

Basement Impact
Assessment Audit

Moreton Lodge, Holly Walk,
London NW3 6RA

For
London Borough of Camden

Project No.
14291-04

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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 Moreton Lodge, Holly Walk, London NW3 6RA (planning reference 2024/4333/P & 2024/4345/L). 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 BIA authors' qualifications comply with CPG.
- 1.5 The new replacement extension is slightly larger than existing will have a partial basement foundation level of 0.50m bgl. The outer perimeter will retain approximately 1.20m of soil due to the sloped setting.
- 1.6 The proposed raft foundation is above the foundation level of Moreton House, a Grade II listed building.
- 1.7 The BIA shows the proposed basement will likely be founded within the Bagshot Formation although a site-specific ground investigation is recommended to verify the ground conditions and inform foundation design.
- 1.8 It is unlikely that the ground water table will be encountered during basement foundation excavation given the shallow depth, local groundwater records and adjoining (deeper) structure.
- 1.9 It is accepted that the development will have negligible impact to slope stability.
- 1.10 It is accepted that the development will not impact on the wider hydrogeology of the area and is not in an area subject to flooding.
- 1.11 There will be no significant impact to the hydrological setting of the area, subject to adoption of appropriate SuDS. This should be confirmed by the LLFA.
- 1.12 The BIA recommends movement monitoring to ensure there is no impact to the Morton House.
- 1.13 It is confirmed that the BIA complies with the requirements of CPG: Basements and the Principles for Audit set out in the Basement Impact Assessment (BIA) Audit Service Terms of Reference & Audit Process.

2.0 INTRODUCTION

2.1 CampbellReith was instructed by London Borough of Camden (LBC) on 8th October 2024 to carry out a Category A audit on the Basement Impact Assessment (BIA) submitted as part of the Planning Submission documentation for Moreton Lodge, Holly Walk London NW3 6RA and planning reference 2024/4333/P & 2024/4345/L.

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.
- Hampstead 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 "*Demolition of existing modern two-storey rear extension and erection of replacement two-storey rear extension.*"

2.6 The Audit Instruction confirmed Moreton Lodge, Holly Walk is involved, or was a neighbour to, listed buildings.

2.7 CampbellReith accessed LBC's Planning Portal on 19th November 2024 and gained access to the following relevant documents for audit purposes:

- Basement Impact Assessment Report (BIA) by Jomas Associates Ltd, ref. P6129J3078/JRO, rev. -, dated 19th September 2024.
- Structural Planning Report by Harrison Shortt Structural Engineers Ltd, ref. 3139_Report 01_C, rev. -, dated 20th June 2024.

- Design and Access Statement by Charlton Brown Architecture & Interiors, ref. -, rev. -, dated June 2024.
- Planning Application Drawings by Charlton Brown Architecture & Interiors, ref. 23026, rev. -, dated 12th June 2024, consisting of:
 - Existing Lower and upper floors, drawing no. 2.
 - Existing Section AA, drawing no. 7.
 - Proposed Lower and upper floors, drawing no. 8.
 - Proposed Section AA, drawing no. 13.

3.0 BASEMENT IMPACT ASSESSMENT AUDIT CHECK LIST

Item	Yes/No/NA	Comment
Are BIA Author(s) credentials satisfactory?	Yes	BIA page i
Is data required by Cl.233 of the GSD presented?	Yes	
Does the description of the proposed development include all aspects of temporary and permanent works which might impact upon geology, hydrogeology and hydrology?	Yes	
Are suitable plan/maps included?	Yes	BIA appendices
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?	Yes	BIA section 5.1
Hydrogeology Screening: Have appropriate data sources been consulted? Is justification provided for 'No' answers?	Yes	BIA section 5.1
Hydrology Screening: Have appropriate data sources been consulted? Is justification provided for 'No' answers?	Yes	BIA section 5.1
Is a conceptual model presented?	Yes	
Land Stability Scoping Provided? Is scoping consistent with screening outcome?	Yes	BIA section 5.2
Hydrogeology Scoping Provided? Is scoping consistent with screening outcome?	Yes	BIA section 5.2

Item	Yes/No/NA	Comment
Hydrology Scoping Provided? Is scoping consistent with screening outcome?	Yes	BIA section 5.2
Is factual ground investigation data provided?	N/A	
Is monitoring data presented?	N/A	
Is the ground investigation informed by a desk study?	N/A	
Has a site walkover been undertaken?	Yes	
Is the presence/absence of adjacent or nearby basements confirmed?	Yes	
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?	N/A	
Are the baseline conditions described, based on the GSD?	Yes	
Do the baseline conditions consider adjacent or nearby basements?	Yes	
Is an Impact Assessment provided?	Yes	BIA section 6.0
Are estimates of ground movement and structural impact presented?	N/A	Not considered necessary
Is the Impact Assessment appropriate to the matters identified by screening and scoping?	Yes	BIA section 6.0

Item	Yes/No/NA	Comment
Has the need for mitigation been considered and are appropriate mitigation methods incorporated in the scheme?	Yes	BIA section 6.0
Has the need for monitoring during construction been considered?	Yes	BIA section 6.5.4
Have the residual (after mitigation) impacts been clearly identified?	Yes	BIA section 6.0
Has the scheme demonstrated that the structural stability of the building and neighbouring properties and infrastructure will be maintained?	Yes	BIA section 6.5
Has the scheme avoided adversely affecting drainage and run-off or causing other damage to the water environment?	Yes	BIA section 6.4
Has the scheme avoided cumulative impacts upon structural stability or the water environment in the local area?	Yes	BIA section 6.6
Does report state that damage to surrounding buildings will be no worse than Burland Category 1?	No	Whilst no GMA has been undertaken, the assessment is appropriate to the scale of development.
Are non-technical summaries provided?	Yes	BIA pages 4 to 6

4.0 DISCUSSION

- 4.1 The Basement Impact Assessment (BIA) has been carried out by engineering consultants Jomas Associates Ltd and the qualifications of individuals concerned in its production comply with CPG.
- 4.2 The Structural Planning Report (SSR) has similarly been carried out by Harrison Shortt Engineers Ltd. The report has been completed by a chartered structural engineer.
- 4.3 The LBC Instruction to proceed with the audit identified that the basement proposal involves Moreton House, a Grade II listed building. The Design & Access Statement identified that the Moreton Lodge property is in the Hampstead Conservation Area.
- 4.4 The proposals involve the demolition of existing modern two-storey extension and construction of a new two-storey extension, with a lower ground floor level approximately 0.50m below ground level. The BIA states the new Finished Floor Level (FFL) is c.0.25m below the existing extension FFL, and 0.35m above the adjoining main house foundations, although plans of foundation details of the adjacent structure are not included.
- 4.5 Utility plans have not been provided as per the scope of engineering services. The potential impact to third party assets should be considered prior to construction.
- 4.6 The BIA has been informed by a desk study although it recommends a site-specific ground investigation is undertaken to confirm the ground conditions for foundation design prior to construction.
- 4.7 The desk study reviews BGS data and indicates that the Bagshot Formation is mapped beneath site. Groundwater was recorded at c.9m depth in a historical borehole 160m southeast of site although; this depth may not be accurate for Moreton Lodge given the distance. However, it is noted that the existing adjacent structure is deeper than the proposed structure and therefore the proposed structure is unlikely to impact groundwater flow if present at shallow depth.
- 4.8 A screening and scoping assessment is included in the BIA. The Subterranean (Groundwater) Flow screening identifies the site is underlain by the Bagshot Formation, a Secondary A Aquifer. This is brought forward to scoping because the basement could extend below the water table although, it is noted as highly unlikely given the proposed foundation depth is c.0.50m bgl. The BIA states a ground investigation should be undertaken to confirm the relative depth of the basement to the groundwater level, prior to construction.
- 4.9 Groundwater screening indicates there is a watercourse mapped 60m west of the site; however, given the scale of the development, no impact is anticipated to groundwater flow.
- 4.10 The proposed structural footprint is slightly larger than existing reducing the permeable area at the site. Slightly less surface water will be discharged into the ground.
- 4.11 Stability screening identifies Moreton Lodge is located on a hillside setting sloping down towards the south with gradients $>7^\circ$.

- 4.12 The BIA states the site is reported to be in area at negligible risk from shrink-swell clays and no evidence of structural distress caused by seasonal shrink/ swell was noted during the external walkover. The BIA recommends an assessment of soil volume change potential is included with the ground investigation, prior to construction.
- 4.13 The Surface Flow and Flooding screening identifies the proposed development will result in a change in the proportion of hard surfaced/ paved external areas. There will be no significant impact to the hydrological setting of the area, subject to adoption of appropriate SuDS. This should be confirmed by the LLFA.
- 4.14 The site is in a local Critical Drainage Area (CDA). Flood resilience measures are recommended in the BIA. The BIA reviews the Camden Strategic Flood Risk Assessment (SFRA) and considers the site to be at very low risk of flooding.
- 4.15 The structural report confirms the extension will be a two storey timber frame structure on a shallow raft foundation and outlines the construction sequence. Given the sloped setting, the extension perimeter will be retaining 1.20m of ground at its deepest point and will utilise reinforced concrete or masonry.
- 4.16 The structural report conclusions are as follows:
- The new building will be founded at a similar level to the existing extension and above the original building and therefore presents minimal risk to the listed structure.
 - The site allows for an open excavation that will allow for safe construction of the extension with lowered floor.
- 4.17 The BIA considers a Ground Movement Assessment (GMA) is unnecessary given the depth of excavation. However, unavoidable lateral ground movements associated with the excavations must be controlled during temporary and permanent works so as not to impact the listed building. The BIA recommends suitably designed temporary support (propping) and movement monitoring as mitigation measures.

5.0 CONCLUSIONS

- 5.1 The BIA authors' qualifications comply with CPG basements.
- 5.2 The BIA has been informed by a desk study.
- 5.3 It is accepted that the proposed development will have a negligible impact on slope stability, groundwater flow, surface water flow or the neighbouring structure.
- 5.4 Appropriate SuDS design should be confirmed by the LLFA.
- 5.5 The BIA recommends movement monitoring during excavation and construction to ensure there is no impact to Morton House.
- 5.6 It is confirmed that the BIA complies with the requirements of CPG: Basements and the Principles for Audit set out in the Basement Impact Assessment (BIA) Audit Service Terms of Reference & Audit Process.

Appendix 1

Consultation Responses

None

Appendix 2

Audit Query Tracker

None

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Appendix 3

Supplementary Supporting Documents

None

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