

Chelmer Geotechnical Laboratories

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Laboratory Testing Results

Job No: CGL02537
 Client: K F Geotechnical
 Site: Kidderpore Gardens

Received: 07.02.12
 Tested: 13.02.12
 Complete: 15.02.12

Sample Ref		Type	Moisture Content (%) [1]	Soil Fraction > 0.425mm (%) [2]	Liquid Limit (%) [3]	Plastic Limit (%) [4]	Plasticity Index (%) [5]	Liquidity Index [5]	Modified Plasticity Index (%) [6]	Soil Class [7]	Filter Paper Contact Time (h) [8]	Soil Sample Suction (kPa)	In situ Shear Vane Strength (kPa) [9]	Organic Content (%) [10]	pH Value [11]	Sulphate Content (g/l)		Class [14]
BH / Sample No	Depth (m)															SO ₃ [12]	SO ₄ [13]	
1/022594	1.0	D	26	20														
1/022595	1.5	D	25	26														
1/022596	2.0	D	27	<5	53	18	35	0.24	35	CH								
1/022597	2.5	D	26	<5														
1/022598	3.0	D	26	<5	53	20	33	0.20	33	CH								
1/022599	4.0	D	27	<5														
1/022600	5.0	D	26	<5														
1/022601	6.0	D	25	<5														
1/022602	8.0	D	30	<5														
1/022603	10.0	D	30	<5														

Test Methods / Notes

- [1] BS 1377 : Part 2 : 1990, Test No 3.2
- [2] Estimated if <3%, otherwise measured
- [3] BS 1377 : Part 2 : 1990, Test No 4.4
- [4] BS 1377 : Part 2 : 1990, Test No 5.3
- [5] BS 1377 : Part 2 : 1990, Test No 5.4
- [6] BRE Digest 240 : 1993
- [7] BS 5930 : 1981 : Figure 31 - Plasticity Chart for the classification of fine soils
- [8] In-house method S9a adapted from BRE IP 4/93

[9] Values of shear strength were determined in situ by using

- a Pileon hand vane or Geonor vane (GV).
- [10] BS 1377 : Part 3 : 1990, Test No 4
- [11] BS 1377 : Part 2 : 1990, Test No 9
- [12] BS 1377 : Part 3 : 1990, Test No 5.6
- [13] SO₄ = 1.2 x SO₃
- [14] BRE Special Digest One (Concrete in Aggressive Ground) 2005

Note that if the SO₄ content falls into the DS-4 or DS-5 class, it would be prudent to consider the sample as falling into the DS-4m or DS-5m class respectively unless water soluble magnesium testing is undertaken to prove otherwise

Key

- D Disturbed sample
- B Bulk sample
- U U100 (undisturbed sample)
- W Water sample
- ENP Essentially Non-Plastic by inspection
- US Underside Foundation