CampbellReith
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Basement Impact Assessment Audit

11 Hampstead High Street, London NW3 1PY

For
London Borough of Camden

Project No.
13693-92

Revision
F1

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APPENDICES

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 11 Hampstead High Street, London, NW3 1PY (planning reference 2022/0700/P & 2022/0710/P). The basement is considered to fall within Category A as defined by the Terms of Reference.

1.2 The Audit reviewed the Basement Impact Assessment (BIA) 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 individuals who possess suitable qualifications.

1.5 It is proposed to extend the lower ground floor across the existing courtyard situated to the rear of the property. The works will include cutting into the paved embankment and stairwell (that separates the site from the adjoining car park) and construction of a new retaining wall.

1.6 The BIA report confirms that the proposed development does not result in any deepening with respect to the existing basement and / or retaining structures. The architect's drawings confirm that the basement of the neighbouring property to the east is at a similar level of the existing lightwell at the rear of the property.

1.7 It is accepted that there are no subterranean or surface water flow concerns regarding the proposed development.

1.8 It is accepted that the proposed basement will not impact the stability of the neighbouring buildings.

1.9 An appropriate ground model and associated geotechnical parameters have been provided.

1.10 It can be confirmed that the BIA complies with the requirements of CPG: Basements.

2.0 INTRODUCTION

2.1 CampbellReith was instructed by London Borough of Camden (LBC) on 14th December 2022 to carry out a Category A audit on the Basement Impact Assessment (BIA) submitted as part of the Planning Submission documentation for 11 Hampstead High Street London NW3 1PX (reference 2022/0700/P & 2022/0710/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:

- Camden Local Plan 2017 - Policy A5 Basements.
- Camden Planning Guidance (CPG): Basements. January 2021.
- Guidance for Subterranean Development (GSD). Issue 01. November 2010. Ove Arup & Partners.
- Hampstead Neighbourhood Plan

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,

d) 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 two storey rear extension, following the excavation for a lower-ground floor* ex*tension to provide 1 x 3 bed self-contained flat*".

2.6 The Audit Instruction confirmed 11 Hampstead High Street involved, or was a neighbour to, a listed building.

2.7 CampbellReith accessed LBC's Planning Portal on 16th December 2022 and gained access to the following relevant documents for audit purposes:

- Design & Access Statement by CSM Architects.
- Existing plan by CSM Architects dated June 2021.
- Existing drawing by CSM Architects dated December 2021.
- Existing site and roof plan by CSM Architects dated December 2021.

- Site Location Plan by CSM Architects.
- Proposed plans and elevation by CSM Architects dated June 2021.
- Proposed floor plan by CSM Architects dated December 2021.
- Proposed elevation drawing by CSM Architects dated December 2021.
- Blue Roof Calculations Revision B by Brauder dated February 2022.
- Phase I Geo-environmental Assessment by 3econsult, ref. P21-270/P1, dated December 2021.
- Phase II Geo-environmental Assessment by Hydrock, ref. P21-270-3E-XX-XX-RP-G-9001, issue 1, dated August 2022.
- Basement Impact Assessment Report by Geotechnical & Environmental Associates Limited, ref. J22271, rev 0 dated 30 September 2022.
- Response as per Appendix 1.

2.8 Subsequent to the initial audit report, the following additional documents were provided to CampbellReith to address the queries raised:

- Basement Impact Assessment Report by Geotechnical & Environmental Associates Limited, ref. J22271, rev 1, dated 25 September 2023.
- Phase II Geo-environmental Assessment by Hydrock, ref. P21-270-3E-XX-XX-RP-G-9001, issue 3, dated 11 April 2023.
- Revised Proposed plans and elevation by CSM Architects, Rev A, dated 11 April 2023.
- Revised Proposed floor plan by CSM Architects, Rev A, dated 11 April 2023.
- Revised Proposed elevation drawing by CSM Architects, Rev A, dated 11 April 2023.
- Existing Foundation Details drawing by CSM Architects, Rev C, dated 16 November 2023.
- Proposed Foundation Details drawing by CSM Architects, Rev B, dated 15 November 2023.

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	
Does the description of the proposed development include all aspects of temporary and permanent works which might impact upon geology, hydrogeology and hydrology?	Yes	
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	
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	
Land Stability Scoping Provided? Is scoping consistent with screening outcome?	Yes	
Hydrogeology Scoping Provided? Is scoping consistent with screening outcome?	Yes	

Item	Yes/No/NA	Comment
Hydrology Scoping Provided? Is scoping consistent with screening outcome?	NA	No items taken forward from Screening.
Is factual ground investigation data provided?	Yes	Hydrock 3E Phase II Geo-environmental Assessment
Is monitoring data presented?	Yes	Hydrock 3E Phase II Geo-environmental Assessment
Is the ground investigation informed by a desk study?	Yes	3econsult Phase I Geo-Environmental Assessment
Has a site walkover been undertaken?	Yes	None included within the BIA assessment however, a ground investigation was carried out by Hydrock 3e in June 2022.
Is the presence/ absence of adjacent or nearby basements confirmed?	Yes	
Is a geotechnical interpretation presented?	Yes	Within appendix of the BIA.
Does the geotechnical interpretation include information on retaining wall design?	Yes	Within appendix of the BIA.
Are reports on other investigations required by screening and scoping presented?	NA	
Are the baseline conditions described, based on the GSD?	Yes	Section 3.0 of BIA
Do the base line conditions consider adjacent or nearby basements?	Yes	
Is an Impact Assessment provided?	Yes	Section 6.0 of BIA
Are estimates of ground movement and structural impact presented?	NA	

Item	Yes/No/NA	Comment
Is the Impact Assessment appropriate to the matters identified by screening and scoping?	Yes	
Has the need for mitigation been considered and are appropriate mitigation methods incorporated in the scheme?	Yes	Section 6.0 of BIA
Has the need for monitoring during construction been considered?	NA	
Have the residual (after mitigation) impacts been clearly identified?	NA	
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	
Has the scheme avoided cumulative impacts upon structural stability or the water environment in the local area?	Yes	
Does the report state that damage to surrounding buildings will be no worse than Burland Category 1?	NA	
Are non-technical summaries provided?	Yes	

4.0 DISCUSSION

4.1 The Basement Impact Assessment (BIA) has been carried out by engineering consultants Geotechnical & Environmental Associates (GEA) and the individuals concerned in its production have suitable qualifications.

4.2 The proposal includes a two-story extension and alterations to the lower ground floor and ground floor of the existing building to allow construction of two residential flats and remodel the existing HSBC bank. The new extension will be located within the existing lower ground floor courtyard situated to the rear of the property. The works will include cutting into a paved embankment and stairwell (that separates the site from the adjoining car park) and construction of a new retaining wall.

4.3 Updated architect drawings have been provided to show the proposed basement and neighbouring foundations. The drawings indicate the basement of the neighbouring property to the east is at a similar level (within 300mm) of the existing lightwell at the rear of the property. The BIA also states that the proposed development does not result in any deepening with respect to the existing basement and / or retaining structures.

4.4 A ground investigation (GI) has been undertaken comprising one rotary open hole borehole, one handheld mini percussive borehole and two hand excavated trial pits. The findings indicate that the site is underlain by Made Ground of variable thickness (ranging from 0.45m to 1.40m) over firm sandy clays of the Claygate Member. The London Clay Formation was encountered from 5.60m below the car park level, comprising stiff (becoming very stiff) silty clay.

4.5 Groundwater was not encountered during the GI but measured to be 4.45m and 4.54m below the car park level during later monitoring visits carried out on 26th July and 28th July 2022.

4.6 Two hand dug pits targeted the foundations of the eastern garden wall and confirmed the foundations extended to a depth of at least 1.40m bgl. The BIA states that the hand dug pits confirm the presence of an existing basement below the neighbouring property (No. 1 Old Brewery Mews). A supplementary trial pit was carried out on the western boundary wall and confirmed the foundations to a depth of 0.50m bgl over clays. Based on the findings of the supplementary ground investigation the BIA confirms that underpinning will not be required. However, it is stated that the existing retaining wall along the western part of the site (approximately 1.4m from the western boundary wall) is likely to be modified or replaced and thus a system of temporary supports will be provided to the boundary garden wall to eliminate any potential impact.

4.7 The Subterranean Flow Screening indicates the presence of a Secondary A aquifer beneath the site. The Claygate deposits encountered during the ground investigation were predominantly clay and were assumed in the BIA to have the characteristics of non-productive strata, similar to that of the London Clay.

4.8 Historical borehole data shows a historical well situated 25m east of site associated with a former brewery. Records confirm the well targeted extraction from the chalk bedrock underlying the London Clay Formation and was decommissioned in the 1930's.

4.9 It is accepted that there are no hydrogeological concerns regarding the proposed development.

4.10 Surface flow and flooding screening confirmed no increase in impermeable area.

4.11 An independent check shows the site to be within an area affected by internal sewer flooding and a Critical Drainage Area within the figures included in the Camden SFRA; the BIA states that, in accordance with the CPG, a positive pump device and non-return valve will be installed as part of the development.

4.12 The land stability screening identified the site has an existing slope greater than 7 degrees at the rear of the property. As part of the construction a new retaining wall will be constructed, and the slope cut out. A ground model and associated geotechnical parameters have been provided in the updated Phase II Hydrock report to inform the detailed design.

4.13 The screening has been updated to include reference of a small tree present in proximity to the extension and has confirmed it is to be retained.

4.14 No proposals are provided for a movement monitoring strategy during excavation and construction.

5.0 CONCLUSIONS

5.1 The Basement Impact Assessment (BIA) has been carried out by engineering consultants Geotechnical & Environmental Associates (GEA) and the individuals concerned in its production have suitable qualifications.

5.2 It is proposed to extend the lower ground floor across the existing courtyard situated to the rear of the property. The works will include cutting into the paved embankment and stairwell (that separates the site from the adjoining car park) and construction of a new retaining wall.

5.3 Updated architect drawings have been provided and confirm the existing basement of the neighbouring property to the east is within 300mm of the level of the existing lightwell at the rear of the property. The updated BIA report confirms that the proposed development will not result in any deepening with respect to the existing basement and / or retaining structures.

5.4 An appropriate ground model and associated geotechnical parameters have been provided.

5.5 It is accepted that there are no subterranean or surface flow concerns regarding the proposed development.

5.6 It is accepted that the proposed basement will not impact the stability of the neighbouring buildings.

5.7 No proposals are provided for a movement monitoring strategy during excavation and construction.

5.8 It can be confirmed that the BIA complies with the requirements of CPG: Basements.

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Appendix 1

Consultation Responses

Residents' Consultation Comments

Surname	Address	Date	Issue raised	Response
Moran	14 Hampstead High Street	21/11/2022	Issues raised on works being carried out near to the resident's property (being a listed building), potential destabilising of the party wall and, removal of tree along boundary. The response references underpinning possibly being required beneath the party wall.	Items covered in updated response received in October 2023.

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Appendix 2

Audit Query Tracker

Audit Query Tracker

Query No	Subject	Query	Status	Date closed out
1	BIA	Confirmation of the proposed foundation depth of the lower ground floor extension should be provided. Architectural drawings to include existing and proposed levels. If deepening is confirmed, resulting differential depth to neighbouring foundation to be presented.	Closed	16/11/2023
2	BIA	Details of the foundation depths of the party walls to the west boundary is required. In addition, clarification regarding reference to underpinning of the western party wall is required.	Closed	18/10/2023
3	BIA	If underpinning is likely to be required along the party wall, construction details and method is required.	Closed	18/10/2023
4	BIA	Provide geotechnical interpretation including parameters for proposed retaining wall.	Closed	18/10/2023
5	Land Stability	Clarification required regarding the tree removal referenced in one response is required.	Closed	18/10/2023
6	Land Stability	A Ground Movement Assessment (GMA) is not provided at this stage. If it becomes necessary for underpinning to be undertaken along the party walls, a GMA may be required to ensure movements are limited within Category 1 damage of the Burland Scale to neighbouring structures and infrastructure. An outline structural proposal will also be required to inform the GMA.	Note Only	

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Appendix 3

Supplementary Supporting Documents

None

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