

53 Glenmore Road,  
London NW3 4DA

Basement Impact Assessment  
Audit

For  
London Borough of Camden

Project Number: 13693-39

Revision: F1

September 2022

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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 53 Glenmore Road, London NW3 4DA (planning reference 2021/5068/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 (BIA) 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 proposed development comprises the extension of the existing cellar on the lower ground floor to create a separate unit with a private entrance and rear garden. A rear light-well has been proposed, half of which will be used as an external garden.
- 1.5. The BIA has been prepared by Fairhurst. In the updated submissions the qualifications of the authors have been demonstrated to be in accordance with LBC guidance.
- 1.6. In the updated submissions the BIA has been informed by a desk study in line with LBC guidance.
- 1.7. In the updated submissions screening and scoping assessments have been completed.
- 1.8. The reported ground conditions comprise Made Ground overlying the London Clay Formation. In the updated submissions factual site investigation information is presented.
- 1.9. Groundwater is reported to have been encountered in shallow soils during trial pit excavation and monitored at depth below the proposed basement formation level within the London Clay. Given that the groundwater has only been monitored once in 2017 it is recommended that further monitoring is undertaken to inform temporary works contingency planning, control measures and waterproofing design.
- 1.10. The BIA states that a 'lost' tributary of the River Tyburn is located 90m west of the site which has since been covered/culverted.
- 1.11. The site is reported to be at low to medium risk of flooding from surface water. In the updated submissions, a Flood Risk Assessment has been submitted and mitigation measures proposed.

- 1.12. Glenmore Road is within Critical Drainage Area (Group 3-005). In the updated submissions the change in impermeable site area has been quantified and assessed as causing a negligible impact. A detailed drainage scheme should be agreed with LBC and Thames Water.
- 1.13. In the updated submissions interpretative geotechnical information in accordance with LBC guidance is provided.
- 1.14. In the updated submissions, outline structural information is provided, including construction methodology, sequencing and propping proposals.
- 1.15. A Ground Movement Assessment (GMA) has been undertaken to predict movements that may impact the adjacent properties at 51 and 55 Glenmore Road, which has been assessed as causing no more than Category 1 damage. The revised assessment is accepted.
- 1.16. Non-technical summaries are presented in the updated BIA.
- 1.17. Queries and matters requiring further clarification are discussed in Section 4 and summarised in Appendix 2. Considering the additional information submitted, the BIA meets the requirements of CPG: Basements.

## 2.0 INTRODUCTION

- 2.1. CampbellReith was instructed by London Borough of Camden (LBC) on 15th February 2022 to carry out a Category B Audit on the Basement Impact Assessment (BIA) submitted as part of the Planning Submission documentation for 53 Glenmore Road, London NW3 4DA, Camden Reference 2021/5068/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): Basements. January 2021
  - Camden Development Policy (DP) 27: Basements and Lightwells.
  - Camden Development Policy (DP) 23: Water.
  - The Local Plan (2017): Policy 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; 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 planning portal describes the proposal as: *"Conversion of 3 partially self-contained flats to 1 x 5 bed and 1 x 1 bed fully self contained dwellings including excavation of basement, rear/side infill extension, rear dormer extension and enlargement of front lightwell."*
- 2.6. The planning portal confirmed the site lies within Belsize Park Conservation Area and neither the subject site nor neighbouring properties are listed buildings.
- 2.7. CampbellReith accessed LBC's Planning Portal on 22<sup>nd</sup> February 2022 and gained access to the following relevant documents for audit purposes:
- Basement Impact Assessment (ref 145294/R1) dated 29<sup>th</sup> September 2021 by Fairhurst.

- Existing and proposed plans and sections dated August and October 2021 by Richard James Hastings Architecture Ltd.
- Planning, Design & Access Statement dated 14<sup>th</sup> October 2021 by RJH Architecture Ltd.
- Construction/Demolition Management Plan dated September 2021 by TTP Consulting.
- Planning consultation comments.

2.8. CampbellReith were provided with the following relevant documents for audit purposes between May and August 2022:

- Basement Impact Assessment (ref 145294/R1.1) dated 6<sup>th</sup> May 2022 by Fairhurst.
- Basement Impact Assessment (ref 145294/R1.2) dated 9<sup>th</sup> August 2022 by Fairhurst.
- Construction Programme dated April 2022 by MH Costa.
- Ground Investigation & Assessment dated March 2017 by LMB Geosolutions.
- Flood Risk Assessment for Planning dated March 2017 by Unda Consulting.

### 3.0 BASEMENT IMPACT ASSESSMENT AUDIT CHECK LIST

Item	Yes/No/NA	Comment
Are BIA Author(s) credentials satisfactory?	Yes	Updated submissions.
Is data required by Cl.233 of the GSD presented?	Yes	Updated submissions.
Does the description of the proposed development include all aspects of temporary and permanent works which might impact upon geology, hydrogeology and hydrology?	Yes	Updated submissions.
Are suitable plans/maps included?	Yes	Updated submissions.
Do the plans/maps show the whole of the relevant area of study and do they show it in sufficient detail?	Yes	Updated submissions.
Land Stability Screening: Have appropriate data sources been consulted? Is justification provided for 'No' answers?	Yes	Updated submissions.
Hydrogeology Screening: Have appropriate data sources been consulted? Is justification provided for 'No' answers?	Yes	Updated submissions.
Hydrology Screening: Have appropriate data sources been consulted? Is justification provided for 'No' answers?	Yes	Updated submissions.
Is a conceptual model presented?	Yes	Updated submissions.
Land Stability Scoping Provided? Is scoping consistent with screening outcome?	Yes	Updated submissions.



Item	Yes/No/NA	Comment
Hydrogeology Scoping Provided? Is scoping consistent with screening outcome?	Yes	Updated submissions.
Hydrology Scoping Provided? Is scoping consistent with screening outcome?	Yes	Updated submissions.
Is factual ground investigation data provided?	Yes	Updated submissions.
Is monitoring data presented?	Yes	Section 4.2 of the BIA. One monitoring well was monitored on one occasion in 2017.
Is the ground investigation informed by a desk study?	Yes	Updated submissions.
Has a site walkover been undertaken?	Yes	Updated submissions.
Is the presence/absence of adjacent or nearby basements confirmed?	Yes	Updated submissions.
Is a geotechnical interpretation presented?	Yes	Section 5 of the BIA. However, information accordance with GSD Appendix G3 required.
Does the geotechnical interpretation include information on retaining wall design?	Yes	Updated submissions.
Are reports on other investigations required by screening and scoping presented?	Yes	Updated submissions.
Are baseline conditions described, based on the GSD?	Yes	Updated submissions.
Do the baseline conditions consider adjacent or nearby basements?	Yes	Assumptions have been made on the depth of adjacent basements.
Is an Impact Assessment provided?	Yes	Updated submissions.

Item	Yes/No/NA	Comment
Are estimates of ground movement and structural impact presented?	Yes	Section 5 of the BIA. Queries as Section 4.
Is the Impact Assessment appropriate to the matters identified by screen and scoping?	Yes	Updated submissions.
Has the need for mitigation been considered and are appropriate mitigation methods incorporated in the scheme?	Yes	Updated submissions.
Has the need for monitoring during construction been considered?	Yes	Section 6 of the BIA. However, no details are provided.
Have the residual (after mitigation) impacts been clearly identified?	Yes	Updated submissions.
Has the scheme demonstrated that the structural stability of the building and neighbouring properties and infrastructure will be maintained?	Yes	Updated submissions.
Has the scheme avoided adversely affecting drainage and run-off or causing other damage to the water environment?	Yes	Updated submissions.
Has the scheme avoided cumulative impacts upon structural stability or the water environment in the local area?	Yes	Updated submissions.
Does report state that damage to surrounding buildings will be no worse than Burland Category 1?	Yes	Updated submissions.
Are non-technical summaries provided?	Yes	Updated submissions.

## 4.0 DISCUSSION

- 4.1. The site currently comprises a three-storey terraced residential property with a cellar. The proposed development comprises the extension of the existing cellar on the lower ground floor to create a separate unit with a private entrance and rear garden. A rear light-well has been proposed, half of which will be used as an external garden. The basement excavation includes the deepening of the existing cellar by approximately 1.35m and excavation of approximately 3.20m (2.70m to finished floor level + 200mm finishes + 300mm thick basement slab) in the remaining proposed basement area.
- 4.2. The BIA has been prepared by Fairhurst. In the updated submissions the qualifications of the authors have been demonstrated to be in accordance with LBC guidance.
- 4.3. In the updated submissions the BIA has been informed by a desk study in line with GSD Appendix G1.
- 4.4. In the updated submissions, screening and scoping assessments have been completed. Whilst some inconsistencies remain, the conclusions of the scoping and impact assessments have been accepted as being representative.
- 4.5. In the updated submissions the site investigation undertaken by LMB Geosolutions Ltd is provided for review. The ground conditions are reported as Made Ground overlying the London Clay Formation. Groundwater was not encountered within a borehole during the investigation but standing water was recorded in a trial pit at a depth of c. 0.80m below ground level (bgl). Following completion of the ground investigation works the monitoring well installed within the borehole was monitored on one occasion on 15 March 2017 with groundwater recorded at a depth of 5.66m bgl within the London Clay. The BIA notes that this represents perched water.
- 4.6. Given that the groundwater has only been monitored once in 2017 it is recommended that further monitoring is undertaken to inform temporary works contingency planning, control measures and waterproofing design.
- 4.7. The 'lost' tributary of the River Tyburn is located 90m west of the site which has since been covered/culverted. It will not be impacted by or impact the proposed development.
- 4.8. In the updated submissions, a Flood Risk Assessment is provided. The site is reported to be at low to medium risk of flooding from surface water. Thresholds are to be raised by 300mm to mitigate against flood risk.
- 4.9. Glenmore Road is within Critical Drainage Area (Group 3-005). In the revised submissions the change in impermeable site area has been quantified and resulting change in off-site surface water flow rates has been calculated for 1 in 100 year storms events plus allowance for climate change. The

change is assessed as negligible. A final drainage scheme should be agreed with LBC and Thames Water.

- 4.10. In the revised submissions interpretative geotechnical information is presented, including information on bearing capacity and retaining wall design, in accordance with the GSD Appendix G3.
- 4.11. In the updated submissions, outline structural information is provided, including construction methodology, sequencing and propping proposals. The basement will be constructed by underpinning techniques.
- 4.12. In the updated submissions, an outline construction programme is provided.
- 4.13. A Ground Movement Assessment (GMA) has been undertaken to predict movements that may impact the adjacent properties at 51 and 55 Glenmore Road in order to allow an assessment of the potential damage. The maximum damage category for the adjacent properties has been calculated to be within Category 1 (very slight damage) using Burland's classification.
- 4.14. In the updated submissions the relevant geotechnical and structural information has been provided to support the GMA and the assessment has adopted moderately conservative assumptions. The range of movements predicted are within the range anticipated for a single storey basement, constructed by underpinning within the London Clay, assuming good workmanship, and is accepted.
- 4.15. The BIA states that movement monitoring of walls is recommended during the construction stage and that trigger levels should be specified and agreed with the party wall surveyor to protect the neighbouring properties as a precautionary measure.
- 4.16. Non-technical summaries are provided within the revised submissions.

## 5.0 CONCLUSIONS

- 5.1. In the updated submissions the qualifications of the authors have been demonstrated to be in accordance with LBC guidance.
- 5.2. In the updated submissions the BIA has been informed by a desk study in line with LBC guidance.
- 5.3. In the updated submissions screening and scoping assessments have been completed.
- 5.4. In the updated submissions factual site investigation information is presented.
- 5.5. In the updated submissions a Flood Risk Assessment has been submitted and mitigation measures proposed.
- 5.6. In the updated submissions the change in impermeable site area has been quantified and assessed as causing a negligible impact. A detailed drainage scheme should be agreed with LBC and Thames Water.
- 5.7. In the updated submissions interpretative geotechnical information in accordance with LBC guidance is provided.
- 5.8. In the updated submissions, outline structural information is provided, including construction methodology, sequencing and propping proposals.
- 5.9. A Ground Movement Assessment (GMA) has been undertaken. The revised assessment is accepted.
- 5.10. Non-technical summaries are presented in the updated BIA.
- 5.11. Considering the additional information submitted, the BIA meets the requirements of CPG: Basements.

## Appendix 1: Residents' Consultation Comments

None

## Appendix 2: Audit Query Tracker

Audit Query Tracker

Query No	Subject	Query	Status/Response	Date closed out
1	BIA Format	BIA authors' qualifications	Closed	May 2022
2	Desk Study	Historical mapping of site and underground utility and infrastructure information should be provided.	Closed	May 2022
3	BIA Format	Screening assessment to be reviewed / updated and scoping assessment to be presented.	Closed	September 2022 - these are addressed by the other responses.
4	BIA Format	Factual site investigation report to be presented	Closed	May 2022
5	Land Stability / Groundwater	Groundwater levels to be confirmed (and assessment demonstrated to be consisted with site investigation data)	Closed	May 2022
6	Surface Water Flow	Flood Risk Assessment required.	Closed	May 2022
7	Surface Water Flow	Impermeable site area to be clarified. Outline drainage plans should be provided including SUDS proposals.	Closed	September 2022
8	Land Stability	Interpretative geotechnical parameters as GSD G3.	Closed	September 2022
9	Land Stability	Outline structural information to be provided.	Closed	May 2022
10	Land Stability	GMA to be clarified.	Closed	September 2022
11	BIA Format	Outline Construction programme and non-technical summaries required	Closed	May 2022



## Appendix 3: Supplementary Supporting Documents

None

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