

Soils Laboratory Results Summary

Address: **27 The Foxgloves, Hedge End, Southampton, SO30 0UG**

Reference: LIV-SN-22-005467

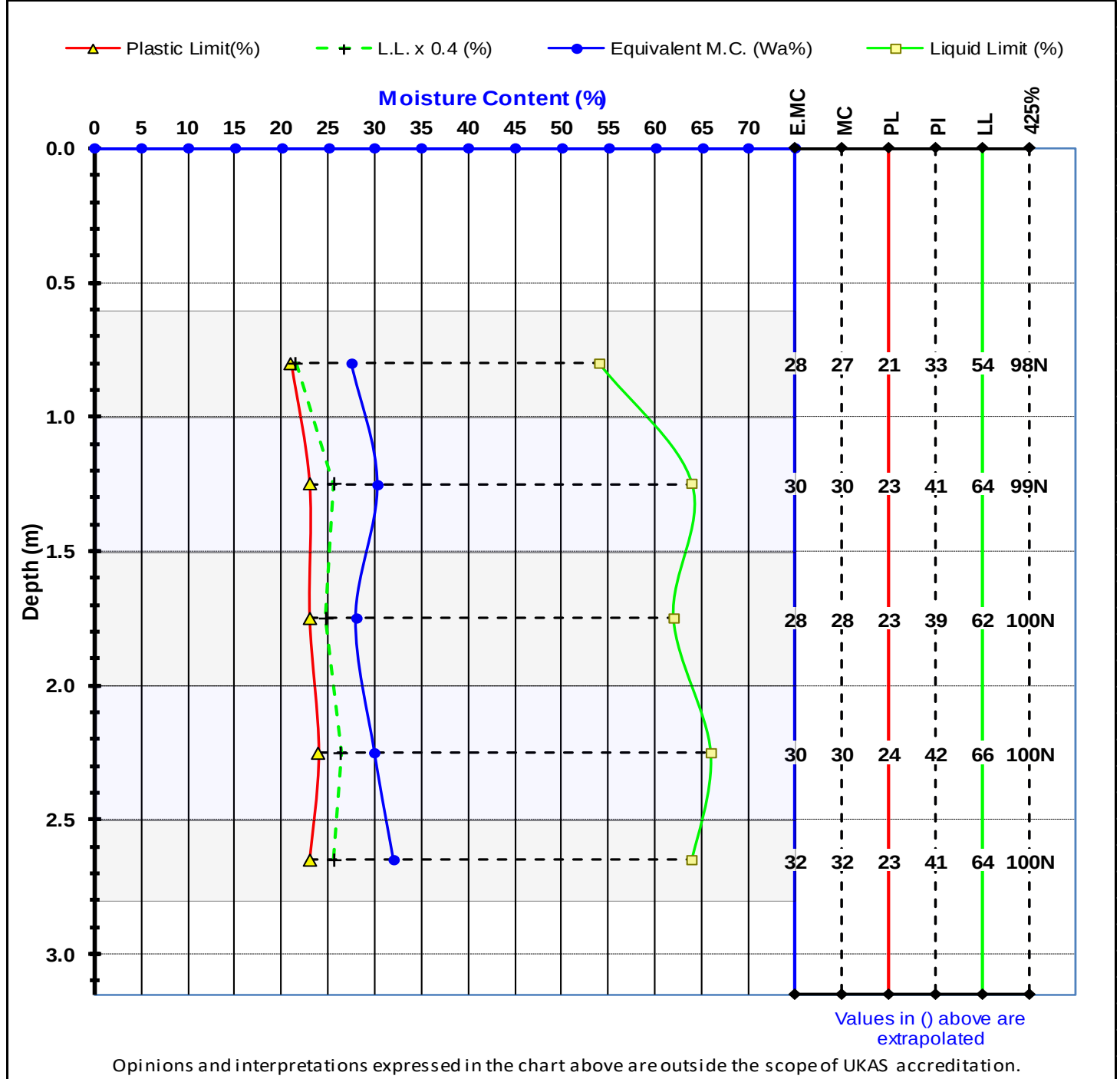
Date: 03-03-23

Laboratory: DRC Soils Lab

Lab Ref: LJ10616

Date: 03-03-23

Depth T (m)	Depth B (m)	1 - Rear left of conservatory	Plasticity (BS 5930)	Volume Change	
		Brief Soil Description		M.PI	(BRE 240)
0.6	1	Soft/firm dark brown/light brown CLAY with rare medium gravel & roots	High CH	32%	Medium
1	1.5	Firm light brown CLAY with rare medium gravel & roots	High CH	41%	High
1.5	2	Firm light brown slightly sandy CLAY with rare medium gravel	High CH	39%	Medium
2	2.5	Firm light brown slightly sandy CLAY with rare medium gravel	High CH	42%	High
2.5	2.8	Soft/firm light brown slightly sandy CLAY with rare medium gravel	High CH	41%	High



Key:

MC = Natural Moisture Content (%)

E.M.C = Equivalent Moisture Content (%) = $MC \times 100 / 425\%$

M.PI = Modified Plasticity Index (%) = $PI \times 425\% / 100$

425% = Material passing the 425µm sieve (%) + (N = Natural or S = Sieved)

Notes: All samples received as Disturbed unless noted below in the comments.

Samples prepared in accordance to BS1377:Part 1:1990 Section 7 & described in general accordance with BS5930:1999.

Samples tested in accordance to BS1377:Part 2:1990 Section 3.2, 4.4 & 5.

Comments: Slightly desiccated with typical bulge.

PL = Plastic Limit (%)

PI = Plasticity Index (%) = $LL - PL$

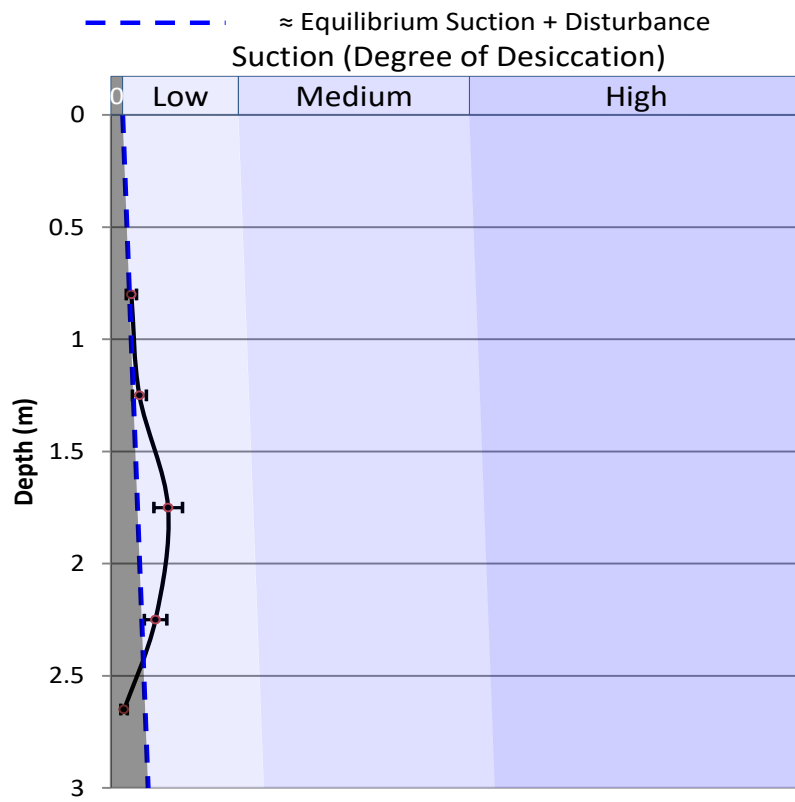
LL = Liquid Limit (%)

LL x 0.4 = 40% of the LL (%)

NP = Non Plastic

Soils Analysis

Predicted Suction Profile



The predicted suction profile to the left has been calculated from the present test results and analysed against a large ($\approx 170,000$) database of previous test results and is based upon variables such as location, soil type, deposit type, likely previous stress history, depth, matric suction, MC, plasticity, % passing the 425 μm sieve and oedometer tests among others.

The potential heave below has been calculated from the predicted suction profile in accordance with: *BRE Digest 412 (1996) "Using suction profiles"*

$\approx$ Heave Potential = 1 to 6mm **Med. 3mm**
 $\therefore \approx$ Predicted heave over the recorded depth of
 (0.6 to 2.8m) 2.2m is about: **0 to 2cm.**