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Basement Impact Assessment Audit

17 Colville Place, London, W1T 2BN

For
London Borough of Camden

Project No.
14297-25

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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 17 Colville Place, London, W1T 2BN (planning reference 2025/0223/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 BIA has been prepared by an individual who does not hold suitable qualifications in accordance with CPG Basements.

1.5 The BIA notes that the proposed basement will be founded within the Lynch Hill Gravel Formation, however, Section 4.0 of the BIA identifies a layer of Made Ground to a depth of 4m below ground level.

1.6 Screening and scoping assessments are presented; however, there are omissions in the responses. The responses should be updated following review of the comments within Section 4.0.

1.7 The BIA states that the water table depth is unknown and it is likely that the ground water table will not be encountered during basement foundation excavation. Further justification is required.

1.8 The BIA states that there is no structural impact to the neighbouring properties. However, no land stability screening has been provided, and is required.

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

1.10 Based on the responses to surface water and flooding screening, it is accepted that the development will not impact on the wider hydrogeology of the area. The site is not in an area subject to flooding and no surface water impacts are anticipated.

1.11 As described in Section 5, it cannot be confirmed that the BIA complies with the requirements of CPG: Basements and the Principles for Audit set out in the Basement Impact Assessment (BIA) Audit Service Terms of Reference & Audit Process. Queries and comments on the BIA are described in Section 4 and Appendix 2.

2.0 INTRODUCTION

2.1 CampbellReith was instructed by London Borough of Camden (LBC) on 15/04/2025 to carry out a Category B audit on the Basement Impact Assessment (BIA) submitted as part of the Planning Submission documentation for 17 Colville Place, London, W1T 2BN (planning reference 2025/0223/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.
- Fitzrovia 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 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 "Excavation of a basement lightwell."

2.6 The Audit Instruction confirms 17 Colville Place involves, and is a neighbour to, listed buildings.

2.7 CampbellReith accessed LBC's Planning Portal on 30/04/2025 and gained access to the following relevant documents for audit purposes:

- Basement Impact Assessment Report (BIA) by Andrew Smith, reference 1168-REP-001-BIA (undated)
- Existing and Proposed Drawings
  - Proposed GRD FLR BIA plan, reference FDB-17CP A201a
  - Location and Block plan, reference FDB-17CP A001
- Design and Access Statement by Felix DB, reference unreferenced, dated 18th January 2025

3.0 BASEMENT IMPACT ASSESSMENT AUDIT CHECK LIST

Item	Yes/No/NA	Comment
Are BIA Author(s) credentials satisfactory?	No	It should be demonstrated that the BIA has been approved by a CEng MICE and a CGeol FGS.
Is data required by Cl.233 of the GSD presented?	No	Further clarifications on the following are required. See comments within Section 4.0: - The physical form of the development - A work programme
Does the description of the proposed development include all aspects of temporary and permanent works which might impact upon geology, hydrogeology and hydrology?	No	Further details of the temporary works are requested.
Are suitable plan/maps included?	No	The relevant Arup GSD map extracts indicating the site are requested.
Do the plans/maps show the whole of the relevant area of study and do they show it in sufficient detail?	No	
Land Stability Screening: Have appropriate data sources been consulted? Is justification provided for 'No' answers?	No	Land stability screening is requested as per CPG Basements requirements
Hydrogeology Screening: Have appropriate data sources been consulted? Is justification provided for 'No' answers?	Yes	Provided in Section 5.1 of the BIA.
Hydrology Screening: Have appropriate data sources been consulted? Is justification provided for 'No' answers?	Yes	Provided in Section 5.2 of the BIA.
Is a conceptual model presented?	Yes	Provided in Section 4.1 of the BIA.

Item	Yes/No/NA	Comment
Land Stability Scoping Provided? Is scoping consistent with screening outcome?	NA	Land stability screening not provided.
Hydrogeology Scoping Provided? Is scoping consistent with screening outcome?	Yes	
Hydrology Scoping Provided? Is scoping consistent with screening outcome?	Yes	
Is factual ground investigation data provided?	No	A site investigation has not been carried out.
Is monitoring data presented?	No	
Is the ground investigation informed by a desk study?	N/A	
Has a site walkover been undertaken?	Yes	Provided in the Design and Access Report.
Is the presence/absence of adjacent or nearby basements confirmed?	Yes	Provided in Section 2.2 of the BIA.
Is a geotechnical interpretation presented?	No	
Does the geotechnical interpretation include information on retaining wall design?	No	
Are reports on other investigations required by screening and scoping presented?	No	However, this needs to be reviewed following update of screening and scoping.
Are the baseline conditions described, based on the GSD?	No	Ground and groundwater model is requested.
Do the baseline conditions consider adjacent or nearby basements?	Yes	

Item	Yes/No/NA	Comment
Is an Impact Assessment provided?	No	Insufficient land stability assessment provided.
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 justifications are requested as discussed in Section 4.0.
Has the need for mitigation been considered and are appropriate mitigation methods incorporated in the scheme?	No	
Has the need for monitoring during construction been considered?	No	
Have the residual (after mitigation) impacts been clearly identified?	No	
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?	Yes	However, to be reviewed following update of the screening and scoping.
Has the scheme avoided cumulative impacts upon structural stability or the water environment in the local area?	No	Not demonstrated. See above comments.
Does report state that damage to surrounding buildings will be no worse than Burland Category 1?	No	
Are non-technical summaries provided?	Yes	

4.0 DISCUSSION

4.1 The Basement Impact Assessment (BIA) has been carried out by a chartered structural engineer, Andrew Smith. The individual concerned in its production does not provide evidence to show that they hold suitable qualifications as required by CPG Basements for assessment of land stability, surface water or hydrogeological impacts.

4.2 Minimal structural information has been provided.

4.3 The LBC Instruction to proceed with the audit identified that the basement proposal involves Neighbouring Grade II Listed Buildings (Nos. 14, 15 and 16 Colville Place) and a Local Listed park/play area at Crabtree Field but gave no details.

4.4 The site currently comprises a four storey terraced house which includes an existing basement through to third floor. At the rear of the building is a stepped façade with a partially enclosed courtyard at basement/ground level. A small lightwell is also present at the rear of the property, providing limited natural light to the basement level.

~~4.5~~ The proposed basement consists of excavation to enlarge the existing rear lightwell and enlarge the basement floor. The proposal also comprises of replacement and installation of raised rear platform and steps to the rear garden level~~.~~

4.6 No ground investigation was undertaken at the time of the submission of the BIA. The ground conditions in the BIA were determined based on borehole records from the British Geological Survey. The BIA summarises that the ground comprises Made Ground to 4.00m below ground level (bgl) underlain by medium dense gravel, coarse sand and firm clay (up to thickness of 3.50m) forming the superficial geology at site, believed to be the Lynch Hill Gravel Formation. The superficial geology is reported to be underlain by firm to hard clay (London Clay Formation) encountered at 5.50m to 6.50m bgl.

4.7 The BIA anticipates that based on the historical ground water level data (recorded in 1965) the groundwater is deep and will be below the proposed basement development, however, no monitoring or ground investigation is proposed to validate this assumption.

4.8 The screening responses for groundwater assessment, surface water and flooding are provided in Section 5.0 of the BIA report. The subterranean flow screening responses identify that the site is directly underlain by the Lynch Hill Gravel Formation which is classified as a Secondary A aquifer and that the proposed basement will be above the assumed groundwater level. It is stated that the site is not within 100m of any watercourses, wells or spring lines.

4.9 Based on the surface water screening, it is accepted that the proposed basement development will not adversely impact surface water flow and is not in an area prone to flooding.

4.10 No land stability screening responses are provided in the BIA. These are a requirement of the CPG Basements and are requested.

4.11 Scoping is presented in Section 6 and addresses the finding that the site is underlain by an aquifer. The BIA states the ground water level is 7m bgl and that “Based on the available evidence, there is likely to be groundwater is present in the gravels beneath the site, but at a great enough depth that the lightwell will not interfere with groundwater flow”. No information is provided to verify this statement, however, it is acknowledged that the scale of the proposed works will not create a significant risk of hydrogeological impacts.

4.12 The BIA has specified that the proposed lightwell is to be formed of reinforced concrete and designed to level 1 in accordance with BS8102:2009 for water retaining structures. The BIA also specified the lightwell to be tied to the existing rear brickwork with streel reinforced dowels. No geotechnical information has been provided to allow the design of the retaining wall and foundations.

4.13 The founding stratum assumed for design contradicts the ground model. In Section 4.2 of the BIA, identified the presence of Made Ground up to 4.00m thickness while Section 4.3 of the BIA specifies lightwell walls are designed based on an allowable bearing pressure in granular soils of 150kPa. The ground model should be clarified, and justification should be provided for this assumption.

4.14 The BIA states that there is no structural impact the neighbouring properties as the lightwell is outside the footprint of the existing building, however no land stability screening has been carried out and further justification is requested. Where neighbouring properties are within the zone of influence defined by Camden’s policies, explicit consideration of the impact to the surrounding listed buildings is required. Noting that its status as a listed building, a damage assessment for the host property is required.

4.15 The construction methodology of the lightwell is briefly provided in section 7.1 of the BIA. Reference is made to battering back the excavation; however, it is not clear how this can be achieved in the space available. Consideration is also required of the stability of the boundary wall once the excavation of the extended lightwell has taken place. Drawings and further details are requested.

4.16 The BIA notes the potential for groundwater seepage and near-surface flows during rainfall events and recommends that allowance is made for dewatering. Noting the retained soils comprise Made Ground and Lynch Hill Gravel, the groundwater regime and its impact on stability, including from dewatering, require further assessment.

4.17 No proposals are provided for a movement monitoring strategy during excavation and construction. The need for a strategy should be confirmed upon completion of Land Stability screening and Impact Assessment.

5.0 CONCLUSIONS

5.1 The BIA should be updated by authors with suitable qualifications as required by CPG Basements.

5.2 Limited information has been provided regarding the construction methodology of the lightwell and how stability will be maintained. Further details are requested.

5.3 The screening and scoping assessments should be updated following review of the comments within Section 4.0.

5.4 Based on the surface water screening, it is concluded that the proposed basement development will not negatively affect surface water flow and is not located within a flood-prone area.

5.5 The identified founding stratum in the BIA conflicts with the provided ground model. Clarification of the ground model and justification for this design assumption are required.

5.6 The groundwater table is unknown; the BIA assumed that that based on the historical groundwater level data, the groundwater is deep and will be below the proposed basement development. It is acknowledged that the scale of the proposed works is unlikely to pose a significant hydrogeological risk, however, further justification of this assumption is requested to allow stability impacts to be assessed.

5.7 The BIA concludes that there will be no structural impact on neighbouring properties, as the lightwell lies outside the existing building footprint. However, no land stability screening has been conducted, and further justification is required to support this conclusion. The impact to the listed host building requires consideration.

5.8 No movement monitoring strategy has been proposed for the excavation and construction phases. The requirement for such a strategy should be determined following the completion of the Land Stability Screening and Impact Assessment.

5.9 It cannot be confirmed that the BIA complies with the requirements of CPG: Basements and the Principles for Audit set out in the Basement Impact Assessment (BIA) Audit Service Terms of Reference & Audit Process, specifically:

- The person undertaking the BIA does not hold qualifications relevant to the matters being considered, in accordance with the requirements set out in CPG: Basements.
- The Basement Impact Assessment has not been prepared in accordance with the processes and procedures set out in CPG: Basements.
- The methodologies and assumptions are not clearly stated.
- The conclusions have not been arrived at based on all necessary and reasonable evidence and considerations, in a reliable, transparent manner, by suitably qualified professionals, with sufficient attention paid to risk assessment and use of cautious or moderately conservative engineering values/estimates.

- The conclusions of the various documents/details comprising the BIA are not consistent with each other. The conclusions are not sufficiently robust and accurate and are not accompanied by sufficiently detailed amelioration/mitigation measures to support the grant of planning permission in accordance with Policy A5 of the Local Plan, in respect of:
    - maintaining the structural stability of the building, the ground and any neighbouring properties to within limits set out in the policy/guidance
    - avoiding adversely affecting drainage and run-off or causing other damage to the water environment and
    - avoiding cumulative impacts on ground and structural stability or the water environment in the local area.

5.10 Queries and comments on the BIA are described in Section 4 and Appendix 2.

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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	Qualifications	Provide evidence that the BIA has been undertaken by individuals with suitable qualifications and experience in accordance with the CPG Basements.	Open	
2	Land stability	No Land Stability Screening has been provided and is requested as per CPG Basements requirements.	Open	
3	Land Stability	Further justification for the ground model is required including confirmation of bearing stratum and groundwater conditions.	Open	
4	Land stability	Details of the construction methodology and temporary works of the proposed development are required.	Open	
5	Land stability	Details of retaining wall calculations are requested and provision of suitable geotechnical interpretation and parameters are requested.	Open	
6	Land stability	The structural impact to the host building requires consideration to demonstrate that no harm is caused to the listed building	Open	
7	Land stability	Following provision of the land stability screening and scoping, a Ground Movement Assessment may be required.	-	

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Appendix 3

Supplementary Supporting Documents

None

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