

Basement Impact
Assessment Audit

Flat A 73 Redington Road,
London NW3 7RP

For
London Borough of Camden

Project No.
14006-80

Date
September 2024

Campbell Reith Hill LLP
15 Bermondsey Square
London
SE1 3UN

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

DOCUMENT HISTORY AND STATUS

Revision	Date	Purpose/ Status	File Ref	Author	Check	Review
D1	11/09/2024	For comment	SSkb14006-80- 110924- Flat A 73 Redington Road_D1	SS	KB	KB

This document has been prepared in accordance with the scope of Campbell Reith Hill LLP's (CampbellReith) appointment with its client and is subject to the terms of the appointment. It is addressed to and for the sole use and reliance of CampbellReith's client. CampbellReith accepts no liability for any use of this document other than by its client and only for the purposes, stated in the document, for which it was prepared and provided. No person other than the client may copy (in whole or in part) use or rely on the contents of this document, without the prior written permission of Campbell Reith Hill LLP. Any advice, opinions, or recommendations within this document should be read and relied upon only in the context of the document as a whole. The contents of this document are not to be construed as providing legal, business or tax advice or opinion.

© Campbell Reith Hill LLP 2024

Document Details

Last Saved	11/09/2024 11:57
Author	Sam Savery, BSc MSc CGeol FGS
Project Partner	E M Brown, BSc MSc CGeol FGS
Project Number	14006-80
Project Name	Basement Impact Assessment Audit
Revision	D1
Planning Reference	2024/0958/P
File Ref	SSkb14006-80-110924- Flat A 73 Redington Road_D1.docx

CONTENTS

1.0	NON-TECHNICAL SUMMARY	4
2.0	INTRODUCTION.....	5
3.0	BASEMENT IMPACT ASSESSMENT AUDIT CHECK LIST	7
4.0	DISCUSSION	10
5.0	CONCLUSIONS.....	12

APPENDICES

Appendix 1 Consultation Responses

Appendix 2 Audit Query Tracker

Appendix 3 Supplementary Supporting Documents

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 Flat A 73 Redington Road, London NW3 7RP (planning reference 2024/0958/P). The basement is considered to fall within Category A 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 carried out by individuals who hold the qualifications required by CPG: Basements.
- 1.5 Basement proposals involve lowering the floor of the existing lower ground floor level by c. 0.60m depth and extending it by 2.00m to the east to open up an existing void under the property. The depth of the current foundations has been proven by site investigation and no underpinning works are required.
- 1.6 Due to the limited depth of excavation, it is unlikely that the ground water table will be encountered during basement foundation excavation.
- 1.7 The BIA demonstrates that the proposed development will not cause adverse impacts relating to land stability, groundwater and surface water flow, and is at very low risk of flooding.
- 1.8 The BIA states ground movements caused by the basement construction will be minimal and will be contained within the building footprint due to the excavations not extending below the existing foundation depth. As such, it is accepted that there will be no impacts to neighbouring properties or infrastructure.
- 1.9 It is confirmed that the BIA complies with the requirements of CPG: Basements and the Principles for Audit set out in the Basement Impact Assessment (BIA) Audit Service Terms of Reference & Audit Process.

2.0 INTRODUCTION

2.1 CampbellReith was instructed by London Borough of Camden (LBC) on 15th August 2024 to carry out a Category A audit on the Basement Impact Assessment (BIA) submitted as part of the Planning Submission documentation for 73 Flat A Redington Road, London NW3 7RP and reference 2024/0958/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 (CPG): Basements. January 2021.
- Guidance for Subterranean Development (GSD). Issue 01. November 2010. Ove Arup & Partners.
- Redington and Frognal Neighbourhood Plan

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 of lower ground basement to create a lower ground floor extension and associated works".

2.6 The Audit Instruction confirmed 73 Flat A Redington Road, London NW3 7RP was involved, or was a neighbour to, listed buildings.

2.7 CampbellReith accessed LBC's Planning Portal on 21st August 2024 and gained access to the following relevant documents for audit purposes:

- Basement Impact Assessment (BIA) by Milvum Engineering Services, Ref. MES/2407/DMAG232, Rev. 02, dated July 2024.
- Trial Pit records by Milvum, included in Appendix 3 of this audit report.
- Flood Risk Assessment (FRA) by Davies Maguire, Ref. DMAG-2409-FRA, Rev. P02, dated 24th July 2004.

- Structural Method Statement (SMS) by Davies Maguire, Ref. DMAG-24-09-SMS, Rev. P01, dated 25th July 2024.
- Redington Frogna! Neighbourhood Forum Letter by Davies Macguire, Ref. Application 2024/0958/P: 73A Redington Road – objection, dated 26th June 2024.
- Planning consultation responses.

3.0 BASEMENT IMPACT ASSESSMENT AUDIT CHECK LIST

Item	Yes/No/NA	Comment
Are BIA Author(s) credentials satisfactory?	Yes	BIA Section 2.2
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	
Are suitable plan/maps included?	Yes	BIA Appendix 2 FRA Section 4
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 4.2
Hydrogeology Screening: Have appropriate data sources been consulted? Is justification provided for 'No' answers?	Yes	BIA Section 4.1
Hydrology Screening: Have appropriate data sources been consulted? Is justification provided for 'No' answers?	Yes	BIA Section 4.3
Is a conceptual model presented?	Yes	BIA Section 6.2
Land Stability Scoping Provided? Is scoping consistent with screening outcome?	Yes	BIA Section 5.1

Item	Yes/No/NA	Comment
Hydrogeology Scoping Provided? Is scoping consistent with screening outcome?	Yes	BIA Section 5.2
Hydrology Scoping Provided? Is scoping consistent with screening outcome?	Yes	BIA Section 5.3
Is factual ground investigation data provided?	Yes	BIA Section 6.0
Is monitoring data presented?	No	
Is the ground investigation informed by a desk study?	Yes	BIA Section 3.0
Has a site walkover been undertaken?	Yes	
Is the presence/absence of adjacent or nearby basements confirmed?	No	
Is a geotechnical interpretation presented?	Yes	BIA Section 6.0
Does the geotechnical interpretation include information on retaining wall design?	No	However, the assessment is deemed suitably conservative.
Are reports on other investigations required by screening and scoping presented?	Yes	Flood Risk Assessment
Are the baseline conditions described, based on the GSD?	Yes	
Do the baseline conditions consider adjacent or nearby basements?	No	
Is an Impact Assessment provided?	Yes	BIA Section 7.0
Are estimates of ground movement and structural impact presented?	N/A	

Item	Yes/No/NA	Comment
Is the Impact Assessment appropriate to the matters identified by screening and scoping?	Yes	
Has the need for mitigation been considered and are appropriate mitigation methods incorporated in the scheme?	N/A	
Has the need for monitoring during construction been considered?	N/A	
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?	Yes	
Has the scheme avoided adversely affecting drainage and run-off or causing other damage to the water environment?	Yes	BIA Sections 7.2 & 7.3
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 1?	N/A	
Are non-technical summaries provided?	Yes	BIA Section 1.0

4.0 DISCUSSION

- 4.1 The Basement Impact Assessment (BIA) has been carried out by engineering consultants Milvum Engineering Services and the individuals concerned in its production have suitable qualifications.
- 4.2 The Structural Strategy Report (SMS) has similarly been carried out by a well-known firm of engineering consultants, Davies Maguire. The author and reviewer are both chartered structural engineers.
- 4.3 The LBC Instruction to proceed with the audit states that the basement proposal is not involved with a listed building or is located adjacent to listed buildings. The site is within the Redington and Frognaal Neighbourhood Plan area.
- 4.4 The proposed basement consists of the extension and deepening of the existing lower ground floor. This involves increasing the depth by 0.60m and a c. 2.00m extension to the east to open up an existing void under the property.
- 4.5 The BIA has been informed by a desk study and site-specific ground investigation including 5 No. foundation exposure trial pits. The investigation shows the ground conditions at the site comprise Made Ground to <1.15m below ground level (bgl), below which lies the Claygate Member to the maximum depth of investigation of 1.25m bgl. A review of the BGS records within the BIA suggests the London Clay Formation is present c. 11.00m below existing foundation level.
- 4.6 The foundation exposure pits indicate the existing foundations extend c. 0.45m lower than the proposed new basement slab level. As such, no underpinning of the existing foundations is required. The foundation exposure pit logs and photographs are included in Appendix 3 of this audit.
- 4.7 The Subterranean (Groundwater) Flow Screening Assessment identifies the Claygate Member is a designated Secondary (A) Aquifer. No seepage or standing groundwater was recorded in any of the foundation exposure pits and the soils are described as generally cohesive and of low permeability.
- 4.8 Groundwater Screening identifies a spring line and a historical tributary of the River Westbourne mapped within close proximity to the site. No evidence of these water features was observed during the investigation and the BIA states the low permeability cohesive soil at formation level is not capable of supporting groundwater flow. It is accepted the basement will not impact groundwater flow of the wider area.
- 4.9 The Slope Stability Screening Assessment identifies the site is in a wider hillside setting with slope angles between 5-7° and more, however there is no change to the existing foundations or retaining walls that could impact the slopes. It is accepted that there are no slope stability concerns regarding the proposed development.

- 4.10 Screening identifies potential for shrink swell subsidence although there were no observations of any subsidence noted during the site investigation, which the BIA identifies as suggesting that the performance of the existing foundation is adequate. The basement proposals use the existing foundations therefore it is accepted the potential for shrink swell movements to impact the host building is unlikely.
- 4.11 Surface Water and Flooding Screening Assessment confirms there will be no change in impermeable site area and drainage will remain as existing. The BIA shows there is a low risk of flooding to the proposed development and this is supported by a Flood Risk Assessment (FRA) for the site. The FRA includes an assessment of possible SuDS measures that could be implemented at the site to provide betterment to the existing off-site sewer discharge. It is accepted that the basement will not impact the wider hydrological environment.
- 4.12 The BIA states ground movements caused by the excavation and construction of the proposed development will be minimal. A quantitative ground movement assessment is not required.

5.0 CONCLUSIONS

- 5.1 The BIA has been carried out by individuals who hold the qualifications required by CPG: Basements.
- 5.2 Proposals involve lowering the existing lower ground floor by 0.60m and extending to the east by c. 2.00m to open up an existing void under the property. The excavation will not extend deeper than the existing foundations therefore no underpinning is required.
- 5.3 The BIA has confirmed that the proposed basement will be founded within the Claygate Member.
- 5.4 It is unlikely that the ground water table will be encountered during basement foundation excavation because the development does not require deepening of the existing foundations.
- 5.5 It is accepted that the development will not impact on the wider hydrology of the area and is not in an area subject to flooding.
- 5.6 It is accepted that the development will not impact the stability of the surrounding land.
- 5.7 The BIA states ground movements caused by the excavation and construction of the proposed development will be minimal and will be contained within the existing foundation footprint. As such, there will be no impacts to neighbouring properties or infrastructure.
- 5.8 It is confirmed that the BIA complies with the requirements of CPG: Basements and the Principles for Audit set out in the Basement Impact Assessment (BIA) Audit Service Terms of Reference & Audit Process.

Basement Impact Assessment Audit
Flat A 73 Redington Road, London NW3 7RP

CampbellReith
consulting engineers

Appendix 1

Consultation Responses

Residents' Consultation Comments

Surname	Address	Date	Issue raised	Response
Redington Frognal Neighbourhood Forum	-	26 th June 2024	Site is near the lost Boundary Stream Pond and Redington Frognal spring line	Paragraph 4.8
			SuDS measures	Paragraph 4.11

Appendix 2

Audit Query Tracker

None

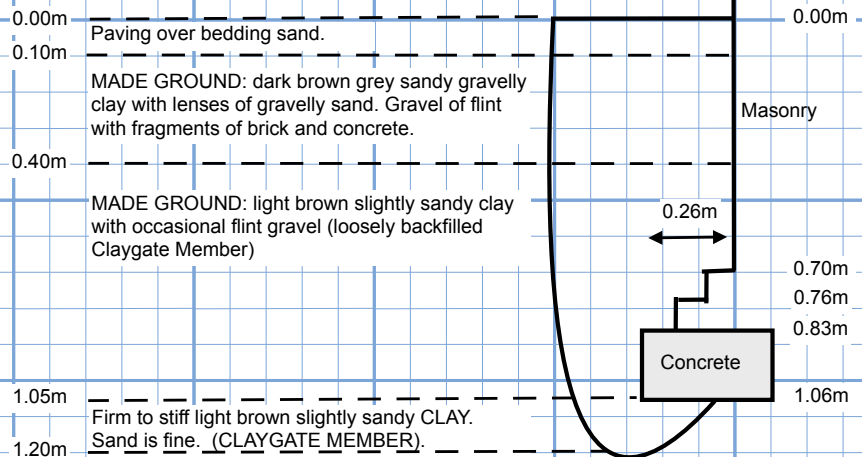
Basement Impact Assessment Audit
Flat A 73 Redington Road, London NW3 7RP

CampbellReith
consulting engineers

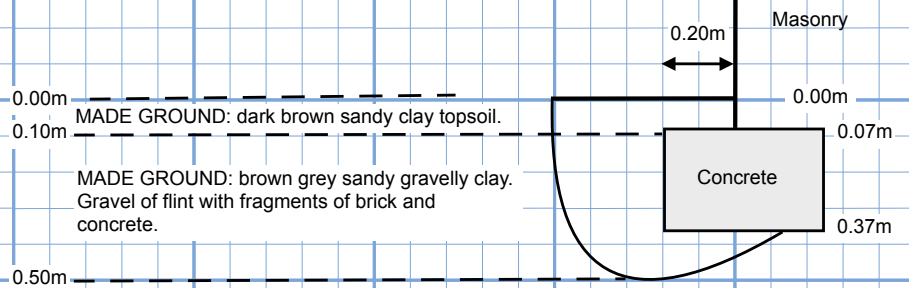
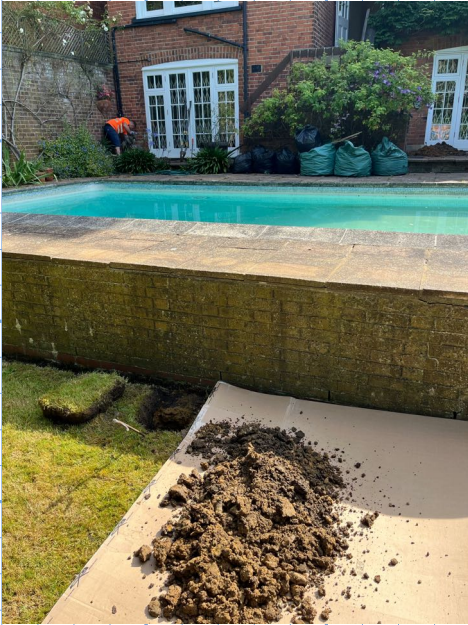
Appendix 3

Supplementary Supporting Documents

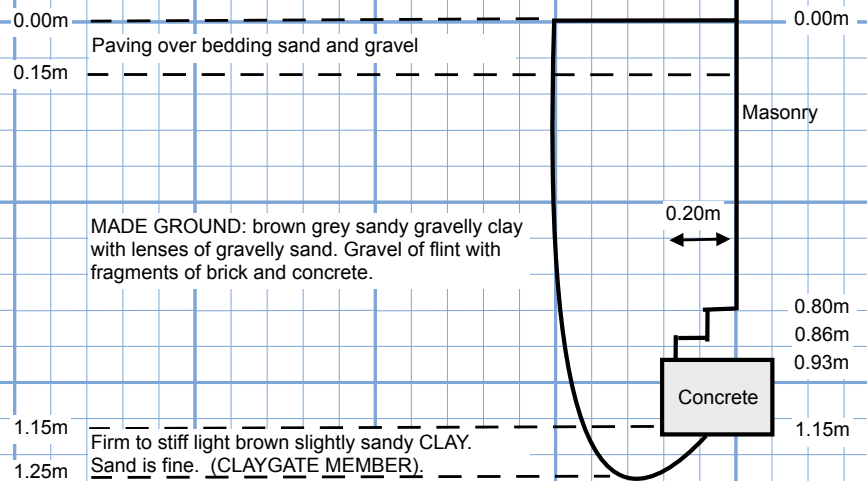
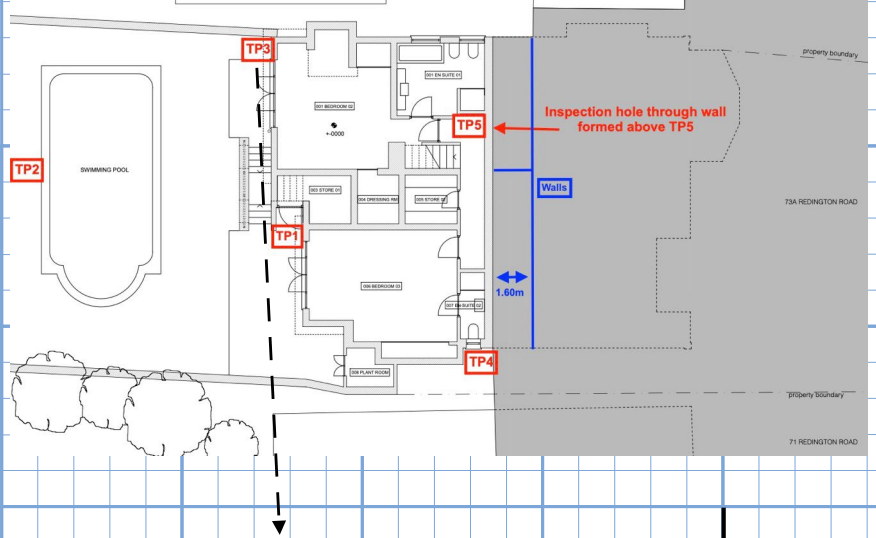
Trial Pit Records



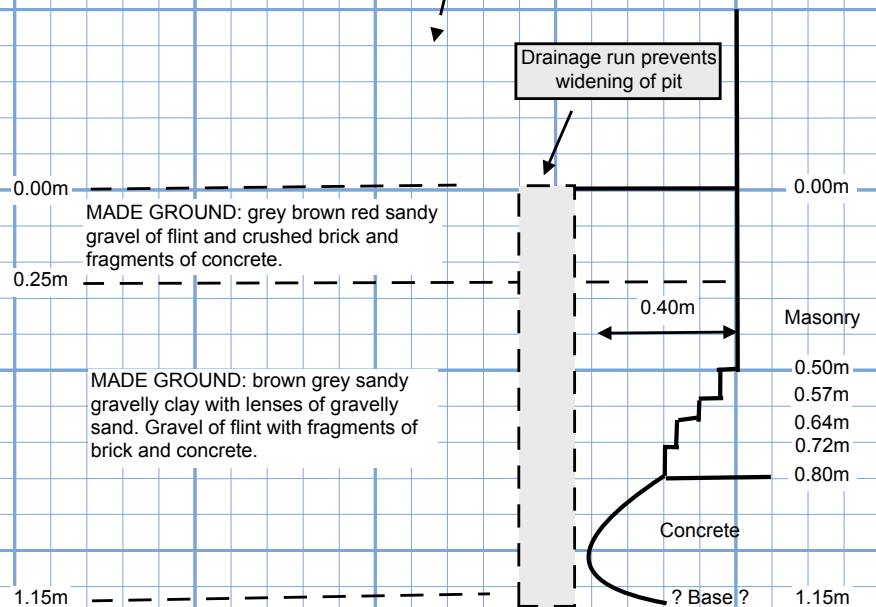
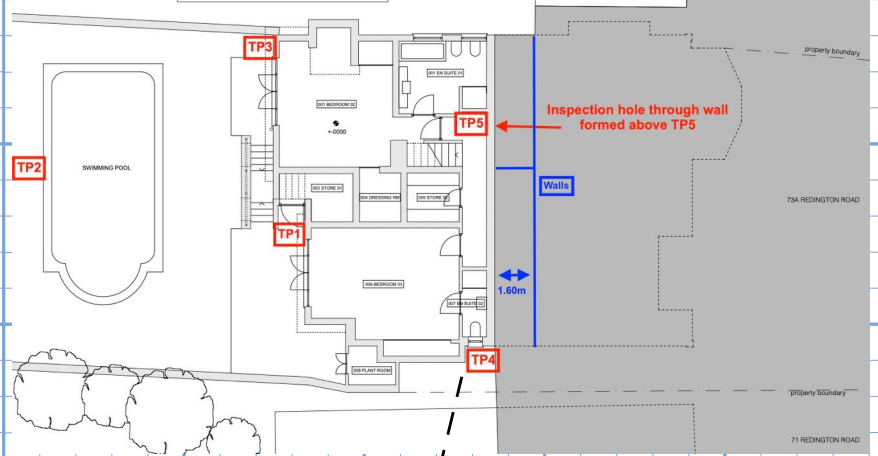
Foundation Details			
Structure	Depth (m bgl)	Projection (m)	Total Projection (m)
Corbel 1	0.70	0.07	0.07
Corbel 2	0.76	0.07	0.14
Top Concrete	0.83	0.12	0.26
Base Concrete	1.06	0.12	0.26



Foundation Details			
Structure	Depth (m bgl)	Projection (m)	Total Projection (m)
Top Concrete	0.07	0.20	0.20
Base Concrete	0.37	0.20	0.20



Foundation Details			
Structure	Depth (m bgl)	Projection (m)	Total Projection (m)
Corbel 1	0.80	0.07	0.07
Corbel 2	0.86	0.07	0.14
Top Concrete	0.93	0.06	0.20
Base Concrete	1.15	0.06	0.20

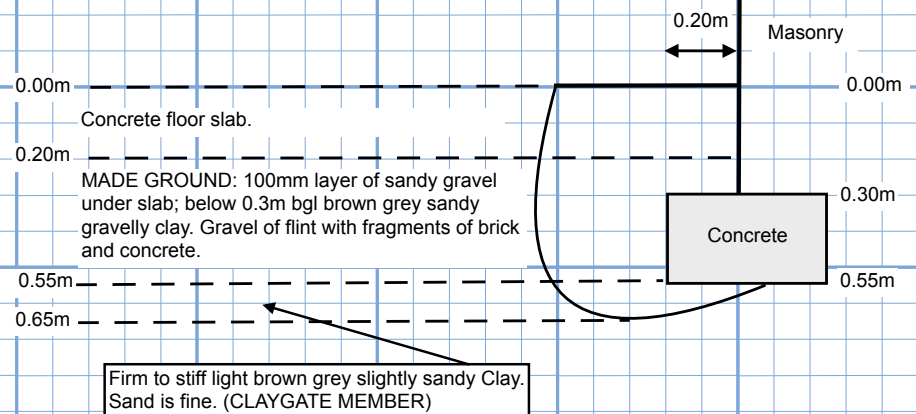
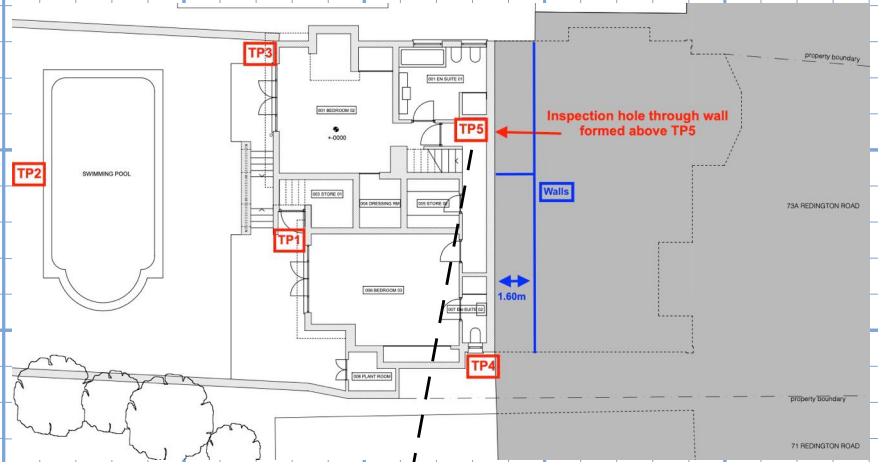


Foundation Details

Structure	Depth (m bgl)	Projection (m)	Total Projection (m)
Corbel 1	0.50	0.05	0.05
Corbel 2	0.57	0.05	0.10
Corbel 3	0.64	0.05	0.15
Corbel 4	0.72	0.05	0.20
Top Concrete	0.80	0.05	0.25
Base Concrete	>1.15	0.15	0.40

Base of concrete footing not proven, >1.15m bgl
Width of pit constrained by drainage run along southern site boundary.

View North - behind existing corridor wall



View South - beyond existing corridor wall



Foundation Details			
Structure	Depth (m bgl)	Projection (m)	Total Projection (m)
Top Concrete	0.30	0.20	0.20
Base Concrete	0.55	0.20	0.20

Inspection hole knocked through rear corridor wall above TP5 - same height basement void beyond to next cross wall, approximately 1.60m in width. Mounded soil and concrete against cross wall.

Beyond crosswall to front of property void space below ground floor visible ranging from 2.00m height to 0.50m height approximately.

London

15 Bermondsey Square
London
SE1 3UN

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

Bristol

Unit 5.03
HERE
470 Bath Road
Bristol BS4 3AP

T: +44 (0)117 916 1066
E: bristol@campbellreith.com

Manchester

10 Chapel Walks
Manchester
M2 1HL

T: +44 (0)161 819 3060
E: manchester@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: 15 Bermondsey Square, London, SE1 3UN
VAT No 974 8892 43