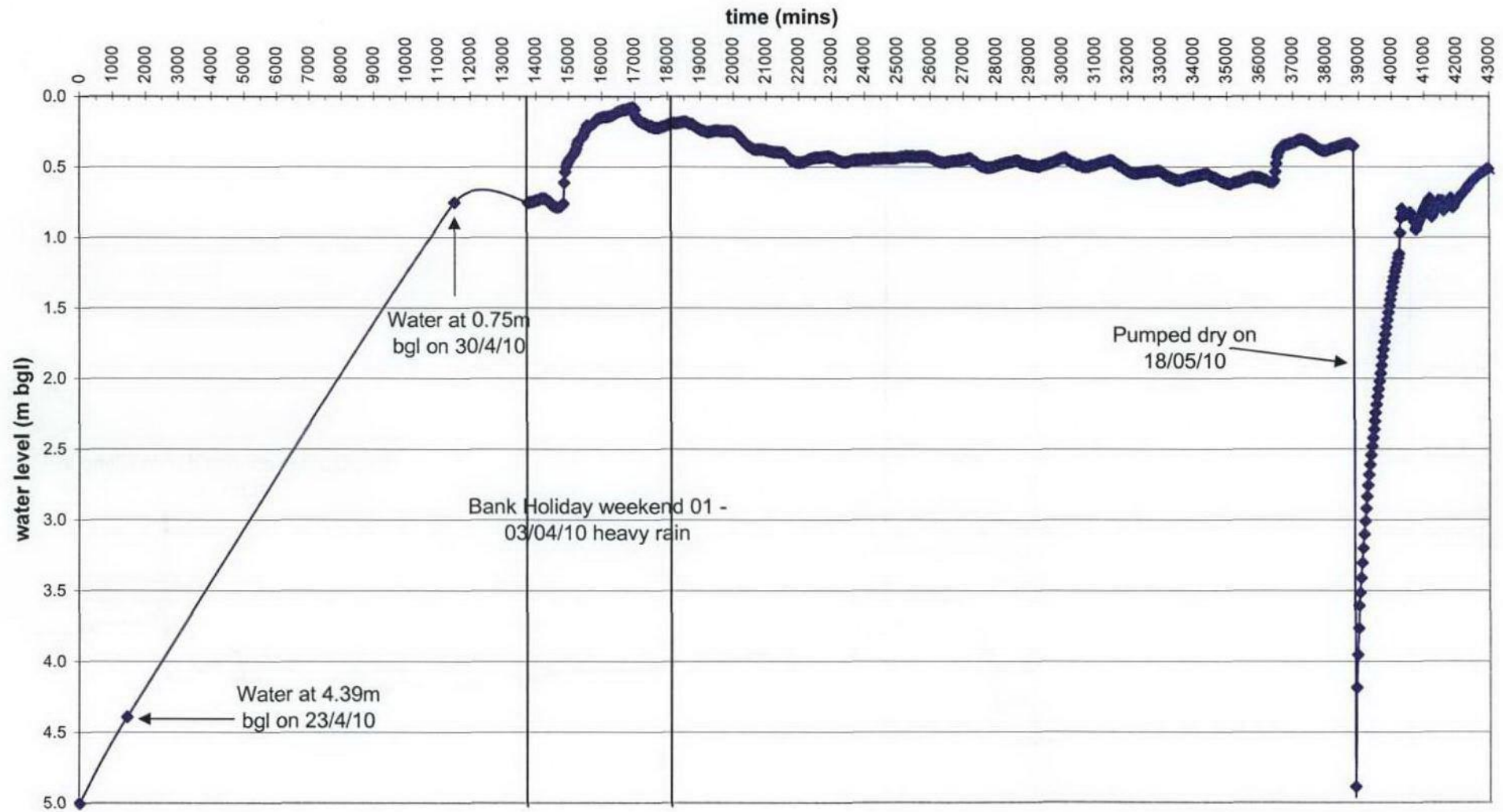
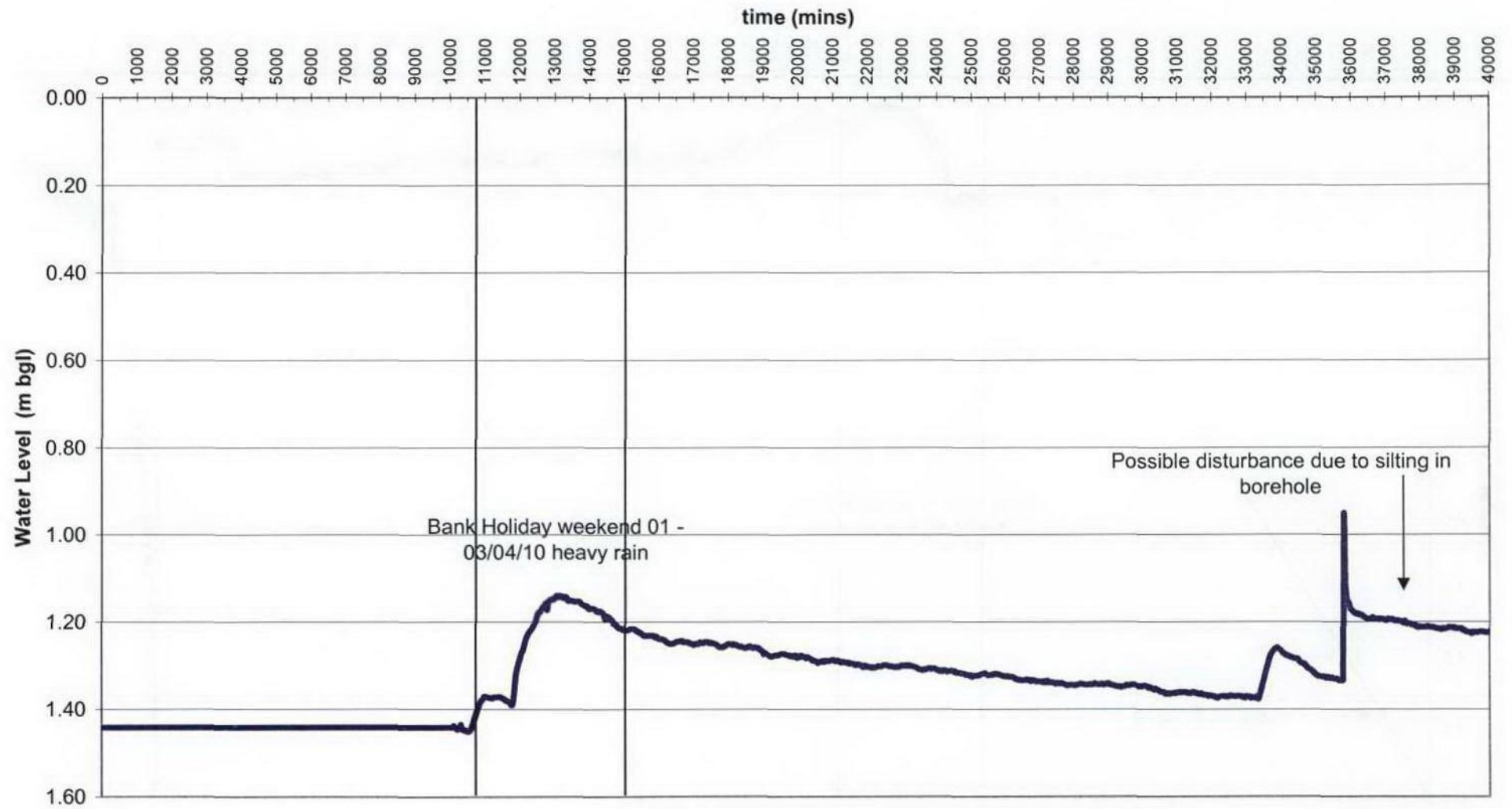


WS7



WS10



APPENDIX C

Geotechnical Laboratory Test Records

(this appendix contains 28 pages, including this one)



Clive Gerring
RSK STATS Geoconsult Limited
18 Frogmore Road
Hemel Hempstead
Hertfordshire
HP3 9RT

STRUCTURAL SOILS LTD

SITE INVESTIGATION

SOIL, ROCK &
MATERIAL TESTING

GEOTECHNICAL
CONSULTANCY

CONTAMINATED
LAND ASSESSMENT

18th May 2010

TESTING REPORT

YOUR REF: 241529

SITE: FITZROY FARM, HAMPSTEAD

CERTIFICATE NUMBER: 581094

DATE SAMPLES RECEIVED: 29TH April 2010
DATE TESTING COMMENCED: 29th April 2010

DATE OF SAMPLE DISPOSAL: 18th June 2010

INSTRUCTIONS: Please carry out Moisture Content, Quick Undrained Triaxial and Atterberg Limit tests on the samples provided.

Dear Mr Gerring,

I have pleasure in enclosing the test report for the above project that you submitted to us for testing.

Yours sincerely

Paul Kent
Laboratory Manager

Enc.

18 FROGMORE ROAD
HEMEL HEMPSTEAD
HERTS
HP3 9RT
TEL: 01442 416660
FAX: 01442 437550
hemel@soils.co.uk
www.soils.co.uk

HEAD OFFICE:
Bristol

BRANCH OFFICE:
Castleford
West Yorkshire

Date: 18/05/2010

Drawn by: SC

Template Issue: 2

Filename: 581094 / CLASS / 01_MC.XLS

Borehole	Sample	Depth (m)	Moisture Content (%)
BH1	-	0.80	32
BH1	-	1.50	30
BH1	-	2.50	30
BH1	-	4.50	32
BH1	-	7.00	26
BH1	-	10.00	29
BH2	-	0.50	32
BH2	-	1.50	31
BH2	-	3.50	30
BH2	-	5.50	33
BH2	-	8.50	27
BH2	-	11.50	26
BH3	-	0.70	38
BH3	-	1.40	33
BH3	-	2.50	32
WS1	-	0.80	34
WS1	-	1.50	25
WS1	-	2.00	25
WS1	-	3.00	31
WS2	-	0.70	34
WS2	-	1.50	32
WS2	-	2.50	33
WS2	-	3.50	30
WS3	-	1.00	35
WS3	-	2.00	30
WS3	-	3.00	32
WS3	-	4.00	33
WS5	-	1.00	31
WS5	-	2.00	32
WS5	-	3.50	34
WS5	-	5.00	26

Tested in accordance with BS1377: Part 2: 1990: Clause 3

SUMMARY OF MOISTURE CONTENT TEST RESULTS

Date: 18/05/2010

Drawn by: SC

Template Issue: 4

Filename: 581094 / 01_SD.XLS

Borehole	Depth (m)	Moisture Content (%)	Sample Description
BH1	2.50	30	Brown mottled grey CLAY with occasional pockets of silty fine sand and traces of gypsum
BH1	4.50	32	Brown mottled grey CLAY with traces of gypsum
BH1	7.00	26	Very dark brownish grey CLAY
BH1	10.00	29	Very dark brownish grey CLAY
BH1	16.00	28	Very dark brownish grey CLAY
BH2	1.50	31	Brown mottled grey CLAY with occasional pockets of silty fine sand and traces of gypsum
BH2	3.50	30	Brown CLAY with occasional pockets of fine sand and traces of gypsum
BH2	5.50	33	Brown CLAY with occasional pockets of fine sand and traces of gypsum
BH2	8.50	27	Very dark brownish grey CLAY
BH2	11.50	26	Very dark brownish grey CLAY

Moisture contents tested in accordance with BS 1377: Part 2: 1990: Clause 3

Key to Gravel Sizes: fine - 2 to 6mm
 medium - 6 to 20mm
 coarse - 20 to 60mm

SUMMARY OF SAMPLE DESCRIPTIONS AND MOISTURE CONTENT

Date: 18/05/2010

Drawn by: SC

Template Issue: 4

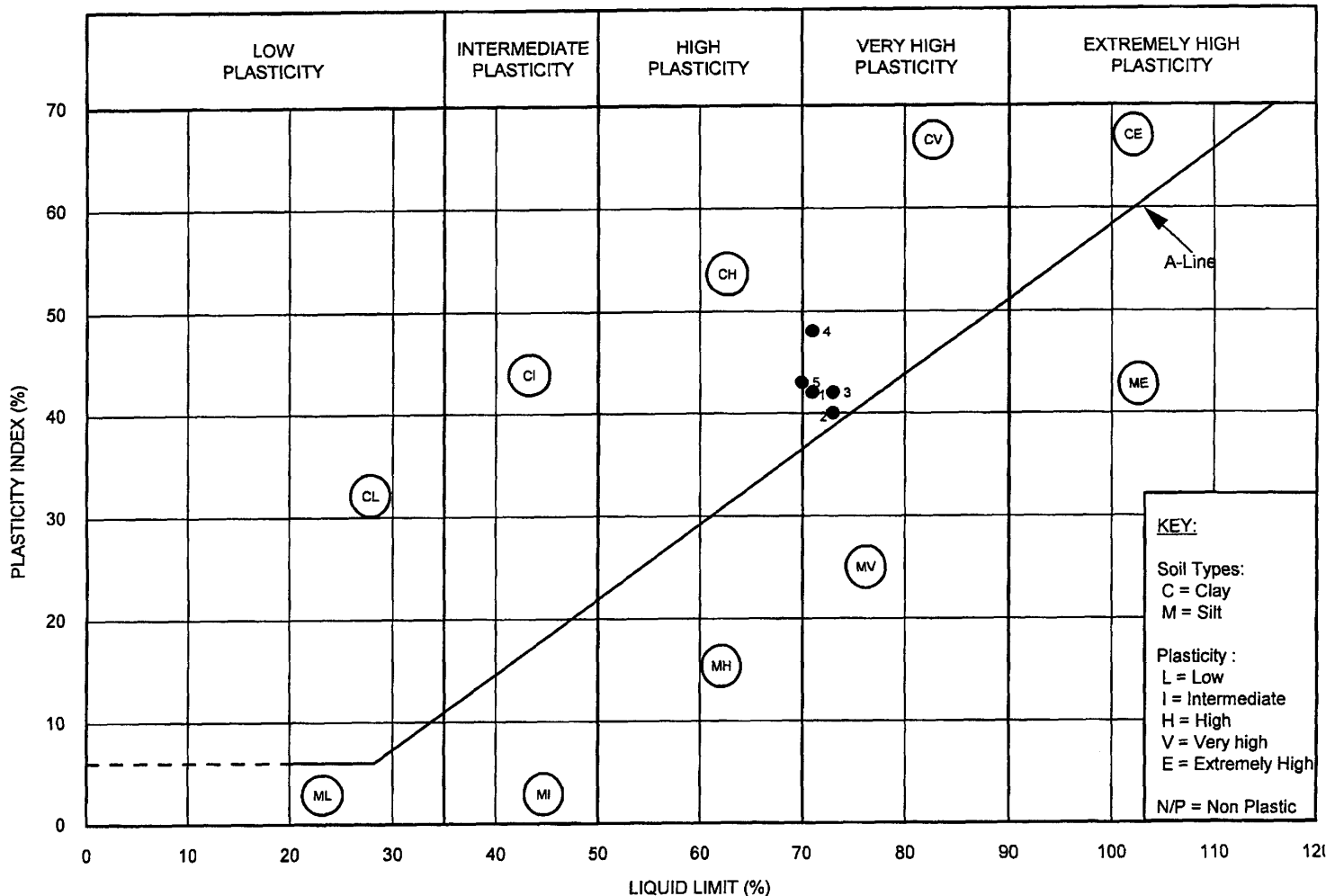
Filename: 581094 / 02_SD.XLS

Borehole	Depth (m)	Moisture Content (%)	Sample Description
BH2	14.50	30	Very dark brownish grey CLAY
BH3	3.50	34	Brown mottled grey CLAY with traces of gypsum
BH3	5.50	26	Brown CLAY with a single pocket of fine to coarse gravel and mudstone and traces of gypsum
BH3	8.50	28	Very dark brownish grey CLAY

Moisture contents tested in accordance with BS 1377: Part 2: 1990: Clause 3

Key to Gravel Sizes: fine - 2 to 6mm
 medium - 6 to 20mm
 coarse - 20 to 60mm

SUMMARY OF SAMPLE DESCRIPTIONS AND MOISTURE CONTENT



Plot Number	Borehole	Sample	Depth (m)	BS Test Method*	Preparation Method †	% Passing 425 micron Sieve	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)
1	BH1	-	0.80	4.4/5.3/5.4	4.2.3	100	71	29	42
2	BH1	-	2.50	4.4/5.3/5.4	4.2.3	100	73	33	40
3	BH1	-	4.50	4.4/5.3/5.4	4.2.3	100	73	31	42
4	BH1	-	7.00	4.4/5.3/5.4	4.2.3	100	71	23	48
5	BH1	-	10.00	4.4/5.3/5.4	4.2.3	100	70	27	43

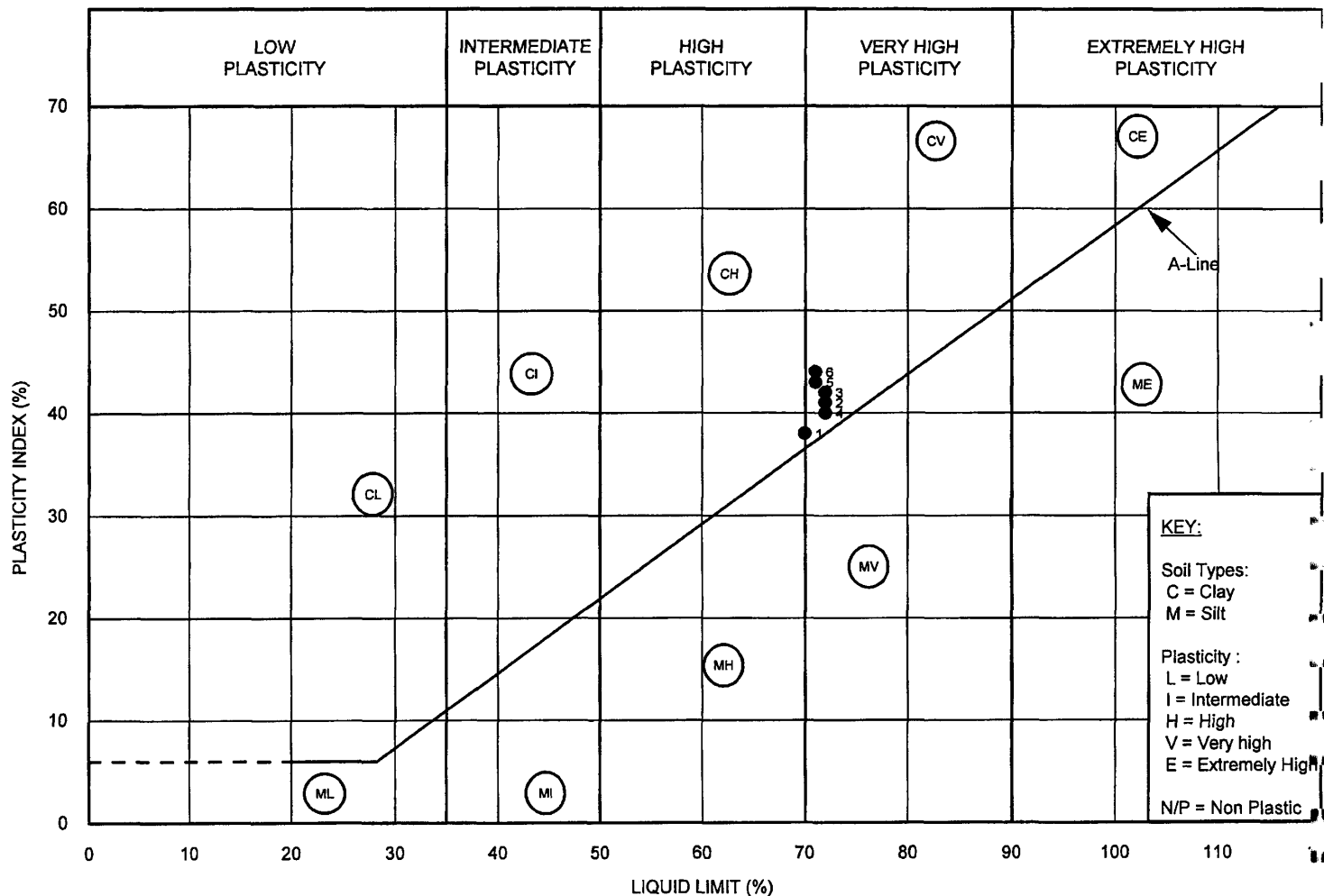
*Tested in accordance with the following clauses of BS 1377:Part 2:1990:
4.3 - Cone Penetrometer Method
4.4 - One point Cone Penetrometer Method
4.5 - Casagrande Method
4.6 - One point Casagrande Method
5.3 - Plastic Limit Method
5.4 - Plasticity Index

†Tested in accordance with the following clauses of BS 1377:Part 2:1990:
4.2.3 - Natural Soil
4.2.4 - Sieved Specimen

ATTERBERG LIMITS TEST RESULTS

Date : 18/05/10

Drawn by: SC

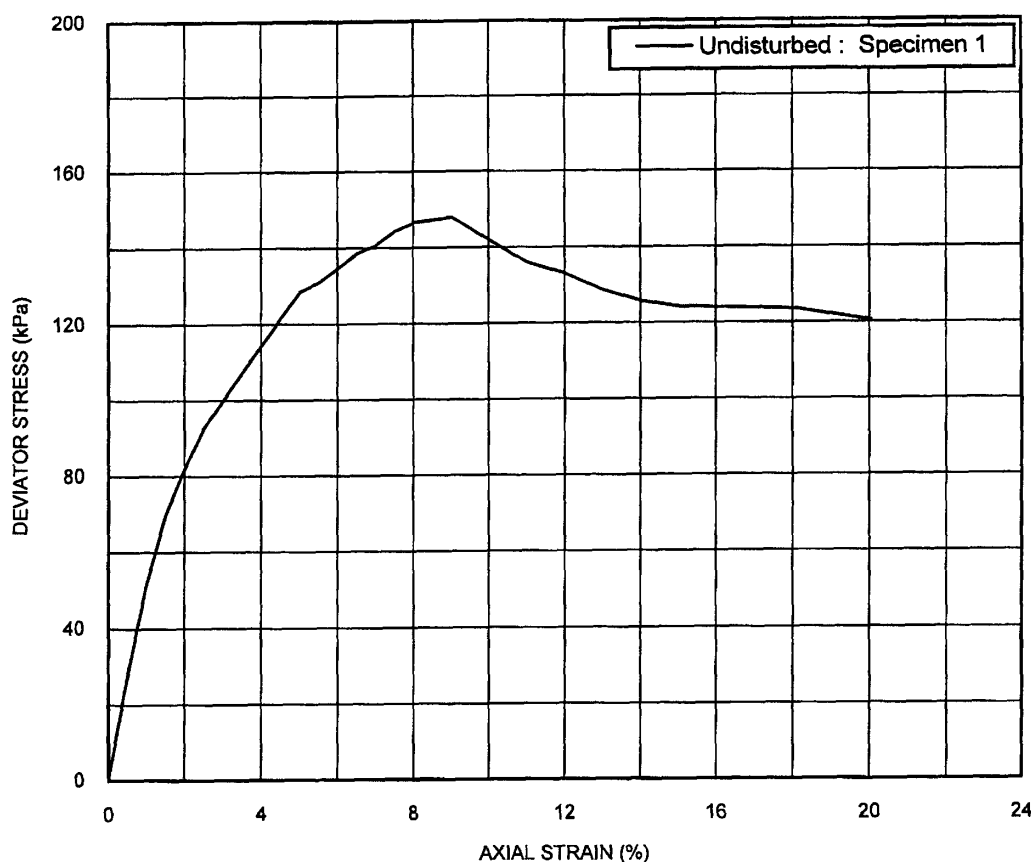


Plot Number	Borehole	Sample	Depth (m)	BS Test Method*	Preparation Method †	% Passing 425 micron Sieve	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)
1	BH2	-	0.50	4.4/5.3/5.4	4.2.3	100	70	32	38
2	BH2	-	1.50	4.4/5.3/5.4	4.2.3	100	72	31	41
3	BH2	-	3.50	4.4/5.3/5.4	4.2.3	100	72	30	42
4	BH2	-	5.50	4.4/5.3/5.4	4.2.3	100	72	32	40
5	BH2	-	8.50	4.4/5.3/5.4	4.2.3	100	71	28	43
6	BH2	-	11.50	4.4/5.3/5.4	4.2.3	100	71	27	44

*Tested in accordance with the following clauses of BS 1377:Part 2:1990:
4.3 - Cone Penetrometer Method
4.4 - One point Cone Penetrometer Method
4.5 - Casagrande Method
4.6 - One point Casagrande Method
5.3 - Plastic Limit Method
5.4 - Plasticity Index

†Tested in accordance with the following clauses of BS 1377:Part 2:1990:
4.2.3 - Natural Soil
4.2.4 - Sieved Specimen

ATTERBERG LIMITS TEST RESULTS

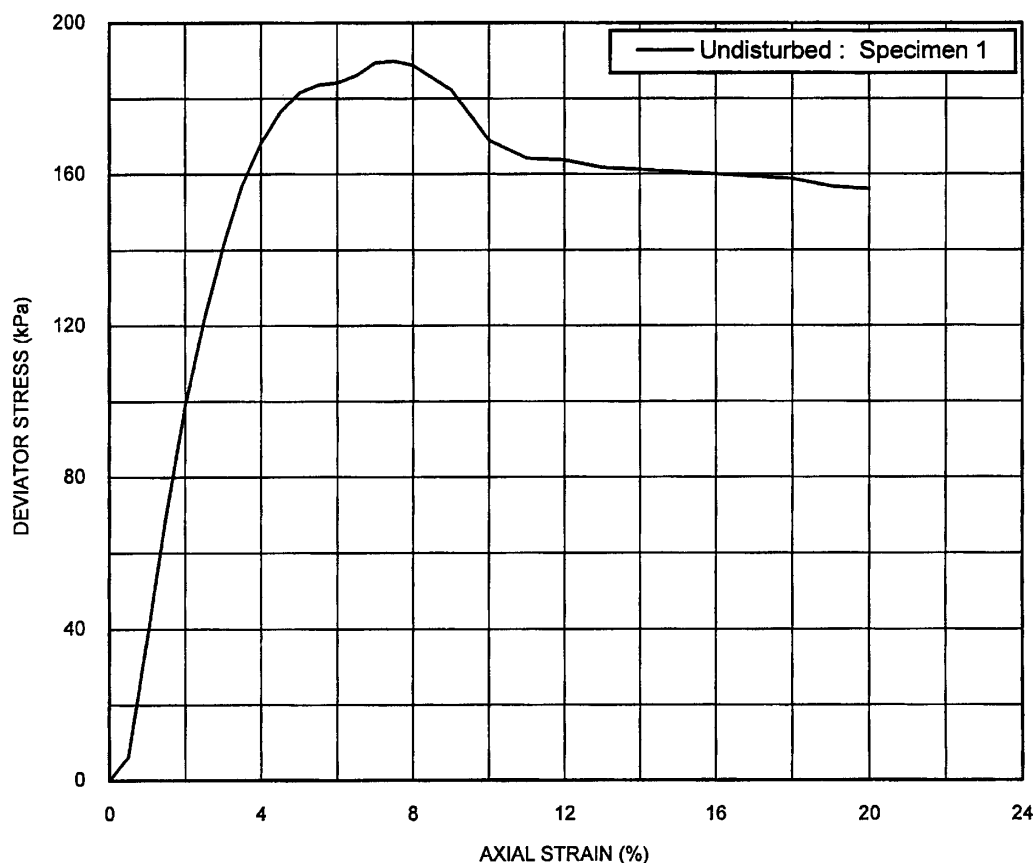


Initial Conditions		Units	Specimen 1
Sample length	mm		209.5
Sample diameter	mm		101.7
Membrane thickness	mm		0.24
Rate of strain	%/min		1.0
Bulk density	Mg/m ³		1.90
Dry density	Mg/m ³		1.43
Moisture content	%		33
Failure Conditions			
Cell pressure	kPa		50
Membrane correction	kPa		0.50
Corrected deviator stress	kPa		148
Strain at failure	%		9.0
Undrained shear strength	kPa		74
Sample Details			Failure shape
Borehole	: BH1		
Sample	: -		
Depth (m)	: 2.50		

Tested in accordance with BS 1377: Part 7: 1990: Clause 8

UNCONSOLIDATED UNDRAINED
TRIAxIAL COMPRESSION TEST

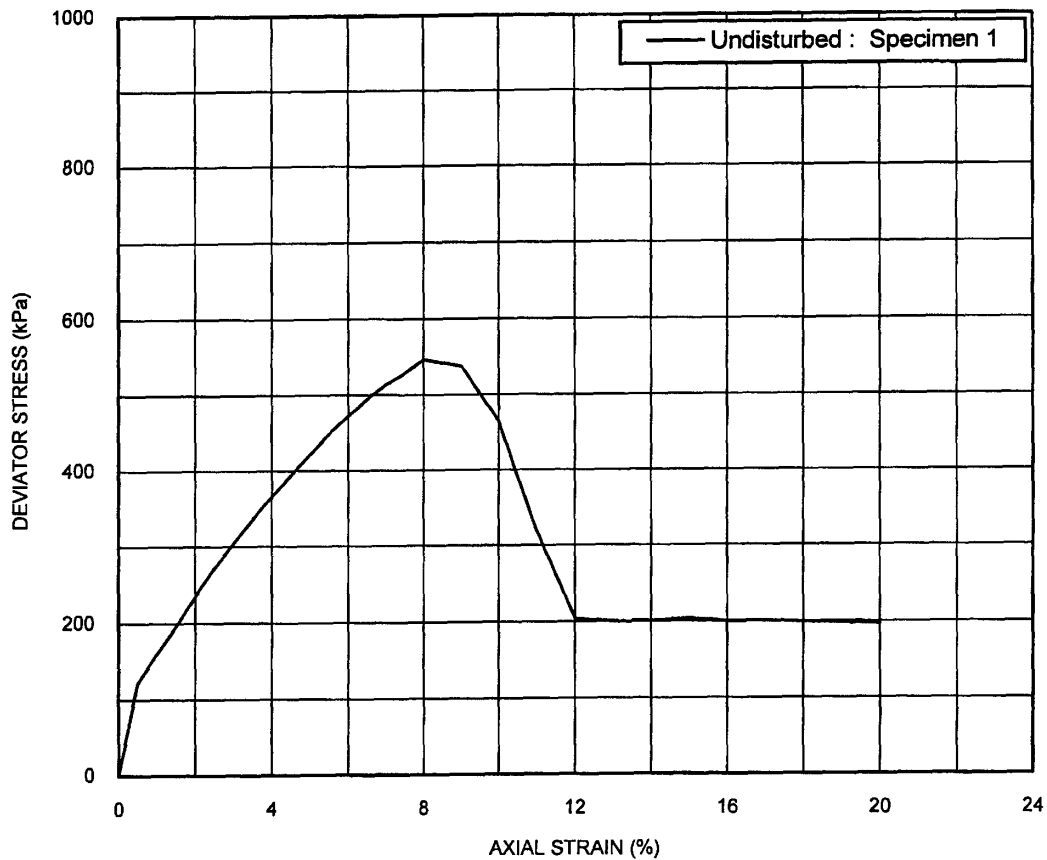
Date: 18/05/2010
Drawn by: SC



<u>Initial Conditions</u>	<u>Units</u>	<u>Specimen 1</u>
Sample length	mm	210.0
Sample diameter	mm	102.7
Membrane thickness	mm	0.24
Rate of strain	%/min	1.0
Bulk density	Mg/m ³	1.90
Dry density	Mg/m ³	1.43
Moisture content	%	33
<u>Failure Conditions</u>		
Cell pressure	kPa	90
Membrane correction	kPa	0.42
Corrected deviator stress	kPa	190
Strain at failure	%	7.5
Undrained shear strength	kPa	95
<u>Sample Details</u>		<u>Failure shape</u>
Borehole	: BH1	
Sample	: -	
Depth (m)	: 4.50	

Tested in accordance with BS 1377: Part 7: 1990: Clause 8

UNCONSOLIDATED UNDRAINED TRIAxIAL COMPRESSION TEST



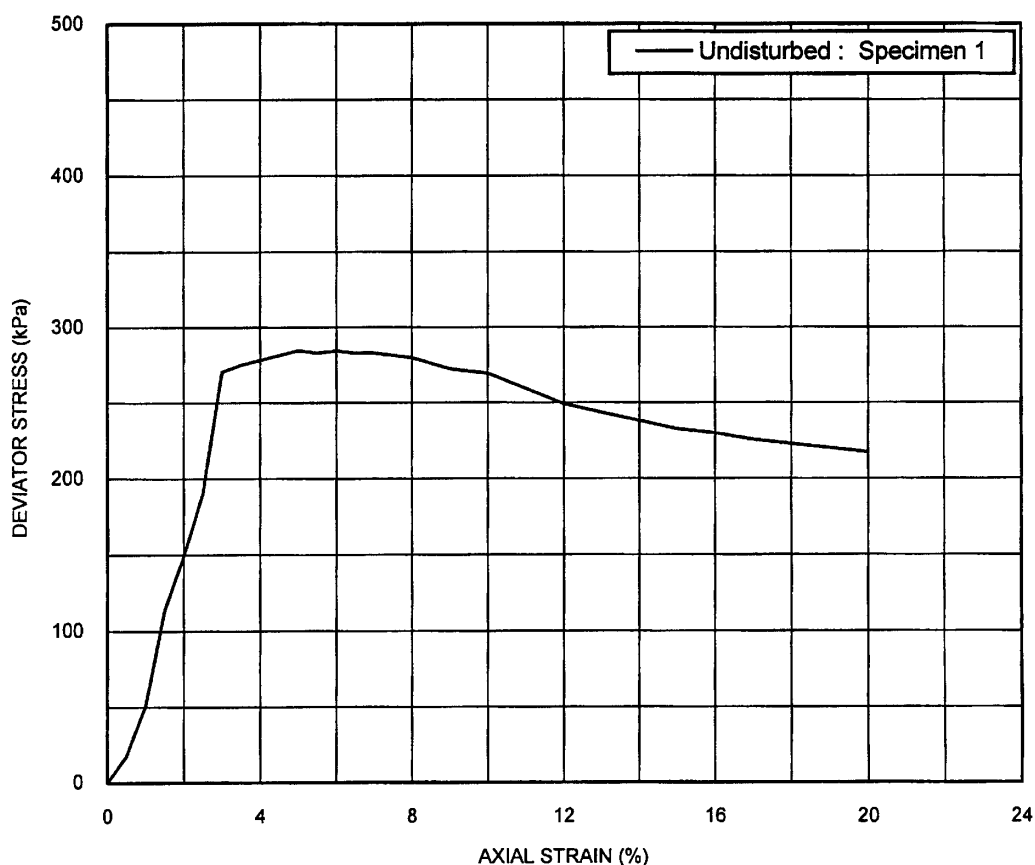
Initial Conditions		Units	Specimen 1
Sample length	mm		209.9
Sample diameter	mm		103.1
Membrane thickness	mm		0.24
Rate of strain	%/min		1.0
Bulk density	Mg/m ³		2.00
Dry density	Mg/m ³		1.58
Moisture content	%		27
Failure Conditions			
Cell pressure	kPa		140
Membrane correction	kPa		0.44
Corrected deviator stress	kPa		546
Strain at failure	%		8.0
Undrained shear strength	kPa		273
Sample Details		Failure shape	
Borehole	: BH1		
Sample	: -		
Depth (m)	: 7.00		

Tested in accordance with BS 1377: Part 7: 1990: Clause 8

**UNCONSOLIDATED UNDRAINED
TRIAxIAL COMPRESSION TEST**

Date: 18/05/2010

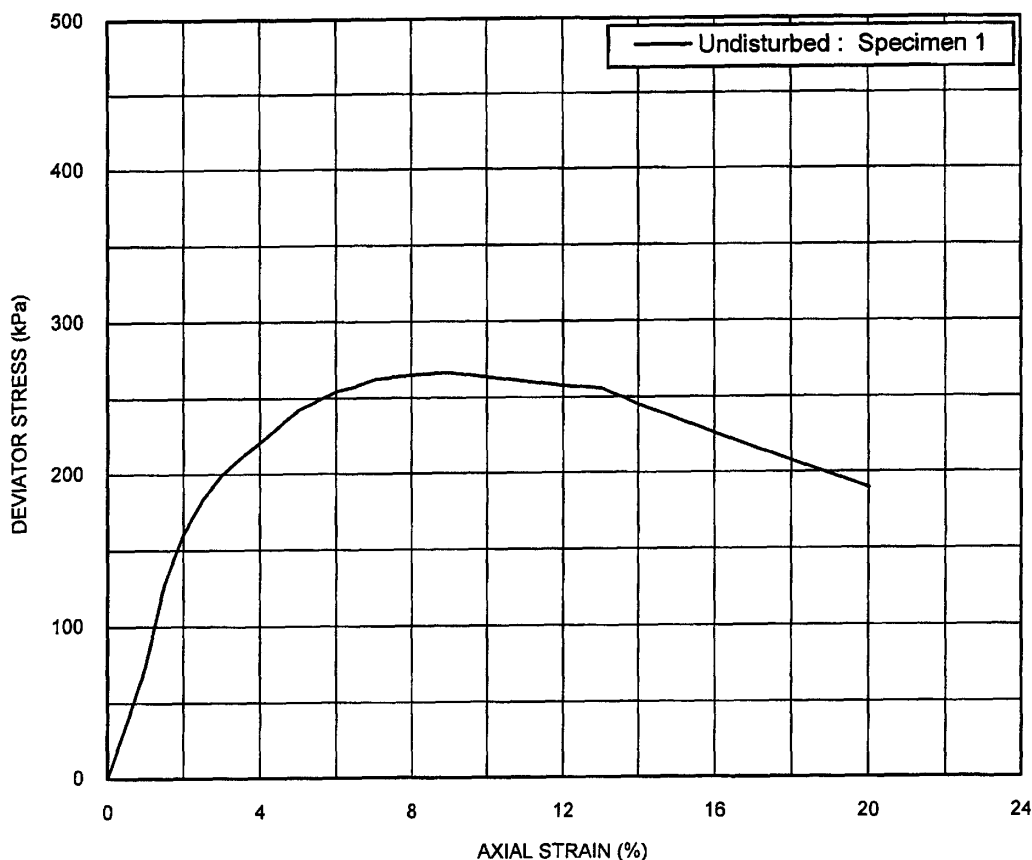
Drawn by: SC



<u>Initial Conditions</u>	<u>Units</u>	<u>Specimen 1</u>
Sample length	mm	210.1
Sample diameter	mm	102.0
Membrane thickness	mm	0.24
Rate of strain	%/min	1.0
Bulk density	Mg/m ³	1.95
Dry density	Mg/m ³	1.50
Moisture content	%	30
<u>Failure Conditions</u>		
Cell pressure	kPa	200
Membrane correction	kPa	0.30
Corrected deviator stress	kPa	285
Strain at failure	%	5.0
Undrained shear strength	kPa	142
<u>Sample Details</u>		<u>Failure shape</u>
Borehole	: BH1	
Sample	: -	
Depth (m)	: 10.00	

Tested in accordance with BS 1377: Part 7: 1990: Clause 8

**UNCONSOLIDATED UNDRAINED
TRIAXIAL COMPRESSION TEST**



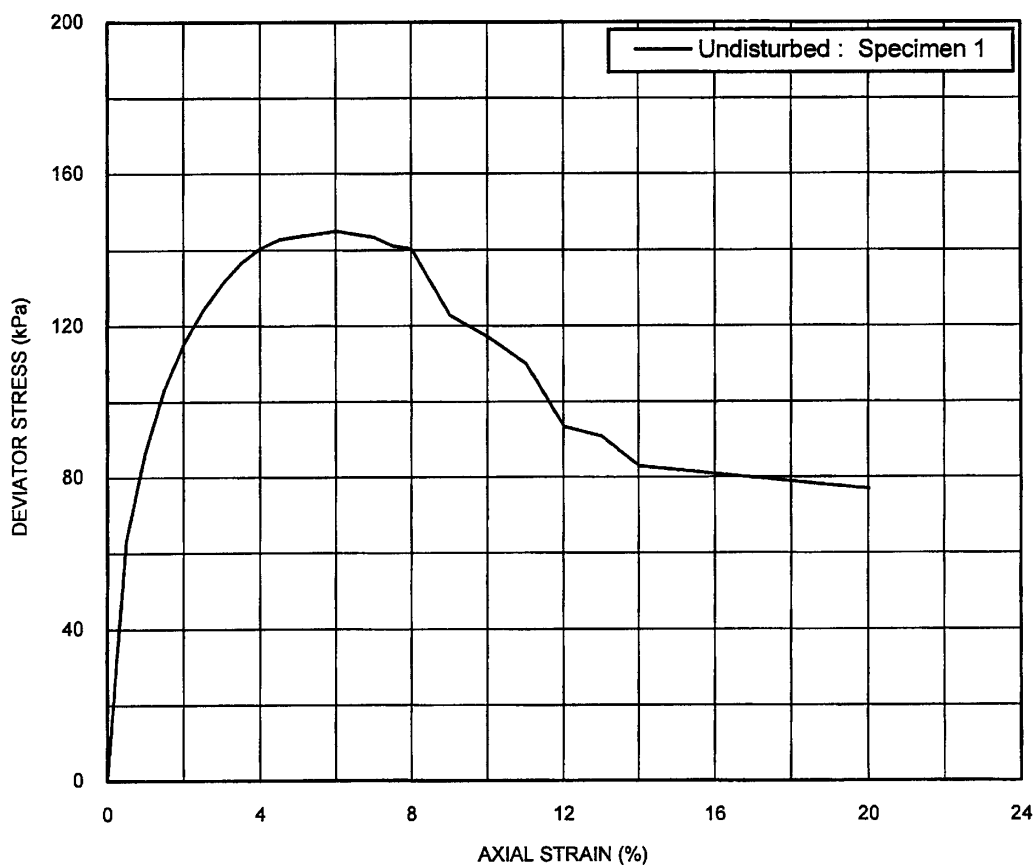
<u>Initial Conditions</u>		<u>Specimen 1</u>
Sample length	mm	209.7
Sample diameter	mm	102.6
Membrane thickness	mm	0.24
Rate of strain	%/min	1.0
Bulk density	Mg/m ³	1.93
Dry density	Mg/m ³	1.49
Moisture content	%	30
<u>Failure Conditions</u>		
Cell pressure	kPa	320
Membrane correction	kPa	0.49
Corrected deviator stress	kPa	267
Strain at failure	%	9.0
Undrained shear strength	kPa	133
<u>Sample Details</u>		<u>Failure shape</u>
Borehole	: BH1	
Sample	: -	
Depth (m)	: 16.00	

Tested in accordance with BS 1377: Part 7: 1990: Clause 8

**UNCONSOLIDATED UNDRAINED
TRIAxIAL COMPRESSION TEST**

Date: 18/05/2010

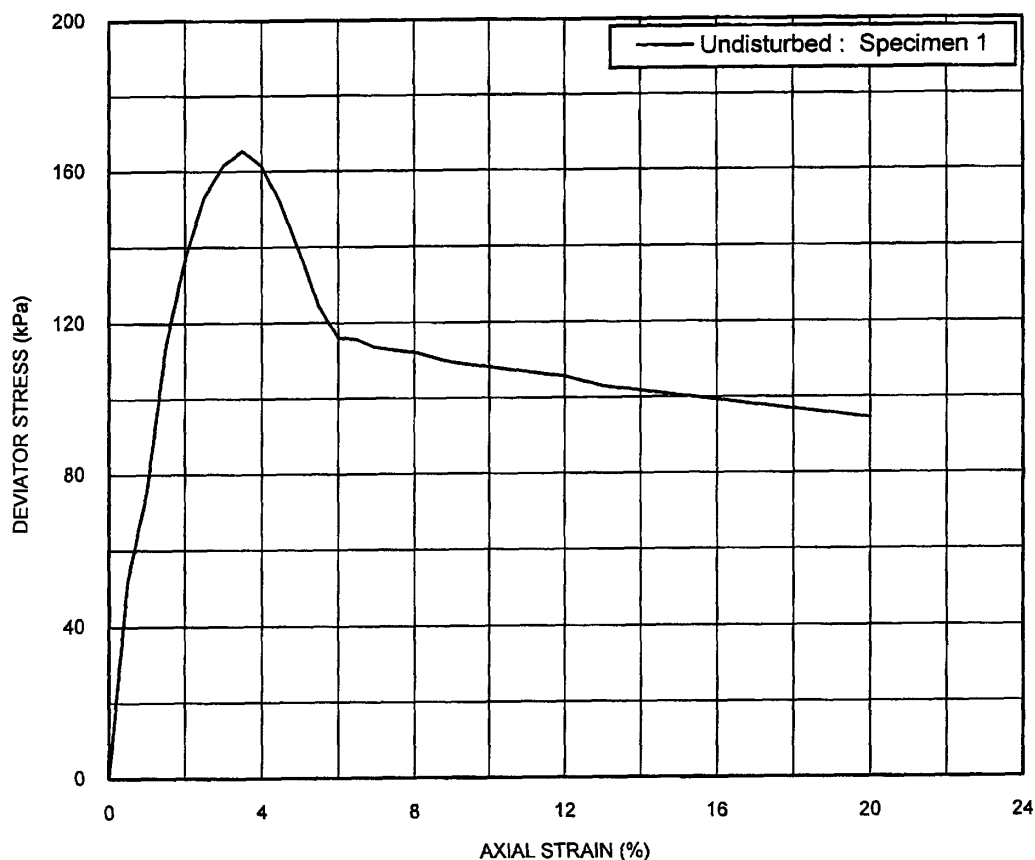
Drawn by: SC



<u>Initial Conditions</u>		<u>Specimen 1</u>
Sample length	mm	209.7
Sample diameter	mm	102.4
Membrane thickness	mm	0.24
Rate of strain	%/min	1.0
Bulk density	Mg/m ³	1.94
Dry density	Mg/m ³	1.48
Moisture content	%	31
<u>Failure Conditions</u>		
Cell pressure	kPa	30
Membrane correction	kPa	0.35
Corrected deviator stress	kPa	145
Strain at failure	%	6.0
Undrained shear strength	kPa	72
<u>Sample Details</u>		<u>Failure shape</u>
Borehole	: BH2	
Sample	: -	
Depth (m)	: 1.50	

Tested in accordance with BS 1377: Part 7: 1990: Clause 8

**UNCONSOLIDATED UNDRAINED
TRIAxIAL COMPRESSION TEST**



Initial Conditions		Units	Specimen 1
Sample length	mm		210.1
Sample diameter	mm		102.5
Membrane thickness	mm		0.24
Rate of strain	%/min		1.0
Bulk density	Mg/m ³		1.95
Dry density	Mg/m ³		1.49
Moisture content	%		30
Failure Conditions			
Cell pressure	kPa		70
Membrane correction	kPa		0.21
Corrected deviator stress	kPa		165
Strain at failure	%		3.5
Undrained shear strength	kPa		83
Sample Details		Failure shape	
Borehole	: BH2		
Sample	: -		
Depth (m)	: 3.50		

Tested in accordance with BS 1377: Part 7: 1990: Clause 8

UNCONSOLIDATED UNDRAINED
TRIAxIAL COMPRESSION TEST