

Factual Geotechnical Ground Investigation Report

Site

219A Goldhurst Terrace
NW6 3EP

Client

Marcus Zaman

Report Reference

GT-2021-000045

Prepared by

STM Environmental Consultants Ltd

Date

16/06/2021



**CONSULTING GEO-ENVIRONMENTAL
ENGINEERS AND SCIENTISTS**

Phase 1 Contaminated Land Desk Studies, Geo-Environmental Site Investigations, Environmental Due Diligence, Flood Risk Assessments, Surface Water Management Strategies (SuDS), Ecology, Noise and Air Quality Assessments, Environmental Management Systems, GIS & Data Management Systems

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1 DOCUMENT CONTROL



FACTUAL GEOTECHNICAL GROUND INVESTIGATION REPORT



Site Address:	219A Goldhurst Terrace NW6 3EP
Site Coordinates:	525948, 184004
Prepared for:	Marcus Zaman
Report Reference:	GT-2021-000045
Version No:	1.0
Date:	16/06/2021
Report Authors:	Gregory Northwood (MSc) Geo-environmental Consultant
Authorised by:	Simon Makoni (MSc, BSc) Director

2 DISCLAIMERS

This report and any information or advice which it contains, is provided by STM Environmental Consultants Ltd (STM) and can only be used and relied upon by Marcus Zaman (Client).

STM has exercised such professional skill, care and diligence as may reasonably be expected of a properly qualified and competent consultant when undertaking works of this nature. However, STM gives no warranty, representation or assurance as to the accuracy or completeness of any information, assessments or evaluations presented within this report. Furthermore, STM accepts no liability whatsoever for any loss or damage arising from the interpretation or use of the information contained within this report. Any party other than the Client using or placing reliance upon any information contained in this report, do so at their own risk.

Due to budgetary and physical constraints, sampling and in-situ testing was not possible over the entire site during the ground investigation. Therefore, we can offer no guarantee as to the validity of the data in any areas other than those investigated.

It should also be noted that some of the findings presented in this report are based on information obtained from third parties (i.e., laboratory). Whilst we assume that all information presented is accurate, we can offer no guarantee as to the validity.

The undertaking of an aboricultural/tree survey was not part of the scope of works. Therefore, the opinions provided in relation to tree heights and species are provided for information only and should not be relied upon. It is recommended that a tree identification survey is undertaken by a suitably qualified Aboriculturist.

3 INTRODUCTION

3.1 Commissioning

STM Environmental Consultants Limited were commissioned by Marcus Zaman (Client) to undertake a ground investigation at 219A Goldhurst Terrace, NW6 3EP (the Site).

3.2 Report Objectives

The purpose of the investigation was to provide a factual report on current ground conditions to assist with the design of foundations for structures associated with a planned redevelopment at the Site.

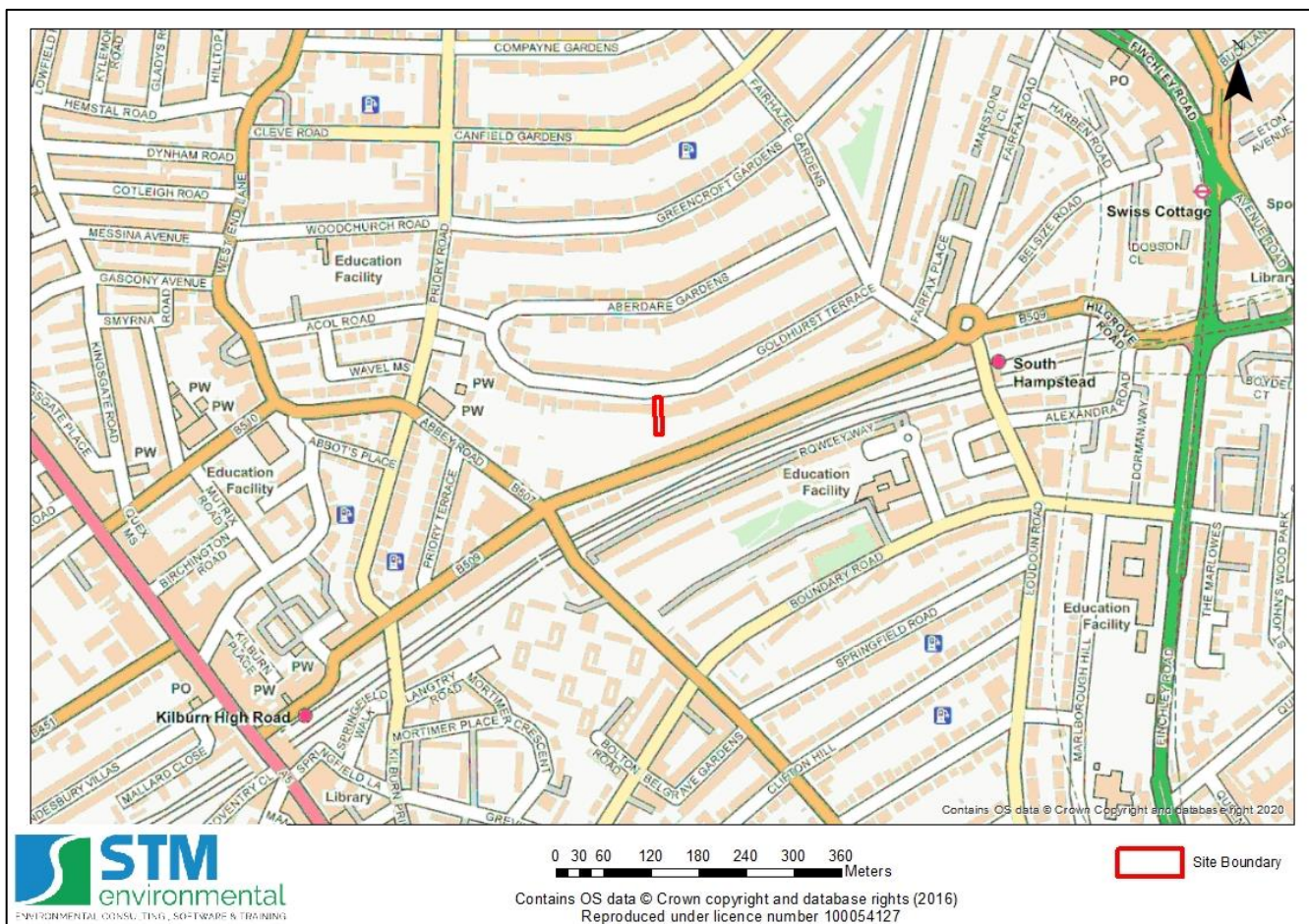
4 SITE DESCRIPTION

4.1 Site Location and Current Use

The site is located at 219A Goldhurst Terrace, NW6 3EP. It is approximately centred at grid reference: 525948, 184004 and has an area of approximately 396m².

The site lies within the jurisdiction of London Borough of Camden Council in terms of the planning process. The site is currently used as a 3-storey terrace residential property.

Figure 1 – Maps showing location of site



5 SUMMARY OF GROUND INVESTIGATIONS

The ground investigation works were carried out on 27/05/2021 and were undertaken in accordance with BS5930:2015 Code of Practice for Ground Investigation.

5.1 Service and Utility Plans

Linesearchb4Udig was contacted prior to undertaking works for service and utility information. However, only limited information was provided.

5.2 Borehole

A total of 1no. borehole was excavated at the site for the purpose of undertaking both geotechnical soil sampling and in-situ standard penetration testing (SPT) using a dynamic windowless sampling rig. The location of the excavation was cleared for buried services using a CAT scanner, after which a hand pit was excavated to a depth of 1.2mbgl prior to commencing drilling.

Borehole BH01 was located on the driveway at the front of the property, at approximate BNG coordinates: 525947,184021.

The borehole was advanced to a maximum depth of 8mbgl.

A map showing the location of the borehole is available in [Appendix 1](#).





5.3 Standard Penetration Tests

SPTs were undertaken at the base of the initial hand dug hole and at 1.00m intervals as the borehole was advanced. The tests were carried out in accordance with BS EN ISO 22476-3 and consisted of driving a 50mm split spoon sampler into the soil with a 64 kg weight, having a free fall of 760mm. The blows required to drive the split barrel sampler a distance of 305mm, after an initial penetration of 152mm, is referred to as the SPT – N value.

5.4 Geotechnical Sampling and Laboratory Testing

Disturbed samples were recovered for geotechnical analysis at 1.0m intervals or from each change of strata from each borehole and placed into tubs.

A programme of geotechnical laboratory testing agreed with the Client and was carried out by i2 Analytical an MCERTS/UKAS accredited laboratory. The requested testing consisted of the following:

-  Moisture Content (2no.)
-  Plasticity Index (2no.)
-  Sulphate (as SO₄) - Water Soluble (2:1) (2no.)
-  pH (2no.)

6 GROUND INVESTIGATION FINDINGS

6.1 Ground Conditions

6.1.1 Geology

The borehole revealed ground conditions that were generally consistent with the geological records of the area. Made Ground (Gravelly CLAY containing occasional fragments of bituminous material) was encountered to a maximum depth of 1.15mbgl, and was underlain by light brown CLAY with pockets of orange fine SAND to a maximum depth of 8mbgl.

Borehole logs are available in [Appendix 2](#). Photographs of the soils extracted from the boreholes are presented in [Appendix 4](#).

6.1.2 Groundwater

Groundwater was not encountered within any of the boreholes during the investigation.

6.1.3 Root Activity

No root activity was recorded within any of the boreholes.

6.2 Standard Penetration Tests

The results of the in-situ Standard Penetration Tests (SPT) are presented on the borehole logs presented in [Appendix 2](#) and in tabular form in [Appendix 3](#).

6.3 Laboratory Tests

Copies of all laboratory test certificates are available in [Appendix 5](#).

7 INFORMATION GAPS AND UNCERTAINTIES

A number of assumptions have been made regarding the nature of the strata present at the site and its properties. It is possible that there may be areas of the site that have different characteristics to those observed during the ground investigation and outlined in this report. Should ground conditions differing significantly from those described in our report be encountered during foundation excavation, then the authors should be contacted immediately so that the details of this report can be updated accordingly.

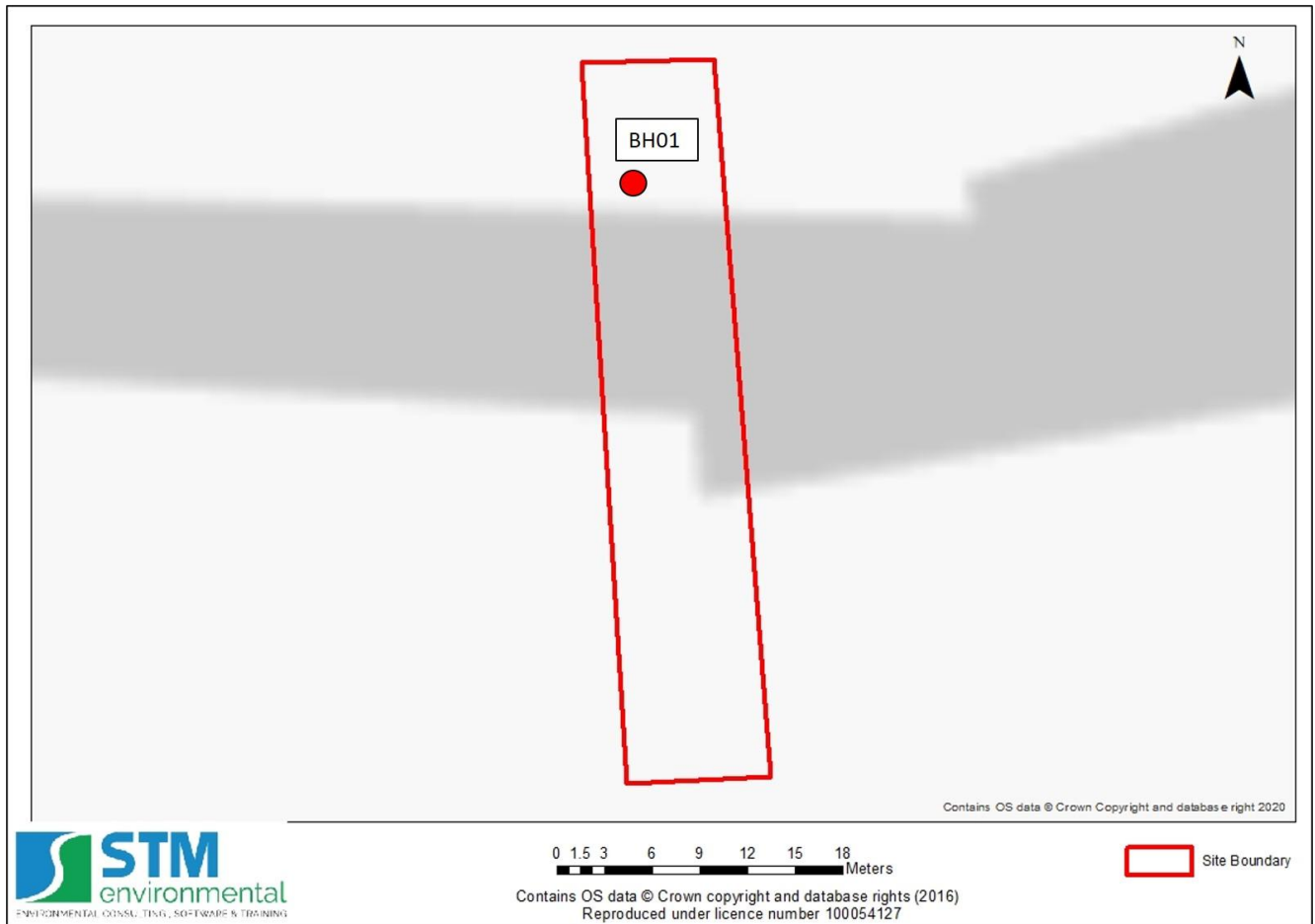
8 ABBREVIATIONS

Table 1: Abbreviations used in the report


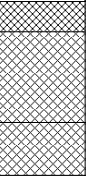


ABBREVIATION	DESCRIPTION
OS	Ordnance Survey
NPPF	National Planning Policy Framework
PI	Plasticity Index
MPI	Modified Plasticity Index
VCP	Volume Change Potential

9 APPENDICES

9.1 Appendix 1 - Borehole Location Plan



9.2 Appendix 2 - Borehole Logs

					<h1>Borehole Log</h1>			Borehole No. BH01 Sheet 1 of 1		
Project Name: 219A Goldhurst Terrace					Project No. 219A Goldhurst Terrace		Co-ords: 525947.00 - 184021.00		Hole Type WLS	
Location: 219A Goldhurst Terrace, NW6 3EP					Level: 42.00		Scale 1:50			
Client: Marcus Zaman					Dates: 27/05/2021 - 27/05/2021		Logged By P. Bhatia			
Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description		
		Depth (m)	Type	Results						
		1.00		N=4 (1,1/1,1,1,1)	0.20	41.80		Bituminous hardstand.	1	
								Made Ground - Dark to light brown gravelly CLAY with occasional fragments of brick.		
								Made Ground - Bituminous material and brick rubble.		
								Firm becoming very stiff light brown CLAY with occasional pockets of orange fine SAND.		
		2.00 2.00	D	N=8 (1,1/2,2,2,2)	0.80	41.20			2	
					1.15	40.85				
		3.00 3.00	D	N=10 (1,1/2,2,3,3)						3
		4.00 4.00	D	N=13 (1,2/3,3,3,4)						4
5.00 5.00	D	N=12 (1,2/3,3,3,3)						5		
6.00		N=17 (2,3/4,4,4,5)						6		
7.00		N=20 (2,3/4,5,5,6)					7			
8.00		N=21 (3,3/5,5,5,6)	8.00	34.00			8			
End of borehole at 8.00 m									9	
									10	
Remarks Borehole advanced to a maximum depth of 8mbgl. Groundwater not encountered. Borehole location grid references and elevation values are based off of aerial imagery (not measured).										

9.3 Appendix 3 – Results of Standard Penetration Testing

Location ID	Depth Top	Blows Seating 1	Blows Seating 2	Blows Main 1	Blows Main 2	Blows Main 3	Blows Main 4	N Value
BH01	1	1	1	1	1	1	1	4
BH01	2	1	1	2	2	2	2	8
BH01	3	1	1	2	2	3	3	10
BH01	4	1	2	3	3	3	4	13
BH01	5	1	2	3	3	3	3	12
BH01	6	2	3	4	4	4	5	17
BH01	7	2	3	4	5	5	6	20
BH01	8	3	3	5	5	5	6	21

9.4 Appendix 4 – Site Investigation Photographs



Photograph looking South, showing the front of the property.



Photograph showing the Dynamic Windowless Sampling Rig in operation at BH01.





Photograph showing the 1st to 8th (left to right) meter of soil retrieved from BH01.

9.5 Appendix 5 – Laboratory Certification and Results

SUMMARY OF GEOTECHNICAL TESTING

Sample details					Classification Tests					Density Tests		Undrained Triaxial Compression				Chemical Tests			Other tests and comments
Location	Depth (m)	Sample Ref	Type	Description	WC	LL	PL	PI	<425 µm	Bulk	Dry	Condition	Cell Pressure	Deviator Stress	Shear Stress	pH	2:1 W/S SO4	W/S Mg	
					%	%	%	%	%	Mg/m³	Mg/m³		kPa	kPa	kPa		g/L	mg/L	
BH01	2.00	BH01/1	D	Dark brown mottled grey slightly sandy CLAY.	32.8	74	20	54	100										
BH01	3.00	BH01/2	D													8.2	0.50		
BH01	4.00	BH01/3	D	Brown CLAY with rare gypsum.	27.2	74	22	52	100										
BH01	5.00	BH01/4	D													8.3	0.68		

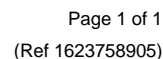
Sample type: B (Bulk disturb.) BLK (Block) C (Core) D (Disturbed) LB (Large Bulk dist.) U (Undisturbed)

Checked and Approved by  J Sturges - Operations Manager 15/06/2021	<div style="display: flex; justify-content: space-between;"> <div> Project Number: Project Name: </div> <div style="text-align: center;"> GEO / 33304 219A GOLDHURST TERRACE, BRENT NW6 3EP </div> </div>	
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Test Type:	Sample condition:
1 - 1 point 80g / 30° fall cone method.	1 - As Received
2 - 4 point 80g / 30° fall cone method.	2 - Air Dried
3 - Non plastic determination.	3 - Washed & Air Dried

219A GOLDHURST TERRACE, BRENT NW6 3EP

1 - As Received
2 - Air Dried
3 - Washed & Air Dried



Tested by Chemtest Ltd : MCERTS / UKAS No 2183

GEOLABSPage 1 of 1
(Ref 1623758863)