

28 Avenue Road
London NW1 3ER

Basement Impact Assessment
Audit

For
London Borough of Camden

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Campbell Reith Hill LLP
15 Bermondsey Square
London
SE1 3UN

T: +44 (0)20 7340 1700
E: london@campbellreith.com
W: www.campbellreith.com

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Author	H Pham
Project Partner	E M Brown, BSc MSc CGeol FGS
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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 28 Avenue Road, London NW8 6BU (planning reference 2021/1358/P). 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 provided with the BIA and supporting information by LBC's planning department and reviewed it against an agreed audit checklist. The BIA and supporting drawings are available on Camden's website.
- 1.4. The Basement Impact Assessment (BIA), has been carried out by Geotechnical and Environmental Associates Ltd (GEA) and the authors have the qualifications required by LBC.
- 1.5. The BIA is based on desk study information followed by a site specific intrusive ground investigation which, considering the proposals, is adequate for impact assessment.
- 1.6. The proposal includes for a single level of basement to 4.00m below ground level plus local deepening for a swimming pool to 5.50m below ground level. The basement will be founded within the London Clay.
- 1.7. It is noted that there are no neighbouring properties within 28m of the site and the proposed excavation will not impact existing nearby structures.
- 1.8. The proposed development is in Flood Zone 1 and is considered as being at low risk of fluvial flooding. Although the proposed development will increase the total impermeable area on site, surface water runoff to the public sewer will be limited to an acceptable level by attenuation SUDS. This is subject to approval by the authority and Thames Water.
- 1.9. The BIA states that groundwater monitoring should be continued and trial excavations should be considered to assess the extent of inflows within the proposed basement excavations. However, given the underlying soils are of very low permeability and are not designated as an aquifer, it is accepted there will be no impacts to the wider hydrogeological environment.
- 1.10. Outline geotechnical parameters for basement retaining walls and foundation design are provided.
- 1.11. The BIA meets the requirements of Camden's Planning Guidance with respect to basements.

2.0 INTRODUCTION

2.1. CampbellReith was instructed by London Borough of Camden (LBC) on 14 May 2021 to carry out a Category A audit on the Basement Impact Assessment (BIA) submitted as part of the Planning Submission documentation for 28 Avenue Road, London NW8 6BU, planning reference 2021/1358/P.

2.2. The audit was carried out in accordance with the Terms of Reference set by LBC. It reviewed the BIA 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. January 2021.
- 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.

LBC's Audit Instruction described the planning proposal as *"Erection of a two-storey plus basement and mansard dwelling with outbuildings, vehicular access, parking, landscaping and associated works."*

2.5. CampbellReith downloaded the following information from the planning website for the purposes of the audit:

- Planning Statement prepared by hgh Consulting, dated March 2021.
- Desk Study & Ground Investigation Report, reference J20060, prepared by GEA, dated March 2021. A Basement Impact Assessment is included in this report.
- Design and Access Statement, prepared by Spence Harris Hogan Limited (SHH), dated March 2021.
- An existing site plan, proposed plans and sections rev P03, prepared by SHH, project number 860, dated 09 March 2021.

- Flood Risk Assessment and Surface Water Drainage Strategy, prepared by Ambient Environmental Assessment Ltd, dated March 2020.
- Arboricultural Impact Assessment, prepared by Landmark Trees Ltd, dated March 2021.

3.0 BASEMENT IMPACT ASSESSMENT AUDIT CHECK LIST

Item	Yes/No/NA	Comment
Are BIA Author(s) credentials satisfactory?	Yes	
Is data required by Cl.233 of the GSD presented?	Yes	Information broadly in compliance with GSD.
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	
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	In the answer to question 6, it states that no tree will felled as part of the proposed development, although the arboricultural report does indicate some trees to be felled. However, it is accepted that those trees to be felled to facilitate basement excavation are at a significant distance from the nearest neighbouring structures and will not impact them.
Hydrogeology Screening: Have appropriate data sources been consulted? Is justification provided for 'No' answers?	Yes	
Hydrology Screening: Have appropriate data sources been consulted? Is justification provided for 'No' answers?	Yes	There is an increase to impermeable area. SUDS attenuation is proposed to reduce the impact on the sewers to acceptable levels.
Is a conceptual model presented?	Yes	

Item	Yes/No/NA	Comment
Land Stability Scoping Provided? Is scoping consistent with screening outcome?	No	See comments on the Land Stability Screening.
Hydrogeology Scoping Provided? Is scoping consistent with screening outcome?	Yes	See Section 4 of Part 1 of the BIA Report.
Hydrology Scoping Provided? Is scoping consistent with screening outcome?	Yes	See Section 4 of Part 1 of the BIA Report.
Is factual ground investigation data provided?	Yes	See Section 4 of Part 1 of the BIA Report.
Is monitoring data presented?	No	The BIA report states only one monitoring visit has been undertaken and the borehole was dry. No date of visit is provided. It is stated in the report that groundwater monitoring should be continued.
Is the ground investigation informed by a desk study?	Yes	
Has a site walkover been undertaken?	Yes	
Is the presence/absence of adjacent or nearby basements confirmed?	No	It is noted in the BIA that the depth of adjacent foundations is unknown. Given the distance to the nearest structures, it is accepted that there will be no cumulative impacts.
Is a geotechnical interpretation presented?	Yes	See Part 2 of the BIA Report.
Does the geotechnical interpretation include information on retaining wall design?	Yes	See Section 8.1.1 of Part 2 of the BIA Report.
Are reports on other investigations required by screening and scoping presented?	Yes	Arboricultural; drainage strategy.
Are the baseline conditions described, based on the GSD?	Yes	

Item	Yes/No/NA	Comment
Do the base line conditions consider adjacent or nearby basements?	Yes	It is noted in the BIA that the closest structures to the basement are located 28m to the south, which is unlikely to be affected by the construction basement.
Is an Impact Assessment provided?	Yes	See Part 3 of the BIA Report.
Are estimates of ground movement and structural impact presented?	Yes	Although no result of the ground movement, the likely impact on adjacent structures is discussed in Section 8.8 of Part 3 of the BIA Report.
Is the Impact Assessment appropriate to the matters identified by screen and scoping?	Yes	
Has the need for mitigation been considered and are appropriate mitigation methods incorporated in the scheme?	Yes	Attenuation SUDS.
Has the need for monitoring during construction been considered?	No	This is generally recommended but the proposed development is beyond the likely zone of influence of ground movements to the nearest structures.
Have the residual (after mitigation) impacts been clearly identified?	Yes	
Has the scheme demonstrated that the structural stability of the building and neighbouring properties and infrastructure will be maintained?	Yes	
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?	Yes	

Item	Yes/No/NA	Comment
Does report state that damage to surrounding buildings will be no worse than Burland Category 1?	Yes	It is noted in the BIA that the closest structures to the basement are located 28m to the south, which is unlikely to be affected by the construction basement.
Are non-technical summaries provided?	Yes	

4.0 DISCUSSION

- 4.1. The Basement Impact Assessment (BIA) has been carried out by GEA Ltd and the qualifications of the authors are in accordance with the requirements of LB Camden's Planning Guidance.
- 4.2. The proposal includes for a single level of basement to 4.00m below ground level plus local deepening for a swimming pool to 5.50m below ground level.
- 4.3. The BIA is based on desk study information followed by a site specific intrusive ground investigation, which indicates the site is underlain by Made Ground to depths of between 0.7m and 1.0m over London Clay.
- 4.4. The basement will be founded within the London Clay. Outline geotechnical parameters for basement retaining walls and foundation design are provided.
- 4.5. It is reported that groundwater was not encountered during the ground investigation. A standpipe installed in one of the boreholes was found to be dry during a single subsequent monitoring visit. However, a well located on site was found to have a standing water of 0.83m below ground level.
- 4.6. The BIA states that groundwater monitoring should be continued and trial excavations should be considered to assess the extent of inflows within the proposed basement excavations. However, given the underlying soils are of very low permeability and are not designated as an aquifer, it is accepted there will be no impacts to the wider hydrogeological environment.
- 4.7. With respect to surface water, the BIA notes that there will be an increase to the extent of impermeable areas and that surface water flows off site will be mitigated to an acceptable level by the use of attenuation SUDS, subject to approval by the local authority and Thames Water. There will be no impact to the wider hydrological environment.
- 4.8. The proposed development is in Flood Zone 1 and is considered as being at low risk of fluvial flooding. Flood risk will be further mitigated by the proposed attenuation SUDS to be adopted and the use of non-return valves, basement waterproofing, etc.
- 4.9. With respect to stability, as the proposed basement is remote from other basements and existing structures (with the closest structure indicated to be 28m away), it is accepted that, subject to adequate temporary works, the proposed development will have no adverse impact on the stability and condition of nearby structures.
- 4.10. The land stability screening states that no tree is to be felled as part of the proposed development, but the existing / proposed site plans and arboricultural report indicate that there

are trees to be removed. However, it is accepted that those trees to be felled to facilitate basement excavation are at a significant distance from the nearest neighbouring structures and will not impact them.

5.0 CONCLUSIONS

- 5.1. The BIA authors have the qualifications required by LBC.
- 5.2. The BIA is based on desk study information followed by a site specific intrusive ground investigation which, considering the proposals, is adequate for impact assessment.
- 5.3. Outline geotechnical parameters for basement retaining walls and foundation design is provided.
- 5.4. The BIA states that there are no neighbouring properties within 28m of the site. It is accepted that the proposed excavation will not impact existing nearby structures.
- 5.5. There will be an increase to the extent of impermeable areas, to be mitigated by the use of attenuation SUDS, subject to approval by the local authority and Thames Water. There will be no impact to the wider hydrological environment.
- 5.6. There will be no impacts to the wider hydrogeological environment.
- 5.7. The BIA meets the requirements of Camden's Planning Guidance with respect to basements.

Appendix 1: Residents' Consultation Comments

Residents' Consultation Comments

Surname	Address	Date	Issue raised	Response
Ganendra	-	22/04/2021	Effects of basement excavation on the stability of the adjoining properties.	Section 4 – no stability impacts likely given proximity of neighbouring properties.

Appendix 2: Audit Query Tracker

None

Appendix 3: Supplementary Supporting Documents

None

London

15 Bermondsey Square
London
SE1 3UN

T: +44 (0)20 7340 1700
E: london@campbellreith.com

Birmingham

Chantry House
High Street, Coleshill
Birmingham B46 3BP

T: +44 (0)1675 467 484
E: birmingham@campbellreith.com

Surrey

Raven House
29 Linkfield Lane, Redhill
Surrey RH1 1SS

T: +44 (0)1737 784 500
E: surrey@campbellreith.com

Manchester

No. 1 Marsden Street
Manchester
M2 1HW

T: +44 (0)161 819 3060
E: manchester@campbellreith.com

Bristol

Wessex House
Pixash Lane, Keynsham
Bristol BS31 1TP

T: +44 (0)117 916 1066
E: bristol@campbellreith.com

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A list of Members is available at our Registered Office at: 15 Bermondsey Square, London, SE1 3UN
VAT No 974 8892 43