

**50-52 Monmouth Street,
London WC2H 9EP**

Basement Impact Assessment Audit

For
London Borough of Camden

Project No.
14006-72

Date
May 2024

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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 50-52 Monmouth Street, London WC2H 9EP (planning reference 2024/1235/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 proposed development comprises the lowering of the existing basement by approximately 710mm to 1,110mm to provide a head height within the basement of circa 3.20m with the vaults to be lowered by approximately 400mm to 820mm to achieve a maximum head height of circa 2.20m.
- 1.5 The BIA is not informed by an adequate desk study. In addition to absence of key information, some information is factually incorrect and there is inconsistency of presented information between documents.
- 1.6 No site investigation or interpretative geotechnical information is provided. A site investigation along with groundwater level monitoring should be undertaken and then data should be presented in an interpretative report including a conceptual site model.
- 1.7 The baseline conditions for the BIA should be provided based on a detailed desk study and the results from the site investigation, outline structural drawings (sequencing, propping, permanent and temporary works), construction method statement and outline programme of works, including any required groundwater control techniques.
- 1.8 A number of queries are raised in regard to the Screening assessment, as detailed in Section 4. Once responses have been clarified, additional assessment and mitigation should be provided, as required.
- 1.9 The BIA does not include a Ground Movement Assessment and therefore no conclusions can be made regarding land or structural stability issues relating to the proposed development. A GMA should therefore be provided along with an outline methodology and guidance for monitoring ground / structural movements during construction.
- 1.10 A Flood Risk Assessment and Drainage Strategy has been presented and further analysis of the drainage strategy should be undertaken at detailed design stage. Drainage proposals should be agreed with LBC and Thames Water.
- 1.11 It cannot be confirmed that the BIA complies with the requirements of CPG: Basements until the queries raised in Section 4 and summarised in Appendix 2 are addressed.

2.0 INTRODUCTION

2.1 CampbellReith was instructed by London Borough of Camden (LBC) on 24 April 2024 to carry out a Category B audit on the Basement Impact Assessment (BIA) submitted as part of the Planning Submission documentation for 50-52 Monmouth Street, London WC2H 9EP and Planning Reference No. 2024/1235/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 "Shopfront alterations and excavation of existing basement and vaults to create level floor surface and increase head height."

2.6 The Audit Instruction confirmed the subject site is not a listed building but the buildings adjacent to the north (42-48 Monmouth Street), buildings on the opposite side of Monmouth Street (65-71 Monmouth Street) and 5-8 Tower Court (5m northwest of the site) are Grade II listed buildings. The site is located within the Seven Dials (Covent Garden) Conservation Area.

2.7 CampbellReith accessed LBC's Planning Portal on 9 May 2024 and gained access to the following relevant documents for audit purposes:

- Basement Impact Assessment and Structural Methodology Statement by Furness Consulting Engineers, Ref 7030, dated 29 February 2024.
- Drainage Strategy and Flood Risk Assessment by Furness Consulting Engineers, Ref: 7930-FUR-ZZ-XX-RP-D-0901, dated March 2024.

- Archaeological desk-based assessment by Museum of London Archaeology, Ref P23-637, dated 27 February 2024.
- Existing and proposed plans, sections and elevations by Child Graddon Lewis, Ref P23-065, dated February 2024.
- Design and Access Statement by Child Graddon Lewis, dated March 2024.
- Planning consultation comments.

3.0 BASEMENT IMPACT ASSESSMENT AUDIT CHECK LIST

Item	Yes/No/NA	Comment
Are BIA Author(s) credentials satisfactory?	No	The authors' qualifications do not meet the requirements of CPG Basements.
Is data required by Cl.233 of the GSD presented?	No	Outline construction methodology / structural information and programme should be presented.
Does the description of the proposed development include all aspects of temporary and permanent works which might impact upon geology, hydrogeology and hydrology?	No	Outline construction methodology / structural information should be presented once site investigation undertaken.
Are suitable plan/maps included?	No	Architectural drawings provided although no desk study has been undertaken so neither historical maps or LBC map excerpts have been provided.
Do the plans/maps show the whole of the relevant area of study and do they show it in sufficient detail?	No	Utility infrastructure maps to be provided.
Land Stability Screening: Have appropriate data sources been consulted? Is justification provided for 'No' answers?	No	Section 6.2 of BIA. Requires further clarification / assessment regarding underlying ground conditions (Q5, Q7, Q10) and neighbouring properties (Q12).
Hydrogeology Screening: Have appropriate data sources been consulted? Is justification provided for 'No' answers?	No	Section 6.1 of BIA. Requires further clarification / assessment regarding underlying ground conditions and hydrogeology: Q1a, Q1b.
Hydrology Screening: Have appropriate data sources been consulted? Is justification provided for 'No' answers?	Yes	Section 6.2.1 of BIA (formatting within report – should be 6.3). Further analysis of the drainage strategy should be undertaken at detailed design stage.

Item	Yes/No/NA	Comment
Is a conceptual model presented?	No	A conceptual model of the development is not presented. Strata, groundwater, existing and proposed development levels, relative levels of structures within the zone of influence should all be indicated in plan and section with relevant annotation.
Land Stability Scoping Provided? Is scoping consistent with screening outcome?	No	Section 7.2 of BIA. Requires site investigation and Ground Movement Assessment.
Hydrogeology Scoping Provided? Is scoping consistent with screening outcome?	No	Section 7.1 of BIA. Requires site investigation to confirm the ground conditions and groundwater levels (if any) beneath the site.
Hydrology Scoping Provided? Is scoping consistent with screening outcome?	No	Section 7.3 of BIA. Flood risk assessment and drainage strategy provided. Further analysis of the drainage strategy should be undertaken at detailed design stage.
Is factual ground investigation data provided?	No	
Is monitoring data presented?	No	
Is the ground investigation informed by a desk study?	No	
Has a site walkover been undertaken?	No	As part of Archaeological desk-based assessment by Museum of London Archaeology on 12 December 2023 but no site walkover referred to in BIA.
Is the presence/absence of adjacent or nearby basements confirmed?	No	Assumptions made about neighbouring properties.

Item	Yes/No/NA	Comment
Is a geotechnical interpretation presented?	No	No site investigation provided or geotechnical data presented.
Does the geotechnical interpretation include information on retaining wall design?	No	No geotechnical interpretation presented.
Are reports on other investigations required by screening and scoping presented?	No	Drainage Strategy and Flood Risk Assessment. However, no site investigation or Ground Movement Assessment provided.
Are the baseline conditions described, based on the GSD?	No	No site investigation provided
Do the base line conditions consider adjacent or nearby basements?	No	No desk study or site investigation and no confirmation of adjacent or nearby basements.
Is an Impact Assessment provided?	No	
Are estimates of ground movement and structural impact presented?	No	
Is the Impact Assessment appropriate to the matters identified by screening and scoping?	No	Further assessment required.
Has the need for mitigation been considered and are appropriate mitigation methods incorporated in the scheme?	No	Further assessment required.
Has the need for monitoring during construction been considered?	No	
Have the residual (after mitigation) impacts been clearly identified?	No	

Item	Yes/No/NA	Comment
Has the scheme demonstrated that the structural stability of the building and neighbouring properties and infrastructure will be maintained?	No	
Has the scheme avoided adversely affecting drainage and run-off or causing other damage to the water environment?	No	Noting that geology and hydrogeology has been incorrectly identified in the BIA and hence no assessment to underlying aquifer undertaken.
Has the scheme avoided cumulative impacts upon structural stability or the water environment in the local area?	No	Further consideration of site conditions required. A ground movement assessment is required which should assess the impact on all of the structures within the zone of influence. To be addressed with reference to local basements and groundwater flow.
Does report state that damage to surrounding buildings will be no worse than Burland Category 1?	Yes	However, no ground movement assessment provided. No basis or substantiation for statement made.
Are non-technical summaries provided?	No	However, the BIA is written so as to be understandable.

4.0 DISCUSSION

- 4.1 The Basement Impact Assessment (BIA) has been prepared by Furness Consulting Engineers with supporting documents by Child Graddon Lewis. The qualifications of the authors of the BIA are not in accordance with LBC guidance.
- 4.2 The site comprises a four-storey building and a basement. The basement, ground and first floors are currently occupied by a restaurant and the remaining floors are offices. The site is on the intersection of Monmouth Street and Tower Street. There are several vaults within the basement that which protrude out from the building's footprint under the pavement/ road. The subject site is not a listed building.
- 4.3 The proposed development comprises the lowering of the existing basement by approximately 710mm to 1,110mm to provide a head height within the basement of circa 3.20m. The vaults are to be lowered by approximately 400mm to 820mm to achieve a maximum head height of circa 2.20m.
- 4.4 The BIA is not informed by an adequate desk study. In addition to absence of key information, some information is factually incorrect and there is inconsistency of presented information between documents. For instance, the underlying Secondary Aquifer (A) of the River Terrace Deposits is identified in the FRA and Drainage Strategy whereas the BIA reports these deposits to be absent.
- 4.5 A Desk Study in accordance with the Guidance for Subterranean Development (GSD) Appendix G1 should be presented.
- 4.6 Screening assessments are presented. However, the following queries are raised, and responses should be reviewed and updated as required, with appropriate changes to Scoping, investigation, assessment and mitigation:
- 4.7 Land Stability Q5, Q7, Q10: Site investigation and assessment required to confirm underlying ground conditions at the site. Q12: Confirmation of depth of foundations of neighbouring properties required.
- 4.8 Groundwater Flow Q1a and Q1b: Site investigation and assessment required to confirm hydrogeology beneath the site.
- 4.9 No site investigation has been undertaken on site to date. A site investigation should be undertaken broadly in accordance with the GSD Appendix G2. The data should be presented in an interpretative report in accordance with GSD Appendix G3.
- 4.10 A site investigation should be undertaken to establish the hydrogeological regime beneath the site. If required, groundwater monitoring should be undertaken in advance of excavation to inform temporary works contingency planning and control of construction.
- 4.11 The baseline conditions for the BIA should be provided based on desk study and the results from the site investigation, outline structural drawings (sequencing, propping, permanent and temporary works), construction method statement and outline programme of works.

- 4.12 The BIA does not identify local basements in proximity to the proposed development nor consider potential impacts / cumulative impacts (i.e. to groundwater flow, if applicable).
- 4.13 A conceptual model indicating ground and groundwater conditions, the existing and proposed development levels, and the relative levels of structures within the zone of influence should all be indicated in plan and section with relevant annotation and assessment of impacts.
- 4.14 A Flood Risk Assessment and Drainage Strategy has been presented and further analysis of the drainage strategy should be undertaken at detailed design stage. Drainage proposals should be agreed with LBC and Thames Water.
- 4.15 No ground movement analysis (GMA) has been presented for review and therefore there is no information on the indicative zone of influence of the development. The presence or absence of other nearby basements and underground structures within that zone should be confirmed. A GMA should therefore be provided which should address both the excavation and construction methodology effects and assess the damage impact on all of the structures within the zone of influence (including the applicant's property and neighbouring properties within the zone with shallow foundations and the carriageway given that the vaults within the basement protrude out from the building's footprint under the pavement/ road). In line with CPG Basements, where Category 1 or a higher damage category is identified in a ground movement assessment, the BIA should provide mitigation measures to address ground movement. It should also provide an outline methodology and guidance for monitoring ground / structural movements during construction.
- 4.16 Non-technical summaries should be provided within any revisions to the BIA submitted.

5.0 CONCLUSIONS

- 5.1 The BIA should be updated by authors demonstrating the appropriate qualifications and experience in accordance with CPG Basements.
- 5.2 A Desk Study in accordance with the GSD Appendix G1 is required to inform the BIA.
- 5.3 Information presented between documents should be updated to be consistent.
- 5.4 The Screening and Scoping assessments require revision, as detailed in Section 4.
- 5.5 A site investigation along with groundwater level monitoring should be undertaken in accordance with the GSD Appendix G2 and then data should be presented in an interpretative report in accordance with GSD Appendix G3, including a conceptual site model.
- 5.6 Outline structural drawings (sequencing, propping, permanent and temporary works), construction method statement and outline programme of works should be presented.
- 5.7 A GMA should be provided along with an outline methodology and guidance for monitoring ground / structural movements during construction.
- 5.8 A Flood Risk Assessment and Drainage Strategy has been presented and further analysis of the drainage strategy should be undertaken at detailed design stage. Drainage proposals should be agreed with LBC and Thames Water.
- 5.9 Non-technical summaries should be provided.
- 5.10 It cannot be confirmed that the BIA complies with the requirements of CPG: Basements until the queries raised in Section 4 and summarised in Appendix 2 are addressed.

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Appendix 1

Consultation Responses

None

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Appendix 2

Audit Query Tracker

Audit Query Tracker

Query No	Subject	Query	Status	Date closed out
1	BIA Format	The BIA should be updated by authors demonstrating the appropriate qualifications and experience in accordance with CPG Basements. Non-technical summaries to be provided.	Open – 4.1, 4.14	
2	BIA Format	A Desk Study in accordance with the GSD Appendix G1 is required to inform the BIA. Information presented between documents should be updated to be consistent.	Open – 4.4, 4.5	
3	Screening / Scoping	Assessments to be clarified and updated, with consequential investigation / assessment / mitigation etc provided, as required.	Open – 4.6	
4	Land Stability / Groundwater	A site investigation along with groundwater level monitoring should be undertaken in accordance with the GSD Appendix G2 and then data should be presented in an interpretative report in accordance with GSD Appendix G3, including a conceptual site model.	Open – 4.7, 4.8	
5	Groundwater	Noting clarifications to Screening process; aquifer status; groundwater flow and cumulative impacts; groundwater control during construction.	Open – 4.8 to 4.10	
6	Land Stability	Noting clarifications to Screening process; a ground movement assessment and damage assessment addressing both the excavation and construction methodology effects and identifying a zone of influence and assessment of all structures within the zone; construction methodology; structural information; foundation depths; monitoring proposals.	Open – 4.9 to 4.11, 4.13	

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Appendix 3

Supplementary Supporting Documents

None

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