CampbellReith
consulting engineers

9 Thanet Street
WC1H 9QL

Basement Impact Assessment
Audit

For

London Borough of Camden

Project Number: 12727-21
Revision: D1

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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 9 Thanet Street, WC1H 9QL (planning reference 2018/2172/P and 2018/2173/L). The basement is considered to fall within Category A 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. It is understood that the proposed development shall take place in a Grade II listed building, which forms the part of a terrace of 10 similar buildings.

1.5. The proposal comprise general excavation of the existing hard-surfaced rear garden to facilitate basement extension, with the proposed garden being in level with the basement floor.

1.6. The BIA- screening study has been carried out by well-known firms of engineering consultants using individuals who possess suitable qualifications.

1.7. The information presented to date does not show the extent of new/underpinned foundation and does not consider the impacts of the proposals on the stability of the host property and boundary walls, all of which are listed.

1.8. Outline calculations for any proposed temporary supports during basement extension and calculations to justify the stability of any permanent retaining walls for the remaining garden perimeter is not present.

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

1.10. It is accepted that the surrounding slopes to the development site are stable.

1.11. It is accepted that the development will not impact on the hydrology and wider hydrogeology of the area and is not in an area subject to flooding.

2.0 INTRODUCTION

2.1. CampbellReith was instructed by London Borough of Camden (LBC) on 23rd October 2018 to carry out a Category A Audit on the Basement Impact Assessment (BIA) submitted as part of the Planning Submission documentation for 9 Thanet Street, WC1H 9QL.

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

- Guidance for Subterranean Development (GSD). Issue 01. November 2010. Ove Arup & Partners.
- Camden Planning Guidance Basements. March 2018.
- Camden Development Policy (DP) 27: Basements and Lightwells.
- Camden Development Policy (DP) 23: Water.
- Local Plan Policy A5 Basements.

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 *"The demolition of central supporting wall to lower ground floor replaced with steel support. Demolition rear wall to lower ground floor and replacement with I steel support. Construction of single storey rear extension to lower ground floor following excavation of garden closing up exiting rear exit door to garden. New internal layout lower ground floor only."* The Audit Instruction also confirmed that 9 Thanet Street was a Grade II listed building forming a part of a terrace of 10 similar buildings.

2.6. CampbellReith accessed LBC's Planning Portal on 23rd November 2018 and gained access to the following relevant documents for audit purposes:

- BIA – Screening Study (reference no: 18837, dated 27 July 2018, prepared by Barden Chapman)
- Planning Application Drawings consisting of

  Location Plan (Reference no. 00319143-24799D, dated 03rd May 2018)

  Existing Plans and sections (Dwg no: 001 and 005, dated 26th November 2017, prepared by Gemma Dudgeon Interiors)

  Proposed Plans and section (Dwg no: 001a, 005a, dated 10th October 2017, prepared by Gemma Dudgeon Interiors)

- Design Access Statement

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?	No	Engineer's drawings and/or sketches which clearly show the extent of the proposed excavation and work to the host property and boundary walls are required. The current drawings are architectural in nature.
Does the description of the proposed development include all aspects of temporary and permanent works which might impact upon geology, hydrogeology and hydrology?	No	Refer Section 4.0.
Are suitable plan/maps included?	Yes	Refer BIA-Screening study.
Do the plans/maps show the whole of the relevant area of study and do they show it in sufficient detail?	No	The drawings presented do not indicate relevant dimensions of the existing and the proposed structure, and hence it is difficult to understand the position and extent of the development with respect to the neighbouring buildings.
Land Stability Screening: Have appropriate data sources been consulted? Is justification provided for 'No' answers?	Yes	Refer BIA-Screening study. However, further information required to confirm potential impacts to stability.
Hydrogeology Screening: Have appropriate data sources been consulted? Is justification provided for 'No' answers?	Yes	Refer BIA-Screening study.
Hydrology Screening: Have appropriate data sources been consulted? Is justification provided for 'No' answers?	Yes	Refer BIA-Screening study.

Item	Yes/No/NA	Comment
Is a conceptual model presented?	No	
Land Stability Scoping Provided? Is scoping consistent with screening outcome?	Yes	However further information or extent of underpinning required.
Hydrogeology Scoping Provided? Is scoping consistent with screening outcome?	Yes	Refer Section 4.0.
Hydrology Scoping Provided? Is scoping consistent with screening outcome?	No	Not required.
Is factual ground investigation data provided?	No	However, sketches of the foundation inspection pits are presented.
Is monitoring data presented?	No	
Is the ground investigation informed by a desk study?	NA	
Has a site walkover been undertaken?	Yes	
Is the presence/absence of adjacent or nearby basements confirmed?	Yes	The adjacent basements are assumed to be similar to that of 9 Thanet Street. This is accepted.
Is a geotechnical interpretation presented?	No	
Does the geotechnical interpretation include information on retaining wall design?	NA	
Are reports on other investigations required by screening and scoping presented?	No	Construction method statement is required. Refer section 4.0.
Are the baseline conditions described, based on the GSD?	No	Refer Section 4.0.

Item	Yes/No/NA	Comment
Do the base line conditions consider adjacent or nearby basements?	Yes	The BIA-screening study states that the adjacent basements are similar to that of 9 Thanet Street. Since the property forms a part of a terraced development, the statement is accepted.
Is an Impact Assessment provided?	No	The BIA report presented only covers the screening and scoping stages.
Are estimates of ground movement and structural impact presented?	No	The requirement for a GMA can be confirmed only once the engineer's drawings and the construction method statement are provided.
Is the Impact Assessment appropriate to the matters identified by screen and scoping?	No	As above.
Has the need for mitigation been considered and are appropriate mitigation methods incorporated in the scheme?	No	Refer Section 4.0.
Has the need for monitoring during construction been considered?	No	The requirement for the same can be concluded once engineer's drawings and the construction method statement are provided.
Have the residual (after mitigation) impacts been clearly identified?	No	As above.
Has the scheme demonstrated that the structural stability of the building and neighbouring properties and infrastructure will be maintained?	No	This can be concluded once engineer's drawings and the construction method statement is provided.
Has the scheme avoided adversely affecting drainage and run-off or causing other damage to the water environment?	Yes	The existing garden is hard surfaced and will remain so after the scheme has been implemented. Hence it is accepted that it will not affect the drainage and run-off.
Has the scheme avoided cumulative impacts upon structural stability or the water environment in the local area?	No	Appropriate assessment can be made only once the engineer's drawings and the construction method statement is provided.

Item	Yes/No/NA	Comment
Does report state that damage to surrounding buildings will be no worse than Burland Category 1?	No	As above.
Are non-technical summaries provided?	No	Although a short non-technical summary is provided within the BIA-screening study, it is found to be insufficient and does not list out all required details of the proposed development.

4.0 DISCUSSION

4.1. The Basement Impact Assessment (BIA) – screening study has been carried out by Barden Chapman Civil and Structural consultants, and the individual concerned in its production is a Chartered Engineer and a Member of the Institution of Civil Engineers.

4.2. The Design and Access Statement provided states that the development proposal is for a Grade II listed building which forms a part of a terrace of 10 similar houses.

4.3. The BIA states that the depth of foundations of neighbouring properties is likely to be at the same depth as 9 Thanet Street. This is accepted.

4.4. The proposal is to extend the existing basement (lower ground floor) by excavating the rear garden up to 1.50m below its current level. The extent of the excavation is not known, however from the architect's drawings provided, it is understood that the extended basement would occupy around 50% of the existing garden area. The remaining garden space would be lowered up to the basement floor level, to create a new rear terraced area.

4.5. The information presented to date does not confirm the extent of any underpinning works to the existing property. The proposed level difference between Nos 9 and 10 following the excavation may lead to potential ground movements and instability of the boundary wall. Although excavation will reduce the level difference between Nos 8 and 9, excavation will result in the boundary wall being unsupported. It is recommended that further information and outline designs of the same be presented with any necessary impact assessments.

4.6. A construction methodology for the scheme has not been provided. The description for the proposed works states that the rear wall to the lower ground floor will be demolished and replaced with I-steel supports. However, the documents provided do not clearly state whether underpinning/new foundations are required in this area, nor how the excavation walls will be supported during construction.

4.7. Although the ground conditions on site has been generally identified based on the BGS borehole data, the thickness of each stratum is not clearly stated. The absence of site investigation information and engineer's drawings makes it difficult to conclude what the founding stratum for the basement will be.

4.8. It is accepted that there are no slope stability concerns regarding the proposed development.

4.9. It was understood that no groundwater was encountered up to 1.40m bgl, during excavation of the foundation inspection pits. Appropriate measures are included in the scoping for surface flow and flooding, to mitigate any ingress of perched groundwater into the excavation. It is accepted that there is no impact to the hydrogeology.

4.10. It is accepted that there is no impact to surface water and the site and the site is not in an area prone to flooding.

5.0 CONCLUSIONS

5.1. The BIA- screening study has been carried out by well-known firms of engineering consultants using individuals who possess suitable qualifications.

5.2. The information presented to date does not show the extent of new/underpinned foundation and does not consider the impacts of the proposals on the stability of the host property and boundary walls, all of which are listed. It is recommended that engineer's drawings, sketches for the proposal and a construction methodology for the scheme be presented.

5.3. Outline calculations for any proposed temporary supports during basement extension should be provided with calculations to justify the stability of the permanent retaining walls for the remaining garden perimeter, including the soil parameters considered during their design.

5.4. No proposals are provided for a movement monitoring strategy during excavation and construction. The need for the same can only be confirmed once detailed engineers drawing and construction methodology is provided.

5.5. It is accepted that the surrounding slopes to the development site are stable.

5.6. It is accepted that the development will not impact on the hydrology and wider hydrogeology of the area and is not in an area subject to flooding.

5.7. On the basis of the information presented to date, it cannot be confirmed that the proposal comply with the requirements of CPG4.

Appendix 1: Residents' Consultation Comments

None available

Appendix 2: Audit Query Tracker

Audit Query Tracker

Query No	Subject	Query	Status	Date closed out
1	Stability	Engineer's drawings with accurate dimensions of the proposed scheme and the full extent of new/underpinned foundation are required.	Open	
2	Stability	Outline retaining wall design, both temporary and permanent, plus consideration of structural impacts from excavation to existing wall are required, clearly stating the soil parameters considered during design.	Open	
3	Stability	A construction methodology that shall be adopted for the scheme is required.	Open	

Appendix 3: Supplementary Supporting Documents

Not included as they are available on Camden's planning application portal

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