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89A Gloucester Avenue, London NW1 8LB

Basement Impact Assessment Audit

For

London Borough of Camden

Project Number: 13693-17
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Appendix

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 89A Gloucester Avenue, London NW1 8LB (planning reference 2021/0095/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 carried out by individuals who possess CEng qualifications. It is not clear if an individual holding a CGeol qualification has been involved in the production of the BIA.

1.5. The dimensions and levels of the proposed basement should be provided clearly. It is proposed to construct the basement using underpinning in a hit/miss sequence.

1.6. The hydrology screening assessment should be updated to include Question 6.

1.7. The site is within a Local Flood Risk Zone and further assessment should be presented.

1.8. It is accepted that the development will not have a significant impact on the hydrogeology of the area, subject to confirmation of assessment by a Chartered Hydrogeologist.

1.9. A site investigation of appropriate scope and scale to the proposals should be undertaken. Interpretative geotechnical information should be provided.

1.10. A ground movement assessment, potential structural impact and mitigation measures, if required, are not included in the BIA and are requested.

1.11. Utility data should be provided.

1.12. It cannot be confirmed that the BIA complies with the requirements of CPG: Basements until the queries raised in Section 4 and Appendix 2 are addressed.

2.0 INTRODUCTION

2.1. CampbellReith was instructed by London Borough of Camden (LBC) on 6 September 2021 to carry out a Category B audit on the Basement Impact Assessment (BIA) submitted as part of the Planning Submission documentation for 89A Gloucester Avenue, London NW1 8LB.

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 *"Alterations to the lower ground floor vault, including installation of walk-over rooflight, structure to lower ground floor and alterations to front paving area".*

2.6. CampbellReith accessed LBC's Planning Portal on 22 September 2021 and gained access to the following relevant documents for audit purposes:

- Basement Impact Assessment (BIA) by Constructure Ltd, ref. 2163, dated 20 July 2021.
- Design and Access Statement, author unknown, undated.
- Planning Application Drawings by Alexandra Von Peltz Design Studio, consisting of:

Location Plan, rev 0, dated 9 January 2021,

Existing Plan, rev 0, dated 5 December 2020,

Existing Section AA, rev 0, dated 19 December 2020,

Existing Elevations, rev 0, dated 19 January 2021,

Proposed Plans, rev P01, dated 01 October 2021,

Proposed Section AA, rev P02, dated 01 October 2021,

Proposed Elevations, rev 0, dated 19 December 2020,

Existing and Proposed Section BB, rev P01, dated 01 October 2021.

3.0 BASEMENT IMPACT ASSESSMENT AUDIT CHECK LIST

Item	Yes/No/NA	Comment
Are BIA Author(s) credentials satisfactory?	No	BIA does not appear to have input from an individual holding CGeol qualification.
Is data required by Cl.233 of the GSD presented?	No	Construction sequence, programme and structural data are absent. Utility data absent. Ground Movement Assessment is absent. Mitigation measures are absent.
Does the description of the proposed development include all aspects of temporary and permanent works which might impact upon geology, hydrogeology and hydrology?	No	Construction sequence, programme and structural data are absent.
Are suitable plan/maps included?	Yes	
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	
Hydrogeology Screening: Have appropriate data sources been consulted? Is justification provided for 'No' answers?	Yes	Assessment to be completed by CGeol FGS.
Hydrology Screening: Have appropriate data sources been consulted? Is justification provided for 'No' answers?	No	Question 6 absent. Site is within Local Flood Risk Zone
Is a conceptual model presented?	No	

Item	Yes/No/NA	Comment
Land Stability Scoping Provided? Is scoping consistent with screening outcome?	No	Proximity of highway and potential utilities therein should be considered.
Hydrogeology Scoping Provided? Is scoping consistent with screening outcome?	N/A	No items carried to scoping.
Hydrology Scoping Provided? Is scoping consistent with screening outcome?	No	Question 6 is missing from the screening assessment. Site is within Local Flood Risk Zone.
Is factual ground investigation data provided?	No	BIA recommends that this be undertaken and is required.
Is monitoring data presented?	No	
Is the ground investigation informed by a desk study?	No	
Has a site walkover been undertaken?	Unknown	
Is the presence/absence of adjacent or nearby basements confirmed?	Yes	
Is a geotechnical interpretation presented?	No	
Does the geotechnical interpretation include information on retaining wall design?	No	An outline retaining wall design has been provided with assumed parameters used. A site investigation and confirmed parameters are required.
Are reports on other investigations required by screening and scoping presented?	Unknown	Screening and scoping require further consideration.
Are the baseline conditions described, based on the GSD?	Yes	However, further consideration required.
Do the base line conditions consider adjacent or nearby basements?	Yes	Trial pitting is recommended in the BIA to confirm foundation depths.

Item	Yes/No/NA	Comment
Is an Impact Assessment provided?	Yes	However this requires further consideration.
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 is required.
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?	No	
Has the scheme avoided cumulative impacts upon structural stability or the water environment in the local area?	No	
Does report state that damage to surrounding buildings will be no worse than Burland Category 1?	No	No assessment undertaken.
Are non-technical summaries provided?	No	

4.0 DISCUSSION

4.1. The Basement Impact Assessment (BIA) has been carried out by individuals who hold CEng qualifications. However, it is not clear if an individual holding a CGeol qualification has been involved in the production of the BIA, as required by CPG Basements.

4.2. The BIA indicates that the property is located within the Primrose Hill Conservation Area and neither the property, nor the surrounding buildings, are listed.

4.3. The proposed basement development comprises the enlargement of the existing lower ground floor area below the front paving area. Two existing rooms, comprising a vault and a bathroom, will be combined to form a larger space to be used as a bedroom and en suite. The wall of this room will be extended c. 1m towards the front of the property. It is not clear if the floor level of the existing basement will be lowered. Further information showing dimensions and levels of the basement development are requested.

4.4. It is not clear if a walkover visit of the property has been undertaken.

4.5. A screening assessment has been undertaken and is presented in Section 3 of the BIA. The text references CPG4; however, it should be noted that CPG4 has been superseded by CPG Basements (2021). Subsequent revisions of the BIA should be carried out in reference to current LBC guidance.

4.6. Based on the screening assessment presented in the BIA, subject to confirmation by a Chartered Hydrogeologist, it is accepted that the proposed development will not have a significant impact on the hydrogeology of the area.

4.7. One of the screening questions for surface flow and flooding is missing from the screening assessment in Section 3.1 of the BIA. This question relates to surface water flood risk which should be included and the scoping and impact assessment sections updated accordingly.

4.8. Section 2.4 of the BIA discusses flood risk in relation to information available from the Environment Agency. The LBC Strategic Flood Risk Assessment (SFRA) should also be considered in the assessment, particularly with respect to the Critical Drainage Areas and Local Flood Risk Zones identified therein. The site is within a Local Flood Risk Zone.

4.9. The BIA recommends that site investigation should be completed prior to detailed design to confirm the ground and groundwater conditions. The ground conditions are anticipated to comprise London Clay. Groundwater is anticipated to be limited in nature and controlled during construction using standard dewatering pumps.

4.10. A site investigation should be undertaken of appropriate scope and scale to provide the required interpretative geotechnical information to support the BIA, in accordance with the GSD Appendices G2 and G3.

4.11. An allowable gross ground bearing pressure of 150kPa has been assumed for the outline retaining wall design. This should be confirmed once the site investigation has been completed.

4.12. A proposed construction sequence for the basement is presented in Section 6 of the BIA. It is proposed to construct the basement by "underpinning the existing load bearing walls forming the existing vaults". An underpin-style construction sequence is proposed for the new retaining wall on the eastern side of the property. Section 5.3 indicates underpinning will be undertaken in bays of 1m width in a 5-bay hit/miss arrangement.

4.13. A ground movement assessment, potential structural impacts and mitigation measures, if required, in accordance with CPG Basements, are not included in the BIA and are requested. Section 5.2 of the BIA states that "*a Ground Movement Assessment may need to be conducted as part of the next phase."* Structures and services that may be affected by anticipated ground movements should be clearly identified and potential impacts assessed. It should also be noted that CIRIA C580 (now superseded by C760) is intended for embedded retaining walls, whereas this development proposes the use of underpinning.

4.14. Utility data should be provided and the impact to adjacent utilities should be included in the Ground Movement Assessment (GMA).

4.15. Section 7.4 of the BIA indicates that monitoring works are not considered necessary during the construction. This should be revised once the GMA is complete, and agreed as part of the Party Wall Awards.

5.0 CONCLUSIONS

5.1. It should be demonstrated that an individual holding a CGeol qualification has been involved in the hydrogeological assessments.

5.2. Drawings showing dimensions and levels of the existing and proposed basement development are requested.

5.3. The hydrology screening assessment should be updated to include Question 6.

5.4. It is accepted that the development will not have a significant impact on the hydrogeology of the area, subject to confirmation by a chartered hydrogeologist.

5.5. The underlying geology is anticipated to comprise London Clay and limited ground water is anticipated. A site investigation is required to inform the BI and provide interpretative geotechnical information.

5.6. A ground movement assessment, potential structural impact and mitigation measures, if required, are not included in the BIA and are requested.

5.7. Utility data should be provided.

5.8. It cannot be confirmed that the BIA complies with the requirements of CPG: Basements until the queries raised in Section 4 and Appendix 2 are addressed.

Appendix 1: Residents' Consultation Comments

None

Appendix 2: Audit Query Tracker

Audit Query Tracker

Query No	Subject	Query	Status	Date closed out
1	Guidance	CPG4 is referenced in the BIA. This has been superseded by CPG Basements (2021), which should be referenced in future revisions.	Open	
2	Qualification	Evidence of input from an individual holding CGeol qualification should be provided.	Open	
3	Drawings	Drawings showing the dimensions and levels of the existing and proposed basement development are required.	Open	
4	Hydrology	The screening assessment for surface flow and flooding should be updated to answer all screening questions. Appropriate flood risk assessment is required, considering the Camden SFRA and location of the site within a Local Flood Risk Zone.	Open	
5	Stability / Hydrogeology	Site investigation and interpretative geotechnical information should be provided.	Open	
6	Stability	A ground movement assessment, potential structural impacts and mitigation measures, if required, in accordance with CPG Basements are requested.	Open	
7	Stability	Utility data should be provided.	Open	

Appendix 3: Supplementary Supporting Documents

None

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