## CampbellReith consulting engineers

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

## Basement Impact Assessment Audit

For London Borough of Camden

> Project No. 14006-72

Date December 2024

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#### **CONTENTS**

1.0	NON-TECHNICAL SUMMARY	4
2.0	INTRODUCTION	6
3.0	BASEMENT IMPACT ASSESSMENT AUDIT CHECK LIST	8
4.0	DISCUSSION	12
5.0	CONCLUSIONS	

#### **APPENDICES**

- Appendix 1 Consultation Responses
- Appendix 2 Audit Query Tracker
- Appendix 3 Supplementary Supporting Documents



#### 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. A revised set of documents including an updated BIA was subsequently provided in September 2024.
- 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 qualifications of the authors of the BIA are not wholly in accordance with LBC guidance; a chartered hydrogeologist (CGeol FGS) should confirm the final impact assessments within a Basement Construction Plan (BCP).
- 1.6 The revised BIA includes additional Desk Study data.
- 1.7 No site investigation 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. Due to current site access restrictions, its understood that LBC will allow these requirements to be presented within a BCP.
- 1.8 Outline construction methodology is provided in the updated BIA. Once site investigation is completed, structural drawings (sequencing, propping, permanent and temporary works), construction method statement and programme of works, including any required groundwater control techniques, should be provided within a BCP.
- 1.9 A Ground Movement Analysis has been presented for review. At both 48 Monmouth Street and 21 Tower Street the 'Worst case scenario' states damage to buildings could be Burland Category 2 (Slight), although the stated 'most probable' outcome is Category 1 (Very Slight). 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. Once the site investigation and construction method statement are completed, an updated GMA should be provided with a Basement Construction Plan (BCP) to confirm no more than Category 1 damage will be sustained to neighbours.
- **1.10** The methodology and guidance for monitoring ground / structural movements during construction should be provided within a BCP.



- 1.11 A Flood Risk Assessment and Drainage Strategy has been presented. Drainage proposals should be agreed with LBC and Thames Water.
- 1.12 It cannot be confirmed that the BIA complies with the requirements of CPG: Basements until the site investigation, construction methodology and ground movement assessment have been completed. It is understood that LBC will allow these requirements to be presented within a BCP to be secured under a Section 106 Agreement.



#### 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.
- 2.8 Following issue of the initial BIA, the following documents were provided for review:
  - Preliminary Basement Impact Assessment Report by Card Geotechnics Limited, Ref CGL/10259 (Revision 1), dated September 2024.
  - Utilities map including Thames Water Asset Location Search (dated 17 September 2024), Cadent Gas Network (dated 11 September 2024), Openreach (dated 11 September 2024), G Network (dated 11 September 2024), Zayo Group (dated 11 September 2024), UK Power Networks (dated 17 September 2024).



#### 3.0 BASEMENT IMPACT ASSESSMENT AUDIT CHECK LIST

Item	Yes/No/NA	Comment
Are BIA Author(s) credentials satisfactory?	No	The qualifications of the authors of the BIA are not wholly in accordance with LBC guidance; a chartered hydrogeologist (CGeol FGS) should confirm final assessments within a Basement Construction Plan (BCP).
Is data required by Cl.233 of the GSD presented?	Yes	To be confirmed in a BCP.
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. To be confirmed in a BCP.
Are suitable plan/maps included?	Yes	Updated BIA.
Do the plans/maps show the whole of the relevant area of study and do they show it in sufficient detail?	Yes	Utility infrastructure maps provided.
Land Stability Screening: Have appropriate data sources been consulted? Is justification provided for 'No' answers?	Yes	Updated BIA.
Hydrogeology Screening: Have appropriate data sources been consulted? Is justification provided for 'No' answers?	Yes	Updated BIA
Hydrology Screening: Have appropriate data sources been consulted? Is justification provided for 'No' answers?	Yes	Updated BIA
Is a conceptual model presented?	Yes	To be confirmed in a BCP.
Land Stability Scoping Provided?	Yes	Requires site investigation. To be confirmed in a BCP.



Item	Yes/No/NA	Comment
Is scoping consistent with screening outcome?		
Hydrogeology Scoping Provided? Is scoping consistent with screening outcome?	Yes	Requires site investigation to confirm the ground conditions and groundwater levels (if any) beneath the site. To be confirmed in a BCP.
Hydrology Scoping Provided? Is scoping consistent with screening outcome?	Yes	Section 4 of BIA. Flood risk assessment and drainage strategy provided.
Is factual ground investigation data provided?	No	To be confirmed in a BCP.
Is monitoring data presented?	No	To be confirmed in a BCP.
Is the ground investigation informed by a desk study?	No	Desk study undertaken by CGL. To be confirmed in a BCP.
Has a site walkover been undertaken?	No	No site access available. To be confirmed in a BCP.
Is the presence/absence of adjacent or nearby basements confirmed?	Yes	Page 14 of CGL BIA states 'It is also noted that the presence of existing basements within the neighbouring buildings, i.e. 48 Monmouth Street and 21 Tower Street, has been confirmed'.
Is a geotechnical interpretation presented?	No	No site investigation provided. Preliminary geotechnical parameters provided in Section 5 of BIA based on nearby BGS boreholes and a ground investigation report from Camden's Portal. To be confirmed in a BCP.
Does the geotechnical interpretation include information on retaining wall design?	No	No geotechnical interpretation presented. To be confirmed in a BCP.
Are reports on other investigations required by screening and scoping presented?	No	No site investigation provided. To be confirmed in a BCP.



Item	Yes/No/NA	Comment
Are the baseline conditions described, based on the GSD?	No	No site investigation provided. To be confirmed in a BCP.
Do the base line conditions consider adjacent or nearby basements?	Yes	
Is an Impact Assessment provided?	Yes	To be confirmed in a BCP.
Are estimates of ground movement and structural impact presented?	Yes	Section 8 of BIA. To be confirmed in a BCP.
Is the Impact Assessment appropriate to the matters identified by screening and scoping?	Yes	To be confirmed in a BCP.
Has the need for mitigation been considered and are appropriate mitigation methods incorporated in the scheme?	Yes	To be confirmed in a BCP.
Has the need for monitoring during construction been considered?	Yes	Section 9 of BIA. To be confirmed in a BCP.
Have the residual (after mitigation) impacts been clearly identified?	Yes	To be confirmed in a BCP.
Has the scheme demonstrated that the structural stability of the building and neighbouring properties and infrastructure will be maintained?	Yes	To be confirmed in a BCP.
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	To be confirmed in a BCP.
Does report state that damage to surrounding buildings will be no worse than Burland Category 1?	Yes	However, at both 48 Monmouth Street and 21 Tower Street the 'Worst case scenario' states damage to building could be Burland Category 2 (Slight). To be confirmed in a BCP.



Item	Yes/No/NA	Comment
Are non-technical summaries provided?	Yes	



#### 4.0 DISCUSSION

- 4.1 The Basement Impact Assessment (BIA) has been prepared by Card Geotechnics Ltd with supporting documents by Child Graddon Lewis. The qualifications of the authors of the BIA are not wholly in accordance with LBC guidance; a chartered hydrogeologist (CGeol FGS) should confirm final assessments within a Basement Construction Plan (BCP).
- 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 by710mm 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 updated BIA includes Desk Study Data and updated Screening and Scoping assessments.
- 4.5 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. Due to current site access restrictions, its understood that LBC will allow these requirements to be presented within a BCP.
- 4.6 The site investigation should confirm the hydrogeological regime beneath the site. Groundwater monitoring should be undertaken in advance of excavation to inform temporary works contingency planning and control of construction.
- 4.7 Outline construction methodology is provided in the updated BIA. Once site investigation is completed, structural drawings (sequencing, propping, permanent and temporary works), construction method statement and programme of works, including any required groundwater control techniques, should be provided within a BCP.
- 4.8 The updated BIA does identify nearby basement structures.
- 4.9 The 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 confirmed in plan and section with relevant annotation and assessment of impacts in a BCP.
- 4.10 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.



- 4.11 A Ground Movement Analysis has been presented for review. At both 48 Monmouth Street and 21 Tower Street the 'Worst case scenario' states damage to buildings could be Burland Category 2 (Slight), although the stated 'most probable' outcome is Category 1 (Very Slight). 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. Once the site investigation and construction method statement are completed, an updated GMA should be provided within a BCP to confirm no more than Category 1 damage will be sustained to neighbours.
- 4.12 The methodology and guidance for monitoring ground / structural movements during construction should be provided within a BCP.



#### 5.0 CONCLUSIONS

- 5.1 The qualifications of the authors of the BIA are not wholly in accordance with LBC guidance; a chartered hydrogeologist (CGeol FGS) should confirm final assessments within a Basement Construction Plan (BCP).
- 5.2 No site investigation is provided. Due to current site access restrictions, its understood that LBC will allow these requirements to be presented within a BCP.
- 5.3 Once site investigation is completed, structural drawings (sequencing, propping, permanent and temporary works), construction method statement and programme of works, including any required groundwater control techniques, should be provided within a BCP.
- 5.4 Once the site investigation and construction method statement are completed, an updated GMA should be provided with a Basement Construction Plan (BCP) to confirm no more than Category 1 damage will be sustained to neighbours.
- 5.5 The methodology and guidance for monitoring ground / structural movements during construction should be provided within a BCP.
- 5.6 A Flood Risk Assessment and Drainage Strategy has been presented. Drainage proposals should be agreed with LBC and Thames Water.
- 5.7 It cannot be confirmed that the BIA complies with the requirements of CPG: Basements until the site investigation, construction methodology and ground movement assessment have been completed. It is understood that LBC will allow these requirements to be presented within a BCP to be secured under an S106 Agreement.



# Appendix 1

### **Consultation Responses**

None



# 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.	To be confirmed within a BCP	ВСР
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.	Closed	December 2024
3	Screening / Scoping	Assessments to be clarified and updated, with consequential investigation / assessment / mitigation etc provided, as required.	Closed	December 2024
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.	To be confirmed within a BCP	ВСР
5	Groundwater	Noting clarifications to Screening process; aquifer status; groundwater flow and cumulative impacts; groundwater control during construction.	To be confirmed within a BCP	BCP
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.	To be confirmed within a BCP	ВСР



### **Appendix 3**

### Supplementary Supporting Documents

None

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