

**Basement Impact
Assessment Audit**

175 Arlington Road, London
NW1 7EY

For
London Borough of Camden

Project No.
14006-73

Date
February 2025

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DOCUMENT HISTORY AND STATUS

Revision	Date	Purpose/ Status	File Ref	Author	Check	Review
D1	29/05/2024	For comment	MEkb_14006-73- 290524- 175 Arlington Road D1.docx	ME	KB	KB
F1	24/02/2025	For Planning	MEkb_14006-73- 240225- 175 Arlington Road F1.docx	GK	HS	GK

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Document Details

Last Saved	21/02/2025 17:20
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Project Number	14006-73
Project Name	Basement Impact Assessment Audit
Revision	F1
Planning Reference	2023/4321/P
File Ref	MEkb_14006-73-240225- 175 Arlington Road F1.docx

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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 175 Arlington Road, London, NW1 7EY (planning reference 2023/4321/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 qualifications of the individuals involved in the updated BIA are in accordance with LBC Guidance.
- 1.5 The requested clarification of the existing and proposed site arrangements has been provided in the updated BIA.
- 1.6 The proposed development comprises the construction of a single level basement and extending the existing building to the rear. The boundary walls shared with 173 and 177 Arlington Road as well as the front elevation will be underpinned as part of the redevelopment.
- 1.7 Screening and Scoping assessments are presented, supported by material that typically would be found in a Desk Study.
- 1.8 A site specific ground investigation is presented in the updated BIA along with appropriate geotechnical information.
- 1.9 Outline structural information is presented, including confirmation of the temporary works and permanent works strategies and sequencing.
- 1.10 The requested additional assessments have been undertaken and are presented in the updated BIA, including Flood Risk Assessment, Drainage Strategy and hydrogeological assessment. There will be no adverse impacts to surface water flow or groundwater flow.
- 1.11 An updated Ground Movement Assessment (GMA) and Building Damage Assessment is presented. Impacts to neighbours are predicted to be within Category 1 (Very Slight) in accordance with the Burland Scale.
- 1.12 The GMA indicates that a movement monitoring scheme is to be adopted to ensure that movements generated are maintained within predicted limits.
- 1.13 Queries and requests for information are discussed in Section 4 and summarised in Appendix 2. Based on the updated information presented, the BIA meets the requirements of Camden Planning Guidance: Basements.

2.0 INTRODUCTION

2.1 CampbellReith was instructed by London Borough of Camden (LBC) on 29 April 2024 to carry out a Category B audit on the Basement Impact Assessment (BIA) submitted as part of the Planning Submission documentation for 175 Arlington Road, London, NW1 7EY and planning reference 2023/4321/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.

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 "Basement extension to ground floor flat at 175 Arlington Road."

2.6 The Audit Instruction confirmed 175 Arlington Road did not involve, nor was a neighbour to, listed buildings.

2.7 CampbellReith accessed LBC's Planning Portal on 01 May 2024 and gained access to the following relevant documents for audit purposes:

- Basement Impact Assessment by LIM Engineering Ltd Consulting Engineers, Ref.: 1569 Revision 0, dated September 2023.
- Structural Drawings by LIM Engineering Ltd Consulting Engineers, Ref.: 1569 Revision 0, dated September 2023.
- Structural Calculations by LIM Engineering Ltd Consulting Engineers, Ref.: 1569 Revision 0, dated October 2023.

- Architectural Drawings by Studio Becoming:
 - Existing Plans, Ref.: ARL_SB_EX_AL_100 Revision P1, dated 12 August 2022
 - Existing and Proposed Section AA, Ref.: ARL_SB_PR_AL_200 Revision P3, dated 12 August 2022.
 - Proposed Plans: Basement to First Floors, Ref.: ARL_SB_PR_AL_100A Revision P11, dated 12 August 2022.
 - Existing & Proposed Rear Elevations, Ref.: ARL_SB_PR_AL_310 Revision P5, dated 12 August 2022.
 - Proposed Plans: Second Floor to Roof Plan, Ref.: ARL_SB_PR_AL_100B Revision P9, dated 12 August 2022.
 - Existing & Proposed Front Elevations, Ref.: ARL_SB_PR_AL_300 Revision P3, dated 12 August 2022.

2.8 CampbellReith were provided with the following documents for audit purposes in November 2024 and February 2025:

- Basement Impact Assessment (Ref CGL/10296, Rev 0) dated October 2024 by Card Geotechnics Limited.
- Flood Risk Assessment (Ref 516 FRA-v1) dated September 2024 by Urban Water.
- Drainage Strategy (Ref 516 Rev-v1) date August 2024 by Urban Water.

3.0 BASEMENT IMPACT ASSESSMENT AUDIT CHECK LIST

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

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

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

4.0 DISCUSSION

- 4.1 The updated Basement Impact Assessment (BIA) has been carried out by Card Geotechnics Limited and the individuals concerned in its production hold suitable qualifications that meet the requirements of CPG Basements.
- 4.2 The site is rectangular, measuring 18.3m long and 4.7m wide. It shares a party wall with the property at 173 Arlington Road along the south boundary and 177 Arlington Road along the north boundary. The revised BIA describes the existing development as a three-storey terraced building, which includes a single-storey rear addition and garden at the rear.
- 4.3 The proposed development comprises the construction of a single level basement and extending the existing building to the rear. The formation level of the proposed basement is at 22.25m AOD, and the boundary walls shared with 173 and 177 Arlington Road as well as the front elevation will be underpinned as part of the redevelopment.
- 4.4 The requested clarification of the existing and proposed site arrangements has been provided in the updated BIA.
- 4.5 Screening and Scoping assessments are presented, supported by material that typically would be found in a Desk Study. The assessments within the updated BIA are accepted as appropriate.
- 4.6 Previous BIA submissions did not present suitable ground conditions information or geotechnical assessments. A site specific ground investigation is presented in the updated BIA along with appropriate geotechnical information. The geotechnical design parameters and bearing capacity have been clarified.
- 4.7 Outline structural information is presented, including confirmation of the temporary works and permanent works strategies and sequencing. Single stage underpinning is proposed in a hit and miss sequence with stiff propping in the permanent and temporary cases. Underpins will be constructed off the London Clay Formation.
- 4.8 Previous BIA submissions raised questions on the flood risk, surface water impacts and groundwater regime and further assessments were requested. The requested additional assessments have been undertaken and are presented in the updated BIA, including Flood Risk Assessment, Drainage Strategy and hydrogeological assessment. There will be no adverse impacts to surface water flow or groundwater flow.
- 4.9 An updated Ground Movement Assessment (GMA) and Building Damage Assessment is presented. The range of movements predicted are within the typical range anticipated considering the depth and scale of the development, ground conditions and construction methodology. Impacts to neighbours are predicted to be within Category 1 (Very Slight) in accordance with the Burland Scale.
- 4.10 The BIA indicates that a movement monitoring scheme is to be adopted to ensure that the movements generated are maintained within predicted limits. In addition, it recommends that a condition survey is undertaken on all adjacent walls and property facades prior to works commencing.

5.0 CONCLUSIONS

- 5.1 The qualifications of the individuals involved in the updated BIA are in accordance with LBC Guidance.
- 5.2 The requested clarification of the existing and proposed site arrangements has been provided in the updated BIA.
- 5.3 Screening and Scoping assessments are presented.
- 5.4 A site specific ground investigation is presented in the updated BIA along with appropriate geotechnical information.
- 5.5 Outline structural information is presented, including confirmation of the temporary works and permanent works strategies and sequencing.
- 5.6 The requested additional assessments have been undertaken and are presented in the updated BIA. There will be no adverse impacts to surface water flow or groundwater flow.
- 5.7 Impacts to neighbours are predicted to be within Category 1 (Very Slight) in accordance with the Burland Scale.
- 5.8 The GMA indicates that a movement monitoring scheme is to be adopted to ensure that movements generated are maintained within predicted limits.
- 5.9 Based on the updated information presented, the BIA meets the requirements of Camden Planning Guidance: Basements.

Appendix 1

Consultation Responses

None

Basement Impact Assessment Audit
175 Arlington Road, London NW1 7EY

CampbellReith
consulting engineers

Appendix 2

Audit Query Tracker

Audit Query Tracker

Query No	Subject	Query	Status	Date closed out
1	BIA	The qualifications of the individuals involved in the production of the BIA should be demonstrated to be in accordance with LBC guidance.	Closed	February 2025
2	BIA	Clarification regarding the existing site description is requested.	Closed	February 2025
3	BIA	The architectural drawings should be fully dimensioned. The maximum excavation depth should be clearly presented.	Closed	February 2025
4	BIA	Maps and photographs showing the location of the project relative to surrounding buildings, topography and natural & man-made features are required in accordance with cl233 of the GSD	Closed	February 2025
5	Hydrology/ Hydrogeology	Clarification regarding increase in hardstanding areas. Screening and scoping assessment to be reviewed.	Closed	February 2025
6	Hydrology/ Hydrogeology	Provision of the Flood Risk Assessment and Drainage Report referred to in the BIA is requested.	Closed	February 2025
7	Land Stability	Clarification regarding proximity to tunnels is requested.	Closed	February 2025
8	BIA	Where a 'no' response is given in the screening assessment, justification for the response should be provided.	Closed	February 2025
9	BIA	A plan showing the location of the borehole in relation to the proposed basement is requested.	Closed	February 2025
10	Land Stability/ Hydrogeology	Further justification for the ground model adopted in the BIA is requested.	Closed	February 2025

Query No	Subject	Query	Status	Date closed out
11	Hydrogeology	Further consideration of the hydrogeological regime, the impact on underpins construction, basement excavation, and proposed mitigation measures is requested.	Closed	February 2025
12	Hydrogeology/ Land Stability	Section 5 of the BIA states that an intrusive site investigation is required and provides the reasons for this. However, based on the information provided, it is not considered that the criteria listed in the BIA have been met.	Closed	February 2025
13	Hydrogeology/ Hydrology	Clarification regarding the critical drainage area is requested.	Closed	February 2025
14	Land Stability	Clarification is required regarding whether a site walkover has been conducted and whether neighbouring properties have existing basements.	Closed	February 2025
15	Land Stability	Geotechnical parameters to be reviewed following the comments provided in Section 4.	Closed	February 2025
16	Land Stability	Clarification regarding the number of underpinning lifts is requested. An outline construction programme and utility data are also requested.	Closed	February 2025
17	Land Stability	The GMA to be reviewed following the comments provided in Section 4.	Closed	February 2025

Appendix 3

Supplementary Supporting Documents

None

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