

119A Fordwych Road
London NW2 3NJ

Basement Impact Assessment
Audit

For
London Borough of Camden

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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 119A Fordwych Road NW2 3NJ (planning reference 2016/0847/P). The basement is considered to fall within Category B as defined by the Terms of Reference.
- 1.2. The Audit 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.
- 1.4. The BIA has been prepared by a firm of engineering consultants however the individual authors and their qualifications have not been identified for review.
- 1.5. The BIA has confirmed that the soil strata are 0.65m of Made Ground over London Clay, the foundations to the basement will be founded within the London Clay.
- 1.6. It is unlikely that the ground water table will be encountered during basement foundation excavation; however the Contractor should make allowance for perch water in the Made Ground.
- 1.7. The BIA contains no description of the structural proposals to form the basement retaining walls.
- 1.8. No analysis has been undertaken of horizontal and vertical ground movements and this should be carried out once a decision on methodology has been taken and the above investigations have been completed.
- 1.9. It is accepted that the surrounding slopes to the development site are stable.
- 1.10. It is accepted that the development will not impact on the wider hydrogeology of the area and is not in an area subject to flooding.
- 1.11. Queries and requests for clarification are discussed in Section 4 and summarised in Appendix 2.

2.0 INTRODUCTION

- 2.1. CampbellReith was instructed by London Borough of Camden (LBC) on 31 May 2016 to carry out a Category B Audit on the Basement Impact Assessment (BIA) submitted as part of the Planning Submission documentation for 119A Fordwych Road NW2 3NJ Planning Reference 2016/0847/P.
- 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 (CPG) 4: Basements and Lightwells.
 - Camden Development Policy (DP) 27: Basements and Lightwells.
 - Camden Development Policy (DP) 23: Water.
- 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 *"Excavation of front lightwell and insertion of doors at lower ground floor level and erection of two storey rear extension"*
- 2.6. The Audit Instruction also confirmed neither the property or neighbouring properties are listed buildings.
- 2.7. CampbellReith accessed LBC's Planning Portal on 17 June 2016 and gained access to the following relevant documents for audit purposes:

- Basement Impact Assessment Report (BIA) by Site Analytical Services Ltd dated May 2016
- Planning Application Drawings by Horizon design consisting of
 - Location Plan
 - Existing Plans
 - Proposed Plans
- Structural Calculations for beams and joists by N.M.N Partnership

3.0 BASEMENT IMPACT ASSESSMENT AUDIT CHECK LIST

Item	Yes/No/NA	Comment
Are BIA Author(s) credentials satisfactory?	No	Author of BIA not identified.
Is data required by Cl.233 of the GSD presented?	Yes	Within BIA.
Does the description of the proposed development include all aspects of temporary and permanent works which might impact upon geology, hydrogeology and hydrology?	No	No description of proposed method of construction contained in BIA
Are suitable plan/maps included?	Yes	Relevant plans and extracts are contained in Section 3 of the BIA.
Do the plans/maps show the whole of the relevant area of study and do they show it in sufficient detail?	Yes	As above.
Land Stability Screening: Have appropriate data sources been consulted? Is justification provided for 'No' answers?	Yes	Table 2 of the BIA.
Hydrogeology Screening: Have appropriate data sources been consulted? Is justification provided for 'No' answers?	Yes	Table 2 of the BIA.
Hydrology Screening: Have appropriate data sources been consulted? Is justification provided for 'No' answers?	Yes	Table 2 of the BIA.
Is a conceptual model presented?	Yes	Section 6 of the BIA.
Land Stability Scoping Provided? Is scoping consistent with screening outcome?	Yes	Section 4 of the BIA.

Item	Yes/No/NA	Comment
Hydrogeology Scoping Provided? Is scoping consistent with screening outcome?	Yes	Section 4 of the BIA.
Hydrology Scoping Provided? Is scoping consistent with screening outcome?	Yes	Section 4 of the BIA.
Is factual ground investigation data provided?	Yes	Ground Investigation Report contained in Appendix A of BIA.
Is monitoring data presented?	Yes	Section 3.3 of ground investigation report.
Is the ground investigation informed by a desk study?	No	However some reference to geological and historical maps is noted.
Has a site walkover been undertaken?	No	No evidence provided.
Is the presence/absence of adjacent or nearby basements confirmed?	No	No adjacent basements noted.
Is a geotechnical interpretation presented?	Yes	Ground Investigation Report contained in Appendix A of BIA.
Does the geotechnical interpretation include information on retaining wall design?	Yes	Section 5.5 of the ground investigation report.
Are reports on other investigations required by screening and scoping presented?	No	None identified.
Are the baseline conditions described, based on the GSD?	No	Plan required identifying extent of adjoining property in relation to the new basement.
Do the base line conditions consider adjacent or nearby basements?	No	None identified.
Is an Impact Assessment provided?	Yes	Section 7 of the BIA.
Are estimates of ground movement and structural impact presented?	No	None included.

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?	No	Mitigation measures noted however not necessarily incorporated into scheme.
Has the need for monitoring during construction been considered?	Yes	Monitoring recommended, trigger levels identified but not quantified.
Have the residual (after mitigation) impacts been clearly identified?	Yes	Section 7 of the BIA.
Has the scheme demonstrated that the structural stability of the building and neighbouring properties and infrastructure will be maintained?	No	No specific estimation of movement given.
Has the scheme avoided adversely affecting drainage and run-off or causing other damage to the water environment?	Yes	
Has the scheme avoided cumulative impacts upon structural stability or the water environment in the local area?	No	Structural stability impacts not identified.
Does report state that damage to surrounding buildings will be no worse than Burland Category 2?	No	No reference to Burland Category.
Are non-technical summaries provided?	Yes	All relevant sections.

4.0 DISCUSSION

- 4.1. The Basement Impact Assessment (BIA) and the Ground Investigation report have both been carried out by a firm of engineering consultants, Site Analytical Services Ltd; however the individual authors have not been identified, so it is currently impossible to confirm suitable qualifications in accordance with CPG 4 requirements.
- 4.2. The LBC Instruction to proceed with the audit identified that the basement proposal did not involve a listed building either on or adjacent to the development.
- 4.3. The BIA clearly carries out the screening and scoping assessments in line with CPG4 requirements and includes maps, diagrams and references to support conclusions where necessary.
- 4.4. The planning drawings indicate a proposed basement extension of 4 metres to the rear of the property and a small front lightwell extension. The depth of the existing basement below the rear garden is indicated as 1.9m, the depth of the basement internally is not given. Clause 3.7 of the BIA indicates the existing ground floor is to be lowered, although this element is not clearly indicated on the submitted documents.
- 4.5. The BIA and ground investigation report have confirmed the ground conditions as Made Ground to a depth of 0.65m below which London Clay was found to a depth of 8.0m. Groundwater level monitoring indicated the water between 6.2 and 6.8m which is below the formation of the basement structure.
- 4.6. Some structural calculations are presented however they appear to relate to the ground floor alterations. The BIA contains no detail of the proposed construction methodology to form the basement. It is recommended that an outline structural philosophy supported by preliminary retaining wall calculations are produced.
- 4.7. No trial pits to establish the depth and form of construction for either the 119A wall or the party wall have been undertaken, so it is not possible to determine the levels of the existing foundations in respect to the new basement.
- 4.8. No assessment of vertical and horizontal ground movements has been produced, so no indication of potential damage to adjoining properties can be reviewed.
- 4.9. The BIA indicates proposals for monitoring of movement during construction and suggests trigger levels should be set. These need to be agreed with the relevant adjoining owners.

- 4.10. The BIA has shown that the development is not close to a “lost” river nor will it impact on the wider hydrogeology of the area, any other watercourses, springs or the Hampstead Heath Pond chain catchment area.
- 4.11. It is accepted that there are no slope stability concerns regarding the proposed development and although the area previously flooded in 1975 it is now not considered as an area prone to flooding.

5.0 CONCLUSIONS

- 5.1. The BIA and SSR have been carried out by a firm of engineering consultants however the individual authors have not been identified.
- 5.2. The BIA has confirmed that the proposed basement will be founded within the London Clay.
- 5.3. It is unlikely that the ground water table will be encountered during basement foundation excavation.
- 5.4. The BIA contains no description of the proposed construction methodology or structural plans or calculations for the proposed retaining wall.
- 5.5. No analysis has been undertaken of horizontal and vertical ground movements and this should be carried out once a decision on methodology has been taken and the above investigations have been completed.
- 5.6. No proposals are provided for a movement monitoring strategy during excavation and construction.
- 5.7. It is accepted that the surrounding slopes to the development site are stable.
- 5.8. It is accepted that the development will not impact on the wider hydrogeology of the area and is not in an area subject to flooding.

Appendix 1: Residents' Consultation Comments

None

Appendix 2: Audit Query Tracker

Audit Query Tracker

Query No	Subject	Query	Status	Date closed out
1	General	Please confirm authors and qualifications for the relevant sections of the BIA	Open	
2	General	Please confirm depth and extent of new basement.	Open	
3	Stability	Please confirm ground movement assumptions	Open	
4	Stability	Please confirm level of damage to adjacent structures categorized to 'Burland Scale'	Open	
5	Stability	Please confirm structural proposals and outline calculations for the basement retaining walls	Open	

Appendix 3: Supplementary Supporting Documents

None

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