

115-119 Camden High Street

Basement Impact Assessment
Audit

For

London Borough of Camden

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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 115-119 Camden High Street, NW1 7JS (planning reference 2019/3138/P). The basement is considered to fall within Category C 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 site is currently occupied by a two storey retail unit, with a 2.50m deep basement underneath the south-eastern area of site. It is proposed to replace the existing structure with a new part four, part five storey building with a single level 3.50m deep basement underneath the central area.
- 1.5. The site overlies London Underground tunnels and consultation responses indicate that asset protection agreements should be agreed.
- 1.6. The qualifications of the BIA authors should be demonstrated to be in compliance with LBC guidance.
- 1.7. The process of Screening, Scoping and Impact Assessments, as set out in CPG Basements, has not been completed and should be provided for review.
- 1.8. The BIA indicates that the proposed basement will be founded over London Clay. It is stated in the BIA that groundwater will not be encountered during basement construction. A site specific ground investigation is required.
- 1.9. Interpretative geotechnical design parameters are required and should be presented.
- 1.10. A bottom up sequence of construction, with the basement formed within contiguous pile walls is proposed. The retaining walls would be supported by temporary props as excavation proceeds. It is understood that the new structure will be supported on piles.
- 1.11. The structural design and construction strategy should be confirmed following completion of the site investigation and agreement with London Underground on exclusion zones / asset protection requirements.

- 1.12. A ground movement assessment (GMA) has been carried out to assess the impacts on the adjacent building (121-123 Camden High Street). This should be reviewed following completion of the site investigation and confirmation of the structural scheme and should include assessment of the highway and underlying utilities, and the London Underground Infrastructure.
- 1.13. A movement monitoring strategy is proposed during excavation and construction. This should be confirmed, following review of the GMA and requirements of asset owners.
- 1.14. An outline construction programme should be provided.
- 1.15. It is accepted that the proposed development is not in an area prone to flooding.
- 1.16. The proposed development will not lead to change in impermeable surface area. A SuDs strategy is proposed. The final design should be agreed with LBC and Thames Water.
- 1.17. Queries and requests for further information are discussed in Section 4 and summarised in Appendix 2. Until the additional information requested is provided, the BIA does not meet the criteria of CPG: Basements.

2.0 INTRODUCTION

2.1. CampbellReith was instructed by London Borough of Camden (LBC) on 19 June 2019 to carry out a Category C Audit on the Basement Impact Assessment (BIA) submitted as part of the Planning Submission documentation for 115-119 Camden High Street, N1 7JS (Planning reference: 2019/3138/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 Basements. March 2018.
- Camden Development Policy (DP) 27: Basements and Lightwells.
- Camden Development Policy (DP) 23: Water.
- Local Plan Policy A5 Basements.

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 two storey building and erection of a part-four, part-five storey building (plus enlargement of existing basement and plant room at roof level) comprising retail (Class A1) at ground floor level fronting Camden High Street, 80-bed hotel (Class C1) and 3 x 2-bed residential units (social rented) (Class C3) fronting Delancey Street."*

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

- Outline Structural Engineering and Basement Impact Assessment Report (Reference: 2/8791, dated 03 June 2019) prepared by Clancy Consulting. It is comprised of the following sub-reports:
 - Phase 1 Geo-Environmental Desk Study Report prepared by Clancy Consulting (Reference: 10/1345/001, dated February 2019)
 - Ground Movement Impact Assessment prepared by Geotechnical Consulting Group (Reference: 01714/10020, dated May 2019)
 - Flood Risk Assessment & SuDS strategy prepared by Clancy Consulting (Reference: 2/8791, dated 04 June 2019)
- Planning Application Drawings consisting of:
 - Location Plan: A277-MCO-XX-XX-DR-A-00101 to 102
 - Existing Plans: A277-MCO-XX-B0-DR-A-00109 to 213
 - Demolition Plans: A277-MCO-XXX-B0-DR-A-12109 to 111
 - Proposed Elevations: A277-MCO-XX-ZZ-DR-A-01210 to 213
 - Proposed Sections: A277-MCO-XX-ZZ-DR-A-01300 to 301
- Design & Access Statement prepared by Morris and Company (Reference: A277, dated June 2019)
- Arboricultural Survey Report prepared by Phylorum (Reference: 8479, dated 26th July 2019)
- Planning consultation responses.

3.0 BASEMENT IMPACT ASSESSMENT AUDIT CHECK LIST

Item	Yes/No/NA	Comment
Are BIA Author(s) credentials satisfactory?	No	Qualifications of the authors to be demonstrated to be in compliance with CPG: Basements.
Is data required by Cl.233 of the GSD presented?	No	As detailed in Section 4.
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, proposed structural design and construction methodology to be confirmed pending site investigation.
Are suitable plan/maps included?	Yes	Refer Appendix I of the Phase 1 Geo-Environmental Desk Study Report (dated February 2019) and Pages 21-29 of the Ground Movement Impact Assessment (dated May 2019).
Do the plans/maps show the whole of the relevant area of study and do they show it in sufficient detail?	Yes	As above.
Land Stability Screening: Have appropriate data sources been consulted? Is justification provided for 'No' answers?	No	A screening assessment is not presented.
Hydrogeology Screening: Have appropriate data sources been consulted? Is justification provided for 'No' answers?	No	A screening assessment is not presented.
Hydrology Screening: Have appropriate data sources been consulted? Is justification provided for 'No' answers?	No	A screening assessment is not presented.
Is a conceptual model presented?	Yes	To be confirmed pending site investigation.

Item	Yes/No/NA	Comment
Land Stability Scoping Provided? Is scoping consistent with screening outcome?	No	Screening and Scoping process has not been presented.
Hydrogeology Scoping Provided? Is scoping consistent with screening outcome?	No	Screening and Scoping process has not been presented.
Hydrology Scoping Provided? Is scoping consistent with screening outcome?	No	Screening and Scoping process has not been presented.
Is factual ground investigation data provided?	No	A site-specific ground investigation has not been carried out.
Is monitoring data presented?	No	Groundwater monitoring has not been carried out.
Is the ground investigation informed by a desk study?	NA	A site-specific ground investigation has not been carried out. However a Phase 1 Geo-Environmental Desk Study Report is available.
Has a site walkover been undertaken?	No	The BIA is based on a desk study report.
Is the presence/absence of adjacent or nearby basements confirmed?	Yes	Refer Section 3.1 of the Ground Movement Assessment Report, basement at the rear of 121 – 123 CHS.
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	Screening and Scoping process to be completed. Site investigation and interpretative geotechnical report required.

Item	Yes/No/NA	Comment
Are the baseline conditions described, based on the GSD?	Yes	To be confirmed pending site investigation.
Do the base line conditions consider adjacent or nearby basements?	Yes	Refer Section 3.1 of the Ground Movement Assessment Report.
Is an Impact Assessment provided?	Yes	Incomplete. Screening and Scoping process to be followed.
Are estimates of ground movement and structural impact presented?	Yes	Impacts to the Highway, underlying utilities and LU infrastructure to be confirmed. To be reviewed following Site Investigation.
Is the Impact Assessment appropriate to the matters identified by screen and scoping?	No	Insufficient information presented. Discussed in Section 4 of this audit report.
Has the need for mitigation been considered and are appropriate mitigation methods incorporated in the scheme?	No	Insufficient information presented. Discussed in Section 4 of this audit report.
Has the need for monitoring during construction been considered?	Yes	Refer Section 7.2 of the Ground Movement Impact assessment report for proposed trigger levels. To be reviewed to consider impacts to other assets.
Have the residual (after mitigation) impacts been clearly identified?	NA	Insufficient information presented.
Has the scheme demonstrated that the structural stability of the building and neighbouring properties and infrastructure will be maintained?	No	Insufficient information presented. Discussed in Section 4 of this audit report
Has the scheme avoided adversely affecting drainage and run-off or causing other damage to the water environment?	No	However, the groundwater level on site has to be confirmed based on site specific ground investigation and subsequent monitoring.
Has the scheme avoided cumulative impacts upon structural stability or the water environment in the local area?	No	Incomplete. Screening and Scoping process to be followed.

Item	Yes/No/NA	Comment
Does report state that damage to surrounding buildings will be no worse than Burland Category 1?	Yes	To be reviewed, following Site Investigation.
Are non-technical summaries provided?	No	

4.0 DISCUSSION

- 4.1. The Outline Structural report and Basement Impact Assessment (BIA) comprises four parts. The qualifications of the BIA authors should be demonstrated to be in compliance with LBC guidance.
- 4.2. The site is currently occupied by a two storey retail unit, with a 2.50m deep basement underneath the south-eastern area of site. It is proposed to replace the existing structure with a new part four, part five storey building with a single level 3.50m deep basement underneath the central area.
- 4.3. The site overlies London Underground tunnels and consultation responses indicate that asset protection agreements should be agreed.
- 4.4. The process of Screening, Scoping and Impact Assessments, as set out in CPG Basements, has not been completed and should be provided for review. The Screening process should be evidenced by the desk study. The Scoping process identifies what further investigation and assessment may be required, if applicable, in order to complete the impact assessment.
- 4.5. Based on a desk study, the BIA has identified that the ground conditions are likely to comprise Made Ground over London Clay. It is stated in the BIA that groundwater will not be encountered during basement construction. A site specific ground investigation is required.
- 4.6. Interpretative geotechnical design parameters should be presented, based on the site specific site investigation.
- 4.7. It is proposed to use contiguous piles installed using CFA techniques, founded at 8.00m below ground level (bgl) around the perimeter of the proposed excavation, in order to support the lateral earth pressure and surcharge forces from the neighbouring properties. Temporary propping is proposed, with permanent propping provided by liner walls and floor slabs. Based on the information provided, it is understood that the load from the superstructure would be supported on a piled foundation.
- 4.8. Its noted that London Underground will impose an exclusion zone and require an impact assessment of its assets which may constrain the proposed piled walls and piled foundation layouts. The structural design and construction strategy should be confirmed following completion of the site investigation and agreement with London Underground on exclusion zones / asset protection requirements.
- 4.9. A ground movement assessment (GMA) has been presented. It states that the neighbouring property to the north, 121-123 Camden High Street, is a three storey masonry structure with a single storey extension with single level basement to the rear. It has been assumed that the party wall to this property is founded at 0.50m bgl.

- 4.10. The GMA is based on the ground conditions derived from a desk study, and on the basis of historic boreholes off-site. As stated in 4.5 to 4.8, the structural scheme should be reviewed following completion of the site investigation and therefore the GMA should also be reviewed once these aspects are confirmed. The current assessment indicates a maximum of Burland Category 1 (Very Slight) damage to 121-123 Camden High Street.
- 4.11. The GMA review should include assessment of the highway and underlying utilities, and the London Underground Infrastructure. Consultation responses from TfL / LU and Thames Water indicate that they will require asset protection criteria to be agreed.
- 4.12. A movement monitoring strategy is proposed during excavation and construction. This should be confirmed, following review of the GMA and requirements of asset owners.
- 4.13. It is accepted that the proposed development is not in an area prone to flooding.
- 4.14. The proposed development will not lead to change in impermeable surface area. A SuDs assessment has been carried out. It is proposed to attenuate and then discharge any collected water into the combined Thames Water sewer within Delancy Street, in accordance with current policy requirements. The final design should be agreed with LBC and Thames Water.
- 4.15. An outline works programme is absent and is requested.

5.0 CONCLUSIONS

- 5.1. The qualifications of the BIA authors should be demonstrated to be in compliance with LBC guidance.
- 5.2. The process of Screening, Scoping and Impact Assessments, as set out in CPG Basements, has not been completed and should be provided for review.
- 5.3. A site specific ground investigation is required.
- 5.4. Interpretative geotechnical design parameters should be presented.
- 5.5. The structural design and construction strategy should be confirmed following completion of the site investigation and agreement with London Underground on exclusion zones / asset protection requirements.
- 5.6. A ground movement assessment (GMA) has been carried out. This should be reviewed following completion of the site investigation and confirmation of the structural scheme, including assessment of the highway and underlying utilities, and the London Underground Infrastructure.
- 5.7. The movement monitoring strategy should be confirmed following review of the GMA and requirements of asset owners.
- 5.8. An outline construction programme should be provided.
- 5.9. It is accepted that the proposed development is not in an area prone to flooding.
- 5.10. The proposed development will not lead to change in impermeable surface area. A SuDs strategy is proposed. The final design should be agreed with LBC and Thames Water.
- 5.11. Queries and requests for further information are summarised in Appendix 2. Until the additional information requested is provided, the BIA does not meet the criteria of CPG: Basements.

Appendix 1: Residents' Consultation Comments

Residents' Consultation Comments

Surname	Address	Date	Issue raised	Response
Thames Water		09/07/2019	Potential for piling to impact upon infrastructure.	Section 4
TfL		-	Potential for piling to impact upon infrastructure (Highway / LU Assets)	Section 4

Appendix 2: Audit Query Tracker

Audit Query Tracker

Query No	Subject	Query	Status	Date closed out
1	BIA	Qualifications of authors of the reports within the BIA to be demonstrated to be in accordance with the requirements of CPG: Basements.	Open	
2	BIA	Screening and Scoping process to be carried out. Further assessments to be undertaken, if identified by the process, to evidence impact assessment.	Open	
3	BIA	An outline works programme is required.	Open	
4	BIA	A site specific ground investigation is required.	Open	
5	BIA	The structural design and construction strategy should be confirmed following completion of the site investigation and agreement with London Underground on exclusion zones / asset protection requirements.	Open	
6	Land Stability	Interpretative geotechnical design parameters to be presented.	Open	
7	Land Stability	The GMA should include assessment of the highway and underlying utilities, and the London Underground Infrastructure, or provide evidence that asset protection criteria have been agreed with the asset owners.	Open	
8	Land Stability	A movement monitoring strategy is proposed during excavation and construction. This should be confirmed, following review of the GMA and requirements of owners.	Open	

Appendix 3: Supplementary Supporting Documents

None relevant

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