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Basement Impact Assessment Audit

36 Garden Flat, Eton Avenue, NW3 3HL

For
London Borough of Camden

Project No.
13693-98

Date
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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 36 Garden Flat, Eton Avenue, London NW3 3HL (planning reference 2022/4255/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 Basement Impact Assessment (BIA) has been carried out by engineering consultants Ashton Bennett Consultancy and the individuals concerned in its production have suitable qualifications.

1.5 The proposed basement development consists of replacing the existing lower ground floor rear extension structure and the enlargement of the existing rear sunken patio. The construction will retain the existing foundations and no underpinning is required.

1.6 Trial pit records included within the structural report identified the existing foundations are founded in firm to stiff clay. No groundwater was encountered during excavation of the trial pits.

1.7 A structural statement has been included within the updated BIA.

1.8 Whilst some responses within the Land stability and Hydrogeology screening are incorrect it is accepted that the additional information included in the structural statement and BIA Annexe provides sufficient information to address the points.

1.9 The BIA indicates that there are no surface water flow concerns regarding the proposed development.

1.10 Considering the additional information presented, it can be confirmed that the BIA meets the requirements of Camden Planning Guidance: Basements.

2.0 INTRODUCTION

2.1 CampbellReith was instructed by London Borough of Camden (LBC) on 19th January 2023 to carry out a Category A audit on the Basement Impact Assessment (BIA) submitted as part of the Planning Submission documentation for 36 Garden Flat, Eton Avenue, London, NW3 3HL (2022/4255/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.

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 "*Replacement of an existing lower ground floor rear extension structure with associated internal alterations and enlargement of the existing rear sunken patio.*"

2.6 LBC's Planning Portal confirms that the subject site is a Grade II listed building and is located in the Belsize Park Conservation Area.

2.7 CampbellReith accessed LBC's Planning Portal on 20th January 2023 and gained access to the following relevant documents for audit purposes:

- Site Location Plan;
- Basement Impact Assessment Report (BIA) by Ashton Bennett, issued December 2022 (ref MHS 3503);
- Planning Application Drawings consisting of:

- 'Existing Lower Ground Floor Plan' by Curtaz Studio, issued September 2022 (ref 2245 A. 101 Re A);
- 'Existing Section A-A/ Side Elevation' by Curtaz Studio, issued September 2022 (ref 2245 A. 101 Re A);
- 'Existing Rear Elevation' by Curtaz Studio, issued September 2022 (ref 2245 A. 111 Re A);
- 'Proposed Lower Ground Floor Plan' by Curtaz Studio, issued September 2022 (ref 2245 A. 201 Re A);
- 'Proposed Section A-A/ Side Elevation' by Curtaz Studio, issued September 2022 (ref 2245 A. 201 Re A);
- 'Proposed Rear Elevation' by Curtaz Studio, issued September 2022 (ref 2245 A. 111 Re A);
- Design & Access Statement by Curtaz Studio, issued September 2022 (ref 2245 PL_DA STAT).

2.8 Subsequent to the initial audit report, CampbellReith was provided with the following documents:

- Basement Impact Assessment Report (BIA) by Ashton Bennett [including a Structural Statement by Ali Karbassi dated April 2023 within the appendices], issued April 2023 (ref MHS 3503);
- Annexe to Basement Impact Assessment (issued to CRH via email on the 2nd May 2023).

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?	Yes	Structural Statement included in the updated BIA appendices.
Does the description of the proposed development include all aspects of temporary and permanent works which might impact upon geology, hydrogeology and hydrology?	Yes	Structural Statement include in the updated BIA appendices.
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?	No	Response to Q8 is incorrect however it is addressed in later sections of the BIA.
Hydrogeology Screening: Have appropriate data sources been consulted? Is justification provided for 'No' answers?	No	Response to Q2 (Q9 in previous BIA version) is still incorrect however it is addressed in later sections of the BIA.
Hydrology Screening: Have appropriate data sources been consulted? Is justification provided for 'No' answers?	Yes	
Is a conceptual model presented?	Yes	Appendix C of BIA
Land Stability Scoping Provided? Is scoping consistent with screening outcome?	Yes	Updated BIA confirmed existing foundations will be retained.
Hydrogeology Scoping Provided? Is scoping consistent with screening outcome?	No	However, it is addressed further in the BIA Annexe.
Hydrology Scoping Provided?	NA	No issues brought to scoping.

Item	Yes/No/NA	Comment
Is scoping consistent with screening outcome?		
Is factual ground investigation data provided?	NA	Trial pitting included within Structural Statement.
Is monitoring data presented?	NA	
Is the ground investigation informed by a desk study?	NA	
Has a site walkover been undertaken?	NA	
Is the presence/absence of adjacent or nearby basements confirmed?	No	The BIA assumes that adjacent buildings do not have basements.
Is a geotechnical interpretation presented?	NA	
Does the geotechnical interpretation include information on retaining wall design?	NA	
Are reports on other investigations required by screening and scoping presented?	Yes	Structural Statement and Design Calculations provided in Appendix D.
Are the baseline conditions described, based on the GSD?	Yes	
Do the baseline conditions consider adjacent or nearby basements?	No	The BIA assumes that adjacent buildings do not have basements.
Is an Impact Assessment provided?	Yes	Section 10 of BIA.
Are estimates of ground movement and structural impact presented?	Yes	The updated BIA confirms existing foundations will be retained and underpinning is not required.
Is the Impact Assessment appropriate to the matters identified by screening and scoping?	Yes	The updated BIA confirms existing foundations will be retained and underpinning is not required.
Has the need for mitigation been considered and are appropriate mitigation methods incorporated in the scheme?	Yes	Section 9.2 of BIA.
Has the need for monitoring during construction been considered?	Yes	The BIA states that it is not required.

Item	Yes/No/NA	Comment
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?	Yes	
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?	Yes	
Does report state that damage to surrounding buildings will be no worse than Burland Category 1?	N/A	
Are non-technical summaries provided?	Yes	

4.0 DISCUSSION

4.1 The Basement Impact Assessment (BIA) has been carried out by engineering consultants Ashton Bennett Consultancy and the individuals concerned in its production have suitable qualifications.

4.2 The LBC Planning Portal confirms that the site is a Grade II listed building and is located in the Belsize Park Conservation Area.

4.3 The proposed basement consists of the replacement of an existing lower ground floor rear extension structure and the enlargement of the existing rear sunken patio. The updated BIA confirms that the redevelopment will retain the existing building foundations and does not require any underpinning to the existing structure.

4.4 The BIA indicates that "temporary support" will be required to maintain stability, details of which are provided in the structural statement included in the updated BIA report.

4.5 The sunken patio will extend across an area of the back garden reducing the current ground level by up to 1.09m.

4.6 The structural statement includes trial pits that identified the existing foundations to be founded on firm to stiff clays. No groundwater was encountered in the pits during excavation.

4.7 Desk Study data is provided.

4.8 The desk study has identified that the site is within proximity of the historic River Tyburn and discussion is presented on the culverting of such historic rivers. The Screening Assessment does not identify this nor discuss potential impacts to groundwater flow or stability (e.g. due to the presence of related superficial deposits). The screening responses within the updated BIA for Hydrogeology Q2 and Land Stability Q8 are therefore incorrect and should be brought through to scoping however, it is recognised further details of the culverted river have been provided within the BIA Annexe and the trial pits did not encountered groundwater during excavation. Whilst the screening is incorrect it is accepted that sufficient evidence is provided within the updated BIA and annexe to satisfy this issue.

4.9 The BIA assumes that adjacent structures do not have basements.

4.10 The BIA has identified that the site is underlain by London Clay. Discussion is presented on the minimum depth of foundations and likely net allowable bearing capacity.

4.11 Groundwater is not anticipated to be encountered during construction and the London Clay is classified as unproductive strata (and therefore exhibiting very low permeability). As aforementioned, the three trial pits included within the structural report did not encounter any groundwater during excavation.

4.12 Within the updated BIA, Q4 and Q7 for Land Stability screening have been brought through to the scoping assessment due to a potential risk from seasonal shrink-swell action within the London Clay. Minimum foundation depths have been proposed. The updated BIA confirms underpinning of the existing foundation in not required.

4.13 The BIA states that considering the depth of excavations of ~1.0m and the use of the existing foundations, there should not be any impacts to neighbouring structures resulting from the development. An outline of the structural information, indicating the foundation and temporary propping arrangements, is included within Appendix D of the updated BIA report.

4.14 No proposals are provided for a movement monitoring strategy during excavation and construction due to the limited depth of excavation and absence of structures within the zone of influence of the excavations.

5.0 CONCLUSIONS

5.1 The Basement Impact Assessment (BIA) has been carried out by engineering consultants Ashton Bennett Consultancy and the individuals concerned in its production have suitable qualifications.

5.2 The proposed basement development consists of replacing the existing lower ground floor rear extension structure and the enlargement of the existing rear sunken patio. The construction will retain the existing foundations and no underpinning is required. A maximum excavation depth of c. 1.10m is indicated.

5.3 Trial pit records included within the structural report identified that the existing foundations are founded in firm to stiff clay. No groundwater was encountered during excavation of the trial pits.

5.4 Whilst the responses within the Land Stability and Hydrogeology screening regarding proximity of water courses are incorrect, it is accepted that the information included in the structural statement and the BIA Annexe provides sufficient information to address this point.

5.5 The BIA indicates that there are no surface water flow concerns regarding the proposed development.

5.6 It is accepted that the basement will not have a significant impact on the hydrogeology, land stability and hydrogeology of the area.

5.7 Considering the additional information presented, it can be confirmed that the BIA meets the requirements of Camden Planning Guidance: Basements.

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Appendix 1

Consultation Responses

None

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Appendix 2

Audit Query Tracker

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Audit Query Tracker

Query No	Subject	Query	Status	Date closed out
1	Format	The BIA should be reviewed and updated in accordance with current guidance, including responses to the full Screening Assessment.	Open	Closed 13/04/2023
2	Land Stability	It should be demonstrated that the author for the land stability assessment holds suitable qualifications in accordance with CPG Basements.	Open	Closed 13/04/2023
3	Land Stability	It should be confirmed whether the redevelopment will retain the existing foundations or require any underpinning to the existing structure. The BIA indicates that "temporary support" will be required to maintain stability, details of which should be provided.	Open	Closed 13/04/2023
4	Groundwater Flow / Land Stability	Proximity to the historic River Tyburn should be considered, including completion of Screening Assessment and related impact assessment.	Open	Closed 02/05/2023
5	Hydrology	Further investigation into the historical tributary of the River Tyburn which is in close proximity to the subject site.	Open	Closed 02/05/2023

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Appendix 3

Supplementary Supporting Documents

None

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