

9 Bracknell Gradens  
London  
NW3 7EE

Basement Impact Assessment  
Audit

For  
London Borough of Camden

Project Number: 13693-12  
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## Document History and Status

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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 9 Bracknell Gardens, London NW3 7EE (planning reference 2021/3278/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 qualifications of the individuals involved in the BIA are not in accordance with LBC guidance. The BIA should be reviewed by individuals holding the qualifications as specified in CPG: Basements.
- 1.5. The proposed works comprise lowering of the existing lightwell to a depth of c. 2.00m bgl and the construction of a new lightwell to the same depth.
- 1.6. The presence or absence of underground infrastructure within the zone of influence of the works should be confirmed.
- 1.7. Some queries are raised in regard to information provided within the Desk Study and the Screening assessment which require further review and clarification, as detailed in Section 4.
- 1.8. Mitigation measures to deal with the potential water ingress within the excavation should be presented in the BIA.
- 1.9. A site investigation, geotechnical interpretation and outline temporary and permanent structural information should be presented in the BIA.
- 1.10. The BIA states that considering the methods of construction proposed, the predicted damage to adjacent structures will be within the limits specified by CPG Basements. However, this statement is not supported by the required geotechnical information and ground movement assessment (GMA) which should be presented.
- 1.11. The BIA does not mention the need for structural movement monitoring during construction. This should be reviewed following clarification of the GMA.
- 1.12. The site is within a Critical Drainage Area and following review by an appropriately qualified

professional, the hydrological assessment and drainage proposals should be confirmed. It is noted that the final drainage scheme will require approval by the local flood authority and the owner of the public sewer system (Thames Water).

- 1.13. Queries and requests for information are discussed in Section 4 and summarised in Appendix 2. Until the clarifications 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 19 August 2021 to carry out a Category B Audit on the Basement Impact Assessment (BIA) submitted as part of the Planning Submission documentation for 9 Bracknell Gardens, London NW3 7EE, Camden Reference 2021/3278/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: Basements. March 2018.
  - 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 "*Excavation of existing basement for a new lightwell to the front elevation and alteration to the front fenestration at lower-ground floor level.*"
- 2.6. The Audit Instruction confirmed applicant's property and neighbouring properties are not listed.
- 2.7. CampbellReith accessed LBC's Planning Portal on 28<sup>th</sup> August 2021 and gained access to the following relevant documents for audit purposes:
- Basement Impact Assessment (ref. unknown), dated June 2020, by CH Simple Design;
  - Planning Application Drawings consisting of Location Plan, Existing and Proposed Plans, Existing and Proposed Sections and Elevations dated June 2021 by Auraa Studio.

### 3.0 BASEMENT IMPACT ASSESSMENT AUDIT CHECK LIST

Item	Yes/No/NA	Comment
Are BIA Author(s) credentials satisfactory?	No	See Section 4 of this audit.
Is data required by Cl.233 of the GSD presented?	No	A utility survey is not presented in the BIA
Does the description of the proposed development include all aspects of temporary and permanent works which might impact upon geology, hydrogeology and hydrology?	Yes	Section 2 of the BIA.
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?	No	Section 2.2 of the BIA. Site location to be identified in respect to historic river.
Land Stability Screening: Have appropriate data sources been consulted? Is justification provided for 'No' answers?	Yes	However, the assessment should be reviewed by professional holding qualifications as described in CPG Basements.
Hydrogeology Screening: Have appropriate data sources been consulted? Is justification provided for 'No' answers?	No	Historical water courses to be reviewed. The BIA should estimate a distance of the historic river from the site and assess impacts, if applicable.
Hydrology Screening: Have appropriate data sources been consulted? Is justification provided for 'No' answers?	Yes	However, the assessment should be reviewed by professional holding qualifications as described in CPG Basements.
Is a conceptual model presented?	No	To be confirmed following clarification of Screening queries.

Item	Yes/No/NA	Comment
Land Stability Scoping Provided? Is scoping consistent with screening outcome?	Yes	Question 1 has been answered as 'Yes' but accepted slopes to the rear will not be impacted by the proposals to the front of the property.
Hydrogeology Scoping Provided? Is scoping consistent with screening outcome?	No	As no site specific investigation was undertaken, the presence of groundwater above basement level cannot be excluded. As such Question 1b should be considered in the Scoping.
Hydrology Scoping Provided? Is scoping consistent with screening outcome?	Yes	
Is factual ground investigation data provided?	No	Site specific SI data not provided.
Is monitoring data presented?	No	
Is the ground investigation informed by a desk study?	Yes	Desktop study information is presented in Section 2 and 5 of the BIA.
Has a site walkover been undertaken?	Yes	Section 1.3. of the BIA.
Is the presence/absence of adjacent or nearby basements confirmed?	No	No information is given on neighbouring basements.
Is a geotechnical interpretation presented?	No	
Does the geotechnical interpretation include information on retaining wall design?	No	
Are reports on other investigations required by screening and scoping presented?	Unknown	To be confirmed once queries to Screening and Scoping clarified.
Are the baseline conditions described, based on the GSD?	No	The presence /absence of underground infrastructure to be identified.
Do the base line conditions consider adjacent or nearby basements?	No	The presence /absence of neighbouring basements to be identified.

Item	Yes/No/NA	Comment
Is an Impact Assessment provided?	Yes	Section 6 of the BIA. To be reviewed.
Are estimates of ground movement and structural impact presented?	No	The BIA considers movements to be negligible. However a GMA should be presented to demonstrate this.
Is the Impact Assessment appropriate to the matters identified by screening and scoping?	No	Further review required, as detailed in Section 4.
Has the need for mitigation been considered and are appropriate mitigation methods incorporated in the scheme?	No	Further review required, as detailed in Section 4.
Has the need for monitoring during construction been considered?	No	The need of a monitoring strategy should be informed by the GMA.
Have the residual (after mitigation) impacts been clearly identified?	No	This should be reviewed once issues have been assessed.
Has the scheme demonstrated that the structural stability of the building and neighbouring properties and infrastructure will be maintained?	No	Geotechnical information and a GMA should be presented.
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	As above.
Does report state that damage to surrounding buildings will be no worse than Burland Category 1?	Yes	However, this has not yet been demonstrated.
Are non-technical summaries provided?	No	They should be included in the BIA.

## 4.0 DISCUSSION

- 4.1. The BIA was undertaken by CH Simple Design. Qualifications of the authors are not presented and are required. The BIA should be reviewed by individuals holding the qualifications as specified in CPG: Basements.
- 4.2. The site is currently occupied by a four-storey detached residential property, consisting of several maisonettes. A single storey basement is present underneath the whole footprint of the house along with a lightwell at the front of the property. The proposed works comprise lowering of the existing lightwell to a depth of c. 2.00m bgl and the construction of a new lightwell to the same depth at the front of the property.
- 4.3. The LBC Instruction to proceed with the audit confirmed that both applicant's property and neighbouring properties are not listed. Although not supported by any evidence the BIA states that neighbouring properties have similar basements to the applicant's property.
- 4.4. Screening and Scoping assessments are presented and informed by desktop study information. Most of the relevant figures/maps from the Arup GSD and other guidance documents are referenced within the BIA to support responses to the screening questions.
- 4.5. It is noted that the Screening and Scoping sections should be reviewed by individual holding suitable qualifications as recommended in CPG Basements.
- 4.6. The following Screening responses require clarification:
- As there is no site specific information on groundwater, Question 1b of the subterranean flow Screening should be brought forward to Scoping as groundwater can be potentially present above basement level and any impact assessed.
  - Question 1 of the slope stability Screening has been answered positively and as such should be brought forward to Scoping and any impact assessed. However, it is accepted that the referenced slopes are to the rear of the property and therefore the proposed works to the front of the property will not impact upon them.
- 4.7. The BIA states that an historic, now culverted river may be present nearby the site. A statement indicating an estimation of the distance of the route of the historic river from the site should be included in the report, including an assessment of any potential impacts, if applicable.
- 4.8. The presence or absence of underground infrastructure (transport and utility assets) should be confirmed within the zone of influence of the proposed development.
- 4.9. A site specific ground investigation has not been undertaken, is recommended in the BIA and should be carried out to inform the design and BIA. A ground model has been included in the BIA based

on historic boreholes logs >1km from the site.

- 4.10. The presence of groundwater, especially within any granular Made Ground or superficial deposits, cannot be discounted and the BIA should present mitigation measures to deal with water ingress during the excavation. Considering the limited area of excavation proposed, it is accepted that the proposed development will not cause any adverse impact on the wider hydrogeological environment, subject to review of the Screening responses by an appropriately qualified hydrogeologist.
- 4.11. It is proposed to support the excavation of both the lightwells via the installation of contiguous piled retaining walls. A geotechnical interpretation to inform foundation design based on a site investigation, outline temporary and permanent structural information, and a ground movement assessment (GMA) should be presented in the BIA, in accordance with the GSD Appendix G3. Structural proposals should include pile depths, propping requirements and sequencing information, for example.
- 4.12. The BIA states that considering the methods of construction proposed, the predicted damage to adjacent structure will be limited to Category 1 (Very Slight) in accordance with the Burland Scale. However, this statement is not supported by the required geotechnical information or GMA. A GMA should be presented which should include an estimation of anticipated ground movements due to excavation and retaining wall installation. Any assumptions on wall stiffness and ground strength should be clearly presented in the GMA.
- 4.13. The BIA does not mention the need for structural movement monitoring during construction. This should be reviewed following clarification of the GMA.
- 4.14. The site is at very low risk from flooding from rivers, seas and reservoirs, from groundwater, and at low risk from surface water.
- 4.15. The proposed development will not result in an increase in impermeable site area. However, the site is within a Critical Drainage Area and following review by an appropriately qualified professional, the hydrological assessment and drainage proposals should be confirmed. It is noted that the final drainage scheme will require approval by the local flood authority and the owner of the public sewer system (Thames Water).
- 4.16. The BIA confirms that there are no trees within the gardens of the site which represent a planning constraint and, as such, no trees are proposed to be removed.

## 5.0 CONCLUSIONS

- 5.1. The BIA should be reviewed by individuals holding the qualifications as specified in CPG: Basements.
- 5.2. The proposed works involve excavations to deepen the existing lightwell and form a new lightwell to the front of the property.
- 5.3. The presence or absence of underground infrastructure within the zone of influence of the works should be confirmed.
- 5.4. Some queries are raised in regard to information provided within the Desk Study and the Screening assessment which require further review and clarification, as detailed in Section 4.
- 5.5. A site investigation, geotechnical interpretation and outline temporary and permanent structural information should be presented.
- 5.6. Mitigation measures to deal with the potential water ingress within the excavation should be presented.
- 5.7. A ground movement assessment (GMA) which should be presented.
- 5.8. The BIA does not mention the need for structural movement monitoring during construction. This should be reviewed following clarification of the GMA.
- 5.9. Queries and requests for information are discussed in Section 4 and summarised in Appendix 2. Until the clarifications requested are presented, the BIA does not meet the requirements of Camden Planning Guidance: Basements.

## Appendix 1: Residents' Consultation Comment

None

Appendix 2: Audit Query Tracker

Audit Query Tracker

Query No	Subject	Query	Status	Date closed out
1	BIA format	The BIA should be reviewed by individuals holding the qualifications required by CPG: Basements.	Open – See 4.1.	
2	BIA format	The presence or absence of underground infrastructure within the zone of influence of the works should be confirmed.	Open – See 4.8.	
3	BIA format	Some queries are raised in regard to information provided within the Desk Study and the Screening assessment which require further review and clarification, as detailed in Section 4.	Open – See 4.3, 4.6.	
4	Hydrogeology	Clarification on the distance of the historic river from the site and consequent impact assessment is required.	Open – See 4.7.	
5	Hydrogeology	Mitigation measures to deal with the potential water ingress within the excavation should be presented in the BIA.	Open – See 4.6, 4.7, 4.15	
6	Land Stability	A site investigation, geotechnical interpretation, and outline temporary and permanent structural information should be presented.	Open – See 4.9, 4.11.	
7	Land stability	A GMA should be presented in the BIA.	Open – See 4.12.	
8	Land Stability	The requirement for structural monitoring should be reviewed.	Open – See 4.13.	

## Appendix 3: Supplementary Supporting Documents

None

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