CampbellReith
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28 John Street

Basement Impact Assessment Audit

For
London Borough of Camden

Project No.
14006-45

Date
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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 28 John Street (planning reference 2023/3562/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 (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 authors hold the qualifications required from the CPG Basement for the impact assessment.

1.5 Screening and scoping assessments are presented and informed by desk study information.

1.6 The updated submission confirms that the proposed works will extend to a maximum of 2.40m below existing basement level (bbl), which is shallower than 5.00m below street level.

1.7 A ground investigation was undertaken in June 2016 indicating the basement will be founded in a suitable founding stratum.

1.8 In the updated submission, more recent groundwater monitoring has been undertaken. It is accepted that the proposed works will have negligible impacts to groundwater flow.

1.9 The BIA confirmed there will not be any change to the impermeable areas of the site and that there is a very low to low risk of flooding from all the sources. It is accepted that there are no adverse impacts to hydrology. Utilities plans show a drainpipe beneath the vault which may require diversion. Final drainage design will require approval from the lead local flood risk authority.

1.10 In the updated submission, structural proposals are confirmed to include underpinning and omit piling. The geotechnical assessment has been updated.

1.11 A Ground Movement Assessment (GMA) has been undertaken which indicates that impacts to neighbouring properties and the highway will be within acceptable limits, assuming good workmanship.

1.12 The BIA presents an outline movement monitoring strategy and indicates that detailed movement monitoring design will be developed and implemented during construction.

1.13 Considering the updated submission, the BIA complies with the requirements of CPG: Basements.

2.0 INTRODUCTION

2.1 CampbellReith was instructed by London Borough of Camden (LBC) on 28/11/2023 to carry out a Category B audit on the Basement Impact Assessment (BIA) submitted as part of the Planning Submission documentation for 28 John Street, London, WC1N 2BL and Planning Reference No. 2023/3562/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 *"Refurbishment and restoration of existing vaults including the lowering of the floor and new openings for timber doors and timber windows."*

2.6 The Audit Instruction indicated the applicant's building and neighbouring properties are not listed buildings. However the BIA notes both the applicant property and neighbouring buildings are Grade II listed.

2.7 CampbellReith accessed LBC's Planning Portal on 15/12/2023 and gained access to the following relevant documents for audit purposes:

- Basement Impact Assessment by Soils Ltd, Ref 19832/BIA_Rev1.04, dated August 2023.
- Structural Methodology Statement for Planning Submission by Chapero Marsh Construction Consultants, Ref 16003, Rev P4, dated August 2016.
- Structural calculations by Chapero Marsh Construction Consultants dated July 2023

- Planning Application Drawings by P-u-r-a Ltd:
  - Site location plan, dated August 2023
  - Existing Lower Ground Floor and Ground Floor (ref. 20-100 and 20-105, dated Feb 2016)
  - Existing Vaults Section (ref. 30-103, dated Feb 2016)
  - Proposed Lower Ground Floor (ref. 20-102, dated Feb 2016) and Sections (ref. 30-101, dated Feb 2016)

2.8 CampbellReith was provided with the following relevant documents for audit purposes in September 2024 and January 2025:

- Basement Impact Assessment by Soils Ltd, Ref 19832/BIA_Rev1.05, dated September 2024.
- Basement Impact Assessment by Soils Ltd, Ref 19832/BIA_Rev1.06, dated January 2025.
- Proposed Section (ref. 30-101, dated 15 January 2025) by P-u-r-a Ltd.

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	Updated submissions.
Are suitable plan/maps included?	Yes	BIA, architectural drawings, structural report.
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	Table 3.2 of BIA.
Hydrogeology Screening: Have appropriate data sources been consulted? Is justification provided for 'No' answers?	Yes	Table 3.1 of BIA.
Hydrology Screening: Have appropriate data sources been consulted? Is justification provided for 'No' answers?	Yes	Table 3.3 of BIA.
Is a conceptual model presented?	Yes	Section 5 of the BIA.
Land Stability Scoping Provided? Is scoping consistent with screening outcome?	Yes	Section 4 of the BIA.
Hydrogeology Scoping Provided? Is scoping consistent with screening outcome?	Yes	Section 4 of the BIA.

Item	Yes/No/NA	Comment
Hydrology Scoping Provided? Is scoping consistent with screening outcome?	Yes	Section 4 of the BIA.
Is factual ground investigation data provided?	Yes	Ground investigation factual report (Appendix A and B of the BIA). Updated submissions.
Is monitoring data presented?	Yes	Section 5.5 of the BIA. Updated submissions.
Is the ground investigation informed by a desk study?	Yes	Section 2 of the BIA.
Has a site walkover been undertaken?	Yes	Section 11.4 of the BIA.
Is the presence/absence of adjacent or nearby basements confirmed?	Yes	Adjoining and neighbouring properties are known to have lower ground floors/basements; however depths are unknown.
Is a geotechnical interpretation presented?	Yes	Section 7 of the BIA and Table 9.1 and 9.2. Updated submissions.
Does the geotechnical interpretation include information on retaining wall design?	Yes	As above.
Are reports/information on other investigations required by screening and scoping presented?	Yes	GMA – Updated Submissions.
Are the baseline conditions described, based on the GSD?	Yes	
Do the base line conditions consider adjacent or nearby basements?	Yes	Adjoining and neighbouring properties are known to have lower ground floors/basements; however, depths are unknown.

Item	Yes/No/NA	Comment
Is an Impact Assessment provided?	Yes	Section 4.2, 8 and 9 of BIA.
Are estimates of ground movement and structural impact presented?	Yes	Section 9 and 10 of the BIA. Updated Submissions.
Is the Impact Assessment appropriate to the matters identified by screening and scoping?	Yes	Updated Submissions.
Has the need for mitigation been considered and are appropriate mitigation methods incorporated in the scheme?	Yes	Updated Submissions.
Has the need for monitoring during construction been considered?	Yes	Control of construction works and movement monitoring.
Have the residual (after mitigation) impacts been clearly identified?	Yes	Updated Submissions.
Has the scheme demonstrated that the structural stability of the building and neighbouring properties and infrastructure will be maintained?	Yes	Updated Submissions.
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	Updated Submissions.
Does report state that damage to surrounding buildings will be no worse than Burland Category 1?	Yes	Updated Submissions.
Are non-technical summaries provided?	Yes	

4.0 DISCUSSION

4.1 The Basement Impact Assessment (BIA) has been prepared by Soils Limited and the authors hold the qualifications required by the CPG for Basements.

4.2 No. 28 John Street is an end of terrace residential building that is divided into flats. The applicant property, Flat 1, occupies the ground and lower ground floors. The lower ground floor includes a lightwell at the front of the property which gives access to four vaults (former coal stores) extending below the existing pavement of John Street.

4.3 The property shares party walls with No. 27 John Street to the north & No. 12 Northington Street to the east as well as neighbouring flats. The BIA indicates that neighbouring buildings are known to have lower ground floor/basements; however, their depth is unknown. The BIA identified both the applicant's building and neighbouring properties as Grade II listed buildings.

4.4 The proposed development comprises the deepening of the four vaults by 2.40m below the existing vaults floor level (bbl), confirmed in the update information, which is approximately 4.90m below street level. The vaults are to be deepened using a typical 'hit and miss' underpinning sequence.

4.5 Screening and scoping assessments are presented and informed by desk study information. Most relevant figures/maps from the ARUP GSD and other guidance documents are referenced within the BIA to support responses to screening questions.

4.6 A ground investigation was undertaken in June 2016 consisting of a single borehole to a depth of 2.65m bbl, dynamic probing (undertaken in advance of the borehole) to a depth of c. 7.00m bbl and five foundation inspection pits to a maximum depth of 0.25m bbl. The investigation identified the site to be underlain by Made Ground to a depth of 2.40m bbl. Below the Made Ground a soft clay with the presence of decomposed material and occasional black staining was encountered to the maximum depth of the exploratory hole. The clay has been interpreted as Lynch Hill Gravel Member. The dynamic probing indicates the potential presence of poor ground conditions to a depth of c. 2m bbl. The BIA recommends all the foundations to bypass Made Ground and to bear into natural soil with any soft spots present at formation level to be excavated and replaced with suitably compacted fill.

4.7 The BIA and structural report acknowledge the potential instability of excavations to be undertaken into Made Ground and Lynch Hill Gravel and recommends the appointed contractor to implement excavation support measures and to limit width of the underpinning bays to 1.00m.

4.8 Groundwater was encountered during drilling at 1.20m bbl. Subsequent groundwater monitoring undertaken in June 2016 with updated information presented from 2024, with to recorded groundwater at 0.80m to 1.88m bbl.

4.9 The updated BIA assesses the groundwater encountered as perched and locally discontinuous above the London Clay, given the generally cohesive nature of the soils encountered. On this basis, and considering that existing basements are present surrounding the site in all nearby buildings, the impacts to groundwater flow has been assessed to be negligible.

4.10 The BIA confirms there will not be any change to the impermeable areas of the site and that there is a very low to low risk of flooding from all the sources. It is generally accepted the proposed development will not cause significant change in surface water run-off and will not have any adverse impact on the hydrology of the area. It is noted an underground drainage pipe runs c. 0.60-1.00m below one of the vaults. The final drainage design will need to consider this and require approval from the lead local flood risk authority.

4.11 Geotechnical parameters have been updated in the newest submissions and are accepted, including the review of bearing capacity in relation to the proposed development loads.

4.12 The structural report indicates the basement construction will be undertaken by using traditional underpinning techniques. The underpins will provide vertical support to the existing foundations as well as lateral resistance to ground and water pressure. A construction sequence has been presented in the report which indicates underpins being designed as propped in both temporary and permanent case.

4.13 A Ground Movement Assessment (GMA) to demonstrate damages to neighbouring properties caused by the proposed development are within the limits set by CPG: Basements, a maximum of Category 1 (Very Slight) damage on the Burland Scale. The assessment has been updated and includes impacts to the highway, which should be negligible assuming good workmanship.

4.14 An outline monitoring strategy is presented which indicates that suitable movement monitoring will be developed and implemented during construction to assess the performance of the earth retention system and to make sure movements will not exceed those anticipated and agreed as part of the party wall award.

5.0 CONCLUSIONS

5.1 The BIA authors hold qualifications required from the CPG Basement for the impact assessment.

5.2 Screening and scoping assessments are presented and informed by desk study information.

5.3 The updated submission confirms that the proposed works will extend to a maximum of 2.40m below existing basement level (bbl).

5.4 A ground investigation has been undertaken to inform the assessments.

5.5 In the updated submission, more recent groundwater monitoring has been undertaken. It is accepted that the proposed works will have negligible impacts to groundwater flow.

5.6 It is accepted that there are no adverse impacts to hydrology. Final drainage design will require approval from the lead local flood risk authority.

5.7 In the updated submission, structural proposals are confirmed to include underpinning and omit piling. The geotechnical assessment has been updated.

5.8 A Ground Movement Assessment (GMA) has been undertaken which indicates that impacts to neighbouring properties and the highway will be within acceptable limits, assuming good workmanship.

5.9 The BIA presents an outline movement monitoring strategy and indicates that detailed movement monitoring design will be developed and implemented during construction.

5.10 Considering the updated submission, the BIA complies with the requirements of CPG: Basements.

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Appendix 1

Consultation Responses

None

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Appendix 2

Audit Query Tracker

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Audit Query Tracker

Query No	Subject	Query	Status	Date closed out
1	BIA format	Architectural drawings should be revised to show the correct proposed formation level.	Closed	January 2025
2	Hydrogeology	The BIA should confirm the current groundwater regime and review the effect on groundwater and stability. Cumulative effects should also be reviewed.	Closed	January 2025
3	Land stability	Clarification on the assumed allowable bearing capacity is requested. Structural calculations may need to be updated consequently.	Closed	January 2025
4	Land Stability	Assessment of the impact on John Street to be included in the GMA.	Closed	January 2025
5	Hydrology	A drainpipe beneath one of the vaults may require diversion. Final drainage design will require approval from the lead local flood risk authority.	Note only	

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Appendix 3

Supplementary Supporting Documents

None

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