

248-250 Camden Road,
London NW1 9HE

Basement Impact Assessment
Audit

For
London Borough of Camden

Project Number: 13398-50

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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 248-250 Camden Road, London NW1 9HE (planning reference 2020/3737/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 (BIA) 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 qualifications of the author of the land stability assessment are not in accordance with CPG guidance.
- 1.5. The site is currently occupied by a four-storey block of flats. The proposed development involves the demolition of the existing building and the construction of a six-storey residential property with a basement. Additionally, two one-storey buildings and retaining walls are proposed at the rear of the property, with excavations of approximately 2.0m below adjacent properties' ground level.
- 1.6. It is noted that some sections of the assessments reference superseded LBC guidance.
- 1.7. The BIA includes the majority of the information required from a desk study in line with the LBC guidance.
- 1.8. The Screening and Scoping Assessments do not address all potential impacts and are not conclusive. Further assessment is required.
- 1.9. A site investigation indicates ground conditions as Made Ground overlying the London Clay. No groundwater was recorded during drilling or on the subsequent monitoring visit.
- 1.10. Insufficient interpretative geotechnical information is presented. As the BIA notes that the soil descriptions do not conform to relevant standards, it should be confirmed if the investigation data is considered adequate to support the impact assessment.
- 1.11. Outline retaining wall and structural proposals should be presented.
- 1.12. The impacts resulting from the removal of trees on existing, neighbouring foundations should be assessed.

- 1.13. An outline construction programme should be provided.
- 1.14. Qualitative statements in regard to impacts from the basement are provided. No assessment of the retaining walls proposed at the rear have been undertaken. A Ground Movement Assessment should be provided that considers both the excavation and construction methodology impacts on all of the structures within the zone of influence.
- 1.15. The site is located within Critical Drainage Area Group (Group 3-003) but is not located within a Local Flood Risk Zone. The BIA should include review of the Flood Risk Assessment.
- 1.16. It is understood that the proposed development will increase the impermeable area of the site. The BIA should include review of the Surface Water Drainage Strategy.
- 1.17. Queries and matters requiring further information or clarification are discussed in Section 4 and summarised in Appendix 2. Until the queries raised are addressed, the BIA does not meet the criteria of CPG Basements.

2.0 INTRODUCTION

- 2.1. CampbellReith was instructed by the London Borough of Camden (LBC) on 17th September 2020 to carry out a Category B Audit on the Basement Impact Assessment (BIA) submitted as part of the Planning Submission documentation for 248-250 Camden Road, London NW1 9HE (LBC Reference 2020/3737/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: Basements. March 2018
 - 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; 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 planning portal describes the proposal as: *"Redevelopment of the site to include demolition of existing hostel building and the erection of a new 4-6 storey plus basement hostel building (sui generis use) with external stairwell and rear balconies to all levels; erection of 2 x single storey garden buildings; associated works including installation of plant equipment, parking and access arrangements and tree and landscaping works. (Information for the purpose of consultation: the proposed development provides 39 units, which comprise 36 x studios, 2 x 1-beds and 1 x 1-bed wheelchair accessible unit)."*

The planning portal also confirmed the site lies within Camden Square Conservation Area but that the building is not listed and neither are the neighbouring buildings.

2.6. CampbellReith accessed LBC's Planning Portal on 24th September 2020 and gained access to the following relevant documents for audit purposes:

- Groundwater, surface water and land stability scoping and screening assessment for Basement Impact Assessment (BIA) (ref 30404R1) dated 15 April 2020 by H Fraser Consulting Ltd including:
 - Land Stability Report (ref 60462) dated 29 January 2020 by Ground and Project Consultants.
 - Geotechnical Survey Report (ref 20269) dated December 2019 by Fastrack Site Investigations Ltd.
- Letter with further information on BIA dated 14 August 2020 by Rodrigues Associates.
- Flood Risk Assessment and Surface Water Drainage Strategy (ref 5356_FRA_SWDS) dated 18 June 2020 by Ambiantal Environmental Assessment.
- Proposed elevations, plans and sections by RCKa Architects.
- Arboricultural Impact Assessment Report (ref SHA 1018) dated May 2020 by Sharon Hosegood Associates.
- Design and Access Statement (ref 1931-RCK-RP-A-S3012) dated 22 July 2020 by RCKa Architects.
- Consultation Responses to the proposed development from local residents, Historic England and Transport for London.

3.0 BASEMENT IMPACT ASSESSMENT AUDIT CHECK LIST

Item	Yes/No/NA	Comment
Are BIA Author(s) credentials satisfactory?	No	The author's qualifications for the land stability assessment are not in accordance with CPG guidelines for all sections. Additionally, the Flood Risk Assessment (FRA) and Surface Water Drainage Strategy (SWDS) should be reviewed by the BIA authors and assessments confirmed.
Is data required by Cl.233 of the GSD presented?	Yes	This includes a Utility Survey which has been provided within Appendix A of the BIA.
Does the description of the proposed development include all aspects of temporary and permanent works which might impact upon geology, hydrogeology and hydrology?	No	The BIA is based on assumptions and does not include impacts from the Garden Buildings.
Are suitable plans/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?	No	Does not consider impacts from Garden Buildings.
Hydrogeology Screening: Have appropriate data sources been consulted? Is justification provided for 'No' answers?	No	SWDS to be reviewed and assessment updated.
Hydrology Screening: Have appropriate data sources been consulted? Is justification provided for 'No' answers?	No	FRA and SWDS to be reviewed and assessment updated.

Item	Yes/No/NA	Comment
Is a conceptual model presented?	Yes	Described within assessments. However, ignores the proposed garden buildings.
Land Stability Scoping Provided? Is scoping consistent with screening outcome?	No	Does not consider impacts from Garden Buildings or impacts on neighbouring foundations from removal of trees.
Hydrogeology Scoping Provided? Is scoping consistent with screening outcome?	No	SWDS to be reviewed and assessment updated.
Hydrology Scoping Provided? Is scoping consistent with screening outcome?	No	FRA and SWDS to be reviewed and assessment updated.
Is factual ground investigation data provided?	Yes	Noted that the Land Stability Report states 'Descriptions of the soils are limited and do not conform to BS 5930:2015: Code of practice for ground investigations.'
Is monitoring data presented?	Yes	Fastrack Site Investigations Ltd reported no water strikes during drilling and noted that during a revisit on 16 th January 2020 the monitoring wells were dry.
Is the ground investigation informed by a desk study?	Yes	H Fraser Consulting Ltd Basement Impact Assessment report, Section 2.
Has a site walkover been undertaken?	Yes	Site Investigation undertaken in October 2019.
Is the presence/absence of adjacent or nearby basements confirmed?	Yes	The BIA states that a basement which is half submerged below ground level is present for the adjacent property to the southwest (No. 246 Camden Road).
Is a geotechnical interpretation presented?	Yes	Fastrack Site Investigations Ltd report, Sections 6, 7 and 8.
Does the geotechnical interpretation include information on retaining wall design?	No	

Item	Yes/No/NA	Comment
Are reports on other investigations required by screening and scoping presented?	Yes	An FRA and SWDS and an Arboricultural Impact Assessment Report have been provided but are not reviewed by the authors.
Are baseline conditions described, based on the GSD?	No	Impacts from proposed Garden Buildings not considered.
Do the baseline conditions consider adjacent or nearby basements?	Yes	Presence of basements is assumed.
Is an Impact Assessment provided?	No	BIA should include review of all proposals and specialist advice and assess impacts resulting.
Are estimates of ground movement and structural impact presented?	No	Zone of influence should be defined and appropriate assessment undertaken.
Is the Impact Assessment appropriate to the matters identified by screen and scoping?	No	No Impact Assessment submitted.
Has the need for mitigation been considered and are appropriate mitigation methods incorporated in the scheme?	No	BIA should include review of all proposals and specialist advice and assess impacts resulting – mitigation of those impacts should be presented.
Has the need for monitoring during construction been considered?	No	
Have the residual (after mitigation) impacts been clearly identified?	No	Additional assessments required, as indicated.
Has the scheme demonstrated that the structural stability of the building and neighbouring properties and infrastructure will be maintained?	No	
Has the scheme avoided adversely affecting drainage and run-off or causing other damage to the water environment?	No	An FRA and SWDS and an Arboricultural Impact Assessment Report have been provided but are not reviewed by the authors.

Item	Yes/No/NA	Comment
Has the scheme avoided cumulative impacts upon structural stability or the water environment in the local area?	No	Impacts from the proposed Garden Buildings and removal of trees required on adjacent foundations.
Does report state that damage to surrounding buildings will be no worse than Burland Category 1?	No	No ground movement assessment provided.
Are non-technical summaries provided?	Yes	Conclusions and recommendations sections.

4.0 DISCUSSION

- 4.1. The assessment of surface water and groundwater impacts have been prepared by H Fraser Consulting Ltd and the land stability assessment has been prepared by Ground and Project Consultants. An overarching BIA has been prepared by H Fraser Consulting Ltd. The qualifications of the author of the land stability assessment are not in accordance with CPG guidance.
- 4.2. Some sections of the assessments reference superseded LBC guidance. Current CPG Basements and Local Plan: Policy A5 Basements guidance should be reviewed and adopted.
- 4.3. A Flood Risk Assessment (FRA) and Surface Water Drainage Strategy (SWDS) have been undertaken by Ambiental. The qualifications of the authors are not indicated. The report has not been reviewed by the BIA authors or incorporated into the assessment. The BIA should include review of this report and update assessments and recommended mitigation actions, as required.
- 4.4. The site is currently occupied by a four-storey block of flats with access and parking provided at the front and a garden at the rear. The proposed development involves the demolition of the existing building and the construction of a six-storey residential development property with a basement to be used as a plant room with an excavation depth of approximately 3.5m. The ground level at the rear will be lowered, with two additional one-storey buildings and retaining walls proposed at the rear of the property, with excavations of approximately 2.0m below adjacent properties' ground level.
- 4.5. The BIA documents include the majority of the information required from a desk study in line with the GSD Appendix G1.
- 4.6. The Screening and Scoping Assessments do not address all potential impacts and are not conclusive. As 4.3, the FRA and SWDS should be reviewed and incorporated into the BIA.
- 4.7. A site investigation was undertaken by Fastrack Site Investigations Ltd in October 2019 comprising eight trial pits and three boreholes across the site to a maximum depth of 15.0m. Monitoring wells were installed within boreholes 1 and 3 to provide groundwater readings. The ground conditions identified were Made Ground (to depths of between 0.5m and 2.1m bgl) overlying the London Clay proven to 15.0 m bgl. As indicated in the BIA, descriptions of the soils are limited and do not conform to BS 5930:2015: Code of practice for ground investigations. No groundwater was recorded during drilling or on the subsequent monitoring visit in January 2020.
- 4.8. Interpretative geotechnical information is presented in the investigation report. However, the range of values is broad and does not include specific parameters to be adopted for the proposed development, considering the foundations to be utilised and the requirements for limiting impacts (e.g. to limit ground movements from construction of the Garden Buildings). It is recommended

these are further reviewed and updated. As the BIA notes that the soil descriptions do not conform to relevant standards, it should be confirmed if the investigation data is considered adequate to support the impact assessment.

- 4.9. Groundwater is stated to be at least 30.0m deep based on BGS borehole records. However, seepage and perched water in the shallow subsurface has not been discounted in the BIA and discharge of surface water to ground is discussed but potential hydrogeological impacts are not conclusively resolved or mitigated.
- 4.10. The outline structural plans indicate that the Garden Buildings will be founded approximately 2.0m below the neighbouring buildings' ground level. Assessment of the impacts from these proposals is required. Outline retaining wall design information and structural calculations should be presented along with an outline temporary works scheme including propping arrangements to mitigate impacts, if required.
- 4.11. In regard to the basement below the main building, no ground movement analysis (GMA) or damage impact assessment calculations have been presented for review and therefore there is no information on the indicative zone of influence of the development. The presence or absence of other nearby basements (notably at 246 and 252 Camden Road), underground structures or listed buildings within that zone should be confirmed. Currently it has been assumed that there is a semi-basement to neighbouring 246 and 252 Camden Road. As noted above, outline temporary works information should be provided, as required, to support any assessment.
- 4.12. Any GMA provided should address both the excavation and construction methodology effects and assess the damage impact on all of the structures within the zone of influence, including the highway and underlying utilities. Where Category 1 or a higher damage category is predicted, the BIA should provide mitigation measures to address ground movement.
- 4.13. It is noted that trees will be removed from site. Considering the nature of the underlying London Clay and susceptibility to volume change with changes in moisture content, the impacts resulting from the removal of trees on existing, neighbouring foundations should be assessed.
- 4.14. The site is located within Critical Drainage Area Group (Group 3-003) but is not located within a Local Flood Risk Zone. The BIA should include review of the FRA and update the assessment and mitigation actions required to demonstrate that there will be no flooding related impacts.
- 4.15. It is understood that the proposed development will increase the impermeable area of the site from 787m² to 987m². The BIA should include review of the Surface Water Drainage Strategy and update the assessment and mitigation actions required to demonstrate that there will be no impacts to the hydrological environment.
- 4.16. Queries and matters requiring further information or clarification are summarised in Appendix 2.

5.0 CONCLUSIONS

- 5.1. The qualifications of the author of the land stability assessment are not in accordance with CPG guidance.
- 5.2. It is noted that some sections of the assessments reference superseded LBC guidance.
- 5.3. The BIA includes the majority of the information required from a desk study in line with the LBC guidance.
- 5.4. The Screening and Scoping Assessments do not address all potential impacts and are not conclusive. Further assessment is required.
- 5.5. A site investigation has been undertaken. Insufficient interpretative geotechnical information is presented. As the BIA notes that the soil descriptions do not conform to relevant standards, it should be confirmed if the investigation data is considered adequate to support the impact assessment.
- 5.6. Outline structural and temporary works information should be provided.
- 5.7. The impacts resulting from the removal of trees on existing, neighbouring foundations should be assessed.
- 5.8. An outline construction programme should be provided.
- 5.9. A Ground Movement Assessment is required which addresses potential impacts from the main basement and Garden Buildings at the rear.
- 5.10. The site is located within Critical Drainage Area Group (Group 3-003) but is not located within a Local Flood Risk Zone. The BIA should include review of the Flood Risk Assessment.
- 5.11. It is understood that the proposed development will increase the impermeable area of the site. The BIA should include review of the Surface Water Drainage Strategy.
- 5.12. Queries and requests for information are summarised in Appendix 2. Until the queries raised are addressed, the BIA does not meet the criteria of CPG Basements.

Appendix 1: Residents' Consultation Comments

Consultation Comments

Surname	Address	Date	Issue raised	Response
Transport for London	N/A	15 th September 2020	TfL confirmed that London Underground/DLR Infrastructure Protection has no comment to make on this planning application as submitted.	N/A

Appendix 2: Audit Query Tracker

Audit Query Tracker

Query No	Subject	Query	Status/Response	Date closed out
1	BIA Format	The author's qualifications for the BIA are not in accordance with CPG guidelines.	Open – as 4.1	
2	BIA Format	Relevant guidance should be adopted for assessment purposes.	Open – as 4.2	
3	Hydrogeology / Hydrology	The BIA should include review of the FRA and SWDS report and update assessments and recommended mitigation actions, as required.	Open – as 4.3, 4.6, 4.9, 4.14, 4.15	
4	Land Stability	Insufficient interpretative geotechnical information is presented. As the BIA notes that the soil descriptions do not conform to relevant standards, it should be confirmed if the investigation data is considered adequate to support the design of the proposed development.	Open – as 4.7, 4.8	
5	Land Stability	Ground Movement and Damage Assessments - all basement structures to be considered and outline structural and temporary works information provided.	Open – as 4.4, 4.10, 4.11, 4.12	
6	Land Stability	Impacts from the removal of trees on neighbouring foundations to be assessed and mitigated, if required.	Open – as 4.13	

Appendix 3: Supplementary Supporting Documents

None

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