CampbellReith
consulting engineers

26 Netherhall Gardens

Basement Impact Assessment Audit

For

London Borough of Camden

Project Number: 12985-51
Revision: F3

November 2020

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Project Number	12985-51
Project Name	26 Netherhall Gardens, NW3 5TL
Planning Reference	2019/1515/P

Contents

Appendix

1.0 NON-TECHNICAL SUMMARY

1.1. CampbellReith was instructed by London Borough of Camden, (LBC) to carry out an audit on the Basement Impact Assessment submitted as part of the Planning Submission documentation for 26 Netherhall Gardens (planning reference 2019/1515/P). The basement is considered to fall within Category C as defined by the Terms of Reference.

1.2. The audit report issued in December 2019 reviewed the Basement Impact Assessment for potential impact on land stability and local ground and surface water conditions arising from basement development in accordance with LBC's policies and technical procedures.

1.3. CampbellReith was able to access LBC's Planning Portal and gain access to the latest revision of submitted documentation and reviewed it against an agreed audit check list. Further information was requested and these were forwarded by email on the 31st of October 2019 and the 29th of November 2019, and was audited in December 2019.

1.4. Comments dated 20th July 2020 by the Heath & Hampstead Society (HHS) and a document labelled 'Inventory of basements within 75m of 26 Netherhall' were forwarded to CampbellReith by LBC, with an audit of the additional information undertaken in September 2020.

1.5. Following the issue of the above audit report (Version F2) the applicant produced further evidence to support their application, which was forwarded to CampbellReith by LBC on 11th November 2020.

1.6. The Basement Impact Assessment (BIA) has been carried out by Sinclair Johnston and Partners (Byrne Looby) and the authors are appropriately qualified.

1.7. The proposed development includes demolition of the existing garage block and construction of a three-storey apartment block plus basement level.

1.8. The BIA and recent addendum are considered to have addressed potential impacts to the hydrogeological environment.

1.9. Geotechnical design parameters have been presented. Construction methodology and temporary works information is provided, including the length and embedment depth of the proposed secant wall piles and locally the use of propped trench sheets.

1.10. A ground movement assessment (GMA) has been undertaken. It states that the current proposal will keep impacts to neighbouring structures within Burland Category 1 (Very Slight). The BIA addendum includes a structural inspection of the exterior walls to the immediately neighbouring properties and concludes there is no indication of existing damage.

1.11. An outline construction programme is provided.

1.12. There will be no impact to the hydrological environment, considering the proposed attenuated drainage scheme is implemented. The final drainage design should be agreed with LBC and Thames Water.

1.13. Discussion is presented in Section 4 and queries are summarised in Appendix 2. The BIA meets the requirements of CPG: Basements.

2.0 INTRODUCTION

2.1. CampbellReith was instructed by London Borough of Camden (LBC) on 16 April 2019 to carry out a Category C Audit on the Basement Impact Assessment (BIA) submitted as part of the Planning Submission documentation for 26 Netherhall Gardens, NW3 5TL.

2.2. The Audit was carried out in accordance with the Terms of Reference set by LBC. It reviewed the Basement Impact Assessment for potential impact on land stability and local ground and surface water conditions arising from basement development.

2.3. A BIA is required for all planning applications with basements in Camden in general accordance with policies and technical procedures contained within

- Guidance for Subterranean Development (GSD). Issue 01. November 2010. Ove Arup & Partners.
- Camden Planning Guidance Basements. March 2018.
- Camden Development Policy (DP) 27: Basements and Lightwells.
- Camden Development Policy (DP) 23: Water.
- Local Plan Policy A5 Basements.

2.4. The BIA should demonstrate that schemes:

a) maintain the structural stability of the building and neighbouring properties;

b) avoid adversely affecting drainage and run off or causing other damage to the water environment;

c) avoid cumulative impacts upon structural stability or the water environment in the local area, and;

evaluate the impacts of the proposed basement considering the issues of hydrology, hydrogeology and land stability via the process described by the GSD and to make recommendations for the detailed design.

2.5. LBC's Audit Instruction described the planning proposal as *"Erection of 3 storey extension plus basement to existing property to provide 4 flats (2x1-bed and 2x2-bed) (Class C3) with rear roof terraces and refuse and cycle store at the front, following demolition of 2 storey garage extension and 1-bed flat."*

2.6. CampbellReith previously accessed LBC's Planning Portal on 10th June 2019 and gained access to the following relevant documents for audit purposes:

- Basement Impact Assessment Parts 1-8 prepared by Sinclair Johnston and Partners (Reference 8240, latest revision D dated March 2018);
- Structural Design and Construction Statement prepared by Sinclair Johnston and Partners (Reference 8240, latest revision E dated March 2018);
- Arboricultural Assessment undertaken by Gifford Tree Service, dated 23rd May 2019;
- Arboricultural report prepared by Crown Consultants, dated 1st February 2019;
- Design and access statement by Squire and Partners (Reference 18059, dated March 2019)
- Planning Application Drawings consisting of

  Existing Plans and Elevations dated June 2019 (Reference: G100_P_AL_001, JA12_P_00_001, JA12_P_LG_001, JA12_P_01_001, JA12_P_02_001, J12_E_W_001, JA12_E_W_002, JA12_E_S_001, JA12_E_N_001, JA12_E_E_001, JA12_S_AA_001)

  Demolition Plans and sections dated May 2019 (Reference: JC20_P-00-001, JC20_P_LG_001, JC20_E_W_001, JC20_E_S_001, JC20_E_N_001, JC20_E_E_001)

  Proposed Plans and Elevation dated May 2019 (Reference: C645_P_00_001, C645_P_LG_002, C645_P_01_001, C645_P_02_001, C645_P_RF_001, C645_E_W_001, C645_E_W_002, C645_E_S_1, C645_E_N_1, C645_E_E_1, C645_S_AA_001, C645_S_BB_001, G251_BS_W_001)
- Planning Comments and Response.

2.7. Following the initial audit, CampbellReith accessed LBC's Planning Portal on 25th September 2019 and gained access to the following relevant documents:

- Basement Consultant Response to CampbellReith by ByrbeLooby (Reference: 8240, dated 3rd September 2019);
- Ground Movement Assessment Report (Reference: J15344, dated August 2019);
- Arboricultural Report (Reference: 09552a, dated July 2019);
- Additional Drawings consisting of

  Tree Constraints Plan (Reference: CCL09552 (Rev3)).

2.8. The following additional documents were forwarded to CampbellReith via email on 31st October 2019:

- Response to BIA audit (Reference 8240-FN 002, dated 23 October 2019);
- Construction Programme (Revision A, dated 18 October 2019).

2.9. Following additional email queries, the following additional documents were forwarded to CampbellReith via email on the 25th and 29th November 2019:

- Attenuation tank capacity assessment by Byrne Looby (Reference: 8240, dated 29th August 2019);
- Plan indicating location of attenuation tank prepared by Squire and Partners (Reference: C645_P_LG_001, dated 15th May 2018).

2.10. The following additional documents were forwarded to CampbellReith from LBC via email in July 2020:

- The Heath & Hampstead Society comments of 20th July 2020;
- Inventory of basements within 75m of No.26 Netherhall Gardens.

2.11. The following additional documents were forwarded to CampbellReith from LBC via email in November 2020:

- 26 Netherhall Gardens – Response to BIA Audit Update by Byrne Looby, dated 20th October 2020.

3.0 BASEMENT IMPACT ASSESSMENT AUDIT CHECK LIST

Item	Yes/No/NA	Comment
Are BIA Author(s) credentials satisfactory?	Yes	
Is data required by Cl.233 of the GSD presented?	Yes	Concluded in F1 audit.
Does the description of the proposed development include all aspects of temporary and permanent works which might impact upon stability, hydrogeology and hydrology?	Yes	Concluded in F1 audit.
Are suitable plan/maps included?	Yes	
Do the plans/maps show the whole of the relevant area of study and do they show it in sufficient detail?	Yes	
Land Stability Screening: Have appropriate data sources been consulted? Is justification provided for 'No' answers?	Yes	Concluded in F1 audit.
Hydrogeology Screening: Have appropriate data sources been consulted? Is justification provided for 'No' answers?	Yes	
Hydrology Screening: Have appropriate data sources been consulted? Is justification provided for 'No' answers?	Yes	
Is a conceptual model presented?	Yes	Section 8.2 of the BIA.
Land Stability Scoping Provided? Is scoping consistent with screening outcome?	Yes	Concluded in F1 audit.

Item	Yes/No/NA	Comment
Hydrogeology Scoping Provided? Is scoping consistent with screening outcome?	Yes	
Hydrology Scoping Provided? Is scoping consistent with screening outcome?	Yes	
Is factual ground investigation data provided?	Yes	
Is monitoring data presented?	Yes	
Is the ground investigation informed by a desk study?	Yes	
Has a site walkover been undertaken?	Yes	
Is the presence/absence of adjacent or nearby basements confirmed?	Yes	In the response to BIA Audit Update by Byrne Looby dated 20th October 2020.
Is a geotechnical interpretation presented?	Yes	
Does the geotechnical interpretation include information on retaining wall design?	Yes	
Are reports on other investigations required by screening and scoping presented?	Yes	
Are the baseline conditions described, based on the GSD?	Yes	Concluded in F1 audit.
Do the base line conditions consider adjacent or nearby basements?	Yes	
Is an Impact Assessment provided?	Yes	
Are estimates of ground movement and structural impact presented?	Yes	

Item	Yes/No/NA	Comment
Is the Impact Assessment appropriate to the matters identified by screen and scoping?	Yes	
Has the need for mitigation been considered and are appropriate mitigation methods incorporated in the scheme?	Yes	
Has the need for monitoring during construction been considered?	Yes	Monitoring strategy to be reviewed based on any updates to the GMA.
Have the residual (after mitigation) impacts been clearly identified?	Yes	
Has the scheme demonstrated that the structural stability of the building and neighbouring properties and infrastructure will be maintained?	Yes	
Has the scheme avoided adversely affecting drainage and run-off or causing other damage to the water environment?	Yes	Concluded in F1 audit.
Has the scheme avoided cumulative impacts upon structural stability or the water environment in the local area?	Yes	
Does report state that damage to surrounding buildings will be no worse than Burland Category 1?	Yes	In the response to BIA Audit Update by Byrne Looby dated 20th October 2020.
Are non-technical summaries provided?	Yes	

4.0 DISCUSSION

4.1. This audit specifically addresses the outstanding comments from an objection to the basement application dated 20th July 2020 by the Heath & Hampstead Society (HHS) and the responses from the BIA author. The list of other objections/comments considered as part of previous and present audit for the proposed development are listed in Appendix 1 of this report. The following discussion summarises the conclusions of the previous audits and considers the BIA in light of any pertinent new information.

4.2. The Basement Impact Assessment (BIA) has been carried out by Sinclair Johnston and Partners (Byrne Looby) and the authors are appropriately qualified.

4.3. It is proposed to demolish the existing side extension to a three-storey detached house, comprising of a two-storey garage extension and one bed flat, to construct a new three-storey extension and a single storey basement under half the footprint of the new extension. The lowest basement level will be at +66.22m OD (3.20m bgl).

4.4. Topographic plans indicate a change in elevation across the site itself of >7 degrees, currently maintained as both slopes and retaining structures. The revisions to the BIA that were reviewed within the previous F1 audit considered the impacts to slopes and retaining structures. The HHS have further queried the assessment of slopes, citing concerns in regard to stability and potential hydrogeological impacts, which are discussed in the following paragraphs.

4.5. The HHS comment 1 discusses the slope across the wider hillside setting and the site itself, and suggests that whilst stability impacts to upslope neighbours have been considered, neighbours to the side will still be impacted by the proposed development due to changes in “ground pressure and vibration” and that the “composition” of the hillside has not been considered. The stability impacts are considered to have been adequately addressed, as discussed in the following paragraphs.

4.6. The BIA states the underlying ground conditions comprise 0.60m of Made Ground over London Clay proven to 20.00m below ground level (bgl). The F1 audit noted the mapped close proximity of the Claygate Member, and that the Made Ground may be underlain by the Claygate Member overlying London Clay. The HHS highlight that the site is in an area with propensity for Head Deposits.

4.7. The Claygate Member is designated a secondary aquifer; the London Clay is designated unproductive strata. HHS have commented (Comments 1 and 3) on the adequacy of the site investigation, in terms of methodology and number of boreholes, to discern both ground and groundwater conditions, including direction of groundwater flow. Whilst it is acknowledged that three boreholes would comply with best practice, given the topography of the site it is clear

that groundwater would be expected to flow down slope from east to west, and it is not considered that additional boreholes would alter the interpretation of groundwater flow.

4.8. It is unclear why HHS consider the use of rotary percussive boreholes, a standard site investigation technique, not to be suitable.

4.9. HHS further note the lack of groundwater monitoring data over a winter period, which is acknowledged. Monitoring of standpipes over a winter period would likely reflect recent rainfall activity and the current constraints to drainage. However, given the underlying London Clay, it is evident that perched groundwater flow can only occur within the very shallow soils of the Made Ground and Head and / or Claygate Member, where present. The existing foundations and retaining walls to 26 Netherhall Gardens already penetrate these soils forming a barrier to any groundwater flow, as indicated in the site investigation report.

4.10. The subject site will not have a basement across the majority of the site footprint. Considering this, and the general absence of surrounding basements (with the exception of No 28 Netherhall Gardens), the F1 audit accepted that the proposed basement would not impact the wider hydrogeological environment. This has been queried by the HHS, who indicate that (comment 6) 24 Netherhall Gardens is built over a basement whilst 24a Netherhall Gardens has shallow foundations. Following the audit query, Byrne Looby has confirmed that the foundations of 24a are bearing on the clay layer. Additionally, as noted in paragraph 4.9, it appears that the existing foundations to 26 Netherhall Gardens already form a cut-off to any perched groundwater flowing, in which case the introduction of the proposed basement does not change the existing conditions.

4.11. Based on the recent response confirming that 24 Netherhall Gardens and the foundations of 24a Netherhall Gardens are within the London Clay, it is considered that the groundwater flow regime will remain as existing and will not impact the stability of the adjacent foundations.

4.12. It is understood that the existing foundations to main building of 26 Netherhall Gardens will be supported using underpinning. A bottom-up method of construction is proposed for basement construction and for construction into the rear garden slope utilising embedded secant piled retaining walls.

4.13. Geotechnical design parameters have been presented. Construction methodology and temporary works information is provided, including the length and embedment depth of the proposed secant wall piles. HHS have raised the following queries:

- (Comments 7 and 8) The use of sheet piling will cause vibrations and be de-stabilising.

  The construction methodology indicates the use of propped trench sheets in order to cast retaining walls, not sheet piling. No further assessment is required.

- (Comment 2) The use of Oasys XDisp for the ground movement assessment (GMA) and the use of certain geotechnical parameters are unsuitable. There is a requirement for finite element analysis (FEA).

  The geotechnical parameters questioned by HHS (Harris & Alvaredo, 'm') have no relevance to the assessment, given that they relate to very specific settlement for the assessment of tunnels rather than the analysis of building movements at ground level. The use of XDisp, and the underlying empirical data set is considered to be more conservative than an equivalent FEA, including as it does allowance for construction movements. The methodology is widely accepted where embedded retaining walls toe into stiff London Clay, even where shallower soils are classified as firm.

4.14. The requirement for the construction methodology to ensure stability during construction has been adequately provided.

4.15. The GMA states that the current proposal will limit damage to neighbouring structures to within Burland Category 1 (Very Slight). The previous F1 accepted that the assessment methodology is reasonably conservative. However, the HHS observe (Comment 6) current structural damage to the adjacent 24a Netherhall Gardens which had not been stated within the BIA. The recent response from Byrne Looby includes structural inspection of the external walls and indicates that the building appears to be in good condition. No further mitigation and/or remediation is necessary.

4.16. An outline construction programme is available.

4.17. The previous F1 audit accepted that there would be no impact to the hydrological environment, considering the proposed attenuated drainage scheme is implemented. The final drainage design should be agreed with LBC and Thames Water.

4.18. It is accepted that the proposed development is not in an area prone to flooding.

5.0 CONCLUSIONS

5.1. The BIA authors are appropriately qualified.

5.2. The proposed development includes demolition of the existing garage block and construction of a three-storey apartment block plus basement level.

5.3. The BIA responses are considered to have addressed the potential impacts, and provided the clarifications requested from previous audits.

5.4. The BIA and recent addendum are considered to have addressed potential impacts to the hydrogeological environment.

5.5. It is indicated that 24a Netherhall Gardens is founded within London Clay. No further assessment is required to demonstrate that the stability of these foundations will be adversely impacted by groundwater flow.

5.6. Geotechnical design parameters, construction methodology and temporary works information are provided. The previous audits and current audit accept that the requirement for groundwater control and construction methodology to ensure stability during construction has been adequately addressed.

5.7. A ground movement assessment (GMA) has been undertake stating that damage to neighbouring structures will not exceed Burland Category 1 (Very Slight). The BIA addendum includes a structural inspection of the exterior walls to the immediately neighbouring properties and concludes there is no indication of existing damage.

5.8. There will be no impact to the hydrological environment, considering the proposed attenuated drainage scheme is implemented. The final drainage design should be agreed with LBC and Thames Water.

5.9. Audit queries are summarised in Appendix 2. Considering the recent information presented, the BIA complies with CPG: Basements.

Appendix 1: Residents' Consultation Comments

Residents' Consultation Comments*

Surname	Address	Date	Issue raised	Response
Amery, Mark	-	29.05.19	Concern regarding subsidence caused by the construction of a double basement and related structural stability of surrounding buildings and impact on hydrogeology	The current proposal although not a double basement, would require considerable amount of excavation. Appropriate information has been requested within the audit and reviewed to address issues causing concern.
Bacall, Billie	-	24.05.19	Slope stability, stability.	Relevant issues were addressed in the audit and further information requested where necessary. Information supplied were found to be adequate.
Harris, Catrien	-	23.07.20	Presence of basement to No. 24 Netherhall and impact on Hydrogeology.	Appropriate evidence presented by applicant. The issue is addressed as of November 2020.
The Heath and Hampstead Society	-	20.07.20	Concern regarding landslide, impact on hydrogeology, land stability, damage to neighbours.	Further clarification was produced by applicant on request. The issue has been adequately addressed as of November 2020.

*Kindly note that other objections raising concern over similar issues to the above and those that are beyond the scope of the BIA are not listed.

Appendix 2: Audit Query Tracker

Audit Query Tracker

Query No	Subject	Query	Status	Date closed out
1	BIA	Utility information to be provided and assessed for impacts.	Closed	31.10.2019
2	BIA	Outline construction programme to be provided.	Closed	31.10.2019
3	Land Stability	Assessment of overall change in elevation across the site and consideration of: slope stability issues; impacts upon existing retaining structures.	Closed	31.10.2019
4	Land Stability	Indicative design of the proposed secant piled retaining walls required.	Closed	31.10.2019
5	Land Stability	A GMA should be carried out that considers the specific development, including secant piled retaining walls, underpinning and the cantilevered RC wall adjacent to 24 Netherhall Gardens. Impacts to retaining walls, the highway and underlying utilities should be confirmed within the GMA.	Closed	31.10.2019
6	Land Stability	The strategy for groundwater control to ensure stability (during underpinning) should be provided. Consideration of any settlement issues cause by dewatering should be addressed in GMA.	Closed	31.10.2019
7	Hydrology	The increase in impermeable areas is inconsistently presented between documents. The change in impermeable site area should be confirmed and sufficient assessment presented to demonstrate that the proposed SUDs is feasible and will mitigate impacts to within policy criteria.	Closed	29.11.2019
8	Hydrogeology and Land Stability	The depth of foundations at 24 and 24a Netherhall Gardens should be clarified in order to confirm the hydrogeological and land stability assessments.	Closed	04.11.2020
9	Land Stability	It should be confirmed whether the neighbouring structure (24a NG) is damaged and, if so, whether further mitigation and/or remediation is required in order to demonstrate damage will be restricted to within the limits predicted as a result of the proposed development.	Closed	04.11.2020
10	BIA	It is to be confirmed whether propped trench sheets retaining wall or sheet piling is the proposed construction method for the retaining wall.	Closed	04.11.2020

Appendix 3: Supplementary Supporting Documents

26 Netherhall Gardens- Response to BIA Audit Update, dated October 2020

BYRNELOOBY

Job Number:	8240
Reference:	8240 – FN 003
Title:	26 Netherall Gardens- Response to BIA Audit Update
Date:	20th October 2020

Introduction

Following comments from 'The Heath & Hampstead Society' on the proposals at No.26 Netherhall Gardens outlined in the Basement Impact Assessment (BIA) complete by Sinclair Johnston/Byrne Looby (BL), Campbell Reith, who prepared the BIA Audit report ref 12985-5,1updated their BIA Audit RevF2 Oct 2020, which requested further information to satisfy their requirements. This additional information can be broadly defined as below:

1. Clarifying the depth of the foundations to 24 and 24A Netherhall Gardens (NG) to confirm if bearing onto the underlying clay
2. Potential further analysis if the depth of the 24A NG foundations are not founded within the clay
3. Confirmation if the neighbouring structure (24A NG) is damaged
4. Potential further review if the neighbouring structure is damaged
5. Confirmation of the method adopted for the construction of the retaining wall proposed adjacent and parallel to 24 NG

To answer these further queries, BL conducted a site visit, reviewed the Soil Investigation (SI) information and searched Planning/Building Control records.

Report

1 Clarifying the depth of the foundations to 24 and 24A Netherhall Gardens (NG) to confirm if bearing onto the underlying clay

No records of the construction of 24A NG were found on the Camden Planning Portal.

As part of the SI, a trial pit was excavated to the 24A NG extension building (TP2), please refer to Appendix A of this File Note where the Trail Pit Location Plan has been provided as well as the subject trial pit section sketches. TP2 was excavated to a depth of 1.5m which was still within the Made Ground, however, the underside of the foundation was not discovered, although the top of the mass concrete base had. TP1, a trial pit located approximately 5-6m away was also excavated to 1.5m depth, this trial pit struck the clay at a depth of 1.38m from a similar ground level. Based on the proximity of TP1 to TP2, the clay layer being close and the fact that 24A NG foundations go deeper suggests that the foundations to 24A NG are in fact founded within the clay layer. It is acknowledged, as it is in the 'Heath & Hampstead

Society's' report that the Victorian built 24 Netherhall Gardens likely has deeper foundations and potentially a basement.

2 Potential further analysis if the depth of 24 and 24A NG foundations are not founded within the clay

BL do not believe further analysis is required based of the SI findings suggesting 24A foundations are founded within the clay, which demonstrates that the hydrogeology & land stability of/below the neighbouring foundations is acceptable which satisfies Query No.8 in Campbell Reith's BIA-Audit Tracker.

3 Confirmation if the neighbouring structure (24A NG) is damaged

BL carried out a site visit on 20th October 2020 to externally inspect the neighbouring building 24A NG (*Photos 1-18*) for which photos can be found in Appendix B of this File Note. The brickwork to the main extension building/s appears to be in very good condition with no signs of cracking, excessive settlement, subsidence or structural movement of any kind. Some minor cracking was noted (*Photo 11*), however, this was at the junction between the main house wall and the half-height garden/porch wall which is not unusual bearing in mind they do not appear to be properly jointed and of different heights and construction. The junction between 24A NG and 24 NG also show some minor cracking to the jointing material (presumed concrete mortar) (*Photo 4*), again, this is not necessarily unusual as the newer-build 24A NG naturally settles under its own weight and would not be classed as damage or an issue. This demonstrates that the land stability of/below the neighbouring 24A NG building is acceptable which satisfies Query No.9 in Campbell Reith's BIA-Audit Tracker.

4 Potential further review if the neighbouring structure is damage

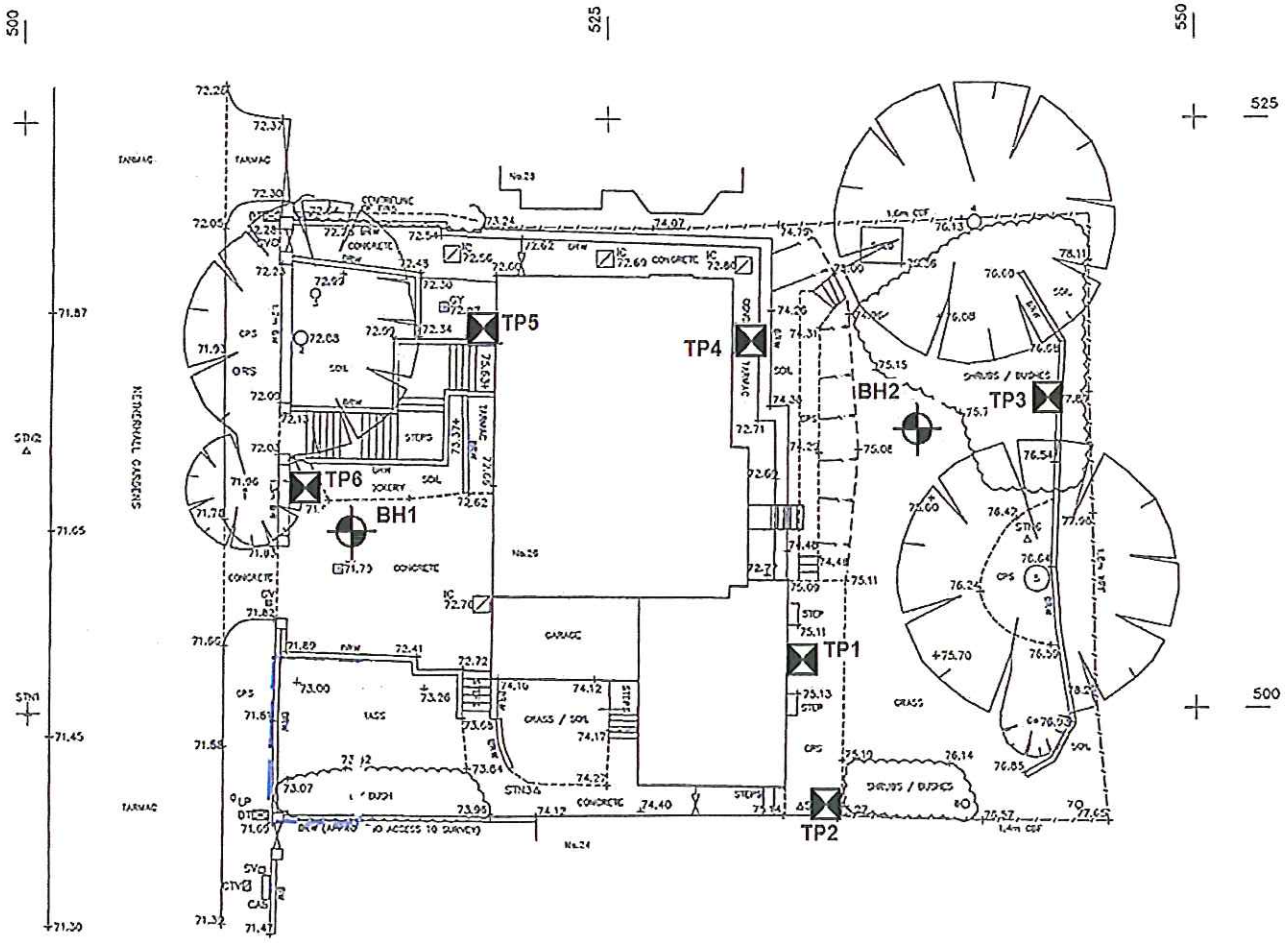
BL do not believe further review is required based of the findings of our site visit noting that the building appears to be in very good condition.

5 Confirmation of the method adopted for the construction of the retaining wall proposed adjacent and parallel to 24 N

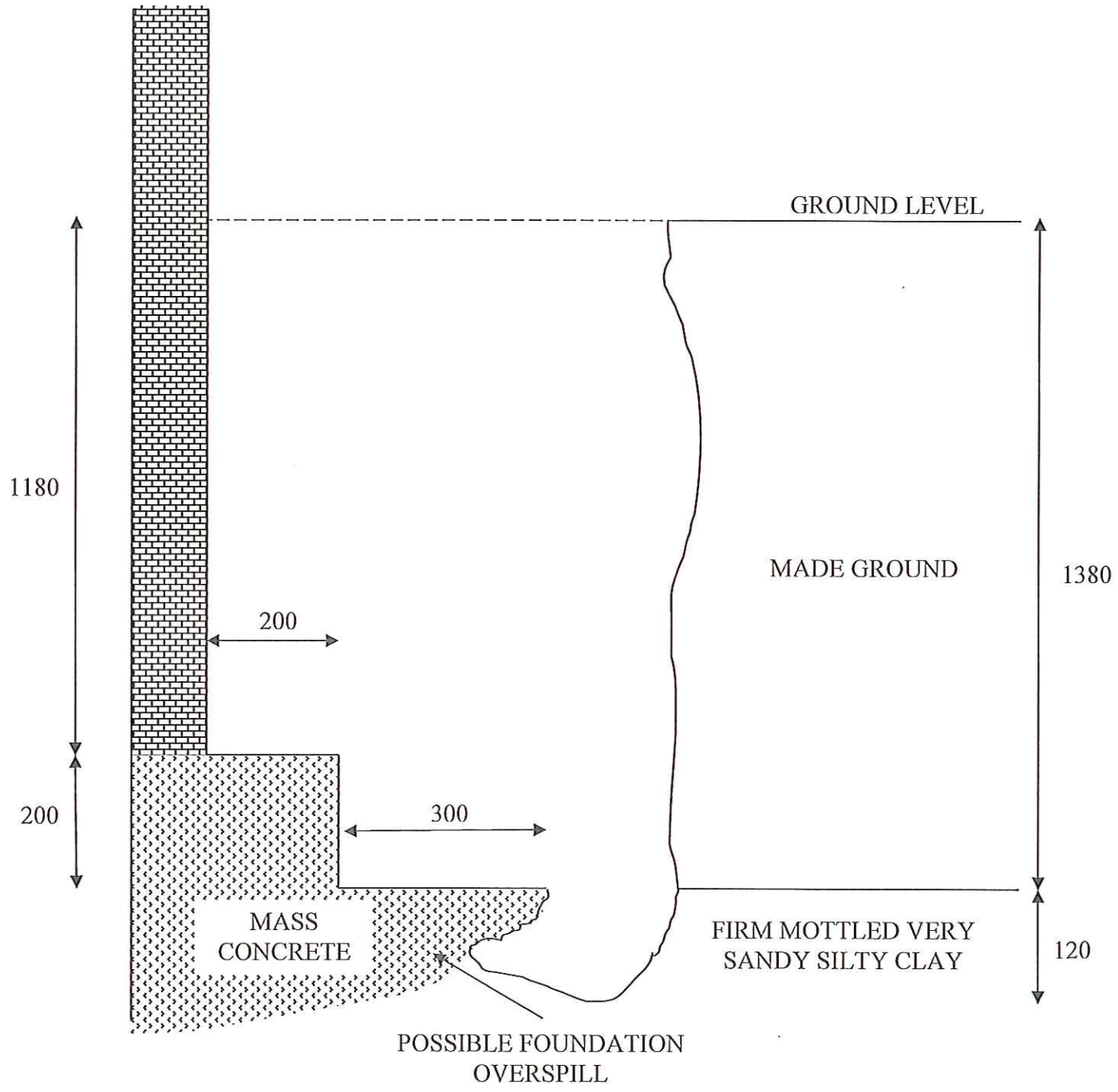
Propped trench sheeting is proposed to avoid vibration caused by sheet piling, which satisfies Query No.10 in Campbell Reith's BIA-Audit Tracker.

Appendix A – Trial Pit Information

Site Analytical Services Ltd.		REF: 14/22068
LOCATION:	26 Netherhall Gardens, London, NW3 5TL	FIG: 1
TITLE: Site Sketch Plan	DATE: June 2014	SCALE: NTS



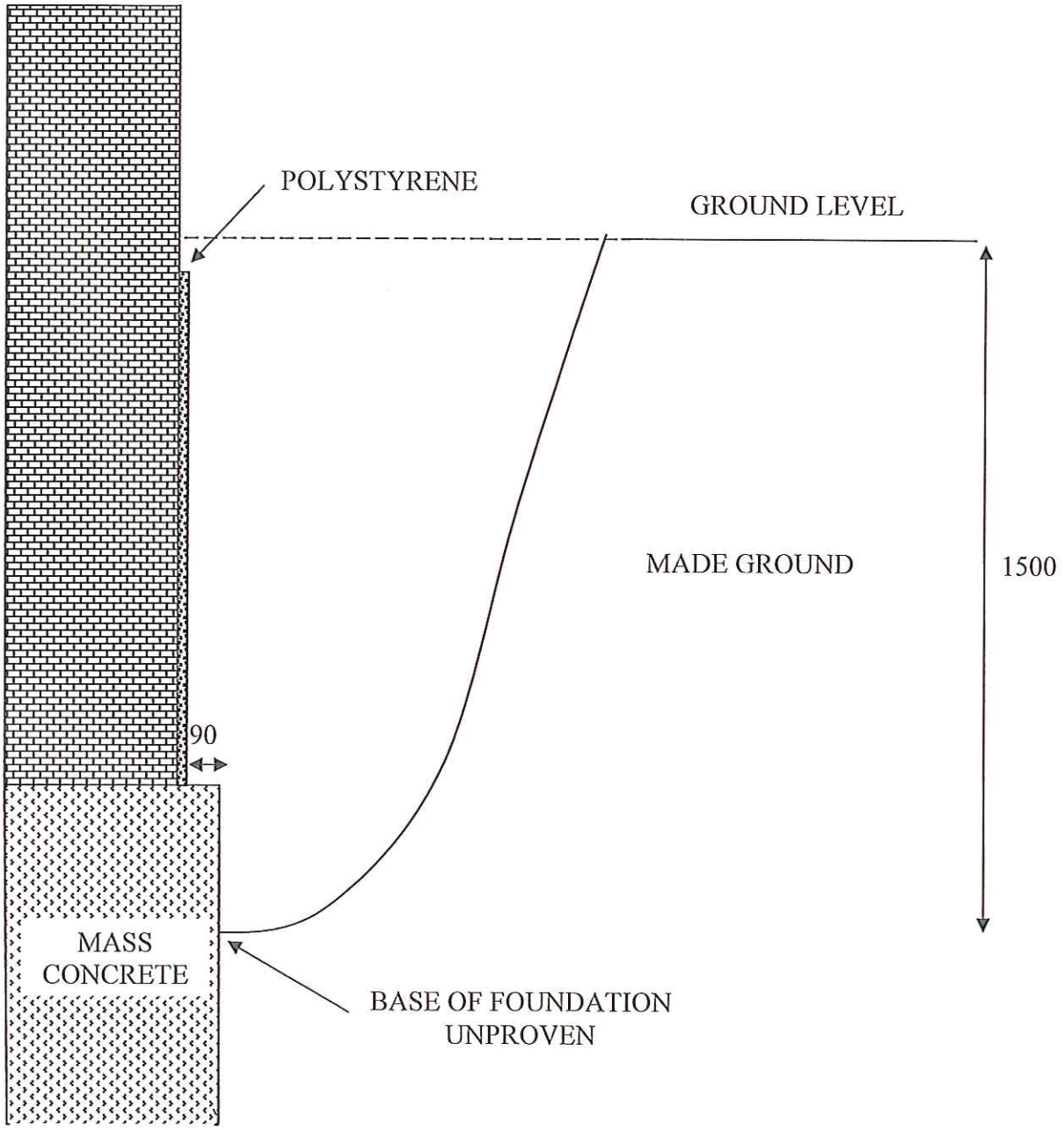
Site Analytical Services Ltd.				REF: 14/22068
LOCATION:	26 Netherhall Gardens, London, NW3 5TL			FIG: 2
TITLE:	Trial Pit 1	DATE:	June 2014	SCALE: NTS



END OF TRIAL PIT 1 AT 1500mm DEPTH

DIMENSIONS IN mm

Site Analytical Services Ltd.		REF: 14/22068
LOCATION:	26 Netherhall Gardens, London, NW3 5TL	FIG: 3
TITLE: Trial Pit 2	DATE: June 2014	SCALE: NTS



END OF TRIAL PIT 2 AT 1500mm DEPTH

DIMENSIONS IN mm

Appendix B – Site Photos

Photo 1

Photo 2

Photo 3

Photo 4

Photo 5

Photo 6

Photo 7

Photo 8

Photo 9

Photo 10

Photo 11

Photo 12

Photo 13

Photo 14

Photo 15

Photo 16

Photo 17

Photo 18

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