

**Basement Impact
Assessment Audit**

10 Abbot's Place, London
NW6 4NP

For
London Borough of Camden

Project No.
14006-70

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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 10 Abbot's Place, London NW6 4NP (planning reference 2024/0458/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 carried out by Qaim Structures Ltd. Evidence of the authors' qualifications do not comply with CPG Basements.
- 1.5 It is proposed to construct a single level basement below the entire footprint of the site using underpinning techniques. Additional excavation beyond the building along the southern side will be undertaken to form a lightwell.
- 1.6 The BIA suggests that the proposed basement foundations will be within the London Clay Formation. Confirmation of the basement depth is required and should be clearly shown on the plans and drawings.
- 1.7 Screening and scoping exercises have been presented, informed by desk study information. Some screening questions are missing or require further consideration. The most recent version of CPG Basements (2021) should be consulted.
- 1.8 The BIA states the groundwater table will not be encountered during basement foundation excavation however, further consideration of the groundwater regime, with reference to the ground investigation, is requested.
- 1.9 The site is not in an area subject to surface water flooding although there is elevated risk of sewer flooding in the area. Details of the proposed SuDS measures to be used is requested. Consideration of the site's location in a Critical Drainage Area should be included in the hydrology assessment.
- 1.10 A geotechnical interpretation of the ground conditions and soil parameters should be provided.
- 1.11 Outline structural calculations should be provided and the construction sequence should be presented consistently.
- 1.12 The BIA includes a Ground Movement and Damage Impact Assessment. However, further information should be provided to support these assessments and justify the conclusions.
- 1.13 Non-technical summaries should be provided.
- 1.14 It cannot be confirmed that the BIA complies with the requirements of CPG: Basements until the queries raised in Section 4 and Appendix 2 are addressed.

2.0 INTRODUCTION

2.1 CampbellReith was instructed by London Borough of Camden (LBC) on 12th April 2024 to carry out a Category B audit on the Basement Impact Assessment (BIA) submitted as part of the Planning Submission documentation for 10 Abbot's Place, North Maida Vale, London, NW6 4NP, planning reference 2024/0458/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.
- Kilburn Neighbourhood Plan.

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 "Erection of a basement extension, single storey side and infill extension, and roof extension. Various associated alterations including fenestration changes, relocation of entrance door to front façade, and alteration of existing boundary wall."

2.6 The Audit Instruction confirmed 10 Abbot's Place is not involved with, or neighbour to, listed buildings.

2.7 CampbellReith accessed LBC's Planning Portal on 30th April 2024 and gained access to the following relevant documents for audit purposes:

- Basement Impact Assessment (BIA) by Qaim Structures Ltd, Ref. 0675, Rev -, dated 17th January 2024.
- Planning Application Drawings by Rees Architects consisting of:

- Existing & proposed location and site plan, drawing no. AL(00)00, Rev. -, dated January 2024.
- Existing sections AA' and BB', drawing nos. AL(00)08 and AL(00)09, Rev. -, dated February 2024.
- Proposed sections AA' and BB', drawing nos. AL(03)01 and AL(03)02, Rev. -, dated February 2024.
- Proposed basement floor plan, drawing no. AL(01)01, Rev. – dated February 2024.

3.0 BASEMENT IMPACT ASSESSMENT AUDIT CHECK LIST

Item	Yes/No/NA	Comment
Are BIA Author(s) credentials satisfactory?	No	Qualifications of the authors do not comply with the requirements of CPG Basements.
Is data required by Cl.233 of the GSD presented?	No	Outline structural calculations are requested.
Does the description of the proposed development include all aspects of temporary and permanent works which might impact upon geology, hydrogeology and hydrology?	No	Basement depth not given and construction sequence should be presented consistently.
Are suitable plan/maps included?	Yes	BIA Section 2.7 and Appendix D.
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	BIA Section 3.2 – to be updated to reflect current CPG Basements 2021.
Hydrogeology Screening: Have appropriate data sources been consulted? Is justification provided for 'No' answers?	No	BIA Section 3.1 – to be updated to reflect current CPG Basements 2021.
Hydrology Screening: Have appropriate data sources been consulted? Is justification provided for 'No' answers?	No	BIA Section 3.3 – to be updated to reflect current CPG Basements 2021.
Is a conceptual model presented?	Yes	BIA Site investigation section.
Land Stability Scoping Provided? Is scoping consistent with screening outcome?	Yes	BIA Section 4.2 - Requires revision.

Item	Yes/No/NA	Comment
Hydrogeology Scoping Provided? Is scoping consistent with screening outcome?	Yes	BIA Section 4.1 - Requires revision.
Hydrology Scoping Provided? Is scoping consistent with screening outcome?	Yes	BIA Section 4.3 - Requires revision.
Is factual ground investigation data provided?	Yes	BIA Appendix C.
Is monitoring data presented?	No	
Is the ground investigation informed by a desk study?	Yes	BIA Appendix B.
Has a site walkover been undertaken?	Yes	
Is the presence/absence of adjacent or nearby basements confirmed?	No	
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?	No	SuDS identified but no details provided.
Are the baseline conditions described, based on the GSD?	No	
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	However further supporting information is requested.

Item	Yes/No/NA	Comment
Is the Impact Assessment appropriate to the matters identified by screening and scoping?	No	BIA section 6.3 - Additional information is required.
Has the need for mitigation been considered and are appropriate mitigation methods incorporated in the scheme?	Yes	However, further consideration is required once the screening and scoping assessments have been updated.
Has the need for monitoring during construction been considered?	Yes	
Have the residual (after mitigation) impacts been clearly identified?	No	Further consideration should be given to the impacts and mitigation required.
Has the scheme demonstrated that the structural stability of the building and neighbouring properties and infrastructure will be maintained?	No	No justification provided to support the 'negligible damage' conclusion.
Has the scheme avoided adversely affecting drainage and run-off or causing other damage to the water environment?	Unknown	Further consideration should be given to the groundwater regime and SuDS measures to be used.
Has the scheme avoided cumulative impacts upon structural stability or the water environment in the local area?	No	
Does report state that damage to surrounding buildings will be no worse than Burland Category 1?	No	
Are non-technical summaries provided?	No	

4.0 DISCUSSION

- 4.1 The Basement Impact Assessment (BIA) has been carried out by engineering consultants Qaim Structures Ltd. The authors' qualifications do not comply with the requirements of CPG Basements.
- 4.2 The LBC Instruction to proceed with the audit identified that the basement proposal does not include, and is not adjacent to, any listed buildings. The BIA confirms 10 Abbot's Place is in the Priory Conservation Area.
- 4.3 Proposals involve the construction of new single storey basement under the full footprint of the existing structure and a new lightwell extending to the southern site boundary wall.
- 4.4 The basement depth has not been stated. Drawing SK-105 in appendix A of the BIA suggests a maximum excavation depth of c.3.50m, however it also states 'basement head height to be confirmed by architect'. Confirmation of the basement depth is required and should be clearly shown on the plans and drawings.
- 4.5 The BIA includes screening and scoping assessments in Sections 3 and 4 respectively, that have been informed by a desk study and site-specific ground investigation. The screening questions do not reflect those given in the current CPG Basement 2021 and require revision.
- 4.6 The Ground Investigation Report (GIR), presented in Appendix C of the BIA, identified that the ground conditions comprise Made Ground to 0.70m below ground level (bgl), overlying London Clay to the maximum depth of investigation of 8.00m bgl.
- 4.7 Groundwater flow (hydrogeology) screening question 4 is answered 'No', however, the BIA indicates the development will result in an increase in soft landscaping and a reduction in the external hardstanding areas. This will increase the amount of surface water discharged into the ground. Further consideration of this screening question in line with the guidance given in Section 4 of CPG Basements is requested.
- 4.8 The hydrogeology screening confirms the site is not located directly above an aquifer; it is underlain by the London Clay Formation, which is a designated Unproductive Stratum. On this basis, the hydrogeology screening states the basement will not extend below the ground water table. However, groundwater seepage is reported in the ground investigation data, associated with a claystone layer at 3.2m depth in BH2. A standpipe was installed in BH1 however, no groundwater monitoring data has been provided. Further consideration of the groundwater regime at the site is required.
- 4.9 The hydrology screening suggests the proposed hardstanding areas will be less than existing and the drainage strategy will reduce surface water run-off. The BIA states SuDS management should be included in the scheme although details of the proposed SuDS strategy have not been provided and are requested. Consideration of the site's location within a Critical Drainage Area should also be provided.

- 4.10 Slope stability screening question 5 is answered 'No', however this contradicts the finding of the ground investigation, where the London Clay Formation was found to be the shallowest stratum at the site. Further consideration of this screening question in line with the guidance given in Section 4 of CPG Basements is requested.
- 4.11 Slope stability screening question 12 is answered 'No', however no information relating to the foundations of neighbouring buildings is provided to support this. The BIA states the proposed basement is at a 'good distance' from the neighbouring properties (4.15m and 7.34m). The definitions given in the BIA Audit Terms of Reference identify "Neighbouring Structures/Directly Affected Neighbours" to be structures within 6m of the basement boundary, which may extend up to four times the basement excavation depth. Further consideration of this screening question in line with the guidance given in Section 4 of CPG Basements is requested.
- 4.12 The BIA includes a topographic survey drawing that shows the site is in a level area with slope angles $<7^\circ$.
- 4.13 The ground investigation identified high volume change potential soil is present beneath the site. The BIA states that no evidence of shrink swell subsidence was noted during the site walkover.
- 4.14 Four trees to be retained have been surveyed comprising a tree in the northern area of site, and three street trees in the pavement along Abbot's Place. An arboricultural report has been prepared that concludes there will be negligible impact to the trees providing the tree protection plan is followed.
- 4.15 The GIR does not include any geotechnical properties for the soils encountered and no engineering interpretation is provided. These are requested.
- 4.16 Section 5 of the BIA includes basement design and construction information. The proposed basement will be constructed using reinforced concrete underpinning in a hit and miss sequence. The ground floor slab will provide lateral support to the top edge of the basement retaining walls. Outline structural calculations should be provided and basement dimensions clearly presented.
- 4.17 The BIA states propping in the temporary condition is required during basement construction. The BIA outlines the sequence of works in 5 stages and makes reference to a series of drawings in Appendix A, however, the stage numbers described in the BIA text do not match the stages shown on the drawings in Appendix A. Further clarification is requested.
- 4.18 The BIA suggests dewatering of excavations is not required however this should be reviewed in line with the hydrogeological assessment.
- 4.19 Section 6.3 of the BIA presents a brief Ground Movement and Damage Impact Assessment. It states that temporary propping will be provided to limit deflection to 5mm, and states 'Based on our experience, there will be minimum movement if the works has been carried out carefully with sequencing'. In accordance with the requirements of CPG for Basements, the following further information is required to support this conclusion:

- Confirmation of how the prediction of ground movement (both horizontal and vertical) and structural impact has been carried out along with suitable justification for the conclusions;
 - Where the BIA identifies a risk of damage to properties this should be described using the Burland Scale;
 - As the proposed basement is within 5m of a highway, an assessment of the impact to the highway and any utilities therein should be included.
- 4.20 The BIA recommends a movement monitoring strategy during excavation and construction is implemented to ensure structural movements remain within acceptable limits. Trigger limits should be agreed as part of the party wall negotiations.
- 4.21 Non-technical summaries should be provided.

5.0 CONCLUSIONS

- 5.1 The BIA has been carried out by Qaim Structures Ltd. Evidence of the authors' qualifications do not comply with CPG Basements.
- 5.2 It is proposed to construct a single level basement below the entire footprint of the site using underpinning techniques. Additional excavation beyond the building along the southern side will be undertaken to form a lightwell.
- 5.3 The BIA suggests that the proposed basement foundations will be within the London Clay Formation. Confirmation of the basement depth is required and should be clearly shown on the plans and drawings.
- 5.4 Screening and scoping exercises have been presented, informed by desk study information. Some screening questions are missing or require further consideration. The most recent version of CPG Basements (2021) should be consulted.
- 5.5 The BIA states the groundwater table will not be encountered during basement foundation excavation however, further consideration of the groundwater regime, with reference to the ground investigation, is requested.
- 5.6 The site is not in an area subject to surface water flooding although there is elevated risk of sewer flooding in the area. Details of the proposed SuDS measures to be used is requested. Consideration of the site's location in a Critical Drainage Area should be included in the hydrology assessment.
- 5.7 A geotechnical interpretation of the ground conditions and soil parameters should be provided.
- 5.8 Outline structural calculations should be provided and the construction sequence should be presented consistently.
- 5.9 The BIA includes a Ground Movement and Damage Impact Assessment. However, further information should be provided to support these assessments and justify the conclusions.
- 5.10 Non-technical summaries should be provided.
- 5.11 It cannot be confirmed that the BIA complies with the requirements of CPG: Basements until the queries raised in Section 4 and Appendix 2 are addressed.

Appendix 1

Consultation Responses

None

Basement Impact Assessment Audit
10 Abbot's Place, London NW6 4NP

CampbellReith
consulting engineers

Appendix 2

Audit Query Tracker

Audit Query Tracker

Query No	Subject	Query	Status	Date closed out
1	Author credentials	The BIA authors should hold appropriate qualifications in accordance with CPG Basements.	Open – See 4.1	
2	Screening	Screening should be updated to the most recent questions, as presented in CPG Basements 2021, and given further consideration as discussed in Section 4 of this audit.	Open – See 4.5, 4.7, 4.10, 4.11	
3	Hydrogeology	Confirmation of groundwater regime is required.	Open – See 4.8	
4	Hydrology	Details of the proposed SuDS is requested.	Open – See 4.9	
5	Land stability	Geotechnical interpretation and soil parameters for should be provided.	Open – See 4.15	
6	Land stability	Outline structural calculations are requested and the construction methodology should be presented consistently.	Open – See 4.16	
7	Impact assessment	Further information should be provided to support the conclusions relating to ground movement impacts.	Open – See 4.19	
8	BIA	Non-technical summaries should be provided.	Open – See 4.21	

Appendix 3

Supplementary Supporting Documents

None

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