

**2 Gayton Road
London
NW3 1TX**

**Basement Impact Assessment
Audit**

For
London Borough of Camden

Project Number: 12066-72
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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 2 Gayton Road, NW3 1TX (planning reference 2015/5243/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 prepared by well-known firms of engineering consultants using individuals who possess suitable qualifications.
- 1.5. The proposed development comprises of an extension to an existing basement, to the rear of the building and the construction of a two story extension above the new basement. The new basement will be an extension of the existing and will therefore be founded at the same level. The basement is founded on in the Claygate Member.
- 1.6. It is unlikely that the groundwater table will be encountered during basement foundation excavation.
- 1.7. The basement will be formed of an RC box, constructed using underpins and retaining walls, which will be tied to the existing basement walls of No. 2 and the party wall with No. 1 Gayton Road. The northern boundary wall to the car park will also be underpinned.
- 1.8. No proposals are provided for a movement monitoring strategy during excavation and construction however no significant ground movements are expected.
- 1.9. It is accepted that the surrounding slopes to the development site are stable.
- 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. In summary, the BIA has identified the potential impacts arising from the basement proposals and recommends suitable mitigation where required.

2.0 INTRODUCTION

- 2.1. CampbellReith was instructed by London Borough of Camden (LBC) on 15th October 2015 to carry out a Category B Audit on the Basement Impact Assessment (BIA) submitted as part of the Planning Submission documentation for 2 Gayton Road, NW3 1TX, Reference 2015/5243/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 "*Extension to rear of dwelling house at basement, ground floor level and partial first floor to create additional living space.*"
- 2.6. The Audit Instruction also confirmed 2 Gayton Road doesn't involve, or neighbour, listed buildings.

2.7. CampbellReith accessed LBC's Planning Portal on 10th November 2015 and gained access to the following relevant documents for audit purposes:

- Basement Impact Assessment Report (BIA) which included a Site Investigation Report
- Planning Application Drawings consisting of
 - Location Plans
 - Existing Plans and Sections
 - Proposed Plans and Sections
 - Sequence of Construction Plans and Sections
- Design & Access Statement
- Planning Comments and Response

3.0 BASEMENT IMPACT ASSESSMENT AUDIT CHECK LIST

Item	Yes/No/NA	Comment
Are BIA Author(s) credentials satisfactory?	No	Although the BIA has been undertaken correctly.
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	BIA Appendix.
Are suitable plan/maps included?	Yes	BIA Appendix A and Appendix B.
Do the plans/maps show the whole of the relevant area of study and do they show it in sufficient detail?	Yes	BIA Appendix B.
Land Stability Screening: Have appropriate data sources been consulted? Is justification provided for 'No' answers?	Yes	BIA Appendix C.
Hydrogeology Screening: Have appropriate data sources been consulted? Is justification provided for 'No' answers?	Yes	BIA Appendix C.
Hydrology Screening: Have appropriate data sources been consulted? Is justification provided for 'No' answers?	Yes	BIA Appendix C.
Is a conceptual model presented?	Yes	BIA Section 3.1.
Land Stability Scoping Provided? Is scoping consistent with screening outcome?	Yes	BIA Section 3.4.

Item	Yes/No/NA	Comment
Hydrogeology Scoping Provided? Is scoping consistent with screening outcome?	Yes	Section 3.3.
Hydrology Scoping Provided? Is scoping consistent with screening outcome?	Yes	Section 3.2.
Is factual ground investigation data provided?	Yes	BIA Appendix E.
Is monitoring data presented?	Yes	BIA Appendix E.
Is the ground investigation informed by a desk study?	Yes	BIA Appendix E.
Has a site walkover been undertaken?	Yes	BIA Appendix E.
Is the presence/absence of adjacent or nearby basements confirmed?	Yes	Proposed basement extension is bounded to the east by the existing basement and to the south by the basement extension to No. 1 Gayton Road which is currently under construction.
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	No further reports on other investigations are required by screening and scoping.
Are baseline conditions described, based on the GSD?	Yes	BIA Appendix C.
Do the base line conditions consider adjacent or nearby basements?	Yes	The neighbouring building has a basement founded at the same level.

Item	Yes/No/NA	Comment
Is an Impact Assessment provided?	Yes	Section 5.0.
Are estimates of ground movement and structural impact presented?	No	No significant ground movements are expected.
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?	No	Impacts of the scheme on the local environment have been considered however no mitigation measures are deemed necessary for this scheme.
Has the need for monitoring during construction been considered?	No	Predicted ground movements are low, therefore the damage caused by ground movements will be negligible.
Have the residual (after mitigation) impacts been clearly identified?	No	Residual risks have been discussed however they are considered low risk.
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	
Does report state that damage to surrounding buildings will be no worse than Burland Category 2?	No	BIA does not refer to the Burland Scale however does state that the expected damage to the surrounding buildings is negligible.
Are non-technical summaries provided?	No	

4.0 DISCUSSION

- 4.1. The current BIA, and its supporting documentation, appear to be thorough and undertaken by competent persons.
- 4.2. The BIA provides details of the proposed neighbouring basement extension to the rear garden of No.1 Gayton Road; this basement is currently under construction and it due to be complete prior to the commencement of the basement to No.2. The basement extends up to the party wall line between the two buildings. The boundary wall between the properties will have a special foundation formed beneath. The formation of the basement to No.2 Gayton Road is reliant on the completion of the basement to No. 1.
- 4.3. The existing basement to No.2 and the proposed basement to No.1 Gayton Road are founded at the same level as the proposed basement to No.2 and therefore no significant ground movements are expected. On the remaining sides of the proposed basement extension, are areas of hardstanding in the car park with no significant structures. The closest building other than No. 1, is No. 3 Gayton Road which is approximately 6m away from the excavation, which is sufficient distance for ground movements to be insignificant.
- 4.4. The LBC Instruction to proceed with the audit identified that the basement proposal either doesn't involved a listed building or is not located adjacent to listed buildings but gave no details. The Design & Access Statement identified that it is not mentioned in the Conservation Area Statement, either as a positive or negative contributor to the character of the area. The property forms part of a pair with number 1 Gayton Road. These properties are different to the rest of the street having been built earlier.
- 4.5. The proposed basement consists of an extension to an existing single story basement. It is to be formed by excavating the rear portion of the site, which is currently the garden, by no more than 2.0 metres in width along the length of the house, the distance from the rear of the dwelling to the rear wall. The proposed basement extension will be excavated to the same depth as the existing basement, which is also a similar level to the basement next door at No. 1 Gayton Road, approximately 2.5m deep. The rear wall, which is adjacent to the carpark to the north, is due to be underpinned by 2m.
- 4.6. The BIA has identified that the reinforced concrete ground bearing slab is underlain by the Claygate Beds which extend from 1m below ground level to at least 6.0 metres below ground level. The basement structure will be formed of an RC box which will be tied to the existing basement walls of No.2 and the party wall with No.1 Gayton Road. Details as to how the existing basement will be tied to the proposed basement have not been included in the BIA. It also doesn't include details on how the joint between the old and the new will be sealed.

- 4.7. The area of hardstanding on the site will be increased, however currently the site is almost entirely hardstanding therefore the decrease in rainwater seeping into the ground will be negligible and is unlikely to affect the adjacent properties and nearby water courses.
- 4.8. The proposed basement is unlikely to encounter the groundwater table. The findings of the site investigation carried out in June 2015 shows the water table to be approximately 1m below the level of the existing and proposed basement.
- 4.9. No proposals are provided for a movement monitoring strategy during excavation and construction. Due the existing basement been founded at the same level, ground movements are expected to be insignificant
- 4.10. It is accepted that there are no slope stability concerns regarding the proposed development and it is not in an area prone to flooding.

5.0 CONCLUSIONS

- 5.1. The BIA has been carried out by well-known firms of engineering consultants using individuals who possess suitable qualifications.
- 5.2. The BIA has confirmed that the proposed basement will be founded within Claygate Beds.
- 5.3. It is unlikely that the groundwater table will be encountered during basement foundation excavation. However local dewatering may be required to deal with rain water falling on site during construction of the basement.
- 5.4. Since the formation of the basement to No.2 Gayton Road is reliant on the completion of the basement to No. 1, it is recommended that the construction of the basement to No.1 is completed prior to the commencement of works to No.2. Otherwise the BIA shall be updated to assess the impact on No. 1.
- 5.5. No proposals are provided for a movement monitoring strategy during excavation and construction however it is accepted that ground movements will be insignificant.
- 5.6. It is accepted that the increase in hardstanding is very minor so will not have noticeable effect on the overall surface water infiltration.
- 5.7. It is accepted that the surrounding slopes to the development site are stable.
- 5.8. 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.
- 5.9. In summary, the BIA has identified the potential impacts arising from the basement proposals and recommends suitable mitigation where required.

Appendix 1: Residents' Consultation Comments

None

Appendix 2: Audit Query Tracker

None

Appendix 3: Supplementary Supporting Documents

None

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