

Land adjacent to 1 Ellerdale Road
London, NW3 6BA

Basement Impact Assessment
Audit

For
London Borough of Camden

Project Number: 12336-16
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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 Land adjacent to 1 Ellerdale Gardens (planning reference 2015/6843/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 engineering consultants using individuals who possess suitable qualifications.
- 1.5. The BIA is an update to a previously submitted and approved BIA (Camden ref: 2012/6484/P) with the principal change being the omission of underpinning to the boundary walls and replacement with a contiguous piled solution to the whole basement perimeter.
- 1.6. The BIA has confirmed that the proposed basement slab will be founded within firm sandy clay head deposits, with the contiguous piles extending into the Claygate Clays below.
- 1.7. It is not likely that the ground water table will be encountered during basement foundation excavation.
- 1.8. An analysis has been undertaken of horizontal and vertical ground movements and their effects on the surrounding building though no proposals are provided for a movement monitoring strategy during excavation and construction. The detailed proposals for this should be agreed as part of the party wall awards.
- 1.9. It is accepted following review that the surrounding slopes to the development site are stable.
- 1.10. It is accepted following review that the development will not impact on the wider hydrogeology of the area and is not in an area subject to flooding.
- 1.11. Following review of the BIA and supporting information there were no queries or other matters requiring further information or clarification. As such, Appendix 2 (Audit Query Tracker) and Appendix 3 (Supplementary Supporting Information) of the BIA audit report do not contain any information.

2.0 INTRODUCTION

- 2.1. CampbellReith was instructed by London Borough of Camden (LBC) on 28/01/16 to carry out a Category B Audit on the Basement Impact Assessment (BIA) submitted as part of the Planning Submission documentation for land adjacent to 1 Ellerdale Road, London, NW3 6BA (planning reference 2015/6843/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.

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.

- 2.4. LBC's Audit Instruction described the planning proposal as "Erection of a new single storey dwelling with basement on land to the rear garden of No. 81 Fitzjohn's Avenue, with access of Ellerdale Road.
- 2.5. CampbellReith accessed LBC's Planning Portal on 17/02/16 and gained access to the following relevant documents for audit purposes:

- Design Study & Basement Impact Assessment Report (BIA) - Revision B dated December 2015.
- Planning Application Drawings by Knight Architecture & Design consisting of
- Location Plan
- Existing site survey, block plan and site location plan
- Existing site sections and elevations
- Proposed floor plans, roof plan and block plan
- Proposed Sections and Elevations
- Design & Access Statement by Philips Planning Services Ltd dated November 2016

3.0 BASEMENT IMPACT ASSESSMENT AUDIT CHECK LIST

Item	Yes/No/NA	Comment
Are BIA Author(s) credentials satisfactory?	Yes	The authors and contributors to the BIA all have suitable credentials.
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	Within BIA.
Are suitable plan/maps included?	Yes	BIA & 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	BIA Section 3.0 and Appendix C.
Hydrogeology Screening: Have appropriate data sources been consulted? Is justification provided for 'No' answers?	Yes	BIA Section 3.0 and Appendix C.
Hydrology Screening: Have appropriate data sources been consulted? Is justification provided for 'No' answers?	Yes	BIA Section 3.0 and Appendix C.
Is a conceptual model presented?	Yes	BIA Section 3.1.
Land Stability Scoping Provided? Is scoping consistent with screening outcome?	Yes	

Item	Yes/No/NA	Comment
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?	Yes	BIA Appendix E-G.
Is monitoring data presented?	Yes	Over a period of time and in different Site Investigation reports.
Is the ground investigation informed by a desk study?	Yes	Ground Engineering 2014 Investigation.
Has a site walkover been undertaken?	Yes	
Is the presence/absence of adjacent or nearby basements confirmed?	Yes	
Is a geotechnical interpretation presented?	Yes	BIA Appendix E-G.
Does the geotechnical interpretation include information on retaining wall design?	Yes	Ground Engineering 2014 Investigation.
Are reports on other investigations required by screening and scoping presented?	Yes	References and relevant extracts included.
Are the baseline conditions described, based on the GSD?	Yes	
Do the base line conditions consider adjacent or nearby basements?	Yes	
Is an Impact Assessment provided?	Yes	
Are estimates of ground movement and structural impact presented?	Yes	

Item	Yes/No/NA	Comment
Is the Impact Assessment appropriate to the matters identified by screen and scoping?	Yes	
Has the need for mitigation been considered and are appropriate mitigation methods incorporated in the scheme?	Yes	Increased pile diameter to improve stiffness.
Has the need for monitoring during construction been considered?	Yes	BIA section 5.8.
Have the residual (after mitigation) impacts been clearly identified?	Yes	
Has the scheme demonstrated that the structural stability of the building and neighbouring properties and infrastructure will be maintained?	Yes	
Has the scheme avoided adversely affecting drainage and run-off or causing other damage to the water environment?	Yes	Green roofs.
Has the scheme avoided cumulative impacts upon structural stability or the water environment in the local area?	Yes	
Does report state that damage to surrounding buildings will be no worse than Burland Category 2?	Yes	BIA section 5.3 & 5.8.
Are non-technical summaries provided?	Yes	

4.0 DISCUSSION

- 4.1. The proposed basement consists of a single storey construction formed within a ring of contiguous piles installed from ground level. The basement extends approximately 3m below the existing garden level.
- 4.2. The BIA is an update to a previously submitted and approved BIA (Camden ref: 2012/6484/P). The original BIA has not been reviewed though the original officer's report was reviewed and the following was noted;

"This application follows on from a similar application for a new dwelling submitted in 2010 (ref: 2010/5841/P). This application did not include a basement as part of the proposal and therefore a BIA was not required. Since the application has been received and during consultation, local residents supplied comments that challenged the robustness of the BIA. Therefore, the Council sought an independent view from GCG. GCG has found that the BIA is considered to be compliant with the requirement of CPG4. An issue was raised by GCG about the replacement of the existing fencing. GCG recommend that it would be better to pile the boundary before reconstructing the boundary wall. This would give greater control of ground movements caused by the construction of the basement. The BIA was revised based on the recommendation of GCG."

- 4.3. The principal update to the BIA reviewed as part of this audit was the omission of underpinning to the boundary walls. The updated scheme involves installing a piled foundation solution to the whole perimeter of the basement.
- 4.4. An analysis has been undertaken of horizontal and vertical ground movements although no proposals are provided for a movement monitoring strategy during excavation and construction. The detailed proposals for this should be agreed as part of the party wall awards.
- 4.5. It is accepted that the site currently is soft landscaped and that the addition of the building will reduce the volume of rainfall seeping into underground aquifers. It is accepted however that the small footprint of the site means this will have negligible effect.
- 4.6. It is accepted that the green roof being provided will help to slow the rate of discharge from the roof of the new development into the surrounding drainage infrastructure.
- 4.7. It is accepted that the screening and scoping are correct in all other respects.

5.0 CONCLUSIONS

- 5.1. The Basement Impact Assessment (BIA) has been carried out by a well-known firm of engineering consultants, Alan Baxter Associates and the individuals concerned in its production have suitable qualifications.
- 5.2. The BIA has referenced Camden Planning Guidance – Basements & Lightwells CPG4 and other the associated relevant documents in its production.
- 5.3. An analysis has been undertaken of horizontal and vertical ground movements all of which appears to be in accordance with the guidance documents.
- 5.4. It is accepted that the surrounding slopes to the development site are stable.
- 5.5. It is accepted that the development will not impact on the wider hydrogeology of the area and is not in an area subject to flooding.

Appendix 1: Residents' Consultation Comments

None

Appendix 2: Audit Query Tracker

None

Appendix 3: Supplementary Supporting Documents

None

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