CampbellReith
consulting engineers

10 Glenmore Road
London
NW3 4DB

Basement Impact Assessment
Audit

For

London Borough of Camden

Project Number: 12985-90
Revision: F1

April 2020

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Document History and Status

Revision	Date	Purpose/Status	File Ref	Author	Check	Review
D1	03/01/2020	Comment	NSjap12985-90-030120-10 Glenmore Road-D1	NS	GK	GK
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Document Details

Last saved	03/04/2020 12:17
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Project Number	12985-90
Project Name	10 Glenmore Road
Planning Reference	2019/4822/P

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Appendix

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 10 Glenmore Road, London NW3 4DB (planning reference 2019/4822/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 application site relates to 10 Glenmore Road, NW3 4DB, which comprises a three storey plus basement, mid terraced Edwardian residence located on the northern side of Glenmore Road.

1.5. The proposed development comprises the deepening and extension of the basement.

1.6. The BIA has been reviewed and approved by Chartered Engineers. The BIA has not been approved by a Chartered Hydrogeologist. However, the hydrogeological assessment is accepted. There will be no impacts to the wider hydrogeological environment.

1.7. A site investigation has been undertaken, indicating that the proposed basement will be founded in the London Clay, a suitable bearing stratum. Foundation inspection pits undertaken alongside the adjoining buildings indicate corbelled masonry over mass concrete strip footings.

1.8. Interpretative geotechnical parameters have been presented in the site investigation report and in the Ground Movement Assessment (GMA) report.

1.9. Outline structural information and a construction methodology have been presented. The proposal includes the installation of a king post wall to allow the deepening of the existing lightwell.

1.10. The GMA demonstrates that ground movements and consequential damage to neighbouring properties and infrastructure will be within LBC's policy requirements.

1.11. There is no change in impermeable site area due to the proposed development and there will be no impact to the wider hydrological environment. A final drainage design should be agreed with LBC and Thames Water in accordance with their policy requirements.

1.12. The BIA indicates that the property is not at risk of flooding. Notwithstanding this, the adjacent highway is indicated to be at low to medium risk of surface water flooding and the final design should incorporate standard flood risk mitigation measures.

1.13. Considering the additional information presented, the BIA meets the criteria of CPG Basements.

2.0 INTRODUCTION

2.1. CampbellReith was instructed by London Borough of Camden (LBC) on 16th December 2019 to carry out a Category B Audit on the Basement Impact Assessment (BIA) submitted as part of the Planning Submission documentation for 10 Glenmore Road, London NW3 4DB, Camden Reference 2019/4822/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 *"Excavation to lower front part of existing basement floor and to extend it further to rear under house; alterations to the front garden to create lightwell and new window for basement floor; installation of new front garden boundary fence; alterations to the rear/side elevations with reconfiguration of existing ground floor rear extension."*

2.6. The site is not listed and neither are the adjacent buildings.

2.7. CampbellReith accessed LBC's Planning Portal on 3rd January 2020 and gained access to the following relevant documents for audit purposes:

- Basement Impact Assessment (ref 19029.R01.P2) dated 23 November 2019 by Structure Workshop.
- Existing and proposed drawings by Studio Mark Ruthven Architecture.

2.8. Following the initial audit, CampbellReith accessed LBC's Planning Portal on 31st March 2020 and gained access to the following relevant documents:

- Ground Movement Assessment (GMA) Report (ref.:J200026) dated March 2020 by GEA Ltd.
- Updated Site Investigation Report (ref.:0762) dated August 2019 by Connaughts Site Investigation LTD.
- Emails from Structure Workshop and GEA Ltd (included in Appendix 3).

3.0 BASEMENT IMPACT ASSESSMENT AUDIT CHECK LIST

Item	Yes/No/NA	Comment
Are BIA Author(s) credentials satisfactory?	No	The hydrogeological assessment requires a professional holding CGeol qualification. However, as outlined in Section 4, the hydrogeological assessment is accepted.
Is data required by Cl.233 of the GSD presented?	Yes	An outline construction programme has not been presented, however the construction phase is indicated to last 6 months.
Does the description of the proposed development include all aspects of temporary and permanent works which might impact upon geology, hydrogeology and hydrology?	Yes	See Section 4 of the BIA.
Are suitable plan/maps included?	Yes	Appendix D of the BIA.
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	Section 4.3 of the BIA. Q13 indicates there will not be a significant increase in differential depth of foundations; however the proposed works will result in a significant increase.
Hydrogeology Screening: Have appropriate data sources been consulted? Is justification provided for 'No' answers?	Yes	Although the BIA does not report the potential presence, the GSD figure 11 indicates the site is within 100m of the historic Tyburn- both the hydrogeology and hydrology screening are accepted.
Hydrology Screening: Have appropriate data sources been consulted? Is justification provided for 'No' answers?	Yes	Section 4.4 of the BIA.
Is a conceptual model presented?	Yes	Ground conditions are described within Section 8.0 of the site investigation report and reported in BIA.

Item	Yes/No/NA	Comment
Land Stability Scoping Provided? Is scoping consistent with screening outcome?	Yes	BIA report, Section 5.0.
Hydrogeology Scoping Provided? Is scoping consistent with screening outcome?	Yes	BIA report, Section 5.0
Hydrology Scoping Provided? Is scoping consistent with screening outcome?	Yes	BIA report, Section 5.0.
Is factual ground investigation data provided?	Yes	BIA report, Appendix B.
Is monitoring data presented?	No	It is understood groundwater monitoring has not been carried as part of the SI. No groundwater was encountered.
Is the ground investigation informed by a desk study?	Yes	A desktop study is presented in Section 3.0 of the BIA.
Has a site walkover been undertaken?	Yes	16th May 2019.
Is the presence/absence of adjacent or nearby basements confirmed?	Yes	It is understood that adjacent properties also have basements to a similar depth and extent as the existing basement of the Applicant's property.
Is a geotechnical interpretation presented?	Yes	Geotechnical parameters in line with GSD Appendix G3 have been presented.
Does the geotechnical interpretation include information on retaining wall design?	Yes	
Are reports on other investigations required by screening and scoping presented?	NA	
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 understood that adjacent properties also have basements to a similar depth and extent as the existing basement of the applicant's property.
Is an Impact Assessment provided?	Yes	Section 5 and 7.3 of the BIA.
Are estimates of ground movement and structural impact presented?	Yes	A Ground Movement Assessment (GMA) has been submitted as part of the BIA
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	An outline temporary and permanent work proposal including mitigation measures has been presented in the BIA.
Has the need for monitoring during construction been considered?	Yes	BIA report, Section 7.4
Have the residual (after mitigation) impacts been clearly identified?	Yes	The BIA states residual impacts to be negligible.
Has the scheme demonstrated that the structural stability of the building and neighbouring properties and infrastructure will be maintained?	Yes	The BIA states the damage occurring at all the neighbouring properties within the zone of influence of the basement will be within Category 1 of Burland Scale.
Has the scheme avoided adversely affecting drainage and run-off or causing other damage to the water environment?	Yes	The site is within a critical drainage area. Drainage design to be confirmed with LBC and Thames Water.
Has the scheme avoided cumulative impacts upon structural stability or the water environment in the local area?	Yes	See above.
Does report state that damage to surrounding buildings will be no worse than Burland Category 1?	Yes	
Are non-technical summaries provided?	Yes	BIA report, Section 1.0

4.0 DISCUSSION

4.1. The Basement Impact Assessment (BIA) was undertaken by Structure Workshop. The BIA has been reviewed and approved by Chartered Engineers (CEng MICE and MIStructE). The hydrogeological assessment should be undertaken by a professional holding CGeol qualification. However, the hydrogeological assessment presented in the BIA is accepted (as 4.6).

4.2. The application site relates to 10 Glenmore Road, NW3 4DB, which comprises a three storey plus basement, mid terraced Edwardian family dwelling located on the northern side of Glenmore Road. The application site is located within the Belsize Park Conservation Area. The proposed development comprises the deepening and extension of the basement for residential use. There will also be a rearrangement of the walls at ground floor level and small alterations to floor spaces above.

4.3. There are no listed or locally listed buildings on or within close vicinity of the site. It is understood that the adjacent properties also have basements to a similar depth and construction as the existing basement to 10 Glenmore Road.

4.4. Screening and Scoping assessments have been undertaken. Queries were raised in regards to the proximity to historic watercourses and differential depth of neighbouring foundations:

- The site is indicated to be within 100m of the historic River Tyburn. Although this has not been identified in the BIA it is accepted that the site investigation (as 4.5) has not identified associated Alluvial deposits which could impact stability and groundwater flow.

- Contrary to the Screening response, the proposed development will significantly increase the differential depth of foundations in relation to neighbouring structures, which required further assessment (as 4.10-4.11).

4.5. A site investigation has been undertaken, indicating Made Ground to a depth of c. 1.60m bgl. The London Clay Formation underlies the Made Ground and is proven to the bottom of the boreholes at 5.10m bgl. Eight foundation inspection pits were undertaken alongside the adjoining buildings, showing corbelled masonry over mass concrete strip footings at a depth of c. 0.55m below existing basement floor level and bearing into a soft to firm orangish brown silty clay.

4.6. No water inflows were encountered within the borehole undertaken which was found to be dry on completion of the site works. A water monitoring standpipe was installed within the borehole; however, it is understood that groundwater monitoring has not yet been undertaken but is proposed. The London Clay is designated as unproductive strata. Considering the ground investigation findings, it is accepted that there will be no impact to the wider hydrogeological environment.

4.7. The existing basement is to be deepened and extended to the rear of the building. The proposed basement floor level will be approximately 2.2m below ground level, with an excavation of between c. 1.5m (where the existing basement is to be deepened) and 2.7m (where the basement is to be extended). All existing footings around the basement perimeter are to be underpinned to facilitate the deepening. A new retaining wall will be formed in an underpinning sequence along the rear boundary of the extended basement.

4.8. A propped sheet pile wall was intended to be installed around the perimeter of the lightwell to resist earth pressures in the temporary case before the permanent retaining wall is cast against it. The previous version of the audit requested clarification regarding toe depth and intended installation methodology of the sheet pile. However, the proposal has been changed and it is now proposed to install a king post wall. The BIA confirmed that the wall will be constantly propped and that the existing lightwell will be lowered by circa 700mm such that extremely low movements can be expected. It also states that given the overall extremely limited movements from the small-scale work proposed, neighbouring properties will not be affected by the installation of the king post wall.

4.9. Geotechnical design parameters have been provided in accordance with the GSD Appendix G3. Outline bearing capacities are indicated in the site investigation report and the structural engineer confirmed the maximum proposed bearing stress beneath the basement to be 67kN/m^2, which is less than the calculated bearing capacity of 84kN/m^2. Geotechnical parameters for retaining wall have been included in the GMA report.

4.10. A Ground Movement Assessment (GMA) has been undertaken by GEA to demonstrate ground movements occurring to neighbouring properties are within the limits required. Analysis of both horizontal and vertical ground movements has been undertaken following CIRIA 760 guidance and the BIA states that damage occurring on neighbouring properties and nearby infrastructure will be within Category 1 of the Burland Scale.

4.11. Whilst the CIRIA approach is intended for embedded retaining walls, it is accepted that the predicted ground movements are within the range typically anticipated for underpinning techniques carried out with good control of workmanship.

4.12. A utility search indicates the presence of a combined Thames Water sewer running beneath Glenmore Road. The GMA considers the proposed development to not have a significant impact on the asset. Consultation with the asset owners with regard to asset protection agreements should be undertaken and asset protection criteria agreed, as required.

4.13. The BIA indicates that structural monitoring will be required during construction and that a project specific monitoring strategy will be written and agreed with the Party wall Surveyor at a

later stage, detailing lines of responsibility, monitoring trigger levels and appropriate potential mitigation measures.

4.14. It is accepted that the proposed basement will not lead to any significant change in impermeable site area, and that the proposal will not impact the hydrological environment. The site is within a critical drainage area. A final drainage design should be agreed with LBC and Thames Water in accordance with their policy requirements.

4.15. The BIA indicates that the property is not at risk of flooding. Notwithstanding this, the adjacent highway is indicated to be at low to medium risk of surface water flooding and the final design should incorporate standard flood risk mitigation measures.

5.0 CONCLUSIONS

5.1. Although the hydrogeological assessment should be undertaken by a Chartered Geologist, the hydrogeological assessment presented in the BIA is accepted.

5.2. The site investigation indicates the proposed basement will be founded in the London Clay.

5.3. Interpretative geotechnical parameters, including those for the retaining wall design, have been presented.

5.4. Outline structural information and a construction methodology have been presented. The proposal includes the installation of a king post wall to allow the deepening of the existing lightwell.

5.5. An indication of the anticipated structural loads and the bearing capacity adopted for design have been presented.

5.6. A Ground Movement Assessment (GMA) has been undertaken and demonstrates that ground movements and consequential damage to neighbouring properties will be within LBC's policy requirements.

5.7. The GMA considers the proposed development to not have a significant impact on a combined Thames Water sewer running beneath Glenmore Road. Consultation with the asset owners with regard to asset protection agreements should be undertaken and asset protection criteria agreed, as required.

5.8. There will be no impact to the wider hydrological environment. The site is within a critical drainage area. A final drainage design should be agreed with LBC and Thames Water in accordance with their policy requirements.

5.9. There will be no impacts to the wider hydrogeological environment.

5.10. The BIA indicates that the property is not at risk of flooding. Notwithstanding this, the final design should incorporate standard flood risk mitigation measures.

5.11. Considering the additional information presented, the BIA meets the criteria of CPG Basements.

Appendix 1: Residents' Consultation Comments

None (relevant to geology, hydrogeology or hydrology)

Appendix 2: Audit Query Tracker

Audit Query Tracker

Query No	Subject	Query	Status	Date closed out
1	Land Stability	Interpretative geotechnical parameters, including those for the retaining wall design, should be presented.	Closed – See paragraph 4.9	15/04/2020
2	Land Stability	An indication of the anticipated structural loads should be presented. The BIA should confirm the bearing capacity adopted for design and assessment purposes.	Closed - See paragraph 4.9	15/04/2020
3	Land Stability	A Ground Movement Assessment (GMA) is required to demonstrate that ground movements and consequential damage to neighbouring properties will be within LBC's policy requirements and to inform the movement monitoring strategy. The assessment should include any impacts associated with the proposed sheet piling.	Closed – See paragraph 4.8 – 4.13	15/04/2020
4	Land stability	The absence/presence of any underground utilities and infrastructure should be confirmed within the zone of influence of the works, with impacts assessed and asset protection agreements entered into with asset owners, as applicable.	Closed - See paragraph 4.12	15/04/2020

Appendix 3: Supplementary Supporting Information

RE: FW: 10 Glenmore Road 2019/4822/P

Matt Legg to: NicolaSimonini@campbellreith.com 06/04/2020 14:25
Cc: "Ben Walford", "Rachel White" , "Sam Riley"

6 attachments

19029.301.T1 DRAFT 20.03.27.pdf image001.png image004.png image006.jpg image001.png

image001.png

Nico,

There has been a slight revision to this in that this will now be formed of a king post wall. Please refer to Section D on the attached. Essentially this sacrificial wall is being installed to simply deepen the existing lightwell and will be constantly propped. The lightwell needs to be lowered by circa 700mm and so as there is an existing lightwell structure already present and the sacrificial wall is being placed behind that, extremely low movements can be expected, if any at all. Exact toe length will be determined at detail design but from a stability viewpoint, it will not need to extend much beyond the formation of the deepened lightwell. Given the overall extremely limited movements from the small-scale work proposed, we do not see an issue with the use of this system, and in any case any minimal movements will propagate towards the road rather than the neighbouring properties.

Trust the above answers you query.

Regards

Matt

Geotechnical & Environmental Associates
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Mob 07912099709
tel 01727 824666
matt.legg@gea-ltd.co.uk
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and Manchester tel 0161 209 3032

From: NicolaSimonini@campbellreith.com <NicolaSimonini@campbellreith.com>
Sent: 02 April 2020 11:43
To: Matt Legg <matt.legg@gea-ltd.co.uk>
Cc: Ben Walford <Ben@prestbury.co.uk>; Rachel White <RachelWhite@boyerplanning.co.uk>; Sam Riley <sr@structureworkshop.co.uk>
Subject: RE: FW: 10 Glenmore Road 2019/4822/P

Hi Matt,

Thanks for the clarification on the GMA. I have got the last question regarding the sheet piled wall which is proposed to be installed to allow for the excavation of the lightwell.
In section 4.8. of our previous audit we asked for the confirmation of sheet piles toe depth and intended installation methodology. Basically we would like you to (qualitatively) assess if the installation of the wall can cause structural stability concern for neighbouring properties. Could you please update your report to include this?

Thanks

Nico

From: "Matt Legg" <matt.legg@gea-ltd.co.uk>
To: "NicolaSimonini@campbellreith.com" <NicolaSimonini@campbellreith.com>
Cc: "Sam Riley" <sr@structureworkshop.co.uk>, "Rachel White" <RachelWhite@boyerplanning.co.uk>, "Ben Walford" <Ben@prestbury.co.uk>
Date: 31/03/2020 17:17
Subject: RE: FW: 10 Glenmore Road 2019/4822/P

Hi Nico,

I have attached the X-Disp input for ease but two excavations are simultaneously modelled to take account of the installation of the underpins (as requested) and the subsequent excavation phase. The first shown on page 3 represents the excavation phase. As you will see no vertical movement has been used in conjunction with the horizontal movement curve denoted as ‘Underpinning’. The underpinning curve, as stated in our report, is simply the movement curve for excavation in front of stiff wall in clay and was setup simply to allow ‘no vertical movement’ to be selected, as the vertical movements had been imported from P-Disp. Vertical and horizontal movement curves for ‘installation of planar diaphragm wall’ have been used to model the installation.

Trust the above further explains the approach, but if you need to discuss further please let me know.

Best Regards

Matt

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From: NicolaSimonini@campbellreith.com <NicolaSimonini@campbellreith.com>
Sent: 30 March 2020 12:09
To: Matt Legg <matt.legg@gea-ltd.co.uk>
Subject: RE: FW: 10 Glenmore Road 2019/4822/P

Hi Matt,

I have received and reviewed the updated ground movement assessment and have the following comments:

- I agree with importing vertical ground movements from PDisp into XDisp and sum them to wall installation movements to get total vertical movements as discussed on the phone
- However, it is not completely clear how the horizontal ground movements were calculated. From XDisp input I understand you used two curves (called 'Underpinning' and 'Installation of planar...') which seem to be both related to underpinning installation and not to excavation movements. Horizontal ground movements due to excavation should be included, could you please clarify on this?

Thanks

Nico

From: "Matt Legg" <matt.legg@gea-ltd.co.uk>

To: "NicolaSimonini@campbellreith.com" <NicolaSimonini@campbellreith.com>
Date: 17/03/2020 16:53
Subject: RE: FW: 10 Glenmore Road 2019/4822/P

Nicola,

By way of an introduction, I am the engineer that carried out the GMA for this site, which you have undertaken a review of. I was wondering if we could discuss the approach taken and also to clarify your comments. Are you available to discuss on the phone?

Many thanks in advance.

Regards

Matt

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From: NicolaSimonini@campbellreith.com <NicolaSimonini@campbellreith.com>
Sent: 10 March 2020 11:35
To: Sam Riley <sr@structureworkshop.co.uk>
Cc: alex.bushell@camden.gov.uk; camdenaudit@campbellreith.com; gary.bakall@camden.gov.uk; Planning <Planning@camden.gov.uk>; Rachel White <RachelWhite@boyerplanning.co.uk>
Subject: RE: FW: 10 Glenmore Road 2019/4822/P

Hi Sam,

Please see below the items we have just discussed on the phone:

- Undrained shear strength to be updated using an SPT correlation factors derived from the plasticity index of the clay (a widely recognised reference for this being 'Stroud & Butler - The Standard Penetration Test and the Engineering Properties of Glacial Materials - 1975', however other methods/references may be accepted). Bearing capacity values to be updated consequently. Structural engineer to compare the maximum allowable bearing capacity with the anticipated loading and confirm the structural stability of the proposed development.

- GMA to be amended according to the updated query tracker. Impact assessment on the sewer to be updated consequently.

Kind regards

Nicola Simonini
Project Engineer
CampbellReith

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From: "Sam Riley" <sr@structureworkshop.co.uk>
To: "NicolaSimonini@campbellreith.com" <NicolaSimonini@campbellreith.com>
Cc: "alex.bushell@camden.gov.uk" <alex.bushell@camden.gov.uk>, "camdenaudit@campbellreith.com" <camdenaudit@campbellreith.com>, "gary.bakall@camden.gov.uk" <gary.bakall@camden.gov.uk>, "Planning" <Planning@camden.gov.uk>, "Rachel White" <RachelWhite@boyerplanning.co.uk>
Date: 10/03/2020 08:12
Subject: RE: FW: 10 Glenmore Road 2019/4822/P

Good morning Nico,

With regard to query 2, would a value of 5.0 x SPT N value be acceptable to obtain an estimate of the undrained shear strength of the London Clay?

Regarding the method used to obtain the bearing capacity from the undrained shear strength, I have had the following response from the geotechnical engineer that provided the site investigation report:

We use the Burland and Burbridge method which applies a factor of safety of 3. It provides a guidance figure for the preliminary bearing capacity using shear strength readings (vane or trixaxial). It allows for a 1m wide foundation unaffected by groundwater and assuming a 25mm settlement which very roughly tends to equate to doubling the undrained shear strength of a clay soil.

Regarding queries 3 and 4 – please find attached updated ground movement assessment which

include the assessment of the Thames Water sewer as requested.

Please let me know if you have any comments. If you are able to come back to me today it would be appreciated.

Kind regards,

Sam Riley
MEng (Hons) CEng MIStructE

Associate

STRUCTURE WORKSHOP
4 Iliffe Yard, London SE17 3QA
020 7701 2616
[Suspicious URL detected]

From: NicolaSimonini@campbellreith.com <NicolaSimonini@campbellreith.com>
Sent: 03 March 2020 10:05
To: Sam Riley <sr@structureworkshop.co.uk>
Cc: alex.bushell@camden.gov.uk; camdenaudit@campbellreith.com; gary.bakall@camden.gov.uk; Planning <Planning@camden.gov.uk>; Rachel White <RachelWhite@boyerplanning.co.uk>
Subject: RE: FW: 10 Glenmore Road 2019/4822/P

Hi Sam,

Thanks for your email and the service survey,

Regarding query 2 we consider the value of the bearing capacity too high. We notice that the SPT N values have been multiplied by a factor of 6.5 to estimate undrained shear strength of the London Clay. According to published research and given the available information, a factor of 6.5 is considered too high and should be clarified. Also the method used to determine the bearing capacity from the undrained shear strength is unclear and should be presented. Please note that the investigation report states: '*We would note that all the figures provided should be used as a guide to soil bearing capacity but should be verified by a structural engineer with knowledge of the design criteria and loading* '.

Regarding query 3 and 4 please see the updated query tracker. Please note that in case the sewers are within the zone of influence of the basement, they should be included in the GMA and the applicant should demonstrate that liaison with the asset owner is ongoing.

Kind regards

Nicola Simonini
Project Engineer

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From: "Sam Riley" <sr@structureworkshop.co.uk>
To: "NicolaSimonini@campbellreith.com" <NicolaSimonini@campbellreith.com>, "Rachel White" <RachelWhite@boyerplanning.co.uk>
Cc: "alex.bushell@camden.gov.uk" <alex.bushell@camden.gov.uk>, "camdenaudit@campbellreith.com" <camdenaudit@campbellreith.com>, "gary.bakall@camden.gov.uk" <gary.bakall@camden.gov.uk>, "Planning" <Planning@camden.gov.uk>
Date: 03/03/2020 08:06
Subject: RE: FW: 10 Glenmore Road 2019/4822/P

Hi Nicola,

Please see additional information below in red. Apologies, I had though you had already received this.

Kind regards,

Sam Riley
MEng (Hons) CEng MIStructE

Associate

STRUCTURE WORKSHOP
4 Iliffe Yard, London SE17 3QA
020 7701 2616
[Suspicious URL detected]

From: NicolaSimonini@campbellreith.com <NicolaSimonini@campbellreith.com>
Sent: 02 March 2020 15:23
To: Rachel White <RachelWhite@boyerplanning.co.uk>
Cc: alex.bushell@camden.gov.uk; camdenaudit@campbellreith.com; gary.bakall@camden.gov.uk; Planning <Planning@camden.gov.uk>; Sam Riley <sr@structureworkshop.co.uk>
Subject: RE: FW: 10 Glenmore Road 2019/4822/P

Hi Rachel,

We have completed our review of the updated information you submitted as part of the BIA for 10 Glenmore Road. Unfortunately there are still some queries to be addressed as detailed in the updated query tracker attached.

In summary:

Query 1 - closed.

Query 2 - the BIA/GMA should indicate the value of the bearing capacity of the London Clay at formation level.
The bearing level is approximately 62.70m which is 3.10m below existing ground level. According to the site investigation report this corresponds to a bearing capacity of approximately 150kN/m^2.

Test Depth	Soil Type	SPT & Shear strength	Approximate Bearing Capacity
WS1 at 2.15m	CLAY (reworked?)	9 blows (52kPa)	100kN/m^2
WS1 at 3.15m	London Clay Fm	12 blows (78kPa)	150kN/m^2
WS1 at 3.50m	London Clay Fm	92kPa (triaxial test)	180kN/m^2
WS1 at 4.15m	London Clay Fm	19 blows (123.5kPa)	200+kN/m^2

Query 3 - the GMA should be amended.
The utilities survey is attached. Considering that the only utilities (sewer and water) are both beneath Glenmore Road (not the property), and that the GMA revealed that movement to even the adjacent properties is 'negligible'/'Burland Scale 0', is it necessary for the GMA to be updated?

Query 4 - A utility survey has not been presented and is requested.
Attached.

Please do not hesitate to contact me if you have any queries or wish to discuss.

Kind regards

Nicola Simonini
Project Engineer

CampbellReith
15 Bermondsey Square
London
SE1 3UN

Tel +44 (0)20 7340 1700
www.campbellreith.com

From: "Rachel White" <RachelWhite@boyerplanning.co.uk>
To: "NicolaSimonini@campbellreith.com" <NicolaSimonini@campbellreith.com>

Cc: "alex.bushell@camden.gov.uk" <alex.bushell@camden.gov.uk>, "gary.bakall@camden.gov.uk" <gary.bakall@camden.gov.uk>, "Planning" <Planning@camden.gov.uk>, "camdenaudit@campbellreith.com" <camdenaudit@campbellreith.com>, "Sam Riley" <sr@structureworkshop.co.uk>
Date: 28/02/2020 11:47
Subject: RE: FW: 10 Glenmore Road 2019/4822/P

Hi Nicola,

I hope you are well. I was wondering whether you have had any comment on the additional information that was sent over? We are keen to get a decision issued once all items have been confirmed on the BIA.

Alex/Gary, please can you advise who will be taking on this project in Charles' absence?

Many thanks

Rachel

Rachel White
Planner
Boyer
t: 0203 872 9871
From: NicolaSimonini@campbellreith.com <NicolaSimonini@campbellreith.com>
Sent: 18 February 2020 14:26
To: Rachel White <RachelWhite@boyerplanning.co.uk>
Cc: alex.bushell@camden.gov.uk; gary.bakall@camden.gov.uk; Planning <Planning@camden.gov.uk>; camdenaudit@campbellreith.com
Subject: Re: FW: 10 Glenmore Road 2019/4822/P

Hi Rachel,

I will be able to have a look at the ground movements assessment early next week and I will come back to you in case we need further clarification.

Kind regards

Nicola Simonini
Project Engineer

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SE1 3UN

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www.campbellreith.com

From: "Rachel White" <RachelWhite@boyerplanning.co.uk>

To: "alex.bushell@camden.gov.uk" <alex.bushell@camden.gov.uk>, "gary.bakall@camden.gov.uk" <gary.bakall@camden.gov.uk>, "Planning" <Planning@camden.gov.uk>
Cc: "nicolasimonini@campbellreith.com" <nicolasimonini@campbellreith.com>
Date: 18/02/2020 11:36
Subject: FW: 10 Glenmore Road 2019/4822/P

Dear Alex and Gary,

Please see email below sent to Charles Thuaire. In his absence, please can you review and respond as necessary?

Kind Regards,

Rachel

Rachel White
Planner

T 0203 872 9871
L linkedin.com/boyer
W boyerplanning.co.uk
A 24 Southwark Bridge Road, London, SE1 9HF

Boyer is proud to support Trussell

From: Rachel White
Sent: 18 February 2020 09:29
To: 'Thuaire, Charles' <Charles.Thuaire@camden.gov.uk>
Cc: 'nicolasimonini@campbellreith.com' <nicolasimonini@campbellreith.com>; Sam Riley <sr@structureworkshop.co.uk>
Subject: 10 Glenmore Road 2019/4822/P
Importance: High

Dear Charles and Nico,

I hope you are both well. Please find attached the ground movement assessment requested by Campbell Reith through the audit process. This has been reviewed by our engineers who confirm the content is acceptable.

Nico, I would be grateful if you could please review this and provide confirmation to Camden at the earliest convenience.

If you have any questions or wish to discuss further, please don't hesitate to get in touch,

Kind Regards,

Rachel

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[attachment "1058887-Asset Location Search-1028059.pdf" deleted by Nicola Simonini/CRH]

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[attachment "J20026 - Rep Issue 2 + Appendix.pdf" deleted by Nicola Simonini/CRH]

[attachment "image001.png" deleted by Nicola Simonini/CRH] [attachment "image004.png" deleted by Nicola Simonini/CRH] [attachment "image006.jpg" deleted by Nicola Simonini/CRH]

[attachment "image001.png" deleted by Nicola Simonini/CRH] [attachment "image004.png" deleted by Nicola Simonini/CRH] [attachment "image006.jpg" deleted by Nicola Simonini/CRH] [attachment "7. J20026 XDisp Input Data.pdf" deleted by Nicola Simonini/CRH]

19029 Glenmore Road - Updated GMA
Sam Riley to: NicolaSimonini@campbellreith.com 24/03/2020 12:43
Cc: "Ben Walford", "Rachel White", "Joe Tompkins", "Philip Wagenfeld"
History:
This message has been forwarded.

2 Attachments

J20026 - Rep Issue 3 + Appendix.pdf SI Report (0762) 10 Glenmore Road, London, NW3 4DB.pdf

Hi Nico,

I understand you have been in communication with Matt from GEA. Please find attached the updated GMA to incorporate your recent comments/discussions.

I also attach the updated SI report which includes for reduced shear strengths calculated using 4.8 x SPT N values as requested. The allowable bearing pressures have consequently also been reduced.

Finally, I can confirm that the maximum proposed bearing stress beneath the basement will be 67kN/m^2 (beneath the party walls, distributed over a 1.4m retaining wall toe length in the temporary case). This is less that the calculated bearing capacity of 84kN/m^2 beneath the Party walls (which is distributed over an existing footing width of approximately 1.0m).

I trust this information is sufficient for you to accept the basement impact assessment. Please let me know if there is anything further that requires clarification.

Kind regards,

Structure Workshop are currently working remotely due to the Coronavirus. If you need to get in touch then please call me directly on the following phone number 07581 452271.

Sam Riley
MEng (Hons) CEng MIStructE

Associate

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