



Certificate of Analysis

Certificate Number 21-19233

Issued: 16-Sep-21

Client GEO Site and Testing Services Ltd
Unit 4
Heol Aur
Dafen Ind Est
Dafen
Carmarthenshire
SA14 8QN

Our Reference 21-19233

Client Reference 19453-GELO

Order No (not supplied)

Contract Title Dunsbury Park Units 100, 400, 600, 700

Description 8 Soil samples.

Date Received 09-Sep-21

Date Started 09-Sep-21

Date Completed 16-Sep-21

Test Procedures Identified by prefix DETSn (details on request).

Notes Opinions and interpretations are outside the laboratory's scope of ISO 17025 accreditation. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.

Approved By

Adam Fenwick
Contracts Manager



2139

Summary of Chemical Analysis Soil Samples

Our Ref 21-19233

Client Ref 19453-GELO

Contract Title Dunsbury Park Units 100, 400, 600, 700

Lab No	1902357	1902358	1902359	1902360	1902361	1902362	1902363	1902364
Sample ID	BH4.02	BH4.02	BH4.04	BH6.02	BH6.03	BH6.01	BH7.02	BH7.03
Depth	1.50	4.50-4.95	6.00	2.00	6.00	2.50-2.95	4.00	5.50
Other ID								
Sample Type	D	D	D	D	D	D	D	D
Sampling Date	n/s	n/s	n/s	n/s	n/s	n/s	n/s	n/s
Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s	n/s	n/s

Test	Method	LOD	Units								
Inorganics											
pH	DETSC 2008#		pH	5.7	8.3	7.4	6.7	7.6	6.8	6.9	7.7
Sulphate Aqueous Extract as SO ₄	DETSC 2076#	10	mg/l	440	520	540	48	450	400	83	240
Sulphur as S, Total	DETSC 2320	0.01	%	0.57	0.53	1.1	0.03	0.55	0.47	0.07	0.31
Sulphate as SO ₄ , Total	DETSC 2321#	0.01	%	0.16	0.17	0.19	0.04	0.02	0.16	0.04	0.12

Information in Support of the Analytical Results

Our Ref 21-19233
 Client Ref 19453-GELO
 Contract Dunsbury Park Units 100, 400, 600, 700

Containers Received & Deviating Samples

Lab No	Sample ID	Date Sampled	Containers Received	Holding time exceeded for tests	Inappropriate container for tests
1902357	BH4.02 1.50 SOIL		PT 1L	Sample date not supplied, Anions 2:1 (30 days), Total Sulphur ICP (7 days), Total Sulphate ICP (30 days), Metals ICP Prep (182 days), pH + Conductivity (7 days)	
1902358	BH4.02 4.50-4.95 SOIL		PT 1L	Sample date not supplied, Anions 2:1 (30 days), Total Sulphur ICP (7 days), Total Sulphate ICP (30 days), Metals ICP Prep (182 days), pH + Conductivity (7 days)	
1902359	BH4.04 6.00 SOIL		PT 1L	Sample date not supplied, Anions 2:1 (30 days), Total Sulphur ICP (7 days), Total Sulphate ICP (30 days), Metals ICP Prep (182 days), pH + Conductivity (7 days)	
1902360	BH6.02 2.00 SOIL		PT 1L	Sample date not supplied, Anions 2:1 (30 days), Total Sulphur ICP (7 days), Total Sulphate ICP (30 days), Metals ICP Prep (182 days), pH + Conductivity (7 days)	
1902361	BH6.03 6.00 SOIL		PT 1L	Sample date not supplied, Anions 2:1 (30 days), Total Sulphur ICP (7 days), Total Sulphate ICP (30 days), Metals ICP Prep (182 days), pH + Conductivity (7 days)	
1902362	BH6.01 2.50-2.95 SOIL		PT 1L	Sample date not supplied, Anions 2:1 (30 days), Total Sulphur ICP (7 days), Total Sulphate ICP (30 days), Metals ICP Prep (182 days), pH + Conductivity (7 days)	
1902363	BH7.02 4.00 SOIL		PT 1L	Sample date not supplied, Anions 2:1 (30 days), Total Sulphur ICP (7 days), Total Sulphate ICP (30 days), Metals ICP Prep (182 days), pH + Conductivity (7 days)	
1902364	BH7.03 5.50 SOIL		PT 1L	Sample date not supplied, Anions 2:1 (30 days), Total Sulphur ICP (7 days), Total Sulphate ICP (30 days), Metals ICP Prep (182 days), pH + Conductivity (7 days)	

Key: P-Plastic T-Tub

DETS cannot be held responsible for the integrity of samples received whereby the laboratory did not undertake the sampling. In this instance samples received may be deviating. Deviating Sample criteria are based on British and International standards and laboratory trials in conjunction with the UKAS note 'Guidance on Deviating Samples'. All samples received are listed above. However, those samples that have additional comments in relation to hold time, inappropriate containers etc are deviating due to the reasons stated. This means that the analysis is accredited where applicable, but results may be compromised due to sample deviations. If no sampled date (soils) or date+time (waters) has been supplied then samples are deviating. However, if you are able to supply a sampled date (and time for waters) this will prevent samples being reported as deviating where specific hold times are not exceeded and where the container supplied is suitable.

Information in Support of the Analytical Results

Our Ref 21-19233
Client Ref 19453-GELO
Contract Dunsbury Park Units 100, 400, 600, 700

Soil Analysis Notes

Inorganic soil analysis was carried out on a dried sample, crushed to pass a 425µm sieve, in accordance with BS1377.
Organic soil analysis was carried out on an 'as received' sample. Organics results are corrected for moisture and expressed on a dry weight basis.
The Loss on Drying, used to express organics analysis on an air dried basis, is carried out at a temperature of 28°C +/-2°C.

Disposal

From the issue date of this test certificate, samples will be held for the following times prior to disposal :-
Soils - 1 month, Liquids - 2 weeks, Asbestos (test portion) - 6 months

End of Report



**Single Stage Unconsolidated-Undrained Triaxial
Test
BS 1377 : 1990 Part 7 : 8**

Contract Number

55427

Borehole/Pit No.

BH101

Site Name

Dunsbury Park Units 100, 400, 600, 700

Sample No.

Soil Description

Mottled brown gravelly silty CLAY.

Depth Top (m)

2.50

Depth Base (m)

2.95

Date Tested

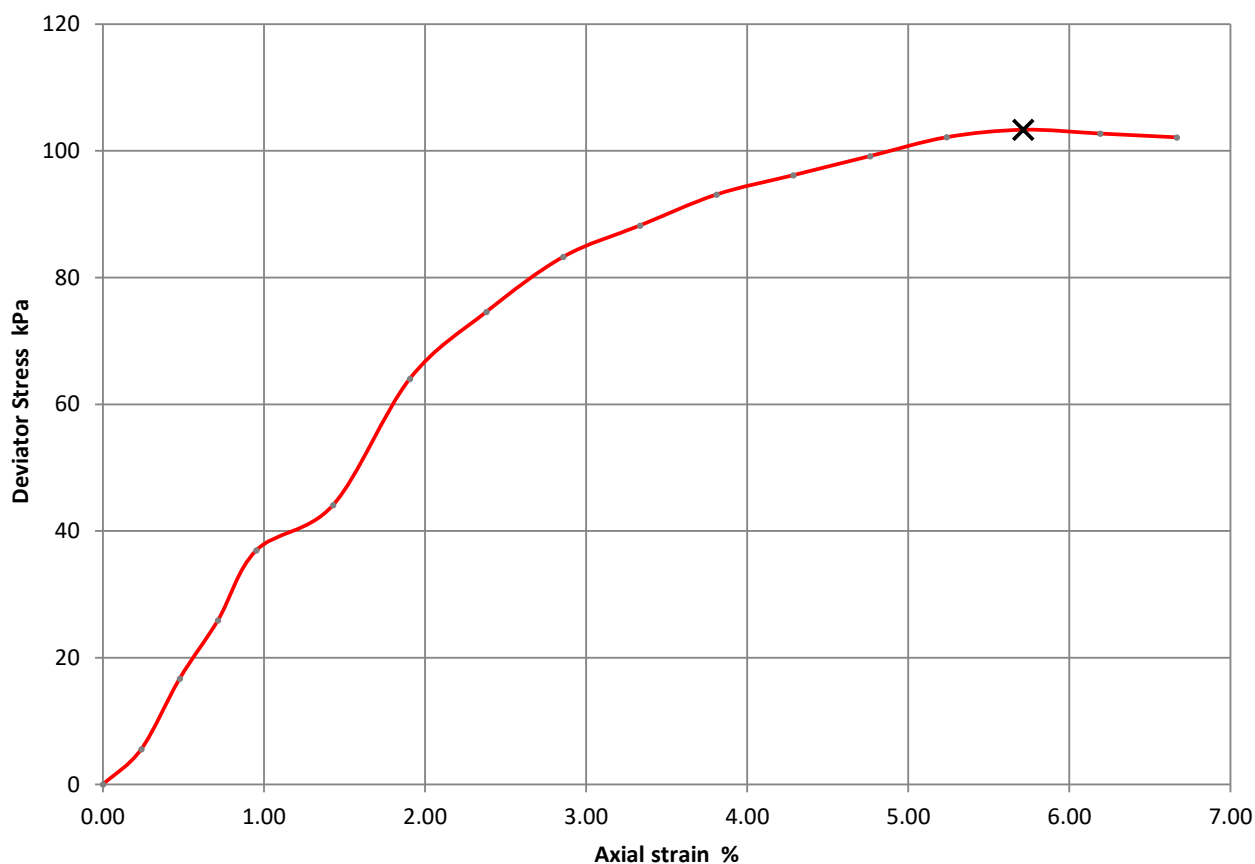
17/09/2021

Sample Type

U

Technician

Daniel B



Moisture Content (%)	10
Bulk Density (Mg/m ³)	1.87
Dry Density (Mg/m ³)	1.70
Specimen Length (mm)	210
Specimen Diameter (mm)	105
Cell Pressure (kPa)	50
Deviator Stress (kPa)	103
Undrained Shear Strength (kPa)	52
Failure Strain (%)	6
Mode Of Failure	Brittle
Membrane Used/Thickness	Rubber/0.3mm
Rate of Strain (%/min)	1.43

Specimen Post Test



Sample Split



Checked	22/09/2021	Richard John	
Approved	23/09/2021	Paul Evans	





Single Stage Unconsolidated-Undrained Triaxial Test
BS 1377 : 1990 Part 7 : 8

Contract Number 55427

Borehole/Pit No. BH101

Site Name Dunsbury Park Units 100, 400, 600, 700

Sample No.

Soil Description Mottled brown gravelly silty CLAY.

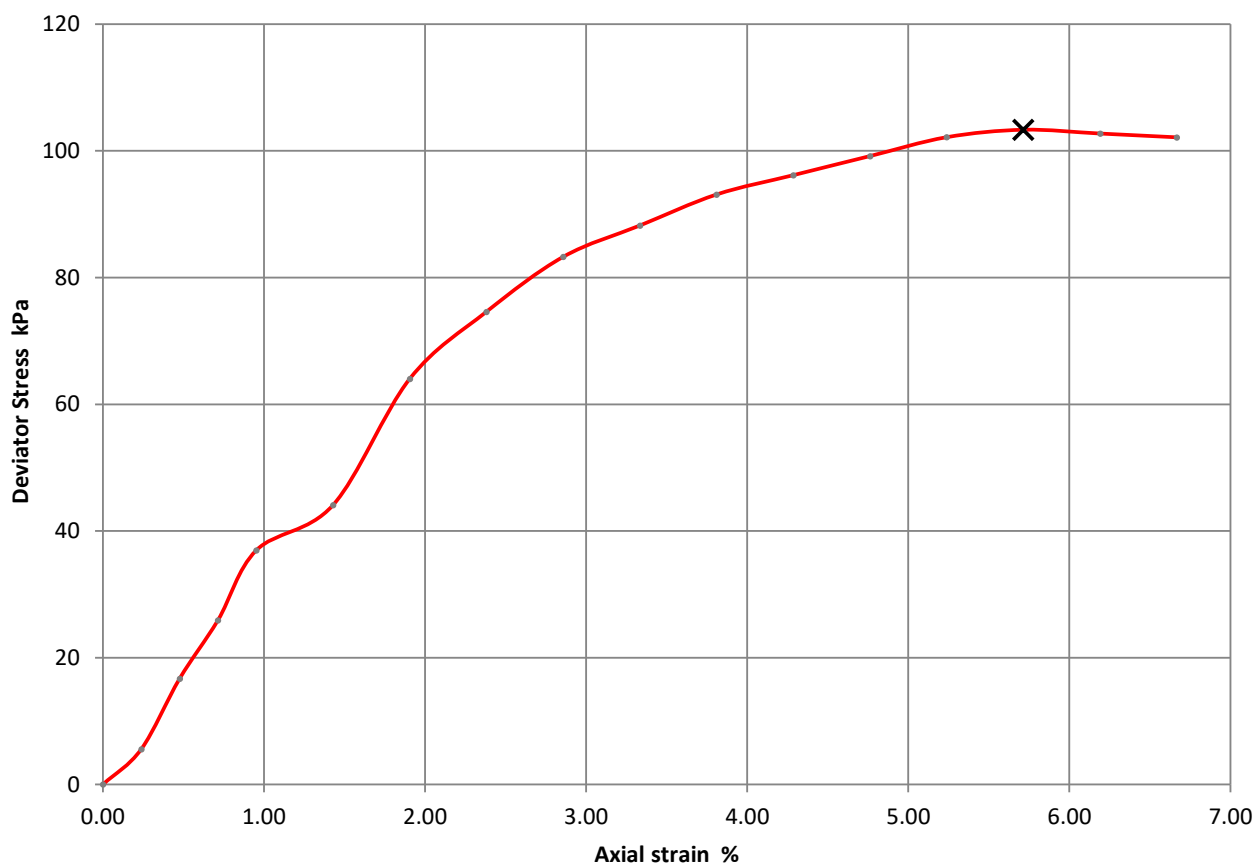
Depth Top (m) 10.50

Depth Base (m) 10.80

Date Tested 17/09/2021

Sample Type U

Technician Daniel B



Moisture Content (%)	10
Bulk Density (Mg/m ³)	1.87
Dry Density (Mg/m ³)	1.70
Specimen Length (mm)	210
Specimen Diameter (mm)	105
Cell Pressure (kPa)	50
Deviator Stress (kPa)	103
Undrained Shear Strength (kPa)	52
Failure Strain (%)	6
Mode Of Failure	Brittle
Membrane Used/Thickness	Rubber/0.3mm
Rate of Strain (%/min)	1.43

Specimen Post Test



Sample Split



Checked	22/09/2021	Richard John	
Approved	23/09/2021	Paul Evans	





Single Stage Unconsolidated-Undrained Triaxial Test
BS 1377 : 1990 Part 7 : 8

Contract Number 55427

Borehole/Pit No. BH101

Site Name Dunsbury Park Units 100, 400, 600, 700

Sample No.

Soil Description Greyish brown silty CLAY.

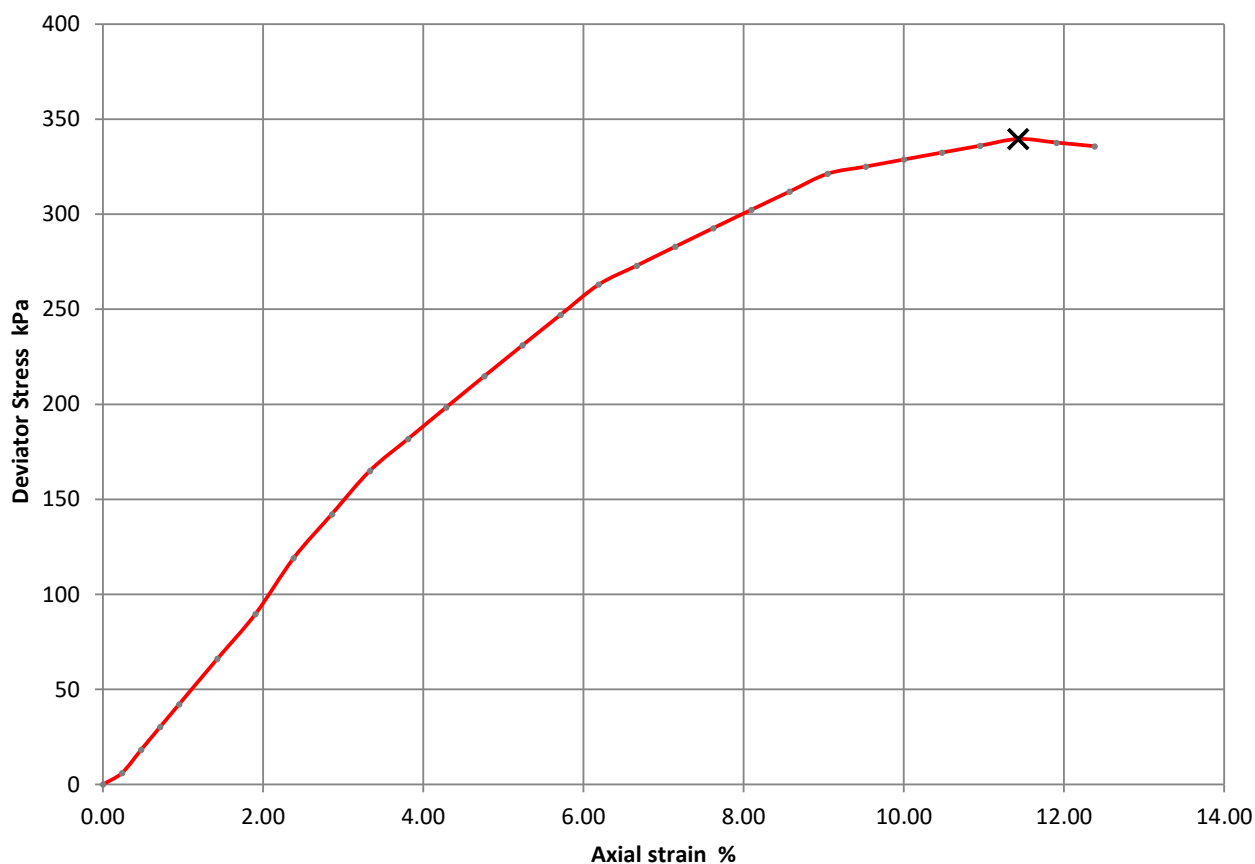
Depth Top (m) 13.50

Depth Base (m) 13.75

Date Tested 17/09/2021

Sample Type U

Technician Daniel B



Moisture Content (%)	9.6
Bulk Density (Mg/m ³)	1.80
Dry Density (Mg/m ³)	1.65
Specimen Length (mm)	210
Specimen Diameter (mm)	105
Cell Pressure (kPa)	270
Deviator Stress (kPa)	340
Undrained Shear Strength (kPa)	170
Failure Strain (%)	11
Mode Of Failure	Brittle
Membrane Used/Thickness	Rubber/0.3mm
Rate of Strain (%/min)	1.43

Specimen Post Test

Sample Split



Checked	22/09/2021	Richard John	
Approved	23/09/2021	Paul Evans	





Single Stage Unconsolidated-Undrained Triaxial Test
BS 1377 : 1990 Part 7 : 8

Contract Number

55427

Borehole/Pit No.

BH101

Site Name

Dunsbury Park Units 100, 400, 600, 700

Sample No.

Soil Description

Greyish brown silty CLAY.

Depth Top (m)

16.50

Depth Base (m)

16.80

Date Tested

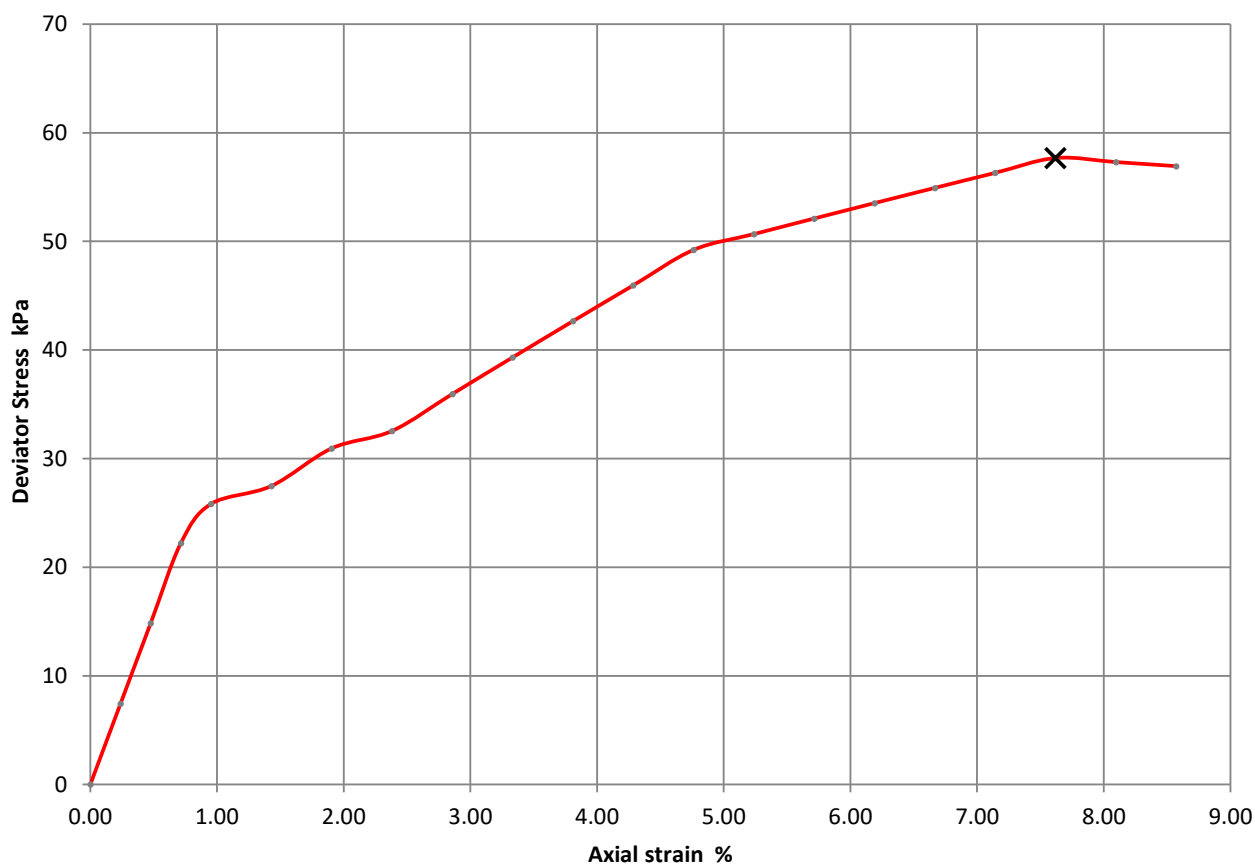
17/09/2021

Sample Type

U

Technician

Daniel B



Moisture Content (%)	30
Bulk Density (Mg/m ³)	1.99
Dry Density (Mg/m ³)	1.53
Specimen Length (mm)	210
Specimen Diameter (mm)	105
Cell Pressure (kPa)	330
Deviator Stress (kPa)	58
Undrained Shear Strength (kPa)	29
Failure Strain (%)	8
Mode Of Failure	Compound
Membrane Used/Thickness	Rubber/0.3mm
Rate of Strain (%/min)	1.43

Specimen Post Test



Sample Split



Checked	22/09/2021	Richard John	
Approved	23/09/2021	Paul Evans	





Single Stage Unconsolidated-Undrained Triaxial Test
BS 1377 : 1990 Part 7 : 8

Contract Number 55427

Borehole/Pit No. BH101

Site Name Dunsbury Park Units 100, 400, 600, 700

Sample No.

Soil Description Greyish brown silty CLAY.

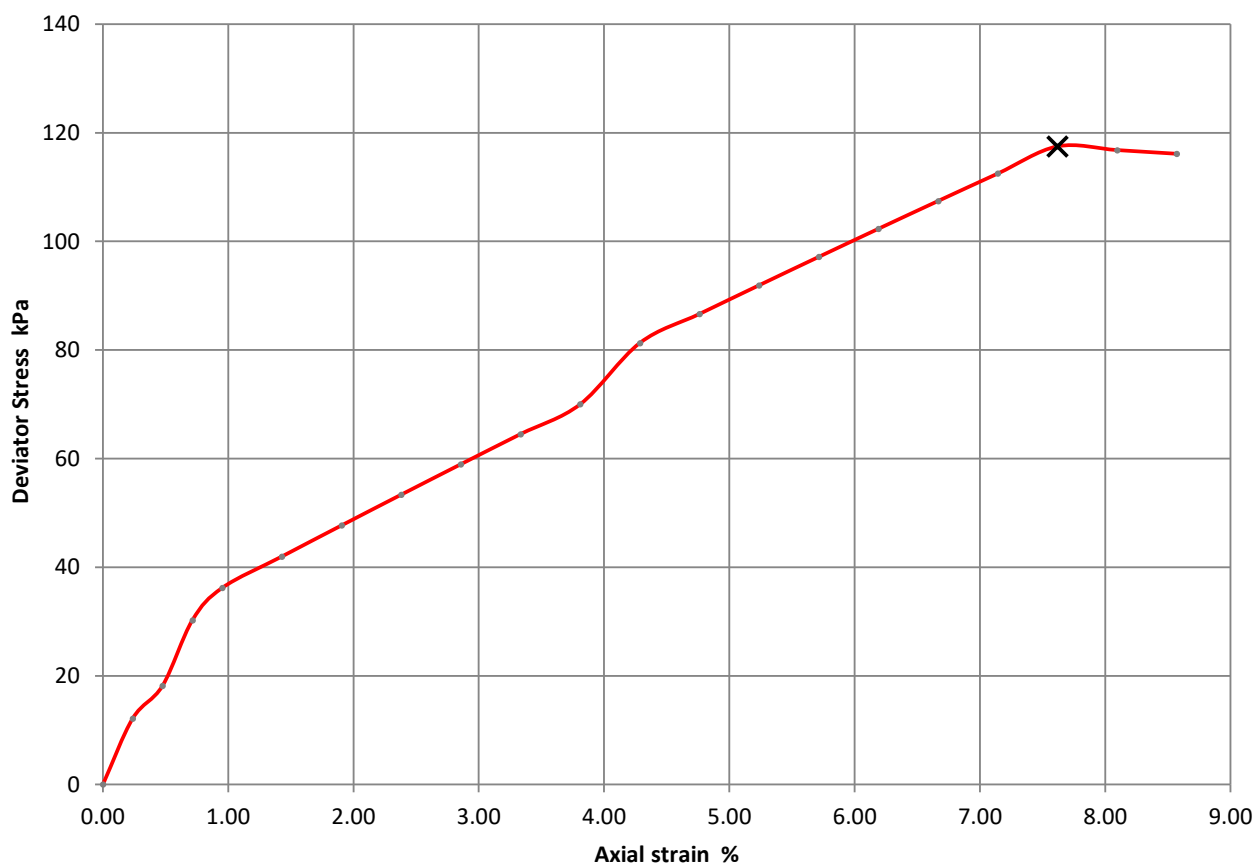
Depth Top (m) 19.50

Depth Base (m) 19.80

Date Tested 17/09/2021

Sample Type U

Technician Daniel B



Moisture Content (%)	9.7
Bulk Density (Mg/m ³)	1.96
Dry Density (Mg/m ³)	1.79
Specimen Length (mm)	210
Specimen Diameter (mm)	105
Cell Pressure (kPa)	390
Deviator Stress (kPa)	117
Undrained Shear Strength (kPa)	59
Failure Strain (%)	8
Mode Of Failure	Brittle
Membrane Used/Thickness	Rubber/0.3mm
Rate of Strain (%/min)	1.43

Specimen Post Test



Sample Split



Checked	22/09/2021	Richard John	
Approved	23/09/2021	Paul Evans	





Single Stage Unconsolidated-Undrained Triaxial Test
BS 1377 : 1990 Part 7 : 8

Contract Number 55427

Borehole/Pit No. BH401

Site Name Dunsbury Park Units 100, 400, 600, 700

Sample No.

Soil Description Greyish brown silty CLAY.

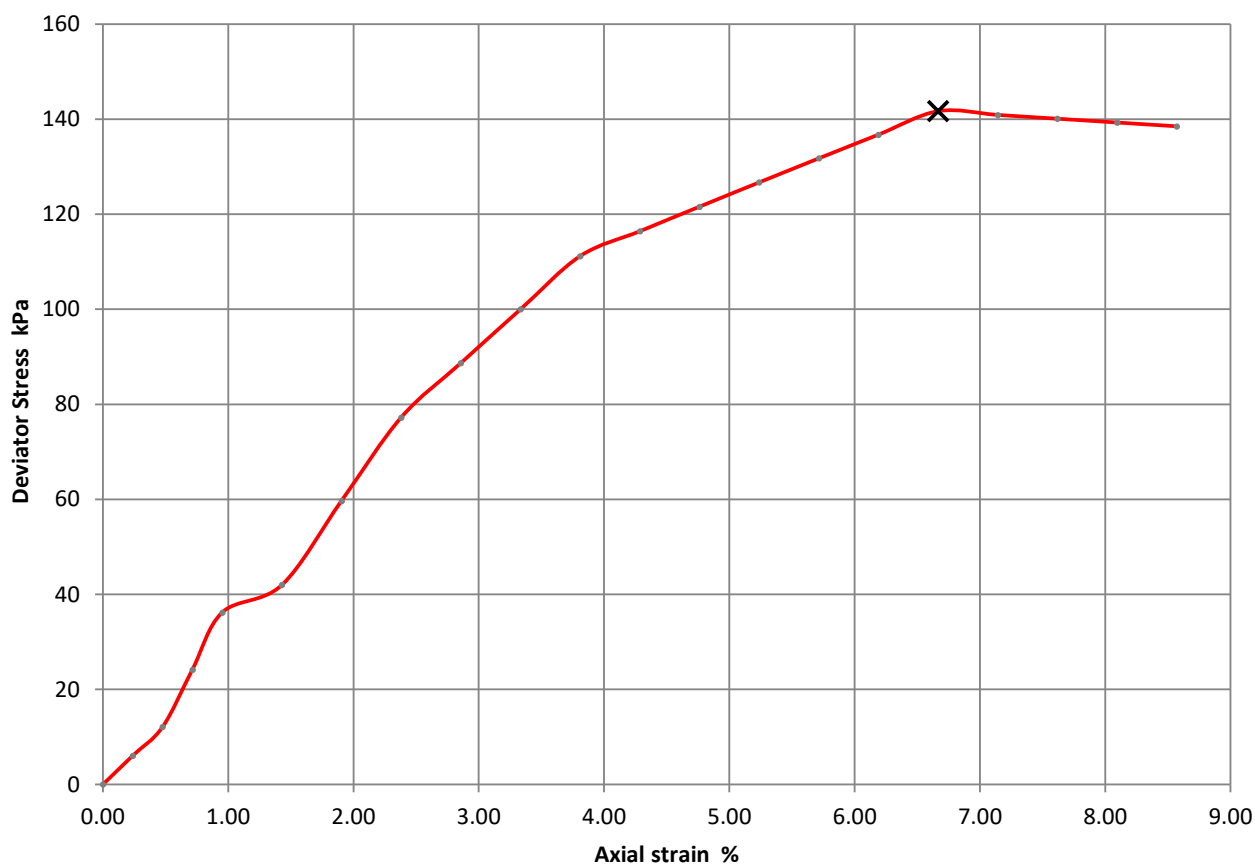
Depth Top (m) 3.50

Depth Base (m) 3.95

Date Tested 17/09/2021

Sample Type U

Technician Daniel B



Moisture Content (%)	11
Bulk Density (Mg/m ³)	1.99
Dry Density (Mg/m ³)	1.79
Specimen Length (mm)	210
Specimen Diameter (mm)	105
Cell Pressure (kPa)	70
Deviator Stress (kPa)	142
Undrained Shear Strength (kPa)	71
Failure Strain (%)	7
Mode Of Failure	Brittle
Membrane Used/Thickness	Rubber/0.3mm
Rate of Strain (%/min)	1.43

Specimen Post Test



Sample Split



Checked	22/09/2021	Richard John	
Approved	23/09/2021	Paul Evans	





Single Stage Unconsolidated-Undrained Triaxial Test
BS 1377 : 1990 Part 7 : 8

Contract Number 55427

Borehole/Pit No. BH401

Site Name Dunsbury Park Units 100, 400, 600, 700

Sample No.

Soil Description Greyish brown silty CLAY.

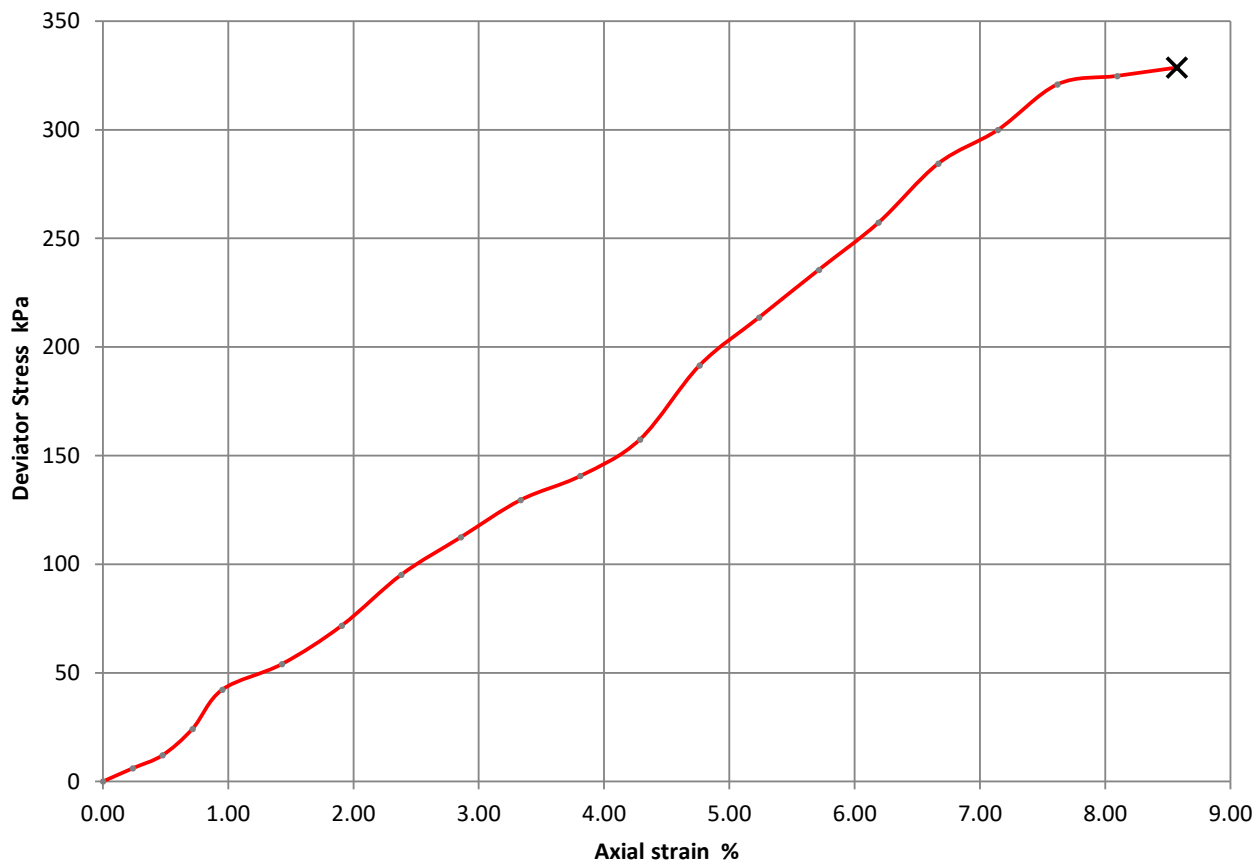
Depth Top (m) 5.50

Depth Base (m) 5.95

Date Tested 17/09/2021

Sample Type U

Technician Daniel B



Moisture Content (%)	25
Bulk Density (Mg/m ³)	1.98
Dry Density (Mg/m ³)	1.58
Specimen Length (mm)	210
Specimen Diameter (mm)	105
Cell Pressure (kPa)	110
Deviator Stress (kPa)	329
Undrained Shear Strength (kPa)	164
Failure Strain (%)	9
Mode Of Failure	Brittle
Membrane Used/Thickness	Rubber/0.3mm
Rate of Strain (%/min)	1.43

Specimen Post Test



Sample Split



Checked	22/09/2021	Richard John	
Approved	23/09/2021	Paul Evans	





Single Stage Unconsolidated-Undrained Triaxial Test
BS 1377 : 1990 Part 7 : 8

Contract Number 55427

Borehole/Pit No. BH401

Site Name Dunsbury Park Units 100, 400, 600, 700

Sample No.

Soil Description Greyish brown silty CLAY.

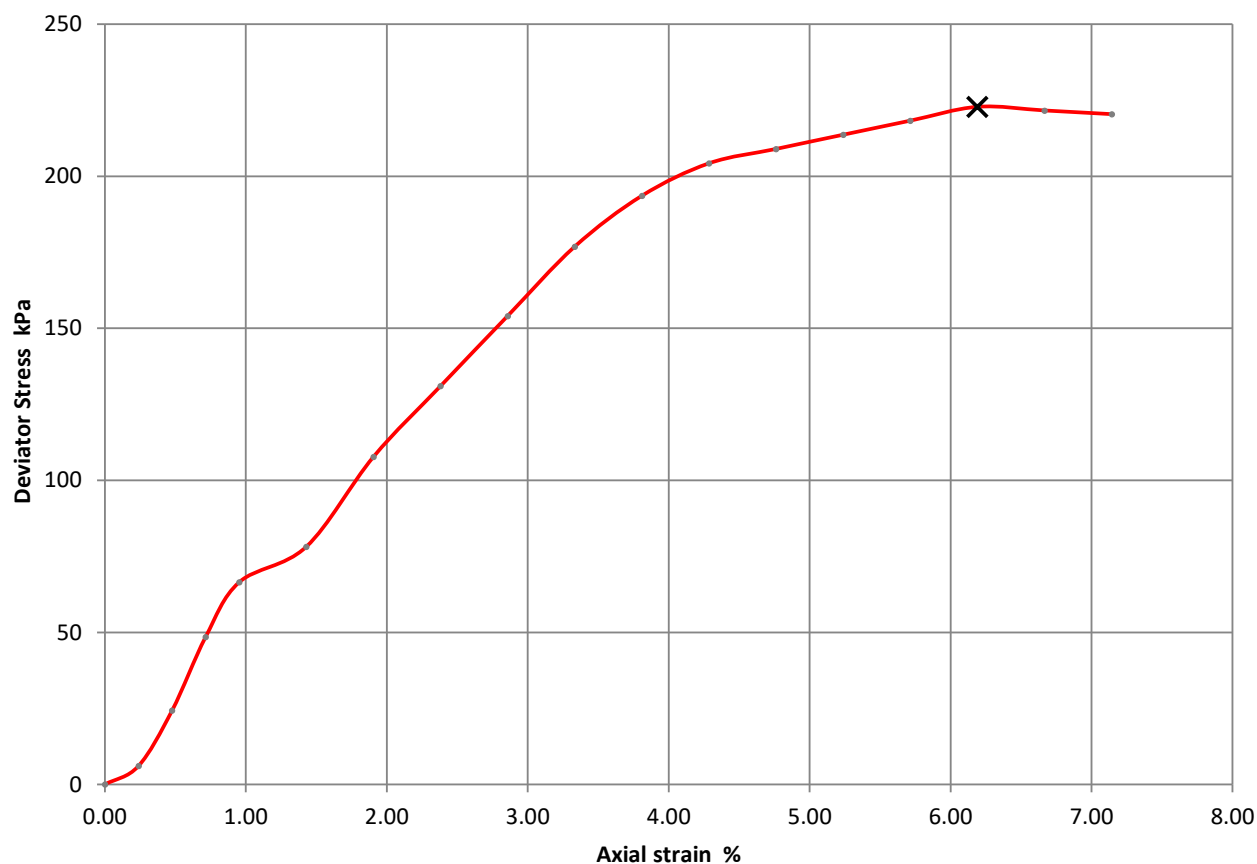
Depth Top (m) 11.50

Depth Base (m) 11.95

Date Tested 17/09/2021

Sample Type U

Technician Daniel B



Moisture Content (%)	21
Bulk Density (Mg/m ³)	1.66
Dry Density (Mg/m ³)	1.38
Specimen Length (mm)	210
Specimen Diameter (mm)	105
Cell Pressure (kPa)	230
Deviator Stress (kPa)	223
Undrained Shear Strength (kPa)	111
Failure Strain (%)	6
Mode Of Failure	Brittle
Membrane Used/Thickness	Rubber/0.3mm
Rate of Strain (%/min)	1.43

Specimen Post Test



Sample Split



Checked	22/09/2021	Richard John	
Approved	23/09/2021	Paul Evans	





Single Stage Unconsolidated-Undrained Triaxial Test
BS 1377 : 1990 Part 7 : 8

Contract Number 55427

Borehole/Pit No. BH401

Site Name Dunsbury Park Units 100, 400, 600, 700

Sample No.

Soil Description Greyish brown silty CLAY.

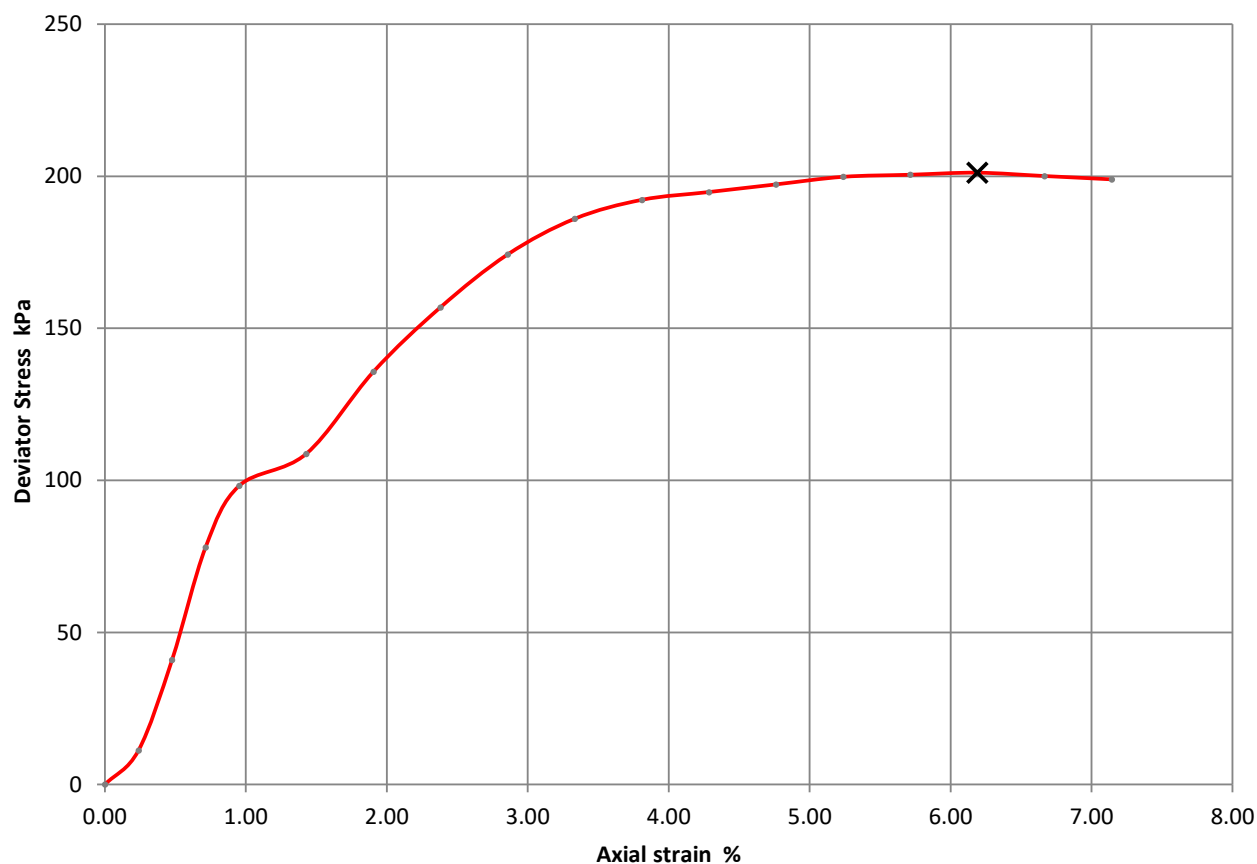
Depth Top (m) 17.50

Depth Base (m) 17.95

Date Tested 17/09/2021

Sample Type U

Technician Daniel B



Moisture Content (%)	24
Bulk Density (Mg/m ³)	1.89
Dry Density (Mg/m ³)	1.53
Specimen Length (mm)	210
Specimen Diameter (mm)	105
Cell Pressure (kPa)	350
Deviator Stress (kPa)	201
Undrained Shear Strength (kPa)	101
Failure Strain (%)	6
Mode Of Failure	Brittle
Membrane Used/Thickness	Rubber/0.3mm
Rate of Strain (%/min)	1.43

Specimen Post Test

Sample Split



Checked	22/09/2021	Richard John	
Approved	23/09/2021	Paul Evans	





Single Stage Unconsolidated-Undrained Triaxial Test
BS 1377 : 1990 Part 7 : 8

Contract Number 55427

Borehole/Pit No. BH402

Site Name Dunsbury Park Units 100, 400, 600, 700

Sample No.

Soil Description Greyish brown silty CLAY.

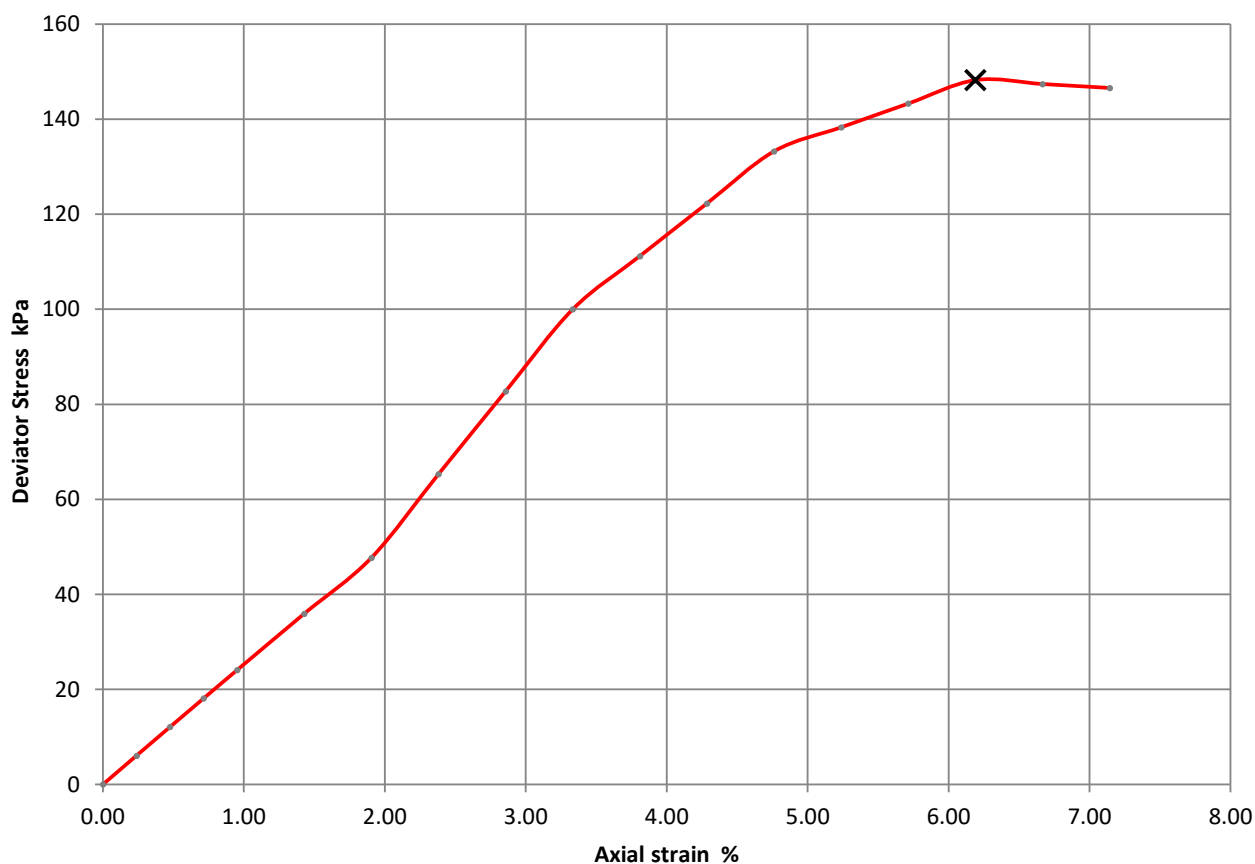
Depth Top (m) 3.50

Depth Base (m) 3.95

Date Tested 17/09/2021

Sample Type U

Technician Daniel B



Moisture Content (%)	22
Bulk Density (Mg/m ³)	1.99
Dry Density (Mg/m ³)	1.63
Specimen Length (mm)	210
Specimen Diameter (mm)	105
Cell Pressure (kPa)	70
Deviator Stress (kPa)	148
Undrained Shear Strength (kPa)	74
Failure Strain (%)	6
Mode Of Failure	Brittle
Membrane Used/Thickness	Rubber/0.3mm
Rate of Strain (%/min)	1.43

Specimen Post Test



Sample Split



Checked	22/09/2021	Richard John	
Approved	23/09/2021	Paul Evans	





Single Stage Unconsolidated-Undrained Triaxial Test
BS 1377 : 1990 Part 7 : 8

Contract Number 55427

Borehole/Pit No. BH402

Site Name Dunsbury Park Units 100, 400, 600, 700

Sample No.

Soil Description Greyish brown silty CLAY.

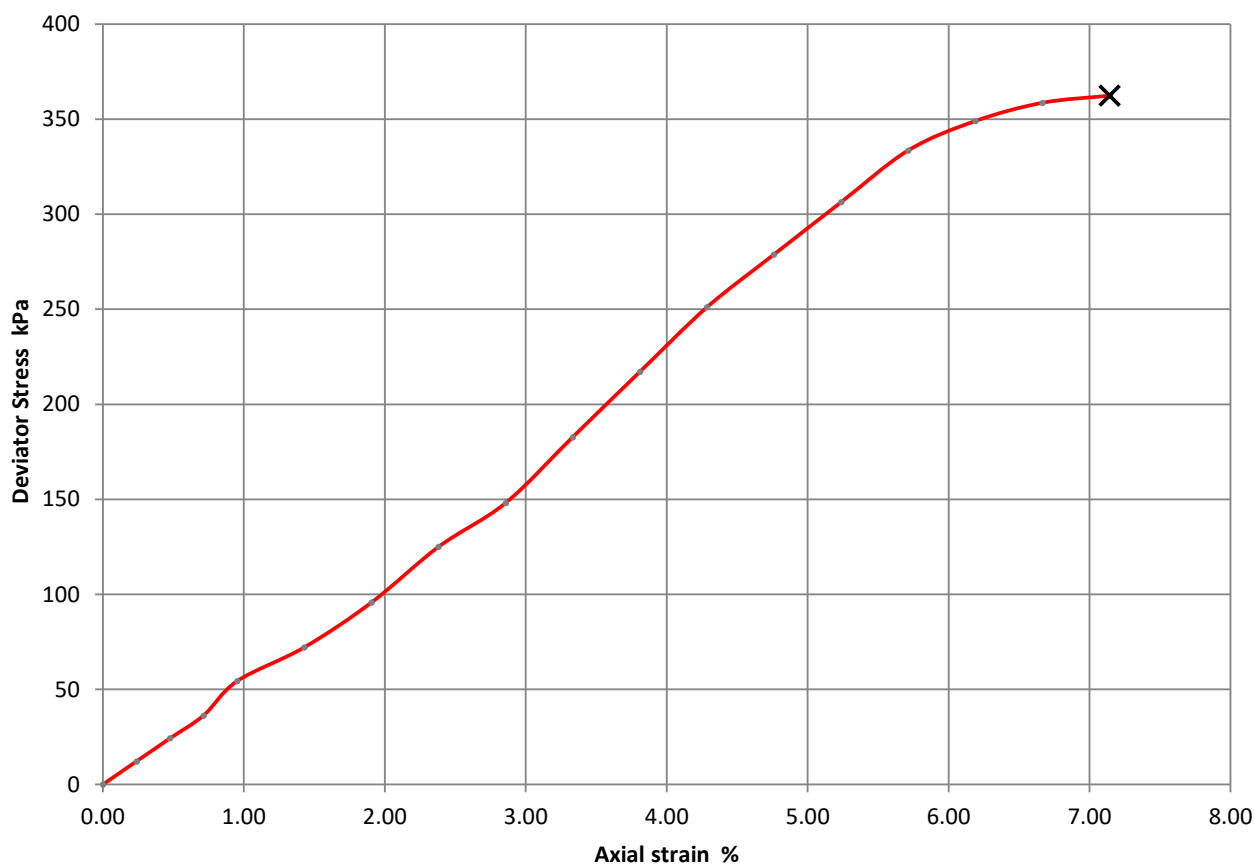
Depth Top (m) 5.50

Depth Base (m) 5.95

Date Tested 17/09/2021

Sample Type U

Technician Daniel B



Moisture Content (%)	20
Bulk Density (Mg/m ³)	2.00
Dry Density (Mg/m ³)	1.66
Specimen Length (mm)	210
Specimen Diameter (mm)	105
Cell Pressure (kPa)	110
Deviator Stress (kPa)	362
Undrained Shear Strength (kPa)	181
Failure Strain (%)	7
Mode Of Failure	Brittle
Membrane Used/Thickness	Rubber/0.3mm
Rate of Strain (%/min)	1.43

Specimen Post Test



Sample Split



Checked	22/09/2021	Richard John	
Approved	23/09/2021	Paul Evans	





Single Stage Unconsolidated-Undrained Triaxial Test
BS 1377 : 1990 Part 7 : 8

Contract Number

55427

Borehole/Pit No.

BH402

Site Name

Dunsbury Park Units 100, 400, 600, 700

Sample No.

Soil Description

Greyish brown silty CLAY.

Depth Top (m)

11.50

Depth Base (m)

11.95

Date Tested

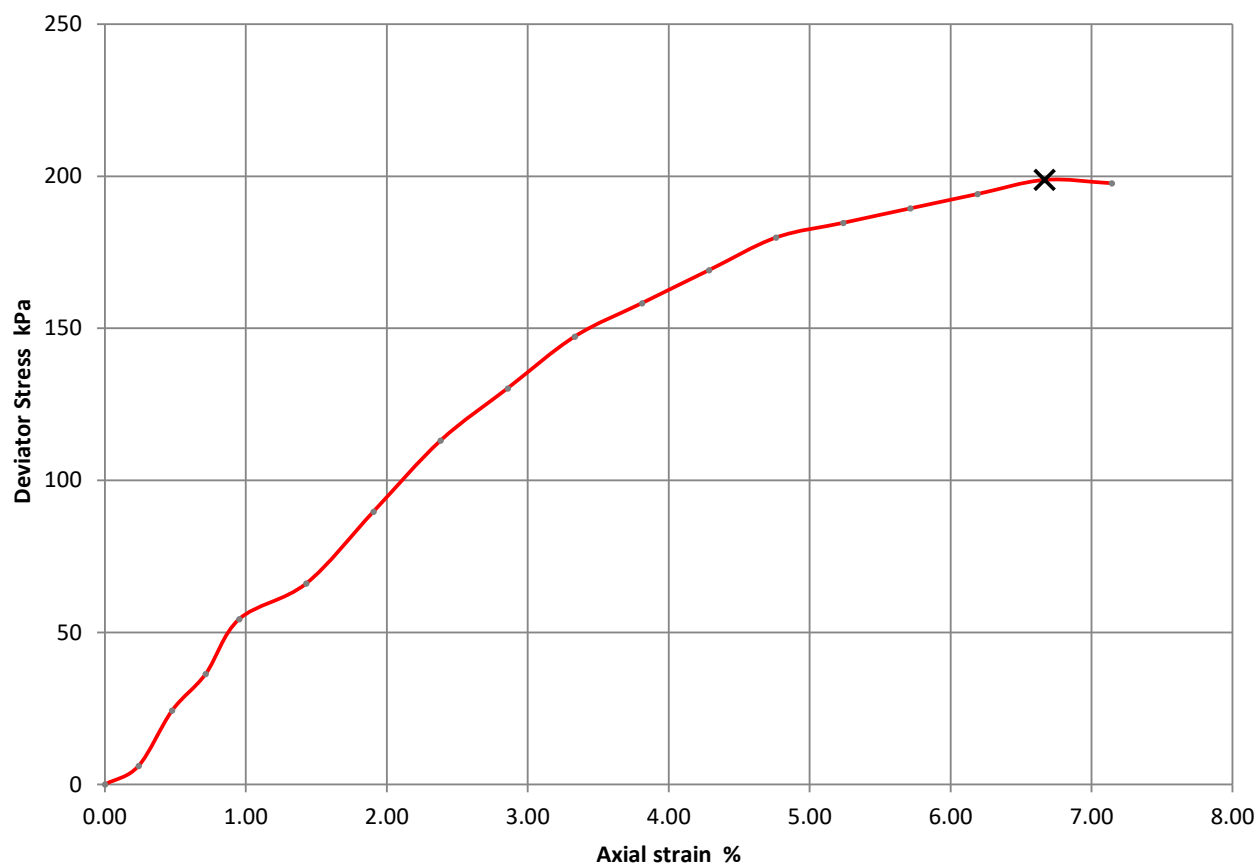
17/09/2021

Sample Type

U

Technician

Daniel B



Moisture Content (%)	22
Bulk Density (Mg/m ³)	1.86
Dry Density (Mg/m ³)	1.53
Specimen Length (mm)	210
Specimen Diameter (mm)	105
Cell Pressure (kPa)	230
Deviator Stress (kPa)	199
Undrained Shear Strength (kPa)	99
Failure Strain (%)	7
Mode Of Failure	Brittle
Membrane Used/Thickness	Rubber/0.3mm
Rate of Strain (%/min)	1.43

Specimen Post Test



Sample Split



Checked	22/09/2021	Richard John	
Approved	23/09/2021	Paul Evans	





Single Stage Unconsolidated-Undrained Triaxial Test
BS 1377 : 1990 Part 7 : 8

Contract Number

55427

Borehole/Pit No.

BH402

Site Name

Dunsbury Park Units 100, 400, 600, 700

Sample No.

Soil Description

Greyish brown silty CLAY.

Depth Top (m)

14.50

Depth Base (m)

14.95

Date Tested

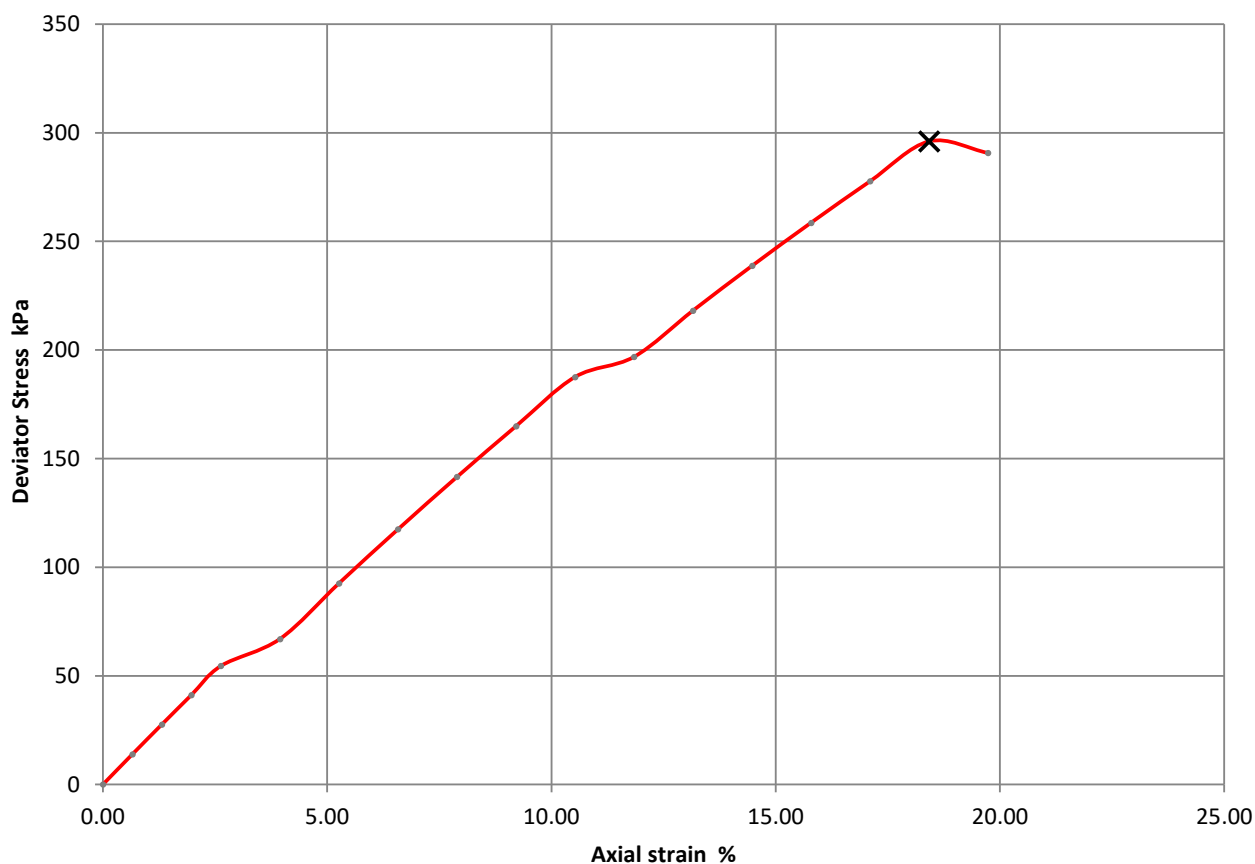
17/09/2021

Sample Type

U

Technician

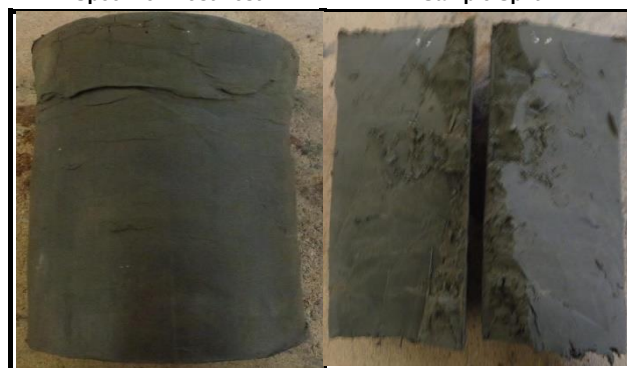
Daniel B



Moisture Content (%)	24
Bulk Density (Mg/m ³)	1.87
Dry Density (Mg/m ³)	1.52
Specimen Length (mm)	76
Specimen Diameter (mm)	38
Cell Pressure (kPa)	290
Deviator Stress (kPa)	296
Undrained Shear Strength (kPa)	148
Failure Strain (%)	18
Mode Of Failure	Brittle
Membrane Used/Thickness	Rubber/0.3mm
Rate of Strain (%/min)	3.95

Specimen Post Test

Sample Split



Checked	22/09/2021	Richard John	
Approved	23/09/2021	Paul Evans	





Single Stage Unconsolidated-Undrained Triaxial Test
BS 1377 : 1990 Part 7 : 8

Contract Number

55427

Borehole/Pit No.

BH402

Site Name

Dunsbury Park Units 100, 400, 600, 700

Sample No.

Soil Description

Greyish brown silty CLAY.

Depth Top (m)

17.50

Depth Base (m)

17.95

Date Tested

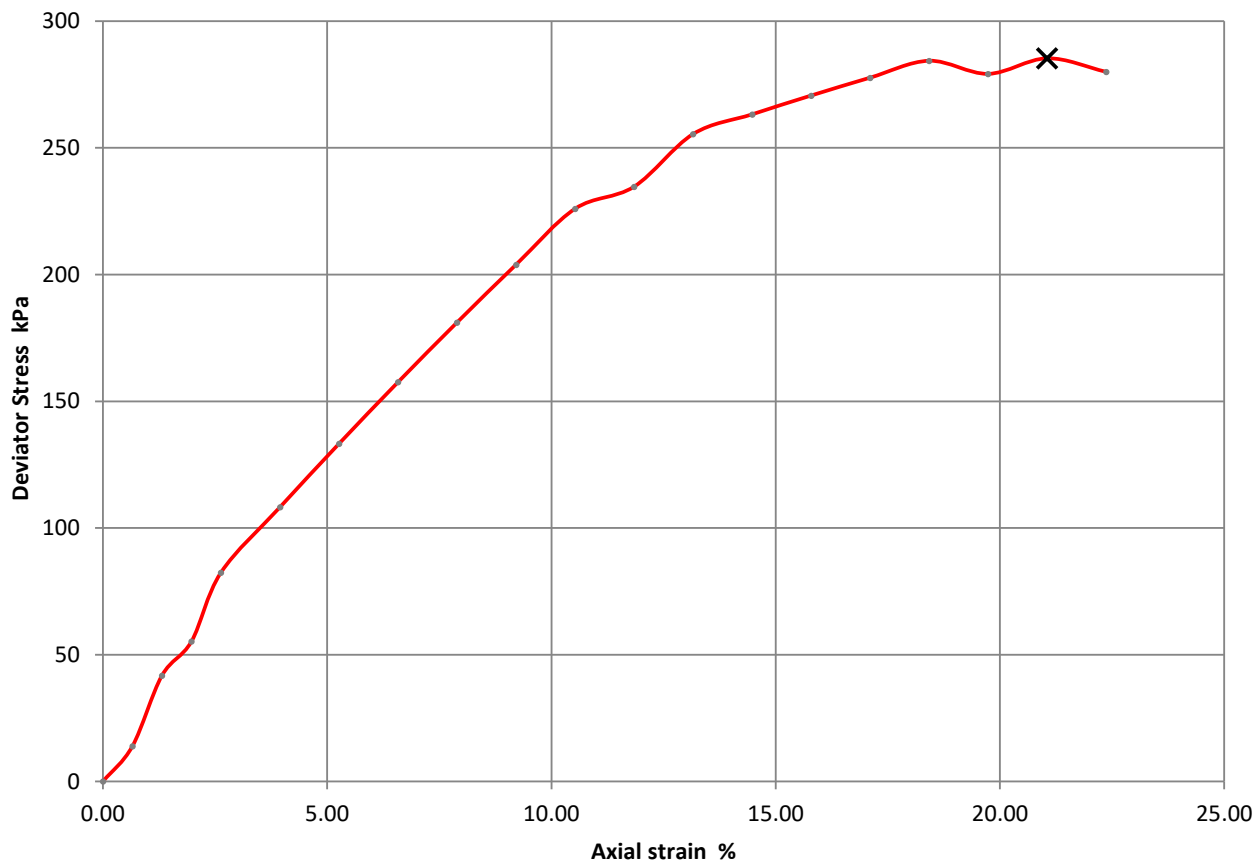
17/09/2021

Sample Type

U

Technician

Daniel B



Moisture Content (%)	24
Bulk Density (Mg/m ³)	1.75
Dry Density (Mg/m ³)	1.42
Specimen Length (mm)	76
Specimen Diameter (mm)	38
Cell Pressure (kPa)	350
Deviator Stress (kPa)	285
Undrained Shear Strength (kPa)	143
Failure Strain (%)	21
Mode Of Failure	Brittle
Membrane Used/Thickness	Rubber/0.3mm
Rate of Strain (%/min)	3.95

Specimen Post Test



Sample Split



Checked	22/09/2021	Richard John	
Approved	23/09/2021	Paul Evans	





Single Stage Unconsolidated-Undrained Triaxial Test
BS 1377 : 1990 Part 7 : 8

Contract Number

55427

Borehole/Pit No.

BH601

Site Name

Dunsbury Park Units 100, 400, 600, 700

Sample No.

Soil Description

Greyish brown fine sandy silty CLAY.

Depth Top (m)

5.50

Depth Base (m)

Date Tested

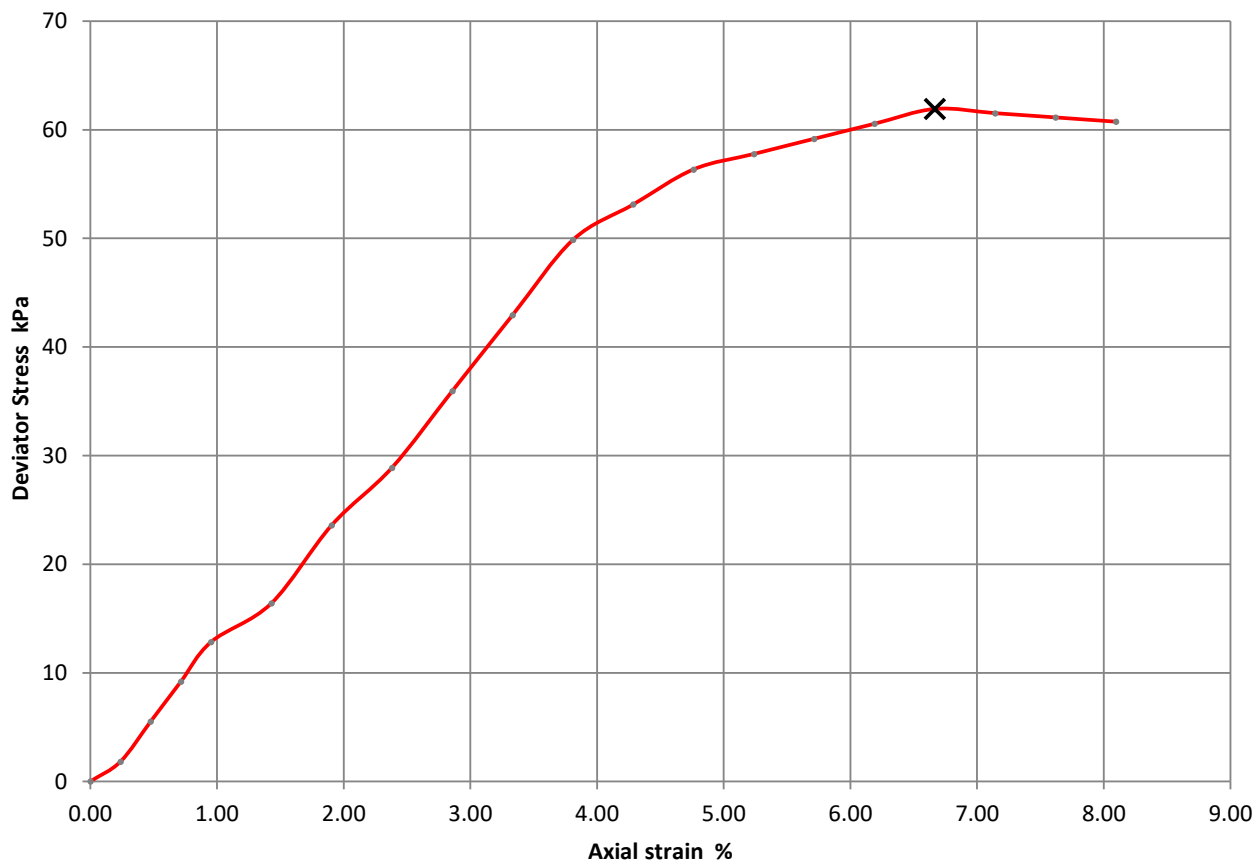
17/09/2021

Sample Type

U

Technician

Daniel B



Moisture Content (%)	17
Bulk Density (Mg/m ³)	1.97
Dry Density (Mg/m ³)	1.68
Specimen Length (mm)	210
Specimen Diameter (mm)	105
Cell Pressure (kPa)	70
Deviator Stress (kPa)	62
Undrained Shear Strength (kPa)	31
Failure Strain (%)	7
Mode Of Failure	Brittle
Membrane Used/Thickness	Rubber/0.3mm
Rate of Strain (%/min)	1.43

Specimen Post Test



Sample Split



Checked	22/09/2021	Richard John	
Approved	23/09/2021	Paul Evans	





Single Stage Unconsolidated-Undrained Triaxial Test
BS 1377 : 1990 Part 7 : 8

Contract Number 55427

Borehole/Pit No. BH601

Site Name Dunsbury Park Units 100, 400, 600, 700

Sample No.

Soil Description Greyish brown fine sandy silty CLAY.

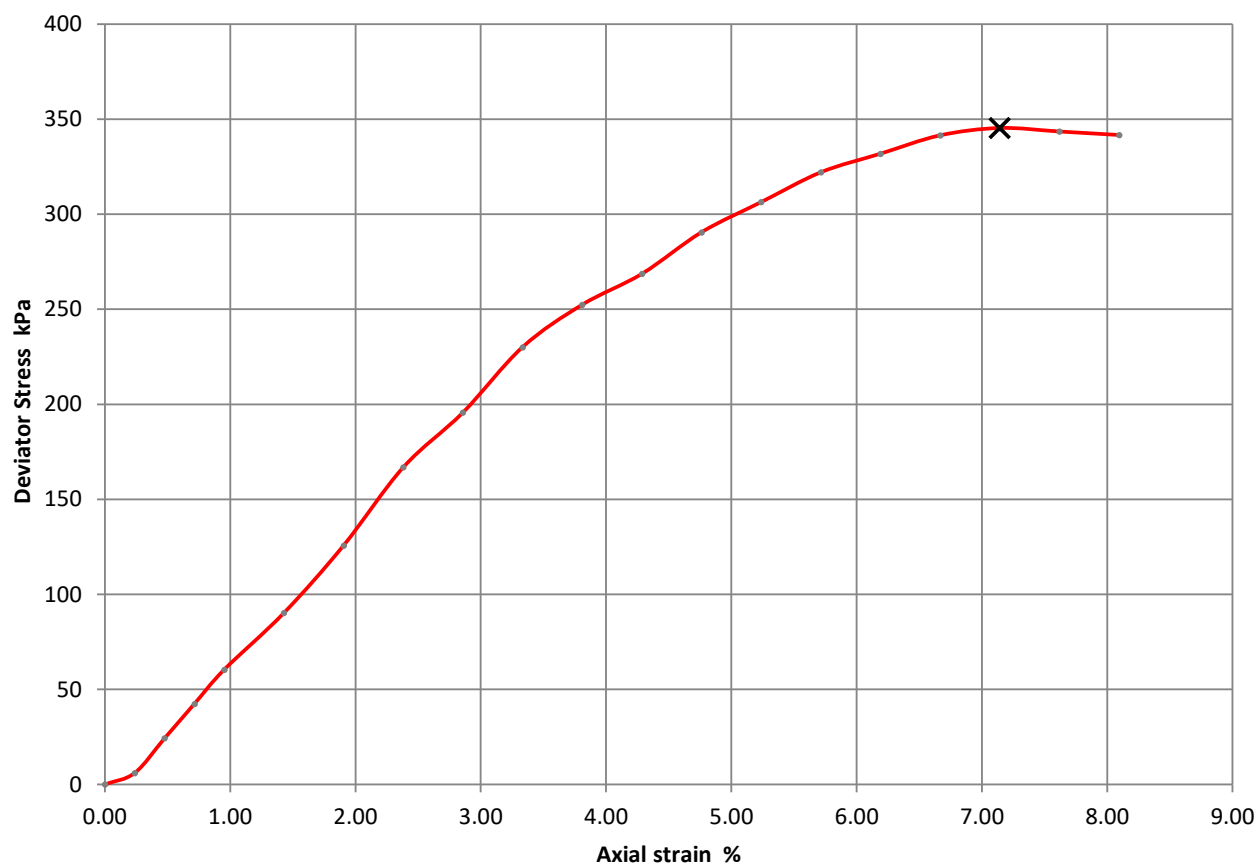
Depth Top (m) 11.50

Depth Base (m) 11.95

Date Tested 17/09/2021

Sample Type U

Technician Daniel B



Moisture Content (%)	20
Bulk Density (Mg/m ³)	1.98
Dry Density (Mg/m ³)	1.65
Specimen Length (mm)	210
Specimen Diameter (mm)	105
Cell Pressure (kPa)	170
Deviator Stress (kPa)	345
Undrained Shear Strength (kPa)	173
Failure Strain (%)	7
Mode Of Failure	Brittle
Membrane Used/Thickness	Rubber/0.3mm
Rate of Strain (%/min)	1.43

Specimen Post Test



Sample Split



Checked	22/09/2021	Richard John	
Approved	23/09/2021	Paul Evans	





Single Stage Unconsolidated-Undrained Triaxial Test
BS 1377 : 1990 Part 7 : 8

Contract Number 55427

Borehole/Pit No. BH601

Site Name Dunsbury Park Units 100, 400, 600, 700

Sample No.

Soil Description Greyish brown silty CLAY.

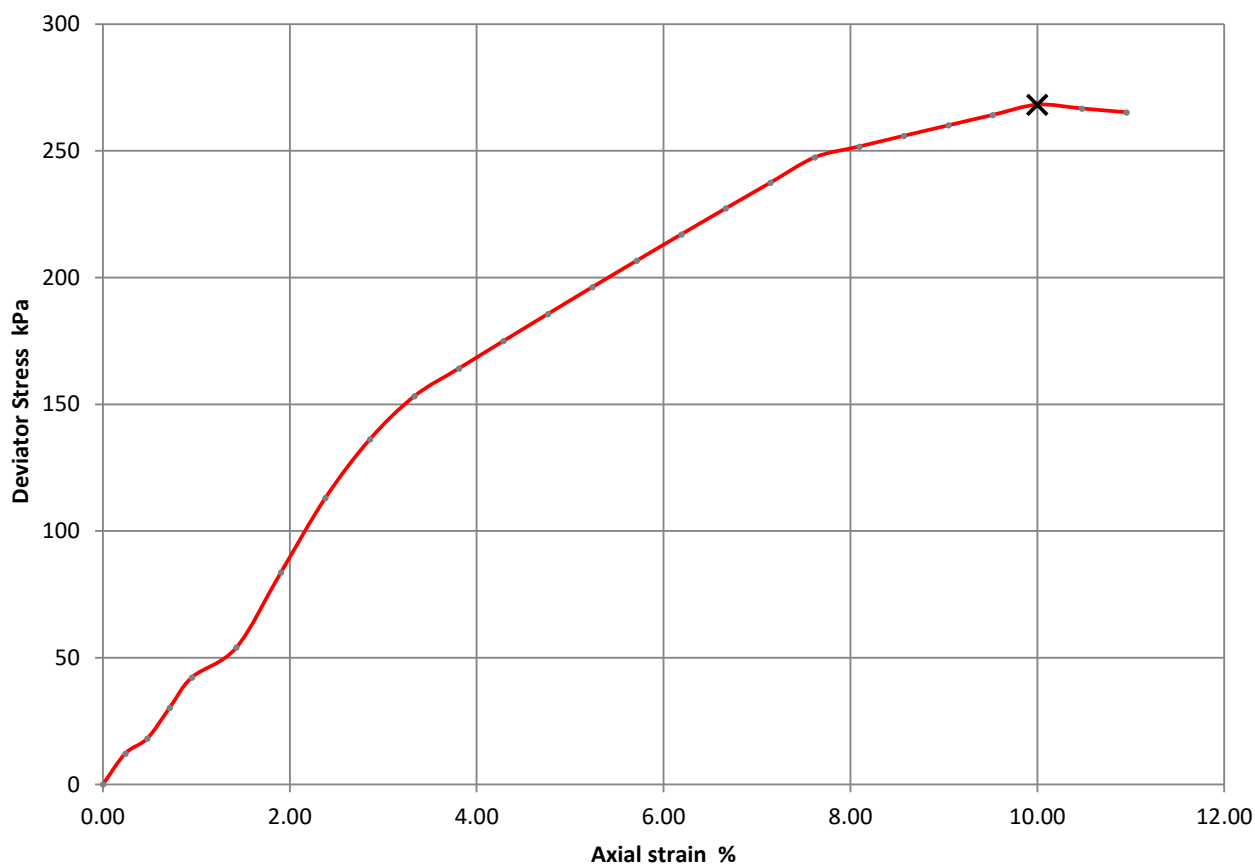
Depth Top (m) 14.50

Depth Base (m) 14.95

Date Tested 17/09/2021

Sample Type U

Technician Daniel B

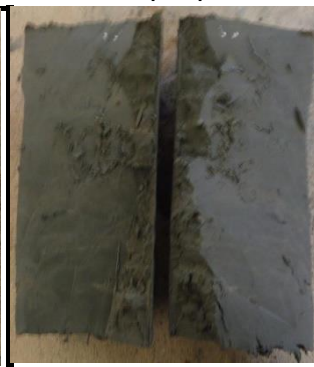


Moisture Content (%)	27
Bulk Density (Mg/m ³)	1.96
Dry Density (Mg/m ³)	1.54
Specimen Length (mm)	210
Specimen Diameter (mm)	105
Cell Pressure (kPa)	290
Deviator Stress (kPa)	268
Undrained Shear Strength (kPa)	134
Failure Strain (%)	10
Mode Of Failure	Brittle
Membrane Used/Thickness	Rubber/0.3mm
Rate of Strain (%/min)	1.43

Specimen Post Test



Sample Split



Checked	22/09/2021	Richard John	
Approved	23/09/2021	Paul Evans	





Single Stage Unconsolidated-Undrained Triaxial Test
BS 1377 : 1990 Part 7 : 8

Contract Number 55427

Borehole/Pit No. BH602

Site Name Dunsbury Park Units 100, 400, 600, 700

Sample No.

Soil Description Mottled Greyish brown silty CLAY.

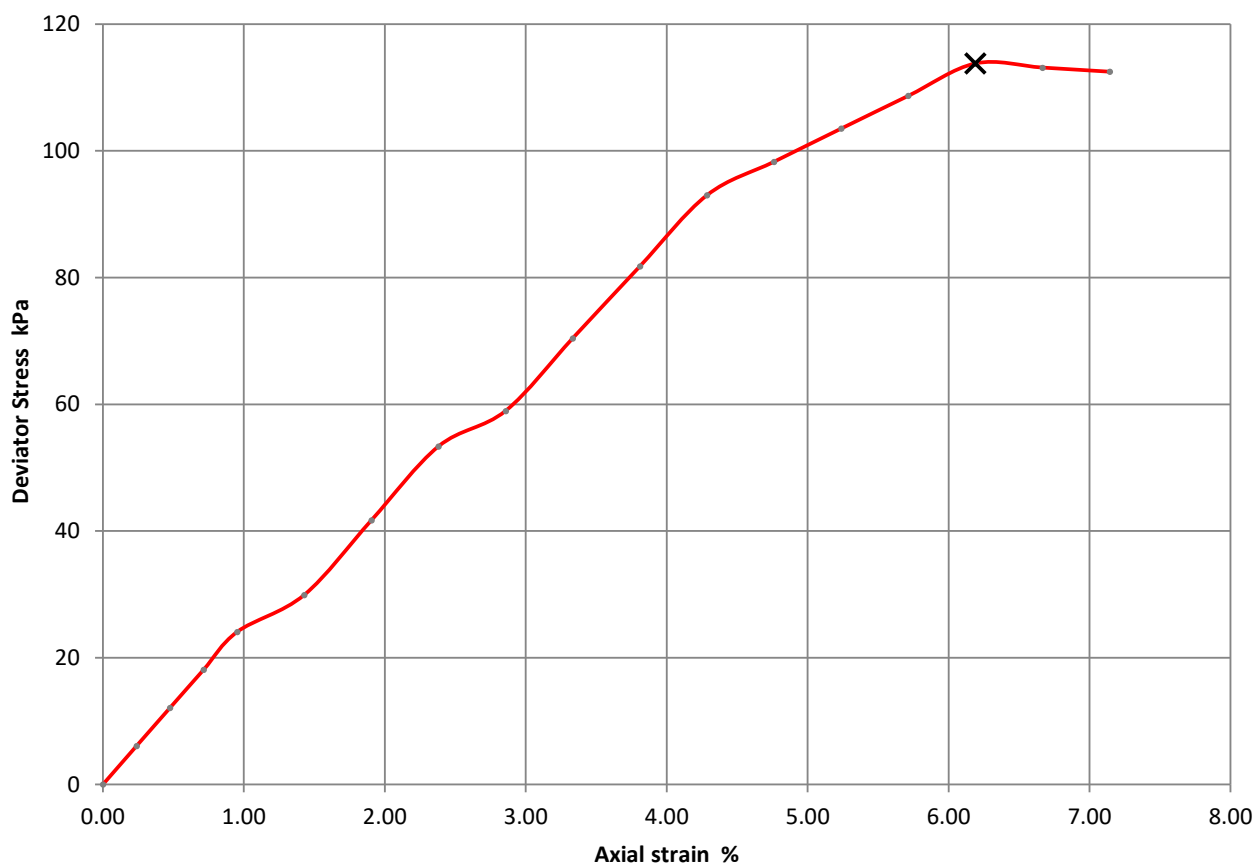
Depth Top (m) 3.50

Depth Base (m) 3.95

Date Tested 17/09/2021

Sample Type U

Technician Daniel B



Moisture Content (%)	23
Bulk Density (Mg/m ³)	1.90
Dry Density (Mg/m ³)	1.55
Specimen Length (mm)	210
Specimen Diameter (mm)	105
Cell Pressure (kPa)	70
Deviator Stress (kPa)	114
Undrained Shear Strength (kPa)	57
Failure Strain (%)	6
Mode Of Failure	Brittle
Membrane Used/Thickness	Rubber/0.3mm
Rate of Strain (%/min)	1.43

Specimen Post Test



Sample Split



Checked	22/09/2021	Richard John	
Approved	23/09/2021	Paul Evans	





Single Stage Unconsolidated-Undrained Triaxial Test
BS 1377 : 1990 Part 7 : 8

Contract Number 55427

Borehole/Pit No. BH602

Site Name Dunsbury Park Units 100, 400, 600, 700

Sample No.

Soil Description Greyish brown silty CLAY.

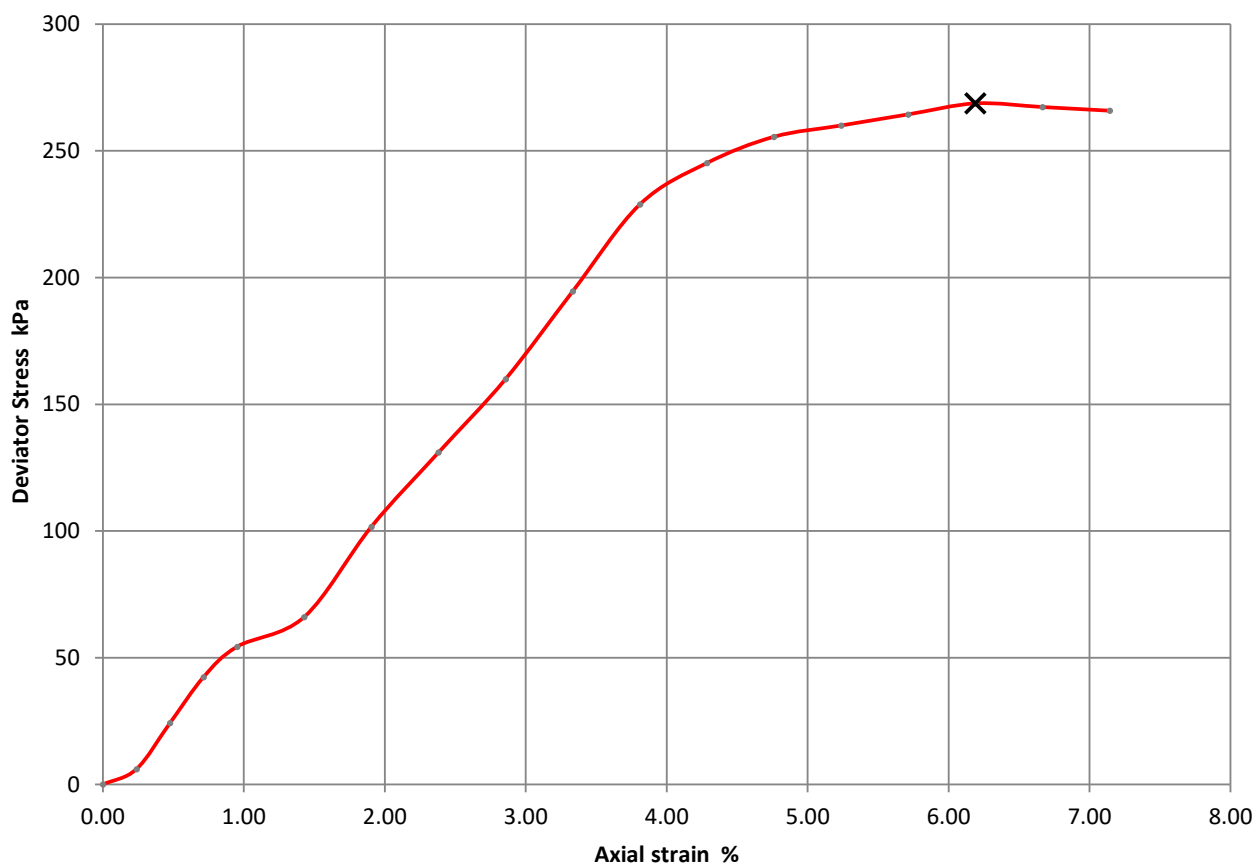
Depth Top (m) 11.50

Depth Base (m) 11.95

Date Tested 17/09/2021

Sample Type U

Technician Daniel B



Moisture Content (%)	21
Bulk Density (Mg/m ³)	1.93
Dry Density (Mg/m ³)	1.60
Specimen Length (mm)	210
Specimen Diameter (mm)	105
Cell Pressure (kPa)	230
Deviator Stress (kPa)	269
Undrained Shear Strength (kPa)	134
Failure Strain (%)	6
Mode Of Failure	Brittle
Membrane Used/Thickness	Rubber/0.3mm
Rate of Strain (%/min)	1.43

Specimen Post Test



Sample Split



Checked	22/09/2021	Richard John	
Approved	23/09/2021	Paul Evans	





Single Stage Unconsolidated-Undrained Triaxial Test
BS 1377 : 1990 Part 7 : 8

Contract Number 55427

Borehole/Pit No. BH602

Site Name Dunsbury Park Units 100, 400, 600, 700

Sample No.

Soil Description Greyish brown silty CLAY.

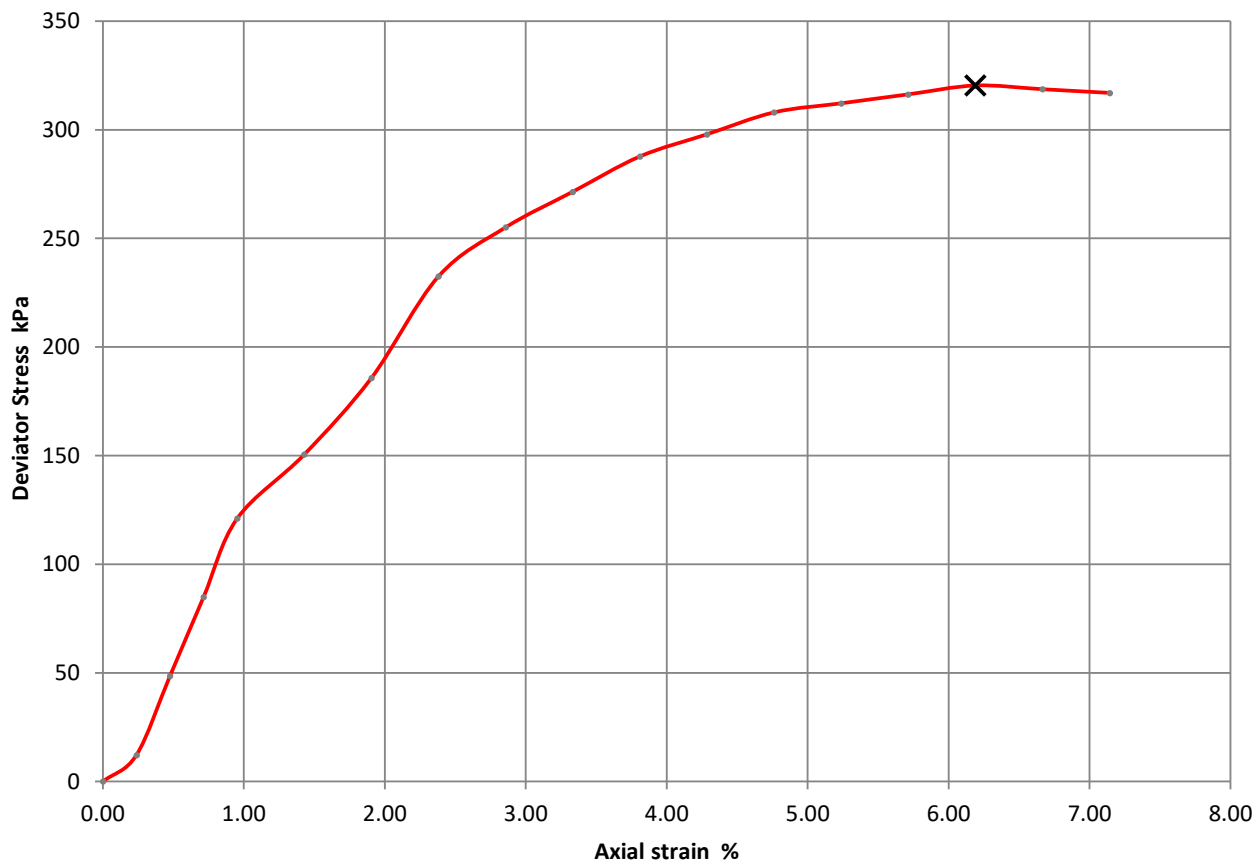
Depth Top (m) 17.50

Depth Base (m) 17.95

Date Tested 17/09/2021

Sample Type U

Technician Daniel B

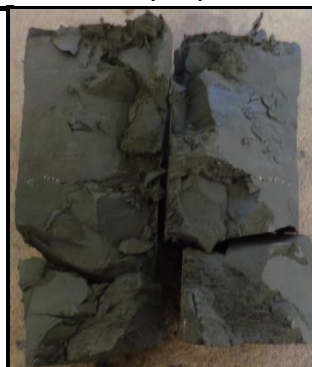


Moisture Content (%)	17
Bulk Density (Mg/m ³)	1.95
Dry Density (Mg/m ³)	1.67
Specimen Length (mm)	210
Specimen Diameter (mm)	105
Cell Pressure (kPa)	350
Deviator Stress (kPa)	320
Undrained Shear Strength (kPa)	160
Failure Strain (%)	6
Mode Of Failure	Brittle
Membrane Used/Thickness	Rubber/0.3mm
Rate of Strain (%/min)	1.43

Specimen Post Test



Sample Split



Checked	22/09/2021	Richard John	
Approved	23/09/2021	Paul Evans	





Single Stage Unconsolidated-Undrained Triaxial Test
BS 1377 : 1990 Part 7 : 8

Contract Number 55427

Borehole/Pit No. BH603

Site Name Dunsbury Park Units 100, 400, 600, 700

Sample No.

Soil Description Greyish brown silty CLAY.

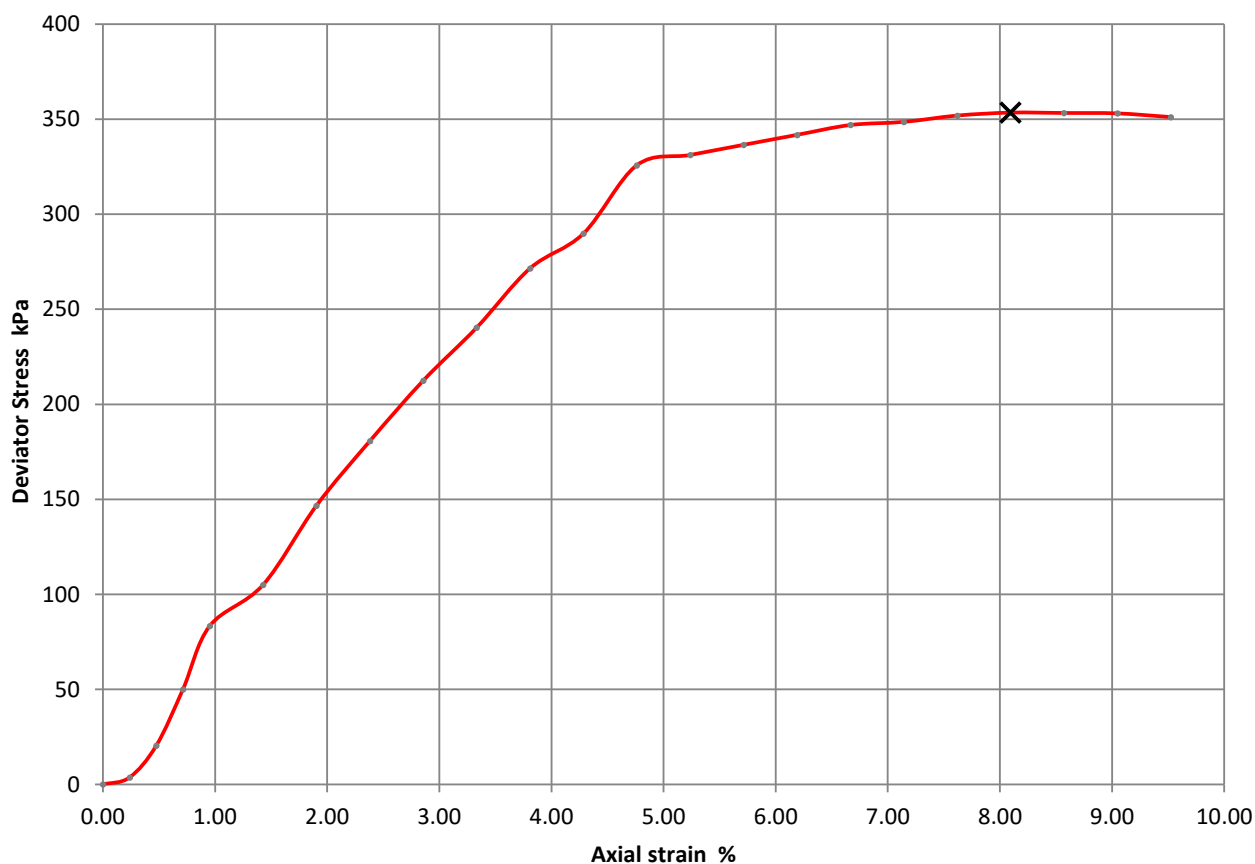
Depth Top (m) 5.50

Depth Base (m) 5.95

Date Tested 17/09/2021

Sample Type U

Technician Daniel B



Moisture Content (%)	15
Bulk Density (Mg/m ³)	1.92
Dry Density (Mg/m ³)	1.67
Specimen Length (mm)	210
Specimen Diameter (mm)	105
Cell Pressure (kPa)	110
Deviator Stress (kPa)	353
Undrained Shear Strength (kPa)	177
Failure Strain (%)	8
Mode Of Failure	Brittle
Membrane Used/Thickness	Rubber/0.3mm
Rate of Strain (%/min)	1.43

Specimen Post Test



Sample Split



Checked	22/09/2021	Richard John	
Approved	23/09/2021	Paul Evans	





**Single Stage Unconsolidated-Undrained Triaxial
Test
BS 1377 : 1990 Part 7 : 8**

Contract Number 55427

Borehole/Pit No. BH603

Site Name Dunsbury Park Units 100, 400, 600, 700

Sample No.

Soil Description Greyish brown silty CLAY.

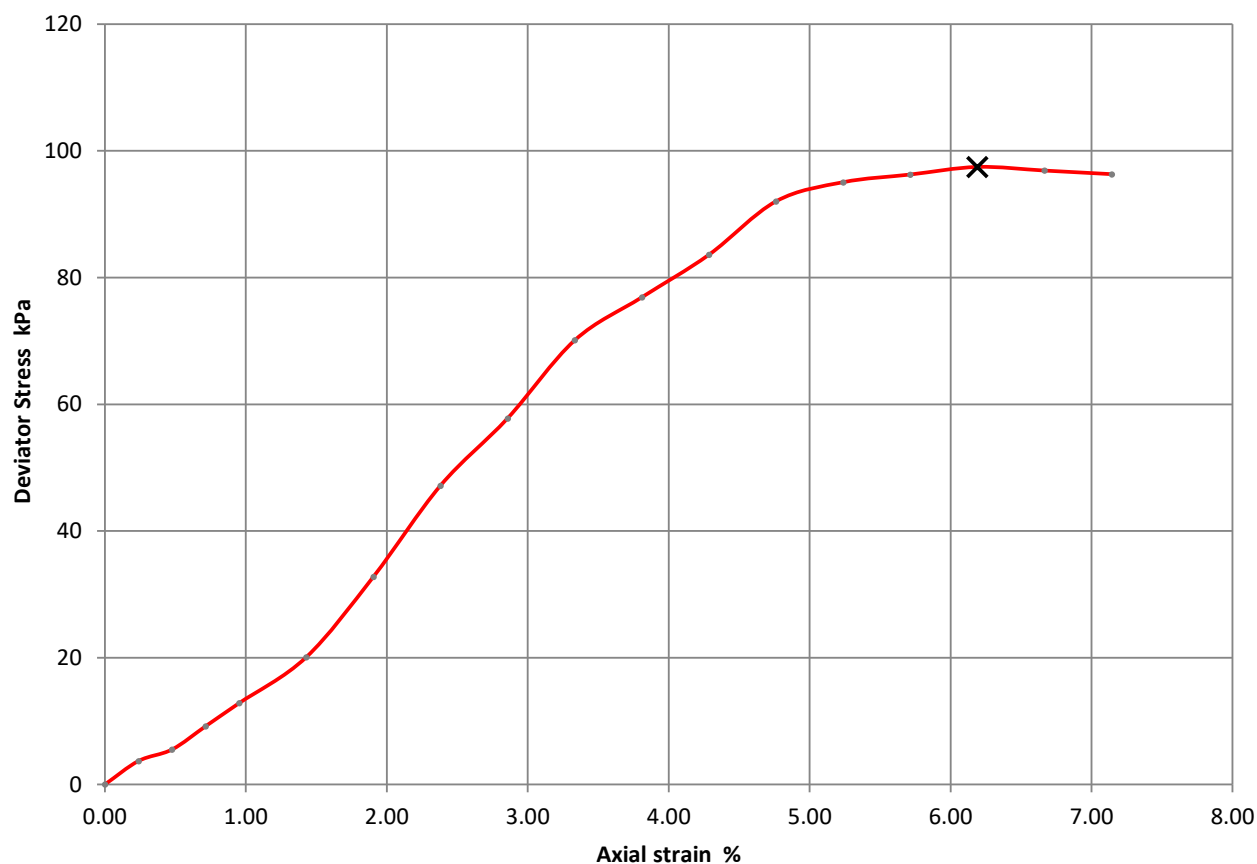
Depth Top (m) 14.50

Depth Base (m) 14.95

Date Tested 17/09/2021

Sample Type U

Technician Daniel B



Moisture Content (%)	21
Bulk Density (Mg/m ³)	1.95
Dry Density (Mg/m ³)	1.61
Specimen Length (mm)	210
Specimen Diameter (mm)	105
Cell Pressure (kPa)	110
Deviator Stress (kPa)	97
Undrained Shear Strength (kPa)	49
Failure Strain (%)	6
Mode Of Failure	Brittle
Membrane Used/Thickness	Rubber/0.3mm
Rate of Strain (%/min)	1.43

Specimen Post Test



Sample Split



Checked	22/09/2021	Richard John	
Approved	23/09/2021	Paul Evans	





Single Stage Unconsolidated-Undrained Triaxial Test
BS 1377 : 1990 Part 7 : 8

Contract Number

55427

Borehole/Pit No.

BH701

Site Name

Dunsbury Park Units 100, 400, 600, 700

Sample No.

Soil Description

Greyish brown silty CLAY.

Depth Top (m)

2.50

Depth Base (m)

2.95

Date Tested

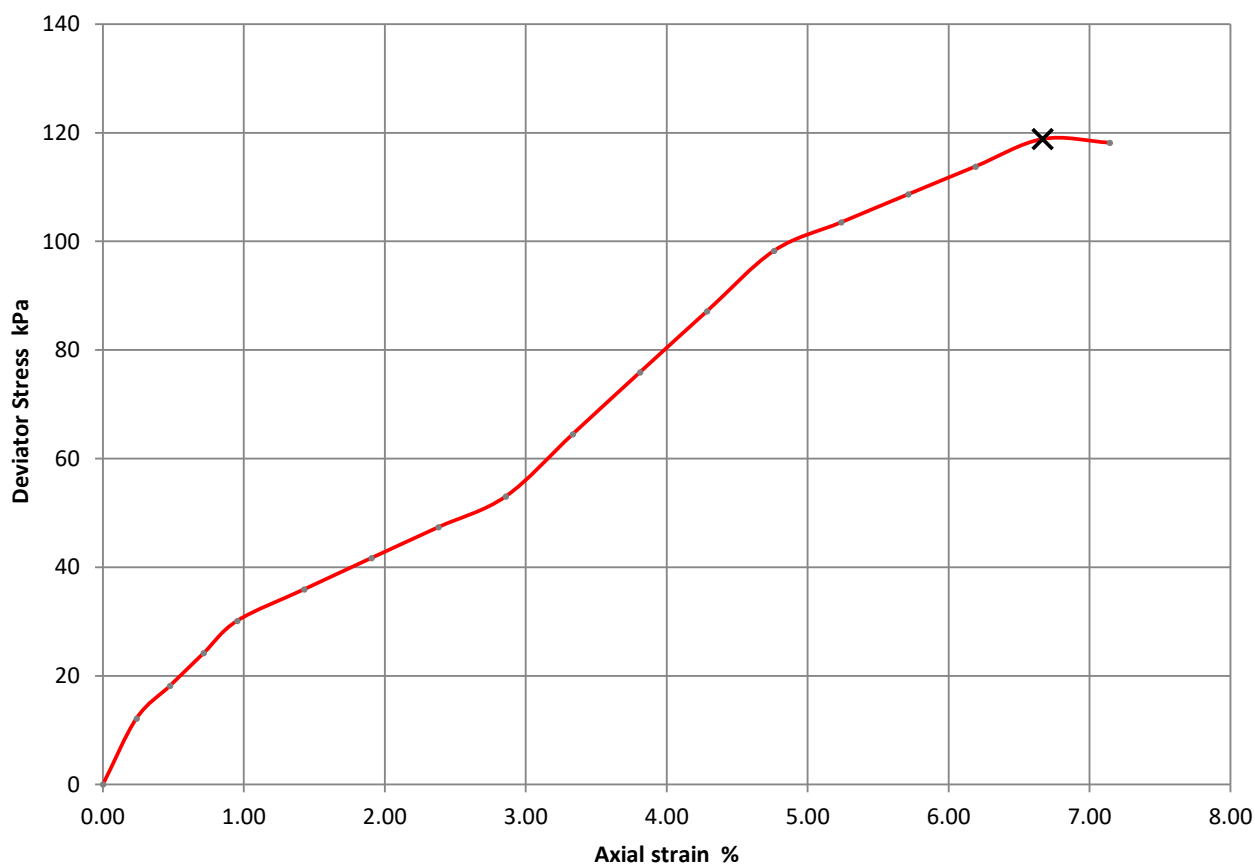
17/09/2021

Sample Type

U

Technician

Daniel B



Moisture Content (%)	22
Bulk Density (Mg/m ³)	1.90
Dry Density (Mg/m ³)	1.56
Specimen Length (mm)	210
Specimen Diameter (mm)	105
Cell Pressure (kPa)	50
Deviator Stress (kPa)	119
Undrained Shear Strength (kPa)	59
Failure Strain (%)	7
Mode Of Failure	Brittle
Membrane Used/Thickness	Rubber/0.3mm
Rate of Strain (%/min)	1.43

Specimen Post Test



Sample Split



Checked	22/09/2021	Richard John	
Approved	23/09/2021	Paul Evans	





Single Stage Unconsolidated-Undrained Triaxial Test
BS 1377 : 1990 Part 7 : 8

Contract Number

55427

Borehole/Pit No.

BH701

Site Name

Dunsbury Park Units 100, 400, 600, 700

Sample No.

Soil Description

Greyish brown silty CLAY.

Depth Top (m)

7.50

Depth Base (m)

7.95

Date Tested

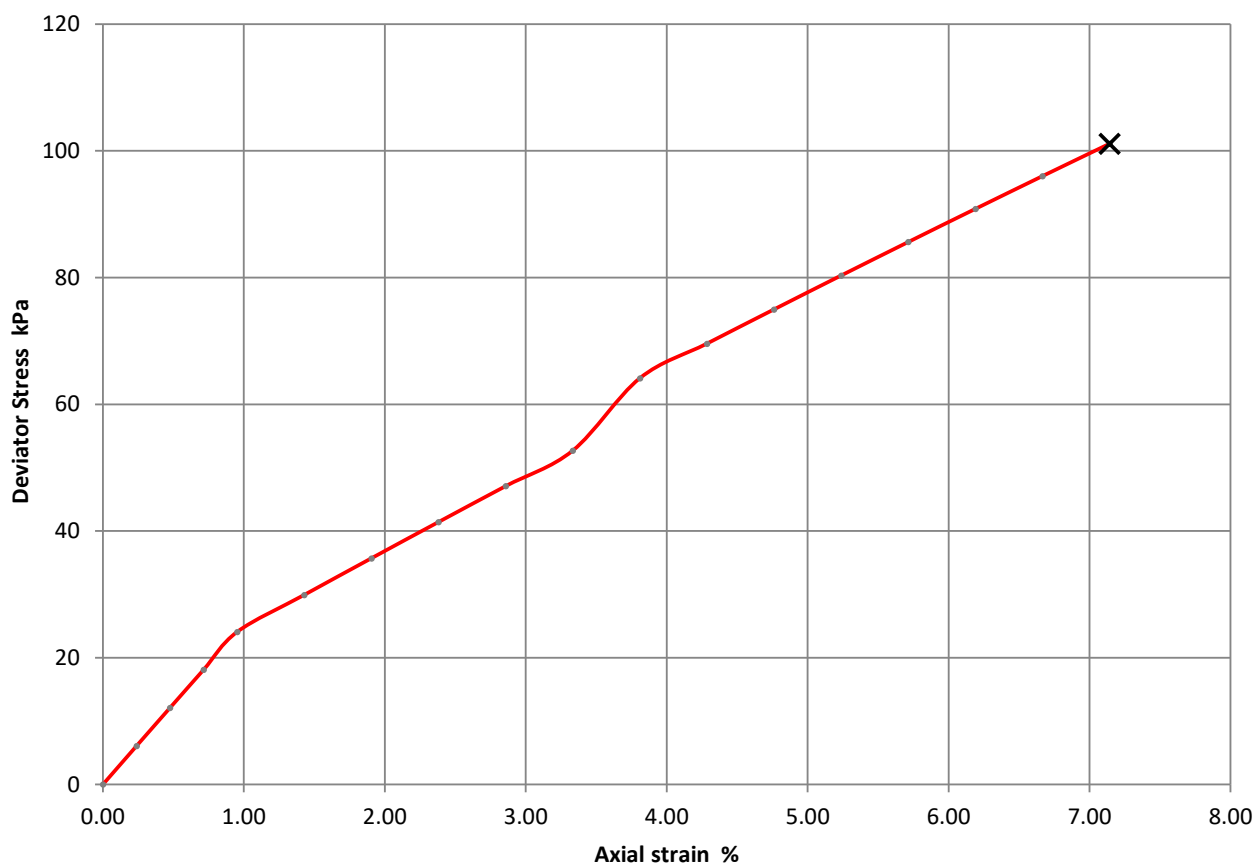
17/09/2021

Sample Type

U

Technician

Daniel B



Moisture Content (%)	11
Bulk Density (Mg/m ³)	1.91
Dry Density (Mg/m ³)	1.72
Specimen Length (mm)	210
Specimen Diameter (mm)	105
Cell Pressure (kPa)	150
Deviator Stress (kPa)	101
Undrained Shear Strength (kPa)	51
Failure Strain (%)	7
Mode Of Failure	Brittle
Membrane Used/Thickness	Rubber/0.3mm
Rate of Strain (%/min)	1.43

Specimen Post Test



Sample Split



Checked	22/09/2021	Richard John	
Approved	23/09/2021	Paul Evans	





Single Stage Unconsolidated-Undrained Triaxial Test
BS 1377 : 1990 Part 7 : 8

Contract Number

55427

Borehole/Pit No.

BH701

Site Name

Dunsbury Park Units 100, 400, 600, 700

Sample No.

Soil Description

Greyish brown silty CLAY.

Depth Top (m)

16.50

Depth Base (m)

16.95

Date Tested

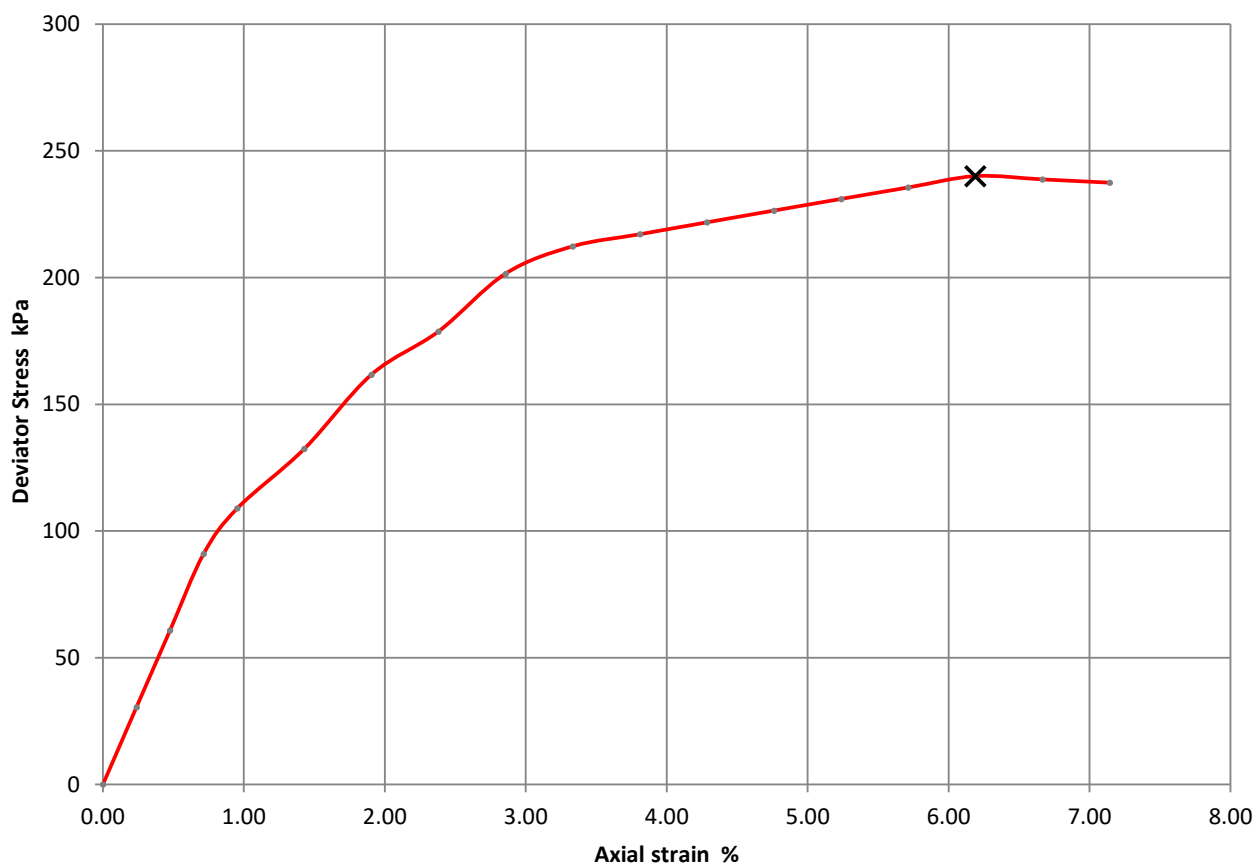
17/09/2021

Sample Type

U

Technician

Daniel B



Moisture Content (%)	23
Bulk Density (Mg/m ³)	1.94
Dry Density (Mg/m ³)	1.58
Specimen Length (mm)	210
Specimen Diameter (mm)	105
Cell Pressure (kPa)	330
Deviator Stress (kPa)	240
Undrained Shear Strength (kPa)	120
Failure Strain (%)	6
Mode Of Failure	Brittle
Membrane Used/Thickness	Rubber/0.3mm
Rate of Strain (%/min)	1.43

Specimen Post Test



Sample Split



Checked	22/09/2021	Richard John	
Approved	23/09/2021	Paul Evans	





Single Stage Unconsolidated-Undrained Triaxial Test
BS 1377 : 1990 Part 7 : 8

Contract Number

55427

Borehole/Pit No.

BH702

Site Name

Dunsbury Park Units 100, 400, 600, 700

Sample No.

Soil Description

Greyish brown silty CLAY.

Depth Top (m)

2.50

Depth Base (m)

2.95

Date Tested

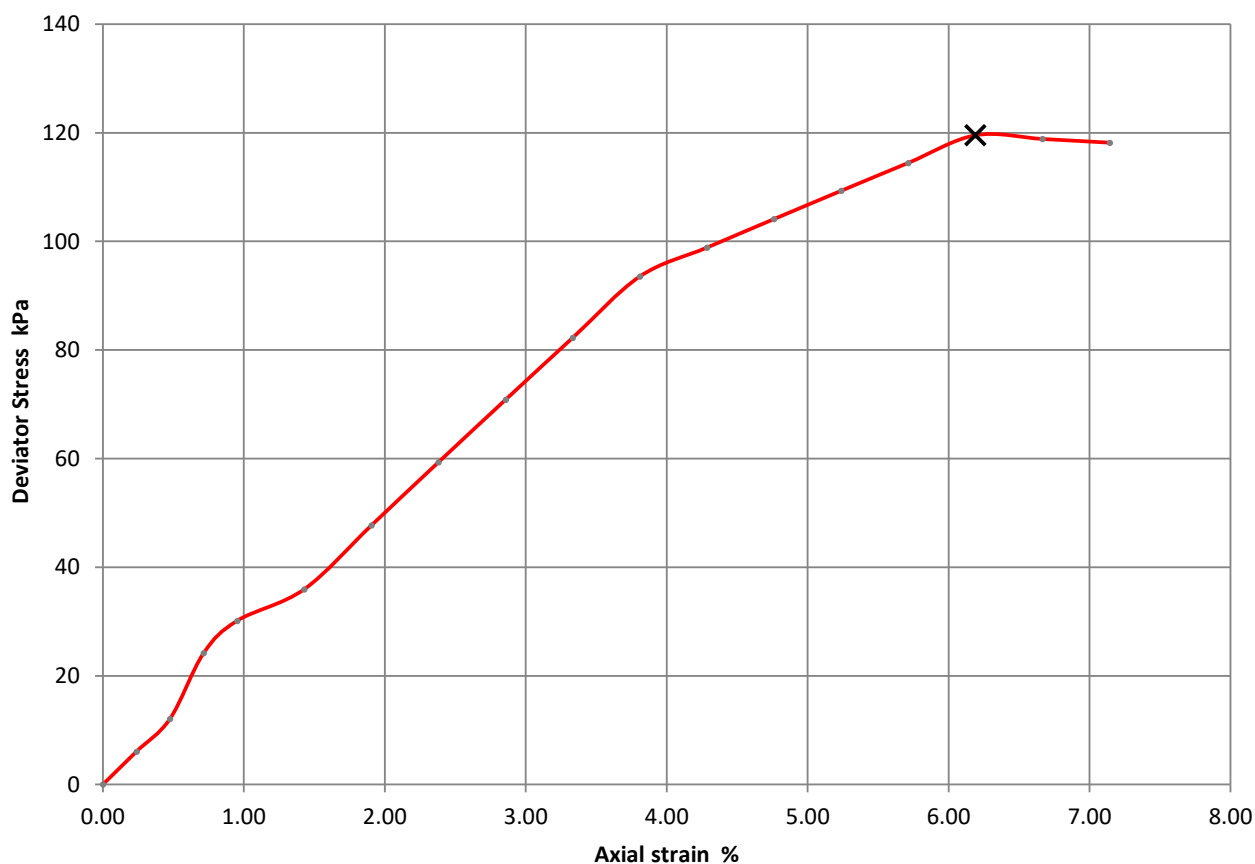
17/09/2021

Sample Type

U

Technician

Daniel B



Moisture Content (%)	25
Bulk Density (Mg/m ³)	1.93
Dry Density (Mg/m ³)	1.54
Specimen Length (mm)	210
Specimen Diameter (mm)	105
Cell Pressure (kPa)	50
Deviator Stress (kPa)	120
Undrained Shear Strength (kPa)	60
Failure Strain (%)	6
Mode Of Failure	Brittle
Membrane Used/Thickness	Rubber/0.3mm
Rate of Strain (%/min)	1.43

Specimen Post Test



Sample Split



Checked	22/09/2021	Richard John	
Approved	23/09/2021	Paul Evans	





Single Stage Unconsolidated-Undrained Triaxial Test
BS 1377 : 1990 Part 7 : 8

Contract Number 55427

Borehole/Pit No. BH702

Site Name Dunsbury Park Units 100, 400, 600, 700

Sample No.

Soil Description Greyish brown silty CLAY.

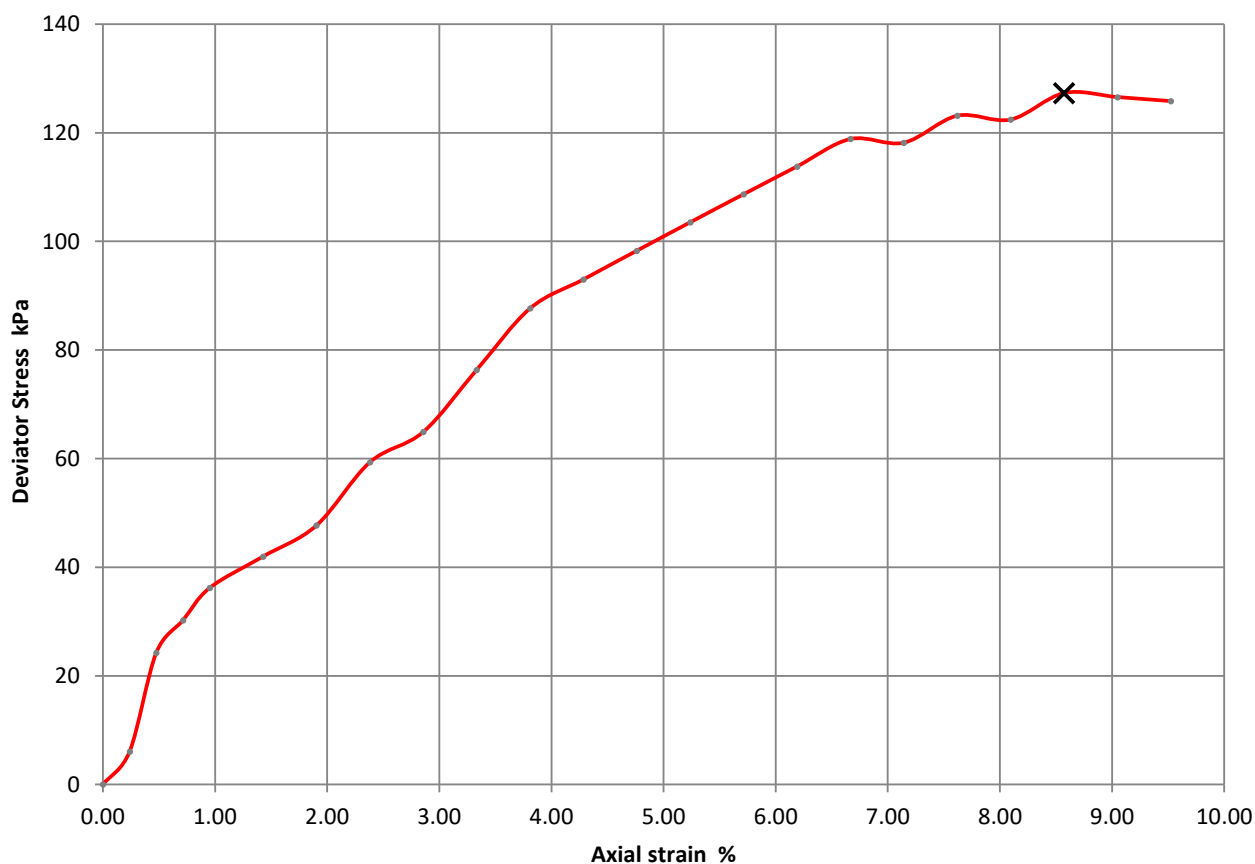
Depth Top (m) 7.50

Depth Base (m) 7.95

Date Tested 17/09/2021

Sample Type U

Technician Daniel B



Moisture Content (%)	22
Bulk Density (Mg/m ³)	1.93
Dry Density (Mg/m ³)	1.58
Specimen Length (mm)	210
Specimen Diameter (mm)	105
Cell Pressure (kPa)	150
Deviator Stress (kPa)	127
Undrained Shear Strength (kPa)	64
Failure Strain (%)	9
Mode Of Failure	Brittle
Membrane Used/Thickness	Rubber/0.3mm
Rate of Strain (%/min)	1.43

Specimen Post Test



Sample Split



Checked	22/09/2021	Richard John	
Approved	23/09/2021	Paul Evans	





Single Stage Unconsolidated-Undrained Triaxial Test
BS 1377 : 1990 Part 7 : 8

Contract Number 55427

Borehole/Pit No. BH702

Site Name Dunsbury Park Units 100, 400, 600, 700

Sample No.

Soil Description Greyish brown silty CLAY.

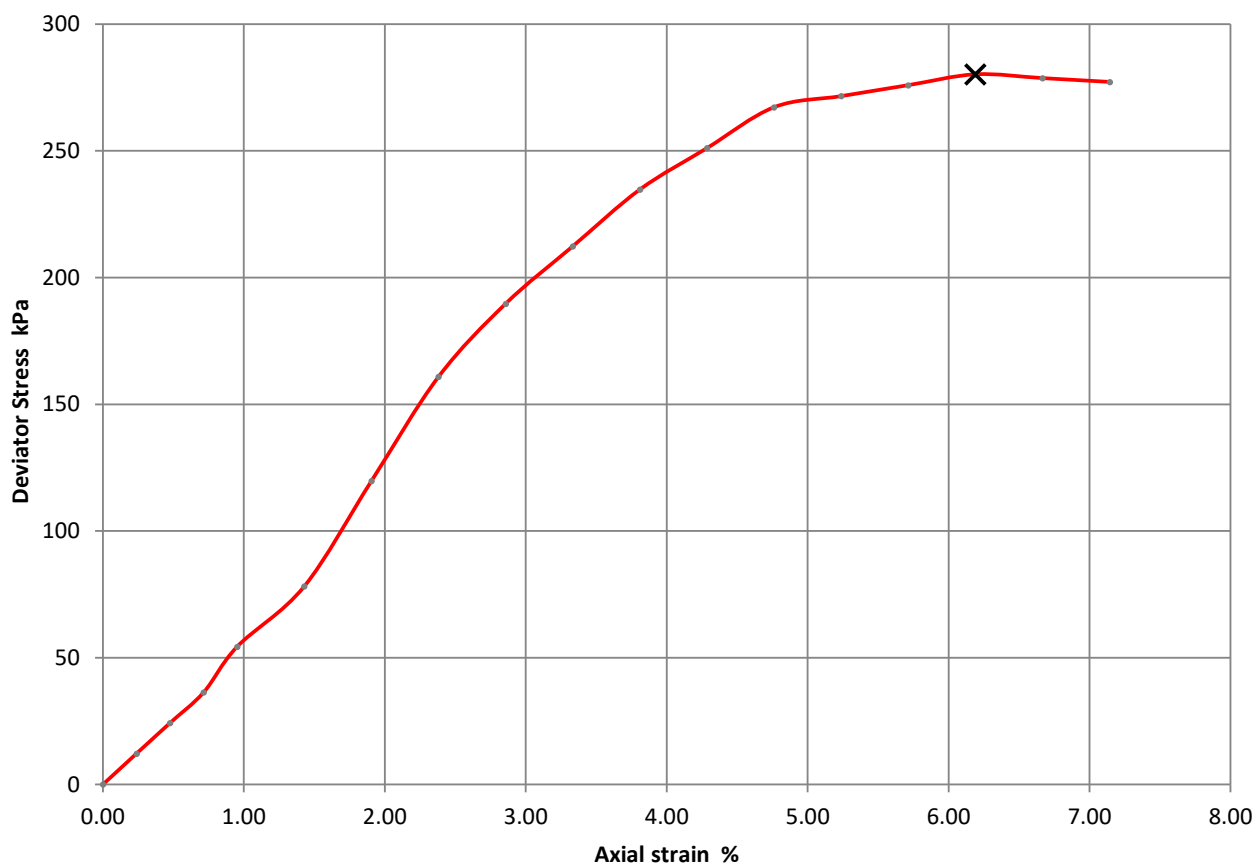
Depth Top (m) 10.50

Depth Base (m) 10.95

Date Tested 17/09/2021

Sample Type U

Technician Daniel B



Moisture Content (%)	22
Bulk Density (Mg/m ³)	1.97
Dry Density (Mg/m ³)	1.62
Specimen Length (mm)	210
Specimen Diameter (mm)	105
Cell Pressure (kPa)	270
Deviator Stress (kPa)	280
Undrained Shear Strength (kPa)	140
Failure Strain (%)	6
Mode Of Failure	Brittle
Membrane Used/Thickness	Rubber/0.3mm
Rate of Strain (%/min)	1.43

Specimen Post Test



Sample Split



Checked	22/09/2021	Richard John	
Approved	23/09/2021	Paul Evans	





Single Stage Unconsolidated-Undrained Triaxial Test
BS 1377 : 1990 Part 7 : 8

Contract Number 55427

Borehole/Pit No. BH702

Site Name Dunsbury Park Units 100, 400, 600, 700

Sample No.

Soil Description Greyish brown silty CLAY.

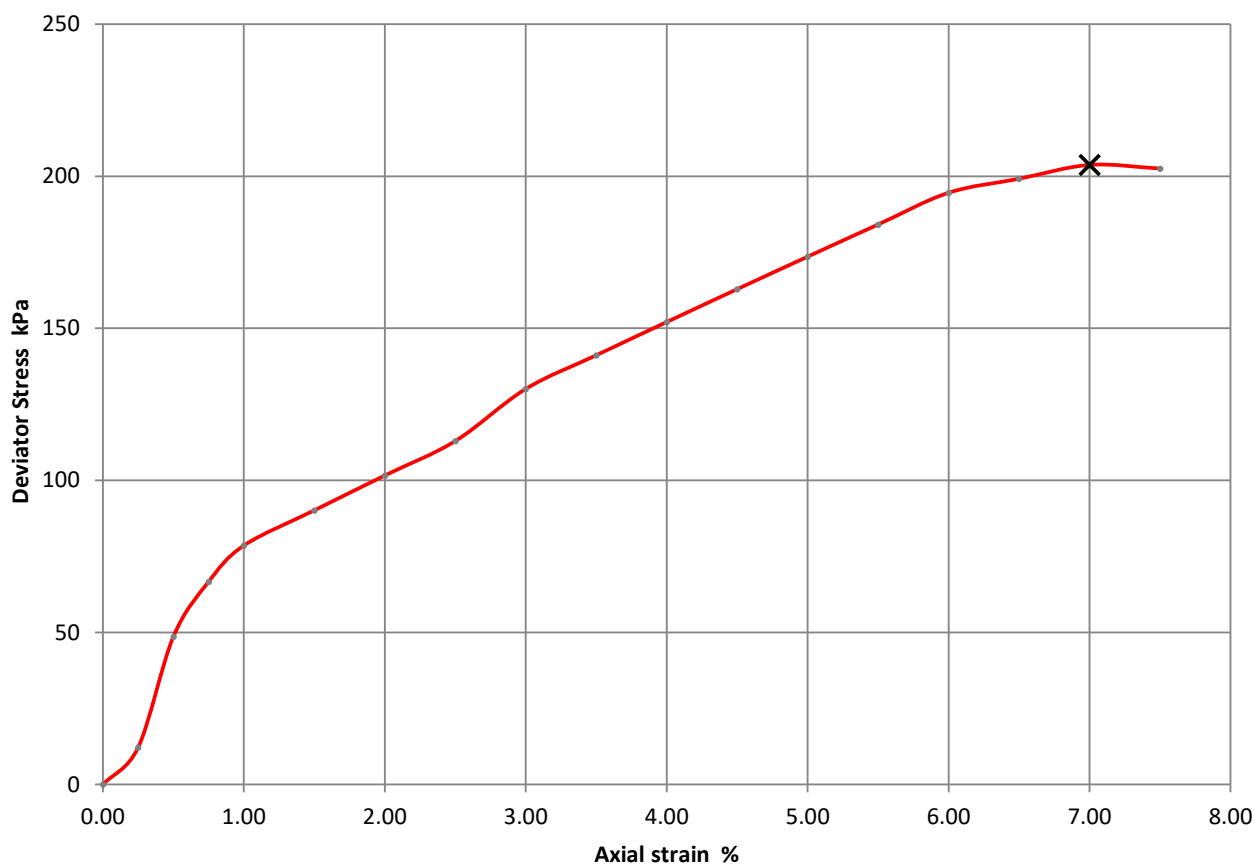
Depth Top (m) 19.50

Depth Base (m) 19.70

Date Tested 17/09/2021

Sample Type U

Technician Daniel B



Moisture Content (%)	31
Bulk Density (Mg/m ³)	1.91
Dry Density (Mg/m ³)	1.46
Specimen Length (mm)	200
Specimen Diameter (mm)	105
Cell Pressure (kPa)	390
Deviator Stress (kPa)	204
Undrained Shear Strength (kPa)	102
Failure Strain (%)	7
Mode Of Failure	Brittle
Membrane Used/Thickness	Rubber/0.3mm
Rate of Strain (%/min)	1.50

Specimen Post Test



Sample Split



Checked	22/09/2021	Richard John	
Approved	23/09/2021	Paul Evans	





Single Stage Unconsolidated-Undrained Triaxial Test
BS 1377 : 1990 Part 7 : 8

Contract Number 55427

Borehole/Pit No. BH703

Site Name Dunsbury Park Units 100, 400, 600, 700

Sample No.

Soil Description Greyish brown silty CLAY.

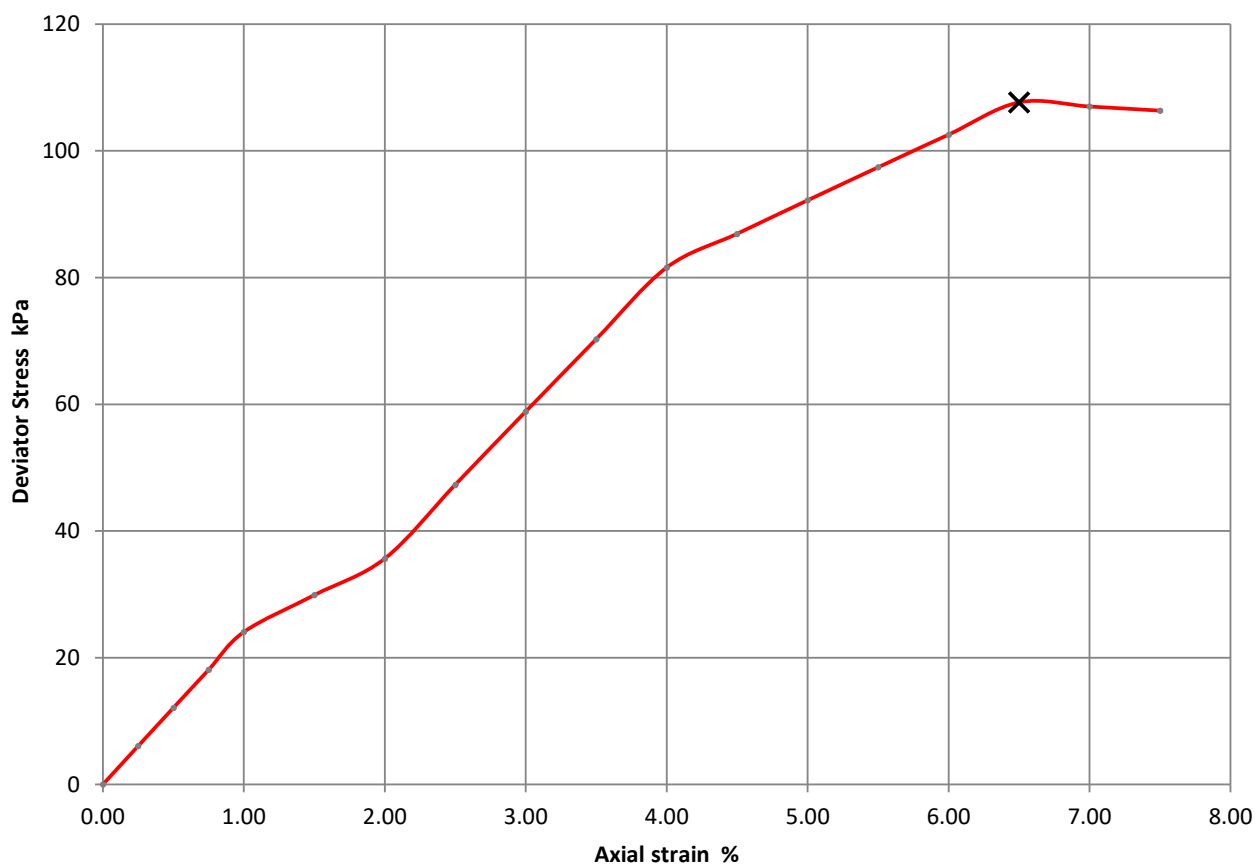
Depth Top (m) 4.50

Depth Base (m) 4.95

Date Tested 17/09/2021

Sample Type U

Technician Daniel B



Moisture Content (%)	12
Bulk Density (Mg/m ³)	2.03
Dry Density (Mg/m ³)	1.81
Specimen Length (mm)	200
Specimen Diameter (mm)	105
Cell Pressure (kPa)	90
Deviator Stress (kPa)	108
Undrained Shear Strength (kPa)	54
Failure Strain (%)	7
Mode Of Failure	Brittle
Membrane Used/Thickness	Rubber/0.3mm
Rate of Strain (%/min)	1.50

Specimen Post Test



Sample Split



Checked	22/09/2021	Richard John	
Approved	23/09/2021	Paul Evans	





Single Stage Unconsolidated-Undrained Triaxial Test
BS 1377 : 1990 Part 7 : 8

Contract Number 55427

Borehole/Pit No. BH703

Site Name Dunsbury Park Units 100, 400, 600, 700

Sample No.

Soil Description Greyish brown silty CLAY.

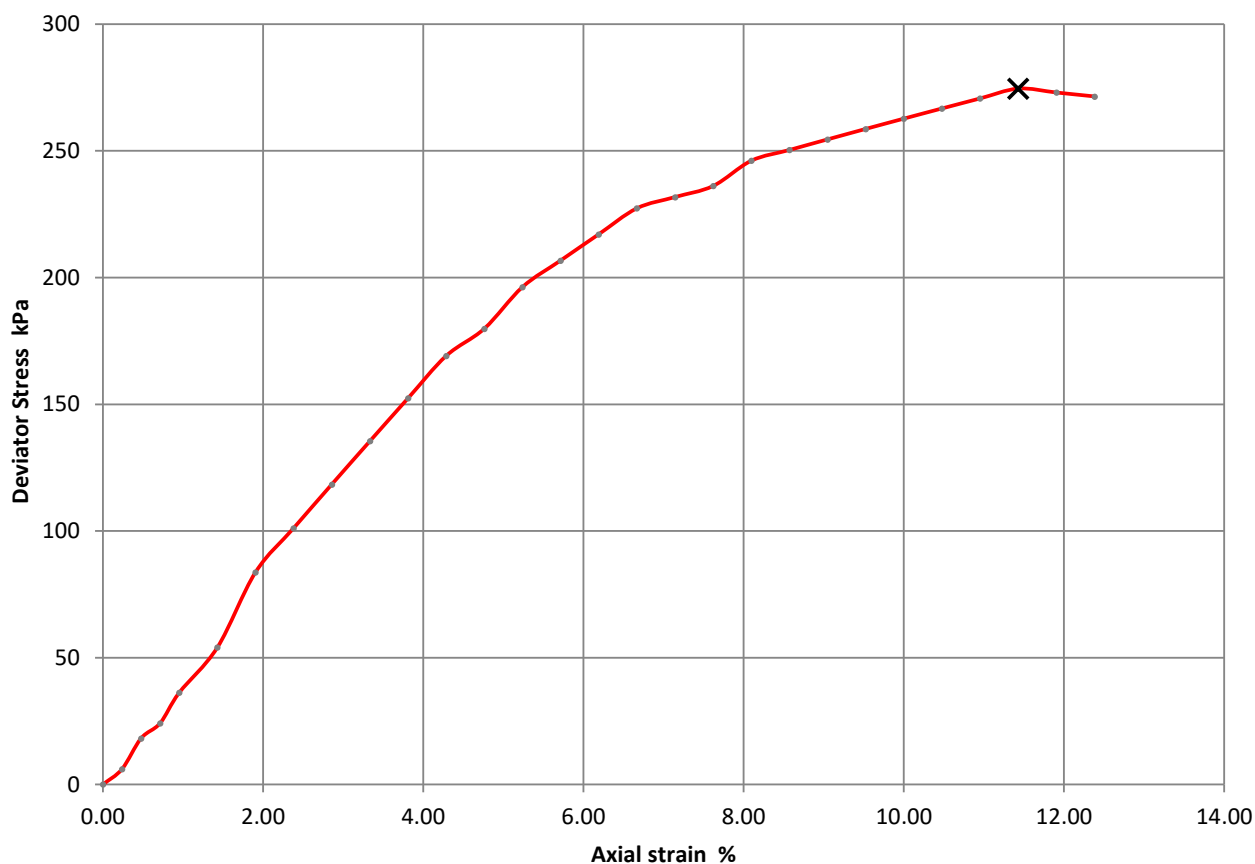
Depth Top (m) 10.50

Depth Base (m) 10.95

Date Tested 17/09/2021

Sample Type U

Technician Daniel B



Moisture Content (%)	20
Bulk Density (Mg/m ³)	1.95
Dry Density (Mg/m ³)	1.63
Specimen Length (mm)	210
Specimen Diameter (mm)	105
Cell Pressure (kPa)	210
Deviator Stress (kPa)	275
Undrained Shear Strength (kPa)	137
Failure Strain (%)	11
Mode Of Failure	Brittle
Membrane Used/Thickness	Rubber/0.3mm
Rate of Strain (%/min)	1.43

Specimen Post Test



Sample Split



Checked	22/09/2021	Richard John	
Approved	23/09/2021	Paul Evans	





Single Stage Unconsolidated-Undrained Triaxial Test
BS 1377 : 1990 Part 7 : 8

Contract Number

55427

Borehole/Pit No.

BH703

Site Name

Dunsbury Park Units 100, 400, 600, 700

Sample No.

Soil Description

Greyish brown silty CLAY.

Depth Top (m)

16.50

Depth Base (m)

16.95

Date Tested

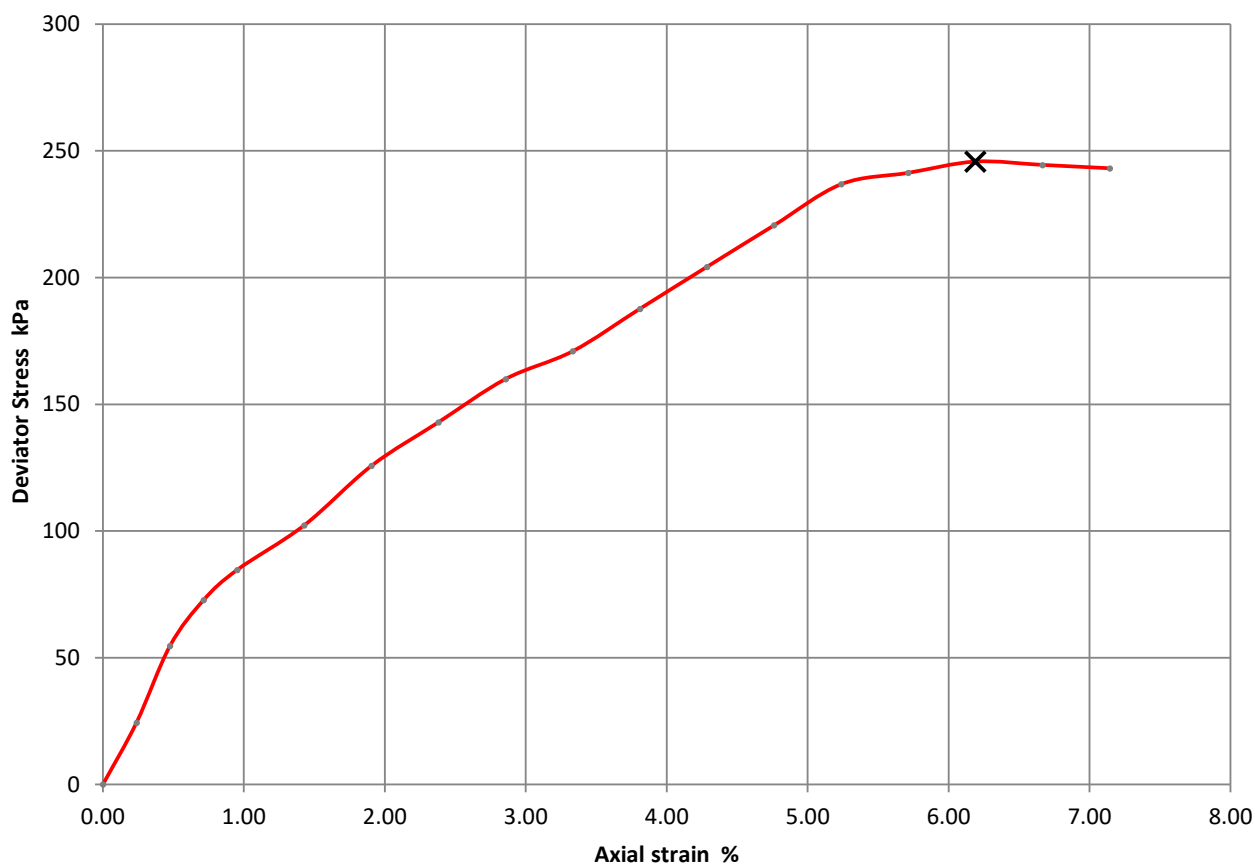
17/09/2021

Sample Type

U

Technician

Daniel B



Moisture Content (%)	9.4
Bulk Density (Mg/m ³)	1.90
Dry Density (Mg/m ³)	1.74
Specimen Length (mm)	210
Specimen Diameter (mm)	105
Cell Pressure (kPa)	330
Deviator Stress (kPa)	246
Undrained Shear Strength (kPa)	123
Failure Strain (%)	6
Mode Of Failure	Brittle
Membrane Used/Thickness	Rubber/0.3mm
Rate of Strain (%/min)	1.43

Specimen Post Test



Sample Split



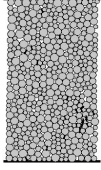
Checked	22/09/2021	Richard John	
Approved	23/09/2021	Paul Evans	



Direct Shear Tests

Direct Shearbox Test

Summary

Sample Details  <i>Sketch showing specimen location in original sample</i>	Depth	0.4			
	Description	Brown sandy clayey SILT			
	Type				
			Spm. 1	2	3
	Initial Height	H ₀ (mm)	25.1	25.1	25.1
	Initial Width	D ₀ (mm)	60.0	60.0	60.0
	Initial Weight	W ₀ (gr)	126.5	126.3	126.2
	Initial Bulk Density	ρ ₀ (Mg/m3)	1.40	1.40	1.40
	Particle Density	ρ _s (Mg/m3)	2.65	2.65	2.65

Initial Condition			Spm. 1	2	3
Normal Stress Level	(kPa)		15	30	60
Is Specimen Submersed?			Yes	Yes	Yes
Reverse Method			Motor Drive		
Hoz. Control Machine			Shearbox 3	Shearbox 3	Shearbox 3
Initial Moisture	ω _i % (%)		19	19	19
Initial Dry Density	ρ _{di} (Mg/m3)		1.18	1.18	1.18
Initial Voids Ratio	e _i .		1.247	1.245	1.247
Initial Degree of Saturation	S _i (%)		39.7	39.6	39.6
Notes					

Max Shear Stress Results			Spm. 1	2	3
Final Moisture	ω _f % (%)		19	19	19
Final Dry Density	ρ _{df} (Mg/m3)		1.51	1.64	1.63
Final Voids Ratio	e _f .		1.079	0.915	0.926
Final Degree of Saturation	S _f (%)		45.9	53.9	53.2
Peak Shear Stress		(kPa)	20.3	41.6	82.6
Hoz Displacement	L _H	(mm)	8.997	8.998	8.999
Vertical Displacement	L _V	(mm)	1.249	1.562	1.300

*GSTL (Clisp V2.5.5.2426)

	Test Method		BS 1377-7 : 1990 clause 4		Test Name		PEAK				
					Database:		.\SQLEXPRESS \ GSTL				
	Site Reference		Dunsbury Park Units 100, 400, 600,		Test Date		14/09/2021				
	Jobfile		55427		Sample		NA				
	Client		Hydrock		Borehole		BH1.01				
Operator		*R.Owens		Checked		*R.John		Approved		*R.John	

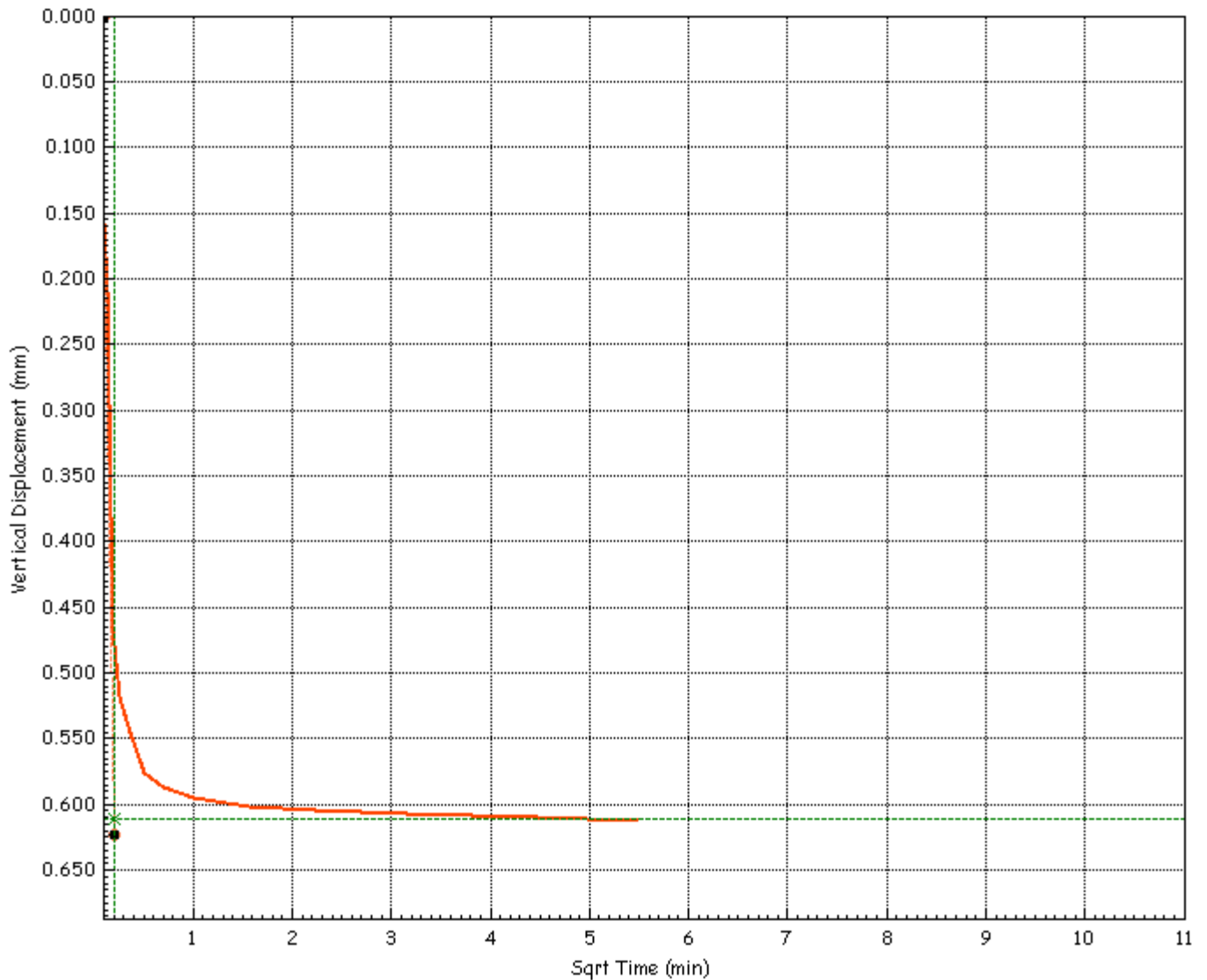
Direct Shear Tests

Direct Shearbox Test

Consolidation Stage

Max Shear Stress Results

			Spm. 1	2	3
Vertical Displacement	ΔH	(mm)	0.612	2.120	2.275
Voids Ratio	e_f	.	1.192	1.055	1.043
t100	t 100	(min)	0.0	0.4	0.2
Shear Speed		(mm/min)	0.300	0.300	0.300



Specimen Number 1

	Test Method	BS 1377-7 : 1990 clause 4		Test Name	PEAK
				Database:	.\SQLEXPRESS \ GSTL
	Site Reference	Dunsbury Park Units 100, 400, 600,		Test Date	14/09/2021
	Jobfile	55427		Sample	NA
	Client	Hydrock		Borehole	BH1.01
Operator	*R.Owens	Checked	*R.John	Approved	*R.John

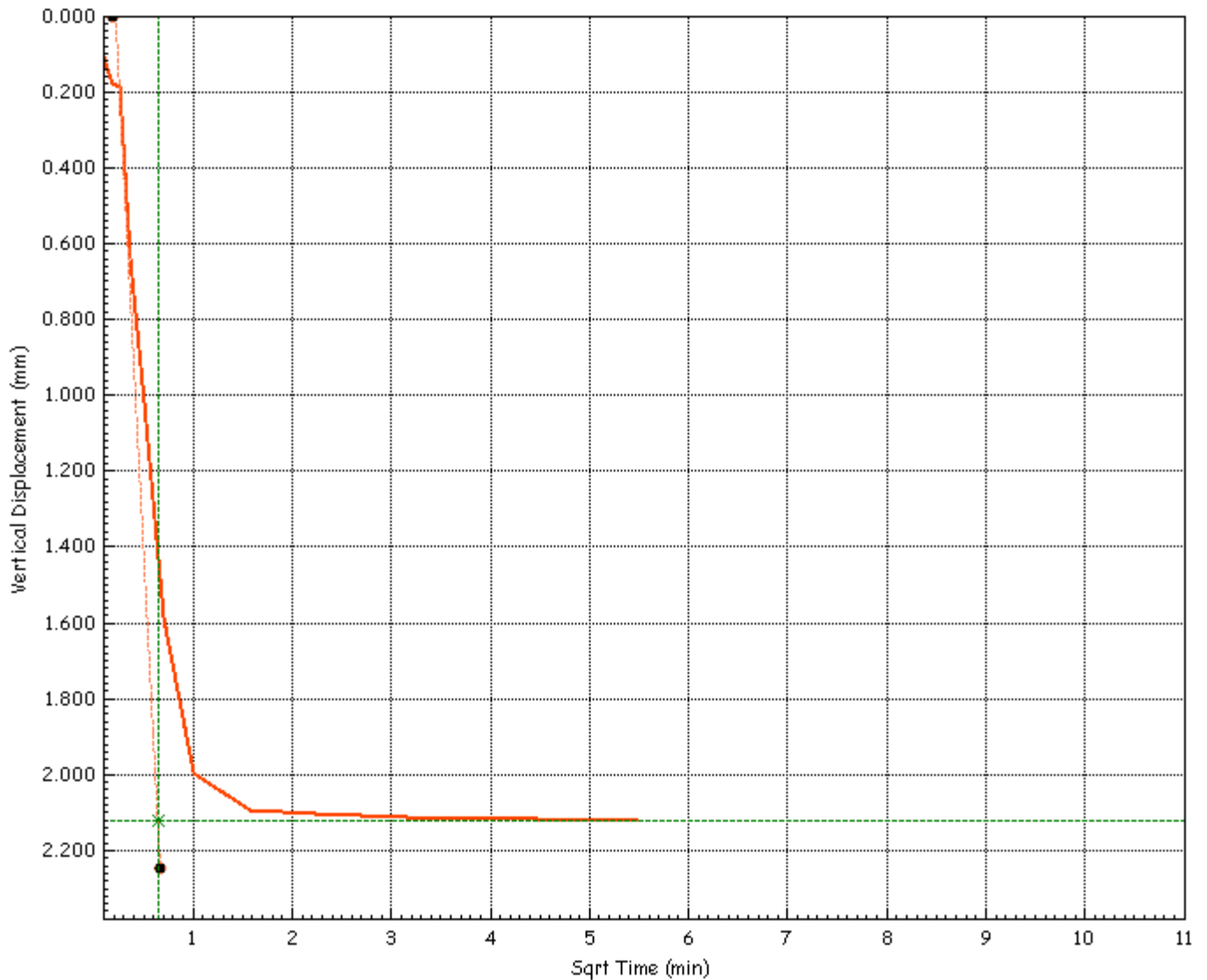
Direct Shear Tests

Direct Shearbox Test

Consolidation Stage

Max Shear Stress Results

			Spm. 1	2	3
Vertical Displacement	ΔH	(mm)	0.612	2.120	2.275
Voids Ratio	e_f	.	1.192	1.055	1.043
t100	t 100	(min)	0.0	0.4	0.2
Shear Speed		(mm/min)	0.300	0.300	0.300



Specimen Number 2

	Test Method	BS 1377-7 : 1990 clause 4		Test Name	PEAK
				Database:	.\SQLEXPRESS \ GSTL
	Site Reference	Dunsbury Park Units 100, 400, 600,		Test Date	14/09/2021
	Jobfile	55427		Sample	NA
	Client	Hydrock		Borehole	BH1.01
Operator	*R.Owens	Checked	*R.John	Approved	*R.John

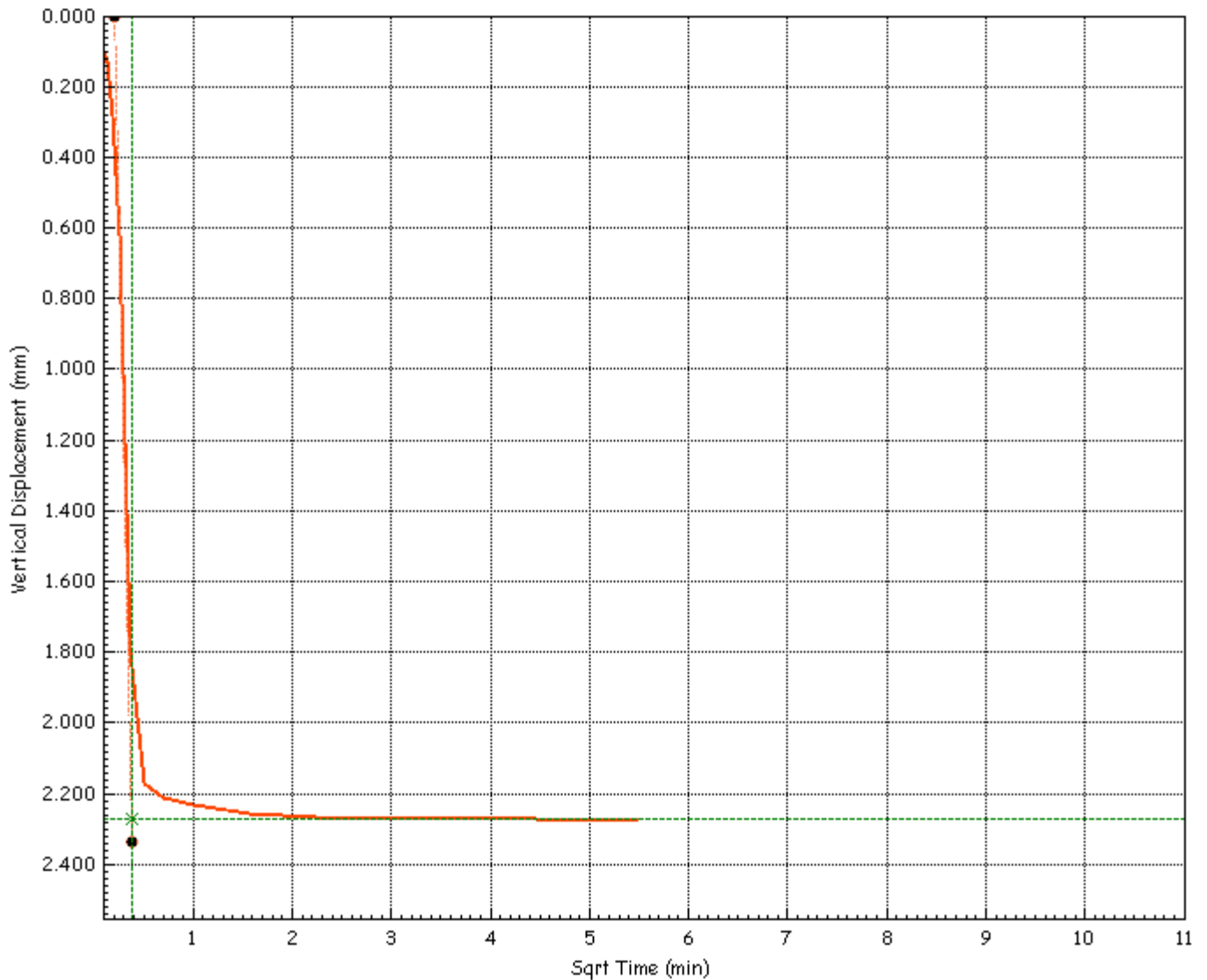
Direct Shear Tests

Direct Shearbox Test

Consolidation Stage

Max Shear Stress Results

			Spm. 1	2	3
Vertical Displacement	ΔH	(mm)	0.612	2.120	2.275
Voids Ratio	e_f	.	1.192	1.055	1.043
t100	t 100	(min)	0.0	0.4	0.2
Shear Speed		(mm/min)	0.300	0.300	0.300



Specimen Number 3

	Test Method	BS 1377-7 : 1990 clause 4		Test Name	PEAK
				Database:	.\SQLEXPRESS \ GSTL
	Site Reference	Dunsbury Park Units 100, 400, 600,		Test Date	14/09/2021
	Jobfile	55427		Sample	NA
	Client	Hydrock		Borehole	BH1.01
Operator	*R.Owens	Checked	*R.John	Approved	*R.John

Direct Shear Tests

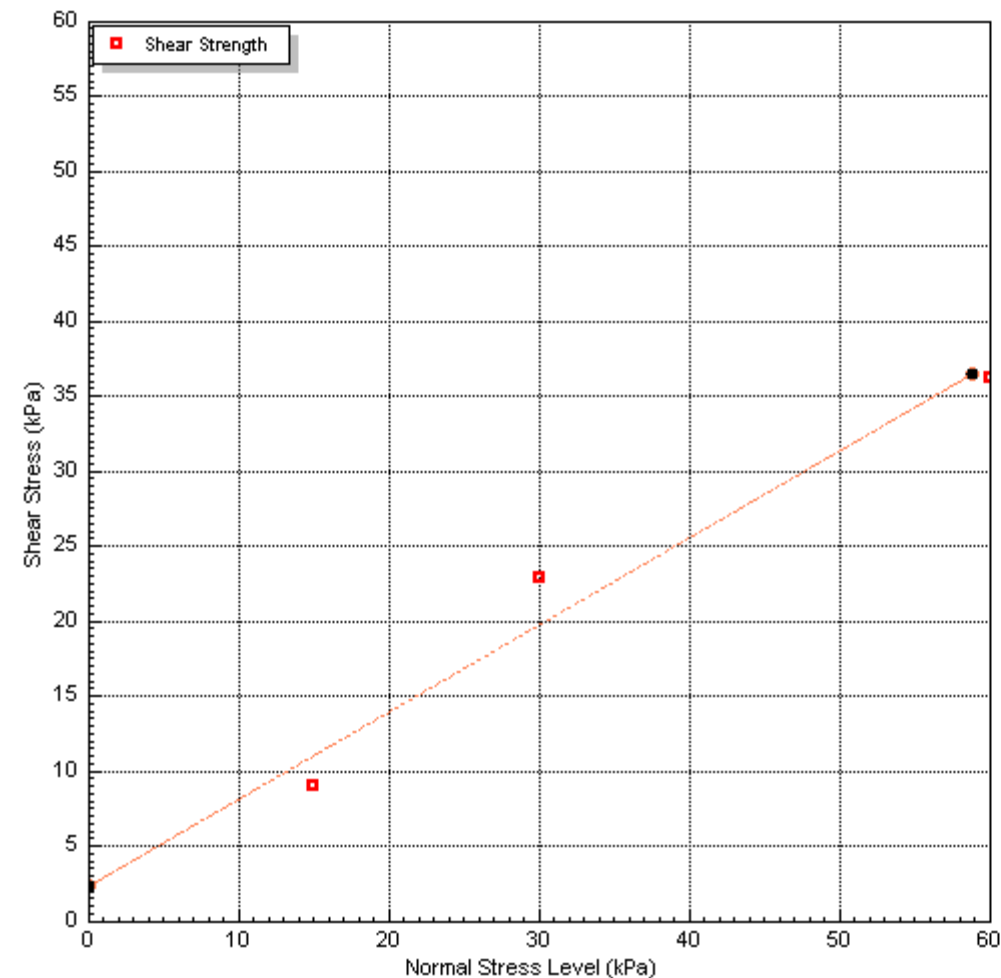
Direct Shearbox Test

Shear Stage

Envelope Failure Results

			Spm. 1	2	3
Final Moisture	w_f (%)	(%)	24	24	24
Final Dry Density	ρ_{df} (Mg/m3)	(Mg/m3)	1.78	1.91	2.00
Final Voids Ratio	e_f	.	0.856	0.723	0.651
Final Degree of Saturation	S_f (%)	(%)	75.6	89.2	99.0
Apparent cohesion	c (kPa)	(kPa)	2.39		
Angle of Shearing Resistance	ϕ	.	30.1		

Notes

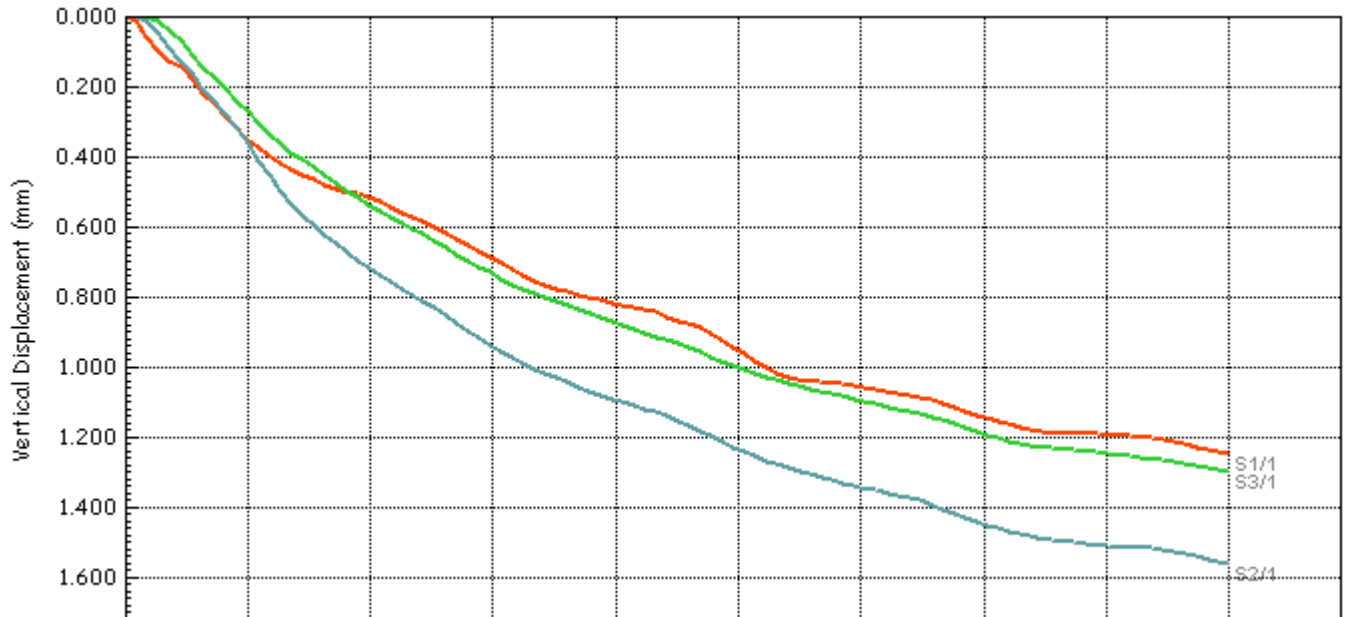
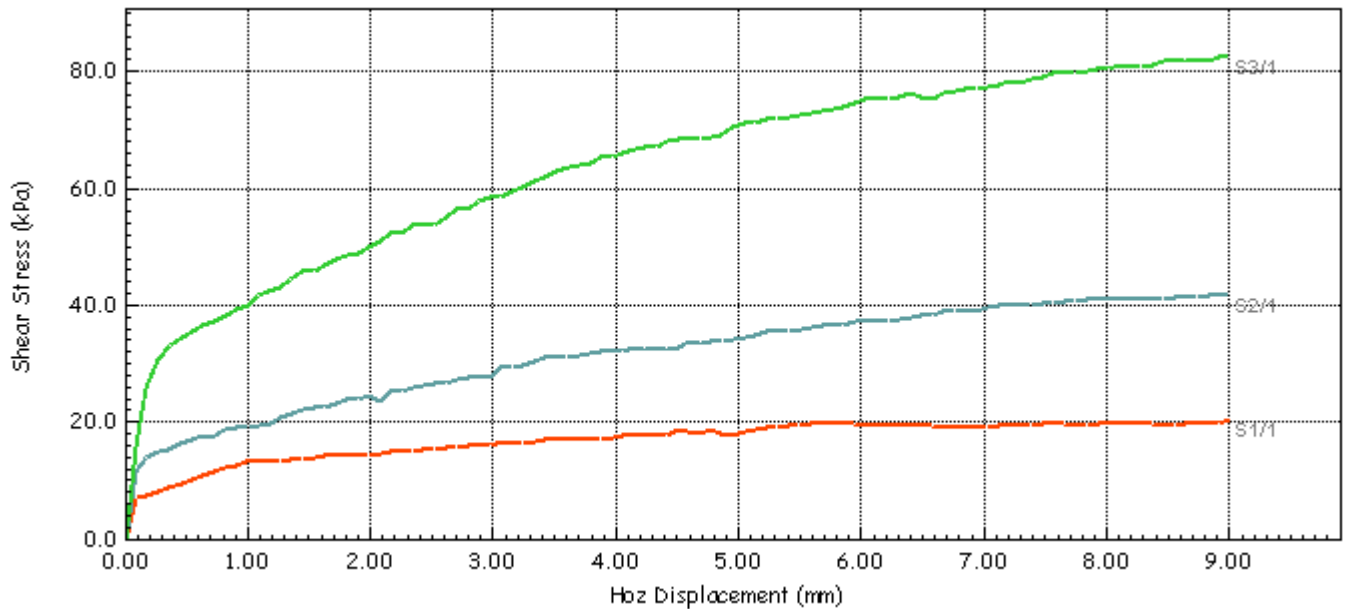


	Test Method		BS 1377-7 : 1990 clause 4		Test Name		PEAK				
					Database:		.\SQLEXPRESS \ GSTL				
	Site Reference		Dunsbury Park Units 100, 400, 600,		Test Date		14/09/2021				
	Jobfile		55427		Sample		NA				
	Client		Hydrock		Borehole		BH6.02				
Operator		*R.Owens		Checked		*R.John		Approved		*R.John	

Direct Shear Tests

Direct Shearbox Test

Shear Stage



	Test Method		BS 1377-7 : 1990 clause 4		Test Name		PEAK				
					Database:		.\SQLEXPRESS \ GSTL				
	Site Reference		Dunsbury Park Units 100, 400, 600,		Test Date		14/09/2021				
	Jobfile		55427		Sample		NA				
	Client		Hydrock		Borehole		BH1.01				
Operator		*R.Owens		Checked		*R.John		Approved		*R.John	

Direct Shear Tests

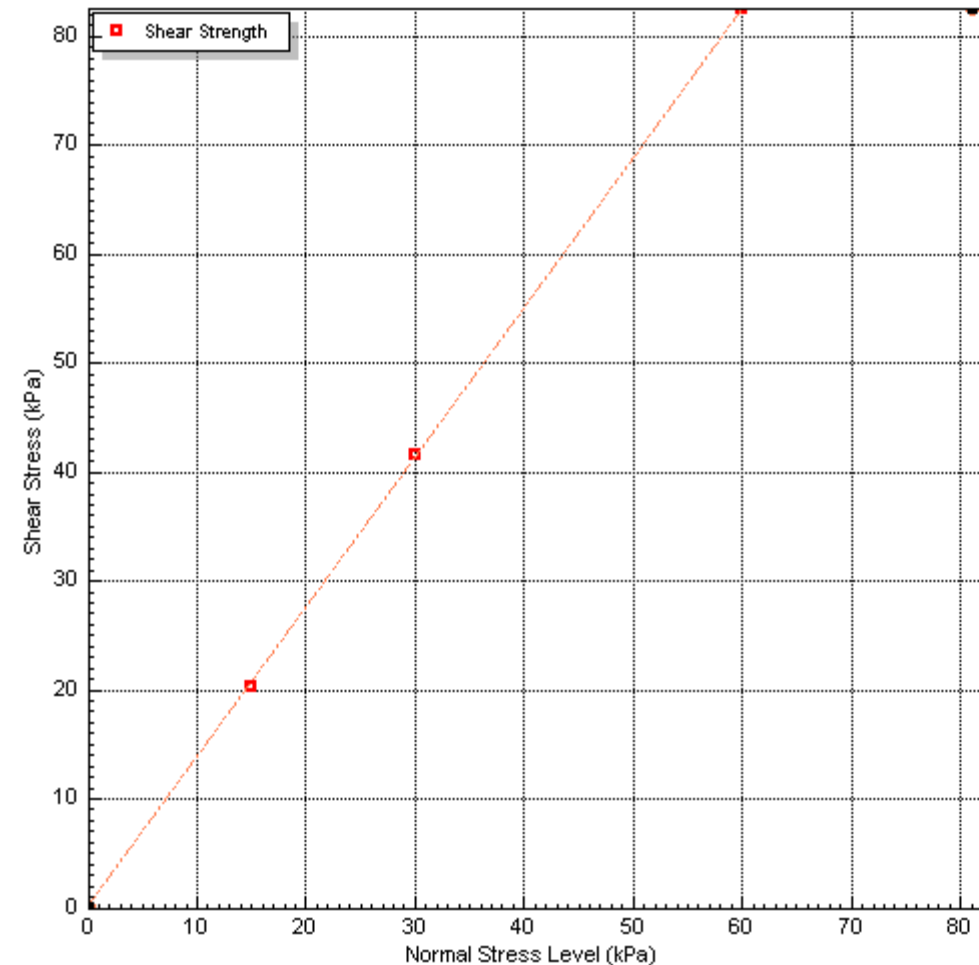
Direct Shearbox Test

Shear Stage

Envelope Failure Results

			Spm. 1	2	3
Final Moisture	w_f %	(%)	19	19	19
Final Dry Density	ρ_{df}	(Mg/m3)	1.51	1.64	1.63
Final Voids Ratio	e_f	.	1.079	0.915	0.926
Final Degree of Saturation	S_f	(%)	45.9	53.9	53.2
Apparent cohesion	c	(kPa)	0.00		
Angle of Shearing Resistance	ϕ	.	54.1		

Notes

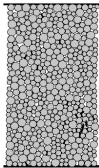


	Test Method		BS 1377-7 : 1990 clause 4		Test Name		PEAK				
					Database:		.\SQLEXPRESS \ GSTL				
	Site Reference		Dunsbury Park Units 100, 400, 600,		Test Date		14/09/2021				
	Jobfile		55427		Sample		NA				
	Client		Hydrock		Borehole		BH1.01				
Operator		*R.Owens		Checked		*R.John		Approved		*R.John	

Direct Shear Tests

Direct Shearbox Test

Summary

Sample Details		Depth	0.5-1m			
 <i>sketch showing specimen location in original sample</i>	Description	Type	Brown silty CLAY			
				Spm. 1	2	3
	Initial Height	H ₀	(mm)	25.1	25.1	25.1
	Initial Width	D ₀	(mm)	60.0	60.0	60.0
	Initial Weight	W ₀	(gr)	159.3	159.4	159.2
	Initial Bulk Density	ρ ₀	(Mg/m3)	1.76	1.77	1.76
	Particle Density	ρ _s	(Mg/m3)	2.65	2.65	2.65

Initial Condition			Spm. 1	2	3
Normal Stress Level	(kPa)		15	30	60
Is Specimen Submersed?			Yes	Yes	Yes
Reverse Method			Motor Drive		
Hoz. Control Machine			shearbox 2	shearbox 2	shearbox 2
Initial Moisture	ω _i % (%)		24	24	24
Initial Dry Density	ρ _{di} (Mg/m3)		1.42	1.42	1.42
Initial Voids Ratio	e _i .		0.870	0.865	0.867
Initial Degree of Saturation	S _i (%)		74.3	74.5	74.4
Notes					

Max Shear Stress Results			Spm. 1	2	3
Final Moisture	ω _f % (%)		24	24	24
Final Dry Density	ρ _{df} (Mg/m3)		1.78	1.91	2.00
Final Voids Ratio	e _f .		0.856	0.723	0.651
Final Degree of Saturation	S _f (%)		75.6	89.2	99.0
Peak Shear Stress		(kPa)	9.0	22.9	36.1
Hoz Displacement	L _H (mm)		8.999	8.999	8.997
Vertical Displacement	L _V (mm)		0.057	0.913	1.152

*GSTL (Clisp V2.5.5.2426)

	Test Method		BS 1377-7 : 1990 clause 4		Test Name		PEAK				
					Database:		.\SQLEXPRESS \ GSTL				
	Site Reference		Dunsbury Park Units 100, 400, 600,		Test Date		14/09/2021				
	Jobfile		55427		Sample		NA				
	Client		Hydrock		Borehole		BH6.02				
Operator		*R.Owens		Checked		*R.John		Approved		*R.John	

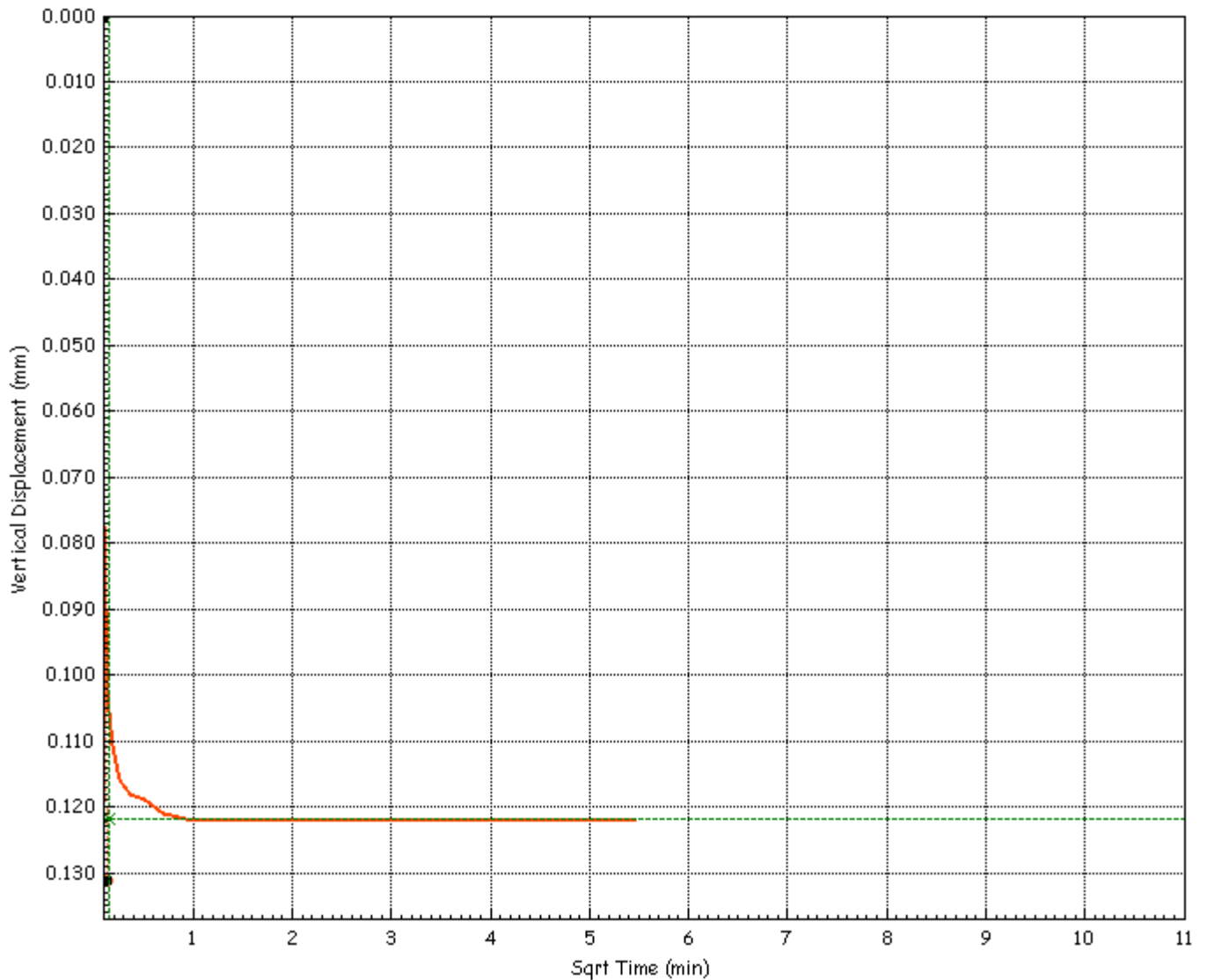
Direct Shear Tests

Direct Shearbox Test

Consolidation Stage

Max Shear Stress Results

			Spm. 1	2	3
Vertical Displacement	ΔH	(mm)	0.122	0.996	1.746
Voids Ratio	e_f	.	0.861	0.791	0.737
t100	t 100	(min)	0.0	0.1	0.1
Shear Speed		(mm/min)	0.300	0.300	0.300



Specimen Number 1

	Test Method	BS 1377-7 : 1990 clause 4		Test Name	PEAK
				Database:	.\SQLEXPRESS \ GSTL
	Site Reference	Dunsbury Park Units 100, 400, 600,		Test Date	14/09/2021
	Jobfile	55427		Sample	NA
	Client	Hydrock		Borehole	BH6.02
Operator	*R.Owens	Checked	*R.John	Approved	*R.John

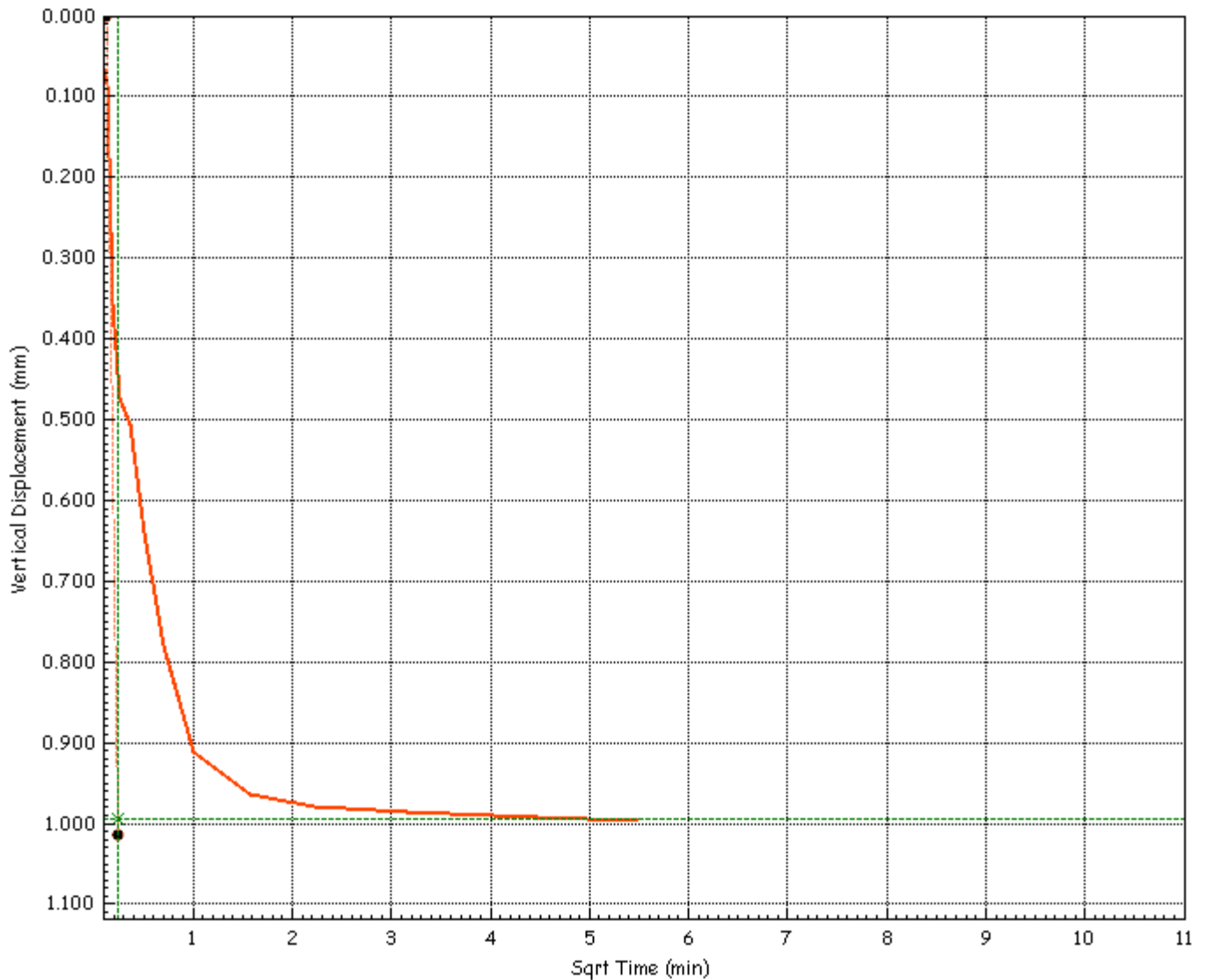
Direct Shear Tests

Direct Shearbox Test

Consolidation Stage

Max Shear Stress Results

			Spm. 1	2	3
Vertical Displacement	ΔH	(mm)	0.122	0.996	1.746
Voids Ratio	e_f	.	0.861	0.791	0.737
t100	t 100	(min)	0.0	0.1	0.1
Shear Speed		(mm/min)	0.300	0.300	0.300



Specimen Number 2

	Test Method	BS 1377-7 : 1990 clause 4		Test Name	PEAK	
				Database:	.SQLEXPRESS \ GSTL	
	Site Reference	Dunsbury Park Units 100, 400, 600,		Test Date	14/09/2021	
	Jobfile	55427		Sample	NA	
	Client	Hydrock		Borehole	BH6.02	
Operator	*R.Owens	Checked	*R.John	Approved	*R.John	

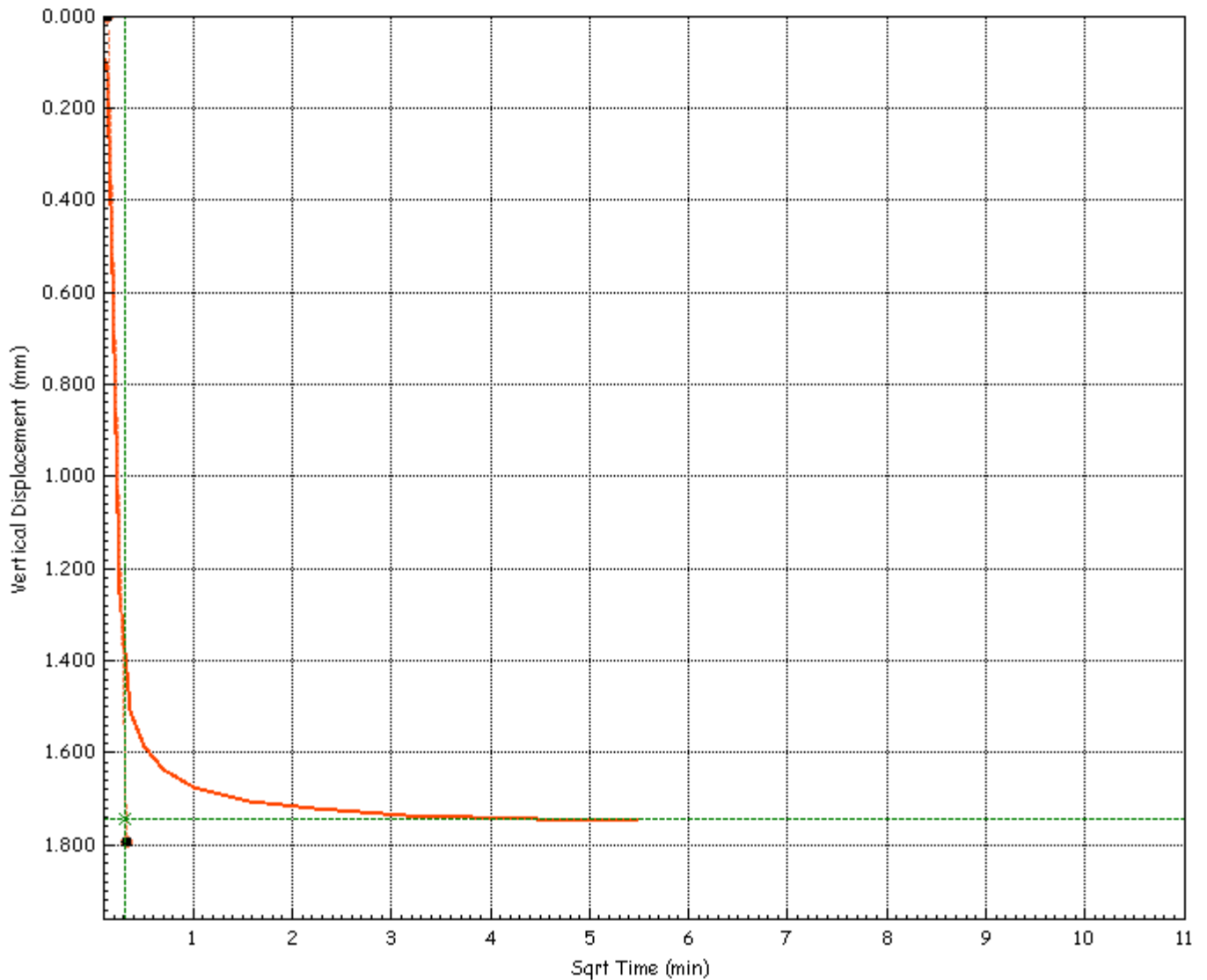
Direct Shear Tests

Direct Shearbox Test

Consolidation Stage

Max Shear Stress Results

			Spm. 1	2	3
Vertical Displacement	ΔH	(mm)	0.122	0.996	1.746
Voids Ratio	e_f	.	0.861	0.791	0.737
t100	t 100	(min)	0.0	0.1	0.1
Shear Speed		(mm/min)	0.300	0.300	0.300



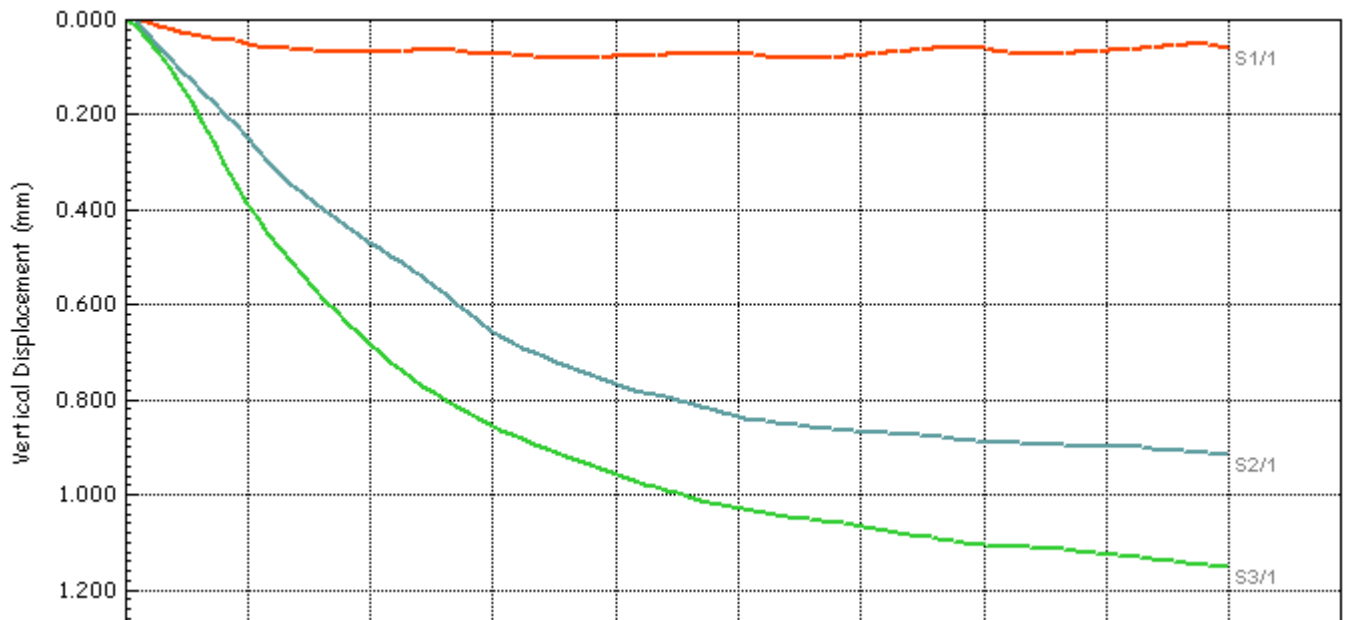
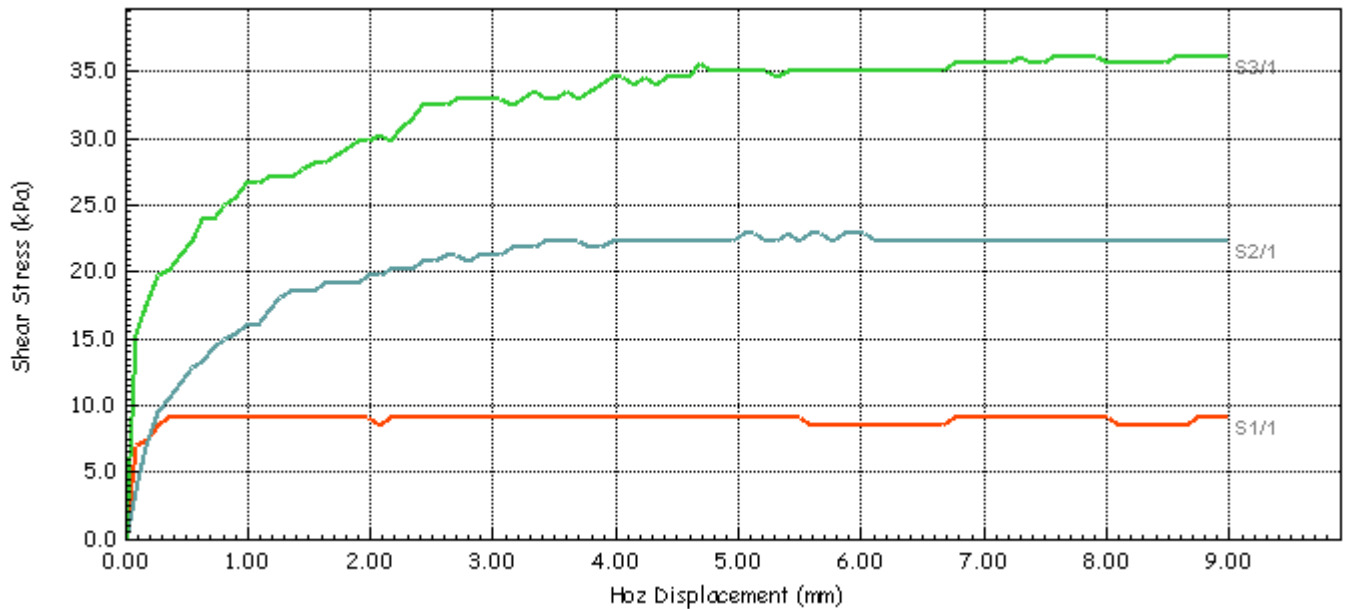
Specimen Number 3

	Test Method	BS 1377-7 : 1990 clause 4		Test Name	PEAK
				Database:	.\SQLEXPRESS \ GSTL
	Site Reference	Dunsbury Park Units 100, 400, 600,		Test Date	14/09/2021
	Jobfile	55427		Sample	NA
	Client	Hydrock		Borehole	BH6.02
Operator	*R.Owens	Checked	*R.John	Approved	*R.John

Direct Shear Tests

Direct Shearbox Test

Shear Stage

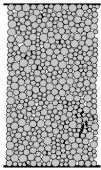


	Test Method		BS 1377-7 : 1990 clause 4		Test Name		PEAK				
					Database:		.\SQLEXPRESS \ GSTL				
	Site Reference		Dunsbury Park Units 100, 400, 600,		Test Date		14/09/2021				
	Jobfile		55427		Sample		NA				
	Client		Hydrock		Borehole		BH6.02				
Operator		*R.Owens		Checked		*R.John		Approved		*R.John	

Direct Shear Tests

Direct Shearbox Test

Summary

Sample Details		Depth	1m			
 <p>Sketch showing specimen location in original sample</p>	Description	Type				
				Spm. 1	2	3
	Initial Height	H ₀	(mm)	25.1	25.1	25.1
	Initial Width	D ₀	(mm)	60.0	60.0	60.0
	Initial Weight	W ₀	(gr)	171.5	171.5	171.5
	Initial Bulk Density	ρ ₀	(Mg/m3)	1.90	1.90	1.90
	Particle Density	ρ _s	(Mg/m3)	2.65	2.65	2.65

Initial Condition			Spm. 1	2	3
Normal Stress Level		(kPa)	20	40	80
Is Specimen Submersed?			Yes	Yes	Yes
Reverse Method			Motor Drive		
Hoz. Control Machine			Shearbox 1	Shearbox 1	Shearbox 1
Initial Moisture	ω _i %	(%)	23	23	23
Initial Dry Density	ρ _{di}	(Mg/m3)	1.54	1.55	1.55
Initial Voids Ratio	e _i	.	0.716	0.714	0.713
Initial Degree of Saturation	S _i	(%)	84.7	85.1	85.0
Notes					

Max Shear Stress Results			Spm. 1	2	3
Final Moisture	ω _f %	(%)	23	23	23
Final Dry Density	ρ _{df}	(Mg/m3)	1.96	1.96	2.04
Final Voids Ratio	e _f	.	0.659	0.661	0.599
Final Degree of Saturation	S _f	(%)	92.2	91.7	100.0
Peak Shear Stress		(kPa)	9.9	12.7	24.3
Hoz Displacement	L _H	(mm)	8.997	8.999	8.997
Vertical Displacement	L _V	(mm)	0.308	0.485	0.624

*GSTL (Clisp V2.5.5.2426)

	Test Method		BS 1377-7 : 1990 clause 4		Test Name		PEAK				
					Database:		.\SQLEXPRESS \ GSTL				
	Site Reference		Dunsbury Park Units 100, 400, 600,		Test Date		14/09/2021				
	Jobfile		55427		Sample		NA				
	Client		Hydrock		Borehole		BH7.03				
	Operator		*R.Owens		Checked		*R.John		Approved		*R.John

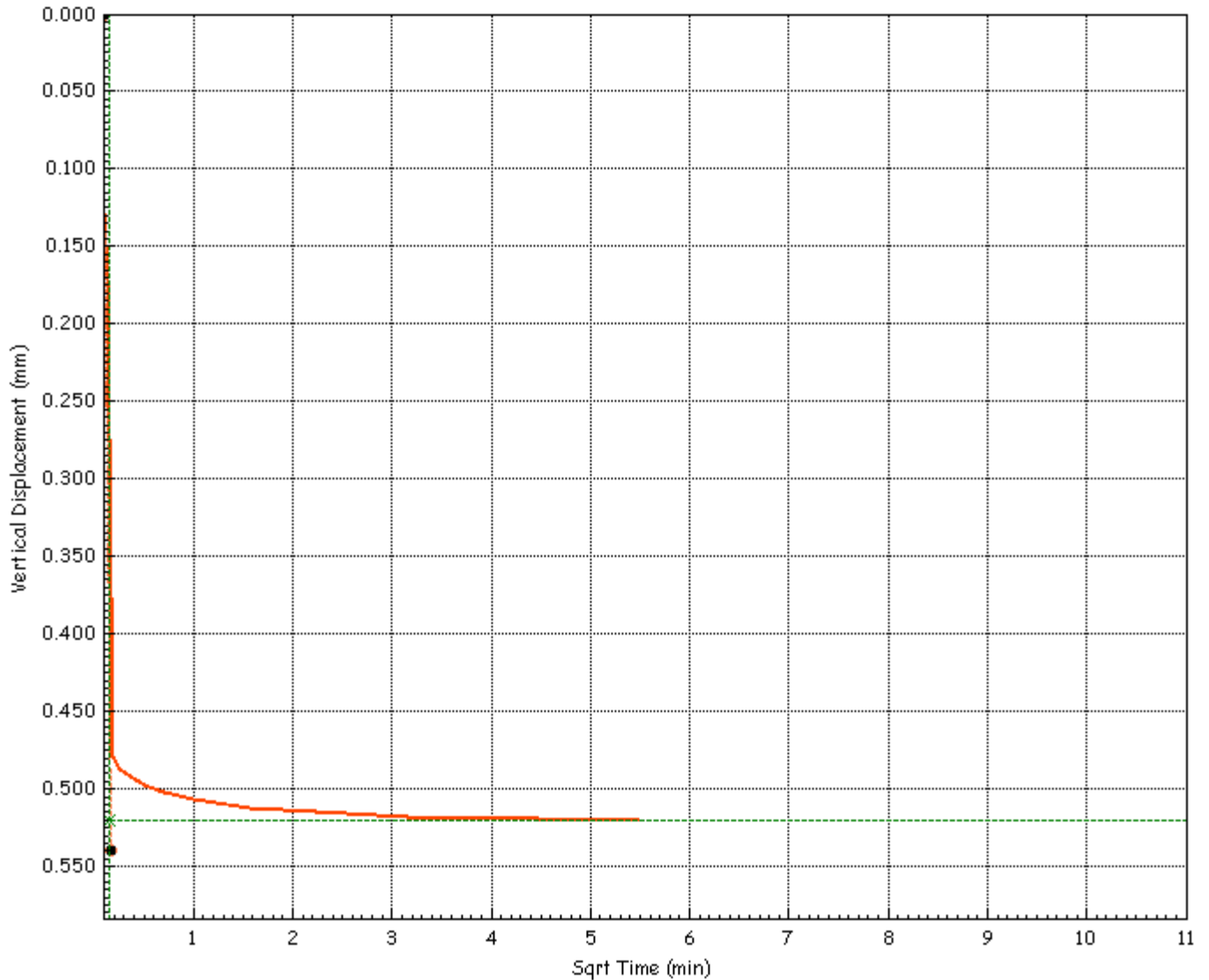
Direct Shear Tests

Direct Shearbox Test

Consolidation Stage

Max Shear Stress Results

			Spm. 1	2	3
Vertical Displacement	ΔH	(mm)	0.520	0.277	1.055
Voids Ratio	e_f	.	0.680	0.695	0.641
t100	t 100	(min)	0.0	0.1	0.1
Shear Speed		(mm/min)	0.300	0.300	0.300



Specimen Number 1

	Test Method	BS 1377-7 : 1990 clause 4		Test Name	PEAK
				Database:	.\SQLEXPRESS \ GSTL
	Site Reference	Dunsbury Park Units 100, 400, 600,		Test Date	14/09/2021
	Jobfile	55427		Sample	NA
	Client	Hydrock		Borehole	BH7.03
Operator	*R.Owens	Checked	*R.John	Approved	*R.John

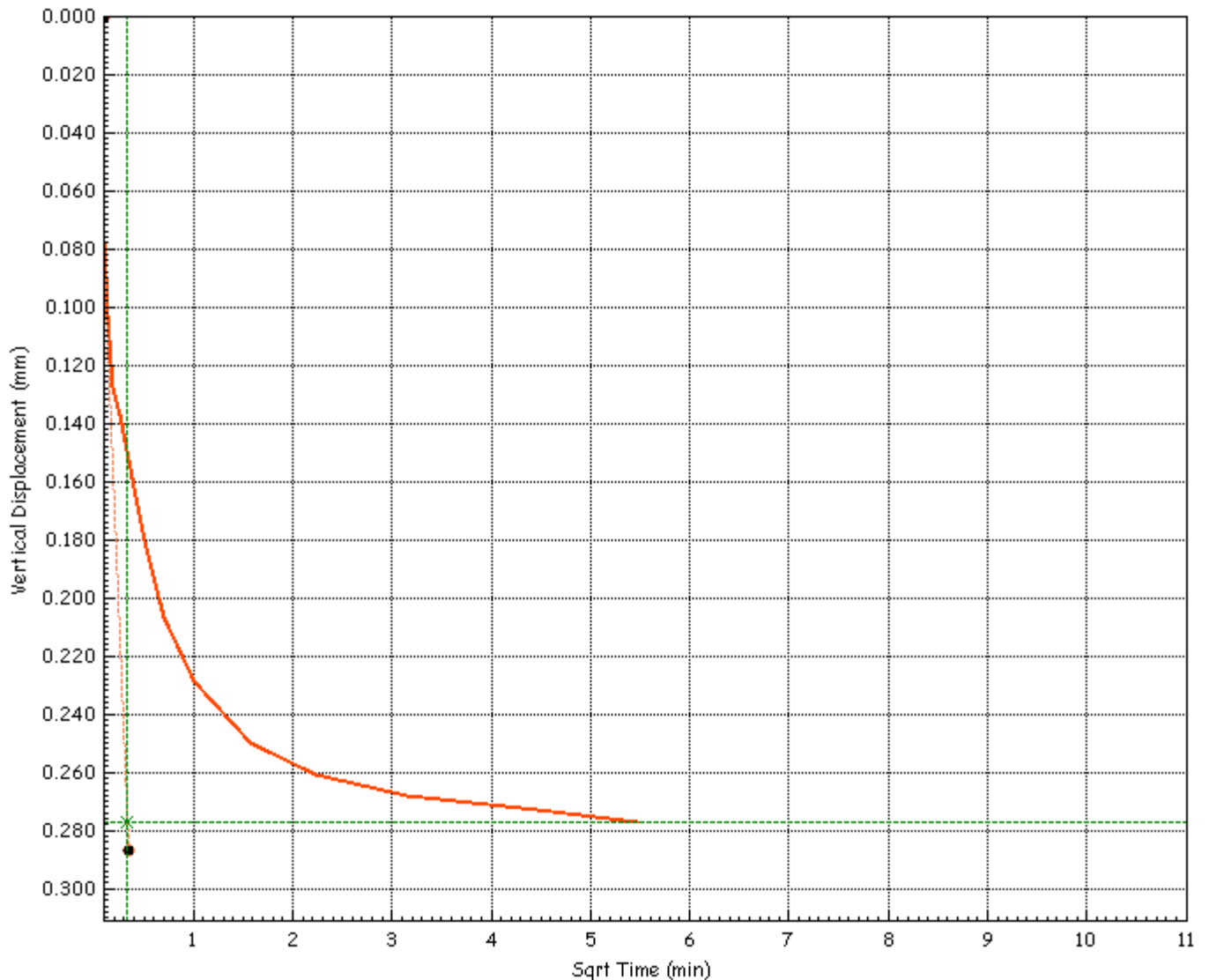
Direct Shear Tests

Direct Shearbox Test

Consolidation Stage

Max Shear Stress Results

			Spm. 1	2	3
Vertical Displacement	ΔH	(mm)	0.520	0.277	1.055
Voids Ratio	e_f	.	0.680	0.695	0.641
t100	t 100	(min)	0.0	0.1	0.1
Shear Speed		(mm/min)	0.300	0.300	0.300



Specimen Number 2

	Test Method	BS 1377-7 : 1990 clause 4		Test Name	PEAK	
				Database:	.SQLEXPRESS \ GSTL	
	Site Reference	Dunsbury Park Units 100, 400, 600,		Test Date	14/09/2021	
	Jobfile	55427		Sample	NA	
	Client	Hydrock		Borehole	BH7.03	
Operator	*R.Owens	Checked	*R.John	Approved	*R.John	

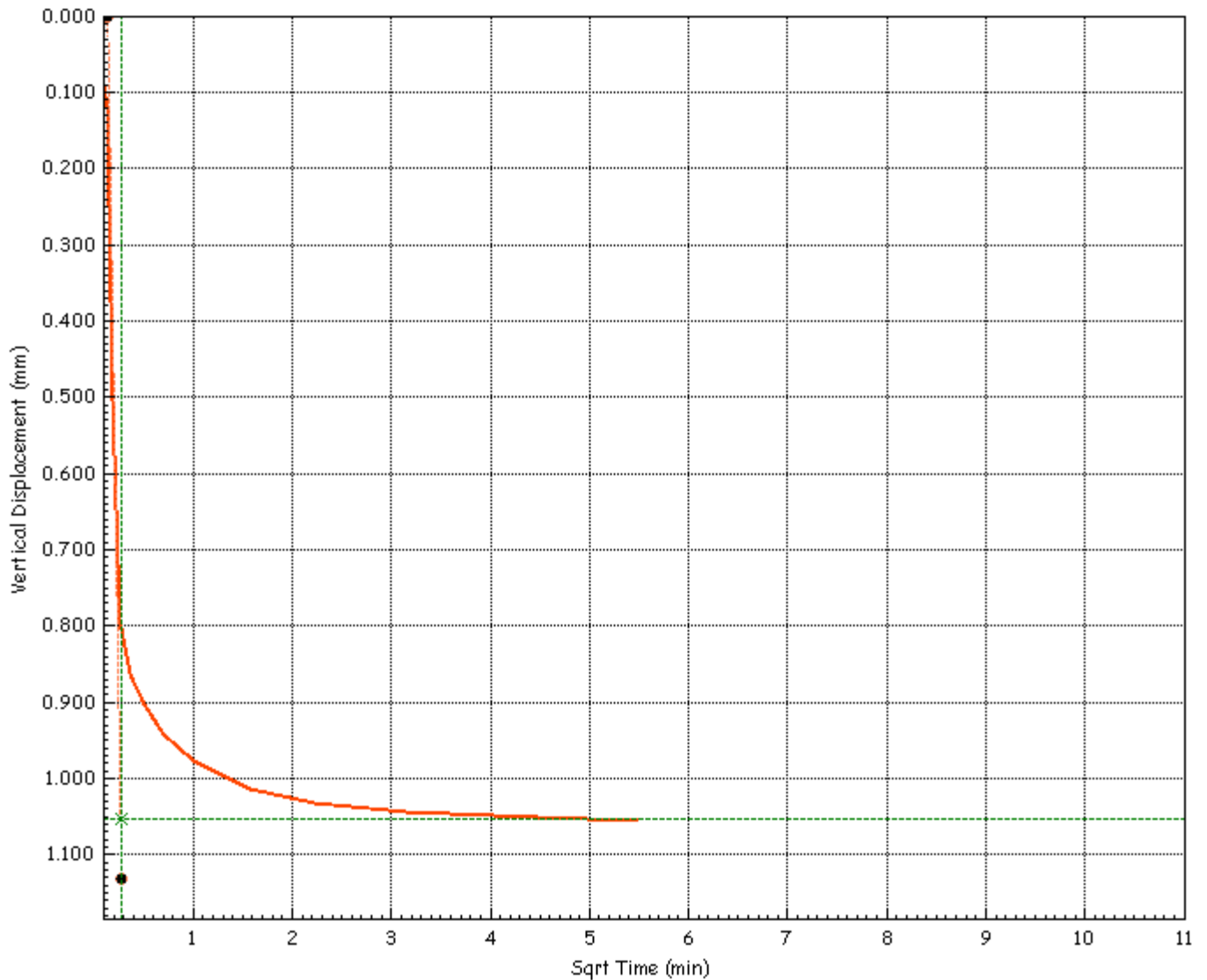
Direct Shear Tests

Direct Shearbox Test

Consolidation Stage

Max Shear Stress Results

			Spm. 1	2	3
Vertical Displacement	ΔH	(mm)	0.520	0.277	1.055
Voids Ratio	e_f	.	0.680	0.695	0.641
t100	t 100	(min)	0.0	0.1	0.1
Shear Speed		(mm/min)	0.300	0.300	0.300



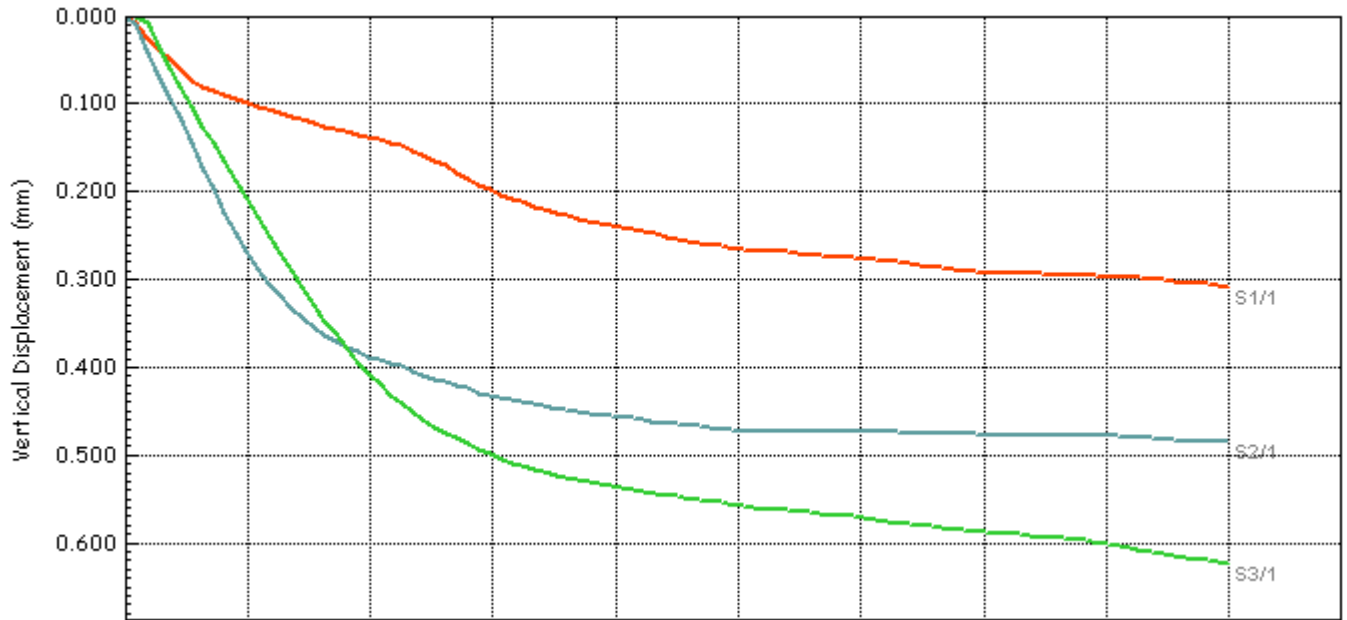
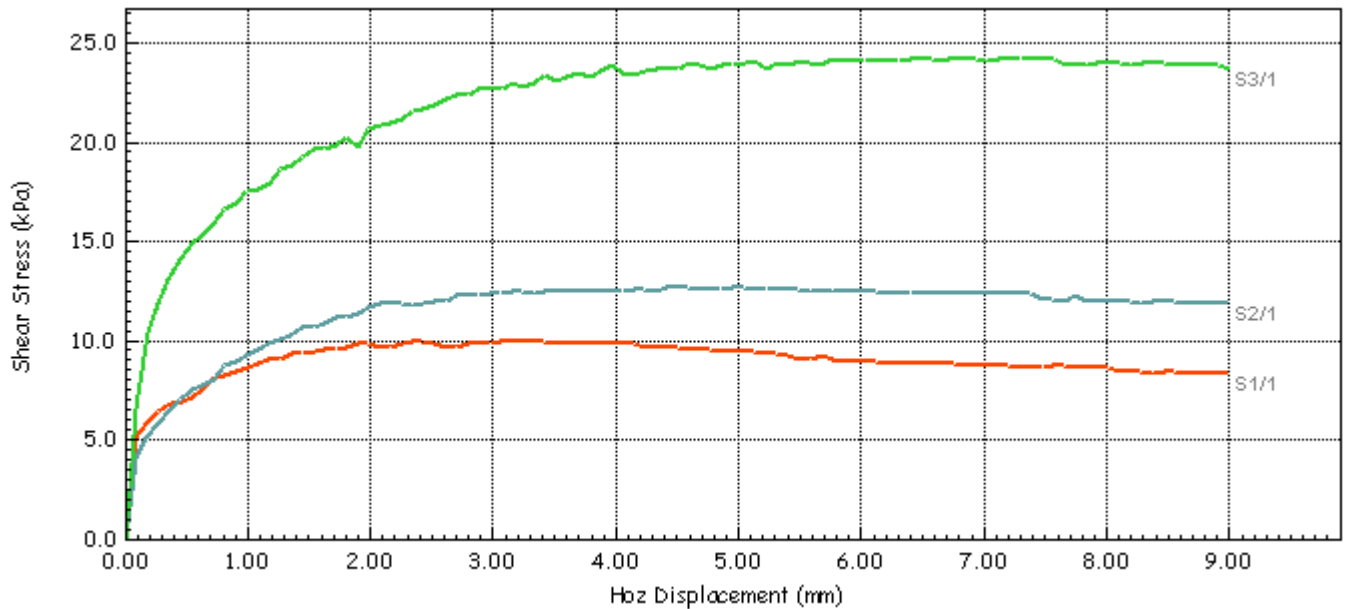
Specimen Number 3

	Test Method	BS 1377-7 : 1990 clause 4		Test Name	PEAK
				Database:	.\SQLEXPRESS \ GSTL
	Site Reference	Dunsbury Park Units 100, 400, 600,		Test Date	14/09/2021
	Jobfile	55427		Sample	NA
	Client	Hydrock		Borehole	BH7.03
Operator	*R.Owens	Checked	*R.John	Approved	*R.John

Direct Shear Tests

Direct Shearbox Test

Shear Stage



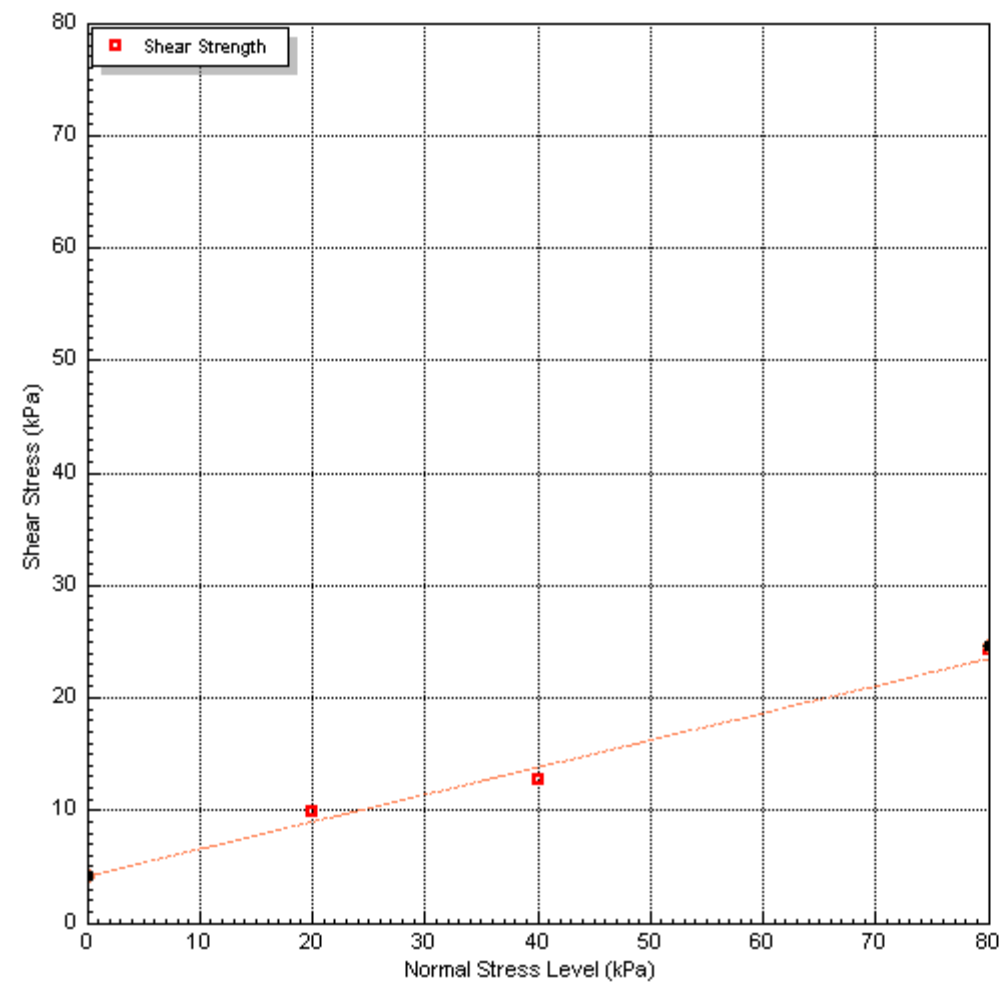
GSTL	Test Method BS 1377-7 : 1990 clause 4		Test Name PEAK	
			Database: .\SQLEXPRESS \ GSTL	
	Site Reference	Dunsbury Park Units 100, 400, 600,	Test Date	14/09/2021
	Jobfile	55427	Sample	NA
	Client	Hydrock	Borehole	BH7.03
Operator *R.Owens		Checked *R.John	Approved *R.John	

Direct Shear Tests

Direct Shearbox Test

Shear Stage

Envelope Failure Results			Spm. 1	2	3
Final Moisture	$\omega_f\%$	(%)	23	23	23
Final Dry Density	ρ_{df}	(Mg/m3)	1.96	1.96	2.04
Final Voids Ratio	e_f	.	0.659	0.661	0.599
Final Degree of Saturation	S_f	(%)	92.2	91.7	100.0
Apparent cohesion	c	(kPa)	4.12		
Angle of Shearing Resistance	ϕ	.	13.9		
Notes					



	Test Method		BS 1377-7 : 1990 clause 4		Test Name		PEAK				
					Database:		.\SQLEXPRESS \ GSTL				
	Site Reference		Dunsbury Park Units 100, 400, 600,		Test Date		14/09/2021				
	Jobfile		55427		Sample		NA				
	Client		Hydrock		Borehole		BH7.03				
	Operator		*R.Owens		Checked		*R.John		Approved		*R.John

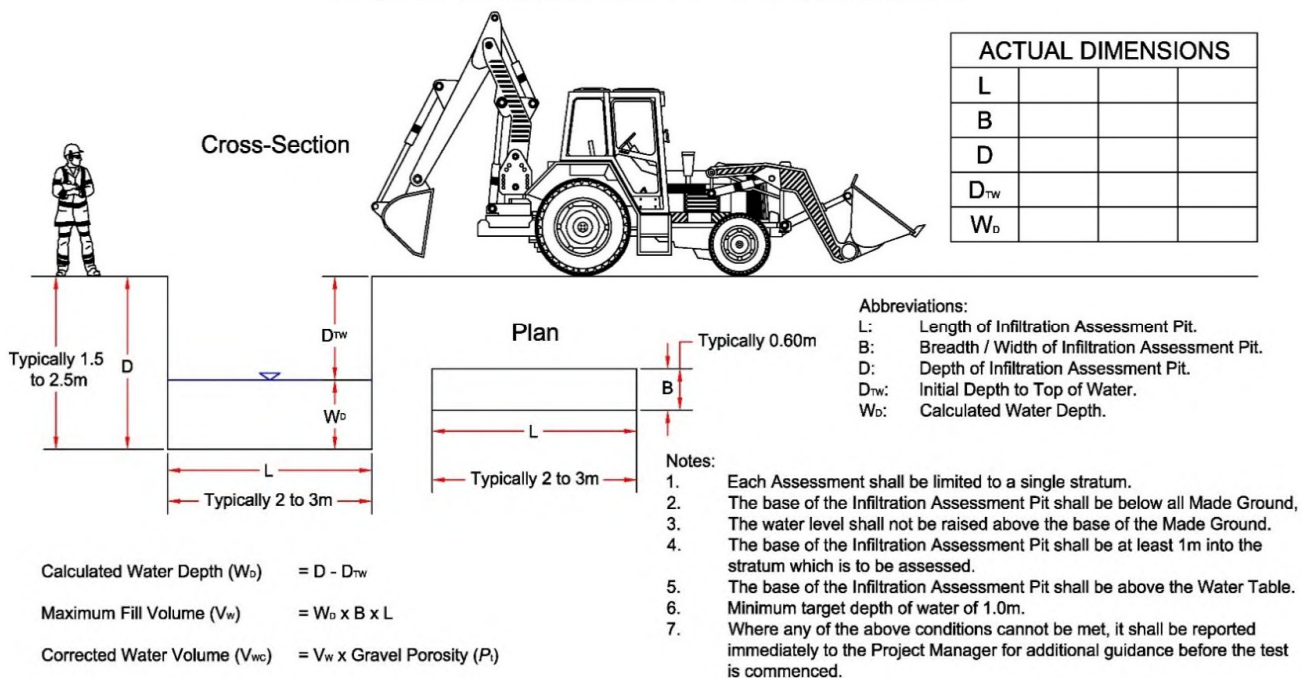
1 DAY INFILTRATION ASSESSMENT - AIDE MEMOIR

Site: Dunsbury Park unit 500
Client: Portsmouth City Council

Test Location SA101 Date of start 22/07/2021 Date at end 22/07/2021

ANTICIPATED GROUND PROFILE FROM DESK STUDY			ACTUAL GROUND PROFILE FROM EXCAVATION		
GROUND LEVEL			GROUND LEVEL		
BASE OF PIT			BASE OF PIT 1.70m		

INFILTRATION ASSESSMENT PIT TYPICAL DIMENSIONS



Infiltration	RUN 1		RUN 2		RUN 3		SITE OBSERVATIONS - VOLUME LOSS		
	W _D	D _{TW1}	W _D	D _{TW2}	W _D	D _{TW3}	Test Run	Infiltration Records up to 6 Hours	Comments
75% full									
25% full									

Assessment of Degree of Infiltration		
WD = 1.80 m		
WD = 1.60 m		
WD = 1.40 m		
WD = 1.20 m		
WD = 1.00 m		
WD = 0.80 m		
WD = 0.60 m		
WD = 0.40 m		
1.40 m	1.20 m	1.00 m
Measured Depth of Water During Assessment		
<div> <div>○ 75 % full</div> <div>△ 50 % full</div> <div>□ 25 % full</div> </div>		

1	<25%	Unlikely without significant attenuation
	<75%	Requires additional BRE DG365 testing
	>75%	Refer to results of Run 2
2	<25%	Unlikely without significant attenuation
	<75%	Requires additional BRE DG365 testing
	>75%	Refer to results of Run 3
3	<25%	Unlikely without significant attenuation
	<75%	Requires additional BRE DG365 testing
	>75%	Indicative Infiltration Rate achieved.

Client Portsmouth City Council	Location or material to which this assessment applies London Clay Formation	
Project Dunsbury Park Plot 100		
Job number 19453-GELO		

Concrete in aggressive ground		After BRE Special Digest 1, 2005
--------------------------------------	--	----------------------------------

Soil data			
	(Adjusted) water soluble sulfate (mg/l)	Total potential sulfate (%)	Water soluble magnesium (mg/l)
Number of tests	1	1	0
No. tests in 20% data set	0	0	
No. tests with suspected pyrite		1	
Maximum value	600	1.7	
Mean of highest two values	600	2	
Mean of highest 20%			
Characteristic Value	600	1.7	
	[no pyrite]	[pyrite suspected]	
DS Class	DS-2	DS-4	
If pyrite suspected, DS Class limited to		DS-4	
Is pyrite assumed to be present?	Yes	Adopted DS Class = DS-4	

Water data		
	(Adjusted) soluble sulfate (mg/l)	Soluble magnesium (mg/l)
Characteristic Value (Maximum Level)	0	0
DS Class		

pH data		
	Soil	Water
Number of tests	1	0
No. tests in 20% data set	0	
Lowest pH	7.8	
Mean of lowest 20%		
Characteristic value	7.8	
Design value	7.8	
Number of soil pH results less than 5.5	0	

DS Class design value	ACEC Class design value
Based on higher of soil and water data	Natural ground Mobile groundwater
DS-4	AC-4

Client Portsmouth City Council	Location or material to which this assessment applies Made Ground	
Project Dunsbury Park Plot 100		
Job number 19453-GELO		

Concrete in aggressive ground		After BRE Special Digest 1, 2005
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Soil data			
	(Adjusted) water soluble sulfate (mg/l)	Total potential sulfate (%)	Water soluble magnesium (mg/l)
Number of tests	2	2	0
No. tests in 20% data set	0	0	
No. tests with suspected pyrite		0	
Maximum value	160	0.3	
Mean of highest two values	90	0	
Mean of highest 20%			
Characteristic Value	160	0.3	
			Mg not required
	[no pyrite]	[pyrite suspected]	
DS Class	DS-1	DS-2	
If pyrite suspected, DS Class limited to		DS-2	
Is pyrite assumed to be present?	No	Adopted DS Class = DS-1	

Water data		
	(Adjusted) soluble sulfate (mg/l)	Soluble magnesium (mg/l)
Characteristic Value (Maximum Level)	0	0
		Mg not required
DS Class		

pH data		
	Soil	Water
Number of tests	2	0
No. tests in 20% data set	0	
Lowest pH	6.3	
Mean of lowest 20%		
Characteristic value	6.3	
Design value	6.3	
Number of soil pH results less than 5.5	0	

DS Class design value	ACEC Class design value
Based on higher of soil and water data	Brownfield Mobile groundwater
DS-1	AC-2z

Client Portsmouth City Council	Location or material to which this assessment applies Bognor Sand Member	
Project Dunsbury Park Plot 400		
Job number 19453-GELO		

Concrete in aggressive ground		After BRE Special Digest 1, 2005
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Soil data			
	(Adjusted) water soluble sulfate (mg/l)	Total potential sulfate (%)	Water soluble magnesium (mg/l)
Number of tests	2	2	0
No. tests in 20% data set	0	0	
No. tests with suspected pyrite		0	
Maximum value	75	0	
Mean of highest two values	48	0	
Mean of highest 20%			
Characteristic Value	75	0	
			Mg not required
	[no pyrite]	[pyrite suspected]	
DS Class	DS-1	DS-1	
If pyrite suspected, DS Class limited to		DS-1	
Is pyrite assumed to be present?	No	Adopted DS Class =	DS-1

Water data		
	(Adjusted) soluble sulfate (mg/l)	Soluble magnesium (mg/l)
Characteristic Value (Maximum Level)	0	0
		Mg not required
DS Class		

pH data		
	Soil	Water
Number of tests	2	0
No. tests in 20% data set	0	
Lowest pH	6.8	
Mean of lowest 20%		
Characteristic value	6.8	
Design value	6.8	
Number of soil pH results less than 5.5	0	

DS Class design value	ACEC Class design value
Based on higher of soil and water data	Brownfield Mobile groundwater
DS-1	AC-1

Client Portsmouth City Council	Location or material to which this assessment applies London Clay Formation	
Project Dunsbury Park Plot 400		
Job number 19453-GELO		

Concrete in aggressive ground		After BRE Special Digest 1, 2005
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Soil data			
	(Adjusted) water soluble sulfate (mg/l)	Total potential sulfate (%)	Water soluble magnesium (mg/l)
Number of tests	4	4	0
No. tests in 20% data set	1	1	
No. tests with suspected pyrite		4	
Maximum value	880	3.6	
Mean of highest two values	790	3	
Mean of highest 20%			
Characteristic Value	880	3.6	

	[no pyrite]	[pyrite suspected]
DS Class	DS-2	DS-5

If pyrite suspected, DS Class limited to	DS-4
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Is pyrite assumed to be present?	Yes	Adopted DS Class =	DS-4
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Water data		
	(Adjusted) soluble sulfate (mg/l)	Soluble magnesium (mg/l)
Characteristic Value (Maximum Level)	0	0

DS Class

pH data		
	Soil	Water
Number of tests	4	0
No. tests in 20% data set	1	
Lowest pH	5.7	
Mean of lowest 20%	5.7	
Characteristic value	5.7	

Design value	5.7
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Number of soil pH results less than 5.5 0

DS Class design value	ACEC Class design value
Based on higher of soil and water data	Natural ground Mobile groundwater
	DS-4
	AC-4

Client Portsmouth City Council	Location or material to which this assessment applies Made Ground	
Project Dunsbury Park Plot 400		
Job number 19453-GELO		

Concrete in aggressive ground		After BRE Special Digest 1, 2005
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Soil data			
	(Adjusted) water soluble sulfate (mg/l)	Total potential sulfate (%)	Water soluble magnesium (mg/l)
Number of tests	2	2	0
No. tests in 20% data set	0	0	
No. tests with suspected pyrite		1	
Maximum value	440	1.7	
Mean of highest two values	258	1	
Mean of highest 20%			
Characteristic Value	440	1.7	
			Mg not required
	[no pyrite]	[pyrite suspected]	
DS Class	DS-1	DS-4 m	
If pyrite suspected, DS Class limited to		DS-4 m	
Is pyrite assumed to be present?	Yes	Adopted DS Class =	DS-4 m

Water data		
	(Adjusted) soluble sulfate (mg/l)	Soluble magnesium (mg/l)
Characteristic Value (Maximum Level)	0	0
		Mg not required
DS Class		

pH data		
	Soil	Water
Number of tests	2	0
No. tests in 20% data set	0	
Lowest pH	5.7	
Mean of lowest 20%		
Characteristic value	5.7	
Design value	5.7	
Number of soil pH results less than 5.5	0	

DS Class design value	ACEC Class design value
Based on higher of soil and water data	Brownfield Mobile groundwater
DS-4 m	AC-5m

Client Portsmouth City Council	Location or material to which this assessment applies Bognor Sand Member	
Project Dunsbury Park Plot 600		
Job number 19453-GELO		

Concrete in aggressive ground		After BRE Special Digest 1, 2005
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Soil data			
	(Adjusted) water soluble sulfate (mg/l)	Total potential sulfate (%)	Water soluble magnesium (mg/l)
Number of tests	2	2	0
No. tests in 20% data set	0	0	
No. tests with suspected pyrite		1	
Maximum value	400	1.4	
Mean of highest two values	207	1	
Mean of highest 20%			
Characteristic Value	400	1.4	

	[no pyrite]	[pyrite suspected]
DS Class	DS-1	DS-4

If pyrite suspected, DS Class limited to	DS-4
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Is pyrite assumed to be present?	Yes	Adopted DS Class =	DS-4
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Water data		
	(Adjusted) soluble sulfate (mg/l)	Soluble magnesium (mg/l)
Characteristic Value (Maximum Level)	0	0

DS Class

pH data		
	Soil	Water
Number of tests	2	0
No. tests in 20% data set	0	
Lowest pH	6.1	
Mean of lowest 20%		
Characteristic value	6.1	

Design value	6.1
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Number of soil pH results less than 5.5 0

DS Class design value	ACEC Class design value
Based on higher of soil and water data	Natural ground Mobile groundwater
	DS-4
	AC-4

Client Portsmouth City Council	Location or material to which this assessment applies Head deposits	
Project Dunsbury Park Plot 600		
Job number 19453-GELO		

Concrete in aggressive ground		After BRE Special Digest 1, 2005
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Soil data			
	(Adjusted) water soluble sulfate (mg/l)	Total potential sulfate (%)	Water soluble magnesium (mg/l)
Number of tests	1	1	0
No. tests in 20% data set	0	0	
No. tests with suspected pyrite		0	
Maximum value	42	0	
Mean of highest two values	42	0	
Mean of highest 20%			
Characteristic Value	42	0	

	[no pyrite]	[pyrite suspected]
DS Class	DS-1	DS-1

If pyrite suspected, DS Class limited to	DS-1
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Is pyrite assumed to be present?	No	Adopted DS Class =	DS-1
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Water data		
	(Adjusted) soluble sulfate (mg/l)	Soluble magnesium (mg/l)
Characteristic Value (Maximum Level)	0	0

DS Class

pH data		
	Soil	Water
Number of tests	1	0
No. tests in 20% data set	0	
Lowest pH	7.6	
Mean of lowest 20%		
Characteristic value	7.6	

Design value	7.6
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Number of soil pH results less than 5.5	0
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DS Class design value	ACEC Class design value
Based on higher of soil and water data	Natural ground
	Mobile groundwater AC-1 *

* increase to AC-2z in flowing water (pure or with >15mg/l carbon dioxide)

Client Portsmouth City Council	Location or material to which this assessment applies London Clay Formation	
Project Dunsbury Park Plot 600		
Job number 19453-GELO		

Concrete in aggressive ground		After BRE Special Digest 1, 2005
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Soil data			
	(Adjusted) water soluble sulfate (mg/l)	Total potential sulfate (%)	Water soluble magnesium (mg/l)
Number of tests	5	5	0
No. tests in 20% data set	1	1	
No. tests with suspected pyrite		2	
Maximum value	450	1.7	
Mean of highest two values	440	2	
Mean of highest 20%			
Characteristic Value	440	2	
	[no pyrite]	[pyrite suspected]	
DS Class	DS-1	DS-4	
If pyrite suspected, DS Class limited to		DS-4	
Is pyrite assumed to be present?	Yes	Adopted DS Class = DS-4	

Water data		
	(Adjusted) soluble sulfate (mg/l)	Soluble magnesium (mg/l)
Characteristic Value (Maximum Level)	0	0
DS Class		

pH data		
	Soil	Water
Number of tests	5	0
No. tests in 20% data set	1	
Lowest pH	6.5	
Mean of lowest 20%	6.5	
Characteristic value	6.5	
Design value	6.5	
Number of soil pH results less than 5.5	0	

DS Class design value	ACEC Class design value
Based on higher of soil and water data	Natural ground
	Mobile groundwater
DS-4	AC-4

Client Portsmouth City Council	Location or material to which this assessment applies Bognor Sand Member	
Project Dunsbury Park Plot 700		
Job number 19453-GELO		

Concrete in aggressive ground		After BRE Special Digest 1, 2005
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Soil data			
	(Adjusted) water soluble sulfate (mg/l)	Total potential sulfate (%)	Water soluble magnesium (mg/l)
Number of tests	5	5	0
No. tests in 20% data set	1	1	
No. tests with suspected pyrite		0	
Maximum value	21	0.1	
Mean of highest two values	16	0	
Mean of highest 20%			
Characteristic Value	16	0	

	[no pyrite]	[pyrite suspected]
DS Class	DS-1	DS-1

If pyrite suspected, DS Class limited to	DS-1
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Is pyrite assumed to be present?	No	Adopted DS Class =	DS-1
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Water data		
	(Adjusted) soluble sulfate (mg/l)	Soluble magnesium (mg/l)
Characteristic Value (Maximum Level)	0	0

DS Class

pH data		
	Soil	Water
Number of tests	5	0
No. tests in 20% data set	1	
Lowest pH	5.2	
Mean of lowest 20%	5.2	
Characteristic value	5.2	

Design value	5.2
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Number of soil pH results less than 5.5 2

DS Class design value	ACEC Class design value
Based on higher of soil and water data	Natural ground Mobile groundwater
	DS-1
	AC-2z

Client Portsmouth City Council	Location or material to which this assessment applies London Clay Formation	
Project Dunsbury Park Plot 700		
Job number 19453-GELO		

Concrete in aggressive ground		After BRE Special Digest 1, 2005
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Soil data			
	(Adjusted) water soluble sulfate (mg/l)	Total potential sulfate (%)	Water soluble magnesium (mg/l)
Number of tests	2	2	0
No. tests in 20% data set	0	0	
No. tests with suspected pyrite		1	
Maximum value	240	0.9	
Mean of highest two values	162	1	
Mean of highest 20%			
Characteristic Value	240	0.9	

	[no pyrite]	[pyrite suspected]
DS Class	DS-1	DS-3

If pyrite suspected, DS Class limited to	DS-3
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Is pyrite assumed to be present?	Yes	Adopted DS Class =	DS-3
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Water data		
	(Adjusted) soluble sulfate (mg/l)	Soluble magnesium (mg/l)
Characteristic Value (Maximum Level)	0	0

DS Class

pH data		
	Soil	Water
Number of tests	2	0
No. tests in 20% data set	0	
Lowest pH	6.9	
Mean of lowest 20%		
Characteristic value	6.9	

Design value	6.9
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Number of soil pH results less than 5.5 0

DS Class design value	ACEC Class design value
Based on higher of soil and water data	Natural ground Mobile groundwater
	DS-3
	AC-3

Client Portsmouth City Council	Location or material to which this assessment applies Made Ground	
Project Dunsbury Park Plot 700		
Job number 19453-GELO		

Concrete in aggressive ground		After BRE Special Digest 1, 2005
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Soil data			
	(Adjusted) water soluble sulfate (mg/l)	Total potential sulfate (%)	Water soluble magnesium (mg/l)
Number of tests	1	1	0
No. tests in 20% data set	0	0	
No. tests with suspected pyrite		0	
Maximum value	12	0.1	
Mean of highest two values	12	0	
Mean of highest 20%			
Characteristic Value	12	0.1	
			Mg not required
	[no pyrite]	[pyrite suspected]	
DS Class	DS-1	DS-1	
If pyrite suspected, DS Class limited to		DS-1	
Is pyrite assumed to be present?	No	Adopted DS Class =	DS-1

Water data		
	(Adjusted) soluble sulfate (mg/l)	Soluble magnesium (mg/l)
Characteristic Value (Maximum Level)	0	0
		Mg not required
DS Class		

pH data		
	Soil	Water
Number of tests	1	0
No. tests in 20% data set	0	
Lowest pH	6.7	
Mean of lowest 20%		
Characteristic value	6.7	
Design value	6.7	
Number of soil pH results less than 5.5	0	

DS Class design value	ACEC Class design value
Based on higher of soil and water data	Brownfield Mobile groundwater
DS-1	AC-1