

A REPORT

ON A

SITE INVESTIGATION

AT

30 - 38 CHESTER ROAD

NORTHWOOD

MIDDLESEX

HA6 1BQ

FOR

SEYMOUR HOUSE RESIDENTIAL CARE HOMES LIMITED

BY

SOILTEC LABORATORIES LIMITED

Ledian Farm Industrial Estate  
Upper Street  
Leeds  
Maidstone  
Kent  
ME17 1RZ

Date: August 2021

Report No: 03875/14

A REPORT ON A SITE INVESTIGATION AT 30 - 38 CHESTER ROAD,  
NORTHWOOD, MIDDLESEX, HA6 1BQ FOR SEYMOUR HOUSE RESIDENTIAL  
CARE HOMES LIMITED BY SOILTEC LABORATORIES LIMITED.

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# FOREWORD

## General Conditions Relating to Site Investigation

The recommendations made and any opinions expressed in this report are based on the ground conditions revealed by the site works, an assessment of the site and laboratory test results together with other available information. The possibility of variations in ground conditions elsewhere on the site should not be overlooked. No liability can be accepted for such variations.

Unless otherwise stated in the report, drilling is undertaken using light percussive shell and auger equipment or continuous window sampler equipment. Whilst these methods are regarded as most reliable, some disturbance of the soils is inevitable.

The ground water conditions indicated on the borehole and/or trial pit records are those observed at the time of the investigation. The normal rate of excavation usually does not allow the recording of an equilibrium water level. Additionally, ground water levels are subject to seasonal variation or changes in local drainage conditions. If accurate ground water levels are required then standpipe piezometers should be installed and monitored for a period of time.

Boring and sampling methods are generally undertaken in accordance with B.S. 5930 : 1999, 'Code of practice for site investigations'. Laboratory testing is carried out in accordance with B. S. 1377 : 1990, 'Methods of Test for Soils for Civil Engineering Purposes', unless otherwise stated.

This report is produced for the benefit of the Client alone. It should be noted that the investigation was made for the form of development described and may be inappropriate to another form of development. No responsibility can be accepted for any consequences of this information being passed to a third party who may act upon its content.

## **1.0 INTRODUCTION**

It is proposed for the construction of a three storey residential care home on land known as 30 - 32 Chester Road, Northwood. At the request of Seymour House Residential Care Homes Limited, an investigation was carried out to provide information on ground conditions for foundation design.

Soiltec Laboratories Limited was instructed to complete the required investigation work by email dated 09<sup>th</sup> August 2021 in response to our quotation for a ground investigation

The comments given and opinions expressed in this report are based on the ground conditions encountered during the site works, on the results of tests made in the field and in the laboratory together with other available information. The possibility of variations in ground conditions elsewhere on the site should not be overlooked.

## **2.0 DESCRIPTION AND GEOLOGY OF THE SITE**

The site is located to the south of Chester Road opposite to the junction with Kemps Drive. The site is level with some front hardstanding, it is currently very overgrown with grass and bushes.

From an examination of the geological map for the area, (Sheet 255 : Beaconsfield), the solid geological deposit for the site is London Clay.

London Clay consists of dark grey pyritous silty clays, in parts sandy, with common courses of claystone (nodular limestone). It weathers to a brown or yellowish-brown colour near the surface.

## **3.0 FIELD WORK**

The fieldwork undertaken comprised the excavation of two boreholes using window sampler methods on the 17th August 2021.

A note of the strata encountered in the boreholes together with a record of the ground water conditions are presented in the borehole records.

Disturbed soil samples were taken at the depths shown on the records and were returned to the laboratory for examination and testing.

Shear strengths of the soils encountered was determined in the boreholes using hand shear vane equipment. The results are included on the borehole records.

## **4.0 LABORATORY TESTING**

A program of laboratory testing was carried out on selected soil samples to determine plasticity, natural moisture contents

Liquid Limits of 80% to 66% and Plastic Limits of 23% to 27% were recorded. The values show the underlying London Clay to vary in plasticity from high to very high. Classified as CH to CV according to BS 5930.

Moisture contents were generally at levels expected for the site.

The tests, unless otherwise stated, were carried out in accordance with British Standard 1377 : 1990 "methods of Test for Soils for Civil Engineering Purposes".

## **5.0 DISCUSSION**

### **5.1 General**

The investigation confirmed the anticipated solid deposit. The site is shown to be overlain with made ground/topsoil to generally 0.80m to 0.90m. Below the made ground to the base of each borehole, firm to stiff or stiff light brown slightly mottled orange or grey silty clay was penetrated.

Fine roots were encountered to a maximum depth of 1.80m, however, it is likely that root growth has extended below this level.

### **5.2 Ground Water**

Ground water was not encountered in the excavations during the site works.

### **5.3 Foundations**

The foundation design must be suitable for the conditions present at the site. For the proposed development it is considered that conventional foundations should be taken through any topsoil or made ground below and root zone, disturbed or desiccated soil and into the London Clay.

The results of the geotechnical laboratory testing conducted on samples of London Clay indicate the soils to be generally of high shrinkage potential, as defined by the NHBC Chapter 4.2. Therefore the foundation depths should be determined in relation to the high shrinkage potential of the soils and location of any significant vegetation that is either to remain or be removed.


Based on in-situ shear vane testing and visual appraisal of the soils encountered in the boreholes an allowable bearing value of 140kPa can be utilized for foundation taken to 2.00m the anticipated formation level. For the allowable bearing value given, settlements should not exceed 25mm, provided a footing width of 0.60m is used and the excavation bases are carefully bottomed out and blinded or concreted as soon after excavation as possible.

As depths of foundations are likely to exceed 1.50m depth it is recommended that all ground floors are suspended.

For and on behalf of

Soiltec Laboratories Limited

## **LABORATORY TEST RESULTS**


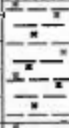
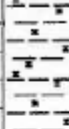

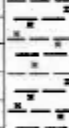
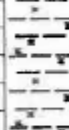
					SOIL CLASSIFICATION RESULTS					
					Date : August 2021			Report No: 03875/14		
Client : SEYMOUR HOUSE					Location : 30 - 32 Chester Rd, Northwood, HA6 1BQ					
Borehole /Trial pit No.	Sample Depth (m)	Sample No.	Moisture Content (%)	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)	Fraction <425µm (%)	Shear Strength (kPa)	Water Sol. Sulphate (g/l <sup>1</sup> )	Sample Description
1	1.00		37.1	66	23	43	100	36		
	2.00		30.4					56		
	3.00		33.6	80	27	53	100	84		
	4.00		29.1					130+		
	5.00		29.4					110		
	6.00		22.3					130+		
2	1.00		38.4	66	24	43	100	52		
	2.00		27.3					70		
	3.00		32.8					98		
	4.00		32.9	72	25	47	100	110		
	5.00		32.9					114		
	6.00		30.0					130+		



## **BOREHOLE LOGS**

Client: Seymour House Residential Care Homes Limited  
 Project: 30 – 32 Chester Road, Northwood, Middlesex, HA6 1BQ  
 Project No: 03875/14  
 Date: 17/08/2021

Borehole No: 1

SUB-SURFACE PROFILE			SAMPLE													
Depth (m)	Legend	Description	Elev/Depth (m)	Number	Type	Depth (m)	SPT/CPT N-Value 10 20 30 40				SHEAR VANE kPa 10 30 50 70 90 110					
		<b>MADE GROUND</b> Loose flint gravel over clay/brick/flint fill with abundant roots.	-0.9													
1		<b>SILTY CLAY</b> Soft light brown slightly mottled orange silty clay with abundant roots.	-1.8	1	D	1.00										
2		<b>SILTY CLAY</b> Firm becoming stiff light brown slightly mottled grey silty clay		2	D	2.00										
3				3	D	3.00										
4				4	D	4.00										
5				5	D	5.00										
6		End of Log	-6	6	D	6.00										
7																
8																
9																
10																

Water Strike : none

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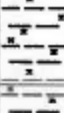
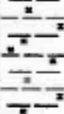
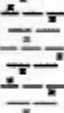
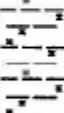
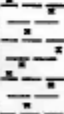
Drill Method : Window Sampler

Water after 15mins :

Sheet : 1 of 1

Client: Seymour House Residential Care Homes Limited  
 Project: 30 – 32 Chester Road, Northwood, Middlesex,  
 HA6 1BQ  
 Project No: 03875/14  
 Date: 17/08/2021

Borehole No: 2

SUB-SURFACE PROFILE			SAMPLE				SPT/CPT N-Value 10 20 30 40				SHEAR VANE kPa 10 30 50 70 90 110					
Depth (m)	Legend	Description	Elev/Depth (m)	Number	Type	Depth (m)										
		<b>MADE GROUND</b> Loose flint gravel over clay/brick/flint fill with abundant roots.	-0.8													
1		<b>SILTY CLAY</b> Firm light brown slightly mottled orange silty clay with abundant roots to 1.80m.		1	D	1.00										
2			-2.2	2	D	2.00										
3		<b>SILTY CLAY</b> Stiff light brown slightly mottled grey silty clay		3	D	3.00										
4				4	D	4.00										
5				5	D	5.00										
6			-6	6	D	6.00										
		End of Log														
7																
8																
9																
10																

Water Strike : none

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Drill Method : Window Sampler

Water after 15mins :

Sheet : 1 of 1