooding in 2002, however the area surrounding the site is not identified as having the potential to be at risk of surface water flooding.

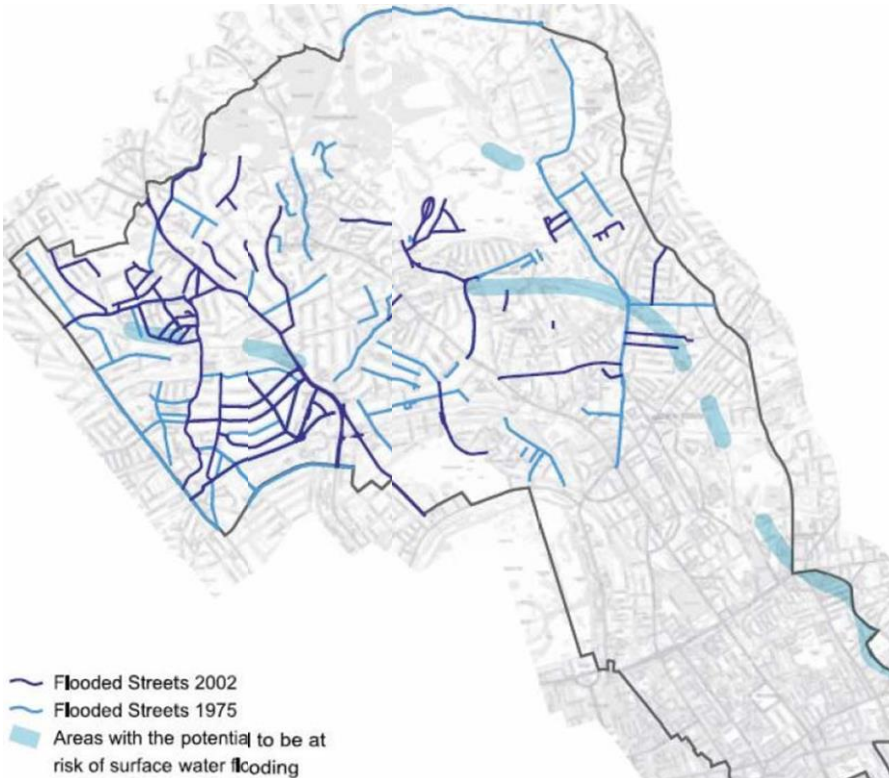


Figure 10: Figure 15 of Arup's report showing flood map

Carry forward to scoping stage

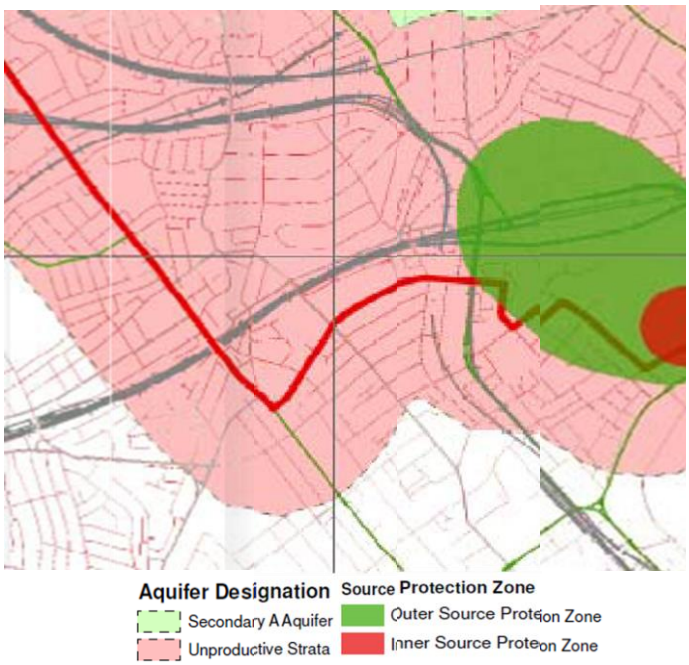

Aquifer Designation
Secondary A Aquifer
Unproductive Strata
Source Protection Zone
Outer Source Protection Zone
Inner Source Protection Zone

Figure 12: Extract from Camden Surface water features map (Arup's report, Fig 12)

12. Is the site within 5m of a highway or pedestrian footway?

No

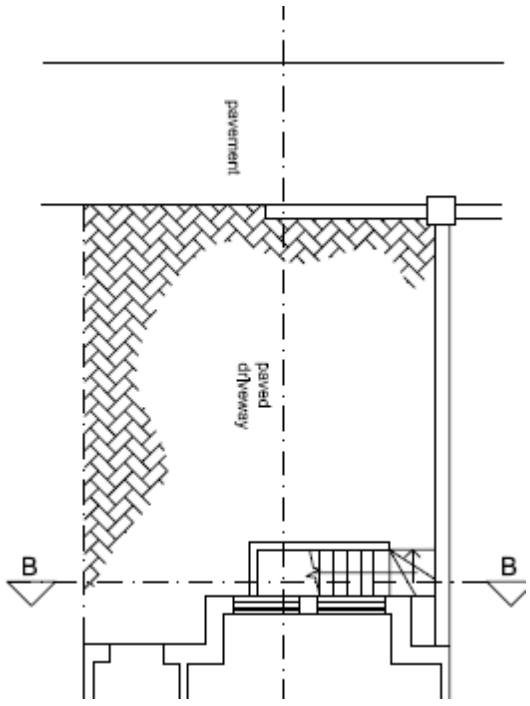


Figure 13: Proximity to public highway

Carry forward to scoping stage.