

23 Lambolle Road,
London, NW3 4HS

Basement Impact Assessment
Audit

For

London Borough of Camden

Project Number: 12985-32
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Document Details

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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 11A Parkhill Road (planning reference 2017/5913/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 Basement Impact Assessment (BIA) has been prepared by appropriately qualified authors.
- 1.5. The proposal consists of extending the existing basement to the full footprint of the ground floor plan to the front of the property, plus a lightwell, and extending beyond the rear of the property.
- 1.6. A site investigation has been completed that confirms the proposed basement will be founded within London Clay.
- 1.7. It is accepted that there will be no impact to the wider hydrological and hydrogeological environments.
- 1.8. A construction methodology is presented, including outline sequencing and propping arrangements. An outline construction programme should be provided.
- 1.9. The BIA states that a flood risk assessment is required. This should be provided, including any mitigation to be adopted.
- 1.10. It is accepted that stability to the neighbouring buildings will be maintained within Burland Category 1 (Very Slight). Assessment of movements and impact to the flats above the proposed development, to the highway and any underlying utilities should be presented.
- 1.11. Non-technical summaries should be presented in any updated BIA submitted.
- 1.12. Queries and requests for information are summarised in Appendix 2. Until the additional information and further assessments requested are presented, the BIA does not meet the requirements of Camden Planning Guidance: Basements.

2.0 INTRODUCTION

- 2.1. CampbellReith was instructed by London Borough of Camden (LBC) on 18 December 2018 to carry out a Category B Audit on the Basement Impact Assessment (BIA) submitted as part of the Planning Submission documentation for 23 Lambolle Road, Camden and 2017/7038/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: Basements (March 2018)
 - Camden Development Policy (DP) 27: Basements and Lightwells.
 - Camden Development Policy (DP) 23: Water.
 - Local Plan Policy (2017): 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;
 - d) 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 single storey rear extension at lower ground floor level, including excavation of the building footprint to lower the floor level, and formation of two front light wells."*
- 2.6. The Audit Instruction also confirmed 23 Lambolle Road and neighbouring buildings reside within a Conservation Area.

2.7. CampbellReith accessed LBC's Planning Portal on 21/12/2018 and gained access to the following relevant documents for audit purposes:

- Planning Application letter submitted by Mr Matthew Wood (Reference PP-06625155 dated 21st December 2017).
- Basement Impact Assessment Report (BIA) by LBH Wembley Engineering dated September 2017.
- Structural Methodology and Structural Calculations by Richard Tant Associates Consulting Engineers dated October 2017.
- Temporary Works Sketches Set by Richard Tant Consulting Engineers dated December 2017 (4467-SM02).
- Design and Access Statement by MW Architects (Not dated).
- MW Architects and Richard Tant Associates Structural Engineer's Planning Application Drawings consisting of:

Site Location Plan (1601-E0.1).

Existing GAs, Sections & Elevations (1601-E1.0, 1601-E2.0).

Proposed GAs, Sections & Elevations (1601-P1.0, 1601-P2.0, 1601-P2.1, 1601-E3.0, 1601-P3.1).

Structural GA (4467-SM01).

3.0 BASEMENT IMPACT ASSESSMENT AUDIT CHECK LIST

Item	Yes/No/NA	Comment
Are BIA Author(s) credentials satisfactory?	Yes	See Audit paragraph 4.1.
Is data required by Cl.233 of the GSD presented?	No	Indicative works programme required.
Does the description of the proposed development include all aspects of temporary and permanent works which might impact upon geology, hydrogeology and hydrology?	Yes	BIA and supporting documents.
Are suitable plan/maps included?	No	Screening references not provided. Flood risk mapping noted as pertinent considering BIA statement on requirement for FRA.
Do the plans/maps show the whole of the relevant area of study and do they show it in sufficient detail?	No	Relevant maps not provided to verify the findings in Section 3.
Land Stability Screening: Have appropriate data sources been consulted? Is justification provided for 'No' answers?	Yes	Query on proximity of highway.
Hydrogeology Screening: Have appropriate data sources been consulted? Is justification provided for 'No' answers?	Yes	Not all references provided but conclusions accepted.
Hydrology Screening: Have appropriate data sources been consulted? Is justification provided for 'No' answers?	Yes	Not all references provided but conclusions accepted. Flood risk mapping noted as pertinent considering BIA statement on requirement for FRA.
Is a conceptual model presented?	Yes	
Land Stability Scoping Provided? Is scoping consistent with screening outcome?	No	Query on proximity of highway. Impact assessment required.

Item	Yes/No/NA	Comment
Hydrogeology Scoping Provided? Is scoping consistent with screening outcome?	Yes	
Hydrology Scoping Provided? Is scoping consistent with screening outcome?	No	Flood risk mapping noted as pertinent considering BIA statement on requirement for FRA.
Is factual ground investigation data provided?	Yes	Provided within BIA Appendices.
Is monitoring data presented?	No	See Audit paragraph 4.5.
Is the ground investigation informed by a desk study?	Yes	See Audit paragraph 4.3.
Has a site walkover been undertaken?	Unknown	Not explicitly stated, however there are references to visual observations in the BIA. See Audit paragraph 4.5.
Is the presence/absence of adjacent or nearby basements confirmed?	Yes	
Is a geotechnical interpretation presented?	Yes	
Does the geotechnical interpretation include information on retaining wall design?	Yes	See Audit paragraph 4.6.
Are reports on other investigations required by screening and scoping presented?	No	Flood risk mapping noted as pertinent considering BIA statement on requirement for FRA.
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	Impact assessment for stability of highway / utilities required; flood risk to be qualified.

Item	Yes/No/NA	Comment
Are estimates of ground movement and structural impact presented?	Yes	Impact assessment for stability of highway / utilities required.
Is the Impact Assessment appropriate to the matters identified by screening and scoping?	No	Impact assessment for stability of highway / utilities required; flood risk to be qualified.
Has the need for mitigation been considered and are appropriate mitigation methods incorporated in the scheme?	No	Impact assessment for stability of highway / utilities required; flood risk to be qualified.
Has the need for monitoring during construction been considered?	No	See Audit paragraph 4.15.
Have the residual (after mitigation) impacts been clearly identified?	No	Impact assessment for stability of highway / utilities required; flood risk to be qualified.
Has the scheme demonstrated that the structural stability of the building and neighbouring properties and infrastructure will be maintained?	No	Impact assessment for stability of highway / utilities required.
Has the scheme avoided adversely affecting drainage and run-off or causing other damage to the water environment?	Yes	However, flood risk to be qualified.
Has the scheme avoided cumulative impacts upon structural stability or the water environment in the local area?	No	Impact assessment for stability of highway / utilities required; flood risk to be qualified.
Does report state that damage to surrounding buildings will be no worse than Burland Category 1?	Yes	
Are non-technical summaries provided?	No	A non-technical summary is not provided in the BIA.

4.0 DISCUSSION

- 4.1. The Basement Impact Assessment (BIA) has been prepared by a firm of engineering consultants, LBH Wembley Engineering. The qualifications of the reviewer has both CEng MICE and CGeol which meets CPG Basements 2018 requirements. The qualifications of Richard Tant Associates Consultant Engineers who prepared the Structural Methodology, Temporary Works Sketches and Calculations are given as CEng MIStructE.
- 4.2. The LBC Instruction to proceed with the audit identified that the basement proposal involves a building which resides within a Conservation Area. This is identified within the Design and Access Statement by MW Architects.
- 4.3. The existing property is discussed in Section 2 of the BIA. It is a three storey semi-detached Victorian house, with a lower ground floor across the majority of the property. The property has been split into separate flats at each level. The house is typically composed or load bearing masonry walls and assumed timber flooring, typical construction of the building's age of the 1800s, with further site history discussed in Section 3.1.
- 4.4. The proposed basement is discussed in Section 2.4 of the BIA, and consists of a single storey construction formed by extending the lower ground floor to match the ground floor floorplan to the front and an extension to the rear of the property. The proposed development requires excavation and construction within the north west corner of the property, to approximately 3.8m below ground level (bgl), which is adjacent to the Party Wall with 21 Lambolle Road that includes existing underpinned foundations to the full depth of the proposed construction. To the rear of the property, excavation will be in the order of 0.4m to 0.6m bgl.
- 4.5. A site investigation has been completed and is discussed in Section 5 of the BIA. The investigation consisted of two small diameter percussive boreholes (to depths of 6.50m bgl) to the front and rear of the property. Ground conditions comprise Made Ground over the London Clay formation. It is also noted in the Structural Methodology Report that a trial hole has been dug to confirm neighbouring foundations and underpinning. The exploratory hole logs along with insitu test results have been provided. Monitoring visits for ground water monitoring are not indicated to have been undertaken. The report concludes that no groundwater was identified beneath the site and a shallow groundwater table is not present. Its accepted that the London Clay is non-productive although some perched water within Made ground should be allowed for during construction.
- 4.6. Interpretative geotechnical information is presented, including bearing capacity and retaining wall design parameters.

- 4.7. Adjacent basements are discussed within the BIA Section 2.3, with 21 Lambolle Road reported as having a basement formed at the same depth of the proposed basement to No. 23. No discussion is presented for 25 Lambolle Road, which is the adjacent detached property, although it is accepted that the proposed works should have negligible impact on the property, due to its proximity.
- 4.8. Conventional strip foundations will be adopted at the rear of the property, with underpinning and temporary trench sheeted retaining walls required for the front lightwell construction. A structural methodology and sequence with accompanying sketches is included within Richard Tant's Structural Methodology, Method of Works Sketches and structural calculations. Richard Tant's basement plan also indicates underpinning sections layout to match the methodology. Outline structural calculations have been provided to demonstrate stability.
- 4.9. The BIA states that the neighbouring properties will not be impacted by the proposed development. It is accepted that stability to the neighbouring buildings will be maintained within Burland Category 1 (Very Slight). No impact assessment in regard to the flats above the proposed development has been stated and this is required.
- 4.10. Its stated that the highway / footpath is approximately 7m from the proposed lightwell. Based on the plans provided, proximity of the highway / footpath is considered to be closer. The distance to the highway / footpath should be confirmed and, regardless of whether this is <5m or not, an assessment of movements and impact to the highway and any underlying utilities should be presented on a reasonably conservative basis.
- 4.11. It is recommended that structural monitoring is adopted during the proposed works. This is not discussed in the BIA. Structural monitoring and consequential actions should be guided by the movement limits predicted by the GMA.
- 4.12. Section 3 of the BIA reviews the Geological, Hydrogeological and Flood Risk information of the site. Use of the Camden Geological, Hydrogeological and Hydrological Study has been referenced in Section 1.5 but no map extracts have been provided to locate the property nor confirm the report's findings.
- 4.13. The screening assessment in section 4.1.2 suggests that historical flooding has occurred on Lambolle Road. The EA flood map is cited and comments within the justification table state that the site is at very low risk of flooding from surface water. However, section 4.2.2 recommends that a Flood Risk Assessment is undertaken. This should be presented, including any mitigation to be adopted.
- 4.14. It is accepted that the change in impermeable site area is negligible and that there will be no impact to the wider hydrological environment.

- 4.15. It is accepted that considering the underlying London Clay, there will be no impact to the wider hydrogeologicval environment.
- 4.16. It is accepted that there are no slope stability concerns regarding the proposed development.

5.0 CONCLUSIONS

- 5.1. The Basement Impact Assessment (BIA) has been prepared by appropriately qualified authors.
- 5.2. A site investigation has been completed that confirms the proposed basement will be founded within London Clay.
- 5.3. It is accepted that there will be no impact to the wider hydrological and hydrogeological environments.
- 5.4. A construction methodology is presented, including outline sequencing and propping arrangements. An outline construction programme should be provided.
- 5.5. The BIA states that a flood risk assessment is required. This should be provided, including any mitigation to be adopted.
- 5.6. It is accepted that stability to the neighbouring buildings will be maintained within Burland Category 1 (Very Slight). Assessment of movements and impact to the flats above the proposed development, to the highway and any underlying utilities should be presented.
- 5.7. Non-technical summaries should be presented in any updated BIA submitted.
- 5.8. Queries and requests for information are summarised in Appendix 2. Until the additional information and further assessments requested are presented, the BIA does not meet the requirements of Camden Planning Guidance: Basements.

Appendix 1: Residents' Consultation Comments

None

Appendix 2: Audit Query Tracker

Audit Query Tracker*

Query No	Subject	Query	Status	Date closed out
1	BIA format	An indicative programme is required.	Open	
2	BIA Format	Non-technical summaries should be presented in any updated BIA submitted.	Open	
3	Hydrology	BIA states that an FRA is required. Appropriate flood risk mapping and assessment to be presented. Mitigation to be adopted should be stated.	Open	
4	Land Stability	Proximity to pedestrian right of way appears to be closer than stated in the BIA. Estimates of ground movements and impacts to the highway and underlying utilities should be stated.	Open	
5	Land Stability	Whilst the GMA confirms that impacts to neighbours will be less than Category 1 (Very Slight), impact to the flats above the proposed development should be stated.	Open	

* Please provide complete and clear responses to the above queries which are discussed in detail in Section 4. Where any of the documents are updated, please indicate the updated sections in a covering email/letter.

Appendix 3: Supplementary Supporting Documents

None

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