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Preliminary Summary – Ground Investigation Report

CLIENT	Croft Structural Engineers
SITE ADDRESS	The Coach House, 98a Priory Road, London NW6 3NT
REPORT REFERENCE	GWPR1259
ENGINEER	Megan James, 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 (WS1 only) (Brown, yellow and grey gravelly SAND. Sand is fine to medium grained. Gravel is abundant, fine to coarse, flint, concrete and cemented sand.)	GL	0.30
MADE GROUND (WS2 only) (Brown and light brown mottled sandy gravelly silty CLAY. Sand is fine to coarse grained. Gravel is occasional, fine to coarse, sub-rounded to sub-angular brick and carbonaceous material (tarmac).)	GL	0.30
MADE GROUND (Light brown and orange mottled sandy gravelly silty CLAY. Sand is fine to coarse grained. Gravel is occasional to abundant, fine to medium, sub-rounded to sub-angular carbonaceous material (tarmac) (WS2 only), cemented sands (WS1 only), flint and brick.)	0.30	0.30 - 0.60
HEAD DEPOSITS (WS2 only) (Brown and orange brown slightly mottled gravelly silty CLAY. Gravel is rare, fine, rounded to sub-rounded flint.)	0.60	0.30
HEAD DEPOSITS (Orange and brown mottled sandy silty CLAY. Sand is fine to coarse grained. Gravel is abundant, fine to medium, sub-rounded to sub-angular flint.)	0.90	0.35
LONDON CLAY FORMATION (Medium brown with occasional orange and grey mottling silty CLAY. Fine selenite crystals noted throughout. Occasional sandy/silty pockets noted.)	1.25	>5.75

IN-SITU STRENGTH TESTING	LONDON CLAY FORMATION: Very low to very high undrained shear strength (20 - 210kpa).
GROUNDWATER	Groundwater strike noted at 4.20m bgl in WS1. No groundwater observed in WS2.
ROOTS	Roots noted to 1.00-1.30m 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, May 2015, it is understood the proposed development will comprise the construction of a two storey side extension, a single storey rear extension and excavation of a basement below the entire footprint of the house. A loft conversion is also proposed. 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. Roots noted to 1.00-1.30m bgl.. 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 3.0-3.50m 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, 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.