

Preliminary Summary – Ground Investigation Report

CLIENT	483 NCR Ltd c/o GML Architects
SITE ADDRESS	251 Goldhurst Terrace, South Hampstead, London NW6 3EP
REPORT REFERENCE	GWPR1852
ENGINEER	Roger Foord, Ground and Water Limited
INVESTIGATION LOCATIONS AND SCOPE OF WORKS	Please see Figure 1 Attached. Site works were undertaken on the 18 th October 2016 and comprised the drilling of one Dart Windowless Sampler Borehole (BH1) to a depth of 10.00m bgl, with Standard Penetration Tests (SPTs) carried out at 1.00m intervals to a depth of 8.00m bgl. A Windowless Sampler Borehole (BH2) was also drilled to a depth of 5.00m bgl. A Trial Pit Foundation Exposure (TP1) was also drilled to a depth of 1.50m bgl. BH2 drilled at a level ~1.50m lower than BH1.

GROUND CONDITIONS ENCOUNTERED

Summary of Strata Encountered (BH1)		
Strata	Depth Encountered (m bgl)	Thickness (m)
CONCRETE (BH1 only)	GL – 0.18	0.18
MADE GROUND (BH1): Orange brown/brown mottled sandy gravelly clay to dark brown sandy gravel. Sand is fine to coarse grained. Gravel is occasional to abundant, fine to medium, sub-angular brick.	GL - 0.180 – 0.80	0.60 – 1.12
HEAD DEPOSITS: Orange brown/brown mottled gravelly silty CLAY. Gravel is rare to occasional, medium to coarse, sub-angular to sub-rounded flint. Gravels reduce with depth.	0.60 - 1.30	0.30 – 1.20
LONDON CLAY FORMATION (BH1): Orange brown/brown and grey mottled silty CLAY. Pockets of silt and fine roots noted between 1.60 – 3.10m bgl and pockets of orange silt noted between 3.10 – 4.30m bg in BH1. Selenite crystals noted from 3.70m bgl in BH2.	1.60 – 1.80	>3.20 - 6.90
LONDON CLAY FORMATION (BH1): Dark grey brown silty CLAY.	7.50	2.50

IN-SITU STRENGTH TESTING (DPH)	LONDON CLAY FORMATION (cohesive) (BH1 1.00 – 10.00m bgl): Low/medium to high/very high undrained shear strength (40 – 155kpa)
GROUNDWATER	No groundwater strikes noted.
ROOTS	Roots were noted to 0.80m bgl at BH2 and TP1 and to 1.00m bgl at BH1.
ANTICIPATED VOLUME CHANGE POTENTIAL	LONDON CLAY FORMATION (BH1 1.00 – 10.00m bgl): Likely to have HIGH volume change potential. Estimations were in accordance with BRE240 & NHBC Standards Chapter 4.2. Subject to confirmation of results of geotechnical classification testing.
FOUNDATION RECOMMENDATIONS	At the time of reporting, October 2016, it was understood that the proposed development incorporate the excavation of a basement below the existing property at an assumed depth of 3.00-3.50m bgl.

Foundations constructed on the soils of the London Clay Formation at 3.00-3.50m bgl can be designed based on a presumed safe bearing capacity of 100kN/m^2 . This is based on trial hole records, inspection of samples recovered and referral to BS 8004:1986, *Code of Practice for Foundations*, the results of the SPT's, and based on a 5m long by 1m wide foundation and a maximum settlement of 25mm.

Project Name
251 Goldhurst Terrace

Project No.
GWPR1852

Co-ords: -

Hole Type
WLS

Location: 251 Goldhurst Terrace, South Hampstead, London NW6 3EP

Level: -

Scale
1:50

Client: 483 NCR Ltd c/o GML Architects

Dates: 18/10/2016

Logged By
RT

Well	Water Strikes	Samples & In Situ Testing			Depth (m)	Level (m AOD)	Legend	Stratum Description
		Depth (m)	Type	Results				
		0.18			0.18		CONCRETE	
		0.30	D		0.30		MADE GROUND: Orange brown/brown mottled sandy gravelly clay. Sand is fine to coarse grained. Gravel is occasional, fine to medium, sub-angular brick.	
		0.50	D		0.50			
		0.80	D		0.80		MADE GROUND: Dark brown sandy gravel. Sand is medium to coarse grained. Gravel is abundant, fine to coarse, sub-angular brick.	
		1.00	SPT	N=10	1.00			
		1.00	D	(2,3/3,3,2,2)	1.00			
		1.30	D		1.30		MADE GROUND: Brown sandy very gravelly clay. Sand is fine to coarse grained. Gravel is occasional, fine to coarse, sub-angular to sub-rounded brick, clinker and flint.	
		1.50	D		1.50			
		2.00	SPT	N=8	2.00		HEAD DEPOSITS: Orange brown/brown mottled gravelly silty CLAY. Gravel is rare to occasional, medium to coarse, sub-angular to sub-rounded flint. Gravels reduce with depth.	
		2.00	D	(1,1/2,2,2,2)	2.00			
		2.50	D		2.50		LONDON CLAY FORMATION: Orange brown/brown mottled silty CLAY. Pockets of silt and fine roots noted between 1.60 - 3.10m bgl. Pockets of orange silt noted between 3.10 - 4.30m bgl.	
		3.00	SPT	N=9	3.00			
		3.00	D	(2,2/2,2,2,3)	3.00			
		3.50	D		3.50		LONDON CLAY FORMATION: Brown with grey and orange brown mottling, silty CLAY.	
		4.00	SPT	N=14	4.00			
		4.00	D	(2,3/3,3,4,4)	4.00			
		4.50	D		4.50		LONDON CLAY FORMATION: Brown silty CLAY.	
		5.00	SPT	N=16	5.00			
		5.00	D	(3,3/4,3,4,5)	5.00			
		5.50	D		5.50		LONDON CLAY FORMATION (BH1): Dark grey brown silty CLAY.	
		6.00	SPT	N=19	6.00			
		6.00	D	(4,4/4,5,5,5)	6.00			
		6.50	D		6.50			
		7.00	SPT	N=23	7.00			
		7.00	D	(5,5/5,6,6,6)	7.00			
		7.50	D		7.50			
		8.00	SPT	N=31	8.00			
		8.00	D	(5,6/7,8,8,8)	8.00			
		8.50	D		8.50			
		9.00	SPT	N=30	9.00			
		9.00	D	(7,6/7,8,7,8)	9.00			
		9.50	D		9.50			

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Remarks: Roots noted to 1.00m bgl.
No groundwater strikes noted.



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Level: -

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1:50

Client: 483 NCR Ltd c/o GML Architects

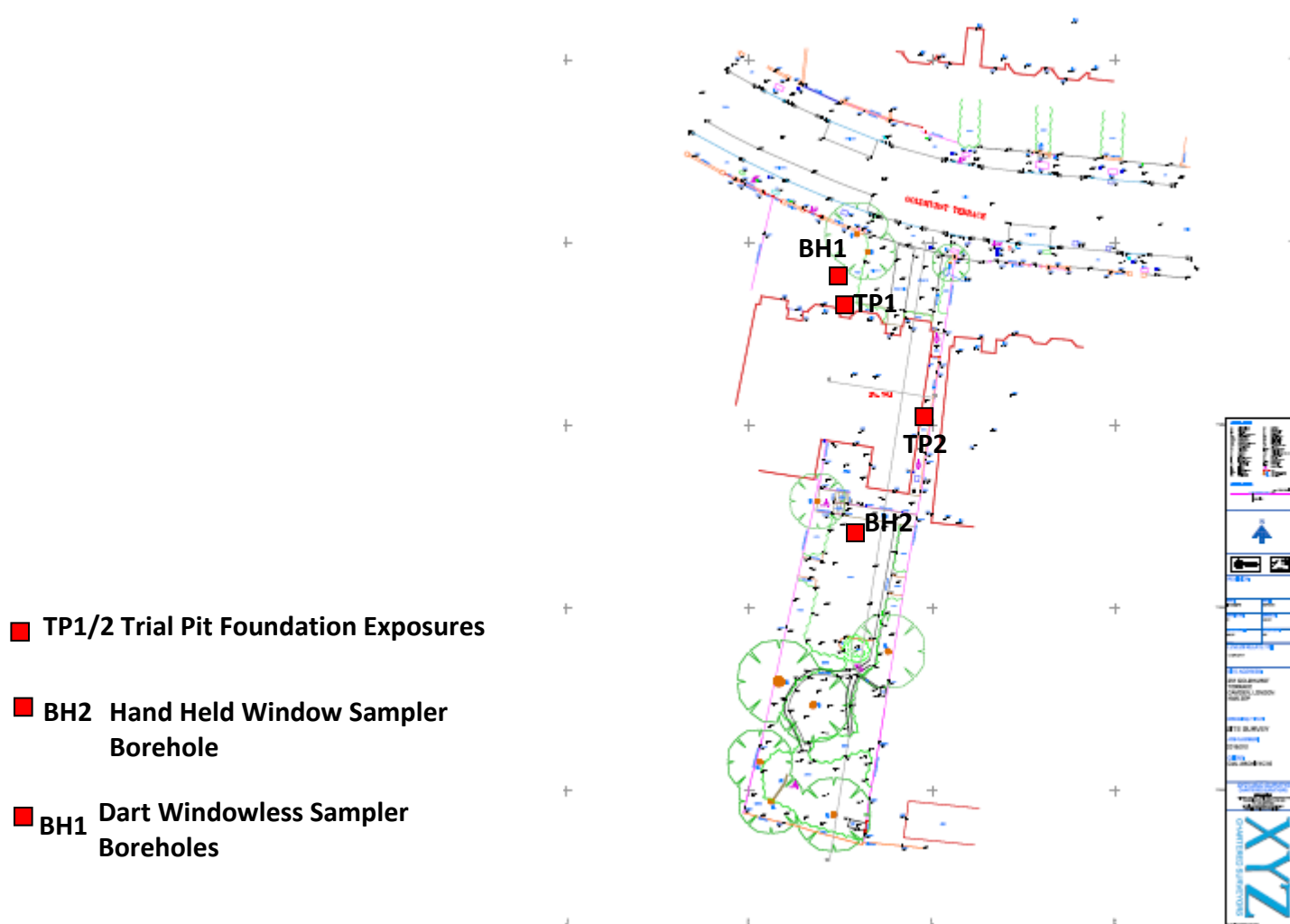
Dates: 18/10/2016

Logged By
RT

Well	Water Strikes	Samples & In Situ Testing			Depth (m)	Level (m AOD)	Legend	Stratum Description
		Depth (m)	Type	Results				
		0.30	D		0.35		MADE GROUND: Brown gravelly sand with clay lenses. Sand is fine to coarse grained. Gravel is rare, fine to medium, sub-angular to sub-rounded brick and flint.	
		0.50	D					
		0.80	D		0.90		MADE GROUND: Orange brown sandy gravelly clay. Sand is fine to coarse grained. Gravel is occasional, fine to coarse, sub-angular to sub-rounded flint and brick.	
		1.00	D					
		1.50	D		1.80		HEAD DEPOSITS: Orange brown/brown mottled silty CLAY. Gravel is rare, fine to coarse, sub-angular flint.	
		2.00	D					
		2.50	D		5.00		LONDON CLAY FORMATION: Brown/orange brown/grey mottled silty CLAY. Pockets of fine grained orange sand noted. Selenite crystals noted from 3.70m bgl.	
		3.00	D					
		3.50	D					
		4.00	D					
		4.50	D					
		5.00	D					
							End of Borehole at 5.45 m	

Remarks: Roots noted to 0.80m bgl.
No groundwater strikes noted.
BH2 approximately 1.5m lower than BH1.





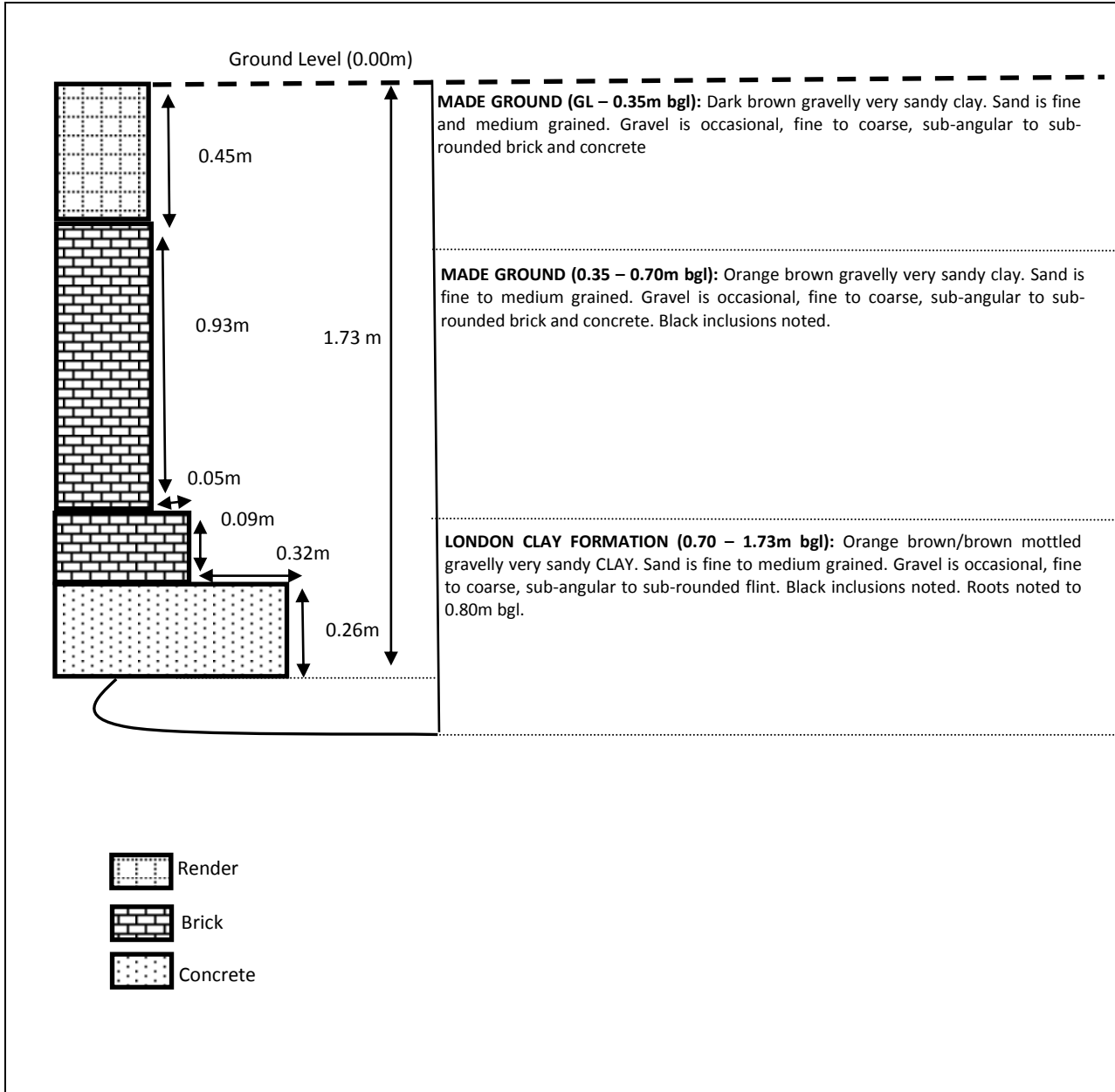
- TP1/2 Trial Pit Foundation Exposures
- BH2 Hand Held Window Sampler Borehole
- BH1 Dart Windowless Sampler Boreholes

NOT TO SCALE

Project:		251 Goldhurst Terrace, South Hampstead, London NW6 3EP	
Client:	483 NCR Limited c/o GML Architects	Date:	October 2016
Trial Hole Location Plan		Ref:	GWPR1852

Figure 1

ground&water



Project:
251 Goldhurst Terrace, South Hampstead, London
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Client:
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GML Architects

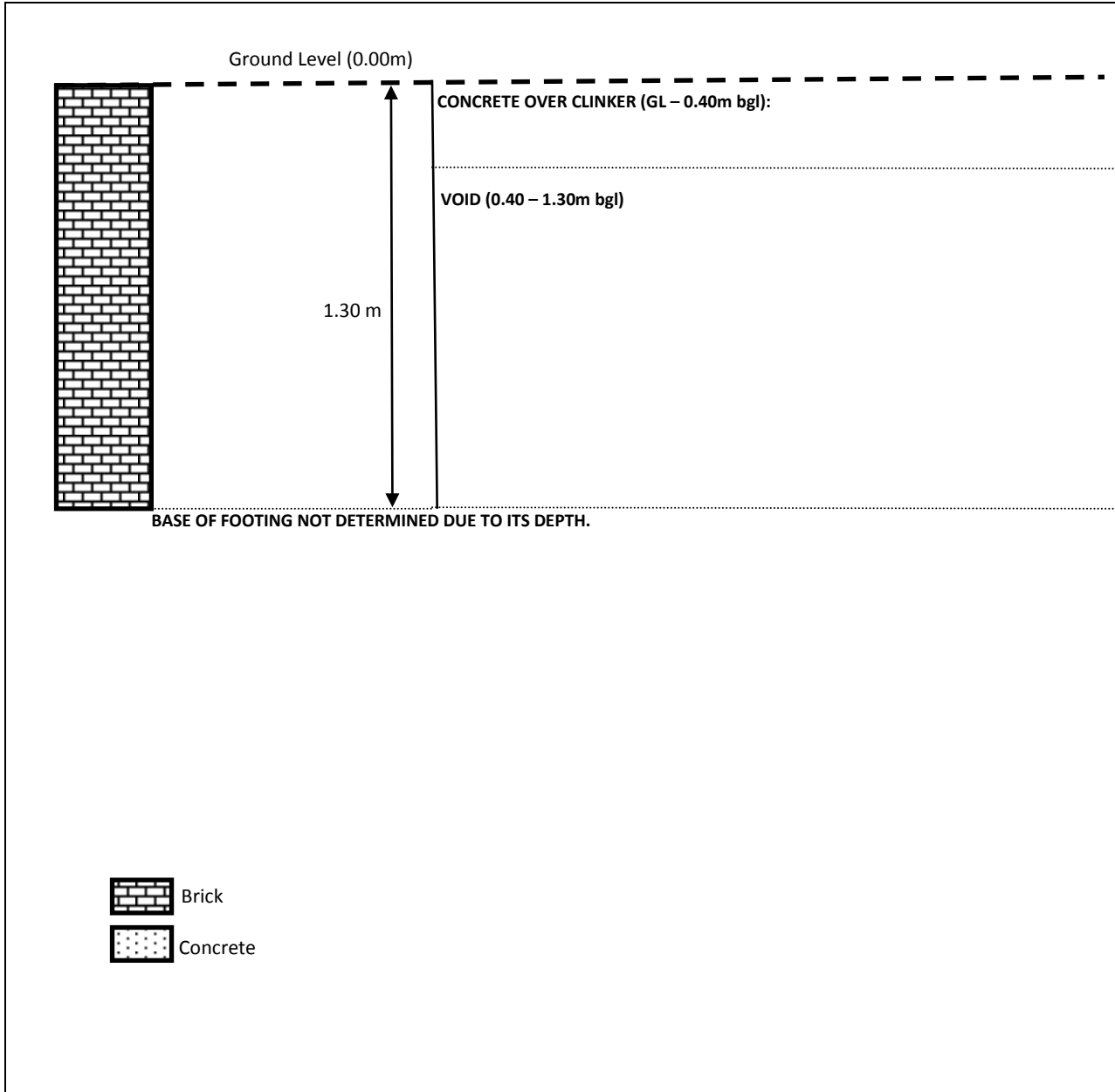
Date:
October 2016

Section Drawing: Foundation
Exposure TP1

Ref:
GWPR1852

Figure 2





Project:
251 Goldhurst Terrace, South Hampstead, London
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Client:
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Date:
October 2016

Section Drawing: Foundation
Exposure TP2

Ref:
GWPR1852

Figure 3