

9-13 Grape Street
London, WC2H 8ED

Basement Impact Assessment
Audit

For

London Borough of Camden

Project Number: 12336-90

Revision: F1

September 2016

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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 9-13 Grape Street (planning reference 2016/2036/P). 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. The authors of the BIA possess the relevant qualifications required by CPG4.
- 1.5. The property to be developed comprises a five storey building, forming part of a terrace, and includes an existing basement which is to be lowered in part by up to 420mm, together with a 1.00 metre square lift pit of 940mm depth.
- 1.6. Although no intrusive soils investigation has been undertaken at depth, it is anticipated that the nominally lowered basement will be founded in the Lynch Hill River Terrace Gravel. Ten no. trial pits were excavated around the perimeter of the existing basement and all pits were dry.
- 1.7. It is accepted that the nominal lowering of the basement will have minimal effect on the adjacent highway, neighbouring foundations or Post Office Railway Tunnel running at depth below the site, although agreement should be provided by Royal Mail's representatives.
- 1.8. Two existing crosswalls within the basement are to be removed during refurbishment works and the removal of these buttress walls on the basement wall's stability should be considered and agreed during the Party Wall Approval process, as should the methodology for constructing the lowered foundations.
- 1.9. It is accepted that the property was unaffected in the 1975 and 2002 flood events and lies within Flood Zone 1.
- 1.10. It is accepted that there are no slope stability concerns, no known ponds, springlines or wells near the site and it is outside the Hampstead pond chain catchment area.
- 1.11. It is accepted that it is unnecessary to carry out the impact assessment and review stages of the BIA process. Although no details are provided, it is accepted the scale of the proposal is modest and no adverse effects on the water environment and stability are anticipated. It is accepted the information provided in the BIA reflects this.

- 1.12. Items that are required to be agreed as part of the Party Wall process are discussed in Section 4 and summarised in Appendix 2.

2.0 INTRODUCTION

- 2.1. CampbellReith was instructed by London Borough of Camden (LBC) on 25 July 2016 to carry out a Category A Audit on the Basement Impact Assessment (BIA) submitted as part of the Planning Submission documentation for 9-13 Grape Street, London WC2H 8ED, Camden Reference 2016/2036/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
- Guidance for Subterranean Development (GSD). Issue 01. November 2010. Ove Arup & Partners.
 - Camden Planning Guidance (CPG) 4: Basements and Lightwells.
 - Camden Development Policy (DP) 27: Basements and Lightwells.
 - Camden Development Policy (DP) 23: Water
- 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; and,
 - 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 *"Erection of a roof extension and change of use from office and photographic studios, gymnasium and gallery (together comprising a sui generis use), to office (Class B1) and associated works."*

2.6. The Audit Instruction also confirmed the proposal does not involve a listed building nor is it neighbour to a listed building, although it is understood the site lies within the Bloomsbury Conservation Area.

2.7. CampbellReith accessed LBC's Planning Portal on 03 August 2016 and gained access to the following relevant documents for audit purposes:

- Basement Impact Assessment (BIA) by Fairhurst dated June 2016
- Existing and Proposed Plans and Sections comprising:

Drawing Nos 1530/0001, 0100-0105, 0200-0203, 0300, 0301, 0900-0905, 0910, 0911, 0920, 0921, 1100E – 1106E, 1200A, 1201C, 1202A, 1203A, 1300C, 0301C.

By Brimelow McSweeney Architects.

3.0 BASEMENT IMPACT ASSESSMENT AUDIT CHECK LIST

Item	Yes/No/NA	Comment
Are BIA Author(s) credentials satisfactory?	Yes	BIA Section 2.4.
Is data required by Cl.233 of the GSD presented?	No	No details or works programme included however it is acknowledged the proposals are modest.
Does the description of the proposed development include all aspects of temporary and permanent works which might impact upon geology, hydrogeology and hydrology?	No	No details provided.
Are suitable plan/maps included?	Yes	See BIA Figures and Architect's drawings.
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	See BIA Section 3.8.
Hydrogeology Screening: Have appropriate data sources been consulted? Is justification provided for 'No' answers?	Yes	See BIA Section 3.8.
Hydrology Screening: Have appropriate data sources been consulted? Is justification provided for 'No' answers?	Yes	See BIA Section 3.8.
Is a conceptual model presented?	Yes	BIA Section 3 includes ground conditions from the limited site specific investigation and information from nearby sites.
Land Stability Scoping Provided? Is scoping consistent with screening outcome?	Yes	See BIA Section 4.

Item	Yes/No/NA	Comment
Hydrogeology Scoping Provided? Is scoping consistent with screening outcome?	Yes	See BIA Section 4.
Hydrology Scoping Provided? Is scoping consistent with screening outcome?	N/A	No issues identified in the screening.
Is factual ground investigation data provided?	Yes	See BIA Section 3.4.
Is monitoring data presented?	No	Limited investigation involving trial pitting undertaken on site.
Is the ground investigation informed by a desk study?	Yes	Desk study information presented.
Has a site walkover been undertaken?	Yes	BIA Section 3.7.
Is the presence/absence of adjacent or nearby basements confirmed?	Yes	See BIA Section 3.7.
Is a geotechnical interpretation presented?	No	Limited investigation undertaken.
Does the geotechnical interpretation include information on retaining wall design?	N/A	Interpretation not presented.
Are reports on other investigations required by screening and scoping presented?	N/A	None identified.
Are baseline conditions described, based on the GSD?	Yes	BIA Section 3
Do the base line conditions consider adjacent or nearby basements?	Yes	BIA Section 3.7
Is an Impact Assessment provided?	N/A	BIA not undertaken beyond screening and scoping.
Are estimates of ground movement and structural impact presented?	N/A	BIA not undertaken beyond screening and scoping and however proposals are modest.

Item	Yes/No/NA	Comment
Is the Impact Assessment appropriate to the matters identified by screen and scoping?	N/A	BIA not undertaken beyond screening and scoping.
Has the need for mitigation been considered and are appropriate mitigation methods incorporated in the scheme?	N/A	Modest proposals and no adverse effects identified.
Has the need for monitoring during construction been considered?	N/A	
Have the residual (after mitigation) impacts been clearly identified?	N/A	No mitigation presented.
Has the scheme demonstrated that the structural stability of the building and neighbouring properties and infrastructure will be maintained?	No	No details are provided but acknowledged proposals are modest (see Audit paragraphs 4.3 to 4.6 and 4.10)
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?	No	Structural stability not demonstrated but acknowledged proposals are modest.
Does report state that damage to surrounding buildings will be no worse than Burland Category 2?	No	Not stated but acknowledged proposals are modest.
Are non-technical summaries provided?	Yes	See BIA Sections 1.0, 3.9, 4.1

4.0 DISCUSSION

- 4.1. The Basement Impact Assessment (BIA) has been produced by Fairhurst Consulting Engineers and the authors possess the relevant qualifications required by CPG4.
- 4.2. The property to be developed comprises a five storey commercial building which is part of a terrace and includes a basement level to be lowered by up to 420mm at its northwestern end to match the level at its southeastern end. A 1m square lift pit is to be installed with an additional depth of 940mm. Two existing cross-walls are to be demolished to create a single large space within the basement.
- 4.3. A screening and scoping exercise has been undertaken in accordance with CPG4 requirements which identified the potential for the site to be located directly above an aquifer, the potential presence of shrinkable founding materials and the site's adjacency to a highway/pedestrian right of way and a tunnel although it is acknowledged the proposals are modest which reduces the potential impacts.
- 4.4. Although it is accepted that the nominal lowering of the basement floor will have minimal effect on the adjacent highway and pavement, the removal of the buttressing cross-walls should be considered during the detailed design stage and agreed as party of the Party Wall process.
- 4.5. Similarly, although it is indicated that the Post Office Railway Tunnel is at considerable depth below the proposed basement, the variation should be agreed with Royal Mail representatives.
- 4.6. No intrusive soils investigation has been undertaken at depth, however, Fairhurst has reviewed the British Geology Survey online records for nearby sites and determined that the site is underlain by the Lynch Hill River Terrace Gravel, which is designated as a Secondary A Aquifer, below which lies the London Clay Formation. Ten no. trial pits were excavated around the perimeter of the existing basement which verified that the nominal reduction in level of the basement would be founded in the Lynch Hill River Terrace Gravel and all trial pit excavations were dry. No methodology for constructing the lowered foundations is contained within the BIA, however, it is acknowledged the proposals are modest. Details of the construction should be provided as part of the Party Wall Award process.
- 4.7. It is accepted that Grape Street did not flood in either the 1975 or the 2002 flood events and that the Environment Agency Flood Maps show the site to lie within Flood Zone 1, its lowest category.
- 4.8. It is accepted that there are no slope stability concerns regarding the proposed development.
- 4.9. It is accepted that no known ponds, springlines or wells are in close vicinity to the site and the site is outside the Hampstead pond chain catchment area.

- 4.10. On the basis of the screening and scoping exercise, it is accepted that it is unnecessary to carry out the impact assessment and review stages of the BIA process. Although no construction details are provided, it is acknowledged the proposals are modest and the information provided in the BIA reflects this.

5.0 CONCLUSIONS

- 5.1. The authors of the BIA possess the relevant qualifications required by CPG4.
- 5.2. The property to be developed comprises a five storey building, forming part of a terrace, and includes an existing basement which is to be lowered in part by up to 420mm, together with a 1m square lift pit of 940mm depth.
- 5.3. Although no intrusive soils investigation has been undertaken at depth, it is anticipated that the nominally lowered basement will be founded in the Lynch Hill River Terrace Gravel. Ten no. trial pits were excavated around the perimeter of the existing basement and all pits were dry.
- 5.4. It is accepted that the nominal lowering of the basement will have minimal effect on the adjacent highway, neighbouring foundations or Post Office Railway Tunnel running at depth below the site, although the agreement should be provided by Royal Mail's representatives.
- 5.5. Two existing crosswalls within the basement are to be removed during refurbishment works, and the removal of these buttress walls on the basement wall's stability should be considered and agreed during the Party Wall Approval process, as should the methodology for constructing the lowered foundations.
- 5.6. It is accepted that the property was unaffected in the 1975 and 2002 flood events and lies within Flood Zone 1.
- 5.7. It is accepted that there are no slope stability concerns, no known ponds, springlines or wells near the site and it is outside the Hampstead pond chain catchment area.
- 5.8. It is accepted that it is unnecessary to carry out the impact assessment and review stages of the BIA process. Although no details are provided, it is accepted the scale of the proposal is modest and no adverse effects on the water environment and stability are anticipated. It is accepted the information provided in the BIA reflects this.

Appendix 1: Residents' Consultation Comments

None

Appendix 2: Audit Query Tracker

Audit Query Tracker

Query No	Subject	Query	Status	Date closed out
1	Stability	Methodology for constructing lowered foundations.	To be agreed as part of Party Wall Approval	N/A
2	Stability	Removal of basement cross-walls.	To be agreed as part of Party Wall Approval	N/A
3	Stability	Effect on Post Office Railway Tunnel	To be agreed with Royal Mail	N/A

Appendix 3: Supplementary Supporting Documents

None

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