ground&water

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Preliminary Summary – Ground Investigation Report

CLIENT	Greenway Architects c/o Vincent & Rymill
SITE ADDRESS	42 Avenue Road, Primrose Hill, London NW8 6HS
REPORT REFERENCE	GWPR1330
ENGINEER	Francis Williams, Ground and Water Limited
INVESTIGATION LOCATIONS	Please see Figure 1 Attached.

GROUND CONDITIONS ENCOUNTERED

Summary of Strata Encountered (WS1 and WS2)		
Strata	**Depth Encountered (m bgl)**	**Thickness (m)**
MADE GROUND (Tarmac over type 1 sub-basE)	GL	0.20
MADE GROUND (Stiff brown clay fill with brick and frequent roots).	0.20	0.40
HEAD DEPOSITS (Stiff orange/grey silty CLAY with occasional, medium gravels).	0.60	1.50
LONDON CLAY FORMATION (Stiff brown/blue clay, becoming brown and then dark grey with depth, silty CLAY. Silt layers/pockets noted. Selenite crystals noted at depth).	2.10	>13.35

As drillers logs. Subject to engineer review.

IN-SITU STRENGTH TESTING	HEAD DEPOSITS: Medium undrained shear strength (55kPa) LONDON CLAY FORMATION: Medium to very high undrained shear strength (55 - 165kpa).
GROUNDWATER	Groundwater seepage noted at 4.30m bgl.
ROOTS	Fine roots noted to 1.80m bgl. Traces of roots noted at 5.70m bgl.
ANTICIPATED VOLUME CHANGE POTENTIAL	HEAD DEPOSITS: Likely to have **LOW TO MEDIUM** volume change potential. LONDON CLAY FORMATION: Likely to have **HIGH** volume change potential. All in accordance with NHBC Standards Chapter 4.2. May have volume change potential in accordance with BRE240. Subject to confirmation of results of geotechnical classification testing.
FOUNDATION RECOMMENDATIONS	At the time of reporting, July 2015, it is understood the proposed development will comprise the excavation of a basement below the entire footprint of the house. Due to the soils having the potential for volume change foundations must not be placed within cohesive root penetrated and/or desiccated soils and the influence of the trees surrounding the site must be taken into account. The base of foundation excavations must extend at least 300mm into non-root penetrated soils. Should trees be removed from footprint of proposed development then a piled foundation should be considered.

Fresh roots were noted to 1.80m bgl. The root traces at 5.70m bgl were considered to be relic and therefore not likely to pose a risk to the serviceability of the proposed structure. Therefore based on the above the assumed minimum foundation depth of 3.00-3.50m bgl for the basement shall be excavated below the root penetrated soils.

Foundations constructed on the soils of the London Clay Formation at 3.00-3.50m can be designed based on a presumed safe bearing capacity of 125 - 150kN/m^2. This is based on trial hole records, inspection of samples recovered, geotechnical laboratory results, and referral to BS 8004:1986, *Code of Practice for Foundations*, the results of the insitu testing, and based on a 5m long by 1m wide foundation and a maximum settlement of ~25mm.

This preliminary information may be subject to amendment in the final report and no liability can be accepted for any actions based on this preliminary information.

NOT TO SCALE

Project: 42 Avenue Road, Primrose Hill, London NW8 6HS		**Figure 1**
Client: Greenway Architects c/o Vincent Rymill	**Date:** July 2015	ground&water
Trial Hole Location Plan	**Ref:** GWPR1330	

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Borehole No **BH1**
Sheet 1 of 2

Project Name	Project No.	Co-ords: -	Hole Type
42 Avenue Road	GWPR1330		WLS
Location: Primrose Hill, London NW8 6HS		Level: -	Scale 1:50
Client: Greenway Architects c/o Vincent & Rymill		Dates: 09/07/2015	Logged By SJM

Well	Water Strikes	Samples & In Situ Testing Depth (m)	Type	Results	Depth (m)	Level (m AOD)	Legend	Stratum Description
					0.20			MADE GROUND: TARMAC/TYPE ONE
		0.30	D					MADE GROUND: Brown clay fill with brick and frequent roots.
		0.50	D		0.60			
		0.80	D					HEAD DEPOSITS: Orange/grey silty gravelly CLAY. Gravel is occasional, medium flints.
		1.00	SPT	N=11 (2,3/ 2,3,3,3)				
		1.00	D					
		1.50	D					
		2.00	SPT	N=14 (2,2/ 3,3,4,4)	2.10			
		2.00	D					LONDON CLAY FORMATION: Brown/blue CLAY with silt pockets and occasional traces of fine roots.
		2.50	D					
		3.00	SPT	N=11 (2,2/ 2,3,3,3)				
		3.00	D					
		3.50	D					
	▽	4.00	SPT	N=15 (3,3/ 4,4,3,4)				
		4.00	D					
		4.50	D					
		5.00	SPT	N=20 (4,4/ 5,5,5,5)				
		5.00	D					
		5.50	D					
		6.00	SPT	N=20 (5,5/ 5,5,5,5)				
		6.00	D		6.20			LONDON CLAY FORMATION: Brown CLAY with silt layers and tiny crystals.
		6.50	D					
		7.00	SPT	N=23 (5,5/ 5,6,6,6)				
		7.00	D					
		7.50	D					
		8.00	SPT	N=21 (4,5/ 5,5,6,5)				
		8.00	D					
		8.50	D					
		9.00	SPT	N=18 (4,5/ 4,4,5,5)				
		9.00	D					
		9.50	D		9.60			LONDON CLAY FORMATION: Grey CLAY with silty pockets and
			Type	Results				

Continued next sheet

Remarks: As drillers logs, subject to engineer review.
Fine roots noted to 1.80m bgl. Traces of roots noted at 5.70m bgl.
Water seepage noted at 4.30m bgl.

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Borehole No **BH1** Sheet 2 of 2

Project Name	Project No.	Co-ords: -	Hole Type
42 Avenue Road	GWPR1330		WLS
Location: Primrose Hill, London NW8 6HS		Level: -	Scale 1:50
Client: Greenway Architects c/o Vincent & Rymill		Dates: 09/07/2015	Logged By SJM

Well	Water Strikes	Samples & In Situ Testing Depth (m)	Type	Results	Depth (m)	Level (m AOD)	Legend	Stratum Description
		10.00	SPT	N=22				occasional tiny crystals.
		10.00	D	(5,5/ 5,6,5,6)				
		10.50	D					
		11.00	SPT	N=25				
		11.00	D	(5,6/ 6,6,6,7)				
		11.50	D					
		12.00	SPT	N=30				
		12.00	D	(5,5/ 6,7,8,9)				
		12.50	D					
		13.00	SPT	N=28				
		13.00	D	(5,6/ 6,7,7,8)				
		13.50	D					
		14.00	SPT	N=33				
		14.00	D	(5,5/ 7,8,9,9)				
		14.50	D					
		15.00	SPT	N=31				
		15.00	D	(6,6/ 6,7,8,10)				
					15.45			End of Borehole at 15.45 m
			Type	Results				

11 12 13 14 15 16 17 18 19

Remarks: As drillers logs, subject to engineer review.
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Water seepage noted at 4.30m bgl.

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