Report No H4042-14A

DINAH'S HOLLOW, MELBURY ABBAS
PHASE 2 GROUND INVESTIGATION

FACTUAL REPORT ON GROUND INVESTIGATION

Carried out for:
Dorset County Council

Engineer:
Parsons Brinkerhoff

October 2014

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Report No: H4042-14A

Date: October 2014

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Issue No	Date	Details
1	October 2014	Final Report

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1 INTRODUCTION

In June 2014 Environmental Scientifics Group (ESG) was commissioned by Parsons Brinkerhoff (PB), on behalf of Dorset County Council (DCC), to carry out a ground investigation at Dinah's Hollow, Melbury Abbas. The investigation was required to obtain geotechnical information for a slope stability assessment.

The scope of the investigation, which was specified by PB, comprised dynamic sample with rotary core follow-on boreholes, in situ testing and laboratory testing. The investigation was carried out in accordance with the contract specification, Eurocode 7 and relevant related standards identified below (see also References). The fieldwork was carried out between 4 July and 3 August 2014.

This report presents the factual records of the fieldwork and laboratory testing. The data is also presented separately in digital format following AGS (2005).

A previous investigation had been carried out by Structural Soils (Report No 728347 dated September 2013). A copy of their borehole logs and site plan was made available to ESG by PB at the outset of the current investigation.

2 THE SITE AND GEOLOGY

2.1 The Site

Dinah's Hollow is a road situated in the village of Melbury Abbas, approximately 3 km south east of Shaftesbury and approximately 6 km north of Iwerne Minster, see Site Location Plan in Enclosure F. The site is at National Grid reference ST882205.

The linear site is approximately 450 m in length and comprises a macadam highway, referred to as Dinah's Hollow, trending in a north-south direction and two steeply dipping slopes located immediately to the east and west of the highway. The slopes dip towards the highway such that it is located in a cutting.

The site is bound by open agricultural fields in all directions.

2.2 Published Geology

The published geological map covering the area, BGS Sheet 313 (1994), shows the site to be underlain by strata of the Upper Greensand Formation, of Cretaceous age.

Dinah's Hollow descends in elevation from north to south, passing from the outcrop of the Boyne Hollow Chert Member in the north, down through the underlying Shaftsbury Sandstone Member in the central part of the site, onto the outcrop of the underlying Cann Sand Member at the southern end of the site. Based on information given in the BGS memoir for Sheet 313 (BGS, 1995), these units can be summarised as follows:

Boyne Hollow Chert Member:	Glauconitic quartz SAND and SANDSTONE with cherty and siliceous concretions and local beds of chert up to 0.6 m thick.
Shaftesbury Sandstone Member:	Alternating beds of glauconitic SAND and weakly calcite-cemented and glauconitic SANDSTONE, capped by beds of hard, shelly, well-cemented, glauconitic SANDSTONE ('Ragstone').
Cann Sand Member:	Fine-grained, locally micaceous SAND and very weakly cemented SANDSTONE

At the southern end of the site the Cann Sand Member is overlain by a narrow strip of Alluvium, that coincides with the stream situated at the base of the valley.

The geology map also shows the presence of two parallel faults, trending SW-NE and downthrown to the east, approximately 0.5 km and 1.0 km to the west of the site.

3 FIELDWORK

3.1 General

The fieldwork was carried out in general accordance with BS 5930+A2 (2010), BS EN 1997-2 (2007) and BS EN ISO 22475-1 (2006).

The exploratory hole and in situ test locations were selected by PB. The locations were set out from local features. The co-ordinates and reduced levels of the borehole locations were surveyed by JV Survey to National Grid and Ordnance Datum. The exploratory hole locations are shown on the Site Plan in Enclosure F.

3.2 Exploratory Holes

The exploratory holes are listed in the following table.

SUMMARY OF EXPLORATORY HOLES

TYPE	BOREHOLE ID	MAXIMUM DEPTH (m)	REMARKS
Dynamic sampled	BH2-1	7.95	
Dynamic sampled	BH2-2	8.95	
Dynamic sampled	BH2-3	10.95	
Dynamic sampling with rotary core follow on	BH2-4	11.95	
Dynamic sampled	BH2-5	10.95	
Dynamic sampled	BH2-6	16.00	
Dynamic sampling with rotary core follow on	BH2-7	17.00	

The boreholes were generally formed by dynamic sampling, supplemented as appropriate by rotary coring methods. Coring was carried out in BH2-4, from 9.00 m to 10.50 m depth and in BH2-7 from 10.20 m to 11.70 m depth and 12.50m to 17.00m depth.

The exploratory hole records are presented in Enclosure A and should be read in conjunction with the Key which is included in that enclosure. The records provide descriptions of the materials encountered in accordance with BS EN ISO 14688-1 (2002) and 14689-1 (2003), for soils and rocks respectively, as amplified by BS 5930+A2 (2010). The records also give details of the samples taken together with observations made during drilling.

Standard penetration tests (SPT) were carried out in accordance with BS EN ISO 22476-3:2005+A1 (2011) and the results are included on the borehole record. The SPT hammer energy ratio calibration certificate is also included in Enclosure A.

Photographs of the recovered cores and dynamic sampling liners are presented in Enclosure E.

On completion of the fieldwork geotechnical samples were transported to the Bridgend office of ESG for temporary retention, with those required for testing being transferred to Soil Engineering's Geotechnical Laboratory in Leeds and ESG's in-house laboratory at Burton upon Trent.

3.3 Instrumentation and Monitoring

The instruments installed in the exploratory holes are shown on the logs and detailed in Enclosure B. Records of groundwater monitoring carried out by ESG after the fieldwork period are also presented in Enclosure B.

3.4 In Situ Testing

In situ testing was carried out in accordance with the relevant standards as tabulated below. The testing is summarised in the following table and the results are presented in Enclosure C.

SUMMARY OF IN SITU TESTING

TYPE	QUANTITY	REMARKS
Soil Resistivity Testing	14	BS 1377 (1990)

Soil resistivity testing was undertaken in the bank at specified chainage points adjacent to the Dinah's Hollow highway. The chainage points were specified by PB.

4 GEOTECHNICAL LABORATORY TESTING

The testing was scheduled by PB and was carried out in accordance with BS 1377 (1990) unless otherwise stated. The testing is summarised below and the results are presented in Enclosure D.

SUMMARY OF GEOTECHNICAL LABORATORY TESTING

TYPE	REMARKS
Moisture Content Determination	23 no.
Atterberg Limit Determination	15 no.
Particle Size Distribution Analysis	2 no.
pH, Acid and Water Soluble Sulphate Content and Total Sulphur of Soils	15 no. Test methods are BS 1377 or others recognised in BRE Special Digest 1 (2005); they are indicated on the results report sheets in Enclosure D.
Consolidated Drained Triaxial Compression Testing with Volume Change Measurement	8 no.

Prepared By	**A Putt BSc (Hons) FGS**
Reviewed By	**M Martin BSc (Hons) MSc FGS**
Approved for Issue By	**Lynne Llewellyn BSc (Hons) FGS**

REFERENCES

AGS : 2005 : Electronic transfer of geotechnical and geoenvironmental data (Edition 3.1 including addendum May 2005). Association of Geotechnical and Geoenvironmental Specialists.

BGS England and Wales Sheet 313 : 1994 : Shaftesbury. 1:50 000 geological map (solid and drift). British Geological Survey

BGS : 1995 : Memoir for 1:50 000 geological sheet 313 (England and Wales). Geology of the country around Shaftesbury. British Geological Survey

BS 1377 : 1990 : Methods of test for soils for civil engineering purposes. British Standards Institution.

BS 5930+A2 : 2010 : Code of practice for site investigations (Amendment 2). British Standards Institution.

BS EN 1997-2 : 2007 : Eurocode 7 - Geotechnical design - Part 2 Ground investigation and testing. British Standards Institution.

BS EN ISO 14688-1 : 2002 : Geotechnical investigation and testing - Identification and classification of soil - Part 1 Identification and description. British Standards Institution.

BS EN ISO 14689-1 : 2003 : Geotechnical investigation and testing - Identification and classification of rock - Part 1 Identification and description. British Standards Institution.

BS EN ISO 22475-1 : 2006 : Geotechnical investigation and testing – Sampling methods and groundwater measurements - Part 1 Technical principles for execution. British Standards Institution.

BS EN ISO 22476-3:2005+A1 : 2011 : Geotechnical investigation and testing - Field testing - Part 3 Standard penetration test. British Standards Institution.

ENCLOSURE A

EXPLORATORY HOLE RECORDS

Key to Exploratory Hole Records	Key
Hammer Energy Ratio Report	Calibration certificate for AB1
Borehole Logs	BH2-1 to BH2-7

Key to Exploratory Hole Records

SAMPLES

Undisturbed

U	Driven tube sample
UT	Driven thin wall tube sample
TW	Pushed thin wall tube sample
P	Pushed piston sample

} nominally 100 mm diameter and full recovery unless otherwise stated

L	Liner sample (from Windowless or similar sampler), full recovery unless otherwise stated
CBR	CBR mould sample
BLK	Block sample
CS	Core sample (from rotary core) taken for laboratory testing
AMAL	Amalgamated sample

Disturbed

D	Small sample
B	Bulk sample

Other

W	Water sample
G	Gas sample

Environmental chemistry samples (in more than one container where appropriate)

ES	Soil sample
EW	Water sample

Comments

Sample reference numbers are assigned to every sample taken. A sample reference of 'NR' indicates that attempt was made to take a tube sample, however, there was no recovery.

Monitoring samples taken after completion of hole construction are not shown on the exploratory hole logs.

TESTS

SPT S or SPT C — Standard Penetration Test, open shoe (S) or solid cone (C)

The Standard Penetration Test is defined in BS EN ISO 22476-3 (2005). The incremental blow counts are given in the Field Records column; each increment is 75 mm unless stated otherwise and any penetration under self weight in mm (SW) is noted. Where the full 300 mm test drive is achieved the total number of blows for the test drive is presented as N = ** in the Test column. Where the test drive blows reach 50 the total blow count beyond the seating drive is given (without the N = prefix).

IV	*in situ* Vane shear strength, peak (p) and remoulded (r)
HV	Hand vane shear strength, peak (p) and remoulded (r)
PP	Pocket penetrometer test, converted to shear strength
KFH, KRH, KPI	Permeability tests (KFH = falling head, KRH = rising head; KPI = packer inflow); results provided in Field Records column (one value per stage for packer tests)

DRILLING RECORDS

The mechanical indices (TCR/SCR/RQD & If) are defined in BS 5930+A2 (2010)

TCR	Total Core Recovery, %
SCR	Solid Core Recovery, %
RQD	Rock Quality Designation, %
If	Fracture spacing, mm. Minimum, typical and maximum spacings are presented. The term non-intact (NI) is used where the core is fragmented.

Flush returns, estimated percentage with colour where relevant, are given in the Records column

CRF	Core recovered (length in m) in the following run
AZCL	Assessed zone of core loss
NR	Not recovered

GROUNDWATER

▼	Groundwater strike
▽	Groundwater level after standing period

Notes:
See report text for full references of standards

Project Dinah's Hollow, Melbury Abbas Phase 2 Ground Investigation
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Carried out for Dorset County Council

Key

Key to Exploratory Hole Records

INSTALLATION

Standpipe/ piezometer

Details of standpipe/piezometer installations are given on the Record. Legend column shows installed instrument depths including slotted pipe section or tip depth, response zone filter material type and layers of backfill.

The type of instrument installed is indicated by a code in the Legend column at the depth of the response zone:

SP	Standpipe
SPIE	Standpipe piezometer
PPIE	Pneumatic piezometer
EPIE	Electronic piezometer

Inclinometer or Slip Indicator

The installation of vertical profiling instruments is indicated on the Record. The base of tubing is shown in the Legend column.

The type of instrument installed is indicated by a code in the Legend column at the base of the tubing:

ICE	Biaxial inclinometer
ICM	Inclinometer tubing for use with probe
SLIP	Slip indicator

Settlement Points or Pressure Cells

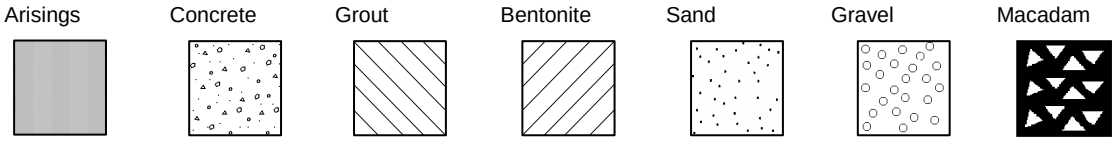
The installation of single point instruments is indicated on the Record. The location of the measuring device is shown in the Legend column.

The type of instrument installed is indicated by a code in the Legend column:

ESET	Electronic settlement cell/gauge
ETM	Magnetic extensometer settlement point
EPCE	Electronic embedment pressure cell
PPCE	Electronic push in pressure cell

INSTALLATION LEGENDS

A legend describing the installation is shown in the rightmost column. Legends additional to BS5930 are used to describe the backfill materials as indicated below.



NOTES

1. Soils and rocks are described in accordance with BS EN ISO 14688-1 (2002) and 14689-1 (2003) respectively as amplified by BS 5930+A2 (2010).

2. For fine soils, consistency determined during description is reported for those strata where undisturbed samples are available. Where the logger considers that the sample may not be representative of the condition in situ, for whatever reason, the reported consistency is given in brackets. The reliability of the sample is indicated by Probably or Possibly as appropriate. Hence (Probably firm) indicates the logger is reasonably confident of the assessment, but (Possibly firm) means less certainty. Where the samples available are too disturbed to allow a reasonable assessment of the in situ condition, no consistency is given.

3. Evidence of the occurrence of very coarse particles (cobbles and boulders) is presented on the logs, however, because of their size in relation to the exploratory hole these records may not be fully representative of their size and frequency in the ground mass.

4. The declination of bedding and joints is given with respect to the normal to the core axis. Thus in a vertical borehole this will be the dip.

5. The assessment of SCR, RQD and Fracture Spacing excludes artificial fractures

6. Strata legends are in accordance with BS 5930+A2 (2010).

7. Water level observations of discernible entries during the advancing of the exploratory hole are given at the foot of the log and in the Legend column. The term "none observed" is used where no discrete entries are identified although this does not necessarily indicate that the hole has not been advanced below groundwater level. Under certain conditions groundwater cannot be observed, for instance, drilling with water flush or overwater, or boring at a rate much faster than water can make its way into the borehole (ref BS5930+A2:2010, Clause 47.2.7). In addition, where appropriate, water levels in the hole at the time of recovering individual samples or carrying out in situ tests and at shift changes are given in the Records column.

8. The borehole logs present the results of Standard Penetration Tests recorded in the field without correction or interpretation. However, in certain ground conditions (eg high hydraulic head or where very coarse particles are present) some judgement may be necessary in considering whether the results are representative of in situ mass conditions.

Updated March 2012

Hammer Energy Test Report

in accordance with BSEN ISO 22476-3:2005

Dynamic sampling UK Ltd
Unit 8
Victory park way
Victory road
Derby
DE24 8ZF

Hammer Ref:	AB1
Test Date:	13/03/2014
Report Date:	13/03/2014
File Name:	AB1.spt
Test Operator:	TP

Instrumented Rod Data

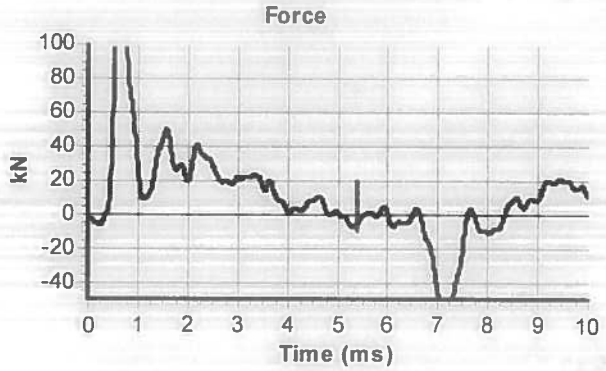
Diameter d_r (mm):	54
Wall Thickness t_r (mm):	6.9
Assumed Modulus E_a (GPa):	208
Accelerometer No.1:	6455
Accelerometer No.2:	6457

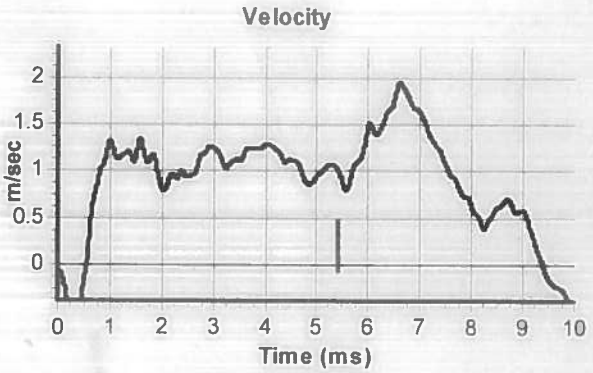
Hammer Information

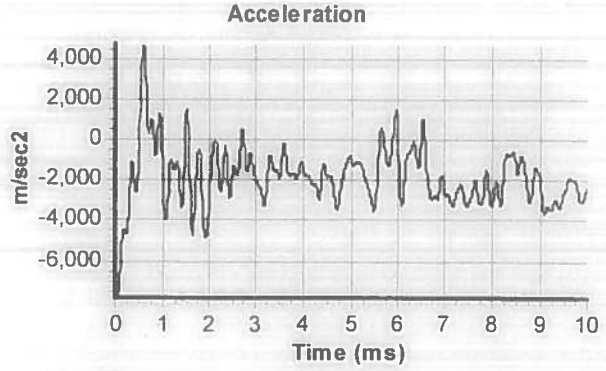
Hammer Mass m (kg):	63.5
Falling Height h (mm):	760
String Length L (m):	13.5

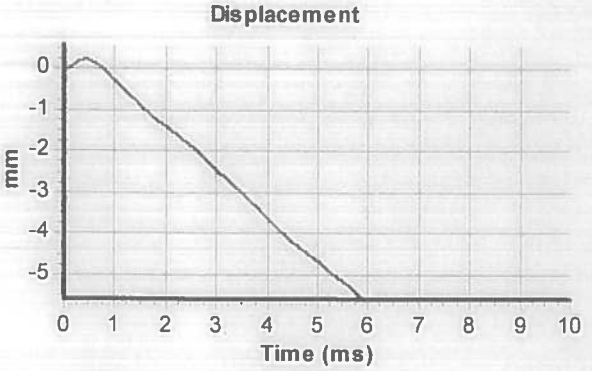
Comments / Location

AB-OVO Drilling hammer tested at Dynamic samplings yard.





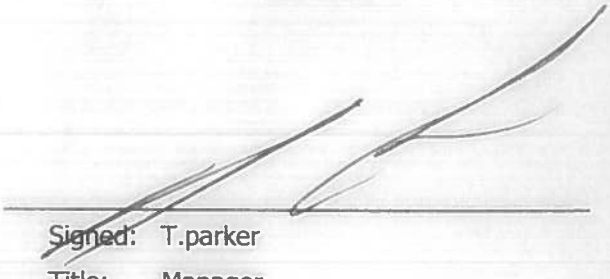




Calculations

Area of Rod A (mm2):	1021
Theoretical Energy E_{theor} (J):	473
Measured Energy E_{meas} (J):	330

Energy Ratio E_r (%): **70**



Signed: T.parker

Title: Manager

The recommended calibration interval is 12 months

Exploratory Hole Log

Drilled CJ **Logged** NJD **Checked** MM	**Start** 03/08/2014 **End** 03/08/2014	**Equipment, Methods and Remarks** Unimog mounted Klemm 802 Hand excavated inspection pit from GL - 1.20m. Dynamic sampling from 1.20 to 7.95m	**Depth from** 1.20m	**to** 7.95m	**Diameter** 101mm	**Casing Depth** 6.00m	**Ground Level** +147.38 mOD **Coordinates** E 388311.08 **National Grid** N 120615.20 **Chainage**		

Samples and Tests

Depth	Type & No	Records	Date Casing	Time Water
0.20-0.30	D 1			
1.00-1.10	D 2			
1.20-1.65	UT 3	430mm		
1.70	SPT S	N=10 (4,3/3,3,2,2)	1.70	dry
1.70-2.15	D 4			
1.70-2.55	L 5	800mm		
2.55	SPT S	N=10 (3,1/2,3,2,3)	1.70	dry
2.55-3.00	D 6			
3.00-3.45	UT 7	350mm		
3.50	SPT S	N=6 (2,0/1,1,2,2)	3.00	dry
3.50-3.95	D 8			
3.50-4.50	L 9	750mm		
4.50-5.45	UT 10	450mm		
5.00	SPT S	N=20 (2,2/3,4,5,8)	4.50	dry
5.00-5.45	D 11			
5.00-6.00	L 12	800mm		
6.00-6.45	UT 13	360mm		
6.50	SPT S	N=13 (3,2/3,4,3,3)	6.00	dry
6.50-6.95	D 14			
6.50-7.50	L 15	850mm		
7.50	SPT S	N=21 (2,3/4,5,6,6)	7.50	dry
7.50-7.95	D 16			
			03/06/2014	1800
			6.00	dry

Strata

Description	Depth, *Level* (Thickness)	Legend	Backfill/ Instruments
Dark brown silty fine SAND (TOPSOIL)	(0.30)		
	0.30		
Firm brown sandy slightly gravelly CLAY. Sand is fine to medium. Gravel is subangular to subrounded, fine to coarse of sandstone. (UPPER GREENSAND FORMATION)	(1.10)		
	1.40		
Brown sandy clayey GRAVEL. Sand is fine to medium. Gravel is subangular to subrounded, fine to coarse and of sandstone and chert. (UPPER GREENSAND FORMATION)	(0.50)		
	1.90		
Firm light orangish brown sandy gravelly CLAY. Sand is fine to medium. Gravel is angular to subangular, fine to coarse of sandstone and chert. (UPPER GREENSAND FORMATION)	(1.90)		
3.40-3.80 m Gravel is tabular			
	3.80		
Medium dense light greyish brown fine to medium SAND. (UPPER GREENSAND FORMATION)			
4.95 m Tabular cobble of sandstone 5.00-5.40 m Clayey	(2.80)		
6.00-6.20 m Slightly gravelly. Gravel of subangular, fine to medium and of sandstone.			
	6.60		
Medium dense light yellowish brown fine to medium SAND. (UPPER GREENSAND FORMATION)	(1.35)		
EXPLORATORY HOLE ENDS AT 7.95 m	7.95		

Groundwater Entries

No.	Struck (m)	Post strike behaviour	Depth sealed (m)
None observed (see Key Sheet)			

Depth Related Remarks *

From	to (m)

Chiselling

Depths (m)	Time	Tools used

Notes: For explanation of symbols and abbreviations see key sheet. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column.

Scale 1:50

Project Dinah's Hollow and Melbury Church Phase 2 Ground Investigation
Project No. H4042-14
Carried out for Parsons Brinckerhoff

Borehole

BH2-1

Sheet 1 of 1

Exploratory Hole Log

ESG Environmental Scientifics Group

Drilled CJ **Logged** NJD **Checked** MM	**Start** 04/07/2014 **End** 04/07/2014	**Equipment, Methods and Remarks** Unimog mounted Klemm 802 Hand excavated inspection pit GL - 1.20m. Dynamic sampling from 1.20 to 8.95m	**Depth from** 1.20m	**to** 8.95m	**Diameter** 101mm	**Casing Depth** 7.50m	**Ground Level** +140.87 mOD **Coordinates** E 388300.10 **National Grid** N 120551.40 **Chainage**

Samples and Tests

Depth	Type & No	Records	Date Casing	Time Water
0.20-0.30	D 1			
1.00-1.10	D 2			
1.20-1.65	UT 3	290mm		
1.70	SPT S	N=11 (4,2/2,2,3,4)	1.70	dry
1.70-2.15	D 4			
1.70-2.55	L 5	800mm		
2.55	SPT S	N=27 (4,4/5,5,6,11)	1.70	dry
2.55-3.00	D 6			
3.00-3.45	UT 7	330mm		
3.50	SPT S	N=26 (3,4/7,8,6,5)	3.00	dry
3.50-3.95	D 8			
3.50-4.50	L 9	700mm		
4.50-4.95	UT 10	430mm		
5.00	SPT S	N=22 (8,6/6,7,5,4)	4.50	dry
5.00-5.45	D 11			
5.00-6.00	L 12	900mm		
6.00-6.45	UT 13	330mm		
6.50	SPT S	N=26 (4,7/6,6,7,7)	6.00	dry
6.50-6.95	D 14			
6.50-7.50	L 15	800mm		
7.50	SPT S	N=20 (2,3/4,4,6,6)	7.50	dry
7.50-7.95	D 16			
7.50-8.50	L 17	950mm		
8.50	SPT S	N=32 (2,6/6,9,8,9)	7.50	dry
8.50-8.95	D 18		04/07/2014	1800
			7.50	dry

Strata

Description	Depth, *Level* (Thickness)
Dark brown silty fine SAND (TOPSOIL)	(0.30)
	0.30
Firm light orangish brown sandy slightly gravelly CLAY. Sand is fine to medium. Gravel is subangular to subrounded, fine to coarse of sandstone. (UPPER GREENSAND FORMATION)	(2.90)
1.70-3.20 m Gravel of sandstone and chert.	
	3.20
Medium dense light orangish brown sandy very clayey GRAVEL in a firm very sandy CLAY matrix. Gravel is subangular to subrounded, fine to coarse of sandstone. (UPPER GREENSAND FORMATION)	(1.10)
	4.30
Medium dense light greyish brown fine to medium SAND. (UPPER GREENSAND FORMATION)	(1.20)
5.00-5.50 m gravelly. Gravel is subangular, fine to coarse of sandstone.	
	5.50
Medium dense becoming dense light orangish brown gravelly clayey SAND. Gravel is subangular to subrounded, fine to coarse of sandstone. (UPPER GREENSAND FORMATION)	(3.45)
EXPLORATORY HOLE ENDS AT 8.95 m	8.95

Legend

Backfill/ Instruments

SPIE

Groundwater Entries

No.	Struck (m)	Post strike behaviour	Depth sealed (m)
None observed (see Key Sheet)			

Depth Related Remarks *

From to (m)

Chiselling

Depths (m) Time Tools used

Notes: For explanation of symbols and abbreviations see key sheet. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column.

Scale 1:50

AGS

Project Dinah's Hollow and Melbury Church Phase 2 Ground Investigation

Project No. H4042-14

Carried out for Parsons Brinckerhoff

Borehole

BH2-2

Sheet 1 of 1

Exploratory Hole Log

ESG Environmental Scientifics Group

Drilled CJ **Logged** NJD **Checked** MM	**Start** 07/07/2014 **End** 07/07/2014	**Equipment, Methods and Remarks** Unimog mounted Klemm 802 Hand excavated inspection pit GL - 1.20m. Dynamic sampling from 1.20 to 10.95m	**Depth from** 0.00m	**to** 10.95m	**Diameter** 101mm	**Casing Depth** 9.00m	**Ground Level** +134.58 mOD **Coordinates** E 388283.34 **National Grid** N 120488.04 **Chainage**

Samples and Tests

Depth	Type & No	Records	Date Casing	Time Water
0.20-0.30	D 1			
1.00-1.10	D 2			
1.20-1.65	UT 3	450mm		
1.70	SPT S	N=16 (1,1/3,4,4,5)	1.70	dry
1.70-2.15	D 4			
1.70-2.55	L 5	800mm		
2.55	SPT S	N=11 (5,4/3,3,2,3)	1.70	dry
2.55-3.00	D 6			
3.00-3.45	UT 7	410mm		
3.50	SPT S	N=6 (2,1/1,1,2,2)	3.00	dry
3.50-3.95	D 8			
3.50-4.50	L 9	850mm		
4.50-4.95	UT 10	380mm		
5.00	SPT S	N=17 (1,2/3,4,4,6)	4.50	dry
5.00-5.45	D 11			
5.00-6.00	L 12	800mm		
6.00-6.45	UT 13	390mm		
6.50	SPT S	N=18 (2,3/3,4,5,6)	6.00	dry
6.50-6.95	D 14			
6.50-7.50	L 15	900mm		
7.50-7.95	UT 16	440mm		
8.00	SPT S	N=24 (2,3/5,6,6,7)	7.50	dry
8.00-8.45	D 17			
8.00-9.00	L 18	950mm		
9.00-9.45	UT 19	390mm		
9.50	SPT S	N=35 (3,4/4,6,11,14)	9.00	dry
9.50-9.95	D 20			
9.50-10.50	L 21	950mm		

Strata

Description	Depth, *Level* (Thickness)	Legend	Backfill/ Instruments
Dark brown silty fine SAND (TOPSOIL)	(0.30)		
Firm light orangish brown sandy becoming slightly sandy gravelly CLAY. Sand is fine to medium. Gravel is angular to subrounded fine to coarse of sandstone and chert. (UPPER GREENSAND FORMATION).	0.30		
	(2.30)		
Firm light greyish brown sandy CLAY. Sand is fine. (UPPER GREENSAND FORMATION) — 2.55 m Cobble of sandstone	2.60		
	(0.40)		
Brown sandy very clayey subangular and tabular fine to coarse GRAVEL of sandstone and chert. (UPPER GREENSAND FORMATION)	3.00		
	3.20		
Firm light greyish brown slightly sandy silty CLAY. Sand is fine. (UPPER GREENSAND FORMATION)	(0.80)		SPIE
	4.00		
Medium dense light orangish brown becoming light greyish brown fine SAND with clayey sand laminae. (UPPER GREENSAND FORMATION) — 4.70-6.20 m Light greyish brown	(2.20)		
	6.20		
Light greyish brown silty fine SAND. (UPPER GREENSAND FORMATION)	(0.30)		
	6.50		
Soft to firm light brown silty CLAY. (UPPER GREENSAND FORMATION)	(0.50)		
	7.00		
Medium dense becoming dense light greyish brown very silty fine SAND. (UPPER GREENSAND FORMATION)			
	(3.50)		
9.50-10.00 m Dense mottled orange			
Stratum continues to 10.50 m			

Groundwater Entries

No.	Struck (m)	Post strike behaviour	Depth sealed (m)
None observed (see Key Sheet)			

Depth Related Remarks *

From	to (m)

Chiselling

Depths (m)	Time	Tools used

Notes: For explanation of symbols and abbreviations see key sheet. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column.

Scale 1:50

Project Dinah's Hollow and Melbury Church Phase 2 Ground Investigation
Project No. H4042-14
Carried out for Parsons Brinckerhoff

Borehole

BH2-3

Exploratory Hole Log

ESG Environmental Scientifics Group

Drilled CJ **Logged** NJD **Checked** MM	**Start** 07/07/2014 **End** 07/07/2014	**Equipment, Methods and Remarks** Unimog mounted Klemm 802 Hand excavated inspection pit GL - 1.20m. Dynamic sampling from 1.20 to 10.95m	**Depth from** 0.00m	**to** 10.95m	**Diameter** 101mm	**Casing Depth** 9.00m	**Ground Level** +134.58 mOD **Coordinates** E 388283.34 **National Grid** N 120488.04 **Chainage**		

Samples and Tests

Depth	Type & No	Records	Date Casing	Time Water
10.50 10.50-10.95	SPT S D 22	N=38 (7,11/7,9,9,13)	9.00 07/07/2014 9.00	dry 1800 dry

Strata

Description (Continued from Sheet 1)	Depth, *Level* (Thickness)	Legend	Backfill/ Instruments
Medium dense becoming dense light greyish brown very silty fine SAND. (UPPER GREENSAND FORMATION)			
Light greyish brown mottled orange fine grained SANDSTONE. Recovered as dense fine SAND. (POSSIBLE BEDROCK)	10.50 (0.45) 10.95		
EXPLORATORY HOLE ENDS AT 10.95 m			

Depth	Type & No	Records	Date Casing	Time Water

Groundwater Entries

No.	Struck (m)	Post strike behaviour	Depth sealed (m)

None observed (see Key Sheet)

Depth Related Remarks *

From	to (m)

Chiselling

Depths (m)	Time	Tools used

Notes: For explanation of symbols and abbreviations see key sheet. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column.

Scale 1:50

Project Dinah's Hollow and Melbury Church Phase 2 Ground Investigation
Project No. H4042-14
Carried out for Parsons Brinckerhoff

Borehole

BH2-3

Exploratory Hole Log

ESG Environmental Scientifics Group

Drilled CJ **Logged** NJD **Checked** MM	**Start** 08/07/2014 **End** 08/07/2014	**Equipment, Methods and Remarks** Unimog mounted Klemm 802 Hand excavated inspection pit from GL - 1.20m. Dynamic sampling from 1.20 - 9.00m. Rotary coring from 9.00 - 10.50m. Dynamic sampling 10.50 - 11.95m.	**Depth from** 0.00m	**to** 11.95m	**Diameter** 101mm	**Casing Depth** 9.00m	**Ground Level** +131.12 mOD **Coordinates** E 388268.83 **National Grid** N 120445.38 **Chainage**

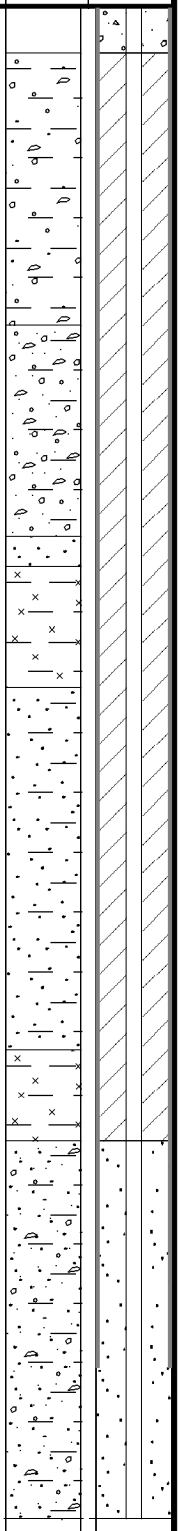
Samples and Tests

Depth	Type & No	Records	Date Casing	Time Water
0.20-0.30	D 1			
0.60-0.70	D 2			
1.20-1.65	UT 3	280mm		
1.70	SPT S	N=9 (2,2/2,3,2,2)	1.70	dry
1.70-2.15	D 4			
1.70-2.55	L 5	900mm		
2.55	SPT S	N=31 (7,8/9,9,7,6)	1.70	dry
2.55-3.00	D 6			
3.00-3.35	UT 7	380mm		
3.50	SPT S	N=14 (1,2/4,3,3,4)	3.00	dry
3.50-3.95	D 8			
3.50-4.50	L 9	900mm		
4.50-4.95	UT 10	410mm		
5.00	SPT S	N=13 (2,1/3,2,4,4)	4.50	dry
5.00-5.45	D 11			
5.00-6.00	L 12	900mm		
6.00-6.45	UT 13	390mm		
6.50	SPT S	N=17 (3,3/3,4,4,6)	6.00	dry
6.50-6.95	D 14			
6.50-7.50	L 15	900mm		
7.50-7.95	UT 16	400mm		
8.00	SPT S	N=53 (6,12/17,16,10,10)	7.50	dry
8.00-8.45	D 17			
8.00-9.00	L 18	800mm		
9.00	SPT S	N=100 (9,22/28,22,27,23)	9.00	dry
9.00-9.45	D 19			
9.00-10.50	13 NI 0 NI 0 NI			

Strata

Description	Depth, *Level* (Thickness)
Dark brown silty fine SAND (TOPSOIL)	(0.30)
Firm brown sandy gravelly CLAY. Sand is fine to medium. Gravel is subangular to subrounded, fine to coarse of sandstone. (UPPER GREENSAND FORMATION)	0.30 (1.80)
Dense brown sandy clayey subangular to subrounded fine to medium GRAVEL of sandstone and chert. Sand is fine to medium. (UPPER GREENSAND FORMATION)	2.10 (1.40)
Light brown clayey fine SAND. (UPPER GREENSAND FORMATION)	3.50 3.70
Firm light brown locally mottled orange silty CLAY. (UPPER GREENSAND FORMATION)	(0.80)
Medium dense light brown clayey becoming slightly clayey fine SAND. (UPPER GREENSAND FORMATION) — 4.70 m Becoming slightly clayey	4.50 (2.40)
Firm orangish brown silty CLAY. (UPPER GREENSAND FORMATION)	6.90 (0.60)
Very dense light greyish brown slightly gravelly clayey fine SAND. Gravel is subangular to subrounded fine to coarse of sandstone (UPPER GREENSAND FORMATION) — 8.00-9.00 m Recovered as: gravelly SAND; 9.00-10.50 m Recovered as: SAND and GRAVEL	7.50 (2.50)

Legend / Backfill/ Instruments



Depth	Type & No	Records	Date Casing	Time Water

Groundwater Entries

No.	Struck (m)	Post strike behaviour	Depth sealed (m)

None observed (see Key Sheet)

Depth Related Remarks *

From	to (m)

Chiselling

Depths (m)	Time	Tools used

Notes: For explanation of symbols and abbreviations see key sheet. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column.

Scale 1:50

Project Dinah's Hollow and Melbury Church Phase 2 Ground Investigation
Project No. H4042-14
Carried out for Parsons Brinckerhoff

Borehole

BH2-4

Exploratory Hole Log

Drilled CJ **Logged** NJD **Checked** MM	**Start** 08/07/2014 **End** 08/07/2014	**Equipment, Methods and Remarks** Unimog mounted Klemm 802 Hand excavated inspection pit from GL - 1.20m. Dynamic sampling from 1.20 - 9.00m. Rotary coring from 9.00 - 10.50m. Dynamic sampling 10.50 - 11.95m.	**Depth from** 0.00m	**to** 11.95m	**Diameter** 101mm	**Casing Depth** 9.00m	**Ground Level** +131.12 mOD **Coordinates** E 388268.83 **National Grid** N 120445.38 **Chainage**

Samples and Tests

Depth	TCR SCR RQD	If	Records/Samples	Date Casing	Time Water
10.50 10.50-10.95 10.50-11.50			SPT S N=28 (4,3/6,8,7,7) D 2 900mm L 22	9.00	dry
11.50 11.50-11.95			SPT S N=39 (7,7/9,9,10,11) D 23	9.00 08/07/2014 9.00	dry 1800 dry

Strata

Description (Continued from Sheet 1)	Depth, *Level* (Thickness)	Legend	Backfill/ Instruments
Medium dense to dense thinly bedded light greyish brown very silty fine SAND. (UPPER GREENSAND FORMATION)	10.00		
	(1.95)		
11.50-11.95 m Dense			SPIE
EXPLORATORY HOLE ENDS AT 11.95 m	11.95		

Depth	TCR SCR RQD	If	Records/Samples	Date Casing	Time Water

Groundwater Entries

No.	Struck (m)	Post strike behaviour	Depth sealed (m)

None observed (see Key Sheet)

Depth Related Remarks *

From	to (m)

Chiselling

Depths (m)	Time	Tools used

Notes: For explanation of symbols and abbreviations see key sheet. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column.

Scale 1:50

Project	Dinah's Hollow and Melbury Church Phase 2 Ground Investigation
Project No.	H4042-14
Carried out for	Parsons Brinckerhoff

Borehole

BH2-4

Exploratory Hole Log

ESG Environmental Scientifics Group

Drilled CJ **Logged** NJD **Checked** MM	**Start** 09/07/2014 **End** 09/07/2014	**Equipment, Methods and Remarks** Unimog mounted Klemm 802 Hand excavated inspection pit from GL to 1.20m. Dynamic sampling from 1.20m to 10.95m.	**Depth from** 1.20m	**to** 10.95m	**Diameter** 101mm	**Casing Depth** 9.00m	**Ground Level** +124.70 mOD **Coordinates** E 388245.28 **National Grid** N 120378.74 **Chainage**

Samples and Tests

Depth	Type & No	Records	Date Casing	Time Water
0.20-0.30	D 1			
1.00-1.10	D 2			
1.20-1.65	UT 3	420mm		
1.70	SPT S	N=8 (1,4/3,2,1,2)	1.70	dry
1.70-2.15	D 4			
1.70-2.55	L 5	800mm		
2.55	SPT S	N=10 (2,2/3,2,2,3)	1.70	dry
2.55-3.00	D 6			
3.00-3.45	UT 7	430mm		
3.50	SPT S	N=14 (1,2/3,3,4,4)	3.00	dry
3.50-3.95	D 8			
3.50-4.50	L 9			
4.50-4.95	UT 10	390mm		
5.00	SPT S	N=15 (2,3/4,3,3,5)	4.50	dry
5.00-5.45	D 11			
5.00-6.00	L 12			
6.00-6.45	UT 13	340mm		
6.50	SPT S	N=52 (4,8/11,14,15,12)	6.00	dry
6.50-6.95	D 14			
6.50-7.50	L 15	1000mm		
7.50	SPT S	N=62 (5,9/13,15,16,18)	7.50	dry
7.50-7.95	D 16			
7.50-8.50	L 17	950mm		
8.50	SPT S	N=63 (2,10/11,17,16,19)	7.50	dry
8.50-8.95	D 18			
8.50-9.50	L 19	950mm		
9.50	SPT S	N=69 (4,9/10,12,21,26)	9.00	dry
9.50-9.95	D 20			
9.50-10.50	L 21	950mm		

Strata

Description	Depth, *Level* (Thickness)
Dark brown silty fine SAND (TOPSOIL)	(0.30) 0.30
Firm light orangish brown slightly gravelly silty CLAY. Gravel is subangular to subrounded, fine to coarse of sandstone. (UPPER GREENSAND FORMATION) 1.50-2.60 m Sandy. Gravel locally absent.	(4.70)
Medium dense light greyish brown mottled orange very silty fine SAND. (UPPER GREENSAND FORMATION)	5.00 (1.00)
Very dense light greenish brown clayey fine SAND. (UPPER GREENSAND FORMATION) 6.80-7.00 m Gravelly. Gravel is subangular fine to medium of sandstone.	6.00 (4.95)
Stratum continues to 10.95 m	

Legend

Backfill/ Instruments

Groundwater Entries

No.	Struck (m)	Post strike behaviour	Depth sealed (m)

Depth Related Remarks *

From	to (m)

Chiselling

Depths (m)	Time	Tools used

Notes: For explanation of symbols and abbreviations see key sheet. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column.

Scale 1:50

Project Dinah's Hollow and Melbury Church Phase 2 Ground Investigation
Project No. H4042-14
Carried out for Parsons Brinckerhoff

Borehole

BH2-5

Sheet 1 of 2

Exploratory Hole Log

Drilled CJ **Logged** NJD **Checked** MM	**Start** 09/07/2014 **End** 09/07/2014	**Equipment, Methods and Remarks** Unimog mounted Klemm 802 Hand excavated inspection pit from GL to 1.20m. Dynamic sampling from 1.20m to 10.95m.	**Depth from** 1.20m	**to** 10.95m	**Diameter** 101mm	**Casing Depth** 9.00m	**Ground Level** **Coordinates** **National Grid** **Chainage**	+124.70 mOD E 388245.28 N 120378.74	

Samples and Tests

Depth	Type & No	Records	Date Casing	Time Water
10.50 10.50-10.95	SPT S D 22	N=38 (6,8/7,9,10,12)	9.00 09/07/2014 9.00	dry 1800 dry

Strata

Description (Continued from Sheet 1)	Depth, *Level* (Thickness)	Legend	Backfill/ Instruments
Very dense light greenish brown clayey fine SAND. (UPPER GREENSAND FORMATION) 10.50-10.95 m Dense			
EXPLORATORY HOLE ENDS AT 10.95 m	10.95		SPIE

Depth	Type & No	Records	Date Casing	Time Water

Groundwater Entries

No.	Struck (m)	Post strike behaviour	Depth sealed (m)
	10.95	Rose to 10.00 m after 20 minutes. Slow	-

Depth Related Remarks *

From	to (m)

Chiselling

Depths (m)	Time	Tools used

Notes: For explanation of symbols and abbreviations see key sheet. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column.

Scale 1:50

Project Dinah's Hollow and Melbury Church Phase 2 Ground Investigation
Project No. H4042-14
Carried out for Parsons Brinckerhoff

Borehole
BH2-5
Sheet 2 of 2

Exploratory Hole Log

ESG Environmental Scientifics Group

Drilled CJ **Logged** NJD **Checked** MM	**Start** 10/07/2014 **End** 24/07/2014	**Equipment, Methods and Remarks** Unimog mounted Klemm 802 Hand excavated inspection pit from GL to 1.20m. Dynamic sampling from 1.20 to 16.00m.	**Depth from** 1.20m	**to** 16.00m	**Diameter** 101mm	**Casing Depth** 12.00m	**Ground Level** +148.00 mOD **Coordinates** - **National Grid** - **Chainage**		

Samples and Tests

Depth	Type & No	Records	Date Casing	Time Water
0.00-2.15	SPT S	N=13 (1,2/3,4,3,3)	0.00	dry
0.60-0.70	D 1			
1.20-1.45	UT 2	440mm		
1.70-2.15	D 3			
1.70-2.55	L 4	800mm		
2.55-3.00	SPT S	N=51 (6,7/7,11,15,18)	0.00	dry
2.55-3.00	D 5			
3.00-4.00	L 6	950mm		
4.00-4.45	SPT	N=55 (6,8/8,14,15,18)	3.00	dry
4.00-4.45	D 7			
4.00-5.00	L 8	1000mm		
5.00-5.45	SPT	N=49 (7,11/11,13,11,14)	3.00	dry
5.00-6.00	L 10	1000mm		
5.00-5.45	D 9			
6.00-6.45	SPT S	N=33 (4,4/7,8,8,10)	6.00	dry
6.00-6.45	D 11			
6.00-7.00	L 12	950mm		
7.00-7.45	SPT S	N=27 (5,5/6,6,7,8)	6.00	dry
7.00-7.45	D 13			
7.00-8.00	L 14	950mm		
8.00-8.45	SPT S	N=27 (2,4/5,5,9,8)	6.00	
8.00-8.45	D 15			
8.00-9.00	L 16	950mm		
			10/07/2014	1800
			9.00	dry
9.00-9.45	SPT S	N=15 (2,4/4,3,4,4)	9.00	dry
9.00-9.45	D 17		23/07/2014	1200
9.00-10.00	L 18	1000mm	9.00	dry

Strata

Description	Depth, *Level* (Thickness)	Legend	Backfill/ Instruments
Firm dark brown very sandy gravelly CLAY. Sand is fine to medium. Gravel is angular fine to coarse of chert and sandstone. (TOPSOIL)	(0.30) 0.30		
Stiff light brownish grey sandy gravelly CLAY. Sand is fine to medium. Gravel is subangular to rounded, fine to coarse of chert and sandstone. (POSSIBLE HEAD DEPOSITS)	(0.60) 0.90		
Orangish brown clayey fine SAND. (UPPER GREENSAND FORMATION)	(1.30) 2.20		
Light greenish grey slightly clayey fine to medium SAND. (UPPER GREENSAND FORMATION)	(0.30) 2.50		
Very dense light green gravelly slightly clayey SAND. Gravel is subangular to subrounded fine to coarse of sandstone. (UPPER GREENSAND FORMATION) — 3.00-4.00 m Clayey sandy GRAVEL. Gravel is angular, fine to coarse. (Possible band of extremely week sandstone).	(2.00) 4.50		
Medium dense light green slightly silty fine SAND. (UPPER GREENSAND FORMATION) — 5.00-5.45 m Dense			
6.00-15.00 m Slightly clayey			
Stratum continues to 16.00 m			

Groundwater Entries

No.	Struck (m)	Post strike behaviour	Depth sealed (m)
None observed (see Key Sheet)			

Depth Related Remarks *

From	to (m)

Chiselling

Depths (m)	Time	Tools used

Notes: For explanation of symbols and abbreviations see key sheet. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column.

Scale 1:50

Project Dinah's Hollow and Melbury Church Phase 2 Ground Investigation
Project No. H4042-14
Carried out for Parsons Brinckerhoff

Borehole

BH2-6

Exploratory Hole Log

Drilled CJ **Logged** NJD **Checked** MM	**Start** 10/07/2014 **End** 24/07/2014	**Equipment, Methods and Remarks** Unimog mounted Klemm 802 Hand excavated inspection pit from GL to 1.20m. Dynamic sampling from 1.20 to 16.00m.	**Depth from** 1.20m	**to** 16.00m	**Diameter** 101mm	**Casing Depth** 12.00m	**Ground Level** +148.00 mOD **Coordinates** - **National Grid** - **Chainage**		

Samples and Tests

Depth	Type & No	Records	Date Casing	Time Water
10.00-10.45 10.00-10.45 10.00-11.00	SPT S D 19 L 20	N=20 (2,4/3,5,5,7) 1000mm	9.00	dry
11.00-11.45 11.00-11.45 11.00	SPT S D 21 L 22	N=35 (3,6/8,7,9,11) 1000mm	9.00	dry
12.00-12.45 12.00-12.45 12.00-13.00	SPT S D 23 L 24	N=26 (2,3/5,6,7,8)	12.00	dry
13.00-13.45 13.00-13.45 13.00-14.00	SPT S D 25 L 26	N=21 (2,4/3,5,6,7) 1000mm	12.00	dry
14.00-14.45 14.00-14.45 14.00-15.00	SPT D 27 L 28	N=34 (2,3/6,8,9,11) 1000mm	12.00	dry
15.00-15.45 15.00-15.45 15.00-16.00	SPT S D 29 L 30	N=32 (4,5/6,6,9,11) 1000mm	12.00	dry
			23/07/2014 12.00	1800 dry

Strata

Description (Continued from Sheet 1)	Depth, *Level* (Thickness)	Legend	Backfill/ Instruments
Medium dense light green slightly silty fine SAND. (UPPER GREENSAND FORMATION)	(11.50)		
11.00 m Locally dense.			
14.00-16.00 m Becoming dense. 14.00-16.00 m Occasional shell fragments. 14.00-16.00 m Locally mottled light orange			
EXPLORATORY HOLE ENDS AT 16.00 m	16.00		SPIE

Depth	Type & No	Records	Date Casing	Time Water

Groundwater Entries

No.	Struck (m)	Post strike behaviour	Depth sealed (m)

None observed (see Key Sheet)

Depth Related Remarks *

From	to (m)

Chiselling

Depths (m)	Time	Tools used

Notes: For explanation of symbols and abbreviations see key sheet. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column.

Scale 1:50

Project	**Dinah's Hollow and Melbury Church Phase 2 Ground Investigation**
Project No.	**H4042-14**
Carried out for	**Parsons Brinckerhoff**

Borehole

BH2-6

Sheet 2 of 2

Exploratory Hole Log

ESG Environmental Scientifics Group

Drilled CJ **Logged** NJD **Checked** MM	**Start** 24/07/2014 **End** 25/07/2014	**Equipment, Methods and Remarks** Unimog mounted Klemm 802 Hand excavated inspection pit from GL-1.20m. Dynamic sampling from 1.20-10.20m. Rotary coring 10.20-11.70m. Dynamic sampling 12.50m. Rotary coring 12.50-17.00m.	**Depth from** 0.00m	**to** 17.00m	**Diameter** 101mm	**Casing Depth** 9.00m	**Ground Level** +131.30 mOD **Coordinates** - **National Grid** - **Chainage**

Samples and Tests

Depth	Type & No	Records	Date Casing	Time Water
0.60	D 1			
1.20-1.65	UT 2	280 mm rec		
1.70-2.15	SPT S	N=12 (2,2/3,2,3,4)	0.00	dry
1.70-2.15	D 3			
1.70-2.55	L 4			
2.55-3.00	D 5			
2.70-3.15	SPT S	N=22 (2,3/4,6,6,6)	0.00	dry
3.00-3.45	UT 6	350 mm rec		
3.50-3.95	SPT S	N=11 (2,2/3,3,2,3)	3.00	dry
3.50-3.95	D 7			
3.50-4.50	L 8	850 mm rec		
4.50-4.95	UT 9			
5.00-5.45	SPT S	N=16 (3,3/3,4,4,5)	3.00	dry
5.00-5.45	D 10			
5.00-6.00	L 11			
6.00-6.45	UT 12	350 mm rec		
6.50-6.95	SPT S	N=23 (3,3/6,6,5,6)	6.50	dry
6.50-6.95	D 13			
6.50-7.50	L 14	900 mm rec		
7.50-7.95	UT 15	390 mm rec		
8.00-8.45	SPT S	N=23 (4,5/6,5,6,6)	6.00	dry
8.00-8.45	D 16			
8.00-9.00	L 17			
9.00-9.45	UT 18			
9.50-9.95	SPT S	N=20 (4,4/4,4,4,8)	9.00	dry
9.50-9.95	D 19			
9.50-10.20	L 20	650 mm rec		

Strata

Description	Depth, *Level* (Thickness)
Medium dense light greyish brown clayey fine SAND. (UPPER GREENSAND FORMATION)	
1.70-7.00 m Becoming mottled orange.	
5.00-7.00 m With very sandy clay laminae.	
6.50-7.00 m With reddish brown nodules.	
	(7.00)
Light green clayey fine SAND. (UPPER GREENSAND FORMATION)	7.00
	(0.80)
Medium dense light greyish brown mottled orange clayey fine SAND with very sandy clay laminae. (UPPER GREENSAND FORMATION)	7.80
	(1.55)
Extremely weak light greyish brown glauconitic fine to medium grained SANDSTONE. Recovered as: clayey sandy	9.35
	9.60
	(0.60)
Stratum continues to 10.20 m	

Legend

Backfill/ Instruments

Groundwater Entries

No.	Struck (m)	Post strike behaviour	Depth sealed (m)
None observed (see Key Sheet)			

Depth Related Remarks *

From	to (m)

Chiselling

Depths (m)	Time	Tools used

Notes: For explanation of symbols and abbreviations see key sheet. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column.

Scale 1:50

AGS

Project Dinah's Hollow and Melbury Church Phase 2 Ground Investigation
Project No. H4042-14
Carried out for Parsons Brinckerhoff

Borehole

BH2-7

Exploratory Hole Log

Drilled CJ **Logged** NJD **Checked** MM	**Start** 24/07/2014 **End** 25/07/2014	**Equipment, Methods and Remarks** Unimog mounted Klemm 802 Hand excavated inspection pit from GL-1.20m. Dynamic sampling from 1.20-10.20m. Rotary coring 10.20-11.70m. Dynamic sampling 12.50m. Rotary coring 12.50-17.00m.	**Depth from** 0.00m	**to** 17.00m	**Diameter** 101mm	**Casing Depth** 9.00m	**Ground Level** +131.30 mOD **Coordinates** - **National Grid** - **Chainage**

Samples and Tests

Depth	Type & No	Records	Date Casing	Time Water
	NI 220 220	If NI/220/220		
10.20-11.70	20 13 13			0.000
11.70-12.15	NI	SPT S N=29 (3,3/5,6,7,11) D 22	9.00	dry
11.70-12.15	NI			
11.70-12.50	NI	600 mm rec L 23		
12.50-12.83		SPT S 174 (11,23/ 35,39,100 for 25mm)	9.00	dry
12.50-14.00	65 40 19			0.000
14.00-15.50	89 85 54			0.000
	NI 180 400		24/07/2014 9.00	1800 dry
15.50-17.00	96 56 35		25/07/2014 9.00	0800 15.30
				0.000
			25/07/2014 9.00	1800 15.30

Strata

Description (Continued from Sheet 1)

9.35m - 9.60m : GRAVEL. Gravel is angular fine to coarse of weak sandstone. (UPPER GREENSAND FORMATION)

10.42 m Non intact and medium strong. 10.50-11.70 m AZCL. NOT 10.20 - 11.90m. Given rate of coring. Assumed as WS22.

9.60m - 10.20m : Medium dense light greyish brown mottled orange clayey SAND with very sandy clay laminae. (UPPER GREENSAND FORMATION)

Strong medium bedded light greyish brown fine to medium grained SANDSTONE. Fractures dip 5-10 degrees; stepped smooth and clean. (UPPER GREENSAND FORMATION)

Extremely weak light greyish brown fine to medium glauconitic SANDSTONE. Recovered as: slightly gravelly clayey fine to medium SAND. Gravel is angular fine to medium. (UPPER GREENSAND FORMATION)

12.50 m WS refusal. 12.50-13.00 m AZCL.

Extremely to very weak medium bedded light greyish brown glauconitic fine grained SANDSTONE with occasional dark brown disturbed bioturbated laminae of sand and shell fragments. (UPPER GREENSAND FORMATION)

13.30-13.92 m Very weak
13.48-13.92 m Vertical fracture stained orangish brown, <50mm.
13.71-13.92 m Non intact.
13.92-14.00 m Extremely weak.
14.00-14.16 m AZCL
14.16-15.04 m Very weak.
15.04-15.27 m Weak.
15.27-15.50 m Very weak
15.47 m Fracture stained orange brown.

Strong light brown glauconitic fine grained SANDSTONE. Discontinuities are widely spaced and dip 5 degrees, closely spaced undulating. Sand infill <1mm. (UPPER GREENSAND FORMATION)

15.50-15.56 m AZCL.
15.56-15.76 m Weak.

Light brown clayey fine SAND. (UPPER GREENSAND FORMATION)

15.76-15.90 m
15.77-15.90 m Vertical fracture. Stained orangish brown. <5mm.
15.90-16.70 m Largely non intact. Extremely weak to very weak.

EXPLORATORY HOLE ENDS AT 17.00 m

Depth, *Level* (Thickness)	Legend	Backfill/ Instruments
10.20		
(0.30)		
10.50		
(2.50)		
13.00		
(2.50)		
15.50		
15.70		
(1.30)		
17.00		SPIE

Depth	TCR SCR RQD	If	Records/Samples	Date Casing	Time Water

Groundwater Entries

No.	Struck (m)	Post strike behaviour	Depth sealed (m)
None observed (see Key Sheet)			

Depth Related Remarks *

From	to (m)

Chiselling

Depths (m)	Time	Tools used

Notes: For explanation of symbols and abbreviations see key sheet. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column.

Scale 1:50

Project Dinah's Hollow and Melbury Church Phase 2 Ground Investigation
Project No. H4042-14
Carried out for Parsons Brinckerhoff

Borehole
BH2-7
Sheet 2 of 2

ENCLOSURE B

INSTRUMENTATION AND MONITORING

Groundwater Installation Details

Hole No	Instrument ID	Installation Type	Date of Installation	Reference depth (mBGL)	Piezometer Diameter (mm)	Top of response zone (mBGL)	Base of response zone (mBGL)	Tubing Completion Details	Headworks	Remarks
BH2-1	1	SPIE	3 Aug 2014	7.50	19	3.80	7.50	Open	Lockable top cover	
BH2-2	1	SPIE	4 Aug 2014	8.50	19	3.00	8.50	Open	Lockable top cover	
BH2-3	1	SPIE	7 Jul 2014	3.50	19	3.00	3.50	Open	Lockable top cover	
BH2-4	1	SPIE	8 Jul 2014	11.50	19	7.50	11.50	Open	Lockable top cover	
BH2-5	1	SPIE	9 Jul 2014	10.50	19	10.00	11.00	Open	Lockable top cover	
BH2-6	1	SPIE	24 Jul 2014	15.70	19	15.50	16.00	Open	Lockable top cover	
BH2-7	1	SPIE	25 Jul 2014	17.00	19	2.00	17.00	Open	Lockable top cover	

Notes: Type: SP - Standpipe, SPIE - Standpipe Piezometer, HPIE - Hydraulic Piezometer, PPIE - Pneumatic Piezometer, EPIE - Electronic Piezometer Prepared: 22/09/2014 13:53

AGS

Project Dinah's Hollow and Melbury Church Phase 2 Ground Investigation
Project No. H4042-14
Carried out for Parsons Brinckerhoff

Table B1

Groundwater Monitoring

Hole ID	Instrument ID	Instrument Type	Base of Instrument (mBGL)	Reference Depth (mBGL)	Reading				
					Date	Time (hhmmss)	Water Level (mBGL) * calculated	Head (m above Tip) * calculated	Comments
BH2-1	1	SPIE	7.5	7.50	4 Aug 2014	010000			Dry
BH2-1	1	SPIE	7.5	7.50	19 Aug 2014	010500			Dry
BH2-1	1	SPIE	7.5	7.50	3 Sep 2014	010000			Dry
BH2-1	1	SPIE	7.5	7.50	24 Sep 2014	093800			Dry
BH2-2	1	SPIE	8.5	8.50	4 Aug 2014	100000			Dry
BH2-2	1	SPIE	8.5	8.50	18 Aug 2014	100000			Dry
BH2-2	1	SPIE	8.5	8.50	3 Sep 2014	105300			Dry
BH2-2	1	SPIE	8.5	8.50	24 Sep 2014	100000			Dry
BH2-3	1	SPIE	3.5	3.50	4 Aug 2014	110000			Dry
BH2-3	1	SPIE	3.5	3.50	19 Aug 2014	134500			Dry
BH2-3	1	SPIE	3.5	3.50	3 Sep 2014	110000			Dry
BH2-3	1	SPIE	3.5	3.50	24 Sep 2014	110000			Dry
BH2-4	1	SPIE	11.5	11.50	4 Aug 2014	113300			Dry
BH2-4	1	SPIE	11.5	11.50	19 Aug 2014	110500			Dry
BH2-4	1	SPIE	11.5	11.50	3 Sep 2014	110500			Dry
BH2-4	1	SPIE	11.5	11.50	24 Sep 2014	112500			Dry
BH2-5	1	SPIE	10.5	10.50	4 Aug 2014	131200	8.37	2.13 *	
BH2-5	1	SPIE	10.5	10.50	19 Aug 2014	111500	8.50	2.00 *	
BH2-5	1	SPIE	10.5	10.50	3 Sep 2014	112500	8.45	2.05 *	
BH2-5	1	SPIE	10.5	10.50	24 Sep 2014	113800	8.57	1.93 *	
BH2-6	1	SPIE	15.7	15.70	4 Aug 2014	120000			Dry
BH2-6	1	SPIE	15.7	15.70	19 Aug 2014	113500			Dry
BH2-6	1	SPIE	15.7	15.70	3 Sep 2014	134500			Dry
BH2-6	1	SPIE	15.7	15.70	24 Sep 2014	143500			Dry
BH2-7	1	SPIE	17	17.00	4 Aug 2014	125500			Dry
BH2-7	1	SPIE	17	17.00	19 Aug 2014	120000	14.45	2.55 *	
BH2-7	1	SPIE	17	17.00	3 Sep 2014	145200			Dry
BH2-7	1	SPIE	17	17.00	24 Sep 2014	153300	14.72	2.28 *	

ENCLOSURE C
IN SITU TESTING

Soil Resistivity Test Data	SR1

Soil Resistivity Test Data

Bank & Chainage (m)	Spacing (a) 2.5m	5.0m	10.0m	Soil Resistivity (ρ_a) (Ωm)				Soil Resistivity (ρ_a) (Ωcm)			
	Resistance (Ω)										
	Error (%)			2.5m	5.0m	10.0m	Average	2.5m	5.0m	10.0m	Average
E90	**2.764**	**0.998**	**0.361**	21.708	15.677	11.341	16.24203	2170.841	1567.655	1134.115	1624.203
	1.7	2.1	0.1								
W110	**1.463**	**0.693**	**0.331**	11.49	10.886	10.399	10.92489	1149.038	1088.562	1039.867	1092.489
	3.6	4.4	0.2								
E130	**1.311**	**0.666**	**0.396**	10.297	10.462	12.441	11.06626	1029.657	1046.15	1244.071	1106.626
	0.0	0.0	0.0								
W150	**1.158**	**0.498**	**0.301**	9.0949	7.8226	9.4562	8.791223	909.4911	782.2566	945.6194	879.1223
	1.4	7.8	0.1								
E170	**0.801**	**0.494**	**0.311**	6.291	7.7597	9.7704	7.940375	629.1039	775.9734	977.0353	794.0375
	0.3	4.0	0.0								
W190	**1.789**	**0.492**	**0.284**	14.051	7.7283	8.9221	10.23374	1405.077	772.8318	892.2123	1023.374
	0.1	6.3	0.6								
E210	**1.941**	**0.773**	**0.315**	15.245	12.142	9.896	12.42762	1524.458	1214.226	989.6017	1242.762
	2.9	5.1	3.4								
W230	**1.524**	**0.508**	**0.296**	11.969	7.9796	9.2991	9.749409	1196.947	797.9645	929.9114	974.9409
	0.4	5.3	0.2								
E250	**1.931**	**0.716**	**0.363**	15.166	11.247	11.404	12.60564	1516.604	1124.69	1140.398	1260.564
	0.4	3.4	0.0								
W270	**1.748**	**0.498**	**0.314**	13.729	7.8226	9.8646	10.47198	1372.876	782.2566	986.4601	1047.198
	0.0	7.6	0.4								
E290	**3.422**	**0.923**	**0.366**	26.876	14.498	11.498	17.62433	2687.633	1449.845	1149.823	1762.433
	0.6	0.0	0.1								
W310	**2.561**	**0.592**	**0.433**	20.114	9.2991	13.603	14.33875	2011.405	929.9114	1360.31	1433.875
	0.1	0.2	0.3								
E330	**7.115**	**1.697**	**0.509**	55.881	26.656	15.991	32.84273	5588.108	2665.641	1599.071	3284.273
	0.0	0.3	0.2								
W350	**5.011**	**2.154**	**0.924**	39.356	33.835	29.028	34.07319	3935.63	3383.495	2902.832	3407.319
	1.4	2.0	0.3								

Geometric Factor (k)		
Wenner 4-Pin Method (k=2πa)		
Spacings		
2.5m	5.0m	10.0m
15.7079633	31.41592654	62.83185307

Notes:

Project Dinahs Hollow, Melbury Abbas Phase 2 Ground Investivgation

Project No. H4042-14A

Carried out for Dorset County Council

Figure **SR1**

ENCLOSURE D

GEOTECHNICAL LABORATORY TEST RESULTS

Soil Engineering Report

Chemical Test Results

LT1468
ESG Report No
S144904 Ver. 3

Key to Laboratory Summary Sheets

Common to all summaries				
Sample Type	U	Undisturbed sample	D	Small disturbed sample
	P	Piston sample	B	Bulk disturbed sample
	TW	Thin walled sample	BLK	Block sample
	L	Liner sample	C	Rock core
	AMAL	Amalgamated sample		
Test status	Any result in *italics* indicates a test that is not within the scope of the UKAS accreditation for this laboratory.			
Summary of Laboratory Soil Tests: Index / Classification Tests				
Particle density	p	Small pyknometer method	g	Gas jar method
Plastic index	N/P	Non plastic, although liquid limit will have been determined if requested		
Particle size (PSD)	1	Following value in silt column denotes combined clay and silt fraction		
	p	Following value in clay column denotes sedimentation by pipette, else sedimentation is by hydrometer.		
Summary of Laboratory Soil Tests: Strength and Permeability Tests				
Triaxial	UU	Single stage unconsolidated quick undrained	UUM	Multi stage unconsolidated quick undrained
	UU3	Set of 3 unconsolidated quick undrained	CU	Single stage consolidated undrained
	CUM	Multi stage consolidated undrained	CU3	Set of 3 consolidated undrained
	CD	Single stage consolidated drained	CDM	Multi stage consolidated drained
	CD3	Set of 3 consolidated drained		
	Note that single stage tests are reported assuming f = 0 for total stress and c' = 0 for effective stress			
Consol	Oed	One-dimensional oedometer	Hyd	Hydraulic cell consolidation
	m_v	coefficient of compressibility quoted for p0 to p0 + 100kPa, where determined		
Permeability	C	Constant head permeability	T	Triaxial permeability
Shearbox	SSB	Small shear box	LSB	Large shear box
	p	Peak value	r	Residual value
	RS	Ring shear		
Summary of Laboratory Soil Re-Use Test				
MCV	s	MCV value at natural or specified moisture content	int	Intercept of calibration line in MCV calibration
Summary of Laboratory Rock Strength Tests				
Point Load Type (Combination of)	D	Diametral	A	Axial
	I	Irregular lump	B	Block
	L	Test performed parallel to planes of weakness		
	P	Test performed perpendicular to planes of weakness		
	X	Invalid failure of point load (not broken between points of load application)		
Summary of Laboratory Rock Materials Tests				
Ten% fines	w	Soaked test	d	Dry test
Point Load Index Result				
Point Load Type (Combination of)	D	Diametral	A	Axial
	I	Irregular lump	B	Block
	L	Parallel to planes of weakness	P	Perpendicular to planes of weakness
	X	Invalid failure of point load (not broken between points of load application)		
Dimensions	W	Diameter of core or average smallest width perpendicular to axis of loading in a block or irregular lump		
	D	Distance between platens when just in contact with specimen		
	D'	Distance between platens at point of failure		
	De	Equivalent core diameter	Is	P/De^2
	Is(50)	F x Is	F	$(De/50)^{0.45}$
	Is(50) point load strength index corrected for a diametral test of core diameter 50mm			
	For Axial/Lump tests $De^2 = (4/Pi) \times (W \times D')$		For Diametral tests $De^2 = D \times D'$	

Important note: summary sheets are provided for convenience and in no way replace individual test result sheets which shall, without exception, be regarded as the definitive result.

Project Name	Dinah_s Hollow and Melbury Church Phase 2 GI
Project No.	LT1468
Engineer	ESG Ltd
Employer	ESG Ltd

Classification Tests Summary

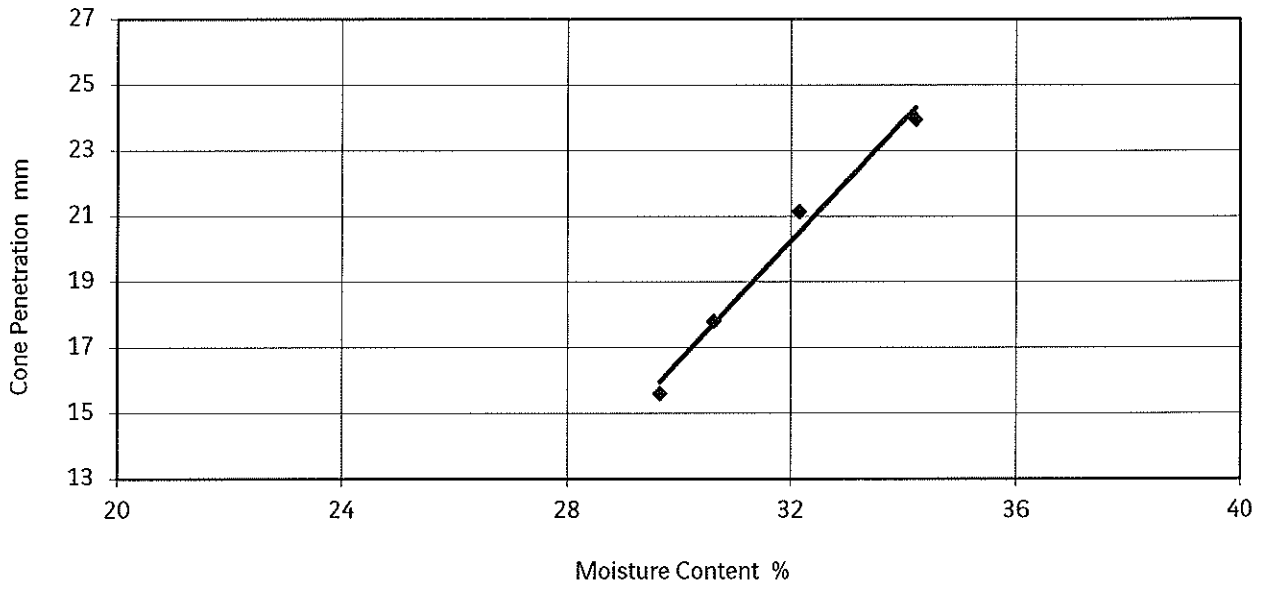
Hole ID	Sample depth m	Sample no.	Sample type	Specimen depth m	Specimen no.	Moisture Content	Bulk Density	Dry Density	Particle Density	Liquid Limit	Plastic Limit	Plastic Index	Passing 425µm	Linear Shrinkage	Particle size				
															Clay	Silt	Sand	Gravel	Cobbles
						%	Mg/m³			%	%	%	%	%	%	%	%	%	%
BH2-1	3.00	7	UT	3.10	01	19				32	15	17	42						
BH2-1	6.00	13	UT	6.10	01	15				31	16	15	73						
BH2-2	3.50	9	WS	3.50	01										11	7	56	26	0
BH2-2	6.00	12	U	6.27	01	23				41	23	18	100						
BH2-2	7.50	16	U	7.55	01	21				32	24	8	100						
BH2-2	7.50	17	WS (B)	7.50	01	21				34	NP	NP	100						
BH2-2	7.50	17	WS (B)	7.50	02										10	11	80	0	0
BH2-3	3.50	8	D	3.50	01	22				37	23	14	100						
BH2-4	1.70	5	WS (B)	1.70	01	15				22	18	4	86						
BH2-4	5.00	11	D	5.00	01	23				40	23	17	100						
BH2-4	6.00	13	UT	6.06	01	26				49	24	25	100						
BH2-5	2.55	6	D	2.55	01	26				35	21	14	65						
BH2-5	4.50	10	UT	4.60	01	28				42	24	18	100						
BH2-5	8.50	19	WS	8.50	01	21				41	18	23	100						
BH2-6	1.20	2	UT	1.20	01	20				34	18	16	99						
BH2-7	1.20	2	UT	1.37	01	22				33	21	12	100						
BH2-7	4.50	9	UT	4.65	01	20				34	22	12	100						
							End												

Project Name	Dinah_s Hollow and Melbury Church Phase 2 GI
Project No.	LT1468
Engineer	ESG Ltd
Employer	ESG Ltd

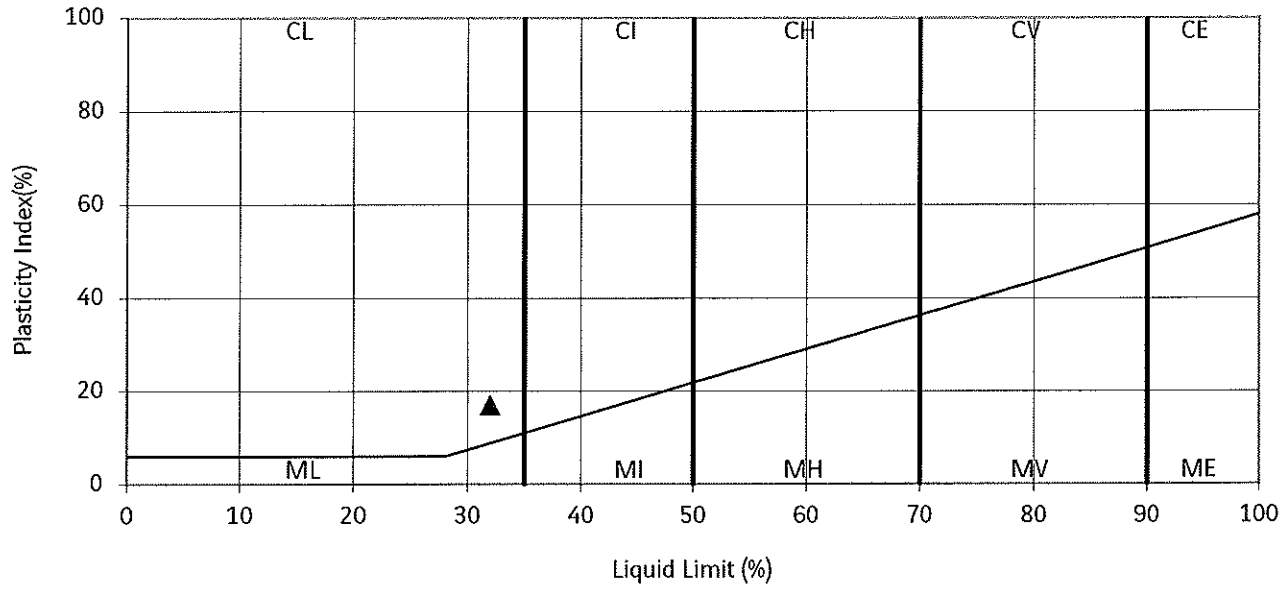
Strength and Permeability Summary

Hole ID	Sample depth m	Sample no.	Sample type	Specimen depth m	Specimen no.	Moisture Content	Bulk Density	Triaxial			Consol		Permeability		Shearbox		
								Type	c	Ø	Type	m_v	Type	K	Type	c	Ø
						%	Mg/m^3		kPa	°		m^2/MN		m/s		kPa	°
BH2-2	4.50	9	UT	4.65	1	16	1.63	CD									
BH2-3	3.00	7	UT	3.23	1	26	2.01	CD									
BH2-3	6.00	12	UT	6.09	1	26	1.88	CD									
BH2-4	4.50	10	UT	4.55	1	27	1.97	CD									
BH2-4	6.00	13	UT	6.06	2	24	1.93	CD									
BH2-5	4.50	10	UT	4.60	2	32	1.85	CD									
BH2-7	1.20	2	UT	1.43	2	22	1.81	CD									
BH2-7	4.50	9	UT	4.73	2	20	1.84	CD									
								End									

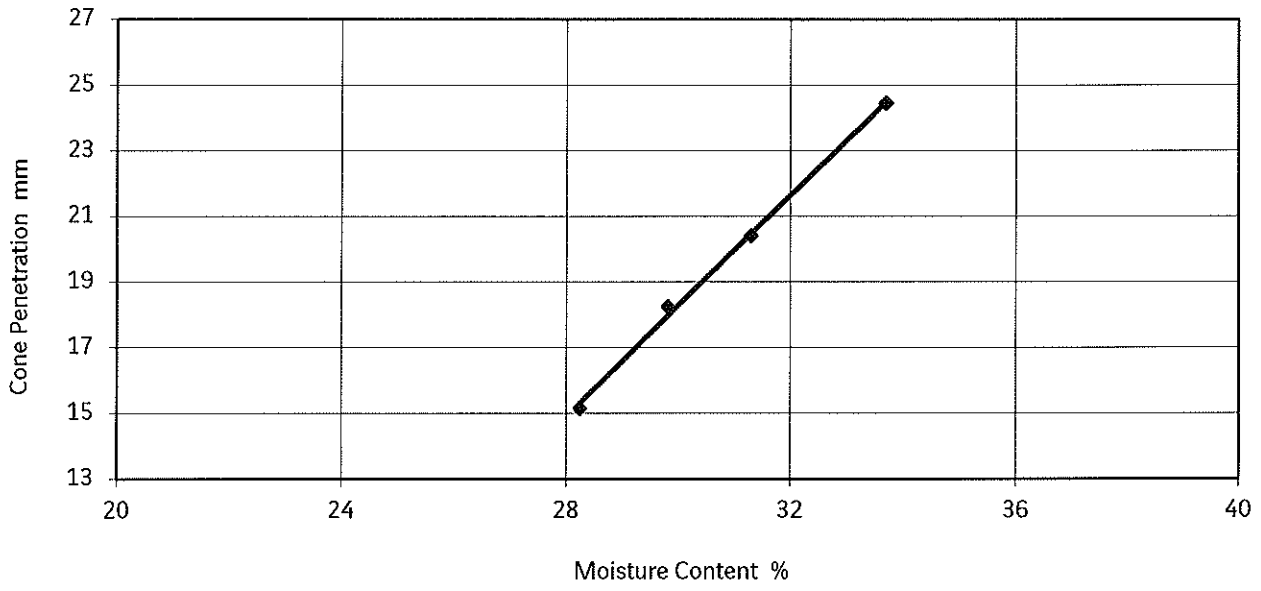
Project Name	Dinah_s Hollow and Melbury Church Phase 2 GI	**Liquid And Plastic Limit Test**	Hole ID BH2-1
Project No.	LT1468		Sample Depth 3.00m
Engineer	ESG Ltd		Sample Number 7
Employer	ESG Ltd	Test Method: BS1377: Part 2: 1990: Clause 4.3 and 5	Sample Type UT
Description	Brown gravelly CLAY. Gravel is fine to coarse angular.		Specimen Depth 3.10m
			Specimen Number 1



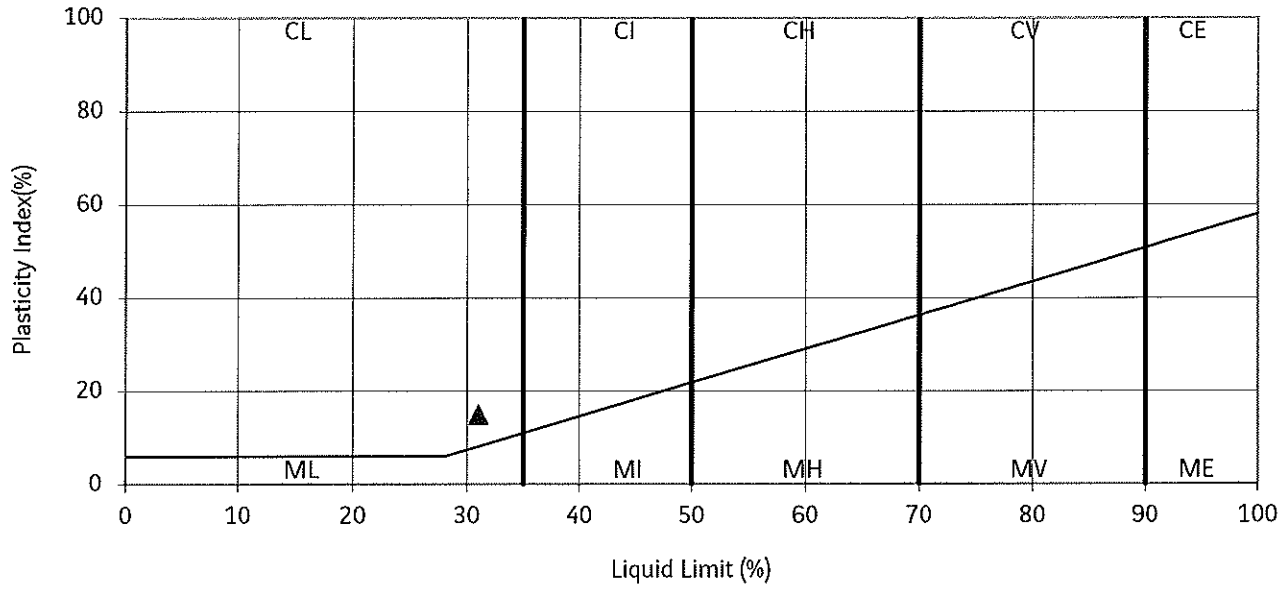
Natural moisture content:	19%	Percentage retained on 425µm sieve:	58%
Liquid limit:	32%	Preparation of sample: Wet sieve	
Plastic limit:	15%	Remarks:	
Plasticity index:	17%		
Moisture content of soil passing 425µm	44%		
Liquidity index:	1.73		



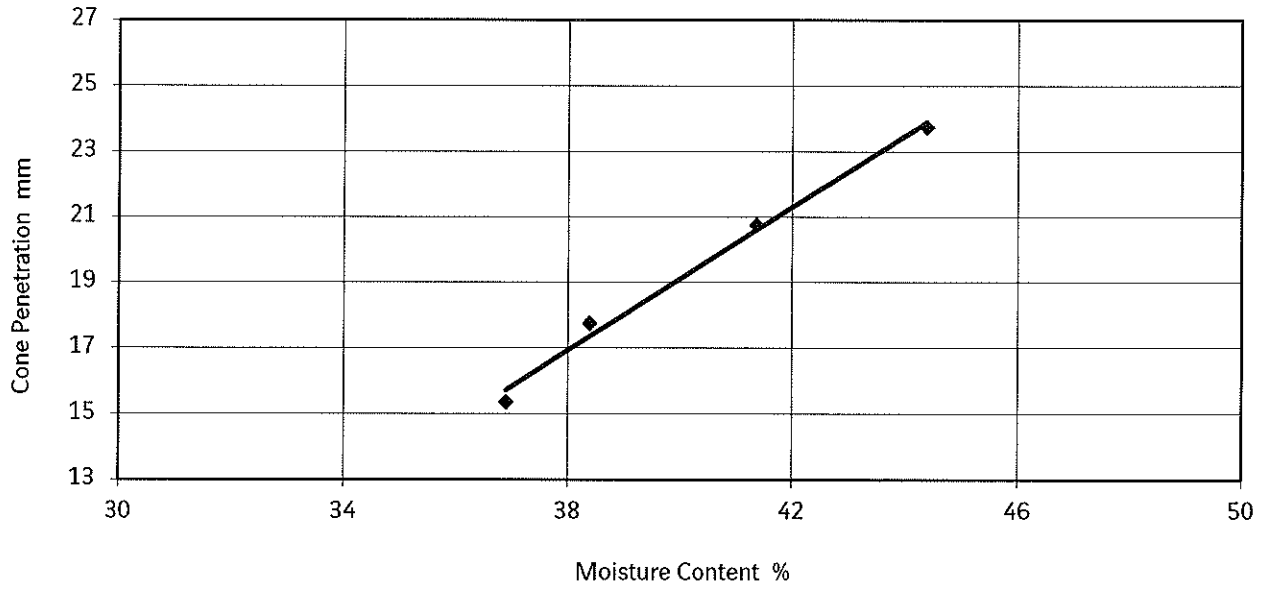
Project Name	Dinah_s Hollow and Melbury Church Phase 2 GI	**Liquid And Plastic Limit Test**	Hole ID BH2-1
Project No.	LT1468		Sample Depth 6.00m
Engineer	ESG Ltd		Sample Number 13
Employer	ESG Ltd	Test Method: BS1377: Part 2: 1990: Clause 4.3 and 5	Sample Type UT
Description	Greenish grey slightly gravelly CLAY. Gravel is fine to medium angular.		Specimen Depth 6.10m
			Specimen Number 1



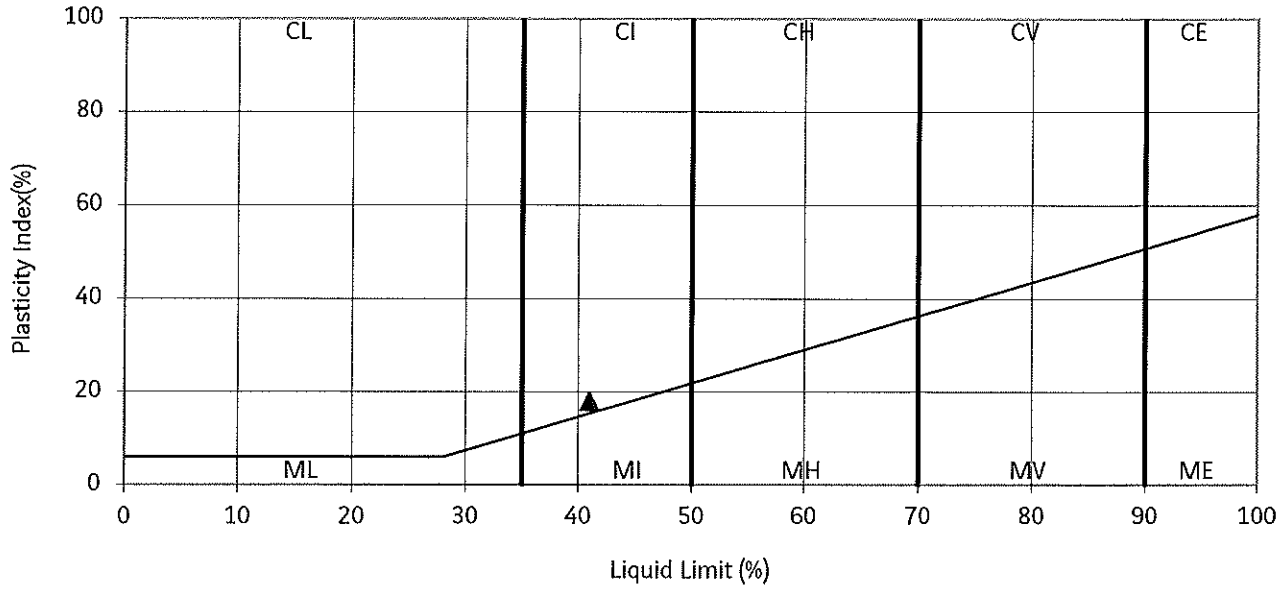
Natural moisture content:	15%	Percentage retained on 425µm sieve:	27%
Liquid limit:	31%	Preparation of sample: Wet sieve	
Plastic limit:	16%	Remarks:	
Plasticity index:	15%		
Moisture content of soil passing 425µm	20%		
Liquidity index:	0.26		



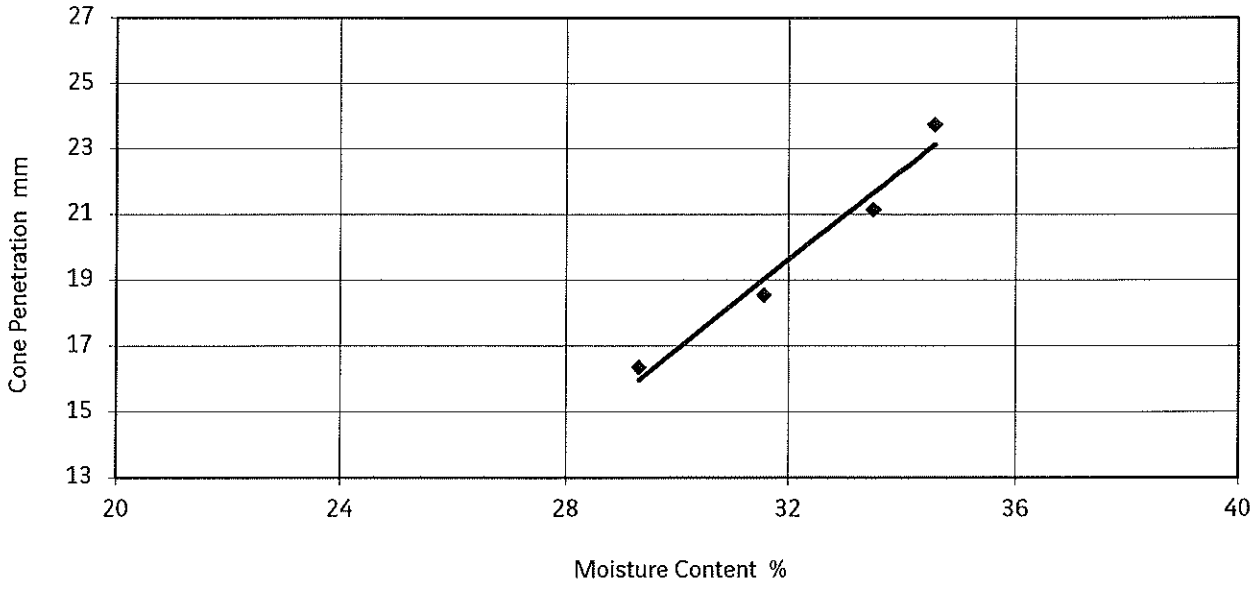
Project Name	Dinah_s Hollow and Melbury Church Phase 2 GI	**Liquid And Plastic Limit Test**	Hole ID BH2-2
Project No.	LT1468		Sample Depth 6.00m
Engineer	ESG Ltd		Sample Number 12
Employer	ESG Ltd	Test Method: BS1377: Part 2: 1990: Clause 4.3 and 5	Sample Type U
Description	Light brown slightly clayey SAND.		Specimen Depth 6.27m
			Specimen Number 1



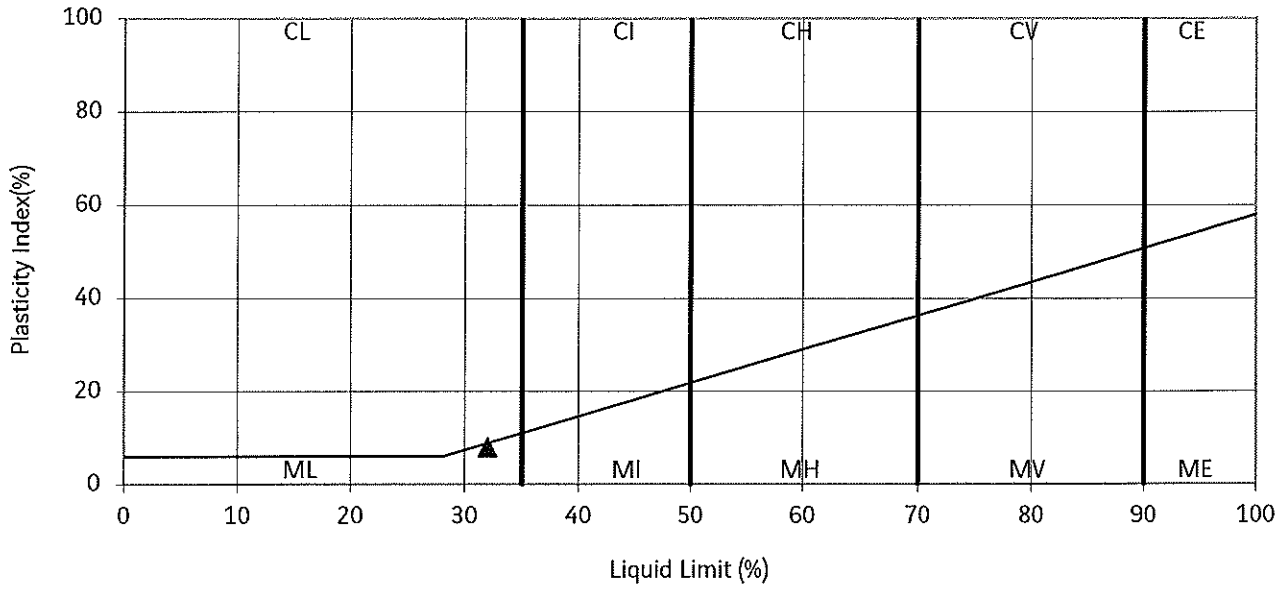
Natural moisture content:	23%	Estimated percentage retained on 425µm sieve:	0%
Liquid limit:	41%	Preparation of sample: Natural	
Plastic limit:	23%	Remarks:	
Plasticity index:	18%		
Moisture content of soil passing 425µm	23%		
Liquidity index:	-0.02		



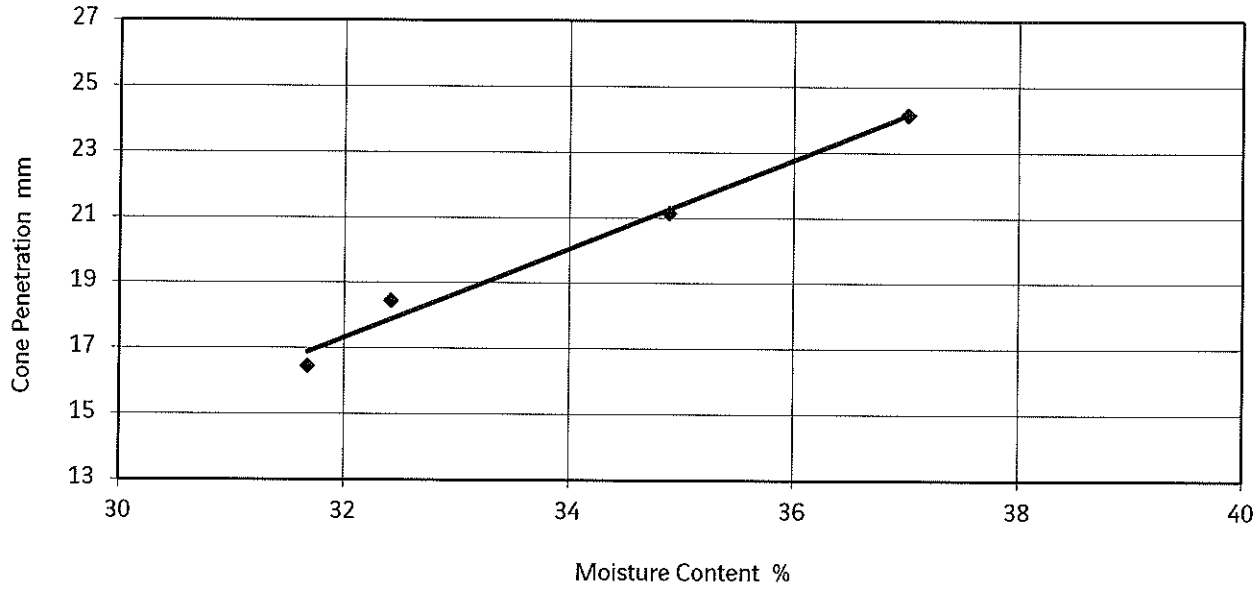
Project Name	Dinah_s Hollow and Melbury Church Phase 2 GI	**Liquid And Plastic Limit Test**	Hole ID BH2-2
Project No.	LT1468		Sample Depth 7.50m
Engineer	ESG Ltd		Sample Number 16
Employer	ESG Ltd	Test Method: BS1377: Part 2: 1990: Clause 4.3 and 5	Sample Type U
Description	Greenish brown clayey fine to medium SAND.		Specimen Depth 7.55m
			Specimen Number 1



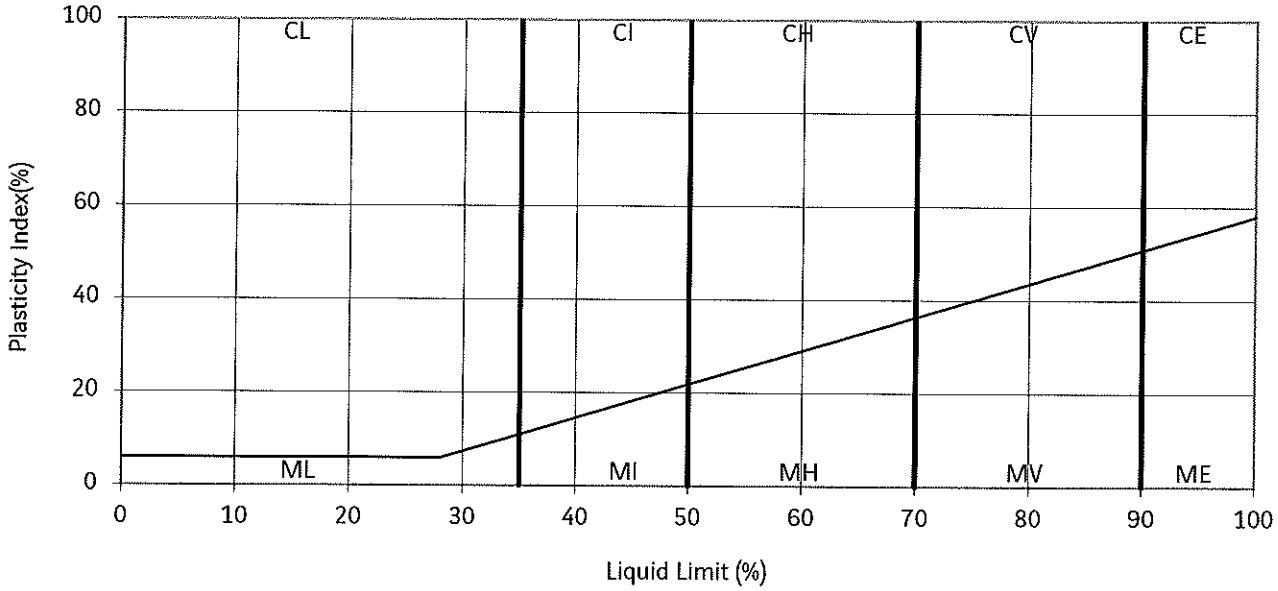
Natural moisture content:	21%	Estimated percentage retained on 425µm sieve:	0%
Liquid limit:	32%	Preparation of sample: Natural	
Plastic limit:	24%	Remarks:	
Plasticity index:	8%		
Moisture content of soil passing 425µm	21%		
Liquidity index:	-0.36		



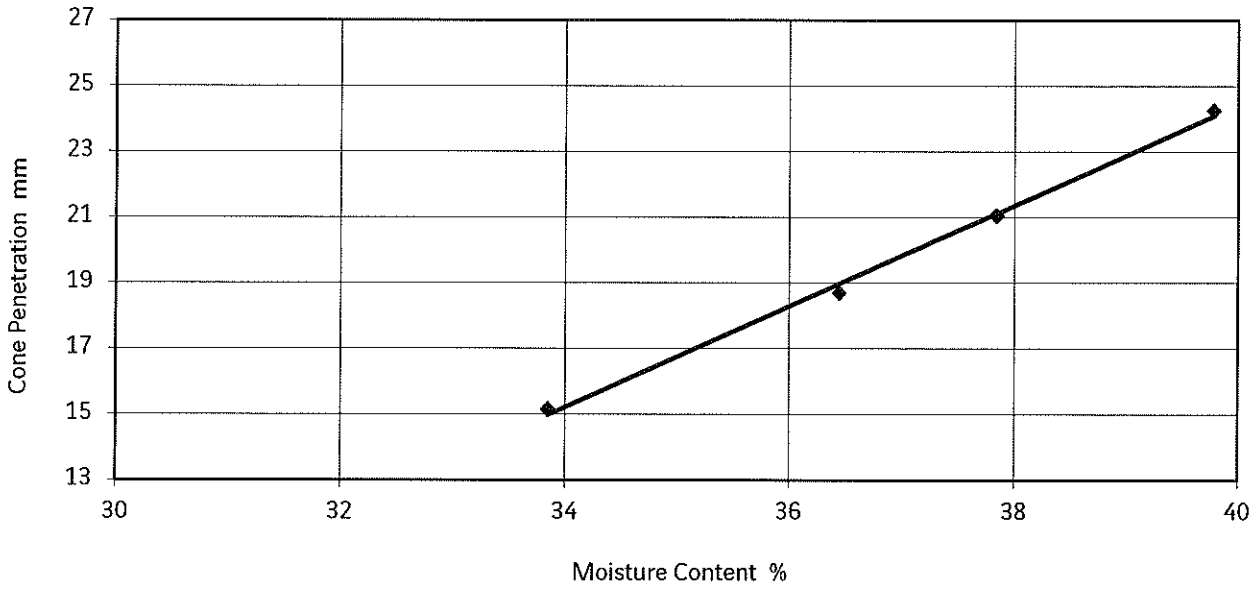
Project Name	Dinah_s Hollow and Melbury Church Phase 2 GI	**Liquid And Plastic Limit Test**	Hole ID BH2-2
Project No.	LT1468		Sample Depth 7.50m
Engineer	ESG Ltd		Sample Number 17
Employer	ESG Ltd	Test Method: BS1377: Part 2: 1990: Clause 4.3 and 5	Sample Type WS (B)
Description	Greenish brown clayey SAND		Specimen Depth 7.50m
			Specimen Number 1



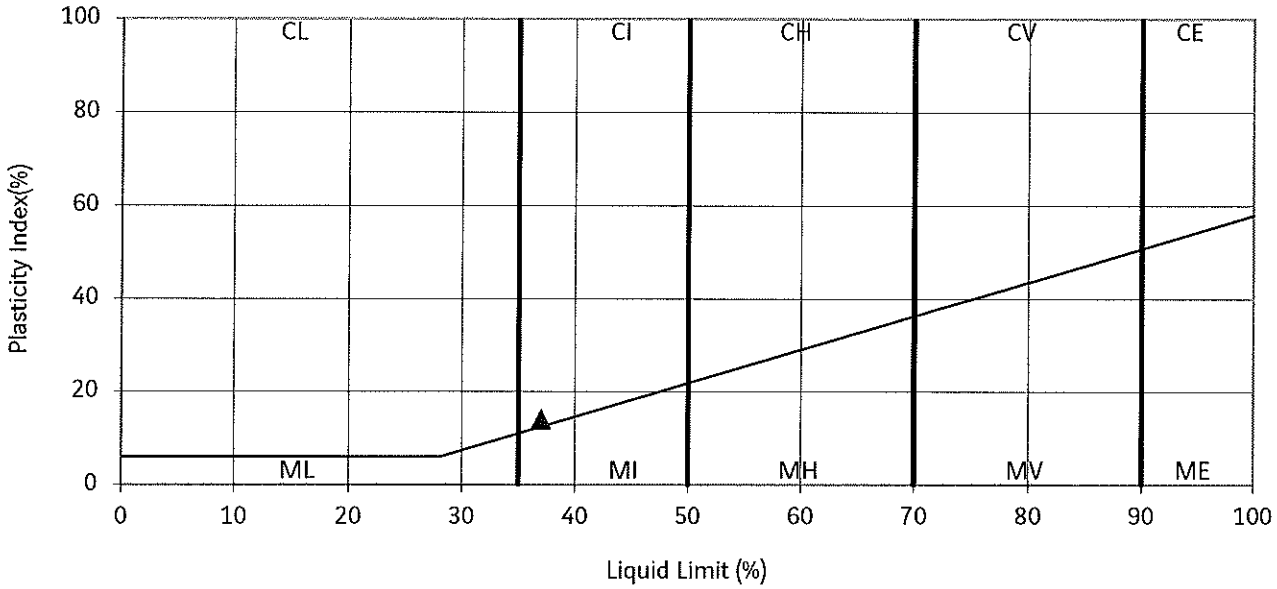
Natural moisture content:	21%	Estimated percentage retained on 425µm sieve:	0%
Liquid limit:	34%	Preparation of sample: Natural	
Plastic limit:	NP	Remarks:	
Plasticity index:	NP		
Moisture content of soil passing 425µm	21%		
Liquidity index:			



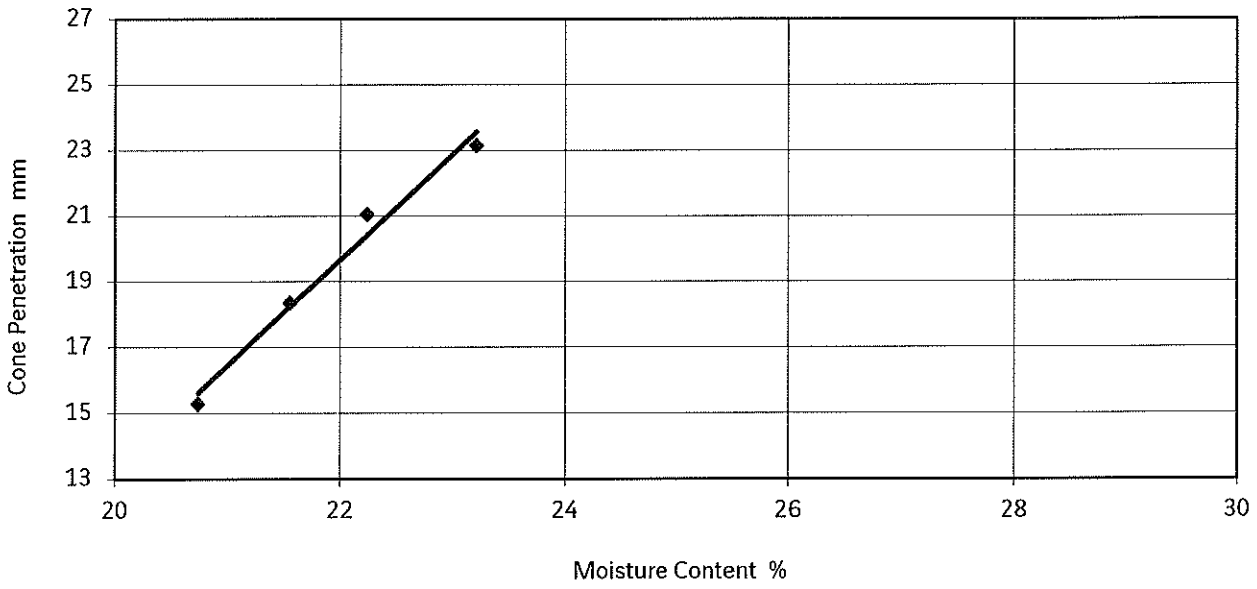
Project Name	Dinah_s Hollow and Melbury Church Phase 2 GI	**Liquid And Plastic Limit Test**	Hole ID BH2-3
Project No.	LT1468		Sample Depth 3.50m
Engineer	ESG Ltd		Sample Number 8
Employer	ESG Ltd	Test Method: BS1377: Part 2: 1990: Clause 4.3 and 5	Sample Type D
Description	Greenish brown sandy CLAY		Specimen Depth 3.50m
			Specimen Number 1



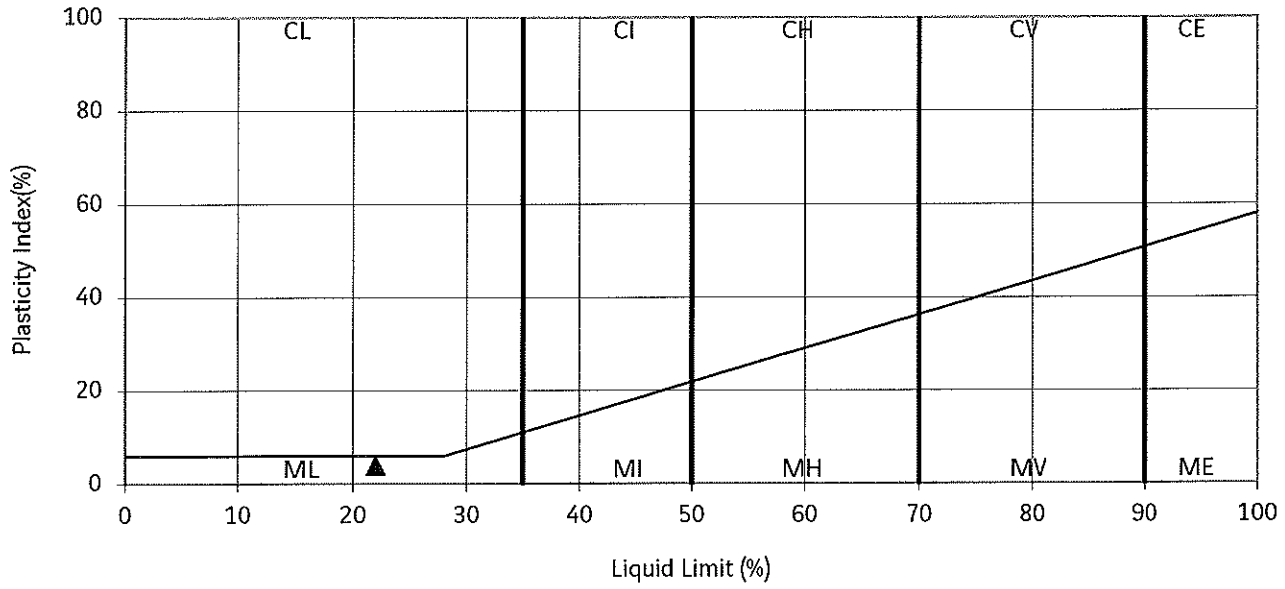
Natural moisture content:	22%	Estimated percentage retained on 425µm sieve:	0%
Liquid limit:	37%	Preparation of sample: Natural	
Plastic limit:	23%	Remarks:	
Plasticity index:	14%		
Moisture content of soil passing 425µm	22%		
Liquidity index:	-0.05		



Project Name	Dinah_s Hollow and Melbury Church Phase 2 GI	**Liquid And Plastic Limit Test**	Hole ID BH2-4
Project No.	LT1468		Sample Depth 1.70m
Engineer	ESG Ltd		Sample Number 5
Employer	ESG Ltd	Test Method: BS1377: Part 2: 1990: Clause 4.3 and 5	Sample Type WS (B)
Description	Brown sandy CLAY with sandstone gravel.		Specimen Depth 1.70m
			Specimen Number 1

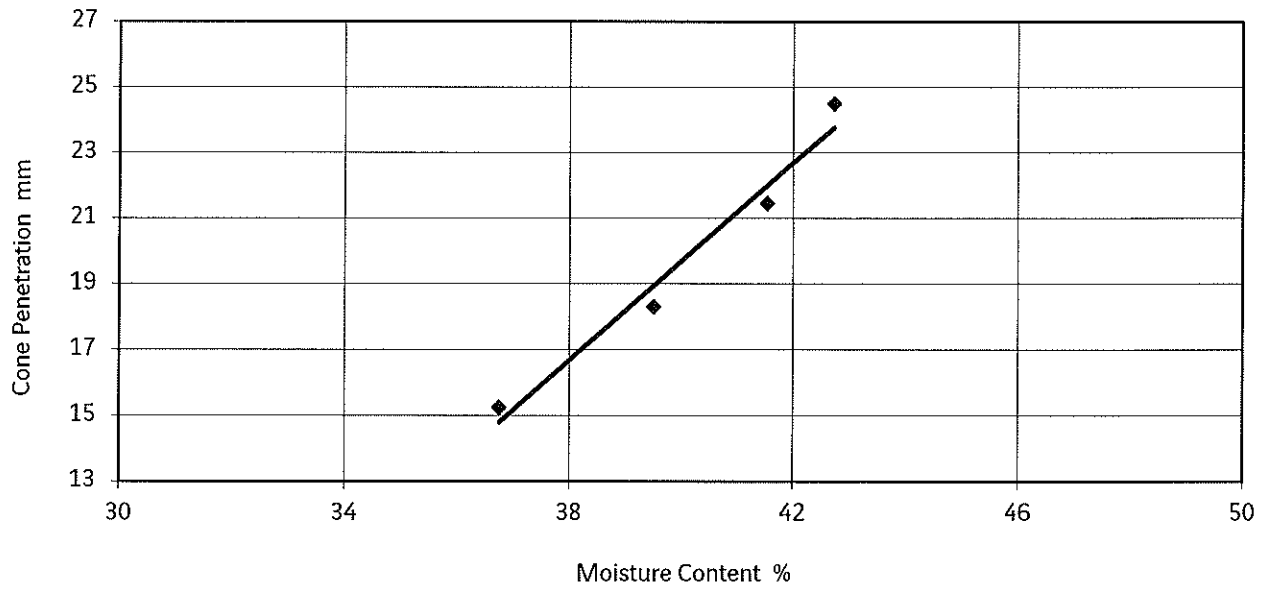


Natural moisture content:	15%	Percentage retained on 425µm sieve:	14%
Liquid limit:	22%	Preparation of sample: Wet sieve	
Plastic limit:	18%	Remarks:	
Plasticity index:	4%		
Moisture content of soil passing 425µm	18%		
Liquidity index:	-0.04		

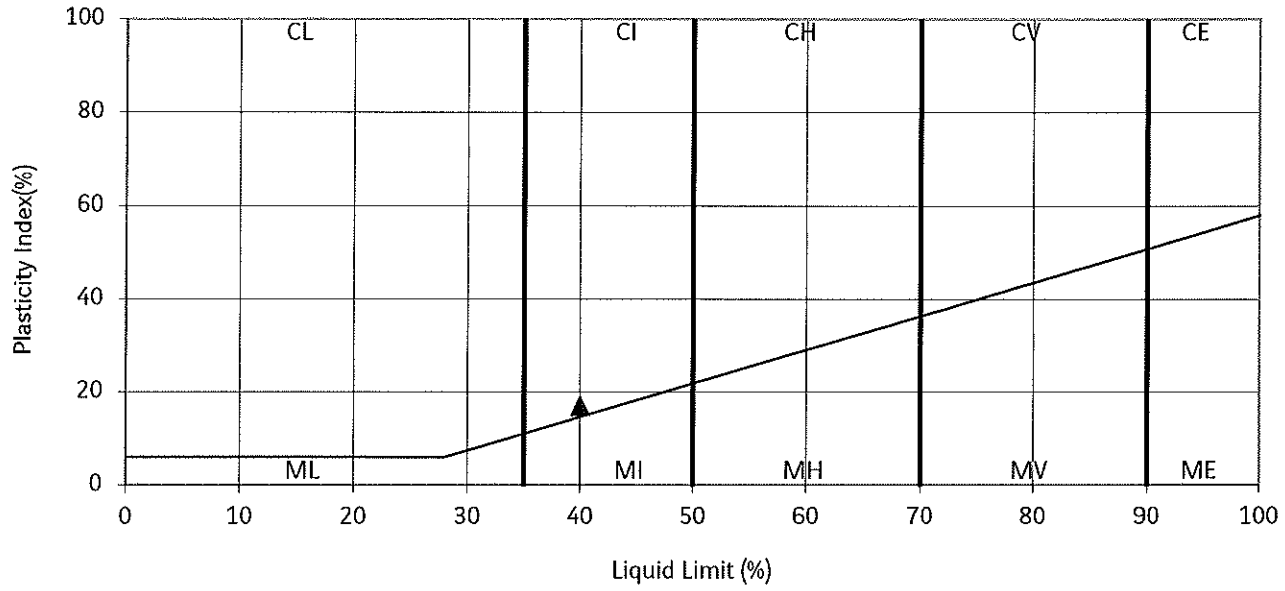


Approved by:	Leeds Laboratory	Report No.: LT1468	
Sushil Sharda		Page 11 of 45	Print date 15/09/2014
	Revision No. 2.07	Issue Date 19/11/2012	SOIL ENGINEERING Part of the Bachy Soletanche Group

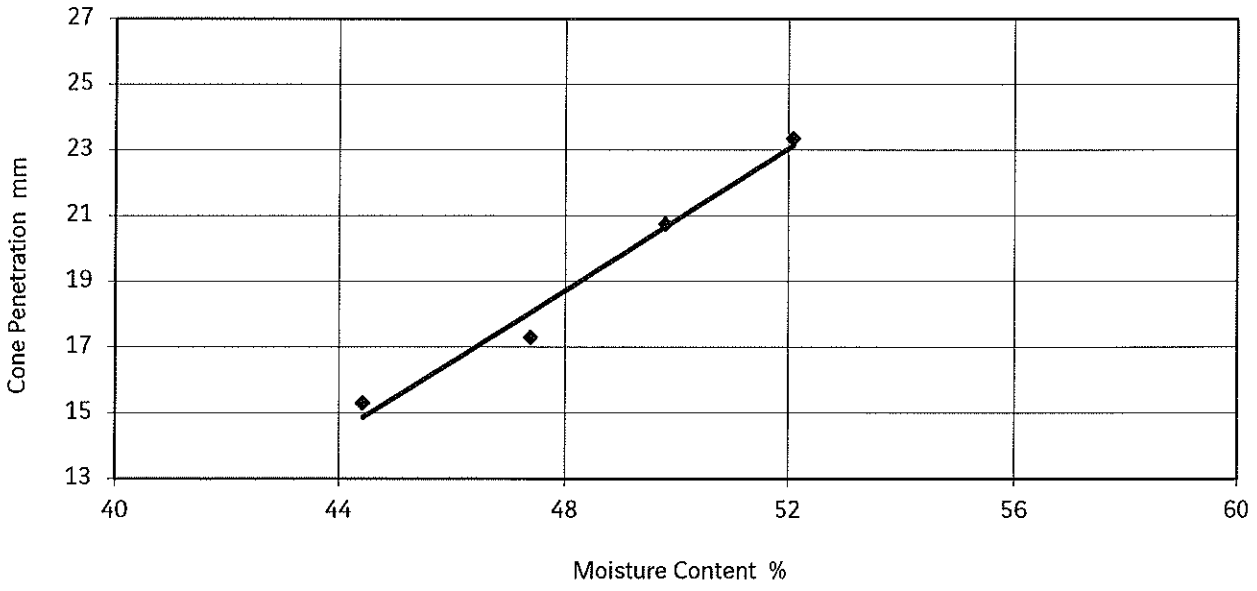
Project Name	Dinah_s Hollow and Melbury Church Phase 2 GI	**Liquid And Plastic Limit Test**	Hole ID BH2-4
Project No.	LT1468		Sample Depth 5.00m
Engineer	ESG Ltd		Sample Number 11
Employer	ESG Ltd	Test Method: BS1377: Part 2: 1990: Clause 4.3 and 5	Sample Type D
Description	Greenish brown sandy CLAY		Specimen Depth 5.00m
			Specimen Number 1



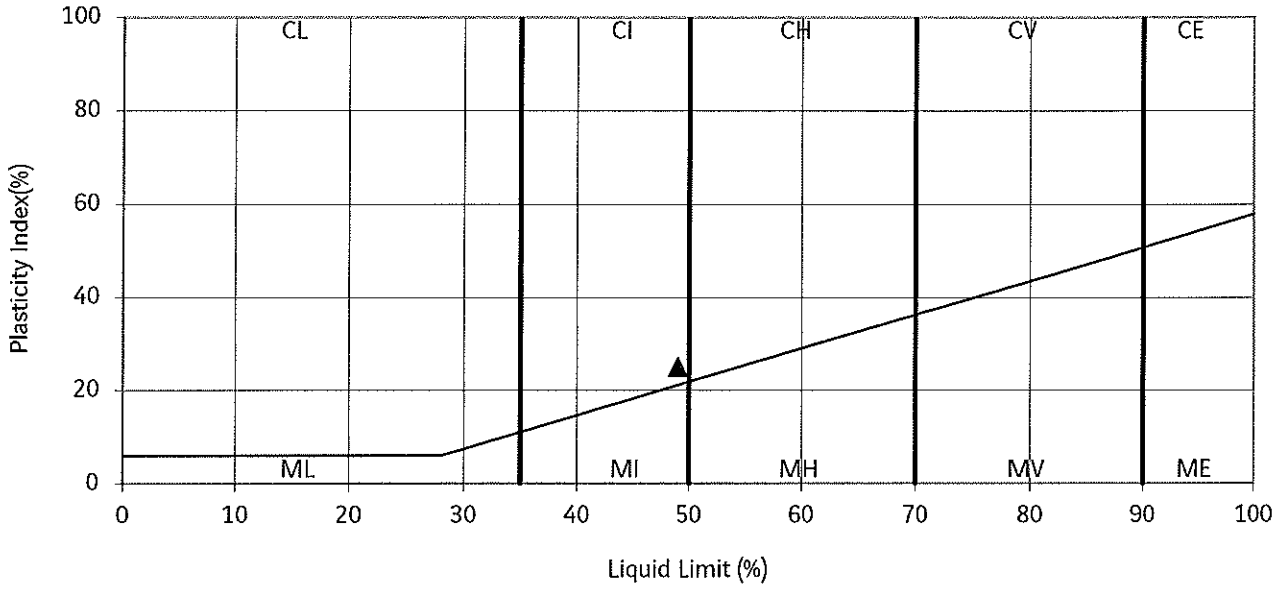
Natural moisture content:	23%	Estimated percentage retained on 425µm sieve:	0%
Liquid limit:	40%	Preparation of sample: Natural	
Plastic limit:	23%	Remarks:	
Plasticity index:	17%		
Moisture content of soil passing 425µm	23%		
Liquidity index:	0.00		



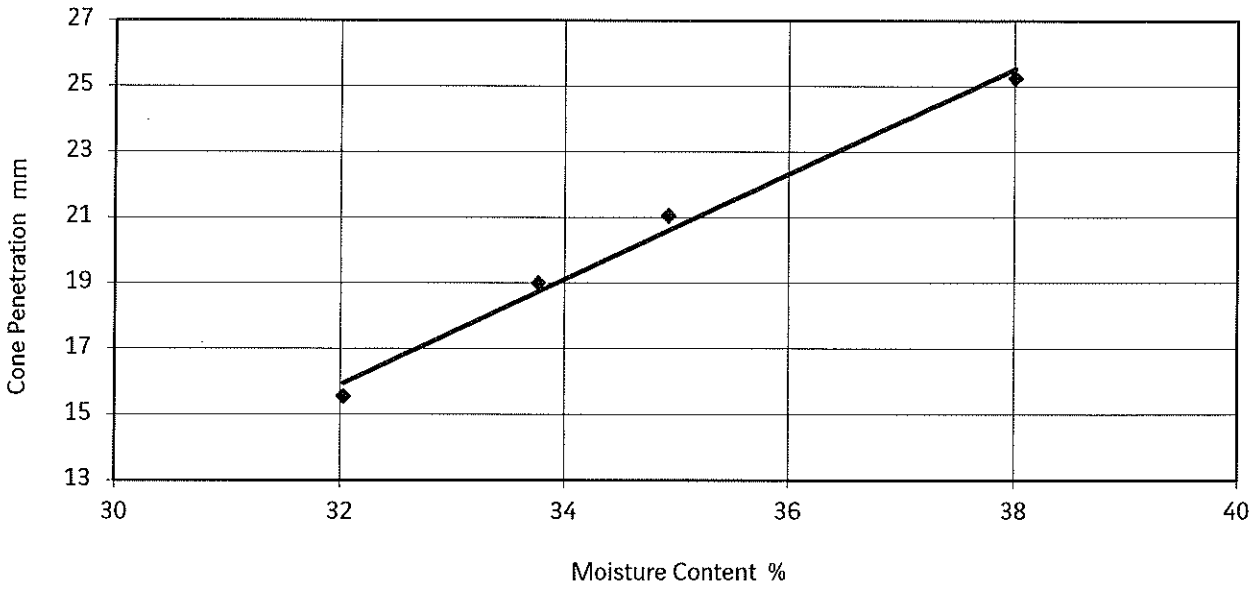
Project Name	Dinah_s Hollow and Melbury Church Phase 2 GI	**Liquid And Plastic Limit Test**	Hole ID BH2-4
Project No.	LT1468		Sample Depth 6.00m
Engineer	ESG Ltd		Sample Number 13
Employer	ESG Ltd	Test Method: BS1377: Part 2: 1990: Clause 4.3 and 5	Sample Type UT
Description	Light brown clayey SAND		Specimen Depth 6.06m
			Specimen Number 1



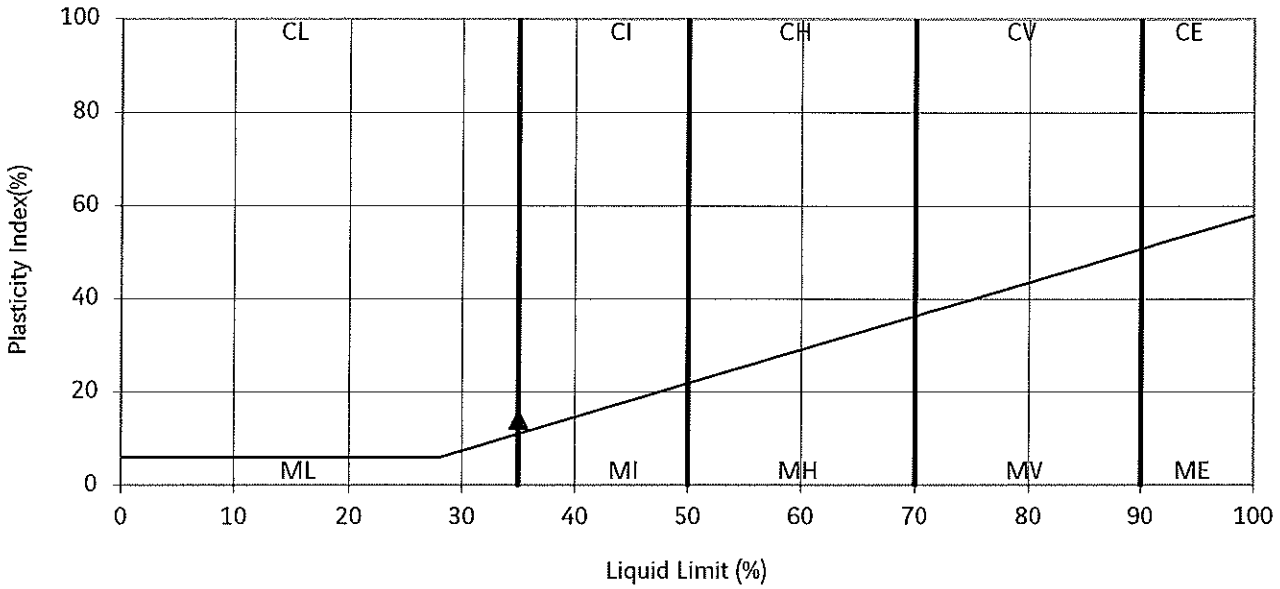
Natural moisture content:	26%	Estimated percentage retained on 425µm sieve:	0%
Liquid limit:	49%	Preparation of sample: Natural	
Plastic limit:	24%	Remarks:	
Plasticity index:	25%		
Moisture content of soil passing 425µm	26%		
Liquidity index:	0.10		



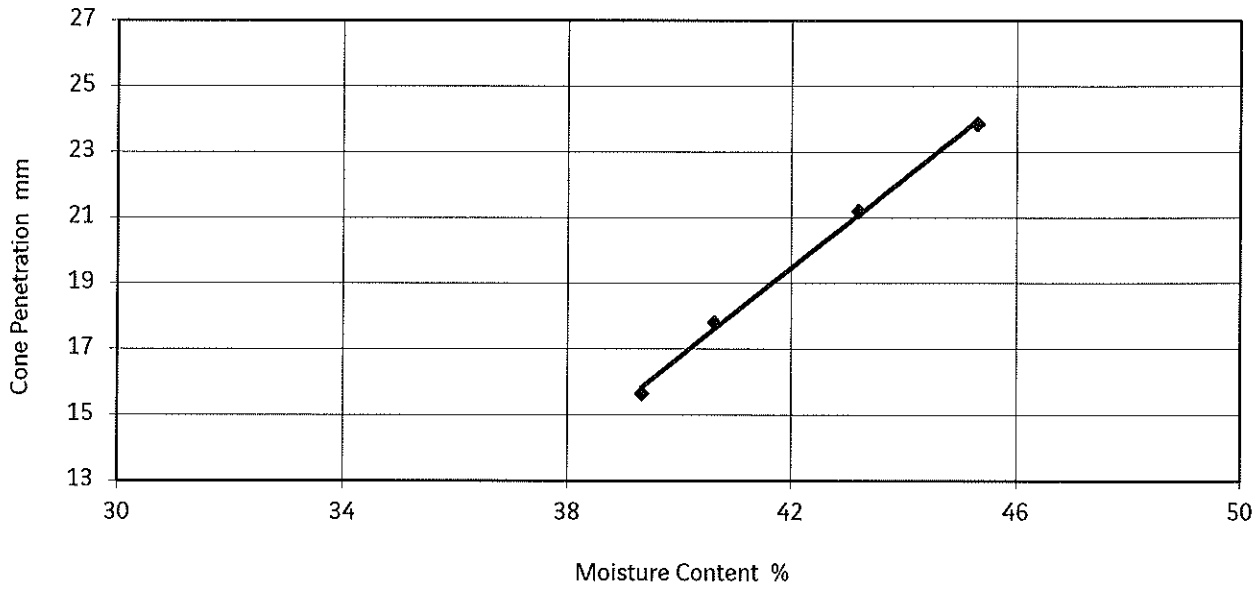
Project Name	Dinah_s Hollow and Melbury Church Phase 2 GI	**Liquid And Plastic Limit Test**	Hole ID BH2-5
Project No.	LT1468		Sample Depth 2.55m
Engineer	ESG Ltd		Sample Number 6
Employer	ESG Ltd	Test Method: BS1377: Part 2: 1990: Clause 4.3 and 5	Sample Type D
Description	Greenish brown slightly gravelly sandy CLAY		Specimen Depth 2.55m
			Specimen Number 1



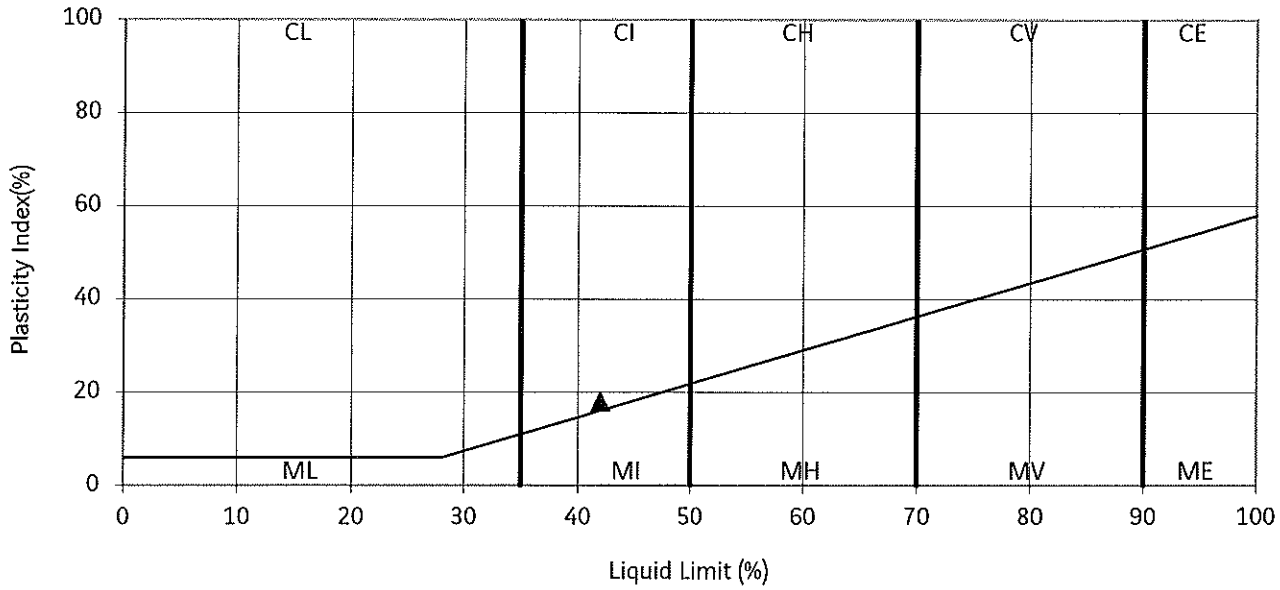
Natural moisture content:	26%	Estimated percentage retained on 425µm sieve:	35%
Liquid limit:	35%	Preparation of sample: Natural	
Plastic limit:	21%	Remarks:	
Plasticity index:	14%		
Moisture content of soil passing 425µm	40%		
Liquidity index:	1.37		



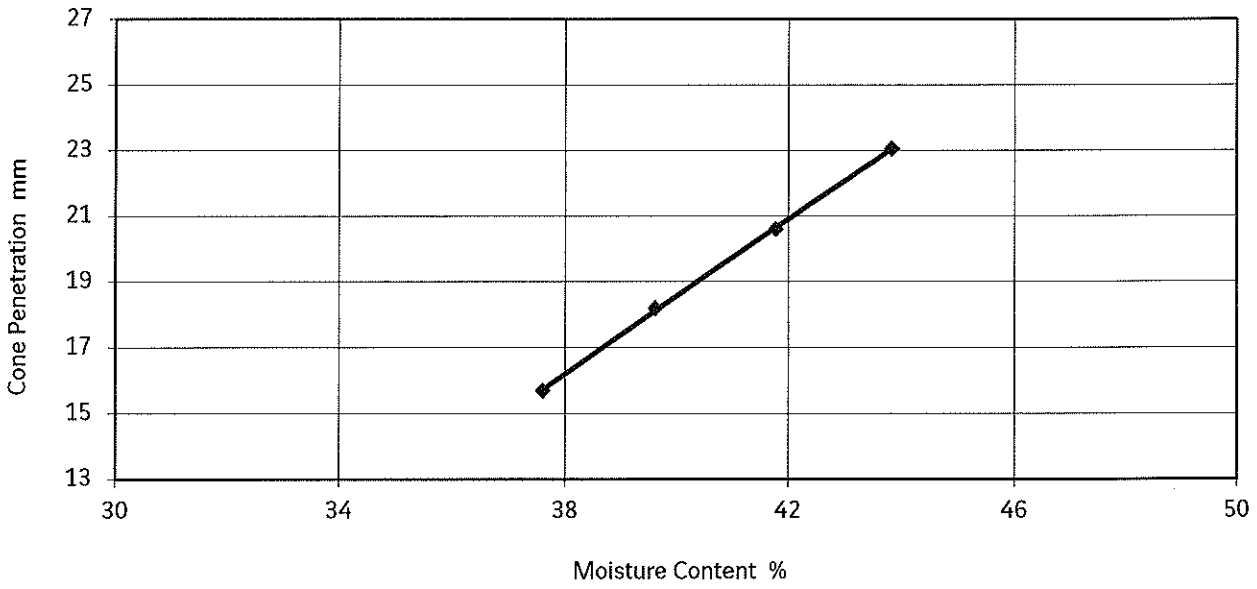
Project Name	Dinah_s Hollow and Melbury Church Phase 2 GI	**Liquid And Plastic Limit Test**	Hole ID BH2-5
Project No.	LT1468		Sample Depth 4.50m
Engineer	ESG Ltd		Sample Number 10
Employer	ESG Ltd	Test Method: BS1377: Part 2: 1990: Clause 4.3 and 5	Sample Type UT
Description	Light brown very sandy CLAY.		Specimen Depth 4.60m
			Specimen Number 1



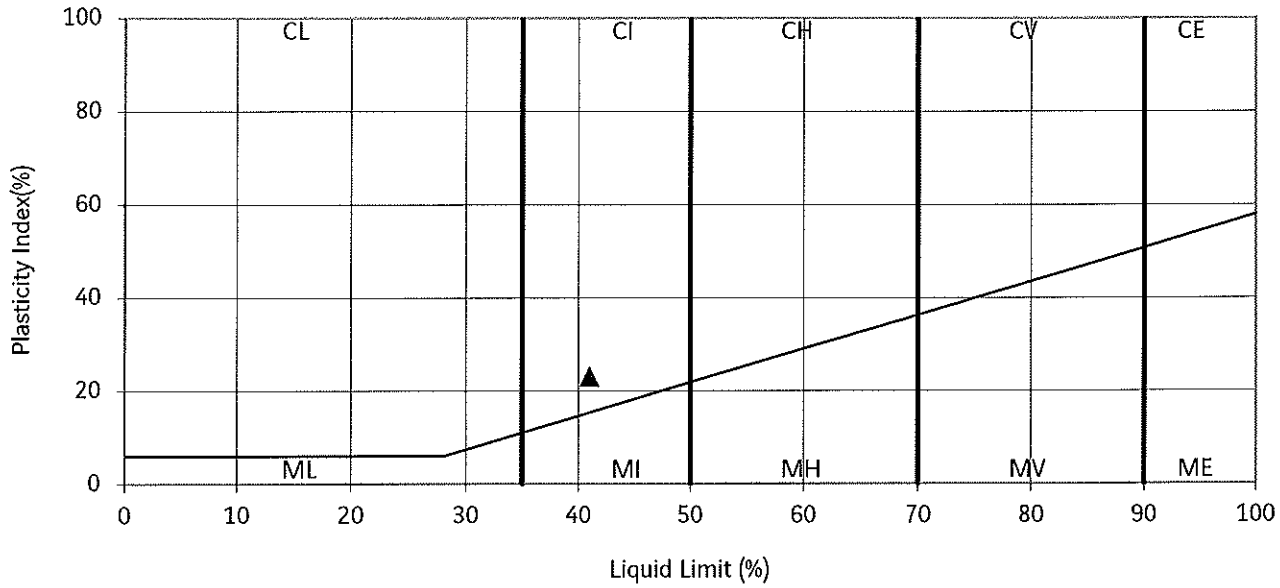
Natural moisture content:	28%	Estimated percentage retained on 425µm sieve:	0%
Liquid limit:	42%	Preparation of sample: Natural	
Plastic limit:	24%	Remarks:	
Plasticity index:	18%		
Moisture content of soil passing 425µm	28%		
Liquidity index:	0.23		



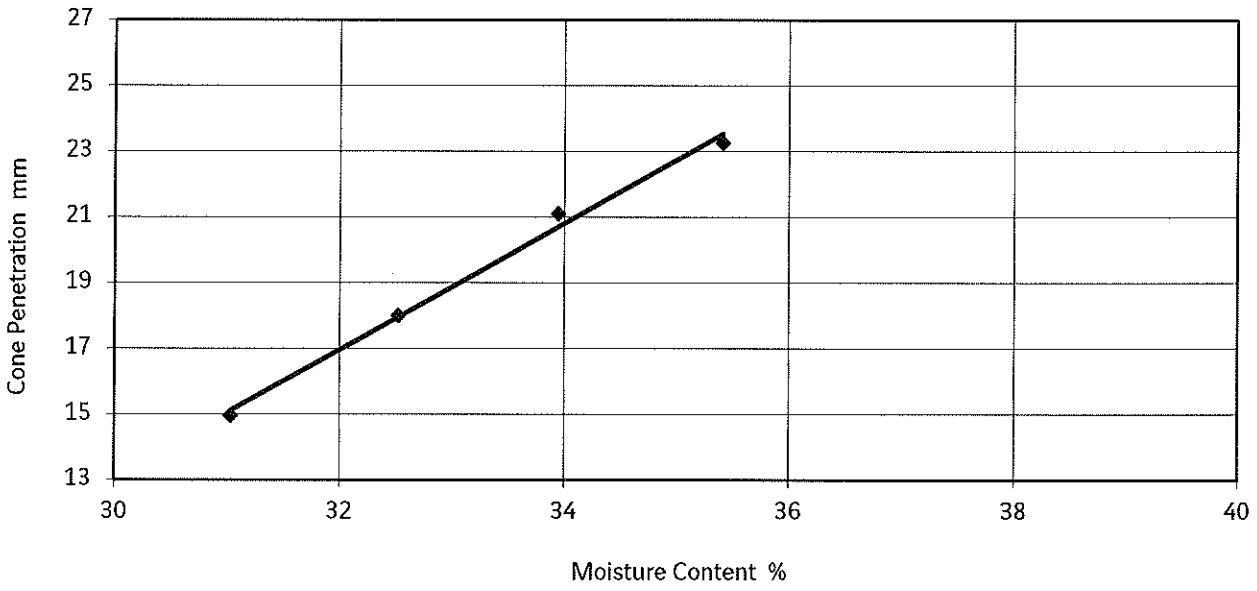
Project Name	Dinah_s Hollow and Melbury Church Phase 2 GI	**Liquid And Plastic Limit Test**	Hole ID BH2-5
Project No.	LT1468		Sample Depth 8.50m
Engineer	ESG Ltd		Sample Number 19
Employer	ESG Ltd	Test Method: BS1377: Part 2: 1990: Clause 4.3 and 5	Sample Type WS
Description	Greenish brown sandy CLAY		Specimen Depth 8.50m
			Specimen Number 1



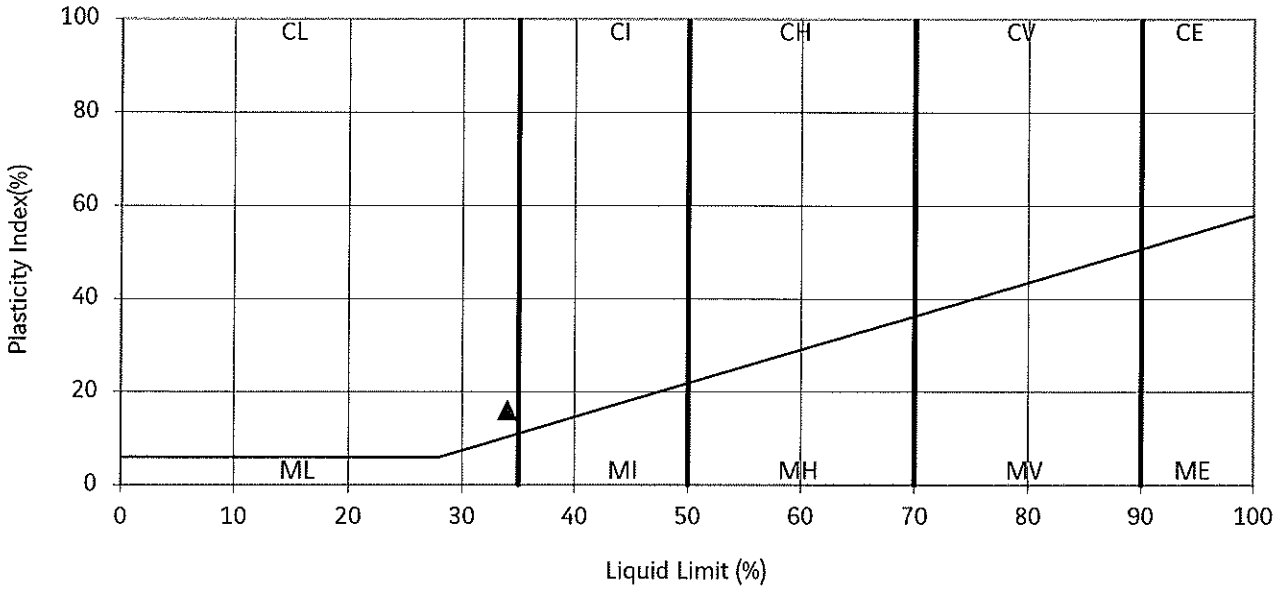
Natural moisture content:	21%	Estimated percentage retained on 425µm sieve:	0%
Liquid limit:	41%	Preparation of sample: Natural	
Plastic limit:	18%	Remarks:	
Plasticity index:	23%		
Moisture content of soil passing 425µm	21%		
Liquidity index:	0.11		



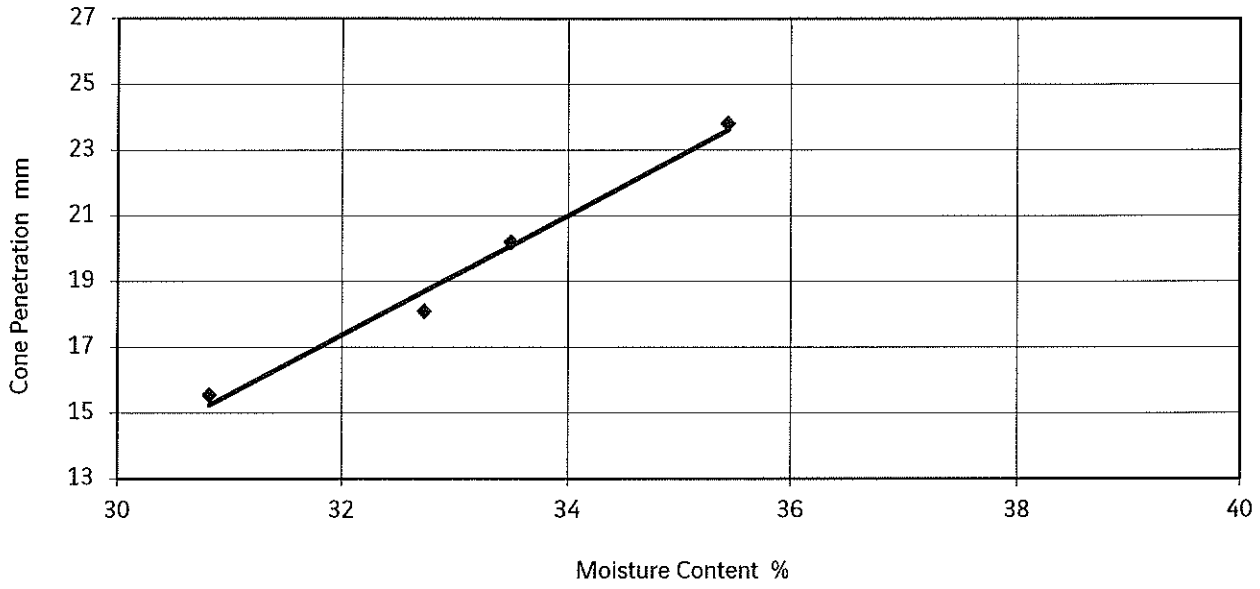
Project Name	Dinah_s Hollow and Melbury Church Phase 2 GI	**Liquid And Plastic Limit Test**	Hole ID BH2-6
Project No.	LT1468		Sample Depth 1.20m
Engineer	ESG Ltd		Sample Number 2
Employer	ESG Ltd	Test Method: BS1377: Part 2: 1990: Clause 4.3 and 5	Sample Type UT
Description	Greenish brown clayey SAND with rare fine angular gravel		Specimen Depth 1.20m
			Specimen Number 1



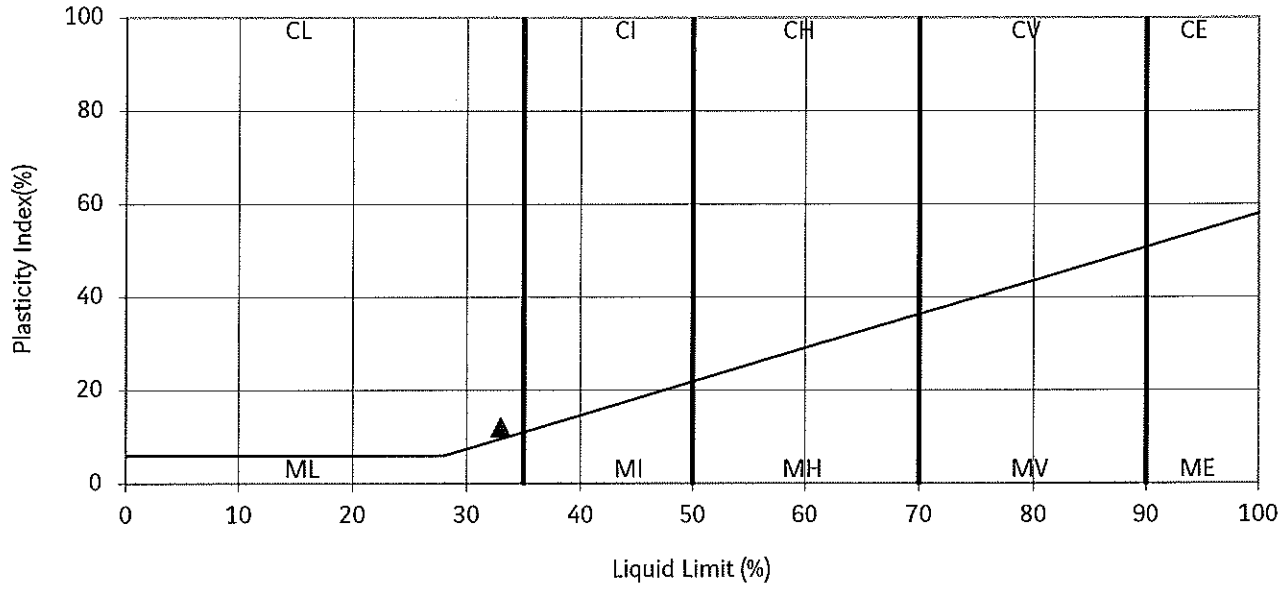
Natural moisture content:	20%	Estimated percentage retained on 425µm sieve:	1%
Liquid limit:	34%	Preparation of sample: Natural	
Plastic limit:	18%	Remarks:	
Plasticity index:	16%		
Moisture content of soil passing 425µm	20%		
Liquidity index:	0.14		



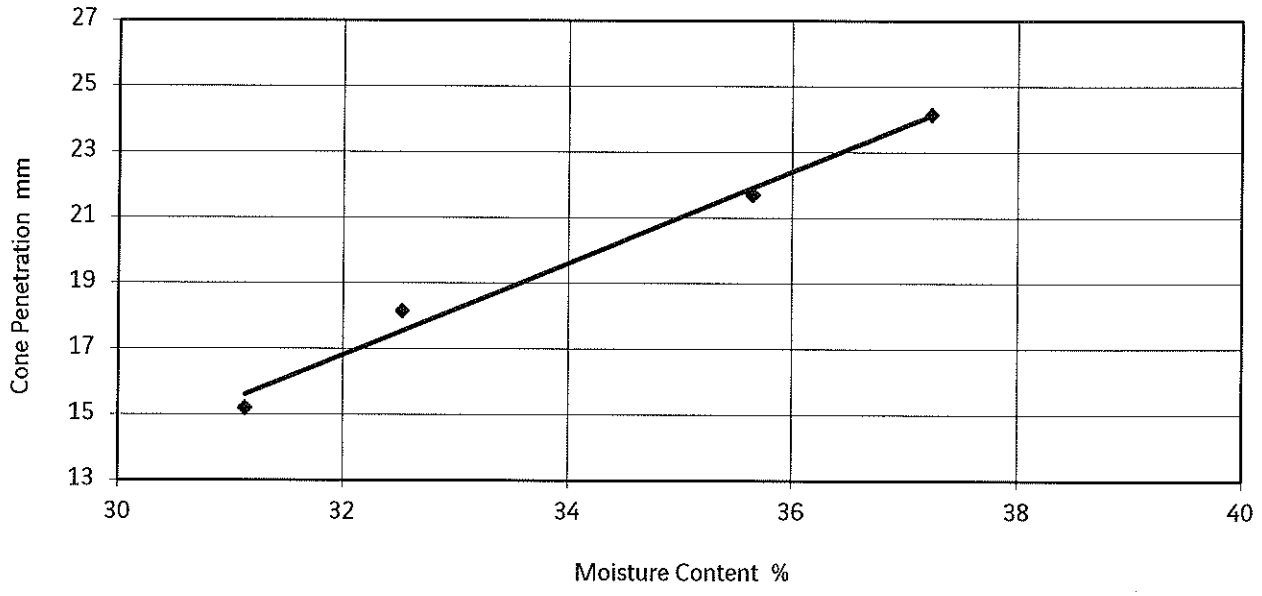
Project Name	Dinah_s Hollow and Melbury Church Phase 2 GI	**Liquid And Plastic Limit Test**	Hole ID BH2-7
Project No.	LT1468		Sample Depth 1.20m
Engineer	ESG Ltd		Sample Number 2
Employer	ESG Ltd	Test Method: BS1377: Part 2: 1990: Clause 4.3 and 5	Sample Type UT
Description	Yellowish brown clayey SAND		Specimen Depth 1.37m
			Specimen Number 1



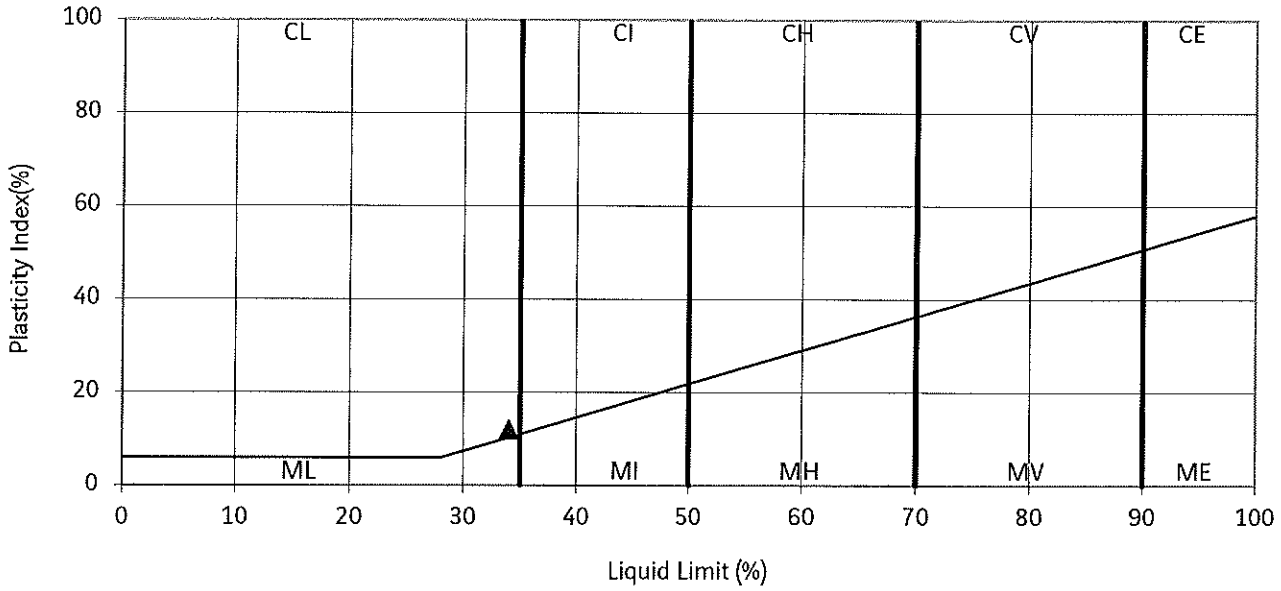
Natural moisture content:	22%	Estimated percentage retained on 425µm sieve:	0%
Liquid limit:	33%	Preparation of sample: Natural	
Plastic limit:	21%	Remarks:	
Plasticity index:	12%		
Moisture content of soil passing 425µm	22%		
Liquidity index:	0.05		



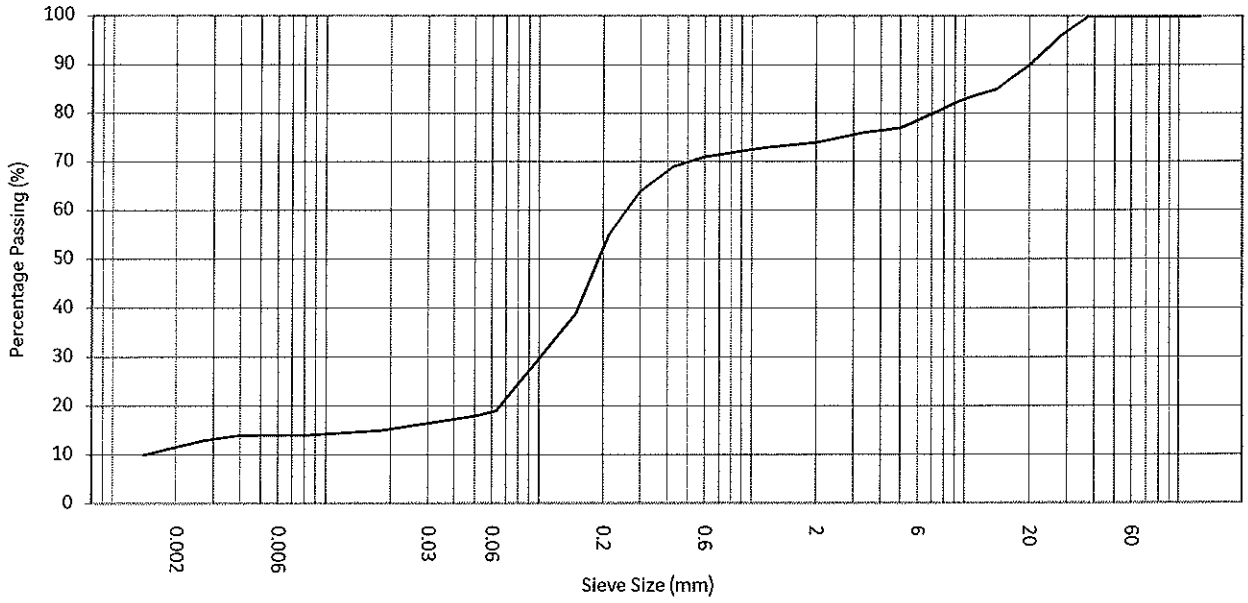
Project Name	Dinah_s Hollow and Melbury Church Phase 2 GI	**Liquid And Plastic Limit Test**	Hole ID BH2-7
Project No.	LT1468		Sample Depth 4.50m
Engineer	ESG Ltd		Sample Number 9
Employer	ESG Ltd	Test Method: BS1377: Part 2: 1990: Clause 4.3 and 5	Sample Type UT
Description	Yellowish brown clayey SAND		Specimen Depth 4.65m
			Specimen Number 1



Natural moisture content:	20%	Estimated percentage retained on 425µm sieve:	0%
Liquid limit:	34%	Preparation of sample: Natural	
Plastic limit:	22%	Remarks:	
Plasticity index:	12%		
Moisture content of soil passing 425µm	20%		
Liquidity index:	-0.20		



Project Name	Dinah_s Hollow and Melbury Church Phase 2 GI	**Particle Size Distribution**	Hole ID BH2-2
Project No.	LT1468		Sample Depth 3.50m
Engineer	ESG Ltd		Sample Number 9
Employer	ESG Ltd	BS 1377: Part 2: 1990: 9.2, 9.5	Sample type WS
Description	Brown gravelly very sandy CLAY. Gravel is fine to coarse subangular		Specimen Depth 3.50m
			Specimen No. 1



PARTICLE SIZE	%
Clay:	11
Silt:	7
Sand:	56
Gravel:	26
Cobbles:	0

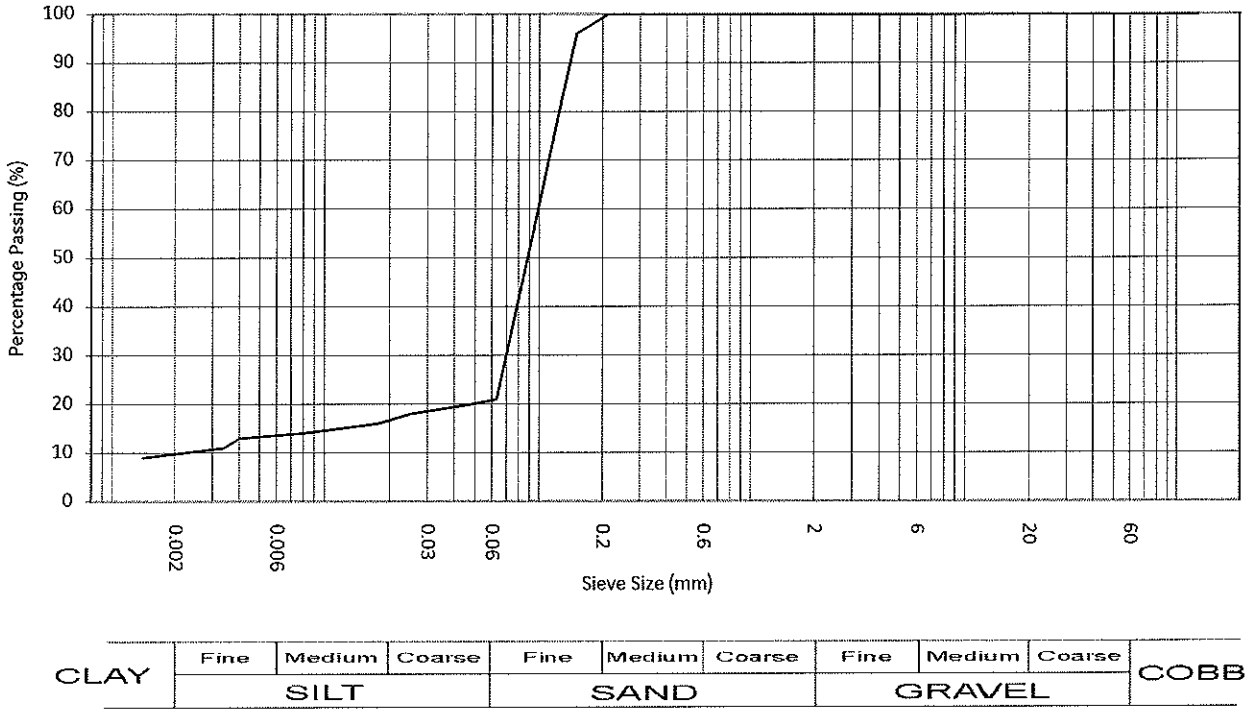
General remarks

Dispersant used when soaking specimen.

Particle density: 2.65Mg/m³ Assumed

WET SIEVE DATA				SEDIMENTATION DATA	
Sieve size mm	Cumulative % passing	Sieve size mm	Cumulative % passing	Equivalent particle diameter mm	Cumulative % passing
		14.0	85		
		10.0	83	0.0503	18
		6.3	79	0.0254	16
125.0	100	5.0	77	0.0181	15
90.0	100	3.35	76	0.0081	14
75.0	100	2.00	74	0.0040	14
63.0	100	1.18	73	0.0027	13
50.0	100	0.600	71	0.0014	10
37.5	100	0.425	69		
28.0	96	0.300	64		
20.0	90	0.212	55		
		0.150	39		
		0.063	19		

Project Name	Dinah_s Hollow and Melbury Church Phase 2 GI	**Particle Size Distribution**	Hole ID BH2-2
Project No.	LT1468		Sample Depth 7.50m
Engineer	ESG Ltd		Sample Number 17
Employer	ESG Ltd	BS 1377: Part 2: 1990: 9.2, 9.5	Sample type WS (B)
Description	Greenish brown clayey SAND		Specimen Depth 7.50m
			Specimen No. 2



PARTICLE SIZE	%
Clay:	10
Silt:	11
Sand:	80
Gravel:	0
Cobbles:	0

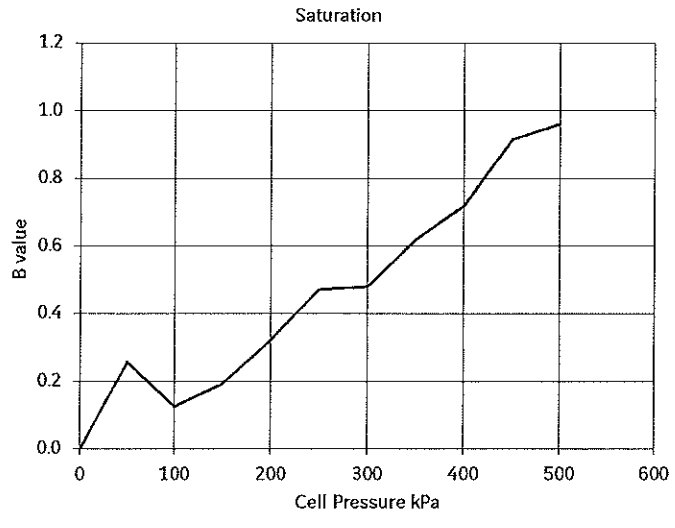
General remarks

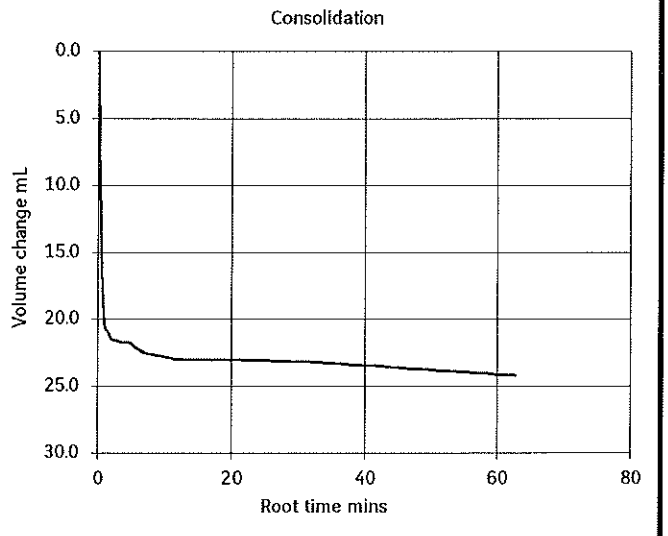
Particle density: 2.65Mg/m³ Assumed

WET SIEVE DATA				SEDIMENTATION DATA	
Sieve size mm	Cumulative % passing	Sieve size mm	Cumulative % passing	Equivalent particle diameter mm	Cumulative % passing
		14.0	100		
		10.0	100	0.0488	20
		6.3	100	0.0248	18
125.0	100	5.0	100	0.0177	16
90.0	100	3.35	100	0.0080	14
75.0	100	2.00	100	0.0040	13
63.0	100	1.18	100	0.0034	11
50.0	100	0.600	100	0.0014	9
37.5	100	0.425	100		
28.0	100	0.300	100		
20.0	100	0.212	100		
		0.150	96		
		0.063	21		

Project Name	Dinah_s Hollow and Melbury Church Phase 2 GI	**Consolidated Drained Triaxial Compression With Volume Change Measurement**	Hole ID BH2-2
Project No.	LT1468		Sample Depth 4.50m
Engineer	ESG Ltd		Sample Number 9
Employer	ESG Ltd	BS1377: Part 8: 1990: Clauses 4, 5, 6 and 8	Sample Type UT
Description	Greenish light brown SAND		Specimen Depth 4.65m
			Specimen Number 1

SPECIMEN INITIAL DIMENSIONS		
Test number		1
Specimen diameter	mm	103.25
Specimen length	mm	177.00
Density	Mg/m^3	1.63
Moisture content	%	16
Dry density	Mg/m^3	1.40
SATURATION STAGE		
Initial pore water pressure	kPa	2.5
Saturated pore water pressure	kPa	490.6
Final cell pressure	kPa	500
B value		0.962
CONSOLIDATION STAGE		
Cell pressure	kPa	530
Back pressure	kPa	440
Effective cell pressure	kPa	90
Initial pore water pressure	kPa	515.4
Final pore water pressure	kPa	441
Pore pressure dissipation	%	98.7
c_{vi}	$m^2/year$	3020.56
m_{vi}	m^2/MN	0.22
SPECIMEN AFTER CONSOLIDATION		
Density	Mg/m^3	1.85
Moisture content	%	30
Dry density	Mg/m^3	1.43

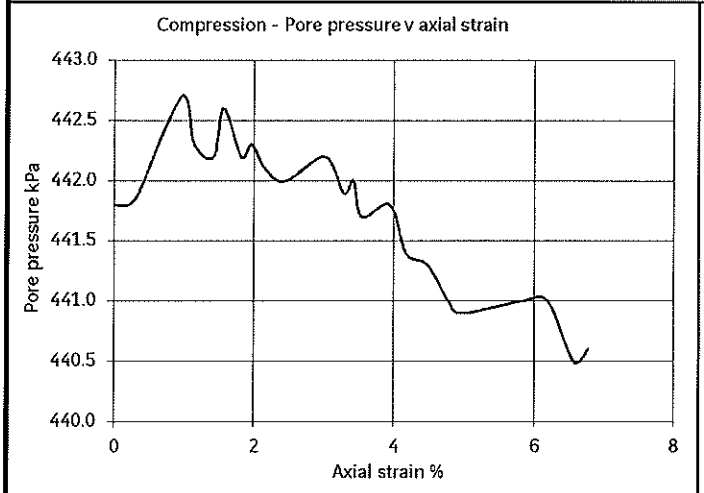


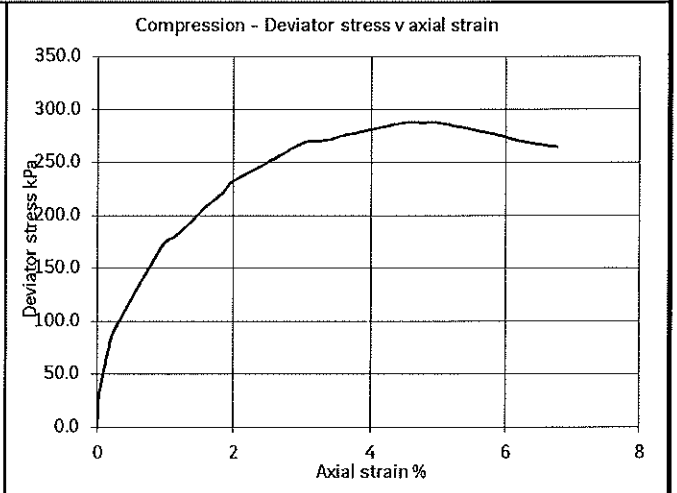


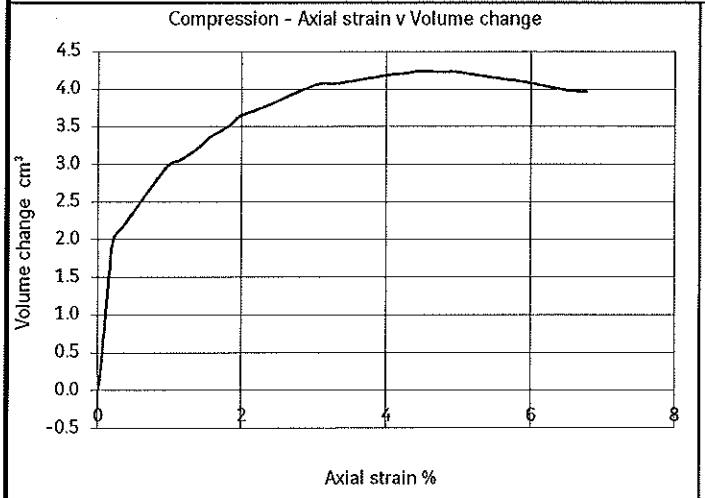
Remarks: Specimen orientation Vertical
Specimen condition for test Undisturbed
Saturation with 50kPa increments with a differential pressure of 10kPa
Drainage from both ends

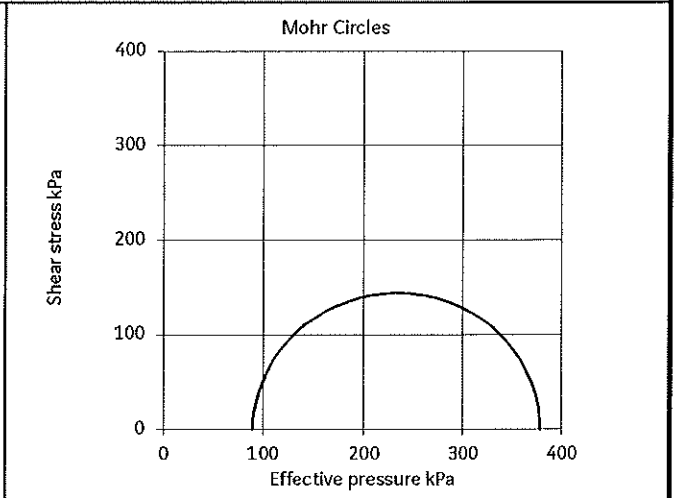
Project Name	Dinah_s Hollow and Melbury Church Phase 2 GI	**Consolidated Drained Triaxial Compression With Volume Change Measurement**	Hole ID BH2-2
Project No.	LT1468		Sample Depth 4.50m
Engineer	ESG Ltd		Sample Number 9
Employer	ESG Ltd	BS1377: Part 8: 1990: Clauses 4, 5, 6 and 8	Sample Type UT
Description	Greenish light brown SAND		Specimen Depth 4.65m
			Specimen Number 1

COMPRESSION STAGE			
Test number			1
Cell pressure		kPa	530
Initial pore water pressure		kPa	442
Initial effective pressure		kPa	90
Failure conditions at			Maximum deviator stress
Axial strain at failure		%	5.0
Maximum deviator stress	$\sigma_1-\sigma_3$	kPa	288
Pore water pressure at failure	σ	kPa	441
Effective major principal stress	σ_1'	kPa	376.89
Effective minor principal stress	σ_3'	kPa	89.10
Volumetric strain		%	0.18
Membrane correction		kPa	0.48
Filter drain correction not applicable		kPa	0.0





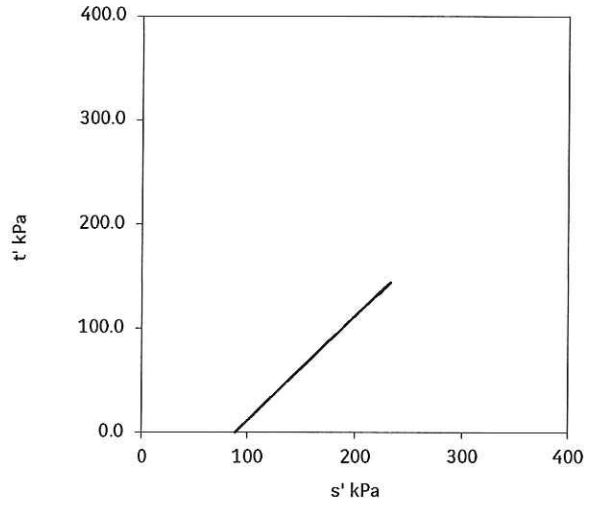


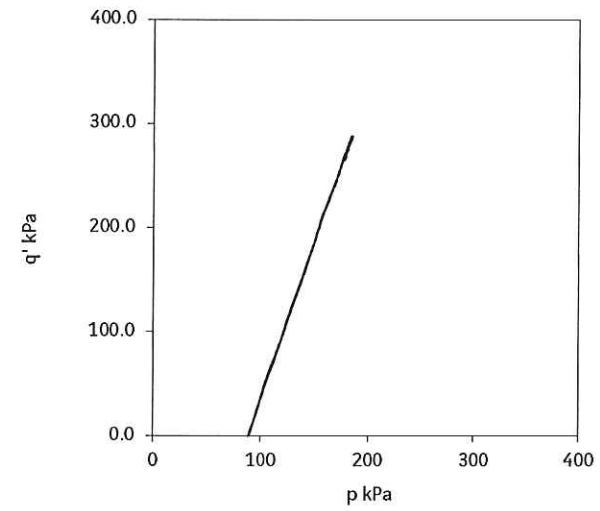


Project Name	Dinah_s Hollow and Melbury Church Phase 2 GI	**Consolidated Drained Triaxial Compression With Volume Change Measurement**	Hole ID BH2-2
Project No.	LT1468		Sample Depth 4.50m
Engineer	ESG Ltd		Sample Number 9
Employer	ESG Ltd	BS1377: Part 8: 1990: Clauses 4, 5, 6 and 8	Sample Type UT
Description	Greenish light brown SAND		Specimen Depth 4.65m
			Specimen Number 1

SPECIMEN AFTER TEST			
Test number		1	
Mode of failure		Compound 	
Final moisture content	%	30	
Final bulk density	Mg/m^3	1.85	
Final dry density	Mg/m^3	1.43	

ADDITIONAL SPECIMEN DETAILS			
Rate of strain	%/hour	0.25	
Failure criterion		Maximum deviator stress	

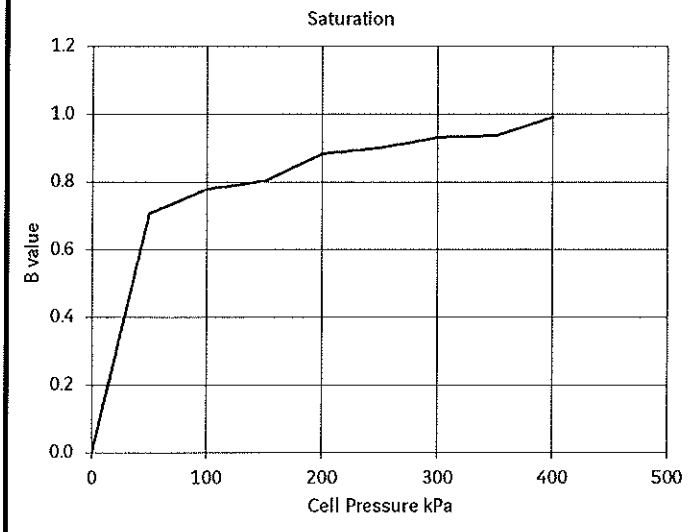


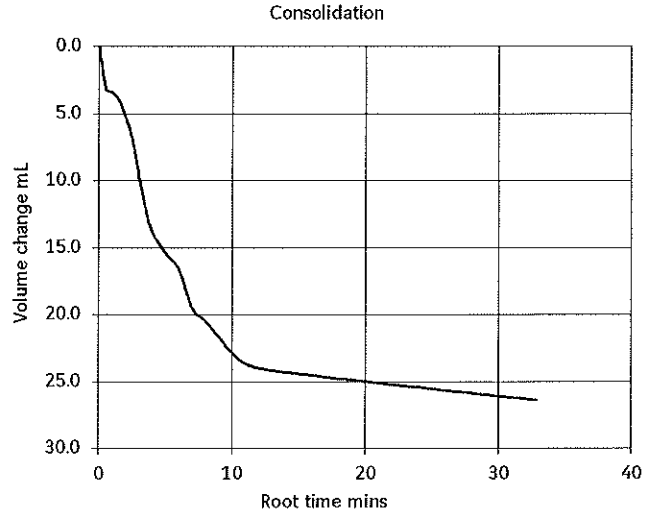


REMARKS

Project Name	Dinah_s Hollow and Melbury Church Phase 2 GI	**Consolidated Drained Triaxial Compression With Volume Change Measurement**	Hole ID BH2-3
Project No.	LT1468		Sample Depth 3.00m
Engineer	ESG Ltd		Sample Number 7
Employer	ESG Ltd	BS1377: Part 8: 1990: Clauses 4, 5, 6 and 8	Sample Type UT
Description	Greenish brown slightly clayey SAND		Specimen Depth 3.23m
			Specimen Number 1

SPECIMEN INITIAL DIMENSIONS		
Test number		1
Specimen diameter	mm	101.88
Specimen length	mm	196.63
Density	Mg/m^3	2.01
Moisture content	%	26
Dry density	Mg/m^3	1.60
SATURATION STAGE		
Initial pore water pressure	kPa	-0.5
Saturated pore water pressure	kPa	389.4
Final cell pressure	kPa	400
B value		0.992
CONSOLIDATION STAGE		
Cell pressure	kPa	405
Back pressure	kPa	340
Effective cell pressure	kPa	65
Initial pore water pressure	kPa	400
Final pore water pressure	kPa	339.6
Pore pressure dissipation	%	100.7
c_{vi}	$m^2/year$	45.48
m_{vi}	m^2/MN	0.27
SPECIMEN AFTER CONSOLIDATION		
Density	Mg/m^3	2.04
Moisture content	%	25
Dry density	Mg/m^3	1.63

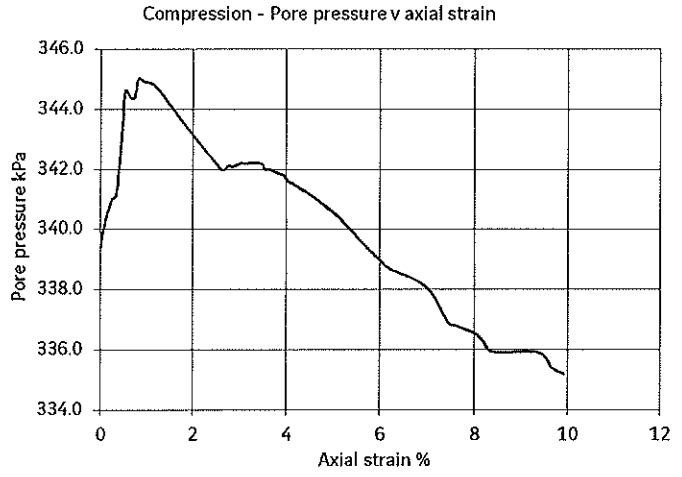


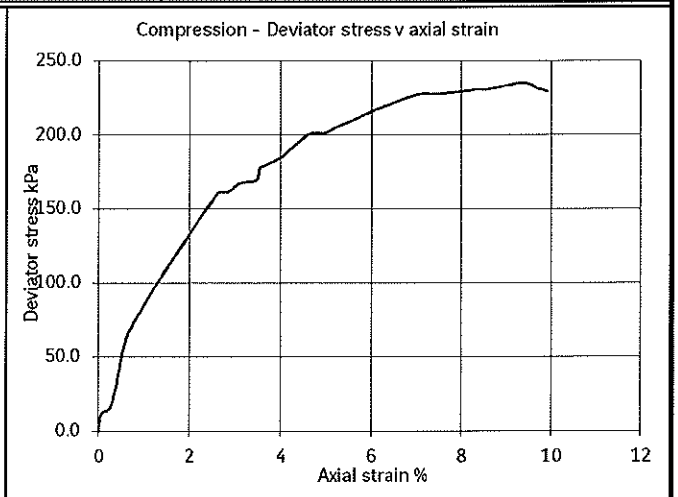


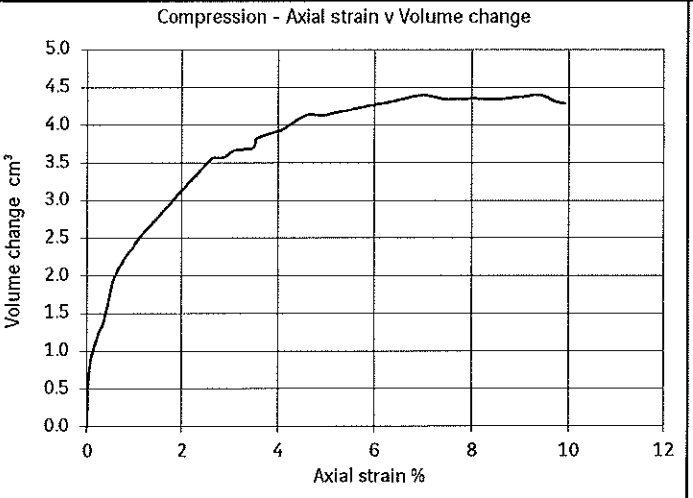
Remarks: Specimen orientation Vertical
Specimen condition for test Undisturbed
Saturation with 50kPa increments with a differential pressure of 10kPa
Drainage from both ends

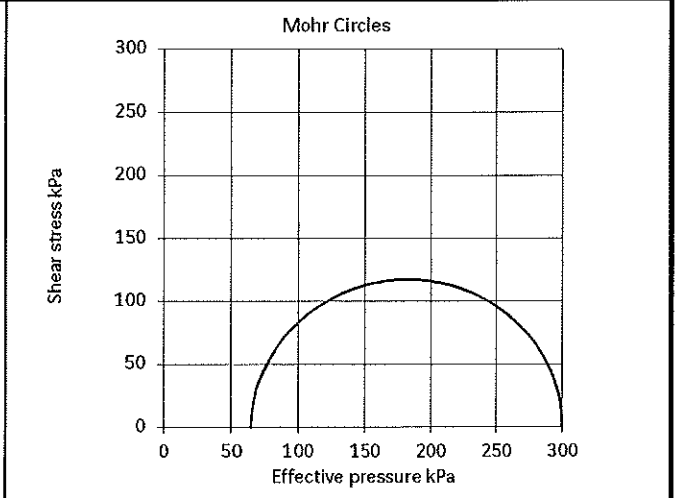
Project Name	Dinah_s Hollow and Melbury Church Phase 2 GI	**Consolidated Drained Triaxial Compression With Volume Change Measurement**	Hole ID BH2-3
Project No.	LT1468		Sample Depth 3.00m
Engineer	ESG Ltd		Sample Number 7
Employer	ESG Ltd	BS1377: Part 8: 1990: Clauses 4, 5, 6 and 8	Sample Type UT
Description	Greenish brown slightly clayey SAND		Specimen Depth 3.23m
			Specimen Number 1

COMPRESSION STAGE				
Test number			1	
Cell pressure		kPa	405	
Initial pore water pressure		kPa	339	
Initial effective pressure		kPa	65	
Failure conditions at			Maximum deviator stress	
Axial strain at failure		%	9.4	
Maximum deviator stress	$\sigma_1-\sigma_3$	kPa	235	
Pore water pressure at failure	σ	kPa	336	
Effective major principal stress	σ_1'	kPa	304.13	
Effective minor principal stress	σ_3'	kPa	69.10	
Volumetric strain		%	0.49	
Membrane correction		kPa	0.77	
Filter drain correction not applicable		kPa	0.0	

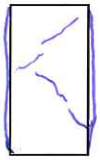




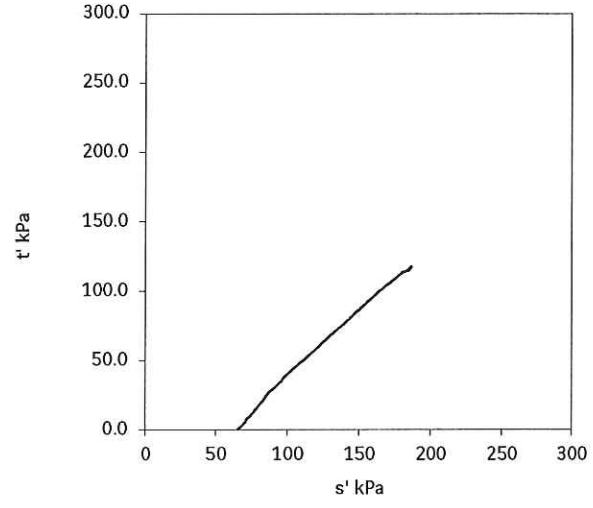


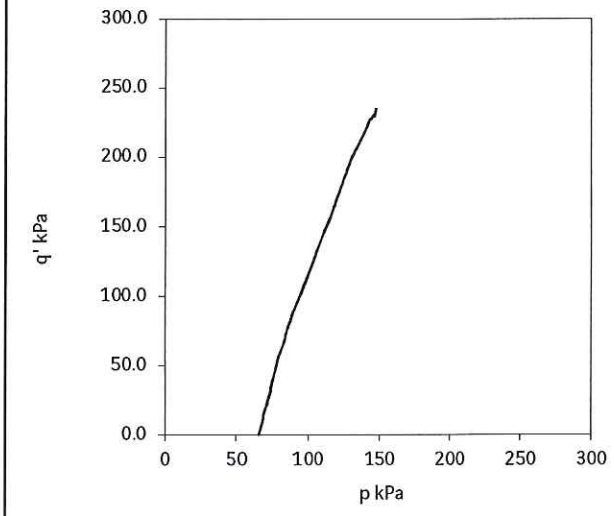


Project Name	Dinah_s Hollow and Melbury Church Phase 2 GI	**Consolidated Drained Triaxial Compression With Volume Change Measurement**	Hole ID BH2-3
Project No.	LT1468		Sample Depth 3.00m
Engineer	ESG Ltd		Sample Number 7
Employer	ESG Ltd	BS1377: Part 8: 1990: Clauses 4, 5, 6 and 8	Sample Type UT
Description	Greenish brown slightly clayey SAND		Specimen Depth 3.23m
			Specimen Number 1

SPECIMEN AFTER TEST			
Test number		1	
Mode of failure		Compound 	
Final moisture content	%	25	
Final bulk density	Mg/m^3	2.04	
Final dry density	Mg/m^3	1.63	

ADDITIONAL SPECIMEN DETAILS			
Rate of strain	%/hour	0.25	
Failure criterion		Maximum deviator stress	

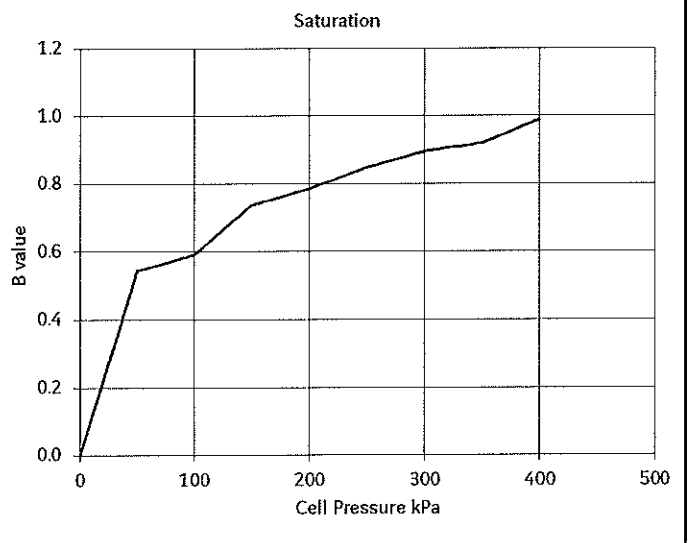


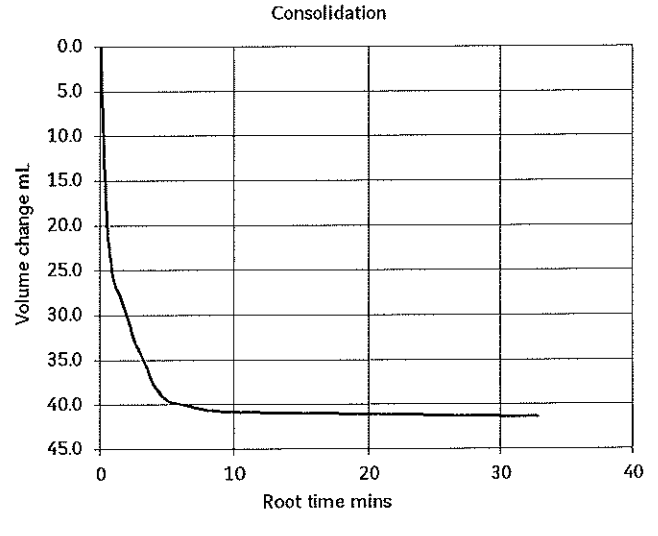


REMARKS

Project Name	Dinah_s Hollow and Melbury Church Phase 2 GI	**Consolidated Drained Triaxial Compression With Volume Change Measurement**	Hole ID BH2-3
Project No.	LT1468		Sample Depth 6.00m
Engineer	ESG Ltd		Sample Number 12
Employer	ESG Ltd	BS1377: Part 8: 1990: Clauses 4, 5, 6 and 8	Sample Type UT
Description	Yellowish brown slightly clayey SAND		Specimen Depth 6.09m
			Specimen Number 1

SPECIMEN INITIAL DIMENSIONS		
Test number		1
Specimen diameter	mm	103.33
Specimen length	mm	198.50
Density	Mg/m^3	1.88
Moisture content	%	26
Dry density	Mg/m^3	1.50
SATURATION STAGE		
Initial pore water pressure	kPa	0.2
Saturated pore water pressure	kPa	388.4
Final cell pressure	kPa	400
B value		0.99
CONSOLIDATION STAGE		
Cell pressure	kPa	450
Back pressure	kPa	340
Effective cell pressure	kPa	110
Initial pore water pressure	kPa	431.8
Final pore water pressure	kPa	339.4
Pore pressure dissipation	%	100.7
c_{vi}	$m^2/year$	203.79
m_{vi}	m^2/MN	0.27
SPECIMEN AFTER CONSOLIDATION		
Density	Mg/m^3	1.96
Moisture content	%	27
Dry density	Mg/m^3	1.54

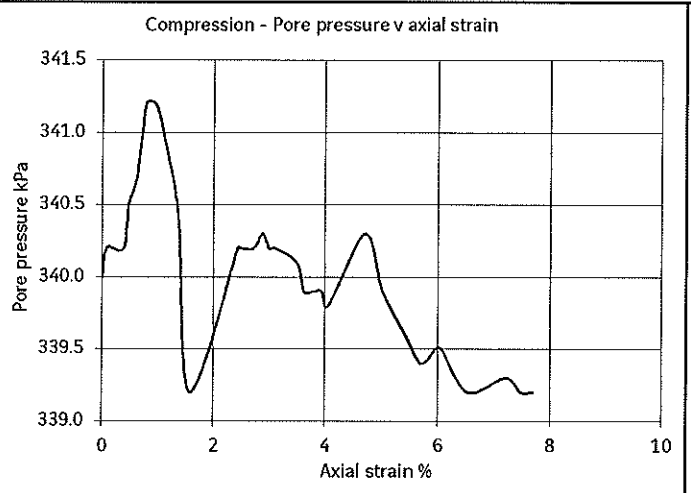


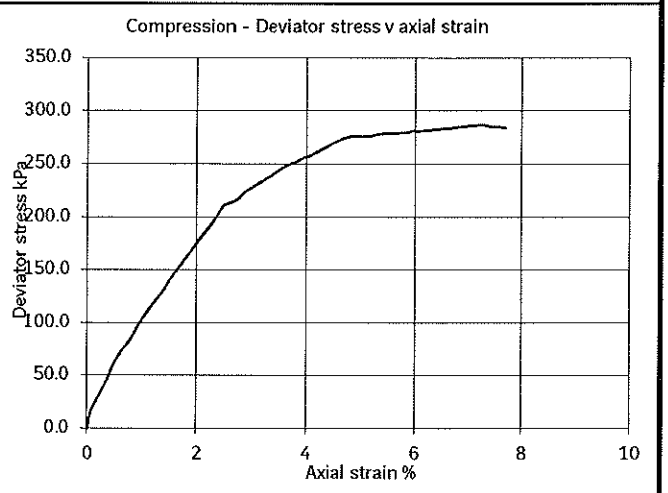


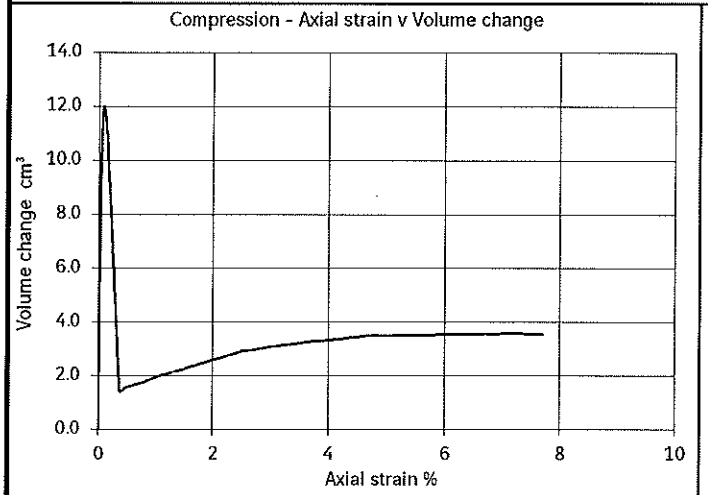
Remarks: Specimen orientation Vertical
Specimen condition for test Undisturbed
Saturation with 50kPa increments with a differential pressure of 10kPa
Drainage from both ends

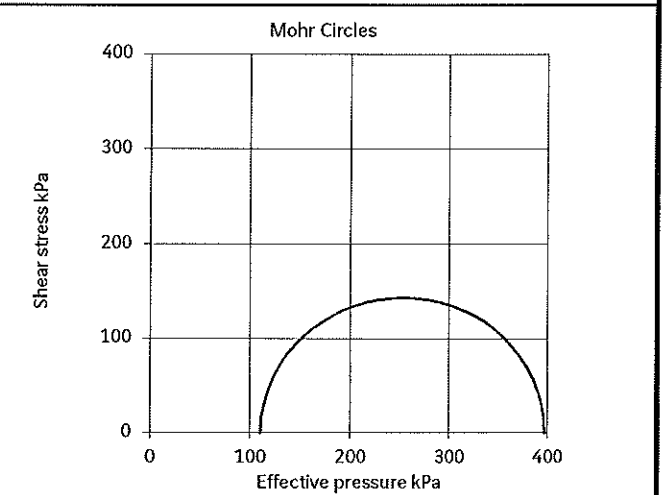
Project Name	Dinah_s Hollow and Melbury Church Phase 2 GI	**Consolidated Drained Triaxial Compression With Volume Change Measurement**	Hole ID BH2-3
Project No.	LT1468		Sample Depth 6.00m
Engineer	ESG Ltd		Sample Number 12
Employer	ESG Ltd	BS1377: Part 8: 1990: Clauses 4, 5, 6 and 8	Sample Type UT
Description	Yellowish brown slightly clayey SAND		Specimen Depth 6.09m
			Specimen Number 1

COMPRESSION STAGE				
Test number			1	
Cell pressure		kPa	450	
Initial pore water pressure		kPa	340	
Initial effective pressure		kPa	110	
Failure conditions at			Maximum deviator stress	
Axial strain at failure		%	7.2	
Maximum deviator stress	$\sigma_1-\sigma_3$	kPa	287	
Pore water pressure at failure	σ	kPa	339	
Effective major principal stress	σ_1'	kPa	397.32	
Effective minor principal stress	σ_3'	kPa	110.70	
Volumetric strain		%	1.05	
Membrane correction		kPa	0.62	
Filter drain correction not applicable		kPa	0.0	

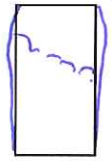


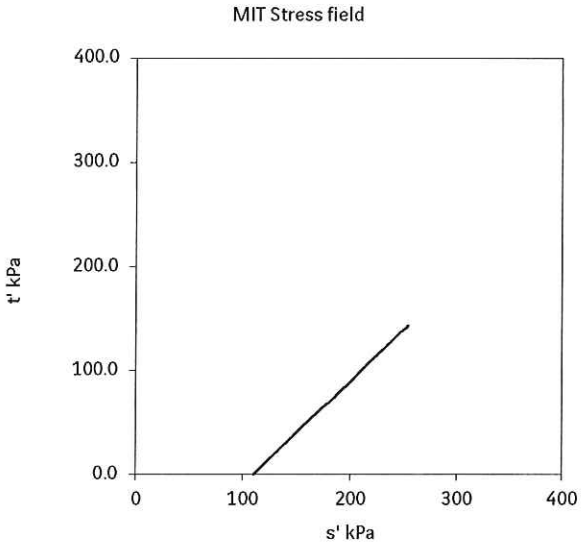


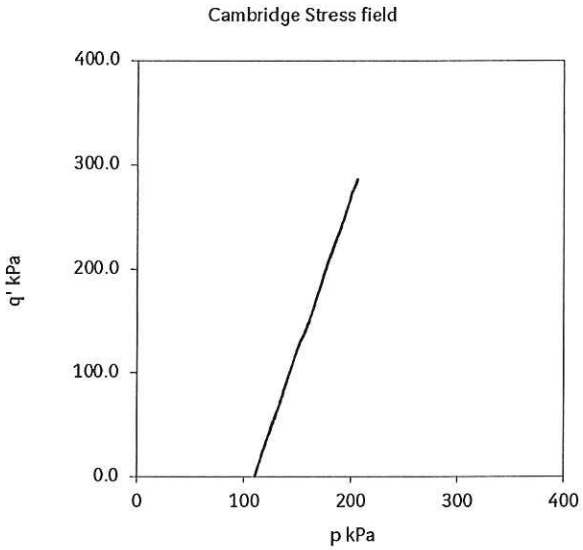




Project Name	Dinah_s Hollow and Melbury Church Phase 2 GI	**Consolidated Drained Triaxial Compression With Volume Change Measurement**	Hole ID BH2-3
Project No.	LT1468		Sample Depth 6.00m
Engineer	ESG Ltd		Sample Number 12
Employer	ESG Ltd	BS1377: Part 8: 1990: Clauses 4, 5, 6 and 8	Sample Type UT
Description	Yellowish brown slightly clayey SAND		Specimen Depth 6.09m
			Specimen Number 1

SPECIMEN AFTER TEST			
Test number		1	
Mode of failure		Compound 	
Final moisture content	%	27	
Final bulk density	Mg/m^3	1.97	
Final dry density	Mg/m^3	1.55	
ADDITIONAL SPECIMEN DETAILS			
Rate of strain	%/hour	0.25	
Failure criterion		Maximum deviator stress	

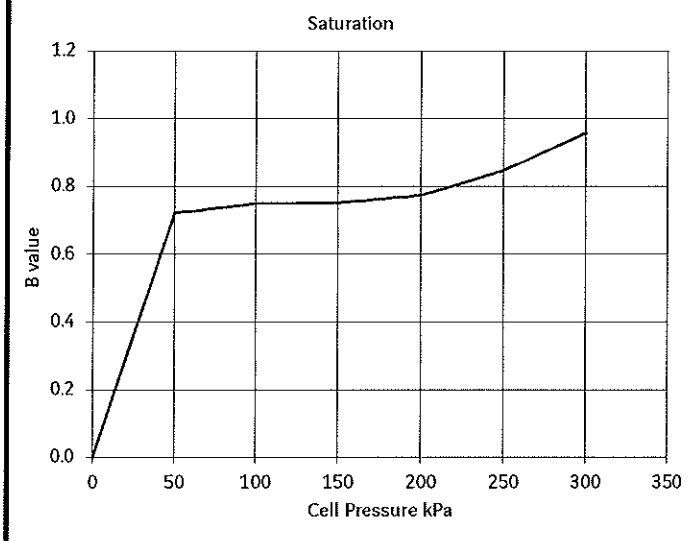


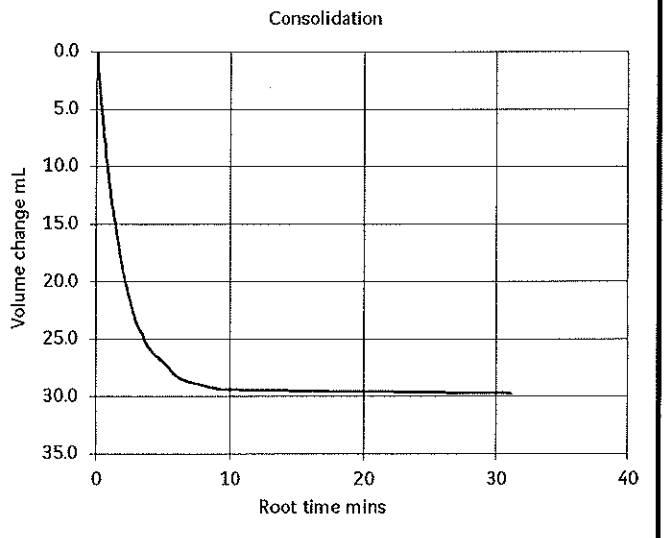


REMARKS

Project Name	Dinah_s Hollow and Melbury Church Phase 2 GI	**Consolidated Drained Triaxial Compression With Volume Change Measurement**	Hole ID BH2-4
Project No.	LT1468		Sample Depth 4.50m
Engineer	ESG Ltd		Sample Number 10
Employer	ESG Ltd	BS1377: Part 8: 1990: Clauses 4, 5, 6 and 8	Sample Type UT
Description	Light brown slightly clayey SAND		Specimen Depth 4.55m
			Specimen Number 1

SPECIMEN INITIAL DIMENSIONS			
Test number		1	
Specimen diameter	mm	102.13	
Specimen length	mm	195.80	
Density	Mg/m^3	1.97	
Moisture content	%	27	
Dry density	Mg/m^3	1.55	
SATURATION STAGE			
Initial pore water pressure	kPa	0.3	
Saturated pore water pressure	kPa	288	
Final cell pressure	kPa	300	
B value		0.958	
CONSOLIDATION STAGE			
Cell pressure	kPa	390	
Back pressure	kPa	300	
Effective cell pressure	kPa	90	
Initial pore water pressure	kPa	371.2	
Final pore water pressure	kPa	297.9	
Pore pressure dissipation	%	102.9	
c_{vi}	$m^2/year$	289.08	
m_{vi}	m^2/MN	0.25	
SPECIMEN AFTER CONSOLIDATION			
Density	Mg/m^3	2.01	
Moisture content	%	28	
Dry density	Mg/m^3	1.57	

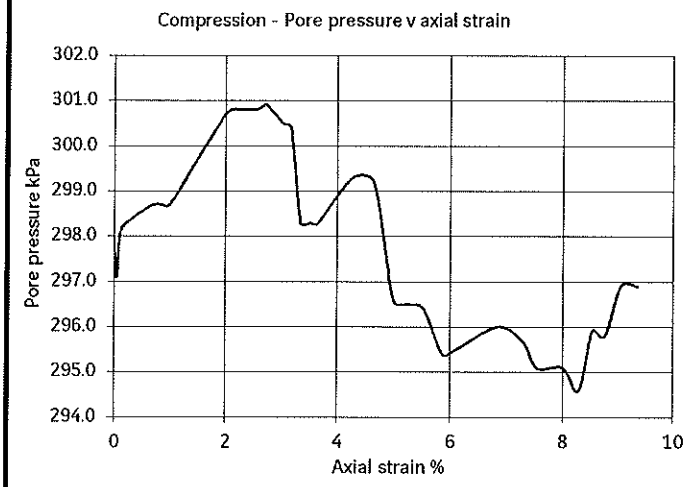


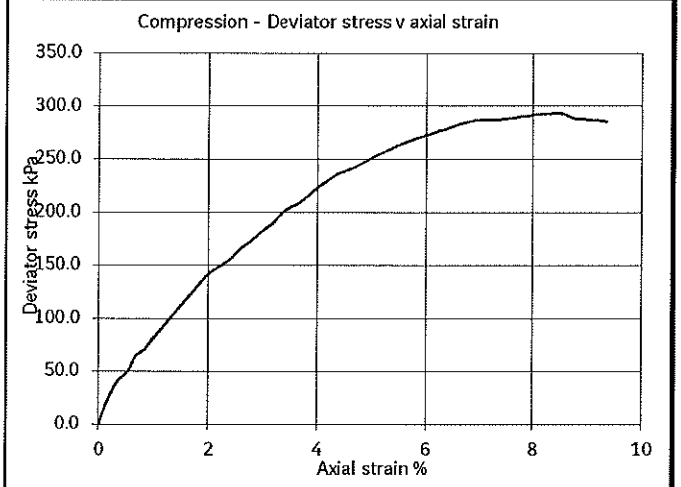


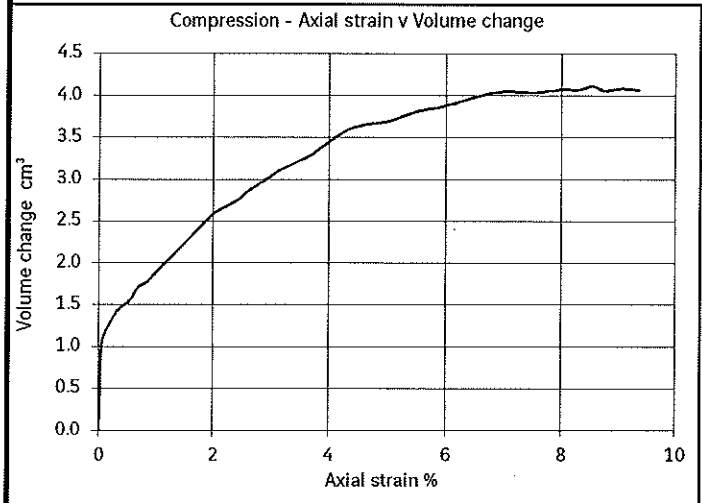
Remarks: Specimen orientation Vertical
Specimen condition for test Undisturbed
Saturation with 50kPa increments with a differential pressure of 10kPa
Drainage from both ends

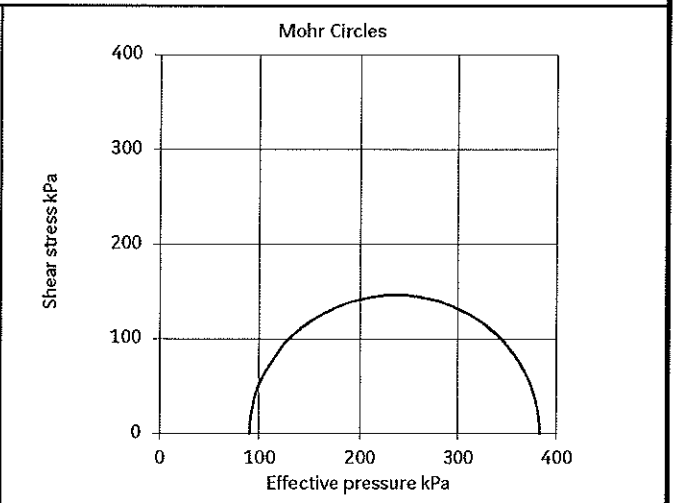
Project Name	Dinah_s Hollow and Melbury Church Phase 2 GI	**Consolidated Drained Triaxial Compression With Volume Change Measurement**	Hole ID BH2-4
Project No.	LT1468		Sample Depth 4.50m
Engineer	ESG Ltd		Sample Number 10
Employer	ESG Ltd	BS1377: Part 8: 1990: Clauses 4, 5, 6 and 8	Sample Type UT
Description	Light brown slightly clayey SAND		Specimen Depth 4.55m
			Specimen Number 1

COMPRESSION STAGE				
Test number			1	
Cell pressure		kPa	390	
Initial pore water pressure		kPa	298	
Initial effective pressure		kPa	90	
Failure conditions at			Maximum deviator stress	
Axial strain at failure		%	8.5	
Maximum deviator stress	$\sigma_1-\sigma_3$	kPa	293	
Pore water pressure at failure	σ	kPa	296	
Effective major principal stress	σ_1'	kPa	387.40	
Effective minor principal stress	σ_3'	kPa	94.10	
Volumetric strain		%	1.12	
Membrane correction		kPa	0.76	
Filter drain correction not applicable		kPa	0.0	

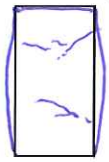


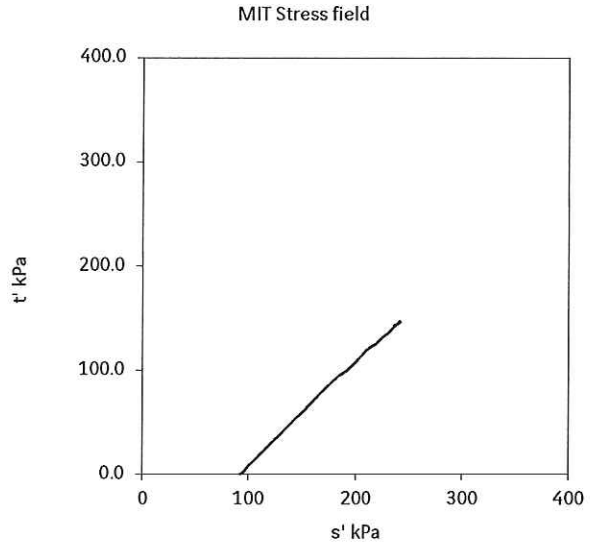


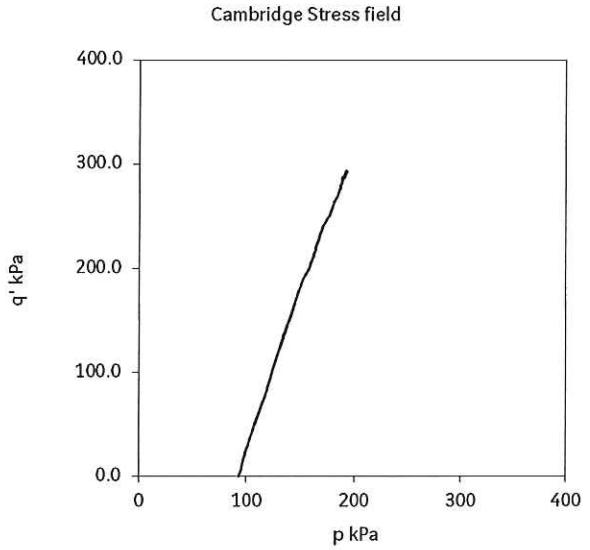




Project Name	Dinah_s Hollow and Melbury Church Phase 2 GI	**Consolidated Drained Triaxial Compression With Volume Change Measurement**	Hole ID BH2-4
Project No.	LT1468		Sample Depth 4.50m
Engineer	ESG Ltd		Sample Number 10
Employer	ESG Ltd	BS1377: Part 8: 1990: Clauses 4, 5, 6 and 8	Sample Type UT
Description	Light brown slightly clayey SAND		Specimen Depth 4.55m
			Specimen Number 1

SPECIMEN AFTER TEST			
Test number		1	
Mode of failure		Compound 	
Final moisture content	%	27	
Final bulk density	Mg/m^3	2.01	
Final dry density	Mg/m^3	1.59	
ADDITIONAL SPECIMEN DETAILS			
Rate of strain	%/hour	0.25	
Failure criterion		Maximum deviator stress	

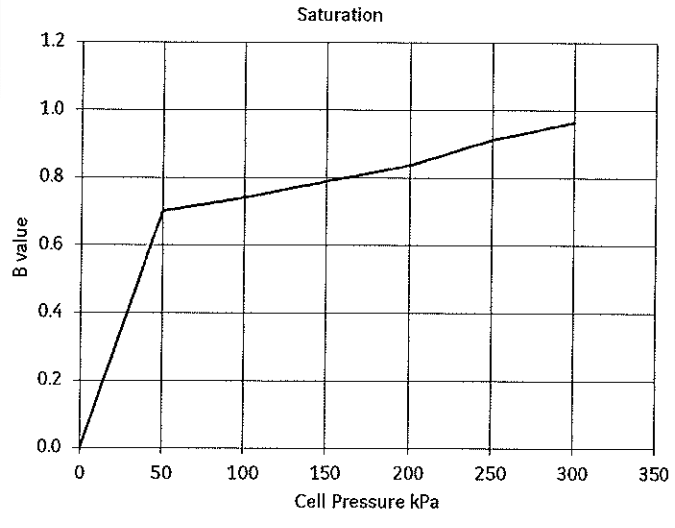


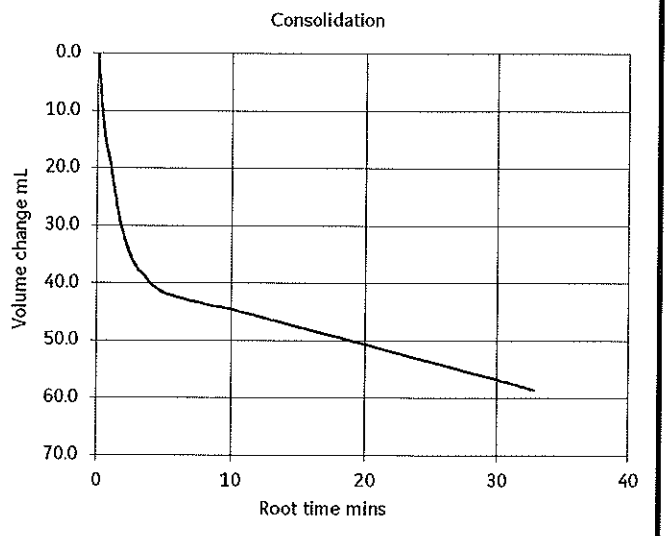


REMARKS

Project Name	Dinah_s Hollow and Melbury Church Phase 2 GI	**Consolidated Drained Triaxial Compression With Volume Change Measurement**	Hole ID BH2-4
Project No.	LT1468		Sample Depth 6.00m
Engineer	ESG Ltd		Sample Number 13
Employer	ESG Ltd	BS1377: Part 8: 1990: Clauses 4, 5, 6 and 8	Sample Type UT
Description	Light brown slightly clayey SAND		Specimen Depth 6.06m
			Specimen Number 2

SPECIMEN INITIAL DIMENSIONS		
Test number		1
Specimen diameter	mm	102.23
Specimen length	mm	194.40
Density	Mg/m^3	1.93
Moisture content	%	24
Dry density	Mg/m^3	1.55
SATURATION STAGE		
Initial pore water pressure	kPa	1.8
Saturated pore water pressure	kPa	289.8
Final cell pressure	kPa	300
B value		0.966
CONSOLIDATION STAGE		
Cell pressure	kPa	410
Back pressure	kPa	300
Effective cell pressure	kPa	110
Initial pore water pressure	kPa	396.8
Final pore water pressure	kPa	300
Pore pressure dissipation	%	100.0
c_{vi}	$m^2/year$	148.37
m_{vi}	m^2/MN	0.38
SPECIMEN AFTER CONSOLIDATION		
Density	Mg/m^3	2.03
Moisture content	%	26
Dry density	Mg/m^3	1.61

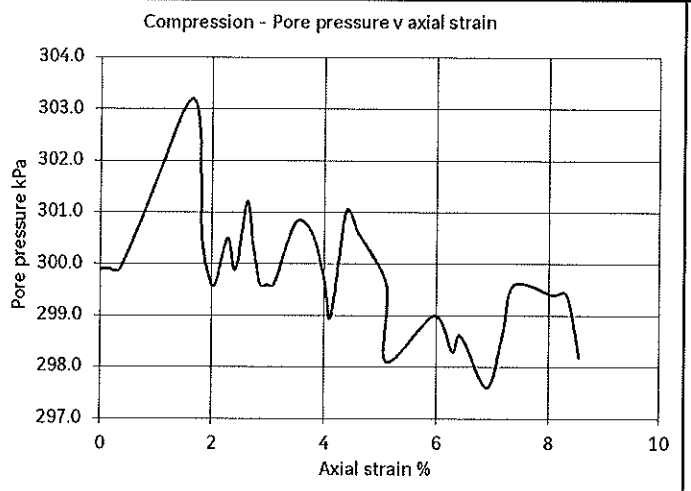


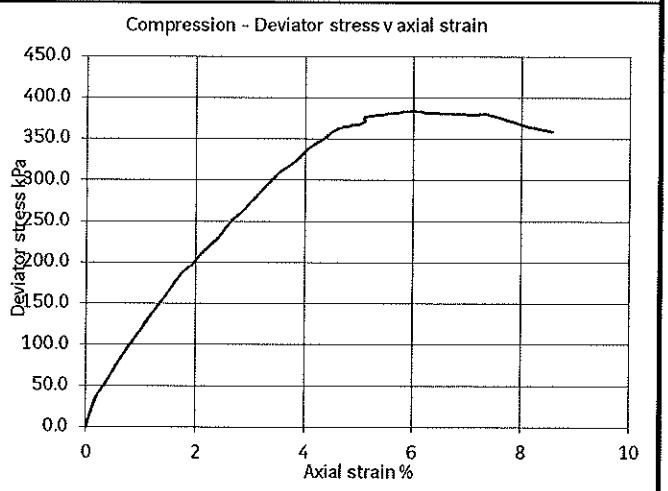


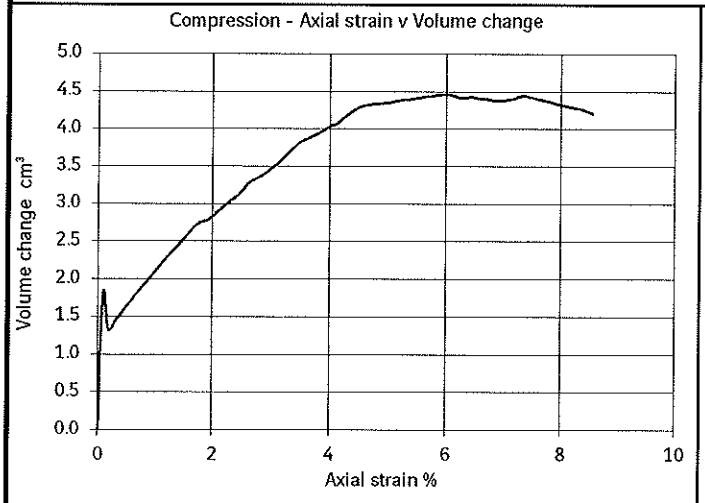
Remarks: Specimen orientation Vertical
Specimen condition for test Undisturbed
Saturation with 50kPa increments with a differential pressure of 10kPa
Drainage from both ends

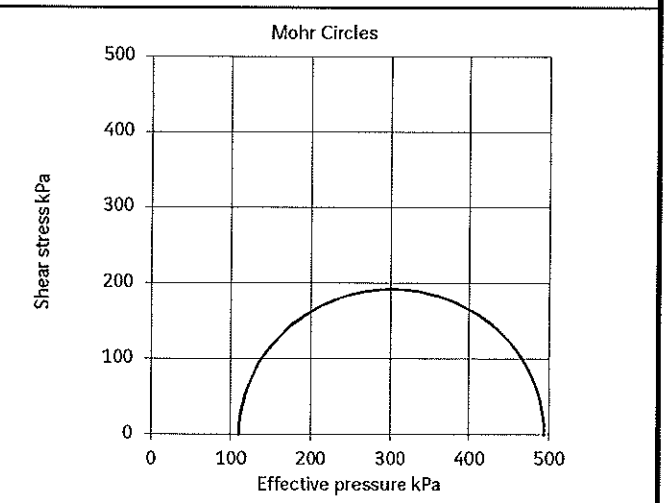
Project Name	Dinah_s Hollow and Melbury Church Phase 2 GI	**Consolidated Drained Triaxial Compression With Volume Change Measurement**	Hole ID BH2-4
Project No.	LT1468		Sample Depth 6.00m
Engineer	ESG Ltd		Sample Number 13
Employer	ESG Ltd	BS1377: Part 8: 1990: Clauses 4, 5, 6 and 8	Sample Type UT
Description	Light brown slightly clayey SAND		Specimen Depth 6.06m
			Specimen Number 2

COMPRESSION STAGE			
Test number			1
Cell pressure		kPa	410
Initial pore water pressure		kPa	300
Initial effective pressure		kPa	110
Failure conditions at			Maximum deviator stress
Axial strain at failure		%	5.9
Maximum deviator stress	$\sigma_1-\sigma_3$	kPa	384
Pore water pressure at failure	σ	kPa	299
Effective major principal stress	σ_1'	kPa	494.78
Effective minor principal stress	σ_3'	kPa	111.00
Volumetric strain		%	2.55
Membrane correction		kPa	0.56
Filter drain correction not applicable		kPa	0.0



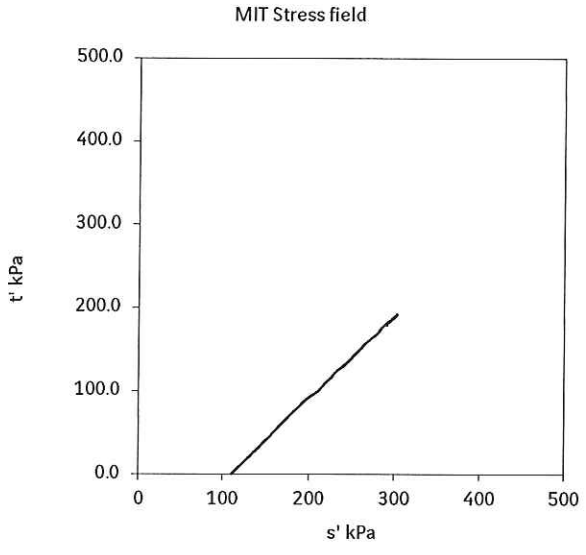


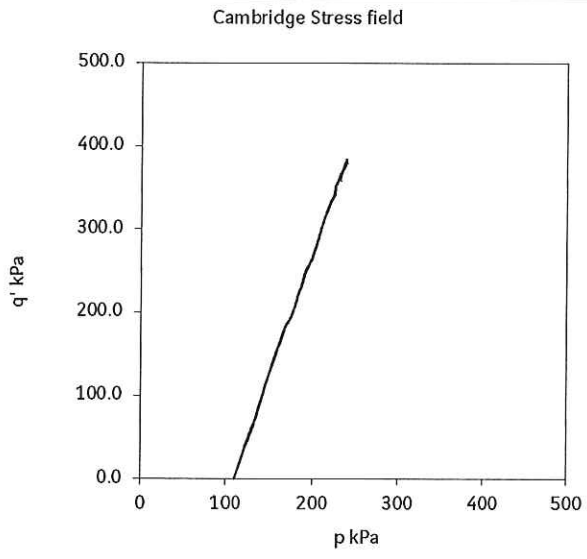




Project Name	Dinah_s Hollow and Melbury Church Phase 2 GI	**Consolidated Drained Triaxial Compression With Volume Change Measurement**	Hole ID BH2-4
Project No.	LT1468		Sample Depth 6.00m
Engineer	ESG Ltd		Sample Number 13
Employer	ESG Ltd	BS1377: Part 8: 1990: Clauses 4, 5, 6 and 8	Sample Type UT
Description	Light brown slightly clayey SAND		Specimen Depth 6.06m
			Specimen Number 2

SPECIMEN AFTER TEST			
Test number		1	
Mode of failure		Compound 	
Final moisture content	%	25	
Final bulk density	Mg/m^3	2.06	
Final dry density	Mg/m^3	1.65	
ADDITIONAL SPECIMEN DETAILS			
Rate of strain	%/hour	0.23	
Failure criterion		Maximum deviator stress	

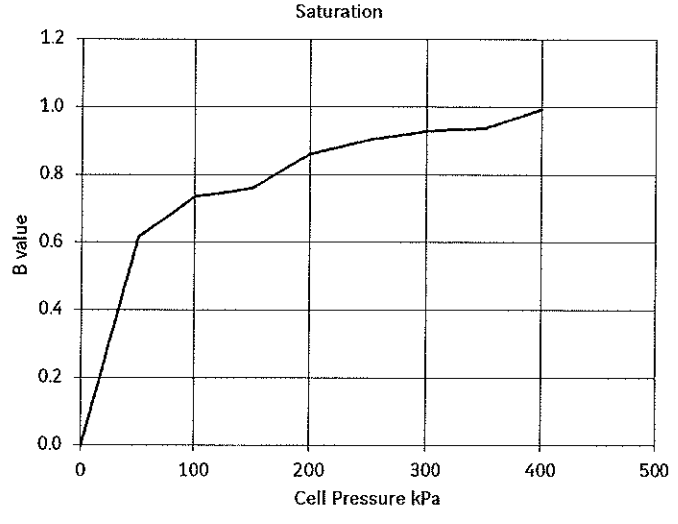


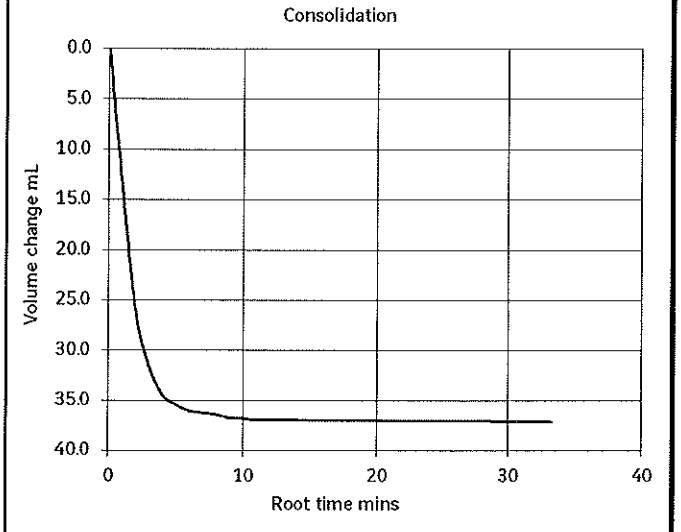


REMARKS

Project Name	Dinah_s Hollow and Melbury Church Phase 2 GI	**Consolidated Drained Triaxial Compression With Volume Change Measurement**	Hole ID BH2-5
Project No.	LT1468		Sample Depth 4.50m
Engineer	ESG Ltd		Sample Number 10
Employer	ESG Ltd	BS1377: Part 8: 1990: Clauses 4, 5, 6 and 8	Sample Type UT
Description	Light brown very sandy CLAY		Specimen Depth 4.60m
			Specimen Number 2

SPECIMEN INITIAL DIMENSIONS		
Test number		1
Specimen diameter	mm	103.00
Specimen length	mm	196.80
Density	Mg/m^3	1.85
Moisture content	%	32
Dry density	Mg/m^3	1.41
SATURATION STAGE		
Initial pore water pressure	kPa	1.4
Saturated pore water pressure	kPa	388.1
Final cell pressure	kPa	400
B value		0.994
CONSOLIDATION STAGE		
Cell pressure	kPa	430
Back pressure	kPa	340
Effective cell pressure	kPa	90
Initial pore water pressure	kPa	418.6
Final pore water pressure	kPa	340.1
Pore pressure dissipation	%	99.9
c_{vi}	$m^2/year$	524.73
m_{vi}	m^2/MN	0.29
SPECIMEN AFTER CONSOLIDATION		
Density	Mg/m^3	1.90
Moisture content	%	33
Dry density	Mg/m^3	1.43

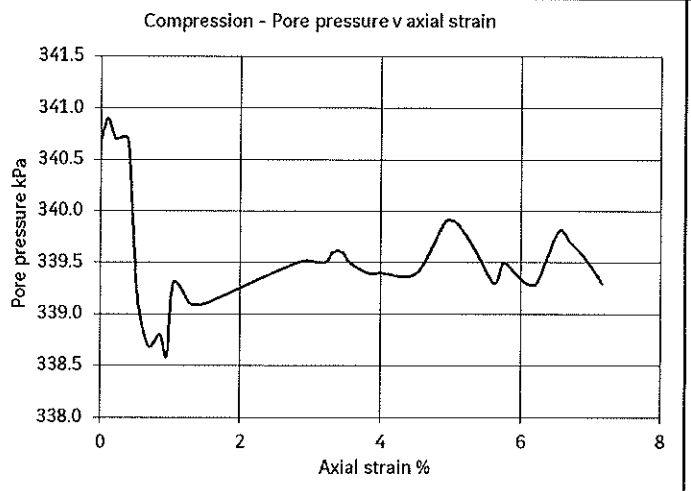


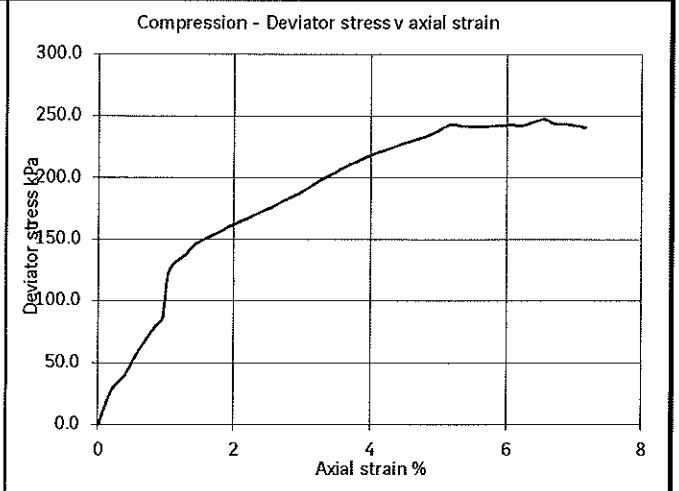


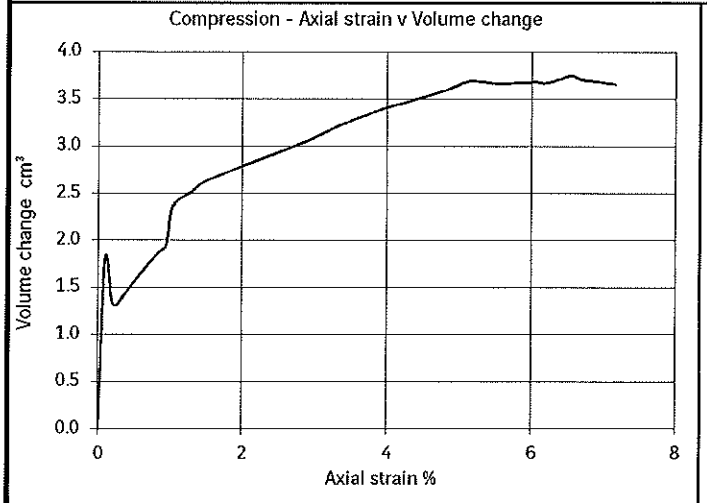
Remarks: Specimen orientation Vertical
Specimen condition for test Undisturbed
Saturation with 50kPa increments with a differential pressure of 10kPa
Drainage from both ends

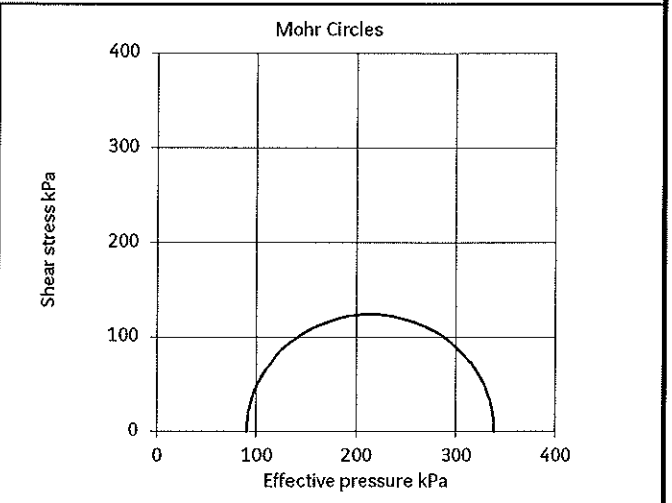
Project Name	Dinah_s Hollow and Melbury Church Phase 2 GI	**Consolidated Drained Triaxial Compression With Volume Change Measurement**	Hole ID BH2-5
Project No.	LT1468		Sample Depth 4.50m
Engineer	ESG Ltd		Sample Number 10
Employer	ESG Ltd	BS1377: Part 8: 1990: Clauses 4, 5, 6 and 8	Sample Type UT
Description	Light brown very sandy CLAY		Specimen Depth 4.60m
			Specimen Number 2

COMPRESSION STAGE				
Test number			1	
Cell pressure		kPa	430	
Initial pore water pressure		kPa	341	
Initial effective pressure		kPa	90	
Failure conditions at			Maximum deviator stress	
Axial strain at failure		%	6.5	
Maximum deviator stress	$\sigma_1-\sigma_3$	kPa	248	
Pore water pressure at failure	σ	kPa	340	
Effective major principal stress	σ_1'	kPa	337.90	
Effective minor principal stress	σ_3'	kPa	90.20	
Volumetric strain		%	1.15	
Membrane correction		kPa	0.57	
Filter drain correction not applicable		kPa	0.0	









Approved by:	Leeds Laboratory	Report No.: LT1468	
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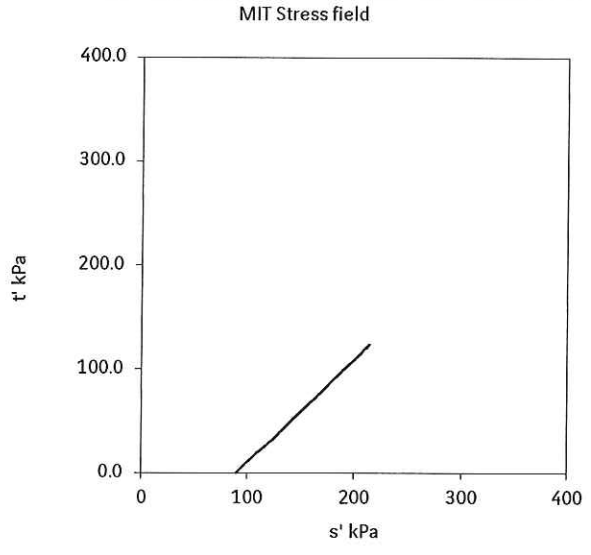
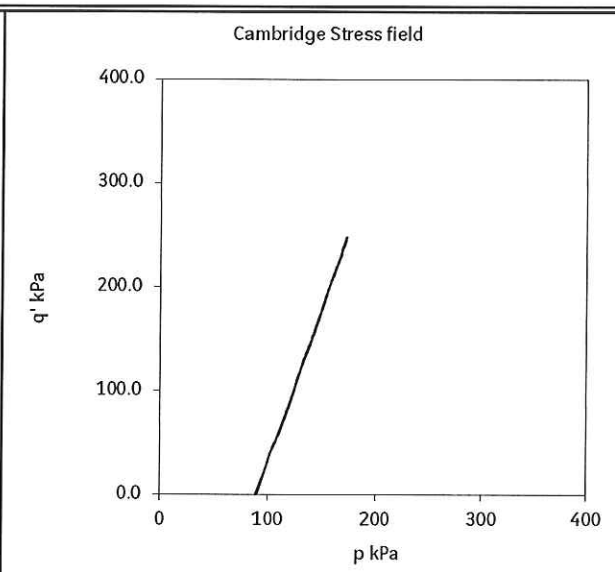
Project Name	Dinah_s Hollow and Melbury Church Phase 2 GI	**Consolidated Drained Triaxial Compression With Volume Change Measurement**	Hole ID BH2-5
Project No.	LT1468		Sample Depth 4.50m
Engineer	ESG Ltd		Sample Number 10
Employer	ESG Ltd	BS1377: Part 8: 1990: Clauses 4, 5, 6 and 8	Sample Type UT
Description	Light brown very sandy CLAY		Specimen Depth 4.60m
			Specimen Number 2

SPECIMEN AFTER TEST			
Test number		1	
Mode of failure		Compound 	
Final moisture content	%	30	
Final bulk density	Mg/m^3	1.89	
Final dry density	Mg/m^3	1.45	
ADDITIONAL SPECIMEN DETAILS			
Rate of strain	%/hour	0.25	
Failure criterion		Maximum deviator stress	

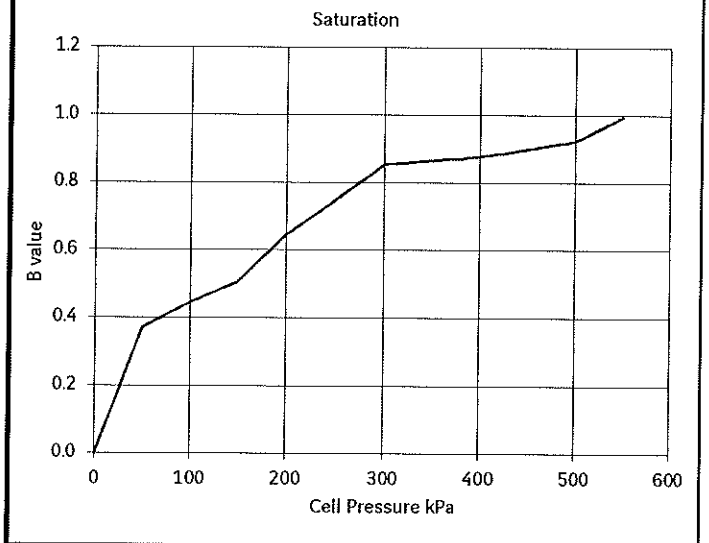


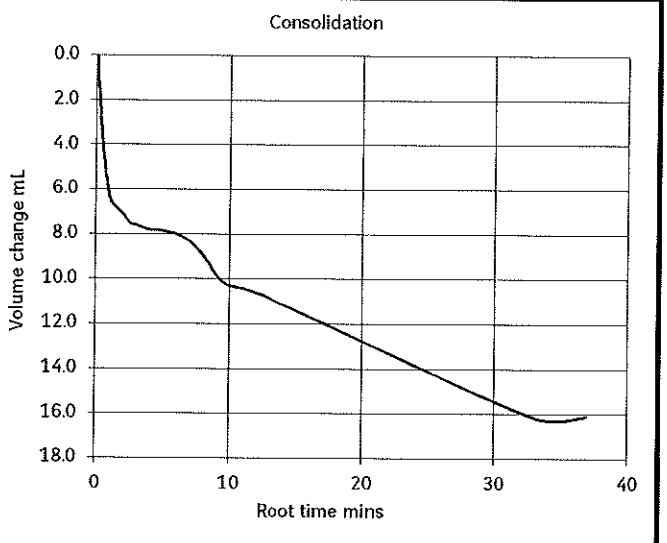


REMARKS

Project Name	Dinah_s Hollow and Melbury Church Phase 2 GI	**Consolidated Drained Triaxial Compression With Volume Change Measurement**	Hole ID BH2-7
Project No.	LT1468		Sample Depth 1.20m
Engineer	ESG Ltd		Sample Number 2
Employer	ESG Ltd	BS1377: Part 8: 1990: Clauses 4, 5, 6 and 8	Sample Type UT
Description	Orangish brown slightly clayey SAND		Specimen Depth 1.43m
			Specimen Number 2

SPECIMEN INITIAL DIMENSIONS			
Test number		1	
Specimen diameter	mm	102.28	
Specimen length	mm	197.27	
Density	Mg/m^3	1.81	
Moisture content	%	22	
Dry density	Mg/m^3	1.48	
SATURATION STAGE			
Initial pore water pressure	kPa	1.3	
Saturated pore water pressure	kPa	544.2	
Final cell pressure	kPa	550	
B value		0.996	
CONSOLIDATION STAGE			
Cell pressure	kPa	550	
Back pressure	kPa	525	
Effective cell pressure	kPa	25	
Initial pore water pressure	kPa	544.2	
Final pore water pressure	kPa	525.2	
Pore pressure dissipation	%	99.0	
c_{vi}	$m^2/year$	7.87	
m_{vi}	m^2/MN	0.52	
SPECIMEN AFTER CONSOLIDATION			
Density	Mg/m^3	1.91	
Moisture content	%	28	
Dry density	Mg/m^3	1.50	

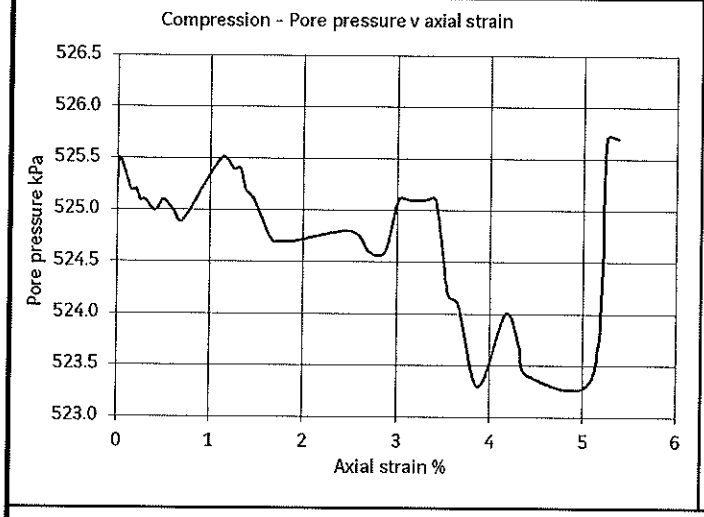


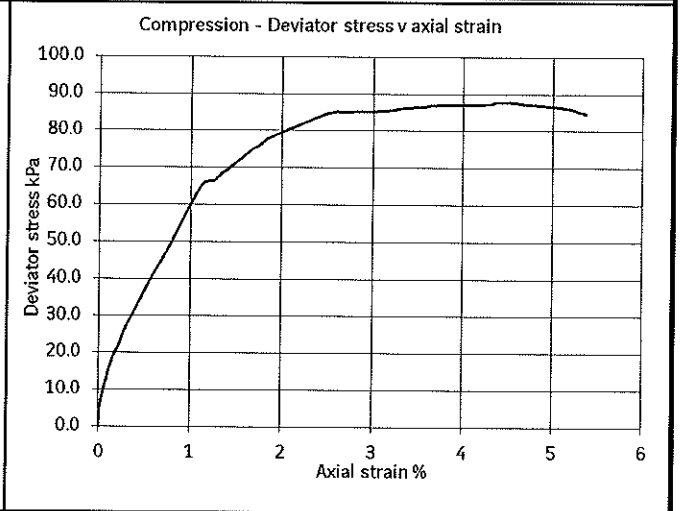


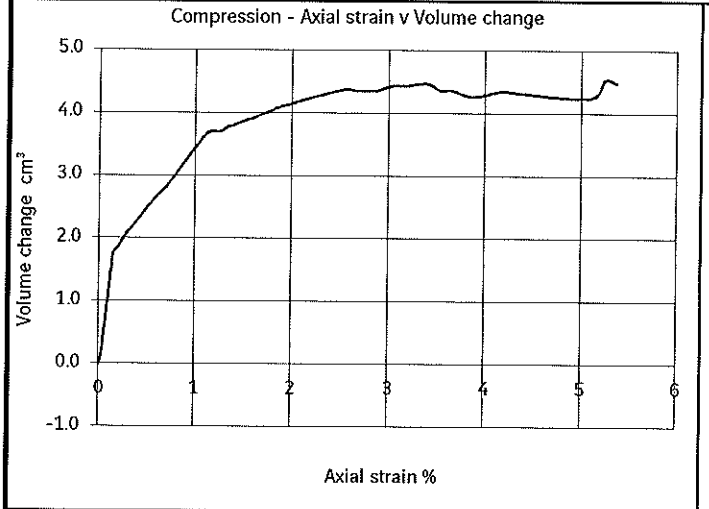
Remarks: Specimen orientation Vertical
Specimen condition for test Undisturbed
Saturation with 50kPa increments with a differential pressure of 10kPa
Drainage from both ends

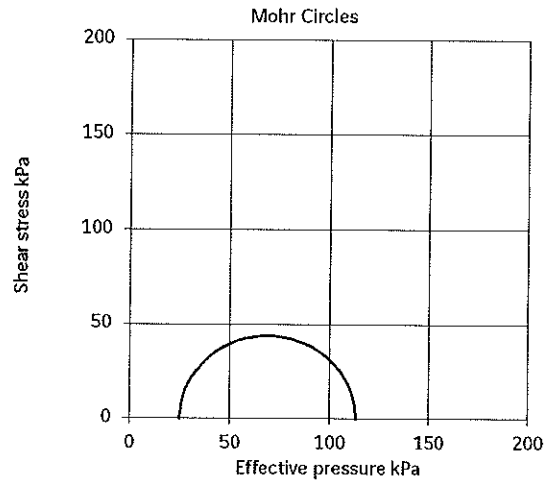
Project Name	Dinah_s Hollow and Melbury Church Phase 2 Gl	**Consolidated Drained Triaxial Compression With Volume Change Measurement**	Hole ID BH2-7
Project No.	LT1468		Sample Depth 1.20m
Engineer	ESG Ltd		Sample Number 2
Employer	ESG Ltd	BS1377: Part 8: 1990: Clauses 4, 5, 6 and 8	Sample Type UT
Description	Orangish brown slightly clayey SAND		Specimen Depth 1.43m
			Specimen Number 2

COMPRESSION STAGE				
Test number			1	
Cell pressure		kPa	550	
Initial pore water pressure		kPa	525	
Initial effective pressure		kPa	25	
Failure conditions at			Maximum deviator stress	
Axial strain at failure		%	4.4	
Maximum deviator stress	$\sigma_1-\sigma_3$	kPa	88	
Pore water pressure at failure	σ	kPa	523	
Effective major principal stress	σ_1'	kPa	114.48	
Effective minor principal stress	σ_3'	kPa	26.60	
Volumetric strain		%	-0.90	
Membrane correction		kPa	0.41	
Filter drain correction not applicable		kPa	0.0	



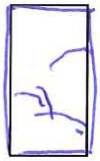


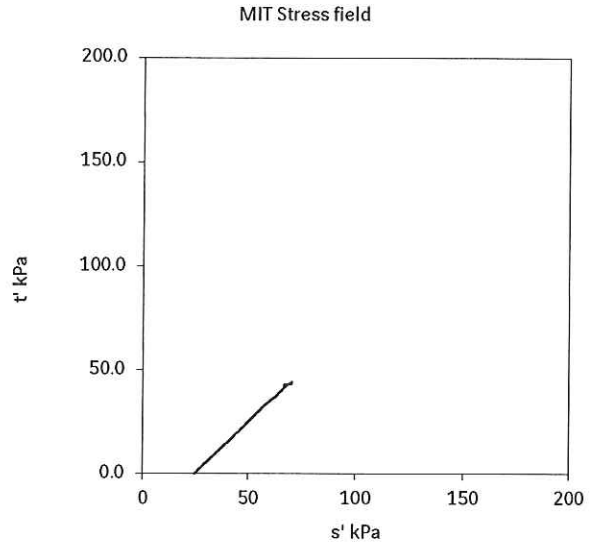


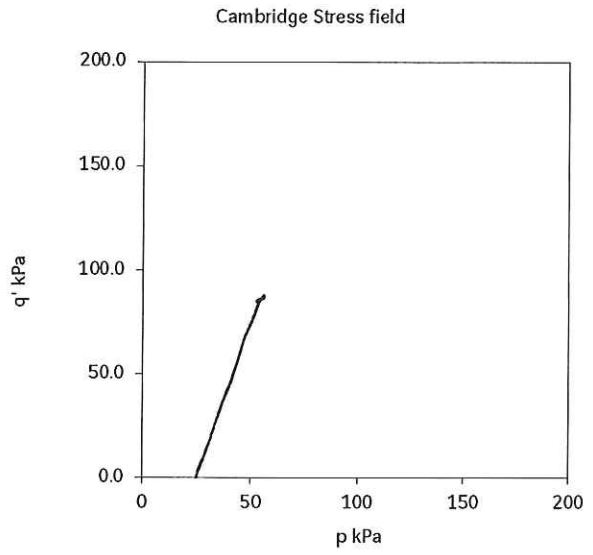


Approved by:	Leeds Laboratory	Report No.: LT1468	
Stuart Kirk		Page 41 of 45	Print date 15/09/2014
	Revision No. 2.04	Issue Date 21/11/2012	SOIL engineering Part of the Bachy Soletanche Group

Project Name	Dinah_s Hollow and Melbury Church Phase 2 GI	**Consolidated Drained Triaxial Compression With Volume Change Measurement**	Hole ID BH2-7
Project No.	LT1468		Sample Depth 1.20m
Engineer	ESG Ltd		Sample Number 2
Employer	ESG Ltd	BS1377: Part 8: 1990: Clauses 4, 5, 6 and 8	Sample Type UT
Description	Orangish brown slightly clayey SAND		Specimen Depth 1.43m
			Specimen Number 2

SPECIMEN AFTER TEST			
Test number		1	
Mode of failure		Compound 	
Final moisture content	%	28	
Final bulk density	Mg/m^3	1.90	
Final dry density	Mg/m^3	1.48	
ADDITIONAL SPECIMEN DETAILS			
Rate of strain	%/hour	0.12	
Failure criterion		Maximum deviator stress	

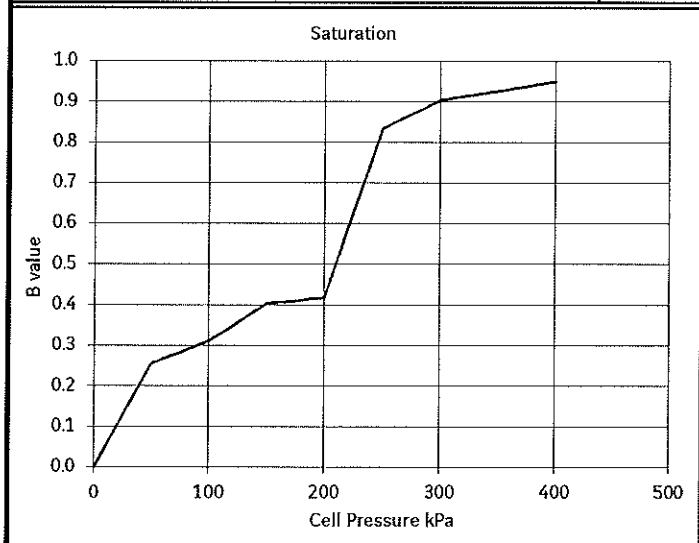


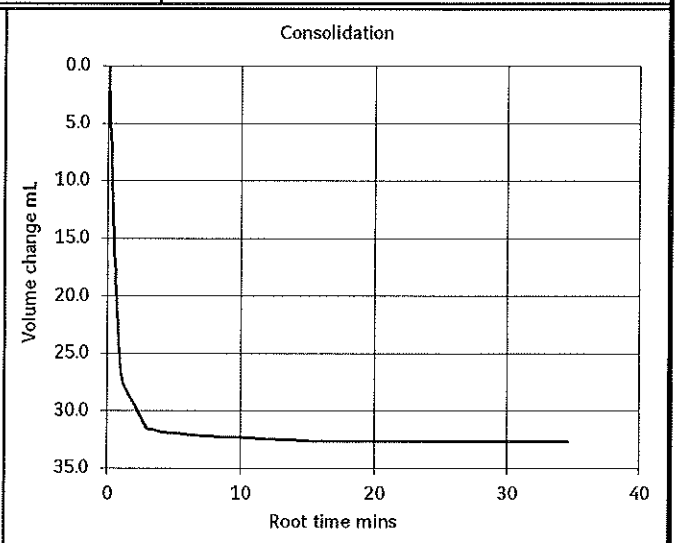


REMARKS

Project Name	Dinah_s Hollow and Melbury Church Phase 2 GI	**Consolidated Drained Triaxial Compression With Volume Change Measurement**	Hole ID BH2-7
Project No.	LT1468		Sample Depth 4.50m
Engineer	ESG Ltd		Sample Number 9
Employer	ESG Ltd	BS1377: Part 8: 1990: Clauses 4, 5, 6 and 8	Sample Type UT
Description	Orangish brown slightly clayey SAND		Specimen Depth 4.73m
			Specimen Number 2

SPECIMEN INITIAL DIMENSIONS			
Test number		1	
Specimen diameter	mm	103.13	
Specimen length	mm	196.70	
Density	Mg/m^3	1.84	
Moisture content	%	20	
Dry density	Mg/m^3	1.54	
SATURATION STAGE			
Initial pore water pressure	kPa	3.52	
Saturated pore water pressure	kPa	388.5	
Final cell pressure	kPa	400	
B value		0.95	
CONSOLIDATION STAGE			
Cell pressure	kPa	430	
Back pressure	kPa	340	
Effective cell pressure	kPa	90	
Initial pore water pressure	kPa	414.1	
Final pore water pressure	kPa	341.5	
Pore pressure dissipation	%	98.0	
c_{vi}	$m^2/year$	2817.10	
m_{vi}	m^2/MN	0.27	
SPECIMEN AFTER CONSOLIDATION			
Density	Mg/m^3	1.94	
Moisture content	%	23	
Dry density	Mg/m^3	1.57	

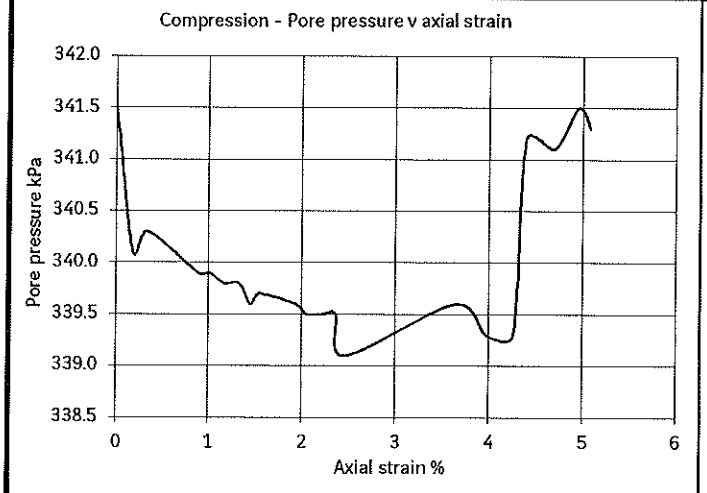


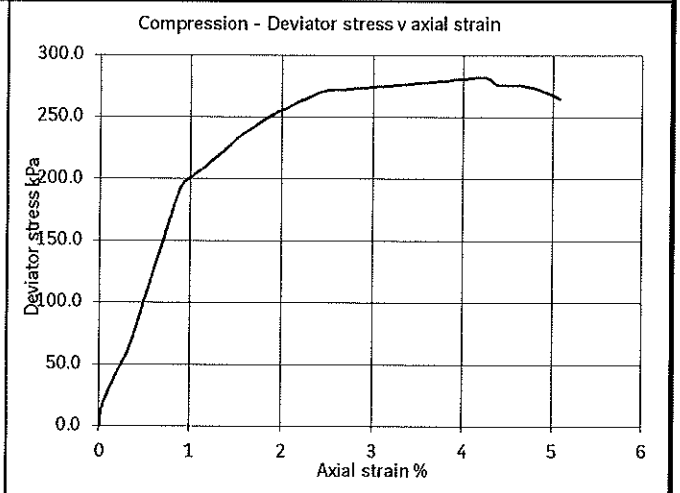


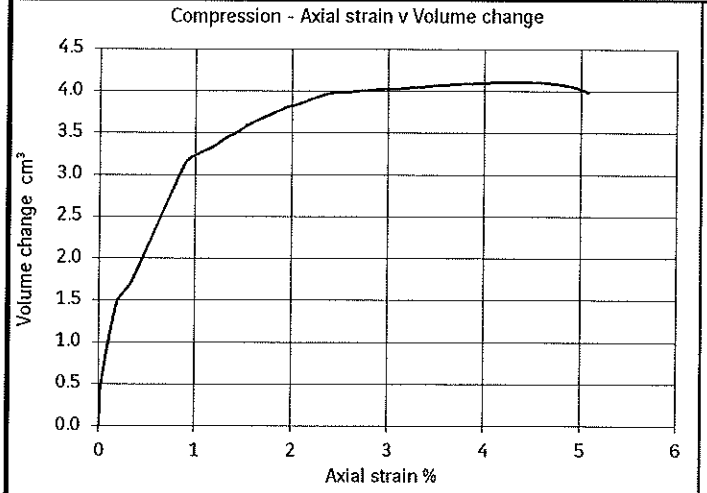
Remarks: Specimen orientation Vertical
Specimen condition for test Undisturbed
Saturation with 50kPa increments with a differential pressure of 10kPa
Drainage from both ends

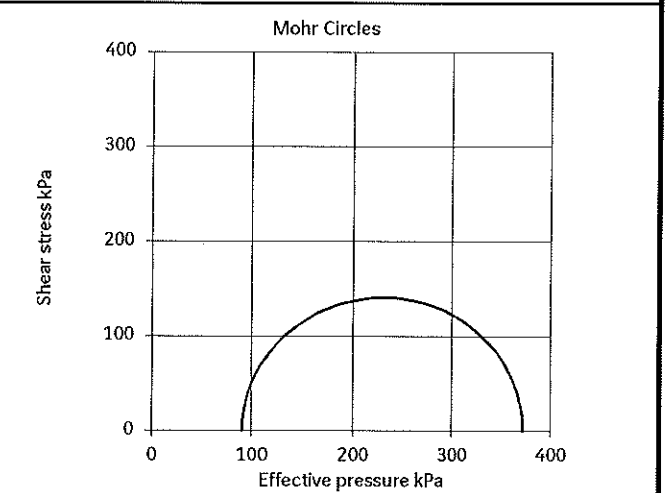
Project Name	Dinah_s Hollow and Melbury Church Phase 2 GI	**Consolidated Drained Triaxial Compression With Volume Change Measurement**	Hole ID BH2-7
Project No.	LT1468		Sample Depth 4.50m
Engineer	ESG Ltd		Sample Number 9
Employer	ESG Ltd	BS1377: Part 8: 1990: Clauses 4, 5, 6 and 8	Sample Type UT
Description	Orangish brown slightly clayey SAND		Specimen Depth 4.73m
			Specimen Number 2

COMPRESSION STAGE				
Test number			1	
Cell pressure		kPa	430	
Initial pore water pressure		kPa	342	
Initial effective pressure		kPa	90	
Failure conditions at			Maximum deviator stress	
Axial strain at failure		%	4.3	
Maximum deviator stress	$\sigma_1-\sigma_3$	kPa	282	
Pore water pressure at failure	σ	kPa	339	
Effective major principal stress	σ_1'	kPa	372.57	
Effective minor principal stress	σ_3'	kPa	90.70	
Volumetric strain		%	-0.35	
Membrane correction		kPa	0.40	
Filter drain correction not applicable		kPa	0.0	





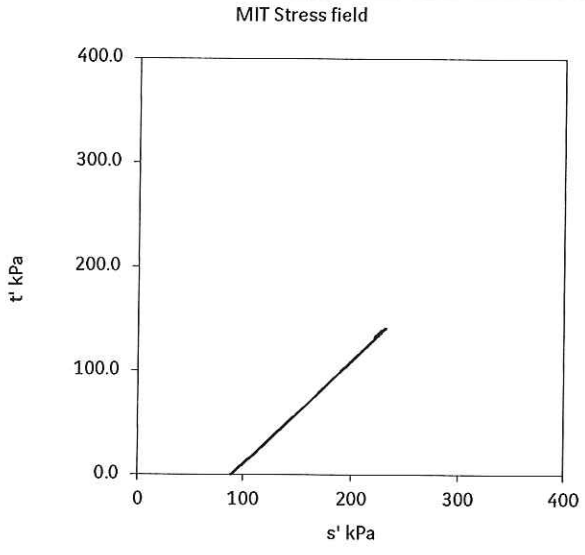


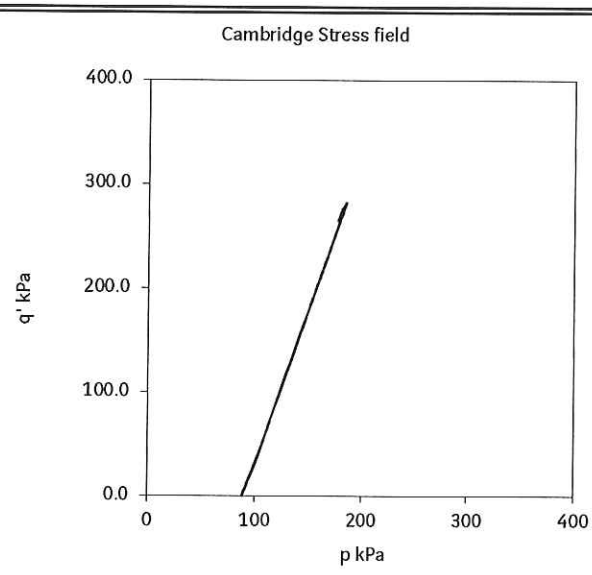


Approved by:	Leeds Laboratory	Report No.: LT1468	SOIL ENGINEERING
Stuart Kirk		Page 44 of 45 Print date 15/09/2014	
	Revision No. 2.04	Issue Date 21/11/2012	Part of the Bachy Soletanche Group

Project Name	Dinah_s Hollow and Melbury Church Phase 2 GI	**Consolidated Drained Triaxial Compression With Volume Change Measurement**	Hole ID BH2-7
Project No.	LT1468		Sample Depth 4.50m
Engineer	ESG Ltd		Sample Number 9
Employer	ESG Ltd	BS1377: Part 8: 1990: Clauses 4, 5, 6 and 8	Sample Type UT
Description	Orangish brown slightly clayey SAND		Specimen Depth 4.73m
			Specimen Number 2

SPECIMEN AFTER TEST			
Test number		1	
Mode of failure		Compound 	
Final moisture content	%	25	
Final bulk density	Mg/m^3	1.96	
Final dry density	Mg/m^3	1.56	
ADDITIONAL SPECIMEN DETAILS			
Rate of strain	%/hour	0.25	
Failure criterion		Maximum deviator stress	





REMARKS

TEST REPORT

1252

Report No. EFS/144904 (Ver. 3)

ESG Bridgend
Unit 15
Crosby Yard
Wildmill
Bridgend

Site: Dinahs Hollow

The 15 samples described in this report were registered for analysis by ESG on 09-Aug-2014. This report supersedes any versions previously issued by the laboratory.
The analysis was completed by: 23-Sep-2014

Tests where the accreditation is set to N or No, and any individual data items marked with a * are not UKAS accredited
Any opinions or interpretations expressed herein are outside the scope of any UKAS accreditation held by ESG.

The following tables are contained in this report:

On behalf of
ESG :
Declan Burns

Operations Director
Laboratory and Analytical Business

Date of Issue: 23-Sep-2014

Tests marked '^' have been subcontracted to another laboratory.
Where samples have been flagged as deviant on the Analytical and Deviating Sample Overview, for any reason, the data may not be representative of the sample at the point of sampling and the validity of the data may be affected. ESG accepts no responsibility for any sampling not carried out by our personnel.

Where individual results are flagged see report notes for status.

Units :		pH Units	mg/kg	mg/l	%												
Method Codes :		PHSOIL	Sub016	Sub016	TSBRE1												
Method Reporting Limits :			50	1.5	0.005												
UKAS Accredited :		Yes	Yes	Yes	No												
LAB ID Number CL/	**Client Sample Description**	**pH units (AR)**	**^SO4-- (acid sol)**	**^SO4-- (H2O sol) mg/l**	**Total Sulphur.**												
1421408	BH2-1 D 8 3.5	7.9	<50	<1.5	0.027												
1421409	BH2-2 D 4 1.7	7.2	70	5.8	0.033												
1421410	BH2-2 D 18 8.5	7.3	<50	8.6	0.030												
1421411	BH2-4 D 4 1.7	7.1	90	11.7	0.015												
1421412	BH2-4 D 8 3.5	7.0	<50	15.1	0.027												
1421413	BH2-4 D 14 6.5	7.0	<50	12.7	0.022												
1421416	BH2-1 UT 13 6.0	7.9	<50	323.1	0.023												
1421417	BH2-2 WS 12 5.0	7.2	<50	4.6	0.027												
1421418	BH2-3 D 6 2.55	7.0	<50	6.4	0.013												
1421419	BH2-5 D 4 1.7	6.9	<50	<1.5	0.010												
1421420	BH2-6 D 7 4.0	7.8	<50	5.6	0.010												
1421421	BH2-6 D 13 7.0	7.6	<50	2.2	0.021												
1421422	BH2-7 D 5 2.55	5.4	88	52.2	0.026												
1421423	BH2-7 D 10 5.0	5.8	<50	190.8	0.014												
1421424	BH2-5 D 7.50	7.3	<50	8.4	0.021												

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Burton-on-Trent, Staffordshire, DE15 0YZ
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Fax +44 (0) 1283 554422

Client Name **ESG Bridgend**

Contact Mr A Putt

Dinahs Hollow

Sample Analysis

Date Printed	**23-Sep-2014**
Report Number	**EFS/144904**
Table Number	**1**

Sample Analysis

ESG Environmental Chemistry
Analytical and Deviating Sample Overview

S144904

Customer ESG Bridgend
Site Dinahs Hollow
Report No S144904

Consignment No S42922
Date Logged 09-Aug-2014

Report Due 21-Aug-2014

ID Number	Description	MethodID	CustServ	Dep.Opt			ICPBRE	KONECL	KoneNO3	PHSOIL	Sub016		TSBRE1
		Sampled	Report B	DO Cl if pH<5.5	DO Mg if SO4(W)>3000	DO NO3 if pH<5.5	Magnesium (BRE)	Chloride:(2:1)	Nitrate (BRE 2:1): mg/l	pH units (AR)	^SO4-- (acid sol)	^SO4-- (H2O sol) mg/l	Total Sulphur.
										✓	✓	✓	
CL/1421408	BH2-1 3.5	D											
CL/1421409	BH2-2 1.7	D											
CL/1421410	BH2-2 8.5	D											
CL/1421411	BH2-4 1.7	D											
CL/1421412	BH2-4 3.5	D											
CL/1421413	BH2-4 6.5	D											
CL/1421416	BH2-1 6.0	D											
CL/1421417	BH2-2 5.0	D											
CL/1421418	BH2-3 2.5	D											
CL/1421419	BH2-5 1.7	D											
CL/1421420	BH2-6 4.0	D											
CL/1421421	BH2-6 7.0	D											
CL/1421422	BH2-7 2.55	D											

Note: For analysis where the scheduled turnaround is greater than the holding time we will do our utmost to prioritise these samples. However, it is possible that samples could become deviant whilst being processed in the laboratory.

In this instance please contact the laboratory immediately should you wish to discuss how you would like us to proceed. If you do not respond within 24 hours, we will proceed as originally requested.

Deviating Sample Key

A	The sample was received in an inappropriate container for this analysis
B	The sample was received without the correct preservation for this analysis
C	Headspace present in the sample container
D	The sampling date was not supplied so holding time may be compromised - applicable to all analysis
E	Sample processing did not commence within the appropriate holding time
F	Sample processing did not commence within the appropriate handling time

Requested Analysis Key

	Analysis Required
	Analysis dependant upon trigger result - **Note: due date may be affected if triggered**
	No analysis scheduled
^	Analysis Subcontracted - **Note: due date may vary**

Where individual results are flagged see report notes for status.

ESG Environmental Chemistry
Analytical and Deviating Sample Overview

Customer ESG Bridgend
Site Dinahs Hollow
Report No S144904

Consignment No S42922
Date Logged 09-Aug-2014

Report Due 21-Aug-2014

ID Number	Description	MethodID	CustServ	Dep.Opt			ICPBRE	KONECL	KoneNO3	PHSOIL	Sub016		TSBRE1
		Sampled	Report B	DO Cl if pH<5.5	DO Mg if SO4(W)>3000	DO NO3 if pH<5.5	Magnesium (BRE)	Chloride:(2:1)	Nitrate (BRE 2:1): mg/l	pH units (AR)	^SO4-- (acid sol)	^SO4-- (H2O sol) mg/l	Total Sulphur.
										✓	✓	✓	
CL/1421423	BH2-7 5.0	D											
CL/1421424	BH2-5 7.50	D											

Note: For analysis where the scheduled turnaround is greater than the holding time we will do our utmost to prioritise these samples. However, it is possible that samples could become deviant whilst being processed in the laboratory.

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Deviating Sample Key

A	The sample was received in an inappropriate container for this analysis
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F	Sample processing did not commence within the appropriate handling time

Requested Analysis Key

	Analysis Required
	Analysis dependant upon trigger result - **Note: due date may be affected if triggered**
	No analysis scheduled
^	Analysis Subcontracted - **Note: due date may vary**

Where individual results are flagged see report notes for status.

Method Descriptions

Matrix	MethodID	Analysis Basis	Method Description
Soil	PHSOIL	As Received	Determination of pH of 2.5:1 deionised water to soil extracts using pH probe.
Soil	SubCon*	*	Contact Laboratory for details of the methodology used by the sub-contractor.
Soil	TSBRE1	Oven Dried @ < 35℃	Determination of Total Carbon and/or Total Sulphur in solid samples by high temperature combustion/infrared detection

Report Notes

Generic Notes

Soil/Solid Analysis

Unless stated otherwise,
- Results expressed as mg/kg have been calculated on the basis indicated in the Method Description table.
  All results on MCERTS reports are reported on a 105ºC dry weight basis with the exception of pH and conductivity.
- Sulphate analysis not conducted in accordance with BS1377
- Water Soluble Sulphate is on a 2:1 water:soil extract

Waters Analysis

Unless stated otherwise results are expressed as mg/l

Nil: Where "Nil" has been entered against Total Alkalinity or Total Acidity this indicates that a measurement was not required due to the inherent pH of the sample.

Oil analysis specific

Unless stated otherwise,
- Results are expressed as mg/kg
- SG is expressed as g/cm^3@ 15^{o}C

Gas (Tedlar bag) Analysis

Unless stated otherwise, results are expressed as ug/l

Asbestos Analysis

CH Denotes Chrysotile **TR** Denotes Tremolite
CR Denotes Crocidolite **AC** Denotes Actinolite
AM Denotes Amosite **AN** Denotes Anthophylite
NAIIS No Asbestos Identified in Sample
NADIS No Asbestos Detected In Sample

Symbol Reference

^ Sub-contracted analysis.
$$ Unable to analyse due to the nature of the sample
¶ Samples submitted for this analyte were not preserved on site in accordance with laboratory protocols. This may have resulted in deterioration of the sample(s) during transit to the laboratory. Consequently the reported data may not represent the concentration of the target analyte present in the sample at the time of sampling
¥ Results for guidance only due to possible interference
& Blank corrected result
I.S Insufficient sample to complete requested analysis
I.S(g) Insufficient sample to re-analyse, results for guidance only
Intf Unable to analyse due to interferences
N.D Not determined **N.Det** Not detected
N.F No Flow
NS Information Not Supplied
Req Analysis requested, see attached sheets for results
Þ Raised detection limit due to nature of the sample
***** All accreditation has been removed by the laboratory for this result
‡ MCERTS accreditation has been removed for this result
§ accreditation has been removed for this result as it is a non-accredited matrix

Note: The Laboratory may only claim that data is accredited when all of the requirements of our Quality System have been met. Where these requirements have not been met the laboratory may elect to include the data in its final report and remove the accreditation from individual data items if it believes that the validity of the data has not been affected. If further details are required of the circumstances which have led to the removal of accreditation then please do not hesitate to contact the laboratory.

Sample Descriptions

Client : ESG Bridgend

Site : Dinahs Hollow

Report Number : S14_4904

Note: major constituent in upper case

Lab ID Number	Client ID	Description
CL/1421408	BH2-1 D 8 3.5	SAND
CL/1421409	BH2-2 D 4 1.7	SAND
CL/1421410	BH2-2 D 18 8.5	SAND
CL/1421411	BH2-4 D 4 1.7	CLAY
CL/1421412	BH2-4 D 8 3.5	CLAY
CL/1421413	BH2-4 D 14 6.5	SAND
CL/1421416	BH2-1 UT 13 6.0	SAND
CL/1421417	BH2-2 WS 12 5.0	SAND
CL/1421418	BH2-3 D 6 2.55	SAND
CL/1421419	BH2-5 D 4 1.7	SAND
CL/1421420	BH2-6 D 7 4.0	SAND
CL/1421421	BH2-6 D 13 7.0	SAND
CL/1421422	BH2-7 D 5 2.55	SAND
CL/1421423	BH2-7 D 10 5.0	SAND
CL/1421424	BH2-5 D 7.50	SAND

ENCLOSURE E

PHOTOGRAPHS

Core Photographs	Plates 1 to 21

Core Photographs

Plate 1: BH2-1 1.70 - 6.00m

Plate 2: BH2-1 6.50 - 7.50m

Notes:		Plates
	Project Dinah's Hollow, Melbury Abbas Phase 2 Ground Invesitgation **Project No.** H4042-14A **Carried out for** Dorset County Council	1 and 2

Core Photographs

Plate 3: BH2-2 1.70 - 6.00m

Plate 4: BH2-2 7.50 - 8.50m

Notes:		Plates
	Project Dinah's Hollow, Melbury Abbas Phase 2 Ground Invesitgation **Project No.** H4042-14A **Carried out for** Dorset County Council	3 and 4

Core Photographs

Plate 5: BH2-3 1.70 - 6.00m

Plate 6: BH2-3 6.50 - 10.50m

Notes:		Plates
	Project Dinah's Hollow, Melbury Abbas Phase 2 Ground Invesitgation **Project No.** H4042-14A **Carried out for** Dorset County Council	5 and 6

Core Photographs

Plate 7: BH2-4 1.70 - 6.00m

Plate 8: BH2-4 6.50 - 10.50m

Notes:		Plates
	Project Dinah's Hollow, Melbury Abbas Phase 2 Ground Invesitgation **Project No.** H4042-14A **Carried out for** Dorset County Council	7 and 8

Core Photographs

Plate 9: BH2-4 10.50 - 11.50m

Plate 10: BH2-5 1.70 - 6.00m

Notes:		Plates
	Project Dinah's Hollow, Melbury Abbas Phase 2 Ground Invesitgation **Project No.** H4042-14A **Carried out for** Dorset County Council	9 and 10

Core Photographs

Plate 11: BH2-5 6.50 - 8.00m

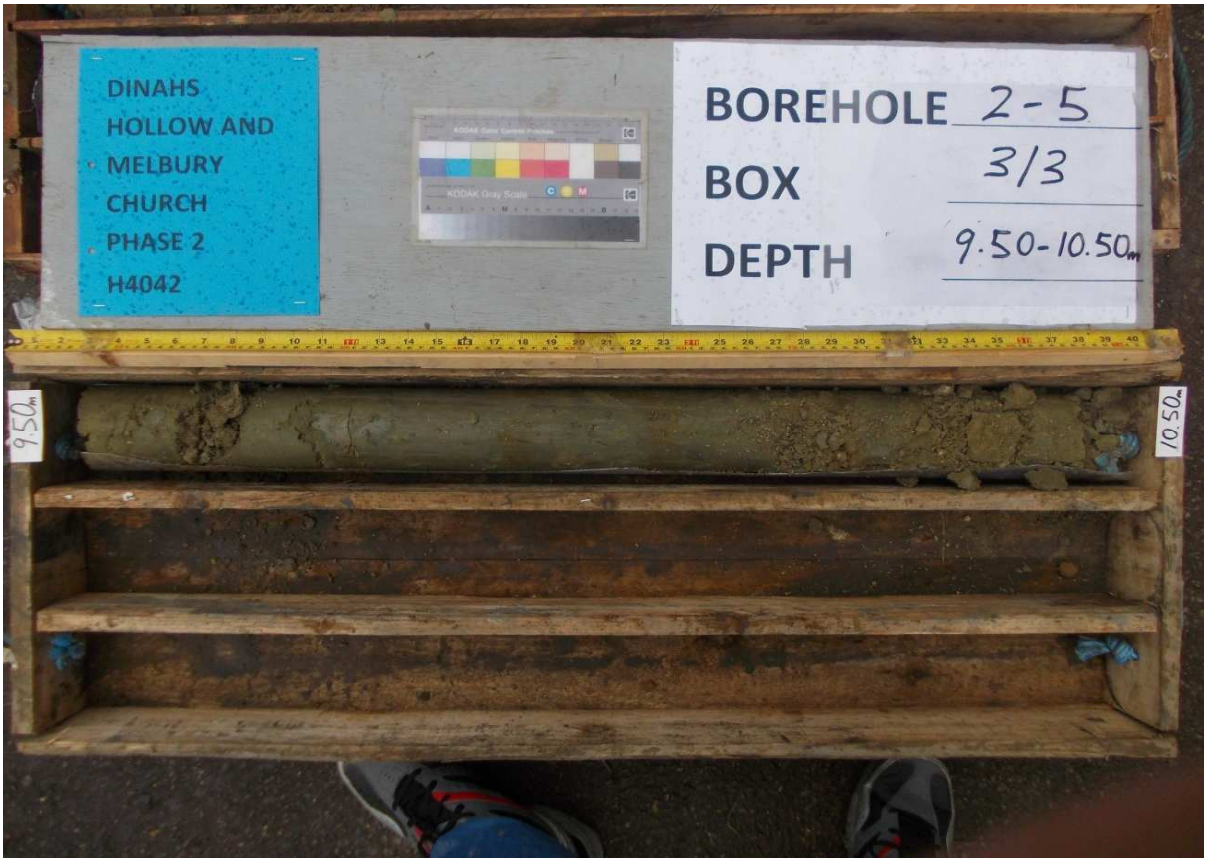


Plate 12: BH2-5 9.50 10.50m

Notes:		Plates
	Project Dinah's Hollow, Melbury Abbas Phase 2 Ground Invesitgation **Project No.** H4042-14A **Carried out for** Dorset County Council	11 and 12

Core Photographs

Plate 13: BH2-6 1.70 - 5.00m

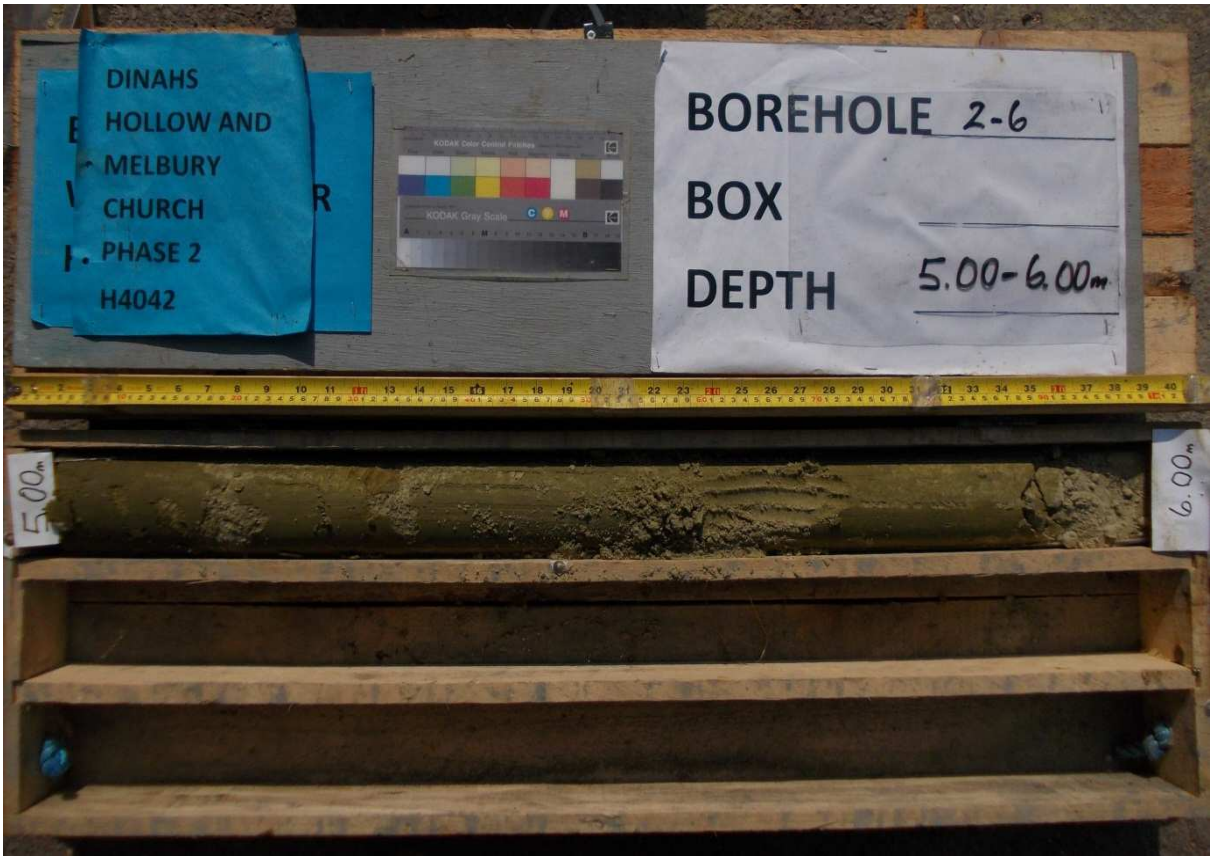


Plate 14: BH2-6 5.00 - 6.00m

Notes:		Plates
	Project Dinah's Hollow, Melbury Abbas Phase 2 Ground Invesitgation **Project No.** H4042-14A **Carried out for** Dorset County Council	13 and 14

Core Photographs

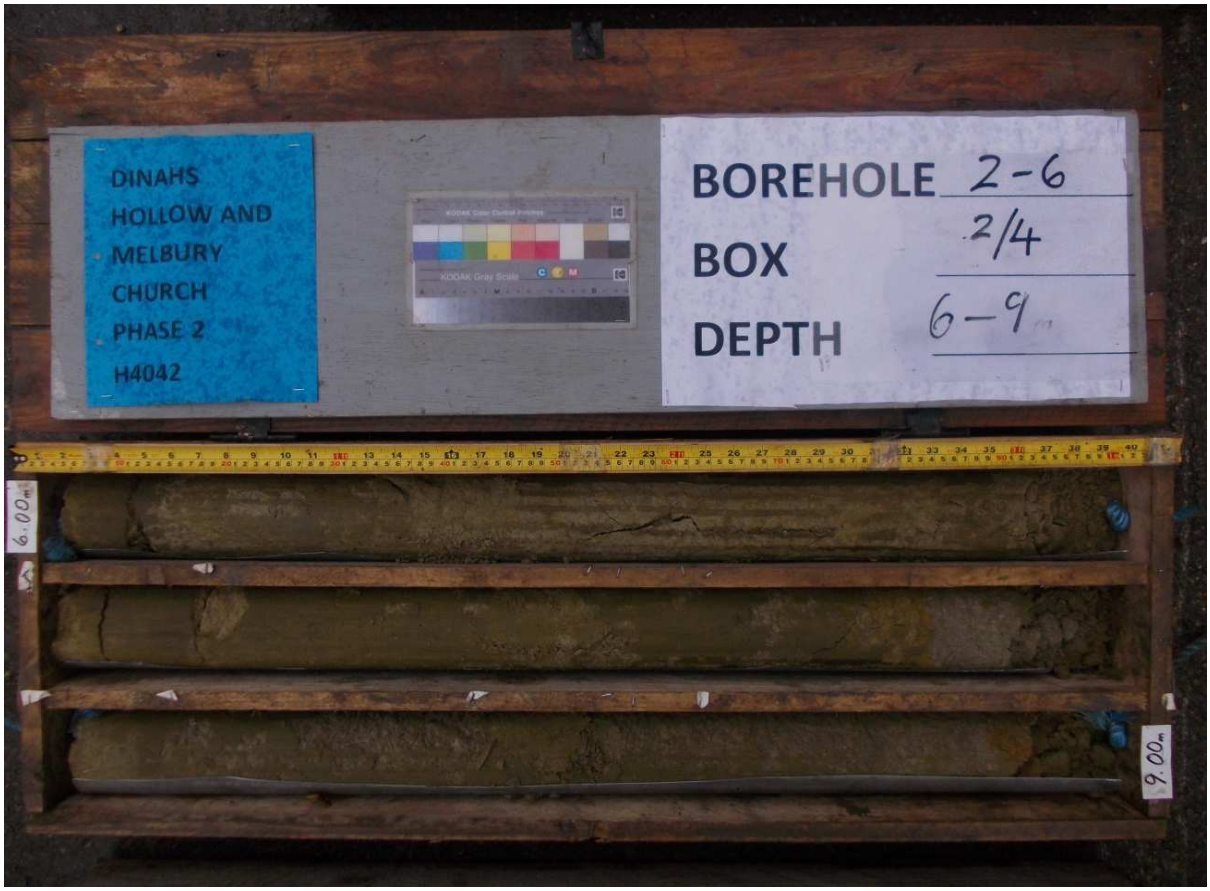


Plate 15: BH2-6 6.00 -9.00m

Plate 16: BH2-6 9.00 - 12.00m

Notes:		Plates
	Project Dinah's Hollow, Melbury Abbas Phase 2 Ground Invesitgation **Project No.** H4042-14A **Carried out for** Dorset County Council	15 and 16

Core Photographs

Plate 17: BH2-6 12.00 -15.00m

Plate 18: BH2-6 15.00 - 16.00m

Notes:		Plates
	Project Dinah's Hollow, Melbury Abbas Phase 2 Ground Invesitgation **Project No.** H4042-14A **Carried out for** Dorset County Council	17 and 18

Core Photographs

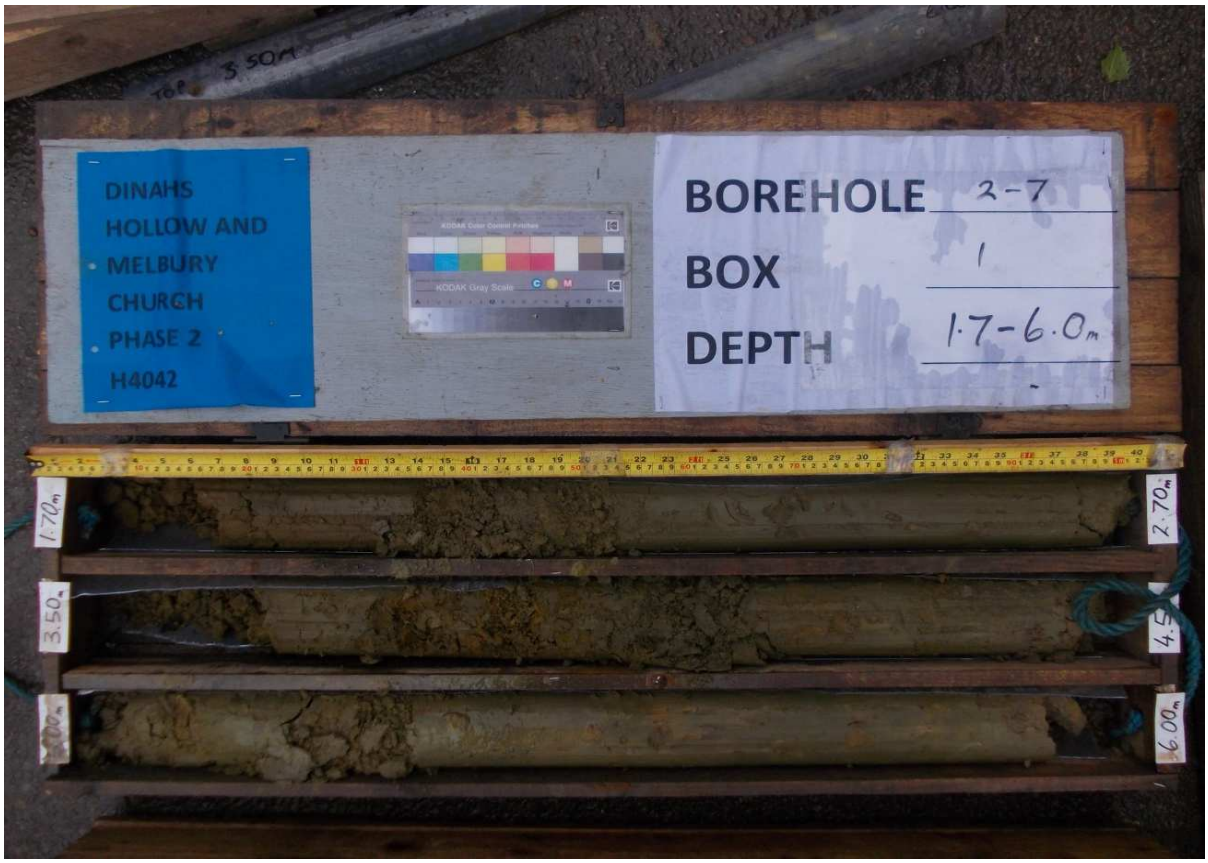


Plate 19: BH2-7 1.70 - 6.00m

Plate 20: BH2-7 6.20 - 10.20m

Notes:		Plates
	Project Dinah's Hollow, Melbury Abbas Phase 2 Ground Invesitgation **Project No.** H4042-14A **Carried out for** Dorset County Council	19 and 20

Core Photographs

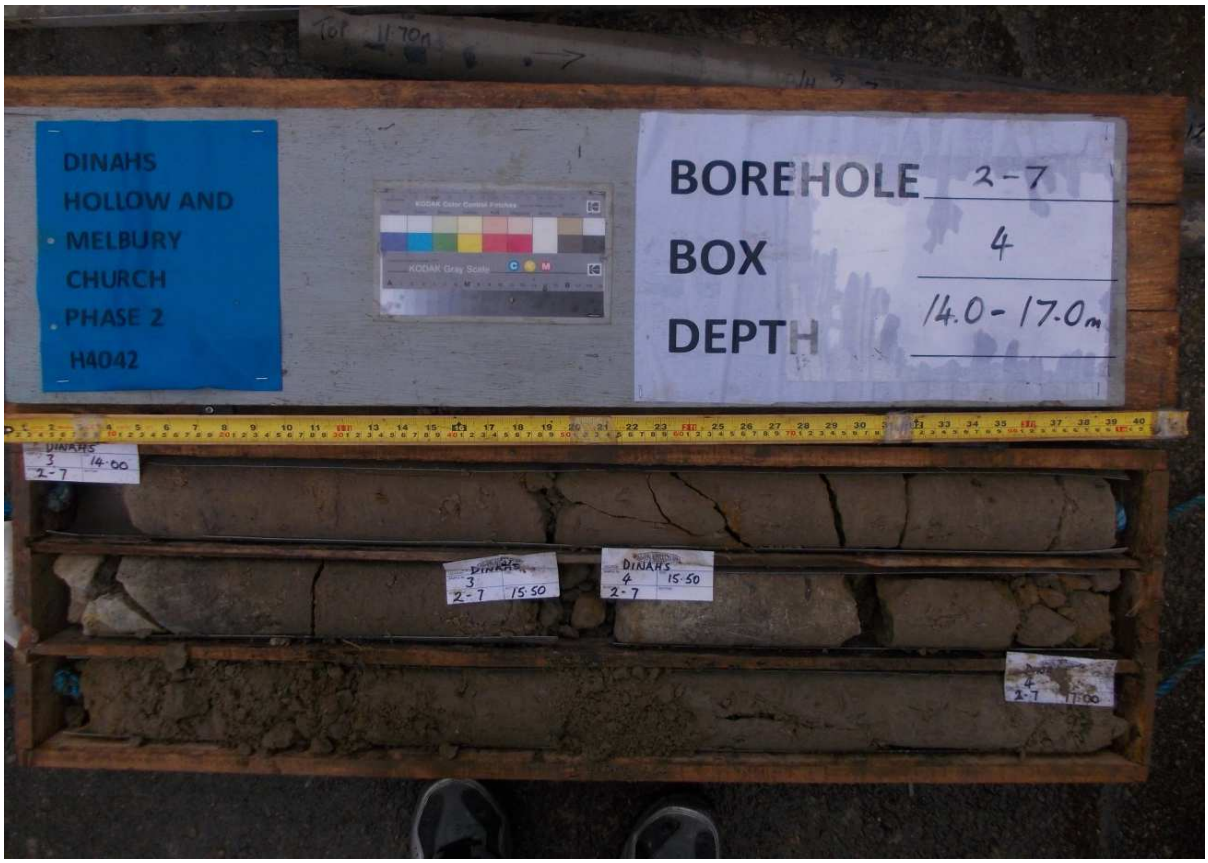
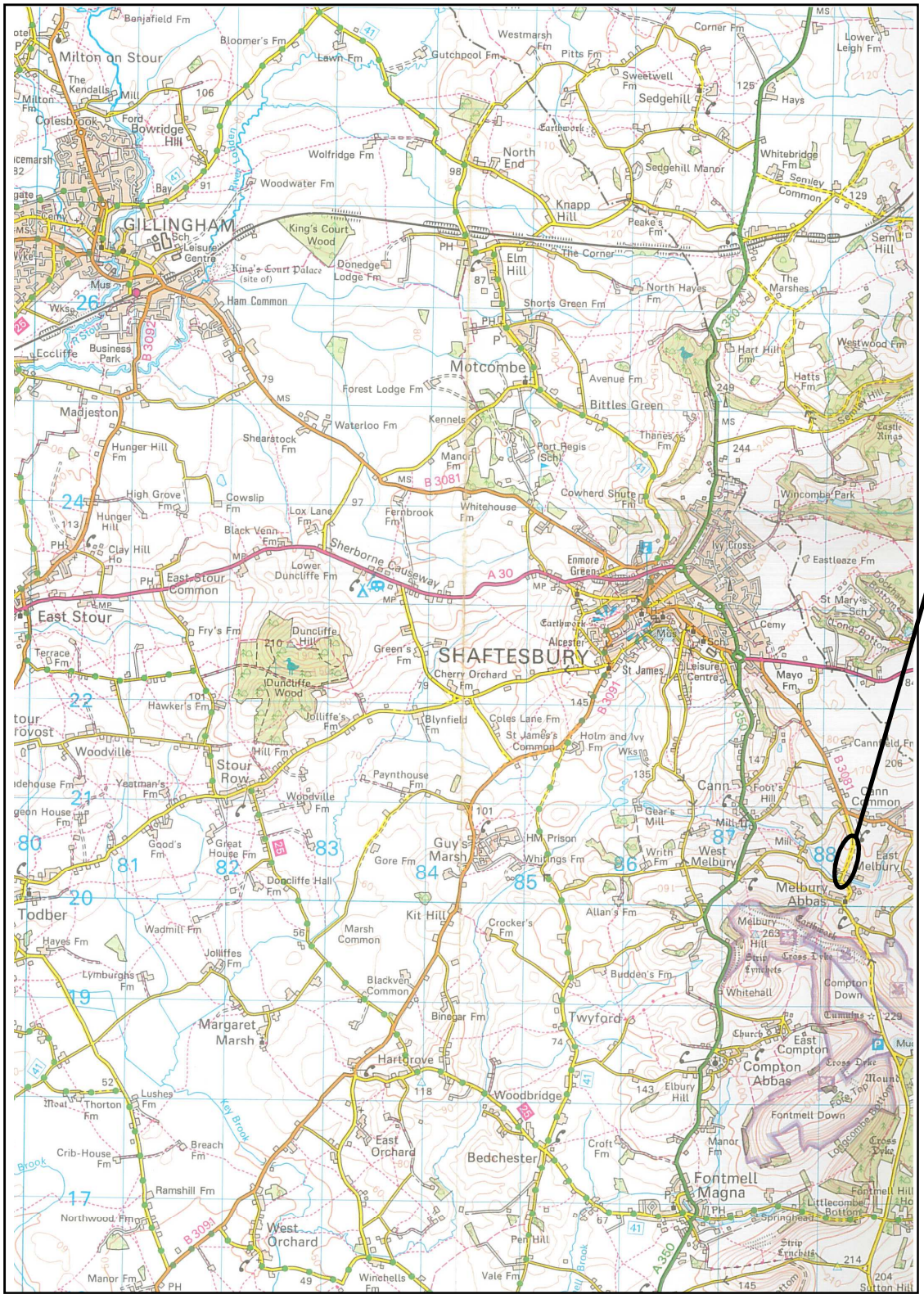


Plate 21: BH2-7 14.00 - 17.00m

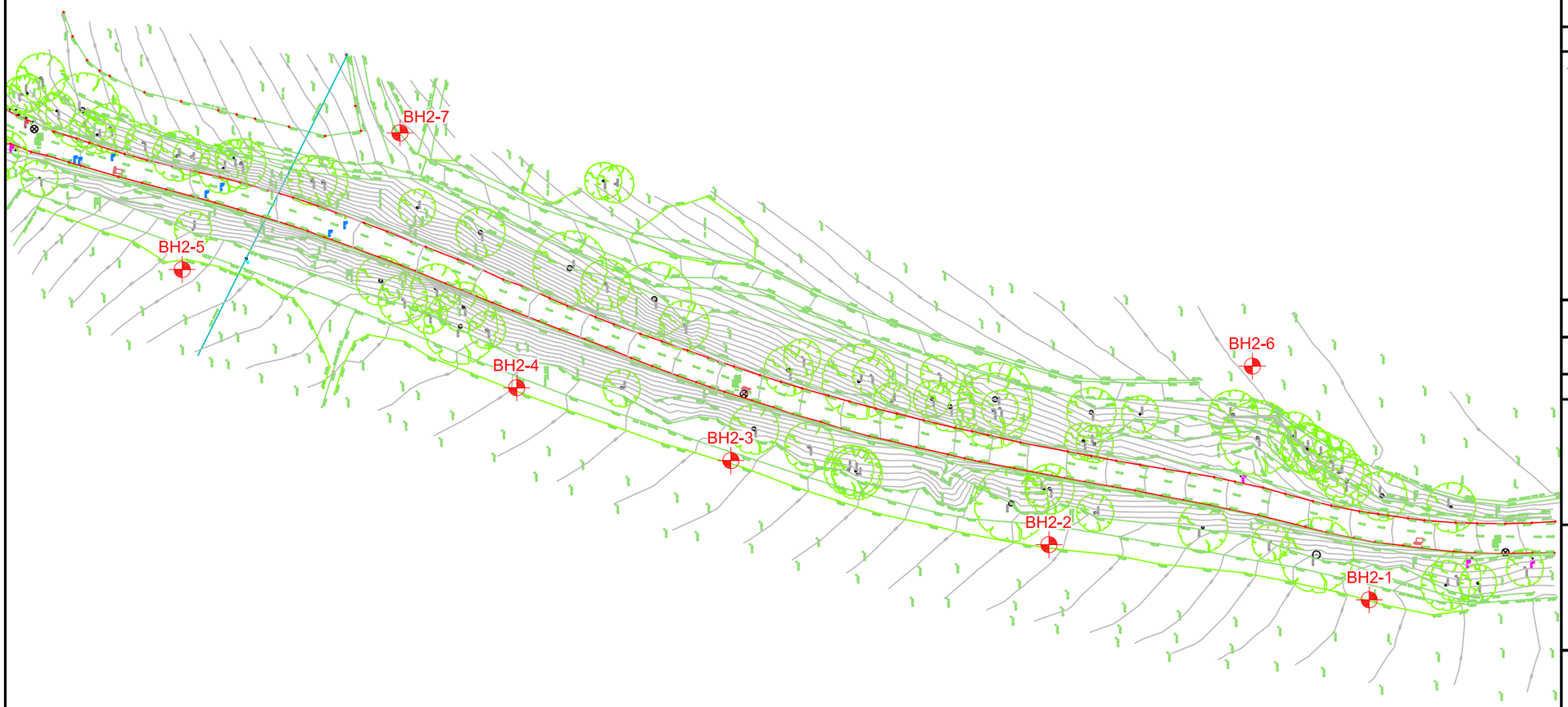
ENCLOSURE F

DRAWINGS

Site Location Plan



Notes: Scale 1:50 000	**Project** Dinah's Hollow, Melbury Abbas **Project No.** H4042-14A **Carried out for** Dorset County Council	**Figure** **F1**



GENERAL NOTES

1. Reproduced from Dorset County Council 's Drawing No. BHP 001.
2. Hole Locations to National Grid Co-ordinate Reference System.

LEGEND TO SYMBOLS

Borehole Location

Scale: 1:1000

0 10m 20 30 40 50

Rev	Drawn	Date	Approv.	Date	Modification Details
x	x	x	x	x	x

AMENDMENTS

Title

SITE PLAN

Project

DINAHS HOLLOW, MELBURY ABBAS
PHASE 2 GROUND INVESTIGATION

Client

DORSET COUNTY COUNCIL

ESG Environmental Scientifics Group

Date	Drawn By	Approv. By
22/09/2014	BS	AP

Sheet Size	Scale	Project No
A3	1:1000	H4042-14A

Drawing No	Rev
F2	0