

APPENDIX F - NON-TECHNICAL SUMMARY

I STAGE 1 - SCREENING

The questions in the screening stage are based on the flow charts found in Camden Planning Guidance 4. Desk study research formed the basis for the answers during the screening stage. Questions that were answered affirmatively were further investigated during the scoping stage. The questions below were answered affirmatively during the screening stage and have been taken forward to the scoping stage.

SURFACE FLOW AND FLOODING

- Will surface water flows be materially changed?
- Will the proposed basement result in a change in the proportion of impermeable surfaces?

SUBTERRANEAN GROUNDWATER FLOW

- Will the proposed basement result in a change in the proportion of impermeable surfaces?

SCOPING SLOPE STABILITY

- Is the London Clay the shallowest strata at the site?
- 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?
- Is the site within an area of previously worked ground?
- Is the site within 5m of a highway or pedestrian right of way?
- Will the proposed basement significantly increase the differential depth of foundations relative to neighbouring properties?

2 STAGE 2 - SCOPING

The following paragraphs elaborate further on any questions that were answered 'yes' during the screening stage. The below gives justifications as to how each issue will be dealt with and why they are not considered to be problematic. Some responses require some further investigation which has been done in the Site Investigation and Study' stage (Stage 3).

2.1 SURFACE FLOW AND FLOODING

Question 2: Will surface water flows be materially changed?

The proposed scheme has a larger area of impermeable surfaces and as a result will intercept a larger proportion of rainwater than the previous scheme. This water will be captured, taken to a new underground attenuation tank (SuDS system) which will control flow into the mains sewerage system so that it is no worse than existing. This means that a smaller proportion of the precipitation falling on the site will be transmitted as surface water i.e. the risk of flooding around the site due to surface water flow will be reduced by comparison to the situation at present. Refer to WYE drainage calculations.

Therefore there is no negative impact on the surface water flows and the risk of flooding will be decreased.
This issue does not need to be considered further.

Question 3: Will the proposed basement result in a change in the proportion of impermeable surfaces?

As question 2, above.

Therefore there is no negative impact on the surrounding environment/ existing sewerage system with regards to surface water flow. This issue does not need to be considered further.

2.2 SUBTERRANEAN GROUNDWATER FLOW

Question 4: Will the proposed basement result in a change in the proportion of impermeable surfaces?

As described in the response to question 2, above, the proposed construction will result in an increased plan area of impermeable surfaces which will decrease the amount of water that can naturally soak into the ground. It is proposed that this runoff be collected from the site into an attenuation tank and released at a controlled rate into the sewerage system so that it is no worse than existing. The ground at the site is London Clay which is impermeable; some pockets of non-flowing (perched) water may be present within it and so the proposed development will not have an overall effect on groundwater flow as there is presently no significant flow. In addition the site is over 500m from any current or historic watercourses.

Therefore the proposed development will not have an impact on groundwater flow.

A site investigation has been conducted to confirm this view; refer to Stage 3.

2.3 SCOPING SLOPE STABILITY

A site investigation has been undertaken to confirm the soil properties which will enable the design of temporary and permanent works to ensure that any movements are limited to acceptable levels – refer to Stages 3 and 4. Questions 5, 9, 12 and 13, below, will be discussed further in Stage 4.

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

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

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

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

Refer to Arboriculturalist report for question 6. This issue will not be discussed any further in this report.

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?

3 STAGE 3 – SITE INVESTIGATION

This section summarises the site investigation works that were undertaken in order to confirm any assumptions that were made in the scoping stage and to adequately answer the questions raised during the screening stage that need further evidence.

3.1 SUMMARY OF SITE INVESTIGATION WORKS

A Phase I desk study was undertaken by Constructive Evaluation Ltd in December 2013. This was followed by a Phase II investigation finalised in February 2014. The site investigation consisted of a 25m deep borehole and 2 window sample holes in order to determine the ground conditions and take samples of soil and water for testing; a dynamic probe drilled to 6m depth to determine the soil strength and consistency of strata; trial pits to determine existing foundation configurations and groundwater monitoring to determine the level of the groundwater – this was monitored on two separate occasions rounds, 3 weeks apart.

3.2 SUMMARY OF SITE INVESTIGATION FINDINGS

The ground was confirmed as being London Clay which was found to be soft-firm in the upper layer, becoming stiff at 3.8m below ground level. A relatively thin layer (600mm) of made ground was noted above the clay layer. Testing of the clay on site found that the top 3.5m layer is of high compressibility and was found to be saturated.

Standing water was found at shallow depths within the top 2.5m of the London Clay. This is considered, by the engineering geologists who undertook the investigation, to be perched water present because of the heavy rainfall that fell during the period in which the investigation took place (Jan-Feb 2014). The borehole encountered groundwater in the upper clay layer but, when it was sealed off at shallow depth (2m below ground level) there were no further water strikes found within the 25m depth of the borehole. Thus it is considered that the water is only in the top 2.5m of ground and that it is not flowing but perched.

3.3 ANSWERING REMAINING SCREENING STAGE QUESTIONS

SUBTERRANEAN GROUNDWATER FLOW

Will the proposed basement result in a change in the proportion of impermeable surfaces?

The assumptions made in the scoping stage are confirmed by the site investigation: the only groundwater found during the investigation was perched water within the upper layers of the London Clay meaning that there is no flow to disrupt.

Therefore there is no impact on the groundwater flow. This issue does not need to be considered further.

SLOPE STABILITY

Is the London Clay the shallowest strata at the site?

London Clay is the shallowest strata at the site. The site investigation has confirmed the ground conditions and soil parameters for use in calculations.

Is the site within an area of previously worked ground?

The site has an existing property that will be demolished to make way for the new development; the existing basement will be propped/ filled during the demolition of the existing property. A 600mm thick layer of Made Ground was established at the site during the site investigation but the basement will be founded on the London Clay. The site investigation has confirmed the ground conditions and soil parameters for use in calculations.

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

Adequate permanent and temporary works will ensure that any movements of the soil are limited during construction and the lifetime of the basement. The site investigation has confirmed the ground conditions and soil parameters for use in calculations. Refer to WYE construction sequence drawings which give an example of a possible method of construction that would minimise ground movements.

Will the proposed basement significantly increase the differential depth of foundations relative to neighbouring properties?

The distance between the neighbouring properties and the proposed basements is circa 2.3m at their closest point (5.6m for the property at 55 Agar Grove) meaning that neighbouring footings are likely to be far enough away from the basement not to be affected by its construction. Nevertheless, the basements will be adequately propped during construction to ensure minimal movement of the soil and the design will be undertaken to ensure that only small movements of the ground are permitted. The site investigation has confirmed the ground conditions and soil parameters for use in calculations.

4 STAGE 4 IMPACT ASSESSMENT

All of the questions from the screening stage have now been answered. This last section re-iterates that with adequate design and forward planning during the construction stage the baseline and constructed phases are either similar or that the constructed phase is better.

4.1 SURFACE FLOW AND FLOODING IMPACT ASSESSMENT

No impact – refer to previous stages.

4.2 SUBTERRANEAN GROUNDWATER FLOW IMPACT ASSESSMENT

The site is located on London Clay with only the upper 2.5m being water-bearing, with any water thought to be perched (i.e. not flowing) as a result of recent heavy rainfall. Therefore it is not considered that the basement construction will have any impact on groundwater flows.

Reasonable care will be taken to control ingress of water during construction; at this stage it is envisaged that this will be done using sheet piles which will be sunk to below 2.5m to cut off any perched water. The basement will need to be waterproofed in the permanent condition, it is anticipated that this will be done using a cavity drain system.

4.3 SLOPE STABILITY IMPACT ASSESSMENT

Although London clay is the shallowest strata on the site, the proposed basement is not situated in a hill-side setting, nor does the site or neighbouring land contain any significant slopes existing or proposed. The site investigation has determined geotechnical parameters for foundation and retaining wall design. These parameters will be used to develop a basement design and construction sequence that will ensure that ground movements are limited to acceptable levels and that any possible damage to adjacent structures will be limited to Burland category 0-I. Refer to WYE construction sequence drawings showing proposed methodology and indicative temporary works.

In conclusion the addition of properly constructed and designed basements on the site will either improve or maintain the existing conditions on the site.