

26 Rosecroft Avenue
London, NW3 7QB

Basement Impact Assessment
Audit

For
London Borough of Camden

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March 2016

Campbell Reith Hill LLP
Friars Bridge Court
41-45 Blackfriars Road
London
SE1 8NZ

T: +44 (0)20 7340 1700
F: +44 (0)20 7340 1777
E: london@campbellreith.com
W: www.campbellreith.com

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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 26 Rosecroft Avenue, London NW3 7QB (planning reference 2016/0231/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 and GMA have been prepared by Geotechnical and Environmental Associates. The qualifications of the authors meet the LBC requirements.
- 1.5. The proposed development is the enlargement of an existing lower ground floor to be present under the majority of the current buildings footprint, with new lightwells to the front and rear.
- 1.6. The BIA states that the proposed basement will be founded in the interbedded sands and clays of the Bagshot Formation with FFL at 2.80m below existing ground floor level (so an assumed depth of excavation of approximately 3.20m including for a nominal 400mm basement floor slab).
- 1.7. The BIA and GMA assume retaining walls and foundations to be formed by mass concrete underpinning methods. However, there is no structural methodology statement or contractor's method statement presented that confirms this is the intention. The BIA includes an outline assessment of underpinned and piled foundation solution options and likely bearing capacities of the Bagshot Formation. The structural information should be detailed and confirmed, including construction sequence, temporary works requirements and recommendations for contractors.
- 1.8. The ground investigation and subsequent groundwater monitoring indicates the groundwater level to be at approximately 4m below existing ground level. The proposed basement excavation should not encounter groundwater other than minor seepages. However, the monitoring has only been carried out over a period of 1 month. The potential for groundwater issues should be clearly addressed in a structural methodology statement and confirmed by either longer term monitoring and/or by the contractor in advance of excavation.

- 1.9. It is accepted that there are no hydrogeological or hydrological concerns with respect to the development proposals impacting the surrounding area.
- 1.10. The GMA indicates that in general there will be Negligible (Category 0) and Very Slight (Category 1) impact on 26 Rosecroft Avenue and surrounding structures. Table 6.1 of the GMA indicates that wall F (at the rear of 26 Rosecroft Avenue) will suffer Slight Impact (Category 2), but this should be confirmed based on the confirmed structural methodology. The GMA confirms there are no records of basements existing at any of the immediately adjacent properties.
- 1.11. Queries and matters requiring further information or clarification are summarised in Appendix 2.
- 1.12. Until the missing information is provided, it is not possible to conclude that the criteria contained in CPG4 and DP27 have been met.

2.0 INTRODUCTION

- 2.1. CampbellReith was instructed by London Borough of Camden (LBC) on 16 February 2016 to carry out a Category B Audit on the Basement Impact Assessment (BIA) submitted as part of the Planning Submission documentation for 26 Rosecroft Avenue, London NW3 7QB, Camden Reference 2016/0231/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) 4: Basements and Lightwells.
 - Camden Development Policy (DP) 27: Basements and Lightwells.
 - Camden Development Policy (DP) 23: Water.
- 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 Audit Instruction described the planning proposal as "*Alterations to the ground and lower ground floor flat including lateral extension of the existing semi-basement (within the building existing footprint), formation of a front light well, enlargement of an existing ground floor rear bay window and formation of a rear basement level light well. The audit instruction also confirmed the property did not include any listed buildings, nor was neighbour to any listed buildings*"
- 2.6. CampbellReith accessed LBC's Planning Portal on 4 March 2016 and gained access to the following relevant documents for audit purposes:

- Combined Desk Study, Site Investigation and Basement Impact Assessment dated 11 December 2016 by GEA.
- Ground Movement Assessment Report dated 8 January 2016 by GEA.
- Design, Access, Heritage and Planning Statement dated 15 January 2016 by Doyle.
- Planning Submission Existing and Proposed Plans dated 12 January 2016 by Hestia.
- Aborigicultural Report dated 11 January 2016 by John Cromar.

3.0 BASEMENT IMPACT ASSESSMENT AUDIT CHECK LIST

Item	Yes/No/NA	Comment
Are BIA Author(s) credentials satisfactory?	Yes	All contributing authors are identified and have signed the submission.
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	However, the BIA includes only outline assessments based upon assumptions. A structural method statement confirming retaining wall and foundation construction has not been provided.
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	BIA Section 3.
Hydrogeology Screening: Have appropriate data sources been consulted? Is justification provided for 'No' answers?	Yes	BIA Section 3.
Hydrology Screening: Have appropriate data sources been consulted? Is justification provided for 'No' answers?	Yes	BIA Section 3.
Is a conceptual model presented?	Yes	BIA Section 7.
Land Stability Scoping Provided? Is scoping consistent with screening outcome?	Yes	BIA Section 4.

Item	Yes/No/NA	Comment
Hydrogeology Scoping Provided? Is scoping consistent with screening outcome?	Yes	BIA Section 4.
Hydrology Scoping Provided? Is scoping consistent with screening outcome?	Yes	BIA Section 4.
Is factual ground investigation data provided?	Yes	BIA Appendices.
Is monitoring data presented?	Yes	
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?	Yes	GMA confirms relevant LBC records have been checked for adjacent properties.
Is a geotechnical interpretation presented?	Yes	BIA Section 8 and the GMA present correlations of the SPT and laboratory data to obtain Cu values.
Does the geotechnical interpretation include information on retaining wall design?	Yes	BIA Section 8, outline assessments.
Are reports on other investigations required by screening and scoping presented?	Yes	No other reports required.
Are baseline conditions described, based on the GSD?	Yes	
Do the base line conditions consider adjacent or nearby basements?	No	The GMA identifies that there are no basements in the vicinity.
Is an Impact Assessment provided?	Yes	BIA Section 9

Item	Yes/No/NA	Comment
Are estimates of ground movement and structural impact presented?	Yes	GMA. These are based on an assumed methodology and should be confirmed.
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	Reliant on contractor best practise to review conditions as the works proceed and assess by suitably qualified engineers.
Has the need for monitoring during construction been considered?	Yes	
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?	No	Structural methodology for formation of the retaining walls and foundations should be confirmed.
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	Subject to confirmation of structural methodology.
Does report state that damage to surrounding buildings will be no worse than Burland Category 2?	Yes	Generally between Category 0 - 1, with wall F falling into Category 2. To be confirmed and based on the intended structural methodology.
Are non-technical summaries provided?	Yes	

4.0 DISCUSSION

- 4.1. The Basement Impact Assessment (BIA) consists of a desk study, site investigation, the main assessment report and a ground movement assessment. No structural methodology statement or contractor's method statement has been included, and the assessments are therefore based upon assumed methodologies.
- 4.2. The BIA indicates that the proposed development will be constructed within a Secondary 'A' Aquifer. The monitoring data indicates that the groundwater levels are approximately 4m below the proposed basement slab, however the monitoring period has only been 1 month. The development is unlikely to impact the surrounding water environment but this should ideally be confirmed by longer term groundwater monitoring. It is also noted that the BIA proposes sufficient drainage is included at the retaining walls to allow existing drainage paths to be unaffected.
- 4.3. Groundwater seepages are indicated at shallow depths and may be encountered during excavation / construction. The BIA recommends that the contractor utilises appropriate shoring and pumping to prevent instability issues arising. It also recommends that the contractor undertakes full depth trial excavations to confirm the ground conditions and ensure suitable shoring is provided.
- 4.4. The proposed development will alter the existing proportion of hard surfaces and paved areas marginally and have negligible impact on the quantity of local rainfall entering the existing sewer system.
- 4.5. The site includes areas with slopes in excess of 7°. However, these areas are not within the proposed development area and will not be destabilised by the works assuming appropriate shoring is utilised during construction.
- 4.6. The site is recognised as being within 5m of the public highway. However, the proposed development is set back from the highway and will have negligible impact upon it.
- 4.7. The Ground Movement Assessment (GMA) indicates Negligible to Very Slight impact (Burland Category 0 - 1) upon surrounding properties, and Slight impact (Category 2) for wall F located at the subject site. However, this should be confirmed once the structural methodology is confirmed.
- 4.8. The BIA indicates that trees and vegetation are unlikely to be affected by the proposed development and that there is no planned felling of trees. The arboricultural report indicates the planned removal of 5no Bay trees but confirms there will be significant impact to surrounding

trees assuming appropriate protection measures are adopted during construction. It also provides replacement planting recommendations.

5.0 CONCLUSIONS

- 5.1. The Basement Impact Assessment (BIA) has been prepared by Geotechnical & Environmental Associates and consists of a desk study, site investigation, the main assessment report and a ground movement assessment. The authors have suitable engineering qualifications.
- 5.2. The BIA states that the basement walls will be either mass concrete underpinning or contiguous piled walling. No structural methodology statement or contractor's method statement has been included, and the assessments are therefore based upon assumed methodologies. The structural information should be detailed and confirmed, including construction sequence, temporary works requirements and recommendations for contractors.
- 5.3. The ground investigation and subsequent water monitoring indicate the groundwater level to be at approximately 4m below existing ground level. The proposed basement excavation should not encounter groundwater other than minor seepages. However, the monitoring has only been carried out over a period of 1 month. The potential for groundwater issues should be clearly addressed in a structural methodology statement and confirmed by longer term monitoring and/or by the contractor in advance of excavations
- 5.4. It is accepted that there are no hydrogeological or hydrological concerns with respect to the development proposals impacting the surrounding area.
- 5.5. The GMA indicates there will be Negligible to Very Slight impact to surrounding structures. However, this should be confirmed once the structural methodology is confirmed.
- 5.6. Until the missing structural methodology information is provided, it is not possible to conclude that the criteria contained in CPG4 and DP27 have been met.

Appendix 1: Residents' Consultation Comments

Residents' Consultation Comments

Surname	Address	Date	Issue raised	Response
Heath & Hampstead Society	NW3 1XS	8/2/2016	The rear of the proposed development is not architecturally in keeping with the surrounding area. The proposed basement does not provide adequate light and ventilation for bedrooms.	

Appendix 2: Audit Query Tracker

Audit Query Tracker

Query No	Subject	Query	Status/Response	Date closed out
1	Stability / GMA	Structural Methodology Statement / Construction Methodology to be confirmed and impact assessments confirmed.	Open	
2	Groundwater	Long term monitoring / monitoring by the contractor should confirm the groundwater levels which should be addressed in the structural methodology statement.	Open	

Appendix 3: Supplementary Supporting Documents

None

London

Friars Bridge Court
41- 45 Blackfriars Road
London, SE1 8NZ

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

UAE

Office 705, Warsan Building
Hessa Street (East)
PO Box 28064, Dubai, UAE

T: +971 4 453 4735
E: uae@campbellreith.com

Campbell Reith Hill LLP. Registered in England & Wales. Limited Liability Partnership No OC300082
A list of Members is available at our Registered Office at: Friars Bridge Court, 41- 45 Blackfriars Road, London SE1 8NZ
VAT No 974 8892 43