BASEMENT IMPACT ASSESSMENT

FOR FLAT 1, 253 GOLDHURST TERRACE, LONDON, NW6 3EP

DOCUMENT NO: C3000-R1-REV-B

PREPARED BY

Nimbus
ENGINEERING CONSULTANTS

Contents

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1. SITE DETAILS

Site Name	Flat 1, 253 Goldhurst Terrace
Site Address	Flat 1, 253 Goldhurst Terrace, London, NW6 3EP
Purpose of Development	Residential
Existing Land Use	Brownfield
OS NGR	525815E, 184020N
County	Greater London
Country	England
Local Planning Authority	London Borough of Camden

1.1 Development Proposals

A set of drawings showing the existing and proposed site layouts are included in Appendix A. These show that the proposals are for a basement extension.

1.2 Geology of The Area

According to the British Geological Survey, the superficial deposits at the site are unknown, as shown in Figure 1, below. The bedrock at the area is of the London Clay Formation, shown in Figure 2, below.

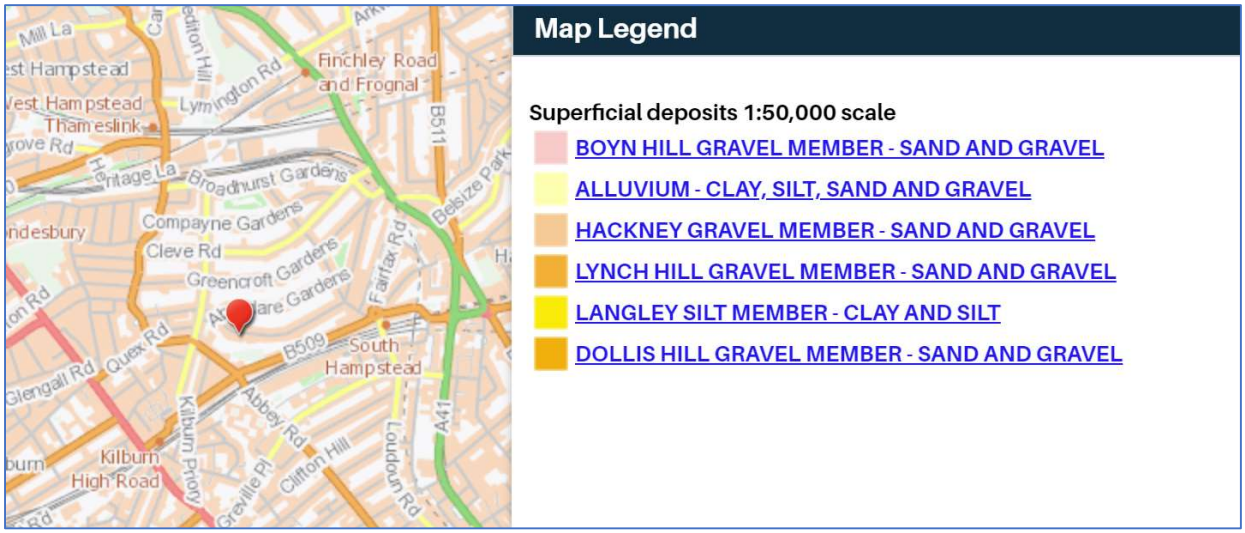


Figure 1- Superficial deposits at the site. (Source: British Geological Society Website (contains British Geological Survey materials © NERC2023)).

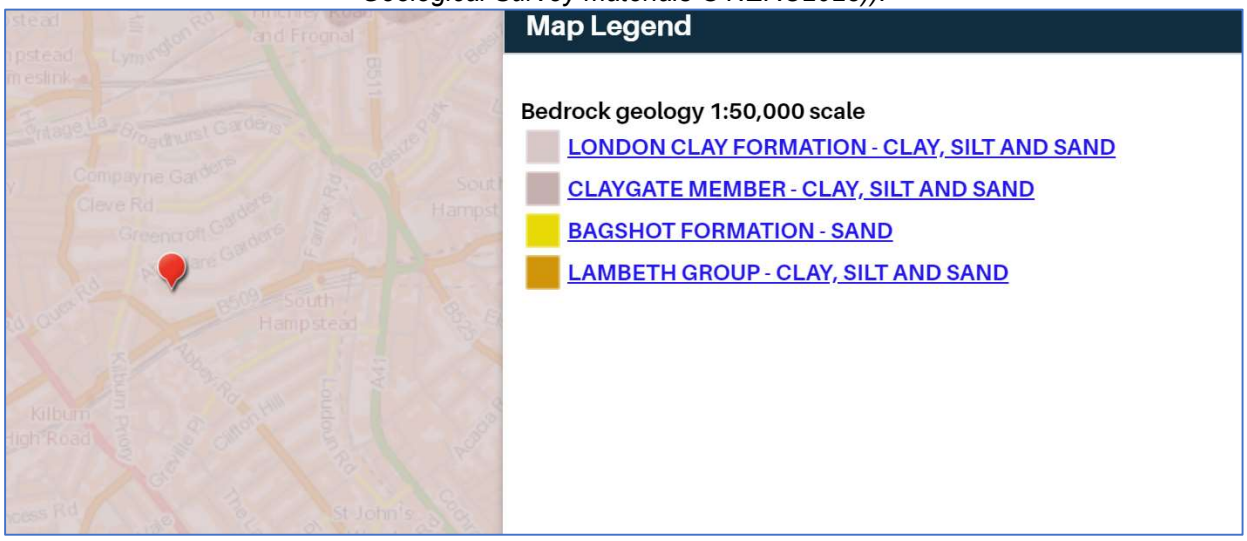


Figure 2 - Bedrock at the site. (Source: British Geological Society Website (contains British Geological Survey materials © NERC2023)).

Historic boreholes within the vicinity of the site were consulted in order to determine groundwater levels within the vicinity of the site. The location of these boreholes can be found in figure 3 below, and the results of boreholes can be found in Appendix B.

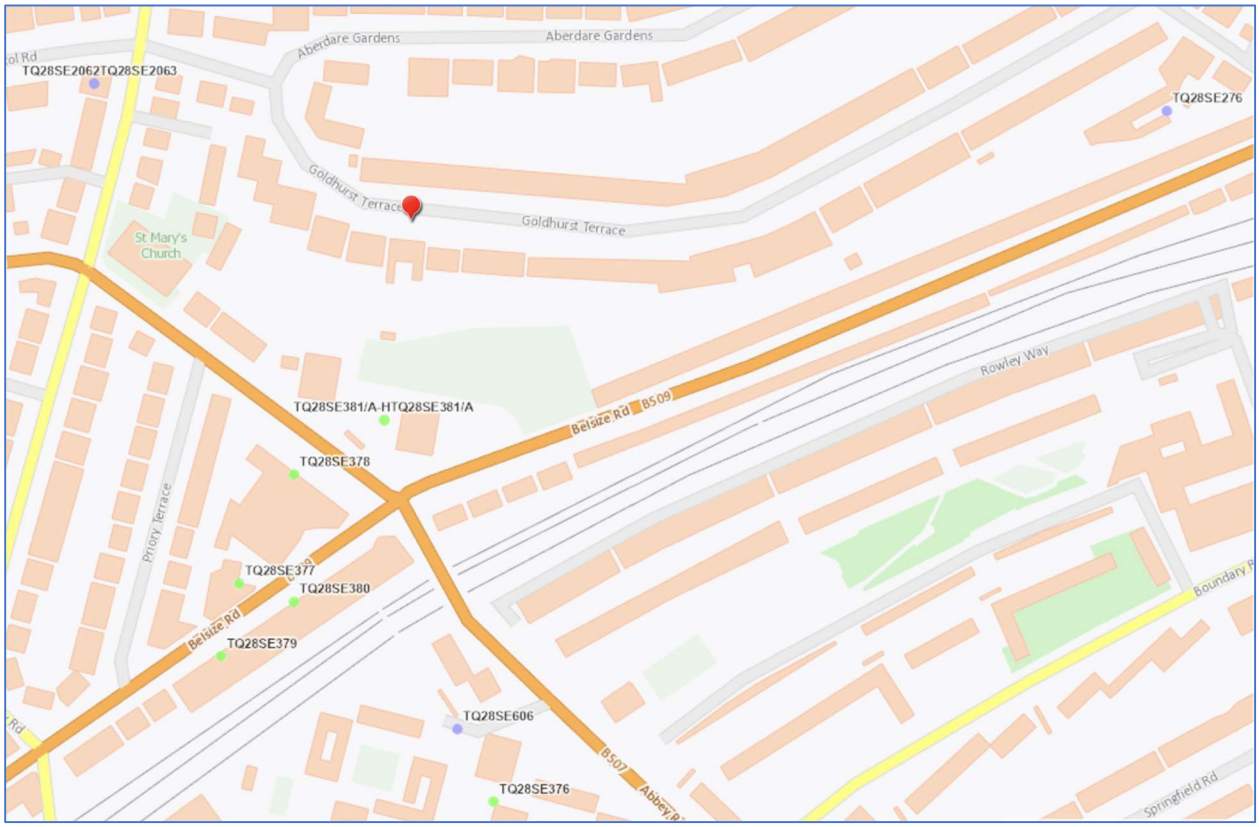


Figure 3 - Historic Boreholes at the site. (Source: British Geological Society Website (Contains British Geological Survey materials © URKI [2023]. Base mapping is provided by ESRI)).

The results of these historic boreholes show that no groundwater was encountered, and the Groundwater vulnerability MAGIC maps from DEFRA shown overleaf, also show the site to be in an area of unproductive strata, with a soluble rock risk.

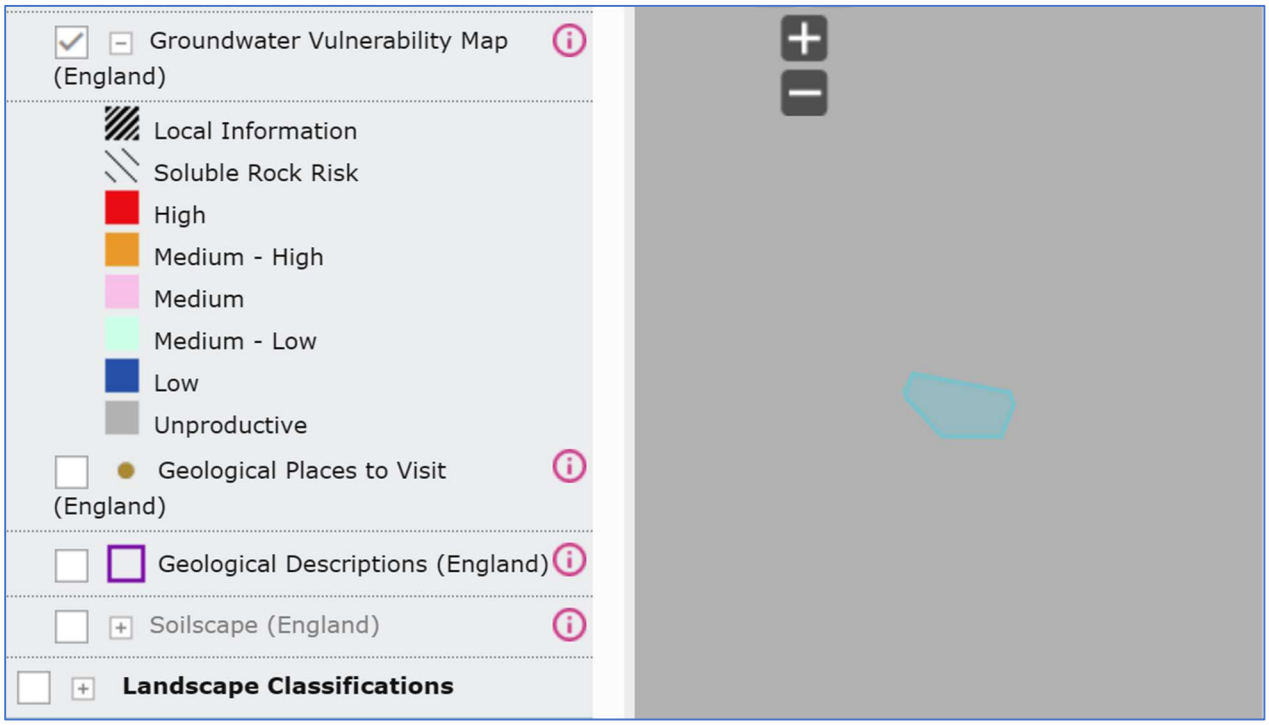


Figure 4 – Groundwater Vulnerability Map – Magic Maps (DEFRA)

2. FLOOD RISK ASSESSMENT

The possible causes of flooding set out in NPPF's technical guidance are considered in this section in relation to the flood risk to the site itself and the effects of the development of the site on flood risk elsewhere.

2.1 Fluvial or Tidal Flooding

The Environment Agency's Flood Map for Planning (Rivers and Sea), shown below, indicates the site is in Flood Zone 1, and not at risk of flooding from rivers or the sea.

The site is also not at risk of tidal flooding, this can also be confirmed by the Environment Agency's Flood map, below.

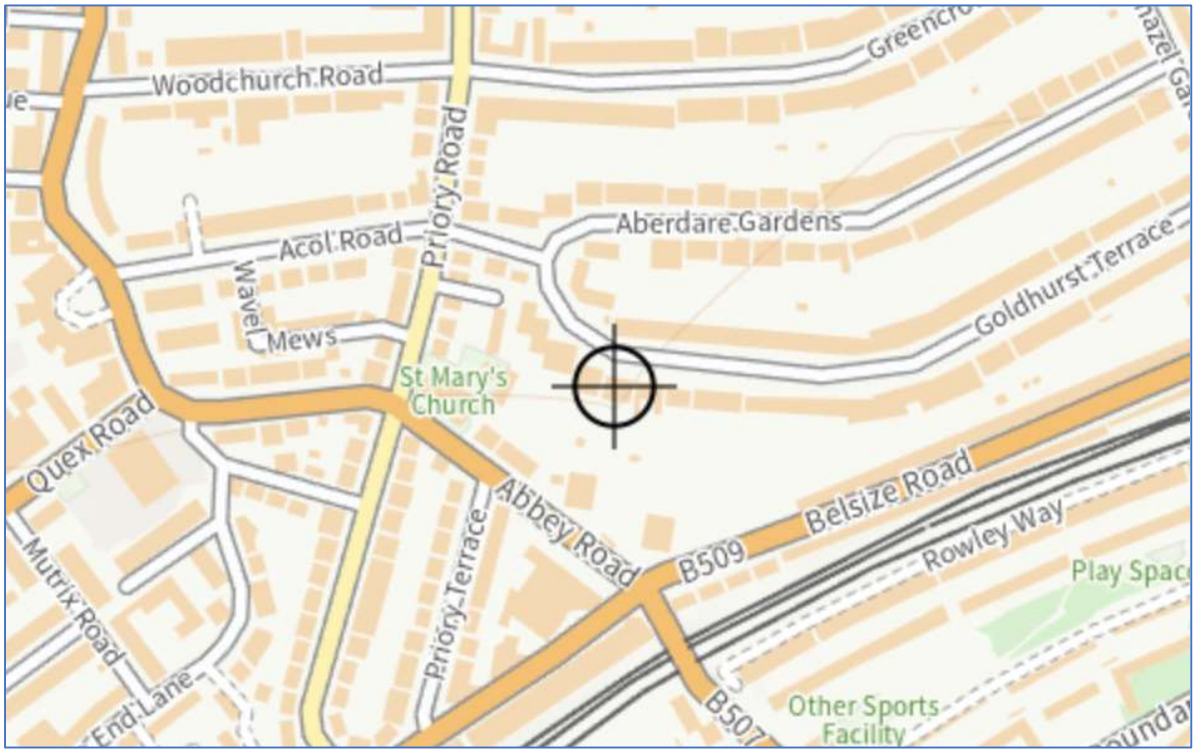


Figure 5 – Environment Agency Flood Map (from Rivers and the Sea) for the proposed development

2.2 Flooding from Land (Overland Flow)

The proposed development site is not at risk of surface water flooding, this can be confirmed by the Environment Agency's Flood map shown below.

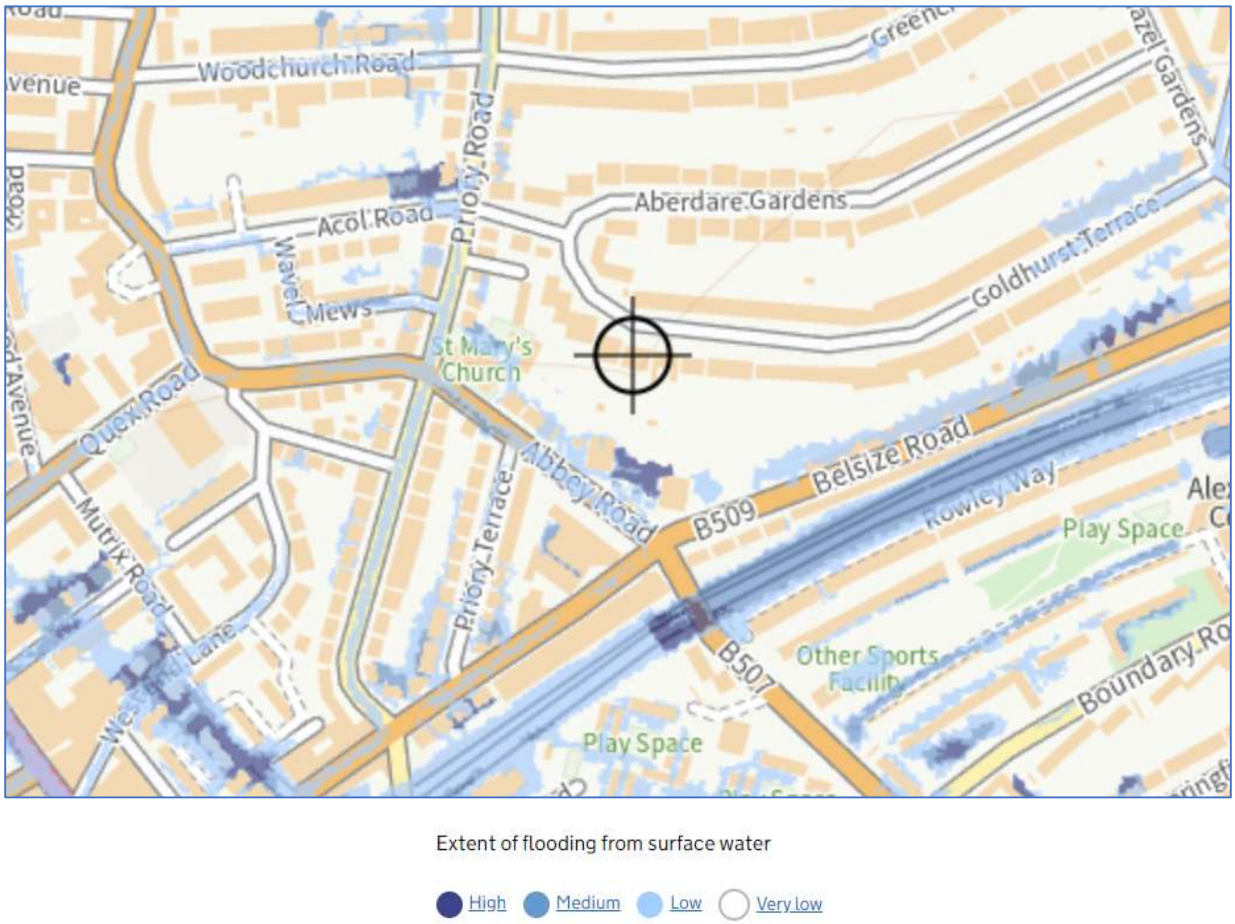


Figure 6 – Environment Agency Flood Map (from surface water) for the proposed development.

2.3 Flooding from Groundwater

We have consulted historic boreholes at the site and have also consulted the DEFRA Magic Maps and both show that the groundwater is very low at this site and there is no risk of groundwater flooding.

Furthermore, we have consulted the Camden Borough Council, Level 1, Strategic Flood Risk Assessment's Geo Flood map, as shown in figure 7 overleaf, and this shows the proposed development site to be in an area with no risk of groundwater flooding, therefore there will be no risk of groundwater flooding to this proposed basement.

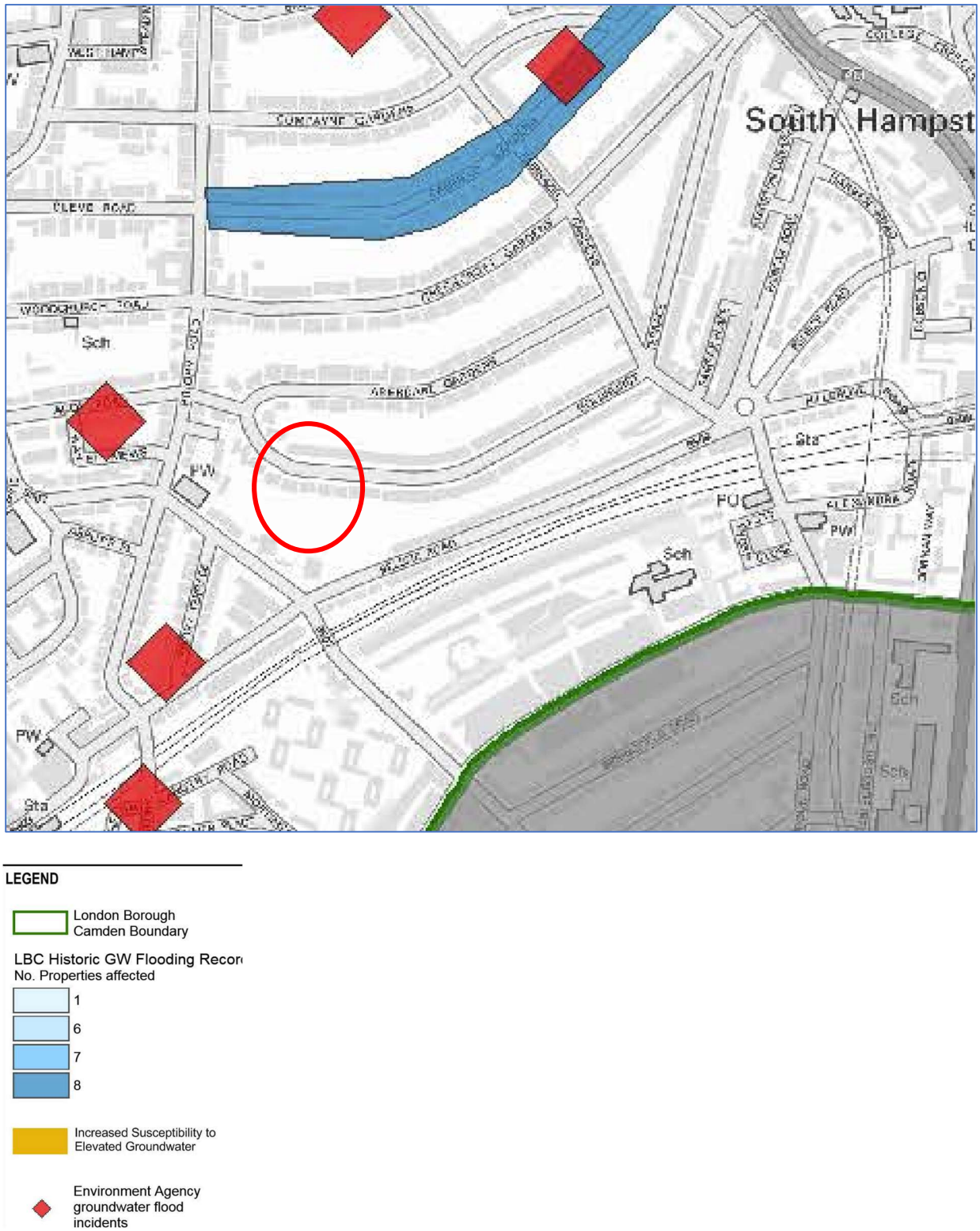


Figure 7 – Increased Susceptibility to Elevated Groundwater Map – Extracted from London Borough of Camden Level 1 Strategic Flood Risk Assessment Report

The client will undertake long term groundwater monitoring to ascertain the depth of any standing groundwater, and also provide a waterproofing membrane to ensure that any perched water has been dealt with and therefore the basement will be waterproof and will be designed as a watertight element. It should be noted that as the groundwater levels will be below the basement level, that the basement structure will not be adversely affected, and other than the waterproofing membrane, no other mitigation measures are required. As it is that the soils at likely foundation/basement depth will deteriorate rapidly in the prolonged presence of water, although there will be no groundwater ingress, other than the unlikely possibility of perched water, a waterproof membrane such as delta membrane or equivalent has been proposed. Consequently, a blinding layer of lean-mix concrete will be applied to all excavations if continuous working cannot be achieved. Fixtures and fittings for the basement will be located to ensure that if any flood water from perched water, does enter the building, the impact of floodwater on the property will be minimal.

2.4 Flooding from Sewers

There have been 8 incidents of sewer flooding, within the vicinity of the site, this is confirmed by the SFRA report.

2.5 Flooding from Reservoirs, Canals, or Other Artificial Sources

The Environment Agency's Flood map shown below, shows the site not to be at risk of reservoir flooding.

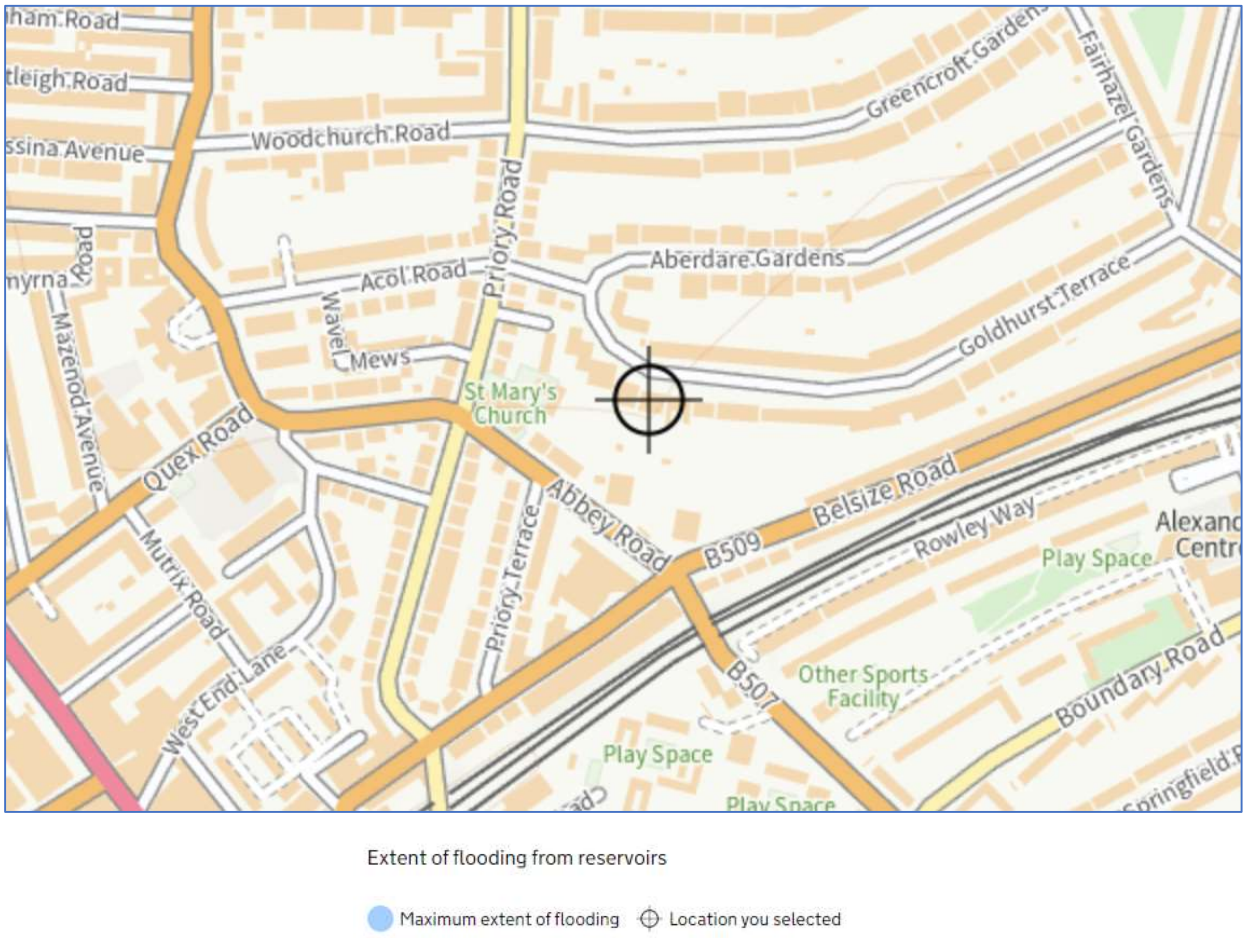
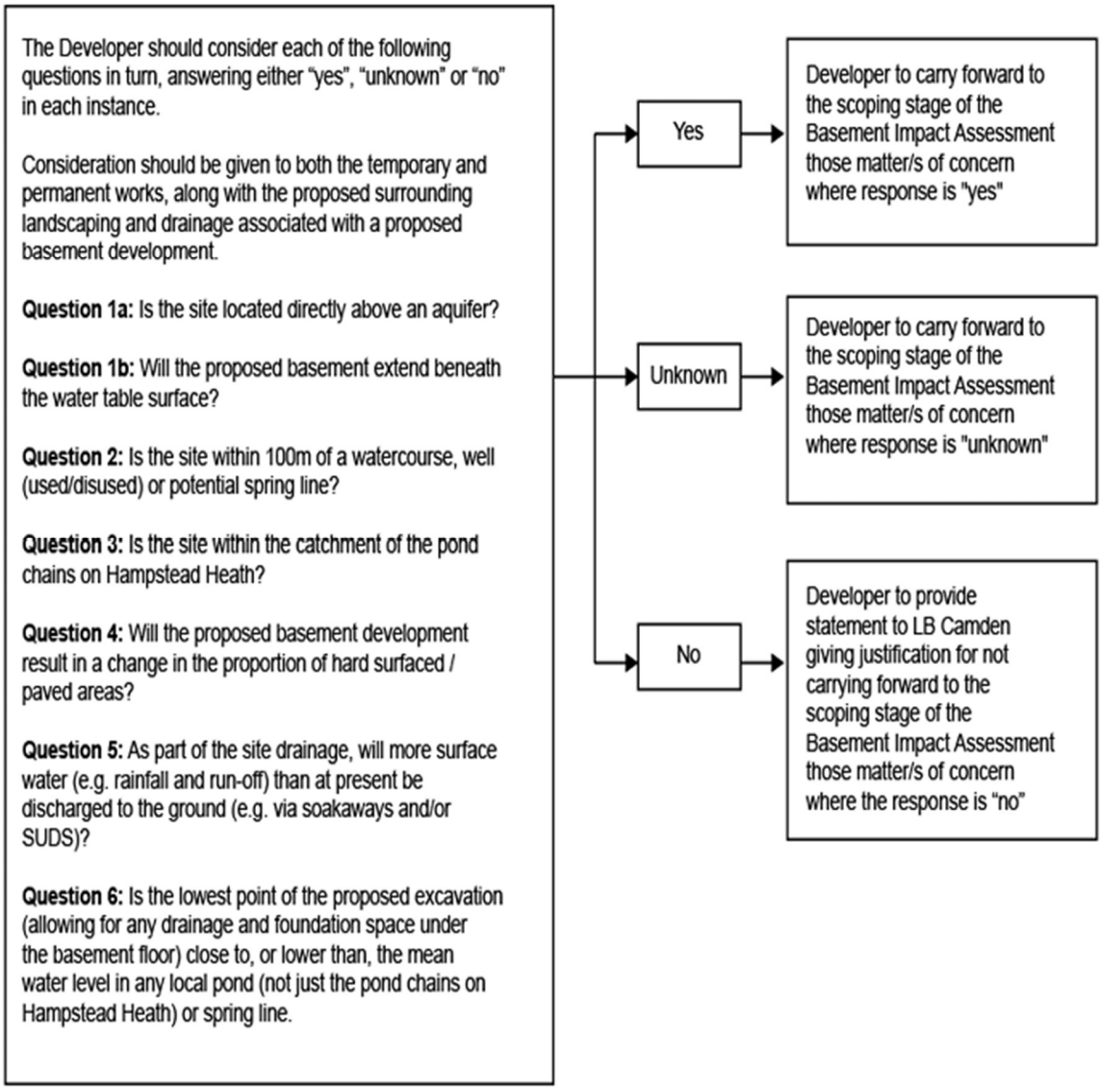


Figure 8 – Environment Agency Flood Map (from reservoirs) for the proposed development

3. GROUNDWATER FLOW SCREENING CHART

In line with the requirements of Camden's CPG Basements document:



The answers to the above are as follows:

Q1 – No

Q2 – No

Q3 – No

Q4 – No

Q5 – No

Q6- No

Therefore as per the results of the above, therefore we are justified to not carrying forward to the scoping stage of the Basement Impact Assessment.

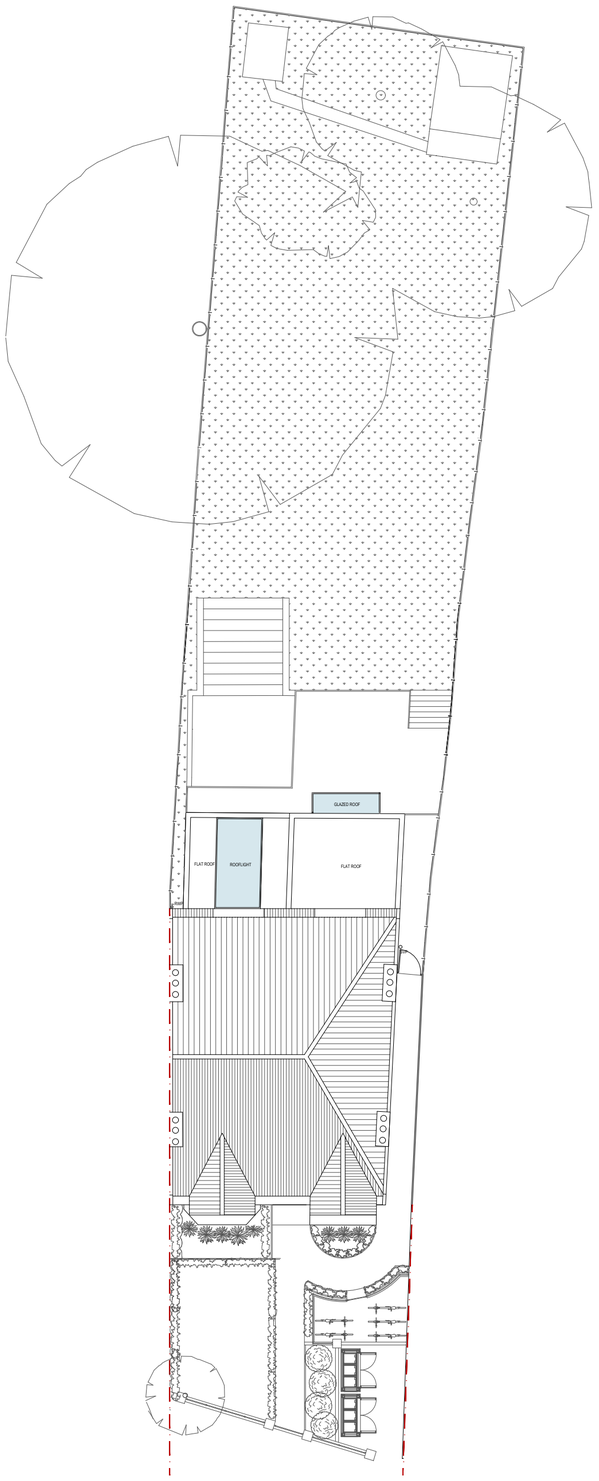
4. SUMMARY AND CONCLUSIONS

The site is at a very low risk from flooding from groundwater, tidal, fluvial, surface water, and reservoir flooding, and although there have been instances of sewer flooding within the vicinity of the site the clients confirms that there has been no history of sewer flooding at their site.

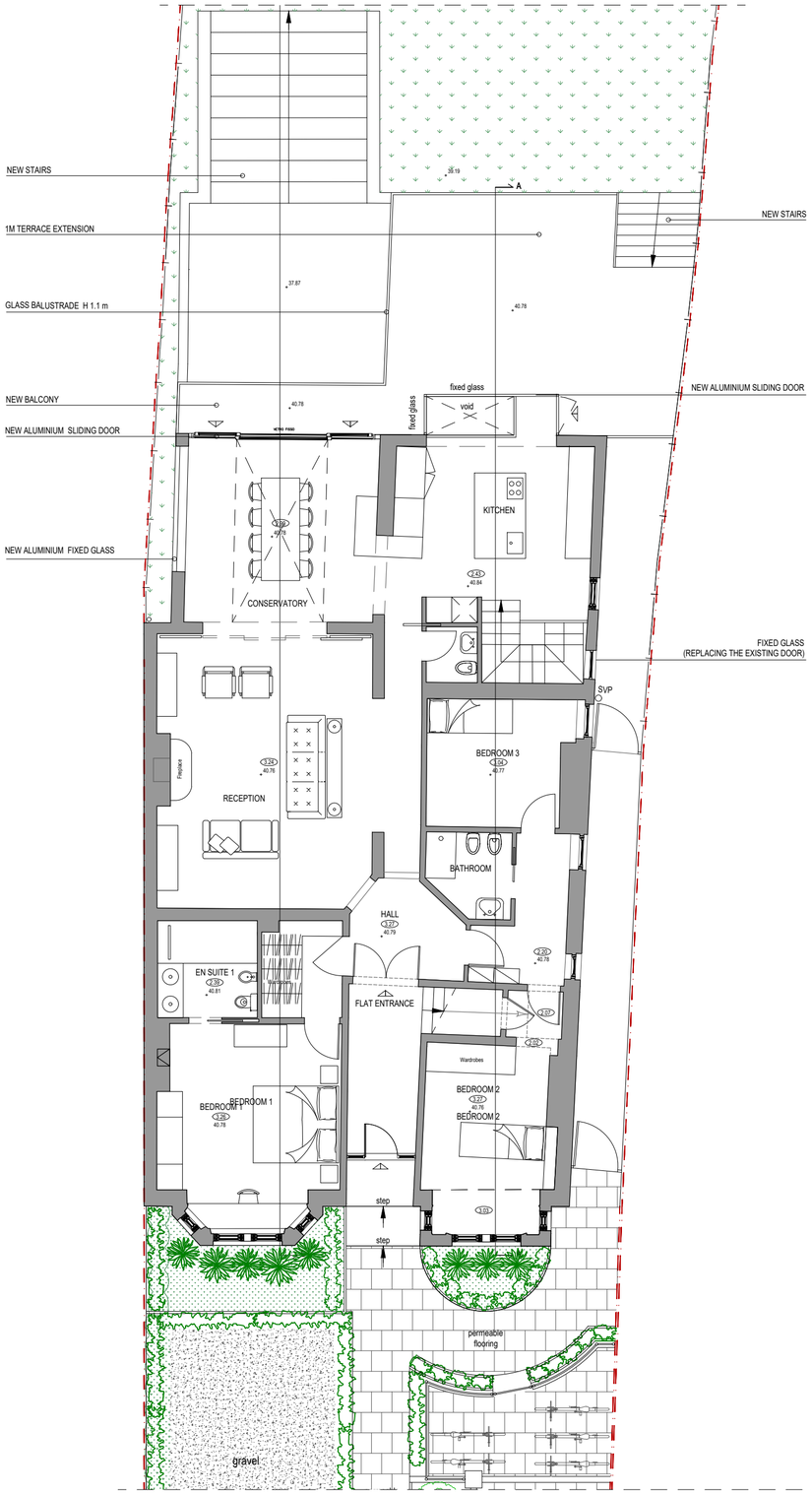
The groundwater levels are well below the proposed basement level; however the basement will still be designed as a watertight element in the unlikely event that there is any groundwater ingress from perched water.

The proposals will not impact on any known flood flow route or flood storage area.

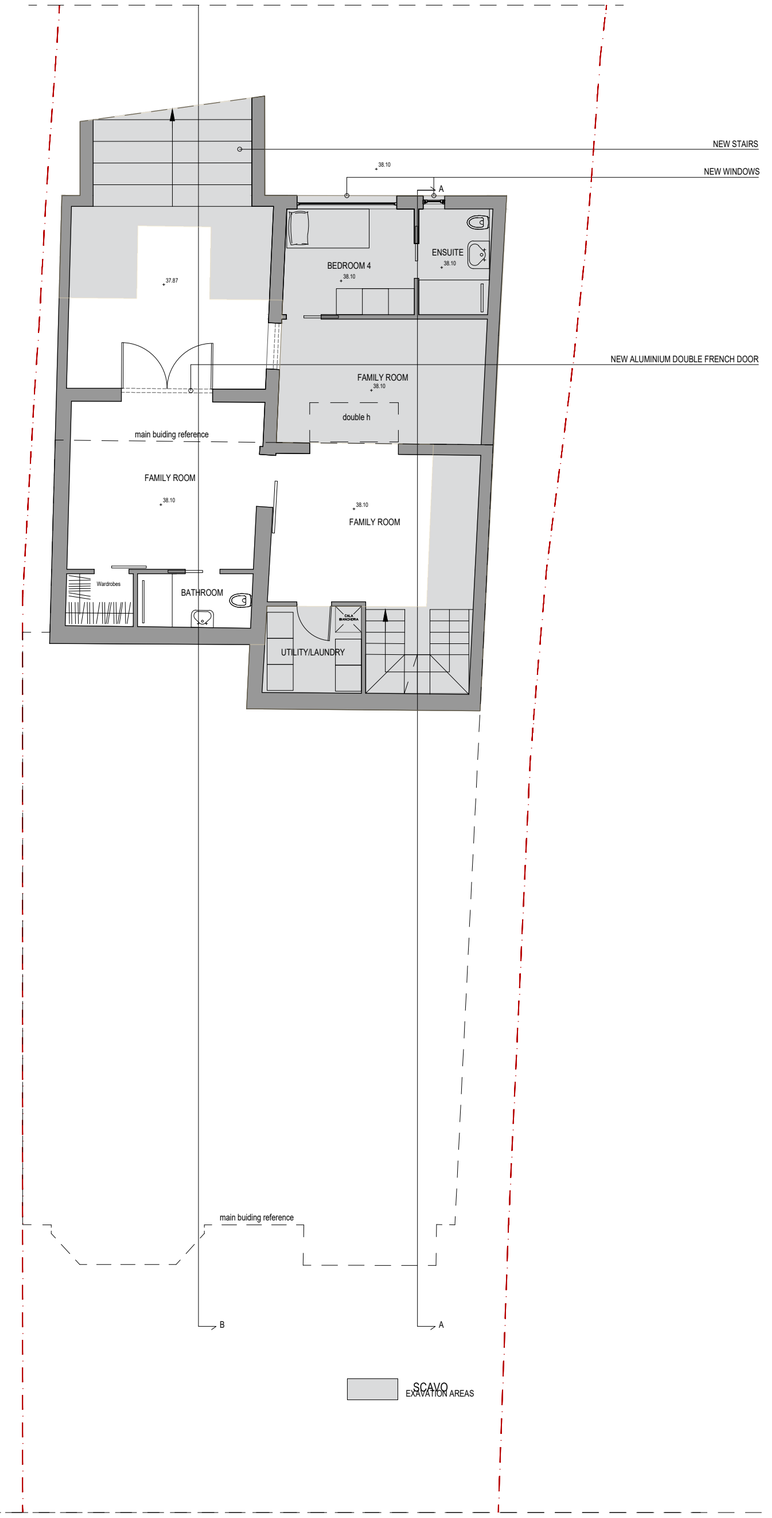
APPENDIX A – DRAWINGS



1 Roof Plan in context
scale 1:200



2 Ground Floor Plan
scale 1:100



3 Basement Plan
scale 1:100

SCALE BAR 1:100 — 0 5 10

SCALE BAR 1:200 — 0 10 20

SF
Architect
46 Redcliffe Square,
London, SW10HQ
T +44 (0)7503707253
arch.silvia.ferrario@gmail.com

Project.	Drawing title.	Scale.	DWG No.	Rev
253 Goldhurst Terrace London NW6 3EP	**PROPOSED** Plans	1:100-200 @A2	05	
		Date. December 2023		

1 Block Plan
scale 1:500

2 Location Plan
scale 1:1250

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Project.
253 Goldhurst Terrace
London NW6 3EP

Client.
Anna & Matteo

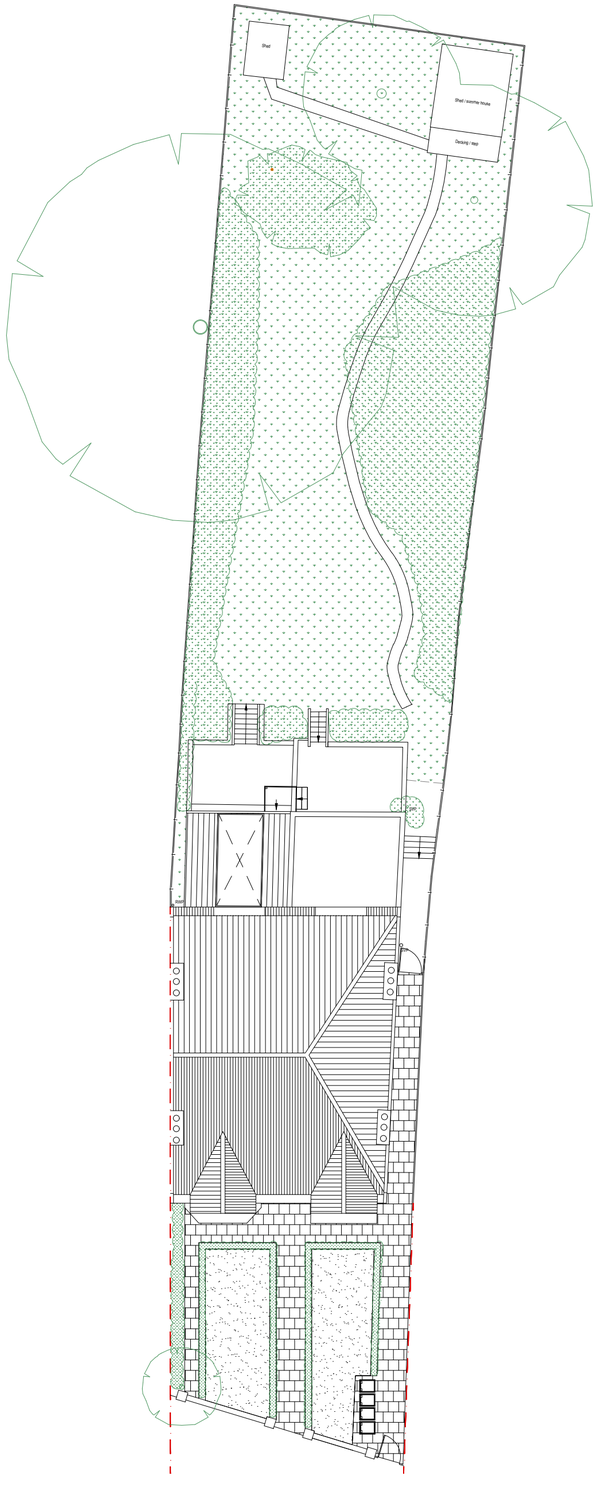
Drawing title.
EXISTING
Block Plan - Location Plan

Scale.
1:2500-500 @A3

Date.
November 2022

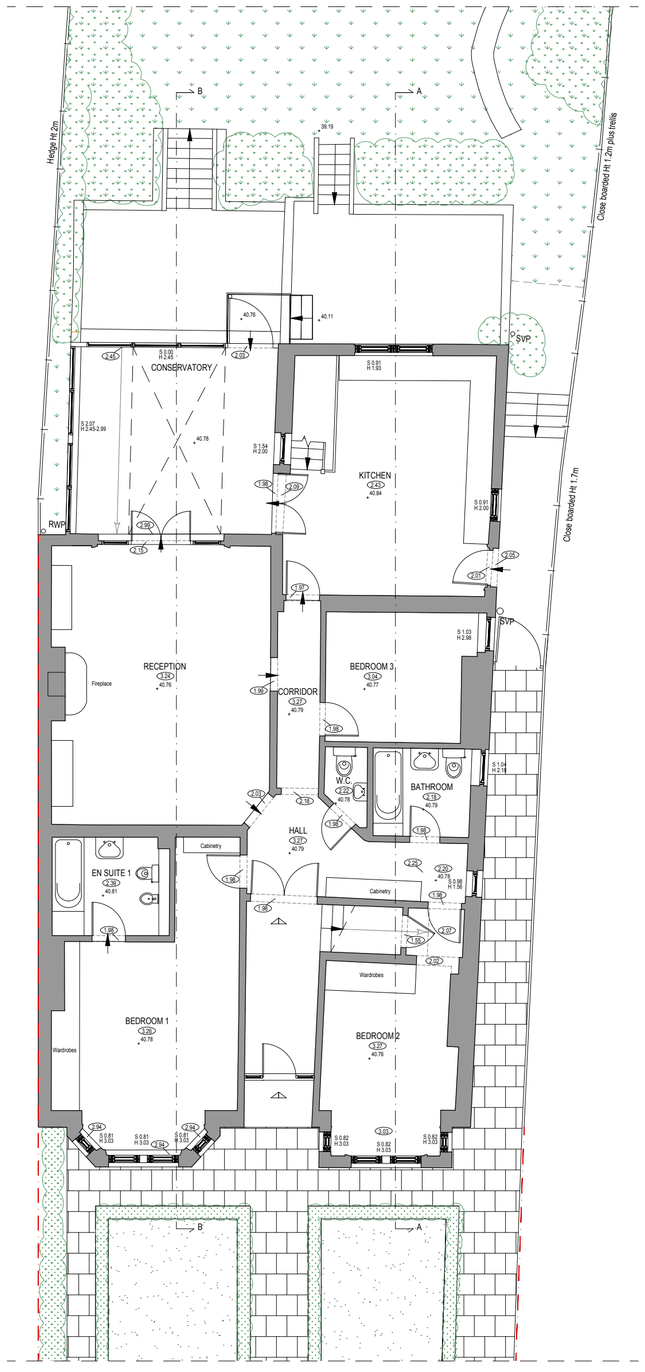
DWG No.
P1_01

Rev



1 Roof Plan in context

scale 1:200



2 Ground Floor Plan

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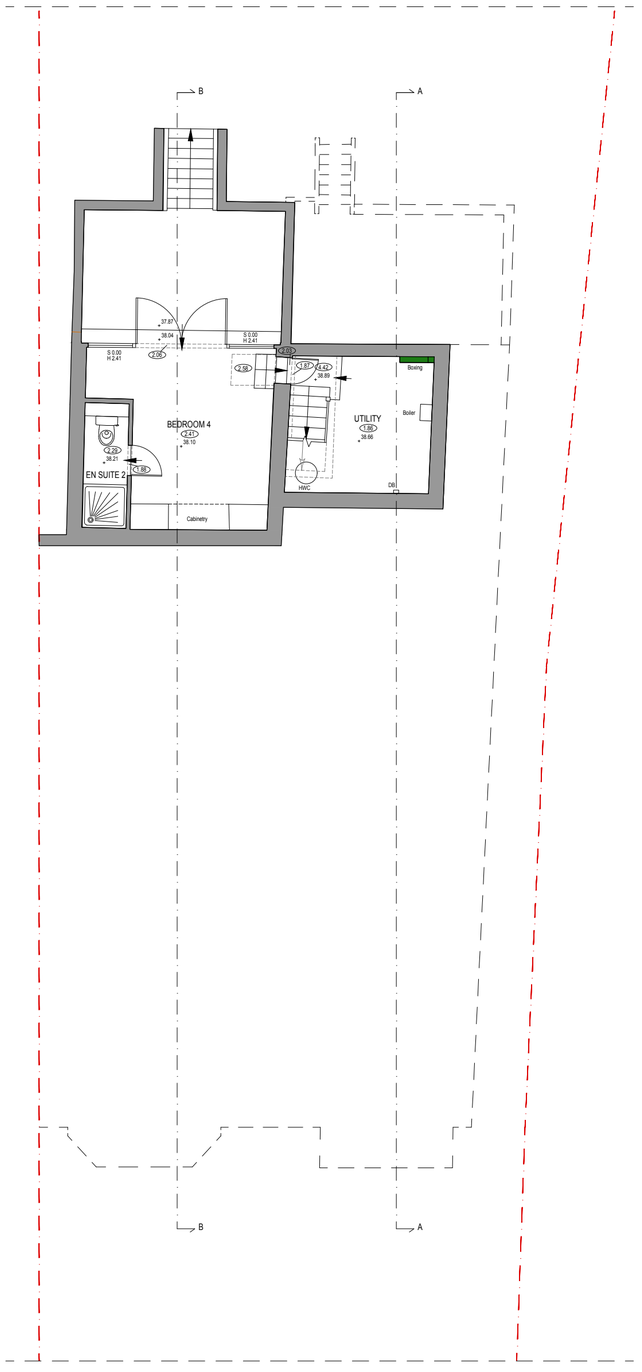


3 Basement Plan

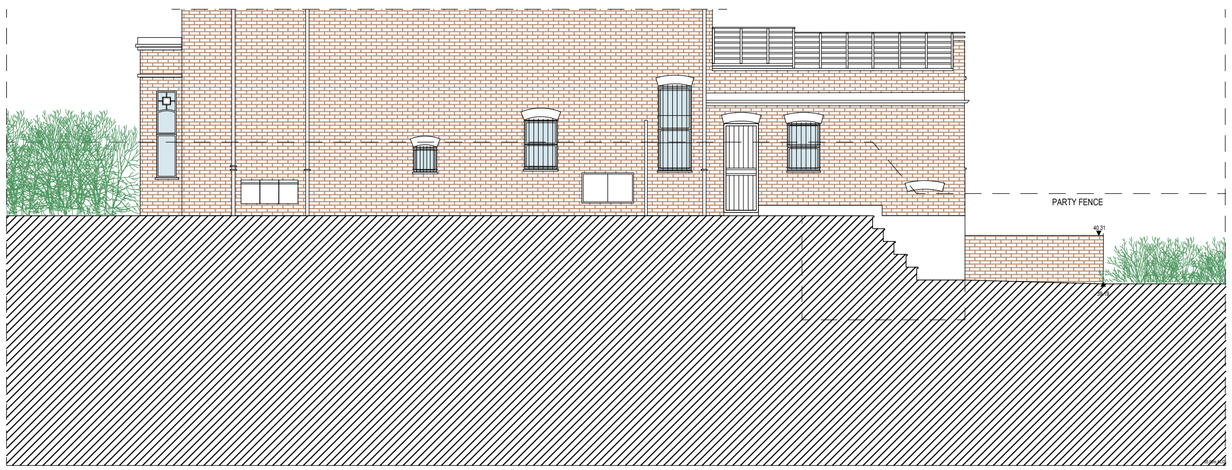
scale 1:100

SCALE BAR 1:100 0 5 10

SCALE BAR 1:200 0 10 20

SF Architect	46 Redcliffe Square, London, SW10HQ T +44 (0)7503707253 arch.silvia.ferrario@gmail.com	**This is A Cad Drawing** UNDER NO CIRCUMSTANCES SHALL MANUAL ALTERATIONS BE MADE. FIGURED DIMENSIONS TAKE PREFERENCE TO SCALE. **VERIFY AND CHECK ALL DIMENSIONS ON SITE BEFORE WORK IS PUT IN HAND. AND ANY DISCREPANCIES ARE TO BE REFERED.** **Copyright Is Reserved** COPYING OR REPRODUCTION OF THIS DRAWING OR ELECTRONIC DATA WITHOUT THE WRITTEN PERMISSION IS NOT PERMITTED.	Project. **253 Goldhurst Terrace London NW6 3EP**	Client. **Anna & Matteo**	Drawing title. **EXISTING** Plans	Scale. 1:100-200 @A2 Date. November 2022	DWG No. P1_02	Rev

1 Rear Elevation in context
scale 1:100



2 Side Elevation
scale 1:100

SCALE BAR 1:100 0 5 10

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Project.
253 Goldhurst Terrace
London NW6 3EP

Client.
Anna & Matteo

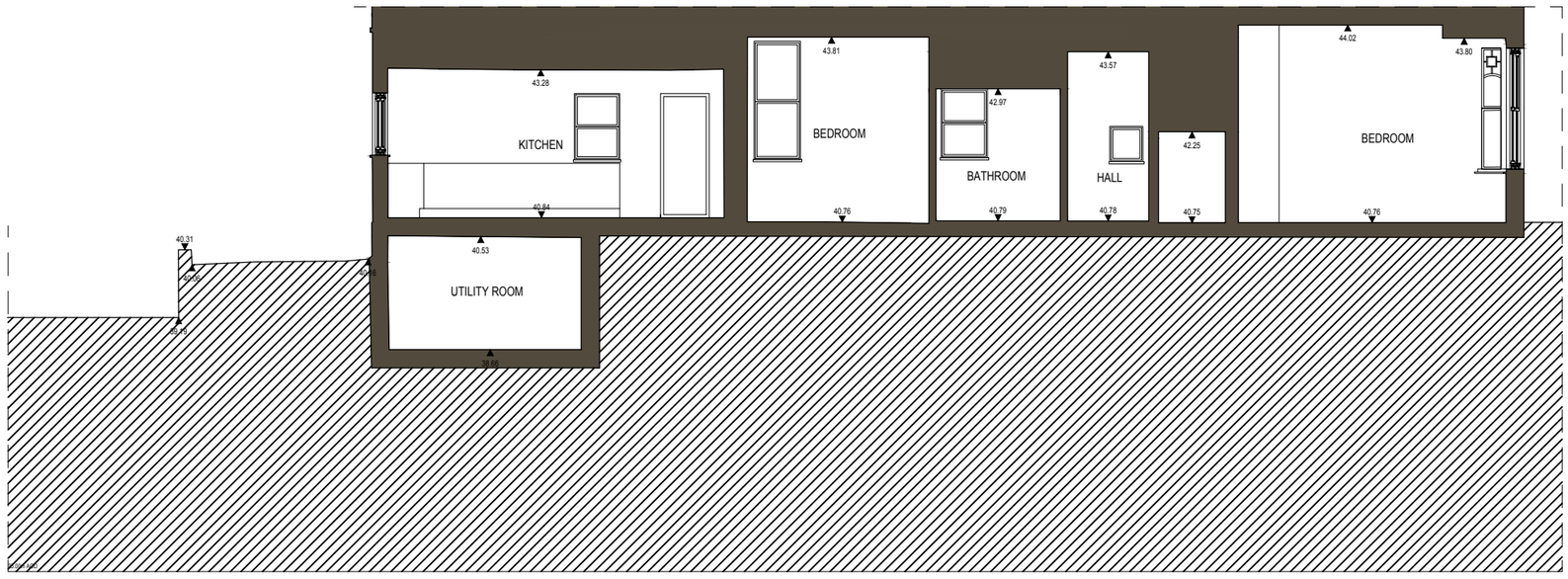
Drawing title.
EXISTING
Elevations

Scale.
1:100@A2

Date.
November 2022

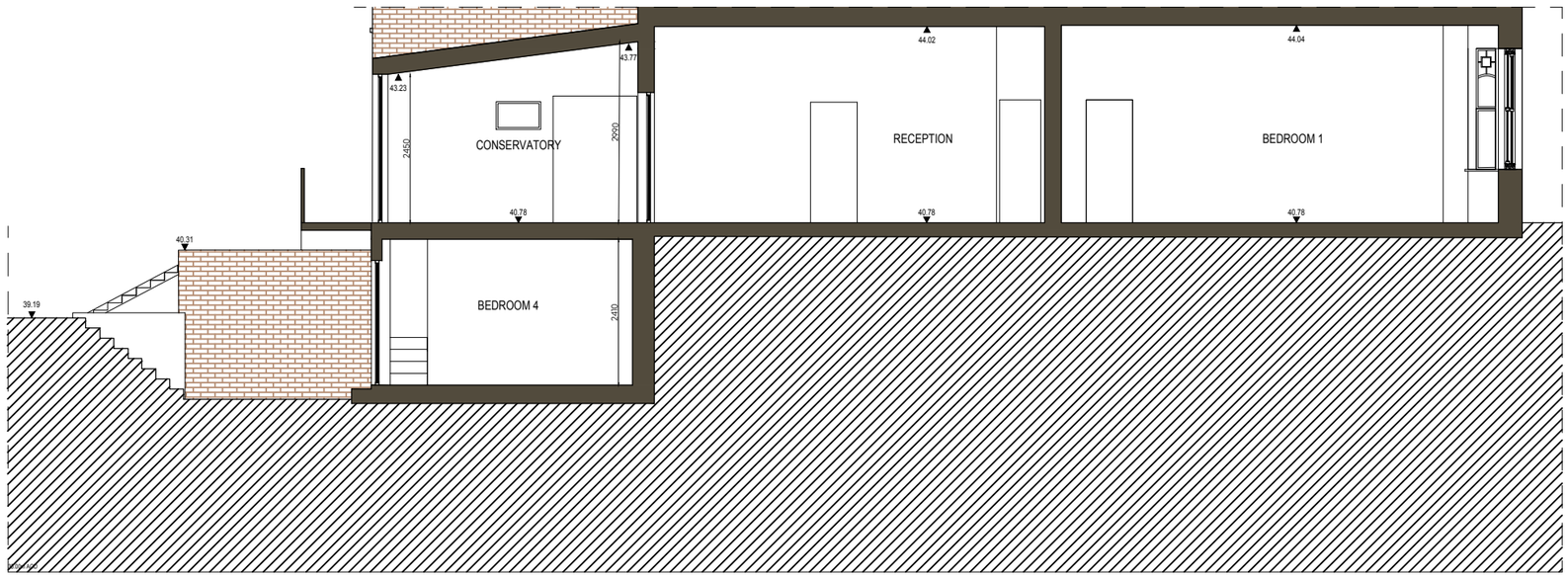
DWG No.
P1_03

Rev



1 Section AA

scale 1:100



2 Section BB

scale 1:100

SCALE BAR 1:100

0 5 10

SF Architect	46 Redcliffe Square, London, SW10HQ T +44 (0)7503707253 arch.silvia.ferrario@gmail.com	**This Is A Cad Drawing** UNDER NO CIRCUMSTANCES SHALL MANUAL ALTERATIONS BE MADE. FIGURED DIMENSIONS TAKE PREFERENCE TO SCALE. **VERIFY AND CHECK ALL DIMENSIONS ON SITE BEFORE WORK IS PUT IN HAND, AND ANY DISCREPANCIES ARE TO BE REFERED.** **Copyright Is Reserved** COPYING OR REPRODUCTION OF THIS DRAWING OR ELECTRONIC DATA WITHOUT THE WRITTEN PERMISSION IS NOT PERMITTED	Project. **253 Goldhurst Terrace London NW6 3EP**	Client. **Anna & Matteo**	Drawing title. **EXISTING** Sections	Scale. 1:100 @A3 Date. November 2022	DWG No. P1_04	Rev

APPENDIX B – HISTORIC BOREHOLES

GEOLOGICAL SURVEY OF GREAT BRITAIN

RECORD OF SHAFT OR BORE FOR MINERALS

(*For Survey use only*)
6-inch Map Registered No.
TQ28SE/378

Name of Shaft or Bore given by Geological Survey:

Name and Number given by owner: Abbey estate no. 16.

For whom made L.C.C.

Town or Village Hampstead County London

Exact site See plan filed under TQ28SE/377 { Attach a tracing from a map, or a sketch-map, if possible.

Purpose for which made Trial

Nat. Grid Reference 25758390

1" N.S.Map No.	1" O.S.Map No.	Confidential or not
256		

Ground Level at shaft bore relative to O.D. ..... If not ground level give O.D. of beginning of shaft bore .....

Made by ..... Date of sinking .....

Information from ..... Date received .....

Examined by .....

SPECIMEN NUMBERS AND ADDITIONAL NOTES

(*For Survey use only*) Geological Classification	Description of Strata	Thickness Ft.	Thickness In.	Depth Ft.	Depth In.
3'6"- 5'0"	Brown fissured clay with fine roots				
8'6"-10'0"	Brown fissured clay, blue in fissures with selenite crystals				
13'6"-15'0"	Brown fissured clay, blue in fissures with selenite crystals				
18'6"-20'0"	Brown fissured clay with selenite crystals				
23'6"-25'0"	Brown fissured clay with selenite crystals				
28'6"-30'0"	Blue fissured clay				
33'6"-35'0"	Blue fissured clay				
38'6"-40'0"	Blue fissured clay				

(5412) Wt.32837/PS.154 2m. 10/54 G.W.B.Ltd. Gp.863

GEOLOGICAL SURVEY OF GREAT BRITAIN

RECORD OF SHAFT OR BORE FOR MINERALS

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6-inch Map Registered No.
TQ28SE/378

Name of Shaft or Bore given by Geological Survey:

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3'6"- 5'0"	Brown fissured clay with fine roots				
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18'6"-20'0"	Brown fissured clay with selenite crystals				
23'6"-25'0"	Brown fissured clay with selenite crystals				
28'6"-30'0"	Blue fissured clay				
33'6"-35'0"	Blue fissured clay				
38'6"-40'0"	Blue fissured clay				

(5412) Wt.32837/PS.154 2m. 10/54 G.W.B.Ltd. Gp.863

GEOLOGICAL SURVEY OF GREAT BRITAIN

RECORD OF SHAFT OR BORE FOR MINERALS

(For Survey use only)

6-inch Map Registered No. TQ28SE/377

Name of Shaft or Bore given by Geological Survey:

Name and Number given by owner: Abbey estate no 15.

Nat. Grid Reference 2572.8384

For whom made

Town or Village Hamp stead County London

Exact site see plan

Attach a tracing from a map, or a sketch-map, if possible.

Purpose for which made Trial

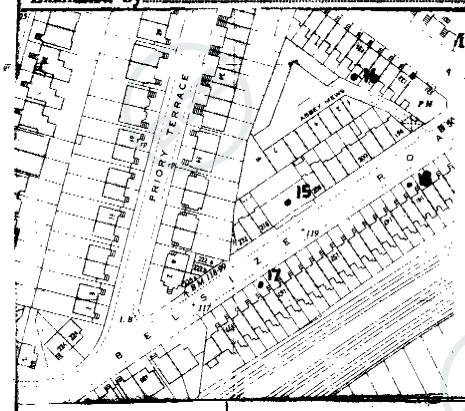
1" N.S.Map No.	1" O.S.Map No.	Confidential or not
256		

Ground Level at shaft bore relative to O.D. If not ground level give O.D. of beginning of shaft bore

Made by Date of sinking

Information from Date received

Examined by



MBERS AND ADDITIONAL NOTES

(For Survey use only) Geological Classification	Description of Strata	Thickness Ft.	Thickness In.	Depth Ft.	Depth In.
3'6"-5'0"	Brown fissured clay, blue in fissures with selenite crystals				
8'6"-10'0"	Brown fissured clay with selenite crystals				
13'6"-15'0"	Brown fissued clay with selenite crystals				
18'6"-20'0"	Brown fissured clay with selenite crystals				
23'6"-25'0"	Blue fissured clay				
28'6"-30'0"	Blue fissured clay				
33'6"-35'0"	Blue fissured clay				
38'6"-40'0"	Blue fissured clay				

(5412) Wt.32837/PS.154 2m. 10/64

GEOLOGICAL SURVEY OF GREAT BRITAIN

RECORD OF SHAFT OR BORE FOR MINERALS

(*For Survey use only*)
6-inch Map Registered No.
TQ28SE/380

Name of Shaft or Bore given by Geological Survey:

Name and Number given by owner: Abbey estate no. 18

For whom made L.C.C.

Town or Village Hampstead County London

Exact site See plan with TQ28SE/377 { Attach a tracing from a map, or a sketch-map, if possible.

Purpose for which made Trial

Nat. Grid Reference 2575·8383

1" N.S.Map No.	1" O.S.Map No.	Confidential or not
256		

Ground Level at shaft bore relative to O.D. If not ground level give O.D. of beginning of shaft bore

Made by Date of sinking

Information from Date received

Examined by

SPECIMEN NUMBERS AND ADDITIONAL NOTES

(*For Survey use only*) Geological Classification	Description of Strata	Thickness Ft.	Thickness In.	Depth Ft.	Depth In.
9'6"-11'0"	Brown fissured clay, blue in fissures with selenite crystals and fine roots				
14'6"-16'0"	Brown fissured clay, blue in fissures with selenite crystals				
19'6"-21'0"	Brown fissured clay, blue in fissures with selenite crystals				
24'6"-26'0"	Brown fissured clay with selenite crystals				
29'6"-31'0"	Brown fissured clay with selenite crystals				
24'6"-36'0"	Blue fissured clay				
38'6"-40'0"	Blue fissured clay				

(5412) Wt.32837/PS.154 2m. 10/64 G.W.B.Ltd. Gp.863

GEOLOGICAL SURVEY OF GREAT BRITAIN

RECORD OF SHAFT OR BORE FOR MINERALS

(*For Survey use only*)
6-inch Map Registered No.
TQ28SE/379

Name of Shaft or Bore given by Geological Survey:

Name and Number given by owner: Abbey estate no 17

For whom made LCC

Town or Village Hampstead County London

Exact site See plan with TQ28SE/377 { Attach a tracing from a map, or a sketch-map, if possible.

Purpose for which made Trial

Nat. Grid Reference 2571.8380

1" N.S.Map No.	1" O.S.Map No.	Confidential or not
256		

Ground Level at shaft bore relative to O.D. ..... If not ground level give O.D. of beginning of shaft bore .....

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Information from ..... Date received .....

Examined by .....

SPECIMEN NUMBERS AND ADDITIONAL NOTES

(*For Survey use only*) Geological Classification	Description of Strata	Thickness Ft.	Thickness In.	Depth Ft.	Depth In.
4'6"-6'0"	Brown fissured clay with fine roots				
9'6"-11'0"	Brown fissured clay, blue in fissures with selenite crystals				
14'6"-16'0"	Brown fissured clay, blue in fissures with selenite crystals				
19'6"-21'0"	Brown fissured clay with selenite crystals				
24'6"-26'0"	Brown fissured clay with selenite crystals				
29'6"-31'0"	Brown fissured clay with selenite crystals				
34'6"-36'0"	Blue fissured clay				
39'6"-41'0"	Blue fissured clay				
44'6"-46'0"	Blue fissured clay				

(3412) Wt.32837/PS.154 2m 10/64 G.W.B.Ltd. Gp.863

TQ28SE/276
2623.8410
256

GROUND EXPLORATIONS LIMITED

BOREHOLE SECTION SHEET

Date December 19 55

CONTRACT NAME Swiss Cottage. ORDER NO.

Bored for : Messrs. Goodhart-Rendel & Partners.

Address : Kirkland House, Whitehall S.W1.

Address of Site : Coleridge Gardens

District or Town : Swiss Cottage County : London

Standing Water Level : - below surface Dia. of Borehole : 6 Inches.

Water Struck (1) None (2) (3)

Boring Commenced : 5.12.55 Boring Completed : 6.12.55

Special Remarks :

Jar Samples : 2871 2'0"; 2872 5'0"; 2879 9'0"; 2876 13'0"; 2878 17'0"; 2880 22'0"

Core Samples : 2873 5'6" - 7'0"; 2875 10'0" - 11'6"; 2877 14'6" - 16'0"; 2879 18'6" - 20'0"; 2881 23'6" - 25'0"

Sand/Gravel Samples :

DESCRIPTION OF STRATA	Thickness Feet	Thickness Inches	Depth Below Surface Feet	Depth Below Surface Inches
The descriptions are given in accordance with the Civil Engineering Code of Practice No. 1 "Site Investigations." No responsibility is accepted for these descriptions and clients should examine the samples submitted.				
No. 1 Boring				
Topsoil	1	6	(0.46) 1	6
Loamy clay	3	6	(1.52) 5	0
Brown clay	20	0	(7.62) 25	0
TOTAL FROM SURFACE ...	25	0	25	0.

This form is to be returned to Head Office immediately the borehole is finished.

Foreman's Signature..... *Date*.....

P. & R. Ltd.—175

BOREHOLE ONE

65 Priory Road, Hampstead

Date of boring 6-7 January, 1983

Diameter of boring : 200mm

Lining tubes : 200 mm to 1.5 m

Ground Level -

Description of Strata	Change of Strata: Legend	Change of Strata: Depth	Change of Strata: Reduced Level	S.P.T. C.P.T. N-value	Samples: Depth	Samples: Type	Water Level	Depth of Casing
		m	m		m		m	m
MADE GROUND Soft to firm brown clay with many broken bricks and de-composed mortar		1.00						
LONDON CLAY Firm slightly silty brown mottled grey CLAY with extensive close fissuring. Occassional clay stones.		2.00		SPT 5	1.50	J		1.50
					2.50	U100		
Becoming firm to stiff		3.00			-2.95			
Very stiff slightly silty dark brown slightly mottled grey CLAY with some fissures and thin partings of grey fine silt					3.50	U100		
		4.00			-3.95			
					4.50	U100		
Gypsum crystals from 5.00m		5.00			-4.95			
		6.00		SPT27	6.00	J		
		7.00						
				SPT33	7.50	J		
Very stiff to hard slightly silty blue-grey CLAY with many large fissures. Some silty and sandy partings		8.00						
					8.75	J		
		9.00					B.H. Dry	
					9.50	U100		
Becoming hard		10.00			-9.95			

APPENDIX A

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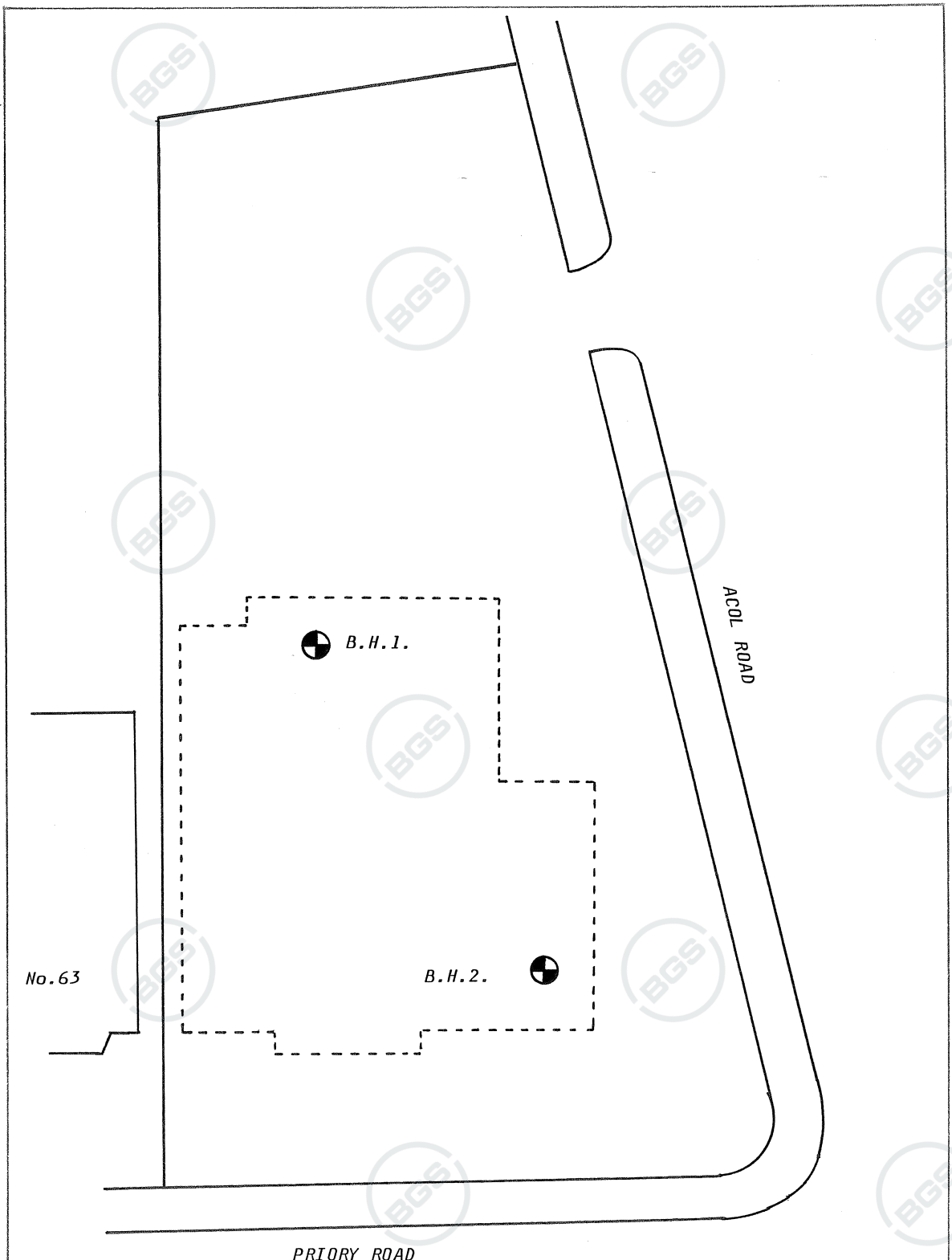
BGS ID: 15948036 : BGS Reference: TQ28SE2062
British National Grid (27700) : 525640,184115



65 PRIORY ROAD – BOREHOLE LOCATIONS

APPENDIX B.

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January 1983

TYRONE