One Earth Solar Farm

Volume 9.0 Other Post-Submission Document [EN010159]

Ground Investigation Report

July 2025

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Revision 01

Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 - Reg 5 (2) (b)



PERSHING CONSULTANTS

One Earth Solar Farm

Ground Investigation Factual Report

2372986 FINAL

CENTRAL ALLIANCE
GROUND ENGINEERING TECHNICAL SERVICES

CENTRAL ALLIANCE CONTROL SHEET

Project No.: 2372986

Title: One Earth Solar Farm Ground Investigation Factual Report

Client: Pershing Consultants

Issue Date: January 25

Office: Central Alliance Pre-Construction Services Limited, (Part of RSK Environment Limited), Alliance House, South Park Way, Wakefield 41 Business Park, Wakefield, WF2 0XJ

Version: 2372986-FAC-01 FINAL

Russell Witter
Geo-Environmental Engineer
[redacted]

John Parkinson
Senior Geo-Environmental Engineer
[redacted]

VERSION CONTROL SHEET

Reference	Date	Status	Amended by	Approved by
FAC-01	25/10/2024	Interim Draft	Russell Witter	John Parkinson
FAC-01	18/12/2024	Interim Draft	Russell Witter	John Parkinson
FAC-01	30/01/2025	Final	Russell Witter	John Parkinson

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1 INTRODUCTION

1.1 Commissioning

Central Alliance Pre-Construction Services Limited (Central Alliance) was instructed by Pershing Consultants Ltd (PCL) to undertake intrusive ground investigation at their site in near Fledborough, Lincolnshire. Central Alliance was commissioned to provide the following for the project:

- A factual description of the work undertaken
- Maps and plans
- Exploratory hole logs
- Monitoring Results
- Laboratory testing results

1.2 Objectives

The objective of the ground investigation was to obtain geological data across the site, to establish geotechnical properties, investigate presence of below ground contamination and to install ground monitoring instrumentation, to aid in the design and completion of the Clients proposed works.

1.3 Scope of works

The scope of the investigation was designed by AECOM as provided within the received specification document Ground Investigation Specification One Earth Solar First Issue 16 08 2024.

The scope included:

- 13No. Dynamic Sampled boreholes with Rotary Core follow-on to scheduled depth of between 7.00 and 17.00m.
- 12No. Machine-Excavated Trial Pits to scheduled depth of 4.50m bgl.

Final exploratory hole locations were agreed on site between the Client and Central Alliance, following consideration of the existing site conditions and site access restrictions. Details of the works completed, including any deviation from the scope of work, is identified in **Section 3.**

1.4 Limitations

This report presents a description of the site at the time of the fieldwork, results of the fieldwork, in-situ testing undertaken, strata encountered and geotechnical and/or chemical test results, and where applicable, the data obtained during the subsequent monitoring programme.

There may be other conditions prevailing at the site which have not been disclosed by this investigation and which have not been considered by this report. Responsibility cannot be accepted for conditions at the site not revealed by the investigation and

confirmation of intermediate ground conditions between exploratory holes should be considered if deemed necessary.

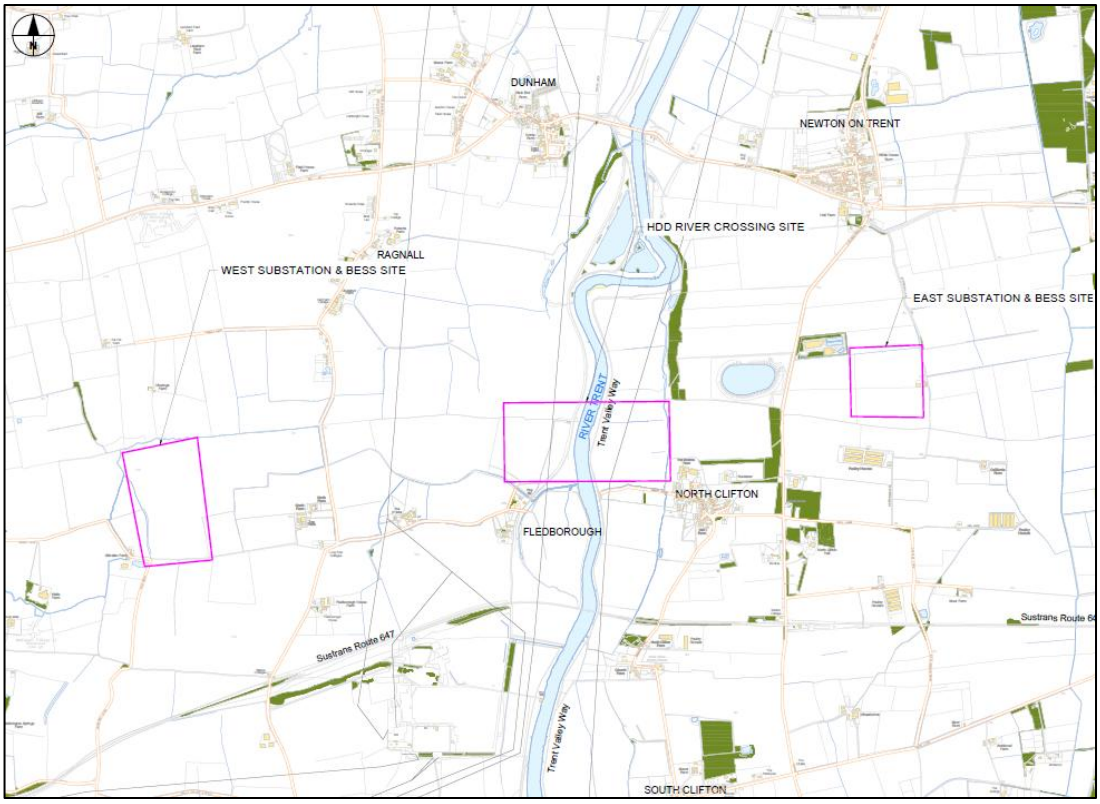
Unless instructed by the Client, Central Alliance is not obliged to and disclaims any obligation to update the report for events taking place after the date on which this investigation was undertaken.

2 SITE DETAILS

2.1 Site Location

The site is located near the village of Fledborough, Lincolnshire, adjacent to the River Trent and approximately 16km to the west of Lincoln. The approximate centre of the site is at Grid Reference 481607, 372571, and the nearest postcode is NG23 7AT.

The site is divided across three areas, as shown in the plan below.



Site location details are presented in **Table 1 - Site Location** and satellite imagery of the area is presented in **Figure 1.**

Table 1 - Site Location

Site name	One Earth Solar Farm
Full site compound address and postcode	During the works the compound was located to the east of the site at: Hall Farm, Southmoor Lane, Lincoln, LN1 2LJ.
National Grid reference (compound)	483641, 372938

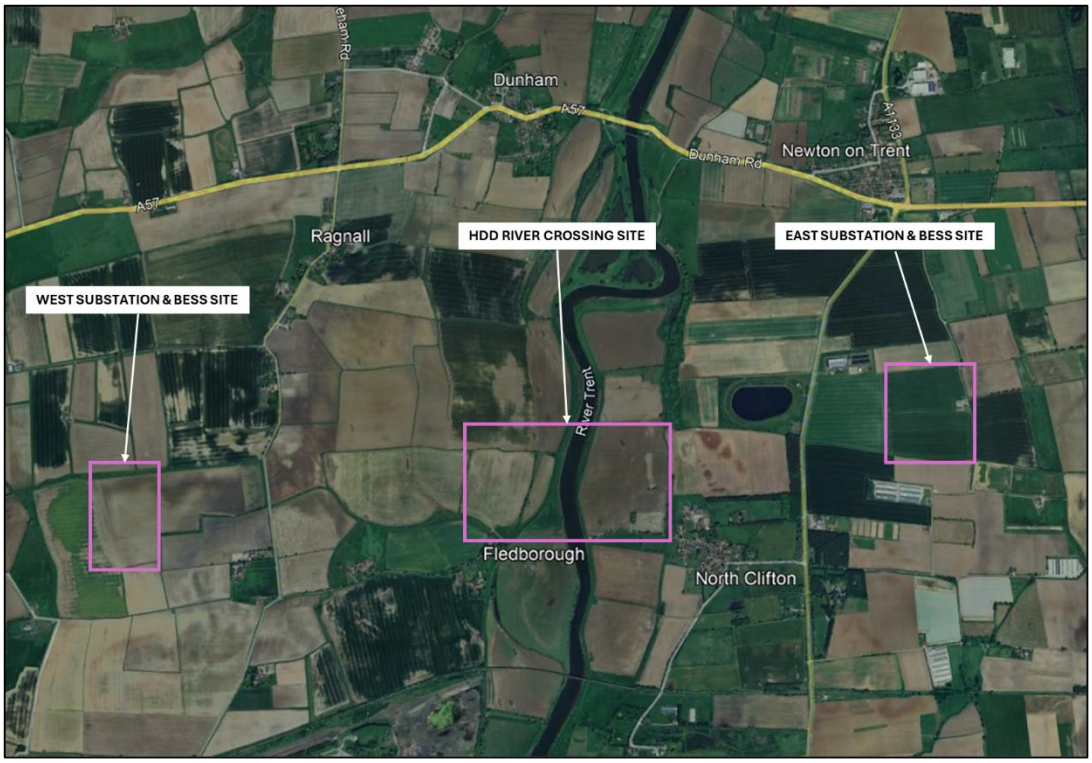


Figure 1: Site Location (Google Earth©, 2024)

2.2 Site Description

West Substation and BESS Site: Area of agricultural fields directly due west of North Farm, Fledborough with further agricultural fields surrounding it

East Substation and BESS site: Area of agricultural fields northeast of North Clifton with further agricultural fields surrounding it

HDD River Crossing: an area of agricultural fields either side of the River Trent between the villages of Fledborough to the west and North Clifton to the east. The river flows in a general north to south direction in this area and is bound by levees.

2.3 Site Geology

2.3.1 Made Ground

Made Ground is not indicated to be present at the location.

2.3.2 Anticipated Geological Sequence

Published records (British Geological Survey, BGS) for the area indicate the geology of the site to be characterised by the strata recorded in **Tables 2** and **3**, seen below

Table 2 - Site Geology (Superficial)

Strata	Description
Holme Pierrepont Member to the east Alluvium shown adjacent to the River Trent. No superficial deposits shown to underlie the east of the site.	Generally pinkish poorly sorted SAND and GRAVEL. CLAY, SILT, SAND and GRAVEL
Relevant information sources: BGS Geology Viewer ☐ BGS Geoindex ☒ Previous SI reports ☐	

Table 3 - Site Geology (Solid Geology)

Strata	Description
Mercia Mudstone	Dominantly Brownish Red, less commonly green/grey mudstones and siltstone with thick gypsum bearing units
Relevant information sources: BGS Geology Viewer ☒ BGS Geoindex ☒ Previous SI reports ☐	

3 FIELDWORK

3.1 General Fieldwork Information

The ground investigation works were completed between Monday 23rd September and Tuesday 22nd October 2024, with works completed during normal weekday shifts

The fieldwork was carried out in general accordance with Eurocode 7, BS5930:2015+A1:2020 - 'Code of Practice for Ground Investigations'; BS10175 'Investigation of potentially contaminated sites – Code of Practice' (2001); Association of Geotechnical and Geo-environmental Specialist Guidelines for Good Practice in Geotechnical Ground Investigation (June 2016) and logged in accordance with BS EN ISO 14688-1:2018 and BS EN ISO 14688-2:2018.

The final locations of exploratory holes were determined by the presence of underground services, practicalities, and any site access restrictions. The locations of exploratory holes are provided on drawing CA-2372986-GI with coordinates and levels recorded on the individual exploratory hole logs presented as Appendix A.

3.2 Exploratory Holes

The exploratory holes were completed using a combination of dynamic sampling, rotary coring and machine trial pitting techniques. The logging, sampling and subsampling of the exploratory holes were completed by a suitably qualified Geo-Environmental Engineer provided by Central Alliance.

The completed scope of works was as follows:

- 13No. Dynamic Sampled boreholes with Rotary Core follow-on to a maximum depth between 5.00m and 19.40m bgl.
- 12No. Trial Pits to a maximum depth between 1.60m and 4.00m bgl

In situ standard penetration tests (SPT) were performed within the dynamic sample boreholes. The results are presented on the exploratory hole logs provided in Appendix A.

The trial pits were terminated at slightly shallower depths due to groundwater ingress and instability.

Due to the presence of gravels adjacent to the River Trent, a cable percussive rig was mobilised to site to assist the rotary rig. BH005, BH007, BH008 and BH010 were advanced by cable percussive techniques to either the scheduled depth of the borehole or to rockhead to allow the rotary core follow-on to continue to the scheduled depth.

Table 4 - Summary of Ground Investigation Works

Investigation Method	No. of Positions	Maximum Depth (mbgl)	No. SPTs	Installs
Dynamic Sampled Boreholes	13 (BH001 to BH013)	19.4m	60	9no. 50mm Standpipes 4no. VWPs
Trial Pits	2 (TP001 to TP012	4.0m	n/a	n/a

For full details of the strata encountered, groundwater strikes, samples taken, in-situ testing, logging legend sheet, and calibration certificates please refer to the individual exploratory hole records presented as Appendix A.

Photographs of recovered cores/samples and/or Trial Pit excavations, are provided as Appendix B.

3.3 Monitoring Installations

The following monitoring instrumentation was installed to facilitate the specified post-fieldworks monitoring:

- 9No. 50mm diameter groundwater/ground gas monitoring standpipe installation
- 4No. vibrating wire piezometer (VWP) installation

3.4 Post-Fieldwork Monitoring

To date the groundwater/ground gas monitoring standpipes have been monitored for water level on 3no. occasion at 1- month intervals, following completion of the fieldworks. Water sampling was undertaken on the second visit. The monitoring results to date are presented as Appendix C. Monitoring is ongoing and will be reported in the updated final report upon completion.

4 LABORATORY TESTING

4.1 Geotechnical Laboratory Testing

Laboratory testing was scheduled by Pershing Consultants/AECOM on selected soil/rock samples recovered during the investigation. The samples were sent to Professional Soils Laboratory (PSL), at their testing facility in Doncaster, to determine the physical characteristics of the substrata and comprised the following:

- Moisture content and Atterberg Limit tests to classify the materials.
- Particle size distribution (PSD)/sedimentations to confirm the field descriptions of the soils encountered.
- Organic Matter.
- BRE Full Suite.
- California Bearing Ratio (CBR) test to determine the bearing characteristics of the soils.
- One Dimensional Consolidation test to determine the compressibility of the soils.
- Shear strength testing of 100mm diameter specimens, 60mmx60mm shear box testing and by hand vane to determine the shear strength characteristics of the soils.
- Moisture Condition Value (MCV) testing to determine the suitability of the material for compaction.
- Effective stress testing by multistage undrained triaxial.
- Compaction testing (2.5kg) and particle density to determine the compaction properties of the soils.
- Bulk density.
- Loss On ignition.
- Point load and UCS testing on rock core to determine the strength of the rock.

All testing has been carried out in accordance with the laboratory's UKAS accreditation following lab standards set out in BS EN INO 17892. The certificates to date are included in Appendix D.

4.2 Chemical Laboratory Testing

Chemical testing was scheduled by Pershing Consultants/AECOM on selected samples recovered during the ground investigation and from groundwater samples recovered during the monitoring. The samples were sent to Envirolab at their laboratory in Hattersley, Greater Manchester.

All testing was carried out in accordance with the laboratory's UKAS accreditation.

The certificates to date are included in Appendix E.

DRAWING(S)

TP002
7.273

TP001
8.779

BH001
9.350

11m

BH002
6.817

TP003
9.616

BH003
9.586

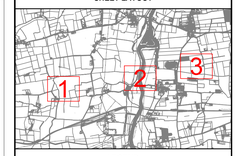
BH004
12.440

TP005
9.656

TP004
11.306

Gibraltar Farm

SHEET LAYOUT



LEGEND

BOREHOLE (BH)

TRIAL PIT (TP)

EXPLORATORY HOLE LOCATION COORDINATES

HOLE ID	EASTING	NORTHING	LEVEL
BH001	479072.886	372470.641	9.350
BH002	479291.893	372242.504	6.817
BH003	478976.071	372181.986	9.586
BH004	479178.144	371956.123	12.440
TP001	478881.160	372487.841	8.779
TP002	479204.332	372542.343	7.273
TP003	479128.056	372209.201	9.616
TP004	479044.592	371896.531	11.306
TP005	479313.355	371922.335	9.656

REV.	DETAILS	BY	DATE

GRID: ORDNANCE SURVEY Related to OS Network reference station by GPS observations.

DATUM: ORDNANCE SURVEY Related to OS Network reference station by GPS observations.

CENTRAL ALLIANCE
GROUND ENGINEERING TECHNICAL SERVICES
RSK

Tel: (0)1924 229889
Email: info@central-alliance.co.uk
Web: www.central-alliance.co.uk

Alliance House, South Park Way,
Wakefield 41 Business Park,
Wakefield, WF2 0XJ

CLIENT: Pershing Consultants

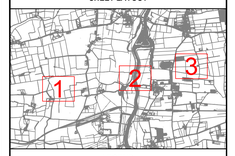
SITE LOCATION: One Earth Solar Farm

SURVEY TITLE: Exploratory Hole Location Plan

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DRAWN BY:	DATE:	SCALE:
TR	Dec 2024	1:1000 @ A0
APPROVED BY:	DATE:	SHEET NUMBER: / REV:
JP	Dec 2024	1 of 3 A0



SHEET LAYOUT



LEGEND

BOREHOLE (BH)

TRIAL PIT (TP)

EXPLORATORY HOLE LOCATION COORDINATES

HOLE ID	EASTING	NORTHING	LEVEL
BH005	481462.717	372660.487	4.647
BH006	481517.904	372663.210	4.900
BH007	481486.704	372521.543	4.683
BH008	481691.058	372551.491	4.611
BH009	481688.528	372421.446	4.777
BH010	481743.251	372419.519	4.803
TP006	481433.936	372524.536	4.703
TP007	481429.902	372441.844	4.684
TP008	481755.789	372615.037	4.033
TP009	481754.954	372545.658	4.284

REV.	DETAILS	BY	DATE

GRID: ORDNANCE SURVEY. Related to OS Network reference station by GPS observations.

DATUM: ORDNANCE SURVEY. Related to OS Network reference station by GPS observations.

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RSK

Tel: (0)1924 229889
Email: info@central-alliance.co.uk
Web: www.central-alliance.co.uk

Alliance House, South Park Way,
Wakefield 41 Business Park,
Wakefield, WF2 0XJ

CLIENT: Pershing Consultants

SITE LOCATION: One Earth Solar Farm

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SURVEYED BY:	DATE:	DRAWING NUMBER:
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DRAWN BY:	DATE:	SCALE:
TR	Dec 2024	1:1000 @ A0
APPROVED BY:	DATE:	SHEET NUMBER / REV:
JP	Dec 2024	2 of 3 A0

BH011
8.742

TP010
9.970

TP011
7.482

6m

TP012
9.184

BH013
7.055

BH012
11.144

11m

SHEET LAYOUT



LEGEND

BOREHOLE (BH)

TRIAL PIT (TP)

EXPLORATORY HOLE LOCATION COORDINATES

HOLE ID	EASTING	NORTHING	LEVEL
BH011	483440.709	373100.997	8.742
BH012	483291.841	372784.385	11.144
BH013	483568.581	372807.214	7.055
TP010	483303.858	372998.478	9.970
TP011	483551.040	373015.641	7.482
TP012	483428.679	372848.451	9.184

REV.	DETAILS	BY	DATE

GRID: ORDNANCE SURVEY
Related to OS Network reference station by GPS observations.

DATUM: ORDNANCE SURVEY
Related to OS Network reference station by GPS observations.

CENTRAL ALLIANCE
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RSK

Tel: (0)1924 229689
Email: info@central-alliance.co.uk
Web: www.central-alliance.co.uk

Alliance House, South Park Way,
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Wakefield, WF2 0XJ

CLIENT:
Pershing Consultants

SITE LOCATION:
One Earth Solar Farm

SURVEY TITLE:
Exploratory Hole Location Plan

SURVEYED BY:	DATE:	DRAWING NUMBER:
AW	Sep/Oct 2024	CA-2372986-GI
DRAWN BY:	DATE:	SCALE:
TR	Dec 2024	1:1000 @ A0
APPROVED BY:	DATE:	SHEET NUMBER: / REV:
JP	Dec 2024	3 of 3 A0

CENTRAL ALLIANCE
GROUND ENGINEERING TECHNICAL SERVICES

Appendix A
Exploratory Hole Logs

CENTRAL ALLIANCE

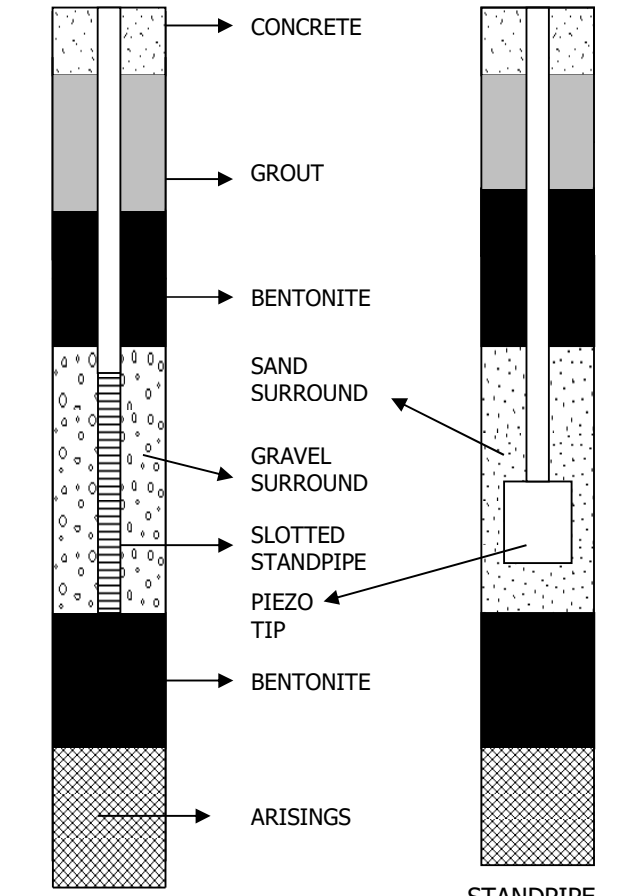
GROUND ENGINEERING TECHNICAL SERVICES

EXPLORATORY HOLE LEGEND SHEET

STRATA LEGENDS

- TOPSOIL
- MADE GROUND
- CLAY
- SANDY GRAVELLY CLAY
- ORGANIC CLAY
- SILT
- SAND
- GRAVEL
- SAND & GRAVEL
- PEAT
- COBBLES
- BOULDERS
- MUDSTONE
- SILTSTONE
- SANDSTONE
- LIMESTONE
- CHALK

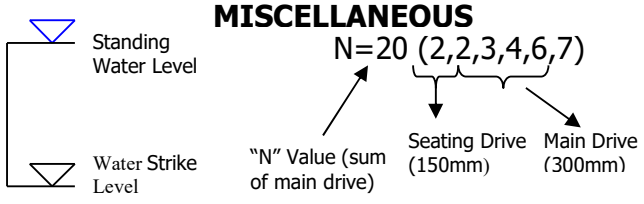
INSTALLATIONS / BACKFILL



SAMPLE & IN SITU TESTS

B	Bulk Disturbed Sample
D	Disturbed Sample
W	Water Sample
ES	Environmental Soil Sample
EW	Environmental Water Sample
U	Undisturbed Sample
UT	Undisturbed Thin Wall Sample
P	Piston Sample
S	SPT (Split Spoon)
C	CPT / Core Sample
HV	Hand Vane
PID	Photo Ionisation Detector

MISCELLANEOUS



Allied Exploration & Geotechnics Ltd.

Unit 25 Stella Gill Industrial Estate
Pelton Fell
Chester-le-Street
DH2 2RG

SPT Hammer Energy Test Report

in accordance with BSEN ISO 22476-3:2005

SPT Hammer Ref:	DS 7.10.1
Test Date:	24/01/2023
Report Date:	24/01/2023
File Name:	DS 7.10.1.spt
Test Operator:	SW

Instrumented Rod Data

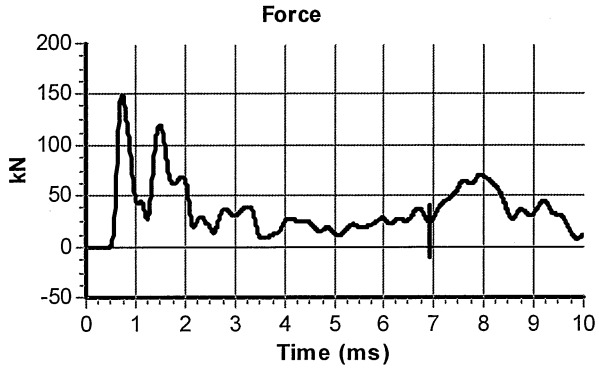
Diameter d_r (mm):	67
Wall Thickness t_r (mm):	8.7
Assumed Modulus E_a (GPa):	208
Accelerometer No.1:	65939
Accelerometer No.2:	66286

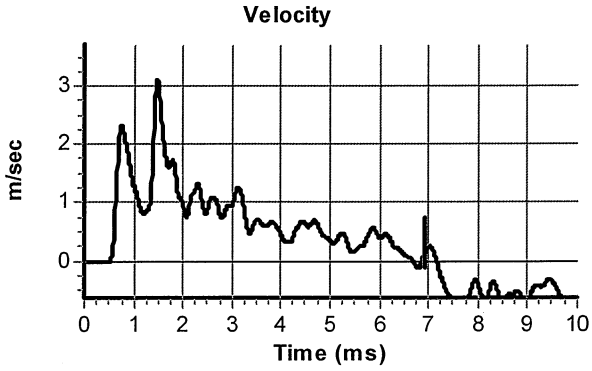
SPT Hammer Information

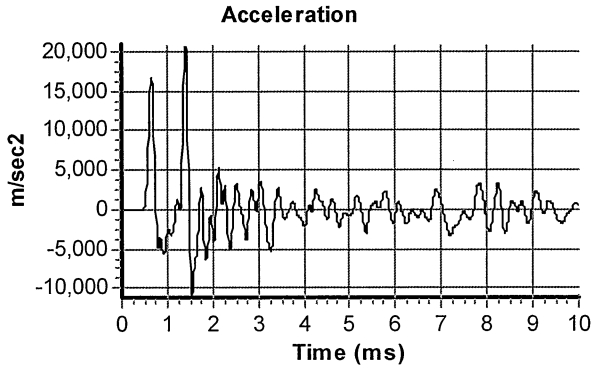
Hammer Mass m (kg):	63.5
Falling Height h (mm):	760
SPT String Length L (m):	14.1

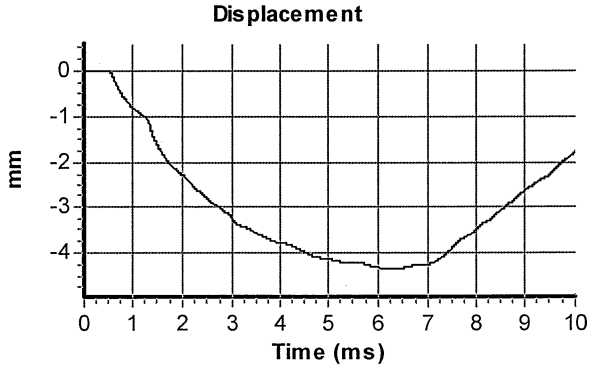
Comments / Location

Mass and drop supplied by client









Calculations

Area of Rod A (mm2):	1593
Theoretical Energy E_{theor} (J):	473
Measured Energy E_{meas} (J):	292

Energy Ratio E_r (%): **62**

[redacted]even Wakely
Title: Laboratory Technichian

The recommended calibration interval is 12 months

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SPT Hammer Energy Test Report

in accordance with BSEN ISO 22476-3:2005

///SAFER RIG SERVICES

Safer Rig Services
Portview Road
Avonmouth
Bristol
BS11 9JE

SPT Hammer Ref:	AR2152
Test Date:	11/04/2024
Report Date:	15/04/2024
File Name:	CA AR2152.spt
Test Operator:	MS

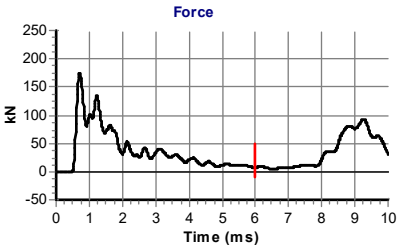
Instrumented Rod Data

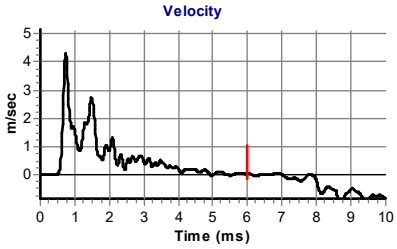
Diameter d_r (mm):	54
Wall Thickness t_r (mm):	6.8
Assumed Modulus E_a (GPa):	200
Accelerometer No.1:	73534
Accelerometer No.2:	73538

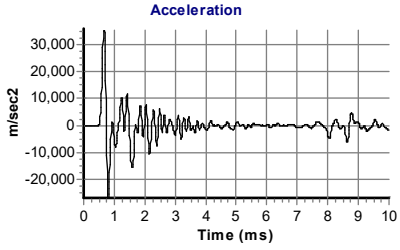
SPT Hammer Information

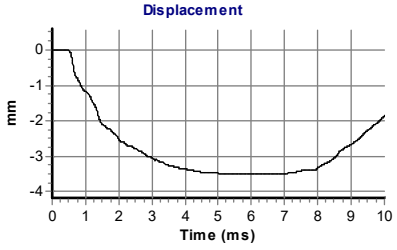
Hammer Mass m (kg):	63.5
Falling Height h (mm):	760
SPT String Length L (m):	12.2

Comments / Location









Calculations

Area of Rod A (mm2):	1008
Theoretical Energy E_{theor} (J):	473
Measured Energy E_{meas} (J):	301

Energy Ratio E_r (%): **64**

[redacted]

Signed: M.Stokes

Title: Equipment Inspector

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SPT Hammer Energy Test Report

in accordance with BSEN ISO 22476-3:2005

///SAFER RIG SERVICES

Safer Rig Services
Portview Road
Avonmouth
Bristol
BS11 9JE

SPT Hammer Ref:	AR2154
Test Date:	05/08/2024
Report Date:	06/08/2024
File Name:	AR2154.spt
Test Operator:	MS

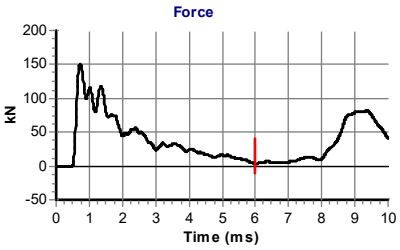
Instrumented Rod Data

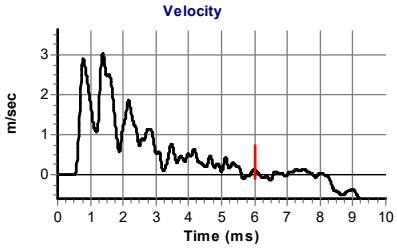
Diameter d_r (mm):	54
Wall Thickness t_r (mm):	6.8
Assumed Modulus E_a (GPa):	208
Accelerometer No.1:	73534
Accelerometer No.2:	73538

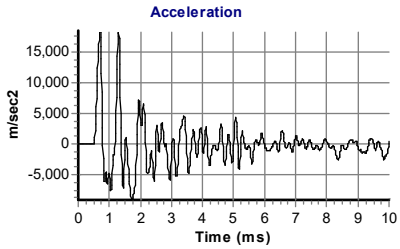
SPT Hammer Information

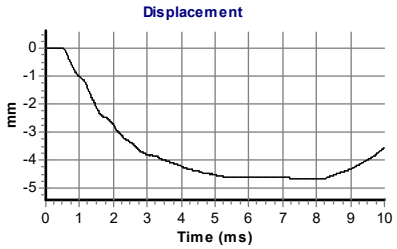
Hammer Mass m (kg):	63.5
Falling Height h (mm):	760
SPT String Length L (m):	12.1

Comments / Location









Calculations

Area of Rod A (mm2):	1008
Theoretical Energy E_{theor} (J):	473
Measured Energy E_{meas} (J):	334

Energy Ratio E_r (%): **71**

[redacted]

Signed: M.Stokes

Title: Equipment Inspector

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Alliance House
3A South Park Way
Wakefield 41 Business Park
Wakefield WF2 0XJ
+44 (0)1924 229889
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Start Date:	30/09/2024	Checked:	RW
End Date:	01/10/2024	Approved:	JP

Location ID

BH001

FINAL

Log Type

Header Sheet

Scale: 1:50

Sheet 1 of 1

Project No:	**2372986**
Name:	**One Earth Solar Farm**
Location:	**Hall Farm, Lincoln**
Client:	**Pershing Consultants**

Location Details

Easting:	**479072.89**	Northing:	**372470.64**
Elevation:	**9.35mAOD**	Final Depth:	**10.00m**
Logger:	**AT**	Grid System:	**OSGB**
Orientation:	**N/A**	Inclination:	**90°**

Methodology & Plant

Depth (m)	Method	Plant Used
0.00 - 1.20	Inspection Pit	Hand Tools
1.20 - 2.50	Dynamic Sampling	Comacchio 205
2.50 - 10.00	Rotary Coring	Comacchio 205

Hole Diameter

Depth (m)	Diam (mm)
10.00	121

Casing Diameter

Depth (m)	Diam (mm)
2.50	143

Groundwater Strikes

Strike (m)	Casing (m)	Sealed (m)	Time (min)	Rose To (m)	Remarks

Installation / Instrument Details

Date	Instrument Details	To (m)	Resp. Zone (m)	Diam (mm)
01/10/2024	Standpipe	4.00	2.50 - 4.00	50

If Methodology includes Dynamic Sampling refer to Runs table for info.

No Groundwater Encountered

Backfill

Depth (m)	Legend Code
0.00 - 0.50	Concrete
0.50 - 2.50	Bentonite
2.50 - 4.00	Gravel
4.00 - 10.00	Bentonite

Sample Summary

Environmental Samples			
Soil	**8**	Water	**1**
Geotechnical Samples			
Bulk	**2**	Large Bulk	**0**
Disturbed	**3**	Disturbed (NR)	**0**
Piston	**0**	Piston (NR)	**0**
Undisturbed	**0**	Undisturbed (NR)	**0**
Undisturbed Thin Wall			**0**
Undisturbed Thin Wall (NR)			**0**
Core Sample			**0**

(NR) Indicates sample undertaken but with 0% Recovery

Standard Penetration Test Summary

Test Type	Depth (m)	Casing (m)	Water (m)	Seating Blows	Main Blows	Penetration Total (mm)	N	Reported Result	Hammer Ref
Split Spoon	1.20	-	-	8	21	450	21	N=21 (3,5/4,6,5,6)	AR2152
Split Spoon	2.00	-	-	3	7	450	7	N=7 (1,2/1,1,2,3)	AR2152
Split Spoon	2.50	2.50	-	15	33	450	33	N=33 (6,9/6,8,9,10)	AR2152

SPT Hammer Ref.	Energy Ratio (%)
AR2152	64

In-Situ Tests

PID	**0**
Hand Vane*	**0**
Standard Penetration Tests	**3**

* One count indicates an average reported result of 3 tests carried out at one depth where available.

Applicable to Cable Percussion Only

Chiselling

Depth (m)	Duration (mins)

Water Added

Depth (m)	Litres

Applicable to Rotary Only

Drilling Flush

Depth (m)	Flush Type	Flush Colour	Return %
2.50 - 4.00	Water	Reddish Brown	90
4.00 - 5.50	Water	Reddish Brown	90
5.50 - 7.00	Water	Reddish Brown	90
7.00 - 8.50	Water	Reddish Brown	90
8.50 - 10.00	Water	Reddish Brown	90

Applicable to Dynamic Sampling Only

Dynamic Sampling Runs

Depth (m)	Diam (mm)	Recovery %	Remarks
1.20 - 2.00	117	100	
2.00 - 2.50	117	100	

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3A South Park Way
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End Date	01/10/2024	Approved:	JP

Methodology & Plant

Depth (m)	Method	Plant Used
0.00 - 1.20	Inspection Pit	Hand Tools
1.20 - 2.50	Dynamic Sampling	Comacchio 205
2.50 - 10.00	Rotary Coring	Comacchio 205

Location ID

BH001

FINAL

Log Type

Combined Borehole

Scale: 1:50

Sheet 1 of 2

Project No:	**2372986**
Name:	**One Earth Solar Farm**
Location:	**Hall Farm, Lincoln**
Client:	**Pershing Consultants**

Location Details

Easting:	**479072.89**	Northing:	**372470.64**
Elevation:	**9.35mAOD**	Final Depth:	**10.00m**
Logged By:	**AT**	Grid System:	**OSGB**
Orientation:	**N/A**	Inclination:	**90°**

Strata Description	Depth (m) (Stratum Thickness)	Reduced Level (mAOD)	Hole Ø (mm) Depth (m)	Casing Ø (mm) Depth (m)	Water Level (m)	Installation / Backfill	Core Run	TCR	SCR	RQD	FI	Depth (m)	Ref	Test Results
Soft brown slightly sandy silty CLAY with occasional rootlets. Sand is fine. [TOPSOIL]	(0.30)											0.00 - 0.30	1 B	
	0.30	9.05										0.30	1 ES	
Firm brown slightly sandy silty CLAY. Sand is fine.												0.50	2 ES	
	(0.70)											0.50 - 1.00	2 B	
	1.00	8.35										1.00	3 ES	
Firm reddish brown silty CLAY.												1.20 - 1.65	1 D	SPT(S) 1.20m, N=21 (3,5/4,6,5,6)
From 1.30m to 1.60m, Becomes greenish grey with occasional mudstone inclusions.	(0.60)													
	1.60	7.75												
Firm to stiff reddish brown CLAY.												2.00	4 ES	SPT(S) 2.00m, N=7 (1,2/1,1,2,3)
	(0.90)											2.00 - 2.45	2 D	
												2.18 - 3.51	EW	
	2.50	6.85		143 / 2.50								2.50 - 2.95	3 D	SPT(S) 2.50m, N=33 (6,9/6,8,9,10)
Assumed zone of core loss. MUDSTONE. (Drillers description)	(0.50)										AZCL			
	3.00	6.35										3.00	5 ES	
Brown very silty clayey fine to medium SAND. Discontinuities are horizontal closely spaced planar rough open clean [MERCIA MUDSTONE [1]].	(0.35)						2.50 / 4.00	67	13	0	5			
From 3.20m to 3.35m, Moderately strong greenish grey SILTSTONE and weak reddish brown mercia MUDSTONE. Non-intact core recovered as angular to subangular fine to coarse GRAVEL.	3.35	6.00									NI			
	(0.65)										NA			
Extremely weak reddish brown partially weathered mercia MUDSTONE recovered as firm to stiff very gravelly CLAY. Gravel is angular to subangular fine to coarse [MERCIA MUDSTONE [2]].	4.00	5.35												
	(0.40)										AZCL			
Assumed zone of core loss. MUDSTONE. (Drillers description)	4.40	4.95												
Very weak reddish brown partially weathered mercia MUDSTONE. Non-intact core recovered as very clayey angular to subangular fine to coarse GRAVEL [MERCIA MUDSTONE [3]].	(0.60)						4.00 / 5.50	73	14	9	NI			
	5.00	4.35												
Very weak reddish brown mercia MUDSTONE. Discontinuities are horizontal closely spaced undulating smooth open clean [MERCIA MUDSTONE [1]].	(0.28)										7			
	5.28	4.07												
	(0.22)										NI			
Very weak reddish brown partially weathered mercia MUDSTONE. Non-intact core recovered as clayey angular to subangular fine to coarse GRAVEL [MERCIA MUDSTONE [2]].	5.50	3.85										5.60	6 ES	
	(0.40)										AZCL			
Assumed zone of core loss. MUDSTONE. (Drillers description)	5.90	3.45												
Very weak reddish brown mercia MUDSTONE with frequent veins infilled by gypsum and gypsum nodules. Discontinuities are horizontal planar undulating stepped smooth open to partly open clean [MERCIA MUDSTONE [1]].	(1.04)						5.50 / 7.00	73	59	29	10			
	6.94	2.41												
	(0.29)										NI			
Very weak reddish brown locally green partially weathered mercia MUDSTONE. Non-intact core recovered as angular to subangular fine to coarse GRAVEL [MERCIA MUDSTONE [2]].	7.23	2.12												
	(0.35)										17			
Very weak reddish brown mercia MUDSTONE. Discontinuities are 1) subhorizontal 0-10 Deg very closely to closely spaced planar and undulating smooth open to partly open clean. 2) Subhorizontal 45 Deg very closely spaced undulating smooth partly open to open clean [MERCIA MUDSTONE [1]].	7.58	1.77												
	(0.42)						7.00 / 8.50	100	51	0	NI	7.80	7 ES	
	8.00	1.35									17			
											NI			
	(0.39)										8			
Very weak reddish brown locally green mercia MUDSTONE. Discontinuities are subhorizontal 45 deg planar smooth partly open to open clean [MERCIA MUDSTONE [1]].	8.39	0.96									NI			
Very weak reddish brown mercia MUDSTONE. Discontinuities are 1) Horizontal 0-10 Deg planar smooth open clean. 2) Subhorizontal 40 Deg planar smooth open with gravel infill [MERCIA MUDSTONE [1]].												8.90	8 ES	
From 8.00m to 8.14m, Very weak reddish brown partially weathered mercia MUDSTONE. Non-intact core recovered as angular to subangular fine to coarse GRAVEL [MERCIA MUDSTONE [2]].	(1.61)						8.50 / 10.00	100	91	35	11			
Very weak reddish brown locally green mercia MUDSTONE with frequent veins of white gypsum. Discontinuities are 1)														
From 8.39m to 8.58m, Very weak reddish brown partially weathered														
	10.00	-0.65	121 / 10.00											

Continued on Next Page

Observations / Remarks

Misc.

No Groundwater Encountered
Casing Used
Monitoring Point/s Installed

Shift Information

Date	Time	Depth (m)	Casing (m)	Water (m)
30/09	07:00	0.00	-	
30/09	17:00	7.00	2.50	
01/10	07:00	7.00	2.50	4.60
01/10	16:00	10.00	2.50	

Backfill

From (m)	To (m)	Material
0.00	0.50	Concrete
0.50	2.50	Bentonite
2.50	4.00	Gravel
4.00	10.00	Bentonite

Installations

Instrument Type	Resp. Zone	Depth (m)	Diameter
Standpipe	2.50 - 4.00	4.00	50

Groundwater Strikes

Strike (m)	Rises To (m)	Time (min)	Remarks

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Alliance House,
3A South Park Way
Wakefield 41 Business Park
Wakefield WF2 0XJ
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End Date	01/10/2024	Approved:	JP

Location ID

BH001

FINAL

Methodology & Plant

Depth (m)	Method	Plant Used
0.00 - 1.20	Inspection Pit	Hand Tools
1.20 - 2.50	Dynamic Sampling	Comacchio 205
2.50 - 10.00	Rotary Coring	Comacchio 205

Log Type

Combined Borehole

Scale: 1:50

Sheet 2 of 2

Project No:	**2372986**
Name:	**One Earth Solar Farm**
Location:	**Hall Farm, Lincoln**
Client:	**Pershing Consultants**

Location Details

Easting:	**479072.89**	Northing:	**372470.64**
Elevation:	**9.35mAOD**	Final Depth:	**10.00m**
Logged By:	**AT**	Grid System:	**OSGB**
Orientation:	**N/A**	Inclination:	**90°**

Strata Description	Legend	Depth (m) (Stratum Thickness)	Reduced Level (mAOD)	Hole Ø (mm) Depth (m)	Casing Ø (mm) Depth (m)	Water Level (m)	Installation / Backfill	Coring, Samples & Testing: Core Run	TCR	SCR	RQD	FI	Depth (m)	Ref	Test Results
g smooth partly open to open clean. 2) Subhorizontal 50 Deg undulating smooth open clean [MERCIA MUDSTONE [1]]. *From 8.39m to 8.58m, Very weak reddish brown partially weathered mercia MUDSTONE. Non-intact core recovered as angular to subangular fine to coarse GRAVEL [MERCIA MUDSTONE [1]].* EOH at 10.00m - Scheduled Depth															

Observations / Remarks

Misc.

No Groundwater Encountered
Casing Used
Monitoring Point/s Installed

Shift Information

Date	Time	Depth (m)	Casing (m)	Water (m)
30/09	07:00	0.00	-	
30/09	17:00	7.00	2.50	
01/10	07:00	7.00	2.50	4.60
01/10	16:00	10.00	2.50	

Backfill

From (m)	To (m)	Material
0.00	0.50	Concrete
0.50	2.50	Bentonite
2.50	4.00	Gravel
4.00	10.00	Bentonite

Installations

Instrument Type	Resp. Zone	Depth (m)	Diameter
Standpipe	2.50 - 4.00	4.00	50

Groundwater Strikes

Strike (m)	Rises To (m)	Time (min)	Remarks

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Alliance House
3A South Park Way
Wakefield 41 Business Park
Wakefield WF2 0XJ
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Start Date:	02/10/2024	Checked:	RW
End Date:	03/10/2024	Approved:	JP

Location ID

BH002

FINAL

Log Type

Header Sheet

Scale: 1:50

Sheet 1 of 1

Methodology & Plant

Depth (m)	Method	Plant Used
0.00 - 1.20	Inspection Pit	Hand Tools
1.20 - 3.00	Dynamic Sampling	Comacchio 205
3.00 - 10.30	Rotary Coring	Comacchio 205

Project No:	**2372986**
Name:	**One Earth Solar Farm**
Location:	**Hall Farm, Lincoln**
Client:	**Pershing Consultants**

Location Details

Easting:	**479291.89**	Northing:	**372242.50**
Elevation:	**6.82mAOD**	Final Depth:	**10.30m**
Logger:	**ED**	Grid System:	**OSGB**
Orientation:	**N/A**	Inclination:	**90°**

Hole Diameter

Depth (m)	Diam (mm)
10.30	121

Casing Diameter

Depth (m)	Diam (mm)
6.00	143

Groundwater Strikes

Strike (m)	Casing (m)	Sealed (m)	Time (min)	Rose To (m)	Remarks

Installation / Instrument Details

Date	Instrument Details	To (m)	Resp. Zone (m)	Diam (mm)
03/10/2024	Standpipe	3.50	1.20 - 3.50	50

If Methodology includes Dynamic Sampling refer to Runs table for info.

No Groundwater Encountered

Backfill

Depth (m)	Legend Code
0.00 - 1.20	Bentonite
1.20 - 3.50	Gravel
3.50 - 10.30	Bentonite

In-Situ Tests

PID	**0**
Hand Vane*	**3**
Standard Penetration Tests	**3**

* One count indicates an average reported result of 3 tests carried out at one depth where available.

Sample Summary

Environmental Samples			
Soil	**8**	Water	**1**
Geotechnical Samples			
Bulk	**5**	Large Bulk	**0**
Disturbed	**18**	Disturbed (NR)	**0**
Piston	**0**	Piston (NR)	**0**
Undisturbed	**0**	Undisturbed (NR)	**0**
Undisturbed Thin Wall			**0**
Undisturbed Thin Wall (NR)			**0**
Core Sample			**0**

(NR) Indicates sample undertaken but with 0% Recovery

Standard Penetration Test Summary

Test Type	Depth (m)	Casing (m)	Water (m)	Seating Blows	Main Blows	Penetration Total (mm)	N	Reported Result	Hammer Ref
Split Spoon	1.20	-	-	2	6	450	6	N=6 (1,1/2,2,1,1)	AR2154
Split Spoon	2.00	-	1.80	7	8	450	8	N=8 (4,3/2,2,2,2)	AR2154
Split Spoon	3.00	3.00	-	20	50	225		50 (8,12/50 for 150mm)	AR2154

SPT Hammer Ref.	Energy Ratio (%)
AR2154	64

Applicable to Cable Percussion Only

Chiselling

Depth (m)	Duration (mins)

Water Added

Depth (m)	Litres

Applicable to Rotary Only

Drilling Flush

Depth (m)	Flush Type	Flush Colour	Return %
3.00 - 4.30	Water	Reddish Grey	100
4.30 - 5.80	Water	Reddish Grey	75
5.80 - 6.30	Water	-	0
6.30 - 7.80	Water	-	0
7.80 - 9.30	Water	-	0
9.30 - 10.30	Water	-	0

Applicable to Dynamic Sampling Only

Dynamic Sampling Runs

Depth (m)	Diam (mm)	Recovery %	Remarks
1.20 - 2.00	117	100	
2.00 - 3.00	117	100	

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Alliance House,
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Wakefield 41 Business Park
Wakefield WF2 0XJ
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Start Date:	02/10/2024	Checked:	RW
End Date	03/10/2024	Approved:	JP

Methodology & Plant

Depth (m)	Method	Plant Used
0.00 - 1.20	Inspection Pit	Hand Tools
1.20 - 3.00	Dynamic Sampling	Comacchio 205
3.00 - 10.30	Rotary Coring	Comacchio 205

Location ID

BH002

FINAL

Log Type

Combined Borehole

Scale: 1:50

Sheet 1 of 2

Project No:	**2372986**
Name:	**One Earth Solar Farm**
Location:	**Hall Farm, Lincoln**
Client:	**Pershing Consultants**

Location Details

Easting:	**479291.89**	Northing:	**372242.50**
Elevation:	**6.82mAOD**	Final Depth:	**10.30m**
Logged By:	**ED**	Grid System:	**OSGB**
Orientation:	**N/A**	Inclination:	**90°**

Strata Description	Depth (m) (Stratum Thickness)	Reduced Level (mAOD)	Hole Ø (mm) Depth (m)	Casing Ø (mm) Depth (m)	Core Run	TCR	SCR	RQD	FI	Depth (m)	Ref	Test Results
Soft to firm brown becoming light brown sandy CLAY. Sand is fine.	(1.20)									0.00 - 0.30	1 B	
										0.30	2 ES	HV 0.30m, (p)=80 kPa (r)=14 kPa
										0.30	4 D	
										0.30 - 0.50	3 B	HV 0.50m, (p)=80 kPa (r)=18 kPa
										0.50	5 ES	
										0.50	6 D	
										0.50 - 1.20	7 B	
										0.98 - 3.46	EW	HV 1.00m, (p)=100 kPa (r)=18 kPa
										1.00	8 ES	
										1.00	9 D	
Reddish brown sandy slightly clayey subangular fine to coarse mudstone GRAVEL. Sand is fine.	1.20	5.62								1.20 - 1.65	11 D	SPT(S) 1.20m, N=6 (1,1/2,2,1,1)
	(0.80)									1.60	10 D	
Stiff friable reddish brown slightly gravelly CLAY. Gravel is subangular fine to coarse mudstone.	2.00	4.82								2.00	12 ES	SPT(S) 2.00m, N=8 (4,3/2,2,2,2)
	(0.90)									2.00 - 2.45	13 D	
										2.60	14 D	
Weak grey MUDSTONE [MERCIA MUDSTONE [1]].	2.90	3.92										
	(0.10)	3.82								3.00	15 ES	SPT(S) 3.00m, 50 (8,12/50 for 150mm)
Assumed zone of core loss - Weathered MUDSTONE (Drillers description).	3.00								AZCL	3.00 - 3.45	16 D	
	(0.30)											
Weak light grey and brown MUDSTONE [MERCIA MUDSTONE [1]].	3.30	3.52							NI			
	(0.20)											
Weak friable light brown slightly clayey MUDSTONE [MERCIA MUDSTONE [1]].	3.50	3.32								3.50	17 D	
	(0.30)								Ni			
Weak friable light grey MUDSTONE. Non-intact core recovered as subangular fine to coarse GRAVEL [MERCIA MUDSTONE [2]].	3.80	3.02			3.00 4.50	100	0	0				
	(0.30)								NI			
	4.10	2.72								4.00	18 D	
	(0.20)								NI	4.00	19 ES	
Weak friable light brown slightly sandy MUDSTONE. Sand is fine to coarse [MERCIA MUDSTONE [1]].	4.30	2.52										
Assumed zone of core loss - Weathered MUDSTONE (Drillers description).	(0.70)								AZCL			
Weak friable light brown slightly sandy mercia MUDSTONE. Sand is fine to coarse [MERCIA MUDSTONE [1]].	5.00	1.82								5.00	20 D	
	(0.30)				4.50 5.80	100	0	0	NI	5.00	21 ES	
Weak light brown mercia MUDSTONE recovered as stiff slightly sandy CLAY. Sand is fine to coarse [MERCIA MUDSTONE [4B]].	5.30	1.52										
	(0.50)									5.50	22 D	
	5.80	1.02										
Assumed zone of core loss - Weathered MUDSTONE (Driller's description).	(0.10)	0.92							AZCL			
	5.90			143 6.00	5.80 6.30	80	56	0	22	6.00	23 D	
	(0.40)											
Very weak to weak reddish brown MUDSTONE. Discontinuities are 1) Horizontal (0-5 degrees) very closely spaced planar stepped rough and partly open to moderately wide with clay and gypsum infill 2) Sub-vertical (50-60 degrees) planar rough and partly open with clay and gypsum infill [MERCIA MUDSTONE [2]].	6.30	0.52										
	(0.25)								AZCL			
	6.55	0.27										
From 5.90m to 5.98m, Non-intact core recovered as angular fine to coarse GRAVEL.												
From 6.25m to 6.30m, Non-intact core recovered as angular fine to coarse GRAVEL.	(1.25)				6.30 7.80	83	7	0	NI	7.00 - 8.00	24 B	
										7.10	25 D	
										7.30	26 ES	
Assumed zone of core loss - Weathered fractured MUDSTONE (Driller's description).										7.60	27 D	
	7.80	-0.98										
Extremely weak to weak reddish brown MUDSTONE. Non-intact core recovered as slightly clayey angular to subangular fine to coarse GRAVEL [MERCIA MUDSTONE [2]].	(0.70)								AZCL	8.10	28 D	
From 6.55m to 6.59m, Gypsum vein (42mm).												
Assumed zone of core loss - Weathered fractured MUDSTONE (Driller's description).	8.50	-1.68			7.80 9.30	53	20	7				
									14			
Very weak to weak reddish brown silty and very sandy mercia MUDSTONE with frequent gypsum veining (<7.00mm). Discontinuities are 1) Horizontal (10-20 degrees) closely spaced, planar and stepped, rough and partly open to open with gravel and clay infill 2) Sub-vertical (45-50 degrees), planar, rough and partly open with gypsum infill [MERCIA MUDSTONE [2]].	(0.80)									9.00 - 10.00	29 B	
										9.10	30 D	
	9.30	-2.48							NI			
From 9.15m to 9.30m, Non-intact core recovered as angular fine to coarse GRAVEL.	(0.50)				9.30 10.30	50	25	11	AZCL			
Assumed zone of core loss - Weathered fractured	9.80	-2.98							13	9.90	31 D	
Continued on Next Page												

Observations / Remarks

Misc.

No Groundwater Encountered
Casing Used
Monitoring Point/s Installed

Shift Information

Date	Time	Depth (m)	Casing (m)	Water (m)
02/10	08:00	0.00	-	
02/10	16:00	6.30	3.00	2.10
03/10	07:00	6.30	3.00	2.20
03/10	16:00	10.30	6.00	

Backfill

From (m)	To (m)	Material
0.00	1.20	Bentonite
1.20	3.50	Gravel
3.50	10.30	Bentonite

Installations

Instrument Type	Resp. Zone	Depth (m)	Diameter
Standpipe	1.20 - 3.50	3.50	50

Groundwater Strikes

Strike (m)	Rises To (m)	Time (min)	Remarks

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Alliance House,
3A South Park Way
Wakefield 41 Business Park
Wakefield WF2 0XJ
+44(0)1924 229889
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Start Date:	02/10/2024	Checked:	RW
End Date	03/10/2024	Approved:	JP

Location ID

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Methodology & Plant

Depth (m)	Method	Plant Used
0.00 - 1.20	Inspection Pit	Hand Tools
1.20 - 3.00	Dynamic Sampling	Comacchio 205
3.00 - 10.30	Rotary Coring	Comacchio 205

Log Type

Combined Borehole

Scale: 1:50

Sheet 2 of 2

Project No:	**2372986**
Name:	**One Earth Solar Farm**
Location:	**Hall Farm, Lincoln**
Client:	**Pershing Consultants**

Location Details

Easting:	**479291.89**	Northing:	**372242.50**
Elevation:	**6.82mAOD**	Final Depth:	**10.30m**
Logged By:	**ED**	Grid System:	**OSGB**
Orientation:	**N/A**	Inclination:	**90°**

Strata Description	Legend	Depth (m) (Stratum Thickness)	Reduced Level (mAOD)	Hole Ø (mm) Depth (m)	Casing Ø (mm) Depth (m)	Water Level (m)	Installation / Backfill	Coring, Samples & Testing: Core Run	TCR	SCR	RQD	FI	Depth (m)	Ref	Test Results
MUDSTONE(Driller's description). Very weak to weak reddish brown mercia MUDSTONE with frequent gypsum veining (<7.00mm). Discontinuities are 1) Horizontal (10-20 degrees) closely spaced, planar and stepped, rough and partly open to open with gravel and clay infill 2) Sub-vertical (45-50 degrees), planar, rough and partly open with gypsum infill [MERCIA MUDSTONE [2]]. *From 10.18m to 10.30m, Non-intact core recovered as angular fine to coarse GRAVEL.* EOH at 10.30m - Scheduled Depth		(0.50) 10.30	-3.48	121 10.30								NI			

Observations / Remarks	Misc.
	No Groundwater Encountered *Casing Used* *Monitoring Point/s Installed*

Shift Information

Date	Time	Depth (m)	Casing (m)	Water (m)
02/10	08:00	0.00	-	
02/10	16:00	6.30	3.00	2.10
03/10	07:00	6.30	3.00	2.20
03/10	16:00	10.30	6.00	

Backfill

From (m)	To (m)	Material
0.00	1.20	Bentonite
1.20	3.50	Gravel
3.50	10.30	Bentonite

Installations

Instrument Type	Resp. Zone	Depth (m)	Diameter
Standpipe	1.20 - 3.50	3.50	50

Groundwater Strikes

Strike (m)	Rises To (m)	Time (min)	Remarks

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Alliance House
3A South Park Way
Wakefield 41 Business Park
Wakefield WF2 0XJ
+44 (0)1924 229889
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Start Date:	02/10/2024	Checked:	RW
End Date:	03/10/2024	Approved:	JP

Location ID

BH003

FINAL

Log Type

Header Sheet

Scale: 1:50

Sheet 1 of 1

Methodology & Plant

Depth (m)	Method	Plant Used
0.00 - 1.20	Inspection Pit	Hand Tools
1.20 - 3.50	Dynamic Sampling	Comacchio 205
3.50 - 10.80	Rotary Coring	Comacchio 205

Project No:	**2372986**
Name:	**One Earth Solar Farm**
Location:	**Hall Farm, Lincoln**
Client:	**Pershing Consultants**

Location Details

Easting:	**478976.07**	Northing:	**372181.99**
Elevation:	**9.59mAOD**	Final Depth:	**10.80m**
Logger:	**AG**	Grid System:	**OSGB**
Orientation:	**N/A**	Inclination:	**90°**

Hole Diameter

Depth (m)	Diam (mm)
10.80	121

Casing Diameter

Depth (m)	Diam (mm)
3.50	143

Groundwater Strikes

Strike (m)	Casing (m)	Sealed (m)	Time (min)	Rose To (m)	Remarks

No Groundwater Encountered

Installation / Instrument Details

Date	Instrument Details	To (m)	Resp. Zone (m)	Diam (mm)
03/10/2024	Standpipe	3.50	1.00 - 3.50	50

If Methodology includes Dynamic Sampling refer to Runs table for info.

Backfill

Depth (m)	Legend Code
0.00 - 0.30	Concrete
0.30 - 1.00	Bentonite
1.00 - 3.50	Gravel
3.50 - 10.80	Bentonite

In-Situ Tests

PID	**0**
Hand Vane*	**3**
Standard Penetration Tests	**3**

* One count indicates an average reported result of 3 tests carried out at one depth where available.

Sample Summary

Environmental Samples			
Soil	**10**	Water	**1**
Geotechnical Samples			
Bulk	**6**	Large Bulk	**0**
Disturbed	**12**	Disturbed (NR)	**0**
Piston	**0**	Piston (NR)	**0**
Undisturbed	**0**	Undisturbed (NR)	**0**
Undisturbed Thin Wall			**0**
Undisturbed Thin Wall (NR)			**0**
Core Sample			**0**

(NR) Indicates sample undertaken but with 0% Recovery

Standard Penetration Test Summary

Test Type	Depth (m)	Casing (m)	Water (m)	Seating Blows	Main Blows	Penetration Total (mm)	N	Reported Result	Hammer Ref
Split Spoon	1.20	-	1.10	3	12	450	12	N=12 (1,2/2,3,3,4)	AR2152
Split Spoon	2.00	-	-	4	23	450	23	N=23 (2,2/3,5,7,8)	AR2152
Split Spoon	3.00	-	-	6	30	450	30	N=30 (2,4/6,8,8,8)	AR2152

SPT Hammer Ref.	Energy Ratio (%)
AR2152	64

Applicable to Cable Percussion Only

Chiselling

Depth (m)	Duration (mins)

Water Added

Depth (m)	Litres

Applicable to Rotary Only

Drilling Flush

Depth (m)	Flush Type	Flush Colour	Return %
3.50 - 5.00	Water	Reddish Brown	80
5.00 - 6.50	Water	Reddish Brown	80
6.50 - 7.80	Water	Brown	90
7.80 - 9.30	Water	Brown	90
9.30 - 10.80	Water	Brown	90

Applicable to Dynamic Sampling Only

Dynamic Sampling Runs

Depth (m)	Diam (mm)	Recovery %	Remarks
1.20 - 2.00	117	100	
2.00 - 3.00	102	100	
3.00 - 3.50	102	0	

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Alliance House,
3A South Park Way
Wakefield 41 Business Park
Wakefield WF2 0XJ
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Start Date:	02/10/2024	Checked:	RW
End Date	03/10/2024	Approved:	JP

Location ID
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FINAL

Methodology & Plant

Depth (m)	Method	Plant Used
0.00 - 1.20	Inspection Pit	Hand Tools
1.20 - 3.50	Dynamic Sampling	Comacchio 205
3.50 - 10.80	Rotary Coring	Comacchio 205

Log Type
Combined Borehole

Scale: 1:50
Sheet 1 of 2

Project No:	**2372986**
Name:	**One Earth Solar Farm**
Location:	**Hall Farm, Lincoln**
Client:	**Pershing Consultants**

Location Details

Easting:	**478976.07**	Northing:	**372181.99**
Elevation:	**9.59mAOD**	Final Depth:	**10.80m**
Logged By:	**AG**	Grid System:	**OSGB**
Orientation:	**N/A**	Inclination:	**90°**

Strata Description	Depth (m) (Stratum Thickness)	Reduced Level (mAOD)	Hole Ø (mm) Depth (m)	Casing Ø (mm) Depth (m)	Water Level (m)	Installation / Backfill
MADE GROUND: Grass over soft light brown slightly sandy clayey SILT. Sand is fine. [TOPSOIL]	(0.30)					
Soft to firm light brown slightly sandy silty CLAY. Sand is fine.	0.30	9.29				
	(0.70)					
Firm light reddish brown slightly silty CLAY.	1.00	8.59				
	(0.50)					
Firm to stiff reddish brown slightly gravelly slightly sandy clayey SILT with occasional mudstone inclusions. Sand is fine to coarse. Gravel is subangular fine to coarse mudstone.	1.50	8.09				
	(2.00)					
Assumed zone of core loss. MUDSTONE. (Drillers description)	3.50	6.09		143 3.50		
	(0.80)					
Very weak reddish brown MUDSTONE. Non-intact core recovered as very clayey angular to subangular fine to coarse GRAVEL [MERCIA MUDSTONE [2]].	4.30	5.29				
	(0.70)					
Assumed zone of core loss. MUDSTONE. (Drillers description)	5.00	4.59				
	(0.40)					
Very weak reddish brown MUDSTONE. Non-intact core recovered as slightly clayey angular to subangular fine to coarse GRAVEL with low cobble content. Cobbles are subangular mudstone [MERCIA MUDSTONE [2]].	5.40	4.19				
From 5.75m to 5.86m, Very weak reddish brown mercia MUDSTONE. Discontinuities are horizontal undulating smooth.	(0.70)					
From 5.86m to 6.10m, Non-intact core recovered as angular to subangular fine to coarse GRAVEL.	6.10	3.49				
	(0.40)					
Very weak reddish brown MUDSTONE. Discontinuities are 1) Horizontal 5 deg planar smooth open clean. 2) Subvertical 45 deg planar smooth open clean. 3) Vertical undulating smooth open clean with occasional gravel infill [MERCIA MUDSTONE [2]].	6.50	3.09				
	(0.20)					
Assumed zone of core loss. MUDSTONE. (Drillers description)	6.70	2.89				
From 6.50m, Colour is reddish brown.	(0.30)					
Very weak reddish brown MUDSTONE. Non-intact core recovered as angular to subangular fine to coarse GRAVEL [MERCIA MUDSTONE [2]].	7.00	2.59				
	(0.55)					
Very weak reddish brown MUDSTONE. Discontinuities are 1) horizontal 5-10 Degress closely to medium spaced planar smooth open clean. 2) Vertical 85 Deg stepped smooth open clean [MERCIA MUDSTONE [2]].	7.55	2.04				
From 7.18m to 7.22m, non-intact core recovered as angular to subangular fine to coarse GRAVEL.	(0.25)					
Very weak reddish brown MUDSTONE. Non-intact core recovered as angular to subangular fine to coarse GRAVEL [MERCIA MUDSTONE [2]].	7.80	1.79				
	(0.40)					
Assumed zone of core loss. MUDSTONE. (Drillers description)	8.20	1.39				
	(1.10)					
Very weak reddish brown MUDSTONE interbedded with moderately weak greenish grey fine grained SANDSTONE interbedded with SILTSTONE. Discontinuities are 1) Horizontal 5-10 Deg very closely to closely spaced planar and undulating	9.30	0.29				
	(0.40)					
	9.70	-0.11				
	(0.35)					

Continued on Next Page

Coring, Samples & Testing

Core Run	TCR	SCR	RQD	FI	Depth (m)	Ref	Test Results
					0.00 - 0.30	3 B	
					0.30	1 ES	HV 0.30m, (p)=20 kPa (r)=5 kPa
					0.30	2 D	
					0.50	4 ES	HV 0.50m, (p)=50 kPa (r)=8 kPa
					0.50	5 D	
					0.50 - 1.00	6 B	
					0.66 - 3.40	EW	
					1.00	7 ES	HV 1.00m, (p)=60 kPa (r)=2 kPa
					1.00	8 D	
					1.00 - 1.50	9 B	SPT(S) 1.20m, N=12 (1,2/2,3,3,4)
					1.20 - 1.65	10 D	
					1.20 - 2.00	11 B	
					2.00	13 ES	SPT(S) 2.00m, N=23 (2,2/3,5,7,8)
					2.00	14 D	
					2.00 - 2.45	15 D	
					2.00 - 3.00	12 B	
					3.00	17 ES	SPT(S) 3.00m, N=30 (2,4/6,8,8,8)
					3.00	18 D	
					3.00 - 3.50	16 B	
3.50 5.00	47	0	0	AZCL	4.00	19 ES	
					4.00	20 D	
				NI			
				AZCL	5.00	21 ES	
					5.00	22 D	
5.00 6.50	73	34	0	NI			
				9			
				NI			
				8			
				AZCL	6.50	23 ES	
					6.50	24 D	
				NI			
6.50 7.80	73	33	31	9			
				NI			
				AZCL	8.00	25 ES	
					8.00	26 D	
				NI			
7.80 9.30	73	47	7	17			
				NI			
				AZCL	9.50	27 ES	
					9.50	28 D	
				15			
				NI			

Observations / Remarks

Misc.
No Groundwater Encountered
Casing Used
Monitoring Point/s Installed

Shift Information

Date	Time	Depth (m)	Casing (m)	Water (m)
02/10	07:00	0.00	-	
02/10	16:00	6.50	3.50	1.70
03/10	07:00	6.50	3.50	0.40
03/10	16:00	10.80	3.50	

Backfill

From (m)	To (m)	Material
0.00	0.30	Concrete
0.30	1.00	Bentonite
1.00	3.50	Gravel
3.50	10.80	Bentonite

Installations

Instrument Type	Resp. Zone	Depth (m)	Diameter
Standpipe	1.00 - 3.50	3.50	50

Groundwater Strikes

Strike (m)	Rises To (m)	Time (min)	Remarks

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Alliance House,
3A South Park Way
Wakefield 41 Business Park
Wakefield WF2 0XJ
+44(0)1924 229889
www.central-alliance.co.uk

Start Date:	02/10/2024	Checked:	RW
End Date	03/10/2024	Approved:	JP

Location ID
BH003
FINAL

Methodology & Plant

Depth (m)	Method	Plant Used
0.00 - 1.20	Inspection Pit	Hand Tools
1.20 - 3.50	Dynamic Sampling	Comacchio 205
3.50 - 10.80	Rotary Coring	Comacchio 205

Log Type
Combined Borehole

Scale: 1:50
Sheet 2 of 2

Project No:	**2372986**
Name:	**One Earth Solar Farm**
Location:	**Hall Farm, Lincoln**
Client:	**Pershing Consultants**

Location Details

Easting:	**478976.07**	Northing:	**372181.99**
Elevation:	**9.59mAOD**	Final Depth:	**10.80m**
Logged By:	**AG**	Grid System:	**OSGB**
Orientation:	**N/A**	Inclination:	**90°**

Strata Description	Legend	Depth (m) (Stratum Thickness)	Reduced Level (mAOD)	Hole Ø (mm) Depth (m)	Casing Ø (mm) Depth (m)	Water Level (m)	Installation / Backfill	Coring, Samples & Testing: Core Run	TCR	SCR	RQD	FI	Depth (m)	Ref	Test Results
smooth open clean. 2) Vertical 85 Deg stepped smooth open clean [MERCIA MUDSTONE [2]]. *From 8.20m to 8.30m, Very weak reddish brown mercia MUDSTONE. Non-intact core recovered as angular to subangular fine to coarse GRAVEL.* *From 8.35m to 8.42m, Very weak reddish brown mercia MUDSTONE. Non-intact core recovered as angular to subangular fine to coarse GRAVEL.* *From 8.49m to 8.51m, Very weak reddish brown mercia MUDSTONE. Non-intact core recovered as angular to subangular fine to coarse GRAVEL.* *From 8.70m, Weak reddish brown.* *From 9.15m, Mineral veining is subhorizontal to horizontal.* *From 9.16m to 9.30m, Very weak reddish brown mercia MUDSTONE. Non-intact core recovered as angular to subangular fine to coarse GRAVEL.*		10.05 (0.43)	-0.46									17			
Assumed zone of core loss. MUDSTONE. (Drillers description)		10.48 (0.32)	-0.89					9.30 10.80	73	54	14	NI			
Very weak reddish brown MUDSTONE. Discontinuities are very closely to closely spaced planar undulating smooth open clean [MERCIA MUDSTONE [2]]. *From 9.90m to 10.05m, Very weak reddish brown mercia MUDSTONE. Non-intact core recovered as angular to subangular fine to coarse GRAVEL.*		10.80	-1.21	121 10.80								9			
Very weak reddish brown MUDSTONE. Discontinuities are 1) Horizontal 5-10 Deg closely spaced planar smooth open clean with gravel infill. 2) Subhorizontal 45 Deg planar smooth open with gravel infill [MERCIA MUDSTONE [2]]. *From 10.34m to 10.48m, Very weak reddish brown mercia MUDSTONE. Non-intact core recovered as angular to subangular fine to coarse GRAVEL. with low cobble content. Cobbles are angular to subangular mudstone.*															
Very weak reddish brown MUDSTONE with occasional veins of white gypsum. Discontinuities are horizontal5-10 Deg closely spaced planar and undulating smooth open clean [MERCIA MUDSTONE [2]]. *From 10.58m to 10.61m, Very weak reddish brown mercia MUDSTONE. Non-intact core recovered as angular to subangular fine to coarse GRAVEL.*															
EOH at 10.80m - Scheduled Depth															

Observations / Remarks

Misc.
No Groundwater Encountered
Casing Used
Monitoring Point/s Installed

Shift Information

Date	Time	Depth (m)	Casing (m)	Water (m)
02/10	07:00	0.00	-	
02/10	16:00	6.50	3.50	1.70
03/10	07:00	6.50	3.50	0.40
03/10	16:00	10.80	3.50	

Backfill

From (m)	To (m)	Material
0.00	0.30	Concrete
0.30	1.00	Bentonite
1.00	3.50	Gravel
3.50	10.80	Bentonite

Installations

Instrument Type	Resp. Zone	Depth (m)	Diameter
Standpipe	1.00 - 3.50	3.50	50

Groundwater Strikes

Strike (m)	Rises To (m)	Time (min)	Remarks

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Alliance House
3A South Park Way
Wakefield 41 Business Park
Wakefield WF2 0XJ
+44 (0)1924 229889
www.central-alliance.co.uk

Start Date:	04/10/2024	Checked:	RW
End Date:	08/10/2024	Approved:	JP

Location ID

BH004

FINAL

Log Type

Header Sheet

Scale: 1:50

Sheet 1 of 1

Project No:	**2372986**
Name:	**One Earth Solar Farm**
Location:	**Hall Farm, Lincoln**
Client:	**Pershing Consultants**

Location Details

Easting:	**479178.14**	Northing:	**371956.12**
Elevation:	**12.44mAOD**	Final Depth:	**12.00m**
Logger:	**AW**	Grid System:	**OSGB**
Orientation:	**N/A**	Inclination:	**90°**

Methodology & Plant

Depth (m)	Method	Plant Used
0.00 - 1.20	Inspection Pit	Hand Tools
1.20 - 4.00	Dynamic Sampling	Comacchio 205
4.00 - 12.00	Rotary Coring	Comacchio 205

Hole Diameter

Depth (m)	Diam (mm)
12.00	121

Casing Diameter

Depth (m)	Diam (mm)
4.20	143

Groundwater Strikes

Strike (m)	Casing (m)	Sealed (m)	Time (min)	Rose To (m)	Remarks

No Groundwater Encountered

Installation / Instrument Details

Date	Instrument Details	To (m)	Resp. Zone (m)	Diam (mm)
08/10/2024	Standpipe	4.00	1.00 - 4.00	50

If Methodology includes Dynamic Sampling refer to Runs table for info.

Backfill

Depth (m)	Legend Code
0.00 - 1.00	Bentonite
1.00 - 4.00	Gravel
4.00 - 12.00	Bentonite

Sample Summary

Environmental Samples			
Soil	**6**	Water	**1**
Geotechnical Samples			
Bulk	**6**	Large Bulk	**0**
Disturbed	**11**	Disturbed (NR)	**0**
Piston	**0**	Piston (NR)	**0**
Undisturbed	**0**	Undisturbed (NR)	**0**
Undisturbed Thin Wall			**0**
Undisturbed Thin Wall (NR)			**0**
Core Sample			**0**

(NR) Indicates sample undertaken but with 0% Recovery

In-Situ Tests

PID	**0**
Hand Vane*	**2**
Standard Penetration Tests	**4**

* One count indicates an average reported result of 3 tests carried out at one depth where available.

Standard Penetration Test Summary

Test Type	Depth (m)	Casing (m)	Water (m)	Seating Blows	Main Blows	Penetration Total (mm)	N	Reported Result	Hammer Ref
Split Spoon	1.20	-	-	3	10	450	10	N=10 (1,2/4,2,2,2)	AR2154
Split Spoon	2.20	-	-	6	15	450	15	N=15 (3,3/3,4,4,4)	AR2154
Split Spoon	3.20	-	-	14	30	450	30	N=30 (6,8/7,8,7,8)	AR2154
Split Spoon	4.20	-	-	12	50	375		50 (5,7/50 for 225mm)	AR2154

SPT Hammer Ref.	Energy Ratio (%)
AR2154	64

Applicable to Cable Percussion Only

Chiselling

Depth (m)	Duration (mins)

Water Added

Depth (m)	Litres

Applicable to Rotary Only

Drilling Flush

Depth (m)	Flush Type	Flush Colour	Return %
4.20 - 5.50	Water	Brown	100
5.50 - 6.20	Water	Brown	50
6.20 - 7.50	Water	Brown	80
7.50 - 9.00	Water	Brown	100
9.00 - 10.50	Water	Brown	100
10.50 - 12.00	Water	Brown	100

Applicable to Dynamic Sampling Only

Dynamic Sampling Runs

Depth (m)	Diam (mm)	Recovery %	Remarks
1.20 - 2.20	117	100	
2.20 - 3.20	117	100	
3.20 - 4.20	102	100	

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Alliance House,
3A South Park Way
Wakefield 41 Business Park
Wakefield WF2 0XJ
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Start Date:	04/10/2024	Checked:	RW
End Date	08/10/2024	Approved:	JP

Methodology & Plant

Depth (m)	Method	Plant Used
0.00 - 1.20	Inspection Pit	Hand Tools
1.20 - 4.00	Dynamic Sampling	Comacchio 205
4.00 - 12.00	Rotary Coring	Comacchio 205

Location ID

BH004

FINAL

Log Type

Combined Borehole

Scale: 1:50

Sheet 1 of 2

Project No:	**2372986**
Name:	**One Earth Solar Farm**
Location:	**Hall Farm, Lincoln**
Client:	**Pershing Consultants**

Location Details

Easting:	**479178.14**	Northing:	**371956.12**
Elevation:	**12.44mAOD**	Final Depth:	**12.00m**
Logged By:	**AW**	Grid System:	**OSGB**
Orientation:	**N/A**	Inclination:	**90°**

Strata Description	Depth (m) (Stratum Thickness)	Reduced Level (mAOD)	Hole Ø (mm) Depth (m)	Casing Ø (mm) Depth (m)	Water Level (m)	Installation / Backfill
Grass over soft brown CLAY [TOPSOIL].	(0.20) 0.20	12.24				
Soft light brown mottled light grey CLAY.	(1.00)					
Firm to very stiff medium strength red CLAY.	1.20	11.24				
From 2.20m to 2.40m, is soft and friable.	(3.00)					
From 2.90m, Mottled grey.						
Very weak reddish brown MUDSTONE. Non-intact core recovered as angular to subangular fine to coarse GRAVEL [MERCIA MUDSTONE [2]].	4.20 (0.30) 4.50	8.24 7.94		143 4.20		
Weak reddish brown MUDSTONE. Discontinuities are 1) Subhorizontal closely spaced planar smooth open. 2) Subhorizontal medium spaced undulating smooth partly open [MERCIA MUDSTONE [2]].	(1.70)					
From 5.50m to 5.60m, Weak reddish brown mercia MUDSTONE. Non-intact core recovered as subangular to subrounded fine to coarse GRAVEL.						
From 5.95m to 6.00m, Weak reddish brown mercia MUDSTONE. Non-intact core recovered as subangular to subrounded fine to coarse GRAVEL.	6.20	6.24				
Assumed zone of core loss. MUDSTONE. (Drillers description)	(0.90)					
Weak reddish brown MUDSTONE. Non-intact core recovered as angular fine to coarse GRAVEL [MERCIA MUDSTONE [2]].	7.10 (0.40) 7.50	5.34 4.94				
Assumed zone of core loss. MUDSTONE. (Drillers description)	(0.35) 7.85	4.59				
Extremely weak reddish brown MUDSTONE. Discontinuities are horizontal medium spaced undulating rough open [MERCIA MUDSTONE [2]]. *From 8.00m to 8.10m, Weak reddish brown MUDSTONE. Non-intact core recovered as angular fine to coarse GRAVEL. From 8.10m to 8.30m, Very weak.*	(1.15)					
Medium strong reddish brown MUDSTONE. Discontinuities are 1) Subhorizontal medium spaced planar smooth tight. 2) Subhorizontal medium spaced planar smooth tight and open [MERCIA MUDSTONE [2]]. *From 9.00m to 9.15m, Assumed zone of core loss.*	9.00 (1.50)	3.44				
Continued on Next Page						

Core Run	TCR	SCR	RQD	FI	Depth (m)	Ref	Test Results
					0.00 - 0.30	2 B	
					0.10	1 D	
					0.30	3 D	
					0.30	4 ES	
					0.30 - 0.50	5 B	
					0.50	6 ES	
					0.50 - 1.20	7 B	
					0.60	8 D	
					1.00	10 ES	
					1.00	9 D	
					1.20 - 1.65	101 D	SPT(S) 1.20m, N=10 (1,2/4,2,2,2)
					1.20 - 2.20	104 B	
					1.70	102 ES	
					1.80	103 D	
					1.84 - 3.41	EW	
							HV 2.00m, (p)=52 kPa (r)=10 kPa
					2.20 - 2.65	105 D	SPT(S) 2.20m, N=15 (3,3/3,4,4,4)
					2.20 - 3.20	108 B	
					2.90	106 D	
					3.00	107 ES	HV 3.00m, (p)=56 kPa (r)=12 kPa
					3.20 - 3.65	109 D	SPT(S) 3.20m, N=30 (6,8/7,8,7,8)
					3.20 - 4.20	112 B	
					3.90	110 ES	
					4.00	111 D	
					4.20 - 4.65	113 D	SPT(S) 4.20m, 50 (5,7/50 for 225mm)
				NI			
4.20 5.50	100	77	55	5			
				NI			
5.50 6.20	100	79	27	6			
				NI			
				5			
6.20 7.50	31	6	0	AZCL			
				NI			
				0			
				NI			
				AZCL			
				7			
				NI			
7.50 9.00	77	67	17	3			
				AZCL			
9.00 10.50	90	90	38	5			

Observations / Remarks

Misc.

No Groundwater Encountered
Casing Used
Monitoring Point/s Installed

Shift Information

Date	Time	Depth (m)	Casing (m)	Water (m)
04/10	08:00	0.00	-	
04/10	16:00	1.20	-	
07/10	08:00	1.20	-	
07/10	16:00	4.20	3.00	
08/10	08:00	4.20	3.00	
08/10	16:00	12.00	4.20	

Backfill

From (m)	To (m)	Material
0.00	1.00	Bentonite
1.00	4.00	Gravel
4.00	12.00	Bentonite

Installations

Instrument Type	Resp. Zone	Depth (m)	Diameter
Standpipe	1.00 - 4.00	4.00	50

Groundwater Strikes

Strike (m)	Rises To (m)	Time (min)	Remarks

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Alliance House,
3A South Park Way
Wakefield 41 Business Park
Wakefield WF2 0XJ
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Start Date:	04/10/2024	Checked:	RW
End Date	08/10/2024	Approved:	JP

Location ID
BH004
FINAL

Methodology & Plant

Depth (m)	Method	Plant Used
0.00 - 1.20	Inspection Pit	Hand Tools
1.20 - 4.00	Dynamic Sampling	Comacchio 205
4.00 - 12.00	Rotary Coring	Comacchio 205

Log Type
Combined Borehole

Scale: 1:50
Sheet 2 of 2

Project No:	**2372986**
Name:	**One Earth Solar Farm**
Location:	**Hall Farm, Lincoln**
Client:	**Pershing Consultants**

Location Details

Easting:	**479178.14**	Northing:	**371956.12**
Elevation:	**12.44mAOD**	Final Depth:	**12.00m**
Logged By:	**AW**	Grid System:	**OSGB**
Orientation:	**N/A**	Inclination:	**90°**

Strata Description	Legend	Depth (m) (Stratum Thickness)	Reduced Level (mAOD)	Hole Ø (mm) Depth (m)	Casing Ø (mm) Depth (m)	Water Level (m)	Installation / Backfill	Coring, Samples & Testing: Core Run	TCR	SCR	RQD	FI	Depth (m)	Ref	Test Results
At 10.35m, Discontinuity is 30 Deg undulating rough and partly open.															
Moderately weak reddish brown MUDSTONE. Non-intact core recovered as angular fine to coarse GRAVEL [MERCIA MUDSTONE [2]].		10.50	1.94									AZCL			
		(0.50)										NI			
From 10.50m to 10.70m, Assumed zone of core loss.		11.00	1.44												
Strong reddish brown MUDSTONE [MERCIA MUDSTONE [1]]. *At 11.00m, Weak.* *At 11.30m, Extremely weak.* *At 11.45m, 1 No. discontinuity, horizontal, open, smooth and clean.*		(0.50)						10.50 12.00	87	67	40	0			
Medium strong reddish brown MUDSTONE. Discontinuities are 1) Subhorizontal undulating smooth and tight. 2) Horizontal stepped rough and open [MERCIA MUDSTONE [2]].		11.50	0.94												
At 11.50m, Discontinuities are close to medium spaced.		(0.50)										4			
EOH at 12.00m - Scheduled Depth		12.00	0.44	121 / 12.00											

Observations / Remarks

Misc.
No Groundwater Encountered
Casing Used
Monitoring Point/s Installed

Shift Information

Date	Time	Depth (m)	Casing (m)	Water (m)
04/10	08:00	0.00	-	
04/10	16:00	1.20	-	
07/10	08:00	1.20	-	
07/10	16:00	4.20	3.00	
08/10	08:00	4.20	3.00	
08/10	16:00	12.00	4.20	

Backfill

From (m)	To (m)	Material
0.00	1.00	Bentonite
1.00	4.00	Gravel
4.00	12.00	Bentonite

Installations

Instrument Type	Resp. Zone	Depth (m)	Diameter
Standpipe	1.00 - 4.00	4.00	50

Groundwater Strikes

Strike (m)	Rises To (m)	Time (min)	Remarks

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Alliance House
3A South Park Way
Wakefield 41 Business Park
Wakefield WF2 0XJ
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Start Date:	15/10/2024	Checked:	RW
End Date:	16/10/2024	Approved:	JP

Location ID

BH005

FINAL

Methodology & Plant

Depth (m)	Method	Plant Used
0.00 - 1.20	Inspection Pit	Hand Tools
1.20 - 9.00	Cable Percussion Boring	Dando 2000

Log Type

Header Sheet

Scale: 1:50

Sheet 1 of 1

Project No:	**2372986**
Name:	**One Earth Solar Farm**
Location:	**Hall Farm, Lincoln**
Client:	**Pershing Consultants**

Location Details

Easting:	**481462.72**	Northing:	**372660.49**
Elevation:	**4.65mAOD**	Final Depth:	**9.00m**
Logger:	**AW**	Grid System:	**OSGB**
Orientation:	**N/A**	Inclination:	**90°**

Hole Diameter

Depth (m)	Diam (mm)
9.00	150

Casing Diameter

Depth (m)	Diam (mm)
9.00	150

Groundwater Strikes

Strike (m)	Casing (m)	Sealed (m)	Time (min)	Rose To (m)	Remarks
1.30	-	1.50	20	1.00	
2.10	-	2.50	20	1.50	
6.20	-	6.50	20	3.00	

Installation / Instrument Details

Date	Instrument Details	To (m)	Resp. Zone (m)	Diam (mm)
16/10/2024	Vibrating Wire Piezometer	3.50		70

If Methodology includes Dynamic Sampling refer to Runs table for info.

Backfill

Depth (m)	Legend Code
0.00 - 9.00	Grout

In-Situ Tests

PID	**0**
Hand Vane*	**0**
Standard Penetration Tests	**5**

* One count indicates an average reported result of 3 tests carried out at one depth where available.

Sample Summary

Environmental Samples			
Soil	**5**	Water	**0**
Geotechnical Samples			
Bulk	**10**	Large Bulk	**0**
Disturbed	**16**	Disturbed (NR)	**0**
Piston	**0**	Piston (NR)	**0**
Undisturbed	**0**	Undisturbed (NR)	**0**
Undisturbed Thin Wall			**3**
Undisturbed Thin Wall (NR)			**0**
Core Sample			**0**

(NR) Indicates sample undertaken but with 0% Recovery

Standard Penetration Test Summary

Test Type	Depth (m)	Casing (m)	Water (m)	Seating Blows	Main Blows	Penetration Total (mm)	N	Reported Result	Hammer Ref
Split Spoon	2.00	1.50	-	3	7	450	7	N=7 (1,2/2,1,2,2)	7-10-1
Split Spoon	4.00	3.00	-	4	7	450	7	N=7 (2,2/2,2,2,1)	7-10-1
Split Spoon	6.00	4.50	-	1	0	75		0 (1 for 75mm/0 for 0mm)	7-10-1
Cone	7.50	7.50	1	13	23	450	23	N=23 (6,7/6,6,5,6)	7-10-1
Split Spoon	9.00	9.00	2	25	50	190		50 (25 for 85mm/50 for 105mm)	7-10-1

SPT Hammer Ref.	Energy Ratio (%)
7-10-1	62

Applicable to Cable Percussion Only

Chiselling

Depth (m)	Duration (mins)
8.30 - 8.50	30
8.50 - 9.00	60

Water Added

Depth (m)	Litres

Applicable to Rotary Only

Drilling Flush

Depth (m)	Flush Type	Flush Colour	Return %

Applicable to Dynamic Sampling Only

Dynamic Sampling Runs

Depth (m)	Diam (mm)	Recovery %	Remarks

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Alliance House
3A South Park Way
Wakefield 41 Business Park
Wakefield WF2 0XJ
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End Date:	16/10/2024	Approved:	JP

Location ID

BH005

FINAL

Methodology & Plant

Depth (m)	Method	Equipment
0.00 - 1.20	Inspection Pit	Hand Tools
1.20 - 9.00	Cable Percussion Boring	Dando 2000

Log Type

Cable Percussion

Scale: 1:50

Sheet 1 of 1

Project No:	**2372986**
Name:	**One Earth Solar Farm**
Location:	**Hall Farm, Lincoln**
Client:	**Pershing Consultants**

Location Details:

Easting:	**481462.72**	Northing:	**372660.49**
Elevation:	**4.65mAOD**	Final Depth:	**9.00m**
Logged By:	**AW**	Grid System:	**OSGB**
Orientation:	**N/A**	Inclination:	**90°**

Strata Description	Legend	Depth (m) (Stratum Thickness)	Reduced Level (mAOD)	Chiselling (mins)	Water Added (Litres)	Hole Ø (mm) Depth (m)	Casing Ø (mm) Depth (m)	Water Level (m)	Installation / Backfill	Samples & Testing: Depth (m)	Ref	Test Results
MADE GROUND: Firm brown CLAY. [TOPSOIL]		(0.10)	4.55							0.10 - 0.50	1 B	
Firm brown CLAY.		0.10										
										0.60	2 D	
										0.60 - 1.20	3 B	
										0.80	101 ES	
								1.00		1.00	4 D	
		(2.20)								1.20 - 1.65	5 UT	13 blows, 100% Recovery
								1.30				
								1.50		1.70	6 D	
										1.70 - 2.00	7 B	
										2.00	8 D	SPT(S) 2.00m, N=7 (1,2/2,1,2,2)
										2.00 - 2.45	9 D	
								2.10				
Soft brownish grey CLAY.		2.30	2.35							2.50	102 ES	
										2.50 - 3.00	10 B	
								3.00		3.00	11 D	8 blows, 100% Recovery
		(1.70)								3.00 - 3.45	12 UT	
										3.50	13 D	
										3.50 - 4.00	14 B	
Plastic blackish grey clayey amorphous PEAT with a slight organic odour.		4.00	0.65							4.00	15 D	SPT(S) 4.00m, N=7 (2,2/2,2,2,1)
										4.00 - 4.45	16 D	
										4.50	103 ES	
										4.50 - 5.00	17 B	
										5.00	18 D	12 blows, 100% Recovery
										5.00 - 5.45	19 UT	
		(3.00)								5.50 - 6.00	20 B	
										6.00	104 ES	SPT(S) 6.00m, 0 (1 for 75mm/0 for 0mm)
										6.00	21 D	
								6.20		6.00 - 6.45	22 D	
										6.50 - 7.00	23 B	
Medium dense brownish yellow very sandy angular to rounded fine to coarse mixed lithology GRAVEL. Sand is fine to coarse.		7.00	-2.35							7.50	105 ES	SPT(C) 7.50m, N=23 (6,7/6,6,5,6)
										7.50	24 D	
										7.50 - 7.95	25 D	
										7.50 - 7.95	26 B	
		(2.00)								8.00 - 8.50	27 B	
				30								
				60								
						150	150					
EOH at 9.00m - Refusal		9.00	-4.35			9.00	9.00			9.00	28 D	SPT(S) 9.00m, 50 (25 for 85mm/50 for 105mm)
										9.00 - 9.45	29 D	

Observations / Remarks

Misc.

Groundwater Encountered
Casing Used
Monitoring Point/s Installed
Hammer Ref & Energy Ratio (%)
7-10-1 (62[%])

Shift Information

Date	Time	Depth (m)	Casing (m)	Water (m)
15/10	12:00	0.00	-	-
15/10	16:00	7.00	7.00	4.00
16/10	07:00	7.00	7.00	1.00
16/10	14:30	9.00	9.00	2.00

Backfill

From (m)	To (m)	Material
0.00	9.00	Grout

Installations

Instrument Details	Resp. Zone	Depth (m)	Diameter
Vibrating Wire Piezometer		3.50	70

Groundwater Strikes

Strike (m)	Rises To (m)	Time (min)	Remarks
1.30	1.00	20	
2.10	1.50	20	
6.20	3.00	20	

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Alliance House
3A South Park Way
Wakefield 41 Business Park
Wakefield WF2 0XJ
+44 (0)1924 229889
www.central-alliance.co.uk

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Location ID

BH006

FINAL

Log Type

Header Sheet

Scale: 1:50

Sheet 1 of 1

Project No:	**2372986**
Name:	**One Earth Solar Farm**
Location:	**Hall Farm, Lincoln**
Client:	**Pershing Consultants**

Location Details

Easting:	**481517.90**	Northing:	**372663.21**
Elevation:	**4.90mAOD**	Final Depth:	**19.00m**
Logger:	**AW**	Grid System:	**OSGB**
Orientation:	**N/A**	Inclination:	**90°**

Methodology & Plant

Depth (m)	Method	Plant Used
0.00 - 1.20	Inspection Pit	Hand Tools
1.20 - 8.00	Dynamic Sampling	Comacchio 205
4.00 - 19.00	Rotary Coring	Commachio 205
8.00 - 9.00	Rotary Open Holing	Commachio 205

Hole Diameter

Depth (m)	Diam (mm)
3.00	128
8.00	113
9.00	140
19.00	116

Casing Diameter

Depth (m)	Diam (mm)
9.00	140

If Methodology includes Dynamic Sampling refer to Runs table for info.

Groundwater Strikes

Strike (m)	Casing (m)	Sealed (m)	Time (min)	Rose To (m)	Remarks
2.30	2.30	3.00	20	1.65	

Installation / Instrument Details

Date	Instrument Details	To (m)	Resp. Zone (m)	Diam (mm)
15/10/2024	Vibrating Wire Piezometer	13.60	0.00 - 13.60	18

Backfill

Depth (m)	Legend Code
0.00 - 13.60	Grout
13.60 - 19.00	Bentonite

In-Situ Tests

PID	**0**
Hand Vane*	**5**
Standard Penetration Tests	**4**

* One count indicates an average reported result of 3 tests carried out at one depth where available.

Sample Summary

Environmental Samples			
Soil	**7**	Water	**0**
Geotechnical Samples			
Bulk	**8**	Large Bulk	**0**
Disturbed	**14**	Disturbed (NR)	**0**
Piston	**0**	Piston (NR)	**0**
Undisturbed	**0**	Undisturbed (NR)	**0**
Undisturbed Thin Wall			**2**
Undisturbed Thin Wall (NR)			**0**
Core Sample			**0**

(NR) Indicates sample undertaken but with 0% Recovery

Standard Penetration Test Summary

Test Type	Depth (m)	Casing (m)	Water (m)	Seating Blows	Main Blows	Penetration Total (mm)	N	Reported Result	Hammer Ref
Split Spoon	3.00	3.00	2.30	0	1	450	1	N=1 (0,0/0,0,1,0)	AR2154
Split Spoon	5.00	5.00	-	1	1	150		1 (1 for 75mm/1 for 75mm)	AR2154
Split Spoon	6.50	6.50	-	1	2	225		2 (1 for 75mm/2 for 150mm)	AR2154
Split Spoon	9.00	9.00	-	13	35	450	35	N=35 (5,8/6,6,9,14)	AR2154

SPT Hammer Ref.	Energy Ratio (%)
AR2154	71

Applicable to Cable Percussion Only

Chiselling

Depth (m)	Duration (mins)

Water Added

Depth (m)	Litres

Applicable to Rotary Only

Drilling Flush

Depth (m)	Flush Type	Flush Colour	Return %
9.00 - 10.50	Water	Brown	90
10.50 - 12.00	Water	Brown	40
12.00 - 13.50	Water	Brown	70
13.50 - 15.00	Water	Brown	50
15.00 - 16.50	Water	Brown	60
16.50 - 18.00	Water	Brown	60
18.00 - 19.00	Water	Brown	60

Applicable to Dynamic Sampling Only

Dynamic Sampling Runs

Depth (m)	Diam (mm)	Recovery %	Remarks
1.80 - 3.00	128	100	
3.00 - 4.00	113	100	
4.60 - 5.00	113	100	
5.00 - 6.50	113	100	
6.50 - 8.00	113	67	

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Alliance House,
3A South Park Way
Wakefield 41 Business Park
Wakefield WF2 0XJ
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End Date	15/10/2024	Approved:	JP

Location ID

BH006

FINAL

Log Type

Combined Borehole

Scale: 1:50

Sheet 1 of 2

Methodology & Plant

Depth (m)	Method	Plant Used
0.00 - 1.20	Inspection Pit	Hand Tools
1.20 - 8.00	Dynamic Sampling	Comacchio 205
8.00 - 9.00	Rotary Open Holing	Commachio 205
4.00 - 19.00	Rotary Coring	Commachio 205

Project No:	**2372986**		
Name:	**One Earth Solar Farm**		
Location:	**Hall Farm, Lincoln**		
Client:	**Pershing Consultants**		

Location Details

Easting:	**481517.90**	Northing:	**372663.21**
Elevation:	**4.90mAOD**	Final Depth:	**19.00m**
Logged By:	**AW**	Grid System:	**OSGB**
Orientation:	**N/A**	Inclination:	**90°**

Strata Description	Depth (m) (Stratum Thickness)	Reduced Level (mAOD)	Hole Ø (mm) Depth (m)	Casing Ø (mm) Depth (m)	Water Level (m)	Core Run	TCR	SCR	RQD	FI	Depth (m)	Ref	Test Results
Soft to firm low strength brown slightly sandy silty CLAY. Sand is fine to coarse.	(0.54)										0.20 - 0.50	3 B	
											0.30	1 ES	HV 0.30m, (p)=24 kPa (r)=6 kPa
											0.40	2 D	
Very soft brown very sandy silty friable CLAY. Sand is fine to coarse.	0.54 (0.16)	4.36											HV 0.60m, (p)=Fail kPa (r)=Fail kPa
Brown very silty very clayey fine to coarse SAND.	0.70	4.20									0.70	4 D	
											0.70 - 1.10	6 B	
											0.80	5 ES	
											1.20 - 1.80	7 UT	100 Ublows, 100% Recovery
From 1.80m, Slightly sandy.	(2.00)				1.65 1.75 1.90						1.70	8 D	
											1.80 - 2.60	9 B	
											1.90	10 ES	
From 2.30m, is grey.					2.10 2.30								
Soft low strength grey slightly gravelly very sandy CLAY. Sand is fine to coarse. Gravel is subangular fine to medium mudstone.	2.70	2.20									2.80	11 D	HV 2.80m, (p)=26 kPa (r)=8 kPa
											2.80 - 3.00	13 B	
From 3.00m to 3.25m, Slightly sandy silty CLAY.			128 3.00								2.90	12 ES	SPT(S) 3.00m, N=1 (0,0/0,0,1,0)
	(1.02)										3.00 - 3.45	14 D	
											3.20	15 D	
From 3.60m, is bluish grey.											3.30 - 3.60	16 B	
Firm low strength bluish grey CLAY.	3.72	1.18									3.80	17 D	
											3.90	18 ES	HV 3.90m, (p)=30 kPa (r)=10 kPa
	(0.88)										4.00 - 4.45	19 UT	
Soft bluish grey slightly gravelly slightly sandy very silty CLAY. Sand is fine to coarse. Gravel is subangular fine to medium mudstone.	4.60	0.30									4.60	20 D	
											4.60 - 5.00	22 B	
											4.70	21 ES	HV 4.80m, (p)=30 kPa (r)=8 kPa
	(1.10)										5.00 - 5.45	23 D	SPT(S) 5.00m, 1 (1 for 75mm/1 for 75mm)
From 4.60m, Is soft.											5.00 - 5.70	24 B	
Soft brownish grey sandy silty CLAY. Sand is fine to coarse.	5.70 (0.40)	-0.80									5.80	25 D	
											5.90	26 ES	
Grey slightly clayey slightly gravelly fine to coarse SAND. Gravel is subrounded fine to coarse mixed lithologies (River Terrace).	6.10	-1.20									6.30	27 D	
											6.50 - 6.95	28 D	SPT(S) 6.50m, 2 (1 for 75mm/2 for 150mm)
	(1.30)										6.50 - 7.30	29 B	
Brownish grey sandy subangular to subrounded fine to coarse mudstone and mixed lithologies GRAVEL (River Terrace). Sand is fine to coarse.	7.40 (0.60)	-2.50									7.60	30 D	
No recovery - Rotary open holed to pass gravel band.	8.00	-3.10	113 8.00										
	(1.00)												
Very weak red mercia MUDSTONE. Non-intact core recovered as subangular top rounded fine to coarse GRAVEL [MERCIA MUDSTONE [1]].	9.00 (1.20)	-4.10	140 9.00	140 9.00		9.00 10.50	100	13	9	NI	9.00 - 9.45	31 D	SPT(S) 9.00m, N=35 (5,8/6,6,9,14)
Continued on Next Page													

Observations / Remarks

Misc.

Groundwater Encountered
Casing Used
Monitoring Point/s Installed

Shift Information

Date	Time	Depth (m)	Casing (m)	Water (m)
10/10	08:00		-	-
10/10	16:00	4.00	3.00	3.10
11/10	08:00	4.00	3.00	1.20
11/10	15:00	15.00	9.00	2.20
14/10	08:00	19.00	9.00	1.70
14/10	15:30		-	-

Backfill

From (m)	To (m)	Material
0.00	13.60	Grout
13.60	19.00	Bentonite

Installations

Instrument Type	Resp. Zone	Depth (m)	Diameter
Vibrating Wire Piezometer	0.00 - 13.60	13.60	18

Groundwater Strikes

Strike (m)	Rises To (m)	Time (min)	Remarks
2.30	1.65	20	

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Wakefield WF2 0XJ
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Start Date:	10/10/2024	Checked:	RW
End Date	15/10/2024	Approved:	JP

Location ID

BH006

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Log Type

Combined Borehole

Scale: 1:50

Sheet 2 of 2

Methodology & Plant

Depth (m)	Method	Plant Used
0.00 - 1.20	Inspection Pit	Hand Tools
1.20 - 8.00	Dynamic Sampling	Comacchio 205
8.00 - 9.00	Rotary Open Holing	Commachio 205
4.00 - 19.00	Rotary Coring	Commachio 205

Project No:	**2372986**
Name:	**One Earth Solar Farm**
Location:	**Hall Farm, Lincoln**
Client:	**Pershing Consultants**

Location Details

Easting:	**481517.90**	Northing:	**372663.21**
Elevation:	**4.90mAOD**	Final Depth:	**19.00m**
Logged By:	**AW**	Grid System:	**OSGB**
Orientation:	**N/A**	Inclination:	**90°**

Strata Description	Depth (m) (Stratum Thickness)	Reduced Level (mAOD)	Hole Ø (mm) Depth (m)	Casing Ø (mm) Depth (m)	Core Run	TCR	SCR	RQD	FI	Depth (m)	Ref	Test Results
Very weak red mercia MUDSTONE. Non-intact core recovered as subangular top rounded fine to coarse GRAVEL [MERCIA MUDSTONE [1]].	10.20	-5.30							0			
	(0.30)								NA			
Extremely weak red speckled grey mercia MUDSTONE [MERCIA MUDSTONE [3]]. *From 10.40m to 10.50m, non-intact core recovered as slightly sandy silty CLAY. Sand is fine to coarse.*	10.50	-5.60							12			
Extremely weak to very weak red speckled grey mercia MUDSTONE. Discontinuities are sub-horizontal, closely spaced, undulating, smooth and tight to partly open [MERCIA MUDSTONE [1]]. *At 11.05m, 1 No discontinuity, 45 degrees, undulating, smooth and tight. From 11.25m to 11.60m, Non-intact core recovered as slightly gravelly sandy silty CLAY. Gravel is angular fine to coarse mudstone. Sand is fine to coarse. At 11.95m, 1 No discontinuity, horizontal, planar, smooth, very open with clay infill.*	(1.50)				10.50 12.00	100	77	31	NA			
									7.5			
	12.00	-7.10							NI			
Very weak reddish brown mercia MUDSTONE with occasional gypsum veins (1.00mm - 6.00mm). Discontinuities are 1) Sub-horizontal, closely spaced, undulating, rough and partly open to open 2) 30 degrees, closely spaced, rough, planar and partly open with gravel infill [MERCIA MUDSTONE [1]]. *At 12.50m, Band of weak gypsum (30.00mm). At 12.60m, Band of weak gypsum 30 degrees (10.00mm). At 13.10m, Band of weak gypsum (25.00mm). Below 13.35m, is grey speckled red and moderately weak.*	(1.50)				12.00 13.50	100	93	48	9			
Moderately weak to medium strong grey stained red mercia MUDSTONE with frequent gypsum veins (1.00-7.00mm). Discontinuities are 1) Horizontal, medium spaced, smooth, planar and tight 2) Horizontal, medium spaced, stepped, smooth and partly open [MERCIA MUDSTONE [1]]. *From 13.50m to 13.65m, Assumed zone of core loss. From 13.65m to 13.70m, Non-intact core recovered as angular fine to coarse mudstone GRAVEL. AT 14.41m, Band of weak gypsum (40.00mm).*	13.50	-8.60							AZCL			
									NI			
					13.50 15.00	90	87	51	7			
At 15.20m, Band of moderately weak gypsum (<30.00mm). From 15.50m to 15.90m, Discontinuities are horizontal, very closely spaced, undulating, smooth and very open with gravel infill.					15.00 16.50	100	100	28				
	(5.50)											
At 16.40m, Band of moderately weak gypsum (<30.00mm). At 16.86m, Band of moderately weak gypsum (<30.00mm). At 17.00m, Band of moderately weak gypsum (<30.00mm). At 17.32m, Band of moderately weak gypsum (<30.00mm).									7			
					16.50 18.00	100	100	73				
From 18.73m to 18.81m, Moderately weak gypsum.					18.00 19.00	100	100	64				
EOH at 19.00m - Scheduled Depth	19.00	-14.10	116 19.00									

Observations / Remarks

Misc.

Groundwater Encountered
Casing Used
Monitoring Point/s Installed

Shift Information

Date	Time	Depth (m)	Casing (m)	Water (m)
10/10	08:00		-	-
10/10	16:00	4.00	3.00	3.10
11/10	08:00	4.00	3.00	1.20
11/10	15:00	15.00	9.00	2.20
14/10	08:00	19.00	9.00	1.70
14/10	15:30		-	-

Backfill

From (m)	To (m)	Material
0.00	13.60	Grout
13.60	19.00	Bentonite

Installations

Instrument Type	Resp. Zone	Depth (m)	Diameter
Vibrating Wire Piezometer	0.00 - 13.60	13.60	18

Groundwater Strikes

Strike (m)	Rises To (m)	Time (min)	Remarks
2.30	1.65	20	

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3A South Park Way
Wakefield 41 Business Park
Wakefield WF2 0XJ
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End Date:	16/10/2024	Approved:	JP

Location ID

BH007

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Log Type

Header Sheet

Scale: 1:50

Sheet 1 of 1

Methodology & Plant

Depth (m)	Method	Plant Used
0.00 - 1.20	Inspection Pit	Hand Tools
1.20 - 9.50	Cable Percussion Boring	Dando 2000
9.20 - 19.40	Rotary Coring	Commachio 205

Project No:	**2372986**
Name:	**One Earth Solar Farm**
Location:	**Hall Farm, Lincoln**
Client:	**Pershing Consultants**

Location Details

Easting:	**481486.70**	Northing:	**372521.54**
Elevation:	**4.68mAOD**	Final Depth:	**19.40m**
Logger:	**AW**	Grid System:	**OSGB**
Orientation:	**N/A**	Inclination:	**90°**

Hole Diameter

Depth (m)	Diam (mm)
7.50	150
19.40	116

Casing Diameter

Depth (m)	Diam (mm)
7.50	150
9.20	140

Groundwater Strikes

Strike (m)	Casing (m)	Sealed (m)	Time (min)	Rose To (m)	Remarks
2.30	-	3.00	20	2.00	
4.20	-	4.50	20	1.00	
5.60	-	6.00	20	1.00	

Installation / Instrument Details

Date	Instrument Details	To (m)	Resp. Zone (m)	Diam (mm)
16/10/2024	Standpipe	6.00	4.00 - 6.00	50

If Methodology includes Dynamic Sampling refer to Runs table for info.

Backfill

Depth (m)	Legend Code
0.00 - 4.00	Bentonite
4.00 - 6.00	Gravel
6.00 - 19.40	Bentonite

In-Situ Tests

PID	**0**
Hand Vane*	**0**
Standard Penetration Tests	**7**

* One count indicates an average reported result of 3 tests carried out at one depth where available.

Sample Summary

Environmental Samples			
Soil	**7**	Water	**1**
Geotechnical Samples			
Bulk	**10**	Large Bulk	**0**
Disturbed	**17**	Disturbed (NR)	**0**
Piston	**0**	Piston (NR)	**0**
Undisturbed	**0**	Undisturbed (NR)	**0**
Undisturbed Thin Wall			**2**
Undisturbed Thin Wall (NR)			**0**
Core Sample			**0**

(NR) Indicates sample undertaken but with 0% Recovery

Standard Penetration Test Summary

Test Type	Depth (m)	Casing (m)	Water (m)	Seating Blows	Main Blows	Penetration Total (mm)	N	Reported Result	Hammer Ref
Split Spoon	1.20	-	-	2	5	450	5	N=5 (1,1/1,1,2,1)	7-10-1
Split Spoon	3.00	-	-	0	3	450	3	N=3 (0,0/0,1,1,1)	7-10-1
Split Spoon	4.00	-	-	2	4	450	4	N=4 (1,1/1,1,1,1)	7-10-1
Split Spoon	6.00	-	-	10	21	450	21	N=21 (5,5/5,5,6,5)	7-10-1
Split Spoon	7.50	7.50	1	13	27	450	27	N=27 (6,7/7,6,7,7)	7-10-1
Split Spoon	9.00	9.00	3	25	0	317		50 (25 for 135mm/50 for 182mm)	7-10-1
Split Spoon	9.50	9.50	3	25	50	175		50 (25 for 81mm/50 for 94mm)	7-10-1

SPT Hammer Ref.	Energy Ratio (%)
7-10-1	62

Applicable to Cable Percussion Only

Chiselling

Depth (m)	Duration (mins)
5.50 - 6.00	90
7.00 - 7.50	60
8.50 - 9.00	60
9.30 - 9.50	30

Water Added

Depth (m)	Litres

Applicable to Rotary Only

Drilling Flush

Depth (m)	Flush Type	Flush Colour	Return %
9.20 - 10.50	Water	Brown	80
10.50 - 12.00	Water	Brown	80
12.00 - 13.50	Water	Brown	80
13.50 - 15.00	Water	Brown	90
15.00 - 16.50	Water	Brown	90
16.50 - 18.00	Water	Brown	90
18.00 - 19.40	Water	Brown	90

Applicable to Dynamic Sampling Only

Dynamic Sampling Runs

Depth (m)	Diam (mm)	Recovery %	Remarks

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Alliance House,
3A South Park Way
Wakefield 41 Business Park
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Location ID

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Methodology & Plant

Depth (m)	Method	Plant Used
0.00 - 1.20	Inspection Pit	Hand Tools
1.20 - 9.50	Cable Percussion Boring	Dando 2000
9.20 - 19.40	Rotary Coring	Commachio 205

Log Type

Combined Borehole

Scale: 1:50

Sheet 1 of 2

Project No:	**2372986**
Name:	**One Earth Solar Farm**
Location:	**Hall Farm, Lincoln**
Client:	**Pershing Consultants**

Location Details

Easting:	**481486.70**	Northing:	**372521.54**
Elevation:	**4.68mAOD**	Final Depth:	**19.40m**
Logged By:	**AW**	Grid System:	**OSGB**
Orientation:	**N/A**	Inclination:	**90°**

Strata Description	Depth (m) (Stratum Thickness)	Reduced Level (mAOD)	Hole Ø (mm) Depth (m)	Casing Ø (mm) Depth (m)	Water Level (m)	Installation / Backfill	Core Run	TCR	SCR	RQD	FI	Depth (m)	Ref	Test Results
Soft to firm brown CLAY [TOPSOIL].												0.10 - 0.50	1 B	
												0.30	101 ES	
From 0.70m, is firm.												0.60	2 D	
												0.60 - 1.20	3 B	
												0.90	102 ES	
					1.00							1.00	4 D	
	(2.30)				1.00							1.10 - 5.40	EW	
												1.20 - 1.65	5 D	SPT(S) 1.20m, N=5 (1,1/1,1,2,1)
												1.65 - 2.00	6 B	
					2.00							2.00	7 D	20 Ublows, 80% Recovery
												2.00 - 2.45	8 UT	
	2.30	2.38			2.30									
FIrm brown slightly sandy silty CLAY. Sand is fine to medium.												2.50 - 3.00	9 B	
												2.60	103 ES	
												3.00	10 D	SPT(S) 3.00m, N=3 (0,0/0,1,1,1)
												3.00 - 3.45	11 D	
From 3.50m, is soft brown mottled black sandy silty CLAY.												3.50 - 4.00	12 B	
												3.70	104 ES	
	(3.20)											4.00	13 D	SPT(S) 4.00m, N=4 (1,1/1,1,1,1)
												4.00 - 4.45	14 D	
					4.20							4.50 - 5.00	15 B	
												5.00	16 D	10 Ublows, 90% Recovery
												5.00 - 5.45	17 UT	
	5.50	-0.82			5.60							5.50	18 D	
Grey speckled white and black sandy slightly clayey subangular to rounded fine to coarse mixed lithology GRAVEL. Sand is fine to coarse (River Terrace).												5.50 - 6.00	19 B	
	(0.70)											5.60	105 ES	
												6.00	20 D	SPT(S) 6.00m, N=21 (5,5/5,5,6,5)
												6.00 - 6.45	21 D	
	6.20	-1.52										6.50 - 7.00	22 B	
Yellowish brown sandy subrounded to rounded fine to coarse mixed lithology GRAVEL. Sand is fine to coarse (River Terrace).												6.70	106 ES	
			150	150								7.50	23 D	SPT(S) 7.50m, N=27 (6,7/7,6,7,7)
			7.50	7.50								7.50 - 7.95	24 D	
	(3.00)											7.50 - 7.95	25 B	
												8.00 - 8.50	26 B	
												8.30	107 ES	
												9.00	27 D	SPT(S) 9.00m, 50 (25 for 135mm/50 for 182mm)
												9.00 - 9.45	28 D	
	9.20	-4.52		140										
Assumed zone of core loss. MUDSTONE. (Drillers description)				9.20										
	(0.70)						9.20	46	46	21	AZCL	9.50 - 9.95	29 D	SPT(S) 9.50m, 50 (25 for 81mm/50 for 94mm)
							10.50							
	9.90	-5.22												

Continued on Next Page

Observations / Remarks

Misc.

Groundwater Encountered
Casing Used
Monitoring Point/s Installed

Shift Information

Date	Time	Depth (m)	Casing (m)	Water (m)
14/10	05:00	0.00	-	-
14/10	16:00	7.50	7.50	1.00
15/10	08:00	7.50	9.50	1.00
15/10	15:30	13.50	9.20	3.95
16/10	08:00	13.50	9.20	1.50
16/10	16:00	19.40	9.20	1.50

Backfill

From (m)	To (m)	Material
0.00	4.00	Bentonite
4.00	6.00	Gravel
6.00	19.40	Bentonite

Installations

Instrument Type	Resp. Zone	Depth (m)	Diameter
Standpipe	4.00 - 6.00	6.00	50

Groundwater Strikes

Strike (m)	Rises To (m)	Time (min)	Remarks
2.30	2.00	20	
4.20	1.00	20	
5.60	1.00	20	

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Wakefield 41 Business Park
Wakefield WF2 0XJ
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End Date	16/10/2024	Approved:	JP

Location ID

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Methodology & Plant

Depth (m)	Method	Plant Used
0.00 - 1.20	Inspection Pit	Hand Tools
1.20 - 9.50	Cable Percussion Boring	Dando 2000
9.20 - 19.40	Rotary Coring	Commachio 205

Log Type

Combined Borehole

Scale: 1:50

Sheet 2 of 2

Project No:	**2372986**
Name:	**One Earth Solar Farm**
Location:	**Hall Farm, Lincoln**
Client:	**Pershing Consultants**

Location Details

Easting:	**481486.70**	Northing:	**372521.54**
Elevation:	**4.68mAOD**	Final Depth:	**19.40m**
Logged By:	**AW**	Grid System:	**OSGB**
Orientation:	**N/A**	Inclination:	**90°**

Strata Description	Legend	Depth (m) (Stratum Thickness)	Reduced Level (mAOD)	Hole Ø (mm) Depth (m)	Casing Ø (mm) Depth (m)	Water Level (m)	Installation / Backfill	Coring, Samples & Testing: Core Run	TCR	SCR	RQD	FI	Depth (m)	Ref	Test Results
Moderately weak to medium strong brown mottled grey mercia MUDSTONE with occasional gypsum veins. Discontinuities are subhorizontal closely spaced planar smooth open to moderately widE [MERCIA MUDSTONE [1]].												8			
From 10.80m to 12.40m, 60 Deg medium spaced undulating smooth and tight discontinuity.								10.50 12.00	100	100	55	4			
At 11.10m, Horizontal planar smooth very wide with clay infill discontinuity.															
From 12.40m to 12.50m, Non-intact core recovered as angular to subangular fine to coarse mudstone GRAVEL.		(5.10)										NI			
At 12.80m, Very weak gypsum.								12.00 13.50	100	93	51				
From 12.80m to 12.87m, Weak gypsum.															
From 13.20m to 13.34m, Weak															
From 14.18m to 14.22m, Band of weak gypsum.								13.50 15.00	100	100	79	5			
Medium strong to strong brown mottled grey mercia MUDSTONE with frequent gypsum veins. Discontinuities are horizontal medium spaced undulating rough tight to partly open [MERCIA MUDSTONE [1]].		15.00	-10.32									NI			
From 15.00m to 15.20m, Non-intact core recovered as angular fine to coarse mudstone and gypsum GRAVEL.								15.00 16.50	100	87	75	4			
At 15.50m, Very weak.															
From 16.50m to 16.60m, Assumed zone of core loss.		(2.60)										AZCL			
From 16.95m to 17.00m, Band of weak gypsum.								16.50 18.00	93	85	60	2			
From 17.48m to 17.60m, Non-intact core recovered as angular medium to coarse gypsum GRAVEL.		17.60	-12.92									NI			
Medium strong to strong brown and grey mercia MUDSTONE with occasional gypsum veins. Discontinuities are horizontal very closely spaced planar rough partly open [MERCIA MUDSTONE [1]].		(0.40)										15			
Strong grey mottled brown mercia MUDSTONE with occasional gypsum veins. Discontinuities are horizontal medium spaced planar rough open [MERCIA MUDSTONE [1]].		18.00	-13.32												
At 18.40m, Weak gypsum.								18.00 19.40	100	100	74	5			
From 18.70m to 18.87m, Band of moderately weak gypsum.		(1.40)													
From 19.27m to 19.35m, Band of weak gypsum.															
EOH at 19.40m - Scheduled Depth		19.40	-14.72	116 19.40											

Observations / Remarks

Misc.

Groundwater Encountered
Casing Used
Monitoring Point/s Installed

Shift Information

Date	Time	Depth (m)	Casing (m)	Water (m)
14/10	05:00	0.00	-	-
14/10	16:00	7.50	7.50	1.00
15/10	08:00	7.50	9.50	1.00
15/10	15:30	13.50	9.20	3.95
16/10	08:00	13.50	9.20	1.50
16/10	16:00	19.40	9.20	1.50

Backfill

From (m)	To (m)	Material
0.00	4.00	Bentonite
4.00	6.00	Gravel
6.00	19.40	Bentonite

Installations

Instrument Type	Resp. Zone	Depth (m)	Diameter
Standpipe	4.00 - 6.00	6.00	50

Groundwater Strikes

Strike (m)	Rises To (m)	Time (min)	Remarks
2.30	2.00	20	
4.20	1.00	20	
5.60	1.00	20	

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Alliance House
3A South Park Way
Wakefield 41 Business Park
Wakefield WF2 0XJ
+44 (0)1924 229889
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End Date:	10/10/2024	Approved:	JP

Location ID

BH008

FINAL

Log Type

Header Sheet

Scale: 1:50

Sheet 1 of 1

Project No:	**2372986**
Name:	**One Earth Solar Farm**
Location:	**Hall Farm, Lincoln**
Client:	**Pershing Consultants**

Location Details

Easting:	**481691.06**	Northing:	**372551.49**
Elevation:	**4.61mAOD**	Final Depth:	**18.30m**
Logger:	**AR**	Grid System:	**OSGB**
Orientation:	**N/A**	Inclination:	**90°**

Methodology & Plant

Depth (m)	Method	Plant Used
0.00 - 1.20	Inspection Pit	Hand Tools
1.20 - 3.70	Dynamic Sampling	Comacchio 205
3.70 - 7.90	Rotary Open Holing	Comacchio 205
7.90 - 18.30	Rotary Coring	Comacchio 205

Hole Diameter

Depth (m)	Diam (mm)
18.30	121

Casing Diameter

Depth (m)	Diam (mm)
9.30	143

Groundwater Strikes

Strike (m)	Casing (m)	Sealed (m)	Time (min)	Rose To (m)	Remarks
1.30	-	-	20	1.30	

Installation / Instrument Details

Date	Instrument Details	To (m)	Resp. Zone (m)	Diam (mm)
10/10/2024	Standpipe	8.00	4.00 - 8.00	50

If Methodology includes Dynamic Sampling refer to Runs table for info.

Backfill

Depth (m)	Legend Code
0.00 - 0.30	Concrete
0.30 - 4.00	Bentonite
4.00 - 8.00	Gravel
8.00 - 18.30	Bentonite

In-Situ Tests

PID	**0**
Hand Vane*	**2**
Standard Penetration Tests	**6**

* One count indicates an average reported result of 3 tests carried out at one depth where available.

Sample Summary

Environmental Samples			
Soil	**3**	Water	**1**
Geotechnical Samples			
Bulk	**5**	Large Bulk	**0**
Disturbed	**10**	Disturbed (NR)	**0**
Piston	**0**	Piston (NR)	**0**
Undisturbed	**0**	Undisturbed (NR)	**0**
Undisturbed Thin Wall			**0**
Undisturbed Thin Wall (NR)			**0**
Core Sample			**0**

(NR) Indicates sample undertaken but with 0% Recovery

Standard Penetration Test Summary

Test Type	Depth (m)	Casing (m)	Water (m)	Seating Blows	Main Blows	Penetration Total (mm)	N	Reported Result	Hammer Ref
Split Spoon	1.20	-	-	2	5	450	5	N=5 (1,1/1,1,1,2)	AR2152
Split Spoon	2.00	-	-	0	0	450	0	N=0 (0,0/0,0,0,0)	AR2152
Split Spoon	2.70	-	-	21	33	450	33	N=33 (9,12/10,10,7,6)	AR2152
Split Spoon	3.70	3.70	-	4	50	410		50 (2,2/50 for 260mm)	AR2152
Split Spoon	7.90	7.90	-	18	50	405		50 (7,11/50 for 255mm)	AR2152
Split Spoon	9.30	9.30	-	6	29	450	29	N=29 (2,4/6,7,6,10)	AR2152

SPT Hammer Ref.	Energy Ratio (%)
AR2152	64

Applicable to Cable Percussion Only

Chiselling

Depth (m)	Duration (mins)

Water Added

Depth (m)	Litres

Applicable to Rotary Only

Drilling Flush

Depth (m)	Flush Type	Flush Colour	Return %
7.90 - 9.30	Water	Brown	80
9.30 - 10.80	Water	Brown	80
10.80 - 12.30	Water	Brown	80
12.30 - 13.80	Water	Brown	70
13.80 - 15.30	Water	Brown	70
15.30 - 16.80	Water	Brown	70
16.80 - 18.30	Water	Brown	70

Applicable to Dynamic Sampling Only

Dynamic Sampling Runs

Depth (m)	Diam (mm)	Recovery %	Remarks
1.20 - 2.00	117	100	
2.00 - 2.70	117	70	
2.70 - 3.70	102	100	

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Alliance House,
3A South Park Way
Wakefield 41 Business Park
Wakefield WF2 0XJ
+44(0)1924 229889
www.central-alliance.co.uk

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FINAL

Log Type
Combined Borehole

Scale: 1:50
Sheet 1 of 2

Methodology & Plant

Depth (m)	Method	Plant Used
0.00 - 1.20	Inspection Pit	Hand Tools
1.20 - 3.70	Dynamic Sampling	Comacchio 205
3.70 - 7.90	Rotary Open Holing	Comacchio 205
7.90 - 18.30	Rotary Coring	Comacchio 205

Project No:	**2372986**		
Name:	**One Earth Solar Farm**		
Location:	**Hall Farm, Lincoln**		
Client:	**Pershing Consultants**		

Location Details

Easting:	**481691.06**	Northing:	**372551.49**
Elevation:	**4.61mAOD**	Final Depth:	**18.30m**
Logged By:	**AR**	Grid System:	**OSGB**
Orientation:	**N/A**	Inclination:	**90°**

Strata Description	Depth (m) (Stratum Thickness)	Reduced Level (mAOD)	Hole Ø (mm) Depth (m)	Casing Ø (mm) Depth (m)	Water Level (m)	Installation / Backfill
MADE GROUND: Vegetation over soft brown mottled greyish brown slightly sandy silty CLAY [TOPSOIL]. *From 0.00m to 0.40m, Occasional rootlets.*	(2.00)				1.30 1.30	
Very soft to soft dark brownish black organic slightly sandy clayey SILT.	2.00 (0.40)	2.61				
Black slightly gravelly slightly organic silty fine to coarse SAND. Gravel is subrounded to rounded fine to coarse mudstone, quartz and various igneous lithologies.	2.40 (0.90)	2.21				
Very dense greyish brown gravelly fine to coarse SAND. Gravel is subrounded to rounded fine to coarse quartz, mudstone and various igneous lithologies.	3.30 (0.40)	1.31				
Very dense fine to coarse SAND and subrounded to rounded fine to coarse various mixed lithologies GRAVEL.	3.70 (4.20)	0.91				
Very stiff reddish brown occasionally grey silty CLAY with occasional lithorelicts of mudstone (<20.00mm) [MM Grade 4a].	7.90 (0.30)	-3.29				
Assumed zone of core loss - Weathered MUDSTONE (Driller's description).	8.20 (0.80)	-3.59				
Stiff reddish brown an grey silty CLAY with occasional lithorelicts of mudstone (<20.00mm) [MM Grade 4a].	9.00 (0.30)	-4.39				
Assumed zone of core loss - Weathered MUDSTONE (Driller's description).	9.30 (0.40)	-4.69		143 9.30		
Stiff grey silty CLAY with occasional lithorelicts of mudstone	9.70 (0.42)	-5.09				
Continued on Next Page						

Coring, Samples & Testing								
Core Run	TCR	SCR	RQD	FI	Depth (m)	Ref	Test Results
					0.20	2 D	
					0.20 - 0.70	1 B	
					0.50	3 ES	
					0.75	4 D	
					1.00	5 ES	
					1.20 - 1.65	6 D	SPT(S) 1.20m, N=5 (1,1/1,1,1,2)
					1.50 - 2.00	7 B	
					1.75	8 D	HV 1.70m, (p)=64 kPa (r)=20 kPa
					2.00	9 ES	SPT(S) 2.00m, N=0 (0,0/0,0,0,0)
					2.00 - 2.70	11 B	
					2.00 - 2.75	10 D	HV 2.20m, (p)=20 kPa (r)=5 kPa
					2.30	12 D	
					2.70	13 D	SPT(S) 2.70m, N=33
					2.70 - 3.15	14 D	(9,12/10,10,7,6)
					2.70 - 3.30	15 B	
					3.30 - 3.70	16 B	
					3.70 - 4.15	17 D	SPT(S) 3.70m, 50 (2,2/50 for 260mm)
					6.84 - 7.76	EW	
					7.90 - 8.35	18 D	SPT(S) 7.90m, 50 (7,11/50 for 255mm)
7.90 9.30	21	0	0	AZCL			
				NA			
				AZCL			SPT(S) 9.30m, N=29 (2,4/6,7,6,10)
				NA			

Observations / Remarks

Misc.
Groundwater Encountered
Casing Used
Monitoring Point/s Installed

Shift Information

Date	Time	Depth (m)	Casing (m)	Water (m)
07/10	07:00	0.00	-	
07/10	16:00	3.70	3.70	
08/10	07:00	3.70	3.70	0.40
08/10	16:00	12.30	9.30	0.70
09/10	07:00	12.30	9.30	0.70
09/10	16:00	18.30	9.30	

Backfill

From (m)	To (m)	Material
0.00	0.30	Concrete
0.30	4.00	Bentonite
4.00	8.00	Gravel
8.00	18.30	Bentonite

Installations

Instrument Type	Resp. Zone	Depth (m)	Diameter
Standpipe	4.00 - 8.00	8.00	50

Groundwater Strikes

Strike (m)	Rises To (m)	Time (min)	Remarks
1.30	1.30	20	

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GROUND ENGINEERING TECHNICAL SERVICES

Alliance House,
3A South Park Way
Wakefield 41 Business Park
Wakefield WF2 0XJ
+44(0)1924 229889
www.central-alliance.co.uk

Start Date:	07/10/2024	Checked:	RW
End Date	10/10/2024	Approved:	JP

Location ID

BH008

FINAL

Methodology & Plant

Depth (m)	Method	Plant Used
0.00 - 1.20	Inspection Pit	Hand Tools
1.20 - 3.70	Dynamic Sampling	Comacchio 205
3.70 - 7.90	Rotary Open Holing	Comacchio 205
7.90 - 18.30	Rotary Coring	Comacchio 205

Log Type

Combined Borehole

Scale: 1:50

Sheet 2 of 2

Project No:	**2372986**
Name:	**One Earth Solar Farm**
Location:	**Hall Farm, Lincoln**
Client:	**Pershing Consultants**

Location Details

Easting:	**481691.06**	Northing:	**372551.49**
Elevation:	**4.61mAOD**	Final Depth:	**18.30m**
Logged By:	**AR**	Grid System:	**OSGB**
Orientation:	**N/A**	Inclination:	**90°**

Strata Description	Depth (m) (Stratum Thickness)	Reduced Level (mAOD)	Hole Ø (mm) Depth (m)	Casing Ø (mm) Depth (m)	Water Level (m)	Installation / Backfill	Core Run	TCR	SCR	RQD	FI	Depth (m)	Ref	Test Results
(<20.00mm) [MM Grade 4a].	10.12	-5.51												
Extremely weak to very weak reddish brown and grey mercia MUDSTONE with frequent gypsum veins (1.00-2.00mm) and occasional very thin to thin beds of gypsum. Discontinuities are horizontal, very close to closely spaced, undulating, smooth and tight to partly open with clay smear or gravel infill.	(0.68)						9.30 10.80	73	20	0	13			
Assumed zone of core loss - Weathered MUDSTONE (Driller's description).	10.80 (0.35)	-6.19									AZCL			
Extremely weak to very weak reddish brown and light grey mercia MUDSTONE with frequent gypsum veins (1.00-2.00mm) and occasional very thin to thin beds of gypsum. Discontinuities are horizontal, close to medium spaced, planar, undulating, smooth and tight to partly open with clay smear or infill [MM Grade 1/11].	11.15	-6.54					10.80 12.30	77	61	35	9			
From 12.30m to 12.53m, Assumed zone of core loss.											AZCL			
From 13.68m to 13.73m, Non-intact core recovered as reddish brown clayey angular to subangular fine to coarse gypsum and mudstone GRAVEL. *From 14.02m to 14.09m, Non-intact core recovered as reddish brown clayey angular to subangular fine to coarse gypsum and mudstone GRAVEL.*							12.30 13.80	85	53	28				
	(7.15)						13.80 15.30	100	88	45	9			
From 15.24m to 15.30m, Non-intact core recovered as reddish brown clayey angular to subangular fine to coarse mudstone GRAVEL.							15.30 16.80	100	79	42				
From 16.80m to 16.88m, Assumed zone of core loss. *From 16.91m to 16.99m, Non-intact core recovered as angular to subangular fine to coarse mudstone GRAVEL.*											AZCL			
From 17.50m to 17.71m, Very thin beds of weak to moderately weak light grey siltstone.							16.80 18.30	95	79	77	4			
EOH at 18.30m - Scheduled Depth	18.30	-13.69	121 18.30											

Observations / Remarks

Misc.

Groundwater Encountered
Casing Used
Monitoring Point/s Installed

Shift Information

Date	Time	Depth (m)	Casing (m)	Water (m)
07/10	07:00	0.00	-	
07/10	16:00	3.70	3.70	
08/10	07:00	3.70	3.70	0.40
08/10	16:00	12.30	9.30	0.70
09/10	07:00	12.30	9.30	0.70
09/10	16:00	18.30	9.30	

Backfill

From (m)	To (m)	Material
0.00	0.30	Concrete
0.30	4.00	Bentonite
4.00	8.00	Gravel
8.00	18.30	Bentonite

Installations

Instrument Type	Resp. Zone	Depth (m)	Diameter
Standpipe	4.00 - 8.00	8.00	50

Groundwater Strikes

Strike (m)	Rises To (m)	Time (min)	Remarks
1.30	1.30	20	

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GROUND ENGINEERING TECHNICAL SERVICES

Alliance House
3A South Park Way
Wakefield 41 Business Park
Wakefield WF2 0XJ
+44 (0)1924 229889
www.central-alliance.co.uk

Start Date:	10/10/2024	Checked:	RW
End Date:	15/10/2024	Approved:	JP

Location ID

BH009

FINAL

Log Type

Header Sheet

Scale: 1:50

Sheet 1 of 1

Methodology & Plant

Depth (m)	Method	Plant Used
0.00 - 1.20	Inspection Pit	Hand Tools
1.20 - 9.50	Dynamic Sampling	Comacchio 205
9.50 - 16.70	Rotary Coring	Commachio 205

Project No:	**2372986**
Name:	**One Earth Solar Farm**
Location:	**Hall Farm, Lincoln**
Client:	**Pershing Consultants**

Location Details

Easting:	**481688.53**	Northing:	**372421.45**
Elevation:	**4.78mAOD**	Final Depth:	**19.50m**
Logger:	**AR**	Grid System:	**OSGB**
Orientation:	**N/A**	Inclination:	**90°**

Hole Diameter

Depth (m)	Diam (mm)
3.00	117
9.50	102
16.70	116

Casing Diameter

Depth (m)	Diam (mm)
8.00	121

Groundwater Strikes

Strike (m)	Casing (m)	Sealed (m)	Time (min)	Rose To (m)	Remarks

No Groundwater Encountered

Installation / Instrument Details

Date	Instrument Details	To (m)	Resp. Zone (m)	Diam (mm)
15/10/2024	Vibrating Wire Piezometer	11.00	0.30 - 11.00	18

If Methodology includes Dynamic Sampling refer to Runs table for info.

Backfill

Depth (m)	Legend Code
0.00 - 0.30	Concrete
0.30 - 11.00	Grout
11.00 - 19.50	Bentonite

In-Situ Tests

PID	**0**
Hand Vane*	**8**
Standard Penetration Tests	**8**

* One count indicates an average reported result of 3 tests carried out at one depth where available.

Sample Summary

Environmental Samples			
Soil	**7**	Water	**0**
Geotechnical Samples			
Bulk	**9**	Large Bulk	**0**
Disturbed	**17**	Disturbed (NR)	**0**
Piston	**0**	Piston (NR)	**0**
Undisturbed	**0**	Undisturbed (NR)	**0**
Undisturbed Thin Wall			**1**
Undisturbed Thin Wall (NR)			**0**
Core Sample			**0**

(NR) Indicates sample undertaken but with 0% Recovery

Standard Penetration Test Summary

Test Type	Depth (m)	Casing (m)	Water (m)	Seating Blows	Main Blows	Penetration Total (mm)	N	Reported Result	Hammer Ref
Split Spoon	2.00	-	-	2	4	450	4	N=4 (1,1/1,1,1,1)	AR2152
Split Spoon	3.00	-	-	8	21	450	21	N=21 (4,4/4,4,6,7)	AR2152
Split Spoon	4.00	4.00	-	4	11	450	11	N=11 (2,2/2,2,3,4)	AR2152
Split Spoon	5.00	5.00	-	24	44	450	44	N=44 (10,14/12,12,10,10)	AR2152
Split Spoon	6.00	5.00	-	10	18	450	18	N=18 (5,5/5,7,3,3)	AR2152
Split Spoon	7.00	5.00	-	7	17	450	17	N=17 (2,5/4,3,5,5)	AR2152
Split Spoon	8.00	8.00	-	12	41	450	41	N=41 (5,7/9,10,10,12)	AR2152
Split Spoon	9.00	8.00	-	6	44	450	44	N=44 (3,3/5,11,14,14)	AR2152

SPT Hammer Ref.	Energy Ratio (%)
AR2152	64

Applicable to Cable Percussion Only

Chiselling

Depth (m)	Duration (mins)

Water Added

Depth (m)	Litres

Applicable to Rotary Only

Drilling Flush

Depth (m)	Flush Type	Flush Colour	Return %
9.50 - 10.70	Water	Brown	70
10.70 - 12.20	Water	Brown	70
12.20 - 13.70	Water	Brown	70
13.70 - 15.20	Water	Brown	70
15.20 - 16.70	Water	Brown	70
16.70 - 18.20	Water	Brown	80
18.20 - 19.50	Water	Brown	80

Applicable to Dynamic Sampling Only

Dynamic Sampling Runs

Depth (m)	Diam (mm)	Recovery %	Remarks
1.20 - 2.00	117	100	
2.00 - 3.00	117	100	
3.00 - 4.00	102	100	
4.00 - 5.00	102	100	
5.00 - 6.00	102	70	
6.00 - 7.00	102	100	
7.00 - 8.00	102	100	
8.00 - 9.00	102	100	
9.00 - 9.50	102	100	

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Alliance House,
3A South Park Way
Wakefield 41 Business Park
Wakefield WF2 0XJ
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Location ID

BH009

FINAL

Methodology & Plant

Depth (m)	Method	Plant Used
0.00 - 1.20	Inspection Pit	Hand Tools
1.20 - 9.50	Dynamic Sampling	Comacchio 205
9.50 - 16.70	Rotary Coring	Commachio 205

Log Type

Combined Borehole

Scale: 1:50

Sheet 1 of 2

Project No:	**2372986**
Name:	**One Earth Solar Farm**
Location:	**Hall Farm, Lincoln**
Client:	**Pershing Consultants**

Location Details

Easting:	**481688.53**	Northing:	**372421.45**
Elevation:	**4.78mAOD**	Final Depth:	**19.50m**
Logged By:	**AR**	Grid System:	**OSGB**
Orientation:	**N/A**	Inclination:	**90°**

Strata Description	Depth (m) (Stratum Thickness)	Reduced Level (mAOD)	Hole Ø (mm) Depth (m)	Casing Ø (mm) Depth (m)	Water Level (m)	Installation / Backfill	Core Run	TCR	SCR	RQD	FI	Depth (m)	Ref	Test Results
MADE GROUND: Vegetation over soft dark brown slightly sandy slightly organic silty CLAY with occasional rootlets. Sand is fine to coarse [TOPSOIL].	(0.30) 0.30	4.48										0.10 0.10 - 0.30 0.25	2 D 1 B 3 ES	HV 0.25m, (p)=60 kPa (r)=20 kPa
Soft to firm orangish brown sandy silty CLAY. Sand is fine to coarse.	(0.90)													HV 0.50m, (p)=140 kPa (r)=25 kPa
												0.70 - 1.00 0.75	4 B 5 D	
												1.00	6 ES	HV 1.00m, (p)=110 kPa (r)=20 kPa 1
Soft to firm brown mottled grey slightly sandy silty CLAY. Sand is fine to coarse.	1.20	3.58										1.20 - 1.65	7 UT	75 Ublows, 100% Recovery
	(1.25)											1.75	9 D	
												2.00 2.00 - 2.40 2.00 - 2.45	8 ES 11 B 10 D	SPT(S) 2.00m, N=4 (1,1/1,1,1,1) 2 HV 2.00m, (p)=70 kPa (r)=15 kPa
Medium dense orangish brown fine to coarse SAND and subrounded to rounded fine to coarse quartz and various mixed lithologies GRAVEL. *From 2.45m to 2.65m, Very soft dark grey slightly gravelly, sandy, slightly organic, clayey SILT. Sand is fine to coarse. Gravel is subrounded to rounded fine to coarse quartz and various mixed lithologies.*	2.45	2.33	117 3.00									2.50	12 D	
												2.75	13 D	
												3.00 3.00 - 3.45	14 ES 15 D	SPT(S) 3.00m, N=21 (4,4/4,4,6,7) 3
	(2.05)											3.50 - 4.00	16 B	
												3.75	17 D	
												4.00 4.00 - 4.45	18 ES 19 D	SPT(S) 4.00m, N=11 (2,2/2,2,3,4) 4
Dense multicoloured very sandy subrounded to well rounded fine to coarse mixed lithologies GRAVEL with low cobble content. Cobbles are subrounded to well rounded mixed lithologies. Sand is fine to coarse.	4.50	0.28										4.50 - 5.00	20 B	
												5.00 - 5.45	21 D	SPT(S) 5.00m, N=44 (10,14/12,12,10,10) 5
	(1.90)											5.50 - 6.00	22 B	
At 6.00m, Medium dense.												6.00 - 6.45	23 D	SPT(S) 6.00m, N=18 (5,5/5,7,3,3) 6
												6.20	24 D	
Firm friable brown mottled grey slightly sandy silty CLAY. Sand is fine to coarse.	6.40	-1.62										6.75	25 D	HV 6.75m, (p)=FAIL kPa (r)=FAIL kPa
														SPT(S) 7.00m, N=17 (2,5/4,3,5,5) 7
	(1.60)											7.50 - 8.00	26 B	
												7.75	29 D	HV 7.75m, (p)=60 kPa (r)=10 kPa
From 7.93m, discontinuities have clay infill.	8.00	-3.22		121 8.00								8.00 - 8.45 8.00 - 8.70	27 D 28 B	SPT(S) 8.00m, N=41 (5,7/9,10,10,12) 8
Stiff dark grey mottled reddish brown slightly gravelly CLAY. Gravel is angular to subangular fine to medium mudstone.	(0.70)													
	8.70	-3.92										8.60 8.70 - 9.50 8.80	29 ES 30 B 31 D	HV 8.80m, (p)=48 kPa (r)=12 kPa
Firm to stiff light grey mottled reddish brown silty CLAY. *At 8.75m, Lense of angular to subangular fine to medium gravel.*	(0.80)											9.00 - 9.45	32 D	SPT(S) 9.00m, N=44 (3,3/5,11,14,14) 9
	9.50	-4.72	102 9.50									9.50	33 ES	HV 9.50m, (p)=Fail kPa (r)=Fail kPa
Assumed zone of core loss - (Driller's description).	(0.55)										AZCL			
Continued on Next Page														10

Observations / Remarks

Misc.

No Groundwater Encountered
Casing Used
Monitoring Point/s Installed

Shift Information

Date	Time	Depth (m)	Casing (m)	Water (m)
10/10	13:00	0.00	-	-
10/10	16:30	4.00	4.00	-
11/10	07:00	4.00	4.00	0.90
11/10	16:30	8.00	8.00	-
14/10	07:00	8.00	8.00	1.30
14/10	16:40	16.70	8.00	-
15/10	07:00	16.70	8.00	1.50
15/10	16:40		-	-

Backfill

From (m)	To (m)	Material
0.00	0.30	Concrete
0.30	11.00	Grout
11.00	19.50	Bentonite

Installations

Instrument Type	Resp. Zone	Depth (m)	Diameter
Vibrating Wire Piezometer	0.30 - 11.00	11.00	18

Groundwater Strikes

Strike (m)	Rises To (m)	Time (min)	Remarks

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GROUND ENGINEERING TECHNICAL SERVICES

Alliance House,
3A South Park Way
Wakefield 41 Business Park
Wakefield WF2 0XJ
+44(0)1924 229889
www.central-alliance.co.uk

Start Date:	10/10/2024	Checked:	RW
End Date	15/10/2024	Approved:	JP

Location ID

BH009

FINAL

Methodology & Plant

Depth (m)	Method	Plant Used
0.00 - 1.20	Inspection Pit	Hand Tools
1.20 - 9.50	Dynamic Sampling	Comacchio 205
9.50 - 16.70	Rotary Coring	Commachio 205

Log Type

Combined Borehole

Scale: 1:50

Sheet 2 of 2

Project No:	**2372986**
Name:	**One Earth Solar Farm**
Location:	**Hall Farm, Lincoln**
Client:	**Pershing Consultants**

Location Details

Easting:	**481688.53**	Northing:	**372421.45**
Elevation:	**4.78mAOD**	Final Depth:	**19.50m**
Logged By:	**AR**	Grid System:	**OSGB**
Orientation:	**N/A**	Inclination:	**90°**

Strata Description	Depth (m) (Stratum Thickness)	Reduced Level (mAOD)	Hole Ø (mm) Depth (m)	Casing Ø (mm) Depth (m)	Core Run	TCR	SCR	RQD	FI	Depth (m)	Ref	Test Results
Assumed zone of core loss - (Driller's description).	10.05 (0.15) 10.20	-5.27 -5.42							7			
Extremely weak light grey SILTSTONE. Discontinuities are sub-horizontal (20-30 degrees), planar, rough and tight with clay infill.					9.50 10.70	54	42	0	16			
Extremely weak reddish brown mercia MUDSTONE with infrequent gypsum veining (<5.00mm). Discontinuities are, Horizontal (0-10 degrees), very close to closely spaced, planar, rough and tight to partly open with clay and gravel infill [MERCIA MUDSTONE [3]].	(1.12) 11.32	-6.54							AZCL 11			
Very weak to weak greenish grey mercia MUDSTONE with frequent gypsum veining (<28.00mm). Discontinuities are horizontal (0-10 degrees), very close to medium spaced, planar, rough to smooth and partly open to open with gravel infill [MERCIA MUDSTONE [2]].					10.70 12.20	90	83	33	11			
From 12.20m, becoming reddish brown.												
From 13.45m to 14.15m, Greenish grey and reddish brown.	(3.88)				12.20 13.70	100	93	75	7			
					13.70 15.20	92	88	79	AZCL 7			
Assumed zone of core loss - (Driller's description).	15.20 (0.30)	-10.42							AZCL			
Extremely weak to very weak reddish brown mercia MUDSTONE. Non-intact core recovered as clayey angular to subangular fine to coarse GRAVEL [MERCIA MUDSTONE [1]].	15.50 (0.60)	-10.72			15.20 16.70	80	37	29	NI			
Very weak reddish brown and greenish grey mercia MUDSTONE with infrequent gypsum veining. Discontinuities are 1) Horizontal (0-20 degrees), close to medium spaced, undulating, rough and open with clay infill [MERCIA MUDSTONE [3]].	16.10	-11.32	116 16.70						5			
From 17.10m to 17.20m, Zone of very frequent gypsum veining (<6.00mm).									AZCL			
From 17.45m to 17.65m, Becomes greenish grey.					16.70 18.20	93	93	82	5			
From 17.65m, Becomes reddish brown.	(3.40)											
From 18.50m to 18.55m, Gypsum vein (55.00mm). *From 18.55m, gypsum veining becomes infrequent.*									AZCL			
From 19.10m, Becomes reddish brown and greenish grey.					18.20 19.50	86	86	58	7			
EOH at 19.50m - Scheduled Depth	19.50	-14.72										

Water Level (m) / Installation / Backfill

Observations / Remarks

Misc.

No Groundwater Encountered
Casing Used
Monitoring Point/s Installed

Shift Information

Date	Time	Depth (m)	Casing (m)	Water (m)
10/10	13:00	0.00	-	-
10/10	16:30	4.00	4.00	-
11/10	07:00	4.00	4.00	0.90
11/10	16:30	8.00	8.00	-
14/10	07:00	8.00	8.00	1.30
14/10	16:40	16.70	8.00	-
15/10	07:00	16.70	8.00	1.50
15/10	16:40		-	-

Backfill

From (m)	To (m)	Material
0.00	0.30	Concrete
0.30	11.00	Grout
11.00	19.50	Bentonite

Installations

Instrument Type	Resp. Zone	Depth (m)	Diameter
Vibrating Wire Piezometer	0.30 - 11.00	11.00	18

Groundwater Strikes

Strike (m)	Rises To (m)	Time (min)	Remarks

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Alliance House
3A South Park Way
Wakefield 41 Business Park
Wakefield WF2 0XJ
+44 (0)1924 229889
www.central-alliance.co.uk

Start Date:	16/10/2024	Checked:	RW
End Date:	17/10/2024	Approved:	JP

Location ID

BH010

FINAL

Log Type

Header Sheet

Scale: 1:50

Sheet 1 of 1

Methodology & Plant

Depth (m)	Method	Plant Used
0.00 - 1.20	Inspection Pit	Hand Tools
1.20 - 5.00	Dynamic Sampling	Commachio 205
5.00 - 7.10	Cable Percussion Boring	Commachio 205

Project No:	**2372986**
Name:	**One Earth Solar Farm**
Location:	**Hall Farm, Lincoln**
Client:	**Pershing Consultants**

Location Details

Easting:	**481743.25**	Northing:	**372419.52**
Elevation:	**4.80mAOD**	Final Depth:	**7.10m**
Logger:	**AW**	Grid System:	**OSGB**
Orientation:	**N/A**	Inclination:	**90°**

Hole Diameter

Depth (m)	Diam (mm)
4.00	117
5.00	102
7.10	150

Casing Diameter

Depth (m)	Diam (mm)
5.00	121
7.10	150

Groundwater Strikes

Strike (m)	Casing (m)	Sealed (m)	Time (min)	Rose To (m)	Remarks

No Groundwater Encountered

Installation / Instrument Details

Date	Instrument Details	To (m)	Resp. Zone (m)	Diam (mm)
17/10/2024	Vibrating Wire Piezometer	4.00		70

If Methodology includes Dynamic Sampling refer to Runs table for info.

Backfill

Depth (m)	Legend Code
0.00 - 7.10	Grout

In-Situ Tests

PID	**0**
Hand Vane*	**1**
Standard Penetration Tests	**5**

* One count indicates an average reported result of 3 tests carried out at one depth where available.

Sample Summary

Environmental Samples			
Soil	**7**	Water	**0**
Geotechnical Samples			
Bulk	**10**	Large Bulk	**0**
Disturbed	**13**	Disturbed (NR)	**0**
Piston	**0**	Piston (NR)	**0**
Undisturbed	**0**	Undisturbed (NR)	**0**
Undisturbed Thin Wall			**1**
Undisturbed Thin Wall (NR)			**1**
Core Sample			**0**

(NR) Indicates sample undertaken but with 0% Recovery

Standard Penetration Test Summary

Test Type	Depth (m)	Casing (m)	Water (m)	Seating Blows	Main Blows	Penetration Total (mm)	N	Reported Result	Hammer Ref
Split Spoon	2.00	-	-	2	0	450	0	N=0 (1,1/0,0,0,0)	AR2152
Split Spoon	4.00	4.00	-	21	50	450	50	N=50 (7,14/12,14,14,10)	AR2152
Cone	5.00	4.50	2.5	8	18	450	18	N=18 (4,4/5,4,4,5)	7-10-1
Cone	6.00	6.00	2.5	9	23	450	23	N=23 (4,5/5,6,6,6)	7-10-1
Split Spoon	7.00	7.00	3	25	50	207		50 (25 for 90mm/50 for 117mm)	7-10-1

SPT Hammer Ref.	Energy Ratio (%)
AR2152	64
7-10-1	63

Applicable to Cable Percussion Only

Chiselling

Depth (m)	Duration (mins)

Water Added

Depth (m)	Litres

Applicable to Rotary Only

Drilling Flush

Depth (m)	Flush Type	Flush Colour	Return %

Applicable to Dynamic Sampling Only

Dynamic Sampling Runs

Depth (m)	Diam (mm)	Recovery %	Remarks
1.20 - 2.00	117	0	
2.00 - 3.00	117	100	
3.00 - 4.00	117	100	
4.00 - 5.00	102	100	

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Start Date:	16/10/2024	Checked:	RW
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Location ID

BH010

FINAL

Log Type

Combined Borehole

Scale: 1:50

Sheet 1 of 1

Methodology & Plant

Depth (m)	Method	Plant Used
0.00 - 1.20	Inspection Pit	Hand Tools
1.20 - 5.00	Dynamic Sampling	Commachio 205
5.00 - 7.10	Cable Percussion Boring	Commachio 205

Project No:	**2372986**
Name:	**One Earth Solar Farm**
Location:	**Hall Farm, Lincoln**
Client:	**Pershing Consultants**

Location Details

Easting:	**481743.25**	Northing:	**372419.52**
Elevation:	**4.80mAOD**	Final Depth:	**7.10m**
Logged By:	**AW**	Grid System:	**OSGB**
Orientation:	**N/A**	Inclination:	**90°**

Strata Description	Legend	Depth (m) (Stratum Thickness)	Reduced Level (mAOD)	Hole Ø (mm) Depth (m)	Casing Ø (mm) Depth (m)	Water Level (m)	Installation / Backfill
MADE GROUND: Firm dark brown slightly gravelly slightly sandy silty CLAY with roots and rootlets. Sand is fine. Gravel is angular to subangular fine to medium mudstone [TOPSOIL].		(0.30) 0.30	4.50				
Soft to firm brown sandy silty CLAY. Sand is fine to medium. *From 0.80m, Becomes slightly sandy.*		(1.35) 1.65	3.15				
Soft bluish grey mottled orangish brown slightly sandy silty CLAY. Sand is fine.		(0.70) 2.35	2.45				
Soft dark grey locally mottled dark brown slightly gravelly sandy silty CLAY. Sand is fine to coarse. Gravel is rounded fine mudstone and quartz. *At 2.90m, Becomes very sandy.*		(1.00) 3.35	1.45				
Very dense brown gravelly slightly clayey fine to coarse SAND. Gravel is subangular to rounded fine to medium quartz. *From 3.50m, No clay.*		(1.65) 5.00	-0.20	117 / 4.00 102 / 5.00	121 / 5.00		
Medium dense multicoloured very sandy subrounded to well rounded fine to coarse mixed lithologies GRAVEL with low cobble content. Cobbles are subrounded to well rounded of mixed lithologies. Sand is fine to coarse.		(2.10) 7.10	-2.30	150 / 7.10	150 / 7.10		
EOH at 7.10m - Terminated on impenetrable strata.							

Coring, Samples & Testing

Core Run	TCR	SCR	RQD	FI	Depth (m)	Ref	Test Results
					0.00 - 0.30	1 B	
					0.10	2 ES	
					0.20	3 D	
					0.40 - 0.70	4 B	
					0.50	5 ES	
					0.60	6 D	
					0.90 - 1.20	7 B	
					1.00	8 ES	
					1.10	9 D	
					1.20 - 1.65	10 UT	
					1.70	11 D	
					1.90	12 ES	
					2.00 - 2.45	13 D	SPT(S) 2.00m, N=0 (1,1/0,0,0,0)
					2.45 - 3.00	14 B	
					2.70	15 ES	
					2.80	16 D	HV 2.80m, (p)=24 kPa (r)=5 kPa
					3.00 - 3.75	24 UT-NR	
					3.35 - 4.00	17 B	
					3.70	18 ES	
					3.80	19 D	
					4.00 - 4.45	20 D	SPT(S) 4.00m, N=50 (7,14/12,14,14,10)
					4.45 - 5.00	21 B	
					4.70	22 ES	
					4.80	23 D	
					5.00 - 5.45	D	SPT(C) 5.00m, N=18 (4,4/5,4,4,5)
					5.00 - 5.45	102 B	
					5.50 - 6.00	103 B	
					6.00	104 D	SPT(C) 6.00m, N=23 (4,5/5,6,6,6)
					6.00 - 6.45	D	
					6.00 - 6.45	106 B	
					6.50 - 7.00	107 B	
					7.00 - 7.45	D	SPT(S) 7.00m, 50 (25 for 90mm/50 for 117mm)

Observations / Remarks

1) 1 No. SPTY recorded with self-weighting: SPT @ 2.00m - 300mm SW

Misc.

No Groundwater Encountered
Casing Used
Monitoring Point/s Installed

Shift Information

Date	Time	Depth (m)	Casing (m)	Water (m)
17/10	07:30	7.10	7.00	3.00
17/10	14:00		-	-
16/10	07:00	0.00	-	-
16/10	16:00	7.10	7.00	3.00

Backfill

From (m)	To (m)	Material
0.00	7.10	Grout

Installations

Instrument Type	Resp. Zone	Depth (m)	Diameter
Vibrating Wire Piezometer		4.00	70

Groundwater Strikes

Strike (m)	Rises To (m)	Time (min)	Remarks

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Wakefield 41 Business Park
Wakefield WF2 0XJ
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Start Date:	27/09/2024	Checked:	RW
End Date:	01/10/2024	Approved:	JP

Location ID

BH011

FINAL

Log Type

Header Sheet

Scale: 1:50

Sheet 1 of 1

Methodology & Plant

Depth (m)	Method	Plant Used
0.00 - 1.20	Inspection Pit	Hand Tools
1.20 - 3.00	Dynamic Sampling	Comacchio 205
3.00 - 13.10	Rotary Coring	Comacchio 205

Project No:	**2372986**
Name:	**One Earth Solar Farm**
Location:	**Hall Farm, Lincoln**
Client:	**Pershing Consultants**

Location Details

Easting:	**483440.71**	Northing:	**373101.00**
Elevation:	**N/A**	Final Depth:	**13.10m**
Logger:	**JD**	Grid System:	**OSGB**
Orientation:	**N/A**	Inclination:	**90°**

Hole Diameter

Depth (m)	Diam (mm)
13.10	121

Casing Diameter

Depth (m)	Diam (mm)
9.00	143

Groundwater Strikes

Strike (m)	Casing (m)	Sealed (m)	Time (min)	Rose To (m)	Remarks

No Groundwater Encountered

Installation / Instrument Details

Date	Instrument Details	To (m)	Resp. Zone (m)	Diam (mm)
01/10/2024	Standpipe	4.50	1.20 - 4.50	50

If Methodology includes Dynamic Sampling refer to Runs table for info.

Backfill

Depth (m)	Legend Code
0.00 - 1.20	Bentonite
1.20 - 4.50	Gravel
4.50 - 13.10	Bentonite

In-Situ Tests

PID	**0**
Hand Vane*	**3**
Standard Penetration Tests	**3**

* One count indicates an average reported result of 3 tests carried out at one depth where available.

Sample Summary

Environmental Samples			
Soil	**4**	Water	**1**
Geotechnical Samples			
Bulk	**5**	Large Bulk	**0**
Disturbed	**9**	Disturbed (NR)	**0**
Piston	**0**	Piston (NR)	**0**
Undisturbed	**0**	Undisturbed (NR)	**0**
Undisturbed Thin Wall			**0**
Undisturbed Thin Wall (NR)			**0**
Core Sample			**0**

(NR) Indicates sample undertaken but with 0% Recovery

Standard Penetration Test Summary

Test Type	Depth (m)	Casing (m)	Water (m)	Seating Blows	Main Blows	Penetration Total (mm)	N	Reported Result	Hammer Ref
Split Spoon	1.20	-	-	2	8	450	8	N=8 (1,1/3,2,2,1)	AR2154
Split Spoon	2.00	-	-	3	15	450	15	N=15 (2,1/1,2,4,8)	AR2154
Split Spoon	3.00	3.00	-	25	50	300		50 (25 for 125mm/50 for 175mm)	AR2154

SPT Hammer Ref.	Energy Ratio (%)
AR2154	71

Applicable to Cable Percussion Only

Chiselling

Depth (m)	Duration (mins)

Water Added

Depth (m)	Litres

Applicable to Rotary Only

Drilling Flush

Depth (m)	Flush Type	Flush Colour	Return %
3.00 - 4.50	Water	Brown	100
4.50 - 6.00	Water	Brown	50
6.00 - 7.50	Water	Brown	100
7.50 - 9.00	Water	Brown	100
9.00 - 10.50	Water	Brown	100
10.50 - 12.00	Water	Brown	100
12.00 - 13.10	Water	Brown	100

Applicable to Dynamic Sampling Only

Dynamic Sampling Runs

Depth (m)	Diam (mm)	Recovery %	Remarks
1.20 - 2.00	128	100	
2.00 - 3.00	128	100	

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Alliance House,
3A South Park Way
Wakefield 41 Business Park
Wakefield WF2 0XJ
+44(0)1924 229889
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Start Date:	27/09/2024	Checked:	RW
End Date	01/10/2024	Approved:	JP

Location ID

BH011

FINAL

Log Type

Combined Borehole

Scale: 1:50

Sheet 1 of 2

Methodology & Plant

Depth (m)	Method	Plant Used
0.00 - 1.20	Inspection Pit	Hand Tools
1.20 - 3.00	Dynamic Sampling	Comacchio 205
3.00 - 13.10	Rotary Coring	Comacchio 205

Project No:	**2372986**		
Name:	**One Earth Solar Farm**		
Location:	**Hall Farm, Lincoln**		
Client:	**Pershing Consultants**		

Location Details

Easting:	**483440.71**	Northing:	**373101.00**
Elevation:	**N/A**	Final Depth:	**13.10m**
Logged By:	**JD**	Grid System:	**OSGB**
Orientation:	**N/A**	Inclination:	**90°**

Strata Description	Depth (m) (Stratum Thickness)	Reduced Level (mAOD)	Hole Ø (mm) Depth (m)	Casing Ø (mm) Depth (m)	Water Level (m)	Installation / Backfill	Core Run	TCR	SCR	RQD	FI	Depth (m)	Ref	Test Results
Grass over soft brown slightly gravelly sandy CLAY. Sand is fine to coarse. Gravel is subrounded fine to coarse mudstone. [TOPSOIL]	(1.20)											0.00 - 0.30	1 B	
												0.30	1 ES	HV 0.30m, (p)=40 kPa (r)=24 kPa
												0.30 - 0.50	2 B	
												0.50	1 D	HV 0.50m, (p)=42 kPa (r)=24 kPa
												0.50	2 ES	
												0.50 - 1.20	3 B	
												1.00	2 D	HV 1.00m, (p)=40 kPa (r)=18 kPa
												1.00	3 ES	
Soft friable reddish brown gravelly CLAY. Gravel is subrounded fine to coarse mudstone.	(1.80)											1.20 - 1.65	3 D	SPT(S) 1.20m, N=8 (1,1/3,2,2,1)
												1.20 - 2.00	4 B	
												1.50	5 D	
												2.00	4 ES	SPT(S) 2.00m, N=15 (2,1/1,2,4,8)
												2.00 - 2.45	4 D	
												2.00 - 3.00	5 B	
												2.50	6 D	
Assumed zone of core loss - weak MUDSTONE (Drillers description).	(1.20)						3.00 4.50	20	0	0	AZCL	3.00 - 3.45	7 D	SPT(S) 3.00m, 50 (25 for 125mm/50 for 175mm)
												3.95 - 4.66	EW	
Very weak reddish brown mercia MUDSTONE. Non-intact core recovered as slightly sandy clayey angular to subangular fine to coarse GRAVEL. Sand is fine to coarse [MERCIA MUDSTONE [3]].	4.20 (0.30)										NI			
Assumed zone of core loss - Firm MUDSTONE and white calcite (Drillers description).	4.50 (1.35)						4.50 6.00	10	0	0	AZCL	4.60	8 D	
Very weak reddish brown mercia MUDSTONE. Non-intact core recovered as slightly sandy clayey angular to subangular fine to medium GRAVEL. Sand is fine to medium [MERCIA MUDSTONE [3]].	5.85 (0.15)										NI			
Assumed zone of core loss - Firm MUDSTONE and white calcite (Drillers description).	6.00 (0.35)										AZCL	6.00	9 D	
Extremely weak reddish brown to greenish grey mercia MUDSTONE recovered as slightly sandy gravelly CLAY. Sand is fine to coarse. Gravel is angular to subangular fine to coarse [MERCIA MUDSTONE [3]].	6.35 (1.15)						6.00 7.50	77	0	0	NI			
Assumed zone of core loss - MUDSTONE (Drillers description).	7.50 (1.15)						7.50 9.00	23	0	0	AZCL			
Very weak greenish grey locally reddish brown mercia MUDSTONE. Non-intact core recovered as slightly sandy angular to subangular fine to coarse GRAVEL. Sand is fine to coarse [MERCIA MUDSTONE [2]].	8.65 (0.35)										NI			
Assumed zone of core loss - MUDSTONE (Drillers description).	9.00 (0.44)			143 9.00							AZCL			
Weak greenish grey mercia MUDSTONE with infrequent gypsum veining and nodules (Veins <5.00mm, Nodules <60mm). Discontinuities are 1) Horizontal (0-10 degrees), very close to	9.44 (1.06)						9.00 10.50	71	43	0	12			
Continued on Next Page														

Observations / Remarks

Misc.

No Groundwater Encountered
Casing Used
Monitoring Point/s Installed

Shift Information

Date	Time	Depth (m)	Casing (m)	Water (m)
27/08	08:00	0.00	-	
27/08	16:00	2.00	-	
30/09	08:00	2.00	-	
30/09	16:00	10.50	9.00	1.50

Backfill

From (m)	To (m)	Material
0.00	1.20	Bentonite
1.20	4.50	Gravel
4.50	13.10	Bentonite

Installations

Instrument Type	Resp. Zone	Depth (m)	Diameter
Standpipe	1.20 - 4.50	4.50	50

Groundwater Strikes

Strike (m)	Rises To (m)	Time (min)	Remarks

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Alliance House,
3A South Park Way
Wakefield 41 Business Park
Wakefield WF2 0XJ
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Start Date:	27/09/2024	Checked:	RW
End Date	01/10/2024	Approved:	JP

Methodology & Plant

Depth (m)	Method	Plant Used
0.00 - 1.20	Inspection Pit	Hand Tools
1.20 - 3.00	Dynamic Sampling	Comacchio 205
3.00 - 13.10	Rotary Coring	Comacchio 205

Location ID

BH011

FINAL

Log Type

Combined Borehole

Scale: 1:50

Sheet 2 of 2

Project No:	**2372986**
Name:	**One Earth Solar Farm**
Location:	**Hall Farm, Lincoln**
Client:	**Pershing Consultants**

Location Details

Easting:	**483440.71**	Northing:	**373101.00**
Elevation:	**N/A**	Final Depth:	**13.10m**
Logged By:	**JD**	Grid System:	**OSGB**
Orientation:	**N/A**	Inclination:	**90°**

Strata Description	Legend	Depth (m) (Stratum Thickness)	Reduced Level (mAOD)	Hole Ø (mm) Depth (m)	Casing Ø (mm) Depth (m)	Water Level (m)	Installation / Backfill	Coring, Samples & Testing: Core Run	TCR	SCR	RQD	FI	Depth (m)	Ref	Test Results
closely spaced, planar and undulating, rough and open to moderately wide with gravel infill 2) Vertical (70-85 degrees), undulating and smooth, tight and clean [MERCIA MUDSTONE [1]].		10.50													
Assumed zone of core loss - MUDSTONE (Drillers description).		(0.30) 10.80										AZCL			
Weak reddish brown mercia MUDSTONE with gypsum veining and infrequent nodules (Veins <45.00mm; Nodules <30.00mm). Discontinuities are 1) Horizontal (0-10 degrees), close, planar, rough and open to moderately wide with gravel infill 2) Sub-vertical (50-65 degrees), very close, planar and undulating, rough, partly open to open and clean 3) Vertical (75-85 degrees), planar, rough, partly open and clean [MERCIA MUDSTONE [1]].		(1.00)						10.50 12.00	80	35	15	13			
From 11.40m, Becomes light grey.		11.80 (0.20) 12.00										NI			
Very weak reddish brown mercia MUDSTONE. Non-intact core recovered as slightly sandy angular to subangular fine to coarse GRAVEL [MERCIA MUDSTONE [2]].		(0.35) 12.35										AZCL			
Assumed zone of core loss - MUDSTONE (Drillers description).		(0.50)						12.00 13.10	68	7	0	NI			
Very weak reddish brown mercia MUDSTONE recovered as slightly sandy slightly clayey angular to subangular fine to coarse GRAVEL [MERCIA MUDSTONE [1]].		12.85 (0.08) 12.93 (0.17) 13.10		121 13.10								12 NI			
Weak greenish grey mercia MUDSTONE with common gypsum nodules (up to 15.00mm). Discontinuities are 1) Horizontal (0-10 degrees), planar, rough, open and clean [MERCIA MUDSTONE [1]].															
Very weak reddish brown mercia MUDSTONE. Non-intact core recovered as angular to subangular fine to coarse GRAVEL [MERCIA MUDSTONE [1]].															
EOH at 13.10m - Scheduled Depth															

Observations / Remarks

Misc.

No Groundwater Encountered
Casing Used
Monitoring Point/s Installed

Shift Information

Date	Time	Depth (m)	Casing (m)	Water (m)
27/08	08:00	0.00	-	
27/08	16:00	2.00	-	
30/09	08:00	2.00	-	
30/09	16:00	10.50	9.00	1.50

Backfill

From (m)	To (m)	Material
0.00	1.20	Bentonite
1.20	4.50	Gravel
4.50	13.10	Bentonite

Installations

Instrument Type	Resp. Zone	Depth (m)	Diameter
Standpipe	1.20 - 4.50	4.50	50

Groundwater Strikes

Strike (m)	Rises To (m)	Time (min)	Remarks

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Alliance House
3A South Park Way
Wakefield 41 Business Park
Wakefield WF2 0XJ
+44 (0)1924 229889
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Start Date:	24/09/2024	Checked:	RW
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Location ID

BH012

FINAL

Log Type

Header Sheet

Scale: 1:50

Sheet 1 of 1

Project No:	**2372986**
Name:	**One Earth Solar Farm**
Location:	**Hall Farm, Lincoln**
Client:	**Pershing Consultants**

Location Details

Easting:	**483291.84**	Northing:	**372784.38**
Elevation:	**11.14mAOD**	Final Depth:	**14.00m**
Logger:	**ED**	Grid System:	**OSGB**
Orientation:	**N/A**	Inclination:	**90°**

Methodology & Plant

Depth (m)	Method	Plant Used
0.00 - 1.20	Inspection Pit	Hand Tools
1.20 - 3.00	Dynamic Sampling	Comacchio 205
3.00 - 14.00	Rotary Coring	Comacchio 205

Hole Diameter

Depth (m)	Diam (mm)
14.00	121

Casing Diameter

Depth (m)	Diam (mm)
9.00	143

Groundwater Strikes

Strike (m)	Casing (m)	Sealed (m)	Time (min)	Rose To (m)	Remarks

No Groundwater Encountered

Installation / Instrument Details

Date	Instrument Details	To (m)	Resp. Zone (m)	Diam (mm)
27/09/2024	Standpipe	4.00	1.00 - 4.00	50

If Methodology includes Dynamic Sampling refer to Runs table for info.

Backfill

Depth (m)	Legend Code
0.00 - 1.00	Bentonite
1.00 - 4.00	Gravel
4.00 - 14.00	Bentonite

In-Situ Tests

PID	0
Hand Vane*	3
Standard Penetration Tests	4

* One count indicates an average reported result of 3 tests carried out at one depth where available.

Sample Summary

Environmental Samples			
Soil	11	Water	0
Geotechnical Samples			
Bulk	2	Large Bulk	0
Disturbed	11	Disturbed (NR)	0
Piston	0	Piston (NR)	0
Undisturbed	0	Undisturbed (NR)	0
Undisturbed Thin Wall			0
Undisturbed Thin Wall (NR)			0
Core Sample			0

(NR) Indicates sample undertaken but with 0% Recovery

Standard Penetration Test Summary

Test Type	Depth (m)	Casing (m)	Water (m)	Seating Blows	Main Blows	Penetration Total (mm)	N	Reported Result	Hammer Ref
Split Spoon	1.20	-	-	4	16	450	16	N=16 (2,2/3,4,4,5)	DS-21-1-3
Split Spoon	2.00	-	-	9	18	450	18	N=18 (5,4/6,5,3,4)	DS-21-1-3
Split Spoon	3.00	3.00	0.00	25	50	295		50 (25 for 110mm/50 for 185mm)	DS-21-1-3
Split Spoon	8.00	8.00	6.60	5	0	445		50 (3,2/50 for 295mm)	DS-21-1-3

SPT Hammer Ref.	Energy Ratio (%)
DS-21-1-3	56

Applicable to Cable Percussion Only

Chiselling

Depth (m)	Duration (mins)

Water Added

Depth (m)	Litres

Applicable to Rotary Only

Drilling Flush

Depth (m)	Flush Type	Flush Colour	Return %
3.00 - 4.50	Water	Brown	100
4.50 - 6.00	Water	Brown	100
6.00 - 7.50	Water	Brown	5
7.50 - 8.00	Water	Brown	100
8.00 - 9.50	Water	Brown	100
9.50 - 11.00	Water	Brown	5
11.00 - 12.50	Water	Brown	80
12.50 - 14.00	Water	Brown	80

Applicable to Dynamic Sampling Only

Dynamic Sampling Runs

Depth (m)	Diam (mm)	Recovery %	Remarks
1.20 - 2.00	128	100	
2.00 - 3.00	128	100	

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Alliance House,
3A South Park Way
Wakefield 41 Business Park
Wakefield WF2 0XJ
+44(0)1924 229889
www.central-alliance.co.uk

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End Date	26/09/2024	Approved:	JP

Location ID

BH012

FINAL

Log Type

Combined Borehole

Scale: 1:50

Sheet 1 of 2

Methodology & Plant

Depth (m)	Method	Plant Used
0.00 - 1.20	Inspection Pit	Hand Tools
1.20 - 3.00	Dynamic Sampling	Comacchio 205
3.00 - 14.00	Rotary Coring	Comacchio 205

Project No:	**2372986**
Name:	**One Earth Solar Farm**
Location:	**Hall Farm, Lincoln**
Client:	**Pershing Consultants**

Location Details

Easting:	**483291.84**	Northing:	**372784.38**
Elevation:	**11.14mAOD**	Final Depth:	**14.00m**
Logged By:	**ED**	Grid System:	**OSGB**
Orientation:	**N/A**	Inclination:	**90°**

Strata Description	Legend	Depth (m) (Stratum Thickness)	Reduced Level (mAOD)	Hole Ø (mm) Depth (m)	Casing Ø (mm) Depth (m)	Water Level (m)	Installation / Backfill	Core Run	TCR	SCR	RQD	FI	Depth (m)	Ref	Test Results
Soft light brown slightly gravelly SILT. Gravel is subangular fine to coarse mudstone.		(0.45)											0.30	1 D	HV 0.25m, (p)=NA kPa (r)=NA kPa Fail
		0.45	10.69										0.30	101 ES	
Soft friable reddish brown slightly gravelly sandy silty CLAY. Sand is fine to coarse. Gravel is subangular fine to coarse mudstone.		(0.35)											0.50	102 ES	HV 0.50m, (p)=NA kPa (r)=NA kPa Fail
		0.80	10.34										0.50	2 D	
Reddish brown gravelly silty clayey fine to medium SAND. Gravel is subangular fine to coarse mudstone.		(0.40)											0.75	3 D	HV 0.75m, (p)=NA kPa (r)=NA kPa Fail
		1.20	9.94										0.80	4 B	
Medium dense light grey sandy slightly clayey slightly silty angular fine to coarse mudstone GRAVEL.		(0.20)											1.00	103 ES	
		1.40	9.74										1.20 - 1.65	6 D	SPT(S) 1.20m, N=16 (2,2/3,4,4,5)
Soft to firm reddish brown slightly gravelly slightly sandy silty CLAY. Sand is fine to coarse. Gravel is angular fine to coarse mudstone.													1.60	5 D	
													1.90	104 ES	
		(1.40)													SPT(S) 2.00m, N=18 (5,4/6,5,3,4)
													2.50	7 D	
		2.80	8.34												
Medium dense light grey gravelly fine to coarse SAND. Gravel is angular fine to coarse mudstone.		(0.20)											2.90	105 ES	
		3.00	8.14										3.00 - 3.45	8 D	SPT(S) 3.00m, 50 (25 for 110mm/50 for 185mm)
Assumed zone of core loss. MUDSTONE. (Drillers description)		(0.67)										AZCL			
		3.67	7.47					3.00 4.50	55	35	0				
Very weak reddish brown and greenish grey partially weathered mercia MUDSTONE. Non-intact core recovered as angular to subangular fine to coarse GRAVEL [MERCIA MUDSTONE [1]].		(0.26)										NI	3.90	106 ES	
		3.93	7.21										3.90	9 D	
Very weak reddish brown mercia MUDSTONE. Discontinuities are horizontal 0-5 Deg closely spaced planar smooth open clean [MERCIA MUDSTONE [1]].		(0.42)										11			
		4.35	6.79										4.40	10 D	
Very weak greenish grey mercia MUDSTONE. Discontinuities are horizontal very closely spaced planar smooth open clean [MERCIA MUDSTONE [1]].		(0.15)													
		4.50	6.64										4.90	107 ES	
Assumed zone of core loss. MUDSTONE. (Drillers description)		(1.00)										AZCL	5.00	11 D	
		5.50	5.64					4.50 6.00	33	17	0				
Very weak greenish grey mercia MUDSTONE. Discontinuities are horizontal very closely spaced planar smooth open clean [MERCIA MUDSTONE [1]].		(0.25)										20	5.60	108 ES	
		5.75	5.39										5.60	12 D	
		(0.25)										NI			
Extremely weak reddish brown partially weathered mercia MUDSTONE. Non-intact core recovered as angular to subangular fine to coarse GRAVEL [MERCIA MUDSTONE [2]].		6.00	5.14										6.00 - 7.50	13 B	
No recovery. Weak MUDSTONE. (Drillers description)		(2.00)										AZCL			
		8.00	3.14												SPT(S) 8.00m, 50 (3,2/50 for 295mm)
Assumed zone of core loss. MUDSTONE. (Drillers description)		(1.00)										AZCL			
		9.00	2.14		143 9.00			8.00 9.50	40	21	0		8.70	109 ES	
Very weak reddish brown mercia MUDSTONE. Discontinuities are horizontal 0-5 Deg very closely to closely spaced planar and undulating smooth open clean [MERCIA MUDSTONE [1]].		(0.31)										6			
		9.31	1.83												
Very weak reddish brown partially weathered mercia MUDSTONE. Non-intact core recovered as angular to subangular fine to coarse GRAVEL [MERCIA MUDSTONE [2]].		(0.19)										NI			
		9.50	1.64												
Continued on Next Page															

Observations / Remarks

Misc.

No Groundwater Encountered
Casing Used
Monitoring Point/s Installed

Shift Information

Date	Time	Depth (m)	Casing (m)	Water (m)
24/09	08:00	0.00	-	
24/09	16:00	3.00	3.00	0.00
25/09	08:00	3.00	3.00	0.00
25/09	16:00	9.50	8.00	6.60
26/09	08:00	9.50	8.00	6.40
26/09	16:00	14.00	9.00	6.00

Backfill

From (m)	To (m)	Material
0.00	1.00	Bentonite
1.00	4.00	Gravel
4.00	14.00	Bentonite

Installations

Instrument Type	Resp. Zone	Depth (m)	Diameter
Standpipe	1.00 - 4.00	4.00	50

Groundwater Strikes

Strike (m)	Rises To (m)	Time (min)	Remarks

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Alliance House,
3A South Park Way
Wakefield 41 Business Park
Wakefield WF2 0XJ
+44(0)1924 229889
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Location ID

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Methodology & Plant

Depth (m)	Method	Plant Used
0.00 - 1.20	Inspection Pit	Hand Tools
1.20 - 3.00	Dynamic Sampling	Comacchio 205
3.00 - 14.00	Rotary Coring	Comacchio 205

Log Type

Combined Borehole

Scale: 1:50

Sheet 2 of 2

Project No:	**2372986**
Name:	**One Earth Solar Farm**
Location:	**Hall Farm, Lincoln**
Client:	**Pershing Consultants**

Location Details

Easting:	**483291.84**	Northing:	**372784.38**
Elevation:	**11.14mAOD**	Final Depth:	**14.00m**
Logged By:	**ED**	Grid System:	**OSGB**
Orientation:	**N/A**	Inclination:	**90°**

Strata Description	Legend	Depth (m) (Stratum Thickness)	Reduced Level (mAOD)	Hole Ø (mm) Depth (m)	Casing Ø (mm) Depth (m)	Water Level (m)	Installation / Backfill	Coring, Samples & Testing: Core Run	TCR	SCR	RQD	FI	Depth (m)	Ref	Test Results
Assumed zone of core loss. MUDSTONE. (Drillers description)		(1.20)													
								9.50 11.00	20	0	0	AZCL			
Very weak reddish brown partially weathered mercia MUDSTONE. Non-intact core recovered as angular to subangular fine to coarse GRAVEL [MERCIA MUDSTONE [2].		10.70	0.44									NI	10.70	110 ES	
		(0.30)													
Assumed zone of core loss. MUDSTONE. (Drillers description)		11.00	0.14									AZCL			
		(0.25)													
Very weak reddish brown partially weathered mercia MUDSTONE. Non-intact core recovered as angular to subangular fine to coarse GRAVEL [MERCIA MUDSTONE [2]].		11.25	-0.11									NI			
		(0.27)													
Very weak reddish brown mercia MUDSTONE with occasional green dots, common nodules and veins of white gypsum. Discontinuities are horizontal 5-10 Deg very closely to closely spaced undulating smooth open clean with occasional gravel infill [MERCIA MUDSTONE [2]].		11.52	-0.38					11.00 12.50	83	65	9				
												12	12.20	111 ES	
		(0.98)													
From 11.65m to 11.71m, Non-intact core recovered as angular to subangular fine to coarse GRAVEL.		12.50	-1.36									AZCL			
From 11.88m to 11.96m, Non-intact core recovered as angular to subangular fine to coarse GRAVEL.		(0.25)										10			
From 12.26m to 12.33m, Non-intact core recovered as angular to subangular fine to coarse GRAVEL.		12.75	-1.61									NI			
		(0.51)													
Very weak reddish brown locally green mercia MUDSTONE with white gypsum nodules. Discontinuities are horizontal 0-5 Deg planar smooth open clean [MERCIA MUDSTONE [2]].		13.26	-2.12					12.50 14.00	90	45	23				
												6			
		(0.52)													
Very weak reddish brown locally green partially weathered mercia MUDSTONE. Non-intact core recovered as angular to subangular fine to coarse GRAVEL with low cobble content. Cobbles are angular to subangular mudstone [MERCIA MUDSTONE [2]].		13.78	-2.64									NI			
		(0.22)										20			
Very weak reddish brown mercia MUDSTONE with frequent white gypsum nodules and veins. Discontinuities are 1) Horizontal 5-10 Deg closely to medium spaced planar and undulating smooth open clean. 2) Subhorizontal undulating smooth open clean [MERCIA MUDSTONE [2]].		14.00	-2.86	121 14.00											
Very weak reddish brown mercia MUDSTONE. Discontinuities are planar smooth open clean [MERCIA MUDSTONE [1]].															
From 13.78m to 13.95m, Non-intact core recovered as clayey angular to subangular fine to coarse GRAVEL.															
EOH at 14.00m - Scheduled Depth															

Observations / Remarks

Misc.

No Groundwater Encountered
Casing Used
Monitoring Point/s Installed

Shift Information

Date	Time	Depth (m)	Casing (m)	Water (m)
24/09	08:00	0.00	-	
24/09	16:00	3.00	3.00	0.00
25/09	08:00	3.00	3.00	0.00
25/09	16:00	9.50	8.00	6.60
26/09	08:00	9.50	8.00	6.40
26/09	16:00	14.00	9.00	6.00

Backfill

From (m)	To (m)	Material
0.00	1.00	Bentonite
1.00	4.00	Gravel
4.00	14.00	Bentonite

Installations

Instrument Type	Resp. Zone	Depth (m)	Diameter
Standpipe	1.00 - 4.00	4.00	50

Groundwater Strikes

Strike (m)	Rises To (m)	Time (min)	Remarks

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Alliance House
3A South Park Way
Wakefield 41 Business Park
Wakefield WF2 0XJ
+44 (0)1924 229889
www.central-alliance.co.uk

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Location ID

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FINAL

Log Type

Header Sheet

Scale: 1:50

Sheet 1 of 1

Project No:	**2372986**
Name:	**One Earth Solar Farm**
Location:	**Hall Farm, Lincoln**
Client:	**Pershing Consultants**

Location Details

Easting:	**483568.58**	Northing:	**372807.21**
Elevation:	**7.06mAOD**	Final Depth:	**11.00m**
Logger:	**ED**	Grid System:	**OSGB**
Orientation:	**N/A**	Inclination:	**90°**

Methodology & Plant

Depth (m)	Method	Plant Used
0.00 - 1.20	Inspection Pit	Hand Tools
1.20 - 3.00	Dynamic Sampling	Comacchio 205
3.00 - 6.20	Rotary Coring	Comacchio 205
6.20 - 6.80	Dynamic Sampling	Comacchio 205
6.80 - 11.00	Rotary Coring	Comacchio 205

Hole Diameter

Depth (m)	Diam (mm)
11.00	121

Casing Diameter

Depth (m)	Diam (mm)
7.40	143

Groundwater Strikes

Strike (m)	Casing (m)	Sealed (m)	Time (min)	Rose To (m)	Remarks

No Groundwater Encountered

Installation / Instrument Details

Date	Instrument Details	To (m)	Resp. Zone (m)	Diam (mm)
27/09/2024	Standpipe	4.00	1.00 - 4.00	50

If Methodology includes Dynamic Sampling refer to Runs table for info.

Backfill

Depth (m)	Legend Code
0.00 - 0.50	Concrete
0.50 - 1.00	Bentonite
1.00 - 4.00	Gravel
4.00 - 11.00	Bentonite

Sample Summary

Environmental Samples			
Soil	**10**	Water	**1**
Geotechnical Samples			
Bulk	**6**	Large Bulk	**0**
Disturbed	**12**	Disturbed (NR)	**0**
Piston	**0**	Piston (NR)	**0**
Undisturbed	**0**	Undisturbed (NR)	**0**
Undisturbed Thin Wall			**0**
Undisturbed Thin Wall (NR)			**0**
Core Sample			**0**

(NR) Indicates sample undertaken but with 0% Recovery

In-Situ Tests

PID	**0**
Hand Vane*	**3**
Standard Penetration Tests	**4**

* One count indicates an average reported result of 3 tests carried out at one depth where available.

Standard Penetration Test Summary

Test Type	Depth (m)	Casing (m)	Water (m)	Seating Blows	Main Blows	Penetration Total (mm)	N	Reported Result	Hammer Ref
Split Spoon	1.20	-	-	3	10	450	10	N=10 (1,2/2,2,3,3)	AR2152
Split Spoon	2.00	-	-	9	26	450	26	N=26 (3,6/6,6,6,8)	AR2152
Split Spoon	3.00	-	-	14	50	270		50 (2,12/50 for 120mm)	AR2152
Split Spoon	6.20	6.20	-	14	25	450	25	N=25 (6,8/7,5,6,7)	AR2152

SPT Hammer Ref.	Energy Ratio (%)
AR2152	64

Applicable to Cable Percussion Only

Chiselling

Depth (m)	Duration (mins)

Water Added

Depth (m)	Litres

Applicable to Rotary Only

Drilling Flush

Depth (m)	Flush Type	Flush Colour	Return %
3.00 - 4.20	Water	Brown	40
4.20 - 5.70	Water	Brown	40
5.70 - 6.20	Water	Brown	40
6.80 - 8.30	Water	Brown	30
8.30 - 9.80	Water	Brown	20
9.80 - 11.00	Water	Brown	80

Applicable to Dynamic Sampling Only

Dynamic Sampling Runs

Depth (m)	Diam (mm)	Recovery %	Remarks
1.20 - 2.00	117	100	
2.00 - 3.00	117	100	
6.20 - 6.80	102	100	

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3A South Park Way
Wakefield 41 Business Park
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+44(0)1924 229889
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Location ID

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FINAL

Log Type

Combined Borehole

Scale: 1:50

Sheet 1 of 2

Methodology & Plant

Depth (m)	Method	Plant Used
0.00 - 1.20	Inspection Pit	Hand Tools
1.20 - 3.00	Dynamic Sampling	Comacchio 205
3.00 - 6.20	Rotary Coring	Comacchio 205
6.20 - 6.80	Dynamic Sampling	Comacchio 205
6.80 - 11.00	Rotary Coring	Comacchio 205

Project No:	**2372986**
Name:	**One Earth Solar Farm**
Location:	**Hall Farm, Lincoln**
Client:	**Pershing Consultants**

Location Details

Easting:	**483568.58**	Northing:	**372807.21**
Elevation:	**7.06mAOD**	Final Depth:	**11.00m**
Logged By:	**ED**	Grid System:	**OSGB**
Orientation:	**N/A**	Inclination:	**90°**

Strata Description	Depth (m) (Stratum Thickness)	Reduced Level (mAOD)	Hole Ø (mm) Depth (m)	Casing Ø (mm) Depth (m)	Water Level (m)	Installation / Backfill
Loose brown slightly gravelly silty fine SAND with occasional rootlets. Gravel is subangular to rounded fine to medium chert [TOPSOIL]	(0.20) 0.20	6.86				
Loose brown and grey clayey slightly gravelly coarse SAND. Gravel is subrounded fine to medium chert.	(0.40) 0.60	6.46				
Loose grey very gravelly fine to coarse SAND. Gravel is rounded fine chert.	(0.60) 1.20	5.86				
Soft grey and light brown slightly gravelly slightly sandy CLAY. Sand is fine. Gravel is rounded fine mudstone.	(0.30) 1.50	5.56				
Soft reddish brown slightly sandy gravelly CLAY. Sand is fine. Gravel is subrounded fine to medium mudstone.	(0.50) 2.00	5.06				
Soft reddish brown very sandy CLAY. Sand is fine to medium.	(0.50) 2.50	4.56				
Loose reddish brown and grey slightly clayey very sandy angular to subangular coarse mudstone GRAVEL. Sand is medium to coarse.	(0.50) 3.00	4.06				
Assumed zone of core loss - Fractured weak grey brown MUDSTONE (Driller's description). *From 3.20m to 3.30m, Soft brown and grey slightly sandy very gravelly CLAY. Sand is fine. Gravel is subrounded fine mudstone.*	(1.00) 4.00	3.06				
Very weak reddish brown mercia MUDSTONE. Non-intact core recovered as angular to subangular medium to coarse GRAVEL [MERCIA MUDSTONE [1]].	(0.12) 4.12	2.94				
Very weak reddish brown mercia MUDSTONE. Discontinuities are horizontal (10-15 degrees), medium spaced, planar, rough, open and clean [MERCIA MUDSTONE [1]].	(0.08) 4.20	2.86				
Assumed zone of core loss - Weak brown MUDSTONE. Clay fine Gravel (Driller's description). *From 5.00m to 5.20m, Extremely weak reddish brown MUDSTONE. Non-intact core recovered as gravelly coarse SAND. Gravel is angular to subangular fine to coarse. (Mercia Mudstone).*	(2.00) 6.20	0.86				
Loose reddish brown slightly sandy slightly clayey subangular to subrounded fine to coarse mudstone GRAVEL. Sand is fine. *From 6.70m to 6.80m, Reddish brown MUDSTONE.*	(0.60) 6.80	0.26				
Assumed zone of core loss - Weak MUDSTONE - Gravel and Clay (Driller's description).	(1.33) 8.13	-1.08		143 7.40		
Very weak reddish brown and greenish grey mercia MUDSTIONE with frequent gypsum nodules (<110mm). Discontinuities are horizontal (0-5 degrees), planar, rough and clean [MERCIA MUDSTONE [2]].	(0.17) 8.30	-1.25				
Assumed zone of core loss - Brown weak MUDSTONE. Calcite bands (Driller's description).	(0.40) 8.70	-1.64				
Very weak to weak reddish brown mercia MUDSTONE with frequent gypsum nodules. Discontinuities are horizontal (0-10 degrees), closely spaced, planar, rough, partly open to open and clean [MERCIA MUDSTONE [2]]. *From 8.84m to 8.98m, Non-intact core recovered as angular fine to coarse GRAVEL. (Mercia Mudstone).*	(0.41) 9.11	-2.06				
	(0.41) 9.52	-2.46				
	(0.28) 9.80	-2.74				

Continued on Next Page

Coring, Samples & Testing

Core Run	TCR	SCR	RQD	FI	Depth (m)	Ref	Test Results
					0.10	1 D	
					0.30	101 ES	HV 0.25m, (p)=62 kPa (r)=48 kPa
					0.50	102 ES	HV 0.50m, (p)=NA kPa (r)=NA kPa Fail
					0.50	2 D	HV 0.75m, (p)=NA kPa (r)=NA kPa Fail
					1.00	103 ES	
					1.00	3 D	
					1.20 - 1.50	8 B	SPT(S) 1.20m, N=10 (1,2/2,2,3,3)
					1.20 - 1.65	5 D	
					1.30	104 ES	
					1.50	4 D	
					1.50 - 2.00	9 B	
					1.80	105 ES	
					2.00 - 2.45	6 D	SPT(S) 2.00m, N=26 (3,6/6,6,6,8)
					2.00 - 2.50	10 B	
					2.10	106 ES	
					2.50 - 3.00	11 B	
					2.52 - 3.87	EW	
					2.90	107 ES	
3.00 4.20	17	7	0	AZCL	3.00 - 3.45	7 D	SPT(S) 3.00m, 50 (2,12/50 for 120mm)
				NI			
				25	4.20 - 5.70	14 B	
					4.30	108 ES	
4.20 5.20	20	0	0	AZCL	4.50	12 D	
				NI			
					5.50	109 ES	
5.20 6.20	0	0	0	AZCL	5.60	13 D	
					6.20 - 6.65	15 D	SPT(S) 6.20m, N=25 (6,8/7,5,6,7)
					6.20 - 6.70	17 B	
					6.50	110 ES	
					6.60	16 D	
					6.70	18 D	
6.80 8.30	11	11	11	AZCL			
				6			
				AZCL			
8.30 9.80	73	24	15	10			
				NI			
				18			

Observations / Remarks

Misc.

No Groundwater Encountered
Casing Used
Monitoring Point/s Installed

Shift Information

Date	Time	Depth (m)	Casing (m)	Water (m)
24/09	07:00	0.00	-	
24/09	17:00	3.00	-	
25/09	07:00	3.00	-	
25/09	17:00	8.30	7.20	0.30
26/09	07:00	8.30	7.20	2.80
26/09	17:00	11.00	7.40	2.10

Backfill

From (m)	To (m)	Material
0.00	0.50	Concrete
0.50	1.00	Bentonite
1.00	4.00	Gravel
4.00	11.00	Bentonite

Installations

Instrument Type	Resp. Zone	Depth (m)	Diameter
Standpipe	1.00 - 4.00	4.00	50

Groundwater Strikes

Strike (m)	Rises To (m)	Time (min)	Remarks

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Start Date:	24/09/2024	Checked:	RW
End Date	26/09/2024	Approved:	JP

Location ID
BH013
FINAL

Log Type
Combined Borehole

Scale: 1:50
Sheet 2 of 2

Project No:	**2372986**
Name:	**One Earth Solar Farm**
Location:	**Hall Farm, Lincoln**
Client:	**Pershing Consultants**

Location Details

Easting:	**483568.58**	Northing:	**372807.21**
Elevation:	**7.06mAOD**	Final Depth:	**11.00m**
Logged By:	**ED**	Grid System:	**OSGB**
Orientation:	**N/A**	Inclination:	**90°**

Methodology & Plant

Depth (m)	Method	Plant Used
0.00 - 1.20	Inspection Pit	Hand Tools
1.20 - 3.00	Dynamic Sampling	Comacchio 205
3.00 - 6.20	Rotary Coring	Comacchio 205
6.20 - 6.80	Dynamic Sampling	Comacchio 205
6.80 - 11.00	Rotary Coring	Comacchio 205

Strata Description	Legend	Depth (m) (Stratum Thickness)	Reduced Level (mAOD)	Hole Ø (mm) Depth (m)	Casing Ø (mm) Depth (m)	Water Level (m)	Installation / Backfill	Coring, Samples & Testing: Core Run	TCR	SCR	RQD	FI	Depth (m)	Ref	Test Results
Very weak reddish brown mercia MUDSTONE. Non-intact core recovered as angular to subangular fine to coarse GRAVEL [MERCIA MUDSTONE [1]].		(0.60)										12			
Very weak to weak reddish brown and greenish grey mercia MUDSTONE with common gypsum nodules. Discontinuities are 1) Horizontal (0-10 degrees), very close to close closely spaced planar and undulating, rough, partly open to open and clean [MERCIA MUDSTONE [2]].		10.40 (0.35)	-3.34					9.80 11.00	100	50	28	NI			
Very weak to weak reddish brown and greenish grey mercia MUDSTONE with frequent gypsum veining (<5.00mm thick). Discontinuities are horizontal (0-10 degrees), close to medium spaced, planar and stepped, rough and partly open to open with occasional gravel infill [MERCIA MUDSTONE [2]]. *At 10.20m, Very weak.*		10.75 (0.25)	-3.70									12			
Very weak reddish brown to greenish grey mercia MUDSTONE. Non-intact core recovered as angular fine to coarse GRAVEL [MERCIA MUDSTONE [1]].		11.00	-3.94	121 11.00											
Very weak to weak reddish brown mercia MUDSTONE with gypsum veining (<8.00mm) and nodules (<65.00mm). Discontinuities are horizontal (0-10 degrees), very close to closely spaced, rough to smooth, planar to undulating, partly open to open and clean [MERCIA MUDSTONE [2]].															
EOH at 11.00m - Scheduled Depth															

Observations / Remarks

Misc.
No Groundwater Encountered
Casing Used
Monitoring Point/s Installed

Shift Information

Date	Time	Depth (m)	Casing (m)	Water (m)
24/09	07:00	0.00	-	
24/09	17:00	3.00	-	
25/09	07:00	3.00	-	
25/09	17:00	8.30	7.20	0.30
26/09	07:00	8.30	7.20	2.80
26/09	17:00	11.00	7.40	2.10

Backfill

From (m)	To (m)	Material
0.00	0.50	Concrete
0.50	1.00	Bentonite
1.00	4.00	Gravel
4.00	11.00	Bentonite

Installations

Instrument Type	Resp. Zone	Depth (m)	Diameter
Standpipe	1.00 - 4.00	4.00	50

Groundwater Strikes

Strike (m)	Rises To (m)	Time (min)	Remarks

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Exploratory Hole Number: **TP001** FINAL

Log Type: **Trial Pit**

		Location Details			Methodology & Plant		
Project No:	**2372986**	Easting:	**478881.16**	Northing:	**372487.84**	Trial Pit	Scale: 1:30
Name:	**One Earth Solar Farm**	Elevation:	**8.78mAOD**	Final Depth:	**4.00m**		Checked By: RW
Location:	**Hall Farm, Lincoln**	Logger:	**HG**	Grid System:	**OSGB**	Wheeled Backhoe Excavator	Approved By: JP
Client:	**Pershing Consultants**	Orientation:	**N/A**	Inclination:	**90°**		Start Date: 26/09/2024
							Finish Date: 26/09/2024

Strata Description	Legend	Depth (m) (Stratum Thickness)	Reduced Level (mAOD)	Water Level (m)	Installation / Backfill	Samples & Testing: Depth (m)	Ref	Test Results
MADE GROUND: Soft brown slightly sandy CLAY with occasional roots and rootlets. Sand is fine to coarse. [TOPSOIL]		(0.50)				0.10 - 0.50	1 B	
						0.30	3 ES	
						0.40	2 D	
		0.50	8.28					
Stiff reddish brown slightly gravelly slightly sandy CLAY. Sand is fine to coarse. Gravel is angular fine gypsum.						0.60 - 1.00	4 LB	
						0.90	5 D	
						1.00	6 ES	
						1.50 - 2.00	7 B	
						2.00	8 D	
		(3.50)						
				2.60		2.50 - 3.00	9 B	
				2.60				
						3.00	10 D	
						3.50 - 4.00	11 B	
EOH at 4.00m - Refusal on hard strata		4.00	4.78			4.00	12 D	

Observations / Remarks	Breaking Out / Hard Strata			Stability & Backfill	Pit Dimensions
	Depth Top (m)	Depth Base (m)	Duration (hh:mm)	Shoring: None Stability: Stable Backfill: Arisings	1.50m 0.70m Orientation: °

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Exploratory Hole Number
TP002
FINAL

Log Type
Trial Pit
Sheet 1 of 1

Project No:	**2372986**	Location Details		Methodology & Plant	Scale: 1:30
Name:	**One Earth Solar Farm**	Easting: **479204.33**	Northing: **372542.34**	Trial Pit	Checked By: RW
Location:	**Hall Farm, Lincoln**	Elevation: **7.27mAOD**	Final Depth: **3.00m**		Approved By: JP
Client:	**Pershing Consultants**	Logger: **HG**	Grid System: **OSGB**	Wheeled Backhoe Excavator	Start Date: 26/09/2024
		Orientation: **N/A**	Inclination: **90°**		Finish Date: 26/09/2024

Strata Description	Legend	Depth (m) (Stratum Thickness)	Reduced Level (mAOD)	Water Level (m)	Installation / Backfill	Samples & Testing: Depth (m)	Ref	Test Results
MADE GROUND: Soft brown slightly gravelly slightly sandy CLAY with occasional roots and rootlets. Sand is fine to coarse. Gravel is angular fine gypsum. [TOPSOIL]		(0.50)				0.10 - 0.50 0.30	1 B 3 ES	
Stiff yellowish brown slightly gravelly sandy CLAY. Sand is fine to coarse. Gravel is angular fine gypsum and mudstone.		0.50 (1.00)	6.77			0.50 1.00	2 D 4 D	
Very soft low strength reddish brown slightly gravelly slightly sandy silty CLAY with low cobble content. Sand is fine to coarse. Gravel is very angular to angular fine to coarse mudstone. Cobbles are very angular mudstone. *Yellowish brown and light grey fine to coarse SAND.* *From 2.80m, Gravelly.*		1.50 (1.50)	5.77			1.50 1.50 - 2.00 1.75 2.00 2.00 - 2.50 2.50	5 ES 6 LB 9 D 7 D 8 B 10 D	HV 1.50m, (p)=80 kPa (r)=20 kPa HV 2.50m, (p)=40 kPa (r)=5 kPa
EOH at 3.00m - Abandoned due to water ingress		3.00	4.27			3.00	11 D	

Observations / Remarks	Breaking Out / Hard Strata			Stability & Backfill	Pit Dimensions
	Depth Top (m)	Depth Base (m)	Duration (hh:mm)	Shoring: None Stability: Stable Backfill: Arisings	1.50m 0.70m Orientation: °

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Exploratory Hole Number: **TP003** FINAL

Log Type: **Trial Pit**

		Location Details			Methodology & Plant		
Project No:	**2372986**	Easting:	**479128.06**	Northing:	**372209.20**	Trial Pit	Scale: 1:30
Name:	**One Earth Solar Farm**	Elevation:	**9.62mAOD**	Final Depth:	**4.00m**		Checked By: RW
Location:	**Hall Farm, Lincoln**	Logger:	**HG**	Grid System:	**OSGB**		Approved By: JP
Client:	**Pershing Consultants**	Orientation:	**N/A**	Inclination:	**90°**	Wheeled Backhoe Excavator	Start Date: 26/09/2024
							Finish Date: 26/09/2024

Strata Description	Legend	Depth (m) (Stratum Thickness)	Reduced Level (mAOD)	Water Level (m)	Installation / Backfill	Samples & Testing: Depth (m)	Ref	Test Results
MADE GROUND: Soft brown slightly gravelly sandy CLAY with occasional roots and rootlets. Sand is fine to coarse. [TOPSOIL]		(0.50)				0.10 - 0.50	1 B	
						0.30	3 ES	
		0.50	9.12			0.50	2 D	
Stiff reddish brown locally light grey slightly gravelly slightly sandy CLAY. Sand is fine to coarse. Gravel is angular fine quartz.						0.50 - 1.00	4 LB	
						0.90	5 D	
						1.00	6 ES	
						1.50 - 2.00	7 B	
						1.90	8 D	
		(3.50)				2.50 - 3.00	9 B	
						2.90	10 D	
From 3.00m, Becomes very gravelly with high cobble content. Gravel is angular fine to coarse mudstone. Cobbles are angular mudstone.						3.50 - 4.00	11 B	
						3.90	12 D	
EOH at 4.00m - Refusal on hard Strata		4.00	5.62					

Observations / Remarks	Breaking Out / Hard Strata			Stability & Backfill	Pit Dimensions
	Depth Top (m)	Depth Base (m)	Duration (hh:mm)	Shoring: None Stability: Stable Backfill: Arisings	1.50m 0.70m Orientation: °

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Exploratory Hole Number: **TP004** FINAL

Log Type: **Trial Pit**

		Location Details			Methodology & Plant		
Project No:	**2372986**	Easting:	**479044.59**	Northing:	**371896.53**	Trial Pit	Scale: 1:30
Name:	**One Earth Solar Farm**	Elevation:	**11.31mAOD**	Final Depth:	**4.00m**		Checked By: RW
Location:	**Hall Farm, Lincoln**	Logger:	**HG**	Grid System:	**OSGB**	Wheeled Backhoe Excavator	Approved By: JP
Client:	**Pershing Consultants**	Orientation:	**N/A**	Inclination:	**90°**		Start Date: 26/09/2024
							Finish Date: 26/09/2024

Strata Description	Legend	Depth (m) (Stratum Thickness)	Reduced Level (mAOD)	Water Level (m)	Installation / Backfill	Samples & Testing: Depth (m)	Ref	Test Results
MADE GROUND: Stiff brown slightly gravelly sandy CLAY. Sand is fine to coarse. Gravel is angular fine flint and gypsum. [TOPSOIL]		(0.30)				0.10 - 0.30	1 B	
						0.20	2 D	
		0.30	11.01			0.30	3 ES	
Stiff reddish brown slightly gravelly slightly sandy CLAY. Sand is fine to coarse. Gravel is angular fine gypsum and mudstone.						0.50 - 1.00	4 LB	
		(0.90)						
						0.90	5 D	
						1.00	6 ES	
		1.20	10.11					
Reddish brown sandy clayey angular fine to coarse mudstone GRAVEL. Sand is fine to coarse.						1.50 - 2.00	7 B	
						1.90	8 D	
						2.50 - 3.00	9 B	
		(2.80)						
						2.90	10 D	
EOH at 4.00m - Refusal on hard Strata		4.00	7.31					

Observations / Remarks	Breaking Out / Hard Strata			Stability & Backfill	Pit Dimensions
	Depth Top (m)	Depth Base (m)	Duration (hh:mm)	Shoring: None Stability: Stable Backfill: Arisings	1.50m 0.70m Orientation: °

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Exploratory Hole Number: **TP005** FINAL

Log Type: **Trial Pit**

		Location Details			Methodology & Plant		
Project No:	**2372986**	Easting:	**479313.36**	Northing:	**371922.34**	Trial Pit	Scale: 1:30
Name:	**One Earth Solar Farm**	Elevation:	**9.66mAOD**	Final Depth:	**3.50m**		Checked By: RW
Location:	**Hall Farm, Lincoln**	Logger:	**HG**	Grid System:	**OSGB**		Approved By: JP
Client:	**Pershing Consultants**	Orientation:	**N/A**	Inclination:	**90°**	Wheeled Backhoe Excavator	Start Date: 26/09/2024
							Finish Date: 26/09/2024

Strata Description	Legend	Depth (m) (Stratum Thickness)	Reduced Level (mAOD)	Water Level (m)	Installation / Backfill	Samples & Testing: Depth (m)	Ref	Test Results
MADE GROUND: Grass over slightly gravelly slightly clayey fine to coarse SAND. Gravel is subrounded fine to coarse flint. [TOPSOIL]		(0.25)				0.00 - 0.20 0.10 0.10	1 B 2 D 3 ES	
		0.25	9.41					
Stiff yellowish brown slightly gravelly sandy CLAY. Sand is fine to coarse. Gravel is subangular to subrounded fine flint and gypsum.						0.50 - 1.00	4 LB	
		(1.15)				0.90 1.00	5 D 6 ES	
		1.40	8.26					
Stiff reddish brown locally light grey slightly gravelly slightly sandy CLAY. Sand is fine to coarse. Gravel is angular fine gypsum and flint.						1.50 - 2.00	7 B	
		(1.10)				1.90	8 D	
		2.50	7.16					
Extremely weak reddish brown mercia MUDSTONE recovered as sandy clayey angular to subrounded fine to coarse mudstone GRAVEL. Sand is fine to coarse.						2.50 - 3.00	9 B	
		(1.00)				2.90	10 D	
		3.50	6.16			3.50	11 D	
EOH at 3.50m - Refusal on hard Strata								

Observations / Remarks	Breaking Out / Hard Strata			Stability & Backfill	Pit Dimensions
	Depth Top (m)	Depth Base (m)	Duration (hh:mm)	Shoring: None Stability: Stable Backfill: Arisings	1.50m 0.70m Orientation: °

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Exploratory Hole Number
TP006
FINAL

Log Type
Trial Pit

		Location Details				Methodology & Plant		
Project No:	**2372986**	Easting:	**481433.94**	Northing:	**372524.54**	Trial Pit	Scale:	1:30
Name:	**One Earth Solar Farm**	Elevation:	**4.70mAOD**	Final Depth:	**2.20m**		Checked By:	RW
Location:	**Hall Farm, Lincoln**	Logger:	**HG**	Grid System:	**OSGB**	Wheeled Backhoe Excavator	Approved By:	JP
Client:	**Pershing Consultants**	Orientation:	**N/A**	Inclination:	**90°**		Start Date:	01/10/2024
							Finish Date:	01/10/2024

Strata Description	Legend	Depth (m) (Stratum Thickness)	Reduced Level (mAOD)	Water Level (m)	Installation / Backfill	Samples & Testing: Depth (m)	Ref	Test Results
MADE GROUND: Grass over soft to firm brown slightly sandy CLAY with frequent roots and rootlets. Sand is fine to coarse. [TOPSOIL]		(0.30)				0.10 - 0.30	1 B	
						0.20	2 D	
		0.30	4.40			0.30	3 ES	PID 0.30m = 0.0ppm
Very soft to soft light grey and yellowish brown silty CLAY with frequent lenses of fine to coarse sand.						0.50 - 1.00	4 LB	
		(1.20)				0.90	5 D	
						1.00	6 ES	PID 1.00m = 0.0ppm
		1.50	3.20			1.50 - 2.00	7 B	
Very soft to soft light grey slightly sandy very clayey SILT. Sand is fine to coarse.		(0.70)						
EOH at 2.20m - Abandoned due to water ingress		2.20	2.50			2.20	8 D	

Observations / Remarks	Breaking Out / Hard Strata			Stability & Backfill	Pit Dimensions
	Depth Top (m)	Depth Base (m)	Duration (hh:mm)	Shoring: None Stability: Stable Backfill: Arisings	1.50m 0.70m Orientation: °

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Exploratory Hole Number: **TP007** FINAL

Log Type: **Trial Pit**

		Location Details				Methodology & Plant		
Project No:	**2372986**	Easting:	**481429.90**	Northing:	**372441.84**		Scale:	1:30
Name:	**One Earth Solar Farm**	Elevation:	**4.68mAOD**	Final Depth:	**2.50m**	Trial Pit	Checked By:	RW
Location:	**Hall Farm, Lincoln**	Logger:	**HG**	Grid System:	**OSGB**		Approved By:	JP
Client:	**Pershing Consultants**	Orientation:	**N/A**	Inclination:	**90°**	Wheeled Backhoe Excavator	Start Date:	01/10/2024
							Finish Date:	01/10/2024

Strata Description	Legend	Depth (m) (Stratum Thickness)	Reduced Level (mAOD)	Water Level (m)	Installation / Backfill	Samples & Testing: Depth (m)	Ref	Test Results
MADE GROUND: Grass over stiff brown slightly sandy CLAY with frequent roots and rootlets. Sand is fine to coarse. [TOPSOIL]		(0.30)				0.10 - 0.30	1 B	
						0.20	2 D	
		0.30	4.38			0.30	3 ES	PID 0.30m = 0.0ppm
Soft to firm light grey and reddish brown silty CLAY with frequent lenses of fine to coarse sand.						0.50 - 1.00	4 LB	
		(1.20)				0.90	5 D	
						1.00	6 ES	PID 1.00m = 0.0ppm
Soft light grey slightly gravelly slightly sandy very clayey SILT. Gravel is subangular fine to medium mudstone.		1.50	3.18			1.50 - 2.00	7 B	
		(1.00)						
From 2.40m, Becomes bluish grey.								
EOH at 2.50m - Abandoned due to water ingress		2.50	2.18			2.50	8 D	

Observations / Remarks	Breaking Out / Hard Strata			Stability & Backfill	Pit Dimensions
	Depth Top (m)	Depth Base (m)	Duration (hh:mm)	Shoring: None Stability: Stable Backfill: Arisings	1.50m 0.70m Orientation: °

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Exploratory Hole Number: **TP008** FINAL

Log Type: **Trial Pit**

Project No:	**2372986**	Location Details		Methodology & Plant	Scale: 1:30
Name:	**One Earth Solar Farm**	Easting: **481755.79**	Northing: **372615.04**	Trial Pit	Checked By: RW
Location:	**Hall Farm, Lincoln**	Elevation: **4.03mAOD**	Final Depth: **1.60m**		Approved By: JP
Client:	**Pershing Consultants**	Logger: **HG**	Grid System: **OSGB**	Wheeled Backhoe Excavator	Start Date: 27/09/2024
		Orientation: **N/A**	Inclination: **90°**		Finish Date: 27/09/2024

Strata Description	Legend	Depth (m) (Stratum Thickness)	Reduced Level (mAOD)	Water Level (m)	Installation / Backfill	Samples & Testing: Depth (m)	Ref	Test Results
MADE GROUND: Grass over stiff friable brown sandy CLAY with frequent roots and rootlets. Sand is fine to coarse. [TOPSOIL]		(0.50)				0.10 - 0.40	1 B	
						0.30	2 D	
						0.40	3 ES	
		0.50	3.53			0.50 - 1.00	4 LB	
Stiff brown slightly gravelly slightly sandy SILT and CLAY. Sand is fine to coarse. Gravel is angular fine to medium mudstone.								
						0.90	5 D	
		(1.10)				1.00	6 ES	
		1.60	2.43					
EOH at 1.60m - Abandoned due to water ingress								

Observations / Remarks	Breaking Out / Hard Strata			Stability & Backfill	Pit Dimensions
	Depth Top (m)	Depth Base (m)	Duration (hh:mm)	Shoring: None	1.70m
				Stability: Stable	0.70m
				Backfill: Arisings	Orientation: °

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Exploratory Hole Number: **TP009** FINAL

Log Type: **Trial Pit**

		Location Details			Methodology & Plant		
Project No:	**2372986**	Easting:	**481754.95**	Northing:	**372545.66**	Trial Pit	Scale: 1:30
Name:	**One Earth Solar Farm**	Elevation:	**4.28mAOD**	Final Depth:	**2.90m**		Checked By: RW
Location:	**Hall Farm, Lincoln**	Logger:	**HG**	Grid System:	**OSGB**	Wheeled Backhoe Excavator	Approved By: JP
Client:	**Pershing Consultants**	Orientation:	**N/A**	Inclination:	**90°**		Start Date: 27/09/2024
							Finish Date: 27/09/2024

Strata Description	Legend	Depth (m) (Stratum Thickness)	Reduced Level (mAOD)	Water Level (m)	Installation / Backfill	Samples & Testing: Depth (m)	Ref	Test Results
MADE GROUND: Grass over stiff friable brown sandy CLAY with frequent roots and rootlets. Sand is fine to coarse. [TOPSOIL]		(0.40)				0.10 - 0.40	1 B	
						0.30	2 D	
		0.40	3.88			0.40	3 ES	
Stiff reddish brown and grey slightly sandy CLAY. Sand is fine to coarse.						0.50 - 1.00	4 LB	
		(1.10)				0.90	5 D	
						1.00	6 ES	
		1.50	2.78			1.50 - 2.00	7 B	
Stiff reddish brown slightly sandy SILT and CLAY. Sand is fine to coarse.								
						1.90	8 D	
From 2.00m, Medium strength.		(1.00)						HV 2.00m, (p)=58 kPa (r)=24 kPa
		2.50	1.78			2.50 - 2.90	9 B	
Very soft bluish grey slightly gravelly slightly sandy very silty CLAY. Sand is fine to coarse. Gravel is subangular to subrounded fine to coarse gypsum.		(0.40)						
						2.80	10 D	
		2.90	1.38					
EOH at 2.90m - Abandoned due to water ingress								

Observations / Remarks	Breaking Out / Hard Strata			Stability & Backfill	Pit Dimensions
	Depth Top (m)	Depth Base (m)	Duration (hh:mm)	Shoring: None	1.70m
				Stability: Stable	0.70m
				Backfill: Arisings	Orientation: °

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Exploratory Hole Number: **TP010** FINAL

Log Type: **Trial Pit**

Project No:	**2372986**	Location Details		Methodology & Plant	Scale: 1:30
Name:	**One Earth Solar Farm**	Easting: **483303.86**	Northing: **372998.48**	Trial Pit	Checked By: RW
Location:	**Hall Farm, Lincoln**	Elevation: **9.97mAOD**	Final Depth: **2.50m**		Approved By: JP
Client:	**Pershing Consultants**	Logger: **HG**	Grid System: **OSGB**	Wheeled Backhoe Excavator	Start Date: 30/09/2024
		Orientation: **N/A**	Inclination: **90°**		Finish Date: 30/09/2024

Strata Description	Legend	Depth (m) (Stratum Thickness)	Reduced Level (mAOD)	Water Level (m)	Installation / Backfill	Samples & Testing: Depth (m)	Ref	Test Results
MADE GROUND: Grass over soft friable brown sandy CLAY with frequent roots and rootlets. Sand is fine to coarse. [TOPSOIL]		(0.40)				0.10 - 0.40	1 B	
						0.30	2 D	PID 0.30m = 6.1ppm
		0.40	9.57			0.40	3 ES	
Reddish brown slightly sandy slightly clayey slightly silty very angular to angular fine to medium mudstone GRAVEL with occasional pockets of stiff light grey clay. Sand is fine to coarse.						0.50 - 1.00	4 LB	
						0.90	5 D	
						1.00	6 ES	PID 1.00m = 2.5ppm
		(2.10)				1.50 - 2.00	7 B	
From 2.00m, Gravel is fine to coarse.						1.90	8 D	
EOH at 2.50m - Refusal on hard strata		2.50	7.47			2.50	9 D	

Observations / Remarks	Breaking Out / Hard Strata			Stability & Backfill	Pit Dimensions
	Depth Top (m)	Depth Base (m)	Duration (hh:mm)	Shoring: None Stability: Stable Backfill: Arisings	1.50m 0.70m Orientation: °

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Exploratory Hole Number: **TP011** FINAL

Log Type: **Trial Pit**

		Location Details				Methodology & Plant		
Project No:	**2372986**	Easting:	**483551.04**	Northing:	**373015.64**	Trial Pit	Scale:	1:30
Name:	**One Earth Solar Farm**	Elevation:	**7.48mAOD**	Final Depth:	**3.70m**		Checked By:	RW
Location:	**Hall Farm, Lincoln**	Logger:	**HG**	Grid System:	**OSGB**	Wheeled Backhoe Excavator	Approved By:	JP
Client:	**Pershing Consultants**	Orientation:	**N/A**	Inclination:	**90°**		Start Date:	30/09/2024
							Finish Date:	30/09/2024

Strata Description	Legend	Depth (m) (Stratum Thickness)	Reduced Level (mAOD)	Water Level (m)	Installation / Backfill	Samples & Testing: Depth (m)	Ref	Test Results
MADE GROUND: Grass over soft friable brown sandy CLAY. Sand is fine to coarse. [TOPSOIL		(0.50)				0.10 - 0.50 0.40	1 B 2 D	
Stiff grey sandy silty friable CLAY. Sand is fine to coarse. *From 0.70m to 0.75m, Band of weak aranacious mudstone.*		0.50 (1.00)	6.98			0.50 0.50 - 1.00 0.90 1.00	3 ES 4 LB 5 D 6 ES	PID 0.50m = 6.0ppm PID 1.00m = 4.3ppm
Light grey slightly gravelly very silty very clayey fine to coarse SAND. Gravel is very angular to angular fine to medium mudstone. *From 2.20m, Becomes reddish brown and gravel is fine to coarse.*		1.50 (1.00)	5.98			1.50 - 2.00 1.90	7 B 8 D	
Reddish brown slightly sandy slightly clayey silty very angular fine to coarse mudstone GRAVEL. Sand is fine to coarse.		2.50 (1.20)	4.98			2.50 2.50 - 3.00	10 D 9 B	
EOH at 3.70m - Refusal on hard strata		3.70	3.78			3.70	11 D	

Observations / Remarks	Breaking Out / Hard Strata			Stability & Backfill	Pit Dimensions
	Depth Top (m)	Depth Base (m)	Duration (hh:mm)	Shoring: None Stability: Stable Backfill: Arisings	1.50m 0.70m Orientation: °

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Alliance House
3A South Park Way
Wakefield 41 Business Park
Wakefield WF2 0XJ
+44(0)1924 229889
www.central-alliance.co.uk

Exploratory Hole Number
TP012
FINAL

Log Type
Trial Pit
Sheet 1 of 1

Project No:	**2372986**	Location Details		Methodology & Plant	Scale: 1:30
Name:	**One Earth Solar Farm**	Easting: **483428.68**	Northing: **372848.45**	Trial Pit	Checked By: RW
Location:	**Hall Farm, Lincoln**	Elevation: **9.18mAOD**	Final Depth: **3.30m**		Approved By: JP
Client:	**Pershing Consultants**	Logger: **HG**	Grid System: **OSGB**	Wheeled Backhoe Excavator	Start Date: 30/09/2024
		Orientation: **N/A**	Inclination: **90°**		Finish Date: 30/09/2024

Strata Description	Legend	Depth (m) (Stratum Thickness)	Reduced Level (mAOD)	Water Level (m)	Installation / Backfill	Samples & Testing: Depth (m)	Ref	Test Results
MADE GROUND: Grass over soft friable brown sandy CLAY with frequent roots and rootlets. Sand is fine to coarse. [TOPSOIL]		(0.40)				0.10 - 0.40	1 B	
						0.30	2 D	PID 0.30m = 4.8ppm
		0.40	8.78			0.40	3 ES	
Stiff light grey locally yellowish brown sandy silty friable CLAY. Sand is fine to coarse.						0.50 - 1.00	4 LB	
		(1.10)				0.90	5 D	
From 1.00m, Becomes reddish brown.						1.00	6 ES	PID 1.00m = 8.0ppm
		1.50	7.68			1.50 - 2.00	7 B	
Reddish brown slightly sandy silty very angular to angular fine to coarse mudstone GRAVEL with high cobble content. Sand is fine to medium. Cobbles are angular mudstone.						1.90	8 D	
		(1.80)				2.50 - 3.00	9 B	
						2.90	10 D	
EOH at 3.30m - Refusal on hard strata		3.30	5.88			3.30	11 D	

Observations / Remarks	Breaking Out / Hard Strata			Stability & Backfill	Pit Dimensions
	Depth Top (m)	Depth Base (m)	Duration (hh:mm)	Shoring: None Stability: Stable Backfill: Arisings	1.50m 0.70m Orientation: °

Appendix B
Exploratory Hole Photographs



PHOTOGRAPH 1 – BH001 – 0.00m to 1.20m bgl

Client	AECOM
Project	One Earth Solar Farm
Title	BH001

CENTRAL ALLIANCE
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PHOTOGRAPH 2 – BH001 – 1.20m to 2.50m bgl

Client	AECOM
Project	One Earth Solar Farm
Title	BH001

CENTRAL ALLIANCE
GROUND ENGINEERING TECHNICAL SERVICES



PHOTOGRAPH 3 – BH001 – 2.50m to 7.00m bgl



PHOTOGRAPH 4 – BH001 – 7.00m to 10.00m bgl

Client	AECOM
Project	One Earth Solar Farm
Title	BH001

CENTRAL ALLIANCE
GROUND ENGINEERING TECHNICAL SERVICES



PHOTOGRAPH 1 – BH002 – 1.20m to 3.00m bgl



PHOTOGRAPH 2 – BH002 – 3.00m to 5.80m bgl

Client	AECOM
Project	One Earth Solar Farm
Title	BH002

CENTRAL ALLIANCE
GROUND ENGINEERING TECHNICAL SERVICES



PHOTOGRAPH 3 – BH002 – 5.80m to 7.80m bgl



PHOTOGRAPH 4 – BH002 – 7.80m to 10.30m bgl

Client	AECOM
Project	One Earth Solar Farm
Title	BH002

CENTRAL ALLIANCE
GROUND ENGINEERING TECHNICAL SERVICES



PHOTOGRAPH 1 – BH003 – 1.20m to 2.00m bgl



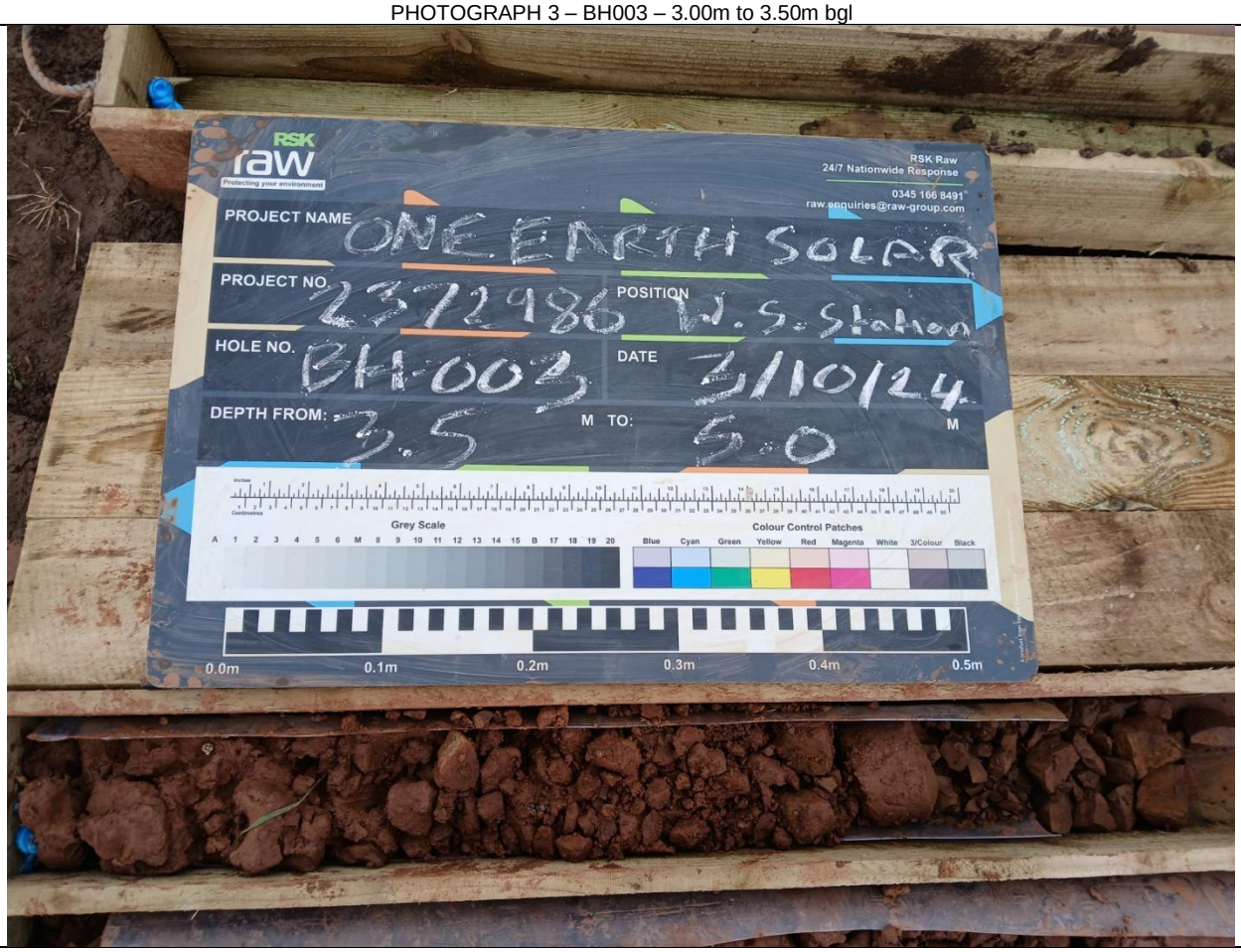
PHOTOGRAPH 2 – BH003 – 2.00m to 3.00m bgl

Client	AECOM
Project	One Earth Solar Farm
Title	BH003

CENTRAL ALLIANCE
GROUND ENGINEERING TECHNICAL SERVICES



PHOTOGRAPH 3 – BH003 – 3.00m to 3.50m bgl



PHOTOGRAPH 4 – BH003 – 3.50m to 5.00m bgl

Client	AECOM
Project	One Earth Solar Farm
Title	BH003

CENTRAL ALLIANCE
GROUND ENGINEERING TECHNICAL SERVICES

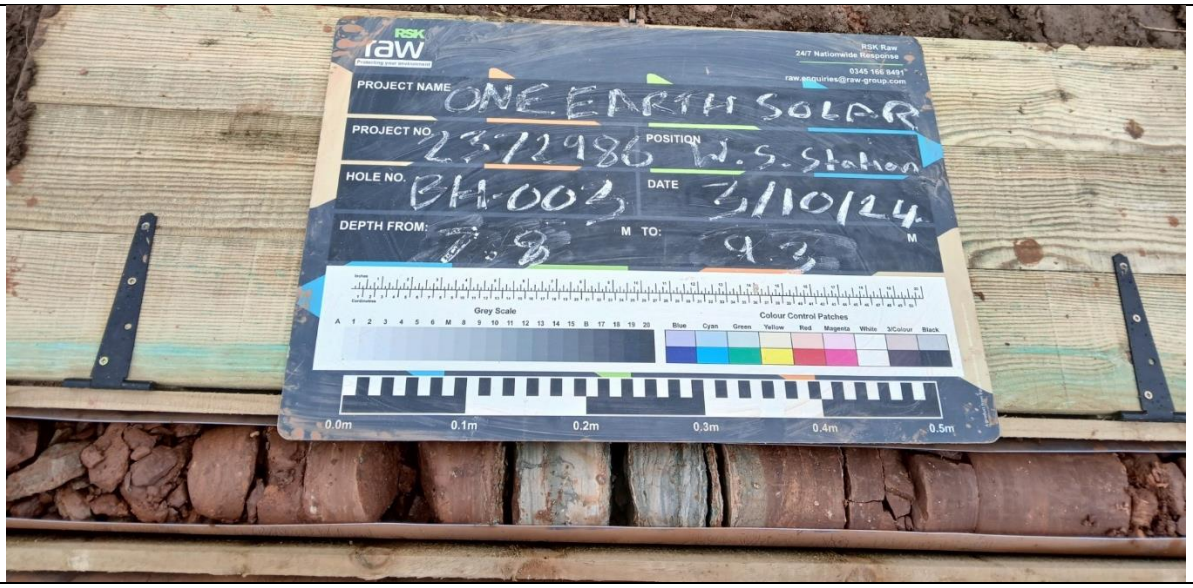


PHOTOGRAPH 5 – BH003 – 5.00m to 6.50m bgl



PHOTOGRAPH 6 – BH003 – 6.50m to 7.80m bgl

Client	AECOM	CENTRAL ALLIANCE GROUND ENGINEERING TECHNICAL SERVICES
Project	One Earth Solar Farm	
Title	BH003	



PHOTOGRAPH 7 – BH003 – 7.80m to 9.30m bgl



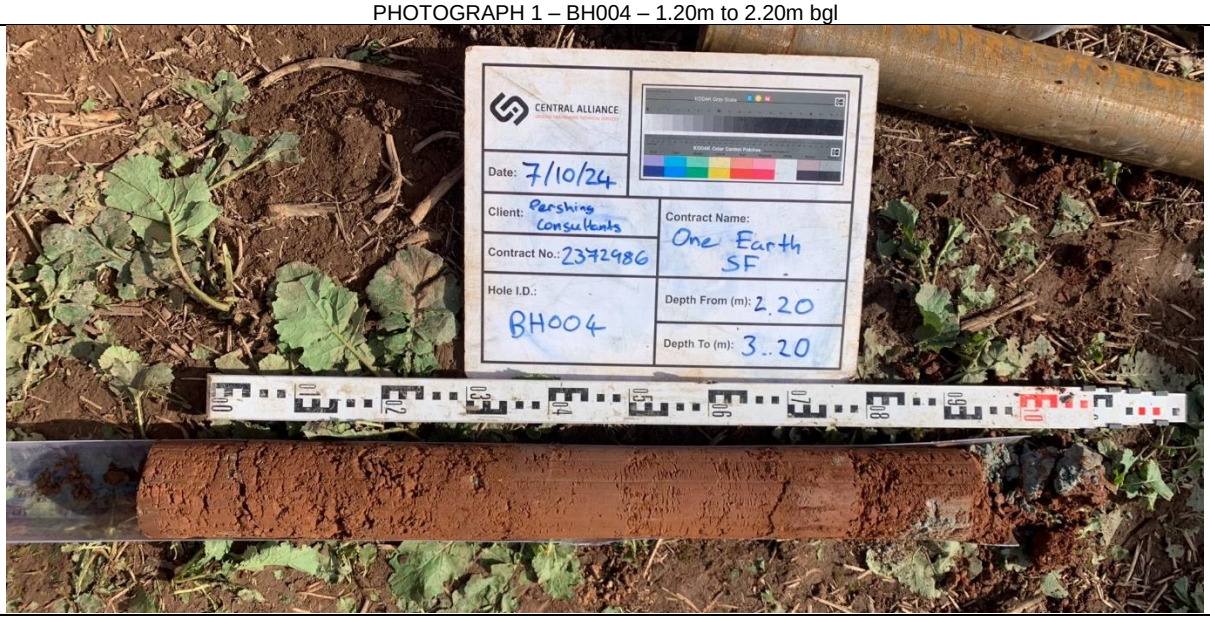
PHOTOGRAPH 8 – BH003 – 9.30m to 10.80m bgl

Client	AECOM
Project	One Earth Solar Farm
Title	BH003

CENTRAL ALLIANCE
GROUND ENGINEERING TECHNICAL SERVICES



PHOTOGRAPH 1 – BH004 – 1.20m to 2.20m bgl



PHOTOGRAPH 2 – BH004 – 2.20m to 3.20m bgl

Client	AECOM
Project	One Earth Solar Farm
Title	BH004

CENTRAL ALLIANCE
GROUND ENGINEERING TECHNICAL SERVICES



PHOTOGRAPH 3 – BH004 – 3.20m to 4.20m bgl



PHOTOGRAPH 4 – BH004 – 4.20m to 6.20m bgl

Client	AECOM
Project	One Earth Solar Farm
Title	BH004

CENTRAL ALLIANCE
GROUND ENGINEERING TECHNICAL SERVICES



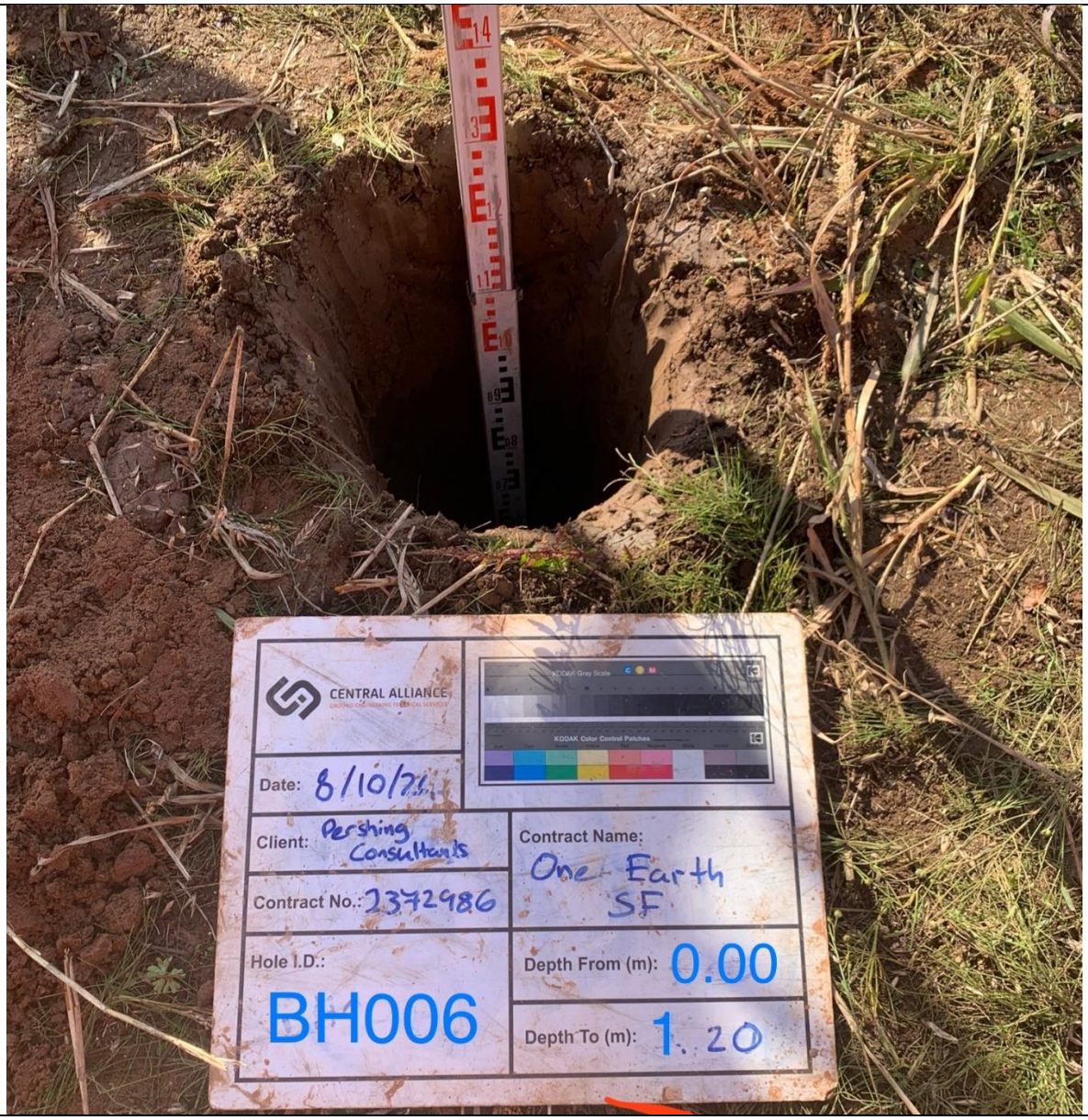
PHOTOGRAPH 5 – BH004 – 6.20m to 9.00m bgl



PHOTOGRAPH 6 – BH004 – 9.00m to 12.00m bgl

Client	AECOM
Project	One Earth Solar Farm
Title	BH004

CENTRAL ALLIANCE
GROUND ENGINEERING TECHNICAL SERVICES



PHOTOGRAPH 1 – BH006 – 0.00m to 1.20m bgl



PHOTOGRAPH 2 – BH006 – 1.80m to 3.00m bgl

Client	AECOM
Project	One Earth Solar Farm
Title	BH006

CENTRAL ALLIANCE
GROUND ENGINEERING TECHNICAL SERVICES



PHOTOGRAPH 3 – BH006 – 3.00m to 4.00m bgl



PHOTOGRAPH 4 – BH006 – 4.60m to 5.00m bgl



PHOTOGRAPH 5 – BH006 – 5.00m to 6.50m bgl

Client	AECOM
Project	One Earth Solar Farm
Title	BH006

CENTRAL ALLIANCE
GROUND ENGINEERING TECHNICAL SERVICES



PHOTOGRAPH 6 – BH006 – 6.50m to 8.00m bgl



PHOTOGRAPH 7 – BH006 – 9.00m to 12.00m bgl

Client	AECOM
Project	One Earth Solar Farm
Title	BH006

CENTRAL ALLIANCE
GROUND ENGINEERING TECHNICAL SERVICES



PHOTOGRAPH 8 – BH006 – 15.00m to 18.00m bgl



PHOTOGRAPH 9 – BH006 – 18.00m to 19.00m bgl

Client	AECOM
Project	One Earth Solar Farm
Title	BH006

CENTRAL ALLIANCE
GROUND ENGINEERING TECHNICAL SERVICES



PHOTOGRAPH 1 – BH007 – 9.20m to 12.00m bgl



PHOTOGRAPH 2 – BH007 – 12.00m to 15.00m bgl

Client	AECOM
Project	One Earth Solar Farm
Title	BH007

CENTRAL ALLIANCE
GROUND ENGINEERING TECHNICAL SERVICES



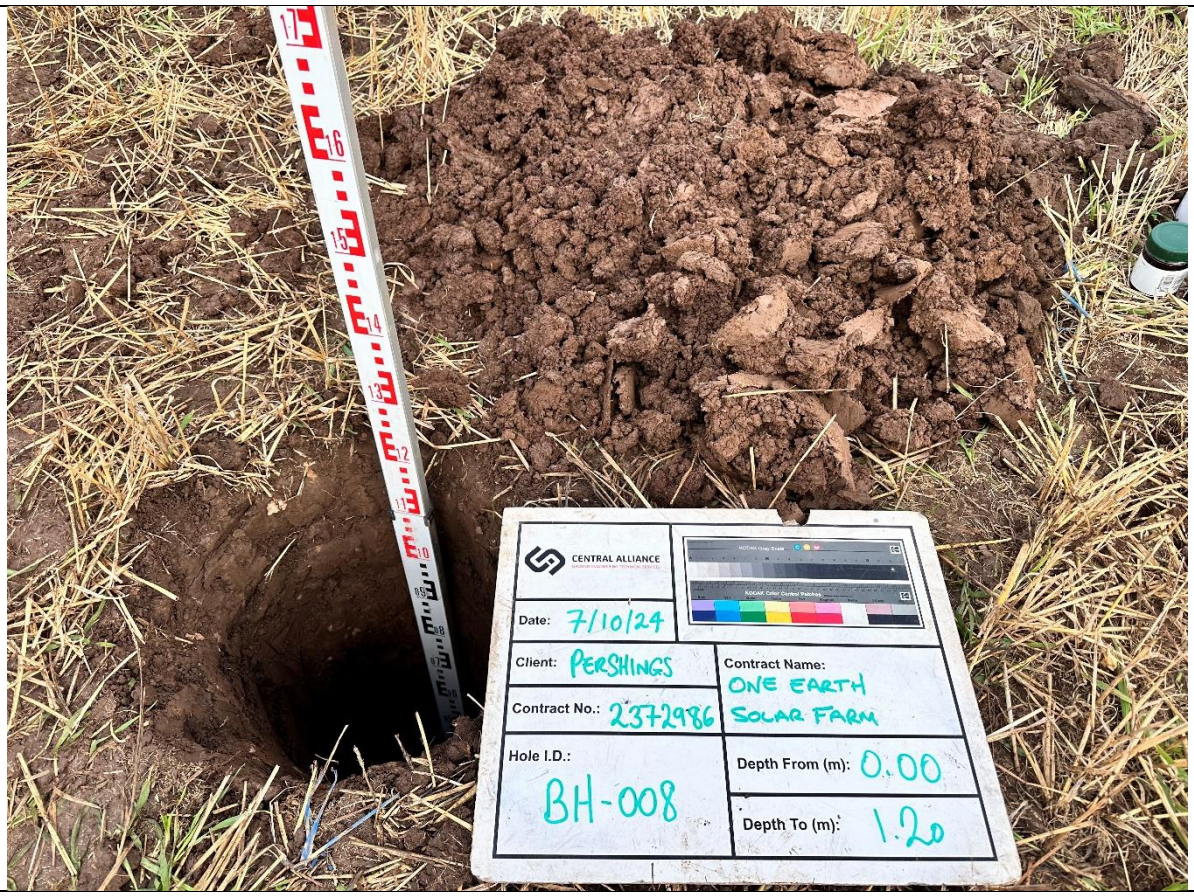
PHOTOGRAPH 3 – BH007 – 15.00m to 18.00m bgl



PHOTOGRAPH 4 – BH007 – 18.00m to 19.40m bgl

Client	AECOM
Project	One Earth Solar Farm
Title	BH007

CENTRAL ALLIANCE
GROUND ENGINEERING TECHNICAL SERVICES



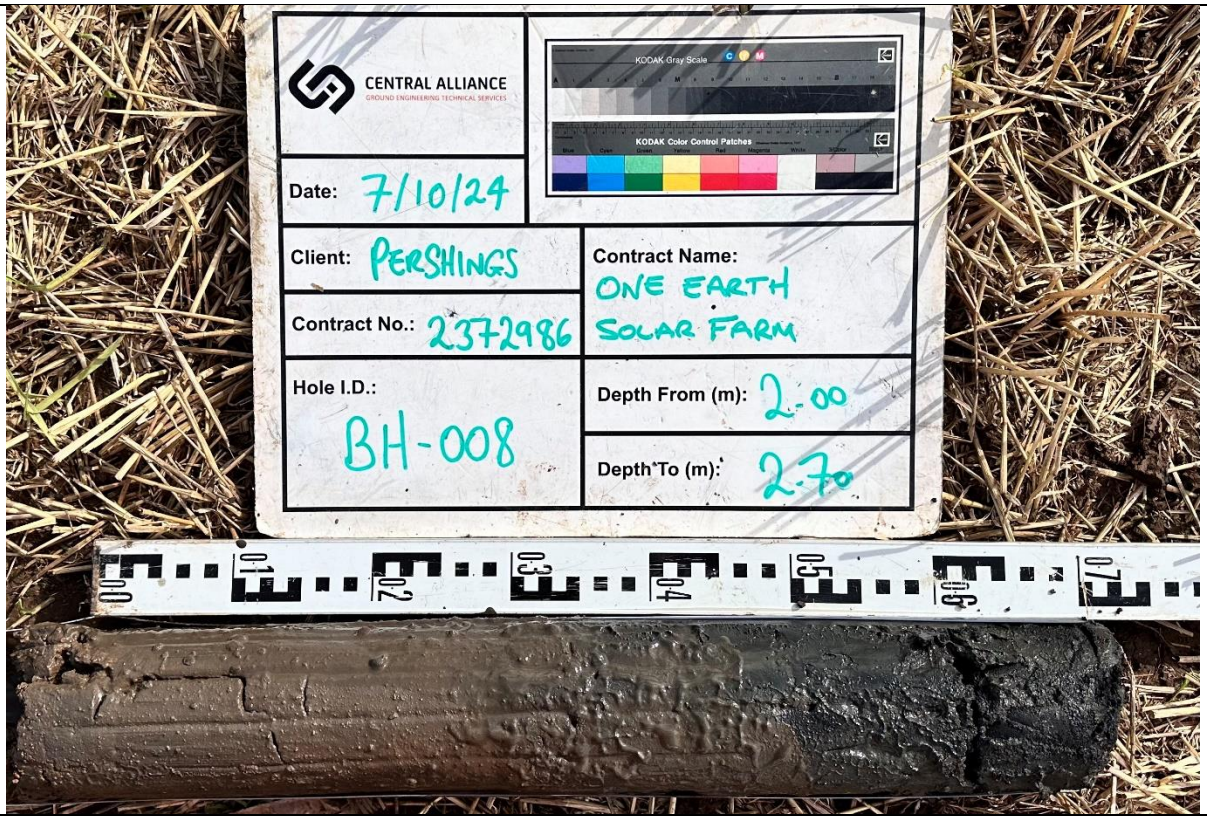
PHOTOGRAPH 1 – BH008 – 0.00m to 1.20m bgl



PHOTOGRAPH 2 – BH008 – 1.20m to 2.00m bgl

Client	AECOM
Project	One Earth Solar Farm
Title	BH008

CENTRAL ALLIANCE
GROUND ENGINEERING TECHNICAL SERVICES



PHOTOGRAPH 3 – BH008 – 2.00m to 2.70m bgl



PHOTOGRAPH 4 – BH008 – 2.70m to 3.70m bgl

Client	AECOM
Project	One Earth Solar Farm
Title	BH008

CENTRAL ALLIANCE
GROUND ENGINEERING TECHNICAL SERVICES



PHOTOGRAPH 5 – BH008 – 7.90m to 10.80m bgl



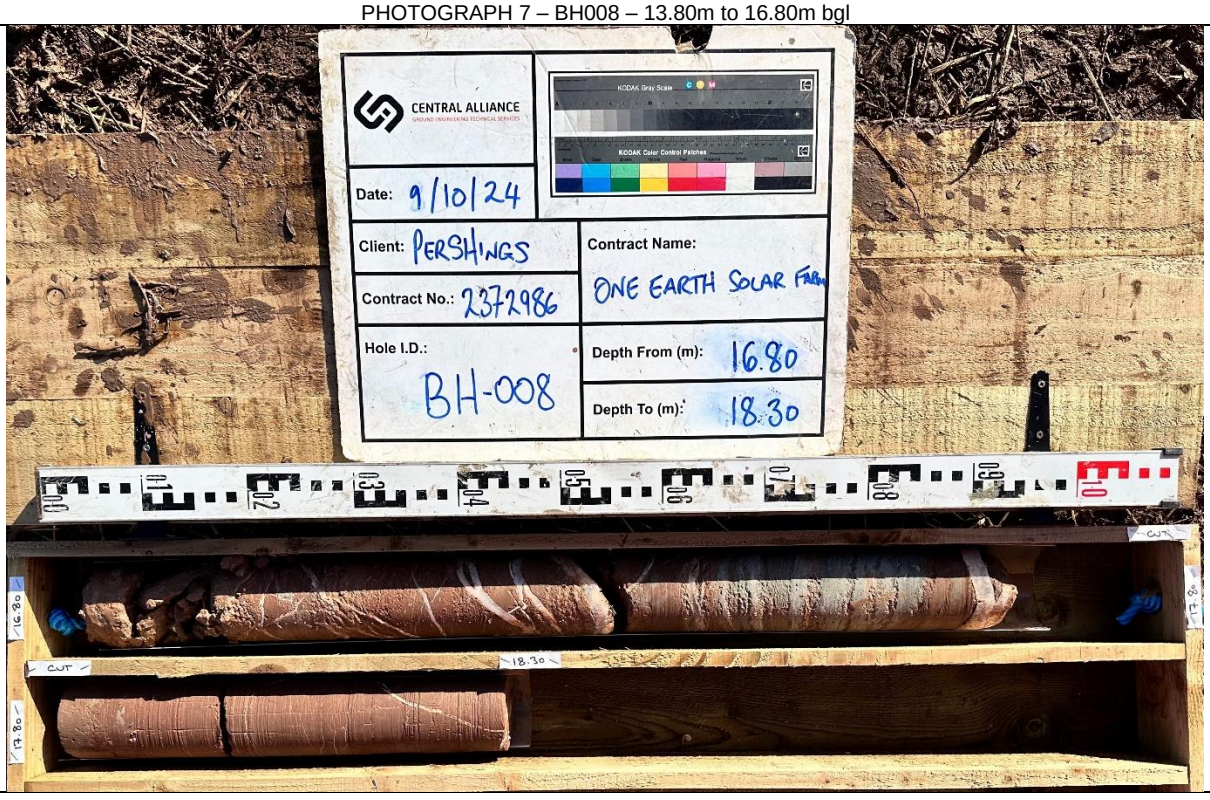
PHOTOGRAPH 6 – BH008 – 10.80m to 13.80m bgl

Client	AECOM
Project	One Earth Solar Farm
Title	BH008

CENTRAL ALLIANCE
GROUND ENGINEERING TECHNICAL SERVICES



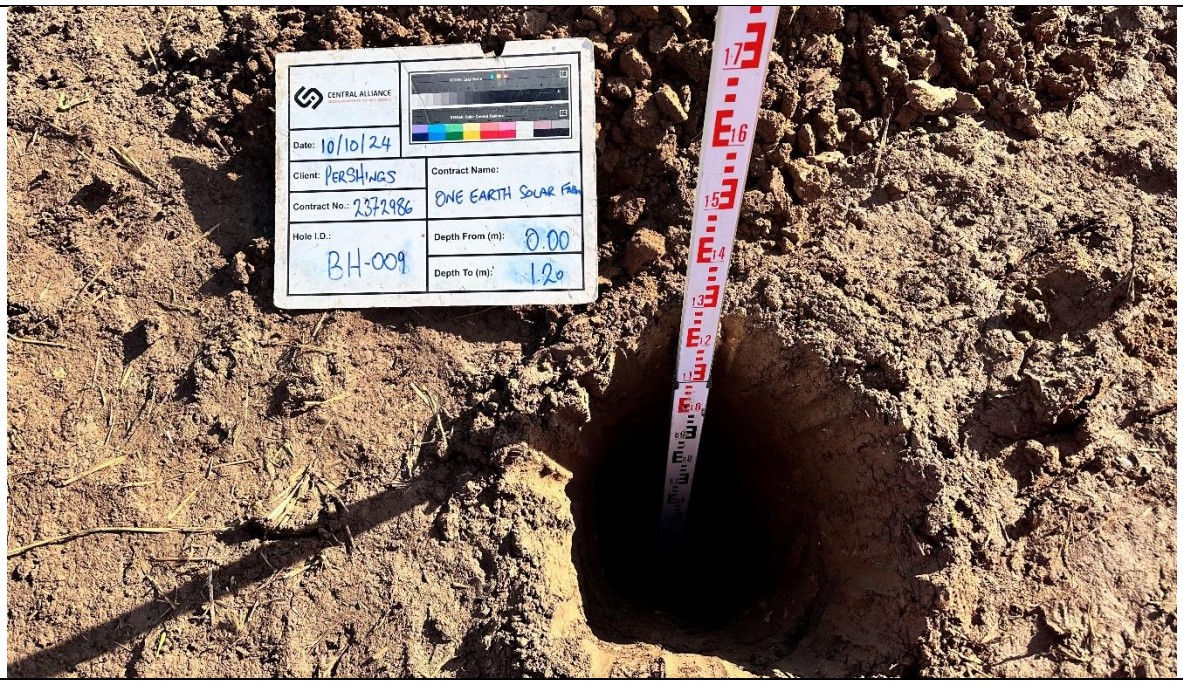
PHOTOGRAPH 7 – BH008 – 13.80m to 16.80m bgl



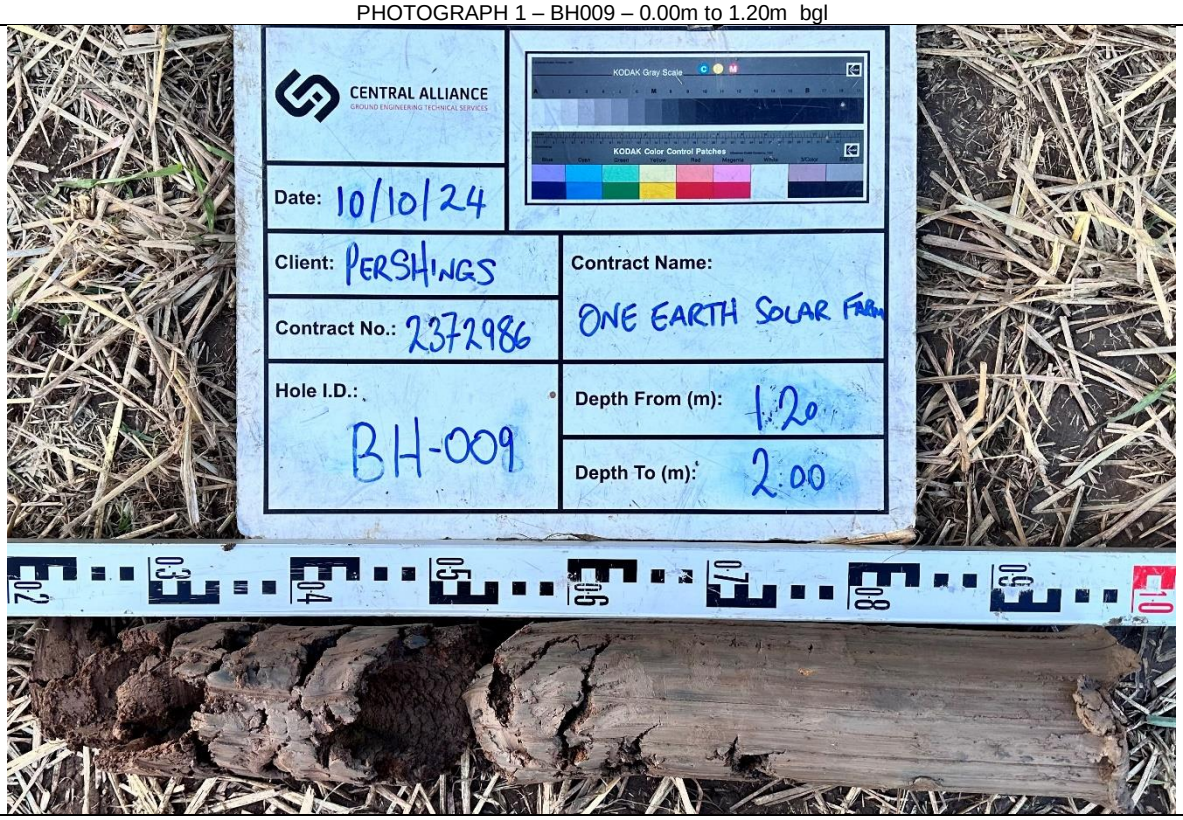
PHOTOGRAPH 8 – BH008 – 16.80m to 18.30m bgl

Client	AECOM
Project	One Earth Solar Farm
Title	BH008

CENTRAL ALLIANCE
GROUND ENGINEERING TECHNICAL SERVICES



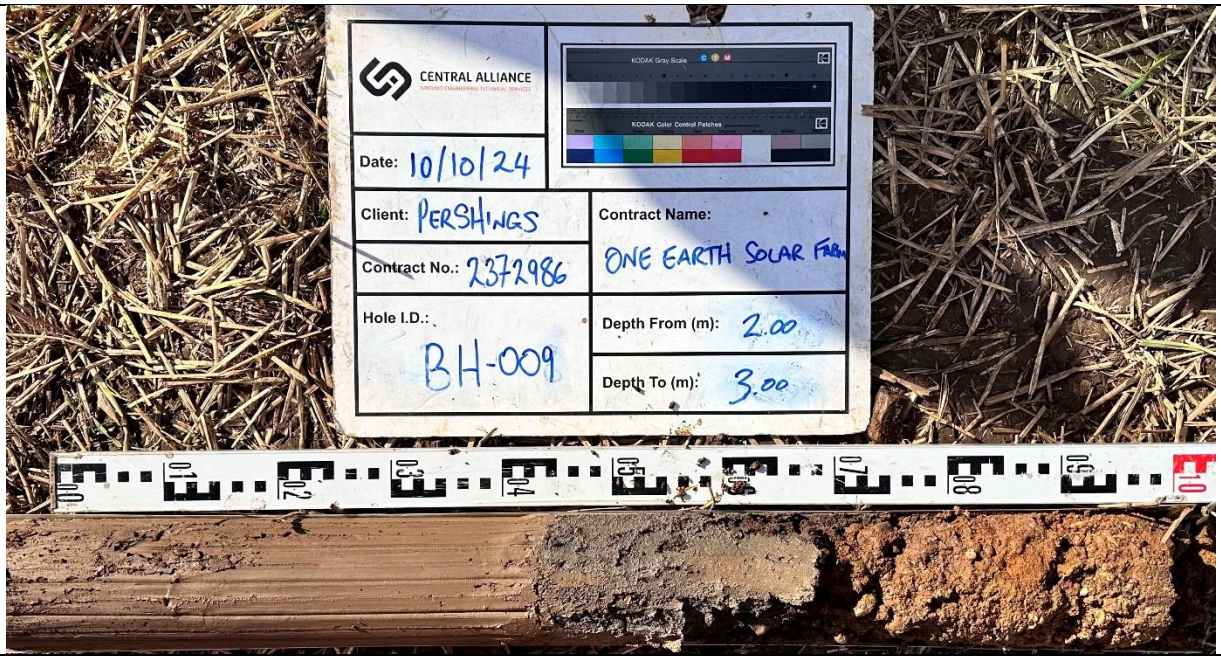
PHOTOGRAPH 1 – BH009 – 0.00m to 1.20m bgl



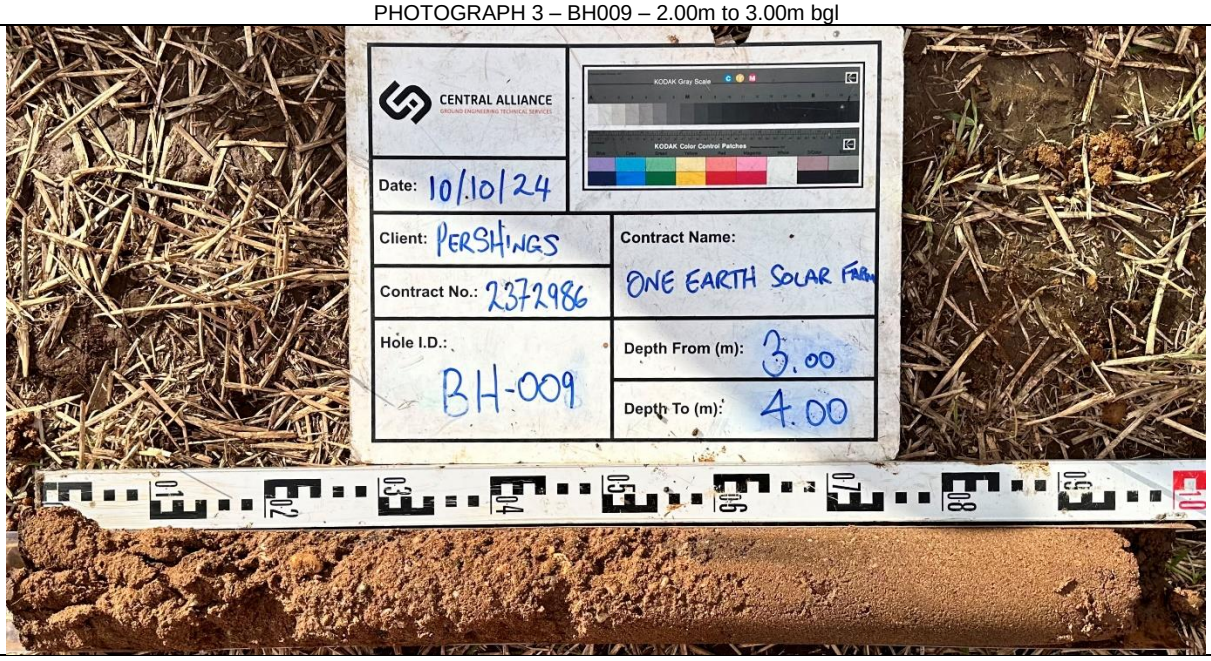
PHOTOGRAPH 2 – BH009 – 1.20m to 2.00m bgl

Client	AECOM
Project	One Earth Solar Farm
Title	BH009

CENTRAL ALLIANCE
GROUND ENGINEERING TECHNICAL SERVICES



PHOTOGRAPH 3 – BH009 – 2.00m to 3.00m bgl



PHOTOGRAPH 4 – BH009 – 3.00m to 4.00m bgl

Client	AECOM
Project	One Earth Solar Farm
Title	BH009

CENTRAL ALLIANCE
GROUND ENGINEERING TECHNICAL SERVICES



PHOTOGRAPH 5 – BH009 – 4.00m to 5.00m bgl



PHOTOGRAPH 6 – BH009 – 5.00m to 6.00m bgl

Client	AECOM
Project	One Earth Solar Farm
Title	BH009

CENTRAL ALLIANCE
GROUND ENGINEERING TECHNICAL SERVICES



PHOTOGRAPH 7 – BH009 – 6.00m to 7.00m bgl



PHOTOGRAPH 8 – BH009 – 7.00m to 8.00m bgl

Client	AECOM
Project	One Earth Solar Farm
Title	BH009

CENTRAL ALLIANCE
GROUND ENGINEERING TECHNICAL SERVICES



PHOTOGRAPH 9 – BH009 – 8.00m to 9.00m bgl



PHOTOGRAPH 10 – BH009 – 9.00m to 9.50m bgl

Client	AECOM
Project	One Earth Solar Farm
Title	BH009

CENTRAL ALLIANCE
GROUND ENGINEERING TECHNICAL SERVICES



PHOTOGRAPH 11 – BH009 – 9.50m to 12.20m bgl



PHOTOGRAPH 12 – BH009 – 12.20m to 15.20m bgl

Client	AECOM
Project	One Earth Solar Farm
Title	BH009

CENTRAL ALLIANCE
GROUND ENGINEERING TECHNICAL SERVICES



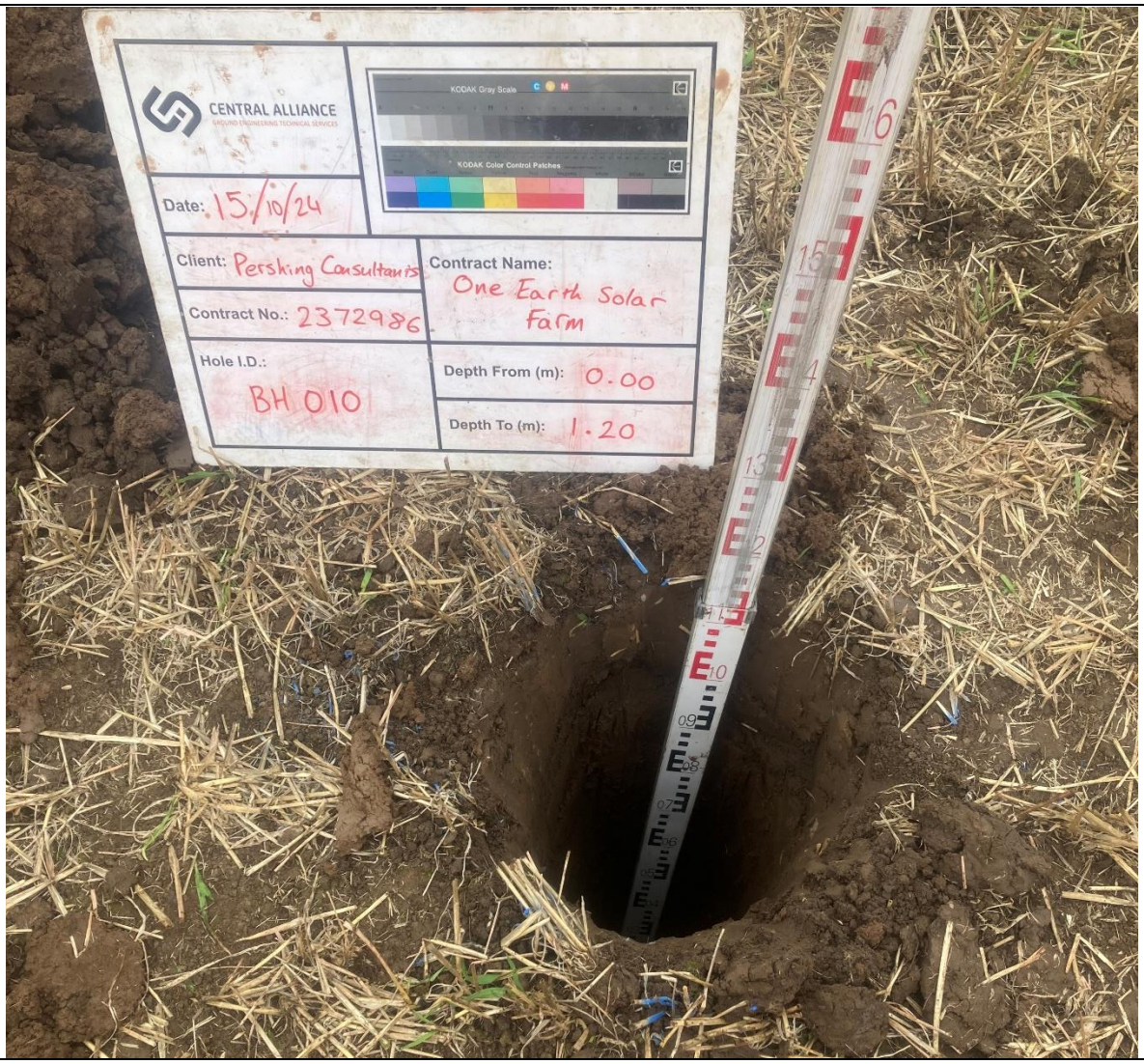
PHOTOGRAPH 13 – BH009 – 15.20m to 18.20m bgl



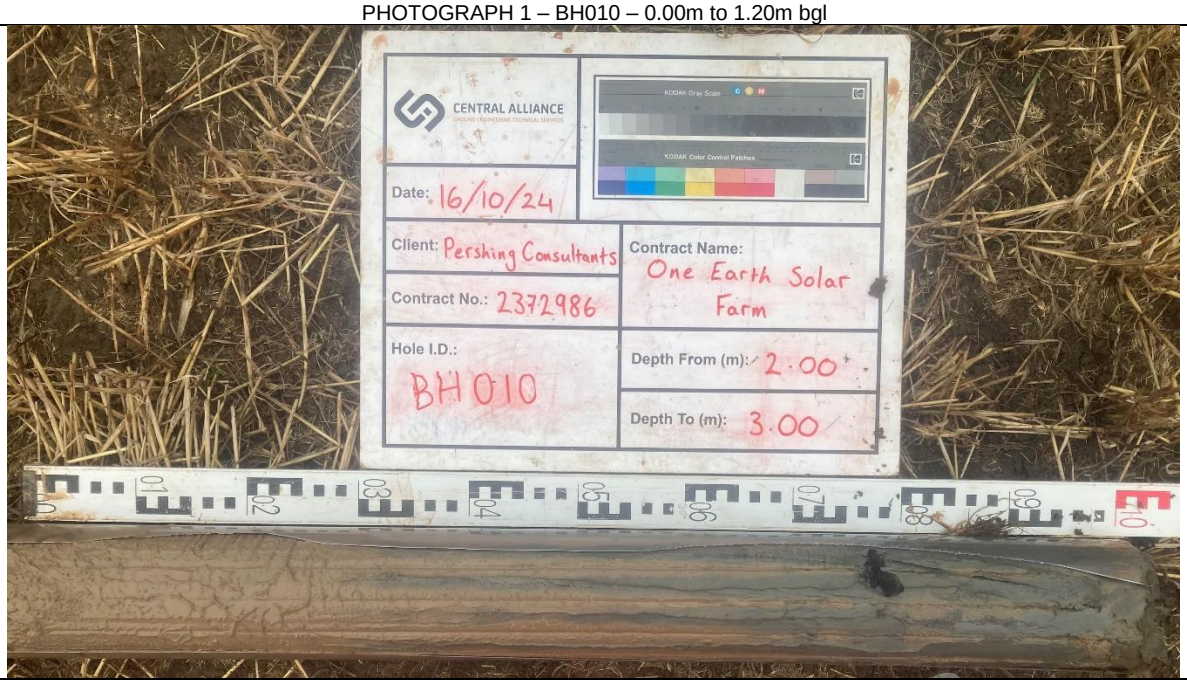
PHOTOGRAPH 14 – BH009 – 18.20m to 19.50m bgl

Client	AECOM
Project	One Earth Solar Farm
Title	BH009

CENTRAL ALLIANCE
GROUND ENGINEERING TECHNICAL SERVICES



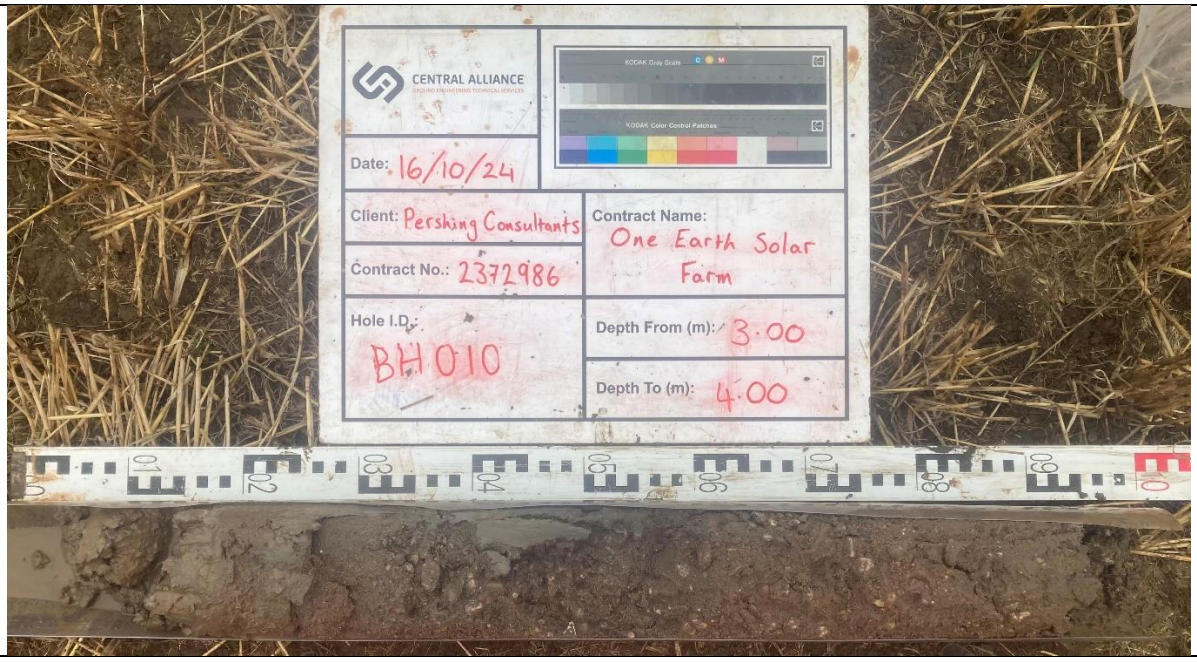
PHOTOGRAPH 1 – BH010 – 0.00m to 1.20m bgl



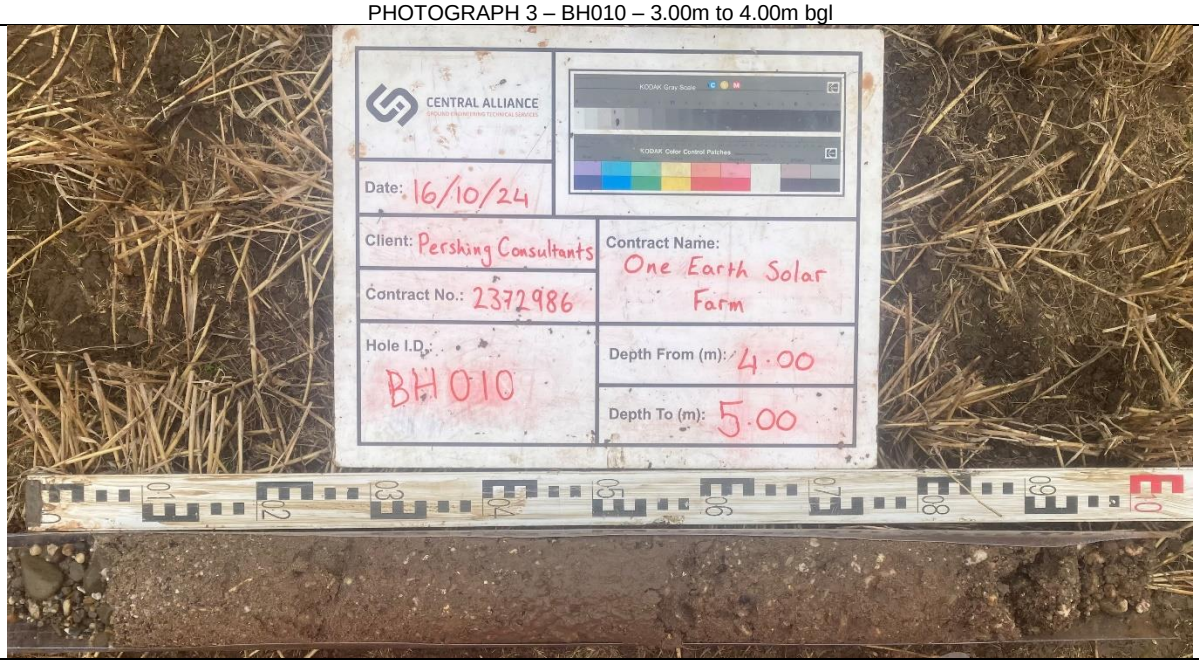
PHOTOGRAPH 2 – BH010 – 2.00m to 3.00m bgl

Client	AECOM
Project	One Earth Solar Farm
Title	BH010

CENTRAL ALLIANCE
GROUND ENGINEERING TECHNICAL SERVICES



PHOTOGRAPH 3 – BH010 – 3.00m to 4.00m bgl



PHOTOGRAPH 4 – BH010 – 4.00m to 5.00m bgl

Client	AECOM
Project	One Earth Solar Farm
Title	BH010

CENTRAL ALLIANCE
GROUND ENGINEERING TECHNICAL SERVICES



PHOTOGRAPH 1 – BH011 – 1.20m to 2.00m bgl



PHOTOGRAPH 2 – BH011 – 2.00m to 3.00m bgl

Client	AECOM
Project	One Earth Solar Farm
Title	BH011

CENTRAL ALLIANCE
GROUND ENGINEERING TECHNICAL SERVICES



PHOTOGRAPH 3 – BH011 – 3.00m to 6.00m bgl



PHOTOGRAPH 4 – BH011 – 6.00m to 9.00m bgl

Client	AECOM
Project	One Earth Solar Farm
Title	BH011

CENTRAL ALLIANCE
GROUND ENGINEERING TECHNICAL SERVICES



PHOTOGRAPH 5 – BH011 – 9.00m to 12.00m bgl



PHOTOGRAPH 6 – BH011 – 12.00m to 13.10m bgl

Client	AECOM
Project	One Earth Solar Farm
Title	BH011

CENTRAL ALLIANCE
GROUND ENGINEERING TECHNICAL SERVICES



PHOTOGRAPH 1 – BH012 - 2.00m to 3.00m bgl



PHOTOGRAPH 2 – BH012 – 3.00m to 6.00m bgl

Client	AECOM
Project	One Earth Solar Farm
Title	BH012

CENTRAL ALLIANCE
GROUND ENGINEERING TECHNICAL SERVICES



PHOTOGRAPH 3 – BH012 – 8.00m to 11.00m bgl



PHOTOGRAPH 4 – BH012 – 11.00m to 14.00m bgl

Client	AECOM
Project	One Earth Solar Farm
Title	BH012

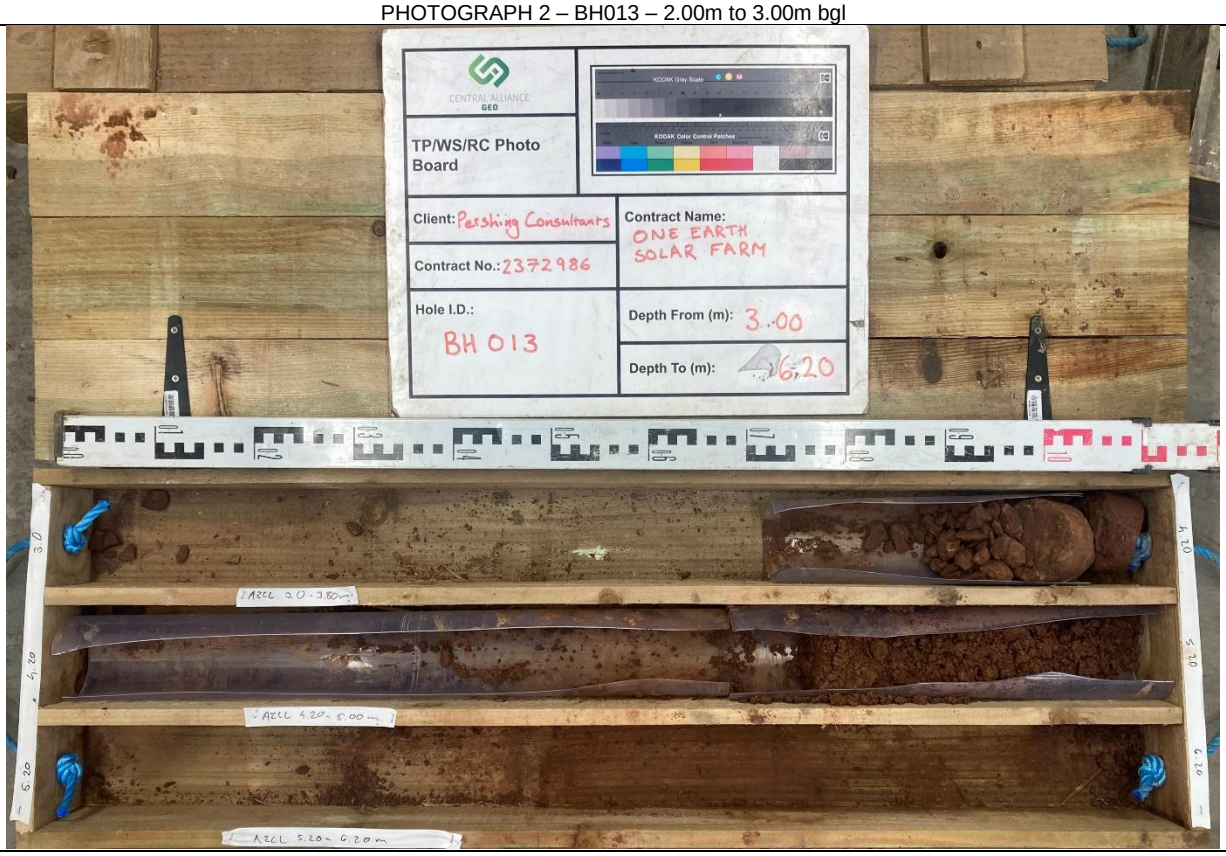
CENTRAL ALLIANCE
GROUND ENGINEERING TECHNICAL SERVICES



PHOTOGRAPH 1 – BH013 – 1.20m to 2.00m bgl



PHOTOGRAPH 2 – BH013 – 2.00m to 3.00m bgl



PHOTOGRAPH 3 – BH013 – 3.00m to 6.20m bgl

Client	AECOM
Project	One Earth Solar Farm
Title	BH013

CENTRAL ALLIANCE
GROUND ENGINEERING TECHNICAL SERVICES



PHOTOGRAPH 4 – BH013 – 6.80m to 8.30m bgl



PHOTOGRAPH 5 – BH013 – 7.20m to 11.00m bgl

Client	AECOM
Project	One Earth Solar Farm
Title	BH013

CENTRAL ALLIANCE
GROUND ENGINEERING TECHNICAL SERVICES



PHOTOGRAPH 1 – TP001 – 0.00m to 4.00m bgl

Client	AECOM
Project	One Earth Solar Farm
Title	TP001

CENTRAL ALLIANCE
GROUND ENGINEERING TECHNICAL SERVICES



PHOTOGRAPH 2 – TP001 – 0.00m to 4.00m bgl

Client	AECOM
Project	One Earth Solar Farm
Title	TP001

CENTRAL ALLIANCE
GROUND ENGINEERING TECHNICAL SERVICES



PHOTOGRAPH 3 – TP001 – 0.00m to 4.00m bgl

Client	AECOM
Project	One Earth Solar Farm
Title	TP001

CENTRAL ALLIANCE
GROUND ENGINEERING TECHNICAL SERVICES



PHOTOGRAPH 4 – TP001 - Spoil

Client	AECOM
Project	One Earth Solar Farm
Title	TP001

CENTRAL ALLIANCE
GROUND ENGINEERING TECHNICAL SERVICES



PHOTOGRAPH 1 – TP002 – 0.00m to 3.00m bgl

Client	AECOM
Project	One Earth Solar Farm
Title	TP002

CENTRAL ALLIANCE
GROUND ENGINEERING TECHNICAL SERVICES



PHOTOGRAPH 2 – TP002 – 0.00m to 3.00m bgl

Client	AECOM	CENTRAL ALLIANCE GROUND ENGINEERING TECHNICAL SERVICES
Project	One Earth Solar Farm	
Title	TP002	



PHOTOGRAPH 3 – TP002 - Spoil

Client	AECOM
Project	One Earth Solar Farm
Title	TP002

CENTRAL ALLIANCE
GROUND ENGINEERING TECHNICAL SERVICES



PHOTOGRAPH 1 – TP003 – 0.00m to 4.00m bgl

Client	AECOM
Project	One Earth Solar Farm
Title	TP003

CENTRAL ALLIANCE
GROUND ENGINEERING TECHNICAL SERVICES



PHOTOGRAPH 2 – TP003 – 0.00m to 4.00m bgl

Client	AECOM
Project	One Earth Solar Farm
Title	TP003

CENTRAL ALLIANCE
GROUND ENGINEERING TECHNICAL SERVICES



PHOTOGRAPH 3 – TP003 – 0.00m to 4.00m bgl

Client	AECOM
Project	One Earth Solar Farm
Title	TP003

CENTRAL ALLIANCE
GROUND ENGINEERING TECHNICAL SERVICES



PHOTOGRAPH 4 – TP003 - Spoil

Client	AECOM
Project	One Earth Solar Farm
Title	TP003

CENTRAL ALLIANCE
GROUND ENGINEERING TECHNICAL SERVICES



PHOTOGRAPH 1 – TP004 – 0.00m to 4.00m bgl

Client	AECOM
Project	One Earth Solar Farm
Title	TP004

CENTRAL ALLIANCE
GROUND ENGINEERING TECHNICAL SERVICES



PHOTOGRAPH 2 – TP004 – 0.00m to 4.00m bgl

Client	AECOM
Project	One Earth Solar Farm
Title	TP004

CENTRAL ALLIANCE
GROUND ENGINEERING TECHNICAL SERVICES



PHOTOGRAPH 3 – TP005 – 0.00m to 4.00m bgl

Client	AECOM
Project	One Earth Solar Farm
Title	TP004

CENTRAL ALLIANCE
GROUND ENGINEERING TECHNICAL SERVICES



PHOTOGRAPH 4 – TP005 – 0.00m to 4.0m bgl

Client	AECOM
Project	One Earth Solar Farm
Title	TP004

CENTRAL ALLIANCE
GROUND ENGINEERING TECHNICAL SERVICES



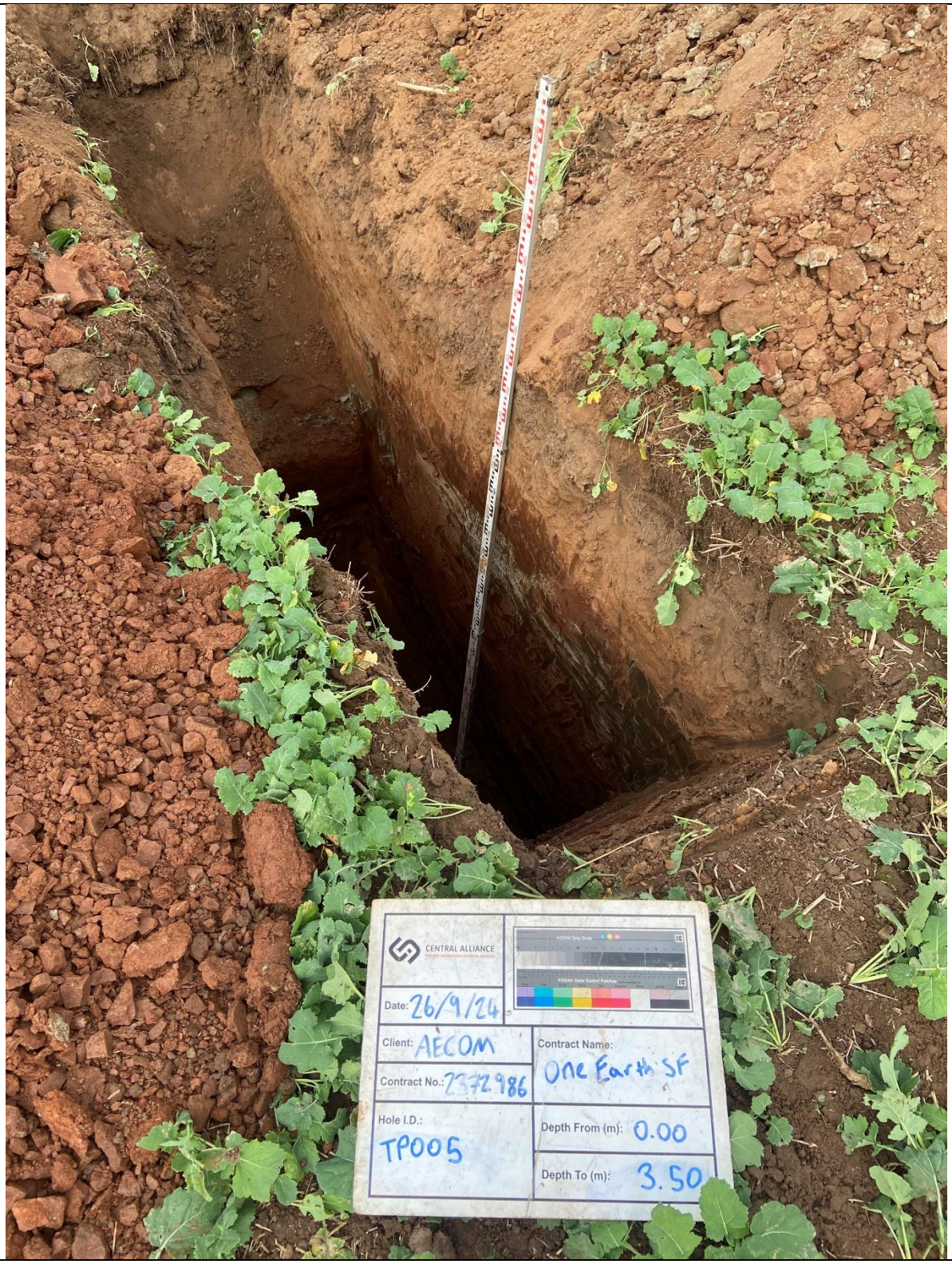
PHOTOGRAPH 5 – TP005 – Spoil

Client	AECOM
Project	One Earth Solar Farm
Title	TP004

CENTRAL ALLIANCE
GROUND ENGINEERING TECHNICAL SERVICES

Client	AECOM
Project	One Earth Solar Farm
Title	TP004

CENTRAL ALLIANCE
GROUND ENGINEERING TECHNICAL SERVICES



PHOTOGRAPH 1 – TP005 – 0.00m to 3.50m bgl

Client	AECOM
Project	One Earth Solar Farm
Title	TP005

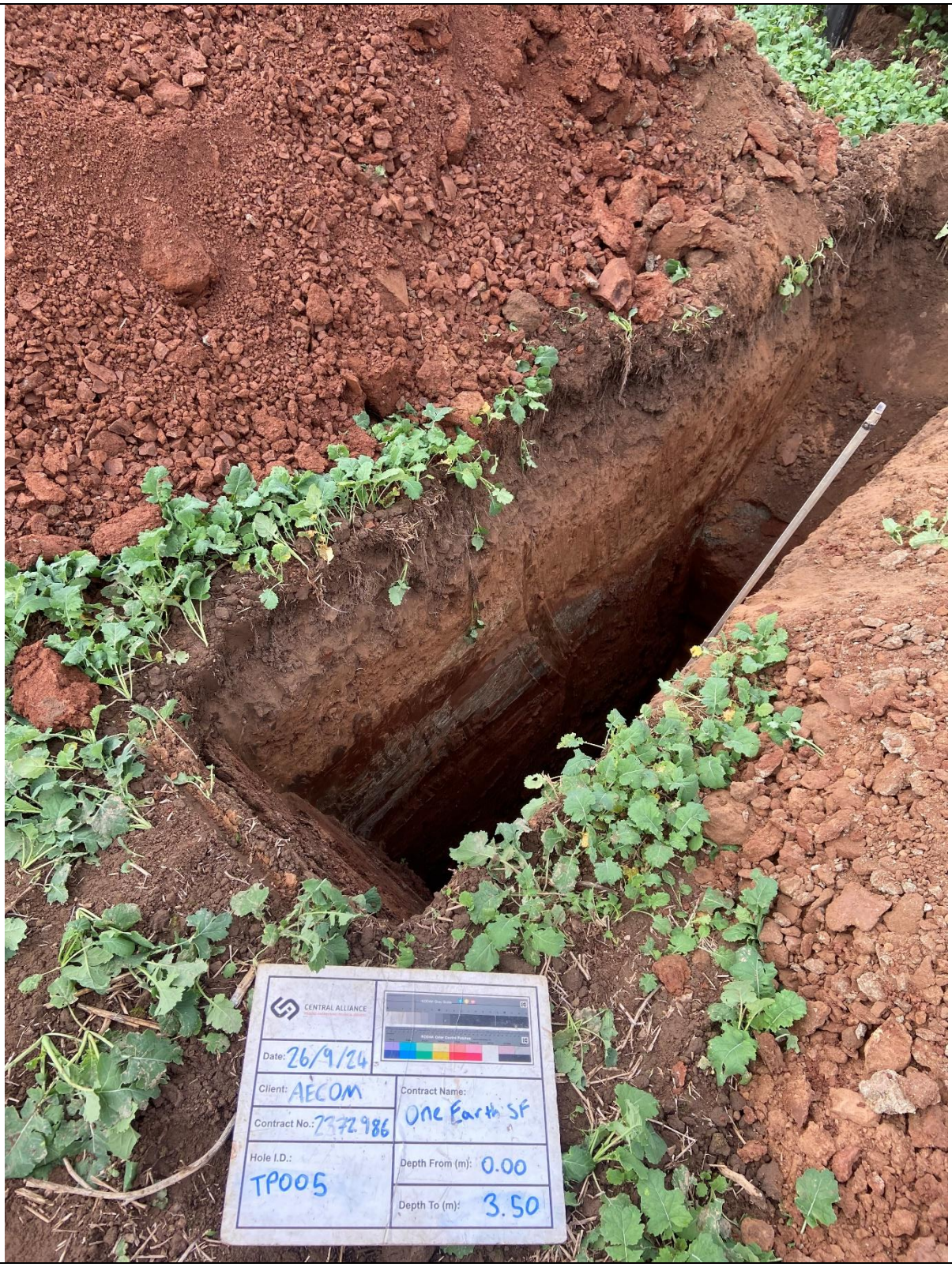
CENTRAL ALLIANCE
GROUND ENGINEERING TECHNICAL SERVICES



PHOTOGRAPH 2 – TP005 – 0.00m to 3.50m bgl

Client	AECOM
Project	One Earth Solar Farm
Title	TP005

CENTRAL ALLIANCE
GROUND ENGINEERING TECHNICAL SERVICES



PHOTOGRAPH 3 – TP005 – 0.00m to 3.5m bgl

Client	AECOM
Project	One Earth Solar Farm
Title	TP005

CENTRAL ALLIANCE
GROUND ENGINEERING TECHNICAL SERVICES



PHOTOGRAPH 4 – TP005 - Spoil

Client	AECOM
Project	One Earth Solar Farm
Title	TP005

CENTRAL ALLIANCE
GROUND ENGINEERING TECHNICAL SERVICES



PHOTOGRAPH 1 – TP006 – 0.00m to 2.20m bgl

Client	AECOM
Project	One Earth Solar Farm
Title	TP006

CENTRAL ALLIANCE
GROUND ENGINEERING TECHNICAL SERVICES



PHOTOGRAPH 2 – TP006 – 0.00m to 2.20m bgl

Client	AECOM
Project	One Earth Solar Farm
Title	TP006

CENTRAL ALLIANCE
GROUND ENGINEERING TECHNICAL SERVICES



PHOTOGRAPH 3 – TP006 - Spoil

Client	AECOM
Project	One Earth Solar Farm
Title	TP006

CENTRAL ALLIANCE
GROUND ENGINEERING TECHNICAL SERVICES

Client	AECOM
Project	One Earth Solar Farm
Title	TP006

CENTRAL ALLIANCE
GROUND ENGINEERING TECHNICAL SERVICES



PHOTOGRAPH 1 – TP007 – 0.00m to 2.50m bgl

Client	AECOM
Project	One Earth Solar Farm
Title	TP007

CENTRAL ALLIANCE
GROUND ENGINEERING TECHNICAL SERVICES



PHOTOGRAPH 2 – TP007 – 0.00m to 2.50m bgl

Client	AECOM
Project	One Earth Solar Farm
Title	TP007

CENTRAL ALLIANCE
GROUND ENGINEERING TECHNICAL SERVICES



PHOTOGRAPH 3 – TP007 - Spoil

Client	AECOM
Project	One Earth Solar Farm
Title	TP007

CENTRAL ALLIANCE
GROUND ENGINEERING TECHNICAL SERVICES

Client	AECOM
Project	One Earth Solar Farm
Title	TP007

CENTRAL ALLIANCE
GROUND ENGINEERING TECHNICAL SERVICES



PHOTOGRAPH 1 – TP008 – 0.00m to 1.60m bgl

Client	AECOM
Project	One Earth Solar
Title	TP008

CENTRAL ALLIANCE
GROUND ENGINEERING TECHNICAL SERVICES



PHOTOGRAPH 2 – TP008 – 0.00m to 1.60m bgl

Client	AECOM
Project	One Earth Solar
Title	TP008

CENTRAL ALLIANCE
GROUND ENGINEERING TECHNICAL SERVICES



PHOTOGRAPH 3 – TP008 - Spoil

Client	AECOM
Project	One Earth Solar
Title	TP008

CENTRAL ALLIANCE
GROUND ENGINEERING TECHNICAL SERVICES

Client	AECOM
Project	One Earth Solar
Title	TP008

CENTRAL ALLIANCE
GROUND ENGINEERING TECHNICAL SERVICES



PHOTOGRAPH 1 – TP009 – 0.00m to 2.90m bgl

Client	AECOM
Project	One Earth Solar Farm
Title	TP009

CENTRAL ALLIANCE
GROUND ENGINEERING TECHNICAL SERVICES



PHOTOGRAPH 2 – TP009 – 0.00m to 2.90m bgl

Client	AECOM
Project	One Earth Solar Farm
Title	TP009

CENTRAL ALLIANCE
GROUND ENGINEERING TECHNICAL SERVICES



PHOTOGRAPH 3 – TP009 - Spoil

Client	AECOM
Project	One Earth Solar Farm
Title	TP009

CENTRAL ALLIANCE
GROUND ENGINEERING TECHNICAL SERVICES

Client	AECOM
Project	One Earth Solar Farm
Title	TP009

CENTRAL ALLIANCE
GROUND ENGINEERING TECHNICAL SERVICES



PHOTOGRAPH 1 – TP010 – 0.00m to 2.50m bgl

Client	AECOM
Project	One Earth Solar Farm
Title	TP010

CENTRAL ALLIANCE
GROUND ENGINEERING TECHNICAL SERVICES



PHOTOGRAPH 2 – TP010 – 0.00m to 2.50m bgl

Client	AECOM
Project	One Earth Solar Farm
Title	TP010

CENTRAL ALLIANCE
GROUND ENGINEERING TECHNICAL SERVICES



PHOTOGRAPH 3 – TP010 – Spoil

Client	AECOM
Project	One Earth Solar Farm
Title	TP010

CENTRAL ALLIANCE
GROUND ENGINEERING TECHNICAL SERVICES

Client	AECOM
Project	One Earth Solar Farm
Title	TP010

CENTRAL ALLIANCE
GROUND ENGINEERING TECHNICAL SERVICES



PHOTOGRAPH 1 – TP011 – 0.00m to 3.70m bgl

Client	AECOM
Project	One Earth Solar Farm
Title	TP011

CENTRAL ALLIANCE
GROUND ENGINEERING TECHNICAL SERVICES



PHOTOGRAPH 2 – TP011 – 0.00m to 3.70m bgl

Client	AECOM
Project	One Earth Solar Farm
Title	TP011

CENTRAL ALLIANCE
GROUND ENGINEERING TECHNICAL SERVICES



PHOTOGRAPH 3 – TP011 – 0.00m to 3.70m bgl

Client	AECOM
Project	One Earth Solar Farm
Title	TP011

CENTRAL ALLIANCE
GROUND ENGINEERING TECHNICAL SERVICES



Client	AECOM
Project	One Earth Solar Farm
Title	TP011

CENTRAL ALLIANCE
GROUND ENGINEERING TECHNICAL SERVICES

PHOTOGRAPH 4 – TP011 - Spoil



PHOTOGRAPH 1 – TP012 – 0.00m to 3.40m bgl

Client	AECOM
Project	One Earth Solar Farm
Title	TP012

CENTRAL ALLIANCE
GROUND ENGINEERING TECHNICAL SERVICES



PHOTOGRAPH 2 – TP012 – 0.00m to 3.40m bgl

Client	AECOM
Project	One Earth Solar Farm
Title	TP012

CENTRAL ALLIANCE
GROUND ENGINEERING TECHNICAL SERVICES



PHOTOGRAPH 3 – TP012 – 0.00m to 3.40m bgl

Client	AECOM
Project	One Earth Solar Farm
Title	TP012

CENTRAL ALLIANCE
GROUND ENGINEERING TECHNICAL SERVICES



PHOTOGRAPH 4 – TP012 - Spoil

Client	AECOM
Project	One Earth Solar Farm
Title	TP012

CENTRAL ALLIANCE
GROUND ENGINEERING TECHNICAL SERVICES

Client	AECOM
Project	One Earth Solar Farm
Title	TP012

CENTRAL ALLIANCE
GROUND ENGINEERING TECHNICAL SERVICES

CENTRAL ALLIANCE
GROUND ENGINEERING TECHNICAL SERVICES

Appendix C
Monitoring

CENTRAL ALLIANCE
GROUND ENGINEERING TECHNICAL SERVICES

Water Monitoring Form

Client	**RSK**
Project Name	**One Earth Solar Farm**
Project Number	**2372986**
Date	**18/11/2024 14:34**
Monitored by	**Shannon Lavelle**
Weather	**Overcast, Frosty**
Instruments Used	**Dipmeter**

Exploratory Hole ID	Time	Borehole Level (m AOD)	Water Depth (m bgl)	Base Depth (m bgl)	Reduced Water Level (mAOD)	Remarks
BH011	14:34	8.74	4.36	4.70	4.38	
BH012	14:36	11.14	0	4.08		Dry
BH013	14:37	7.06	2.82	3.82	4.24	
BH008	14:37	4.61	1.55	7.81	3.06	
BH007	14:38	4.63	1.82	5.41	2.81	
BH001	14:38	9.35		3.22		Clay
BH002	14:38	6.82	1.62	3.41	5.20	
BH003	14:39	9.59	1.48	3.40	8.11	
BH004	14:39	12.44	0	3.28		Dry

CENTRAL ALLIANCE
GROUND ENGINEERING TECHNICAL SERVICES

Water Monitoring Form

Client	**RSK**
Project Name	**One Earth Solar Farm**
Project Number	**2372986**
Date	**17/12/2024 09:05**
Monitored by	**Lucian Juverdeanu**
Weather	**Windy, Cloudy**
Instruments Used	**Dipmeter**

Exploratory Hole ID	Time	Borehole Level (m AOD)	Water Depth (m bgl)	Base Depth (m bgl)	Reduced Water Level (mAOD)	Remarks
BH001	14:53	9.35	2.18	3.51	7.17	
BH002	14:53	6.82	0.98	3.46	5.84	
BH003	14:54	9.59	0.66	3.40	8.93	
BH004	16:13	12.44	1.84	3.41	10.60	
BH006	09:23	4.90	0.88	2.52	4.02	
BH007	09:36	4.63	1.10	5.40	3.53	
BH008	09:37	4.61	0.84	7.76	3.77	
BH011	11:24	8.74	3.95	4.66	4.79	Not enough water to take all samples.

CENTRAL ALLIANCE
GROUND ENGINEERING TECHNICAL SERVICES

Water Monitoring Form

Exploratory Hole ID	Time	Borehole Level (m AOD)	Water Depth (m bgl)	Base Depth (m bgl)	Reduced Water Level (mAOD)	Remarks
BH012	11:25	11.14		4.11		Dry.

CENTRAL ALLIANCE
GROUND ENGINEERING TECHNICAL SERVICES

Gas & Groundwater Monitoring

Client:		**RSK**			**Job No:**			2372986			**Instrument Used:**			Gas Analyser				
Project Name:		**One Earth Solar Farm**			**Date Start:**			17/01/2025			**Make / Model**			Geotech / GA5000				
Weather:		**Windy**			**Monitored By:**			Nonso Umeh			**Serial Number:**			G507630				
Exploratory Hole ID	Date & Time	Peak CH4 (% vol)	Peak CO2 (% vol)	Time to reach steady concentration (secs)	Steady CH4 (% vol)	Steady CO2 (% vol)	Steady O2 (% vol)	Steady H2S (ppm)	Steady CO (ppm)	Flow Rate Peak (L/hr)	Time to reach steady flow (sec)	Flow Rate Steady (L/hr)	Relative Pressure (mb)	Barometric Pressure (mbar)	Borehole Level (m AOD)	Water Depth (m bgl)	Water Level (m AOD)	Base Depth (mbgl)
BH001	17/01/2025 10:09	0	0.1	120	0	0.1	22.6	0	0		60	0.20	0	1033	9.35	2.26	7.09	3.40
BH002	17/01/2025 10:23	0	0.1	120	0	0.1	21.6	0	0		60	0.10	0	1033	6.82	0.90	5.92	3.37
BH003	17/01/2025 11:15	0	0.2	120	0	0.2	22.3	0	0			0.20	0	1032	9.59	0.69	8.90	3.34
BH004	17/01/2025 10:52	0	0.1	120	0	0.1	20.4	0	0		60	0.20	0	1032	12.44	1.40	11.04	3.36
BH008	17/01/2025 10:58	0	0.1	120	0	0.1	4.5	0	0		60	-0.40	-1	1032	4.61	0.32	4.29	7.78
BH007	17/01/2025 12:24	0	0.1	120	0	0.1	1.7	0	0		60	0.10	0	1032	4.63	0.50	4.13	5.70
BH013	17/01/2025 13:34	0	0.1	120	0	0.1	18.6	0	0		60	0.10	0	1032	7.06	2.20	4.86	3.80
BH011	17/01/2025 14:19	0	0.1	120	0	0.1	21.8	0	0		60	0.10	0	1032	8.74	3.62	5.12	4.64
BH012	17/01/2025 14:30	0	0.1	120	0	0.1	21.9	0	0		60	0.10	0	1032	11.14		11.14	4.10

CENTRAL ALLIANCE
GROUND ENGINEERING TECHNICAL SERVICES

Gas & Groundwater Monitoring

Ambient Gas Levels - Before Monitoring						Ambient Gas Levels - After Monitoring					
CH4 (%)	CO2 (%)	O2 (%)	H2S (ppm)	CO (ppm)	Atmos (mbar)	CH4 (%)	CO2 (%)	O2 (%)	H2S (ppm)	CO (ppm)	Atmos (mbar)
0	**0.1**	**22.6**	**0**	**0**	**1033**	**0**	**0.1**	**21.8**	**0**	**0**	**1032**

	Remarks
BH007	Gas bung wasn't fitted into the borehole install on arrival for monitoring
BH011	Gas bung valve left open on my arrival for monitoring
BH012	Gas bung valve left open on my arrival for monitoring **Dry hole**

Appendix D
Geotechnical Laboratory Testing Results

LABORATORY REPORT

Contract Number: PSL24/7865

Report Date: 04 December 2024

Client's Reference: 2372986-002

Client Name: Central Alliance
Alliance House
South Park Way
Wakefield 41 Business Park
Wakefield
WF2 0XJ

For the attention of: John Parkinson

Contract Title: One Earth Solar Farm

Date Received: 25/10/2024
Date Commenced: 25/10/2024
Date Completed: 4/12/2024

Notes: Opinions and Interpretations are outside the UKAS Accreditation

A copy of the Laboratory Schedule of accredited tests as issued by UKAS is attached to this report. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced other than in full, without the prior written approval of the laboratory.

Checked and Approved Signatories:

A Watkins (Managing Director)
R Berriman (Associate Director)
S Royle (Laboratory Manager)
L Knight (Assistant Laboratory Manager)
[redacted] S Eyre (Senior Technical Coordinator)
T Watkins (Senior Technician)

5 – 7 Hexthorpe Road,
Hexthorpe,
Doncaster,
DN4 0AR
Tel: 01[redacted]
Email: [redacted]@prosoils.co.uk
[redacted]@prosoils.co.uk

SUMMARY OF LABORATORY SOIL DESCRIPTIONS

Hole Number	Sample Number	Sample Type	Top Depth m	Base Depth m	Description of Sample
TP008	2	D	0.30		Brown slightly sandy CLAY.
TP008	4	LB	0.50		Brown slightly sandy slightly gravelly CLAY.
TP008	5	D	0.90		Brown slightly sandy CLAY.
TP009	5	D	0.90		Brown slightly sandy CLAY.
TP009	7	B	1.50		Brown slightly sandy CLAY with some organic material.
TP009	8	D	1.90		Brown slightly sandy CLAY with some organic material.
TP009	9	B	2.50		Grey slightly sandy slightly gravelly CLAY with some organic material.
TP009	10	D	2.80		Brown very sandy CLAY.

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

One Earth Solar Farm

Contract No:

PSL24/7865

Client Ref:

2372986

SUMMARY OF SOIL CLASSIFICATION TESTS

BS 1377 - Part 2 : 2022 in accordance with BS EN ISO 17892 (as below)

Hole Number	Sample Number	Sample Type	Top Depth m	Base Depth m	Water Content %	Linear Shrinkage	Particle Density Mg/m^3	Liquid Limit %	Plastic Limit %	Plasticity Index %	Passing 0.425mm %	Remarks
TP008	2	D	0.30		30.2			72	30	42	100	Very High Plasticity CIV
TP008	5	D	0.90		44.4			71	30	41	100	Very High Plasticity CIV
TP009	5	D	0.90		32.3			68	28	40	100	High Plasticity CIH
TP009	8	D	1.90		39.9			69	30	39	100	High Plasticity CIH
TP009	10	D	2.80		29.1			33	16	17	100	Low Plasticity CIL

Water Content - BS 1377 - Part 2 : 2022 : Clause 4 in accordance with BS EN ISO 17892 - 1 : 2014 + A1 : 2022
Linear Shrinkage - BS 1377 - Part 2 : 2022 : Clause 7
Particle Density (Gas Jar method) - BS 1377 - Part 2 : 2022 : Clause 9
Liquid, Plastic Limit & Plasticity Index - BS 1377 - Part 2 : 2022 : Clause 5 & 6 in accordance with BS EN ISO 17892 - 12 : 2018 + A2 : 2022

SYMBOLS : NP = Non Plastic

UKAS TESTING 4043

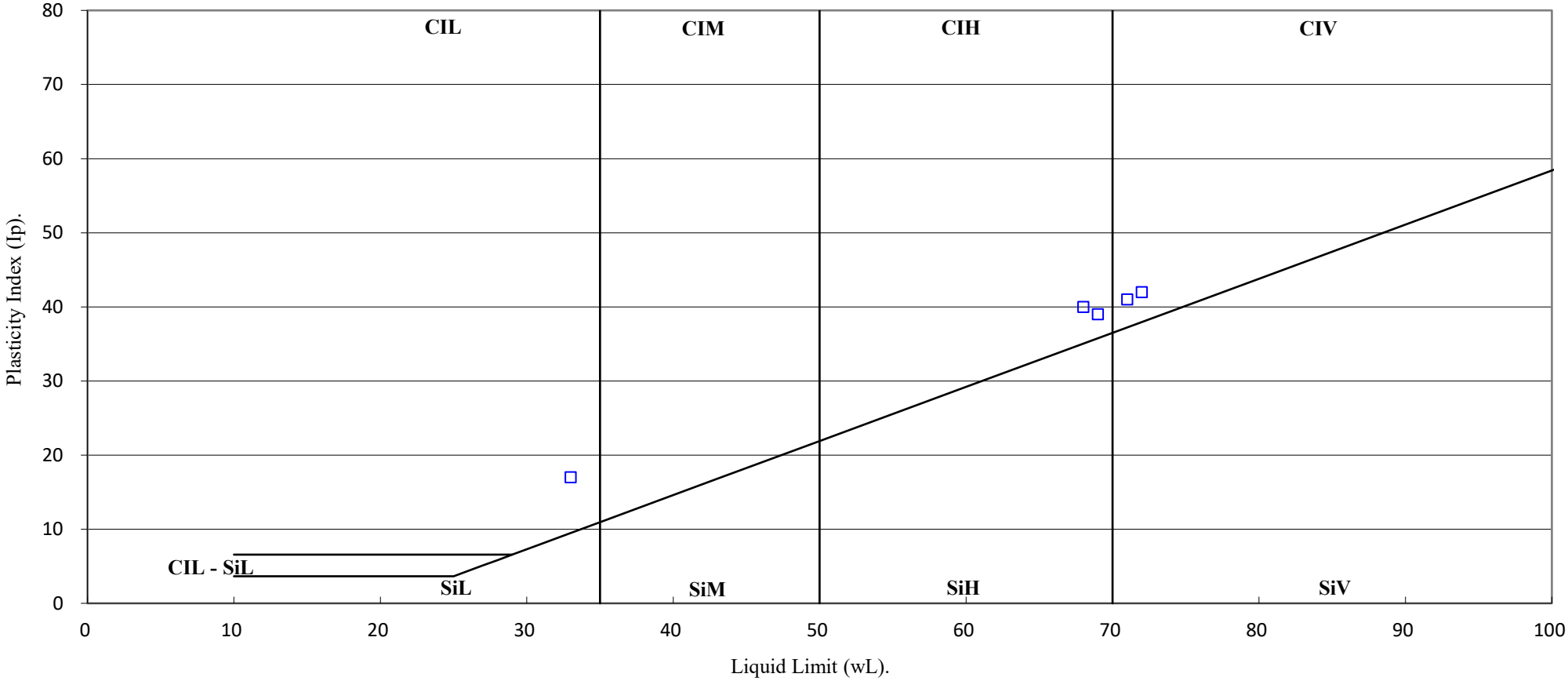
PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

One Earth Solar Farm

Contract No:
PSL24/7865
Client Ref:
2372986

PLASTICITY CHART

BS EN ISO 14688-2:2017 Clause 4.4



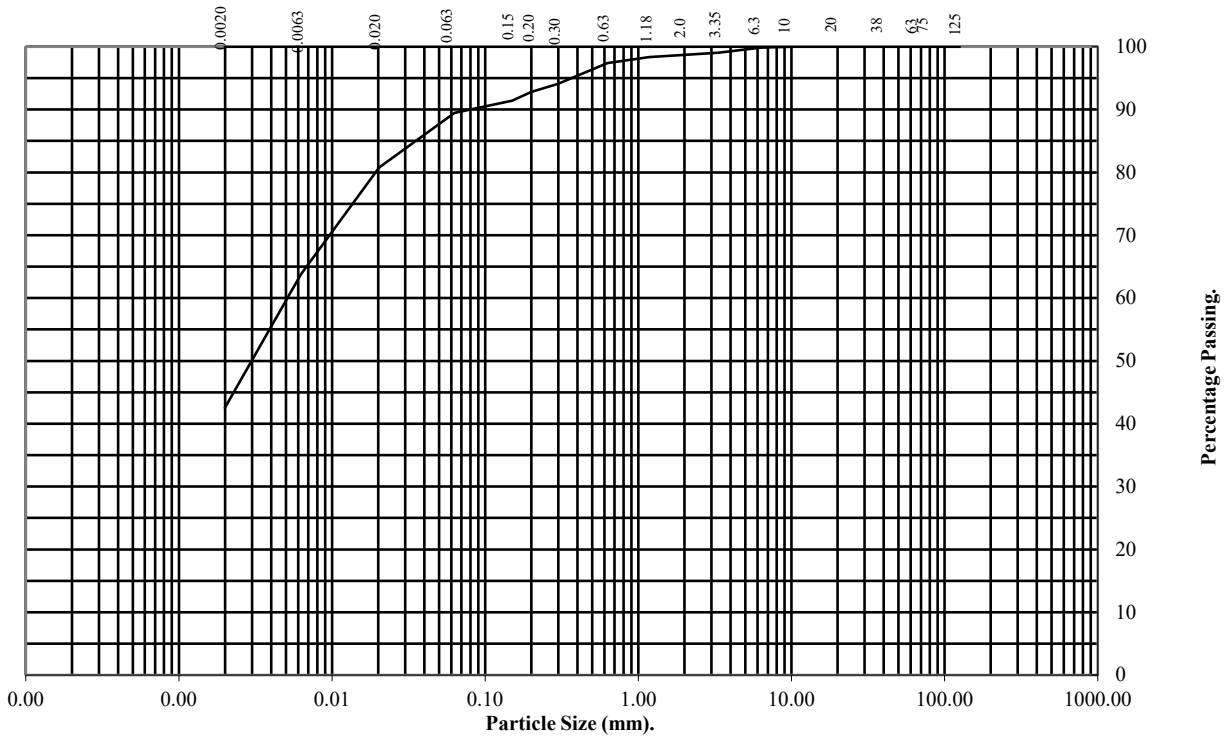
UKAS TESTING 4043 / PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY	**One Earth Solar Farm**	**Contract No:** PSL24/7865 **Client Ref:**

PARTICLE SIZE DISTRIBUTION TEST

BS 1377 - Part 2 : 2022 : Clause 10 in accordance with BS EN ISO 17892 - 4 : 2016

Sieve Method, Clause 5.2 & Pipette Method, Clause 5.4

Hole Number:	**TP008**	**Top Depth (m):**	**0.50**
Sample Number:	**4**	**Base Depth (m):**	
Sample Type:	**LB**		



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
63	100
37.5	100
20	100
10	100
6.3	100
3.35	99
2	99
1.18	98
0.63	97
0.3	94
0.2	93
0.15	91
0.063	89

Particle Diameter	Percentage Passing
0.020	81
0.0063	64
0.0020	43
Particle Density - 2.65 Mg/m3 assumed	

Soil Fraction	Total Percentage
Cobbles	0
Gravel	1
Sand	10
Silt	46
Clay	43

Remarks:

See Summary of Soil Descriptions

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

One Earth Solar Farm

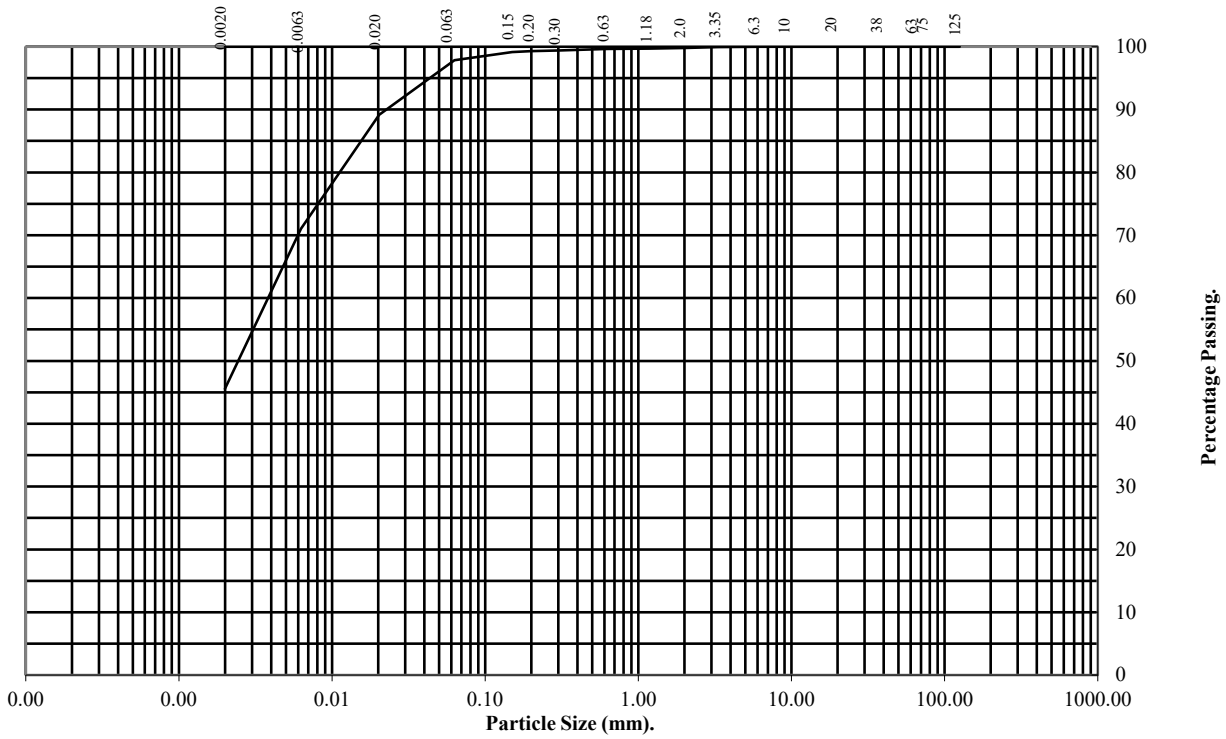
Contract No:
PSL24/7865
Client Ref:
2372986

PARTICLE SIZE DISTRIBUTION TEST

BS 1377 - Part 2 : 2022 : Clause 10 in accordance with BS EN ISO 17892 - 4 : 2016

Sieve Method, Clause 5.2 & Pipette Method, Clause 5.4

Hole Number:	**TP009**	**Top Depth (m):**	**1.50**
Sample Number:	**7**	**Base Depth (m):**	
Sample Type:	**B**		



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
63	100
37.5	100
20	100
10	100
6.3	100
3.35	100
2	100
1.18	100
0.63	100
0.3	99
0.2	99
0.15	99
0.063	98

Particle Diameter	Percentage Passing
0.020	89
0.0063	71
0.0020	46
Particle Density - 2.65 Mg/m3 assumed	

Soil Fraction	Total Percentage
Cobbles	0
Gravel	0
Sand	2
Silt	52
Clay	46

Remarks:

See Summary of Soil Descriptions

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

One Earth Solar Farm

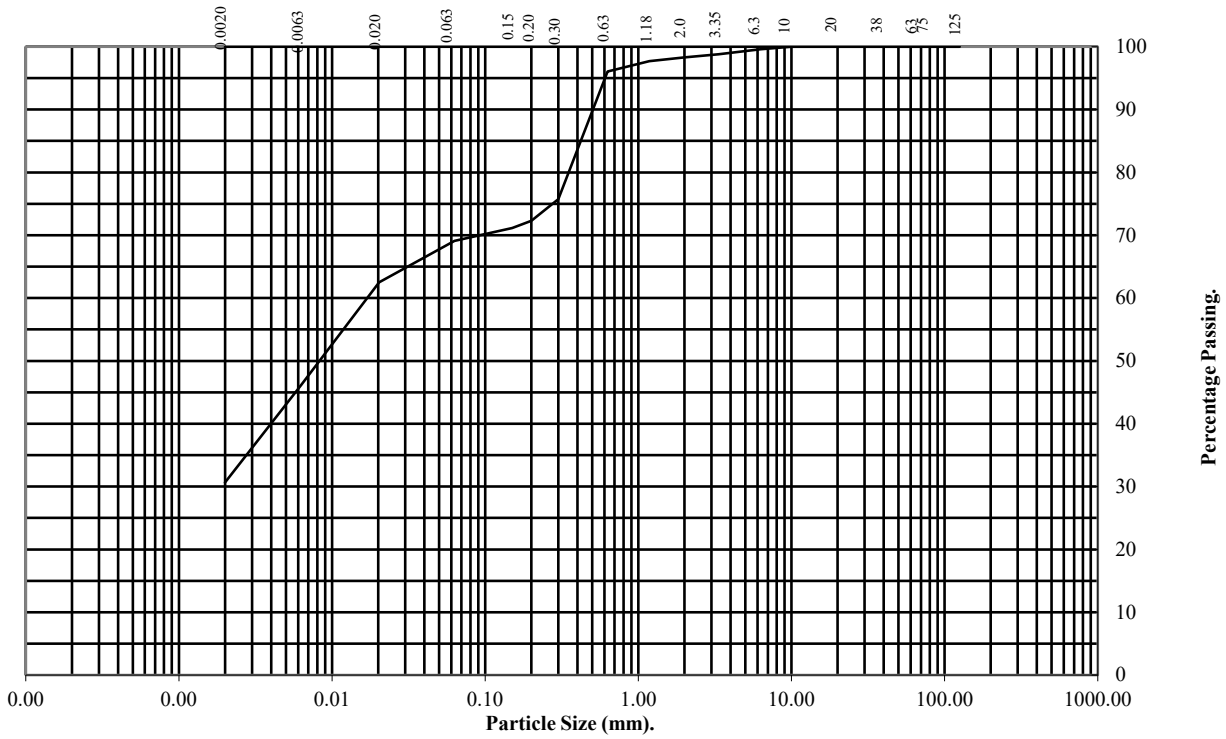
Contract No:
PSL24/7865
Client Ref:
2372986

PARTICLE SIZE DISTRIBUTION TEST

BS 1377 - Part 2 : 2022 : Clause 10 in accordance with BS EN ISO 17892 - 4 : 2016

Sieve Method, Clause 5.2 & Pipette Method, Clause 5.4

Hole Number:	**TP009**	**Top Depth (m):**	**2.50**
Sample Number:	**9**	**Base Depth (m):**	
Sample Type:	**B**		



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
63	100
37.5	100
20	100
10	100
6.3	100
3.35	99
2	98
1.18	98
0.63	96
0.3	76
0.2	72
0.15	71
0.063	69

Particle Diameter	Percentage Passing
0.020	63
0.0063	46
0.0020	31
Particle Density - 2.65 Mg/m3 assumed	

Soil Fraction	Total Percentage
Cobbles	0
Gravel	2
Sand	29
Silt	38
Clay	31

Remarks:

See Summary of Soil Descriptions

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

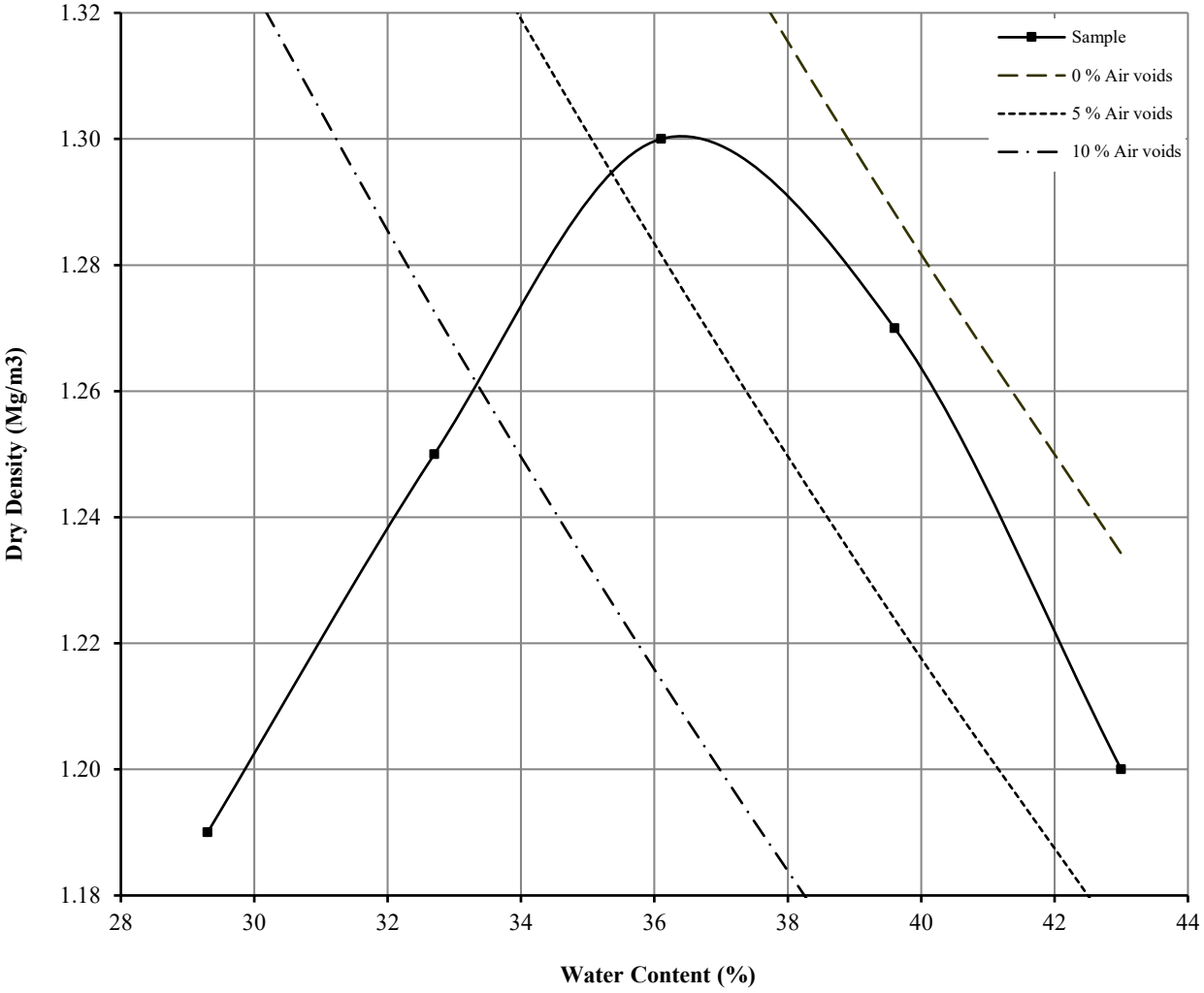
One Earth Solar Farm

Contract No:
PSL24/7865
Client Ref:
2372986

DRY DENSITY/WATER CONTENT RELATIONSHIP

BS 1377 - Part 2 : Clause 11 : 2022

Hole Number:	**TP009**	**Top Depth (m):**	**1.50**
Sample Number:	**7**	**Base Depth (m):**	
Sample Type:	**B**		



Initial Water Content:		43.0	Method of Compaction:	2.5kg	Separate Samples
Particle Density (Mg/m3):	2.63	Assumed	Material Retained on 37.5 mm Test Sieve (%):		0
Maximum Dry Density (Mg/m3):		1.30	Material Retained on 20.0 mm Test Sieve (%):		0
Optimum Water Content (%):		36	Grading Zone:		1
Remarks See summary of soil descriptions					

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

One Earth Solar Farm

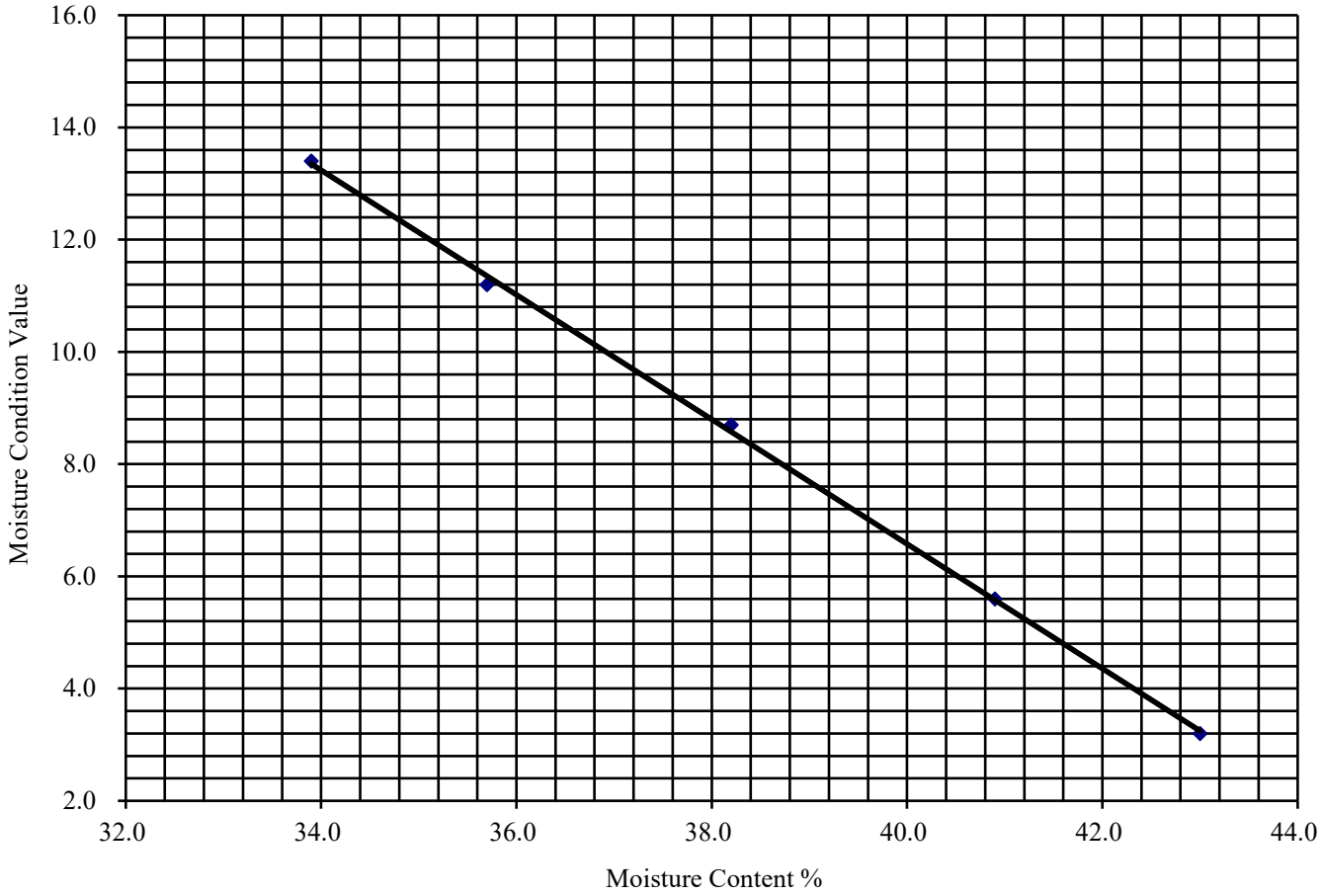
Contract No.
PSL24/7865
Client Ref
2372986

MCV/WATER CONTENT RELATION OF SOIL

BS1377 - Part 2 : 2022 Clause 13.5

Hole Number:	**TP009**	**Top Depth (m):**	**1.50**
Sample Number:	**7**	**Base Depth (m):**	
Sample Type:	**B**		

Initial Water Content (%):	43.0
Single/Separate Samples Tested	Separate
Material Retained on the 20mm BS Test Sieve (%):	0



Test Results.

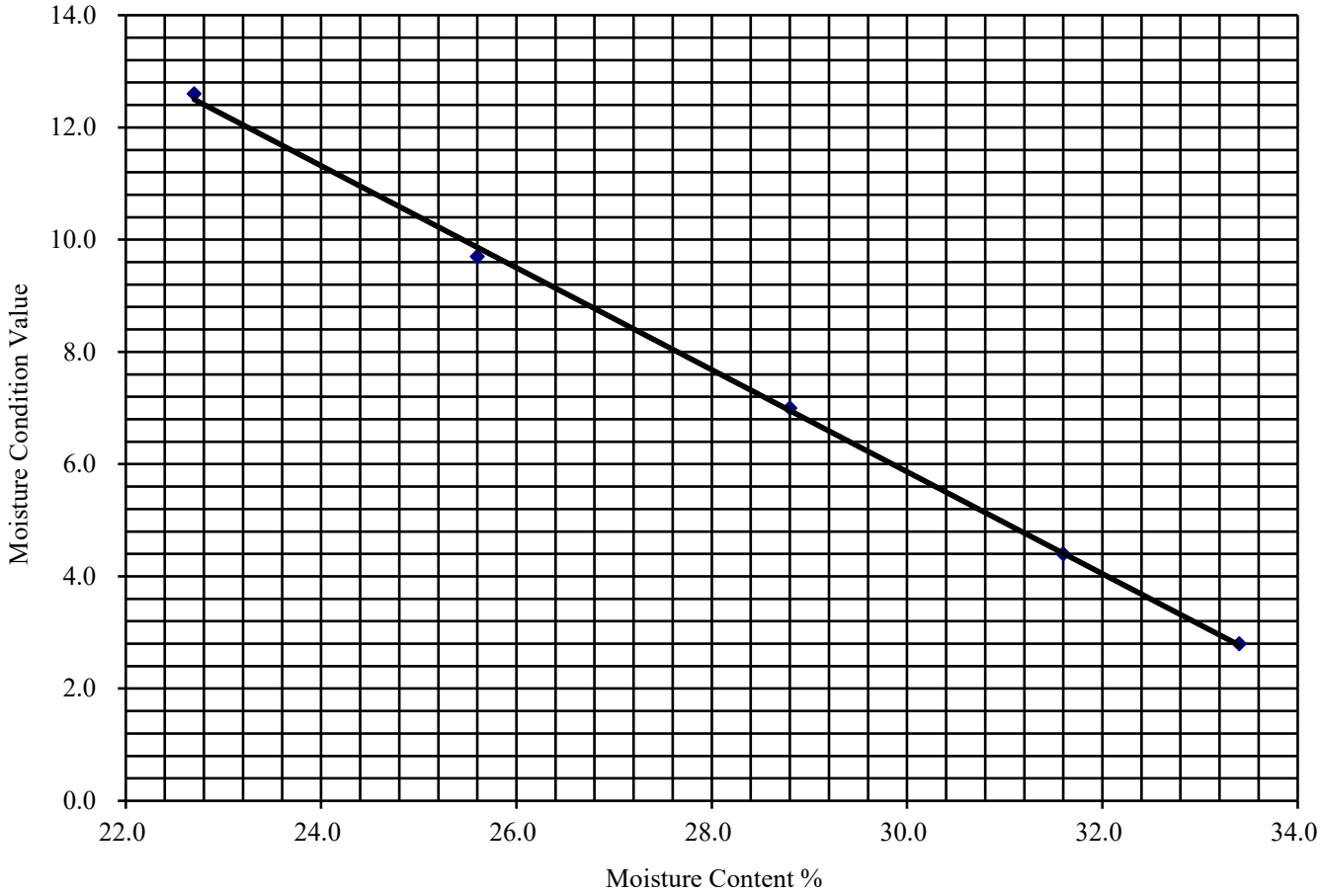
Test Number	1	2	3	4	5
Water Content (%)	43.0	40.9	38.2	35.7	33.9
MCV	3.2	5.6	8.7	11.2	13.4

MCV/WATER CONTENT RELATION OF SOIL

BS1377 - Part 2 : 2022 Clause 13.5

Hole Number:	**TP009**	**Top Depth (m):**	**2.50**
Sample Number:	**9**	**Base Depth (m):**	
Sample Type:	**B**		

Initial Water Content (%):	44.4
Single/Separate Samples Tested	Separate
Material Retained on the 20mm BS Test Sieve (%):	0



Test Results.

Test Number	1	2	3	4	5
Water Content (%)	33.4	31.6	28.8	25.6	22.7
MCV	2.8	4.4	7.0	9.7	12.6

4161

Professional Soils Laboratory
5/7 Hexthorpe Road
Hexthorpe
Doncaster
DN4 0AR

7 - 11 Harding Street
Leicester
LE1 4DH

Analytical Test Report: E24/00560/PSL - 24-52196

Your Project Reference:	**PSL24/7865 One Earth Solar Farm**		
Your Order Number:	PSL24/7865	Samples Received / Instructed:	06/11/2024 / 06/11/2024
Report Issue Number:	1	Sample Tested:	06/11 to 15/11/2024
Samples Analysed:	6 sample(s)	Report issued:	15/11/2024

Sig [redacted]

James Gane
Analytical Services Manager
CTS Group

Notes:

General

Please refer to Methodologies page for details pertaining to the analytical methods undertaken.

Samples will be retained for 14 days after issue of this report unless otherwise requested.

Moisture Content was determined in accordance with CTS method statement MS - CL - Sample Prep, oven dried at <30˚C.

Moisture Content is reported as a percentage of the dry mass of soil, this calculation is in accordance with BS1377, Part 2, 1990, Clause 3.2

Where specification limits are included these are for guidance only. Where a measured value has been highlighted this is not implying acceptance or failure and certainty of measurement values have not been taken into account.

Uncertainty of measurement values are available on request.

Samples were supplied by customer, results apply to the samples as received.

Deviating Samples

On receipt samples are compared against our sample holding and handling protocols, where any deviations have been noted these are reported on our deviating sample page (if present)

Accreditation Key

UKAS = UKAS Accreditation, MCERTS = MCERTS Accreditation, u = Unaccredited, subUKAS - Subcontracted to a laboratory UKAS accredited for this test, subMCERTS - Subcontracted to a laboratory MCERTS accredited for this test

MCERTS Accreditation only covers the SAND, CLAY and LOAM matrices

UKAS accreditation on waters only covers the Ground water and Surface water matrices

Date of Issue: 11.11.2024

Issued by: J. Gane

Issue No: 4

Rev No: 18

4161

CONSTRUCTION TESTING SOLUTIONS
A PHENNA GROUP COMPANY

7 - 11 Harding Street
Leicester
LE1 4DH

E24/00560/PSL - 24-52196

Project Reference - PSL24/7865 One Earth Solar Farm

Analytical Test Results - Chemical Analysis

Lab Reference			415971	415972	415973	415974	415975
Client Sample ID			-	-	-	-	-
Client Sample Location			TP008	TP008	TP009	TP009	TP009
Client Sample Type			LB	D	LB	D	D
Client Sample Number			4	5	4	8	10
Depth - Top (m)			0.50	0.90	0.50	1.90	2.80
Depth - Bottom (m)			0.50	0.90	0.50	1.90	2.80
Date of Sampling			-	-	-	-	-
Time of Sampling			-	-	-	-	-
Sample Matrix			Clay	Clay	Clay	Clay	Clay
Determinant	**Units**	**Accreditation**					
Water soluble sulphate (as SO_4)	(mg/l)	u	-	250	98	-	150
Acid Soluble Sulphate	(%)	u	-	0.11	0.08	-	0.08
Total Sulphur	(%)	UKAS	-	0.04	0.02	-	0.15
pH Value	pH Units	MCERTS	-	6.6	7.0	-	6.7
Organic matter (BS 1377)	(%)	UKAS	1.8	-	1.4	1.5	-
1377 Organic Matter - Sulphides/Chlorides Identified (Yes/No)	-	-	No	-	No	No	-

7 - 11 Harding Street
Leicester
LE1 4DH

E24/00560/PSL - 24-52196

Project Reference - PSL24/7865 One Earth Solar Farm

Soils - No Testing Scheduled

Lab Reference	Client Sample ID	Client Sample Location	Client Sample Type	Client Sample Number	Status
415976	-	TP009	B	9	No Testing Scheduled

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CONSTRUCTION TESTING SOLUTIONS
A PHENNA GROUP COMPANY

7 - 11 Harding Street
Leicester
LE1 4DH

E24/00560/PSL - 24-52196

Project Reference - PSL24/7865 One Earth Solar Farm

Sample Descriptions

Lab Reference	Client Sample ID	Client Sample Location	Client Sample Type	Client Sample Number	Description	Moisture Content (%)	Stone Content (%)	Passing 2mm test sieve (%)
415971	-	TP008	LB	4	Brown slightly gravelly slightly sandy silty clay	-	-	100
415972	-	TP008	D	5	Brown slightly gravelly slightly sandy silty clay	-	-	100
415973	-	TP009	LB	4	Brown slightly gravelly slightly sandy silty clay	-	-	100
415974	-	TP009	D	8	Brown slightly gravelly slightly sandy silty clay	-	-	100
415975	-	TP009	D	10	Dark grey slightly gravelly sandy silty clay	-	-	100

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CONSTRUCTION TESTING SOLUTIONS
A PHENNA GROUP COMPANY

7 - 11 Harding Street
Leicester
LE1 4DH

E24/00560/PSL - 24-52196

Project Reference - PSL24/7865 One Earth Solar Farm

Sample Comments

Lab Reference	Client Sample ID	Client Sample Location	Client Sample Type	Client Sample Number	Comments
415971	-	TP008	LB	4	
415972	-	TP008	D	5	
415973	-	TP009	LB	4	
415974	-	TP009	D	8	
415975	-	TP009	D	10	

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CONSTRUCTION TESTING SOLUTIONS
A PHENNA GROUP COMPANY

7 - 11 Harding Street
Leicester
LE1 4DH

E24/00560/PSL - 24-52196

Project Reference - PSL24/7865 One Earth Solar Farm

Analysis Methodologies

Test Code	Test Name / Reference	Sample condition for analysis	Sample Preperation	Test Details
ANIONSS	MS - CL - Anions by Aquakem (2:1Extract)	Oven dried	Passing 2mm test sieve	Determination of Anions (inc Sulphate, chloride etc.) in soils by Aquakem. Analysis is based on a 2:1 water to soil extraction ratio
PHS	MS - CL - pH in Soils	As received	Passing 10mm test sieve	Determination of pH in soils using a pH probe (using a 1:3 soil to water extraction)
ASSO4S	MS - CL - Acid Soluble Sulphate	Oven Dried	Passing 2mm test sieve	Determination of total sulphate in soils by acid extraction followed by ICP analysis
HOLD	No Testing Scheduled	-	-	No Testing Scheduled
SAMPLEPREP	MS - CL - Sample Preparation	-	-	Preparation of samples (including determination of moisture content) to allow for subsequent analysis
1377ORG	BS1377 Organic Matter	Oven dried	BS1377 : Part 1 : 2016	Testing was in accordance with BS 1377: Part 3: 2018 + A1 : 2021 Clause 4, The reported value is the average OMC present in the soil fraction to the nearest 0.1% of the original oven dry mass of soil. Some information required by BS 1377 has not been
1377TS-ELT	BS1377 Total Sulphur Content by HTC	Oven dried	BS1377 : Part 1 : 2016	Total Sulphur Content testing of Soil in accordance with BS 1377 : Part 3 : 2018 + A1 : 2021 Clause 7.10 (using Eltra CS-800 Analyser)

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CONSTRUCTION TESTING SOLUTIONS
A PHENNA GROUP COMPANY

7 - 11 Harding Street
Leicester
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E24/00560/PSL - 24-52196

Project Reference - PSL24/7865 One Earth Solar Farm

Sample Deviations

Deviations are listed below against each sample and associated test method, where deviation(s) are noted it means data may not be representative of the sample at the time of sampling and it is possible that results provided may be compromised.

Observations on receipt

A - No date of sampling provided
W - No time of sampling provided for water sample
C - Received in inappropriate container
H - Contains headspace
T - Temperature on receipt exceeds storage temperature
R - Sample(s) received with less than 96 hours for testing to commence/complete, any result formally classed as deviating will be marked with an X against the applicable test (i.e. RX)

Observations whilst in laboratory

X - Exceeds sampling to extraction or analysis timescales

Lab Reference	Client Sample ID	Client Sample Location	Client Sample Type	Client Sample Number	Test	Deviations
415971	-	TP008	LB	4		A
415972	-	TP008	D	5		A
415973	-	TP009	LB	4		A
415974	-	TP009	D	8		A
415975	-	TP009	D	10		A
415976	-	TP009	B	9		A

LABORATORY REPORT

Contract Number: PSL24/7866

Report Date:	22 November 2024
Client's Reference:	2372986-003
Client Name:	Central Alliance Alliance House South Park Way Wakefield 41 Business Park Wakefield WF2 0XJ
For the attention of:	**John Parkinson**
Contract Title:	One Earth Solar Farm
Date Received:	25/10/2024
Date Commenced:	25/10/2024
Date Completed:	22/11/2024
Notes:	**Opinions and Interpretations are outside the UKAS Accreditation**

A copy of the Laboratory Schedule of accredited tests as issued by UKAS is attached to this report. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced other than in full, without the prior written approval of the laboratory.

Checked and Approved Signatories:

A Watkins (Managing Director)	R Berriman (Associate Director)	[redacted] (Laboratory Manager)
L Knight (Assistant Laboratory Manager)	S Eyre (Senior Technician)	T Watkins (Senior Technician)

5 – 7 Hexthorpe Road,
Hexthorpe,
Doncaster,
DN4 0AR
Tel: 01302 768098
Email: [redacted]@prosoils.co.uk
[redacted]@prosoils.co.uk

SUMMARY OF LABORATORY SOIL DESCRIPTIONS

Hole Number	Sample Number	Sample Type	Top Depth m	Base Depth m	Description of Sample
TP006	5	D	0.90		Brown slightly sandy CLAY.
TP006	7	B	1.50		Brown slightly sandy CLAY.
TP006	8	D	2.20		Brown slightly sandy CLAY.
TP007	4	LB	0.50		Brown slightly sandy slightly gravelly CLAY.
TP007	5	D	0.90		Brown slightly sandy CLAY.
TP007	8	D	2.50		Brown slightly sandy CLAY.
TP010	4	LB	0.50		Brown slightly sandy slightly gravelly CLAY.
TP010	7	B	1.50		Reddish brown slightly sandy gravelly CLAY.
TP011	5	D	0.90		Brown slightly sandy CLAY.
TP011	7	B	1.50		Brown sandy slightly gravelly CLAY.
TP011	9	B	2.50		Reddish brown slightly clayey sandy GRAVEL.
TP011	10	D	2.50		Reddish brown slightly clayey sandy GRAVEL.
TP012	5	D	0.90		Brown slightly sandy CLAY.
TP012	7	B	1.50		Grey clayey very sandy GRAVEL.

SUMMARY OF SOIL CLASSIFICATION TESTS

BS 1377 - Part 2 : 2022 in accordance with BS EN ISO 17892 (as below)

Hole Number	Sample Number	Sample Type	Top Depth m	Base Depth m	Water Content %	Linear Shrinkage	Particle Density Mg/m^3	Liquid Limit %	Plastic Limit %	Plasticity Index %	Passing 0.425mm %	Remarks
TP006	5	D	0.90		39.8			63	29	34	100	High Plasticity CIH
TP006	8	D	2.20		43.5			64	30	34	100	High Plasticity CIH
TP007	5	D	0.90		38.3			84	34	50	100	Very High Plasticity CIV
TP007	8	D	2.50		34.7			49	22	27	100	Medium Plasticity CIM
TP010	7	B	1.50		11.2							
TP011	5	D	0.90		15.0			40	19	21	100	Medium Plasticity CIM
TP011	10	D	2.50		9.2							
TP012	5	D	0.90		24.0			52	26	26	100	High Plasticity CIH

Water Content - BS 1377 - Part 2 : 2022 : Clause 4 in accordance with BS EN ISO 17892 - 1 : 2014 + A1 : 2022
Linear Shrinkage - BS 1377 - Part 2 : 2022 : Clause 7
Particle Density (Gas Jar method) - BS 1377 - Part 2 : 2022 : Clause 9
Liquid, Plastic Limit & Plasticity Index - BS 1377 - Part 2 : 2022 : Clause 5 & 6 in accordance with BS EN ISO 17892 - 12 : 2018 + A2 : 2022

SYMBOLS : NP = Non Plastic

UKAS TESTING 4043

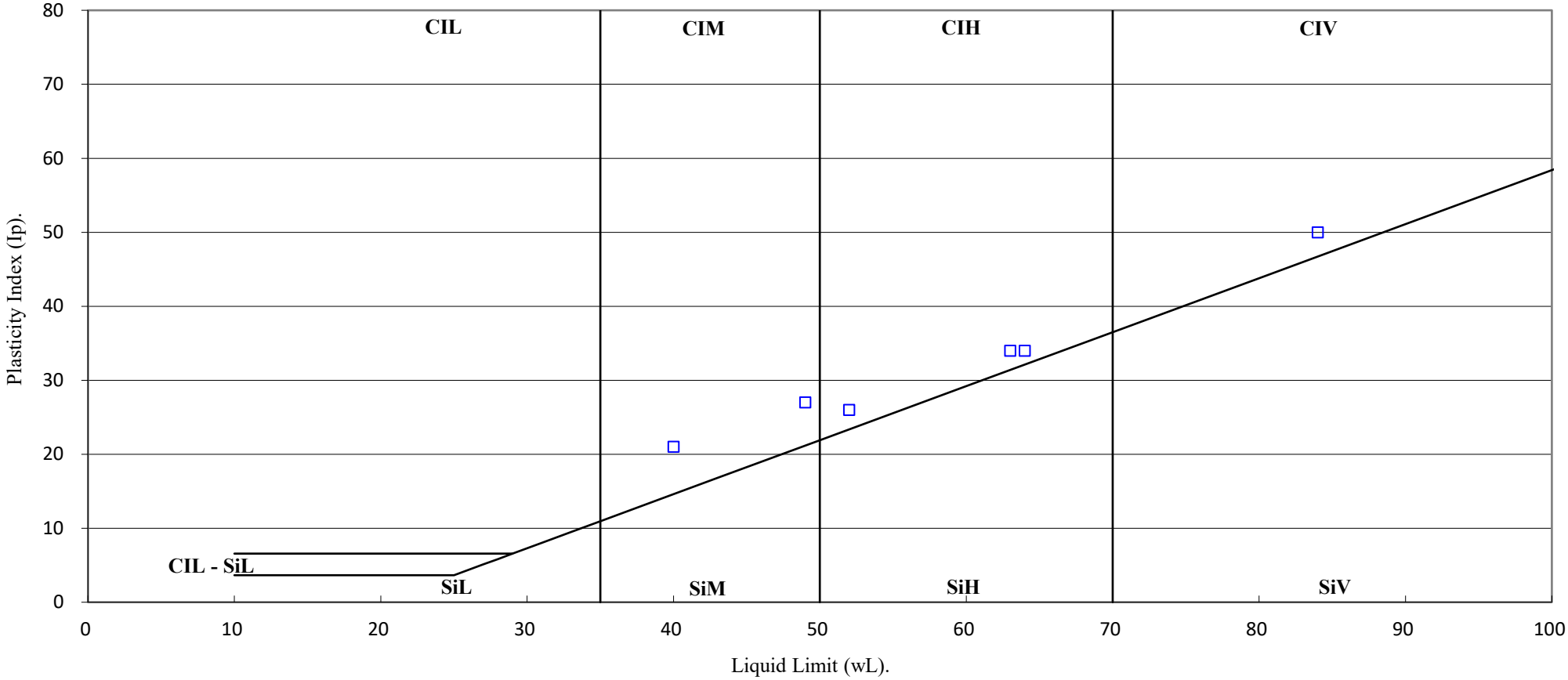
PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

One Earth Solar Farm

Contract No:
PSL24/7866
Client Ref:
2372986

PLASTICITY CHART

BS EN ISO 14688-2:2017 Clause 4.4



UKAS TESTING 4043 / PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY	**One Earth Solar Farm**	**Contract No:** PSL24/7866 **Client Ref:**

PARTICLE SIZE DISTRIBUTION TEST

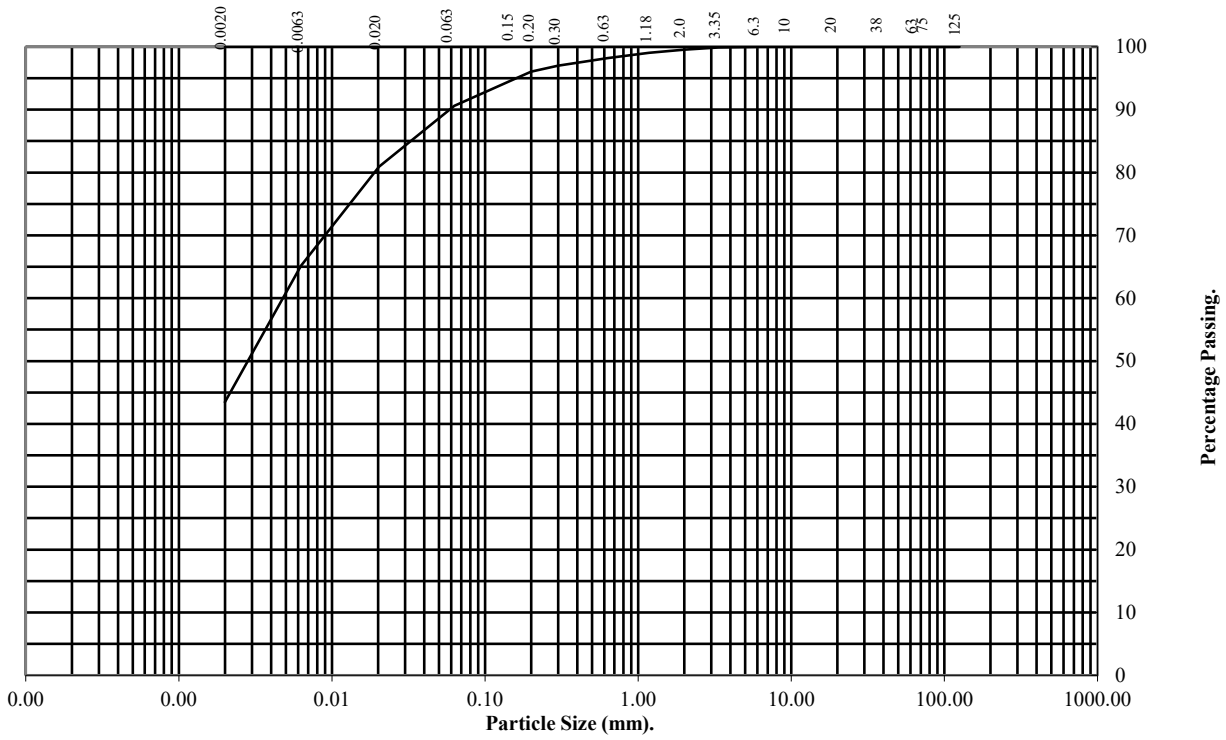
BS 1377 - Part 2 : 2022 : Clause 10 in accordance with BS EN ISO 17892 - 4 : 2016

Sieve Method, Clause 5.2 & Pipette Method, Clause 5.4

Hole Number: TP006 **Top Depth (m):** 1.50

Sample Number: 7 **Base Depth (m):**

Sample Type: B



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
63	100
37.5	100
20	100
10	100
6.3	100
3.35	100
2	100
1.18	99
0.63	98
0.3	97
0.2	96
0.15	95
0.063	91

Particle Diameter	Percentage Passing
0.020	81
0.0063	65
0.0020	43
Particle Density - 2.65 Mg/m3 assumed	

Soil Fraction	Total Percentage
Cobbles	0
Gravel	0
Sand	9
Silt	48
Clay	43

Remarks:

See Summary of Soil Descriptions

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

One Earth Solar Farm

Contract No: PSL24/7866

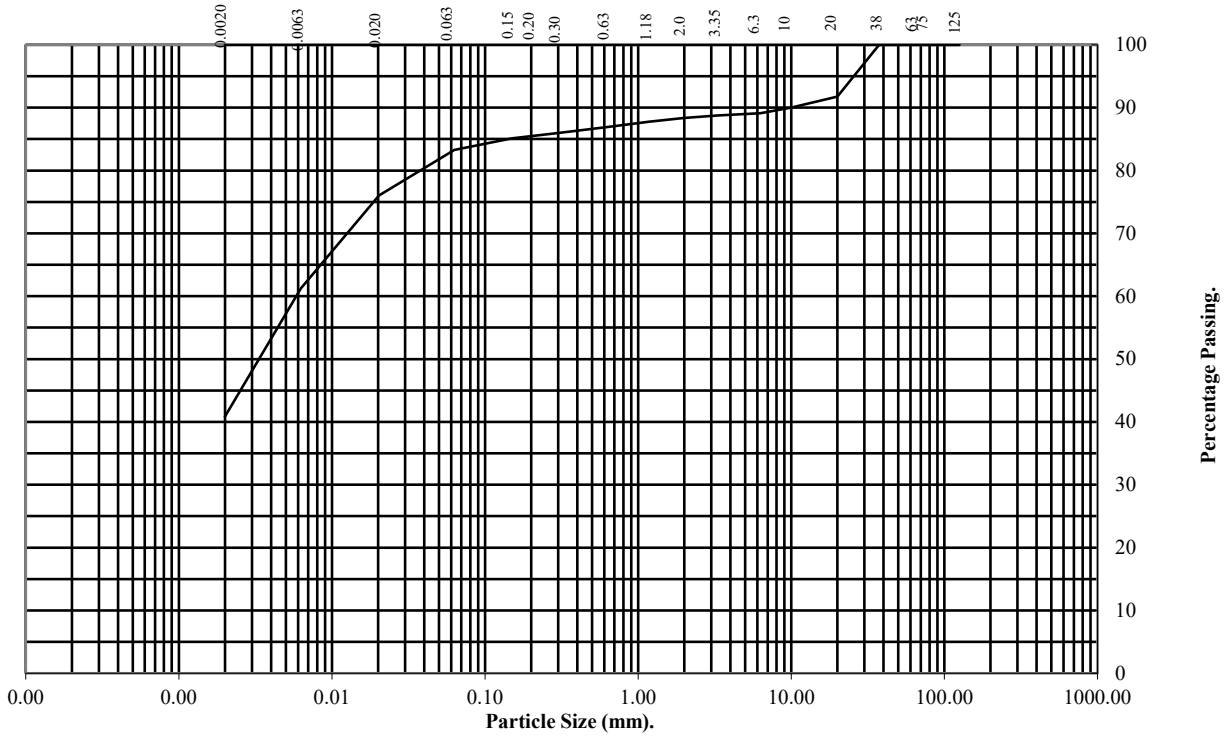
Client Ref: 2372986

PARTICLE SIZE DISTRIBUTION TEST

BS 1377 - Part 2 : 2022 : Clause 10 in accordance with BS EN ISO 17892 - 4 : 2016

Sieve Method, Clause 5.2 & Pipette Method, Clause 5.4

Hole Number:	**TP007**	**Top Depth (m):**	**0.50**
Sample Number:	**4**	**Base Depth (m):**	
Sample Type:	**LB**		



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
63	100
37.5	100
20	92
10	90
6.3	89
3.35	89
2	88
1.18	88
0.63	87
0.3	86
0.2	85
0.15	85
0.063	83

Particle Diameter	Percentage Passing
0.020	76
0.0063	61
0.0020	41
Particle Density - 2.65 Mg/m3 assumed	

Soil Fraction	Total Percentage
Cobbles	0
Gravel	12
Sand	5
Silt	42
Clay	41

Remarks:

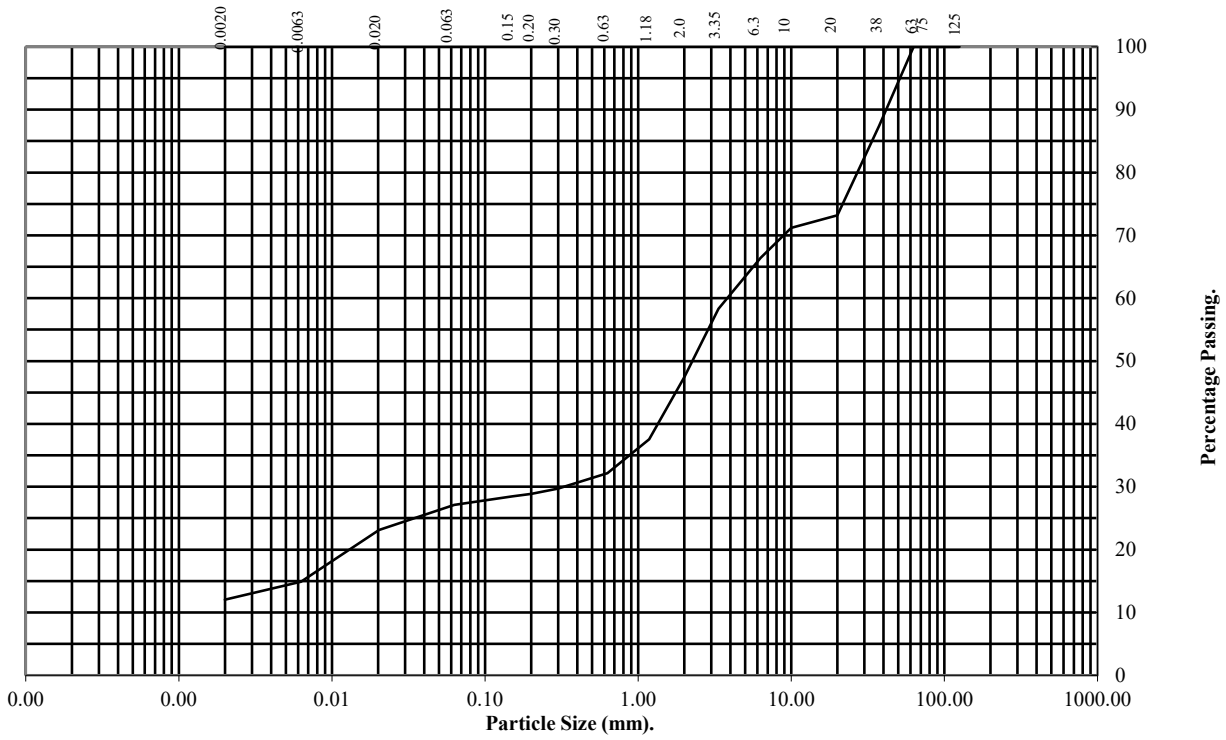
See Summary of Soil Descriptions

PARTICLE SIZE DISTRIBUTION TEST

BS 1377 - Part 2 : 2022 : Clause 10 in accordance with BS EN ISO 17892 - 4 : 2016

Sieve Method, Clause 5.2 & Pipette Method, Clause 5.4

Hole Number:	**TP010**	**Top Depth (m):**	**1.50**
Sample Number:	**7**	**Base Depth (m):**	
Sample Type:	**B**		



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
63	100
37.5	87
20	73
10	71
6.3	66
3.35	58
2	47
1.18	38
0.63	32
0.3	30
0.2	29
0.15	28
0.063	27

Particle Diameter	Percentage Passing
0.020	23
0.0063	15
0.0020	12
Particle Density - 2.65 Mg/m3 assumed	

Soil Fraction	Total Percentage
Cobbles	0
Gravel	53
Sand	20
Silt	15
Clay	12

Remarks:

See Summary of Soil Descriptions

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

One Earth Solar Farm

Contract No:
PSL24/7866
Client Ref:
2372986

PARTICLE SIZE DISTRIBUTION TEST

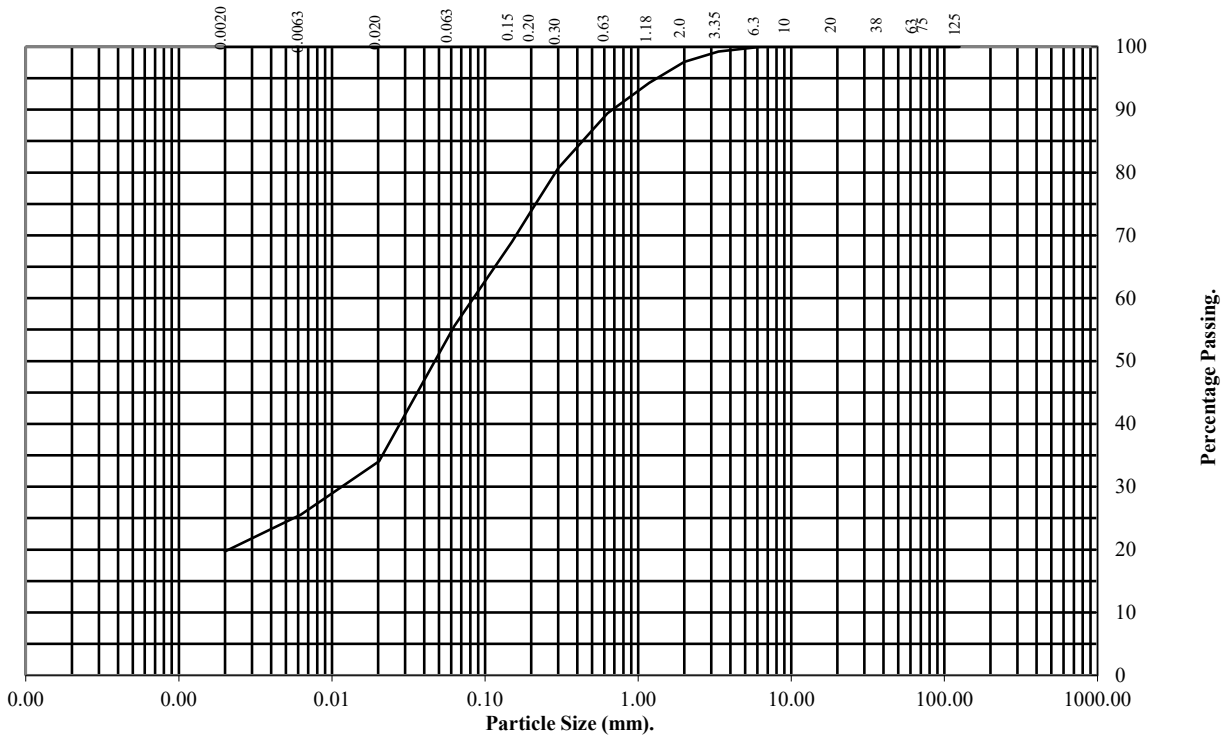
BS 1377 - Part 2 : 2022 : Clause 10 in accordance with BS EN ISO 17892 - 4 : 2016

Sieve Method, Clause 5.2 & Pipette Method, Clause 5.4

Hole Number: TP011 **Top Depth (m):** 1.50

Sample Number: 7 **Base Depth (m):**

Sample Type: B



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
63	100
37.5	100
20	100
10	100
6.3	100
3.35	99
2	98
1.18	94
0.63	89
0.3	81
0.2	74
0.15	69
0.063	56

Particle Diameter	Percentage Passing
0.020	34
0.0063	26
0.0020	20
Particle Density - 2.65 Mg/m3 assumed	

Soil Fraction	Total Percentage
Cobbles	0
Gravel	2
Sand	42
Silt	36
Clay	20

Remarks:

See Summary of Soil Descriptions

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

One Earth Solar Farm

Contract No: PSL24/7866

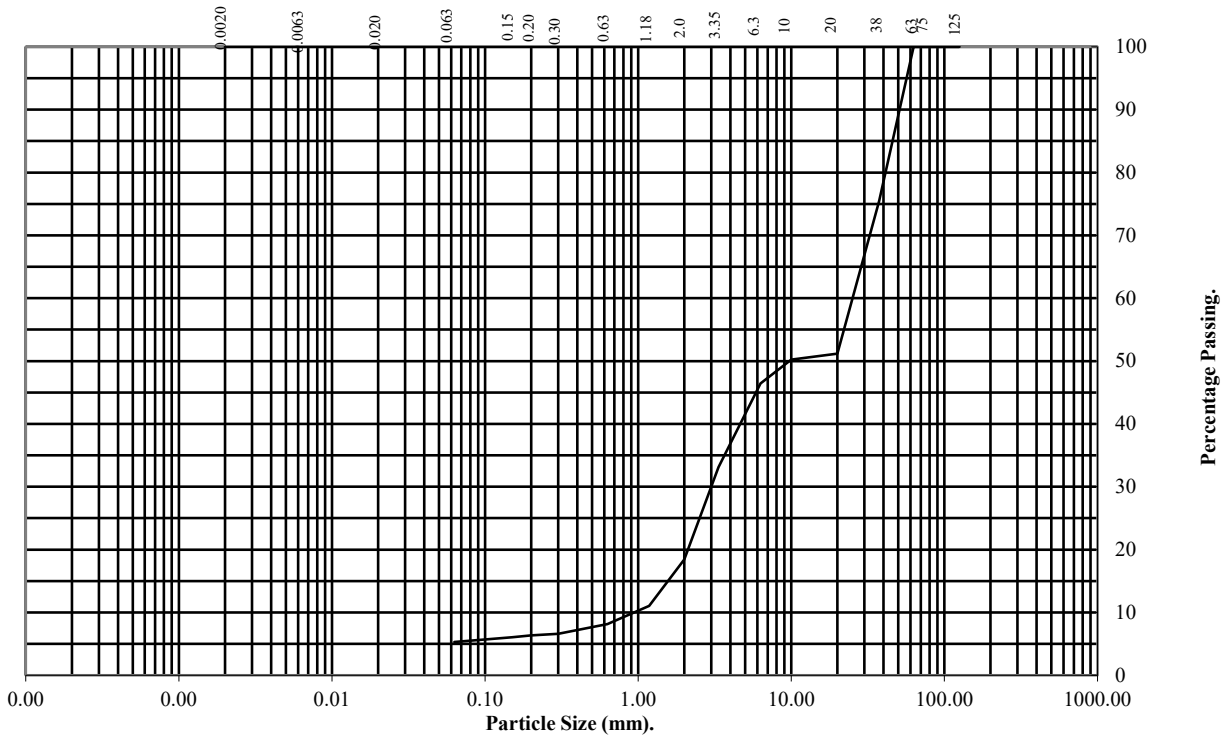
Client Ref: 2372986

PARTICLE SIZE DISTRIBUTION TEST

BS 1377 - Part 2 : 2022 : Clause 10 in accordance with BS EN ISO 17892 - 4 : 2016

Sieve Method, Clause 5.2

Hole Number:	**TP011**	**Top Depth (m):**	**2.50**
Sample Number:	**9**	**Base Depth (m):**	
Sample Type:	**B**		



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
63	100
37.5	75
20	51
10	50
6.3	46
3.35	33
2	18
1.18	11
0.63	8
0.3	7
0.2	6
0.15	6
0.063	5

Soil Fraction	Total Percentage
Cobbles	0
Gravel	82
Sand	13
Silt/Clay	5

Remarks:

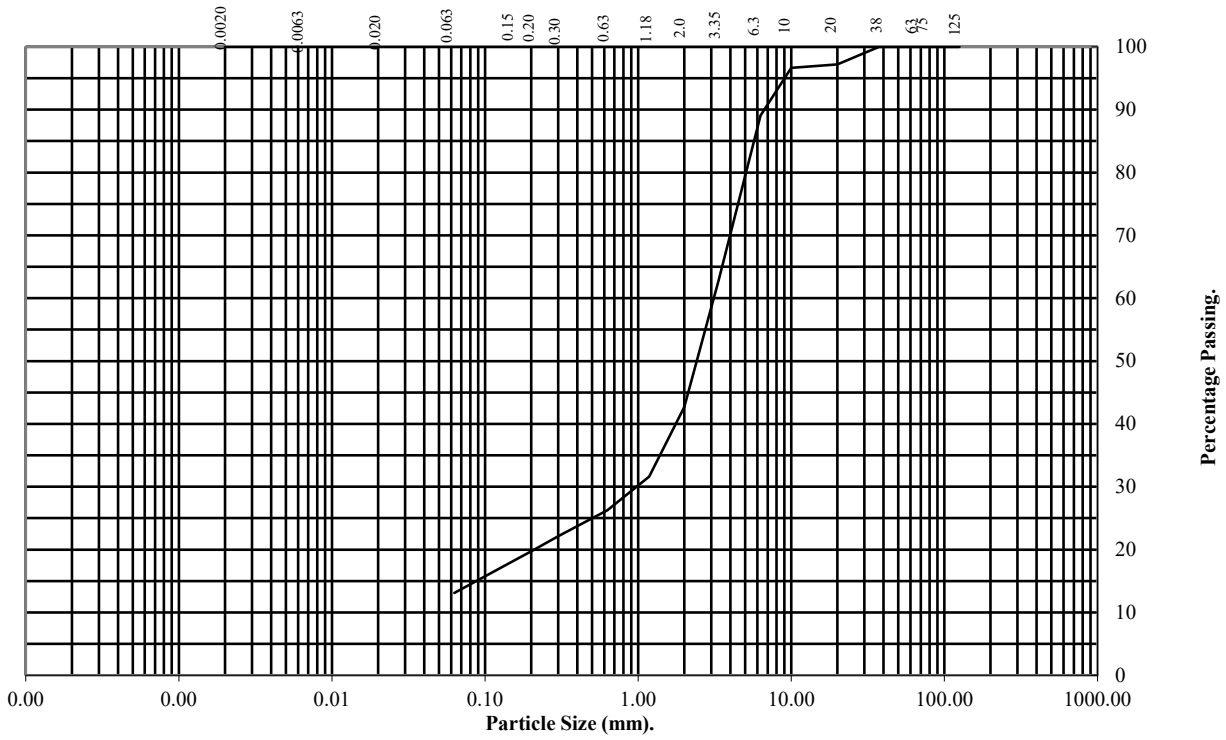
See Summary of Soil Descriptions

PARTICLE SIZE DISTRIBUTION TEST

BS 1377 - Part 2 : 2022 : Clause 10 in accordance with BS EN ISO 17892 - 4 : 2016

Sieve Method, Clause 5.2

Hole Number:	**TP012**	**Top Depth (m):**	**1.50**
Sample Number:	**7**	**Base Depth (m):**	
Sample Type:	**B**		



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
63	100
37.5	100
20	97
10	97
6.3	89
3.35	63
2	43
1.18	32
0.63	26
0.3	22
0.2	20
0.15	18
0.063	13

Soil Fraction	Total Percentage
Cobbles	0
Gravel	57
Sand	30
Silt/Clay	13

Remarks:

See Summary of Soil Descriptions

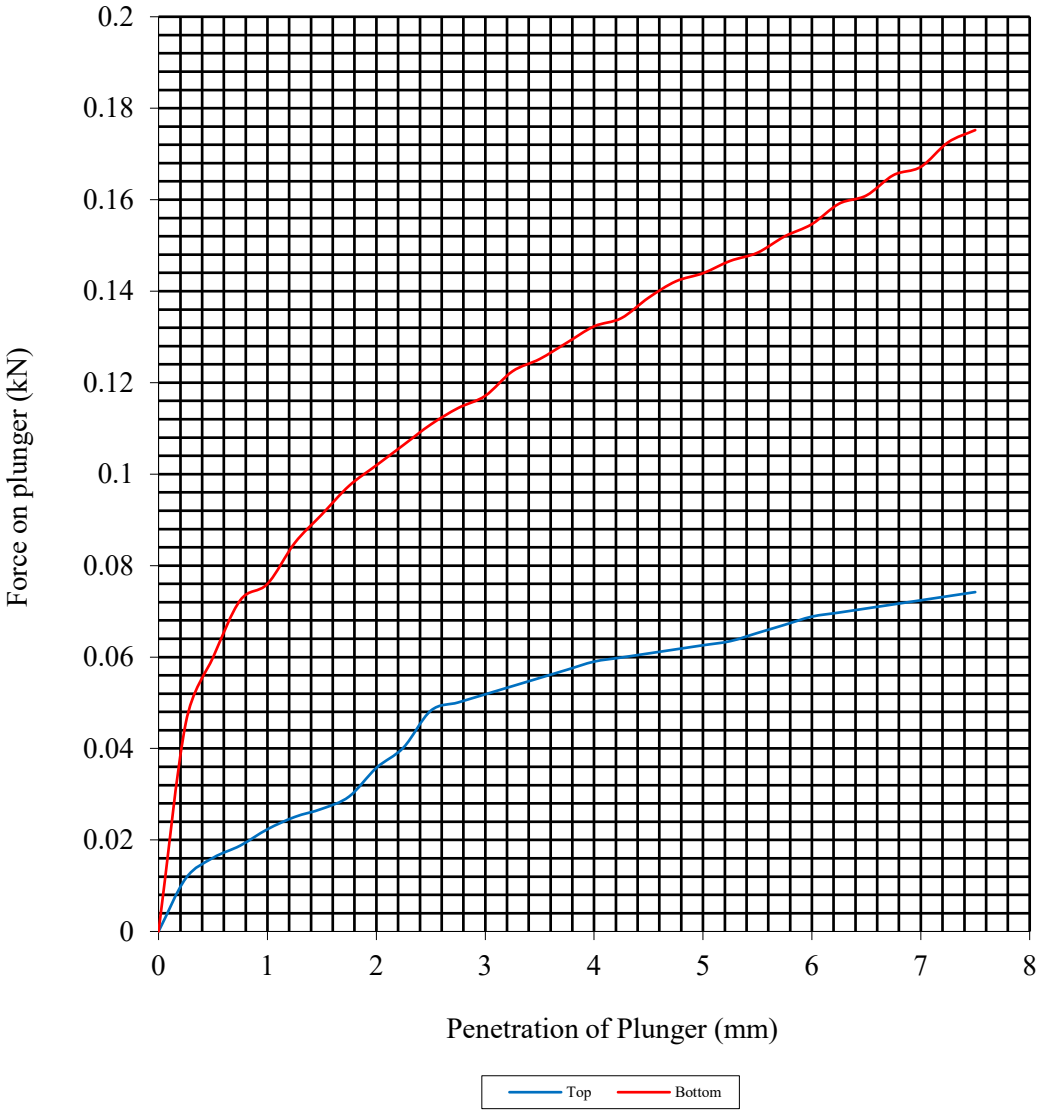
CALIFORNIA BEARING RATIO (CBR)

BS 1377 - Part 2 : Clause 15 : 2022

Hole Number: TP006 **Top Depth (m):** 1.50

Sample Number: 7 **Base Depth (m):**

Sample Type: B



Initial Sample Conditions		Sample Preparation		Final Water Content %		C.B.R. Value %	
Water Content:	39.9	Surcharge Kg:	4.20	Sample Top	39.8	Sample Top	0.4
Bulk Density Mg/m3:	1.80	Soaking Time hrs	0	Sample Bottom	40.1	Sample Bottom	0.8
Dry Density Mg/m3:	1.29	Swelling mm:	0.00	Remarks : See Summary of Soil Descriptions.			
Percentage retained on 20mm BS test sieve:			0				
Compaction Conditions		2.5kg					

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

One Earth Solar Farm

Contract No: PSL24/7866

Client Ref: 2372986

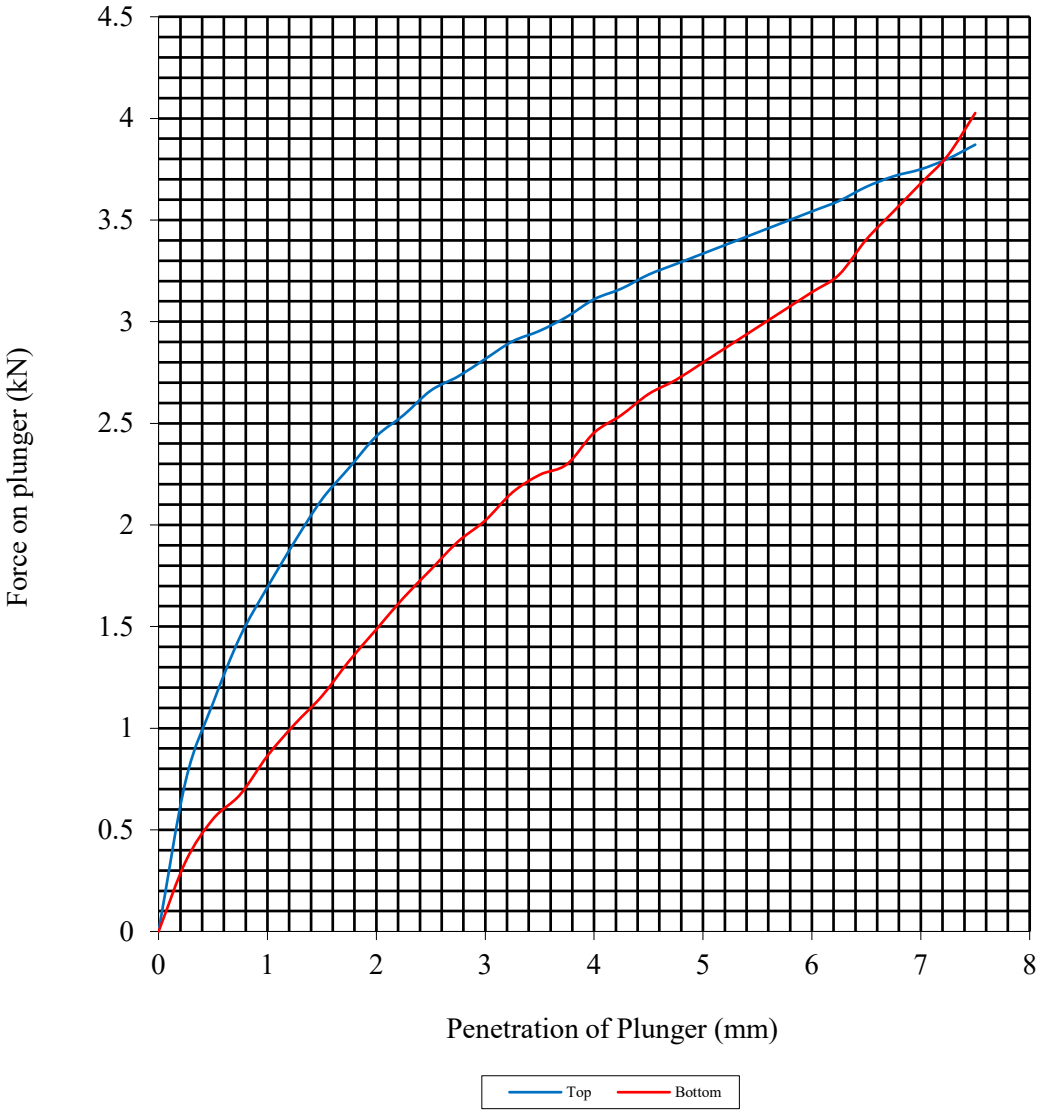
CALIFORNIA BEARING RATIO (CBR)

BS 1377 - Part 2 : Clause 15 : 2022

Hole Number: TP010 **Top Depth (m):** 0.50

Sample Number: 4 **Base Depth (m):**

Sample Type: LB



Initial Sample Conditions		Sample Preparation		Final Water Content %		C.B.R. Value %	
Water Content:	22.4	Surcharge Kg:	4.20	Sample Top	21.9	Sample Top	20.2
Bulk Density Mg/m3:	1.96	Soaking Time hrs	0	Sample Bottom	22.5	Sample Bottom	14.0
Dry Density Mg/m3:	1.60	Swelling mm:	0.00	Remarks : See Summary of Soil Descriptions.			
Percentage retained on 20mm BS test sieve:			4				
Compaction Conditions		2.5kg					

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

One Earth Solar Farm

Contract No: PSL24/7866

Client Ref: 2372986

4161

CONSTRUCTION TESTING SOLUTIONS
A PHENNA GROUP COMPANY

7 - 11 Harding Street
Leicester
LE1 4DH

Professional Soils Laboratory
5/7 Hexthorpe Road
Hexthorpe
Doncaster
DN4 0AR

Analytical Test Report: E24/00787/PSL - 24-52476

Your Project Reference:	**PSL24/7866 One Earth Solar Farm**		
Your Order Number:	PSL24/7866	Samples Received / Instructed:	13/11/2024 / 13/11/2024
Report Issue Number:	1	Sample Tested:	13/11 to 21/11/2024
Samples Analysed:	9 sample(s)	Report issued:	21/11/2024

Sign [redacted]

James Gane
Analytical Services Manager
CTS Group

Notes:

General

Please refer to Methodologies page for details pertaining to the analytical methods undertaken.

Samples will be retained for 14 days after issue of this report unless otherwise requested.

Moisture Content was determined in accordance with CTS method statement MS - CL - Sample Prep, oven dried at <30˚C.

Moisture Content is reported as a percentage of the dry mass of soil, this calculation is in accordance with BS1377, Part 2, 1990, Clause 3.2

Where specification limits are included these are for guidance only. Where a measured value has been highlighted this is not implying acceptance or failure and certainty of measurement values have not been taken into account.

Uncertainty of measurement values are available on request.

Samples were supplied by customer, results apply to the samples as received.

Deviating Samples

On receipt samples are compared against our sample holding and handling protocols, where any deviations have been noted these are reported on our deviating sample page (if present)

Accreditation Key

UKAS = UKAS Accreditation, MCERTS = MCERTS Accreditation, u = Unaccredited, subUKAS - Subcontracted to a laboratory UKAS accredited for this test, subMCERTS - Subcontracted to a laboratory MCERTS accredited for this test

MCERTS Accreditation only covers the SAND, CLAY and LOAM matrices

UKAS accreditation on waters only covers the Ground water and Surface water matrices

Date of Issue: 11.11.2024

Issued by: J. Gane

Issue No: 4

Rev No: 18

7 - 11 Harding Street
Leicester
LE1 4DH

E24/00787/PSL - 24-52476

Project Reference - PSL24/7866 One Earth Solar Farm

Analytical Test Results - Chemical Analysis

Lab Reference			417990	417991	417992	417993	417994	417995	417996
Client Sample ID			-	-	-	-	-	-	-
Client Sample Location			TP006	TP006	TP007	TP007	TP007	TP010	TP011
Client Sample Type			LB	D	D	D	D	D	D
Client Sample Number			4	8	2	5	8	5	8
Depth - Top (m)			0.50	2.20	0.20	0.90	2.50	0.90	1.90
Depth - Bottom (m)			0.50	2.20	0.20	0.90	2.50	0.90	1.90
Date of Sampling			-	-	-	-	-	-	-
Time of Sampling			-	-	-	-	-	-	-
Sample Matrix			Clay	Clay	Clay	Clay	Clay	Clay	Clay
Determinant	**Units**	**Accreditation**							
Water soluble sulphate (as SO_4)	(mg/l)	u	140	110	-	-	32	14	22
Acid Soluble Sulphate	(%)	u	0.06	0.08	-	-	0.04	0.04	0.07
Total Sulphur	(%)	UKAS	0.03	0.07	-	-	0.02	< 0.01	0.02
pH Value	pH Units	MCERTS	8.0	7.5	-	-	7.5	7.8	8.5
Organic matter (BS 1377)	(%)	UKAS	1.4	1.6	5.6	2.0	-	-	-
1377 Organic Matter - Sulphides/Chlorides Identified (Yes/No)	-	-	No	No	No	No	-	-	-

4161

CONSTRUCTION TESTING SOLUTIONS
A PHENNA GROUP COMPANY

7 - 11 Harding Street
Leicester
LE1 4DH

E24/00787/PSL - 24-52476

Project Reference - PSL24/7866 One Earth Solar Farm

Analytical Test Results - Chemical Analysis

Lab Reference			417997	417998
Client Sample ID			-	-
Client Sample Location			TP012	TP012
Client Sample Type			LB	D
Client Sample Number			4	11
Depth - Top (m)			0.50	3.30
Depth - Bottom (m)			0.50	3.30
Date of Sampling			-	-
Time of Sampling			-	-
Sample Matrix			Clay	Other
Determinant	**Units**	**Accreditation**		
Water soluble sulphate (as SO_4)	(mg/l)	u	13	30
Acid Soluble Sulphate	(%)	u	0.02	0.06
Total Sulphur	(%)	UKAS	< 0.01	0.02
pH Value	pH Units	MCERTS	8.5	8.7
Organic matter (BS 1377)	(%)	UKAS	0.4	-
1377 Organic Matter - Sulphides/Chlorides Identified (Yes/No)	-	-	No	-

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CONSTRUCTION TESTING SOLUTIONS
A PHENNA GROUP COMPANY

7 - 11 Harding Street
Leicester
LE1 4DH

E24/00787/PSL - 24-52476

Project Reference - PSL24/7866 One Earth Solar Farm

Sample Descriptions

Lab Reference	Client Sample ID	Client Sample Location	Client Sample Type	Client Sample Number	Description	Moisture Content (%)	Stone Content (%)	Passing 2mm test sieve (%)
417990	-	TP006	LB	4	Brown silty clay	-	-	100
417991	-	TP006	D	8	Brown silty clay	-	-	100
417992	-	TP007	D	2	Brown silty clay	-	-	100
417993	-	TP007	D	5	Brown silty clay	-	-	100
417994	-	TP007	D	8	Brown silty clay	-	-	100
417995	-	TP010	D	5	Reddish brown slightly gravelly silty clay	-	-	100
417996	-	TP011	D	8	Grey sandy clay	-	-	64
417997	-	TP012	LB	4	Brown slightly gravelly silty clay	-	-	100
417998	-	TP012	D	11	Reddish brown very sandy mudstone	-	-	100

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CONSTRUCTION TESTING SOLUTIONS
A PHENNA GROUP COMPANY

7 - 11 Harding Street
Leicester
LE1 4DH

E24/00787/PSL - 24-52476

Project Reference - PSL24/7866 One Earth Solar Farm

Sample Comments

Lab Reference	Client Sample ID	Client Sample Location	Client Sample Type	Client Sample Number	Comments
417990	-	TP006	LB	4	
417991	-	TP006	D	8	
417992	-	TP007	D	2	
417993	-	TP007	D	5	
417994	-	TP007	D	8	
417995	-	TP010	D	5	
417996	-	TP011	D	8	
417997	-	TP012	LB	4	
417998	-	TP012	D	11	

7 - 11 Harding Street
Leicester
LE1 4DH

E24/00787/PSL - 24-52476

Project Reference - PSL24/7866 One Earth Solar Farm

Analysis Methodologies

Test Code	Test Name / Reference	Sample condition for analysis	Sample Preperation	Test Details
ANIONSS	MS - CL - Anions by Aquakem (2:1Extract)	Oven dried	Passing 2mm test sieve	Determination of Anions (inc Sulphate, chloride etc.) in soils by Aquakem. Analysis is based on a 2:1 water to soil extraction ratio
PHS	MS - CL - pH in Soils	As received	Passing 10mm test sieve	Determination of pH in soils using a pH probe (using a 1:3 soil to water extraction)
ASSO4S	MS - CL - Acid Soluble Sulphate	Oven Dried	Passing 2mm test sieve	Determination of total sulphate in soils by acid extraction followed by ICP analysis
SAMPLEPREP	MS - CL - Sample Preparation	-	-	Preparation of samples (including determination of moisture content) to allow for subsequent analysis
1377ORG	BS1377 Organic Matter	Oven dried	BS1377 : Part 1 : 2016	Testing was in accordance with BS 1377: Part 3: 2018 + A1 : 2021 Clause 4, The reported value is the average OMC present in the soil fraction to the nearest 0.1% of the original oven dry mass of soil. Some information required by BS 1377 has not been
1377TS-ELT	BS1377 Total Sulphur Content by HTC	Oven dried	BS1377 : Part 1 : 2016	Total Sulphur Content testing of Soil in accordance with BS 1377 : Part 3 : 2018 + A1 : 2021 Clause 7.10 (using Eltra CS-800 Analyser)

7 - 11 Harding Street
Leicester
LE1 4DH

E24/00787/PSL - 24-52476

Project Reference - PSL24/7866 One Earth Solar Farm

Sample Deviations

Deviations are listed below against each sample and associated test method, where deviation(s) are noted it means data may not be representative of the sample at the time of sampling and it is possible that results provided may be compromised.

Observations on receipt

A - No date of sampling provided
W - No time of sampling provided for water sample
C - Received in inappropriate container
H - Contains headspace
T - Temperature on receipt exceeds storage temperature
R - Sample(s) received with less than 96 hours for testing to commence/complete, any result formally classed as deviating will be marked with an X against the applicable test (i.e. RX)

Observations whilst in laboratory

X - Exceeds sampling to extraction or analysis timescales

Lab Reference	Client Sample ID	Client Sample Location	Client Sample Type	Client Sample Number	Test	Deviations
417990	-	TP006	LB	4		A
417991	-	TP006	D	8		A
417992	-	TP007	D	2		A
417993	-	TP007	D	5		A
417994	-	TP007	D	8		A
417995	-	TP010	D	5		A
417996	-	TP011	D	8		A
417997	-	TP012	LB	4		A
417998	-	TP012	D	11		A

LABORATORY REPORT

Contract Number: PSL24/7867

Report Date: 04 December 2024

Client's Reference: 2372986-004

Client Name: Central Alliance
Alliance House
South Park Way
Wakefield 41 Business Park
Wakefield
WF2 0XJ

For the attention of: John Parkinson

Contract Title: One Earth Solar Farm

Date Received: 25/10/2024
Date Commenced: 25/10/2024
Date Completed: 4/12/2024

Notes: Opinions and Interpretations are outside the UKAS Accreditation

A copy of the Laboratory Schedule of accredited tests as issued by UKAS is attached to this report. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced other than in full, without the prior written approval of the laboratory.

Checked and Approved Signatories:

A Watkins (Managing Director)
R Berriman (Associate Director)
S Royle (Laboratory Manager)
[redacted]
L Knight (Assistant Laboratory Manager)
S Eyre (Senior Technical Coordinator)
T Watkins (Senior Technician)

5 – 7 Hexthorpe Road,
Hexthorpe,
Doncaster,
DN4 0AR
Tel: 01302 768098
Email: rberriman@prosoils.co.uk
awatkins@prosoils.co.uk

SUMMARY OF LABORATORY SOIL DESCRIPTIONS

Hole Number	Sample Number	Sample Type	Top Depth m	Base Depth m	Description of Sample
BH012	3	D	0.75		Reddish brown slightly sandy slightly gravelly CLAY.
BH012	4	B	0.80		Reddish brown sandy slightly gravelly CLAY.
BH012	6	D	1.20		Brown mottled grey slightly sandy slightly gravelly CLAY.
BH012	5	D	1.60		Reddish brown slightly sandy slightly gravelly CLAY.
BH012	7	D	2.50		Reddish brown slightly sandy slightly gravelly CLAY.
BH013	8	B	1.20		Brown slightly sandy gravelly CLAY.
BH013	9	B	1.50		Reddish brown slightly sandy slightly gravelly CLAY.
BH013	10	B	2.00		Brown slightly sandy slightly gravelly CLAY.

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

One Earth Solar Farm

Contract No:

PSL24/7867

Client Ref:

2372986

SUMMARY OF SOIL CLASSIFICATION TESTS

BS 1377 - Part 2 : 2022 in accordance with BS EN ISO 17892 (as below)

Hole Number	Sample Number	Sample Type	Top Depth m	Base Depth m	Water Content %	Linear Shrinkage	Particle Density Mg/m^3	Liquid Limit %	Plastic Limit %	Plasticity Index %	Passing 0.425mm %	Remarks
BH012	3	D	0.75		24.3			40	25	15	98	Medium Plasticity CIM
BH012	4	B	0.80		22.8							
BH012	6	D	1.20		14.9			42	22	20	92	Medium Plasticity CIM
BH012	5	D	1.60		13.5			37	24	13	90	Medium Plasticity CIM
BH012	7	D	2.50		15.7			33	23	10	94	Low Plasticity CIL
BH013	8	B	1.20		21.6							
BH013	9	B	1.50		27.0			41	25	16	90	Medium Plasticity CIM
BH013	10	B	2.00		20.5			32	22	10	70	Low Plasticity CIL

Water Content - BS 1377 - Part 2 : 2022 : Clause 4 in accordance with BS EN ISO 17892 - 1 : 2014 + A1 : 2022
Linear Shrinkage - BS 1377 - Part 2 : 2022 : Clause 7
Particle Density (Gas Jar method) - BS 1377 - Part 2 : 2022 : Clause 9
Liquid, Plastic Limit & Plasticity Index - BS 1377 - Part 2 : 2022 : Clause 5 & 6 in accordance with BS EN ISO 17892 - 12 : 2018 + A2 : 2022

SYMBOLS : NP = Non Plastic

UKAS TESTING 4043

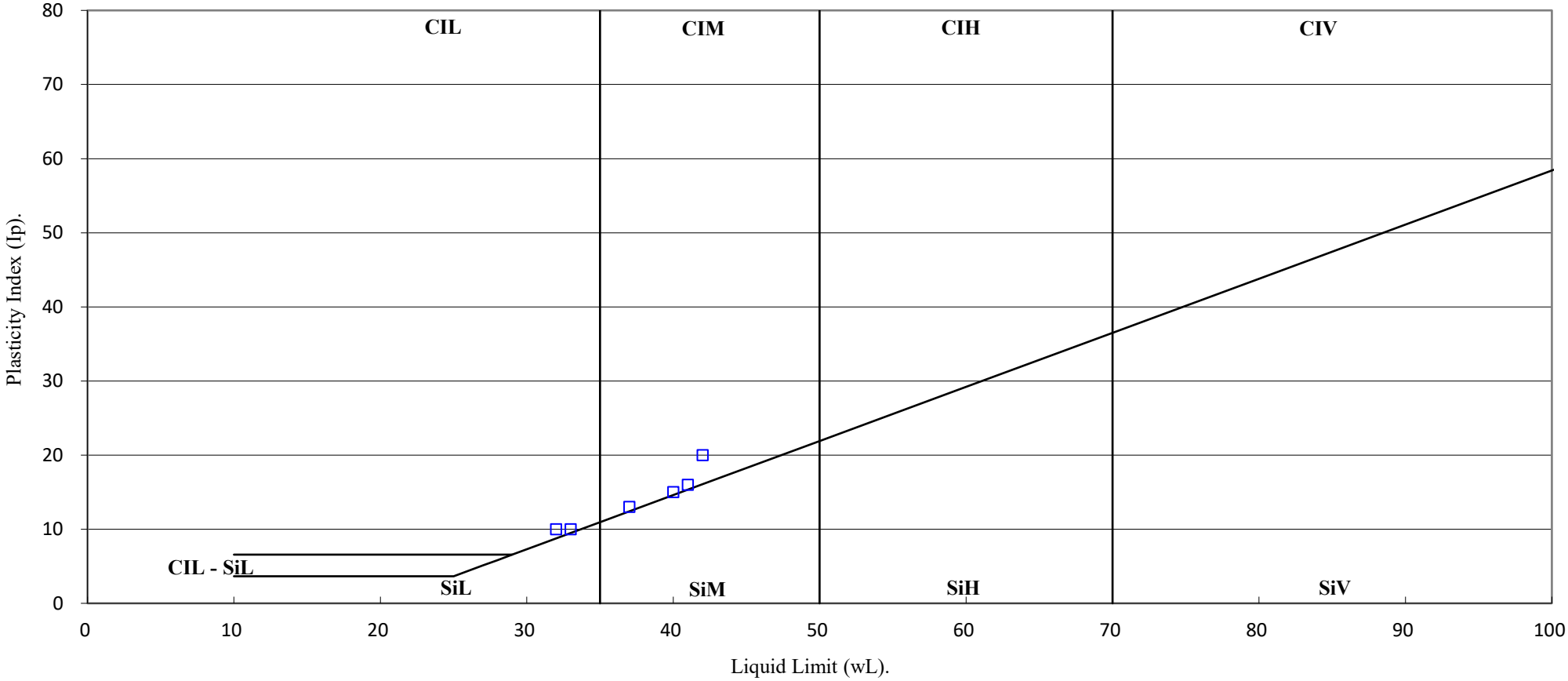
PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

One Earth Solar Farm

Contract No:
PSL24/7867
Client Ref:
2372986

PLASTICITY CHART

BS EN ISO 14688-2:2017 Clause 4.4



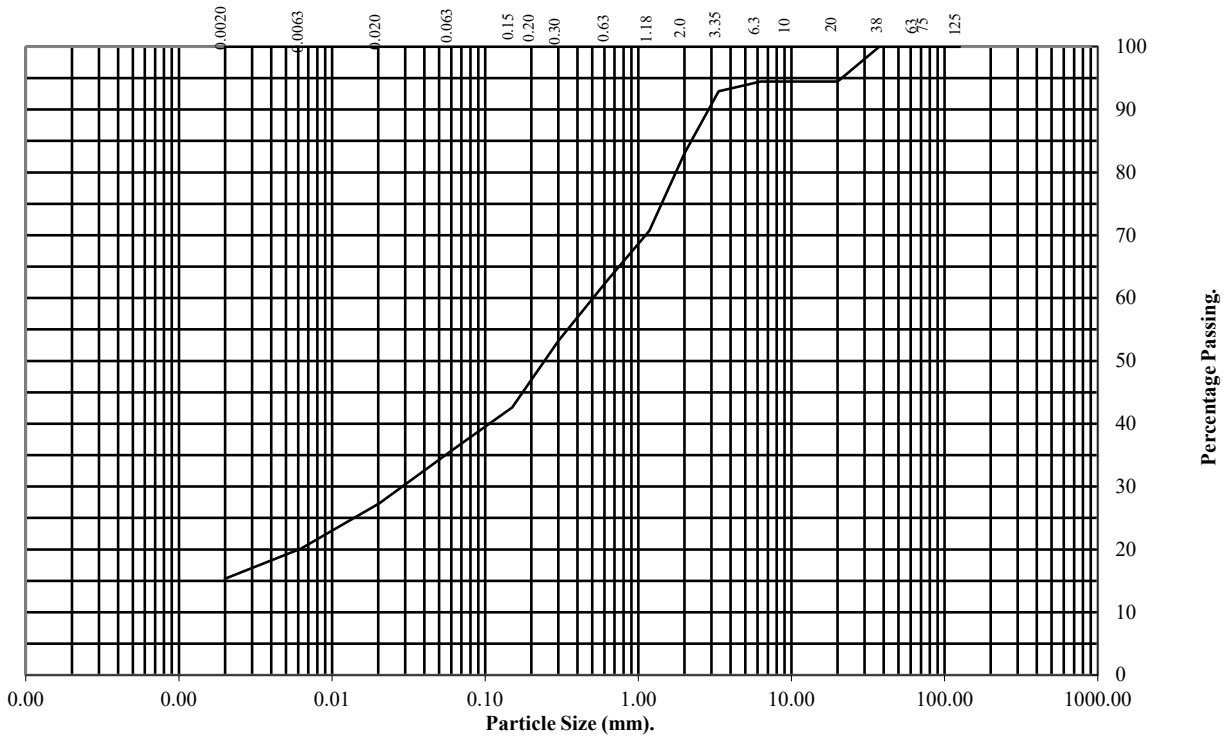
UKAS TESTING 4043 / PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY	**One Earth Solar Farm**	**Contract No:** PSL24/7867 **Client Ref:**

PARTICLE SIZE DISTRIBUTION TEST

BS 1377 - Part 2 : 2022 : Clause 10 in accordance with BS EN ISO 17892 - 4 : 2016

Sieve Method, Clause 5.2 & Pipette Method, Clause 5.4

Hole Number:	**BH012**	**Top Depth (m):**	**0.80**
Sample Number:	**4**	**Base Depth (m):**	
Sample Type:	**B**		



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
63	100
37.5	100
20	94
10	94
6.3	94
3.35	93
2	83
1.18	71
0.63	63
0.3	53
0.2	47
0.15	43
0.063	36

Particle Diameter	Percentage Passing
0.020	27
0.0063	20
0.0020	15
Particle Density - 2.65 Mg/m3 assumed	

Soil Fraction	Total Percentage
Cobbles	0
Gravel	17
Sand	47
Silt	21
Clay	15

Remarks:

See Summary of Soil Descriptions

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

One Earth Solar Farm

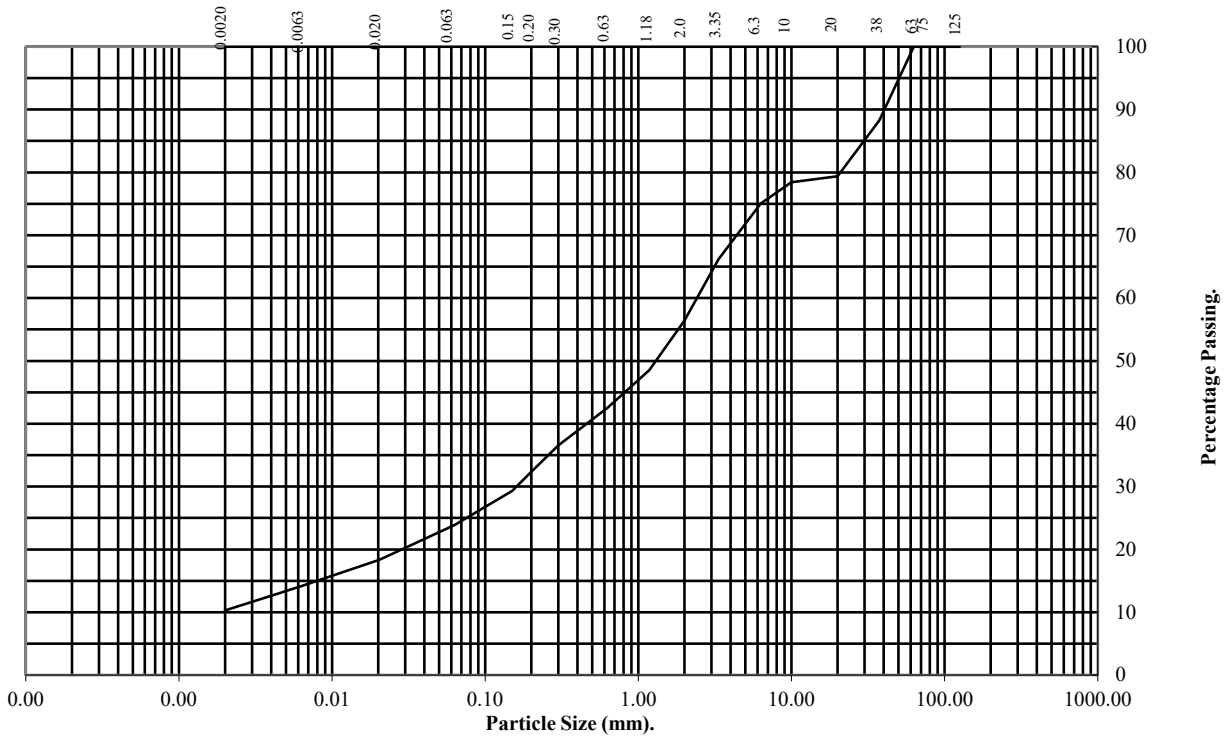
Contract No:
PSL24/7867
Client Ref:
2372986

PARTICLE SIZE DISTRIBUTION TEST

BS 1377 - Part 2 : 2022 : Clause 10 in accordance with BS EN ISO 17892 - 4 : 2016

Sieve Method, Clause 5.2 & Pipette Method, Clause 5.4

Hole Number:	**BH013**	**Top Depth (m):**	**1.20**
Sample Number:	**8**	**Base Depth (m):**	
Sample Type:	**B**		



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
63	100
37.5	88
20	79
10	78
6.3	75
3.35	66
2	56
1.18	49
0.63	43
0.3	37
0.2	32
0.15	29
0.063	24

Particle Diameter	Percentage Passing
0.020	18
0.0063	14
0.0020	10
Particle Density - 2.65 Mg/m3 assumed	

Soil Fraction	Total Percentage
Cobbles	0
Gravel	44
Sand	32
Silt	14
Clay	10

Remarks:

See Summary of Soil Descriptions

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

One Earth Solar Farm

Contract No:
PSL24/7867
Client Ref:
2372986

SUMMARY OF LABORATORY HAND VANES

(Inhouse Method using the principles of BS1377 - PART 9 : Clause 4.4 : 1990)

Hole Number	Sample Number	Sample Type	Top Depth m	Base Depth m	Water Content %	Peak Shear Strength kPa	Residual Shear Strength kPa	Remarks
BH012	4	B	0.80		22.7	7		Top
BH012	4	B	0.80		22.9	10		Base

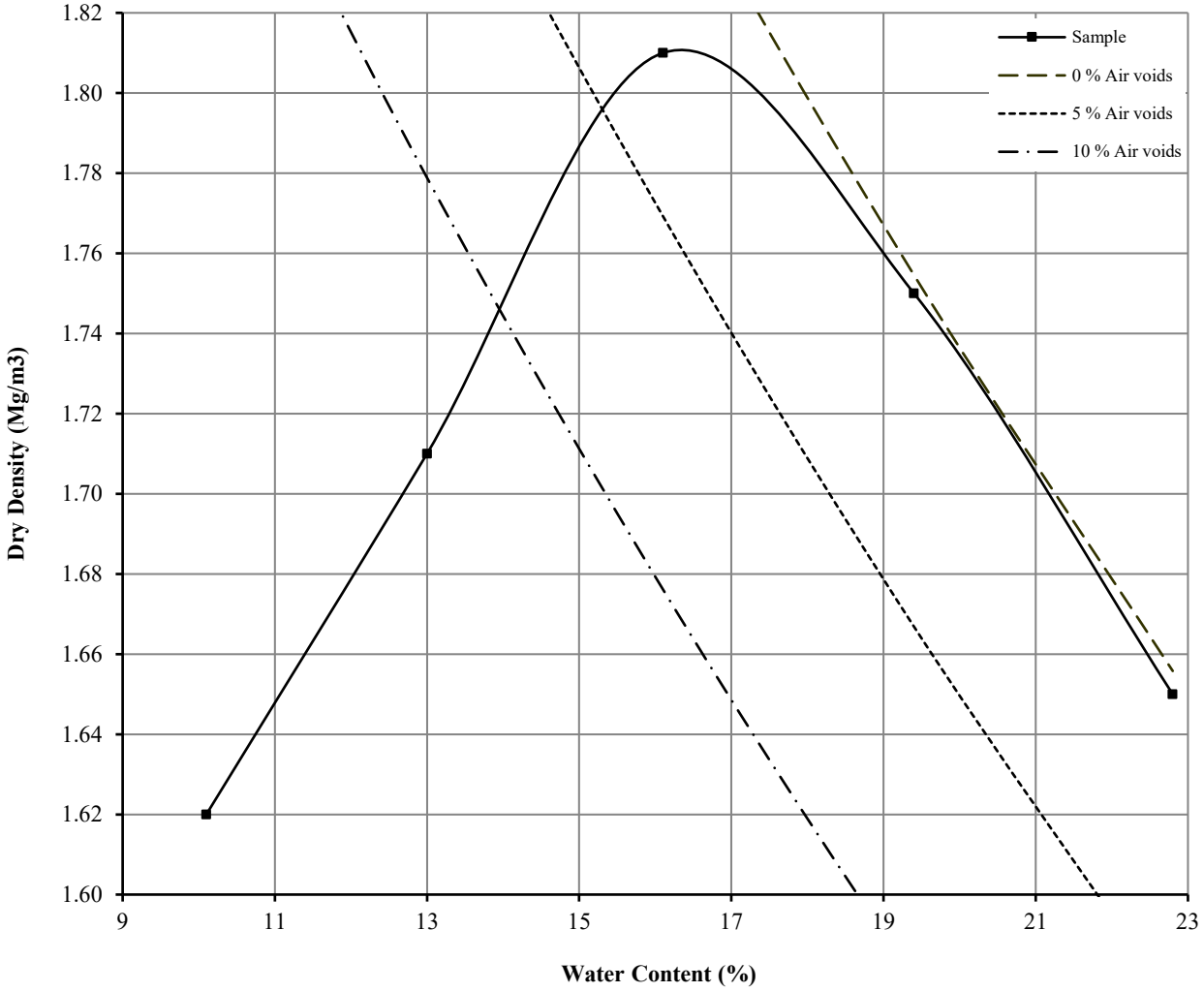
* This test is out of our UKAS scope

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY	One Earth Solar Farm	Contract No: PSL24/7867 Client Ref: 2372986

DRY DENSITY/WATER CONTENT RELATIONSHIP

BS 1377 - Part 2 : Clause 11 : 2022

Hole Number:	**BH012**	**Top Depth (m):**	**0.80**
Sample Number:	**4**	**Base Depth (m):**	
Sample Type:	**B**		



Initial Water Content:		22.8	Method of Compaction:	2.5kg	Separate Samples
Particle Density (Mg/m3):	2.66	Assumed	Material Retained on 37.5 mm Test Sieve (%):		0
Maximum Dry Density (Mg/m3):		1.81	Material Retained on 20.0 mm Test Sieve (%):		6
Optimum Water Content (%):		16	Grading Zone:		1
Remarks See summary of soil descriptions					

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

One Earth Solar Farm

Contract No.
PSL24/7867
Client Ref
2372986

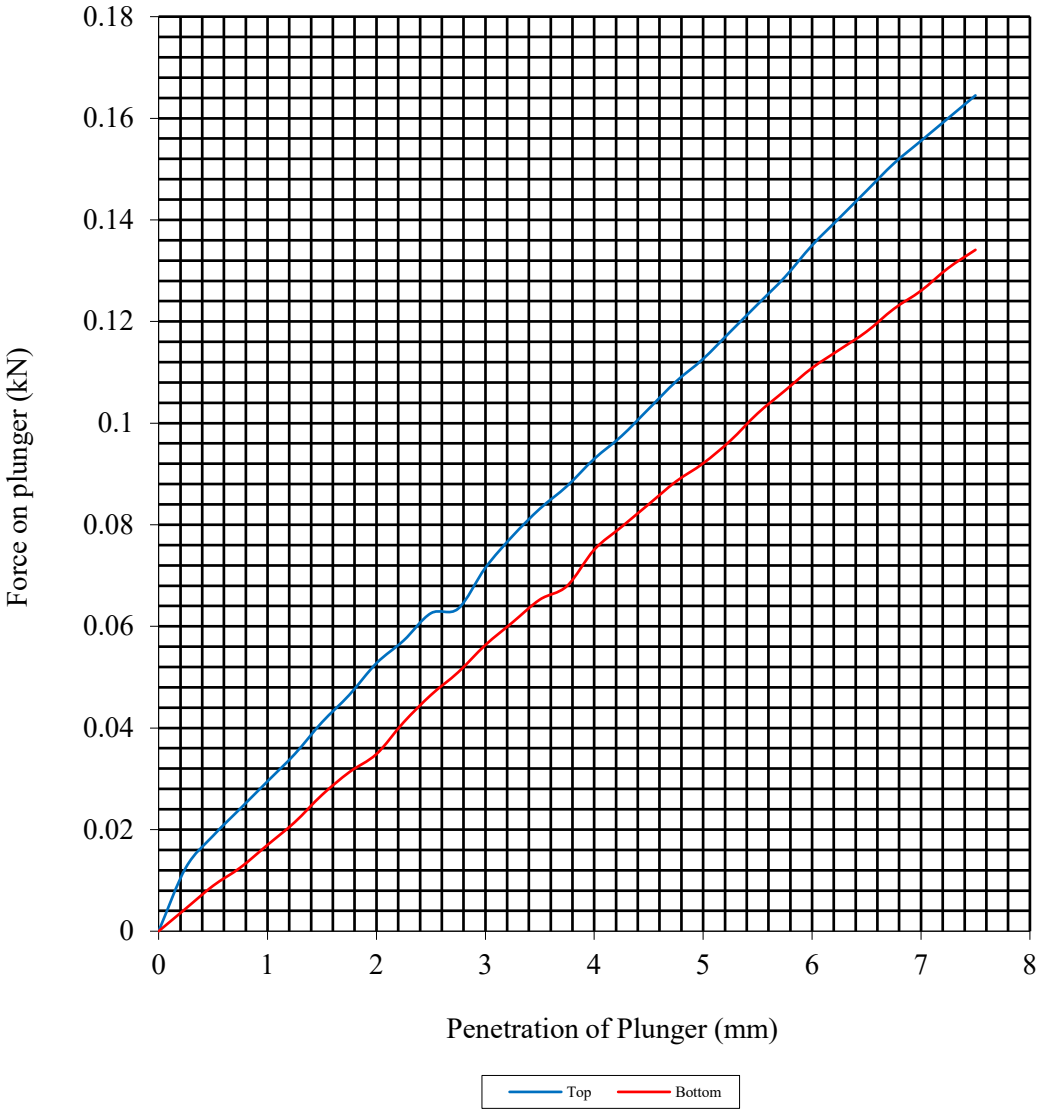
CALIFORNIA BEARING RATIO (CBR)

BS 1377 - Part 2 : Clause 15 : 2022

Hole Number: BH012 **Top Depth (m):** 0.80

Sample Number: 4 **Base Depth (m):**

Sample Type: B



Initial Sample Conditions		Sample Preparation		Final Water Content %		C.B.R. Value %	
Water Content:	22.8	Surcharge Kg:	4.20	Sample Top	22.7	Sample Top	0.6
Bulk Density Mg/m3:	2.03	Soaking Time hrs	0	Sample Bottom	22.9	Sample Bottom	0.5
Dry Density Mg/m3:	1.65	Swelling mm:	0.00	Remarks : See Summary of Soil Descriptions.			
Percentage retained on 20mm BS test sieve:			6				
Compaction Conditions		2.5kg					

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

One Earth Solar Farm

Contract No: PSL24/7867

Client Ref: 2372986

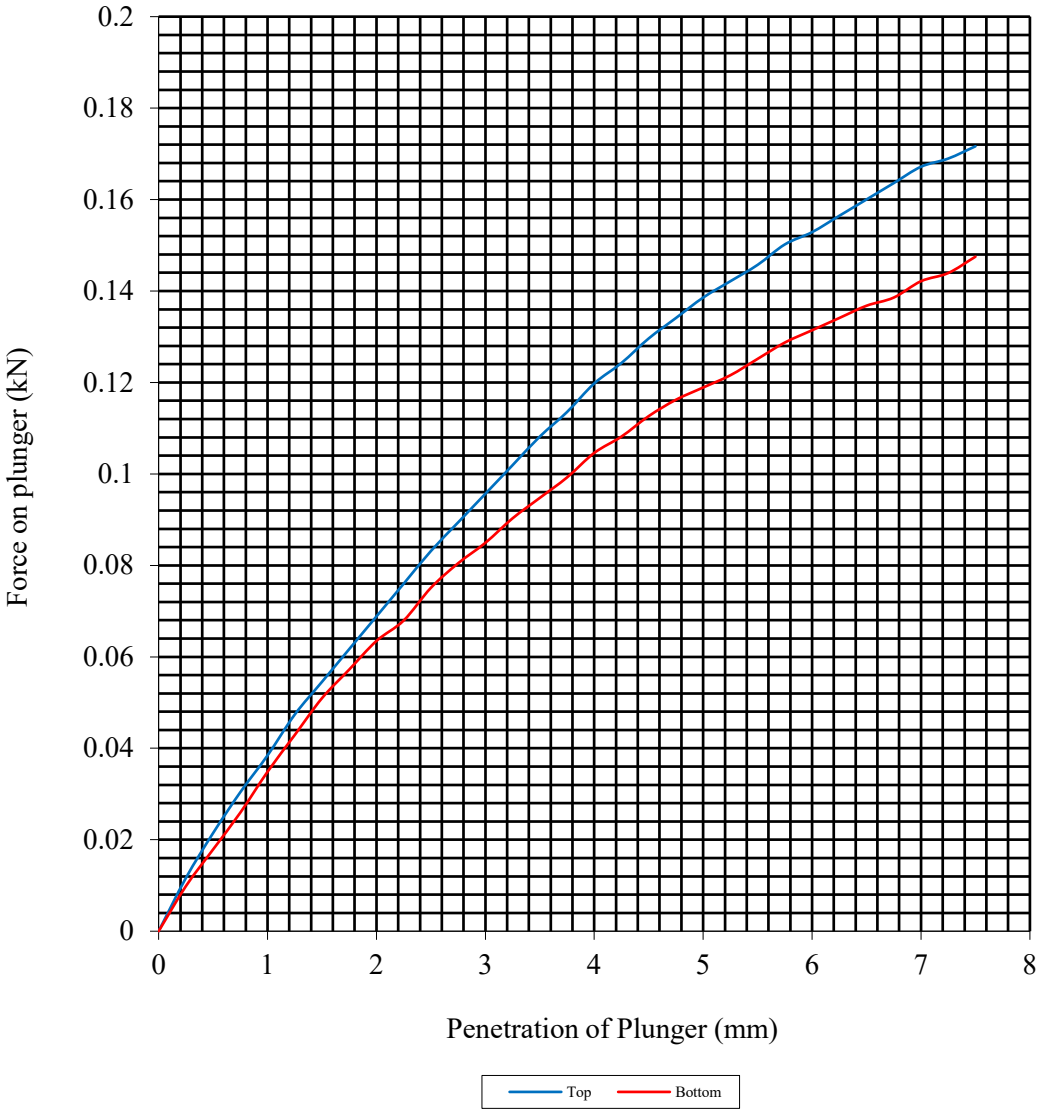
CALIFORNIA BEARING RATIO (CBR)

BS 1377 - Part 2 : Clause 15 : 2022

Hole Number: BH013 **Top Depth (m):** 1.20

Sample Number: 8 **Base Depth (m):**

Sample Type: B



Initial Sample Conditions		Sample Preparation		Final Water Content %		C.B.R. Value %	
Water Content:	21.6	Surcharge Kg:	4.20	Sample Top	21.5	Sample Top	0.7
Bulk Density Mg/m3:	2.04	Soaking Time hrs	0	Sample Bottom	21.7	Sample Bottom	0.6
Dry Density Mg/m3:	1.68	Swelling mm:	0.00	Remarks : See Summary of Soil Descriptions.			
Percentage retained on 20mm BS test sieve:			21				
Compaction Conditions		2.5kg					

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

One Earth Solar Farm

Contract No: PSL24/7867

Client Ref: 2372986

4161

CONSTRUCTION TESTING SOLUTIONS
A PHENNA GROUP COMPANY

7 - 11 Harding Street
Leicester
LE1 4DH

Professional Soils Laboratory
5/7 Hexthorpe Road
Hexthorpe
Doncaster
DN4 0AR

Analytical Test Report: E24/00781/PSL - 24-52470

Your Project Reference:	**PSL24/7867 One Earth Solar Farm**		
Your Order Number:	PSL24/7867	Samples Received / Instructed:	13/11/2024 / 13/11/2024
Report Issue Number:	1	Sample Tested:	13/11 to 21/11/2024
Samples Analysed:	4 sample(s)	Report issued:	21/11/2024

Signed [redacted]

James Gane
Analytical Services Manager
CTS Group

Notes:

General

Please refer to Methodologies page for details pertaining to the analytical methods undertaken.

Samples will be retained for 14 days after issue of this report unless otherwise requested.

Moisture Content was determined in accordance with CTS method statement MS - CL - Sample Prep, oven dried at <30˚C.

Moisture Content is reported as a percentage of the dry mass of soil, this calculation is in accordance with BS1377, Part 2, 1990, Clause 3.2

Where specification limits are included these are for guidance only. Where a measured value has been highlighted this is not implying acceptance or failure and certainty of measurement values have not been taken into account.

Uncertainty of measurement values are available on request.

Samples were supplied by customer, results apply to the samples as received.

Deviating Samples

On receipt samples are compared against our sample holding and handling protocols, where any deviations have been noted these are reported on our deviating sample page (if present)

Accreditation Key

UKAS = UKAS Accreditation, MCERTS = MCERTS Accreditation, u = Unaccredited, subUKAS - Subcontracted to a laboratory UKAS accredited for this test, subMCERTS - Subcontracted to a laboratory MCERTS accredited for this test

MCERTS Accreditation only covers the SAND, CLAY and LOAM matrices

UKAS accreditation on waters only covers the Ground water and Surface water matrices

Date of Issue: 11.11.2024

Issued by: J. Gane

Issue No: 4

Rev No: 18

4161

CONSTRUCTION TESTING SOLUTIONS
A PHENNA GROUP COMPANY

7 - 11 Harding Street
Leicester
LE1 4DH

E24/00781/PSL - 24-52470

Project Reference - PSL24/7867 One Earth Solar Farm

Analytical Test Results - Chemical Analysis

Lab Reference			417933	417934	417935	417936
Client Sample ID			-	-	-	-
Client Sample Location			BH012	BH012	BH013	BH013
Client Sample Type			D	B	B	D
Client Sample Number			6	13	10	16
Depth - Top (m)			1.20	6.00	2.00	6.60
Depth - Bottom (m)			1.20	6.00	2.00	6.60
Date of Sampling			-	-	-	-
Time of Sampling			-	-	-	-
Sample Matrix			Sand	Clay	Clay	Clay
Determinant	**Units**	**Accreditation**				
Water soluble sulphate (as SO_4)	(mg/l)	u	91	53	32	85
Acid Soluble Sulphate	(%)	u	0.08	0.11	0.11	0.11
Total Sulphur	(%)	UKAS	0.02	0.02	0.03	0.03
pH Value	pH Units	MCERTS	8.7	8.8	8.8	8.7
Organic matter (BS 1377)	(%)	UKAS	0.2	-	-	-
1377 Organic Matter - Sulphides/Chlorides Identified (Yes/No)	-	-	No	-	-	-

4161

CONSTRUCTION TESTING SOLUTIONS
A PHENNA GROUP COMPANY

7 - 11 Harding Street
Leicester
LE1 4DH

E24/00781/PSL - 24-52470

Project Reference - PSL24/7867 One Earth Solar Farm

Sample Descriptions

Lab Reference	Client Sample ID	Client Sample Location	Client Sample Type	Client Sample Number	Description	Moisture Content (%)	Stone Content (%)	Passing 2mm test sieve (%)
417933	-	BH012	D	6	Mottled grey brown slightly gravelly silty sand	-	-	100
417934	-	BH012	B	13	Brown very gravelly slightly sandy silty clay	-	-	100
417935	-	BH013	B	10	Brown gravelly slightly sandy silty clay	-	-	93
417936	-	BH013	D	16	Brown very gravelly slightly sandy silty clay	-	-	88

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CONSTRUCTION TESTING SOLUTIONS
A PHENNA GROUP COMPANY

7 - 11 Harding Street
Leicester
LE1 4DH

E24/00781/PSL - 24-52470

Project Reference - PSL24/7867 One Earth Solar Farm

Sample Comments

Lab Reference	Client Sample ID	Client Sample Location	Client Sample Type	Client Sample Number	Comments
417933	-	BH012	D	6	
417934	-	BH012	B	13	
417935	-	BH013	B	10	
417936	-	BH013	D	16	

7 - 11 Harding Street
Leicester
LE1 4DH

E24/00781/PSL - 24-52470

Project Reference - PSL24/7867 One Earth Solar Farm

Analysis Methodologies

Test Code	Test Name / Reference	Sample condition for analysis	Sample Preperation	Test Details
ANIONSS	MS - CL - Anions by Aquakem (2:1Extract)	Oven dried	Passing 2mm test sieve	Determination of Anions (inc Sulphate, chloride etc.) in soils by Aquakem. Analysis is based on a 2:1 water to soil extraction ratio
PHS	MS - CL - pH in Soils	As received	Passing 10mm test sieve	Determination of pH in soils using a pH probe (using a 1:3 soil to water extraction)
ASSO4S	MS - CL - Acid Soluble Sulphate	Oven Dried	Passing 2mm test sieve	Determination of total sulphate in soils by acid extraction followed by ICP analysis
SAMPLEPREP	MS - CL - Sample Preparation	-	-	Preparation of samples (including determination of moisture content) to allow for subsequent analysis
1377ORG	BS1377 Organic Matter	Oven dried	BS1377 : Part 1 : 2016	Testing was in accordance with BS 1377: Part 3: 2018 + A1 : 2021 Clause 4, The reported value is the average OMC present in the soil fraction to the nearest 0.1% of the original oven dry mass of soil. Some information required by BS 1377 has not been
1377TS-ELT	BS1377 Total Sulphur Content by HTC	Oven dried	BS1377 : Part 1 : 2016	Total Sulphur Content testing of Soil in accordance with BS 1377 : Part 3 : 2018 + A1 : 2021 Clause 7.10 (using Eltra CS-800 Analyser)

7 - 11 Harding Street
Leicester
LE1 4DH

E24/00781/PSL - 24-52470

Project Reference - PSL24/7867 One Earth Solar Farm

Sample Deviations

Deviations are listed below against each sample and associated test method, where deviation(s) are noted it means data may not be representative of the sample at the time of sampling and it is possible that results provided may be compromised.

Observations on receipt

A - No date of sampling provided
W - No time of sampling provided for water sample
C - Received in inappropriate container
H - Contains headspace
T - Temperature on receipt exceeds storage temperature
R - Sample(s) received with less than 96 hours for testing to commence/complete, any result formally classed as deviating will be marked with an X against the applicable test (i.e. RX)

Observations whilst in laboratory

X - Exceeds sampling to extraction or analysis timescales

Lab Reference	Client Sample ID	Client Sample Location	Client Sample Type	Client Sample Number	Test	Deviations
417933	-	BH012	D	6		A
417934	-	BH012	B	13		A
417935	-	BH013	B	10		A
417936	-	BH013	D	16		A

LABORATORY REPORT

Contract Number: PSL24/7868

Report Date: 04 December 2024

Client's Reference: 2372986-005

Client Name: Central Alliance
Alliance House
South Park Way
Wakefield 41 Business Park
Wakefield
WF2 0XJ

For the attention of: John Parkinson

Contract Title: One Earth Solar Farm

Date Received: 25/10/2024
Date Commenced: 25/10/2024
Date Completed: 4/12/2024

Notes: Opinions and Interpretations are outside the UKAS Accreditation

A copy of the Laboratory Schedule of accredited tests as issued by UKAS is attached to this report. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced other than in full, without the prior written approval of the laboratory.

Checked and Approved Signatories:

A Watkins (Managing Director)
R Berriman (Associate Director)
S Royle (Laboratory Manager)
L Knight (Assistant Laboratory Manager)
[redacted] S Eyre (Senior Technical Coordinator)
T Watkins (Senior Technician)

5 – 7 Hexthorpe Road,
Hexthorpe,
Doncaster,
DN4 0AR
Tel: [redacted]
Email: [redacted]@prosoils.co.uk
[redacted]@prosoils.co.uk

SUMMARY OF LABORATORY SOIL DESCRIPTIONS

Hole Number	Sample Number	Sample Type	Top Depth m	Base Depth m	Description of Sample
BH001	2	B	0.50		Brown TOPSOIL.
BH001	1	D	1.20		Reddish brown mottled grey slightly sandy CLAY.
BH001	2	D	2.00		Reddish brown mottled grey slightly sandy CLAY.
BH001	3	D	2.50		Reddish brown mottled grey slightly sandy CLAY.
BH002	3	B	0.30		Reddish brown slightly sandy slightly gravelly CLAY.
BH002	7	B	0.50		Brown sandy CLAY.
BH002	9	D	1.00		Reddish brown mottled grey slightly sandy CLAY.
BH002	11	D	1.20		Reddish brown mottled grey slightly sandy CLAY.
BH002	10	D	1.60		Reddish brown slightly sandy CLAY.
BH002	14	D	2.60		Reddish brown sandy GRAVEL.
BH002	18	D	4.00		Reddish brown slightly sandy CLAY.
BH002	29	B	9.00		Brown clayey very sandy GRAVEL.

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

One Earth Solar Farm	Contract No:
	PSL24/7868
	Client Ref:
	2372986

SUMMARY OF SOIL CLASSIFICATION TESTS

BS 1377 - Part 2 : 2022 in accordance with BS EN ISO 17892 (as below)

Hole Number	Sample Number	Sample Type	Top Depth m	Base Depth m	Water Content %	Linear Shrinkage	Particle Density Mg/m^3	Liquid Limit %	Plastic Limit %	Plasticity Index %	Passing 0.425mm %	Remarks
BH001	2	B	0.50		18.7							
BH001	1	D	1.20		17.3			40	20	20	100	Medium Plasticity CIM
BH001	2	D	2.00		22.7			39	20	19	100	Medium Plasticity CIM
BH001	3	D	2.50		13.9			40	20	20	100	Medium Plasticity CIM
BH002	3	B	0.30		19.2			42	21	21	95	Medium Plasticity CIM
BH002	7	B	0.50		19.6			31	17	14	100	Low Plasticity CIL
BH002	9	D	1.00		15.3			45	21	24	100	Medium Plasticity CIM
BH002	11	D	1.20		24.2			39	19	20	100	Medium Plasticity CIM
BH002	10	D	1.60		19.9			43	21	22	100	Medium Plasticity CIM
BH002	14	D	2.60		15.3				NP			
BH002	18	D	4.00		17.0							

Water Content - BS 1377 - Part 2 : 2022 : Clause 4 in accordance with BS EN ISO 17892 - 1 : 2014 + A1 : 2022
Linear Shrinkage - BS 1377 - Part 2 : 2022 : Clause 7
Particle Density (Gas Jar method) - BS 1377 - Part 2 : 2022 : Clause 9
Liquid, Plastic Limit & Plasticity Index - BS 1377 - Part 2 : 2022 : Clause 5 & 6 in accordance with BS EN ISO 17892 - 12 : 2018 + A2 : 2022

SYMBOLS : NP = Non Plastic

UKAS TESTING 4043

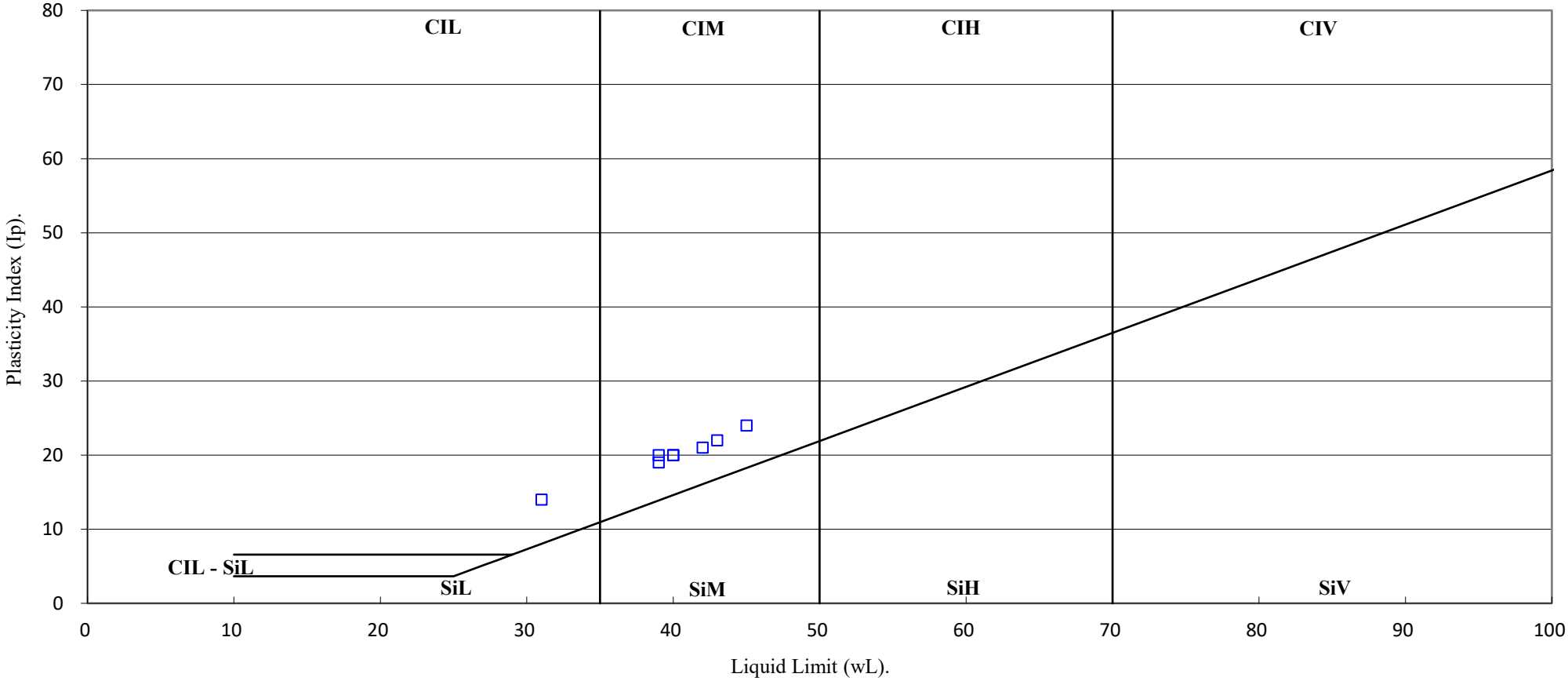
PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

One Earth Solar Farm

Contract No:
PSL24/7868
Client Ref:
2372986

PLASTICITY CHART

BS EN ISO 14688-2:2017 Clause 4.4



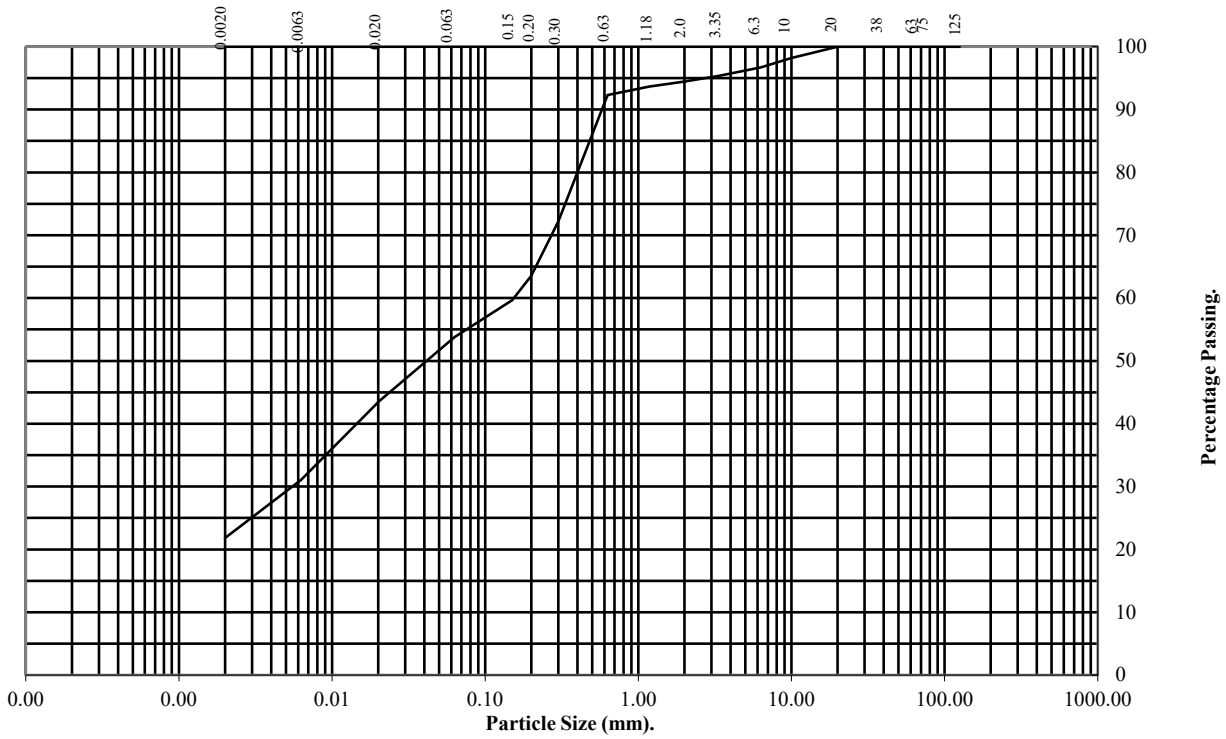
UKAS TESTING 4043 / PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY	One Earth Solar Farm	Contract No: PSL24/7868 Client Ref:

PARTICLE SIZE DISTRIBUTION TEST

BS 1377 - Part 2 : 2022 : Clause 10 in accordance with BS EN ISO 17892 - 4 : 2016

Sieve Method, Clause 5.2 & Pipette Method, Clause 5.4

Hole Number:	**BH001**	**Top Depth (m):**	**0.50**
Sample Number:	**2**	**Base Depth (m):**	
Sample Type:	**B**		



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
63	100
37.5	100
20	100
10	98
6.3	97
3.35	95
2	94
1.18	94
0.63	92
0.3	72
0.2	64
0.15	60
0.063	54

Particle Diameter	Percentage Passing
0.020	44
0.0063	31
0.0020	22
Particle Density - 2.65 Mg/m3 assumed	

Soil Fraction	Total Percentage
Cobbles	0
Gravel	6
Sand	40
Silt	32
Clay	22

Remarks:

See Summary of Soil Descriptions

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

One Earth Solar Farm

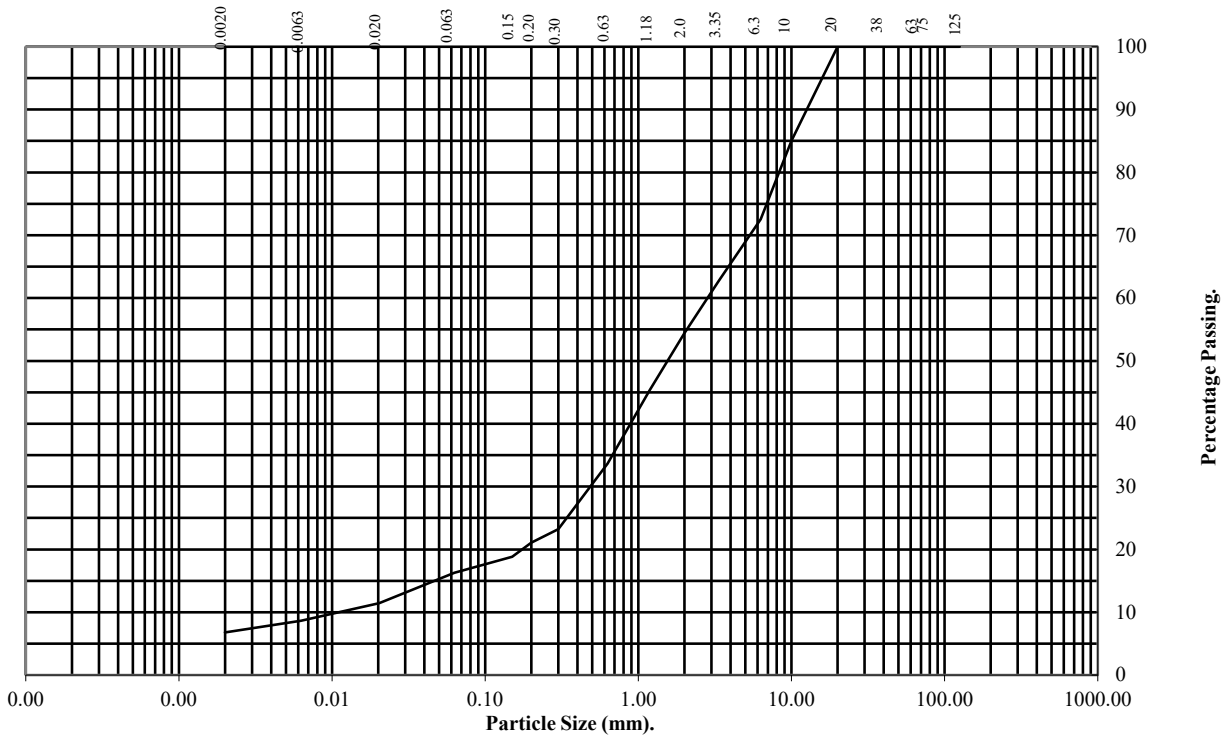
Contract No:
PSL24/7868
Client Ref:
2372986

PARTICLE SIZE DISTRIBUTION TEST

BS 1377 - Part 2 : 2022 : Clause 10 in accordance with BS EN ISO 17892 - 4 : 2016

Sieve Method, Clause 5.2 & Pipette Method, Clause 5.4

Hole Number:	**BH002**	**Top Depth (m):**	**9.00**
Sample Number:	**29**	**Base Depth (m):**	
Sample Type:	**B**		



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
63	100
37.5	100
20	100
10	85
6.3	73
3.35	63
2	54
1.18	45
0.63	34
0.3	23
0.2	21
0.15	19
0.063	16

Particle Diameter	Percentage Passing
0.020	11
0.0063	9
0.0020	7
Particle Density - 2.65 Mg/m3 assumed	

Soil Fraction	Total Percentage
Cobbles	0
Gravel	46
Sand	38
Silt	9
Clay	7

Remarks:

See Summary of Soil Descriptions

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

One Earth Solar Farm

Contract No:
PSL24/7868
Client Ref:
2372986

4161

7 - 11 Harding Street
Leicester
LE1 4DH

Professional Soils Laboratory
5/7 Hexthorpe Road
Hexthorpe
Doncaster
DN4 0AR

Analytical Test Report: E24/00801/PSL - 24-52492

Your Project Reference:	**PSL24/7868 One Earth Solar Farm**		
Your Order Number:	PSL24/7868	Samples Received / Instructed:	13/11/2024 / 13/11/2024
Report Issue Number:	1	Sample Tested:	13/11 to 22/11/2024
Samples Analysed:	6 sample(s)	Report issued:	22/11/2024

Sign [redacted]

James Gane
Analytical Services Manager
CTS Group

Notes:

General

Please refer to Methodologies page for details pertaining to the analytical methods undertaken.

Samples will be retained for 14 days after issue of this report unless otherwise requested.

Moisture Content was determined in accordance with CTS method statement MS - CL - Sample Prep, oven dried at <30˚C.

Moisture Content is reported as a percentage of the dry mass of soil, this calculation is in accordance with BS1377, Part 2, 1990, Clause 3.2

Where specification limits are included these are for guidance only. Where a measured value has been highlighted this is not implying acceptance or failure and certainty of measurement values have not been taken into account.

Uncertainty of measurement values are available on request.

Samples were supplied by customer, results apply to the samples as received.

Deviating Samples

On receipt samples are compared against our sample holding and handling protocols, where any deviations have been noted these are reported on our deviating sample page (if present)

Accreditation Key

UKAS = UKAS Accreditation, MCERTS = MCERTS Accreditation, u = Unaccredited, subUKAS - Subcontracted to a laboratory UKAS accredited for this test, subMCERTS - Subcontracted to a laboratory MCERTS accredited for this test

MCERTS Accreditation only covers the SAND, CLAY and LOAM matrices

UKAS accreditation on waters only covers the Ground water and Surface water matrices

Date of Issue: 11.11.2024
Issued by: J. Gane
Issue No: 4
Rev No: 18

4161

CONSTRUCTION TESTING SOLUTIONS
A PHENNA GROUP COMPANY

7 - 11 Harding Street
Leicester
LE1 4DH

E24/00801/PSL - 24-52492

Project Reference - PSL24/7868 One Earth Solar Farm

Analytical Test Results - Chemical Analysis

Lab Reference			418101	418102	418103	418104	418105
Client Sample ID			-	-	-	-	-
Client Sample Location			BH001	BH002	BH002	BH002	BH002
Client Sample Type			B	D	D	D	D
Client Sample Number			2	9	14	23	31
Depth - Top (m)			0.50	1.00	2.60	6.00	9.90
Depth - Bottom (m)			0.50	1.00	2.60	6.00	9.90
Date of Sampling			-	-	-	-	-
Time of Sampling			-	-	-	-	-
Sample Matrix			Clay	Clay	Clay	Clay	Clay
Determinant	**Units**	**Accreditation**					
Water soluble sulphate (as SO_4)	(mg/l)	u	31	25	190	1700	590
Acid Soluble Sulphate	(%)	u	0.04	0.03	0.10	13.1	0.19
Total Sulphur	(%)	UKAS	0.03	0.02	0.04	3.72	0.05
pH Value	pH Units	MCERTS	7.8	8.1	8.3	7.7	8.2
Organic matter (BS 1377)	(%)	UKAS	2.6	0.3	-	-	-
1377 Organic Matter - Sulphides/Chlorides Identified (Yes/No)	-	-	No	No	-	-	-

7 - 11 Harding Street
Leicester
LE1 4DH

E24/00801/PSL - 24-52492

Project Reference - PSL24/7868 One Earth Solar Farm

Soils - No Testing Scheduled

Lab Reference	Client Sample ID	Client Sample Location	Client Sample Type	Client Sample Number	Status
418106	-	BH002	B	29	No Testing Scheduled

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CONSTRUCTION TESTING SOLUTIONS
A PHENNA GROUP COMPANY

7 - 11 Harding Street
Leicester
LE1 4DH

E24/00801/PSL - 24-52492

Project Reference - PSL24/7868 One Earth Solar Farm

Sample Descriptions

Lab Reference	Client Sample ID	Client Sample Location	Client Sample Type	Client Sample Number	Description	Moisture Content (%)	Stone Content (%)	Passing 2mm test sieve (%)
418101	-	BH001	B	2	Brown slightly gravelly silty clay with rare rootlets	-	-	85
418102	-	BH002	D	9	Brown silty clay	-	-	100
418103	-	BH002	D	14	Reddish brown very gravelly silty clay	-	-	63
418104	-	BH002	D	23	Brown slightly gravelly silty clay	-	-	100
418105	-	BH002	D	31	Brown silty clay	-	-	100

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CONSTRUCTION TESTING SOLUTIONS
A PHENNA GROUP COMPANY

7 - 11 Harding Street
Leicester
LE1 4DH

E24/00801/PSL - 24-52492

Project Reference - PSL24/7868 One Earth Solar Farm

Sample Comments

Lab Reference	Client Sample ID	Client Sample Location	Client Sample Type	Client Sample Number	Comments
418101	-	BH001	B	2	
418102	-	BH002	D	9	
418103	-	BH002	D	14	
418104	-	BH002	D	23	
418105	-	BH002	D	31	

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CONSTRUCTION TESTING SOLUTIONS
A PHENNA GROUP COMPANY

7 - 11 Harding Street
Leicester
LE1 4DH

E24/00801/PSL - 24-52492

Project Reference - PSL24/7868 One Earth Solar Farm

Analysis Methodologies

Test Code	Test Name / Reference	Sample condition for analysis	Sample Preperation	Test Details
ANIONSS	MS - CL - Anions by Aquakem (2:1Extract)	Oven dried	Passing 2mm test sieve	Determination of Anions (inc Sulphate, chloride etc.) in soils by Aquakem. Analysis is based on a 2:1 water to soil extraction ratio
PHS	MS - CL - pH in Soils	As received	Passing 10mm test sieve	Determination of pH in soils using a pH probe (using a 1:3 soil to water extraction)
ASSO4S	MS - CL - Acid Soluble Sulphate	Oven Dried	Passing 2mm test sieve	Determination of total sulphate in soils by acid extraction followed by ICP analysis
HOLD	No Testing Scheduled	-	-	No Testing Scheduled
SAMPLEPREP	MS - CL - Sample Preparation	-	-	Preparation of samples (including determination of moisture content) to allow for subsequent analysis
1377ORG	BS1377 Organic Matter	Oven dried	BS1377 : Part 1 : 2016	Testing was in accordance with BS 1377: Part 3: 2018 + A1 : 2021 Clause 4, The reported value is the average OMC present in the soil fraction to the nearest 0.1% of the original oven dry mass of soil. Some information required by BS 1377 has not been
1377TS-ELT	BS1377 Total Sulphur Content by HTC	Oven dried	BS1377 : Part 1 : 2016	Total Sulphur Content testing of Soil in accordance with BS 1377 : Part 3 : 2018 + A1 : 2021 Clause 7.10 (using Eltra CS-800 Analyser)

7 - 11 Harding Street
Leicester
LE1 4DH

E24/00801/PSL - 24-52492

Project Reference - PSL24/7868 One Earth Solar Farm

Sample Deviations

Deviations are listed below against each sample and associated test method, where deviation(s) are noted it means data may not be representative of the sample at the time of sampling and it is possible that results provided may be compromised.

Observations on receipt

A - No date of sampling provided
W - No time of sampling provided for water sample
C - Received in inappropriate container
H - Contains headspace
T - Temperature on receipt exceeds storage temperature
R - Sample(s) received with less than 96 hours for testing to commence/complete, any result formally classed as deviating will be marked with an X against the applicable test (i.e. RX)

Observations whilst in laboratory

X - Exceeds sampling to extraction or analysis timescales

Lab Reference	Client Sample ID	Client Sample Location	Client Sample Type	Client Sample Number	Test	Deviations
418101	-	BH001	B	2		A
418102	-	BH002	D	9		A
418103	-	BH002	D	14		A
418104	-	BH002	D	23		A
418105	-	BH002	D	31		A

LABORATORY REPORT

Contract Number: PSL24/7869

Report Date: 03 December 2024

Client's Reference: 2372986-006

Client Name: Central Alliance
Alliance House
South Park Way
Wakefield 41 Business Park
Wakefield
WF2 0XJ

For the attention of: John Parkinson

Contract Title: One Earth Solar Farm

Date Received: 25/10/2024
Date Commenced: 25/10/2024
Date Completed: 02/12/2024

Notes: Opinions and Interpretations are outside the UKAS Accreditation

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Checked and Approved Signatories:

A Watkins
(Managing Director)

R Berriman
(Associate Director)

S Royle
(Laboratory Manager)

[redacted]

L Knight
(Assistant Laboratory Manager)

D Nicholson
(Senior Technician)

T Watkins
(Senior Technician)

5 – 7 Hexthorpe Road,
Hexthorpe,
Doncaster,
DN4 0AR
Tel: [redacted]
Email: [redacted]@prosoils.co.uk
[redacted]@prosoils.co.uk

SUMMARY OF LABORATORY SOIL DESCRIPTIONS

Hole Number	Sample Number	Sample Type	Top Depth m	Base Depth m	Description of Sample
BH003	6	B	0.50		Light brown sandy slightly gravelly CLAY.
BH003	5	D	0.50		Brown slightly sandy slightly gravelly CLAY.
BH003	9	B	1.00		Reddish brown slightly gravelly sandy CLAY.
BH003	11	B	1.20		Brown very sandy CLAY.
BH003	12	B	2.00		Reddish brown slightly sandy slightly gravelly CLAY.
BH003	16	B	3.00		Reddish brown sandy CLAY.
BH003	20	D	4.00		Brown sandy very clayey GRAVEL.

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

One Earth Solar System

Contract No:

PSL24/7869

Client Ref:

2372986

SUMMARY OF SOIL CLASSIFICATION TESTS

BS 1377 - Part 2 : 2022 in accordance with BS EN ISO 17892 (as below)

Hole Number	Sample Number	Sample Type	Top Depth m	Base Depth m	Water Content %	Linear Shrinkage	Particle Density Mg/m^3	Liquid Limit %	Plastic Limit %	Plasticity Index %	Passing 0.425mm %	Remarks
BH003	5	D	0.50		19.0			34	18	16	94	Low Plasticity CIL
BH003	9	B	1.00		26.6			48	21	27	99	Medium Plasticity CIM
BH003	11	B	1.20		15.4			34	13	21	100	Low Plasticity CIL
BH003	16	B	3.00		22.4			43	22	21	100	Medium Plasticity CIM
BH003	20	D	4.00		18.2			42	20	22	24	Medium Plasticity CIM

Water Content - BS 1377 - Part 2 : 2022 : Clause 4 in accordance with BS EN ISO 17892 - 1 : 2014 + A1 : 2022
Linear Shrinkage - BS 1377 - Part 2 : 2022 : Clause 7
Particle Density (Gas Jar method) - BS 1377 - Part 2 : 2022 : Clause 9
Liquid, Plastic Limit & Plasticity Index - BS 1377 - Part 2 : 2022 : Clause 5 & 6 in accordance with BS EN ISO 17892 - 12 : 2018 + A2 : 2022

SYMBOLS : NP = Non Plastic

UKAS TESTING 4043

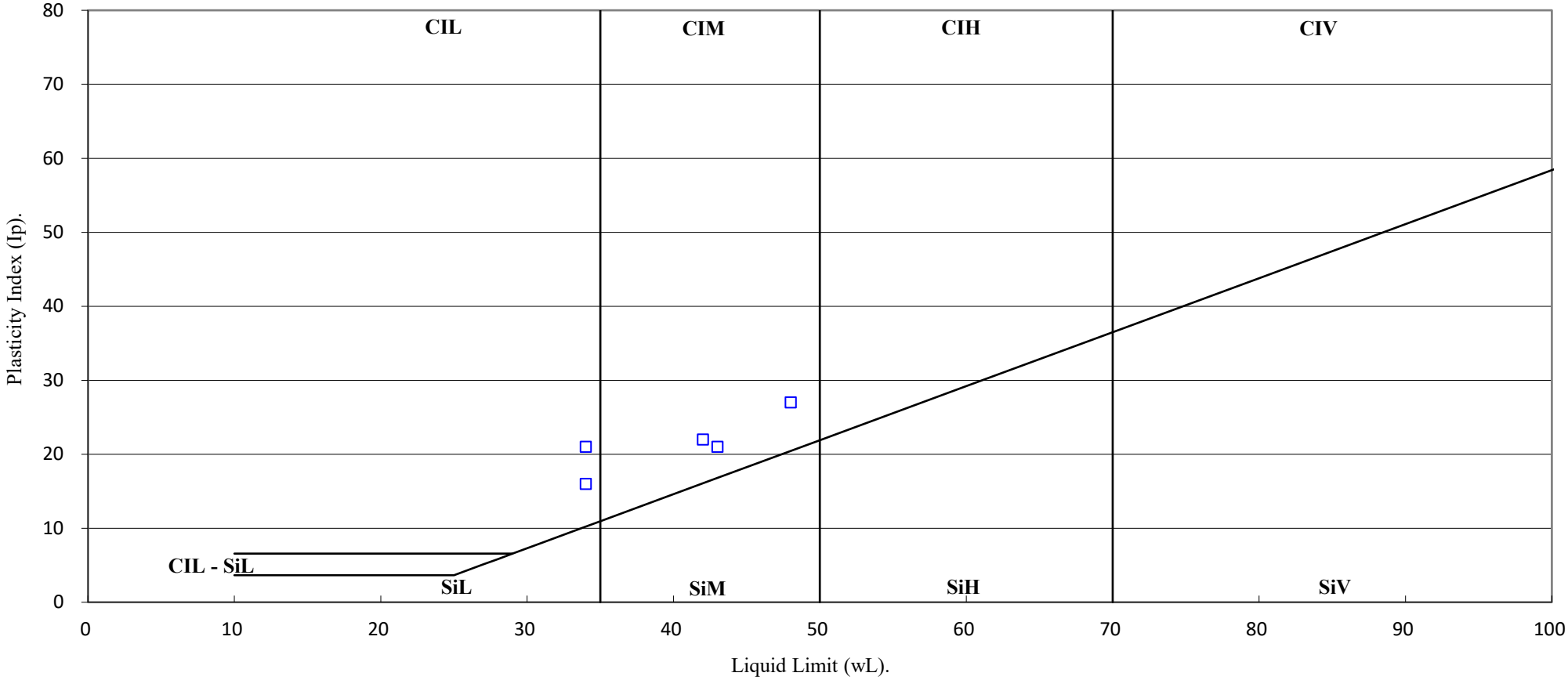
PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

One Earth Solar System

Contract No:
PSL24/7869
Client Ref:
2372986

PLASTICITY CHART

BS EN ISO 14688-2:2017 Clause 4.4



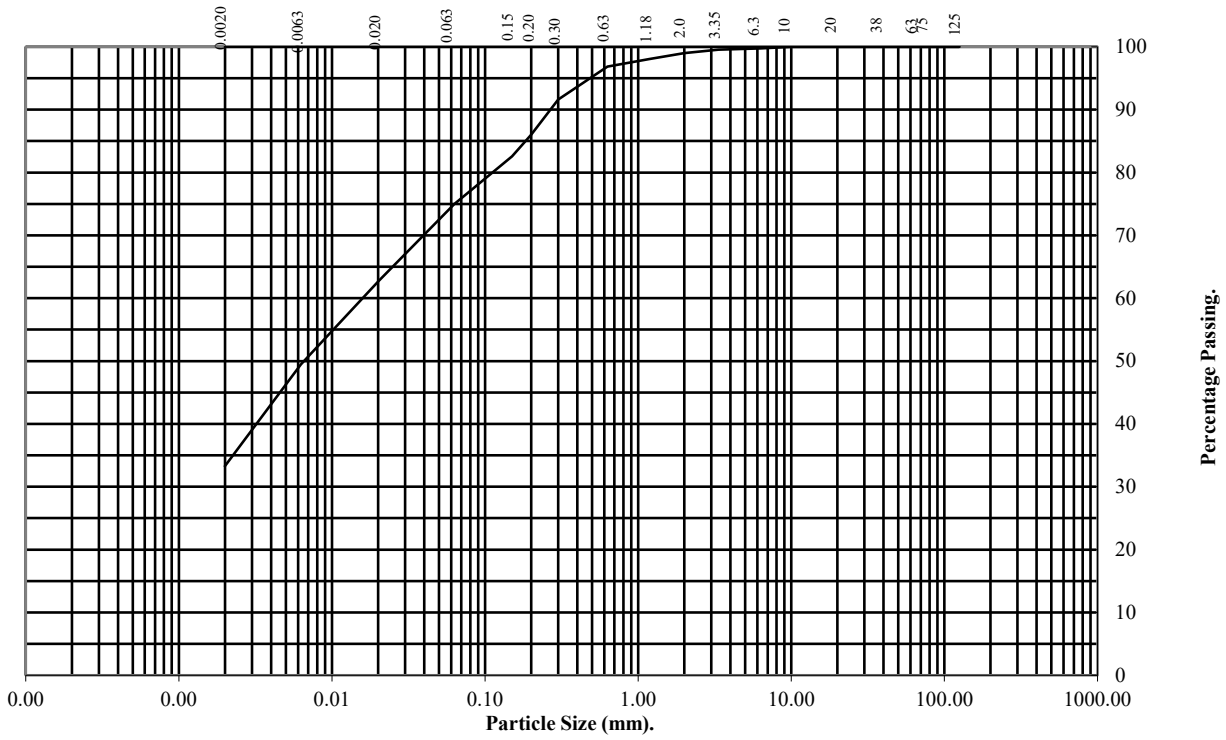
UKAS TESTING 4043 / PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY	**One Earth Solar System**	**Contract No:** PSL24/7869 **Client Ref:**

PARTICLE SIZE DISTRIBUTION TEST

BS 1377 - Part 2 : 2022 : Clause 10 in accordance with BS EN ISO 17892 - 4 : 2016

Sieve Method, Clause 5.2 & Pipette Method, Clause 5.4

Hole Number:	**BH003**	**Top Depth (m):**	**0.50**
Sample Number:	**6**	**Base Depth (m):**	
Sample Type:	**B**		



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
63	100
37.5	100
20	100
10	100
6.3	100
3.35	100
2	99
1.18	98
0.63	97
0.3	92
0.2	86
0.15	83
0.063	75

Particle Diameter	Percentage Passing
0.020	63
0.0063	49
0.0020	33
Particle Density - 2.65 Mg/m3 assumed	

Soil Fraction	Total Percentage
Cobbles	0
Gravel	1
Sand	24
Silt	42
Clay	33

Remarks:

See Summary of Soil Descriptions

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

One Earth Solar System

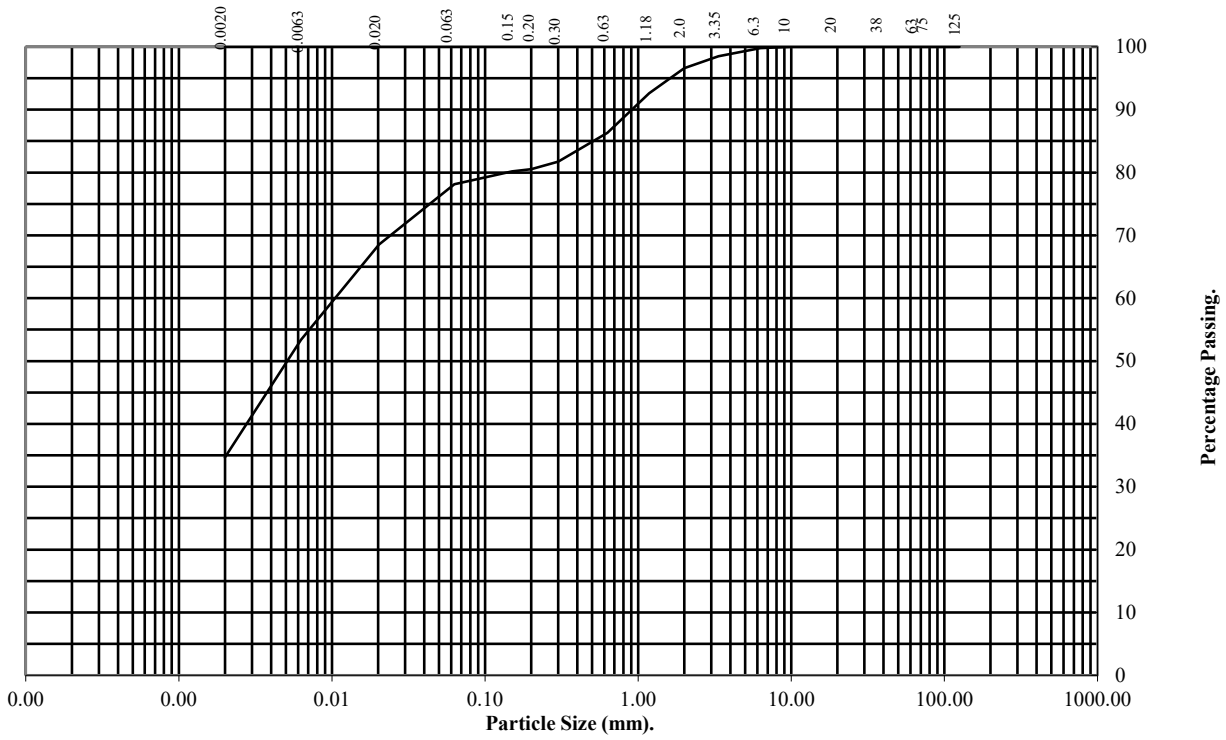
Contract No:
PSL24/7869
Client Ref:
2372986

PARTICLE SIZE DISTRIBUTION TEST

BS 1377 - Part 2 : 2022 : Clause 10 in accordance with BS EN ISO 17892 - 4 : 2016

Sieve Method, Clause 5.2 & Pipette Method, Clause 5.4

Hole Number:	**BH003**	**Top Depth (m):**	**2.00**
Sample Number:	**12**	**Base Depth (m):**	
Sample Type:	**B**		



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
63	100
37.5	100
20	100
10	100
6.3	100
3.35	98
2	97
1.18	93
0.63	86
0.3	82
0.2	81
0.15	80
0.063	78

Particle Diameter	Percentage Passing
0.020	69
0.0063	53
0.0020	35
Particle Density - 2.65 Mg/m3 assumed	

Soil Fraction	Total Percentage
Cobbles	0
Gravel	3
Sand	19
Silt	43
Clay	35

Remarks:

See Summary of Soil Descriptions

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

One Earth Solar System

Contract No:
PSL24/7869
Client Ref:
2372986

4161

CONSTRUCTION TESTING SOLUTIONS
A PHENNA GROUP COMPANY

7 - 11 Harding Street
Leicester
LE1 4DH

Professional Soils Laboratory
5/7 Hexthorpe Road
Hexthorpe
Doncaster
DN4 0AR

Analytical Test Report: E24/00795/PSL - 24-52485

Your Project Reference:	**PSL24/7869 One Earth Solar Farm**		
Your Order Number:	PSL24/7869	Samples Received / Instructed:	13/11/2024 / 13/11/2024
Report Issue Number:	1	Sample Tested:	13/11 to 21/11/2024
Samples Analysed:	4 sample(s)	Report issued:	21/11/2024

Signed [redacted]

James Gane
Analytical Services Manager
CTS Group

Notes:

General

Please refer to Methodologies page for details pertaining to the analytical methods undertaken.

Samples will be retained for 14 days after issue of this report unless otherwise requested.

Moisture Content was determined in accordance with CTS method statement MS - CL - Sample Prep, oven dried at <30˚C.

Moisture Content is reported as a percentage of the dry mass of soil, this calculation is in accordance with BS1377, Part 2, 1990, Clause 3.2

Where specification limits are included these are for guidance only. Where a measured value has been highlighted this is not implying acceptance or failure and certainty of measurement values have not been taken into account.

Uncertainty of measurement values are available on request.

Samples were supplied by customer, results apply to the samples as received.

Deviating Samples

On receipt samples are compared against our sample holding and handling protocols, where any deviations have been noted these are reported on our deviating sample page (if present)

Accreditation Key

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MCERTS Accreditation only covers the SAND, CLAY and LOAM matrices

UKAS accreditation on waters only covers the Ground water and Surface water matrices

Date of Issue: 11.11.2024

Issued by: J. Gane

Issue No: 4

Rev No: 18

4161

CONSTRUCTION TESTING SOLUTIONS
A PHENNA GROUP COMPANY

7 - 11 Harding Street
Leicester
LE1 4DH

E24/00795/PSL - 24-52485

Project Reference - PSL24/7869 One Earth Solar Farm

Analytical Test Results - Chemical Analysis

Lab Reference			418082	418083	418084	418085
Client Sample ID			-	-	-	-
Client Sample Location			BH003	BH003	BH003	BH003
Client Sample Type			B	B	D	D
Client Sample Number			6	16	22	28
Depth - Top (m)			0.50	3.00	5.00	9.50
Depth - Bottom (m)			0.50	3.00	5.00	9.50
Date of Sampling			-	-	-	-
Time of Sampling			-	-	-	-
Sample Matrix			Clay	Clay	Clay	Clay
Determinant	**Units**	**Accreditation**				
Water soluble sulphate (as SO_4)	(mg/l)	u	75	370	1600	390
Acid Soluble Sulphate	(%)	u	0.03	0.14	28.0	0.14
Total Sulphur	(%)	UKAS	0.04	0.02	11.5	0.03
pH Value	pH Units	MCERTS	7.9	8.4	7.8	8.3
Organic matter (BS 1377)	(%)	UKAS	0.3	< 0.1	-	-
1377 Organic Matter - Sulphides/Chlorides Identified (Yes/No)	-	-	No	No	-	-

4161

CONSTRUCTION TESTING SOLUTIONS
A PHENNA GROUP COMPANY

7 - 11 Harding Street
Leicester
LE1 4DH

E24/00795/PSL - 24-52485

Project Reference - PSL24/7869 One Earth Solar Farm

Sample Descriptions

Lab Reference	Client Sample ID	Client Sample Location	Client Sample Type	Client Sample Number	Description	Moisture Content (%)	Stone Content (%)	Passing 2mm test sieve (%)
418082	-	BH003	B	6	Brown silty clay	-	-	100
418083	-	BH003	B	16	Brown silty clay	-	-	100
418084	-	BH003	D	22	Brown very gravelly silty clay	-	-	100
418085	-	BH003	D	28	Reddish brown very gravelly silty clay	-	-	100

4161

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A PHENNA GROUP COMPANY

7 - 11 Harding Street
Leicester
LE1 4DH

E24/00795/PSL - 24-52485

Project Reference - PSL24/7869 One Earth Solar Farm

Sample Comments

Lab Reference	Client Sample ID	Client Sample Location	Client Sample Type	Client Sample Number	Comments
418082	-	BH003	B	6	
418083	-	BH003	B	16	
418084	-	BH003	D	22	
418085	-	BH003	D	28	

4161

CONSTRUCTION TESTING SOLUTIONS
A PHENNA GROUP COMPANY

7 - 11 Harding Street
Leicester
LE1 4DH

E24/00795/PSL - 24-52485

Project Reference - PSL24/7869 One Earth Solar Farm

Analysis Methodologies

Test Code	Test Name / Reference	Sample condition for analysis	Sample Preperation	Test Details
ANIONSS	MS - CL - Anions by Aquakem (2:1Extract)	Oven dried	Passing 2mm test sieve	Determination of Anions (inc Sulphate, chloride etc.) in soils by Aquakem. Analysis is based on a 2:1 water to soil extraction ratio
PHS	MS - CL - pH in Soils	As received	Passing 10mm test sieve	Determination of pH in soils using a pH probe (using a 1:3 soil to water extraction)
ASSO4S	MS - CL - Acid Soluble Sulphate	Oven Dried	Passing 2mm test sieve	Determination of total sulphate in soils by acid extraction followed by ICP analysis
SAMPLEPREP	MS - CL - Sample Preparation	-	-	Preparation of samples (including determination of moisture content) to allow for subsequent analysis
1377ORG	BS1377 Organic Matter	Oven dried	BS1377 : Part 1 : 2016	Testing was in accordance with BS 1377: Part 3: 2018 + A1 : 2021 Clause 4, The reported value is the average OMC present in the soil fraction to the nearest 0.1% of the original oven dry mass of soil. Some information required by BS 1377 has not been
1377TS-ELT	BS1377 Total Sulphur Content by HTC	Oven dried	BS1377 : Part 1 : 2016	Total Sulphur Content testing of Soil in accordance with BS 1377 : Part 3 : 2018 + A1 : 2021 Clause 7.10 (using Eltra CS-800 Analyser)

7 - 11 Harding Street
Leicester
LE1 4DH

E24/00795/PSL - 24-52485

Project Reference - PSL24/7869 One Earth Solar Farm

Sample Deviations

Deviations are listed below against each sample and associated test method, where deviation(s) are noted it means data may not be representative of the sample at the time of sampling and it is possible that results provided may be compromised.

Observations on receipt

A - No date of sampling provided
W - No time of sampling provided for water sample
C - Received in inappropriate container
H - Contains headspace
T - Temperature on receipt exceeds storage temperature
R - Sample(s) received with less than 96 hours for testing to commence/complete, any result formally classed as deviating will be marked with an X against the applicable test (i.e. RX)

Observations whilst in laboratory

X - Exceeds sampling to extraction or analysis timescales

Lab Reference	Client Sample ID	Client Sample Location	Client Sample Type	Client Sample Number	Test	Deviations
418082	-	BH003	B	6		A
418083	-	BH003	B	16		A
418084	-	BH003	D	22		A
418085	-	BH003	D	28		A

LABORATORY REPORT

Contract Number: PSL24/7870

Report Date: 27 November 2024

Client's Reference: 2372986-007

Client Name: Central Alliance
Alliance House
South Park Way
Wakefield 41 Business Park
Wakefield
WF2 0XJ

For the attention of: John Parkinson

Contract Title: One Earth Solar Farm

Date Received: 25/10/2024
Date Commenced: 25/10/2024
Date Completed: 26/11/2024

Notes: Opinions and Interpretations are outside the UKAS Accreditation

A copy of the Laboratory Schedule of accredited tests as issued by UKAS is attached to this report. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced other than in full, without the prior written approval of the laboratory.

Checked and Approved Signatories:

A Watkins (Managing Director)	R Berriman (Associate Director)	S Royle (Laboratory Manager)
L Knight (Assistant Laboratory Manager)	S Eyre (Senior Technician)	T [redacted] ns (Senior Technician)

5 – 7 Hexthorpe Road,
Hexthorpe,
Doncaster,
DN4 0AR
Tel: [redacted]
Email: [redacted]@prosoils.co.uk
[redacted]@prosoils.co.uk

SUMMARY OF LABORATORY SOIL DESCRIPTIONS

Hole Number	Sample Number	Sample Type	Top Depth m	Base Depth m	Description of Sample
BH011	3	B	0.50		Brown slightly gravelly very sandy CLAY.
BH011	2	D	1.00		Brown slightly gravelly sandy CLAY.
BH011	4	B	1.20		Reddish brown slightly gravelly very sandy CLAY.
BH011	5	D	1.50		Reddish brown slightly sandy CLAY.
BH011	5	B	2.00		Reddish brown gravelly slightly sandy CLAY
BH011	4	D	2.00		Reddish brown gravelly slightly sandy CLAY
BH011	6	D	2.50		Reddish brown gravelly sandy CLAY.
BH011	7	D	3.00		Reddish brown very sandy CLAY.

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

One Earth Solar Farm

Contract No:
PSL24/7870
Client Ref:
2372986

SUMMARY OF SOIL CLASSIFICATION TESTS

BS 1377 - Part 2 : 2022 in accordance with BS EN ISO 17892 (as below)

Hole Number	Sample Number	Sample Type	Top Depth m	Base Depth m	Water Content %	Linear Shrinkage	Particle Density Mg/m^3	Liquid Limit %	Plastic Limit %	Plasticity Index %	Passing 0.425mm %	Remarks
BH011	3	B	0.50		16.9			30	15	15	93	Low Plasticity CIL
BH011	2	D	1.00		15.4			36	18	18	95	Medium Plasticity CIM
BH011	5	D	1.50		29.7			55	25	30	100	High Plasticity CIH
BH011	4	D	2.00		23.6			50	24	26	78	High Plasticity CIH
BH011	6	D	2.50		22.1			45	22	23	88	Medium Plasticity CIM
BH011	7	D	3.00		10.3			30	15	15	100	Low Plasticity CIL

Water Content - BS 1377 - Part 2 : 2022 : Clause 4 in accordance with BS EN ISO 17892 - 1 : 2014 + A1 : 2022
Linear Shrinkage - BS 1377 - Part 2 : 2022 : Clause 7
Particle Density (Gas Jar method) - BS 1377 - Part 2 : 2022 : Clause 9
Liquid, Plastic Limit & Plasticity Index - BS 1377 - Part 2 : 2022 : Clause 5 & 6 in accordance with BS EN ISO 17892 - 12 : 2018 + A2 : 2022

SYMBOLS : NP = Non Plastic

UKAS TESTING 4043

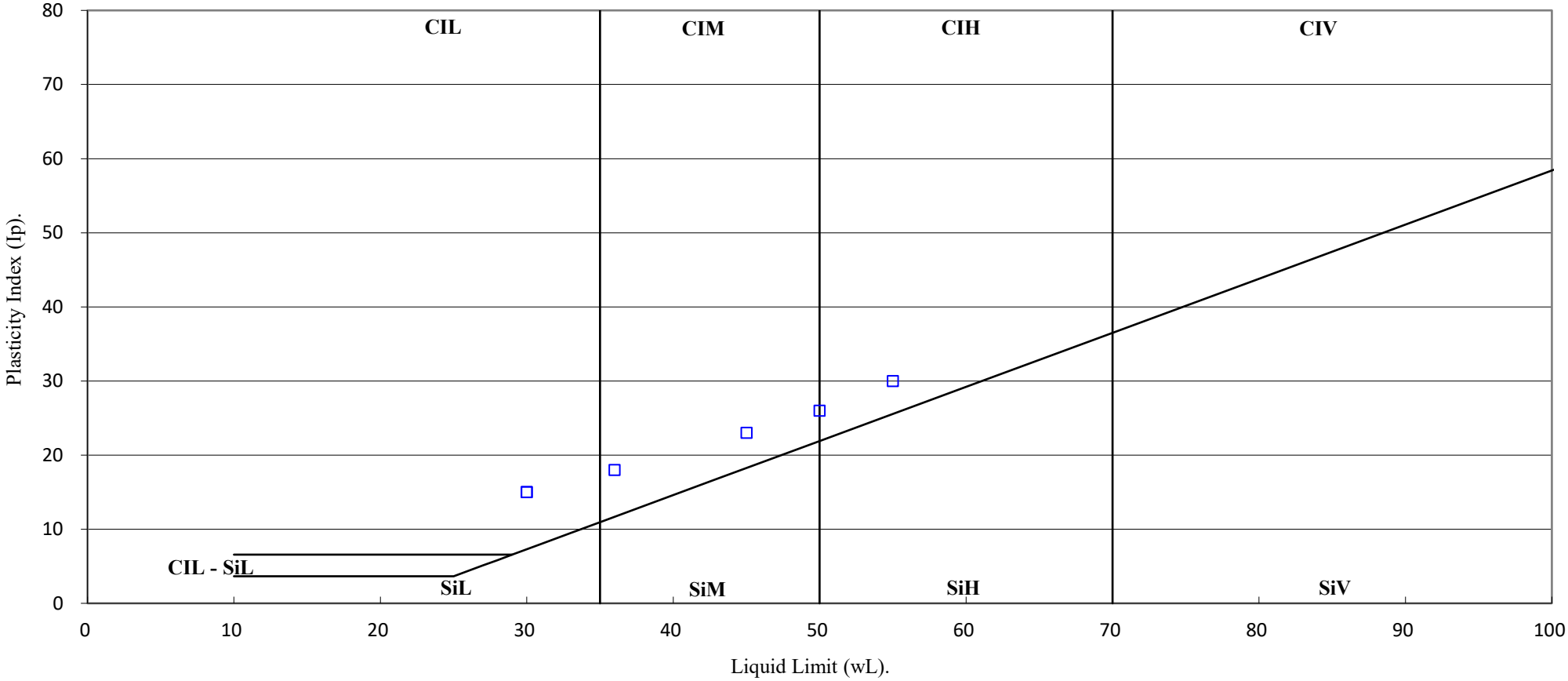
PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

One Earth Solar Farm

Contract No:
PSL24/7870
Client Ref:
2372986

PLASTICITY CHART

BS EN ISO 14688-2:2017 Clause 4.4



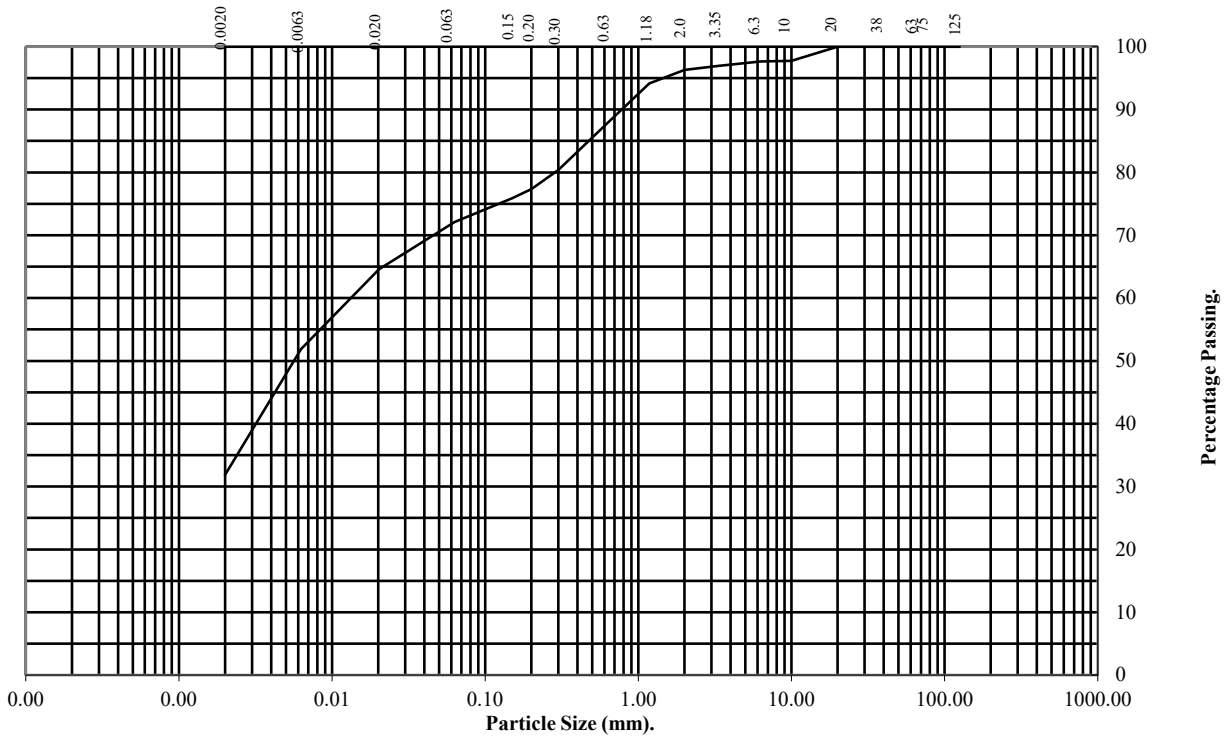
UKAS TESTING 4043 / PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY	One Earth Solar Farm	Contract No: PSL24/7870 Client Ref:

PARTICLE SIZE DISTRIBUTION TEST

BS 1377 - Part 2 : 2022 : Clause 10 in accordance with BS EN ISO 17892 - 4 : 2016

Sieve Method, Clause 5.2 & Pipette Method, Clause 5.4

Hole Number:	**BH011**	**Top Depth (m):**	**1.20**
Sample Number:	**4**	**Base Depth (m):**	
Sample Type:	**B**		



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
63	100
37.5	100
20	100
10	98
6.3	98
3.35	97
2	96
1.18	94
0.63	88
0.3	80
0.2	77
0.15	76
0.063	72

Particle Diameter	Percentage Passing
0.020	65
0.0063	52
0.0020	32
Particle Density - 2.65 Mg/m3 assumed	

Soil Fraction	Total Percentage
Cobbles	0
Gravel	4
Sand	24
Silt	40
Clay	32

Remarks:

See Summary of Soil Descriptions

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

One Earth Solar Farm

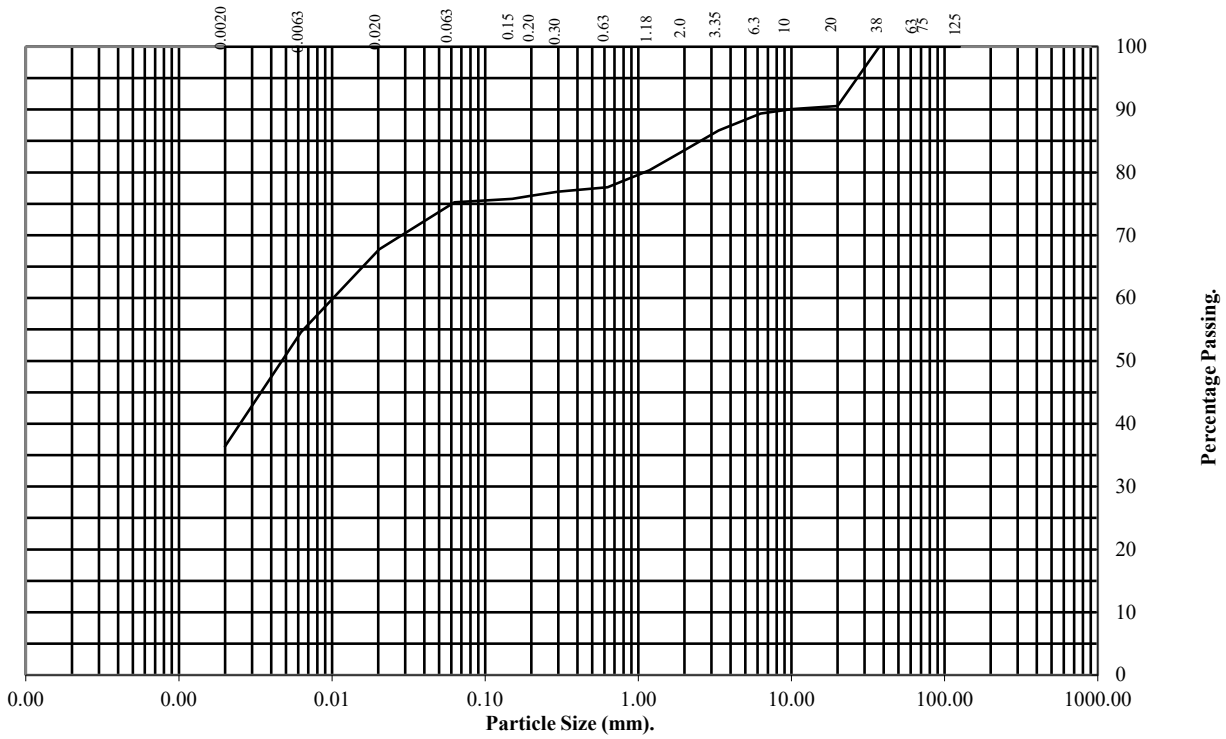
Contract No:
PSL24/7870
Client Ref:
2372986

PARTICLE SIZE DISTRIBUTION TEST

BS 1377 - Part 2 : 2022 : Clause 10 in accordance with BS EN ISO 17892 - 4 : 2016

Sieve Method, Clause 5.2 & Pipette Method, Clause 5.4

Hole Number:	**BH011**	**Top Depth (m):**	**2.00**
Sample Number:	**5**	**Base Depth (m):**	
Sample Type:	**B**		



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
63	100
37.5	100
20	91
10	90
6.3	89
3.35	87
2	84
1.18	80
0.63	78
0.3	77
0.2	76
0.15	76
0.063	75

Particle Diameter	Percentage Passing
0.020	68
0.0063	55
0.0020	36
Particle Density - 2.65 Mg/m3 assumed	

Soil Fraction	Total Percentage
Cobbles	0
Gravel	16
Sand	9
Silt	39
Clay	36

Remarks:

See Summary of Soil Descriptions

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

One Earth Solar Farm

Contract No:
PSL24/7870
Client Ref:
2372986

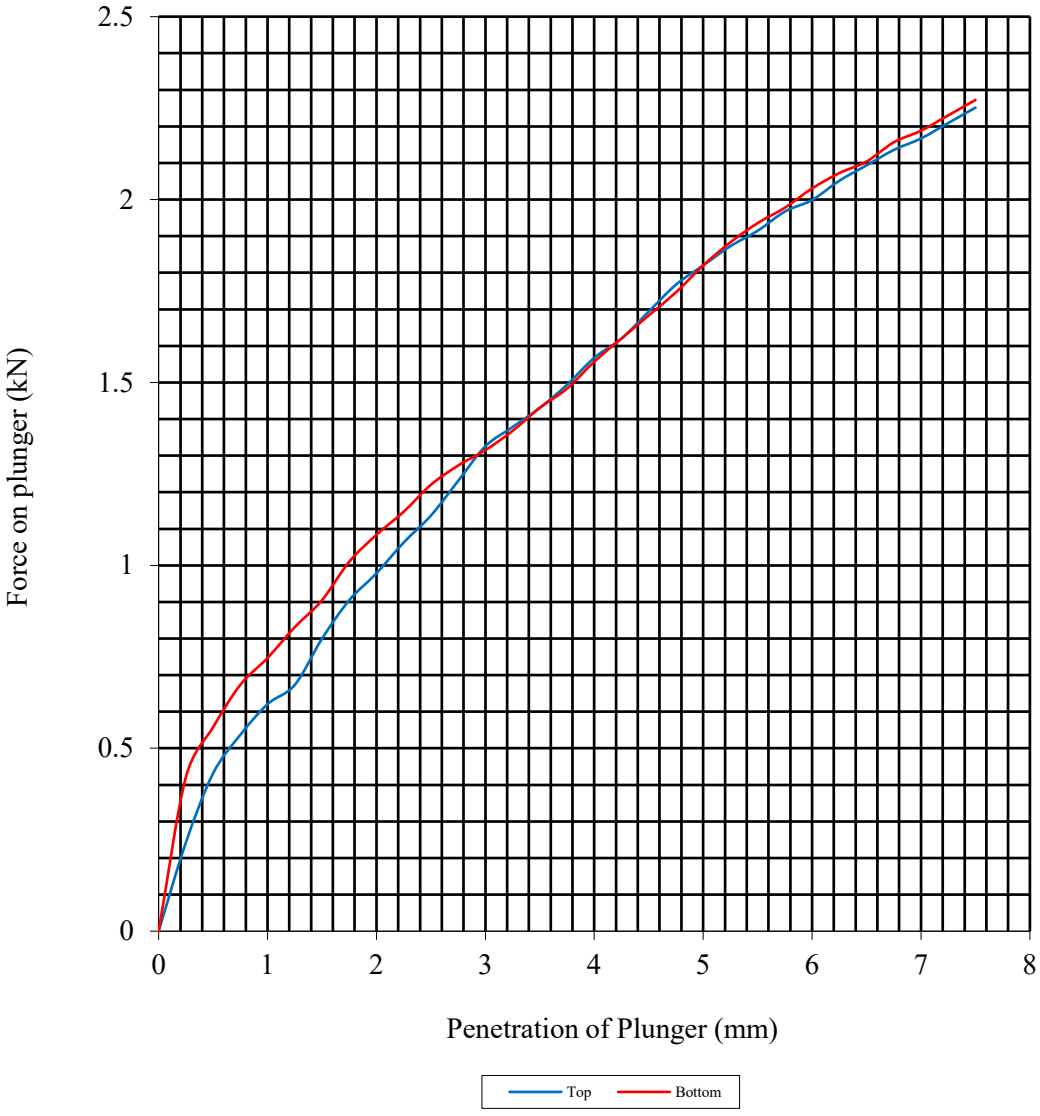
CALIFORNIA BEARING RATIO (CBR)

BS 1377 - Part 2 : Clause 15 : 2022

Hole Number: BH011 **Top Depth (m):** 2.00

Sample Number: 5 **Base Depth (m):**

Sample Type: B



Initial Sample Conditions		Sample Preparation		Final Water Content %		C.B.R. Value %	
Water Content:	23.6	Surcharge Kg:	4.20	Sample Top	23.5	Sample Top	9.1
Bulk Density Mg/m3:	2.07	Soaking Time hrs	0	Sample Bottom	23.9	Sample Bottom	9.2
Dry Density Mg/m3:	1.67	Swelling mm:	0.00	Remarks : See Summary of Soil Descriptions.			
Percentage retained on 20mm BS test sieve:			9				
Compaction Conditions		2.5kg					

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

One Earth Solar Farm

Contract No: PSL24/7870

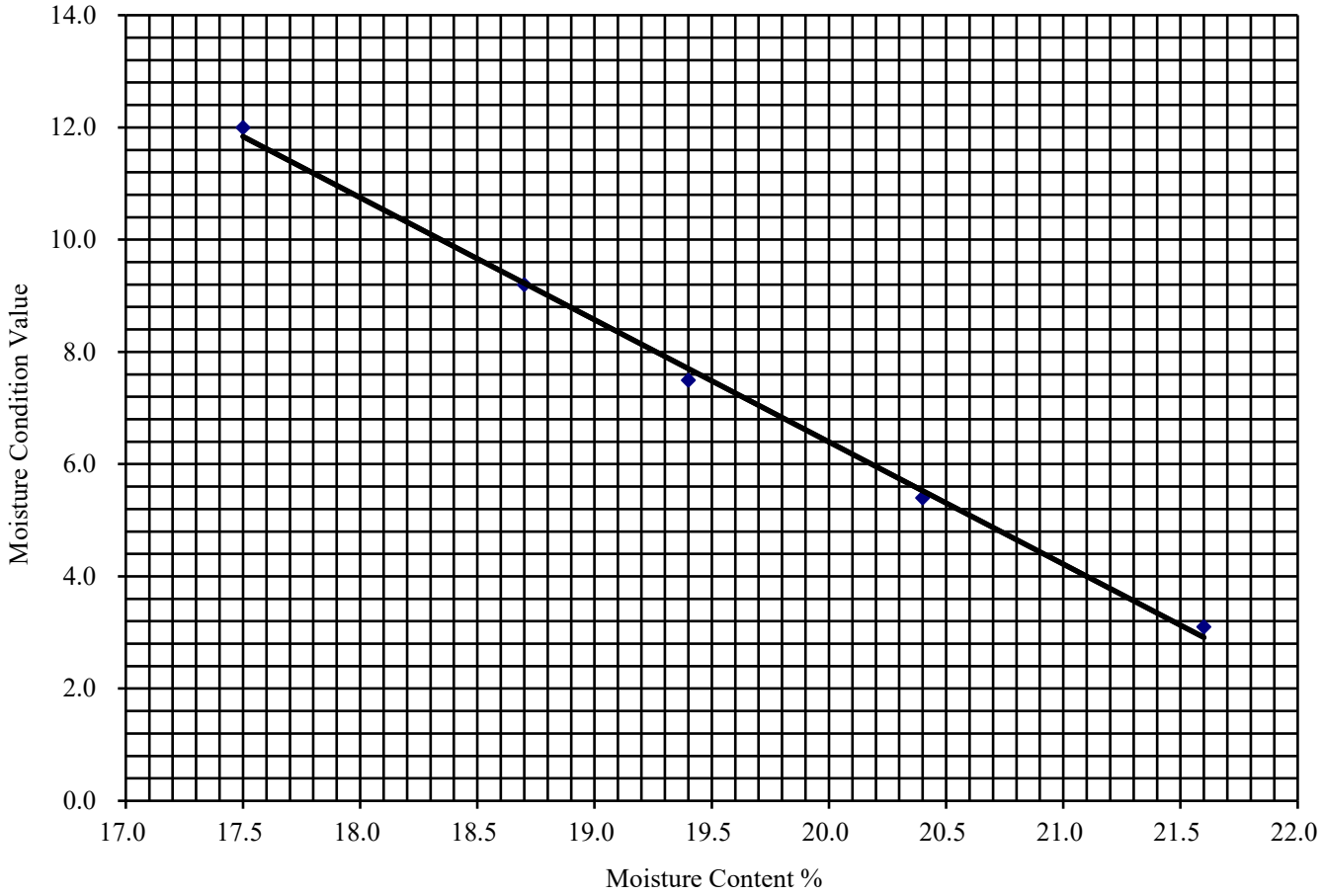
Client Ref: 2372986

MCV/WATER CONTENT RELATION OF SOIL

BS1377 - Part 2 : 2022 Clause 13.5

Hole Number:	**BH011**	**Top Depth (m):**	**2.00**
Sample Number:	**5**	**Base Depth (m):**	
Sample Type:	**B**		

Initial Water Content (%):	23.6
Single/Separate Samples Tested	Separate
Material Retained on the 20mm BS Test Sieve (%):	9



Test Results.

Test Number	1	2	3	4	5
Water Content (%)	17.5	18.7	19.4	20.4	21.6
MCV	12.0	9.2	7.5	5.4	3.1

SUMMARY OF LABORATORY HAND VANES

(Inhouse Method using the principles of BS1377 - PART 9 : Clause 4.4 : 1990)

Hole Number	Sample Number	Sample Type	Top Depth m	Base Depth m	Water Content %	Peak Shear Strength kPa	Residual Shear Strength kPa	Remarks
BH011	5	B	2.00		23.6	74		

* This test is out of our UKAS scope

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

One Earth Solar Farm

Contract No:

PSL24/7870

Client Ref:

2372986

4161

Professional Soils Laboratory
5/7 Hexthorpe Road
Hexthorpe
Doncaster
DN4 0AR

7 - 11 Harding Street
Leicester
LE1 4DH

Analytical Test Report: E24/00799/PSL - 24-52490

Your Project Reference:	**PSL24/7870 One Earth Solar Farm**		
Your Order Number:	PSL24/7870	Samples Received / Instructed:	13/11/2024 / 13/11/2024
Report Issue Number:	1	Sample Tested:	13/11 to 21/11/2024
Samples Analysed:	3 sample(s)	Report issued:	21/11/2024

Sign [redacted]

James Gane
Analytical Services Manager
CTS Group

Notes:

General

Please refer to Methodologies page for details pertaining to the analytical methods undertaken.

Samples will be retained for 14 days after issue of this report unless otherwise requested.

Moisture Content was determined in accordance with CTS method statement MS - CL - Sample Prep, oven dried at <30˚C.

Moisture Content is reported as a percentage of the dry mass of soil, this calculation is in accordance with BS1377, Part 2, 1990, Clause 3.2

Where specification limits are included these are for guidance only. Where a measured value has been highlighted this is not implying acceptance or failure and certainty of measurement values have not been taken into account.

Uncertainty of measurement values are available on request.

Samples were supplied by customer, results apply to the samples as received.

Deviating Samples

On receipt samples are compared against our sample holding and handling protocols, where any deviations have been noted these are reported on our deviating sample page (if present)

Accreditation Key

UKAS = UKAS Accreditation, MCERTS = MCERTS Accreditation, u = Unaccredited, subUKAS - Subcontracted to a laboratory UKAS accredited for this test, subMCERTS - Subcontracted to a laboratory MCERTS accredited for this test

MCERTS Accreditation only covers the SAND, CLAY and LOAM matrices

UKAS accreditation on waters only covers the Ground water and Surface water matrices

Date of Issue: 11.11.2024

Issued by: J. Gane

Issue No: 4

Rev No: 18

4161

CONSTRUCTION TESTING SOLUTIONS
A PHENNA GROUP COMPANY

7 - 11 Harding Street
Leicester
LE1 4DH

E24/00799/PSL - 24-52490

Project Reference - PSL24/7870 One Earth Solar Farm

Analytical Test Results - Chemical Analysis

Lab Reference			418095	418096	418097
Client Sample ID			-	-	-
Client Sample Location			BH011	BH011	BH011
Client Sample Type			D	D	D
Client Sample Number			5	4	9
Depth - Top (m)			1.50	2.00	6.00
Depth - Bottom (m)			1.50	2.00	6.00
Date of Sampling			-	-	-
Time of Sampling			-	-	-
Sample Matrix			Clay	Clay	Clay
Determinant	**Units**	**Accreditation**			
Water soluble sulphate (as SO_4)	(mg/l)	u	97	46	87
Acid Soluble Sulphate	(%)	u	0.04	0.04	0.18
Total Sulphur	(%)	UKAS	0.02	0.01	0.06
pH Value	pH Units	MCERTS	8.7	8.4	8.4

4161

CONSTRUCTION TESTING SOLUTIONS
A PHENNA GROUP COMPANY

7 - 11 Harding Street
Leicester
LE1 4DH

E24/00799/PSL - 24-52490

Project Reference - PSL24/7870 One Earth Solar Farm

Sample Descriptions

Lab Reference	Client Sample ID	Client Sample Location	Client Sample Type	Client Sample Number	Description	Moisture Content (%)	Stone Content (%)	Passing 2mm test sieve (%)
418095	-	BH011	D	5	Reddish brown slightly gravelly silty clay	-	-	100
418096	-	BH011	D	4	Reddish brown slightly gravelly silty clay	-	-	100
418097	-	BH011	D	9	Reddish brown slightly gravelly silty clay	-	-	100

4161

CONSTRUCTION TESTING SOLUTIONS
A PHENNA GROUP COMPANY

7 - 11 Harding Street
Leicester
LE1 4DH

E24/00799/PSL - 24-52490

Project Reference - PSL24/7870 One Earth Solar Farm

Sample Comments

Lab Reference	Client Sample ID	Client Sample Location	Client Sample Type	Client Sample Number	Comments
418095	-	BH011	D	5	
418096	-	BH011	D	4	
418097	-	BH011	D	9	

4161

CONSTRUCTION TESTING SOLUTIONS
A PHENNA GROUP COMPANY

7 - 11 Harding Street
Leicester
LE1 4DH

E24/00799/PSL - 24-52490

Project Reference - PSL24/7870 One Earth Solar Farm

Analysis Methodologies

Test Code	Test Name / Reference	Sample condition for analysis	Sample Preperation	Test Details
ANIONSS	MS - CL - Anions by Aquakem (2:1Extract)	Oven dried	Passing 2mm test sieve	Determination of Anions (inc Sulphate, chloride etc.) in soils by Aquakem. Analysis is based on a 2:1 water to soil extraction ratio
PHS	MS - CL - pH in Soils	As received	Passing 10mm test sieve	Determination of pH in soils using a pH probe (using a 1:3 soil to water extraction)
ASSO4S	MS - CL - Acid Soluble Sulphate	Oven Dried	Passing 2mm test sieve	Determination of total sulphate in soils by acid extraction followed by ICP analysis
SAMPLEPREP	MS - CL - Sample Preparation	-	-	Preparation of samples (including determination of moisture content) to allow for subsequent analysis
1377TS-ELT	BS1377 Total Sulphur Content by HTC	Oven dried	BS1377 : Part 1 : 2016	Total Sulphur Content testing of Soil in accordance with BS 1377 : Part 3 : 2018 + A1 : 2021 Clause 7.10 (using Eltra CS-800 Analyser)

4161

CONSTRUCTION TESTING SOLUTIONS
A PHENNA GROUP COMPANY

7 - 11 Harding Street
Leicester
LE1 4DH

E24/00799/PSL - 24-52490

Project Reference - PSL24/7870 One Earth Solar Farm

Sample Deviations

Deviations are listed below against each sample and associated test method, where deviation(s) are noted it means data may not be representative of the sample at the time of sampling and it is possible that results provided may be compromised.

Observations on receipt

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W - No time of sampling provided for water sample
C - Received in inappropriate container
H - Contains headspace
T - Temperature on receipt exceeds storage temperature
R - Sample(s) received with less than 96 hours for testing to commence/complete, any result formally classed as deviating will be marked with an X against the applicable test (i.e. RX)

Observations whilst in laboratory

X - Exceeds sampling to extraction or analysis timescales

Lab Reference	Client Sample ID	Client Sample Location	Client Sample Type	Client Sample Number	Test	Deviations
418095	-	BH011	D	5		A
418096	-	BH011	D	4		A
418097	-	BH011	D	9		A

LABORATORY REPORT

Contract Number: PSL24/7871

Report Date: 27 November 2024

Client's Reference: 2372986-011

Client Name: Central Alliance
Alliance House
South Park Way
Wakefield 41 Business Park
Wakefield
WF2 0XJ

For the attention of: John Parkinson

Contract Title: One Earth Solar Farm

Date Received: 25/10/2024
Date Commenced: 25/10/2024
Date Completed: 27/11/2024

Notes: Opinions and Interpretations are outside the UKAS Accreditation

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Checked and Approved Signatories:

A Watkins (Managing Director)
R Berriman (Associate Director)
S Royle (Laboratory Manager)
[redacted]
L Knight (Assistant Laboratory Manager)
S Eyre (Senior Technical Coordinator)
T Watkins (Senior Technician)

5 – 7 Hexthorpe Road,
Hexthorpe,
Doncaster,
DN4 0AR
Tel: [redacted]
Email: [redacted]@prosoils.co.uk
[redacted]@prosoils.co.uk

SUMMARY OF LABORATORY SOIL DESCRIPTIONS

Hole Number	Sample Number	Sample Type	Top Depth m	Base Depth m	Description of Sample
BH007	3	B	0.60		Brown slightly sandy CLAY.
BH007	2	D	0.60		Brown slightly sandy CLAY.
BH007	5	D	1.20		Brown slightly sandy CLAY.
BH007	6	B	1.65		Light brown slightly sandy slightly gravelly CLAY.
BH007	7	D	2.00		Brown slightly sandy CLAY.
BH007	8	UT	2.00		Very soft brown slightly sandy CLAY with some organic material.
BH007	10	D	3.00		Brown slightly sandy CLAY with some organic material.
BH007	15	B	4.50		Brown slightly sandy CLAY.
BH007	16	D	5.00		Brown slightly sandy CLAY.
BH007	17	UT	5.00		Grey mottled brown slightly sandy CLAY.
BH007	22	B	6.50		Brown sandy GRAVEL.
BH007	26	B	8.00		Brown slightly silty very gravelly SAND.
BH008	4	D	0.75		Brown slightly sandy CLAY.
BH008	7	B	1.50		Light brown slightly sandy slightly gravelly CLAY.
BH008	12	D	2.30		Dark grey mottled brown sandy organic CLAY.
BH008	16	B	3.30		Light brown slightly clayey very gravelly SAND.
BH008	18	D	7.90		Brown sandy slightly gravelly CLAY.
BH009	4	B	0.70		Brown very sandy slightly gravelly CLAY.
BH009	5	D	0.75		Brown sandy CLAY.

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

One Earth Solar Farm

Contract No:

PSL24/7871

Client Ref:

2372986

SUMMARY OF LABORATORY SOIL DESCRIPTIONS

Hole Number	Sample Number	Sample Type	Top Depth m	Base Depth m	Description of Sample
BH009	7	UT	1.20		Brown slightly sandy CLAY.
BH009	16	B	3.50		Brown slightly silty SAND & GRAVEL.
BH009	22	B	5.50		Light brown slightly sandy very sandy GRAVEL.
BH009	25	D	6.75		Reddish brown mottled grey sandy CLAY.
BH009	32	D	9.00		Grey sandy CLAY.
BH010	7	B	0.90		Brown sandy slightly gravelly CLAY.
BH010	9	D	1.10		Brown slightly sandy CLAY.
BH010	10	UT	1.20		Firm brown slightly sandy CLAY with some organic material.
BH010	17	B	3.35		Brown clayey very sandy GRAVEL.
BH010	21	B	4.45		Light brown slightly sandy very sandy GRAVEL.

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

One Earth Solar Farm

Contract No:

PSL24/7871

Client Ref:

2372986

SUMMARY OF SOIL CLASSIFICATION TESTS

BS 1377 - Part 2 : 2022 in accordance with BS EN ISO 17892 (as below)

Hole Number	Sample Number	Sample Type	Top Depth m	Base Depth m	Water Content %	Linear Shrinkage	Particle Density Mg/m^3	Liquid Limit %	Plastic Limit %	Plasticity Index %	Passing 0.425mm %	Remarks
BH007	2	D	0.60		35.3			67	27	40	100	High Plasticity CIH
BH007	5	D	1.20		37.0			70	29	41	100	Very High Plasticity CIV
BH007	7	D	2.00		41.9			72	30	42	100	Very High Plasticity CIV
BH007	10	D	3.00		68.7			92	34	58	100	Very High Plasticity CIV
BH007	16	D	5.00		37.1			44	22	22	100	Medium Plasticity CIM
BH007	22	B	6.50		2.2							
BH008	4	D	0.75		30.7			61	28	33	100	High Plasticity CIH
BH008	12	D	2.30		117.9			140	52	88	100	Organic Plasticity CIHO
BH008	18	D	7.90		37.0			41	20	21	98	Medium Plasticity CIM
BH009	5	D	0.75		22.8			41	20	21	100	Medium Plasticity CIM
BH009	7	UT	1.20		35.7			61	29	32	100	High Plasticity CIH
BH009	25	D	6.75		33.5			45	21	24	100	Medium Plasticity CIM
BH009	32	D	9.00		38.9			41	20	21	100	Medium Plasticity CIM
BH010	9	D	1.10		34.5			58	24	34	100	High Plasticity CIH
BH010	10	UT	1.20		43.1			83	36	47	100	Very High Plasticity CIV

Water Content - BS 1377 - Part 2 : 2022 : Clause 4 in accordance with BS EN ISO 17892 - 1 : 2014 + A1 : 2022
Linear Shrinkage - BS 1377 - Part 2 : 2022 : Clause 7
Particle Density (Gas Jar method) - BS 1377 - Part 2 : 2022 : Clause 9
Liquid, Plastic Limit & Plasticity Index - BS 1377 - Part 2 : 2022 : Clause 5 & 6 in accordance with BS EN ISO 17892 - 12 : 2018 + A2 : 2022

SYMBOLS : NP = Non Plastic

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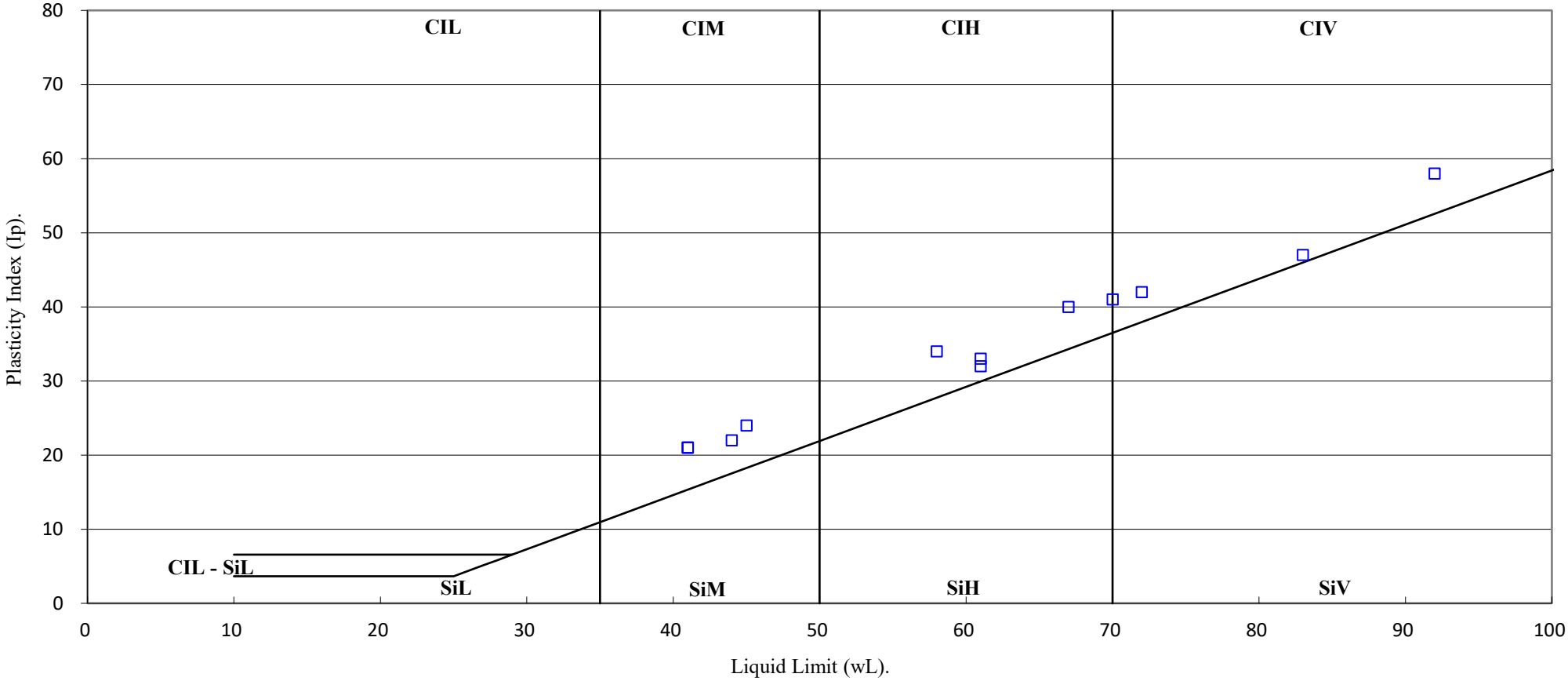
PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

One Earth Solar Farm

Contract No:
PSL24/7871
Client Ref:
2372986

PLASTICITY CHART

BS EN ISO 14688-2:2017 Clause 4.4



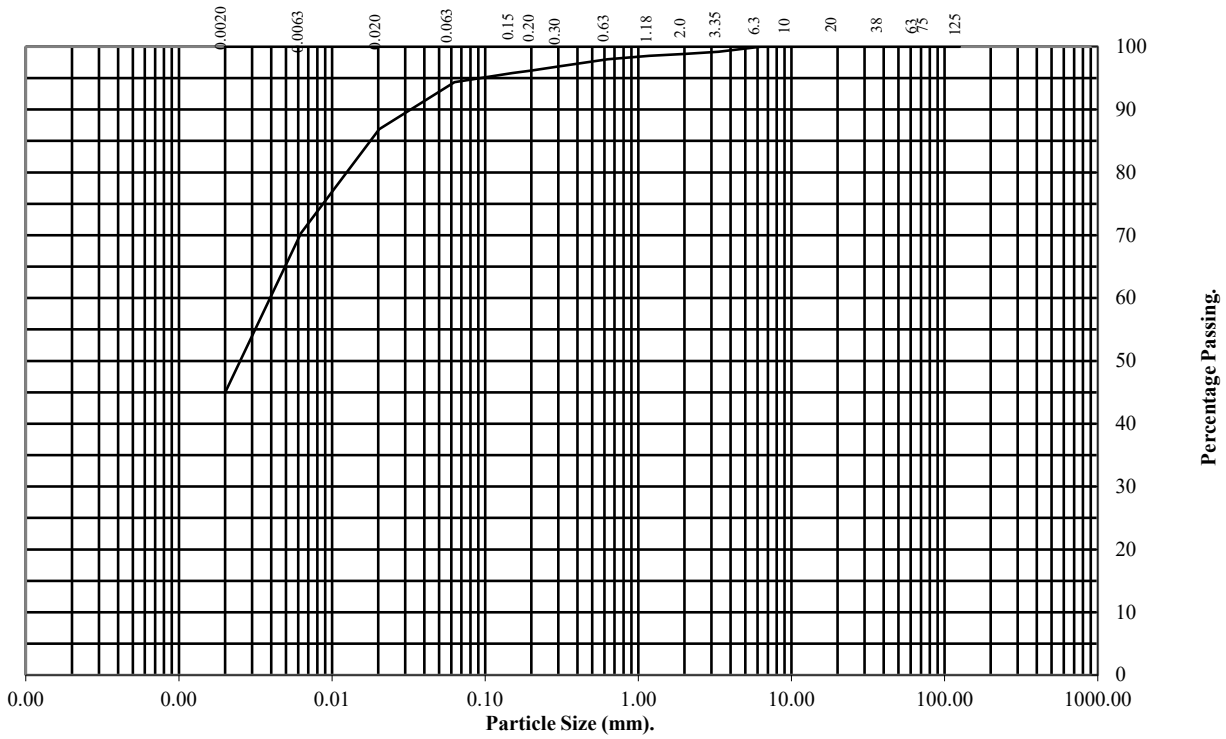
UKAS TESTING 4043 / PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY	One Earth Solar Farm	Contract No: PSL24/7871 Client Ref:

PARTICLE SIZE DISTRIBUTION TEST

BS 1377 - Part 2 : 2022 : Clause 10 in accordance with BS EN ISO 17892 - 4 : 2016

Sieve Method, Clause 5.2 & Pipette Method, Clause 5.4

Hole Number:	**BH007**	**Top Depth (m):**	**1.65**
Sample Number:	**6**	**Base Depth (m):**	
Sample Type:	**B**		



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
63	100
37.5	100
20	100
10	100
6.3	100
3.35	99
2	99
1.18	99
0.63	98
0.3	97
0.2	96
0.15	96
0.063	94

Particle Diameter	Percentage Passing
0.020	87
0.0063	70
0.0020	45
Particle Density - 2.65 Mg/m3 assumed	

Soil Fraction	Total Percentage
Cobbles	0
Gravel	1
Sand	5
Silt	49
Clay	45

Remarks:

See Summary of Soil Descriptions

UKAS TESTING 4043

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One Earth Solar Farm

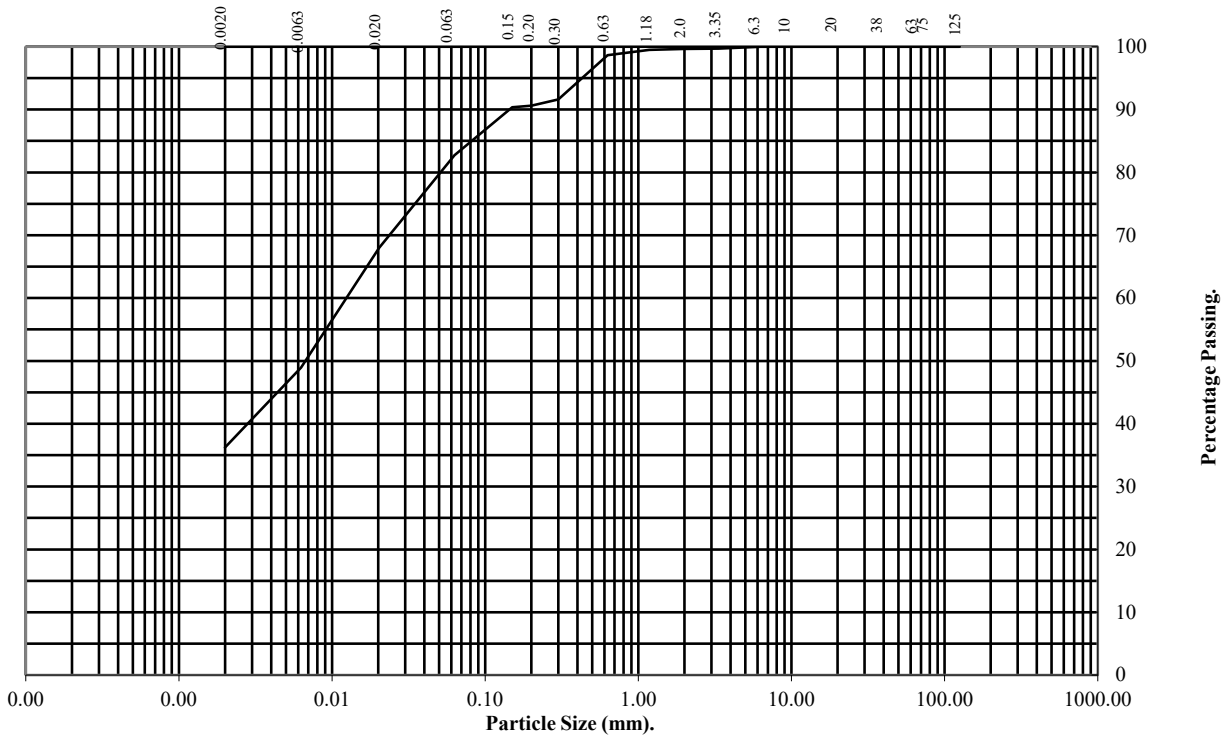
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2372986

PARTICLE SIZE DISTRIBUTION TEST

BS 1377 - Part 2 : 2022 : Clause 10 in accordance with BS EN ISO 17892 - 4 : 2016

Sieve Method, Clause 5.2 & Pipette Method, Clause 5.4

Hole Number:	**BH007**	**Top Depth (m):**	**4.50**
Sample Number:	**15**	**Base Depth (m):**	
Sample Type:	**B**		



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
63	100
37.5	100
20	100
10	100
6.3	100
3.35	100
2	100
1.18	100
0.63	99
0.3	92
0.2	91
0.15	90
0.063	83

Particle Diameter	Percentage Passing
0.020	68
0.0063	49
0.0020	36
Particle Density - 2.65 Mg/m3 assumed	

Soil Fraction	Total Percentage
Cobbles	0
Gravel	0
Sand	17
Silt	47
Clay	36

Remarks:

See Summary of Soil Descriptions

UKAS TESTING 4043

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One Earth Solar Farm

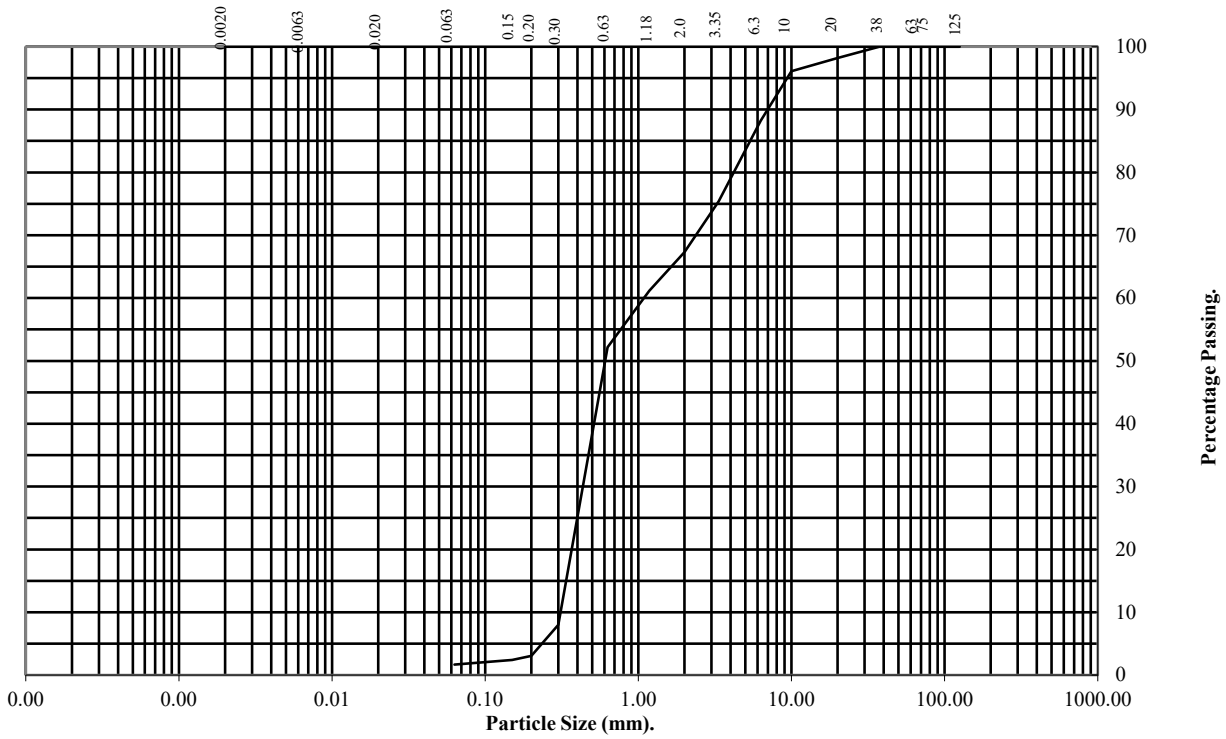
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2372986

PARTICLE SIZE DISTRIBUTION TEST

BS 1377 - Part 2 : 2022 : Clause 10 in accordance with BS EN ISO 17892 - 4 : 2016

Sieve Method, Clause 5.2

Hole Number:	**BH007**	**Top Depth (m):**	**8.00**
Sample Number:	**26**	**Base Depth (m):**	
Sample Type:	**B**		



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
63	100
37.5	100
20	98
10	96
6.3	88
3.35	75
2	67
1.18	61
0.63	52
0.3	8
0.2	3
0.15	2
0.063	2

Soil Fraction	Total Percentage
Cobbles	0
Gravel	33
Sand	65
Silt/Clay	2

Remarks:

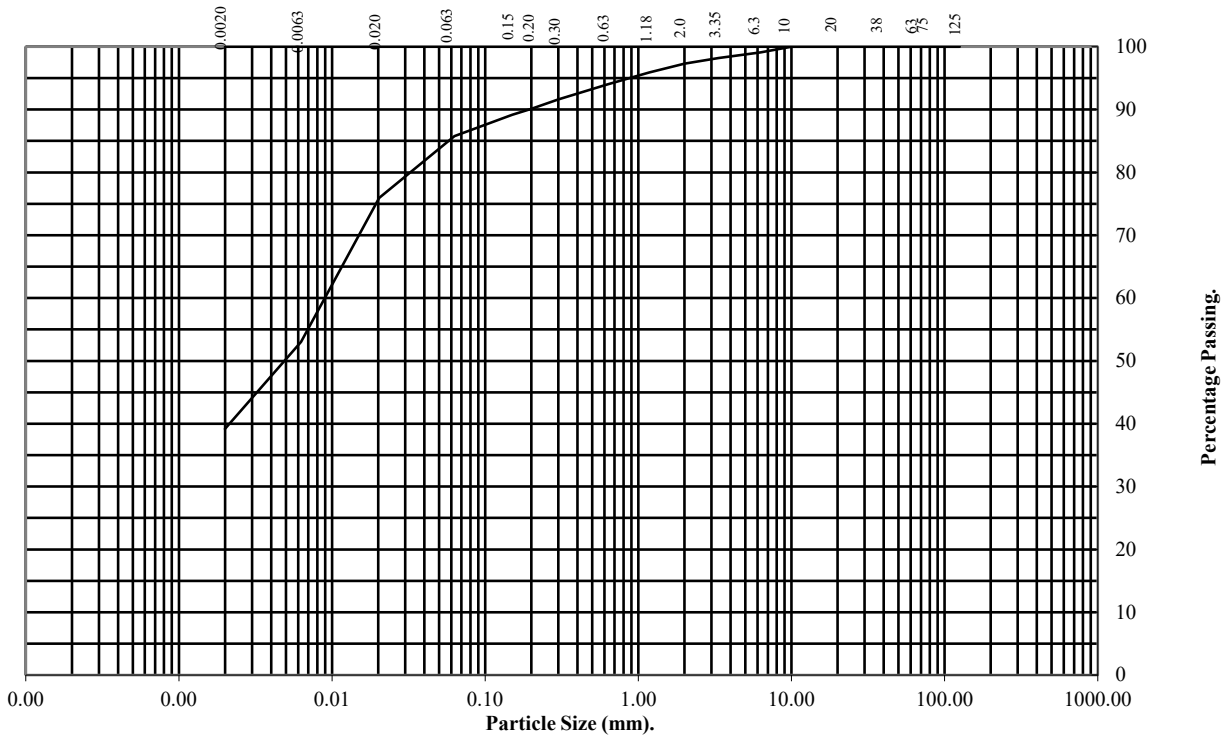
See Summary of Soil Descriptions

PARTICLE SIZE DISTRIBUTION TEST

BS 1377 - Part 2 : 2022 : Clause 10 in accordance with BS EN ISO 17892 - 4 : 2016

Sieve Method, Clause 5.2 & Pipette Method, Clause 5.4

Hole Number:	**BH008**	**Top Depth (m):**	**1.50**
Sample Number:	**7**	**Base Depth (m):**	
Sample Type:	**B**		



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
63	100
37.5	100
20	100
10	100
6.3	99
3.35	98
2	97
1.18	96
0.63	94
0.3	92
0.2	90
0.15	89
0.063	86

Particle Diameter	Percentage Passing
0.020	76
0.0063	53
0.0020	39
Particle Density - 2.65 Mg/m3 assumed	

Soil Fraction	Total Percentage
Cobbles	0
Gravel	3
Sand	11
Silt	47
Clay	39

Remarks:

See Summary of Soil Descriptions

UKAS TESTING 4043

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One Earth Solar Farm

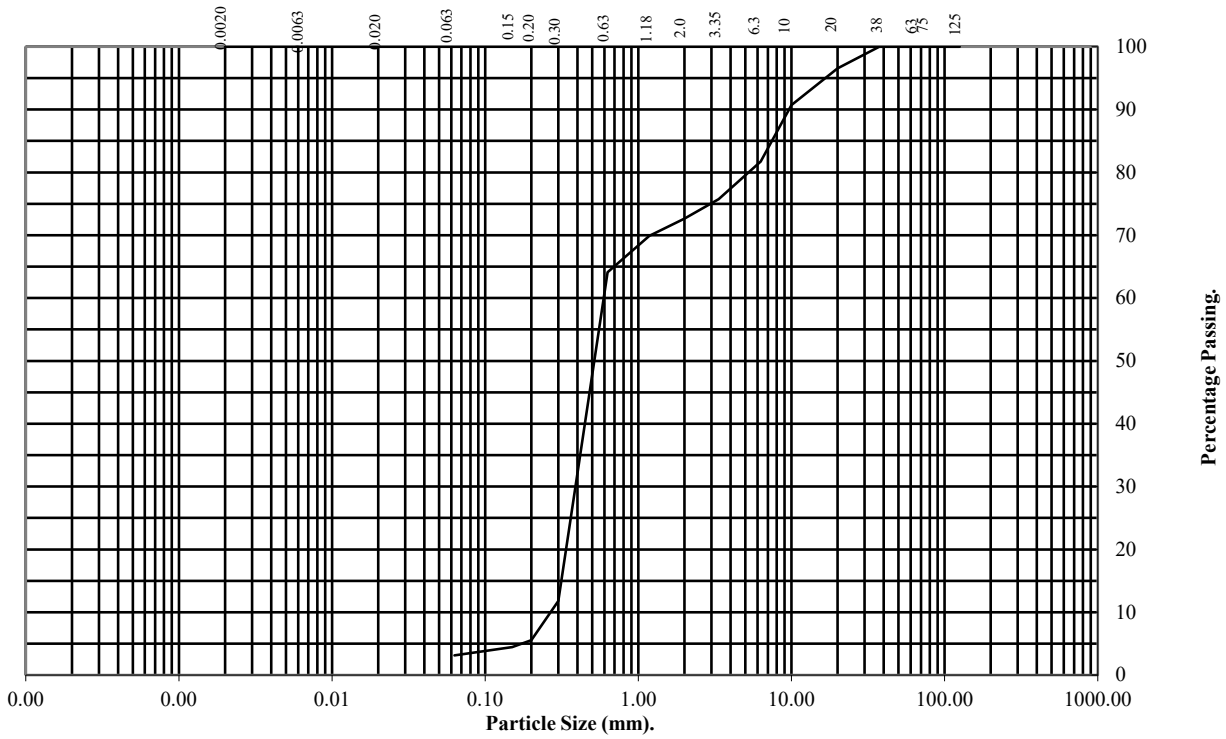
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2372986

PARTICLE SIZE DISTRIBUTION TEST

BS 1377 - Part 2 : 2022 : Clause 10 in accordance with BS EN ISO 17892 - 4 : 2016

Sieve Method, Clause 5.2

Hole Number:	**BH008**	**Top Depth (m):**	**3.30**
Sample Number:	**16**	**Base Depth (m):**	
Sample Type:	**B**		



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
63	100
37.5	100
20	97
10	91
6.3	82
3.35	76
2	73
1.18	70
0.63	64
0.3	12
0.2	6
0.15	4
0.063	3

Soil Fraction	Total Percentage
Cobbles	0
Gravel	27
Sand	70
Silt/Clay	3

Remarks:

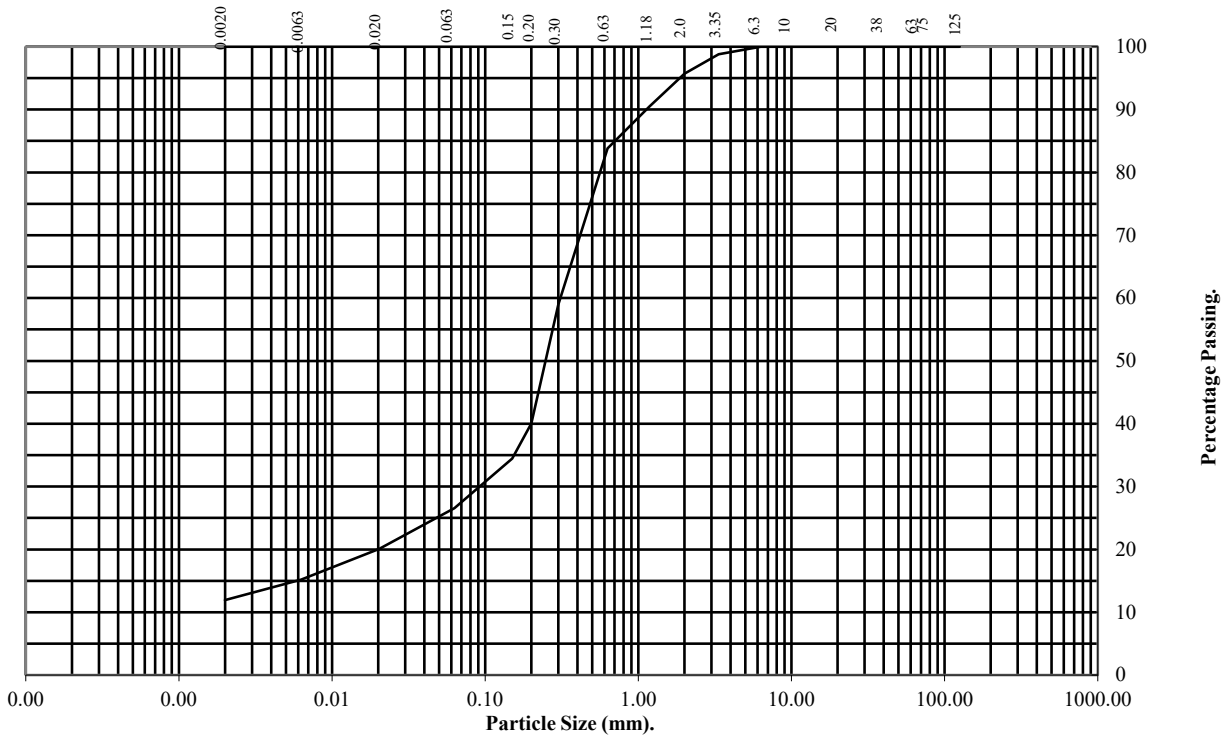
See Summary of Soil Descriptions

PARTICLE SIZE DISTRIBUTION TEST

BS 1377 - Part 2 : 2022 : Clause 10 in accordance with BS EN ISO 17892 - 4 : 2016

Sieve Method, Clause 5.2 & Pipette Method, Clause 5.4

Hole Number:	**BH009**	**Top Depth (m):**	**0.70**
Sample Number:	**4**	**Base Depth (m):**	
Sample Type:	**B**		



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
63	100
37.5	100
20	100
10	100
6.3	100
3.35	99
2	96
1.18	90
0.63	84
0.3	59
0.2	40
0.15	34
0.063	27

Particle Diameter	Percentage Passing
0.020	20
0.0063	15
0.0020	12
Particle Density - 2.65 Mg/m3 assumed	

Soil Fraction	Total Percentage
Cobbles	0
Gravel	4
Sand	69
Silt	15
Clay	12

Remarks:

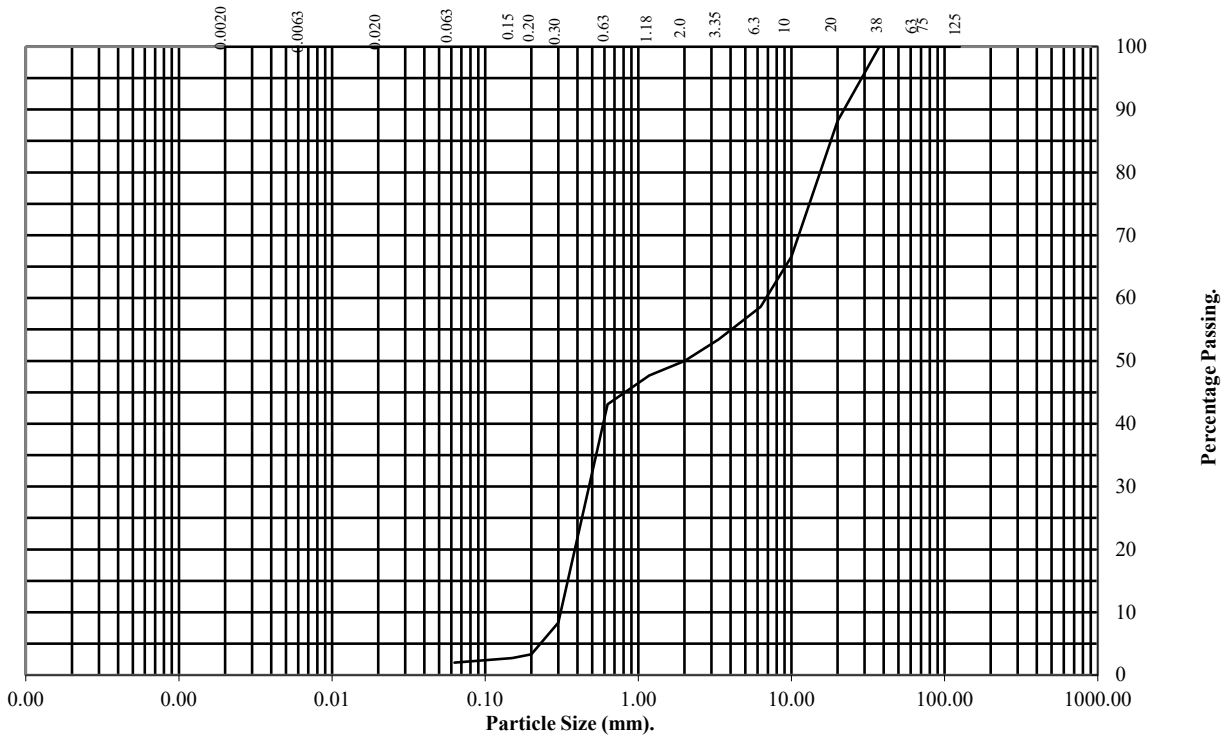
See Summary of Soil Descriptions

PARTICLE SIZE DISTRIBUTION TEST

BS 1377 - Part 2 : 2022 : Clause 10 in accordance with BS EN ISO 17892 - 4 : 2016

Sieve Method, Clause 5.2

Hole Number:	**BH009**	**Top Depth (m):**	**3.50**
Sample Number:	**16**	**Base Depth (m):**	
Sample Type:	**B**		



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
63	100
37.5	100
20	88
10	67
6.3	59
3.35	53
2	50
1.18	48
0.63	43
0.3	8
0.2	3
0.15	3
0.063	2

Soil Fraction	Total Percentage
Cobbles	0
Gravel	50
Sand	48
Silt/Clay	2

Remarks:

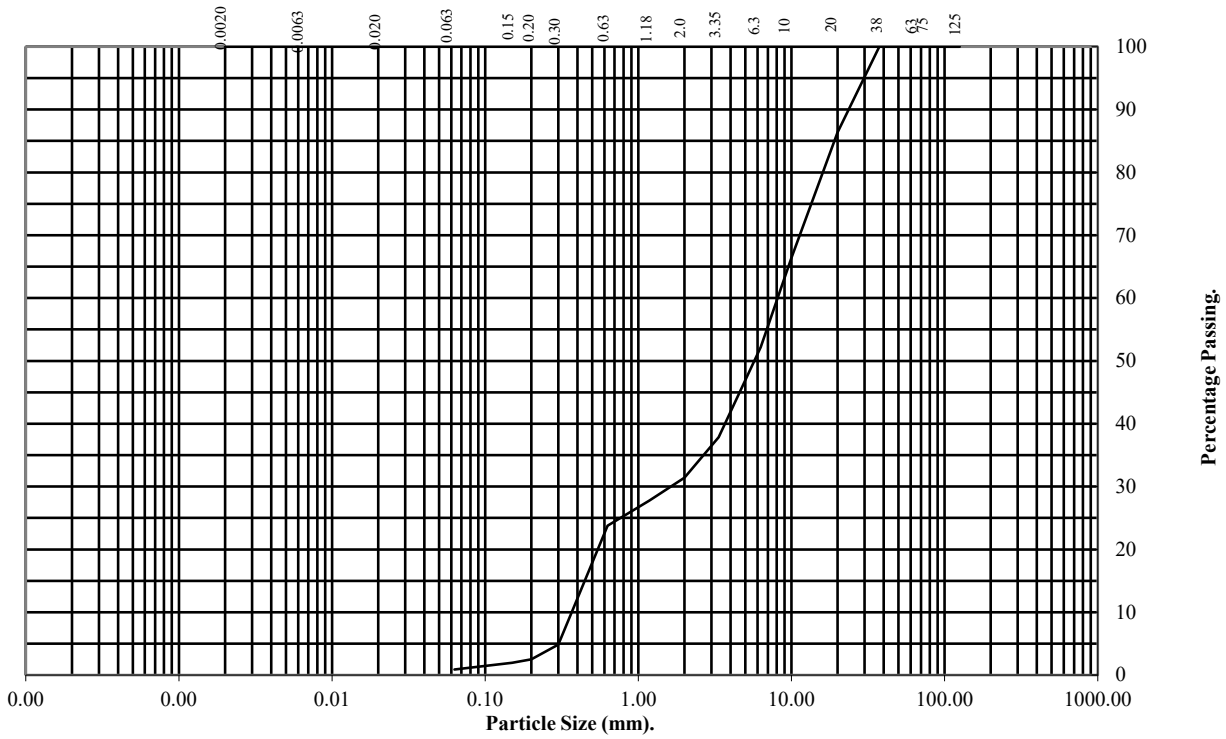
See Summary of Soil Descriptions

PARTICLE SIZE DISTRIBUTION TEST

BS 1377 - Part 2 : 2022 : Clause 10 in accordance with BS EN ISO 17892 - 4 : 2016

Sieve Method, Clause 5.2

Hole Number:	**BH009**	**Top Depth (m):**	**5.50**
Sample Number:	**22**	**Base Depth (m):**	
Sample Type:	**B**		



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
63	100
37.5	100
20	86
10	66
6.3	52
3.35	38
2	31
1.18	28
0.63	24
0.3	5
0.2	2
0.15	2
0.063	1

Soil Fraction	Total Percentage
Cobbles	0
Gravel	69
Sand	30
Silt/Clay	1

Remarks:

See Summary of Soil Descriptions

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

One Earth Solar Farm

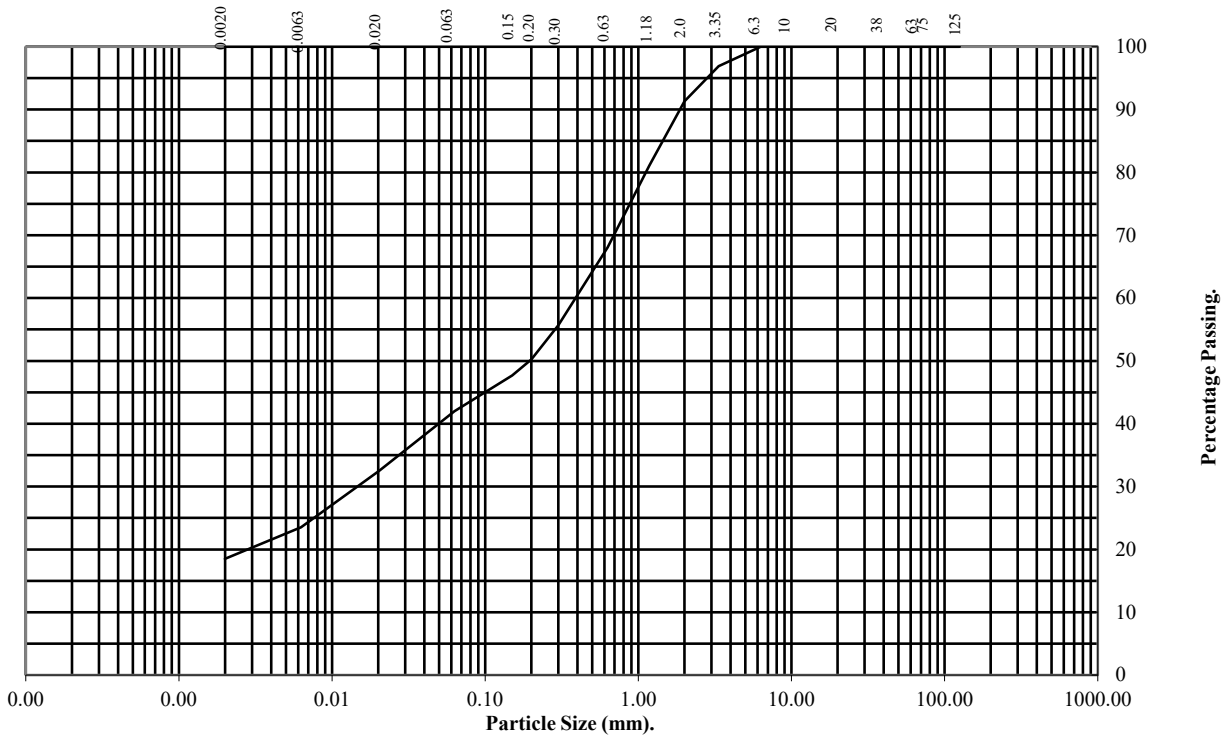
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PARTICLE SIZE DISTRIBUTION TEST

BS 1377 - Part 2 : 2022 : Clause 10 in accordance with BS EN ISO 17892 - 4 : 2016

Sieve Method, Clause 5.2 & Pipette Method, Clause 5.4

Hole Number:	**BH010**	**Top Depth (m):**	**0.90**
Sample Number:	**7**	**Base Depth (m):**	
Sample Type:	**B**		



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
63	100
37.5	100
20	100
10	100
6.3	100
3.35	97
2	91
1.18	81
0.63	68
0.3	56
0.2	50
0.15	48
0.063	42

Particle Diameter	Percentage Passing
0.020	33
0.0063	24
0.0020	18
Particle Density - 2.65 Mg/m3 assumed	

Soil Fraction	Total Percentage
Cobbles	0
Gravel	9
Sand	49
Silt	24
Clay	18

Remarks:

See Summary of Soil Descriptions

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One Earth Solar Farm

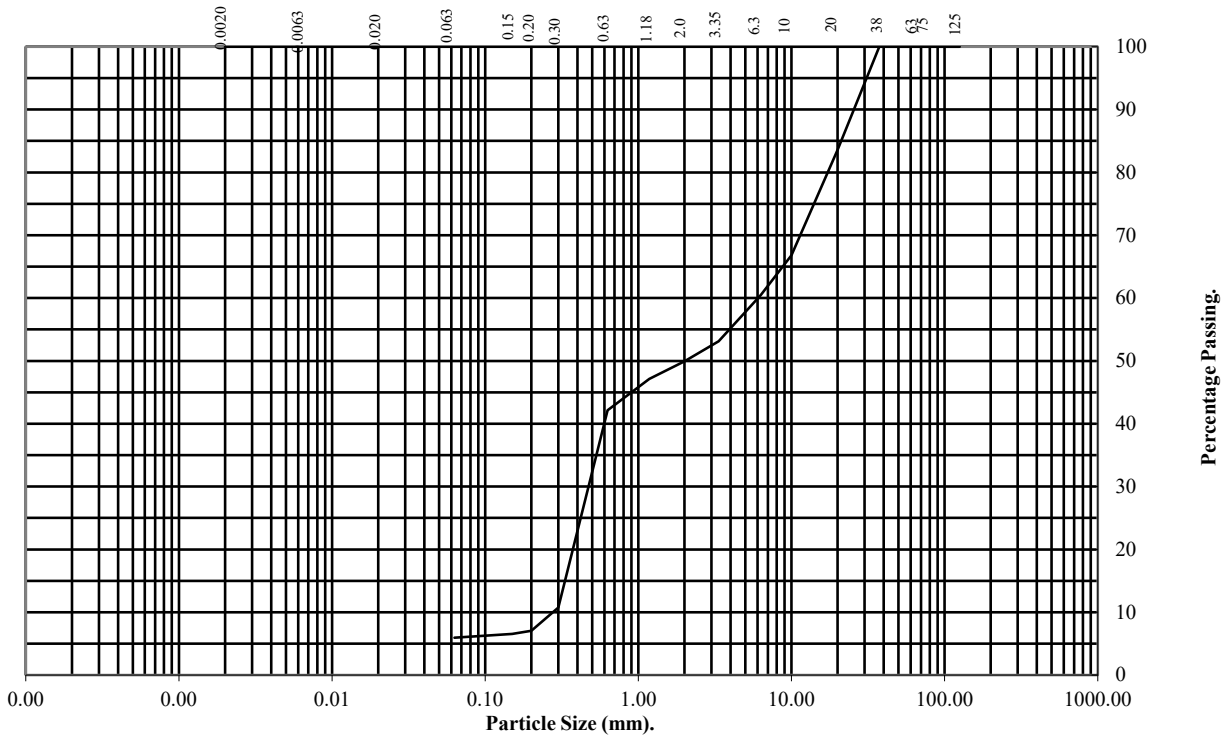
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PARTICLE SIZE DISTRIBUTION TEST

BS 1377 - Part 2 : 2022 : Clause 10 in accordance with BS EN ISO 17892 - 4 : 2016

Sieve Method, Clause 5.2

Hole Number:	**BH010**	**Top Depth (m):**	**3.35**
Sample Number:	**17**	**Base Depth (m):**	
Sample Type:	**B**		



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
63	100
37.5	100
20	84
10	67
6.3	60
3.35	53
2	50
1.18	47
0.63	42
0.3	11
0.2	7
0.15	7
0.063	6

Soil Fraction	Total Percentage
Cobbles	0
Gravel	50
Sand	44
Silt/Clay	6

Remarks:

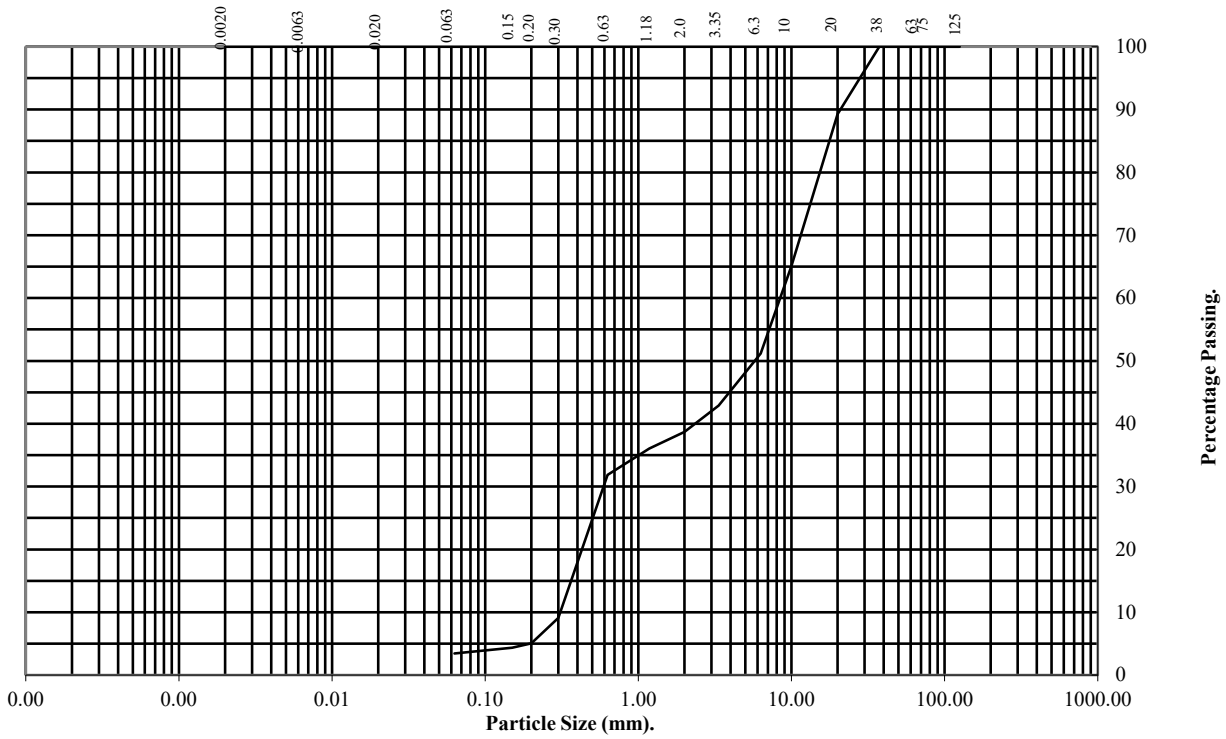
See Summary of Soil Descriptions

PARTICLE SIZE DISTRIBUTION TEST

BS 1377 - Part 2 : 2022 : Clause 10 in accordance with BS EN ISO 17892 - 4 : 2016

Sieve Method, Clause 5.2

Hole Number:	**BH010**	**Top Depth (m):**	**4.45**
Sample Number:	**21**	**Base Depth (m):**	
Sample Type:	**B**		



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
63	100
37.5	100
20	89
10	65
6.3	51
3.35	43
2	39
1.18	36
0.63	32
0.3	9
0.2	5
0.15	4
0.063	3

Soil Fraction	Total Percentage
Cobbles	0
Gravel	61
Sand	36
Silt/Clay	3

Remarks:

See Summary of Soil Descriptions

SUMMARY OF LABORATORY HAND VANES

(Inhouse Method using the principles of BS1377 - PART 9 : Clause 4.4 : 1990)

Hole Number	Sample Number	Sample Type	Top Depth m	Base Depth m	Water Content %	Peak Shear Strength kPa	Residual Shear Strength kPa	Remarks
BH007	3	B	0.60		31.2	28		Top
BH007	3	B	0.60		30.5	36		Base
BH009	4	B	0.70		24.3	67		Top
BH009	4	B	0.70		23.5	72		Base

* This test is out of our UKAS scope

PROFESSIONAL SOILS LABORATORY
A PHENNA GROUP COMPANY

One Earth Solar Farm

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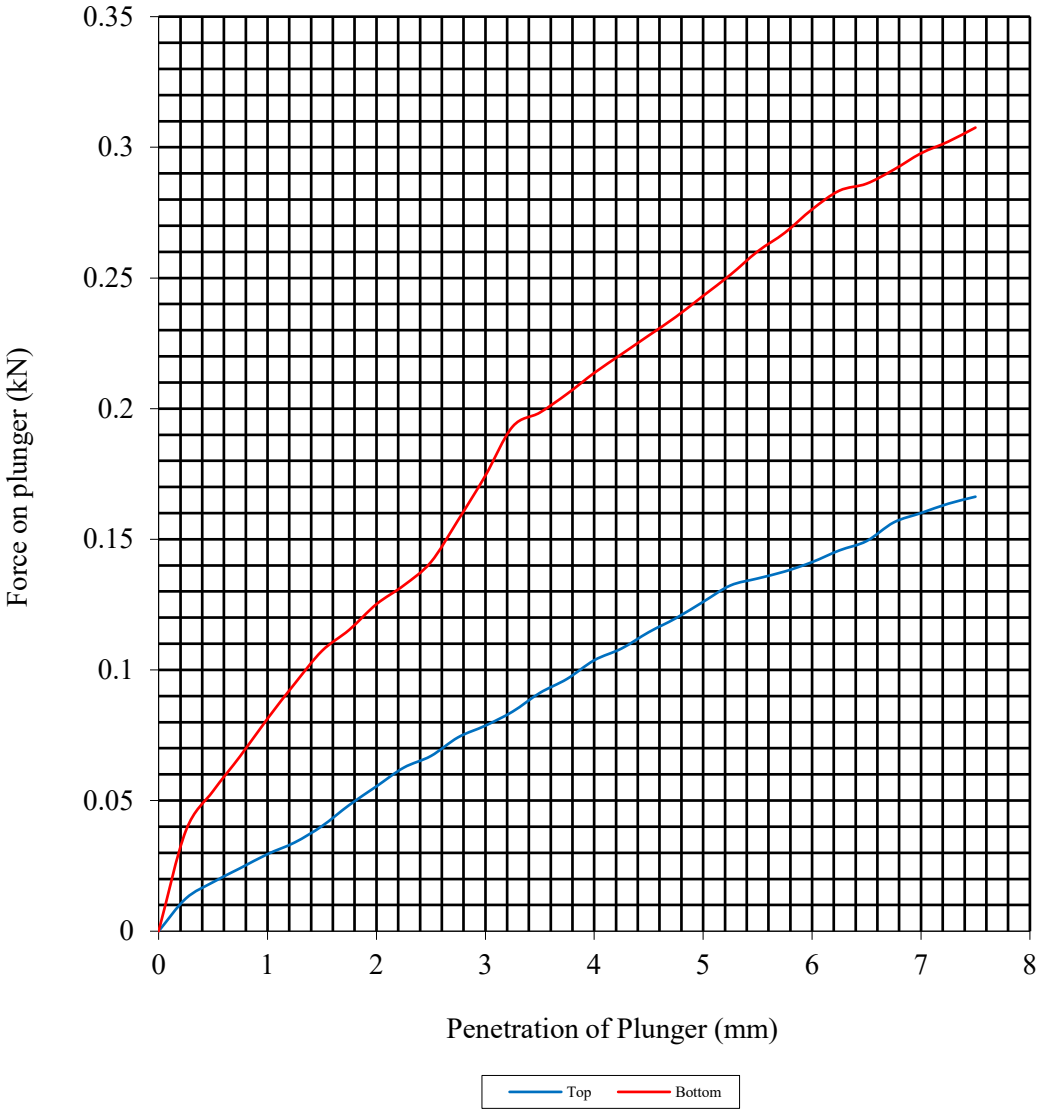
CALIFORNIA BEARING RATIO (CBR)

BS 1377 - Part 2 : Clause 15 : 2022

Hole Number: BH007 **Top Depth (m):** 0.60

Sample Number: 3 **Base Depth (m):**

Sample Type: B



Initial Sample Conditions		Sample Preparation		Final Water Content %		C.B.R. Value %	
Water Content:	27.8	Surcharge Kg:	4.20	Sample Top	31.2	Sample Top	0.6
Bulk Density Mg/m3:	2.00	Soaking Time hrs	96	Sample Bottom	30.5	Sample Bottom	1.2
Dry Density Mg/m3:	1.57	Swelling mm:	1.40	Remarks : See Summary of Soil Descriptions.			
Percentage retained on 20mm BS test sieve:			0				
Compaction Conditions		2.5kg					

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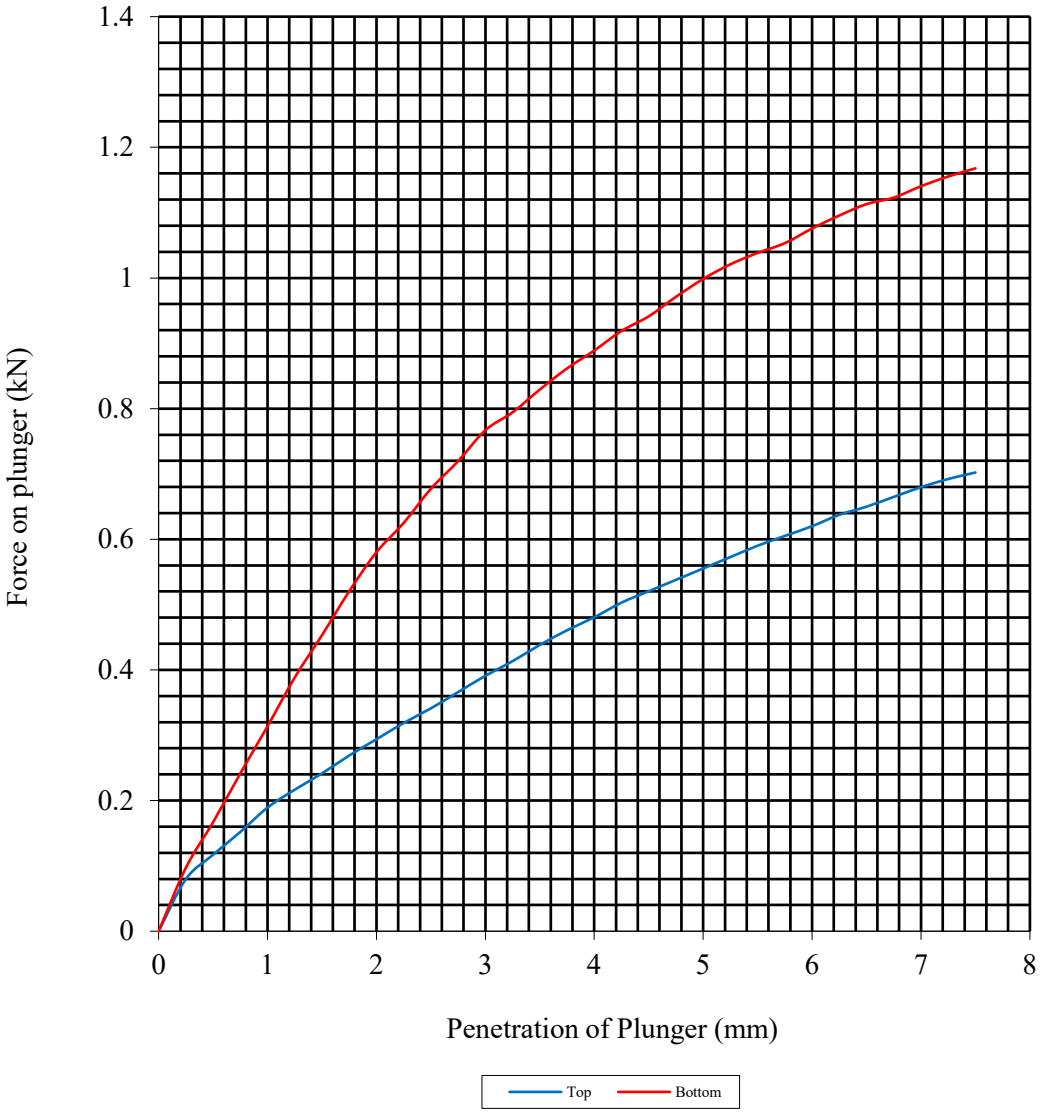
CALIFORNIA BEARING RATIO (CBR)

BS 1377 - Part 2 : Clause 15 : 2022

Hole Number: BH009 **Top Depth (m):** 0.70

Sample Number: 4 **Base Depth (m):**

Sample Type: B



Initial Sample Conditions		Sample Preparation		Final Water Content %		C.B.R. Value %	
Water Content:	19.4	Surcharge Kg:	4.20	Sample Top	24.3	Sample Top	2.8
Bulk Density Mg/m3:	1.97	Soaking Time hrs	96	Sample Bottom	23.5	Sample Bottom	5.1
Dry Density Mg/m3:	1.65	Swelling mm:	3.22	Remarks : See Summary of Soil Descriptions.			
Percentage retained on 20mm BS test sieve:			0				
Compaction Conditions		2.5kg					

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One Earth Solar Farm

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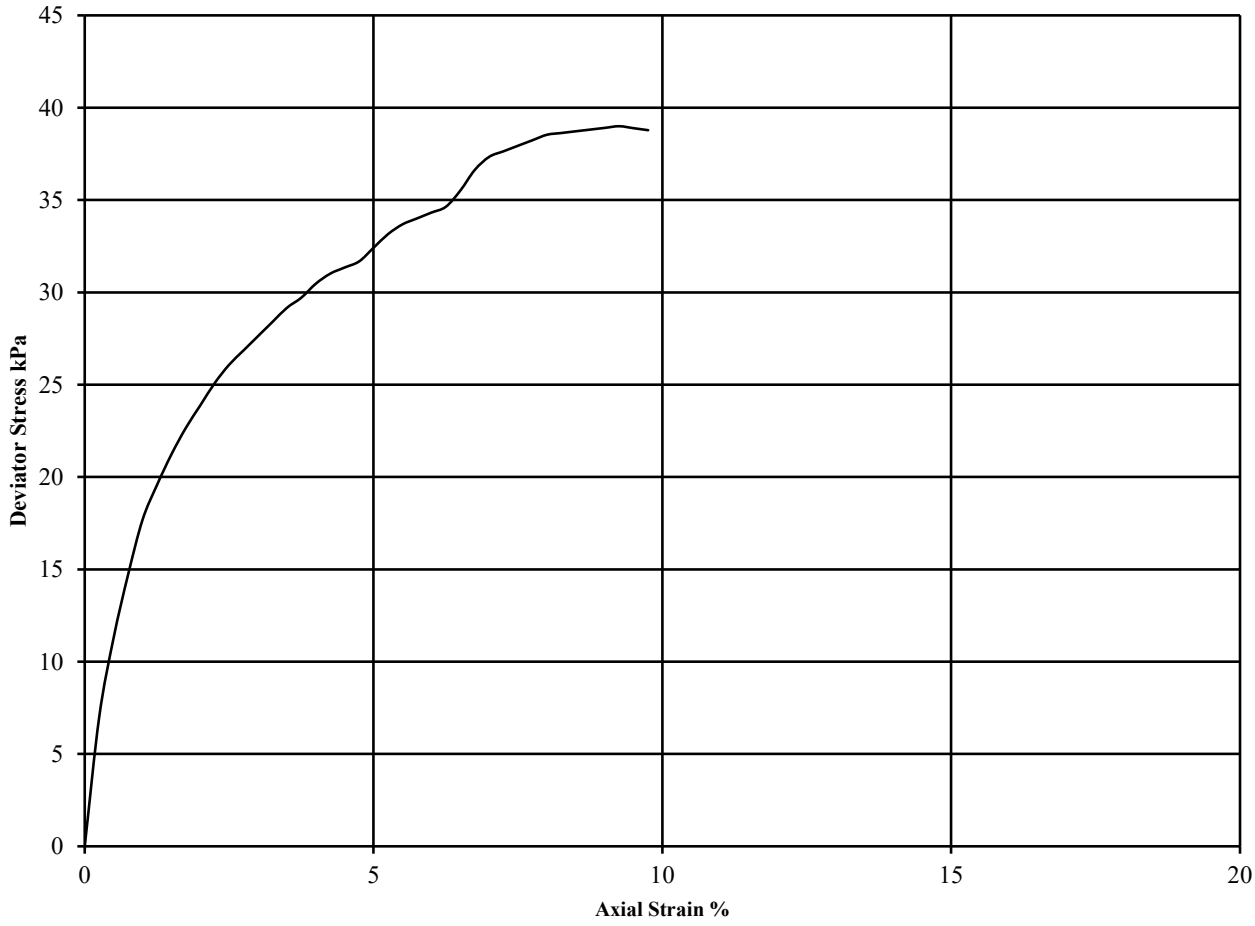
Client Ref: 2372986

UNDRAINED SHEAR STRENGTH IN TRIAXIAL COMPRESSION

WITHOUT MEASUREMENT OF PORE PRESSURE

BS1377 : Part7 : 1990: Clause 9

Hole Number:	**BH007**	**Top Depth (m):**	**2.00**
Sample Number:	**8**	**Base Depth (m):**	
Sample Type	**UT**		



Diameter (mm):		102.13	Height (mm):		204.185	Test:	UU Multistage		Remarks
Specimen	Moisture Content (%)	Bulk Density (Mg/m3)	Dry Density (Mg/m3)	Cell Pressure (kPa) θ_3	Corr. Max. Deviator Stress (kPa) $(\theta_1-\theta_3)_f$	Shear Strength Cu (kPa) $^1/_2(\theta_1-\theta_3)_f$	Failure Strain (%)	Mode of Failure	Undisturbed Sample Sample taken from top of tube Rate of strain = 2 %/min Latex Membrane used 0.2 mm thick Membrane Correction applied (kPa)
1	70	1.69	0.99	20	32	16	4.8		0.36 0.36 0.35
				40	35	17	6.3		See summary of soil descriptions
				80	39	19	9.3	Intermediate	

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One Earth Solar Farm

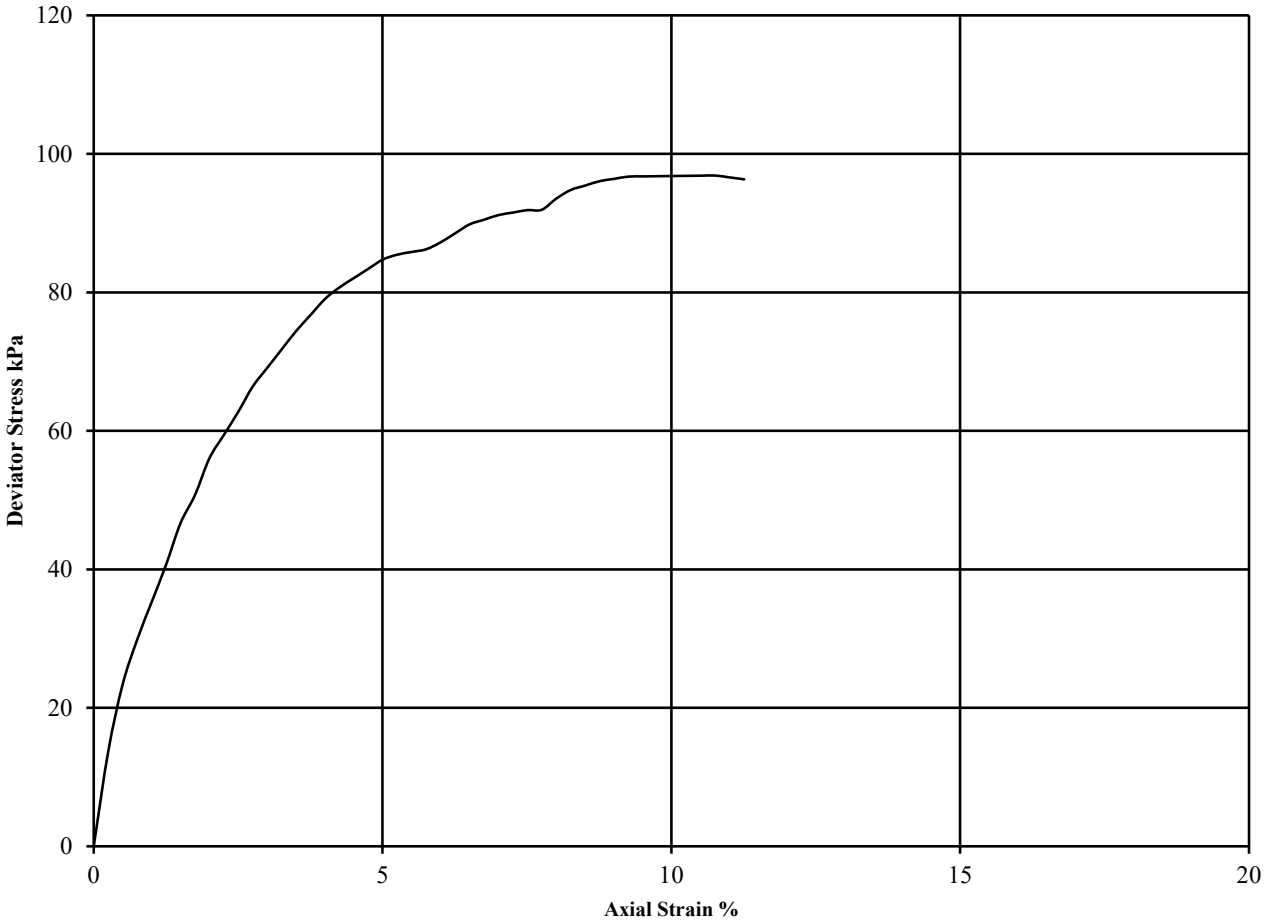
Contract No:
PSL24/7871
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2372986

UNDRAINED SHEAR STRENGTH IN TRIAXIAL COMPRESSION

WITHOUT MEASUREMENT OF PORE PRESSURE

BS1377 : Part7 : 1990: Clause 9

Hole Number:	**BH010**	**Top Depth (m):**	**1.20**
Sample Number:	**10**	**Base Depth (m):**	
Sample Type	**UT**		



Diameter (mm):		102.16	Height (mm):		204.13	Test:	UU Multistage		Remarks
Specimen	Moisture Content (%)	Bulk Density (Mg/m3)	Dry Density (Mg/m3)	Cell Pressure (kPa) θ_3	Corr. Max. Deviator Stress (kPa) $(\theta_1-\theta_3)_f$	Shear Strength Cu (kPa) $^1/_2(\theta_1-\theta_3)_f$	Failure Strain (%)	Mode of Failure	Undisturbed Sample Sample taken from top of tube Rate of strain = 2 %/min Latex Membrane used 0.2 mm thick Membrane Correction applied (kPa)
1	43	1.79	1.25	12	86	43	5.8		0.36 0.36 0.35
				25	92	46	7.8		See summary of soil descriptions
				50	97	48	10.8	Plastic	

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INCREMENTAL LOADING OEDOMETER TEST

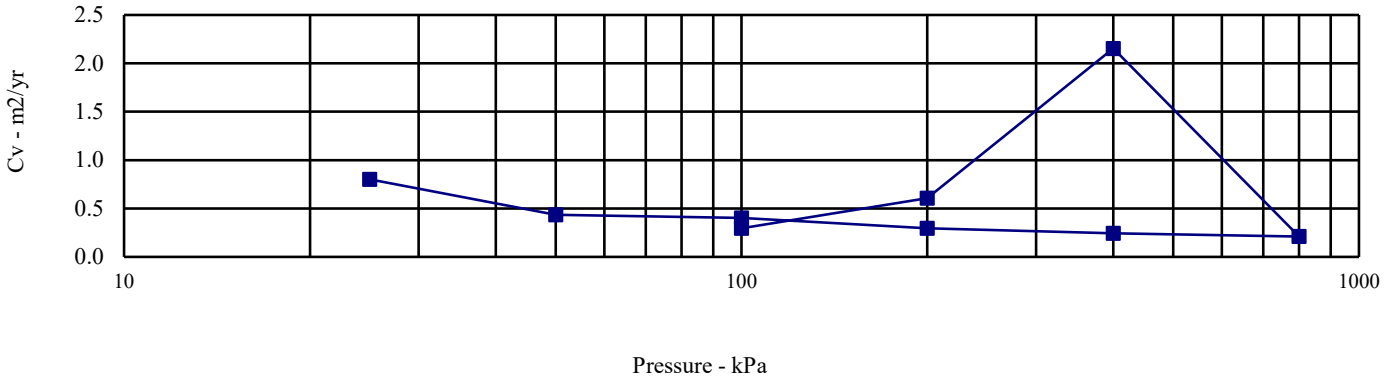
BS 1377 - Part 2 : 2022 : Clause 16 in accordance with BS EN ISO 17892 - 5 : 2017

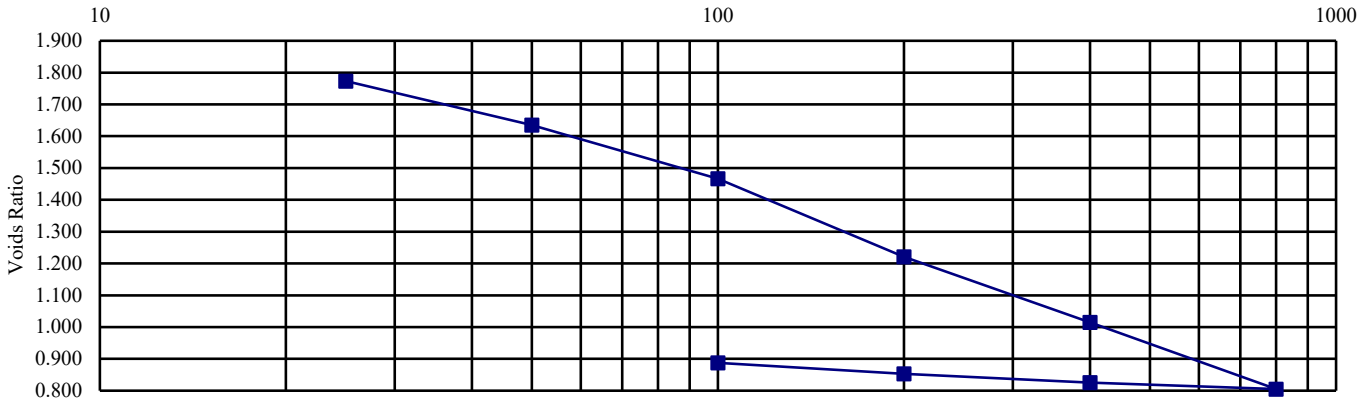
Hole Number: BH007 **Top Depth (m):** 2.00

Sample Number: 8 **Base Depth (m) :**

Sample Type: UT

Initial Conditions		Pressure Range kPa		Mv m2/MN	Cv m2/yr	Specimen location within tube:	Top Vertical
Water Content (%):	72.4						
Bulk Density (Mg/m3):	1.55	0	25	2.446	0.803	Method of preparation:	Trimmed from extruded material
Dry Density (Mg/m3):	0.90	25	50	1.996	0.435		
Voids Ratio:	1.954	50	100	1.282	0.403	Method used to determine CV:	T90
Degree of saturation:	98.2	100	200	0.994	0.297		
Height (mm):	20.02	200	400	0.463	0.244	Nominal temperature during test ' C:	20
Diameter (mm)	75.008	400	800	0.260	0.210		
Particle Density (Mg/m3): Assumed	2.65	800	400	0.028	2.155	Results correct against equipment deformation	Yes
		400	200	0.076	0.608		
		200	100	0.186	0.295		





UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

One Earth Solar Farm

Contract No: PSL24/7871

Client Ref: 2372986

INCREMENTAL LOADING OEDOMETER TEST

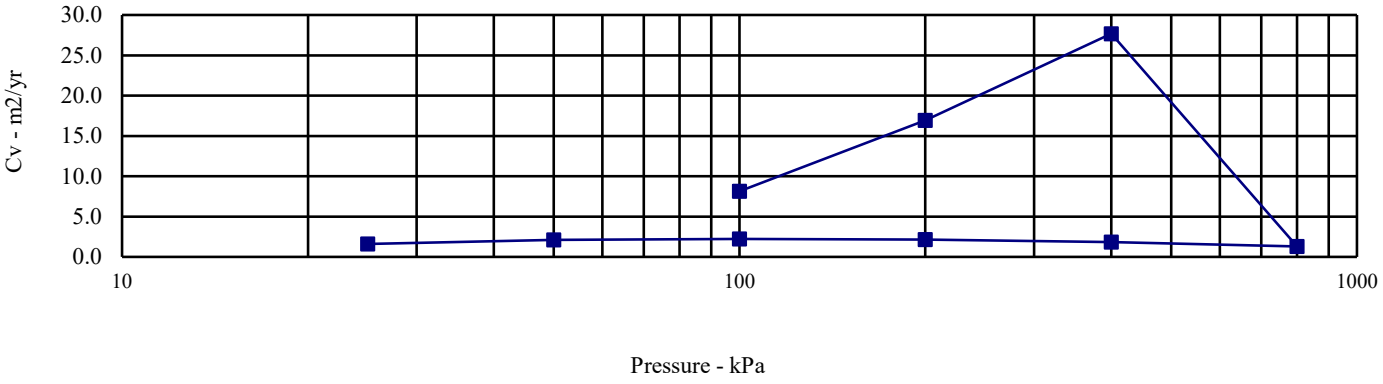
BS 1377 - Part 2 : 2022 : Clause 16 in accordance with BS EN ISO 17892 - 5 : 2017

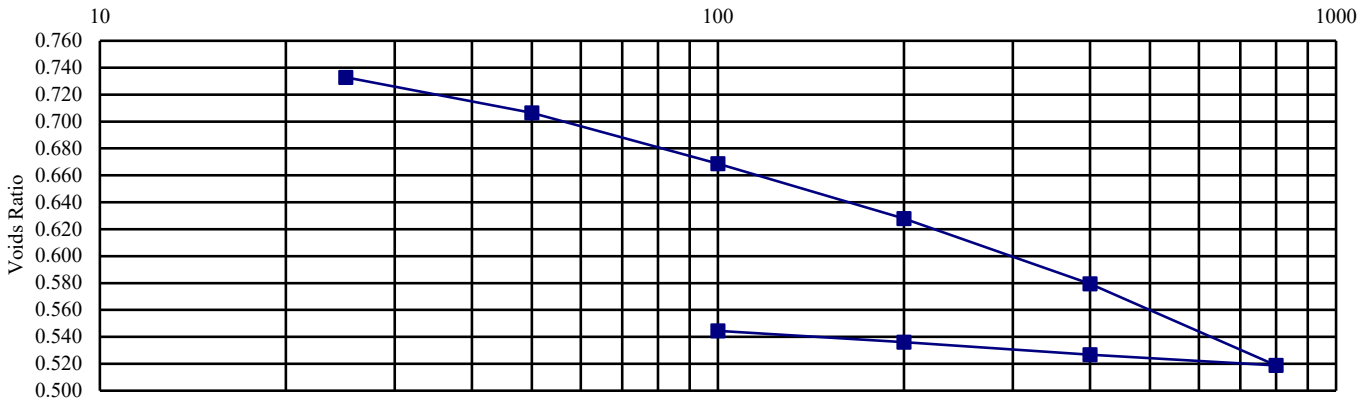
Hole Number: BH007 **Top Depth (m):** 5.00

Sample Number: 17 **Base Depth (m) :**

Sample Type: UT

Initial Conditions		Pressure Range kPa		Mv m2/MN	Cv m2/yr	Specimen location within tube:	Top Vertical
Water Content (%):	32.4						
Bulk Density (Mg/m3):	1.90	0	25	2.516	1.620	Method of preparation:	Trimmed from extruded material
Dry Density (Mg/m3):	1.43	25	50	0.609	2.093		
Voids Ratio:	0.849	50	100	0.444	2.219	Method used to determine CV:	T90
Degree of saturation:	101.0	100	200	0.244	2.143		
Height (mm):	20.03	200	400	0.149	1.825	Nominal temperature during test ' C:	20
Diameter (mm)	75.003	400	800	0.096	1.297		
Particle Density (Mg/m3): Assumed	2.65	800	400	0.013	27.679	Results correct against equipment deformation	Yes
		400	200	0.031	16.911		
		200	100	0.055	8.158		





UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

One Earth Solar Farm

Contract No: PSL24/7871

Client Ref: 2372986

INCREMENTAL LOADING OEDOMETER TEST

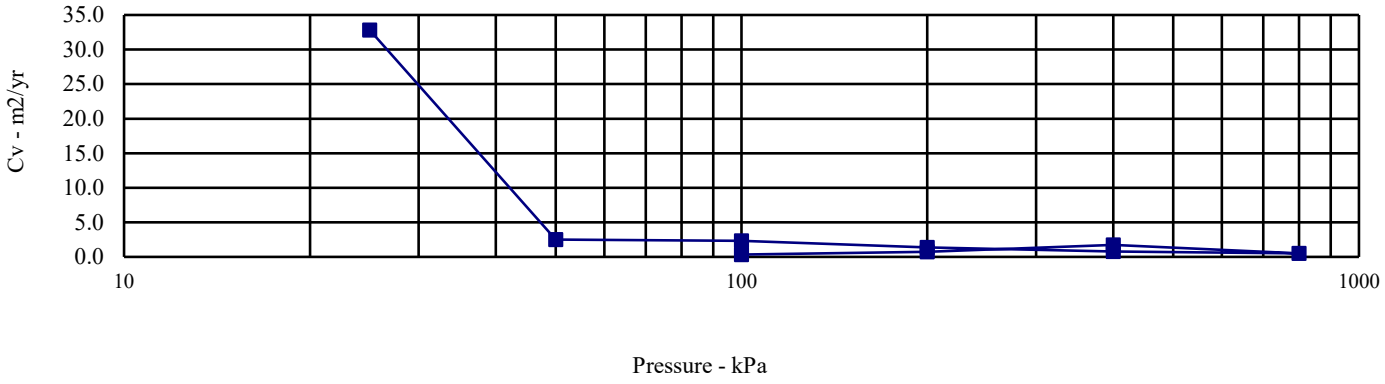
BS 1377 - Part 2 : 2022 : Clause 16 in accordance with BS EN ISO 17892 - 5 : 2017

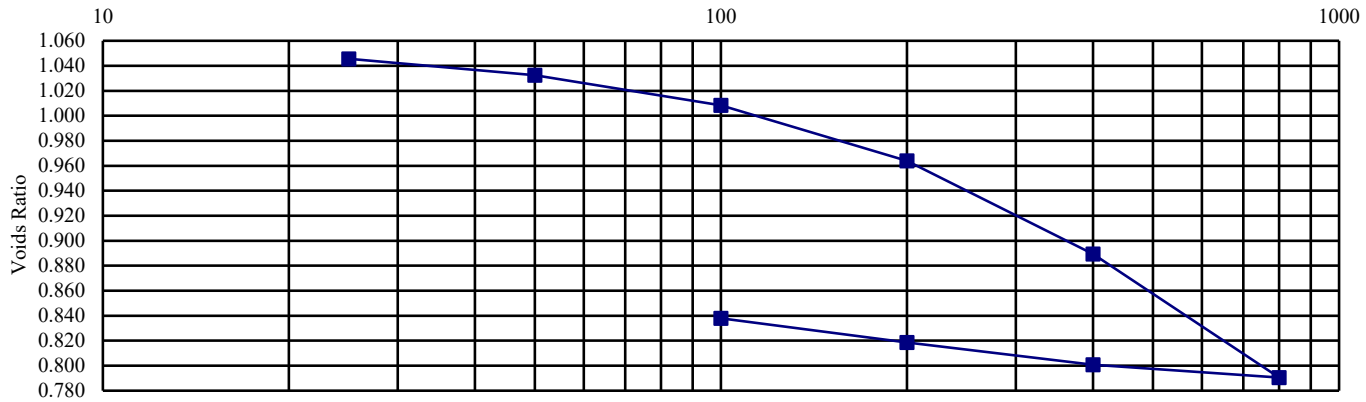
Hole Number: BH009 **Top Depth (m):** 1.20

Sample Number: 7 **Base Depth (m) :**

Sample Type: UT

Initial Conditions		Pressure Range kPa		Mv m2/MN	Cv m2/yr	Specimen location within tube:	Top Vertical
Water Content (%):	37.1						
Bulk Density (Mg/m3):	1.77	0	25	0.168	32.815	Method of preparation:	Trimmed from extruded material
Dry Density (Mg/m3):	1.29	25	50	0.257	2.500		
Voids Ratio:	1.054	50	100	0.238	2.339	Method used to determine CV:	T90
Degree of saturation:	93.3	100	200	0.221	1.367		
Height (mm):	20.012	200	400	0.190	0.761	Nominal temperature during test ' C:	20
Diameter (mm)	75.013	400	800	0.131	0.490		
Particle Density (Mg/m3): Assumed	2.65	800	400	0.014	1.729	Results correct against equipment deformation	Yes
		400	200	0.049	0.718		
		200	100	0.107	0.340		





UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

One Earth Solar Farm

Contract No: PSL24/7871

Client Ref: 2372986

INCREMENTAL LOADING OEDOMETER TEST

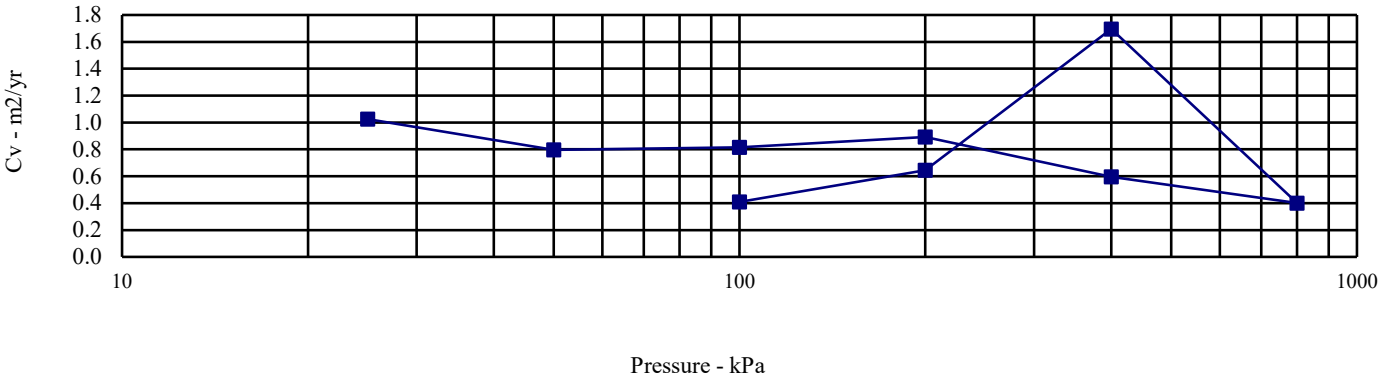
BS 1377 - Part 2 : 2022 : Clause 16 in accordance with BS EN ISO 17892 - 5 : 2017

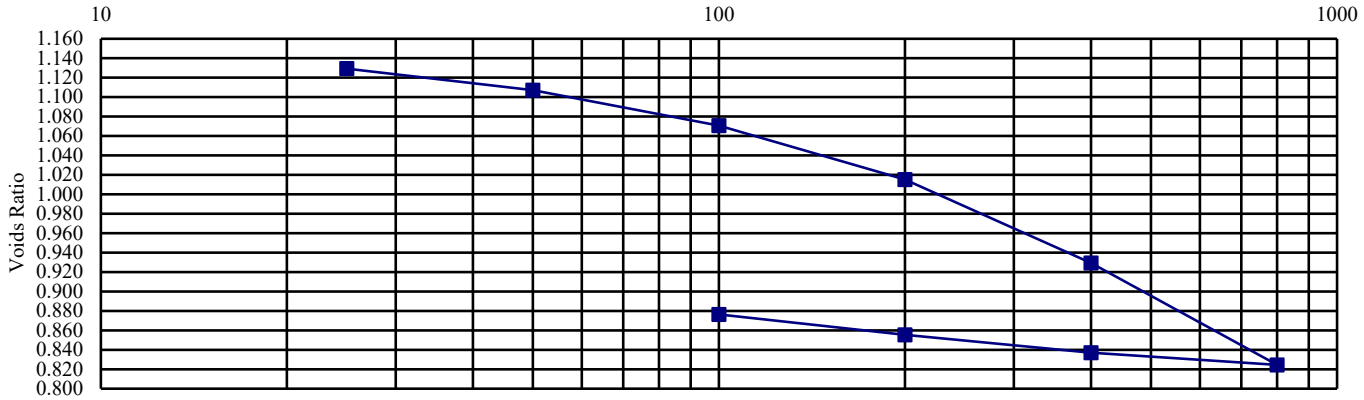
Hole Number: BH010 **Top Depth (m):** 1.20

Sample Number: 10 **Base Depth (m) :**

Sample Type: UT

Initial Conditions		Pressure Range kPa		Mv m2/MN	Cv m2/yr	Specimen location within tube:	Top Vertical
Water Content (%):	43.1						
Bulk Density (Mg/m3):	1.77	0	25	0.344	1.026	Method of preparation:	Trimmed from extruded material
Dry Density (Mg/m3):	1.23	25	50	0.417	0.796		
Voids Ratio:	1.148	50	100	0.344	0.814	Method used to determine CV:	T90
Degree of saturation:	99.5	100	200	0.268	0.892		
Height (mm):	20.014	200	400	0.213	0.597	Nominal temperature during test ' C:	20
Diameter (mm)	75.025	400	800	0.136	0.401		
Particle Density (Mg/m3): Assumed	2.65	800	400	0.017	1.696	Results correct against equipment deformation	Yes
		400	200	0.050	0.644		
		200	100	0.115	0.409		





UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

One Earth Solar Farm

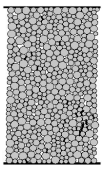
Contract No: PSL24/7871

Client Ref: 2372986

Effective Stress Triaxial Compression

Consolidated Undrained

Summary Report

Sample Details				
	Depth		5.00m UT17	
	Description		See summary of soil descriptions.	
	Type		Undisturbed, vertical orientation.	
	Initial Sample Length	L_0	(mm)	200.0
	Initial Sample Diameter	D_0	(mm)	100.0
	Initial Sample Weight	W_0	(gr)	3000.0
sketch showing specimen location in original sample	Initial Bulk Density	ρ_0	(Mg/m3)	1.91
	Particle Density	ρ_s	(Mg/m3)	2.65 Assumed

Initial Conditions			Stage 1	2	3	4
Initial Cell Pressure	σ_{3i}	(kPa)	325	350	400	
Initial Back Pressure	U_{bi}	(kPa)	300	300	300	
Membrane Thickness	m_b	(mm)	0.400			
Displacement Input	L_{IP}	(mm)	CH 2			
Load Input	N_{IP}	(N)	CH 1			
Pore Water Pressure Input	u_{pwp}	(kPa)	CH 3			
Sample Volume	V	(cc)	CH 6			
Initial Moisture	ω_i	(%)	33.4			
Initial Dry Density	ρ_{di}	(Mg/m3)	1.44			
Initial Voids Ratio	e_i	.	0.843			
Initial Degree of Saturation	S_i	(%)	100			
B Value	B	.	0.98			

Final Conditions						
Final Moisture	ω_f	(%)	25.2			
Final Dry Density	ρ_{df}	(Mg/m3)	1.66			
Final Voids Ratio	e_f	.	0.596			
Final Degree of Saturation	S_f	(%)	100.0			
			Stage 1	2	3	4
Failure Criteria		.	Max. Dev.	Max. Dev.	Max. Dev.	
Strain At Failure	ε_f	(%)	3.18	5.85	8.81	
Stress At Failure	$(\sigma_1-\sigma_3)_f$	(kPa)	37.8	73.1	124.0	
Minor Stress At Failure	σ_3'	(kPa)	12.0	30.8	58.1	
Major Stress At Failure	σ_1'	(kPa)	49.8	103.9	182.1	
Principal Stress Ratio At Failure	σ_1'/σ_3		4.151	3.372	3.135	
PwP At Failure Criteria	u_f		313.0	319.2	342.0	

Notes



Plastic

Test Method	BS 1377-2: 2022 tested in accordance with BS EN ISO 17892-9.	Test Name	BH007 5.00m
		Test Date	08/11/2024
		Borehole	BH007
Jobfile	One Earth Solar Farm	Sample	5.00m
Client	Central Alliance	Depth	5.00m UT17

Operator	David Burton	Checked	S.Royle	Approved	S.Royle

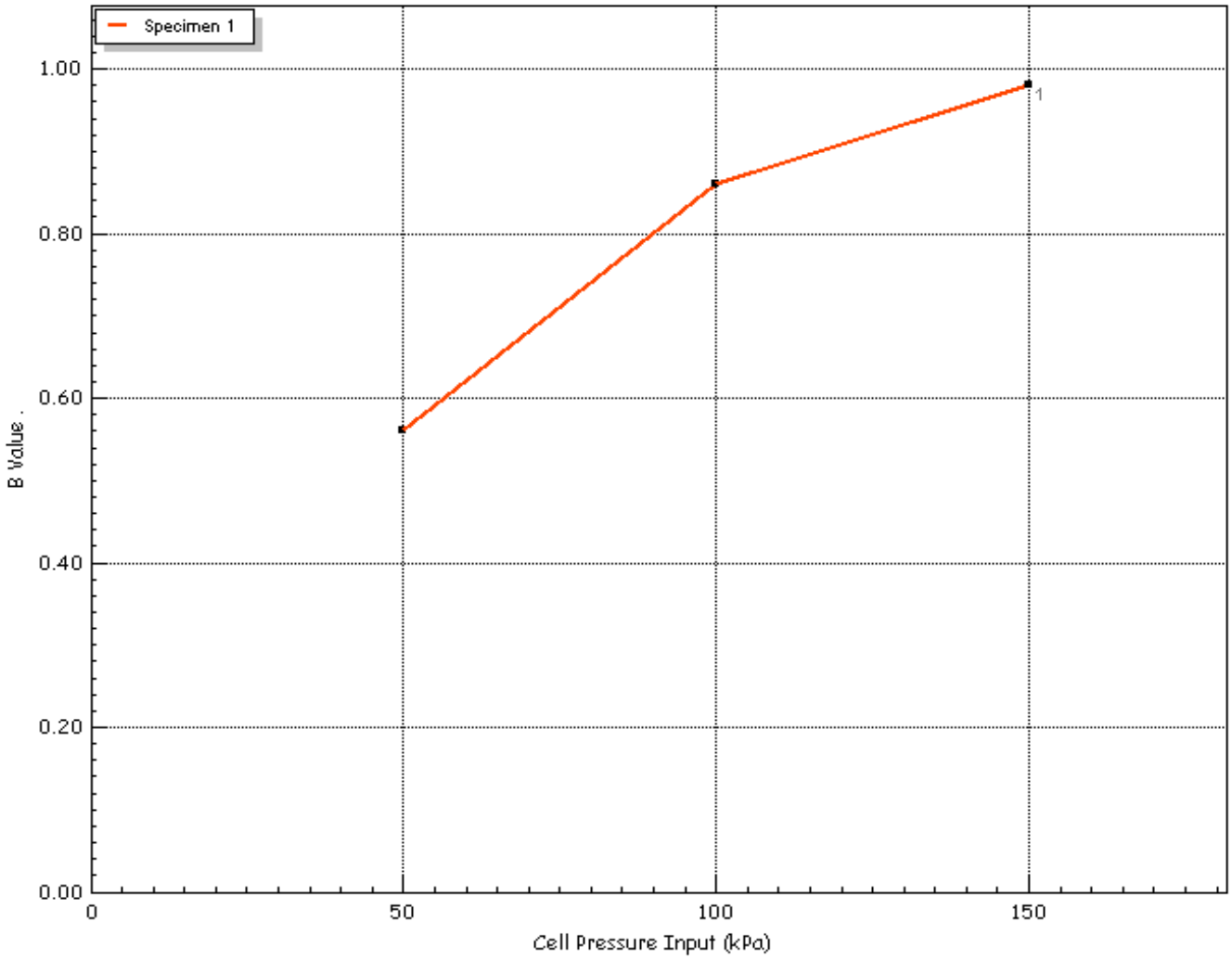
PSL Laboratory

Effective Stress Triaxial Compression

Consolidated Undrained

Saturation Plots

Saturation Method			Stepped
Cell Pressure Input	σ	(kPa)	150
Pore Water Pressure Input	u pwp	(kPa)	137
B Value	B	.	0.98



PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY UKAS TESTING 4043	Test Method	BS 1377-2: 2022 tested in accordance with BS EN ISO 17892-9.		Test Name	BH007 5.00m
				Test Date	08/11/2024
				Borehole	BH007
	Jobfile	One Earth Solar Farm		Sample	5.00m
	Client	Central Alliance		Depth	5.00m UT17
	Operator	David Burton	Checked S.Royle	Approved	S.Royle

PSL Laboratory

Effective Stress Triaxial Compression

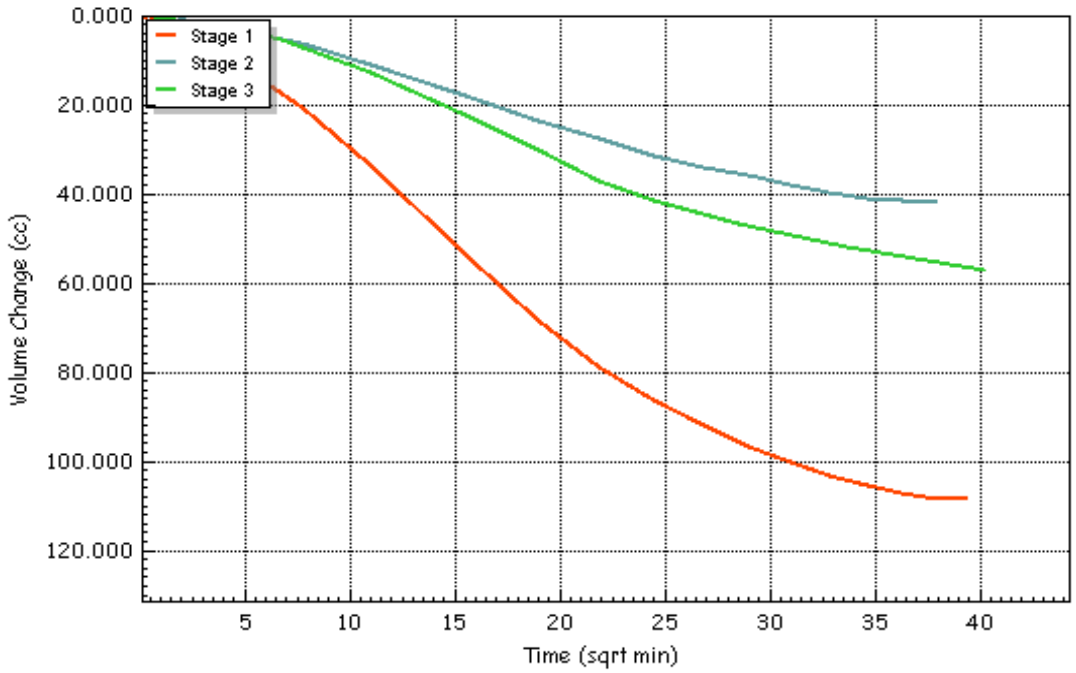
Consolidated Undrained

Consolidation Plots

Initial Conditions			Stage 1	2	3
Initial Cell Pressure	σ_3	(kPa)	325	350	400
Initial Back Pressure	u_{bi}	(kPa)	300	300	300
Pore Water Pressure Input	u_{pwp}	(kPa)	321	336	385
Drainage Method			Radial+One End		

Final Conditions			Stage 1	2	3
PWP Dissipation %	U%	(%)	100.00	100.00	100.00
Volumetric Strain	ε_v%	(%)	6.91	2.67	3.65
Corrected Length	L_C	(mm)	195.4	187.4	179.6
Corrected Area	A_C	(cm2)	74.92	75.82	75.94
Corrected Volume	V_C	(cc)	1462.316	1420.444	1360.575
t100	t_{100}	(min)	633.44	754.13	726.06
Consolidation	c_v	(m2/year)	0.003	0.003	0.003
Compressibility	m_v	(m2/MN)	3.362	0.733	0.585
Test Time	t_F	(h:m:s)	19:00:11	22:37:26	21:46:54
Estimated Strain to Failure	ε%	(%)	5.0	5.0	5.0
Shear Machine Speed	d_r	(mm/min)	0.00857	0.00690	0.00687

Notes



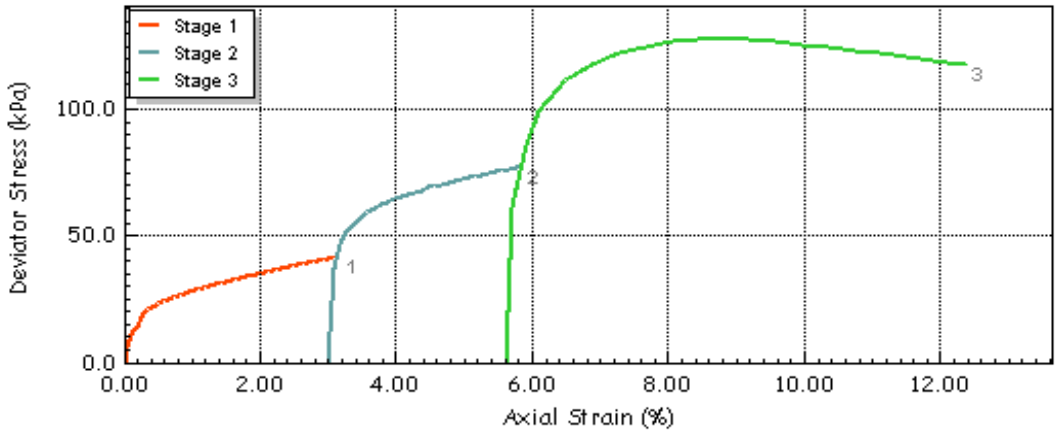
Test Method	BS 1377-2: 2022 tested in accordance with BS EN ISO 17892-9.		Test Name	BH007 5.00m	
			Test Date	08/11/2024	
			Borehole	BH007	
Jobfile	One Earth Solar Farm		Sample	5.00m	
Client	Central Alliance		Depth	5.00m UT17	
Operator	David Burton	Checked S.Royle		Approved	S.Royle

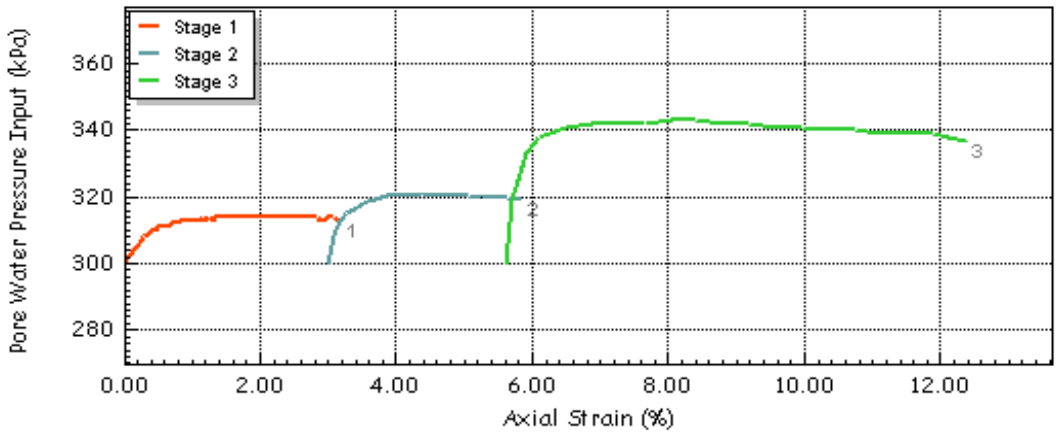
PSL Laboratory

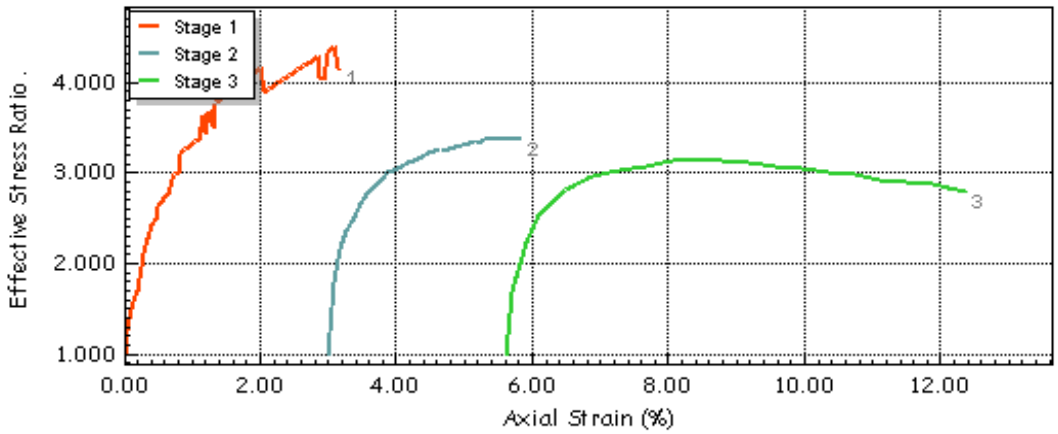
Effective Stress Triaxial Compression

Consolidated Undrained

Shear Stage Plots







PSL PROFESSIONAL SOILS LABORATORY	Test Method	BS 1377-2: 2022 tested in accordance with BS EN ISO 17892-9.		Test Name	BH007 5.00m
				Test Date	08/11/2024
UKAS TESTING 4043	Jobfile	One Earth Solar Farm		Borehole	BH007
	Client	Central Alliance		Sample	5.00m
				Depth	5.00m UT17
	Operator	David Burton	Checked	S.Royle	Approved S.Royle

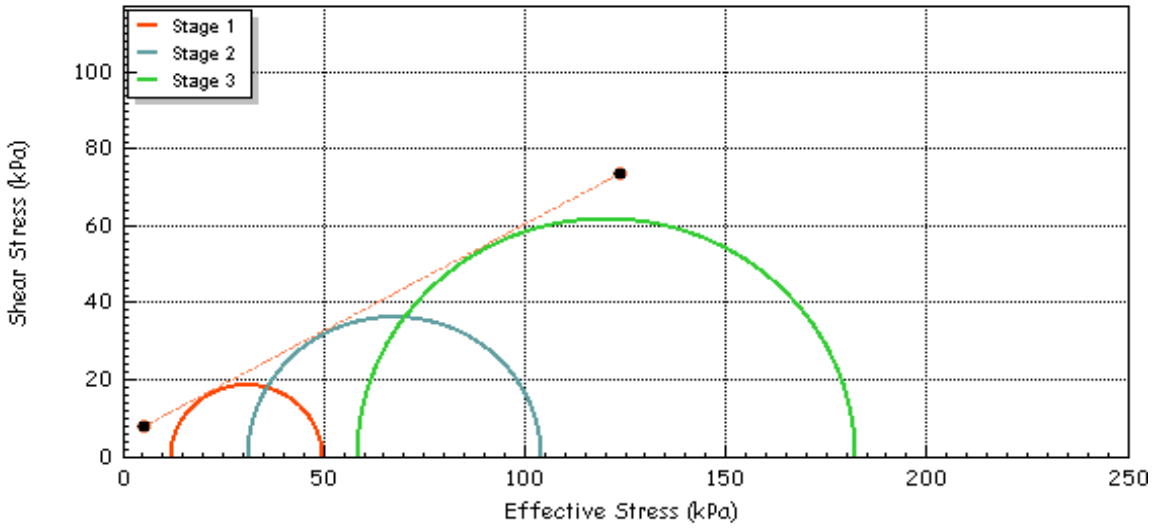
PSL Laboratory

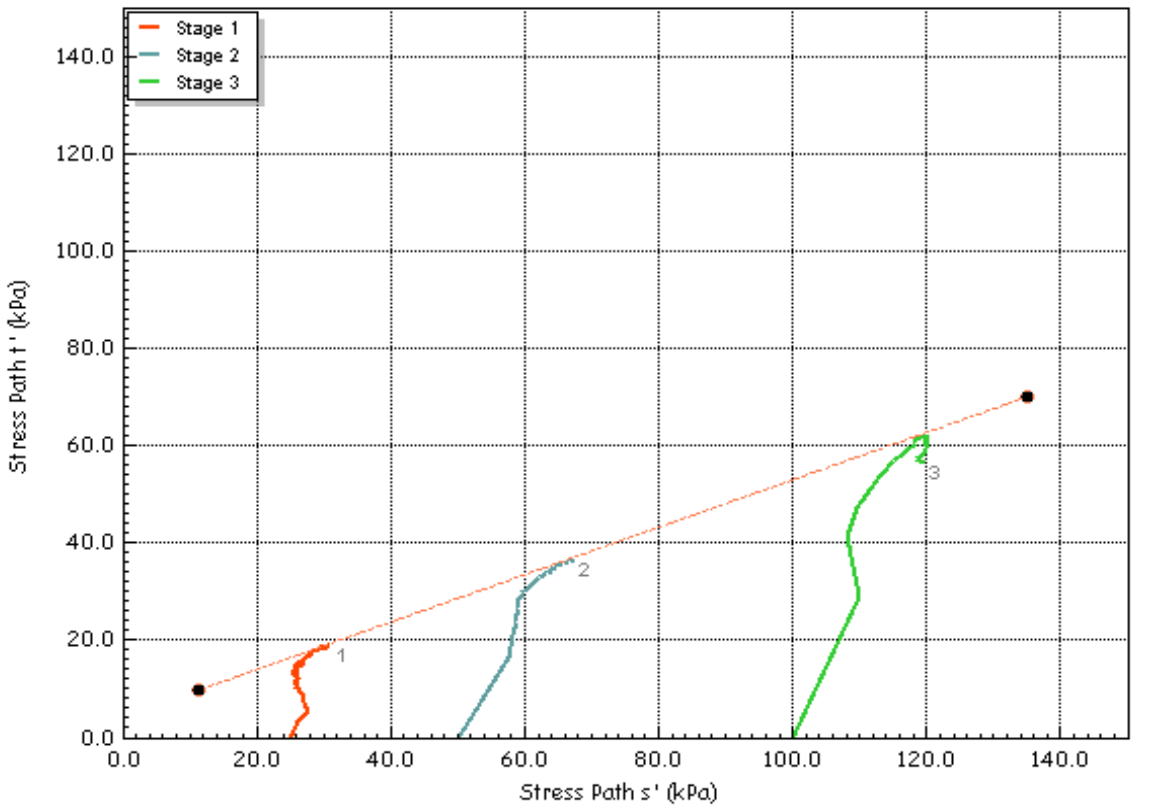
Effective Stress Triaxial Compression

Consolidated Undrained

Shear Stage Plots

Effective	c'	(kPa)	5.11	Effective Cohesion	c'	(kPa)	5.11
Effective Friction	ϕ'	(deg)	28.9	Effective Friction	ϕ'	(deg)	29.0



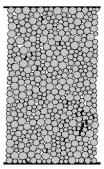


Test Method	BS 1377-2: 2022 tested in accordance with BS EN ISO 17892-9.			Test Name	BH007 5.00m
				Test Date	08/11/2024
				Borehole	BH007
Jobfile	One Earth Solar Farm			Sample	5.00m
Client	Central Alliance			Depth	5.00m UT17
Operator	David Burton	Checked	S.Royle	Approved	S.Royle

Effective Stress Triaxial Compression

Consolidated Undrained

Summary Report

Sample Details				
	Depth		1.20m UT7	
	Description		See summary of soil descriptions.	
	Type		Undisturbed, vertical orientation.	
	Initial Sample Length	L_0	(mm)	211.0
	Initial Sample Diameter	D_0	(mm)	105.0
	Initial Sample Weight	W_0	(gr)	3153.0
	Initial Bulk Density	ρ_0	(Mg/m3)	1.73
	Particle Density	ρ_s	(Mg/m3)	2.65 Assumed

sketch showing specimen location in original sample

Initial Conditions			Stage 1	2	3	4
Initial Cell Pressure	σ_{3i}	(kPa)	412	425	450	
Initial Back Pressure	U_{bi}	(kPa)	400	400	400	
Membrane Thickness	m_b	(mm)	0.400			
Displacement Input	L_{IP}	(mm)	CH 2			
Load Input	N_{IP}	(N)	CH 1			
Pore Water Pressure Input	u_{pwp}	(kPa)	CH 3			
Sample Volume	V	(cc)	CH 6			
Initial Moisture	ω_i	(%)	34.2			
Initial Dry Density	ρ_{di}	(Mg/m3)	1.29			
Initial Voids Ratio	e_i	.	1.057			
Initial Degree of Saturation	S_i	(%)	85			
B Value	B	.	0.95			

Final Conditions						
Final Moisture	ω_f	(%)	35.3			
Final Dry Density	ρ_{df}	(Mg/m3)	1.30			
Final Voids Ratio	e_f	.	1.038			
Final Degree of Saturation	S_f	(%)	90.1			
			Stage 1	2	3	4
Failure Criteria		.	Max. Dev.	Max. Dev.	Max. Dev.	
Strain At Failure	ε_f	(%)	1.95	3.44	7.83	
Stress At Failure	$(\sigma_1-\sigma_3)$	(kPa)	32.6	46.0	71.9	
Minor Stress At Failure	σ_3'	(kPa)	7.0	17.0	35.3	
Major Stress At Failure	σ_1'	(kPa)	39.6	63.0	107.2	
Principal Stress Ratio At Failure	σ_1'/σ_3		5.655	3.708	3.035	
PwP At Failure Criteria	u_f		405.0	408.0	414.8	

Notes



Plastic

Test Method	BS 1377-2: 2022 tested in accordance with BS EN ISO 17892-9.			Test Name	BH009 1.20m
				Test Date	07/11/2024
				Borehole	BH009
Jobfile	One Earth Solar Farm			Sample	1.20m
Client	Central Alliance			Depth	1.20m UT7
Operator	David Burton	Checked	S.Royle	Approved	S.Royle

PROFESSIONAL SOILS LABORATORY — A PHENNA GROUP COMPANY — UKAS TESTING 4043

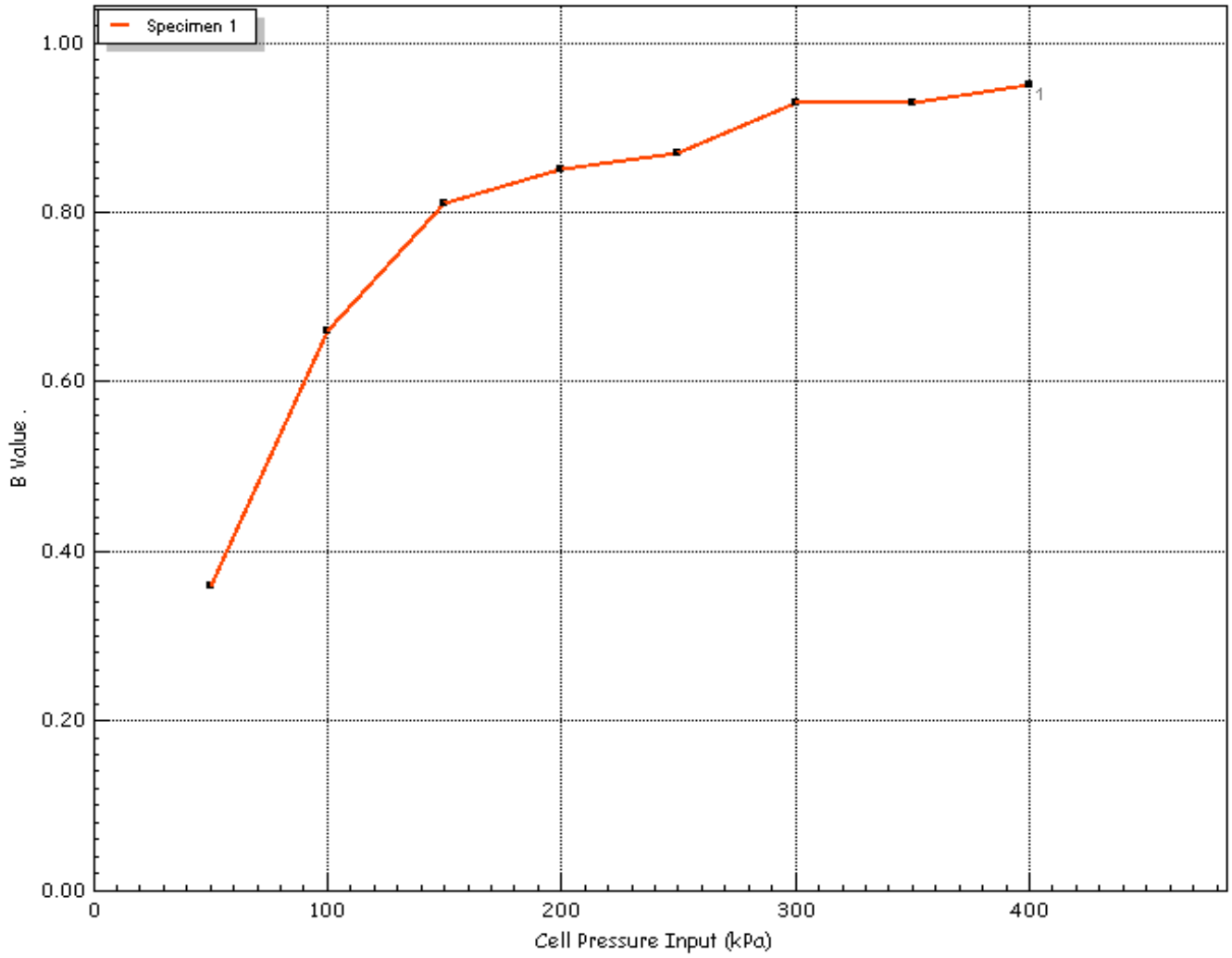
PSL Laboratory

Effective Stress Triaxial Compression

Consolidated Undrained

Saturation Plots

Saturation Method			Stepped
Cell Pressure Input	σ	(kPa)	400
Pore Water Pressure Input	u pwp	(kPa)	378
B Value	B	.	0.95



Test Method	BS 1377-2: 2022 tested in accordance with BS EN ISO 17892-9.			Test Name	BH009 1.20m
				Test Date	07/11/2024
				Borehole	BH009
Jobfile	One Earth Solar Farm			Sample	1.20m
Client	Central Alliance			Depth	1.20m UT7
Operator	David Burton	Checked	S.Royle	Approved	S.Royle

PSL Laboratory

Effective Stress Triaxial Compression

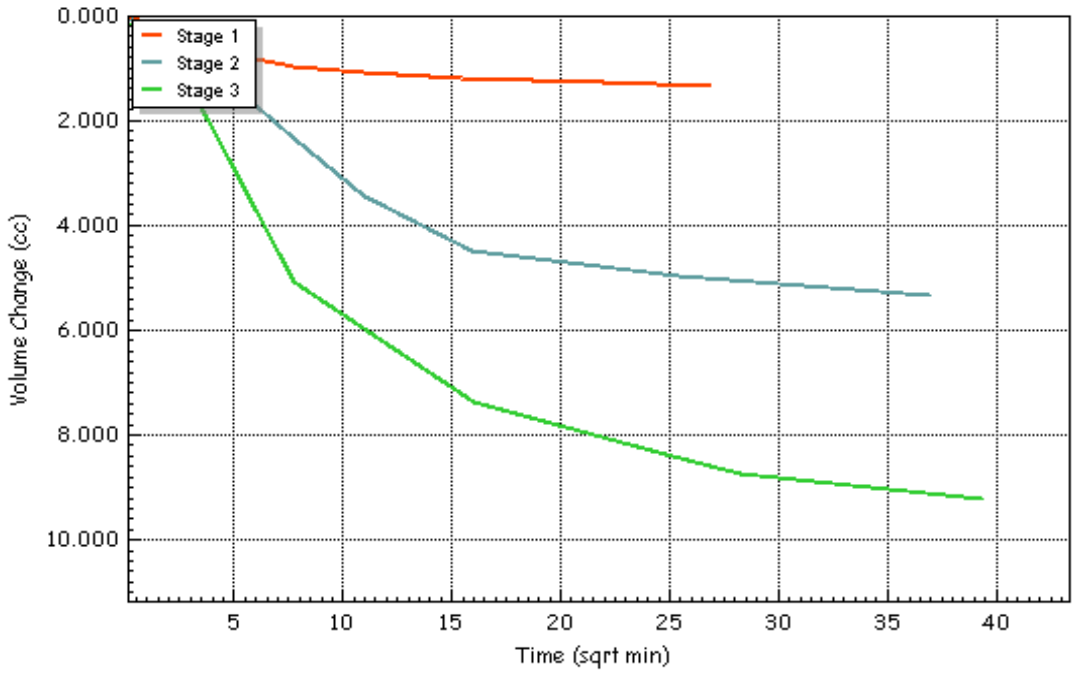
Consolidated Undrained

Consolidation Plots

Initial Conditions			Stage 1	2	3
Initial Cell Pressure	σ_3	(kPa)	412	425	450
Initial Back Pressure	u_{bi}	(kPa)	400	400	400
Pore Water Pressure Input	u_{pwp}	(kPa)	401	406	418
Drainage Method			Radial+One End		

Final Conditions			Stage 1	2	3
PWP Dissipation %	U%	(%)	100.00	100.00	100.00
Volumetric Strain	ε_v%	(%)	0.07	0.29	0.50
Corrected Length	L_C	(mm)	210.9	206.5	202.1
Corrected Area	A_C	(cm2)	86.55	88.14	89.64
Corrected Volume	V_C	(cc)	1825.709	1820.365	1811.145
t100	t_{100}	(min)	86.80	269.60	174.49
Consolidation	c_v	(m2/year)	0.026	0.009	0.014
Compressibility	m_v	(m2/MN)	0.735	0.488	0.285
Test Time	t_F	(h:m:s)	02:36:14	08:05:16	05:14:04
Estimated Strain to Failure	ε%	(%)	5.0	5.0	5.0
Shear Machine Speed	d_r	(mm/min)	0.06751	0.02128	0.03217

Notes



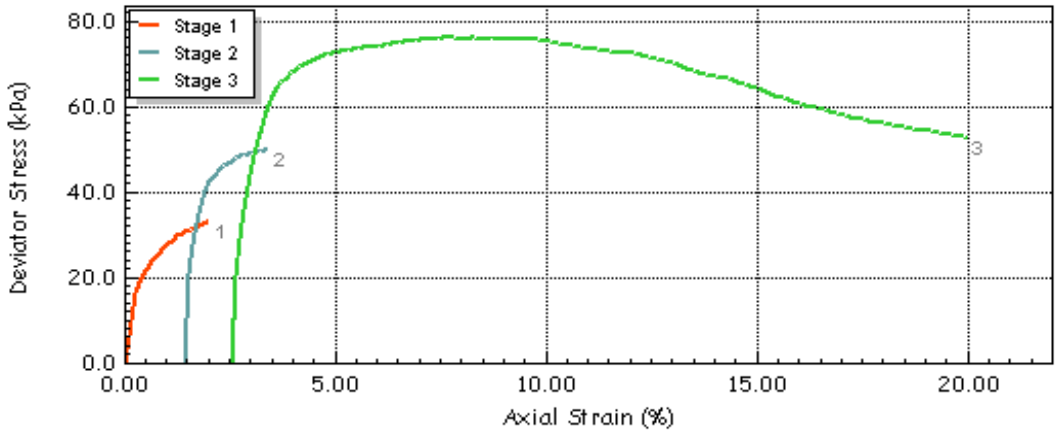
PSL PROFESSIONAL SOILS LABORATORY	Test Method	BS 1377-2: 2022 tested in accordance with BS EN ISO 17892-9.	Test Name	BH009 1.20m	
UKAS TESTING 4043			Test Date	07/11/2024	
			Borehole	BH009	
	Jobfile	One Earth Solar Farm	Sample	1.20m	
	Client	Central Alliance	Depth	1.20m UT7	
	Operator	David Burton	Checked	S.Royle	Approved S.Royle

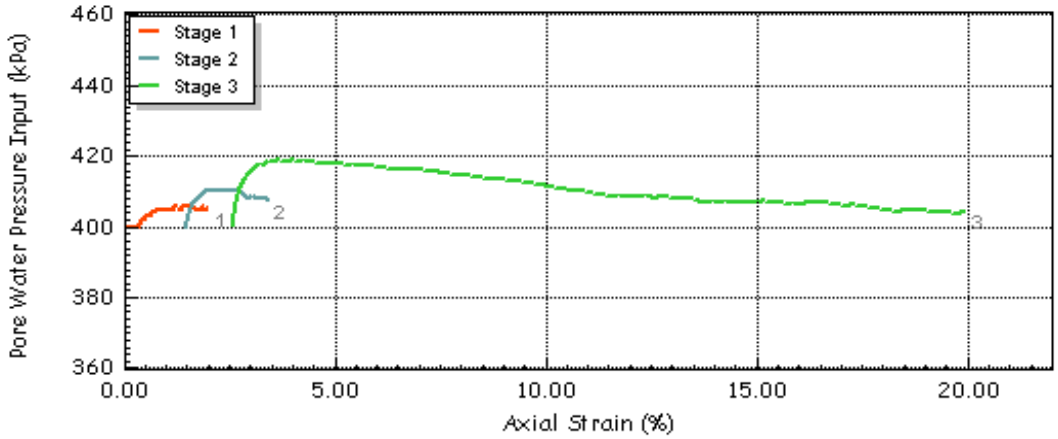
PSL Laboratory

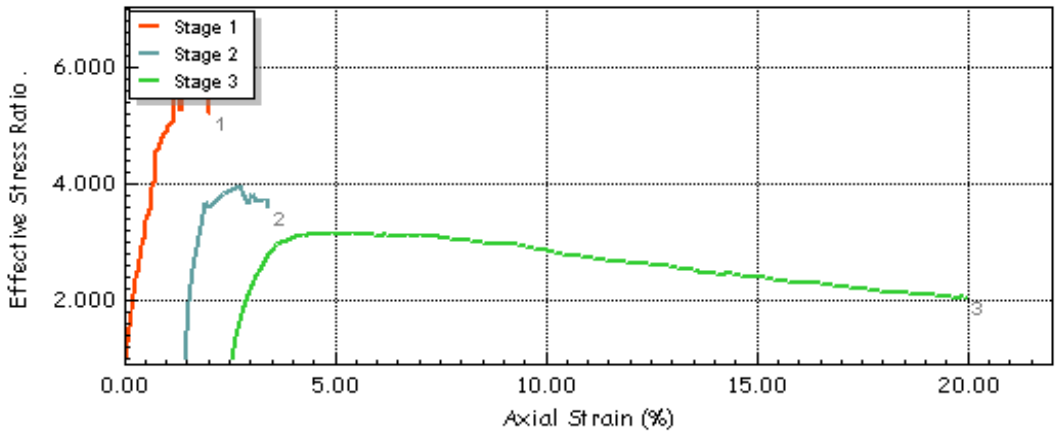
Effective Stress Triaxial Compression

Consolidated Undrained

Shear Stage Plots







PSL PROFESSIONAL SOILS LABORATORY	Test Method	BS 1377-2: 2022 tested in accordance with BS EN ISO 17892-9.		Test Name	BH009 1.20m
				Test Date	07/11/2024
UKAS TESTING 4043	Jobfile	One Earth Solar Farm		Borehole	BH009
	Client	Central Alliance		Sample	1.20m
				Depth	1.20m UT7
	Operator	David Burton	Checked	S.Royle	Approved S.Royle

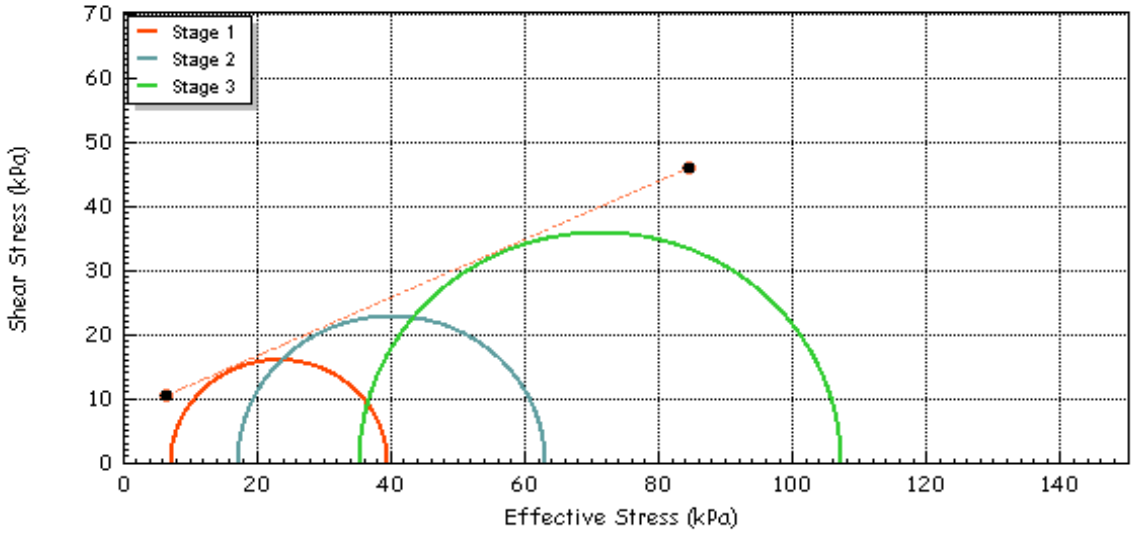
PSL Laboratory

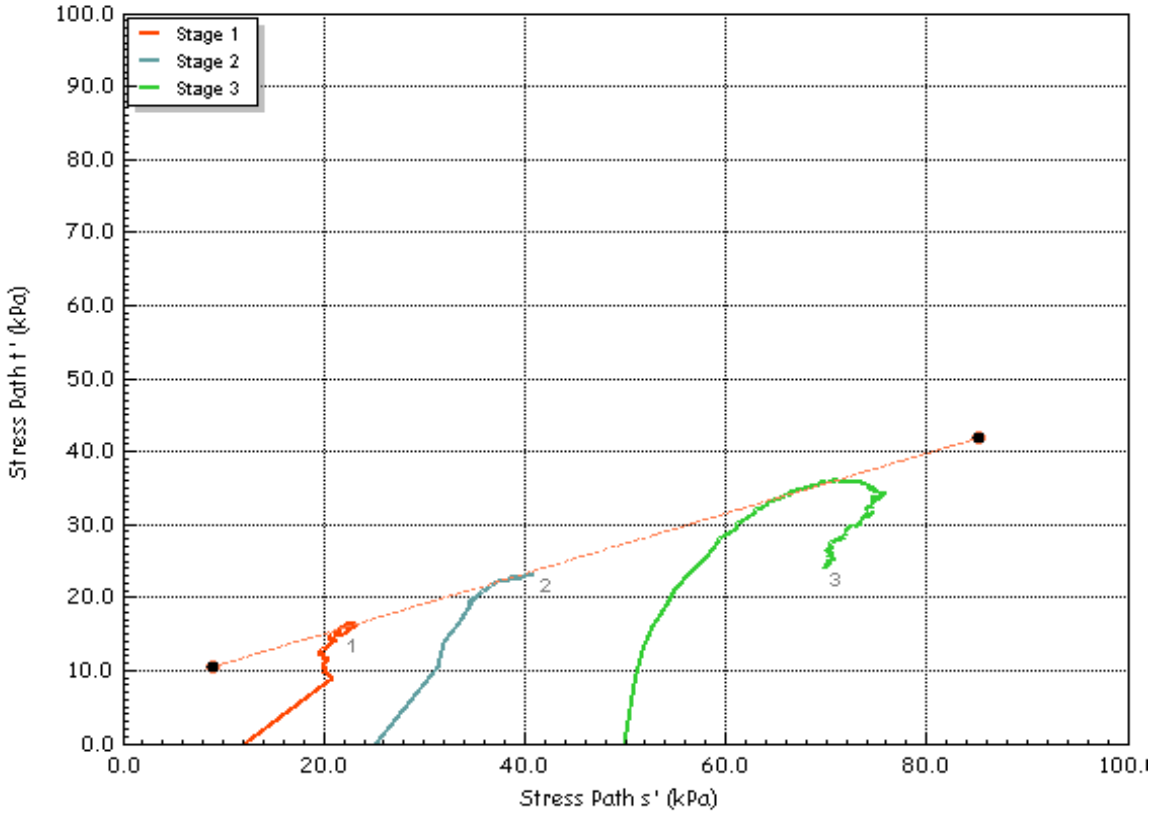
Effective Stress Triaxial Compression

Consolidated Undrained

Shear Stage Plots

Effective	c'	(kPa)	7.49	Effective Cohesion	c'	(kPa)	7.49
Effective Friction	ϕ'	(deg)	24.4	Effective Friction	ϕ'	(deg)	24.4





Test Method	BS 1377-2: 2022 tested in accordance with BS EN ISO 17892-9.		Test Name	BH009 1.20m	
			Test Date	07/11/2024	
			Borehole	BH009	
Jobfile	One Earth Solar Farm		Sample	1.20m	
Client	Central Alliance		Depth	1.20m UT7	
Operator	David Burton	Checked S.Royle		Approved	S.Royle

PSL Laboratory

4161

7 - 11 Harding Street
Leicester
LE1 4DH

Professional Soils Laboratory
5/7 Hexthorpe Road
Hexthorpe
Doncaster
DN4 0AR

Analytical Test Report: E24/00561/PSL - 24-52198

Your Project Reference:	**PSL24/7871 One Earth Solar Farm**		
Your Order Number:	PSL24/7871	Samples Received / Instructed:	06/11/2024 / 06/11/2024
Report Issue Number:	1	Sample Tested:	06/11 to 15/11/2024
Samples Analysed:	15 sample(s)	Report issued:	15/11/2024

Signed

James Gane
Analytical Services Manager
CTS Group

Notes:

General

Please refer to Methodologies page for details pertaining to the analytical methods undertaken.

Samples will be retained for 14 days after issue of this report unless otherwise requested.

Moisture Content was determined in accordance with CTS method statement MS - CL - Sample Prep, oven dried at <30˚C.

Moisture Content is reported as a percentage of the dry mass of soil, this calculation is in accordance with BS1377, Part 2, 1990, Clause 3.2

Where specification limits are included these are for guidance only. Where a measured value has been highlighted this is not implying acceptance or failure and certainty of measurement values have not been taken into account.

Uncertainty of measurement values are available on request.

Samples were supplied by customer, results apply to the samples as received.

Deviating Samples

On receipt samples are compared against our sample holding and handling protocols, where any deviations have been noted these are reported on our deviating sample page (if present)

Accreditation Key

UKAS = UKAS Accreditation, MCERTS = MCERTS Accreditation, u = Unaccredited, subUKAS - Subcontracted to a laboratory UKAS accredited for this test, subMCERTS - Subcontracted to a laboratory MCERTS accredited for this test

MCERTS Accreditation only covers the SAND, CLAY and LOAM matrices

UKAS accreditation on waters only covers the Ground water and Surface water matrices

Date of Issue: 11.11.2024
Issued by: J. Gane
Issue No: 4
Rev No: 18

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CONSTRUCTION TESTING SOLUTIONS
A PHENNA GROUP COMPANY

7 - 11 Harding Street
Leicester
LE1 4DH

E24/00561/PSL - 24-52198

Project Reference - PSL24/7871 One Earth Solar Farm

Analytical Test Results - Chemical Analysis

Lab Reference			416008	416009	416010	416012	416013	416014
Client Sample ID			-	-	-	-	-	-
Client Sample Location			BH007	BH007	BH007	BH007	BH010	BH010
Client Sample Type			D	D	D	D	D	D
Client Sample Number			2	4	7	13	16	19
Depth - Top (m)			0.60	1.00	2.00	4.00	2.80	3.80
Depth - Bottom (m)			0.60	1.00	2.00	4.00	2.80	3.80
Date of Sampling			-	-	-	-	-	-
Time of Sampling			-	-	-	-	-	-
Sample Matrix			Clay	Clay	Clay	Clay	Clay	Sand
Determinant	**Units**	**Accreditation**						
Water soluble sulphate (as SO_4)	(mg/l)	u	-	60	-	380	140	56
Acid Soluble Sulphate	(%)	u	-	0.09	-	0.20	0.13	0.03
Total Sulphur	(%)	UKAS	-	0.02	-	0.86	0.25	0.02
pH Value	pH Units	MCERTS	-	7.1	-	7.1	6.7	6.8
Organic matter (BS 1377)	(%)	UKAS	2.1	-	2.6	-	3.4	0.4
1377 Organic Matter - Sulphides/Chlorides Identified (Yes/No)	-	-	No	-	No	-	No	No

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CONSTRUCTION TESTING SOLUTIONS
A PHENNA GROUP COMPANY

7 - 11 Harding Street
Leicester
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E24/00561/PSL - 24-52198

Project Reference - PSL24/7871 One Earth Solar Farm

Analytical Test Results - Chemical Analysis

Lab Reference			416015	416016	416017	416018	416019	416020
Client Sample ID			-	-	-	-	-	-
Client Sample Location			BH008	BH008	BH008	BH008	BH008	BH009
Client Sample Type			D	D	D	B	D	B
Client Sample Number			2	4	12	16	18	16
Depth - Top (m)			0.20	0.75	2.30	3.30	7.90	3.50
Depth - Bottom (m)			0.20	0.75	2.30	3.30	7.90	3.50
Date of Sampling			-	-	-	-	-	-
Time of Sampling			-	-	-	-	-	-
Sample Matrix			Clay	Clay	Clay	Clay	Clay	Clay
Determinant	**Units**	**Accreditation**						
Water soluble sulphate (as SO_4)	(mg/l)	u	-	32	-	190	250	-
Acid Soluble Sulphate	(%)	u	-	0.08	-	0.05	0.14	-
Total Sulphur	(%)	UKAS	-	0.04	-	0.04	0.04	-
pH Value	pH Units	MCERTS	-	7.0	-	6.9	7.9	-
Organic matter (BS 1377)	(%)	UKAS	2.0	-	5.3	0.3	-	0.2
1377 Organic Matter - Sulphides/Chlorides Identified (Yes/No)	-	-	No	-	No	No	-	No

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CONSTRUCTION TESTING SOLUTIONS
A PHENNA GROUP COMPANY

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LE1 4DH

E24/00561/PSL - 24-52198

Project Reference - PSL24/7871 One Earth Solar Farm

Analytical Test Results - Chemical Analysis

Lab Reference			416021	416022
Client Sample ID			-	-
Client Sample Location			BH009	BH009
Client Sample Type			D	D
Client Sample Number			19	32
Depth - Top (m)			4.00	9.00
Depth - Bottom (m)			4.00	9.00
Date of Sampling			-	-
Time of Sampling			-	-
Sample Matrix			Clay	Clay
Determinant	**Units**	**Accreditation**		
Water soluble sulphate (as SO_4)	(mg/l)	u	320	290
Acid Soluble Sulphate	(%)	u	0.09	0.10
Total Sulphur	(%)	UKAS	0.04	0.02
pH Value	pH Units	MCERTS	7.8	8.5
Organic matter (BS 1377)	(%)	UKAS	-	-
1377 Organic Matter - Sulphides/Chlorides Identified (Yes/No)	-	-	-	-

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CONSTRUCTION TESTING SOLUTIONS
A PHENNA GROUP COMPANY

7 - 11 Harding Street
Leicester
LE1 4DH

E24/00561/PSL - 24-52198

Project Reference - PSL24/7871 One Earth Solar Farm

Sample Descriptions

Lab Reference	Client Sample ID	Client Sample Location	Client Sample Type	Client Sample Number	Description	Moisture Content (%)	Stone Content (%)	Passing 2mm test sieve (%)
416008	-	BH007	D	2	Brown slightly gravelly silty clay with rare rootlets	-	-	100
416009	-	BH007	D	4	Brown slightly gravelly silty clay with rare organic matter	-	-	100
416010	-	BH007	D	7	Brown slightly gravelly silty clay	-	-	100
416012	-	BH007	D	13	Greyish brown slightly gravelly silty clay with rare rootlets	-	-	100
416013	-	BH010	D	16	Greyish brown slightly gravelly silty clay	-	-	100
416014	-	BH010	D	19	Brown gravelly slightly clayey silty sand	-	-	49
416015	-	BH008	D	2	Brown slightly gravelly silty clay with rare rootlets	-	-	100
416016	-	BH008	D	4	Brown slightly gravelly silty clay with rare rootlets	-	-	100
416017	-	BH008	D	12	Greyish brown slightly gravelly silty clay	-	-	100
416018	-	BH008	B	16	Brown gravelly silty clay	-	-	44
416019	-	BH008	D	18	Greyish brown slightly gravelly silty clay	-	-	100
416020	-	BH009	B	16	Brown gravelly silty clay	-	-	67
416021	-	BH009	D	19	Brown slightly gravelly silty clay	-	-	37
416022	-	BH009	D	32	Brownish grey silty clay	-	-	100

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CONSTRUCTION TESTING SOLUTIONS
A PHENNA GROUP COMPANY

7 - 11 Harding Street
Leicester
LE1 4DH

E24/00561/PSL - 24-52198

Project Reference - PSL24/7871 One Earth Solar Farm

Sample Comments

Lab Reference	Client Sample ID	Client Sample Location	Client Sample Type	Client Sample Number	Comments
416008	-	BH007	D	2	
416009	-	BH007	D	4	
416010	-	BH007	D	7	
416012	-	BH007	D	13	
416013	-	BH010	D	16	
416014	-	BH010	D	19	
416015	-	BH008	D	2	
416016	-	BH008	D	4	
416017	-	BH008	D	12	
416018	-	BH008	B	16	
416019	-	BH008	D	18	
416020	-	BH009	B	16	
416021	-	BH009	D	19	
416022	-	BH009	D	32	

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CONSTRUCTION TESTING SOLUTIONS
A PHENNA GROUP COMPANY

7 - 11 Harding Street
Leicester
LE1 4DH

E24/00561/PSL - 24-52198

Project Reference - PSL24/7871 One Earth Solar Farm

Analysis Methodologies

Test Code	Test Name / Reference	Sample condition for analysis	Sample Preperation	Test Details
ANIONSS	MS - CL - Anions by Aquakem (2:1Extract)	Oven dried	Passing 2mm test sieve	Determination of Anions (inc Sulphate, chloride etc.) in soils by Aquakem. Analysis is based on a 2:1 water to soil extraction ratio
PHS	MS - CL - pH in Soils	As received	Passing 10mm test sieve	Determination of pH in soils using a pH probe (using a 1:3 soil to water extraction)
ASSO4S	MS - CL - Acid Soluble Sulphate	Oven Dried	Passing 2mm test sieve	Determination of total sulphate in soils by acid extraction followed by ICP analysis
HOLD	No Testing Scheduled	-	-	No Testing Scheduled
SAMPLEPREP	MS - CL - Sample Preparation	-	-	Preparation of samples (including determination of moisture content) to allow for subsequent analysis
1377ORG	BS1377 Organic Matter	Oven dried	BS1377 : Part 1 : 2016	Testing was in accordance with BS 1377: Part 3: 2018 + A1 : 2021 Clause 4, The reported value is the average OMC present in the soil fraction to the nearest 0.1% of the original oven dry mass of soil. Some information required by BS 1377 has not been
1377TS-ELT	BS1377 Total Sulphur Content by HTC	Oven dried	BS1377 : Part 1 : 2016	Total Sulphur Content testing of Soil in accordance with BS 1377 : Part 3 : 2018 + A1 : 2021 Clause 7.10 (using Eltra CS-800 Analyser)

7 - 11 Harding Street
Leicester
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E24/00561/PSL - 24-52198

Project Reference - PSL24/7871 One Earth Solar Farm

Sample Deviations

Deviations are listed below against each sample and associated test method, where deviation(s) are noted it means data may not be representative of the sample at the time of sampling and it is possible that results provided may be compromised.

Observations on receipt

A - No date of sampling provided
W - No time of sampling provided for water sample
C - Received in inappropriate container
H - Contains headspace
T - Temperature on receipt exceeds storage temperature
R - Sample(s) received with less than 96 hours for testing to commence/complete, any result formally classed as deviating will be marked with an X against the applicable test (i.e. RX)

Observations whilst in laboratory

X - Exceeds sampling to extraction or analysis timescales

Lab Reference	Client Sample ID	Client Sample Location	Client Sample Type	Client Sample Number	Test	Deviations
416008	-	BH007	D	2		A
416009	-	BH007	D	4		A
416010	-	BH007	D	7		A
416012	-	BH007	D	13		A
416013	-	BH010	D	16		A
416014	-	BH010	D	19		A
416015	-	BH008	D	2		A
416016	-	BH008	D	4		A
416017	-	BH008	D	12		A
416018	-	BH008	B	16		A
416019	-	BH008	D	18		A
416020	-	BH009	B	16		A
416021	-	BH009	D	19		A
416022	-	BH009	D	32		A

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CONSTRUCTION TESTING SOLUTIONS
A PHENNA GROUP COMPANY

7 - 11 Harding Street
Leicester
LE1 4DH

Professional Soils Laboratory
5/7 Hexthorpe Road
Hexthorpe
Doncaster
DN4 0AR

Analytical Test Report:	**E24/01329/PSL - 24-53127**

Your Project Reference:	**PSL24/7871 One Earth Solar Farm**		
Your Order Number:	PSL24/7871	Samples Received / Instructed:	27/11/2024 / 27/11/2024
Report Issue Number:	1	Sample Tested:	27/11 to 04/12/2024
Samples Analysed:	1 sample(s)	Report issued:	04/12/2024

Signed



James Gane
Analytical Services Manager
CTS Group

Notes:

General

Please refer to Methodologies page for details pertaining to the analytical methods undertaken.

Samples will be retained for 14 days after issue of this report unless otherwise requested.

Where specification limits are included these are for guidance only. Where a measured value has been highlighted this is not implying acceptance or failure and certainty of measurement values have not been taken into account.

Uncertainty of measurement values are available on request.

Samples were supplied by customer, results apply to the samples as received.

Deviating Samples

On receipt samples are compared against our sample holding and handling protocols, where any deviations have been noted these are reported on our deviating sample page (if present)

Accreditation Key

UKAS = UKAS Accreditation, MCERTS = MCERTS Accreditation, u = Unaccredited, subUKAS - Subcontracted to a laboratory UKAS accredited for this test, subMCERTS - Subcontracted to a laboratory MCERTS accredited for this test

MCERTS Accreditation only covers the SAND, CLAY and LOAM matrices

UKAS accreditation on waters only covers the Ground water and Surface water matrices

Date of Issue: 27.11.2024

Issued by: J. Gane

Issue No: 4

Rev No: 19

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CONSTRUCTION TESTING SOLUTIONS
A PHENNA GROUP COMPANY

7 - 11 Harding Street
Leicester
LE1 4DH

E24/01329/PSL - 24-53127

Project Reference - PSL24/7871 One Earth Solar Farm

Analytical Test Results - Chemical Analysis

Lab Reference			422846
Client Sample ID			-
Client Sample Location			BH007
Client Sample Type			B
Client Sample Number			9
Depth - Top (m)			2.50
Depth - Bottom (m)			2.50
Date of Sampling			-
Time of Sampling			-
Sample Matrix			Clay
Determinant	**Units**	**Accreditation**	
Organic matter (BS 1377)	(%)	UKAS	0.5
1377 Organic Matter - Sulphides/Chlorides Identified (Yes/No)	-	-	No

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CONSTRUCTION TESTING SOLUTIONS
A PHENNA GROUP COMPANY

7 - 11 Harding Street
Leicester
LE1 4DH

E24/01329/PSL - 24-53127

Project Reference - PSL24/7871 One Earth Solar Farm

Sample Descriptions

Lab Reference	Client Sample ID	Client Sample Location	Client Sample Type	Client Sample Number	Description	Moisture Content (%)	Stone Content (%)	Passing 2mm test sieve (%)
422846	-	BH007	B	9	Brown slightly gravelly silty clay	-	-	100

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CONSTRUCTION TESTING SOLUTIONS
A PHENNA GROUP COMPANY

7 - 11 Harding Street
Leicester
LE1 4DH

E24/01329/PSL - 24-53127

Project Reference - PSL24/7871 One Earth Solar Farm

Sample Comments

Lab Reference	Client Sample ID	Client Sample Location	Client Sample Type	Client Sample Number	Comments
422846	-	BH007	B	9	

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CONSTRUCTION TESTING SOLUTIONS
A PHENNA GROUP COMPANY

7 - 11 Harding Street
Leicester
LE1 4DH

E24/01329/PSL - 24-53127

Project Reference - PSL24/7871 One Earth Solar Farm

Analysis Methodologies

Test Code	Test Name / Reference	Sample condition for analysis	Sample Preperation	Test Details
SAMPLEPREP	MS - CL - Sample Preparation	-	-	Preparation of samples (including determination of moisture content) to allow for subsequent analysis
1377ORG	BS1377 Organic Matter	Oven dried	BS1377 : Part 1 : 2016	Testing was in accordance with BS 1377: Part 3: 2018 + A1 : 2021 Clause 4, The reported value is the average OMC present in the soil fraction to the nearest 0.1% of the original oven dry mass of soil. Some information required by BS 1377 has not been

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CONSTRUCTION TESTING SOLUTIONS
A PHENNA GROUP COMPANY

7 - 11 Harding Street
Leicester
LE1 4DH

E24/01329/PSL - 24-53127

Project Reference - PSL24/7871 One Earth Solar Farm

Sample Deviations

Deviations are listed below against each sample and associated test method, where deviation(s) are noted it means data may not be representative of the sample at the time of sampling and it is possible that results provided may be compromised.

Observations on receipt

A - No date of sampling provided
W - No time of sampling provided for water sample
C - Received in inappropriate container
H - Contains headspace
T - Temperature on receipt exceeds storage temperature
R - Sample(s) received with less than 96 hours for testing to commence/complete, any result formally classed as deviating will be marked with an X against the applicable test (i.e. RX)

Observations whilst in laboratory

X - Exceeds sampling to extraction or analysis timescales

Lab Reference	Client Sample ID	Client Sample Location	Client Sample Type	Client Sample Number	Test	Deviations
422846	-	BH007	B	9		A

LABORATORY REPORT

Contract Number: PSL24/7872

Report Date: 22 November 2024

Client's Reference: 2372986-8

Client Name: Central Alliance
Alliance House
South Park Way
Wakefield 41 Business Park
Wakefield
WF2 0XJ

For the attention of: John Parkinson

Contract Title: One Earth Solar Farm

Date Received: 25/10/2024
Date Commenced: 25/10/2024
Date Completed: 22/11/2024

Notes: Opinions and Interpretations are outside the UKAS Accreditation

A copy of the Laboratory Schedule of accredited tests as issued by UKAS is attached to this report. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced other than in full, without the prior written approval of the laboratory.

Checked and Approved Signatories:

A Watkins (Managing Director)	R Berriman (Associate Director)	S Royle (Laboratory Manager)
L Knight (Assistant Laboratory Manager)	S Eyre (Senior Technician)	[redacted] T Watkins (Senior Technician)

5 – 7 Hexthorpe Road,
Hexthorpe,
Doncaster,
DN4 0AR
Tel: [redacted]
Email: [redacted]@prosoils.co.uk
[redacted]@prosoils.co.uk

SUMMARY OF LABORATORY SOIL DESCRIPTIONS

Hole Number	Sample Number	Sample Type	Top Depth m	Base Depth m	Description of Sample
BH006	6	B	0.70		Brown sandy slightly gravelly CLAY.
BH006	4	D	0.70		Brown sandy slightly gravelly CLAY.
BH006	7	UT	1.20		Very soft brown slightly sandy CLAY.
BH006	8	D	1.70		Brown slightly sandy slightly gravelly CLAY.
BH006	13	B	2.80		Brown slightly sandy slightly gravelly CLAY.
BH006	16	B	3.30		Brown slightly sandy CLAY with some organic material.
BH006	19	UT	4.00		Very soft brown organic CLAY.
BH006	22	B	4.60		Brown slightly sandy slightly gravelly CLAY.
BH006	29	B	6.50		Brown slightly gravelly clayey SAND.
BH006	28	D	6.50		Brown slightly gravelly clayey SAND.
BH006	31	D	9.00		Brown slightly sandy slightly gravelly CLAY.

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

One Earth Solar Farm

Contract No:

PSL24/7872

Client Ref:

2372986

SUMMARY OF SOIL CLASSIFICATION TESTS

BS 1377 - Part 2 : 2022 in accordance with BS EN ISO 17892 (as below)

Hole Number	Sample Number	Sample Type	Top Depth m	Base Depth m	Water Content %	Linear Shrinkage	Particle Density Mg/m^3	Liquid Limit %	Plastic Limit %	Plasticity Index %	Passing 0.425mm %	Remarks
BH006	4	D	0.70		14.7			34	17	17	94	Low Plasticity CIL
BH006	7	UT	1.20		38.2			57	25	32	94	High Plasticity CIH
BH006	8	D	1.70		33.1			52	24	28	95	High Plasticity CIH
BH006	16	B	3.30		45.1			60	27	33	100	High Plasticity CIH
BH006	19	UT	4.00		69.9			87	35	52	96	Very High Plasticity CIV
BH006	28	D	6.50		21.7							
BH006	31	D	9.00		17.2			44	21	23	89	Medium Plasticity CIM

Water Content - BS 1377 - Part 2 : 2022 : Clause 4 in accordance with BS EN ISO 17892 - 1 : 2014 + A1 : 2022
Linear Shrinkage - BS 1377 - Part 2 : 2022 : Clause 7
Particle Density (Gas Jar method) - BS 1377 - Part 2 : 2022 : Clause 9
Liquid, Plastic Limit & Plasticity Index - BS 1377 - Part 2 : 2022 : Clause 5 & 6 in accordance with BS EN ISO 17892 - 12 : 2018 + A2 : 2022

SYMBOLS : NP = Non Plastic

UKAS TESTING 4043

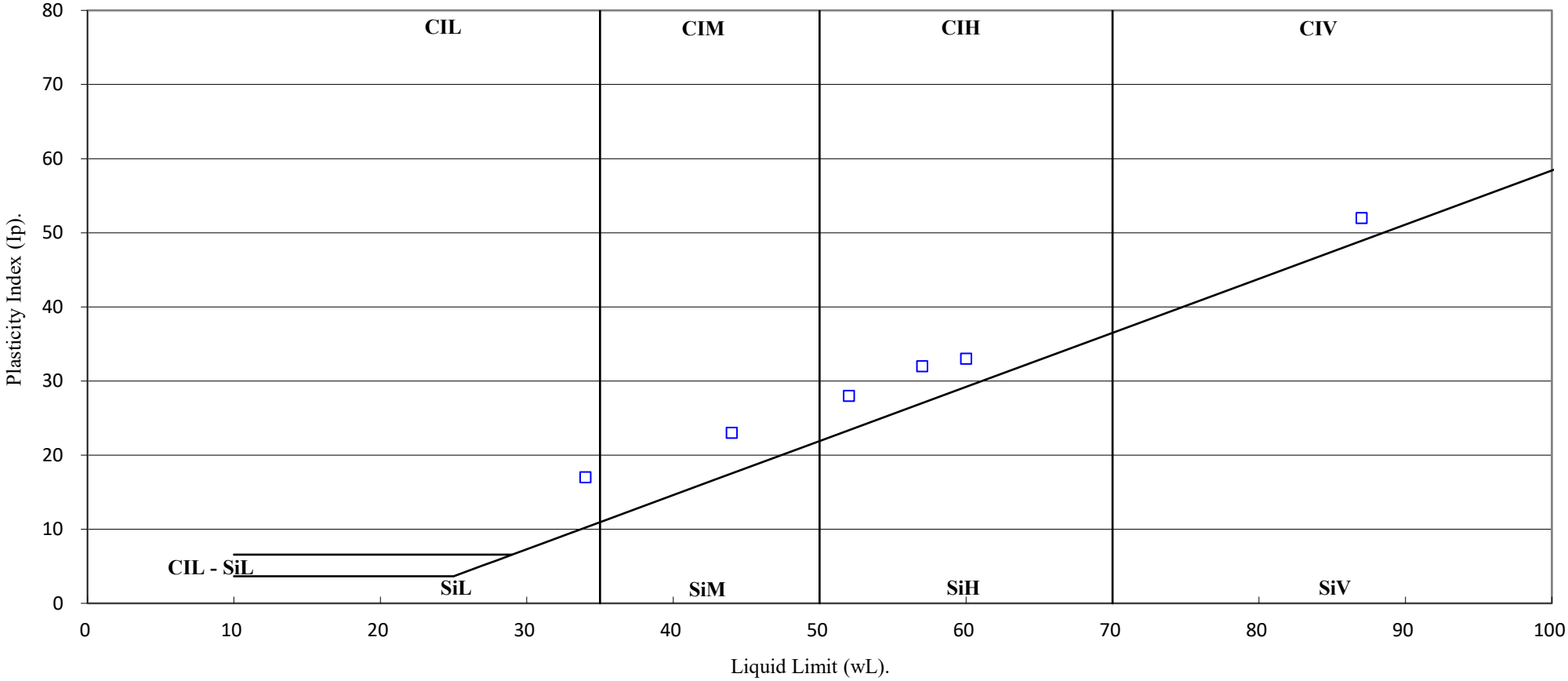
PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

One Earth Solar Farm

Contract No:
PSL24/7872
Client Ref:
2372986

PLASTICITY CHART

BS EN ISO 14688-2:2017 Clause 4.4



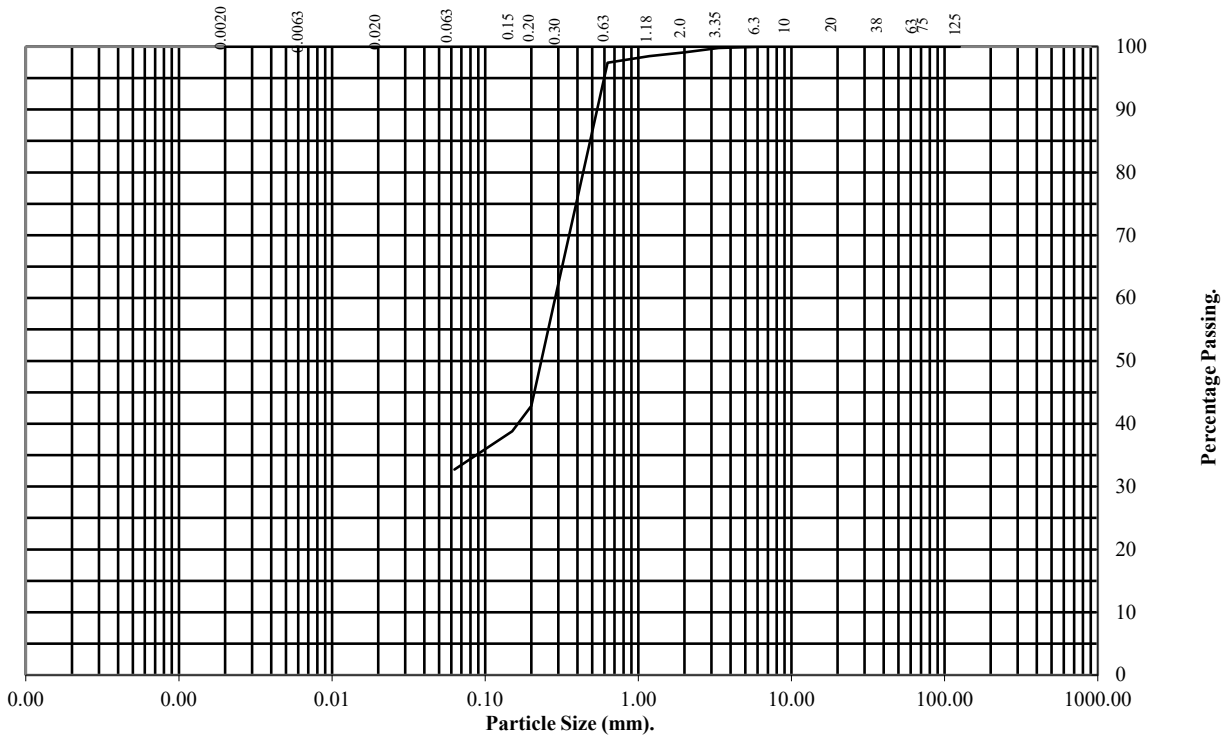
UKAS TESTING 4043 / PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY	One Earth Solar Farm	**Contract No:** PSL24/7872 **Client Ref:**

PARTICLE SIZE DISTRIBUTION TEST

BS 1377 - Part 2 : 2022 : Clause 10 in accordance with BS EN ISO 17892 - 4 : 2016

Sieve Method, Clause 5.2

Hole Number:	**BH006**	**Top Depth (m):**	**0.70**
Sample Number:	**6**	**Base Depth (m):**	
Sample Type:	**B**		



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
63	100
37.5	100
20	100
10	100
6.3	100
3.35	100
2	99
1.18	98
0.63	97
0.3	62
0.2	43
0.15	39
0.063	33

Soil Fraction	Total Percentage
Cobbles	0
Gravel	1
Sand	66
Silt/Clay	33

Remarks:

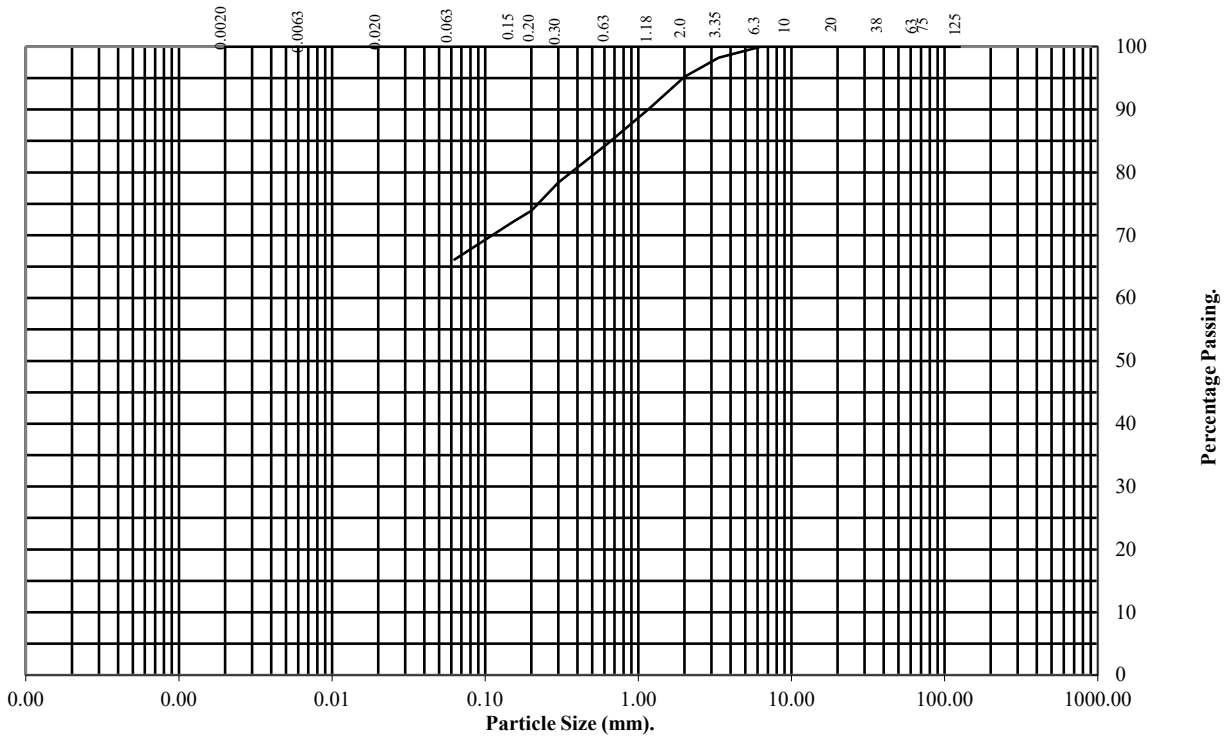
See Summary of Soil Descriptions

PARTICLE SIZE DISTRIBUTION TEST

BS 1377 - Part 2 : 2022 : Clause 10 in accordance with BS EN ISO 17892 - 4 : 2016

Sieve Method, Clause 5.2

Hole Number:	**BH006**	**Top Depth (m):**	**2.80**
Sample Number:	**13**	**Base Depth (m):**	**3.00**
Sample Type:	**B**		



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
63	100
37.5	100
20	100
10	100
6.3	100
3.35	98
2	95
1.18	90
0.63	85
0.3	78
0.2	74
0.15	72
0.063	66

Soil Fraction	Total Percentage
Cobbles	0
Gravel	5
Sand	29
Silt/Clay	66

Remarks:

See Summary of Soil Descriptions

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

One Earth Solar Farm

Contract No: PSL24/7872

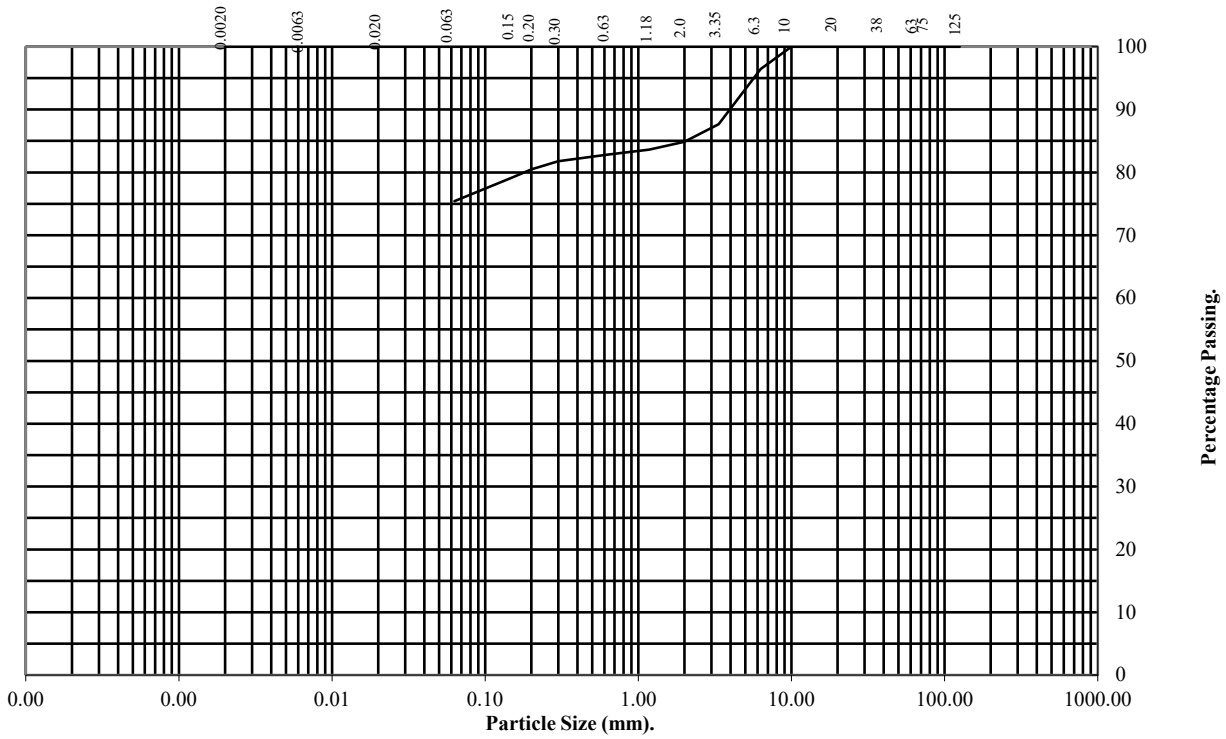
Client Ref: 2372986

PARTICLE SIZE DISTRIBUTION TEST

BS 1377 - Part 2 : 2022 : Clause 10 in accordance with BS EN ISO 17892 - 4 : 2016

Sieve Method, Clause 5.2

Hole Number:	**BH006**	**Top Depth (m):**	**4.60**
Sample Number:	**22**	**Base Depth (m):**	
Sample Type:	**B**		



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
63	100
37.5	100
20	100
10	100
6.3	96
3.35	88
2	85
1.18	84
0.63	83
0.3	82
0.2	80
0.15	79
0.063	75

Soil Fraction	Total Percentage
Cobbles	0
Gravel	15
Sand	10
Silt/Clay	75

Remarks:

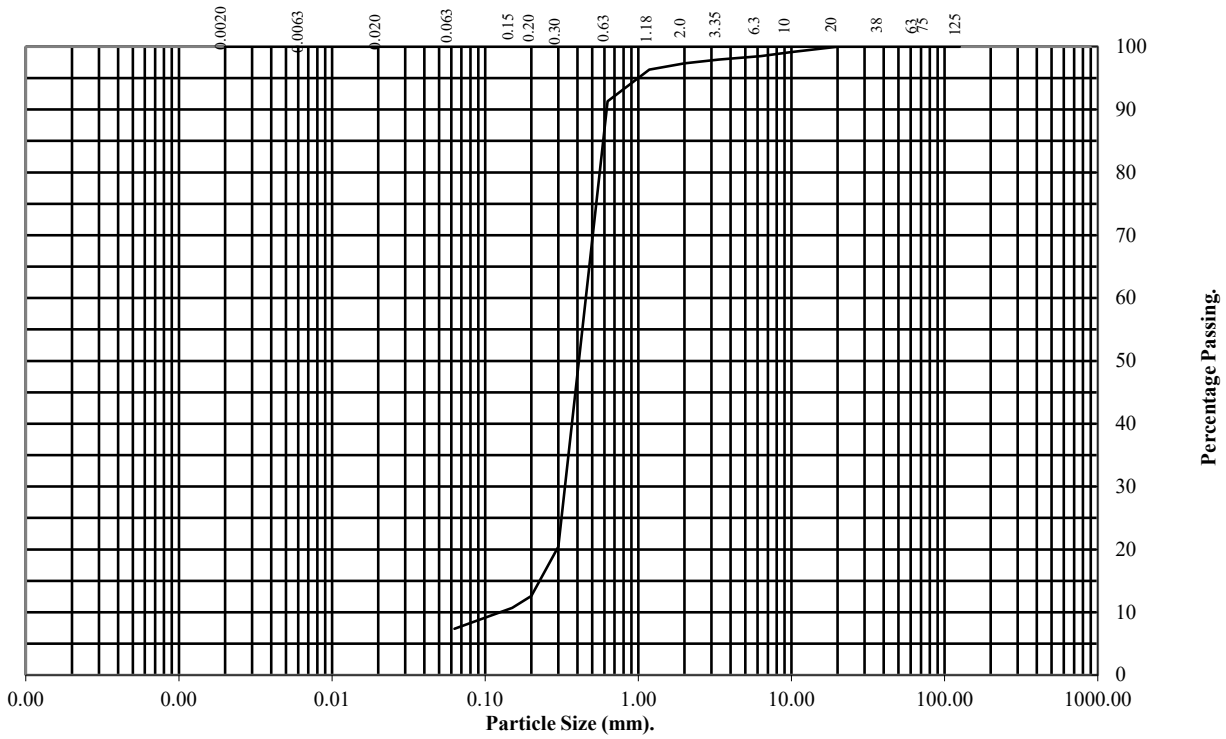
See Summary of Soil Descriptions

PARTICLE SIZE DISTRIBUTION TEST

BS 1377 - Part 2 : 2022 : Clause 10 in accordance with BS EN ISO 17892 - 4 : 2016

Sieve Method, Clause 5.2

Hole Number:	**BH006**	**Top Depth (m):**	**6.50**
Sample Number:	**29**	**Base Depth (m):**	
Sample Type:	**B**		



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
63	100
37.5	100
20	100
10	99
6.3	98
3.35	98
2	97
1.18	96
0.63	91
0.3	20
0.2	13
0.15	11
0.063	7

Soil Fraction	Total Percentage
Cobbles	0
Gravel	3
Sand	90
Silt/Clay	7

Remarks:

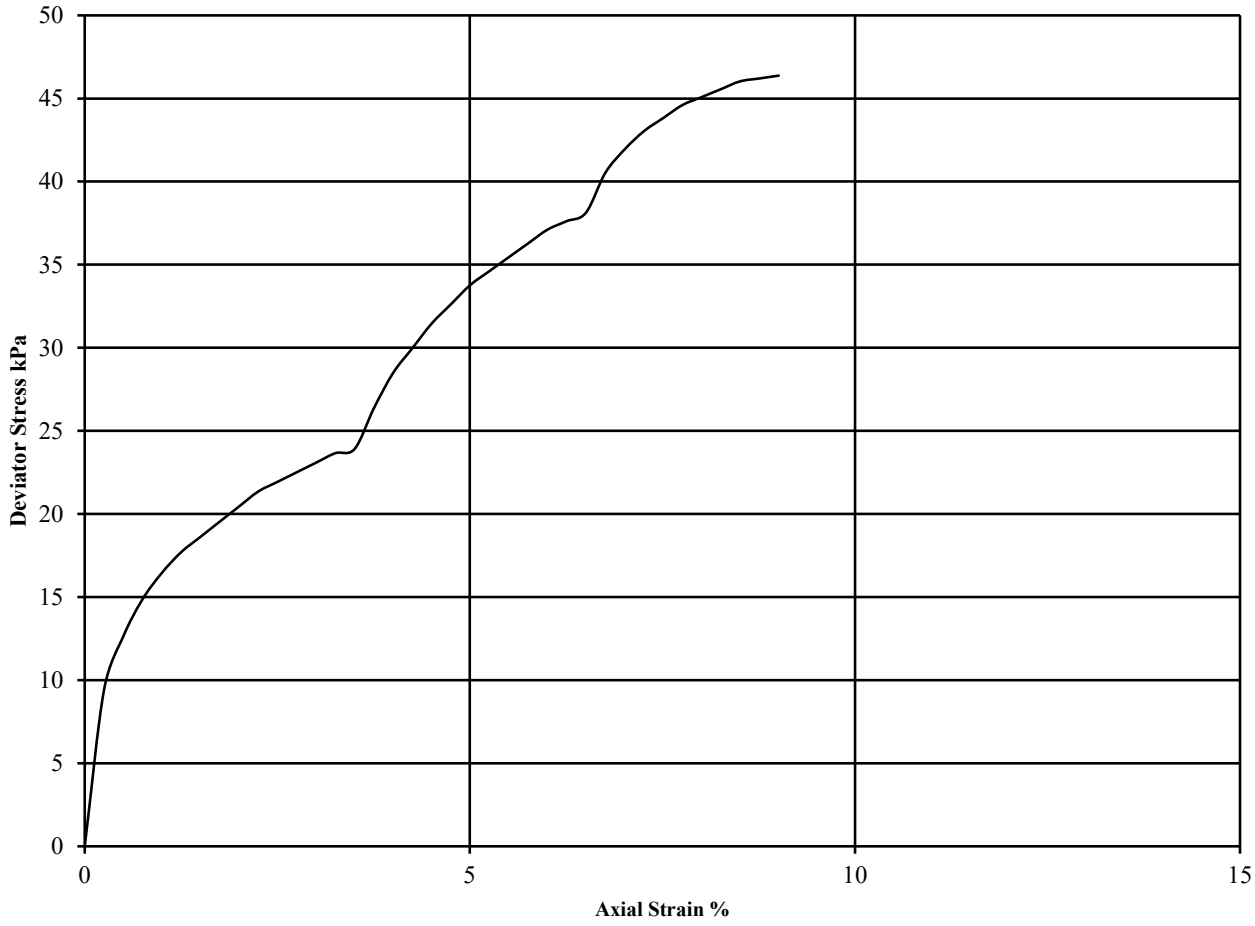
See Summary of Soil Descriptions

UNDRAINED SHEAR STRENGTH IN TRIAXIAL COMPRESSION

WITHOUT MEASUREMENT OF PORE PRESSURE

BS1377 : Part7 : 1990: Clause 9

Hole Number:	**BH006**	**Top Depth (m):**	**1.20**
Sample Number:	**7**	**Base Depth (m):**	
Sample Type	**UT**		



Diameter (mm):		102.1975	Height (mm):		204.15	Test:	UU Multistage		Remarks
Specimen	Moisture Content (%)	Bulk Density (Mg/m3)	Dry Density (Mg/m3)	Cell Pressure (kPa) θ_3	Corr. Max. Deviator Stress (kPa) $(\theta_1-\theta_3)_f$	Shear Strength Cu (kPa) $^1/_2(\theta_1-\theta_3)_f$	Failure Strain (%)	Mode of Failure	Undisturbed Sample Sample taken from top of tube Rate of strain = 2 %/min Latex Membrane used 0.2 mm thick Membrane Correction applied (kPa)
1	25	2.08	1.66	12	24	12	3.5		0.37 0.36 0.35
				25	38	19	6.5		See summary of soil descriptions
				50	46	23	9.0	Plastic	

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

One Earth Solar Farm

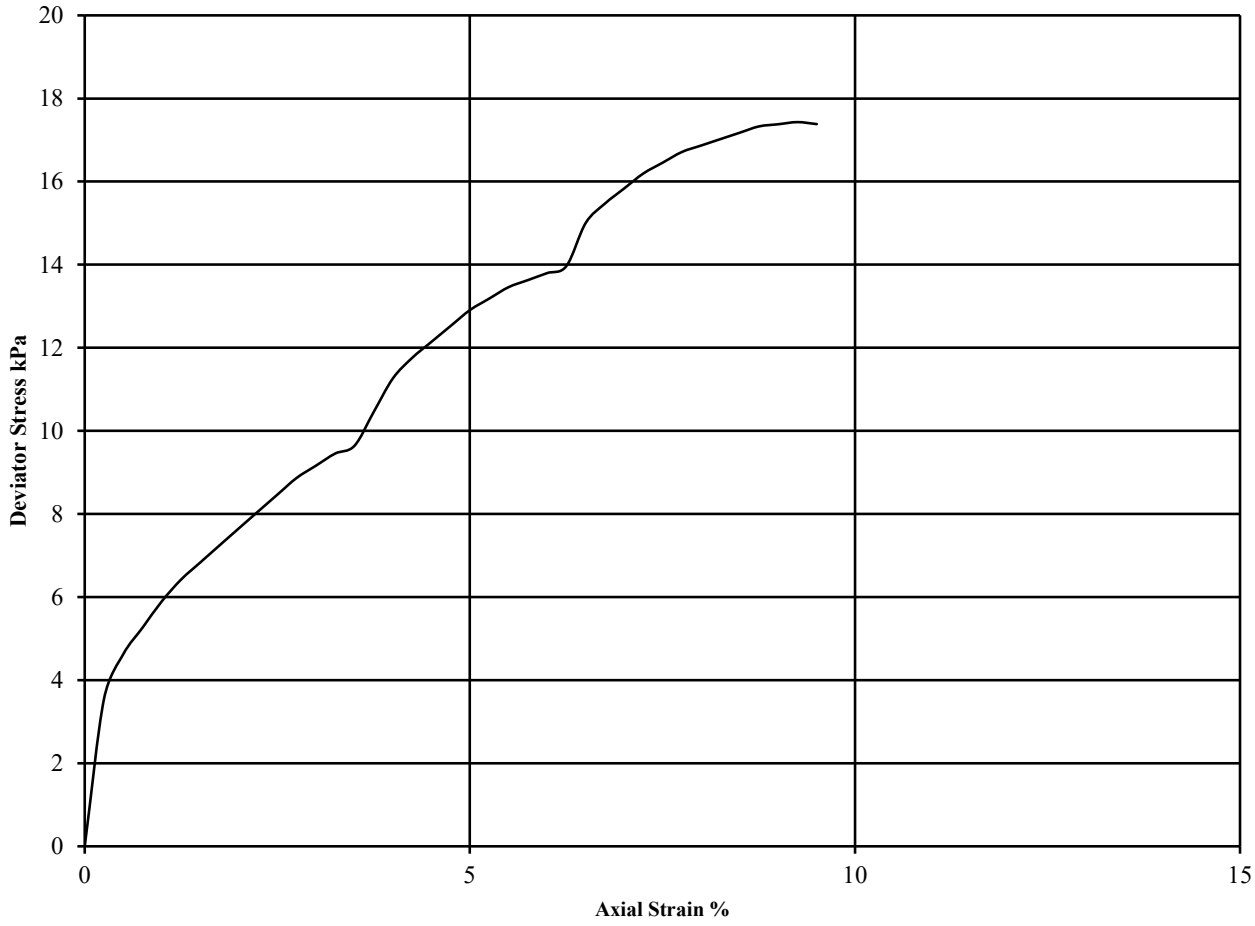
Contract No:
PSL24/7872
Client Ref:
2372986

UNDRAINED SHEAR STRENGTH IN TRIAXIAL COMPRESSION

WITHOUT MEASUREMENT OF PORE PRESSURE

BS1377 : Part7 : 1990: Clause 9

Hole Number:	**BH006**	**Top Depth (m):**	**4.00**
Sample Number:	**19**	**Base Depth (m):**	
Sample Type	**UT**		



Diameter (mm):		102.125	Height (mm):		204.1425	Test:	UU Multistage		Remarks
Specimen	Moisture Content (%)	Bulk Density (Mg/m3)	Dry Density (Mg/m3)	Cell Pressure (kPa) θ_3	Corr. Max. Deviator Stress (kPa) $(\theta_1-\theta_3)_f$	Shear Strength Cu (kPa) $^1/_2(\theta_1-\theta_3)_f$	Failure Strain (%)	Mode of Failure	Undisturbed Sample Sample taken from top of tube Rate of strain = 2 %/min Latex Membrane used 0.2 mm thick Membrane Correction applied (kPa)
1	75	1.57	0.90	40	10	5	3.5		0.37 0.36 0.35
				80	14	7	6.3		See summary of soil descriptions
				160	17	9	9.3	Intermediate	

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

One Earth Solar Farm

Contract No:
PSL24/7872
Client Ref:
2372986

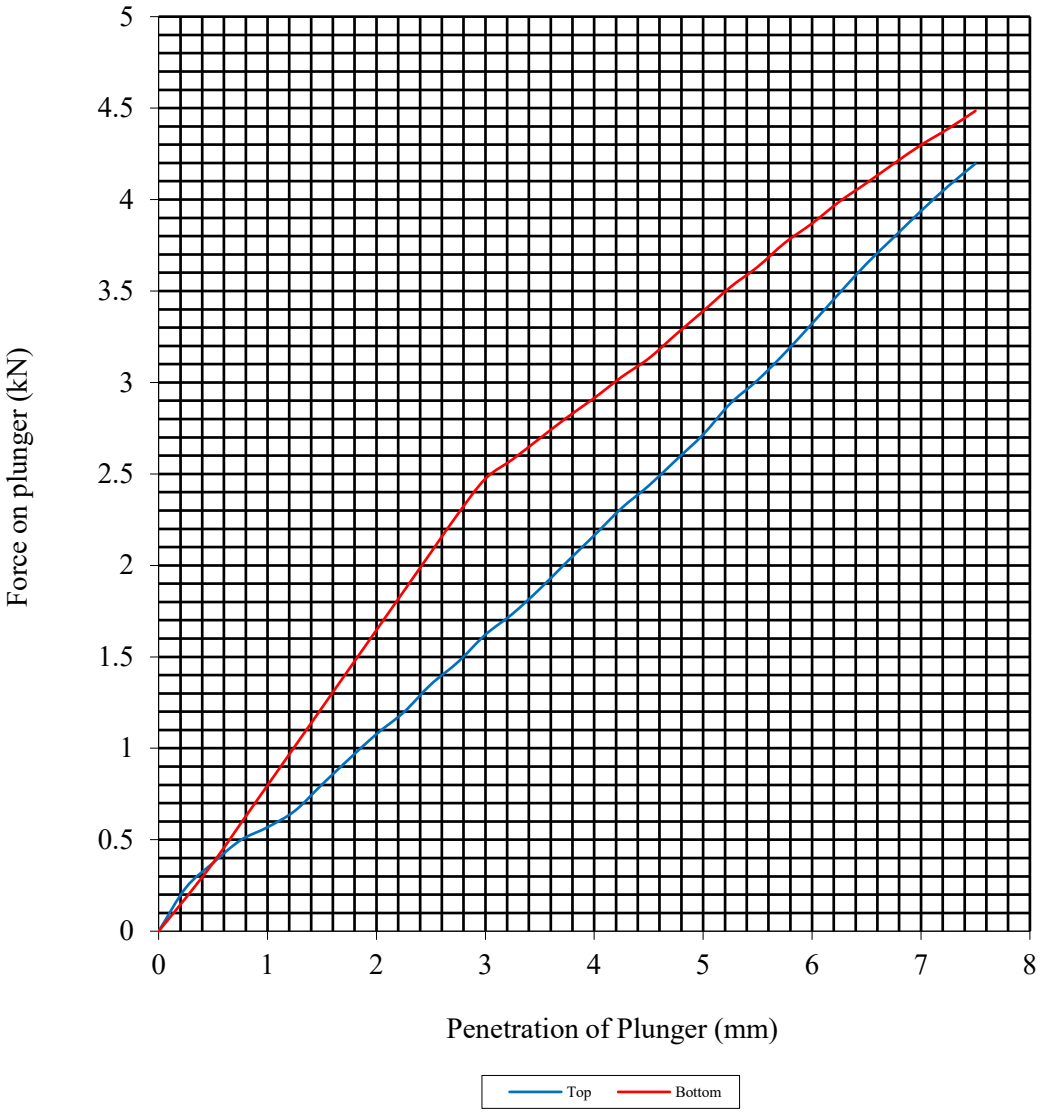
CALIFORNIA BEARING RATIO (CBR)

BS 1377 - Part 2 : Clause 15 : 2022

Hole Number: BH006 **Top Depth (m):** 0.70

Sample Number: 6 **Base Depth (m):**

Sample Type: B



Initial Sample Conditions		Sample Preparation		Final Water Content %		C.B.R. Value %	
Water Content:	14.9	Surcharge Kg:	4.20	Sample Top	14.9	Sample Top	13.6
Bulk Density Mg/m3:	2.14	Soaking Time hrs	0	Sample Bottom	15.2	Sample Bottom	17.0
Dry Density Mg/m3:	1.86	Swelling mm:	0.00	Remarks : See Summary of Soil Descriptions.			
Percentage retained on 20mm BS test sieve:			0				
Compaction Conditions		2.5kg					

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

One Earth Solar Farm

Contract No: PSL24/7872

Client Ref: 2372986

4161

Professional Soils Laboratory
5/7 Hexthorpe Road
Hexthorpe
Doncaster
DN4 0AR

7 - 11 Harding Street
Leicester
LE1 4DH

Analytical Test Report: E24/00559/PSL - 24-52195

Your Project Reference:	**PSL24/7872 One Earth Solar Farm**		
Your Order Number:	PSL24/7872	Samples Received / Instructed:	06/11/2024 / 06/11/2024
Report Issue Number:	1	Sample Tested:	06/11 to 15/11/2024
Samples Analysed:	2 sample(s)	Report issued:	15/11/2024

Signed [redacted]

James Gane
Analytical Services Manager
CTS Group

Notes:

General

Please refer to Methodologies page for details pertaining to the analytical methods undertaken.

Samples will be retained for 14 days after issue of this report unless otherwise requested.

Moisture Content was determined in accordance with CTS method statement MS - CL - Sample Prep, oven dried at <30˚C.

Moisture Content is reported as a percentage of the dry mass of soil, this calculation is in accordance with BS1377, Part 2, 1990, Clause 3.2

Where specification limits are included these are for guidance only. Where a measured value has been highlighted this is not implying acceptance or failure and certainty of measurement values have not been taken into account.

Uncertainty of measurement values are available on request.

Samples were supplied by customer, results apply to the samples as received.

Deviating Samples

On receipt samples are compared against our sample holding and handling protocols, where any deviations have been noted these are reported on our deviating sample page (if present)

Accreditation Key

UKAS = UKAS Accreditation, MCERTS = MCERTS Accreditation, u = Unaccredited, subUKAS - Subcontracted to a laboratory UKAS accredited for this test, subMCERTS - Subcontracted to a laboratory MCERTS accredited for this test

MCERTS Accreditation only covers the SAND, CLAY and LOAM matrices

UKAS accreditation on waters only covers the Ground water and Surface water matrices

Date of Issue: 11.11.2024

Issued by: J. Gane

Issue No: 4

Rev No: 18

4161

CONSTRUCTION TESTING SOLUTIONS
A PHENNA GROUP COMPANY

7 - 11 Harding Street
Leicester
LE1 4DH

E24/00559/PSL - 24-52195

Project Reference - PSL24/7872 One Earth Solar Farm

Analytical Test Results - Chemical Analysis

Lab Reference			415969	415970
Client Sample ID			-	-
Client Sample Location			BH006	BH006
Client Sample Type			B	D
Client Sample Number			16	28
Depth - Top (m)			3.30	6.50
Depth - Bottom (m)			3.30	6.50
Date of Sampling			-	-
Time of Sampling			-	-
Sample Matrix			Clay	Sand
Determinant	**Units**	**Accreditation**		
Water soluble sulphate (as SO_4)	(mg/l)	u	230	370
Acid Soluble Sulphate	(%)	u	0.09	0.12
Total Sulphur	(%)	UKAS	0.18	0.25
pH Value	pH Units	MCERTS	7.3	6.4

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CONSTRUCTION TESTING SOLUTIONS
A PHENNA GROUP COMPANY

7 - 11 Harding Street
Leicester
LE1 4DH

E24/00559/PSL - 24-52195

Project Reference - PSL24/7872 One Earth Solar Farm

Sample Descriptions

Lab Reference	Client Sample ID	Client Sample Location	Client Sample Type	Client Sample Number	Description	Moisture Content (%)	Stone Content (%)	Passing 2mm test sieve (%)
415969	-	BH006	B	16	Brownish grey silty clay	-	-	69
415970	-	BH006	D	28	Brown silty sand	-	-	77

4161

CONSTRUCTION TESTING SOLUTIONS
A PHENNA GROUP COMPANY

7 - 11 Harding Street
Leicester
LE1 4DH

E24/00559/PSL - 24-52195

Project Reference - PSL24/7872 One Earth Solar Farm

Sample Comments

Lab Reference	Client Sample ID	Client Sample Location	Client Sample Type	Client Sample Number	Comments
415969	-	BH006	B	16	
415970	-	BH006	D	28	

4161

CONSTRUCTION TESTING SOLUTIONS
A PHENNA GROUP COMPANY

7 - 11 Harding Street
Leicester
LE1 4DH

E24/00559/PSL - 24-52195

Project Reference - PSL24/7872 One Earth Solar Farm

Analysis Methodologies

Test Code	Test Name / Reference	Sample condition for analysis	Sample Preperation	Test Details
ANIONSS	MS - CL - Anions by Aquakem (2:1Extract)	Oven dried	Passing 2mm test sieve	Determination of Anions (inc Sulphate, chloride etc.) in soils by Aquakem. Analysis is based on a 2:1 water to soil extraction ratio
PHS	MS - CL - pH in Soils	As received	Passing 10mm test sieve	Determination of pH in soils using a pH probe (using a 1:3 soil to water extraction)
ASSO4S	MS - CL - Acid Soluble Sulphate	Oven Dried	Passing 2mm test sieve	Determination of total sulphate in soils by acid extraction followed by ICP analysis
SAMPLEPREP	MS - CL - Sample Preparation	-	-	Preparation of samples (including determination of moisture content) to allow for subsequent analysis
1377TS-ELT	BS1377 Total Sulphur Content by HTC	Oven dried	BS1377 : Part 1 : 2016	Total Sulphur Content testing of Soil in accordance with BS 1377 : Part 3 : 2018 + A1 : 2021 Clause 7.10 (using Eltra CS-800 Analyser)

7 - 11 Harding Street
Leicester
LE1 4DH

E24/00559/PSL - 24-52195

Project Reference - PSL24/7872 One Earth Solar Farm

Sample Deviations

Deviations are listed below against each sample and associated test method, where deviation(s) are noted it means data may not be representative of the sample at the time of sampling and it is possible that results provided may be compromised.

Observations on receipt

A - No date of sampling provided
W - No time of sampling provided for water sample
C - Received in inappropriate container
H - Contains headspace
T - Temperature on receipt exceeds storage temperature
R - Sample(s) received with less than 96 hours for testing to commence/complete, any result formally classed as deviating will be marked with an X against the applicable test (i.e. RX)

Observations whilst in laboratory

X - Exceeds sampling to extraction or analysis timescales

Lab Reference	Client Sample ID	Client Sample Location	Client Sample Type	Client Sample Number	Test	Deviations
415969	-	BH006	B	16		A
415970	-	BH006	D	28		A

INCREMENTAL LOADING OEDOMETER TEST

BS 1377 - Part 2 : 2022 : Clause 16 in accordance with BS EN ISO 17892 - 5 : 2017

Hole Number: BH006 **Top Depth (m):** 1.20

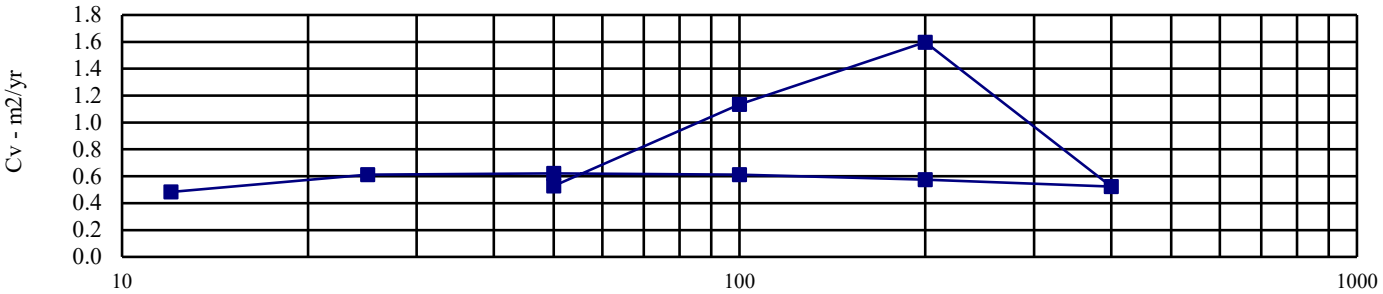
Sample Number: 7 **Base Depth (m) :**

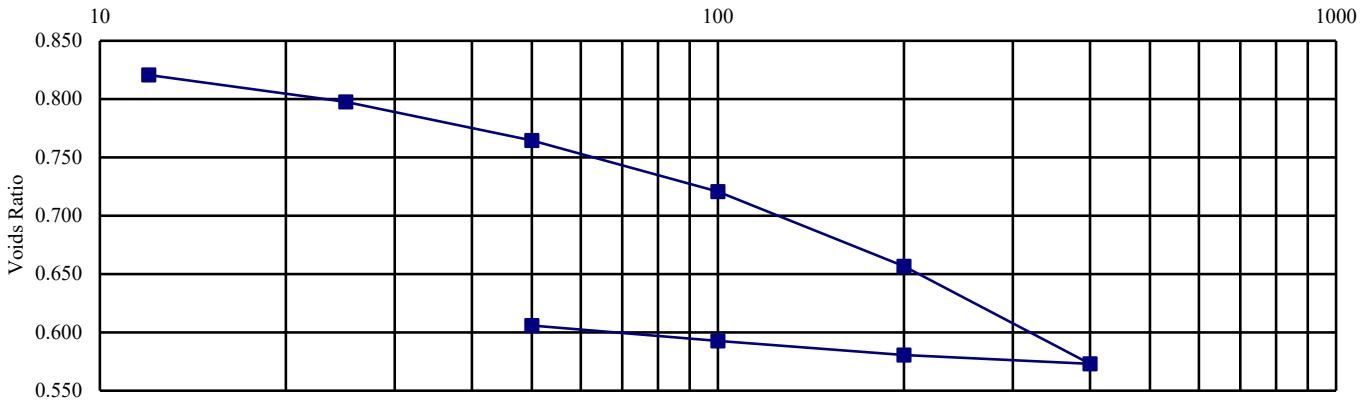
Sample Type: UT

Initial Conditions	
Water Content (%):	37.8
Bulk Density (Mg/m3):	1.97
Dry Density (Mg/m3):	1.43
Voids Ratio:	0.849
Degree of saturation:	117.9
Height (mm):	20.02
Diameter (mm)	75.02
Particle Density (Mg/m3): Assumed	2.65

Pressure Range kPa		Mv m2/MN	Cv m2/yr
0	12	1.257	0.483
12	25	0.971	0.612
25	50	0.736	0.622
50	100	0.497	0.612
100	200	0.372	0.575
200	400	0.252	0.523
400	200	0.024	1.598
200	100	0.077	1.135
100	50	0.167	0.527

Specimen location within tube:	Top Vertical
Method of preparation:	Trimmed from extruded material
Method used to determine CV:	T90
Nominal temperature during test ' C:	20
Results correct against equipment deformation	Yes





UKAS TESTING 4043	PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY	One Earth Solar Farm

Contract No: PSL24/7872

Client Ref: 2372986

INCREMENTAL LOADING OEDOMETER TEST

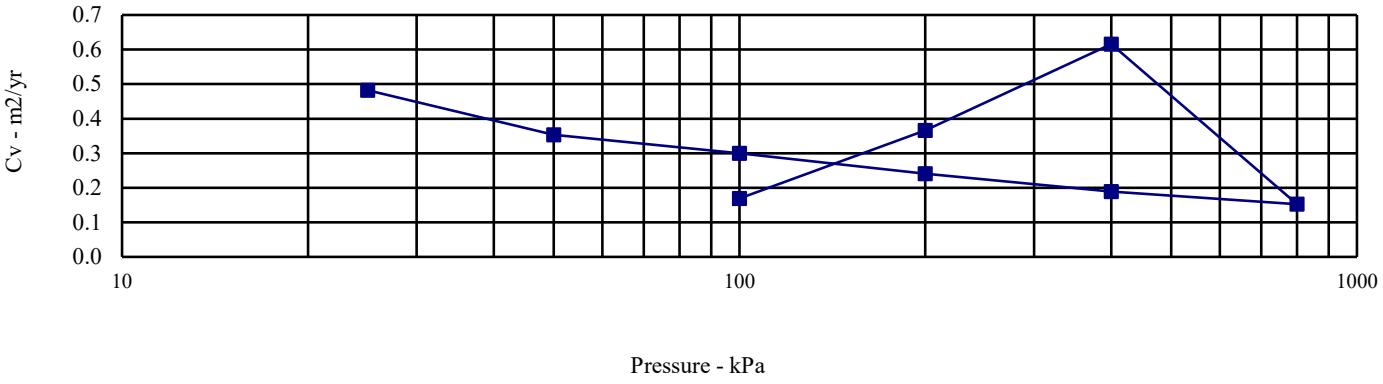
BS 1377 - Part 2 : 2022 : Clause 16 in accordance with BS EN ISO 17892 - 5 : 2017

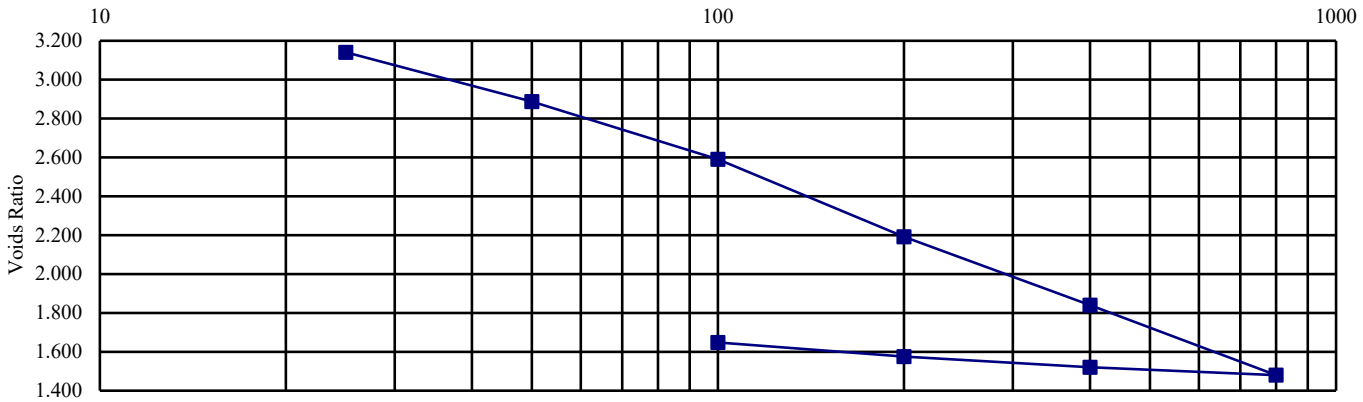
Hole Number: BH006 **Top Depth (m):** 4.00

Sample Number: 19 **Base Depth (m) :**

Sample Type: UT

Initial Conditions		Pressure Range kPa		Mv m2/MN	Cv m2/yr	Specimen location within tube:	Top Vertical
Water Content (%):	141.1						
Bulk Density (Mg/m3):	1.35	0	25	4.917	0.482	Method of preparation:	Trimmed from extruded material
Dry Density (Mg/m3):	0.56	25	50	2.449	0.353		
Voids Ratio:	3.721	50	100	1.525	0.300	Method used to determine CV:	T90
Degree of saturation:	100.5	100	200	1.111	0.241		
Height (mm):	20.02	200	400	0.552	0.189	Nominal temperature during test ' C:	20
Diameter (mm)	75.02	400	800	0.317	0.152		
Particle Density (Mg/m3): Assumed	2.65	800	400	0.040	0.616	Results correct against equipment deformation	Yes
		400	200	0.111	0.366		
		200	100	0.281	0.169		





UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

One Earth Solar Farm

Contract No: PSL24/7872

Client Ref: 2372986

LABORATORY REPORT

Contract Number: PSL24/7970

Report Date: 13 December 2024

Client's Reference: 2372986-001

Client Name: Central Alliance
Alliance House
South Park Way
Wakefield 41 Business Park
Wakefield
WF2 0XJ

For the attention of: John Parkinson

Contract Title: One Earth Solar Farm

Date Received: 25/10/2024
Date Commenced: 25/10/2024
Date Completed: 13/12/2024

Notes: Opinions and Interpretations are outside the UKAS Accreditation

A copy of the Laboratory Schedule of accredited tests as issued by UKAS is attached to this report. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced other than in full, without the prior written approval of the laboratory.

Checked and Approved Signatories:

A Watkins (Managing Director)
R Berriman (Associate Director)
S Royle (Laboratory Manager)
[redacted]
L Knight (Assistant Laboratory Manager)
S Eyre (Senior Technical Coordinator)
T Watkins (Senior Technician)

5 – 7 Hexthorpe Road,
Hexthorpe,
Doncaster,
DN4 0AR
Tel: [redacted]
Email: [redacted]@prosoils.co.uk
[redacted]@prosoils.co.uk

SUMMARY OF LABORATORY SOIL DESCRIPTIONS

Hole Number	Sample Number	Sample Type	Top Depth m	Base Depth m	Description of Sample
TP001	4	LB	0.60		Brown slightly sandy CLAY.
TP001	5	D	0.90		Reddish brown slightly sandy CLAY.
TP001	7	B	1.50		Brown sandy slightly gravelly CLAY.
TP001	8	D	2.00		Reddish brown slightly sandy slightly gravelly CLAY.
TP001	10	D	3.00		Reddish brown slightly sandy slightly gravelly CLAY.
TP001	12	D	4.00		Reddish brown slightly sandy slightly gravelly CLAY.
TP002	4	D	1.00		Brown slightly sandy CLAY.
TP002	6	LB	1.50		Grey slightly sandy slightly gravelly CLAY.
TP002	9	D	1.75		Brown slightly gravelly SAND.
TP002	8	B	2.00		Reddish brown slightly sandy slightly gravelly CLAY.
TP002	10	D	2.50		Reddish brown slightly sandy slightly gravelly CLAY.
TP002	11	D	3.00		Reddish brown slightly sandy slightly gravelly CLAY.
TP003	4	LB	0.50		Reddish brown slightly sandy slightly gravelly CLAY.
TP003	5	D	0.90		Reddish brown slightly sandy slightly gravelly CLAY.
TP003	7	B	1.50		Reddish brown mottled grey slightly sandy slightly gravelly CLAY.
TP003	8	D	1.90		Reddish brown slightly sandy CLAY.
TP003	9	B	2.50		Reddish brown mottled grey slightly sandy CLAY.
TP003	10	D	2.90		Reddish brown MUDSTONE.
TP003	12	D	3.90		Reddish brown slightly sandy CLAY.

SUMMARY OF LABORATORY SOIL DESCRIPTIONS

Hole Number	Sample Number	Sample Type	Top Depth m	Base Depth m	Description of Sample
TP004	4	LB	0.50		Reddish brown slightly sandy CLAY.
TP004	5	D	0.90		Reddish brown slightly sandy CLAY.
TP004	7	B	1.50		Reddish brown slightly sandy slightly gravelly CLAY.
TP005	4	LB	0.50		Reddish brown slightly sandy slightly gravelly CLAY.
TP005	5	D	0.90		Reddish brown slightly sandy slightly gravelly CLAY.
TP005	7	B	1.50		Reddish brown slightly sandy slightly gravelly CLAY.
TP005	8	D	1.90		Reddish brown slightly sandy CLAY.

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

One Earth Solar Farm

Contract No:
PSL24/7970
Client Ref:
2372986

SUMMARY OF SOIL CLASSIFICATION TESTS

BS 1377 - Part 2 : 2022 in accordance with BS EN ISO 17892 (as below)

Hole Number	Sample Number	Sample Type	Top Depth m	Base Depth m	Water Content %	Linear Shrinkage	Particle Density Mg/m^3	Liquid Limit %	Plastic Limit %	Plasticity Index %	Passing 0.425mm %	Remarks
TP001	4	LB	0.60		27.3							
TP001	5	D	0.90		28.1			64	30	34	100	High Plasticity CIH
TP001	8	D	2.00		17.5			39	21	18	79	Medium Plasticity CIM
TP001	10	D	3.00		20.3			41	23	18	84	Medium Plasticity CIM
TP001	12	D	4.00		20.1			40	24	16	80	Medium Plasticity CIM
TP002	4	D	1.00		19.2			54	24	30	100	High Plasticity CIH
TP002	6	LB	1.50		20.9							
TP002	9	D	1.75		19.8				NP			
TP002	10	D	2.50		24.8			34	20	14	81	Low Plasticity CIL
TP002	11	D	3.00		26.0			39	22	17	94	Medium Plasticity CIM
TP003	4	LB	0.50		17.2			39	21	18	97	Medium Plasticity CIM
TP003	5	D	0.90		18.3			47	23	24	95	Medium Plasticity CIM
TP003	8	D	1.90		23.0			46	26	20	100	Medium Plasticity CIM
TP003	9	B	2.50		24.9			51	25	26	100	High Plasticity CIH
TP003	10	D	2.90		15.5				NP			

Water Content - BS 1377 - Part 2 : 2022 : Clause 4 in accordance with BS EN ISO 17892 - 1 : 2014 + A1 : 2022
Linear Shrinkage - BS 1377 - Part 2 : 2022 : Clause 7
Particle Density (Gas Jar method) - BS 1377 - Part 2 : 2022 : Clause 9
Liquid, Plastic Limit & Plasticity Index - BS 1377 - Part 2 : 2022 : Clause 5 & 6 in accordance with BS EN ISO 17892 - 12 : 2018 + A2 : 2022

SYMBOLS : NP = Non Plastic

UKAS TESTING 4043

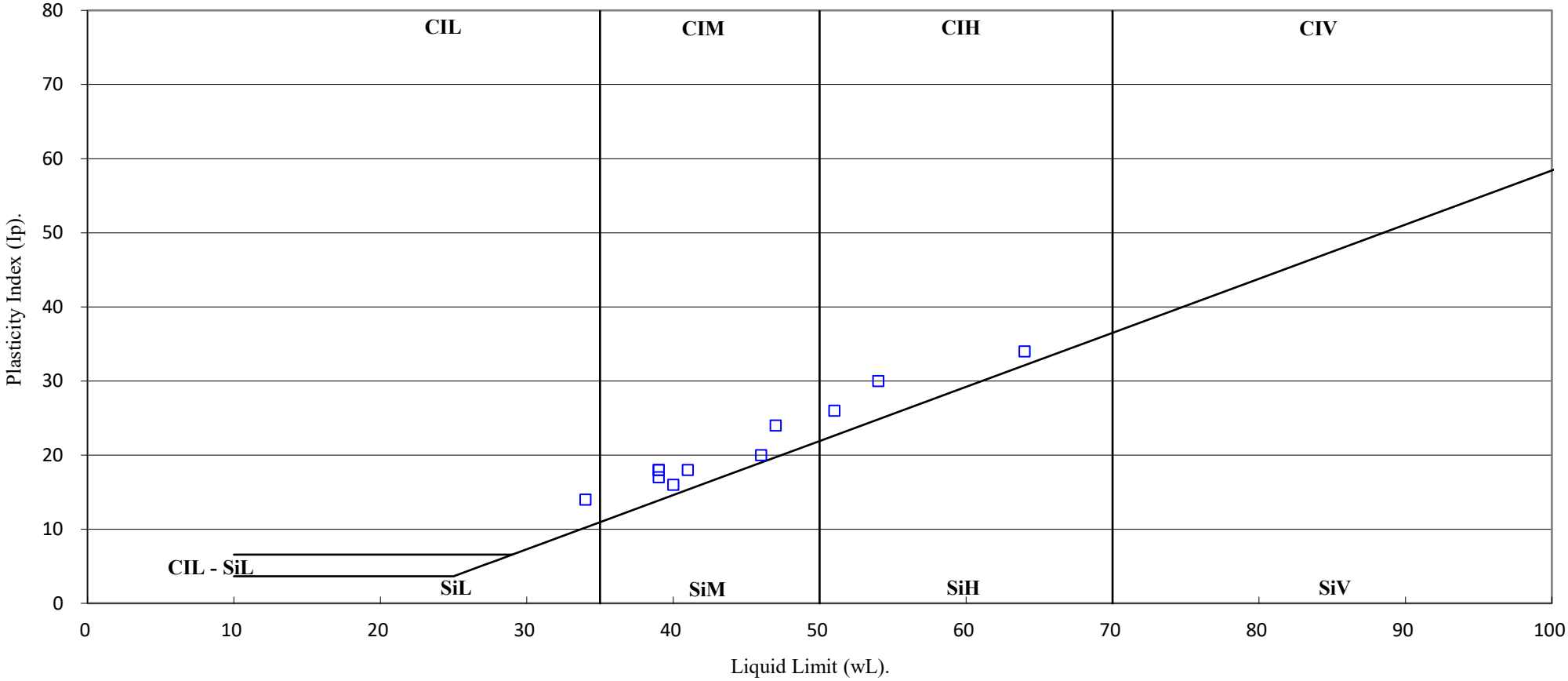
PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

One Earth Solar Farm

Contract No:
PSL24/7970
Client Ref:
2372986

PLASTICITY CHART

BS EN ISO 14688-2:2017 Clause 4.4



UKAS TESTING 4043 / PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY	One Earth Solar Farm	Contract No: PSL24/7970 Client Ref:

SUMMARY OF SOIL CLASSIFICATION TESTS

BS 1377 - Part 2 : 2022 in accordance with BS EN ISO 17892 (as below)

Hole Number	Sample Number	Sample Type	Top Depth m	Base Depth m	Water Content %	Linear Shrinkage	Particle Density Mg/m^3	Liquid Limit %	Plastic Limit %	Plasticity Index %	Passing 0.425mm %	Remarks
TP003	12	D	3.90		19.7			46	23	23	100	Medium Plasticity CIM
TP004	4	LB	0.50		24.7							
TP004	5	D	0.90		24.8			48	26	22	100	Medium Plasticity CIM
TP005	5	D	0.90		12.4			42	23	19	96	Medium Plasticity CIM
TP005	8	D	1.90		20.6			48	26	22	100	Medium Plasticity CIM

Water Content - BS 1377 - Part 2 : 2022 : Clause 4 in accordance with BS EN ISO 17892 - 1 : 2014 + A1 : 2022
Linear Shrinkage - BS 1377 - Part 2 : 2022 : Clause 7
Particle Density (Gas Jar method) - BS 1377 - Part 2 : 2022 : Clause 9
Liquid, Plastic Limit & Plasticity Index - BS 1377 - Part 2 : 2022 : Clause 5 & 6 in accordance with BS EN ISO 17892 - 12 : 2018 + A2 : 2022

SYMBOLS : NP = Non Plastic

UKAS TESTING 4043

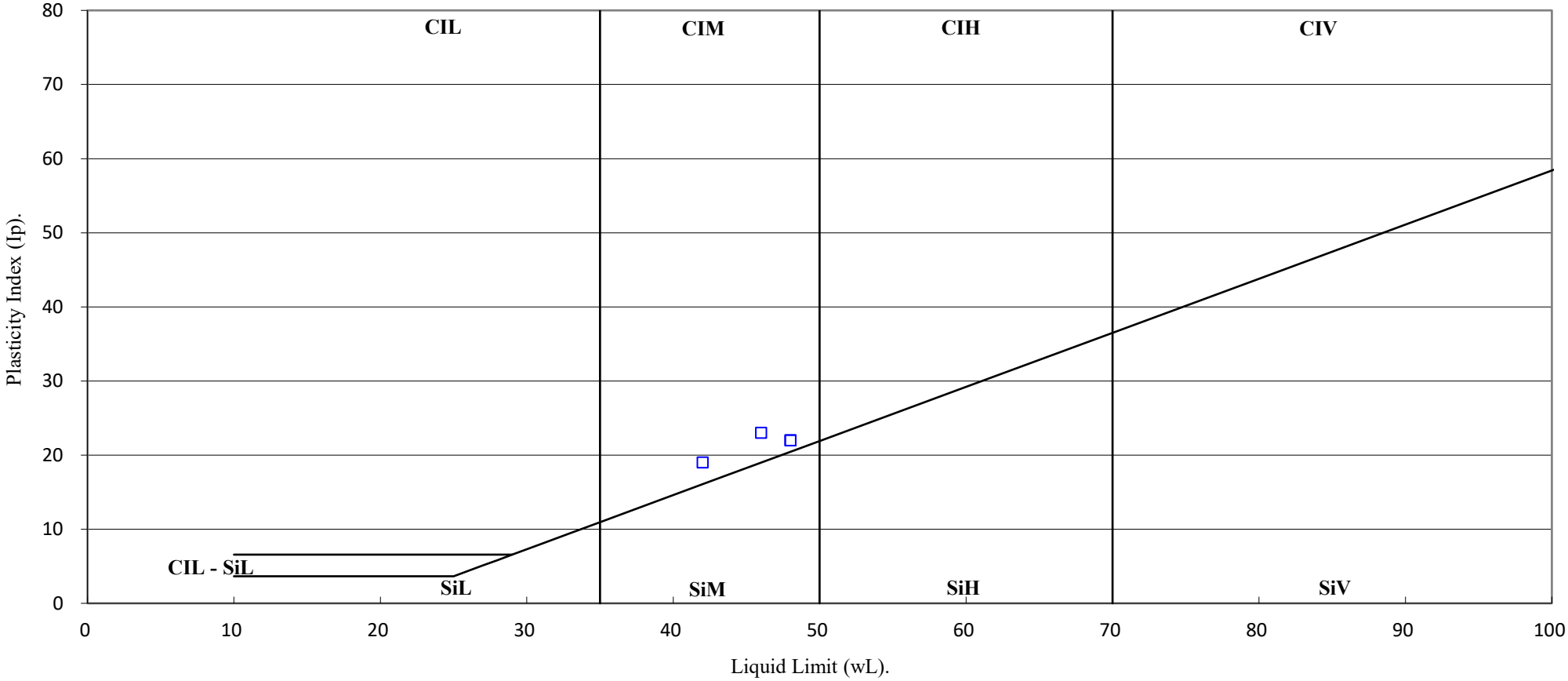
PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

One Earth Solar Farm

Contract No:
PSL24/7970
Client Ref:
2372986

PLASTICITY CHART

BS EN ISO 14688-2:2017 Clause 4.4



UKAS TESTING 4043 / PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY	**One Earth Solar Farm**	**Contract No:** PSL24/7970 **Client Ref:**

SUMMARY OF LABORATORY HAND VANES

(Inhouse Method using the principles of BS1377 - PART 9 : Clause 4.4 : 1990)

Hole Number	Sample Number	Sample Type	Top Depth m	Base Depth m	Water Content %	Peak Shear Strength kPa	Residual Shear Strength kPa	Remarks
TP001	4	LB	0.60		27.2	113		Top
TP001	4	LB	0.60		27.7	108		Base
TP002	6	LB	1.50		20.8	78		Top
TP002	6	LB	1.50		21.2	72		Base
TP003	9	B	2.50		24.9	124		
TP004	4	LB	0.50		24.7	98		Top
TP004	4	LB	0.50		24.9	86		Base

* This test is out of our UKAS scope

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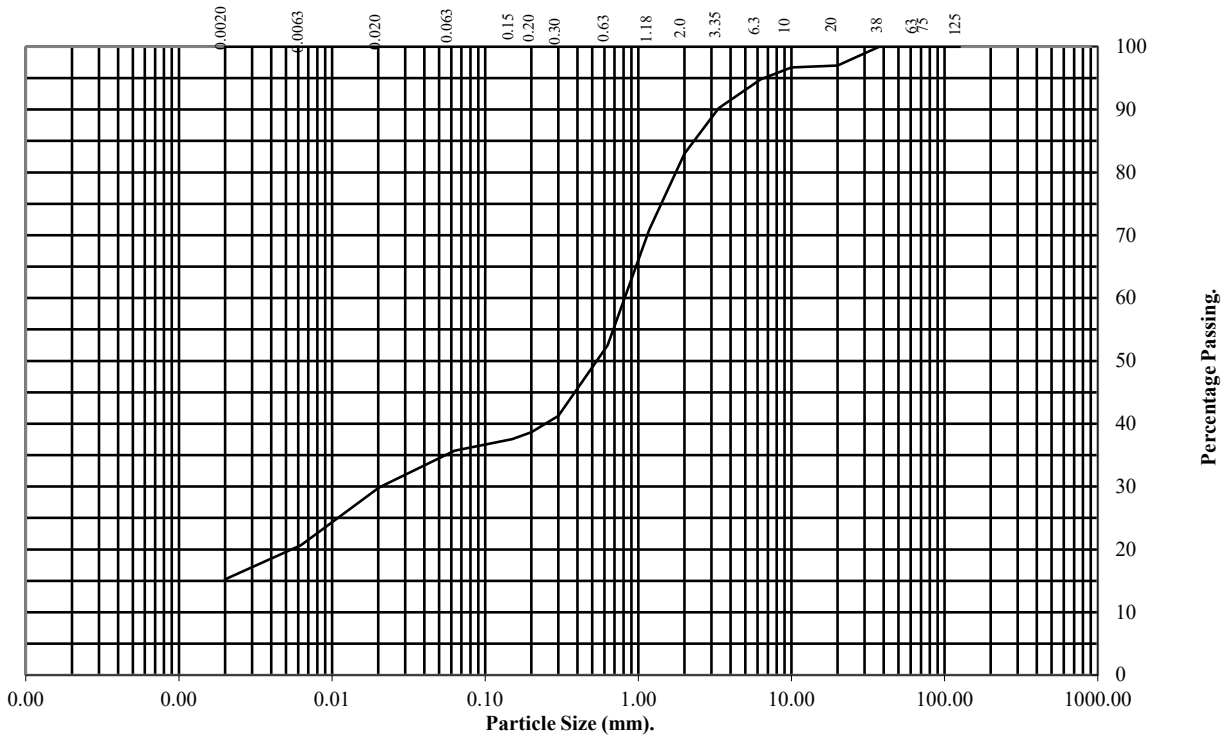
Contract No:
PSL24/7970
Client Ref:
2372986

PARTICLE SIZE DISTRIBUTION TEST

BS 1377 - Part 2 : 2022 : Clause 10 in accordance with BS EN ISO 17892 - 4 : 2016

Sieve Method, Clause 5.2 & Pipette Method, Clause 5.4

Hole Number:	**TP001**	**Top Depth (m):**	**1.50**
Sample Number:	**7**	**Base Depth (m):**	
Sample Type:	**B**		



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
63	100
37.5	100
20	97
10	97
6.3	95
3.35	90
2	83
1.18	71
0.63	52
0.3	41
0.2	39
0.15	38
0.063	36

Particle Diameter	Percentage Passing
0.020	30
0.0063	21
0.0020	15
Particle Density - 2.65 Mg/m3 assumed	

Soil Fraction	Total Percentage
Cobbles	0
Gravel	17
Sand	47
Silt	21
Clay	15

Remarks:

See Summary of Soil Descriptions

UKAS TESTING 4043

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One Earth Solar Farm

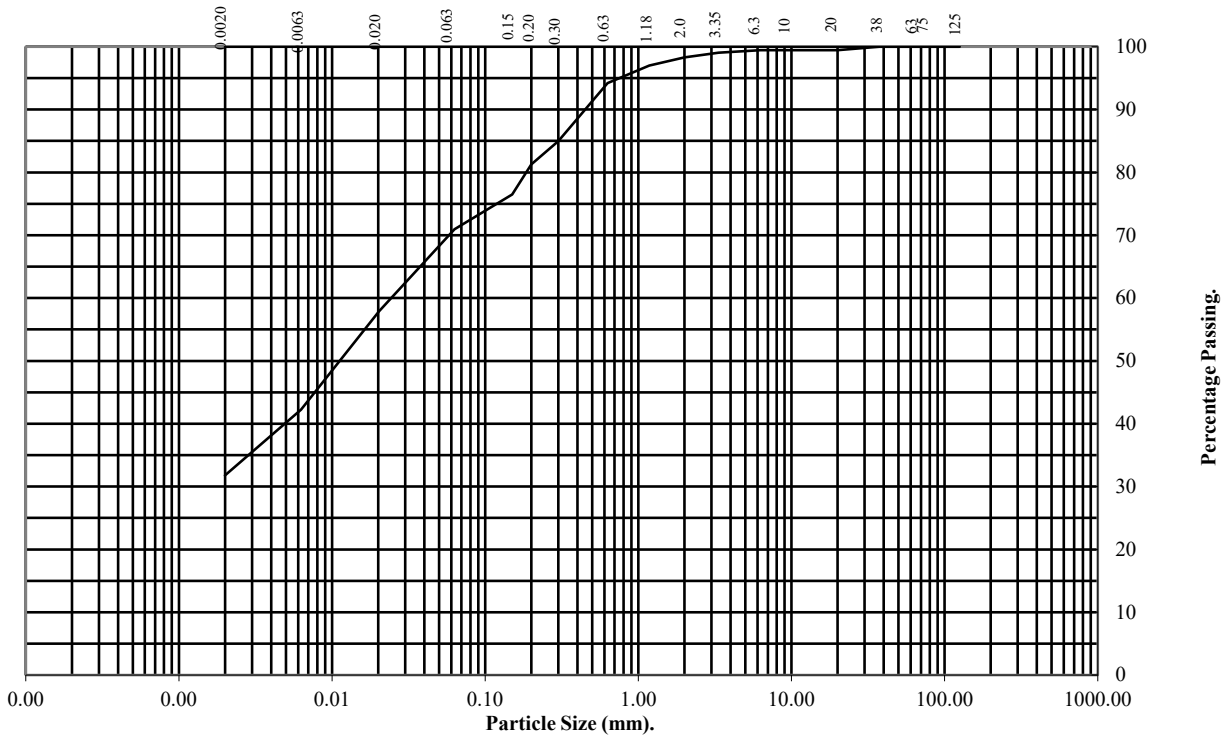
Contract No:
PSL24/7970
Client Ref:
2372986

PARTICLE SIZE DISTRIBUTION TEST

BS 1377 - Part 2 : 2022 : Clause 10 in accordance with BS EN ISO 17892 - 4 : 2016

Sieve Method, Clause 5.2 & Pipette Method, Clause 5.4

Hole Number:	**TP002**	**Top Depth (m):**	**2.00**
Sample Number:	**8**	**Base Depth (m):**	
Sample Type:	**B**		



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
63	100
37.5	100
20	99
10	99
6.3	99
3.35	99
2	98
1.18	97
0.63	94
0.3	85
0.2	81
0.15	76
0.063	71

Particle Diameter	Percentage Passing
0.020	58
0.0063	42
0.0020	32
Particle Density - 2.65 Mg/m3 assumed	

Soil Fraction	Total Percentage
Cobbles	0
Gravel	2
Sand	27
Silt	39
Clay	32

Remarks:

See Summary of Soil Descriptions

PARTICLE SIZE DISTRIBUTION TEST

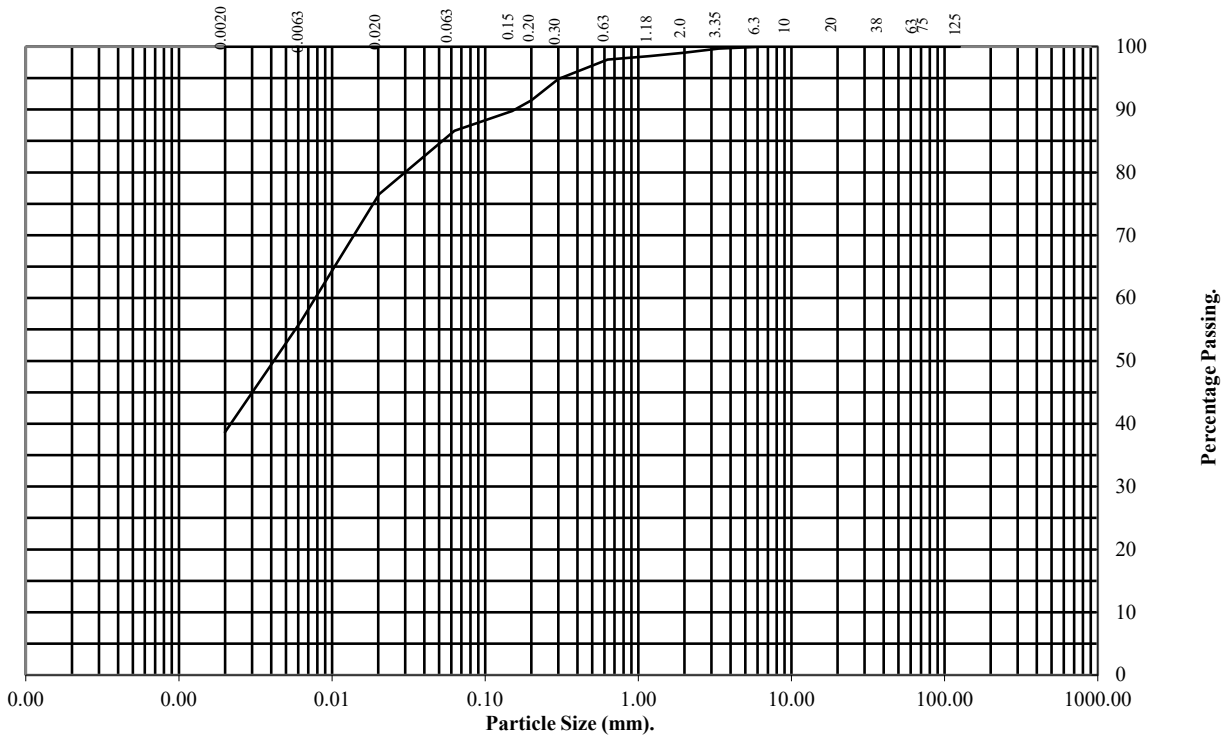
BS 1377 - Part 2 : 2022 : Clause 10 in accordance with BS EN ISO 17892 - 4 : 2016

Sieve Method, Clause 5.2 & Pipette Method, Clause 5.4

Hole Number: TP003 **Top Depth (m):** 0.50

Sample Number: 4 **Base Depth (m):**

Sample Type: LB



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
63	100
37.5	100
20	100
10	100
6.3	100
3.35	100
2	99
1.18	99
0.63	98
0.3	95
0.2	91
0.15	90
0.063	87

Particle Diameter	Percentage Passing
0.020	77
0.0063	56
0.0020	39
Particle Density - 2.65 Mg/m3 assumed	

Soil Fraction	Total Percentage
Cobbles	0
Gravel	1
Sand	12
Silt	48
Clay	39

Remarks:

See Summary of Soil Descriptions

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

One Earth Solar Farm

Contract No: PSL24/7970

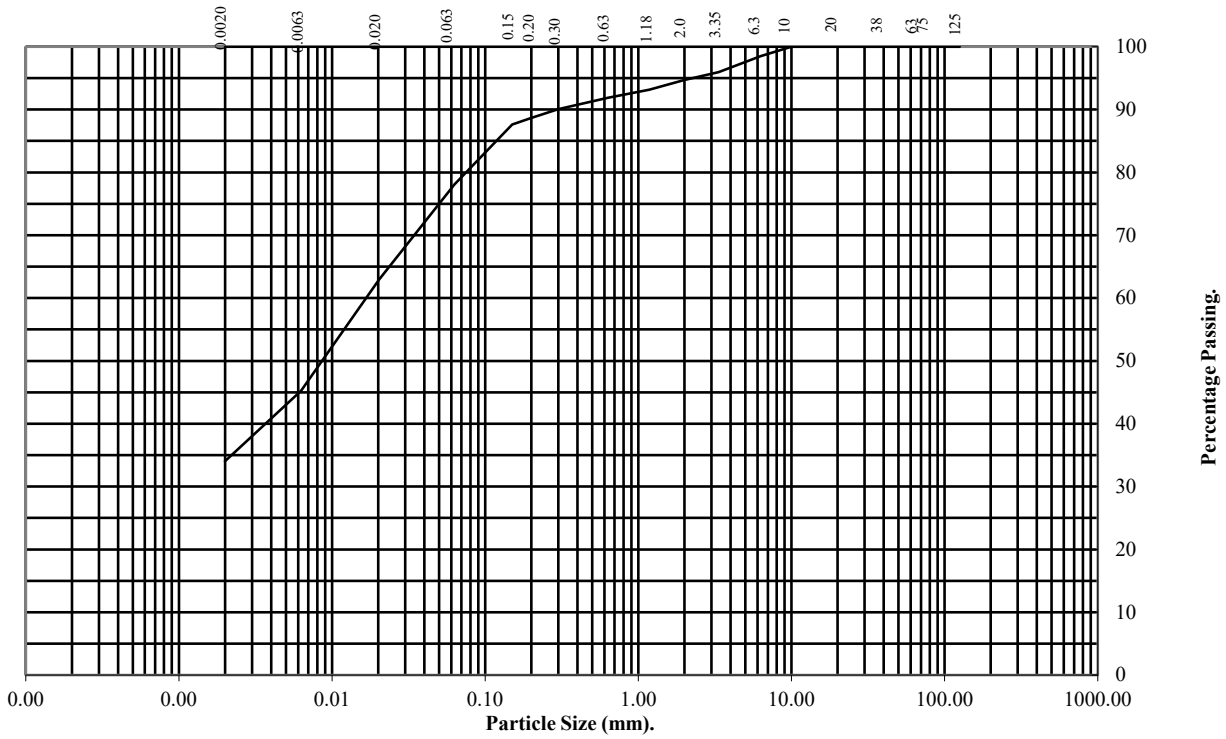
Client Ref: 2372986

PARTICLE SIZE DISTRIBUTION TEST

BS 1377 - Part 2 : 2022 : Clause 10 in accordance with BS EN ISO 17892 - 4 : 2016

Sieve Method, Clause 5.2 & Pipette Method, Clause 5.4

Hole Number:	**TP003**	**Top Depth (m):**	**1.50**
Sample Number:	**7**	**Base Depth (m):**	
Sample Type:	**B**		



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
63	100
37.5	100
20	100
10	100
6.3	99
3.35	96
2	95
1.18	93
0.63	92
0.3	90
0.2	89
0.15	88
0.063	78

Particle Diameter	Percentage Passing
0.020	63
0.0063	45
0.0020	34
Particle Density - 2.65 Mg/m3 assumed	

Soil Fraction	Total Percentage
Cobbles	0
Gravel	5
Sand	17
Silt	44
Clay	34

Remarks:

See Summary of Soil Descriptions

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

One Earth Solar Farm

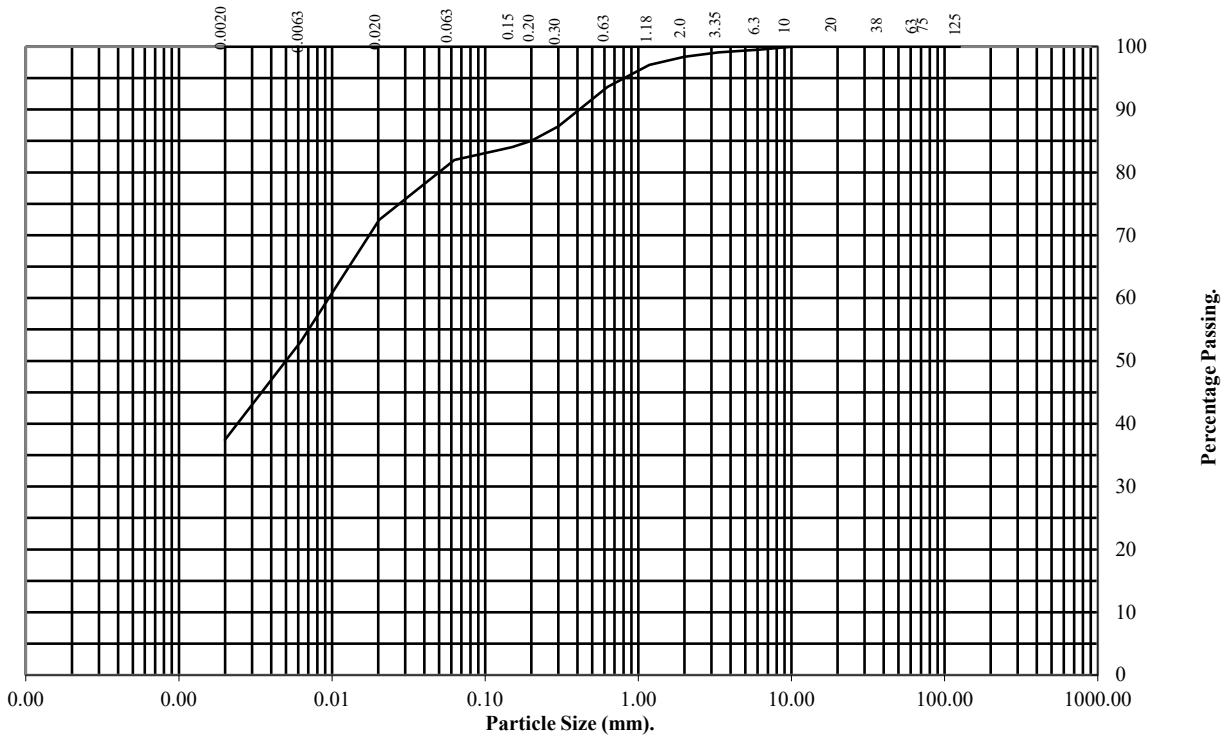
Contract No:
PSL24/7970
Client Ref:
2372986

PARTICLE SIZE DISTRIBUTION TEST

BS 1377 - Part 2 : 2022 : Clause 10 in accordance with BS EN ISO 17892 - 4 : 2016

Sieve Method, Clause 5.2 & Pipette Method, Clause 5.4

Hole Number:	**TP004**	**Top Depth (m):**	**1.50**
Sample Number:	**7**	**Base Depth (m):**	
Sample Type:	**B**		



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
63	100
37.5	100
20	100
10	100
6.3	100
3.35	99
2	98
1.18	97
0.63	94
0.3	87
0.2	85
0.15	84
0.063	82

Particle Diameter	Percentage Passing
0.020	72
0.0063	53
0.0020	37
Particle Density - 2.65 Mg/m3 assumed	

Soil Fraction	Total Percentage
Cobbles	0
Gravel	2
Sand	16
Silt	45
Clay	37

Remarks:

See Summary of Soil Descriptions

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

One Earth Solar Farm

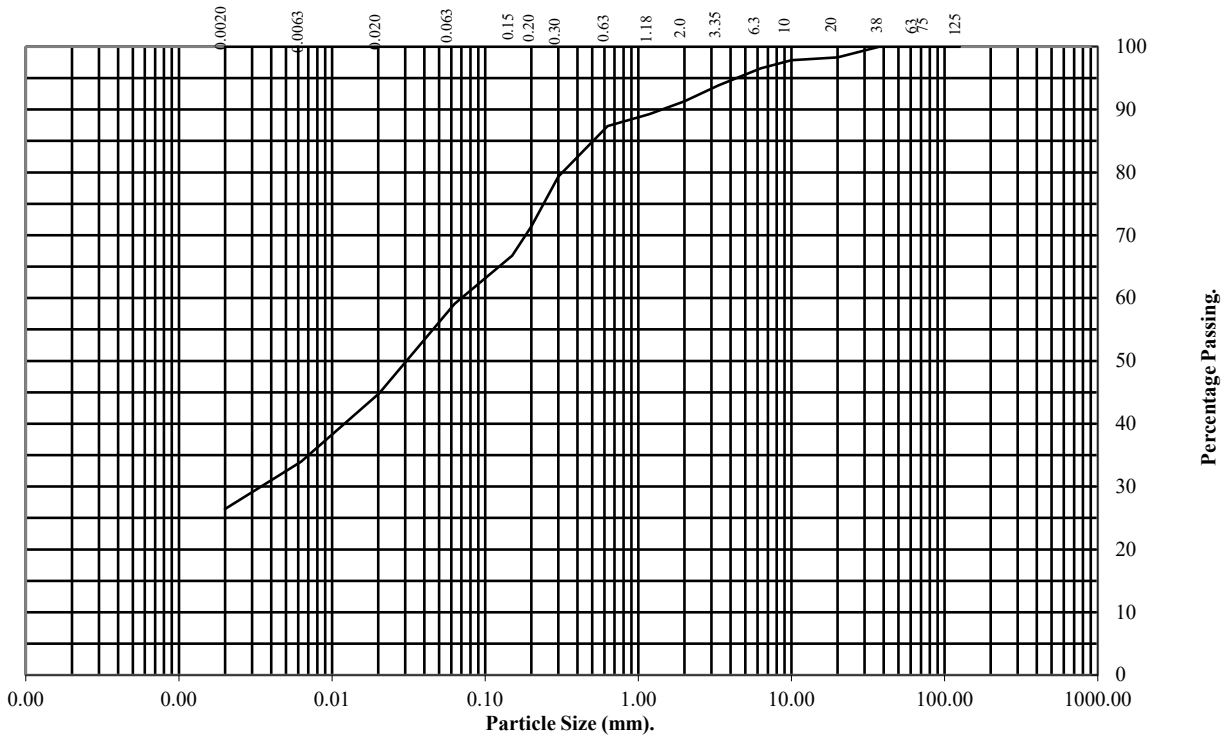
Contract No:
PSL24/7970
Client Ref:
2372986

PARTICLE SIZE DISTRIBUTION TEST

BS 1377 - Part 2 : 2022 : Clause 10 in accordance with BS EN ISO 17892 - 4 : 2016

Sieve Method, Clause 5.2 & Pipette Method, Clause 5.4

Hole Number:	**TP005**	**Top Depth (m):**	**0.50**
Sample Number:	**4**	**Base Depth (m):**	
Sample Type:	**LB**		



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
63	100
37.5	100
20	98
10	98
6.3	97
3.35	94
2	91
1.18	89
0.63	87
0.3	79
0.2	71
0.15	67
0.063	59

Particle Diameter	Percentage Passing
0.020	45
0.0063	34
0.0020	26
Particle Density - 2.65 Mg/m3 assumed	

Soil Fraction	Total Percentage
Cobbles	0
Gravel	9
Sand	32
Silt	33
Clay	26

Remarks:

See Summary of Soil Descriptions

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

One Earth Solar Farm

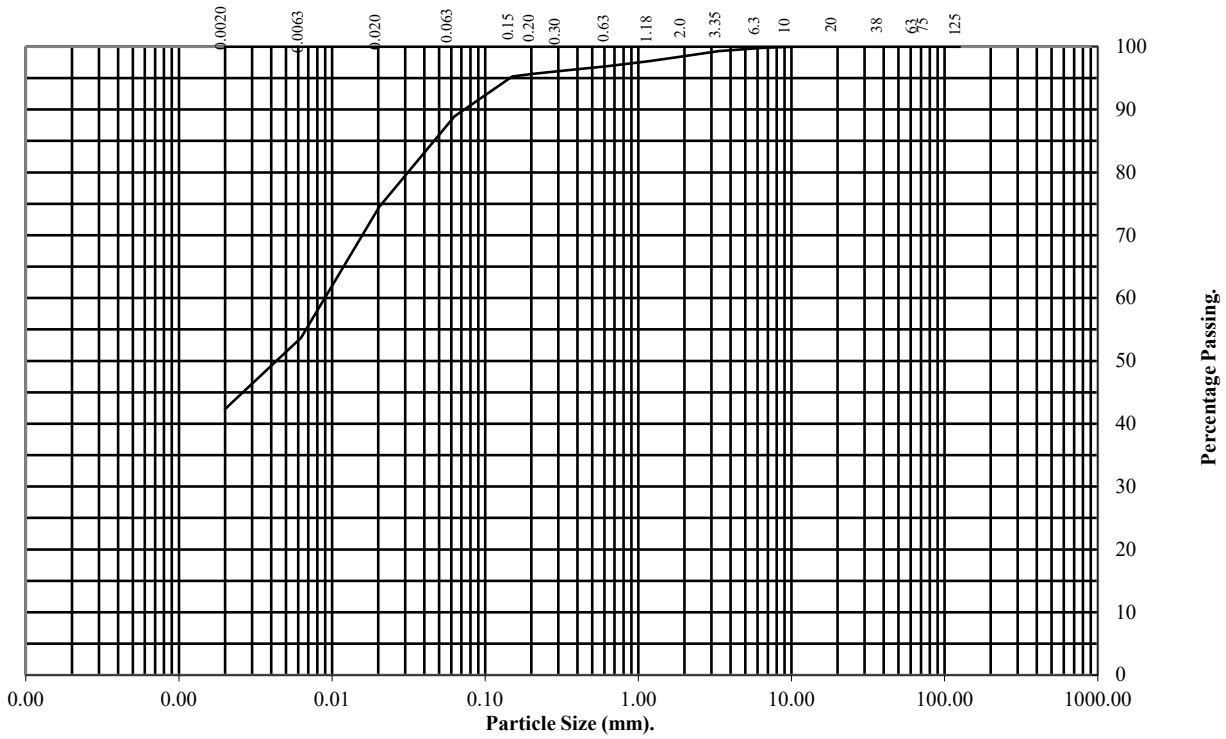
Contract No:
PSL24/7970
Client Ref:
2372986

PARTICLE SIZE DISTRIBUTION TEST

BS 1377 - Part 2 : 2022 : Clause 10 in accordance with BS EN ISO 17892 - 4 : 2016

Sieve Method, Clause 5.2 & Pipette Method, Clause 5.4

Hole Number:	**TP005**	**Top Depth (m):**	**1.50**
Sample Number:	**7**	**Base Depth (m):**	
Sample Type:	**B**		



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
63	100
37.5	100
20	100
10	100
6.3	100
3.35	99
2	99
1.18	98
0.63	97
0.3	96
0.2	96
0.15	95
0.063	89

Particle Diameter	Percentage Passing
0.020	74
0.0063	54
0.0020	42
Particle Density - 2.65 Mg/m3 assumed	

Soil Fraction	Total Percentage
Cobbles	0
Gravel	1
Sand	10
Silt	47
Clay	42

Remarks:

See Summary of Soil Descriptions

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

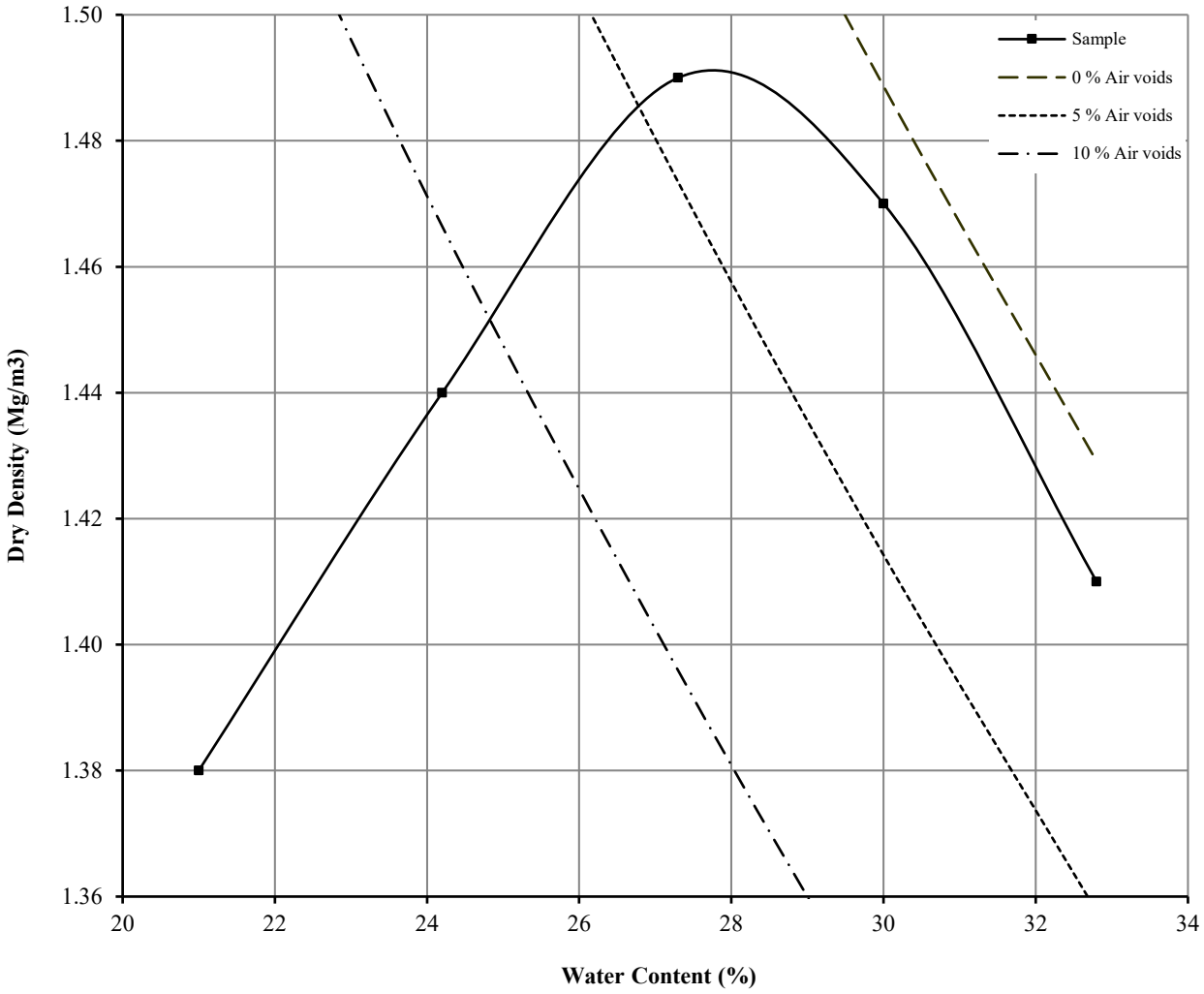
One Earth Solar Farm

Contract No:
PSL24/7970
Client Ref:
2372986

DRY DENSITY/WATER CONTENT RELATIONSHIP

BS 1377 - Part 2 : Clause 11 : 2022

Hole Number:	**TP001**	**Top Depth (m):**	**0.60**
Sample Number:	**4**	**Base Depth (m):**	
Sample Type:	**LB**		



Initial Water Content:		27.3	Method of Compaction:	2.5kg	Separate Samples
Particle Density (Mg/m3):	2.69	Assumed	Material Retained on 37.5 mm Test Sieve (%):		0
Maximum Dry Density (Mg/m3):		1.49	Material Retained on 20.0 mm Test Sieve (%):		0
Optimum Water Content (%):		27	Grading Zone:		1
Remarks See summary of soil descriptions					

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

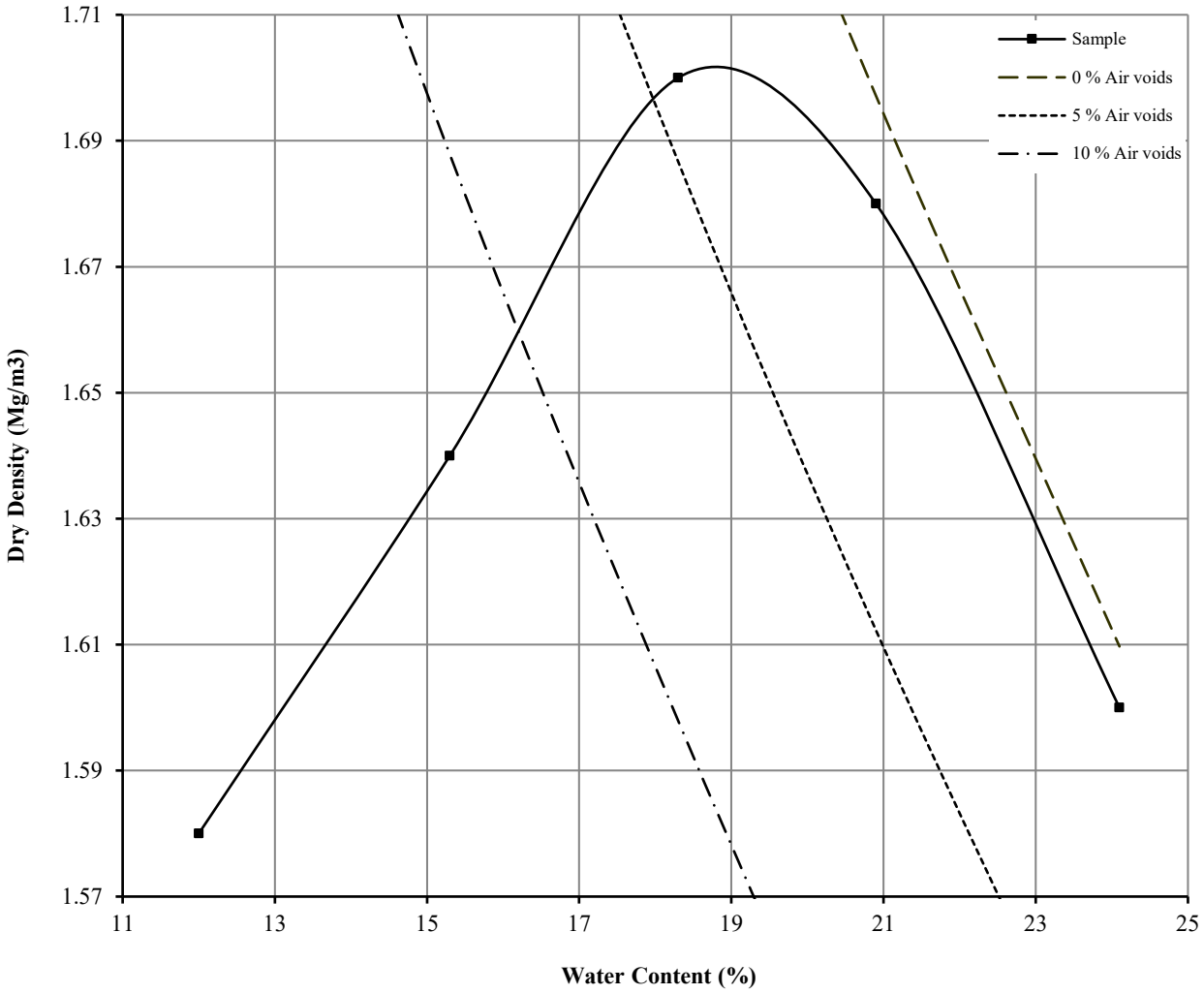
One Earth Solar Farm

Contract No.
PSL24/7970
Client Ref
2372986

DRY DENSITY/WATER CONTENT RELATIONSHIP

BS 1377 - Part 2 : Clause 11 : 2022

Hole Number:	**TP002**	**Top Depth (m):**	**1.50**
Sample Number:	**6**	**Base Depth (m):**	**2.00**
Sample Type:	**LB**		



Initial Water Content:		20.9	Method of Compaction:	2.5kg	Separate Samples
Particle Density (Mg/m3):	2.63	Assumed	Material Retained on 37.5 mm Test Sieve (%):		0
Maximum Dry Density (Mg/m3):		1.70	Material Retained on 20.0 mm Test Sieve (%):		0
Optimum Water Content (%):		18	Grading Zone:		1
Remarks See summary of soil descriptions					

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

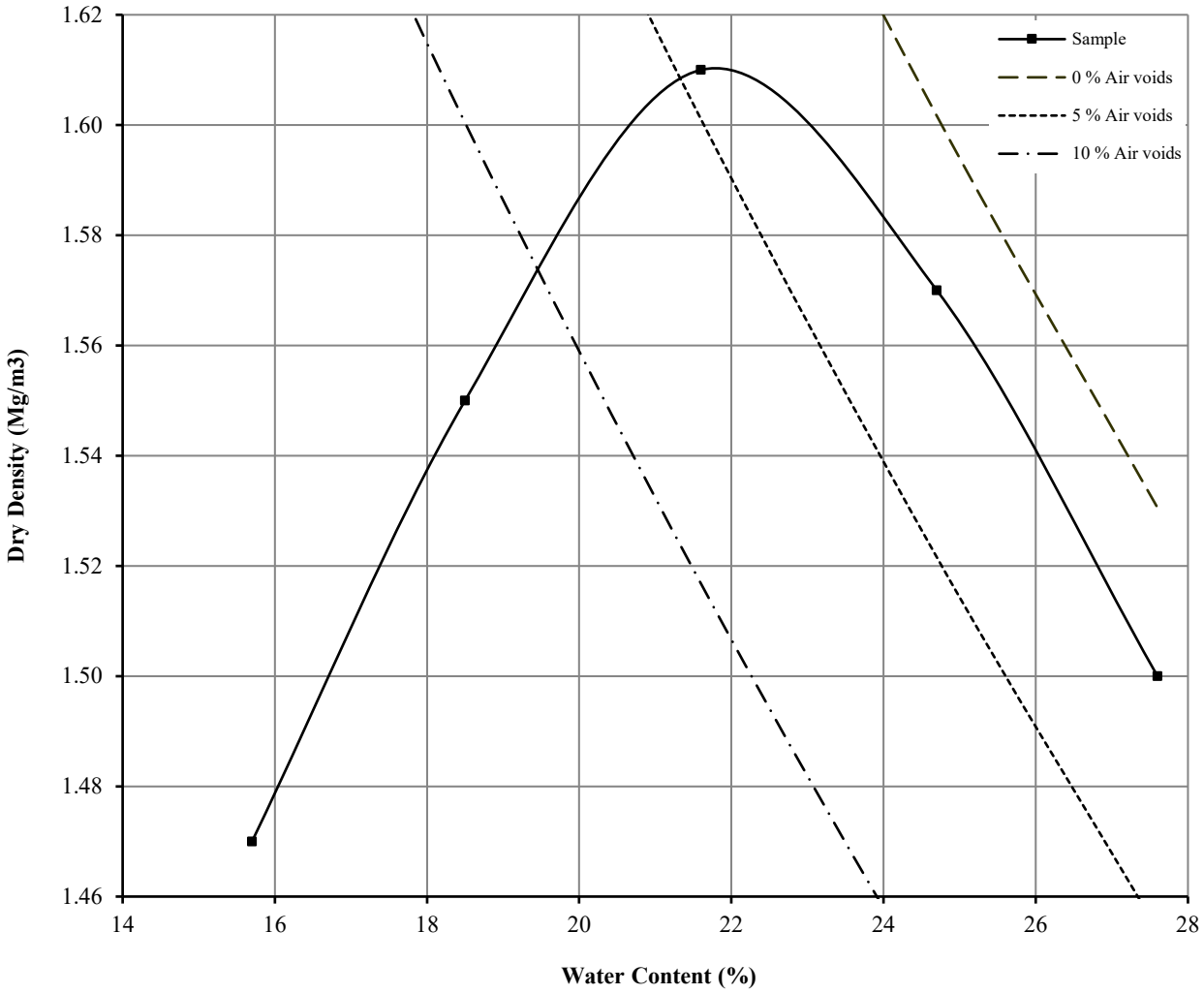
One Earth Solar Farm

Contract No.
PSL24/7970
Client Ref
2372986

DRY DENSITY/WATER CONTENT RELATIONSHIP

BS 1377 - Part 2 : Clause 11 : 2022

Hole Number:	**TP004**	**Top Depth (m):**	**0.50**
Sample Number:	**4**	**Base Depth (m):**	**1.00**
Sample Type:	**LB**		



Initial Water Content:		24.7	Method of Compaction:	2.5kg	Separate Samples
Particle Density (Mg/m3):	2.65	Assumed	Material Retained on 37.5 mm Test Sieve (%):		0
Maximum Dry Density (Mg/m3):		1.61	Material Retained on 20.0 mm Test Sieve (%):		0
Optimum Water Content (%):		22	Grading Zone:		1
Remarks See summary of soil descriptions					

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

One Earth Solar Farm

Contract No.
PSL24/7970
Client Ref
2372986

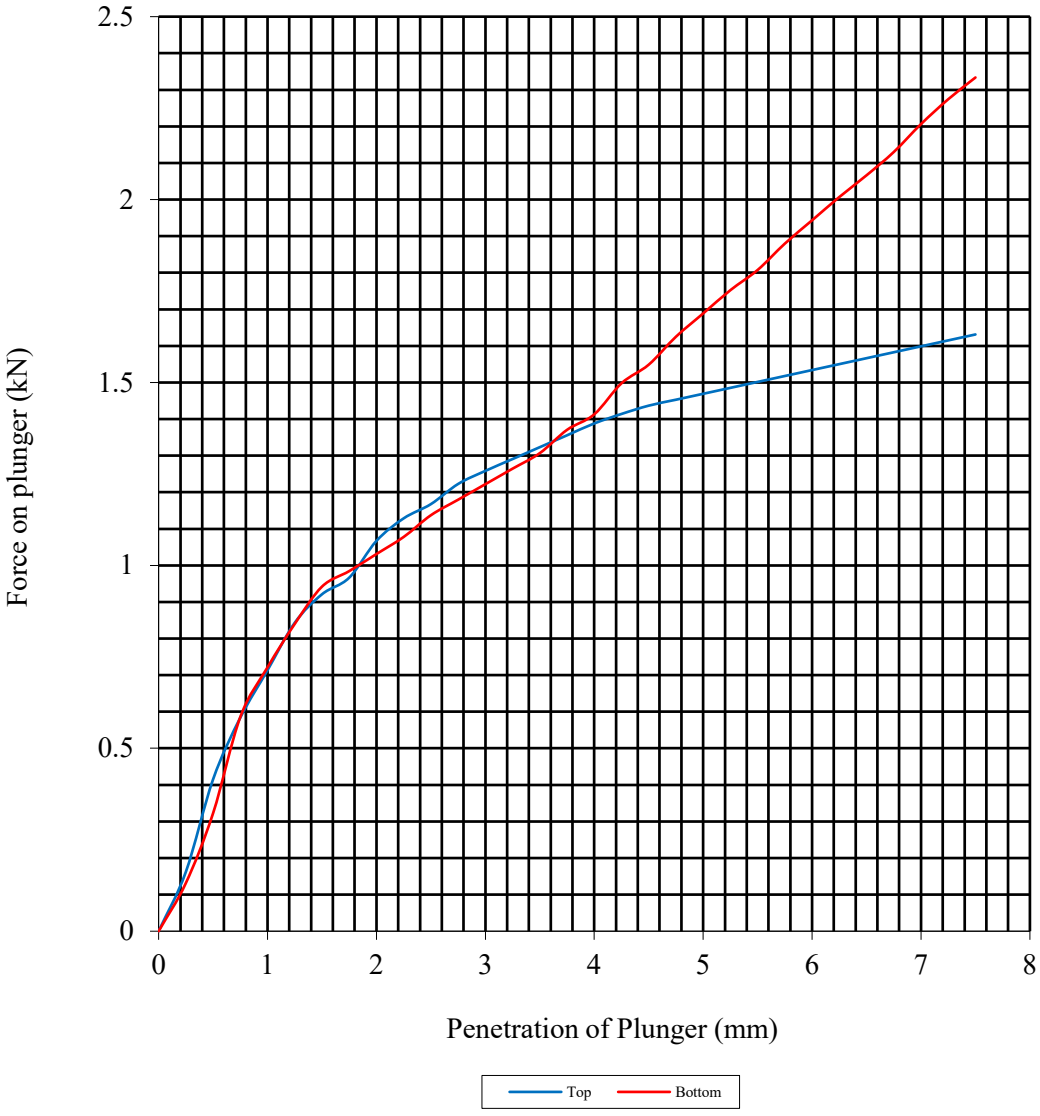
CALIFORNIA BEARING RATIO (CBR)

BS 1377 - Part 2 : Clause 15 : 2022

Hole Number: TP001 **Top Depth (m):** 0.60

Sample Number: 4 **Base Depth (m):**

Sample Type: LB



Initial Sample Conditions		Sample Preparation		Final Water Content %		C.B.R. Value %	
Water Content:	27.3	Surcharge Kg:	4.20	Sample Top	27.2	Sample Top	8.8
Bulk Density Mg/m3:	1.90	Soaking Time hrs	0	Sample Bottom	27.7	Sample Bottom	8.6
Dry Density Mg/m3:	1.49	Swelling mm:	0.00	Remarks : See Summary of Soil Descriptions.			
Percentage retained on 20mm BS test sieve:			0				
Compaction Conditions		2.5kg					

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

One Earth Solar Farm

Contract No: PSL24/7970

Client Ref: 2372986

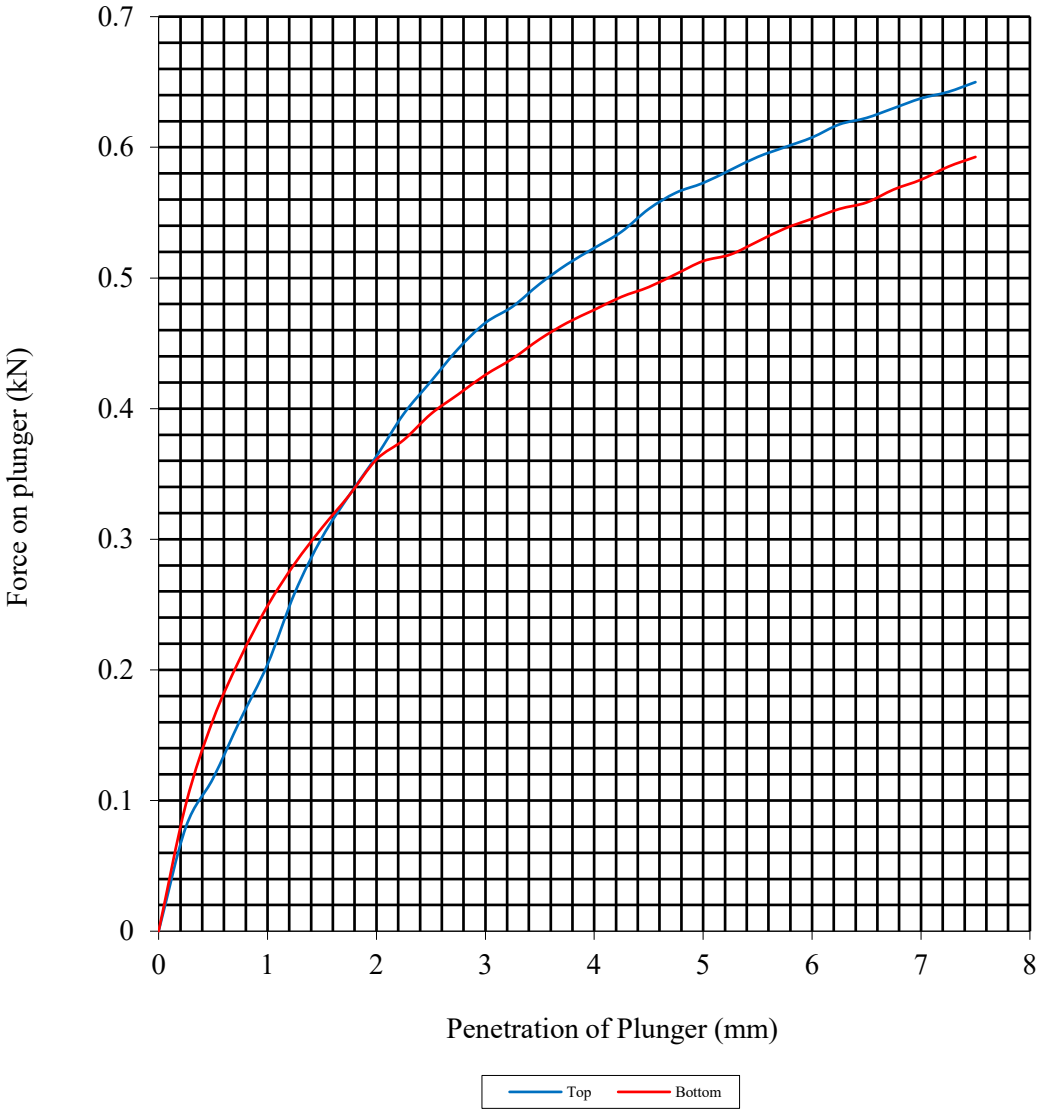
CALIFORNIA BEARING RATIO (CBR)

BS 1377 - Part 2 : Clause 15 : 2022

Hole Number: TP002 **Top Depth (m):** 1.50

Sample Number: 6 **Base Depth (m):**

Sample Type: LB



Initial Sample Conditions		Sample Preparation		Final Water Content %		C.B.R. Value %	
Water Content:	20.9	Surcharge Kg:	4.20	Sample Top	20.8	Sample Top	3.2
Bulk Density Mg/m3:	2.03	Soaking Time hrs	0	Sample Bottom	21.2	Sample Bottom	3.0
Dry Density Mg/m3:	1.68	Swelling mm:	0.00	Remarks : See Summary of Soil Descriptions.			
Percentage retained on 20mm BS test sieve:			0				
Compaction Conditions		2.5kg					

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

One Earth Solar Farm

Contract No: PSL24/7970

Client Ref: 2372986

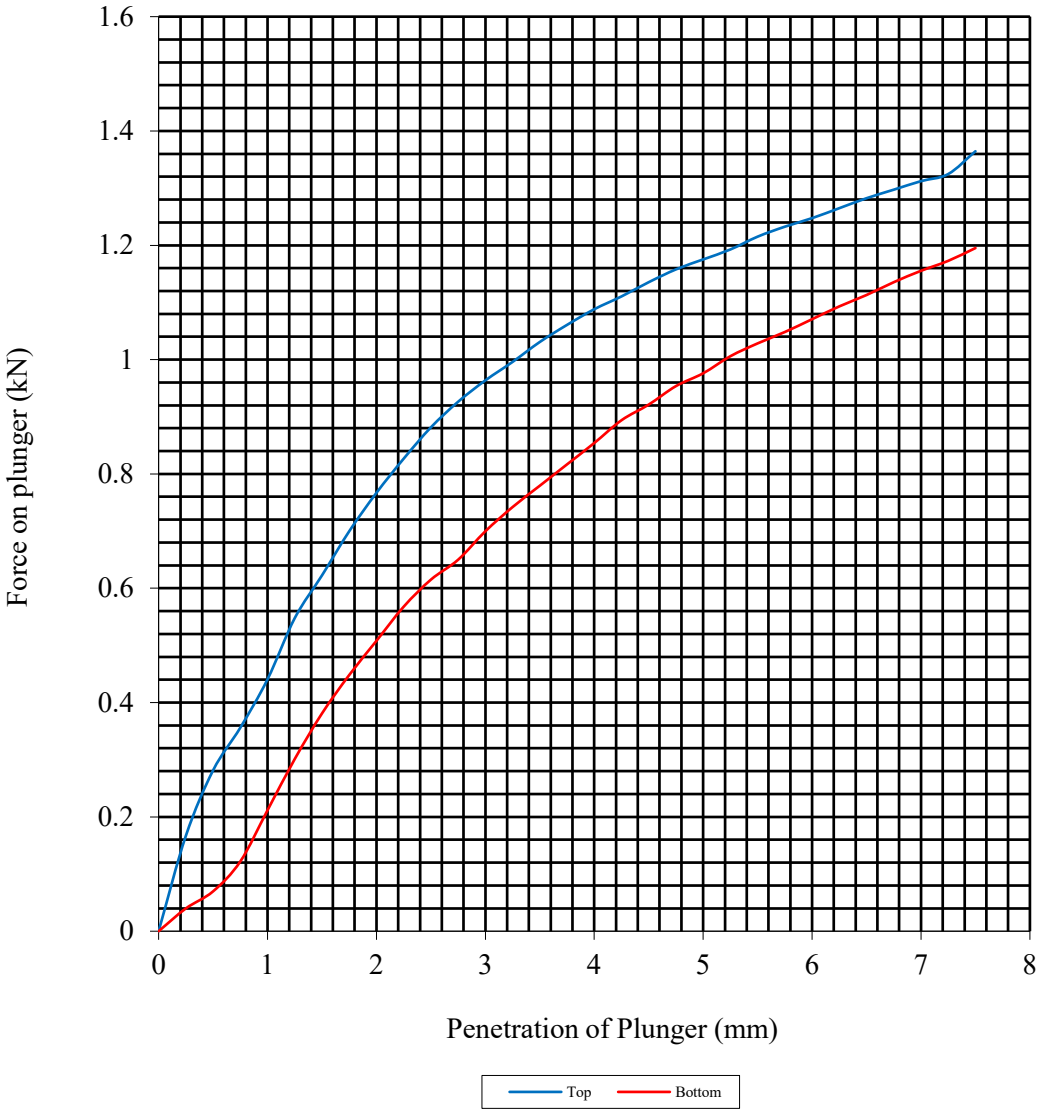
CALIFORNIA BEARING RATIO (CBR)

BS 1377 - Part 2 : Clause 15 : 2022

Hole Number: TP004 **Top Depth (m):** 0.50

Sample Number: 4 **Base Depth (m):**

Sample Type: LB



Initial Sample Conditions		Sample Preparation		Final Water Content %		C.B.R. Value %	
Water Content:	24.7	Surcharge Kg:	4.20	Sample Top	24.7	Sample Top	6.7
Bulk Density Mg/m3:	1.96	Soaking Time hrs	0	Sample Bottom	24.9	Sample Bottom	4.9
Dry Density Mg/m3:	1.57	Swelling mm:	0.00	Remarks : See Summary of Soil Descriptions.			
Percentage retained on 20mm BS test sieve:			0				
Compaction Conditions		2.5kg					

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

One Earth Solar Farm

Contract No: PSL24/7970

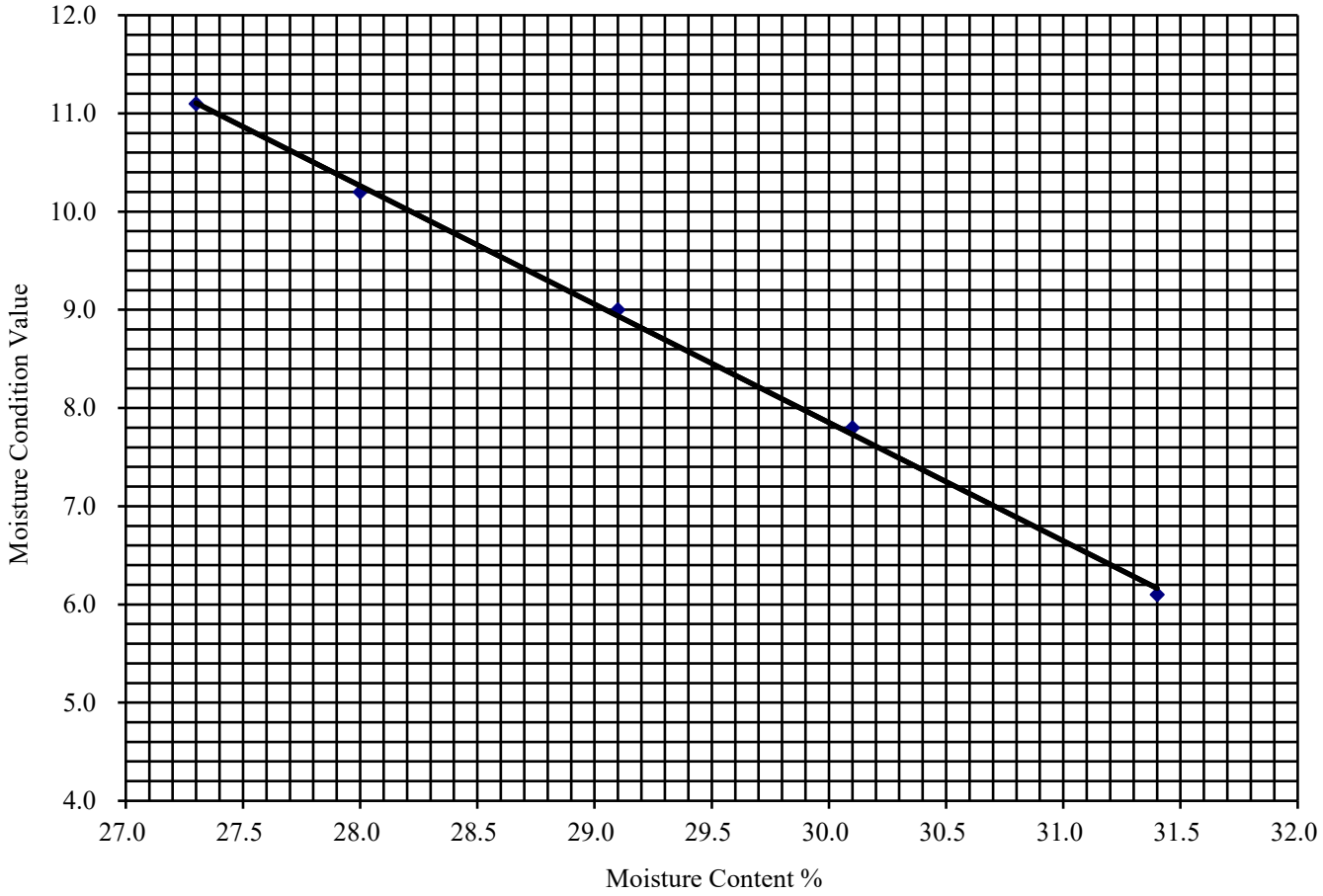
Client Ref: 2372986

MCV/WATER CONTENT RELATION OF SOIL

BS1377 - Part 2 : 2022 Clause 13.5

Hole Number:	**TP001**	**Top Depth (m):**	**0.60**
Sample Number:	**4**	**Base Depth (m):**	
Sample Type:	**LB**		

Initial Water Content (%):	27.3
Single/Separate Samples Tested	Separate
Material Retained on the 20mm BS Test Sieve (%):	0



Test Results.

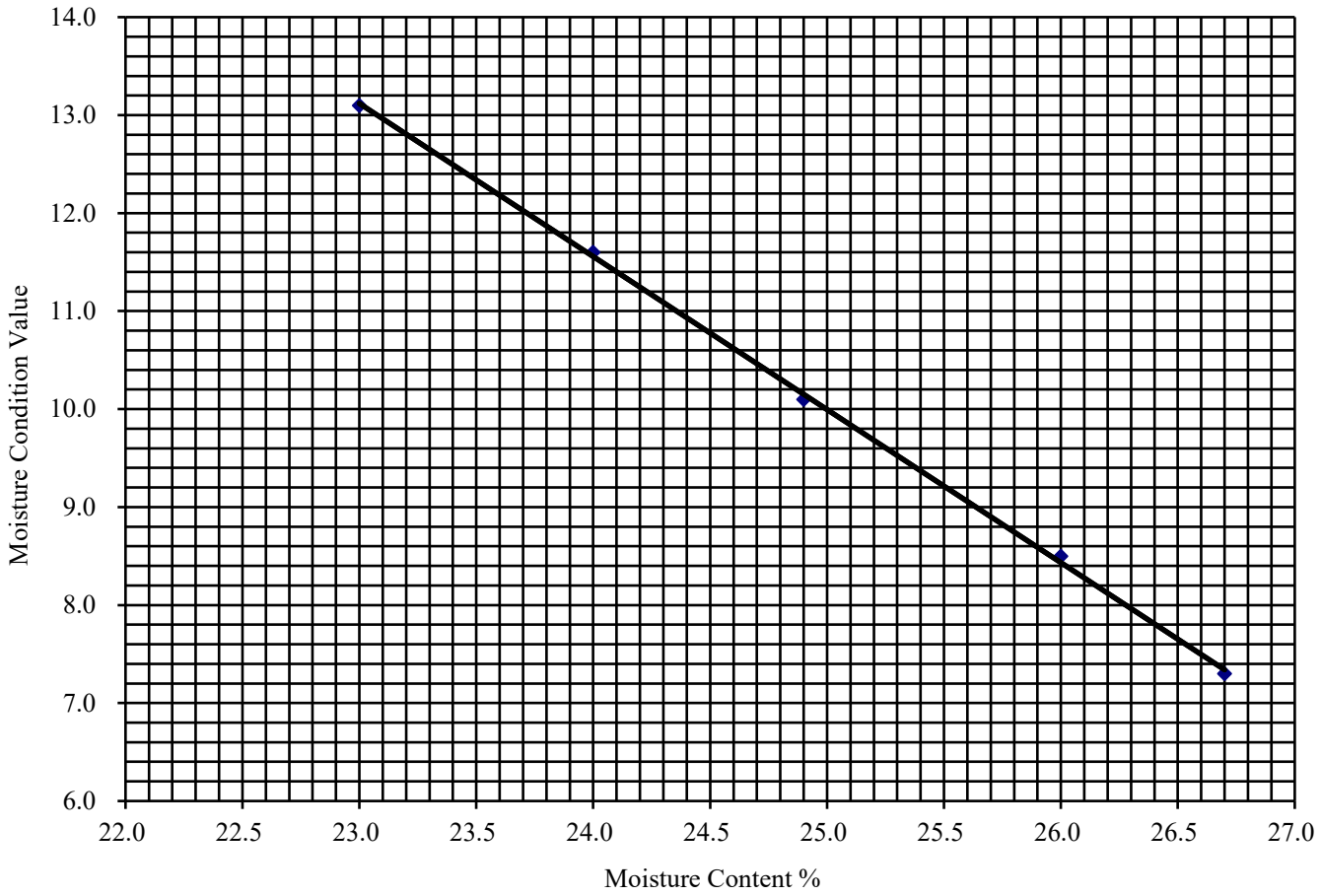
Test Number	1	2	3	4	5
Water Content (%)	27.3	28.0	29.1	30.1	31.4
MCV	11.1	10.2	9.0	7.8	6.1

MCV/WATER CONTENT RELATION OF SOIL

BS1377 - Part 2 : 2022 Clause 13.5

Hole Number:	**TP003**	**Top Depth (m):**	**2.50**
Sample Number:	**9**	**Base Depth (m):**	
Sample Type:	**B**		

Initial Water Content (%):	24.9
Single/Separate Samples Tested	Separate
Material Retained on the 20mm BS Test Sieve (%):	0



Test Results.

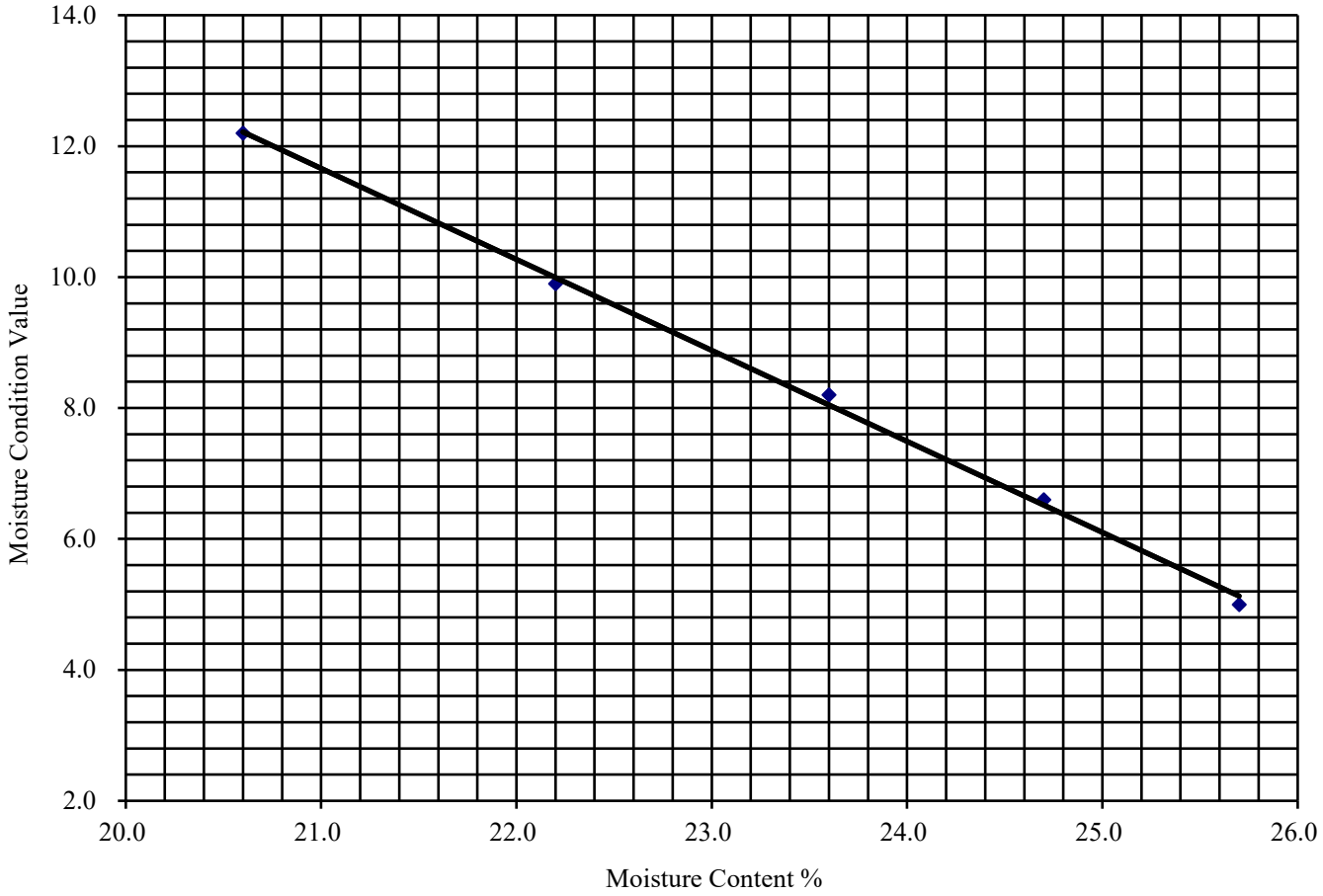
Test Number	1	2	3	4	5
Water Content (%)	23.0	24.0	24.9	26.0	26.7
MCV	13.1	11.6	10.1	8.5	7.3

MCV/WATER CONTENT RELATION OF SOIL

BS1377 - Part 2 : 2022 Clause 13.5

Hole Number:	**TP004**	**Top Depth (m):**	**0.50**
Sample Number:	**4**	**Base Depth (m):**	
Sample Type:	**LB**		

Initial Water Content (%):	24.7
Single/Separate Samples Tested	Separate
Material Retained on the 20mm BS Test Sieve (%):	0



Test Results.

Test Number	1	2	3	4	5
Water Content (%)	20.6	22.2	23.6	24.7	25.7
MCV	12.2	9.9	8.2	6.6	5.0

4161

CONSTRUCTION TESTING SOLUTIONS
A PHENNA GROUP COMPANY

7 - 11 Harding Street
Leicester
LE1 4DH

Professional Soils Laboratory
5/7 Hexthorpe Road
Hexthorpe
Doncaster
DN4 0AR

Analytical Test Report: E24/00782/PSL - 24-52471

Your Project Reference:	**PSL24/7970 One Earth Solar Farm**		
Your Order Number:	PSL24/7970	Samples Received / Instructed:	13/11/2024 / 13/11/2024
Report Issue Number:	1	Sample Tested:	13/11 to 21/11/2024
Samples Analysed:	8 sample(s)	Report issued:	21/11/2024

Sign [redacted]

James Gane
Analytical Services Manager
CTS Group

Notes:

General

Please refer to Methodologies page for details pertaining to the analytical methods undertaken.

Samples will be retained for 14 days after issue of this report unless otherwise requested.

Moisture Content was determined in accordance with CTS method statement MS - CL - Sample Prep, oven dried at <30˚C.

Moisture Content is reported as a percentage of the dry mass of soil, this calculation is in accordance with BS1377, Part 2, 1990, Clause 3.2

Where specification limits are included these are for guidance only. Where a measured value has been highlighted this is not implying acceptance or failure and certainty of measurement values have not been taken into account.

Uncertainty of measurement values are available on request.

Samples were supplied by customer, results apply to the samples as received.

Deviating Samples

On receipt samples are compared against our sample holding and handling protocols, where any deviations have been noted these are reported on our deviating sample page (if present)

Accreditation Key

UKAS = UKAS Accreditation, MCERTS = MCERTS Accreditation, u = Unaccredited, subUKAS - Subcontracted to a laboratory UKAS accredited for this test, subMCERTS - Subcontracted to a laboratory MCERTS accredited for this test

MCERTS Accreditation only covers the SAND, CLAY and LOAM matrices

UKAS accreditation on waters only covers the Ground water and Surface water matrices

Date of Issue: 11.11.2024

Issued by: J. Gane

Issue No: 4

Rev No: 18

7 - 11 Harding Street
Leicester
LE1 4DH

E24/00782/PSL - 24-52471

Project Reference - PSL24/7970 One Earth Solar Farm

Analytical Test Results - Chemical Analysis

Lab Reference			417937	417938	417939	417940	417941	417942	417943
Client Sample ID			-	-	-	-	-	-	-
Client Sample Location			TP001	TP002	TP002	TP003	TP003	TP004	TP005
Client Sample Type			B	D	D	LB	D	D	D
Client Sample Number			7	4	10	4	12	5	10
Depth - Top (m)			1.50	1.00	2.50	0.50	3.90	0.90	2.90
Depth - Bottom (m)			1.50	1.00	2.50	0.50	3.90	0.90	2.90
Date of Sampling			-	-	-	-	-	-	-
Time of Sampling			-	-	-	-	-	-	-
Sample Matrix			Clay	Clay	Clay	Clay	Clay	Clay	Clay
Determinant	**Units**	**Accreditation**							
Water soluble sulphate (as SO_4)	(mg/l)	u	40	50	130	-	24	26	57
Acid Soluble Sulphate	(%)	u	0.05	0.04	0.07	-	0.05	0.03	0.02
Total Sulphur	(%)	UKAS	0.02	0.02	0.02	-	0.02	< 0.01	< 0.01
pH Value	pH Units	MCERTS	8.7	8.4	8.3	-	8.6	8.8	8.6
Organic matter (BS 1377)	(%)	UKAS	0.2	1.3	-	0.3	-	0.2	-
1377 Organic Matter - Sulphides/Chlorides Identified (Yes/No)	-	-	No	No	-	No	-	No	-

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CONSTRUCTION TESTING SOLUTIONS
A PHENNA GROUP COMPANY

7 - 11 Harding Street
Leicester
LE1 4DH

E24/00782/PSL - 24-52471

Project Reference - PSL24/7970 One Earth Solar Farm

Analytical Test Results - Chemical Analysis

Lab Reference	
Client Sample ID	
Client Sample Location	
Client Sample Type	
Client Sample Number	
Depth - Top (m)	
Depth - Bottom (m)	
Date of Sampling	
Time of Sampling	
Sample Matrix	

Determinant	**Units**	**Accreditation**
Water soluble sulphate (as SO_4)	(mg/l)	u
Acid Soluble Sulphate	(%)	u
Total Sulphur	(%)	UKAS
pH Value	pH Units	MCERTS
Organic matter (BS 1377)	(%)	UKAS
1377 Organic Matter - Sulphides/Chlorides Identified (Yes/No)	-	-

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Project Reference - PSL24/7970 One Earth Solar Farm

Soils - No Testing Scheduled

Lab Reference	Client Sample ID	Client Sample Location	Client Sample Type	Client Sample Number	Status
417944	-	TP003	B	9	No Testing Scheduled

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E24/00782/PSL - 24-52471

Project Reference - PSL24/7970 One Earth Solar Farm

Sample Descriptions

Lab Reference	Client Sample ID	Client Sample Location	Client Sample Type	Client Sample Number	Description	Moisture Content (%)	Stone Content (%)	Passing 2mm test sieve (%)
417937	-	TP001	B	7	Reddish brown slightly gravelly slightly sandy silty clay	-	-	100
417938	-	TP002	D	4	Greyish slightly gravelly slightly sandy silty clay with rare rootlets	-	-	100
417939	-	TP002	D	10	Reddish brown slightly gravelly slightly sandy silty clay	-	-	100
417940	-	TP003	LB	4	Greyish slightly gravelly slightly sandy silty clay	-	-	100
417941	-	TP003	D	12	Reddish brown slightly gravelly slightly sandy silty clay	-	-	96
417942	-	TP004	D	5	Reddish brown slightly gravelly slightly sandy silty clay	-	-	100
417943	-	TP005	D	10	Reddish brown slightly gravelly slightly sandy silty clay	-	-	100

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Project Reference - PSL24/7970 One Earth Solar Farm

Sample Comments

Lab Reference	Client Sample ID	Client Sample Location	Client Sample Type	Client Sample Number	Comments
417937	-	TP001	B	7	
417938	-	TP002	D	4	
417939	-	TP002	D	10	
417940	-	TP003	LB	4	
417941	-	TP003	D	12	
417942	-	TP004	D	5	
417943	-	TP005	D	10	

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Project Reference - PSL24/7970 One Earth Solar Farm

Analysis Methodologies

Test Code	Test Name / Reference	Sample condition for analysis	Sample Preperation	Test Details
ANIONSS	MS - CL - Anions by Aquakem (2:1Extract)	Oven dried	Passing 2mm test sieve	Determination of Anions (inc Sulphate, chloride etc.) in soils by Aquakem. Analysis is based on a 2:1 water to soil extraction ratio
PHS	MS - CL - pH in Soils	As received	Passing 10mm test sieve	Determination of pH in soils using a pH probe (using a 1:3 soil to water extraction)
ASSO4S	MS - CL - Acid Soluble Sulphate	Oven Dried	Passing 2mm test sieve	Determination of total sulphate in soils by acid extraction followed by ICP analysis
HOLD	No Testing Scheduled	-	-	No Testing Scheduled
SAMPLEPREP	MS - CL - Sample Preparation	-	-	Preparation of samples (including determination of moisture content) to allow for subsequent analysis
1377ORG	BS1377 Organic Matter	Oven dried	BS1377 : Part 1 : 2016	Testing was in accordance with BS 1377: Part 3: 2018 + A1 : 2021 Clause 4, The reported value is the average OMC present in the soil fraction to the nearest 0.1% of the original oven dry mass of soil. Some information required by BS 1377 has not been
1377TS-ELT	BS1377 Total Sulphur Content by HTC	Oven dried	BS1377 : Part 1 : 2016	Total Sulphur Content testing of Soil in accordance with BS 1377 : Part 3 : 2018 + A1 : 2021 Clause 7.10 (using Eltra CS-800 Analyser)

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E24/00782/PSL - 24-52471

Project Reference - PSL24/7970 One Earth Solar Farm

Sample Deviations

Deviations are listed below against each sample and associated test method, where deviation(s) are noted it means data may not be representative of the sample at the time of sampling and it is possible that results provided may be compromised.

Observations on receipt

A - No date of sampling provided
W - No time of sampling provided for water sample
C - Received in inappropriate container
H - Contains headspace
T - Temperature on receipt exceeds storage temperature
R - Sample(s) received with less than 96 hours for testing to commence/complete, any result formally classed as deviating will be marked with an X against the applicable test (i.e. RX)

Observations whilst in laboratory

X - Exceeds sampling to extraction or analysis timescales

Lab Reference	Client Sample ID	Client Sample Location	Client Sample Type	Client Sample Number	Test	Deviations
417937	-	TP001	B	7		A
417938	-	TP002	D	4		A
417939	-	TP002	D	10		A
417940	-	TP003	LB	4		A
417941	-	TP003	D	12		A
417942	-	TP004	D	5		A
417943	-	TP005	D	10		A

LABORATORY REPORT

Contract Number: PSL24/8176

Report Date: 13 December 2024

Client's Reference: 2372986-012

Client Name: Central Alliance
Alliance House
South Park Way
Wakefield 41 Business Park
Wakefield
WF2 0XJ

For the attention of: John Parkinson

Contract Title: One Earth Solar Farm

Date Received: 6/11/2024
Date Commenced: 6/11/2024
Date Completed: 13/12/2024

Notes: Opinions and Interpretations are outside the UKAS Accreditation

A copy of the Laboratory Schedule of accredited tests as issued by UKAS is attached to this report. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced other than in full, without the prior written approval of the laboratory.

Checked and Approved Signatories:

A Watkins (Managing Director)	R Berriman (Associate Director)	S Royle (Laboratory Manager)
L Knight (Assistant Laboratory Manager)	[redacted] D Nicholson (Senior Technician)	T Watkins (Senior Technician)

5 – 7 Hexthorpe Road,
Hexthorpe,
Doncaster,
DN4 0AR
Tel: [redacted]
Email: [redacted]@prosoils.co.uk
[redacted]@prosoils.co.uk

SUMMARY OF LABORATORY SOIL DESCRIPTIONS

Hole Number	Sample Number	Sample Type	Top Depth m	Base Depth m	Description of Sample
BH004	7	B	0.50		Reddish brown slightly sandy CLAY.
BH004	8	D	0.60		Reddish brown mottled grey slightly sandy slightly gravelly CLAY.
BH004	105	D	2.20		Reddish brown slightly sandy CLAY.
BH004	111	D	4.00		Reddish brown slightly sandy CLAY.
BH005	4	D	1.00		Brown sandy CLAY.
BH005	5	UT	1.20		Very soft brown slightly gravelly CLAY.
BH005	6	D	1.70		Brown slightly sandy slightly gravelly CLAY.
BH005	10	B	2.50		Grey oxidising brown CLAY.
BH005	11	D	3.00		Grey oxidising brown CLAY.
BH005	12	UT	3.00		Dark grey oxidising brown slightly sandy CLAY.
BH005	14	B	3.50		Grey oxidising brown CLAY.
BH005	13	D	3.50		Grey oxidising brown CLAY.
BH005	17	B	4.50		Dark brown slightly sandy gravelly CLAY.
BH005	27	B	8.00		Brown very gravelly SAND.

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

One Earth Solar Farm

Contract No:

PSL24/8176

Client Ref:

2372986

SUMMARY OF SOIL CLASSIFICATION TESTS

BS 1377 - Part 2 : 2022 in accordance with BS EN ISO 17892 (as below)

Hole Number	Sample Number	Sample Type	Top Depth m	Base Depth m	Water Content %	Linear Shrinkage	Particle Density Mg/m^3	Liquid Limit %	Plastic Limit %	Plasticity Index %	Passing 0.425mm %	Remarks
BH004	8	D	0.60		19.9			45	20	25	94	Medium Plasticity CIM
BH004	105	D	2.20		20.4			45	24	21	100	Medium Plasticity CIM
BH004	111	D	4.00		17.8			41	19	22	100	Medium Plasticity CIM
BH005	4	D	1.00		38.3							
BH005	5	UT	1.20		47.2			77	34	43	98	Very High Plasticity CIV
BH005	10	B	2.50		40.3							
BH005	11	D	3.00		42.7							
BH005	12	UT	3.00		41.0			59	25	34	100	High Plasticity CIH
BH005	14	B	3.50		43.3							
BH005	13	D	3.50		46.3							

Water Content - BS 1377 - Part 2 : 2022 : Clause 4 in accordance with BS EN ISO 17892 - 1 : 2014 + A1 : 2022
Linear Shrinkage - BS 1377 - Part 2 : 2022 : Clause 7
Particle Density (Gas Jar method) - BS 1377 - Part 2 : 2022 : Clause 9
Liquid, Plastic Limit & Plasticity Index - BS 1377 - Part 2 : 2022 : Clause 5 & 6 in accordance with BS EN ISO 17892 - 12 : 2018 + A2 : 2022

SYMBOLS : NP = Non Plastic

UKAS TESTING 4043

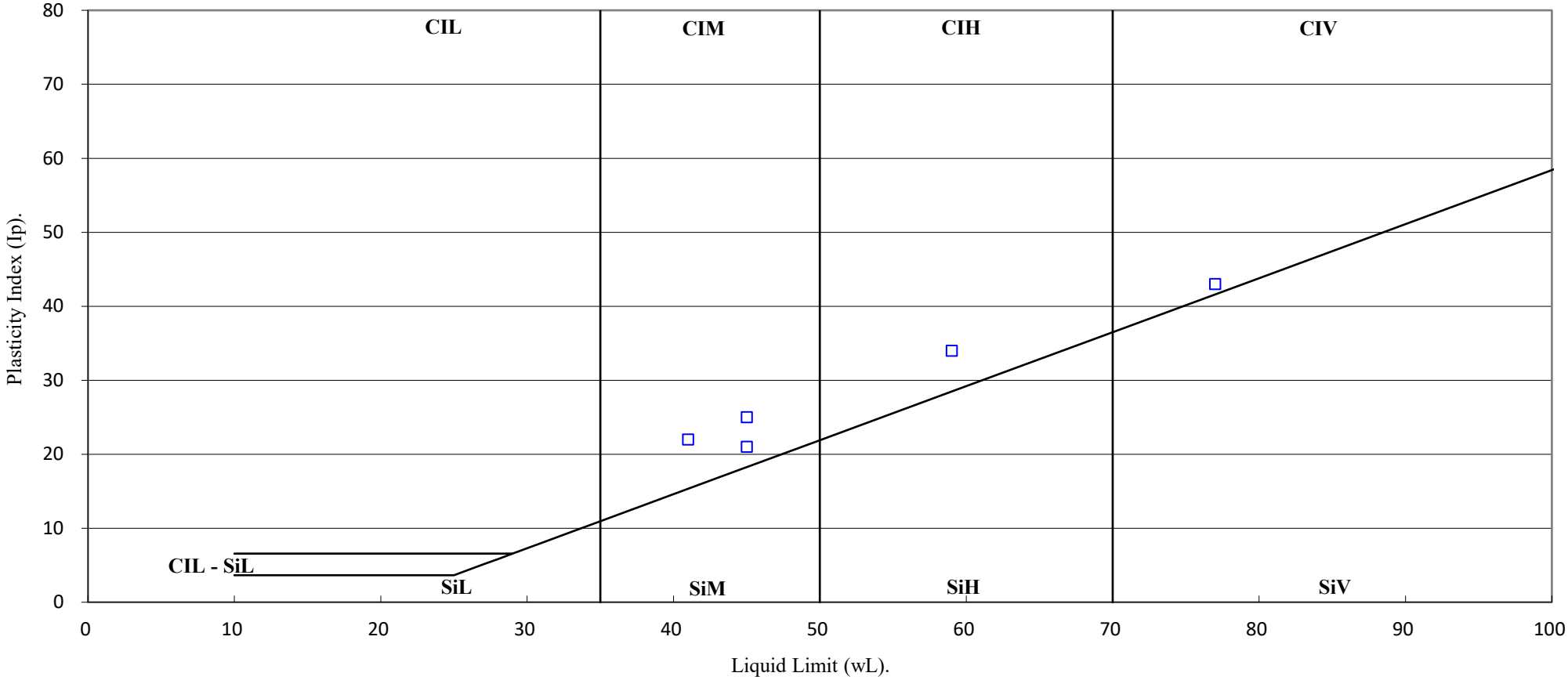
PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

One Earth Solar Farm

Contract No:
PSL24/8176
Client Ref:
2372986

PLASTICITY CHART

BS EN ISO 14688-2:2017 Clause 4.4



UKAS TESTING 4043 / PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY	**One Earth Solar Farm**	**Contract No:** PSL24/8176 **Client Ref:** 2372986

SUMMARY OF DETERMINATION OF BULK DENSITY

BS 1377 - Part 2 : 2022 : Clause 8 in accordance with BS EN ISO 17892 - 2 : 2014

Hole Number	Sample Number	Sample Type	Top Depth m	Base Depth m	Water Content %	Bulk Density Mg/m^3	Dry Density Mg/m^3	Remarks
BH005	12	UT	3.00		46.0	1.72	1.18	

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

One Earth Solar Farm

Contract No:

PSL24/8176

Client Ref:

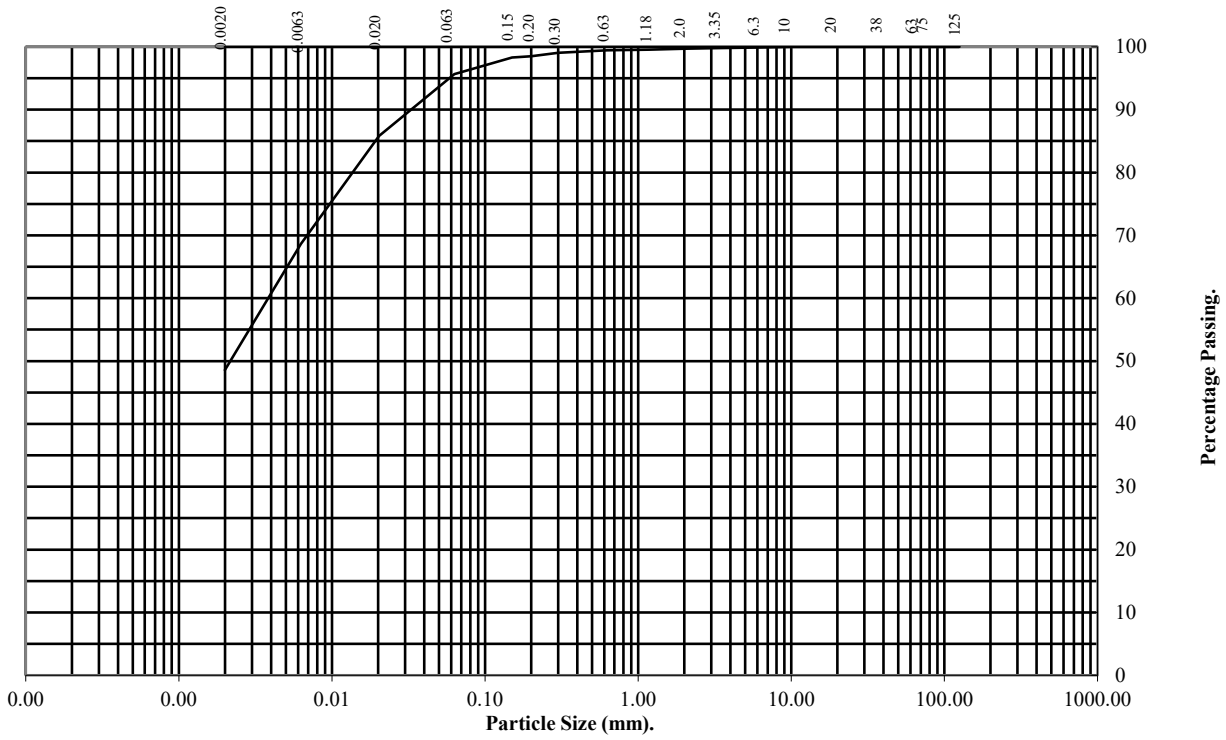
2372986

PARTICLE SIZE DISTRIBUTION TEST

BS 1377 - Part 2 : 2022 : Clause 10 in accordance with BS EN ISO 17892 - 4 : 2016

Sieve Method, Clause 5.2 & Pipette Method, Clause 5.4

Hole Number:	**BH004**	**Top Depth (m):**	**0.50**
Sample Number:	**7**	**Base Depth (m):**	
Sample Type:	**B**		



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
63	100
37.5	100
20	100
10	100
6.3	100
3.35	100
2	100
1.18	100
0.63	99
0.3	99
0.2	99
0.15	98
0.063	96

Particle Diameter	Percentage Passing
0.020	86
0.0063	69
0.0020	49
Particle Density - 2.65 Mg/m3 assumed	

Soil Fraction	Total Percentage
Cobbles	0
Gravel	0
Sand	4
Silt	47
Clay	49

Remarks:

See Summary of Soil Descriptions

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

One Earth Solar Farm

Contract No: PSL24/8176

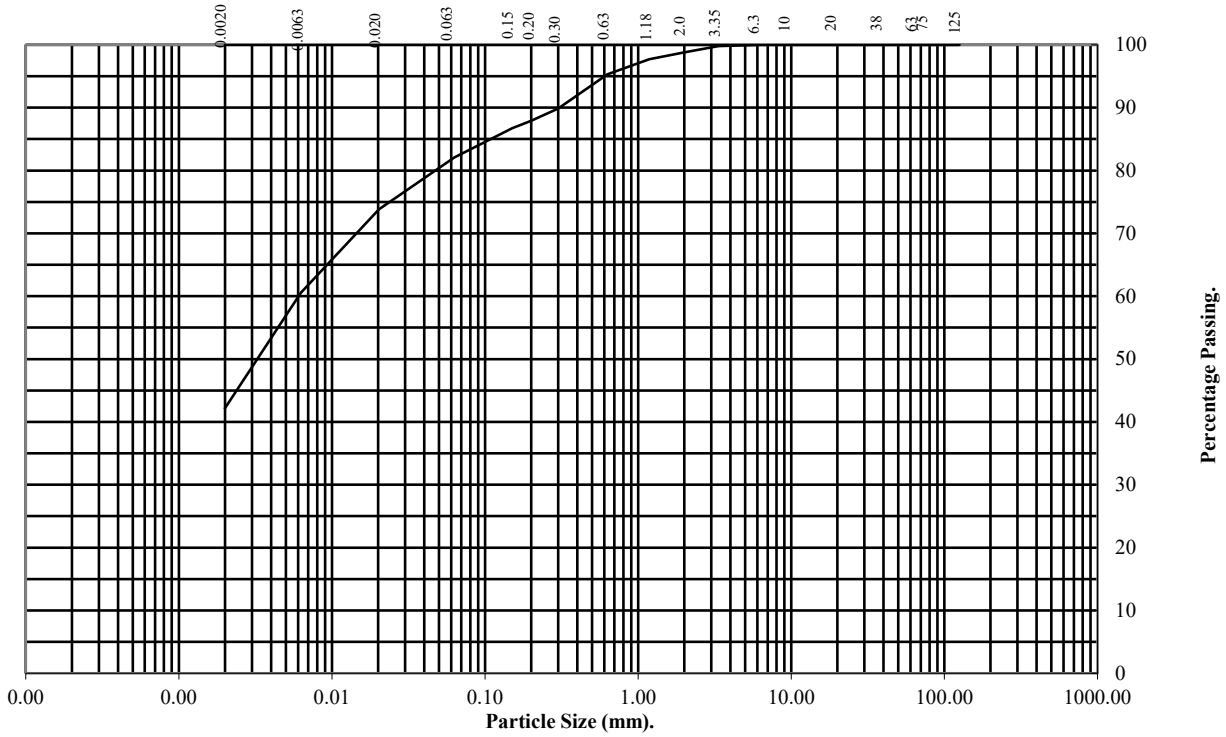
Client Ref: 2372986

PARTICLE SIZE DISTRIBUTION TEST

BS 1377 - Part 2 : 2022 : Clause 10 in accordance with BS EN ISO 17892 - 4 : 2016

Sieve Method, Clause 5.2 & Pipette Method, Clause 5.4

Hole Number:	**BH005**	**Top Depth (m):**	**1.70**
Sample Number:	**6**	**Base Depth (m):**	
Sample Type:	**B**		



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
63	100
37.5	100
20	100
10	100
6.3	100
3.35	100
2	99
1.18	98
0.63	95
0.3	90
0.2	88
0.15	87
0.063	82

Particle Diameter	Percentage Passing
0.020	74
0.0063	61
0.0020	42
Particle Density - 2.65 Mg/m3 assumed	

Soil Fraction	Total Percentage
Cobbles	0
Gravel	1
Sand	17
Silt	40
Clay	42

Remarks:

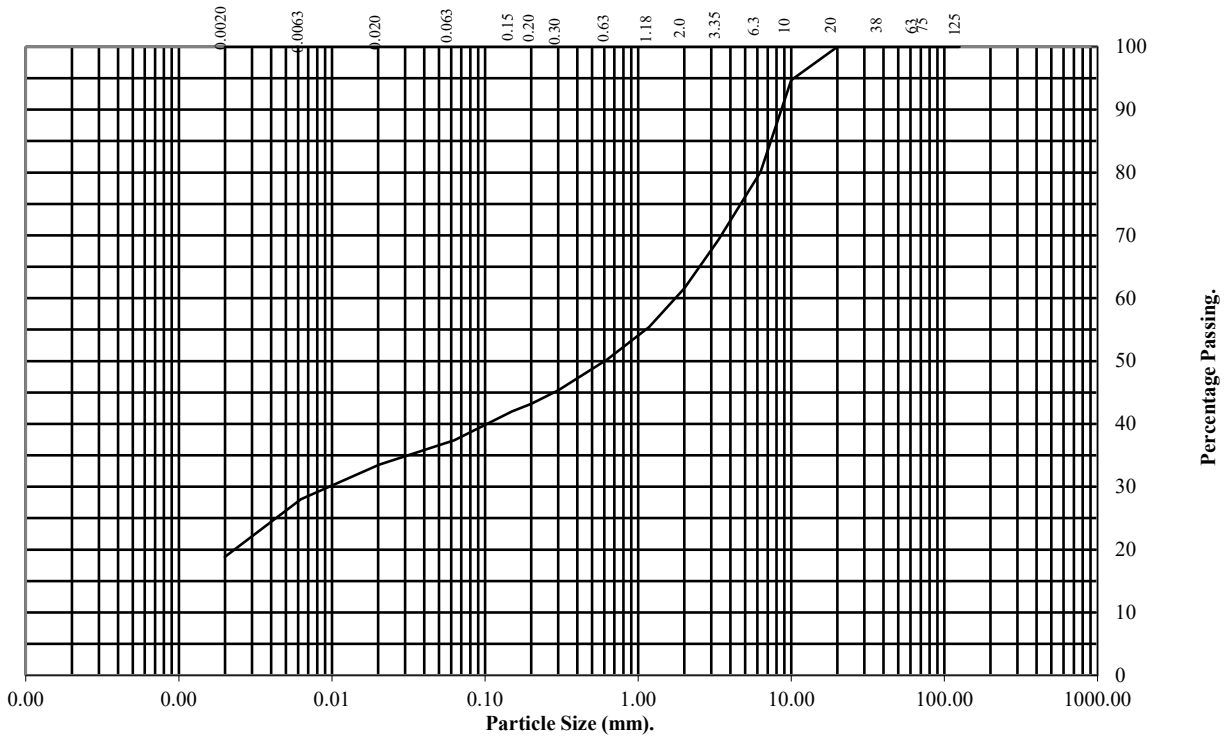
See Summary of Soil Descriptions

PARTICLE SIZE DISTRIBUTION TEST

BS 1377 - Part 2 : 2022 : Clause 10 in accordance with BS EN ISO 17892 - 4 : 2016

Sieve Method, Clause 5.2 & Pipette Method, Clause 5.4

Hole Number:	**BH005**	**Top Depth (m):**	**4.50**
Sample Number:	**17**	**Base Depth (m):**	
Sample Type:	**B**		



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
63	100
37.5	100
20	100
10	95
6.3	80
3.35	69
2	62
1.18	55
0.63	50
0.3	45
0.2	43
0.15	42
0.063	37

Particle Diameter	Percentage Passing
0.020	33
0.0063	28
0.0020	19
Particle Density - 2.65 Mg/m3 assumed	

Soil Fraction	Total Percentage
Cobbles	0
Gravel	38
Sand	25
Silt	18
Clay	19

Remarks:

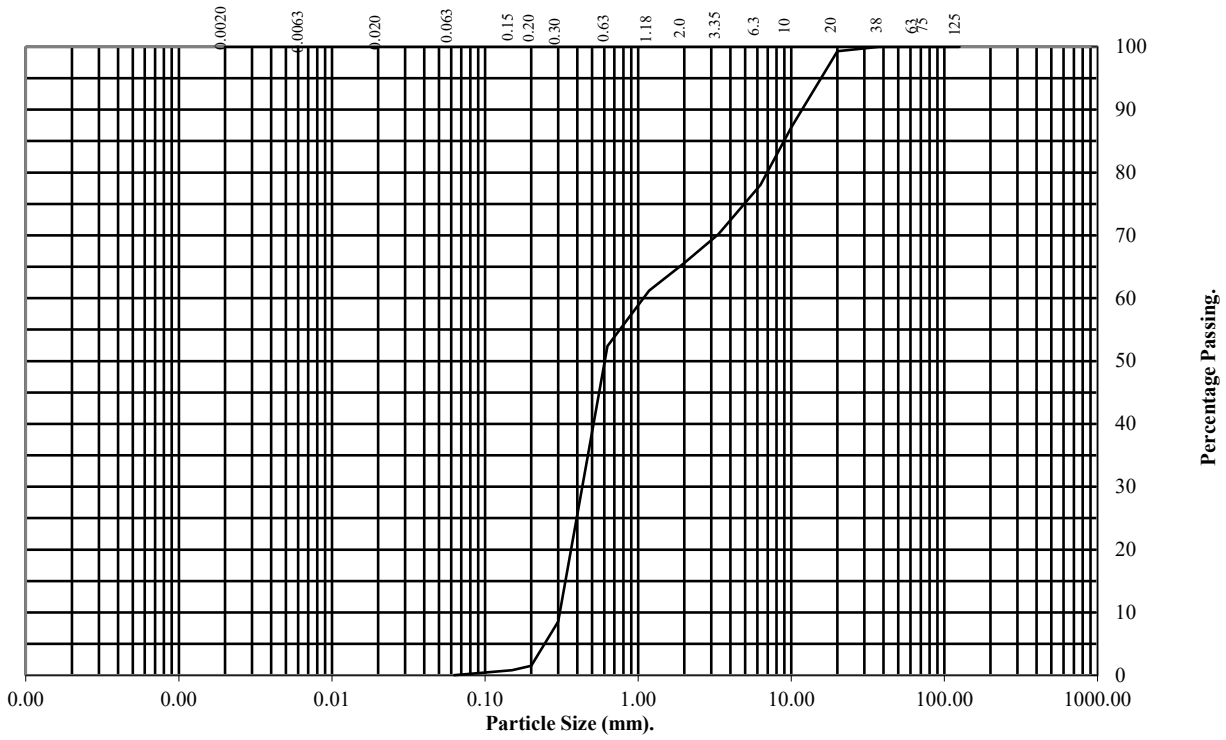
See Summary of Soil Descriptions

PARTICLE SIZE DISTRIBUTION TEST

BS 1377 - Part 2 : 2022 : Clause 10 in accordance with BS EN ISO 17892 - 4 : 2016

Sieve Method, Clause 5.2

Hole Number:	**BH005**	**Top Depth (m):**	**8.00**
Sample Number:	**27**	**Base Depth (m):**	
Sample Type:	**B**		



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
63	100
37.5	100
20	99
10	87
6.3	78
3.35	70
2	66
1.18	61
0.63	52
0.3	9
0.2	2
0.15	1
0.063	0

Soil Fraction	Total Percentage
Cobbles	0
Gravel	34
Sand	66
Silt/Clay	0

Remarks:

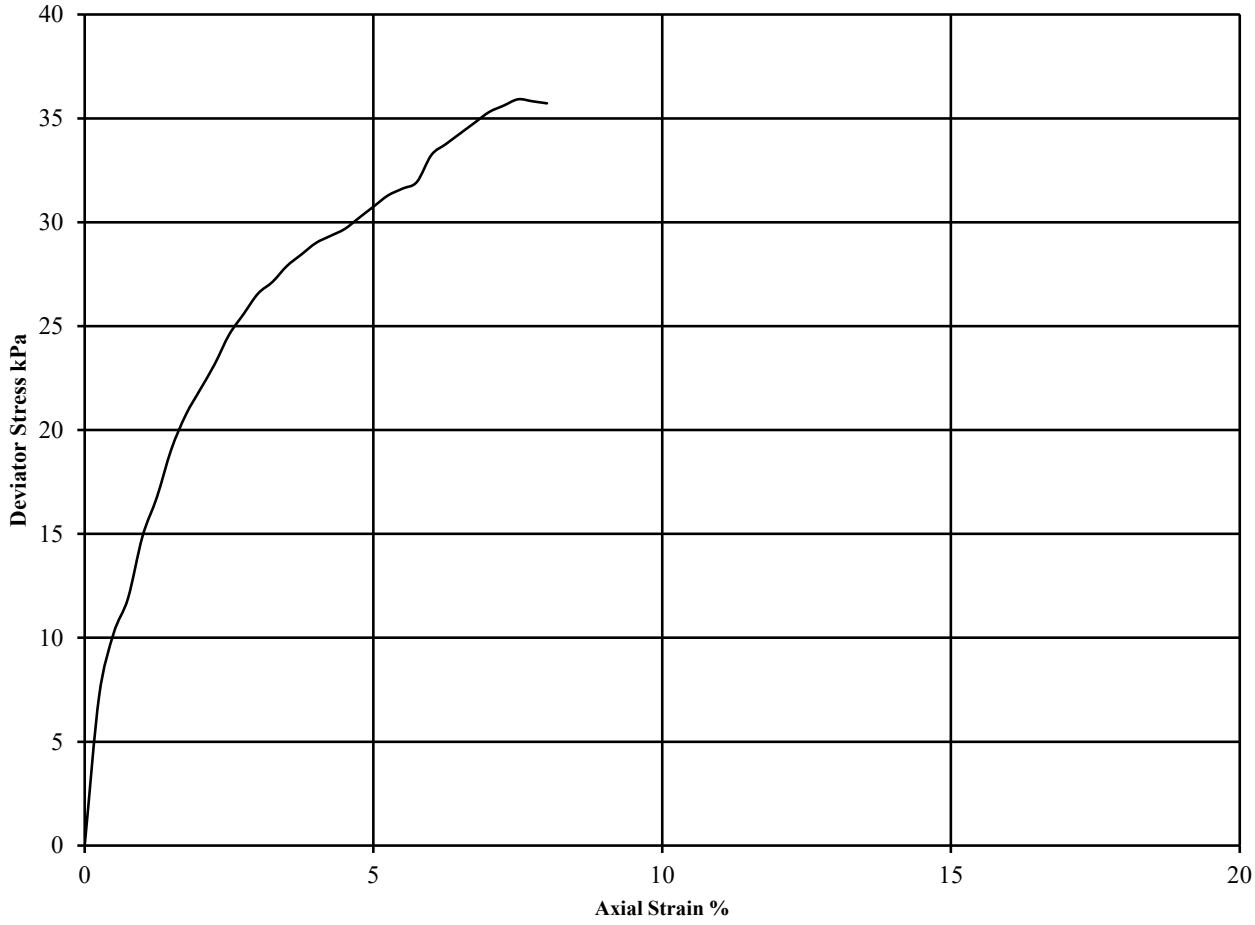
See Summary of Soil Descriptions

UNDRAINED SHEAR STRENGTH IN TRIAXIAL COMPRESSION

WITHOUT MEASUREMENT OF PORE PRESSURE

BS1377 : Part7 : 1990: Clause 9

Hole Number:	**BH005**	**Top Depth (m):**	**1.20**
Sample Number:	**5**	**Base Depth (m):**	
Sample Type	**UT**		



Diameter (mm):		102.1525	Height (mm):		204.195	Test:	UU Multistage		Remarks
Specimen	Moisture Content (%)	Bulk Density (Mg/m3)	Dry Density (Mg/m3)	Cell Pressure (kPa) θ_3	Corr. Max. Deviator Stress (kPa) $(\theta_1-\theta_3)_f$	Shear Strength Cu (kPa) $^1/_2(\theta_1-\theta_3)_f$	Failure Strain (%)	Mode of Failure	Undisturbed Sample Sample taken from top of tube Rate of strain = 2 %/min Latex Membrane used 0.2 mm thick Membrane Correction applied (kPa)
1	46	1.85	1.27	12	30	15	4.5		0.36 0.36 0.36
				25	32	16	5.8		See summary of soil descriptions
				50	36	18	7.5	Plastic	

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

One Earth Solar Farm

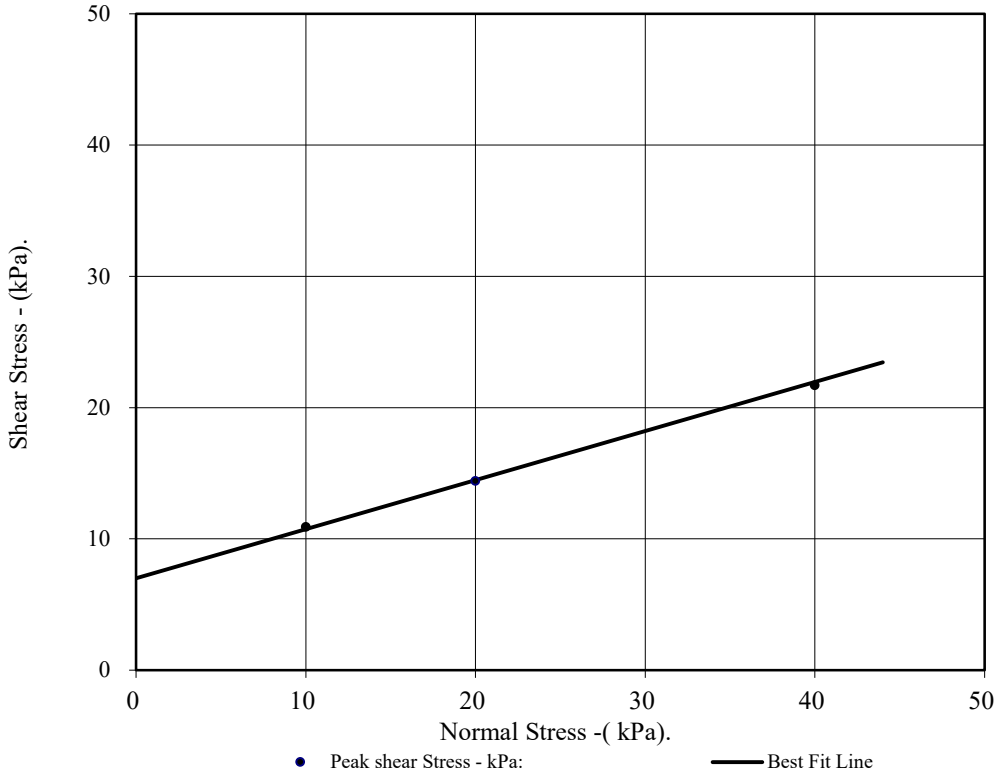
Contract No:
PSL24/8176
Client Ref:
2372986

Determination of shear strength by direct shear (shearbox methods)

BS 1377 - Part 2 : 2022 : Clause 25.2 in accordance with BS EN ISO 17892 - 10 : 2018

Hole Number:	**BH005**		Top Depth:	**2.50**
Sample Number:	**10**		Base Depth:	
Sample Conditions:	Submerged		Sample Type	**B**
Particle Density - Mg/m3:	2.65	Assumed	**Remarks:**	
Sample Preparation:	Material tested passing 2mm sieve Remoulded using 2.5kg effort @ NMC			
Sample Description:	**See summary of soil descriptions.**			

STAGE	**1**	**2**	**3**
Initial Conditions			
Height - mm:	25.00	25.00	25.00
Length - mm:	60.05	60.05	60.05
Water Content - %:	46.0	46.0	46.0
Bulk Density - Mg/m3:	1.72	1.72	1.72
Dry Density - Mg/m3:	1.18	1.18	1.18
Voids Ratio:	1.248	1.248	1.248
Degree of saturation:	97.6	97.6	97.6
Normal Pressure- kPa	10	20	40
Consolidation Stage			
Consolidated Height - mm:	24.54	24.37	23.84
Shearing Stage			
Rate of Strain - mm/min	0.025	0.025	0.025
Displacement at peak shear stress - mm	6.0	7.2	8.7
Peak shear Stress - kPa:	11	14	22
Final Consolidated Conditions			
Water Content - %:	44.7	44.4	43.3
Bulk Density - Mg/m3:	1.75	1.76	1.80
Dry Density - Mg/m3:	1.21	1.22	1.26
Peak			
Angle of Shearing Resistance:(~~θ~~)	**20.5**		
Effective Cohesion - kPa:	**7**		

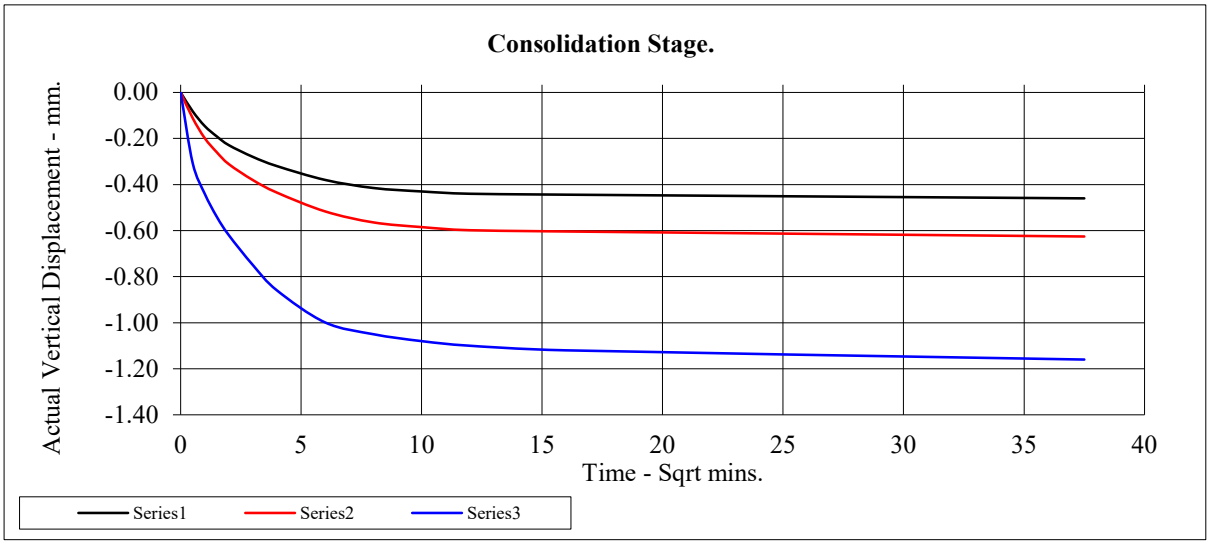


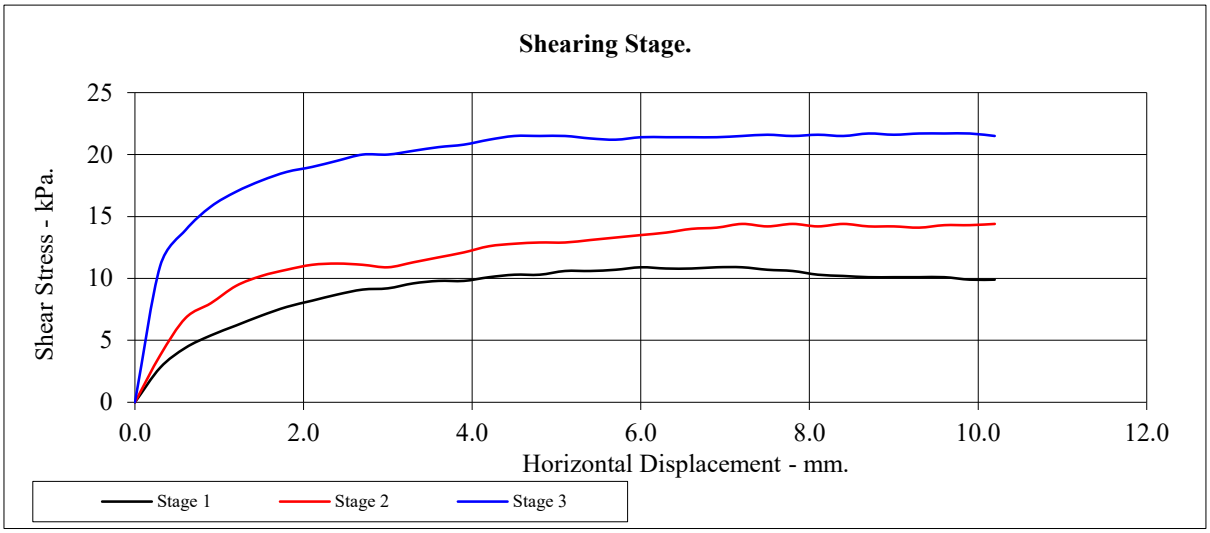
UKAS TESTING 4043 / PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY	**One Earth Solar Farm**	**Contract No:** PSL24/8176 **Client Ref:** 2372986

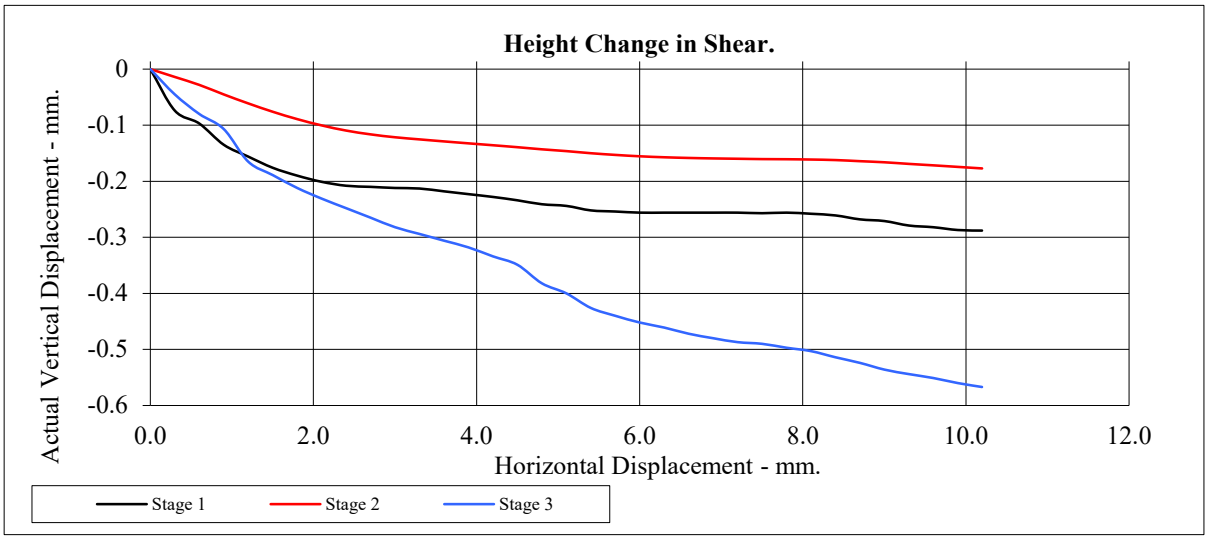
Determination of shear strength by direct shear (shearbox methods)

BS 1377 - Part 2 : 2022 : Clause 25.2 in accordance with BS EN ISO 17892 - 10 : 2018

Hole Number:	**BH005**	Top Depth:	**2.50**
Sample Number:	**10**	Base Depth:	







UKAS TESTING 4043 / PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY	**One Earth Solar Farm**	**Contract No:** **PSL24/8176** **Client Ref:** **2372986**

4161

CONSTRUCTION TESTING SOLUTIONS
A PHENNA GROUP COMPANY

7 - 11 Harding Street
Leicester
LE1 4DH

Professional Soils Laboratory
5/7 Hexthorpe Road
Hexthorpe
Doncaster
DN4 0AR

Analytical Test Report: E24/01535/PSL - 24-53418

Your Project Reference:	**PSL24/8176 One Earth Solar Farm**		
Your Order Number:	PSL24/8176	Samples Received / Instructed:	03/12/2024 / 03/12/2024
Report Issue Number:	1	Sample Tested:	03/12 to 09/12/2024
Samples Analysed:	5 sample(s)	Report issued:	09/12/2024

Signed [redacted]

James Gane
Analytical Services Manager
CTS Group

Notes:

General

This report shall not be reproduce except in full

Please refer to Methodologies page for details pertaining to the analytical methods undertaken.

Samples will be retained for 14 days after issue of this report with the exception of the asbestos test portion which is held for 6 months unless otherwise requested.

Moisture Content was determined in accordance with CTS method statement MS - CL - Sample Prep, oven dried at <30˚C.

Moisture Content is reported as a percentage of the dry mass of soil, this calculation is in accordance with BS1377, Part 2, 1990, Clause 3.2

Where specification limits are included these are for guidance only. Where a measured value has been highlighted this is not implying acceptance or failure and certainty of measurement values have not been taken into account.

Uncertainty of measurement values are available on request.

Samples were supplied by customer, results apply to the samples as received.

Deviating Samples

On receipt samples are compared against our sample holding and handling protocols, where any deviations have been noted these are reported on our deviating sample page (if present)

Accreditation Key

UKAS = UKAS Accreditation, MCERTS = MCERTS Accreditation, u = Unaccredited, subUKAS - Subcontracted to a laboratory UKAS accredited for this test, subMCERTS - Subcontracted to a laboratory MCERTS accredited for this test

MCERTS Accreditation only covers the SAND, CLAY and LOAM matrices

UKAS accreditation on waters only covers the Ground water and Surface water matrices

Date of Issue: 05.12.2024

Issued by: J. Gane

Issue No: 4

Rev No: 20

4161

CONSTRUCTION TESTING SOLUTIONS
A PHENNA GROUP COMPANY

7 - 11 Harding Street
Leicester
LE1 4DH

E24/01535/PSL - 24-53418

Project Reference - PSL24/8176 One Earth Solar Farm

Analytical Test Results - Chemical Analysis

Lab Reference			424163	424164	424165	424166	424167
Client Sample ID			-	-	-	-	-
Client Sample Location			BH04	BH04	BH04	BH05	BH05
Client Sample Type			D	D	D	D	D
Client Sample Number			8	9	113	4	11
Depth - Top (m)			0.60	1.00	4.20	1.00	3.00
Depth - Bottom (m)			0.60	1.00	4.20	1.00	3.00
Date of Sampling			-	-	-	-	-
Time of Sampling			-	-	-	-	-
Sample Matrix			Clay	Clay	Clay	Clay	Clay
Determinant	**Units**	**Accreditation**					
Water soluble sulphate (as SO_4)	(mg/l)	u	-	53	18	-	320
Acid Soluble Sulphate	(%)	u	-	0.05	0.03	-	0.12
Total Sulphur	(%)	UKAS	-	0.03	0.01	-	0.15
pH Value	pH Units	MCERTS	-	8.3	8.1	-	7.3
Organic matter (BS 1377)	(%)	UKAS	0.6	-	-	0.3	-
1377 Organic Matter - Sulphides/Chlorides Identified (Yes/No)	-	-	No	-	-	No	-
Loss on Ignition (BS 1377)	(%)	UKAS	-	-	-	-	7.2

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CONSTRUCTION TESTING SOLUTIONS
A PHENNA GROUP COMPANY

7 - 11 Harding Street
Leicester
LE1 4DH

E24/01535/PSL - 24-53418

Project Reference - PSL24/8176 One Earth Solar Farm

Sample Descriptions

Lab Reference	Client Sample ID	Client Sample Location	Client Sample Type	Client Sample Number	Description	Moisture Content (%)	Stone Content (%)	Passing 2mm test sieve (%)
424163	-	BH04	D	8	Brown slightly gravelly silty clay	-	-	100
424164	-	BH04	D	9	Brown slightly gravelly silty clay	-	-	100
424165	-	BH04	D	113	Brown silty clay	-	-	100
424166	-	BH05	D	4	Brown slightly gravelly slightly sandy silty clay	-	-	100
424167	-	BH05	D	11	Brown slightly gravelly silty clay	-	-	100

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Leicester
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E24/01535/PSL - 24-53418

Project Reference - PSL24/8176 One Earth Solar Farm

Sample Comments

Lab Reference	Client Sample ID	Client Sample Location	Client Sample Type	Client Sample Number	Comments
424163	-	BH04	D	8	
424164	-	BH04	D	9	
424165	-	BH04	D	113	
424166	-	BH05	D	4	
424167	-	BH05	D	11	

7 - 11 Harding Street
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LE1 4DH

E24/01535/PSL - 24-53418

Project Reference - PSL24/8176 One Earth Solar Farm

Analysis Methodologies

Test Code	Test Name / Reference	Sample condition for analysis	Sample Preperation	Test Details
ANIONSS	MS - CL - Anions by Aquakem (2:1Extract)	Oven dried	Passing 2mm test sieve	Determination of Anions (inc Sulphate, chloride etc.) in soils by Aquakem. Analysis is based on a 2:1 water to soil extraction ratio
PHS	MS - CL - pH in Soils	As received	Passing 10mm test sieve	Determination of pH in soils using a pH probe (using a 1:3 soil to water extraction)
ASSO4S	MS - CL - Acid Soluble Sulphate	Oven Dried	Passing 2mm test sieve	Determination of total sulphate in soils by acid extraction followed by ICP analysis
SAMPLEPREP	MS - CL - Sample Preparation	-	-	Preparation of samples (including determination of moisture content) to allow for subsequent analysis
1377ORG	BS1377 Organic Matter	Oven dried	BS1377 : Part 1 : 2016	Testing was in accordance with BS 1377: Part 3: 2018 + A1 : 2021 Clause 4, The reported value is the average OMC present in the soil fraction to the nearest 0.1% of the original oven dry mass of soil. Some information required by BS 1377 has not been
1377LOI	BS1377 LoI	Oven dried	Passing 2mm test sieve	Testing was in accordance with BS 1377: Part 3: 2018 + A1 :2021 Clause 6. Determination of the mass loss on ignition. Some information required by BS1377: 2016: Part 1 has not been reported. This information is available on request.
1377TS-ELT	BS1377 Total Sulphur Content by HTC	Oven dried	BS1377 : Part 1 : 2016	Total Sulphur Content testing of Soil in accordance with BS 1377 : Part 3 : 2018 + A1 : 2021 Clause 7.10 (using Eltra CS-800 Analyser)

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Project Reference - PSL24/8176 One Earth Solar Farm

Sample Deviations

Deviations are listed below against each sample and associated test method, where deviation(s) are noted it means data may not be representative of the sample at the time of sampling and it is possible that results provided may be compromised.

Observations on receipt

A - No date of sampling provided
W - No time of sampling provided for water sample
C - Received in inappropriate container
H - Contains headspace
T - Temperature on receipt exceeds storage temperature
R - Sample(s) received with less than 96 hours for testing to commence/complete, any result formally classed as deviating will be marked with an X against the applicable test (i.e. RX)

Observations whilst in laboratory

X - Exceeds sampling to extraction or analysis timescales

Lab Reference	Client Sample ID	Client Sample Location	Client Sample Type	Client Sample Number	Test	Deviations
424163	-	BH04	D	8		A
424164	-	BH04	D	9		A
424165	-	BH04	D	113		A
424166	-	BH05	D	4		A
424167	-	BH05	D	11		A

LABORATORY REPORT

Contract Number: PSL24/8929

Report Date: 06 January 2025

Client's Reference: 2372986

Client Name: Central Alliance
Alliance House
South Park Way
Wakefield 41 Business Park
Wakefield
WF2 0XJ

For the attention of: John Parkinson

Contract Title: One Earth Solar Farm

Date Received: 2/12/2024
Date Commenced: 2/12/2024
Date Completed: 6/1/2025

Notes: Opinions and Interpretations are outside the UKAS Accreditation

A copy of the Laboratory Schedule of accredited tests as issued by UKAS is attached to this report. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced other than in full, without the prior written approval of the laboratory.

Checked and Approved Signatories:

A Watkins (Managing Director)
R Berriman (Associate Director)
S Royle (Laboratory Manager)
[redacted]
L Knight (Assistant Laboratory Manager)
S Eyre (Senior Technical Coordinator)
T Watkins (Senior Technician)

5 – 7 Hexthorpe Road,
Hexthorpe,
Doncaster,
DN4 0AR
Tel: [redacted]
Email: [redacted]@prosoils.co.uk
[redacted]@prosoils.co.uk

WATER CONTENT OF ROCK

ISRM Suggested Methods - Rock Characterization Testing and Monitoring 1974 - 2006

Hole Number	Sample Number	Sample Type	Top Depth (m)	Base Depth (m)	Water Content (%)	Sample Description	Remarks
BH001		C	6.50	6.70	7.5	Brown MUDSTONE	
BH001		C	6.70	7.00	5.3	Brown MUDSTONE	
BH001		C	7.30	7.60	7.5	Brown MUDSTONE	
BH001		C	7.60	7.80	7.0	Brown MUDSTONE	
BH002		C	8.50	8.70	7.9	Brown MUDSTONE	
BH002		C	10.00	10.20	8.1	Brown MUDSTONE	
BH003		C	6.20	6.50	11.7	Brown MUDSTONE	
BH003		C	7.20	7.40	15.6	Brown MUDSTONE	
BH003		C	7.40	7.70	5.4	Brown MUDSTONE	
BH003		C	9.00	9.20	8.3	Brown MUDSTONE	
BH003		C	10.70	10.80	4.8	Brown MUDSTONE	
BH004		C	8.60	8.80	14.7	Brown MUDSTONE	
BH004		C	9.20	9.30	15.0	Brown MUDSTONE	
BH004		C	9.30	9.60	20.5	Brown MUDSTONE	
BH004		C	11.00	11.30	8.8	Brown MUDSTONE	
BH004		C	11.30	11.50	22.2	Brown MUDSTONE	
BH006		C	10.70	10.80	17.8	Brown MUDSTONE	
BH006		C	17.80	18.00	11.5	Brown MUDSTONE	
BH006		C	18.60	18.80	11.7	Brown MUDSTONE	

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

One Earth Solar Farm

Contract No:

PSL24/8929

Client Ref:

2372986

WATER CONTENT OF ROCK

ISRM Suggested Methods - Rock Characterization Testing and Monitoring 1974 - 2006

Hole Number	Sample Number	Sample Type	Top Depth (m)	Base Depth (m)	Water Content (%)	Sample Description	Remarks
BH007		C	12.80	13.00	7.7	Brown MUDSTONE	
BH007		C	15.50	15.70	15.6	Brown MUDSTONE	
BH007		C	18.40	18.60	8.7	Brown MUDSTONE	
BH007		C	18.40	18.60	8.8	Brown MUDSTONE	
BH008		C	11.40	11.50	16.3	Brown MUDSTONE	
BH008		C	13.30	13.40	15.2	Brown MUDSTONE	
BH008		C	15.40	15.50	13.2	Brown MUDSTONE	
BH008		C	17.30	17.40	8.0	Brown MUDSTONE	
BH009		C	11.70	11.80	17.9	Brown MUDSTONE	
BH009		C	14.00	14.10	16.6	Brown MUDSTONE	
BH009		C	16.50	16.70	12.9	Brown MUDSTONE	
BH009		C	18.80	19.00	12.1	Brown MUDSTONE	
BH011		C	11.50	11.60	6.7	Brown MUDSTONE	
BH012		C	12.00	12.10	4.8	Brown MUDSTONE	
BH012		C	13.60	13.70	6.4	Brown MUDSTONE	
BH013		C	8.70	8.80	5.7	Brown MUDSTONE	
BH013		C	10.20	10.40	7.2	Brown MUDSTONE	

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

One Earth Solar Farm

Contract No:

PSL24/8929

Client Ref:

2372986

SUMMARY OF POINT LOAD TEST RESULTS

ISRM Suggested Methods : 2007

Borehole Number	Depth (m)	Sample Ref	Test Type	Orientation	Dimensions (mm)		Area	D_e^2	D_e	Failure Load (P)		I_s	Corr Fac	I_{s50}	Failure Type	Remarks
				Par / Perp	W	D	(mm2)		(mm)	(Mpa)	(kN)	(MPa)	F	(MPa)		
BH001	6.50		A	Perp	88	61	5368	6834.75	82.67	-	1.37	0.20	1.254	0.25	Valid	
BH001	6.70		A	Perp	88	53	4664	5938.39	77.06	-	0.66	0.11	1.215	0.14	Valid	
BH001	7.30		A	Perp	87	49	4263	5427.82	73.67	-	0.84	0.15	1.191	0.18	Valid	
BH001	7.60		A	Perp	89	45	4005	5099.32	71.41	-	0.43	0.08	1.174	0.10	Valid	
BH002	8.50		A	Perp	88	33	2904	3697.49	60.81	-	0.74	0.20	1.092	0.22	Valid	
BH002	10.00		A	Perp	88	47	4136	5266.12	72.57	-	0.99	0.19	1.182	0.22	Valid	
BH003	6.20		A	Perp	88	56	4928	6274.52	79.21	-	0.94	0.15	1.230	0.18	Valid	
BH003	7.20		A	Perp	88	50	4400	5602.25	74.85	-	0.11	0.02	1.199	0.02	Valid	
BH003	7.40		A	Perp	89	50	4450	5665.92	75.27	-	3.59	0.63	1.202	0.76	Valid	
BH003	9.00		A	Perp	88	61	5368	6834.75	82.67	-	2.11	0.31	1.254	0.39	Valid	
BH003	10.70		A	Perp	81	52	4212	5362.88	73.23	-	2.12	0.40	1.187	0.47	Valid	
BH004	8.60		A	Perp	89	54	4806	6119.19	78.23	-	0.23	0.04	1.223	0.05	Valid	
BH004	9.20		A	Perp	89	45	4005	5099.32	71.41	-	0.31	0.06	1.174	0.07	Valid	
BH004	9.30		A	Perp	89	56	4984	6345.83	79.66	-	0.12	0.02	1.233	0.02	Valid	
BH004	11.00		A	Perp	88	49	4312	5490.21	74.10	-	2.59	0.47	1.194	0.56	Valid	
BH004	11.30		A	Perp	90	53	4770	6073.35	77.93	-	0.27	0.04	1.221	0.05	Valid	
BH006	10.70		A	Perp	88	52	4576	5826.34	76.33	-	0.34	0.06	1.210	0.07	Valid	
BH006	17.80		A	Perp	87	59	5133	6535.54	80.84	-	0.47	0.07	1.241	0.09	Valid	
BH006	18.60		A	Perp	88	49	4312	5490.21	74.10	-	0.67	0.12	1.194	0.15	Valid	
BH007	12.80		A	Perp	88	63	5544	7058.84	84.02	-	1.02	0.14	1.263	0.18	Valid	
BH007	15.50		A	Perp	88	45	3960	5042.03	71.01	-	0.52	0.10	1.171	0.12	Valid	
BH007	18.40		A	Perp	88	59	5192	6610.66	81.31	-	3.73	0.56	1.245	0.70	Valid	

Note All testing carried out on samples at as received water content

Par = parallel, Perp = perpendicular, U = Random

A = Axial, D = Diametral, I = Irregular

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

One Earth Solar Farm

Contract No:

PSL24/8929

Client Ref:

2372986

SUMMARY OF POINT LOAD TEST RESULTS

ISRM Suggested Methods : 2007

Borehole Number	Depth (m)	Sample Ref	Test Type	Orientation	Dimensions (mm)		D_e^2	D_e	Failure Load		I_s	Corr Fac	I_{s50}	Failure Type	Remarks
				Par / Perp	L	D		(mm)	(Mpa)	(kN)	(MPa)	F	(MPa)		
BH003	7.40		D	Par	-	89	7921	89.00	-	0.26	0.033	1.296	0.04	Valid	
BH006	17.80		D	Par	-	87	7569	87.00	-	0.39	0.052	1.283	0.07	Valid	
BH006	18.60		D	Par	-	88	7744	88.00	-	1.09	0.141	1.290	0.18	Valid	
BH007	15.50		D	Par	-	88	7744	88.00	-	0.61	0.079	1.290	0.10	Valid	
BH007	18.40		D	Par	-	88	7744	88.00	-	1.75	0.226	1.290	0.29	Valid	

Note All testing carried out on samples at as received water content

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UKAS TESTING 4043

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SUMMARY OF POINT LOAD TEST RESULTS

ISRM Suggested Methods : 2007

Borehole Number	Depth (m)	Sample Ref	Test Type	Orientation	Dimensions (mm)		Area	D_e^2	D_e	Failure Load (P)		I_s	Corr Fac	I_{s50}	Failure Type	Remarks
				Par / Perp	W	D	(mm2)		(mm)	(Mpa)	(kN)	(MPa)	F	(MPa)		
BH008	11.40		A	Perp	87	70	6090	7754.03	88.06	-	0.47	0.06	1.290	0.08	Valid	
BH008	13.30		A	Perp	87	60	5220	6646.31	81.52	-	0.27	0.04	1.246	0.05	Valid	
BH008	15.40		A	Perp	86	59	5074	6460.42	80.38	-	0.64	0.10	1.238	0.12	Valid	
BH008	17.30		A	Perp	88	59	5192	6610.66	81.31	-	1.78	0.27	1.245	0.34	Valid	
BH009	11.70		A	Perp	86	37	3182	4051.45	63.65	-	0.55	0.14	1.115	0.15	Valid	
BH009	14.00		A	Perp	88	39	3432	4369.76	66.10	-	0.63	0.14	1.134	0.16	Valid	
BH009	16.50		A	Perp	87	43	3741	4763.19	69.02	-	0.53	0.11	1.156	0.13	Valid	
BH009	18.80		A	Perp	88	49	4312	5490.21	74.10	-	1.19	0.22	1.194	0.26	Valid	
BH011	11.50		A	Perp	88	59	5192	6610.66	81.31	-	2.56	0.39	1.245	0.48	Valid	
BH012	12.00		A	Perp	89	52	4628	5892.55	76.76	-	2.13	0.36	1.213	0.44	Valid	
BH012	13.60		A	Perp	88	49	4312	5490.21	74.10	-	1.74	0.32	1.194	0.38	Valid	
BH013	8.70		A	Perp	88	51	4488	5714.30	75.59	-	1.44	0.25	1.204	0.30	Valid	
BH013	10.20		A	Perp	88	56	4928	6274.52	79.21	-	1.08	0.17	1.230	0.21	Valid	

Note All testing carried out on samples at as received water content

Par = parallel, Perp = perpendicular, U = Random

A = Axial, D = Diametral, I = Irregular

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

One Earth Solar Farm

Contract No:

PSL24/8929

Client Ref:

2372986

SUMMARY OF POINT LOAD TEST RESULTS

ISRM Suggested Methods : 2007

Borehole Number	Depth (m)	Sample Ref	Test Type	Orientation	Dimensions (mm)		D_e^2	D_e	Failure Load		I_s	Corr Fac	I_{s50}	Failure Type	Remarks
				Par / Perp	L	D		(mm)	(Mpa)	(kN)	(MPa)	F	(MPa)		
BH008	11.40		D	Par	-	87	7569	87.00	-	0.27	0.036	1.283	0.05	Valid	
BH008	13.30		D	Par	-	87	7569	87.00	-	0.11	0.015	1.283	0.02	Valid	
BH008	15.40		D	Par	-	86	7396	86.00	-	0.37	0.050	1.276	0.06	Valid	
BH009	14.00		D	Par	-	88	7744	88.00	-	0.56	0.072	1.290	0.09	Valid	
BH009	18.80		D	Par	-	88	7744	88.00	-	0.62	0.080	1.290	0.10	Valid	

Note All testing carried out on samples at as received water content

Par = parallel, Perp = perpendicular, U = Random

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

One Earth Solar Farm

Contract No:

PSL24/8929

Client Ref:

2372986

UNIAXIAL COMPRESSIVE STRENGTH

ISRM Suggested Methods - Rock Characterization Testing and Monitoring 1974 - 2006

Borehole Number:	**BH006**	**Top Depth (m):**	**17.50**
Sample Number:	**-**	**Base Depth (m):**	**17.80**
Sample Type:	**C**	**Sample Date:**	**-**
Storage Condition:	**Sealed in core box**	**Date of Receipt**	**02/12/2025**
Sample Description:	**Brown MUDSTONE**		

Specimen Details/Conditions	
Diameter - mm:	87.75
Height - mm:	176.48
Water Content - %:	7.7
Sample Mass - g:	2354.6
Bulk Density - Mg/m^3:	2.21
Dry Density - Mg/m^3:	2.05
Height Ratio: * Sample does not comply with H:D ratio	2.0
Degree of Saturation - %:	54
Assumed Specific Gravity for Degree of Saturation:	2.90

Test Result	
Load Frame/Machine:	CM1/Controls
Date of test:	18/12/2025
Test Duration - mins:	00:10
Orientation:	Perpendicular
Stress Rate - MPa/s:	0.23
Strain at Failure - kN:	13.60
Unconfined Compressive Strength - Mpa:	2.25
Mode of Failure:	Vertical Shear

Remarks: -

UNIAXIAL COMPRESSIVE STRENGTH

ISRM Suggested Methods - Rock Characterization Testing and Monitoring 1974 - 2006

Borehole Number:	**BH007**	**Top Depth (m):**	**12.50**
Sample Number:	**-**	**Base Depth (m):**	**12.80**
Sample Type:	**C**	**Sample Date:**	**-**
Storage Condition:	**Sealed in core box**	**Date of Receipt**	**02/12/2025**
Sample Description:	**Brown MUDSTONE**		

Specimen Details/Conditions	
Diameter - mm:	86.34
Height - mm:	129.64
Water Content - %:	12.0
Sample Mass - g:	1689.5
Bulk Density - Mg/m^3:	2.23
Dry Density - Mg/m^3:	1.99
Height Ratio: * Sample does not comply with H:D ratio	1.5
Degree of Saturation - %:	76
Assumed Specific Gravity for Degree of Saturation:	2.90

Test Result	
Load Frame/Machine:	CM1/Controls
Date of test:	18/12/2025
Test Duration - mins:	00:13
Orientation:	Perpendicular
Stress Rate - MPa/s:	0.70
Strain at Failure - kN:	53.10
Unconfined Compressive Strength - Mpa:	9.07
Mode of Failure:	Vertical Shear

Remarks: -

UNIAXIAL COMPRESSIVE STRENGTH

ISRM Suggested Methods - Rock Characterization Testing and Monitoring 1974 - 2006

Borehole Number:	**BH007**	**Top Depth (m):**	**15.20**
Sample Number:	**-**	**Base Depth (m):**	**15.50**
Sample Type:	**C**	**Sample Date:**	**-**
Storage Condition:	**Sealed in core box**	**Date of Receipt**	**02/12/2025**
Sample Description:	**Brown MUDSTONE**		

Specimen Details/Conditions	
Diameter - mm:	87.69
Height - mm:	132.37
Water Content - %:	17.3
Sample Mass - g:	1758.4
Bulk Density - Mg/m^3:	2.20
Dry Density - Mg/m^3:	1.88
Height Ratio: * Sample does not comply with H:D ratio	1.5
Degree of Saturation - %:	92
Assumed Specific Gravity for Degree of Saturation:	2.90

Test Result	
Load Frame/Machine:	CM1/Controls
Date of test:	18/12/2025
Test Duration - mins:	00:10
Orientation:	Perpendicular
Stress Rate - MPa/s:	0.05
Strain at Failure - kN:	3.10
Unconfined Compressive Strength - Mpa:	0.513
Mode of Failure:	Vertical Shear

Remarks: -

UNIAXIAL COMPRESSIVE STRENGTH

ISRM Suggested Methods - Rock Characterization Testing and Monitoring 1974 - 2006

Borehole Number:	**BH008**	**Top Depth (m):**	**15.00**
Sample Number:	**-**	**Base Depth (m):**	**15.20**
Sample Type:	**C**	**Sample Date:**	**-**
Storage Condition:	**Sealed in core box**	**Date of Receipt**	**02/12/2025**
Sample Description:	**Brown MUDSTONE**		

Specimen Details/Conditions	
Diameter - mm:	87.53
Height - mm:	156.12
Water Content - %:	16.7
Sample Mass - g:	2044.0
Bulk Density - Mg/m^3:	2.18
Dry Density - Mg/m^3:	1.86
Height Ratio: * Sample does not comply with H:D ratio	1.8
Degree of Saturation - %:	87
Assumed Specific Gravity for Degree of Saturation:	2.90

Test Result	
Load Frame/Machine:	CM1/Controls
Date of test:	18/12/2025
Test Duration - mins:	00:10
Orientation:	Perpendicular
Stress Rate - MPa/s:	0.30
Strain at Failure - kN:	17.90
Unconfined Compressive Strength - Mpa:	2.97
Mode of Failure:	Vertical Shear

Remarks: -

UNIAXIAL COMPRESSIVE STRENGTH

ISRM Suggested Methods - Rock Characterization Testing and Monitoring 1974 - 2006

Borehole Number:	**BH008**	**Top Depth (m):**	**17.00**
Sample Number:	**-**	**Base Depth (m):**	**17.20**
Sample Type:	**C**	**Sample Date:**	**-**
Storage Condition:	**Sealed in core box**	**Date of Receipt**	**02/12/2025**
Sample Description:	**Brown MUDSTONE**		

Specimen Details/Conditions	
Diameter - mm:	88.29
Height - mm:	175.44
Water Content - %:	11.4
Sample Mass - g:	2389.5
Bulk Density - Mg/m^3:	2.22
Dry Density - Mg/m^3:	2.00
Height Ratio: * Sample does not comply with H:D ratio	2.0
Degree of Saturation - %:	73
Assumed Specific Gravity for Degree of Saturation:	2.90

Test Result	
Load Frame/Machine:	CM1/Controls
Date of test:	18/12/2025
Test Duration - mins:	00:10
Orientation:	Perpendicular
Stress Rate - MPa/s:	0.10
Strain at Failure - kN:	6.20
Unconfined Compressive Strength - Mpa:	1.01
Mode of Failure:	Vertical Shear

Remarks: -

UNIAXIAL COMPRESSIVE STRENGTH

ISRM Suggested Methods - Rock Characterization Testing and Monitoring 1974 - 2006

Borehole Number:	**BH009**	**Top Depth (m):**	**11.50**
Sample Number:	**-**	**Base Depth (m):**	**11.70**
Sample Type:	**C**	**Sample Date:**	**-**
Storage Condition:	**Sealed in core box**	**Date of Receipt**	**02/12/2025**
Sample Description:	**Brown MUDSTONE**		

Specimen Details/Conditions	
Diameter - mm:	88.21
Height - mm:	171.87
Water Content - %:	14.1
Sample Mass - g:	2338.3
Bulk Density - Mg/m^3:	2.23
Dry Density - Mg/m^3:	1.95
Height Ratio: * Sample does not comply with H:D ratio	1.9
Degree of Saturation - %:	84
Assumed Specific Gravity for Degree of Saturation:	2.90

Test Result	
Load Frame/Machine:	CM1/Controls
Date of test:	18/12/2025
Test Duration - mins:	00:10
Orientation:	Perpendicular
Stress Rate - MPa/s:	0.29
Strain at Failure - kN:	17.60
Unconfined Compressive Strength - Mpa:	2.88
Mode of Failure:	Vertical Shear

Remarks: -

UNIAXIAL COMPRESSIVE STRENGTH

ISRM Suggested Methods - Rock Characterization Testing and Monitoring 1974 - 2006

Borehole Number:	**BH009**	**Top Depth (m):**	**13.30**
Sample Number:	**-**	**Base Depth (m):**	**13.50**
Sample Type:	**C**	**Sample Date:**	**-**
Storage Condition:	**Sealed in core box**	**Date of Receipt**	**02/12/2025**
Sample Description:	**Brown MUDSTONE**		

Specimen Details/Conditions	
Diameter - mm:	88.39
Height - mm:	131.89
Water Content - %:	18.5
Sample Mass - g:	1711.9
Bulk Density - Mg/m^3:	2.12
Dry Density - Mg/m^3:	1.79
Height Ratio: * Sample does not comply with H:D ratio	1.5
Degree of Saturation - %:	86
Assumed Specific Gravity for Degree of Saturation:	2.90

Test Result	
Load Frame/Machine:	CM1/Controls
Date of test:	18/12/2025
Test Duration - mins:	00:10
Orientation:	Perpendicular
Stress Rate - MPa/s:	0.13
Strain at Failure - kN:	7.90
Unconfined Compressive Strength - Mpa:	1.29
Mode of Failure:	Vertical Shear

Remarks: -

UNIAXIAL COMPRESSIVE STRENGTH

ISRM Suggested Methods - Rock Characterization Testing and Monitoring 1974 - 2006

Borehole Number:	**BH012**	**Top Depth (m):**	**13.40**
Sample Number:	**-**	**Base Depth (m):**	**13.60**
Sample Type:	**C**	**Sample Date:**	**-**
Storage Condition:	**Sealed in core box**	**Date of Receipt**	**02/12/2025**
Sample Description:	**Brown MUDSTONE**		

Specimen Details/Conditions	
Diameter - mm:	89.36
Height - mm:	175.25
Water Content - %:	7.8
Sample Mass - g:	2341.6
Bulk Density - Mg/m^3:	2.13
Dry Density - Mg/m^3:	1.98
Height Ratio: * Sample does not comply with H:D ratio	2.0
Degree of Saturation - %:	48
Assumed Specific Gravity for Degree of Saturation:	2.90

Test Result	
Load Frame/Machine:	CM1/Controls
Date of test:	18/12/2025
Test Duration - mins:	00:10
Orientation:	Perpendicular
Stress Rate - MPa/s:	0.54
Strain at Failure - kN:	33.70
Unconfined Compressive Strength - Mpa:	5.37
Mode of Failure:	Vertical Shear

Remarks: -

UNIAXIAL COMPRESSIVE STRENGTH

ISRM Suggested Methods - Rock Characterization Testing and Monitoring 1974 - 2006

Borehole Number:	**BH013**	**Top Depth (m):**	**9.80**
Sample Number:	**-**	**Base Depth (m):**	**10.20**
Sample Type:	**C**	**Sample Date:**	**-**
Storage Condition:	**Sealed in core box**	**Date of Receipt**	**02/12/2025**
Sample Description:	**Brown MUDSTONE**		

Specimen Details/Conditions	
Diameter - mm:	88.74
Height - mm:	133.18
Water Content - %:	3.7
Sample Mass - g:	1811.2
Bulk Density - Mg/m^3:	2.20
Dry Density - Mg/m^3:	2.12
Height Ratio: * Sample does not comply with H:D ratio	1.5
Degree of Saturation - %:	29
Assumed Specific Gravity for Degree of Saturation:	2.90

Test Result	
Load Frame/Machine:	CM1/Controls
Date of test:	18/12/2025
Test Duration - mins:	00:10
Orientation:	Perpendicular
Stress Rate - MPa/s:	0.24
Strain at Failure - kN:	14.90
Unconfined Compressive Strength - Mpa:	2.41
Mode of Failure:	Vertical Shear

Remarks: -

Laboratory Report

UKAS TESTING 2788

GSTL GEOTECHNICAL SITE & TESTING LABORATORIES A PHENNA GROUP COMPANY

Contract Number: 76355

Client Ref: **PSL24/8929**
Client PO: **PSL24/8929**

Date Received: **13-12-2024**
Date Completed: **03-01-2025**
Report Date: **03-01-2025**

Client: **Professional Soils Laboratory Limited**

Contract Title: **One Eart Solar Farm**
For the attention of: **Sean Royle**

This report has been checked and approved by:

[redacted]

Brendan Evans
Office Administrator

Description	Qty
Determination of the slake durability index, two cycles. ISRM Suggested Method For Determining Slake Durability - @ Non Accredited Test	7
Determination of the Cerchar abrasivity value per set of four values. The Cerchar Abrasiveness Index Document October 1986 - @ Non Accredited Test	6

Notes: **Observations and Interpretations are outside the UKAS Accreditation**
*** - denotes test included in laboratory scope of accreditation**
- denotes test carried out by approved contractor
@ - denotes non accredited tests

This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This test report/certificate shall not be reproduced except in full, without the approval of GEO Site & Testing Services Ltd. Any opinions or interpretations stated - within this report/certificate are excluded from the laboratories UKAS accreditation.

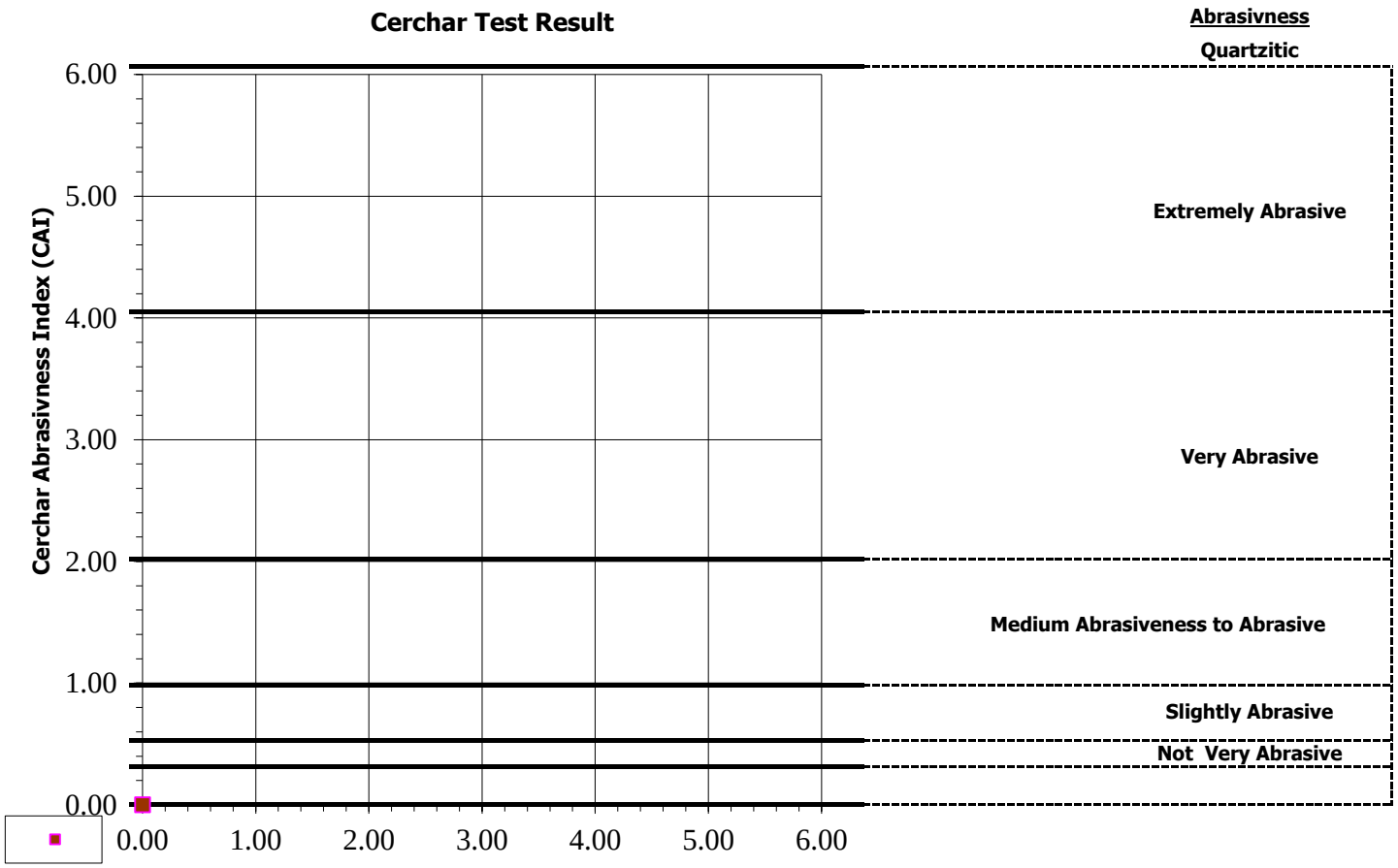
Approved Signatories:
Brendan Evans (Office Administrator) - Darren Bourne (Quality Senior Technician) - Paul Evans (Director)
Richard John (Quality/Technical Manager) - Shaun Jones (Laboratory manager) - Shaun Thomas (Site Manager)
Wayne Honey (HR & HSE Manager)

Test Report: The Cerchar Abrasiveness Index Test

Test Method : The Cerchar Abrasiveness Index (1986) GAI-JTr/JS No. 86-538

Client ref:		Hygrometrice Testing Conditions:	**Natural**
Project Name:	**One Eart Solar Farm**	Type of Rock:	**Homogeneous**
Contract Number:	**76355**	Maximum Grain Size (mm):	**0.06**
Date tested:	**16/12/2024**	Surface Roughness:	**Rough**
BH Number:	**BH006**		
Sample Number:			
Depth (m) :	**10.50-10.70**		
Sample Type:	**C**	**Tested By**	Julian Jones

Mean Test Result (5 pins)	**0.00**	**(mm)**
C.A.I	**0.00**	



Sample Tested with a pin of hardened steel with a Rockwell hardness HRC of 54-56

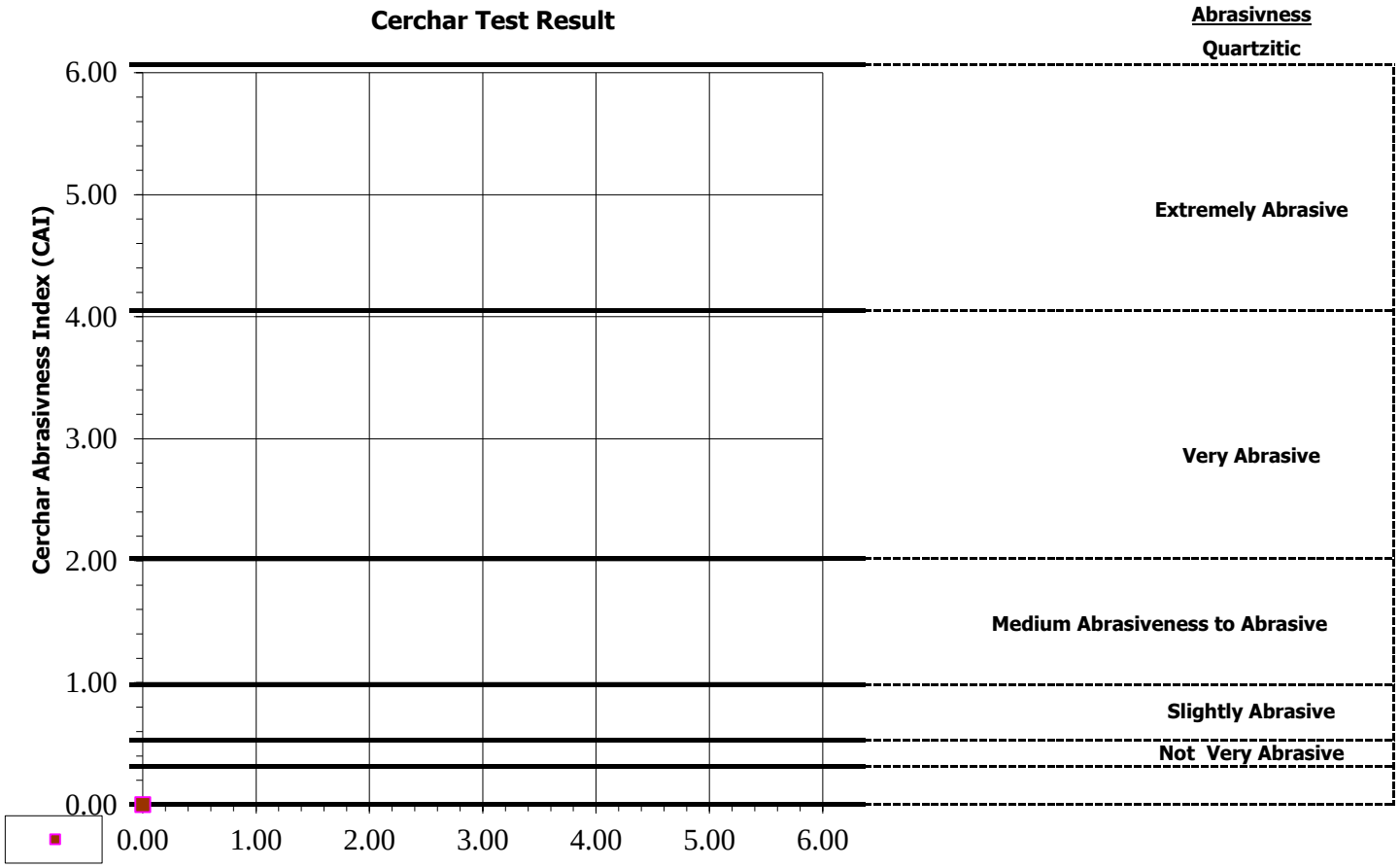
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Test Report: The Cerchar Abrasiveness Index Test

Test Method : The Cerchar Abrasiveness Index (1986) GAI-JTr/JS No. 86-538

Client ref:		Hygrometrice Testing Conditions:	**Natural**
Project Name:	**One Eart Solar Farm**	Type of Rock:	**Homogeneous**
Contract Number:	**76355**	Maximum Grain Size (mm):	**0.06**
Date tested:	**16/12/2024**	Surface Roughness:	**Rough**
BH Number:	**BH006**		
Sample Number:			
Depth (m) :	**11.80-12.00**		
Sample Type:	**C**	**Tested By**	Julian Jones

Mean Test Result (5 pins)	**0.00**	**(mm)**
C.A.I	**0.00**	



Sample Tested with a pin of hardened steel with a Rockwell hardness HRC of 54-56

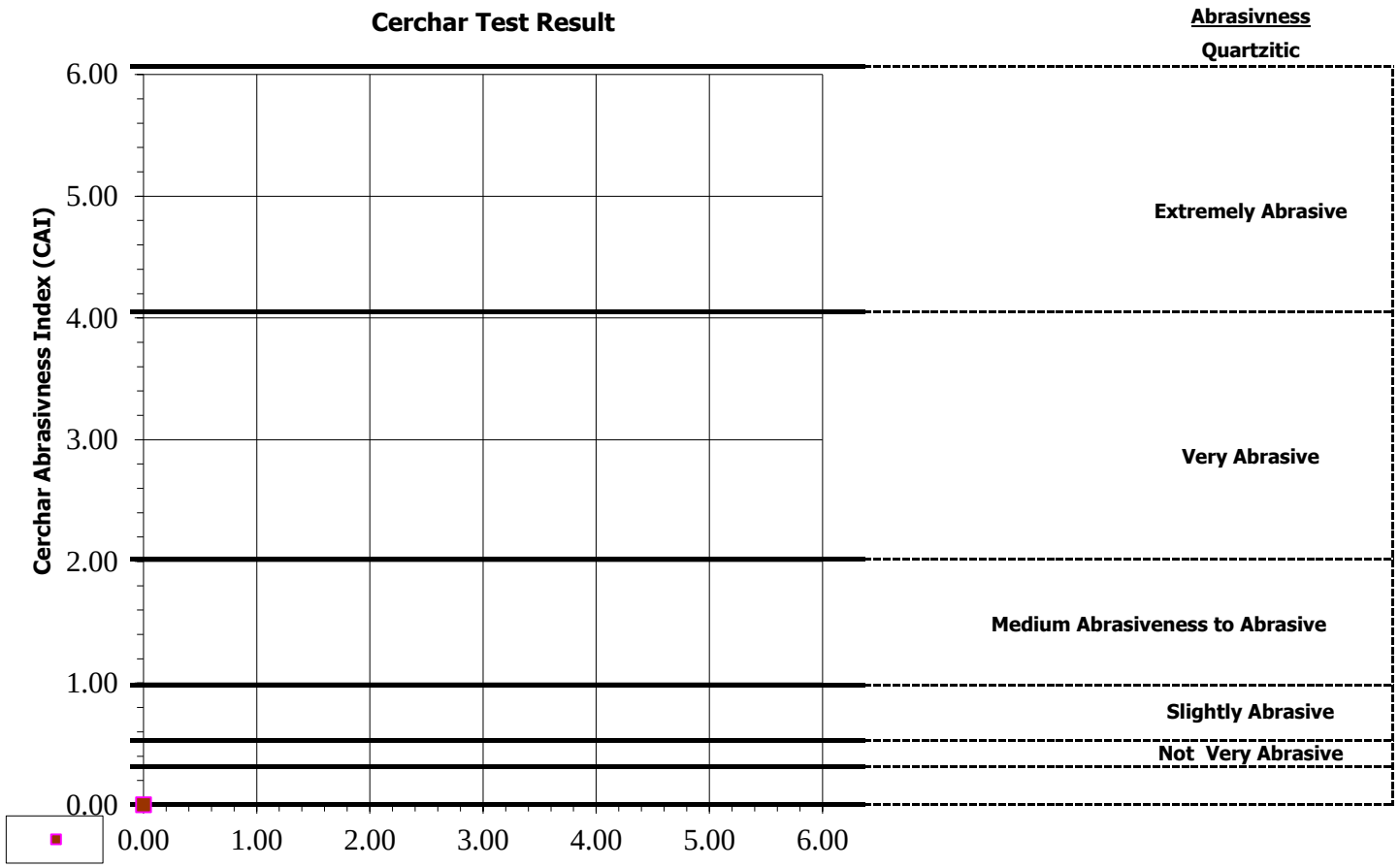
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Test Report: The Cerchar Abrasiveness Index Test

Test Method : The Cerchar Abrasiveness Index (1986) GAI-JTr/JS No. 86-538

Client ref:		Hygrometrice Testing Conditions:	**Natural**
Project Name:	**One Eart Solar Farm**	Type of Rock:	**Homogeneous**
Contract Number:	**76355**	Maximum Grain Size (mm):	**0.06**
Date tested:	**16/12/2024**	Surface Roughness:	**Rough**
BH Number:	**BH007**		
Sample Number:			
Depth (m) :	**9.90-10.10**		
Sample Type:	**C**	**Tested By**	Julian Jones

Mean Test Result (5 pins)	**0.00**	**(mm)**
C.A.I	**0.00**	



Sample Tested with a pin of hardened steel with a Rockwell hardness HRC of 54-56

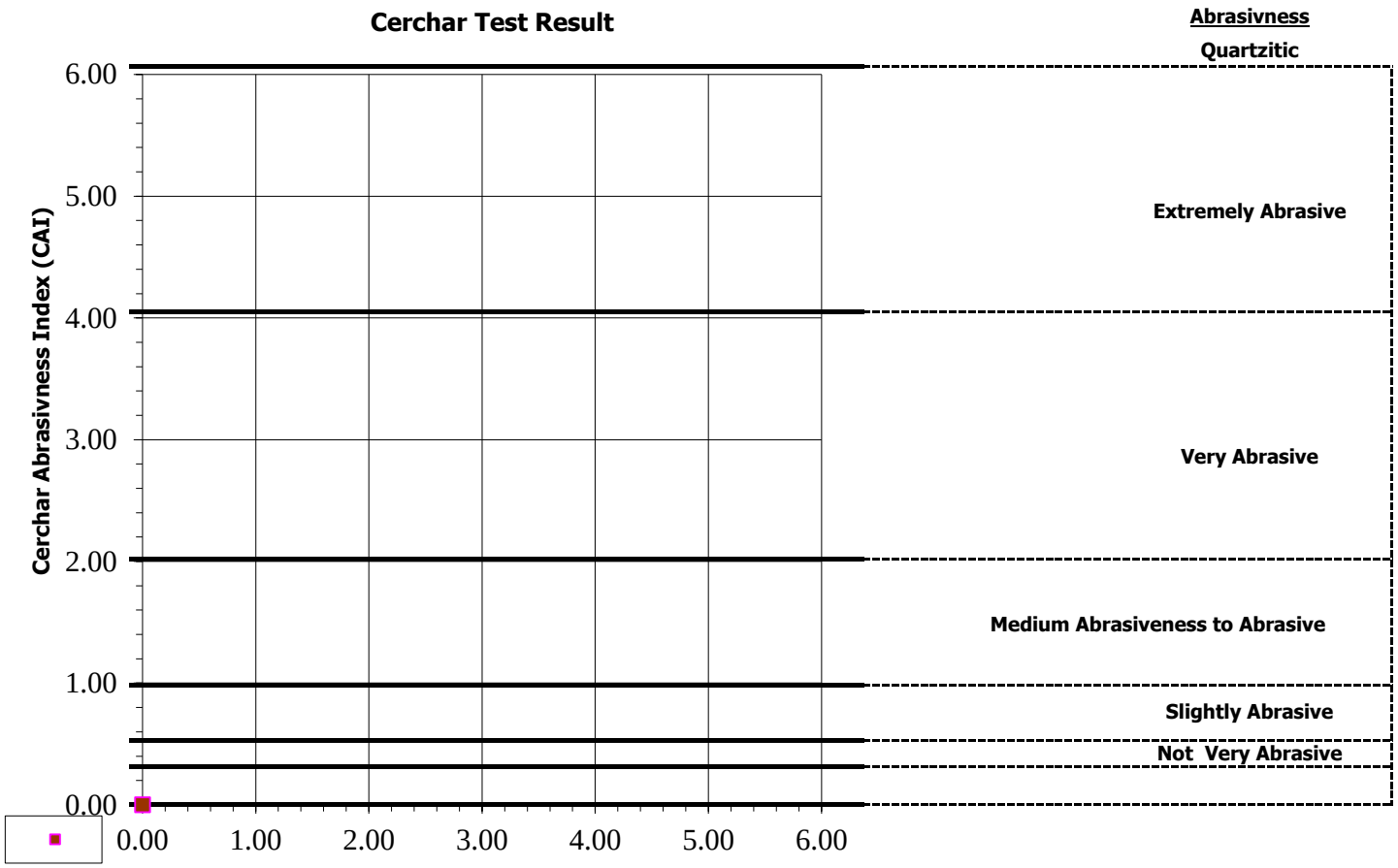
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Test Report: The Cerchar Abrasiveness Index Test

Test Method : The Cerchar Abrasiveness Index (1986) GAI-JTr/JS No. 86-538

Client ref:		Hygrometrice Testing Conditions:	**Natural**
Project Name:	**One Eart Solar Farm**	Type of Rock:	**Homogeneous**
Contract Number:	**76355**	Maximum Grain Size (mm):	**0.06**
Date tested:	**16/12/2024**	Surface Roughness:	**Rough**
BH Number:	**BH007**		
Sample Number:			
Depth (m) :	**13.70-13.90**		
Sample Type:	**C**	**Tested By**	Julian Jones

Mean Test Result (5 pins)	**0.00**	**(mm)**
C.A.I	**0.00**	



Sample Tested with a pin of hardened steel with a Rockwell hardness HRC of 54-56

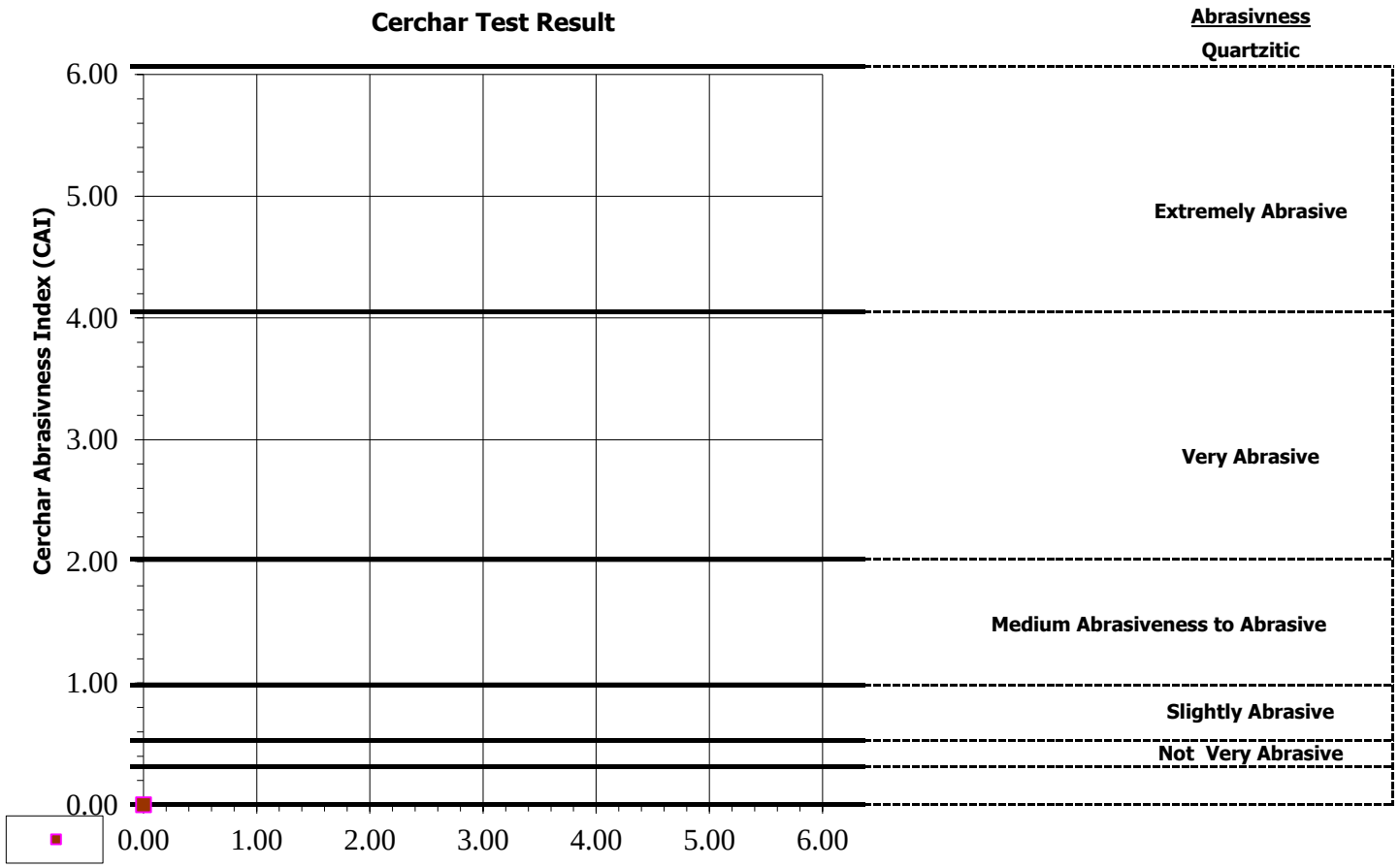
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Test Report: The Cerchar Abrasiveness Index Test

Test Method : The Cerchar Abrasiveness Index (1986) GAI-JTr/JS No. 86-538

Client ref:		Hygrometrice Testing Conditions:	**Natural**
Project Name:	**One Eart Solar Farm**	Type of Rock:	**Homogeneous**
Contract Number:	**76355**	Maximum Grain Size (mm):	**0.06**
Date tested:	**16/12/2024**	Surface Roughness:	**Rough**
BH Number:	**BH008**		
Sample Number:			
Depth (m) :	**10.10-10.30**		
Sample Type:	**C**	**Tested By**	Julian Jones

Mean Test Result (5 pins)	**0.00**	**(mm)**
C.A.I	**0.00**	



Sample Tested with a pin of hardened steel with a Rockwell hardness HRC of 54-56

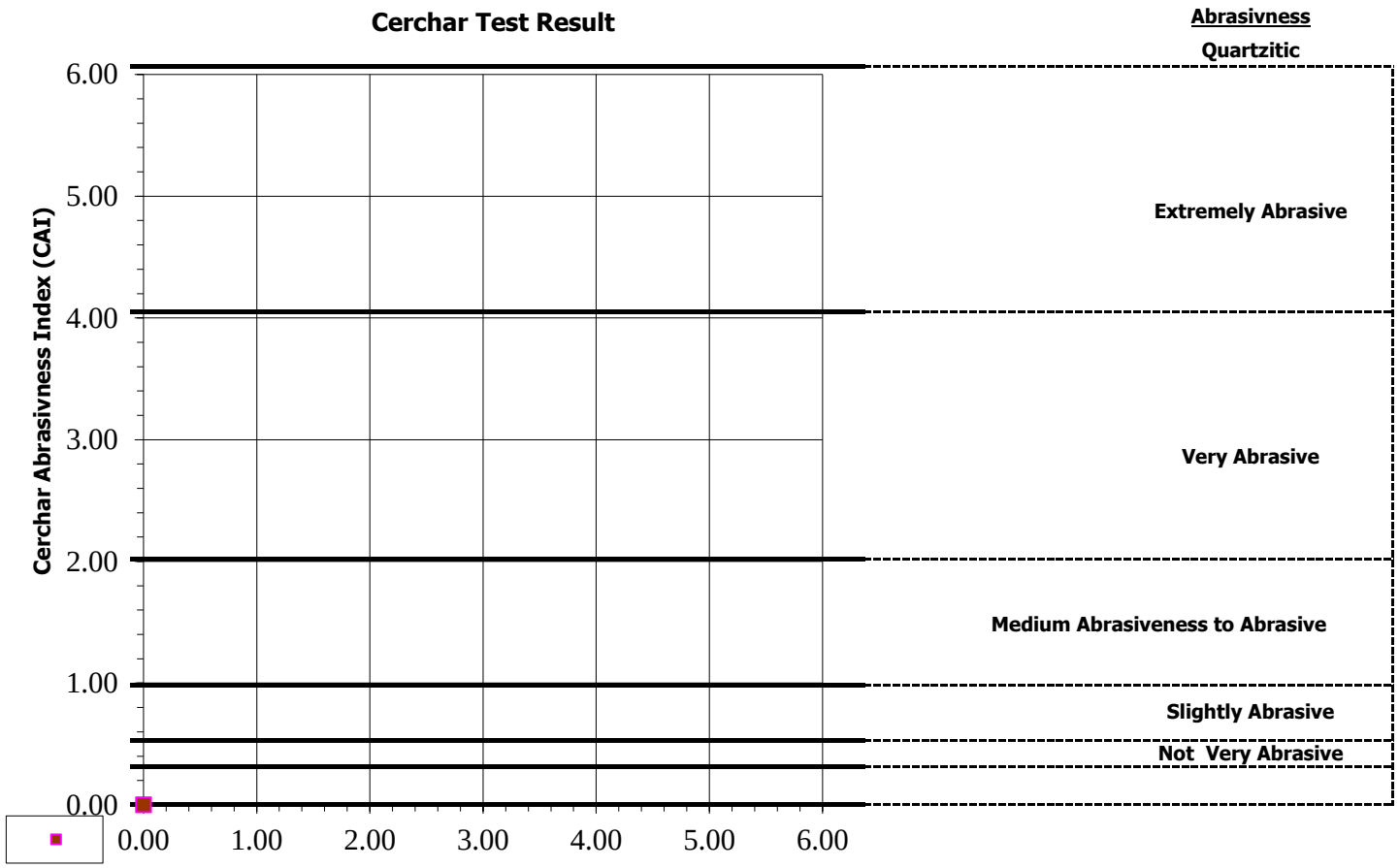
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Test Report: The Cerchar Abrasiveness Index Test

Test Method : The Cerchar Abrasiveness Index (1986) GAI-JTr/JS No. 86-538

Client ref:		Hygrometrice Testing Conditions:	**Natural**
Project Name:	**One Eart Solar Farm**	Type of Rock:	**Homogeneous**
Contract Number:	**76355**	Maximum Grain Size (mm):	**0.06**
Date tested:	**16/12/2024**	Surface Roughness:	**Rough**
BH Number:	**BH008**		
Sample Number:			
Depth (m) :	**11.60-11.80**		
Sample Type:	**C**	**Tested By**	Julian Jones

Mean Test Result (5 pins)	**0.00**	**(mm)**
C.A.I	**0.00**	



Sample Tested with a pin of hardened steel with a Rockwell hardness HRC of 54-56

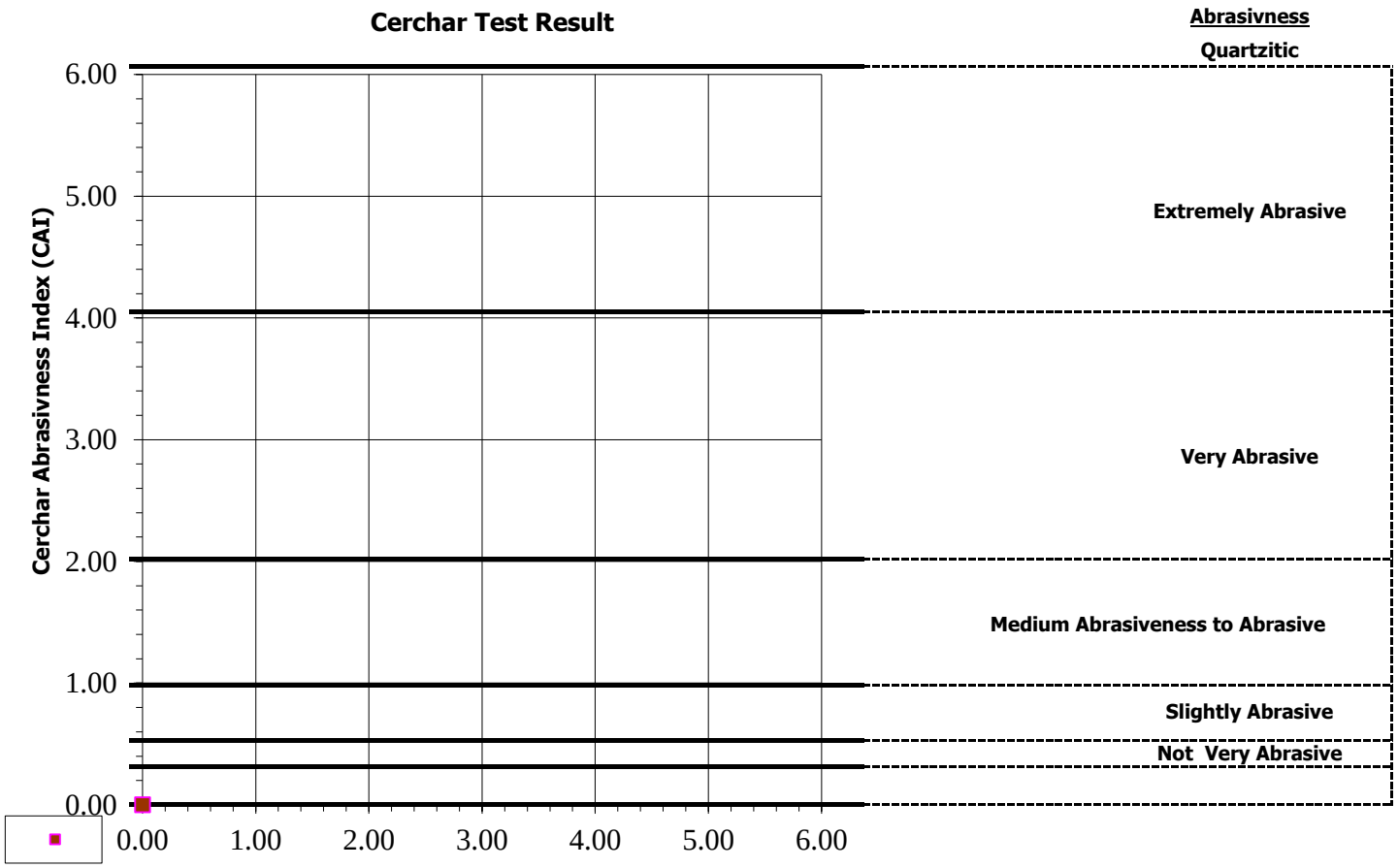
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Test Report: The Cerchar Abrasiveness Index Test

Test Method : The Cerchar Abrasiveness Index (1986) GAI-JTr/JS No. 86-538

Client ref:		Hygrometrice Testing Conditions:	**Natural**
Project Name:	**One Eart Solar Farm**	Type of Rock:	**Homogeneous**
Contract Number:	**76355**	Maximum Grain Size (mm):	**0.06**
Date tested:	**16/12/2024**	Surface Roughness:	**Rough**
BH Number:	**BH009**		
Sample Number:			
Depth (m) :	**12.90-13.10**		
Sample Type:	**C**	**Tested By**	Julian Jones

Mean Test Result (5 pins)	**0.00**	**(mm)**
C.A.I	**0.00**	



Sample Tested with a pin of hardened steel with a Rockwell hardness HRC of 54-56

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Determination of Slake Durability Index

The complete ISRM suggeted methods for rock characterization testing and monitoring : 1974-2006

Contract Number	76355
Project Name	One Eart Solar Farm
Nature of Slaking Fluid	Water at 20°C
Date Tested	17/12/2024

Hole Reference	Depth (m)			Slake First Cycle	Slake Second Cycle	Appearance Of Material Retained In The Drum	Appearance Of Material Passing Through The Drum
BH006	10.20	-	10.40	11.30	10.75	Pieces of Subangular to well rounded mudstone/ fine gravel with many pieces with ground corners and edges.	Sub-angular to well rounded <2mm fragments to a clay/ mud.
BH007	11.50	-	11.70	29.42	14.86	Pieces of Subangular to well rounded mudstone/ fine gravel with many pieces with ground corners and edges.	Sub-angular to well rounded <2mm fragments to a clay/ mud.
BH007	14.00	-	14.20	28.21	17.23	Pieces of Subangular to well rounded mudstone/ fine gravel with many pieces with ground corners and edges.	Sub-angular to well rounded <2mm fragments to a clay/ mud.
BH008	9.10	-	9.30	14.13	10.06	Pieces of Subangular to well rounded mudstone/ fine gravel with many pieces with ground corners and edges.	Sub-angular to well rounded <2mm fragments to a clay/ mud.
BH008	11.80	-	12.00	29.38	14.47	Pieces of Subangular to well rounded mudstone/ fine gravel with many pieces with ground corners and edges.	Sub-angular to well rounded <2mm fragments to a clay/ mud.
BH009	10.30	-	10.50	21.46	12.21	Pieces of Subangular to well rounded mudstone/ fine gravel with many pieces with ground corners and edges.	Sub-angular to well rounded <2mm fragments to a clay/ mud.
BH009	12.20	-	12.40	24.86	17.80	Pieces of Subangular to well rounded mudstone/ fine gravel with many pieces with ground corners and edges.	Sub-angular to well rounded <2mm fragments to a clay/ mud.
		-					
		-					
		-					
		-					
		-					

Key	Reported As
Slake First Cycle	%
Slake Second Cycle	%

Operator
Julian

In Situ Site Investigation Ltd
Innovation Centre
Highfield Drive
St Leonards-on-Sea
East Sussex TN38 9UH

IN SITU
SITE INVESTIGATION

E-mail: info@insitusi.com
T: +44 (0)845 862 0558
M: +44 (0)7917 823541
VAT No: 922 3561 41
Company Reg No: 6339499

CERTIFICATE OF TEST

Mineral Content by X-Ray Diffraction Analysis

InSitu SI Ref No.:	**A1250101**	**Client Ref.**	**PSL**
Location:	**One Earth Solar Farm**	**Borehole Ref.**	**BH006**
Sample ID	**-**	**Material:**	**Mudstone**
Depth From:	**11.50m**	**Depth To:**	**11.70m**
Date Received:	**13th December 2024**	**Date Reported:**	**15th January 2025**
Sample Analysis:	**X-Ray Diffraction (XRD)**		
Sample Type:	**1 x rock core**	**Sample Preparation:**	**As received, visual examination** **XRD preparation detailed below**

Issued on 15/01/2025:	**R Cooke - Principal Geologist**	[redacted]	**R Cooke BSc (Hons), PhD, FMinSoc**

1. Sample Details:

The sample, as received, was wrapped in a sealed plastic bag. The core was 100mm in length and 87mm in diameter.

Upon receipt, the sample was opened and photographed. A visual inspection was made, with the sample being a very weak reddish brown silty MUDSTONE. The core was fractured along a subhorizontal planar white gypsum vein, 5mm in width.

Approximately 50% of the sample was despatched for mineral content determination by XRD analysis.



Plate 1. View of sample as received.
(scale bar = 10cm)

Results reported herein relate solely to the sample tested and are not necessarily representative of a larger sample population.
The samples reported on herein were not sampled or identified by InSitu SI unless otherwise stated.
This test certificate shall not be reproduced, except in full, without the written approval of the issuing Company.

In Situ Site Investigation Ltd
Innovation Centre
Highfield Drive
St Leonards-on-Sea
East Sussex TN38 9UH

E-mail: info@insitusi.com
T: +44 (0)845 862 0558
M: +44 (0)7917 823541
VAT No: 922 3561 41
Company Reg No: 6339499

2. X-Ray Diffraction sample preparation

The sample preparation for XRD analysis is as follows.

The sample is first disaggregated gently using a pestle and mortar. A 2g split of this material is then 'micronised' using a McCrone Micronising Mill to obtain an x-ray diffraction 'powder' with a mean particle diameter of between 5 - 10 microns. The sample, as a water-based slurry, is then sprayed under pressure into an oven where it instantly dries into a powder comprising microspherical aggregates of mineral particles. This powder is front-packed into an aluminium cavity mount, producing a randomly orientated sample for presentation to the x-ray beam.

The sample was analysed in a Philips X-Ray Diffractometer between 4.5° and 75° 2Θ (theta) at a step size of 0.013 and nominal time per step of 0.2s (continuous scanning mode), using x-ray radiation from a copper anode at 40kV, 40mA.

Although clay minerals are evident in 'whole rock' diffractograms, the most satisfactory method for their quantification is to extract and analyse separately the clay fraction. A 5g split of the sample that was disaggregated as the first stage of the whole rock preparation (see above) is taken and weighed accurately. The weight is recorded in a central register for later reference. Separating the <2 micron fraction is achieved by ultrasound and centrifugation. The total weight of clay extracted is determined by removing a 20-25g aliquot of the final clay suspension and evaporating to dryness at 80°C. The initial and final weights of the beaker used are also recorded in the register.

The clay XRD mount is obtained by filtering the clay suspension through a Millipore glass micro-fibre filter and drying the filtrate on the filter paper. The samples are analysed as an untreated clay, after saturation with ethylene glycol vapour overnight and following heating at 380°C for 2 hours, with a further heating to 550°C for one hour. The initial scan for these four treatments is between 3° and 35° 2Θ (theta) at a step size of 0.05°/s using x-ray radiation from a copper anode at 40kV, 40mA. The untreated sample is also analysed between 24-27° 2Θ at a step size of 0.02 °/2s to further define kaolinite/chlorite peaks.

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In Situ Site Investigation Ltd
Innovation Centre
Highfield Drive
St Leonards-on-Sea
East Sussex TN38 9UH

E-mail: info@insitusi.com
T: +44 (0)845 862 0558
M: +44 (0)7917 823541
VAT No: 922 3561 41
Company Reg No: 6339499

3. X-Ray Diffraction results

The whole rock analysis results are presented in Table 1, below.

The dominant mineral phases present are gypsum, illite + mica, quartz, K-feldspar, smectite and palygorskite. Minor hematite, plagioclase and chlorite were determined.

Table 1. Whole rock XRD analysis results.

Sample ID:	BH006: 11.50m
Whole rock fraction	
Mineral phase	**Weight (%)**
Smectite	4.2
Illite/Smectite	-
Illite + Mica	26.7
Kaolinite	-
Chlorite	0.8
Quartz	9.4
K-feldspar	5.8
Plagioclase	1.1
Palygorskite	3.4
Calcite	-
Dolomite	-
Gypsum	47.1
Anhydrite	-
Pyrite	-
Hematite	1.5
Total	100

TR = Trace, typically <0.5%, whereby a peak(s) for that mineral is observed but cannot be quantified successfully using Rietveld refinement

The clay size fraction analysis results are presented in Table 2, below.

The dominant mineral phases present in the clay fraction are poorly crystallised illite and smectite, with moderately crystallised chlorite. Gypsum and quartz are also present.

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Highfield Drive
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East Sussex TN38 9UH

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Company Reg No: 6339499

Table 2. Clay fraction XRD analysis results.

Sample ID:	BH006: 11.50m	
Clay fraction (<2 micron) – 4.6 weight % of bulk sample		
Mineral phase		**Weight (%)**
Smectite	Weight % (size fraction)	28.4
	Weight % (bulk sample)	1.3
	Crystallinity *see note 2 below*	P
Illite	Weight % (size fraction)	46.1
	Weight % (bulk sample)	2.6
	Crystallinity *see note 2 below*	P
Chlorite	Weight % (size fraction)	17.2
	Weight % (bulk sample)	0.8
	Crystallinity *see note 2 below*	M
Quartz	Weight % (size fraction)	1.2
	Weight % (bulk sample)	0.1
Gypsum	Weight % (size fraction)	7.2
	Weight % (bulk sample)	0.3

Note 1: Mixed layer ordering

RI = randomly interstratified

O = ordered interstratification

LR = long range ordering

Note 2: Crystallinity

VW = very well crystallised

W = well crystallised

M = moderately crystallised

P = poorly crystallised

TR = Trace, typically <0.5%, whereby a peak(s) for that mineral is observed but cannot be quantified successfully using Rietveld refinement

Results reported herein relate solely to the sample tested and are not necessarily representative of a larger sample population.
The samples reported on herein were not sampled or identified by InSitu SI unless otherwise stated.
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St Leonards-on-Sea
East Sussex TN38 9UH

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VAT No: 922 3561 41
Company Reg No: 6339499

CERTIFICATE OF TEST

Mineral Content by X-Ray Diffraction Analysis

InSitu SI Ref No.:	**A1250101**	**Client Ref.**	**PSL**
Location:	**One Earth Solar Farm**	**Borehole Ref.**	**BH007**
Sample ID	**-**	**Material:**	**Mudstone**
Depth From:	**10.30m**	**Depth To:**	**10.50m**
Date Received:	**13th December 2024**	**Date Reported:**	**15th January 2025**
Sample Analysis:	**X-Ray Diffraction (XRD)**		
Sample Type:	**1 x rock core**	**Sample Preparation:**	**As received, visual examination** **XRD preparation detailed below**

Issued on 15/01/2025:	**R Cooke - Principal Geologist**	[redacted]	**R Cooke BSc (Hons), PhD, FMinSoc**

1. Sample Details:

The sample, as received, was wrapped in a sealed plastic bag. The core was 140mm in length and 87mm in diameter.

Upon receipt, the sample was opened and photographed. A visual inspection was made, with the sample being a very weak reddish brown silty MUDSTONE. There are subhorizontal undulose zones of green iron reduction mottling. Inclined planar to curved white gypsum veins are present, up to 10mm in width.

Approximately 50% of the sample was despatched for mineral content determination by XRD analysis.



Plate 1. View of sample as received.
(scale bar = 10cm)

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In Situ Site Investigation Ltd
Innovation Centre
Highfield Drive
St Leonards-on-Sea
East Sussex TN38 9UH

E-mail: info@insitusi.com
T: +44 (0)845 862 0558
M: +44 (0)7917 823541
VAT No: 922 3561 41
Company Reg No: 6339499

2. X-Ray Diffraction sample preparation

The sample preparation for XRD analysis is as follows.

The sample is first disaggregated gently using a pestle and mortar. A 2g split of this material is then 'micronised' using a McCrone Micronising Mill to obtain an x-ray diffraction 'powder' with a mean particle diameter of between 5 - 10 microns. The sample, as a water-based slurry, is then sprayed under pressure into an oven where it instantly dries into a powder comprising microspherical aggregates of mineral particles. This powder is front-packed into an aluminium cavity mount, producing a randomly orientated sample for presentation to the x-ray beam.

The sample was analysed in a Philips X-Ray Diffractometer between 4.5° and 75° 2Θ (theta) at a step size of 0.013 and nominal time per step of 0.2s (continuous scanning mode), using x-ray radiation from a copper anode at 40kV, 40mA.

Although clay minerals are evident in 'whole rock' diffractograms, the most satisfactory method for their quantification is to extract and analyse separately the clay fraction. A 5g split of the sample that was disaggregated as the first stage of the whole rock preparation (see above) is taken and weighed accurately. The weight is recorded in a central register for later reference. Separating the <2 micron fraction is achieved by ultrasound and centrifugation. The total weight of clay extracted is determined by removing a 20-25g aliquot of the final clay suspension and evaporating to dryness at 80°C. The initial and final weights of the beaker used are also recorded in the register.

The clay XRD mount is obtained by filtering the clay suspension through a Millipore glass micro-fibre filter and drying the filtrate on the filter paper. The samples are analysed as an untreated clay, after saturation with ethylene glycol vapour overnight and following heating at 380°C for 2 hours, with a further heating to 550°C for one hour. The initial scan for these four treatments is between 3° and 35° 2Θ (theta) at a step size of 0.05°/s using x-ray radiation from a copper anode at 40kV, 40mA. The untreated sample is also analysed between 24-27° 2Θ at a step size of 0.02 °/2s to further define kaolinite/chlorite peaks.

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E-mail: info@insitusi.com
T: +44 (0)845 862 0558
M: +44 (0)7917 823541
VAT No: 922 3561 41
Company Reg No: 6339499

3. X-Ray Diffraction results

The whole rock analysis results are presented in Table 1, below.

The dominant mineral phases present are illite + mica, gypsum, palygorskite, quartz, smectite and K-feldspar. Minor plagioclase and chlorite were determined.

Table 1. Whole rock XRD analysis results.

Sample ID:	BH007: 10.30m
Whole rock fraction	
Mineral phase	**Weight (%)**
Smectite	11.4
Illite/Smectite	-
Illite + Mica	32.2
Kaolinite	-
Chlorite	0.7
Quartz	12.9
K-feldspar	4.6
Plagioclase	0.9
Palygorskite	14.6
Calcite	-
Dolomite	-
Gypsum	22.7
Anhydrite	-
Pyrite	-
Hematite	-
Total	100

TR = Trace, typically <0.5%, whereby a peak(s) for that mineral is observed but cannot be quantified successfully using Rietveld refinement

The clay size fraction analysis results are presented in Table 2, below.

The dominant mineral phases present in the clay fraction are poorly crystallised illite and smectite, with moderately crystallised chlorite.

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M: +44 (0)7917 823541
VAT No: 922 3561 41
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Table 2. Clay fraction XRD analysis results.

Sample ID:	BH007: 10.30m	
Clay fraction (<2 micron) – 4.4 weight % of bulk sample		
Mineral phase		**Weight (%)**
Smectite	Weight % (size fraction)	25.3
	Weight % (bulk sample)	1.1
	Crystallinity *see note 2 below*	P
Illite	Weight % (size fraction)	57.8
	Weight % (bulk sample)	2.6
	Crystallinity *see note 2 below*	P
Chlorite	Weight % (size fraction)	16.9
	Weight % (bulk sample)	0.7
	Crystallinity *see note 2 below*	M
Quartz	Weight % (size fraction)	TR
	Weight % (bulk sample)	TR
Gypsum	Weight % (size fraction)	-
	Weight % (bulk sample)	-

Note 1: Mixed layer ordering

RI = randomly interstratified

O = ordered interstratification

LR = long range ordering

Note 2: Crystallinity

VW = very well crystallised

W = well crystallised

M = moderately crystallised

P = poorly crystallised

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VAT No: 922 3561 41
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CERTIFICATE OF TEST

Mineral Content by X-Ray Diffraction Analysis

InSitu SI Ref No.:	**A1250101**	**Client Ref.**	**PSL**
Location:	**One Earth Solar Farm**	**Borehole Ref.**	**BH007**
Sample ID	**-**	**Material:**	**Mudstone**
Depth From:	**13.30m**	**Depth To:**	**13.50m**
Date Received:	**13th December 2024**	**Date Reported:**	**15th January 2025**
Sample Analysis:	**X-Ray Diffraction (XRD)**		
Sample Type:	**1 x rock core**	**Sample Preparation:**	**As received, visual examination** **XRD preparation detailed below**

Issued on 15/01/2025:	**R Cooke - Principal Geologist**	[redacted]	**R Cooke BSc (Hons), PhD, FMinSoc**

1. Sample Details:

The sample, as received, was wrapped in a sealed plastic bag. The core was 130mm in length and 87mm in diameter.

Upon receipt, the sample was opened and photographed. A visual inspection was made, with the sample being a very weak reddish brown silty MUDSTONE. There are frequent subrounded pockets of green iron reduction, up to 30mm in size.

Approximately 50% of the sample was despatched for mineral content determination by XRD analysis.



Plate 1. View of sample as received.
(scale bar = 10cm)

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T: +44 (0)845 862 0558
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2. X-Ray Diffraction sample preparation

The sample preparation for XRD analysis is as follows.

The sample is first disaggregated gently using a pestle and mortar. A 2g split of this material is then 'micronised' using a McCrone Micronising Mill to obtain an x-ray diffraction 'powder' with a mean particle diameter of between 5 - 10 microns. The sample, as a water-based slurry, is then sprayed under pressure into an oven where it instantly dries into a powder comprising microspherical aggregates of mineral particles. This powder is front-packed into an aluminium cavity mount, producing a randomly orientated sample for presentation to the x-ray beam.

The sample was analysed in a Philips X-Ray Diffractometer between 4.5° and 75° 2Θ (theta) at a step size of 0.013 and nominal time per step of 0.2s (continuous scanning mode), using x-ray radiation from a copper anode at 40kV, 40mA.

Although clay minerals are evident in 'whole rock' diffractograms, the most satisfactory method for their quantification is to extract and analyse separately the clay fraction. A 5g split of the sample that was disaggregated as the first stage of the whole rock preparation (see above) is taken and weighed accurately. The weight is recorded in a central register for later reference. Separating the <2 micron fraction is achieved by ultrasound and centrifugation. The total weight of clay extracted is determined by removing a 20-25g aliquot of the final clay suspension and evaporating to dryness at 80°C. The initial and final weights of the beaker used are also recorded in the register.

The clay XRD mount is obtained by filtering the clay suspension through a Millipore glass micro-fibre filter and drying the filtrate on the filter paper. The samples are analysed as an untreated clay, after saturation with ethylene glycol vapour overnight and following heating at 380°C for 2 hours, with a further heating to 550°C for one hour. The initial scan for these four treatments is between 3° and 35° 2Θ (theta) at a step size of 0.05°/s using x-ray radiation from a copper anode at 40kV, 40mA. The untreated sample is also analysed between 24-27° 2Θ at a step size of 0.02 °/2s to further define kaolinite/chlorite peaks.

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East Sussex TN38 9UH

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T: +44 (0)845 862 0558
M: +44 (0)7917 823541
VAT No: 922 3561 41
Company Reg No: 6339499

3. X-Ray Diffraction results

The whole rock analysis results are presented in Table 1, below.

The dominant mineral phases present are gypsum, illite + mica, smectite, quartz, dolomite, palygorskite and K-feldspar. Minor plagioclase and chlorite were determined.

Table 1. Whole rock XRD analysis results.

Sample ID:	BH007: 13.30m
Whole rock fraction	
Mineral phase	**Weight (%)**
Smectite	11.1
Illite/Smectite	-
Illite + Mica	20.2
Kaolinite	-
Chlorite	0.9
Quartz	10.6
K-feldspar	4.1
Plagioclase	0.9
Palygorskite	5.7
Calcite	-
Dolomite	8.1
Gypsum	38.4
Anhydrite	-
Pyrite	-
Hematite	-
Total	100

TR = Trace, typically <0.5%, whereby a peak(s) for that mineral is observed but cannot be quantified successfully using Rietveld refinement

The clay size fraction analysis results are presented in Table 2, below.

The dominant mineral phases present in the clay fraction are poorly crystallised illite and smectite, with moderately crystallised chlorite. Gypsum and minor quartz are also present.

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Table 2. Clay fraction XRD analysis results.

Sample ID:	BH007: 13.30m	
Clay fraction (<2 micron) – 5.5 weight % of bulk sample		
Mineral phase		**Weight (%)**
Smectite	Weight % (size fraction)	27.2
	Weight % (bulk sample)	1.5
	Crystallinity *see note 2 below*	P
Illite	Weight % (size fraction)	54.0
	Weight % (bulk sample)	3.0
	Crystallinity *see note 2 below*	P
Chlorite	Weight % (size fraction)	16.6
	Weight % (bulk sample)	0.9
	Crystallinity *see note 2 below*	M
Quartz	Weight % (size fraction)	0.5
	Weight % (bulk sample)	0.0
Gypsum	Weight % (size fraction)	1.8
	Weight % (bulk sample)	0.1

Note 1: Mixed layer ordering

RI = randomly interstratified

O = ordered interstratification

LR = long range ordering

Note 2: Crystallinity

VW = very well crystallised

W = well crystallised

M = moderately crystallised

P = poorly crystallised

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St Leonards-on-Sea
East Sussex TN38 9UH

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E-mail: info@insitusi.com
T: +44 (0)845 862 0558
M: +44 (0)7917 823541
VAT No: 922 3561 41
Company Reg No: 6339499

CERTIFICATE OF TEST

Mineral Content by X-Ray Diffraction Analysis

InSitu SI Ref No.:	**A1250101**	**Client Ref.**	**PSL**
Location:	**One Earth Solar Farm**	**Borehole Ref.**	**BH008**
Sample ID	**-**	**Material:**	**Mudstone**
Depth From:	**10.50m**	**Depth To:**	**10.70m**
Date Received:	**13th December 2024**	**Date Reported:**	**15th January 2025**
Sample Analysis:	**X-Ray Diffraction (XRD)**		
Sample Type:	**1 x rock core**	**Sample Preparation:**	**As received, visual examination** **XRD preparation detailed below**

Issued on 15/01/2025:	**R Cooke - Principal Geologist**	[redacted]	**R Cooke BSc (Hons), PhD, FMinSoc**

1. Sample Details:

The sample, as received, was wrapped in a sealed plastic bag. The core was 60mm in length and 87mm in diameter.

Upon receipt, the sample was opened and photographed. A visual inspection was made, with the sample being a weak reddish brown silty MUDSTONE. Frequent extremely closely spaced subhorizontal planar white gypsum veins are present, up to 1mm in width.

Approximately 50% of the sample was despatched for mineral content determination by XRD analysis.



Plate 1. View of sample as received.
(scale bar = 10cm)

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T: +44 (0)845 862 0558
M: +44 (0)7917 823541
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2. X-Ray Diffraction sample preparation

The sample preparation for XRD analysis is as follows.

The sample is first disaggregated gently using a pestle and mortar. A 2g split of this material is then 'micronised' using a McCrone Micronising Mill to obtain an x-ray diffraction 'powder' with a mean particle diameter of between 5 - 10 microns. The sample, as a water-based slurry, is then sprayed under pressure into an oven where it instantly dries into a powder comprising microspherical aggregates of mineral particles. This powder is front-packed into an aluminium cavity mount, producing a randomly orientated sample for presentation to the x-ray beam.

The sample was analysed in a Philips X-Ray Diffractometer between 4.5° and 75° 2Θ (theta) at a step size of 0.013 and nominal time per step of 0.2s (continuous scanning mode), using x-ray radiation from a copper anode at 40kV, 40mA.

Although clay minerals are evident in 'whole rock' diffractograms, the most satisfactory method for their quantification is to extract and analyse separately the clay fraction. A 5g split of the sample that was disaggregated as the first stage of the whole rock preparation (see above) is taken and weighed accurately. The weight is recorded in a central register for later reference. Separating the <2 micron fraction is achieved by ultrasound and centrifugation. The total weight of clay extracted is determined by removing a 20-25g aliquot of the final clay suspension and evaporating to dryness at 80°C. The initial and final weights of the beaker used are also recorded in the register.

The clay XRD mount is obtained by filtering the clay suspension through a Millipore glass micro-fibre filter and drying the filtrate on the filter paper. The samples are analysed as an untreated clay, after saturation with ethylene glycol vapour overnight and following heating at 380°C for 2 hours, with a further heating to 550°C for one hour. The initial scan for these four treatments is between 3° and 35° 2Θ (theta) at a step size of 0.05°/s using x-ray radiation from a copper anode at 40kV, 40mA. The untreated sample is also analysed between 24-27° 2Θ at a step size of 0.02 °/2s to further define kaolinite/chlorite peaks.

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3. X-Ray Diffraction results

The whole rock analysis results are presented in Table 1, below.

The dominant mineral phases present are gypsum, illite + mica, dolomite, smectite, quartz, palygorskite and K-feldspar. Minor chlorite was determined.

Table 1. Whole rock XRD analysis results.

Sample ID:	BH008: 10.50m
Whole rock fraction	
Mineral phase	**Weight (%)**
Smectite	14.9
Illite/Smectite	-
Illite + Mica	21.5
Kaolinite	-
Chlorite	0.6
Quartz	10.2
K-feldspar	4.1
Plagioclase	TR
Palygorskite	6.1
Calcite	-
Dolomite	17.3
Gypsum	25.3
Anhydrite	-
Pyrite	-
Hematite	-
Total	100

TR = Trace, typically <0.5%, whereby a peak(s) for that mineral is observed but cannot be quantified successfully using Rietveld refinement

The clay size fraction analysis results are presented in Table 2, below.

The dominant mineral phases present in the clay fraction are poorly crystallised illite and smectite, with moderately crystallised chlorite. Gypsum and minor quartz are also present.

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Table 2. Clay fraction XRD analysis results.

Sample ID:	BH008: 10.50m	
Clay fraction (<2 micron) – 4.7 weight % of bulk sample		
Mineral phase		**Weight (%)**
Smectite	Weight % (size fraction)	25.7
	Weight % (bulk sample)	1.2
	Crystallinity *see note 2 below*	P
Illite	Weight % (size fraction)	58.9
	Weight % (bulk sample)	2.8
	Crystallinity *see note 2 below*	P
Chlorite	Weight % (size fraction)	13.7
	Weight % (bulk sample)	0.6
	Crystallinity *see note 2 below*	M
Quartz	Weight % (size fraction)	0.6
	Weight % (bulk sample)	0.0
Gypsum	Weight % (size fraction)	1.1
	Weight % (bulk sample)	0.1

Note 1: Mixed layer ordering

RI = randomly interstratified

O = ordered interstratification

LR = long range ordering

Note 2: Crystallinity

VW = very well crystallised

W = well crystallised

M = moderately crystallised

P = poorly crystallised

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East Sussex TN38 9UH

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E-mail: info@insitusi.com
T: +44 (0)845 862 0558
M: +44 (0)7917 823541
VAT No: 922 3561 41
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CERTIFICATE OF TEST

Mineral Content by X-Ray Diffraction Analysis

InSitu SI Ref No.:	**A1250101**	**Client Ref.**	**PSL**
Location:	**One Earth Solar Farm**	**Borehole Ref.**	**BH008**
Sample ID	**-**	**Material:**	**Mudstone**
Depth From:	**12.00m**	**Depth To:**	**12.20m**
Date Received:	**13th December 2024**	**Date Reported:**	**15th January 2025**
Sample Analysis:	**X-Ray Diffraction (XRD)**		
Sample Type:	**1 x rock core**	**Sample Preparation:**	**As received, visual examination** **XRD preparation detailed below**

Issued on 15/01/2025:	**R Cooke - Principal Geologist**	[redacted]	**R Cooke BSc (Hons), PhD, FMinSoc**

1. Sample Details:

The sample, as received, was wrapped in a sealed plastic bag. The core was 100mm in length and 87mm in diameter. Upon receipt, the sample was opened and photographed. A visual inspection was made, with the sample being a very weak light greenish grey mottled pink silty MUDSTONE.

Approximately 50% of the sample was despatched for mineral content determination by XRD analysis.



Plate 1. View of sample as received.
(scale bar = 10cm)

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2. X-Ray Diffraction sample preparation

The sample preparation for XRD analysis is as follows.

The sample is first disaggregated gently using a pestle and mortar. A 2g split of this material is then 'micronised' using a McCrone Micronising Mill to obtain an x-ray diffraction 'powder' with a mean particle diameter of between 5 - 10 microns. The sample, as a water-based slurry, is then sprayed under pressure into an oven where it instantly dries into a powder comprising microspherical aggregates of mineral particles. This powder is front-packed into an aluminium cavity mount, producing a randomly orientated sample for presentation to the x-ray beam.

The sample was analysed in a Philips X-Ray Diffractometer between 4.5° and 75° 2Θ (theta) at a step size of 0.013 and nominal time per step of 0.2s (continuous scanning mode), using x-ray radiation from a copper anode at 40kV, 40mA.

Although clay minerals are evident in 'whole rock' diffractograms, the most satisfactory method for their quantification is to extract and analyse separately the clay fraction. A 5g split of the sample that was disaggregated as the first stage of the whole rock preparation (see above) is taken and weighed accurately. The weight is recorded in a central register for later reference. Separating the <2 micron fraction is achieved by ultrasound and centrifugation. The total weight of clay extracted is determined by removing a 20-25g aliquot of the final clay suspension and evaporating to dryness at 80°C. The initial and final weights of the beaker used are also recorded in the register.

The clay XRD mount is obtained by filtering the clay suspension through a Millipore glass micro-fibre filter and drying the filtrate on the filter paper. The samples are analysed as an untreated clay, after saturation with ethylene glycol vapour overnight and following heating at 380°C for 2 hours, with a further heating to 550°C for one hour. The initial scan for these four treatments is between 3° and 35° 2Θ (theta) at a step size of 0.05°/s using x-ray radiation from a copper anode at 40kV, 40mA. The untreated sample is also analysed between 24-27° 2Θ at a step size of 0.02 °/2s to further define kaolinite/chlorite peaks.

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3. X-Ray Diffraction results

The whole rock analysis results are presented in Table 1, below.

The dominant mineral phases present are gypsum, illite + mica, dolomite, palygorskite, quartz and smectite. Minor chlorite was determined.

Table 1. Whole rock XRD analysis results.

Sample ID:	BH008: 12.00m
Whole rock fraction	
Mineral phase	**Weight (%)**
Smectite	5.6
Illite/Smectite	-
Illite + Mica	17.5
Kaolinite	-
Chlorite	0.8
Quartz	5.8
K-feldspar	TR
Plagioclase	TR
Palygorskite	8.8
Calcite	-
Dolomite	12.6
Gypsum	48.9
Anhydrite	-
Pyrite	-
Hematite	-
Total	100

TR = Trace, typically <0.5%, whereby a peak(s) for that mineral is observed but cannot be quantified successfully using Rietveld refinement

The clay size fraction analysis results are presented in Table 2, below.

The dominant mineral phases present in the clay fraction are poorly crystallised illite and smectite, with moderately crystallised chlorite. Gypsum and minor quartz are also present.

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East Sussex TN38 9UH

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T: +44 (0)845 862 0558
M: +44 (0)7917 823541
VAT No: 922 3561 41
Company Reg No: 6339499

Table 2. Clay fraction XRD analysis results.

Sample ID:	BH008: 12.00m	
Clay fraction (<2 micron) – 5.1 weight % of bulk sample		
Mineral phase		**Weight (%)**
Smectite	Weight % (size fraction)	35.7
	Weight % (bulk sample)	1.8
	Crystallinity *see note 2 below*	P
Illite	Weight % (size fraction)	42.6
	Weight % (bulk sample)	2.2
	Crystallinity *see note 2 below*	P
Chlorite	Weight % (size fraction)	16.5
	Weight % (bulk sample)	0.8
	Crystallinity *see note 2 below*	M
Quartz	Weight % (size fraction)	0.6
	Weight % (bulk sample)	0.0
Gypsum	Weight % (size fraction)	4.7
	Weight % (bulk sample)	0.2

Note 1: Mixed layer ordering

RI = randomly interstratified

O = ordered interstratification

LR = long range ordering

Note 2: Crystallinity

VW = very well crystallised

W = well crystallised

M = moderately crystallised

P = poorly crystallised

TR = Trace, typically <0.5%, whereby a peak(s) for that mineral is observed but cannot be quantified successfully using Rietveld refinement

Results reported herein relate solely to the sample tested and are not necessarily representative of a larger sample population.
The samples reported on herein were not sampled or identified by InSitu SI unless otherwise stated.
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In Situ Site Investigation Ltd
Innovation Centre
Highfield Drive
St Leonards-on-Sea
East Sussex TN38 9UH

IN SITU
SITE INVESTIGATION

E-mail: info@insitusi.com
T: +44 (0)845 862 0558
M: +44 (0)7917 823541
VAT No: 922 3561 41
Company Reg No: 6339499

CERTIFICATE OF TEST

Mineral Content by X-Ray Diffraction Analysis

InSitu SI Ref No.:	**A1250101**	**Client Ref.**	**PSL**
Location:	**One Earth Solar Farm**	**Borehole Ref.**	**BH009**
Sample ID	**-**	**Material:**	**Mudstone**
Depth From:	**11.20m**	**Depth To:**	**11.40m**
Date Received:	**13th December 2024**	**Date Reported:**	**15th January 2025**
Sample Analysis:	**X-Ray Diffraction (XRD)**		
Sample Type:	**1 x rock core**	**Sample Preparation:**	**As received, visual examination** **XRD preparation detailed below**

Issued on 15/01/2025:	**R Cooke - Principal Geologist**	[redacted]	**R Cooke BSc (Hons), PhD, FMinSoc**

1. Sample Details:

The sample, as received, was wrapped in a sealed plastic bag. The core was 80mm in length and 87mm in diameter.

Upon receipt, the sample was opened and photographed. A visual inspection was made, with the sample being a very weak to greenish grey silty MUDSTONE. Frequent extremely closely spaced subhorizontal planar white gypsum veins are present, up to 1mm in width.

Approximately 50% of the sample was despatched for mineral content determination by XRD analysis.



Plate 1. View of sample as received.
(scale bar = 10cm)

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Company Reg No: 6339499

2. X-Ray Diffraction sample preparation

The sample preparation for XRD analysis is as follows.

The sample is first disaggregated gently using a pestle and mortar. A 2g split of this material is then 'micronised' using a McCrone Micronising Mill to obtain an x-ray diffraction 'powder' with a mean particle diameter of between 5 - 10 microns. The sample, as a water-based slurry, is then sprayed under pressure into an oven where it instantly dries into a powder comprising microspherical aggregates of mineral particles. This powder is front-packed into an aluminium cavity mount, producing a randomly orientated sample for presentation to the x-ray beam.

The sample was analysed in a Philips X-Ray Diffractometer between 4.5° and 75° 2Θ (theta) at a step size of 0.013 and nominal time per step of 0.2s (continuous scanning mode), using x-ray radiation from a copper anode at 40kV, 40mA.

Although clay minerals are evident in 'whole rock' diffractograms, the most satisfactory method for their quantification is to extract and analyse separately the clay fraction. A 5g split of the sample that was disaggregated as the first stage of the whole rock preparation (see above) is taken and weighed accurately. The weight is recorded in a central register for later reference. Separating the <2 micron fraction is achieved by ultrasound and centrifugation. The total weight of clay extracted is determined by removing a 20-25g aliquot of the final clay suspension and evaporating to dryness at 80°C. The initial and final weights of the beaker used are also recorded in the register.

The clay XRD mount is obtained by filtering the clay suspension through a Millipore glass micro-fibre filter and drying the filtrate on the filter paper. The samples are analysed as an untreated clay, after saturation with ethylene glycol vapour overnight and following heating at 380°C for 2 hours, with a further heating to 550°C for one hour. The initial scan for these four treatments is between 3° and 35° 2Θ (theta) at a step size of 0.05°/s using x-ray radiation from a copper anode at 40kV, 40mA. The untreated sample is also analysed between 24-27° 2Θ at a step size of 0.02 °/2s to further define kaolinite/chlorite peaks.

Results reported herein relate solely to the sample tested and are not necessarily representative of a larger sample population.
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3. X-Ray Diffraction results

The whole rock analysis results are presented in Table 1, below.

The dominant mineral phases present are illite + mica, gypsum, dolomite, smectite, palygorskite, quartz and K-feldspar. Minor chlorite was determined.

Table 1. Whole rock XRD analysis results.

Sample ID:	BH009: 11.20m
Whole rock fraction	
Mineral phase	**Weight (%)**
Smectite	12.1
Illite/Smectite	-
Illite + Mica	26.5
Kaolinite	-
Chlorite	0.8
Quartz	6.5
K-feldspar	2.9
Plagioclase	TR
Palygorskite	11.8
Calcite	-
Dolomite	14.2
Gypsum	25.3
Anhydrite	-
Pyrite	-
Hematite	-
Total	100

TR = Trace, typically <0.5%, whereby a peak(s) for that mineral is observed but cannot be quantified successfully using Rietveld refinement

The clay size fraction analysis results are presented in Table 2, below.

The dominant mineral phases present in the clay fraction are poorly crystallised illite and smectite, with moderately crystallised chlorite.

Results reported herein relate solely to the sample tested and are not necessarily representative of a larger sample population.
The samples reported on herein were not sampled or identified by InSitu SI unless otherwise stated.
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Table 2. Clay fraction XRD analysis results.

Sample ID:	BH009: 11.20m	
Clay fraction (<2 micron) – 5.3 weight % of bulk sample		
Mineral phase		**Weight (%)**
Smectite	Weight % (size fraction)	23.0
	Weight % (bulk sample)	1.2
	Crystallinity *see note 2 below*	P
Illite	Weight % (size fraction)	62.5
	Weight % (bulk sample)	3.3
	Crystallinity *see note 2 below*	P
Chlorite	Weight % (size fraction)	14.5
	Weight % (bulk sample)	0.8
	Crystallinity *see note 2 below*	M
Quartz	Weight % (size fraction)	TR
	Weight % (bulk sample)	TR
Gypsum	Weight % (size fraction)	-
	Weight % (bulk sample)	-

Note 1: Mixed layer ordering

RI = randomly interstratified

O = ordered interstratification

LR = long range ordering

Note 2: Crystallinity

VW = very well crystallised

W = well crystallised

M = moderately crystallised

P = poorly crystallised

TR = Trace, typically <0.5%, whereby a peak(s) for that mineral is observed but cannot be quantified successfully using Rietveld refinement

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CERTIFICATE OF TEST

Mineral Content by X-Ray Diffraction Analysis

InSitu SI Ref No.:	**A1250101**	**Client Ref.**	**PSL**
Location:	**One Earth Solar Farm**	**Borehole Ref.**	**BH009**
Sample ID	**-**	**Material:**	**Mudstone**
Depth From:	**14.30m**	**Depth To:**	**14.50m**
Date Received:	**13th December 2024**	**Date Reported:**	**15th January 2025**
Sample Analysis:	**X-Ray Diffraction (XRD)**		
Sample Type:	**1 x rock core**	**Sample Preparation:**	**As received, visual examination** **XRD preparation detailed below**

Issued on 15/01/2025:	**R Cooke - Principal Geologist**	[redacted]	**R Cooke BSc (Hons), PhD, FMinSoc**

1. Sample Details:

The sample, as received, was wrapped in a sealed plastic bag. The core was 180mm in length and 87mm in diameter.

Upon receipt, the sample was opened and photographed. A visual inspection was made, with the sample being a weak reddish brown silty MUDSTONE. There are occasional subrounded green iron reduction spots, up to 5mm in size. Randomly orientated planar to curved white gypsum veins are present, up to 8mm in width.

Approximately 50% of the sample was despatched for mineral content determination by XRD analysis.



Plate 1. View of sample as received.
(scale bar = 10cm)

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2. X-Ray Diffraction sample preparation

The sample preparation for XRD analysis is as follows.

The sample is first disaggregated gently using a pestle and mortar. A 2g split of this material is then 'micronised' using a McCrone Micronising Mill to obtain an x-ray diffraction 'powder' with a mean particle diameter of between 5 - 10 microns. The sample, as a water-based slurry, is then sprayed under pressure into an oven where it instantly dries into a powder comprising microspherical aggregates of mineral particles. This powder is front-packed into an aluminium cavity mount, producing a randomly orientated sample for presentation to the x-ray beam.

The sample was analysed in a Philips X-Ray Diffractometer between 4.5° and 75° 2Θ (theta) at a step size of 0.013 and nominal time per step of 0.2s (continuous scanning mode), using x-ray radiation from a copper anode at 40kV, 40mA.

Although clay minerals are evident in 'whole rock' diffractograms, the most satisfactory method for their quantification is to extract and analyse separately the clay fraction. A 5g split of the sample that was disaggregated as the first stage of the whole rock preparation (see above) is taken and weighed accurately. The weight is recorded in a central register for later reference. Separating the <2 micron fraction is achieved by ultrasound and centrifugation. The total weight of clay extracted is determined by removing a 20-25g aliquot of the final clay suspension and evaporating to dryness at 80°C. The initial and final weights of the beaker used are also recorded in the register.

The clay XRD mount is obtained by filtering the clay suspension through a Millipore glass micro-fibre filter and drying the filtrate on the filter paper. The samples are analysed as an untreated clay, after saturation with ethylene glycol vapour overnight and following heating at 380°C for 2 hours, with a further heating to 550°C for one hour. The initial scan for these four treatments is between 3° and 35° 2Θ (theta) at a step size of 0.05°/s using x-ray radiation from a copper anode at 40kV, 40mA. The untreated sample is also analysed between 24-27° 2Θ at a step size of 0.02 °/2s to further define kaolinite/chlorite peaks.

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3. X-Ray Diffraction results

The whole rock analysis results are presented in Table 1, below.

The dominant mineral phases present are illite + mica, smectite, quartz, palygorskite, gypsum and K-feldspar. Minor hematite, plagioclase and chlorite were determined.

Table 1. Whole rock XRD analysis results.

Sample ID:	BH009: 14.30m
Whole rock fraction	
Mineral phase	**Weight (%)**
Smectite	17.5
Illite/Smectite	-
Illite + Mica	38.0
Kaolinite	-
Chlorite	0.7
Quartz	15.6
K-feldspar	7.0
Plagioclase	1.8
Palygorskite	8.5
Calcite	-
Dolomite	-
Gypsum	8.2
Anhydrite	-
Pyrite	-
Hematite	2.7
Total	100

TR = Trace, typically <0.5%, whereby a peak(s) for that mineral is observed but cannot be quantified successfully using Rietveld refinement

The clay size fraction analysis results are presented in Table 2, below.

The dominant mineral phases present in the clay fraction are poorly crystallised illite and smectite, with moderately crystallised chlorite.

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Table 2. Clay fraction XRD analysis results.

Sample ID:	BH009: 14.30m	
Clay fraction (<2 micron) – 4.4 weight % of bulk sample		
Mineral phase		**Weight (%)**
Smectite	Weight % (size fraction)	32.4
	Weight % (bulk sample)	1.4
	Crystallinity *see note 2 below*	P
Illite	Weight % (size fraction)	52.8
	Weight % (bulk sample)	2.2
	Crystallinity *see note 2 below*	P
Chlorite	Weight % (size fraction)	14.7
	Weight % (bulk sample)	0.7
	Crystallinity *see note 2 below*	M
Quartz	Weight % (size fraction)	TR
	Weight % (bulk sample)	TR
Gypsum	Weight % (size fraction)	-
	Weight % (bulk sample)	-

Note 1: Mixed layer ordering

RI = randomly interstratified

O = ordered interstratification

LR = long range ordering

Note 2: Crystallinity

VW = very well crystallised

W = well crystallised

M = moderately crystallised

P = poorly crystallised

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CENTRAL ALLIANCE
GROUND ENGINEERING TECHNICAL SERVICES

Appendix E
Chemical Laboratory Testing Results

envirolab
Hattersley Science & Technology Park
Stockport Road, Hattersley, SK14 3QU

FINAL ANALYTICAL TEST REPORT

Envirolab Job Number: 24/10027
Issue Number: 1 **Date:** 24 October, 2024

Client:
Central Alliance
Alliance House
South Park Way
South Park Way
Wakefield 41 Business Park
Wakefield
WF2 0XJ

Project Manager: John Parkinson/Lab results
Project Name: One Earth Solar Farm
Project Ref: 2372986
Order No: N/A
Date Samples Received: 02/10/24
Date Instructions Received: 17/10/24
Date Analysis Completed: 24/10/24

Approved by:

[redacted]

Richard Wong
Client Manager

mCERTS THE ENVIRONMENT AGENCY'S MONITORING CERTIFICATION SCHEME
UKAS TESTING 1247

Envirolab Job Number: 24/10027

Client Project Name: One Earth Solar Farm

Client Project Ref: 2372986

Lab Sample ID	24/10027/1	24/10027/2	24/10027/5	24/10027/12	24/10027/13	24/10027/14		Units	Limit of Detection	Method ref
Client Sample No	101	102	105	101	102	103				
Client Sample ID	BH012	BH012	BH012	BH013	BH013	BH013				
Depth to Top	0.30	0.50	2.90	0.30	0.50	1.00				
Depth To Bottom										
Date Sampled	24-Sep-24	24-Sep-24	24-Sep-24	24-Sep-24	24-Sep-24	24-Sep-24				
Sample Type	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES				
Sample Matrix Code	4AE	4A	4A	4AE	4AE	4AE				
% Stones >10mm$_A$	5.3	<0.1	6.7	<0.1	<0.1	<0.1		% w/w	0.1	A-T-044
pH$_D$$^{M\#}$	7.16	7.46	8.50	7.45	7.39	8.04		pH	0.01	A-T-031s
Sulphate (water sol 2:1)$_D$$^{M\#}$	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		g/l	0.01	A-T-026s
Cyanide (total)$_A$$^{M\#}$	<1	-	-	<1	-	-		mg/kg	1	A-T-042sTCN
Phenol$_A$	<0.2	-	-	<0.2	-	-		mg/kg	0.2	A-T-050s
Organic Matter$_D$$^{M\#}$	1.2	0.7	3.2	0.7	0.7	2.0		% w/w	0.1	A-T-032s
Arsenic$_D$$^{M\#}$	3	2	<1	6	10	2		mg/kg	1	A-T-024s
Boron (water soluble)$_D$$^{M\#}$	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0		mg/kg	1	A-T-027s
Cadmium$_D$$^{M\#}$	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		mg/kg	0.5	A-T-024s
Copper$_D$$^{M\#}$	11	43	27	23	26	43		mg/kg	1	A-T-024s
Chromium$_D$$^{M\#}$	13	38	29	26	26	32		mg/kg	1	A-T-024s
Lead$_D$$^{M\#}$	16	7	<1	8	10	4		mg/kg	1	A-T-024s
Mercury$_D$	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17		mg/kg	0.17	A-T-024s
Nickel$_D$$^{M\#}$	9	33	22	26	25	26		mg/kg	1	A-T-024s
Zinc$_D$$^{M\#}$	42	61	48	60	58	57		mg/kg	5	A-T-024s

Envirolab Job Number: 24/10027

Client Project Name: One Earth Solar Farm

Client Project Ref: 2372986

Lab Sample ID	24/10027/1	24/10027/2	24/10027/5	24/10027/12	24/10027/13	24/10027/14		Units	Limit of Detection	Method ref
Client Sample No	101	102	105	101	102	103				
Client Sample ID	BH012	BH012	BH012	BH013	BH013	BH013				
Depth to Top	0.30	0.50	2.90	0.30	0.50	1.00				
Depth To Bottom										
Date Sampled	24-Sep-24	24-Sep-24	24-Sep-24	24-Sep-24	24-Sep-24	24-Sep-24				
Sample Type	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES				
Sample Matrix Code	4AE	4A	4A	4AE	4AE	4AE				
Asbestos in Soil (inc. matrix) ^										
Asbestos in soil$_D^{\#}$	-	-	-	NAD	-	-				A-T-045
Asbestos Matrix (visual)$_D$	-	-	-	-	-	-				A-T-045
Asbestos Matrix (microscope)$_D$	-	-	-	-	-	-				A-T-045
Asbestos ACM - Suitable for Water Absorption Test?$_D$	-	-	-	N/A	-	-				A-T-045

Envirolab Job Number: 24/10027

Client Project Name: One Earth Solar Farm

Client Project Ref: 2372986

Lab Sample ID	24/10027/1	24/10027/2	24/10027/5	24/10027/12	24/10027/13	24/10027/14		Units	Limit of Detection	Method ref
Client Sample No	101	102	105	101	102	103				
Client Sample ID	BH012	BH012	BH012	BH013	BH013	BH013				
Depth to Top	0.30	0.50	2.90	0.30	0.50	1.00				
Depth To Bottom										
Date Sampled	24-Sep-24	24-Sep-24	24-Sep-24	24-Sep-24	24-Sep-24	24-Sep-24				
Sample Type	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES				
Sample Matrix Code	4AE	4A	4A	4AE	4AE	4AE				
PAH-16MS										
Acenaphthene$_A^{M\#}$	<0.01	-	-	<0.01	-	-		mg/kg	0.01	A-T-019s
Acenaphthylene$_A^{M\#}$	<0.01	-	-	<0.01	-	-		mg/kg	0.01	A-T-019s
Anthracene$_A^{M\#}$	<0.02	-	-	<0.02	-	-		mg/kg	0.02	A-T-019s
Benzo(a)anthracene$_A^{M\#}$	<0.04	-	-	<0.04	-	-		mg/kg	0.04	A-T-019s
Benzo(a)pyrene$_A^{M\#}$	<0.04	-	-	<0.04	-	-		mg/kg	0.04	A-T-019s
Benzo(b)fluoranthene$_A^{M\#}$	<0.05	-	-	<0.05	-	-		mg/kg	0.05	A-T-019s
Benzo(ghi)perylene$_A^{M\#}$	<0.05	-	-	<0.05	-	-		mg/kg	0.05	A-T-019s
Benzo(k)fluoranthene$_A^{M\#}$	<0.07	-	-	<0.07	-	-		mg/kg	0.07	A-T-019s
Chrysene$_A^{M\#}$	<0.06	-	-	<0.06	-	-		mg/kg	0.06	A-T-019s
Dibenzo(ah)anthracene$_A^{M\#}$	<0.04	-	-	<0.04	-	-		mg/kg	0.04	A-T-019s
Fluoranthene$_A^{M\#}$	<0.08	-	-	<0.08	-	-		mg/kg	0.08	A-T-019s
Fluorene$_A^{M\#}$	<0.01	-	-	<0.01	-	-		mg/kg	0.01	A-T-019s
Indeno(123-cd)pyrene$_A^{M\#}$	<0.03	-	-	<0.03	-	-		mg/kg	0.03	A-T-019s
Naphthalene $_A^{M\#}$	<0.03	-	-	<0.03	-	-		mg/kg	0.03	A-T-019s
Phenanthrene$_A^{M\#}$	<0.03	-	-	<0.03	-	-		mg/kg	0.03	A-T-019s
Pyrene$_A^{M\#}$	<0.07	-	-	<0.07	-	-		mg/kg	0.07	A-T-019s
Total PAH-16MS$_A^{M\#}$	<0.08	-	-	<0.08	-	-		mg/kg	0.01	A-T-019s

Envirolab Job Number: 24/10027

Client Project Name: One Earth Solar Farm

Client Project Ref: 2372986

Lab Sample ID	24/10027/1	24/10027/2	24/10027/5	24/10027/12	24/10027/13	24/10027/14		Units	Limit of Detection	Method ref
Client Sample No	101	102	105	101	102	103				
Client Sample ID	BH012	BH012	BH012	BH013	BH013	BH013				
Depth to Top	0.30	0.50	2.90	0.30	0.50	1.00				
Depth To Bottom										
Date Sampled	24-Sep-24	24-Sep-24	24-Sep-24	24-Sep-24	24-Sep-24	24-Sep-24				
Sample Type	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES				
Sample Matrix Code	4AE	4A	4A	4AE	4AE	4AE				
SVOC excluding PAH-16										
4-Bromophenyl phenyl ether$_A$	<100	-	-	<100	-	-		µg/kg	100	A-T-052s
Hexachlorobenzene$_A$	<100	-	-	<100	-	-		µg/kg	100	A-T-052s
Diethyl phthalate$_A$	<100	-	-	<100	-	-		µg/kg	100	A-T-052s
Dimethyl phthalate$_A$	<100	-	-	<100	-	-		µg/kg	100	A-T-052s
Dibenzofuran$_A$	<100	-	-	<100	-	-		µg/kg	100	A-T-052s
Carbazole$_A$	<100	-	-	<100	-	-		µg/kg	100	A-T-052s
Butylbenzyl phthalate$_A$	<100	-	-	<100	-	-		µg/kg	100	A-T-052s
Bis(2-ethylhexyl)phthalate$_A$	<500	-	-	<500	-	-		µg/kg	500	A-T-052s
Bis(2-chloroethoxy)methane$_A$	<100	-	-	<100	-	-		µg/kg	100	A-T-052s
Bis(2-chloroethyl)ether$_A$	<100	-	-	<100	-	-		µg/kg	100	A-T-052s
4-Nitrophenol$_A$	<100	-	-	<100	-	-		µg/kg	100	A-T-052s
3+4-Methylphenol$_A$	<100	-	-	<100	-	-		µg/kg	100	A-T-052s
4-Chloro-3-methylphenol$_A$	<100	-	-	<100	-	-		µg/kg	100	A-T-052s
2-Nitrophenol$_A$	<100	-	-	<100	-	-		µg/kg	100	A-T-052s
2-Methylphenol$_A$	<100	-	-	<100	-	-		µg/kg	100	A-T-052s
1,2,4-Trichlorobenzene$_A$	<100	-	-	<100	-	-		µg/kg	100	A-T-052s
2-Chlorophenol$_A$	<100	-	-	<100	-	-		µg/kg	100	A-T-052s
2,6-Dinitrotoluene$_A$	<100	-	-	<100	-	-		µg/kg	100	A-T-052s
2,4-Dinitrotoluene$_A$	<100	-	-	<100	-	-		µg/kg	100	A-T-052s
2,4-Dimethylphenol$_A$	<100	-	-	<100	-	-		µg/kg	100	A-T-052s
2,4-Dichlorophenol$_A$	<100	-	-	<100	-	-		µg/kg	100	A-T-052s
2,4,6-Trichlorophenol$_A$	<100	-	-	<100	-	-		µg/kg	100	A-T-052s
2,4,5-Trichlorophenol$_A$	<100	-	-	<100	-	-		µg/kg	100	A-T-052s
1,4-Dichlorobenzene$_A$	<100	-	-	<100	-	-		µg/kg	100	A-T-052s
1,3-Dichlorobenzene$_A$	<100	-	-	<100	-	-		µg/kg	100	A-T-052s
1,2-Dichlorobenzene$_A$	<100	-	-	<100	-	-		µg/kg	100	A-T-052s
2-Chloronaphthalene$_A$	<100	-	-	<100	-	-		µg/kg	100	A-T-052s
2-Methylnaphthalene$_A$	<100	-	-	<100	-	-		µg/kg	100	A-T-052s
Bis(2-chloroisopropyl)ether$_A$	<100	-	-	<100	-	-		µg/kg	100	A-T-052s
Phenol$_A$	<100	-	-	<100	-	-		µg/kg	100	A-T-052s
Pentachlorophenol$_A$	<100	-	-	<100	-	-		µg/kg	100	A-T-052s
n-Nitroso-n-dipropylamine$_A$	<100	-	-	<100	-	-		µg/kg	100	A-T-052s

Envirolab Job Number: 24/10027

Client Project Name: One Earth Solar Farm

Client Project Ref: 2372986

Lab Sample ID	24/10027/1	24/10027/2	24/10027/5	24/10027/12	24/10027/13	24/10027/14		Units	Limit of Detection	Method ref
Client Sample No	101	102	105	101	102	103				
Client Sample ID	BH012	BH012	BH012	BH013	BH013	BH013				
Depth to Top	0.30	0.50	2.90	0.30	0.50	1.00				
Depth To Bottom										
Date Sampled	24-Sep-24	24-Sep-24	24-Sep-24	24-Sep-24	24-Sep-24	24-Sep-24				
Sample Type	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES				
Sample Matrix Code	4AE	4A	4A	4AE	4AE	4AE				
n-Dioctylphthalate$_A$	<500	-	-	<500	-	-		µg/kg	500	A-T-052s
n-Dibutylphthalate$_A$	<100	-	-	<100	-	-		µg/kg	100	A-T-052s
Nitrobenzene$_A$	<100	-	-	<100	-	-		µg/kg	100	A-T-052s
Isophorone$_A$	<100	-	-	<100	-	-		µg/kg	100	A-T-052s
Hexachloroethane$_A$	<100	-	-	<100	-	-		µg/kg	100	A-T-052s
Hexachlorobutadiene$_A$	<100	-	-	<100	-	-		µg/kg	100	A-T-052s
Perylene$_A$	<100	-	-	<100	-	-		µg/kg	100	A-T-052s

Envirolab Job Number: 24/10027

Client Project Name: One Earth Solar Farm

Client Project Ref: 2372986

Lab Sample ID	24/10027/1	24/10027/2	24/10027/5	24/10027/12	24/10027/13	24/10027/14		Units	Limit of Detection	Method ref
Client Sample No	101	102	105	101	102	103				
Client Sample ID	BH012	BH012	BH012	BH013	BH013	BH013				
Depth to Top	0.30	0.50	2.90	0.30	0.50	1.00				
Depth To Bottom										
Date Sampled	24-Sep-24	24-Sep-24	24-Sep-24	24-Sep-24	24-Sep-24	24-Sep-24				
Sample Type	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES				
Sample Matrix Code	4AE	4A	4A	4AE	4AE	4AE				
VOC										
Dichlorodifluoromethane$_{A}$	<1	-	-	<1	-	-		µg/kg	1	A-T-006s
Chloromethane$_{A}$	<10	-	-	<10	-	-		µg/kg	10	A-T-006s
Vinyl Chloride (Chloroethene)$_{A}^{\#}$	<1	-	-	<1	-	-		µg/kg	1	A-T-006s
Bromomethane$_{A}^{\#}$	<1	-	-	<1	-	-		µg/kg	1	A-T-006s
Chloroethane$_{A}^{\#}$	<1	-	-	<1	-	-		µg/kg	1	A-T-006s
Trichlorofluoromethane$_{A}^{\#}$	<1	-	-	<1	-	-		µg/kg	1	A-T-006s
1,1-Dichloroethene$_{A}^{\#}$	<1	-	-	<1	-	-		µg/kg	1	A-T-006s
Carbon Disulphide$_{A}^{\#}$	<1	-	-	<1	-	-		µg/kg	1	A-T-006s
Dichloromethane$_{A}$	<5	-	-	<5	-	-		µg/kg	5	A-T-006s
trans 1,2-Dichloroethene$_{A}^{\#}$	<1	-	-	<1	-	-		µg/kg	1	A-T-006s
1,1-Dichloroethane$_{A}^{\#}$	<1	-	-	<1	-	-		µg/kg	1	A-T-006s
cis 1,2-Dichloroethene$_{A}^{\#}$	<1	-	-	<1	-	-		µg/kg	1	A-T-006s
2,2-Dichloropropane$_{A}^{\#}$	<1^{U}	-	-	<1^{U}	-	-		µg/kg	1	A-T-006s
Bromochloromethane$_{A}^{\#}$	<5	-	-	<5	-	-		µg/kg	5	A-T-006s
Chloroform$_{A}^{\#}$	<1	-	-	<1	-	-		µg/kg	1	A-T-006s
1,1,1-Trichloroethane$_{A}^{\#}$	<1	-	-	<1	-	-		µg/kg	1	A-T-006s
1,1-Dichloropropene$_{A}^{\#}$	<1	-	-	<1	-	-		µg/kg	1	A-T-006s
Carbon Tetrachloride$_{A}^{\#}$	<1	-	-	<1	-	-		µg/kg	1	A-T-006s
1,2-Dichloroethane$_{A}^{\#}$	<2	-	-	<2	-	-		µg/kg	2	A-T-006s
Benzene$_{A}^{\#}$	<1	-	-	<1	-	-		µg/kg	1	A-T-006s
Trichloroethene$_{A}^{\#}$	<1	-	-	<1	-	-		µg/kg	1	A-T-006s
1,2-Dichloropropane$_{A}^{\#}$	<1	-	-	<1	-	-		µg/kg	1	A-T-006s
Dibromomethane$_{A}^{\#}$	<1	-	-	<1	-	-		µg/kg	1	A-T-006s
Bromodichloromethane$_{A}^{\#}$	<10	-	-	<10	-	-		µg/kg	10	A-T-006s
cis 1,3-Dichloropropene$_{A}^{\#}$	<1	-	-	<1	-	-		µg/kg	1	A-T-006s
Toluene$_{A}^{\#}$	<1	-	-	<1	-	-		µg/kg	1	A-T-006s
trans 1,3-Dichloropropene$_{A}^{\#}$	<1	-	-	<1	-	-		µg/kg	1	A-T-006s
1,1,2-Trichloroethane$_{A}^{\#}$	<1	-	-	<1	-	-		µg/kg	1	A-T-006s
1,3-Dichloropropane$_{A}^{\#}$	<1	-	-	<1	-	-		µg/kg	1	A-T-006s
Tetrachloroethene$_{A}^{\#}$	<1	-	-	<1	-	-		µg/kg	1	A-T-006s
Dibromochloromethane$_{A}^{\#}$	<3	-	-	<3	-	-		µg/kg	3	A-T-006s
1,2-Dibromoethane$_{A}^{\#}$	<1	-	-	<1	-	-		µg/kg	1	A-T-006s

Envirolab Job Number: 24/10027

Client Project Name: One Earth Solar Farm

Client Project Ref: 2372986

Lab Sample ID	24/10027/1	24/10027/2	24/10027/5	24/10027/12	24/10027/13	24/10027/14		Units	Limit of Detection	Method ref
Client Sample No	101	102	105	101	102	103				
Client Sample ID	BH012	BH012	BH012	BH013	BH013	BH013				
Depth to Top	0.30	0.50	2.90	0.30	0.50	1.00				
Depth To Bottom										
Date Sampled	24-Sep-24	24-Sep-24	24-Sep-24	24-Sep-24	24-Sep-24	24-Sep-24				
Sample Type	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES				
Sample Matrix Code	4AE	4A	4A	4AE	4AE	4AE				
Chlorobenzene$_{A}^{\#}$	<1	-	-	<1	-	-		µg/kg	1	A-T-006s
1,1,1,2-Tetrachloroethane$_{A}$	<1	-	-	<1	-	-		µg/kg	1	A-T-006s
Ethylbenzene$_{A}^{\#}$	<1	-	-	<1	-	-		µg/kg	1	A-T-006s
m & p Xylene$_{A}^{\#}$	<1	-	-	<1	-	-		µg/kg	1	A-T-006s
o-Xylene$_{A}^{\#}$	<1	-	-	<1	-	-		µg/kg	1	A-T-006s
Styrene$_{A}^{\#}$	<1	-	-	<1	-	-		µg/kg	1	A-T-006s
Bromoform$_{A}^{\#}$	<3^{U}	-	-	<3^{U}	-	-		µg/kg	3	A-T-006s
Isopropylbenzene$_{A}^{\#}$	<1	-	-	<1	-	-		µg/kg	1	A-T-006s
1,1,2,2-Tetrachloroethane$_{A}$	<1	-	-	<1	-	-		µg/kg	1	A-T-006s
1,2,3-Trichloropropane$_{A}^{\#}$	<1	-	-	<1	-	-		µg/kg	1	A-T-006s
Bromobenzene$_{A}^{\#}$	<1	-	-	<1	-	-		µg/kg	1	A-T-006s
n-Propylbenzene$_{A}^{\#}$	<1	-	-	<1	-	-		µg/kg	1	A-T-006s
2-Chlorotoluene$_{A}^{\#}$	<1	-	-	<1	-	-		µg/kg	1	A-T-006s
1,3,5-Trimethylbenzene$_{A}^{\#}$	<1	-	-	<1	-	-		µg/kg	1	A-T-006s
4-Chlorotoluene$_{A}^{\#}$	<1	-	-	<1	-	-		µg/kg	1	A-T-006s
tert-Butylbenzene$_{A}^{\#}$	<2	-	-	<2	-	-		µg/kg	2	A-T-006s
1,2,4-Trimethylbenzene$_{A}^{\#}$	<1	-	-	<1	-	-		µg/kg	1	A-T-006s
sec-Butylbenzene$_{A}^{\#}$	<1	-	-	<1	-	-		µg/kg	1	A-T-006s
4-Isopropyltoluene$_{A}^{\#}$	<1	-	-	<1	-	-		µg/kg	1	A-T-006s
1,3-Dichlorobenzene$_{A}$	<1	-	-	<1	-	-		µg/kg	1	A-T-006s
1,4-Dichlorobenzene$_{A}^{\#}$	<1^{U}	-	-	<1^{U}	-	-		µg/kg	1	A-T-006s
n-Butylbenzene$_{A}^{\#}$	<1	-	-	<1	-	-		µg/kg	1	A-T-006s
1,2-Dichlorobenzene$_{A}^{\#}$	<1	-	-	<1	-	-		µg/kg	1	A-T-006s
1,2-Dibromo-3-chloropropane (DCBP)$_{A}$	<2	-	-	<2	-	-		µg/kg	2	A-T-006s
1,2,4-Trichlorobenzene$_{A}$	<3	-	-	<3	-	-		µg/kg	3	A-T-006s
Hexachlorobutadiene$_{A}^{\#}$	<1	-	-	<1	-	-		µg/kg	1	A-T-006s
1,2,3-Trichlorobenzene$_{A}$	<3	-	-	<3	-	-		µg/kg	3	A-T-006s

Envirolab Job Number: 24/10027

Client Project Name: One Earth Solar Farm

Client Project Ref: 2372986

Lab Sample ID	24/10027/1	24/10027/2	24/10027/5	24/10027/12	24/10027/13	24/10027/14		Units	Limit of Detection	Method ref
Client Sample No	101	102	105	101	102	103				
Client Sample ID	BH012	BH012	BH012	BH013	BH013	BH013				
Depth to Top	0.30	0.50	2.90	0.30	0.50	1.00				
Depth To Bottom										
Date Sampled	24-Sep-24	24-Sep-24	24-Sep-24	24-Sep-24	24-Sep-24	24-Sep-24				
Sample Type	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES				
Sample Matrix Code	4AE	4A	4A	4AE	4AE	4AE				
TPH CWG with Clean Up										
Ali >C5-C6$_A$	<0.01	-	-	<0.01	-	-		mg/kg	0.01	A-T-022s
Ali >C6-C8$_A$	<0.01	-	-	<0.01	-	-		mg/kg	0.01	A-T-022s
Ali >C8-C10$_A$	<1	-	-	<1	-	-		mg/kg	1	A-T-055s
Ali >C10-C12$_A$$^{M\#}$	<1	-	-	<1	-	-		mg/kg	1	A-T-055s
Ali >C12-C16$_A$$^{M\#}$	<1	-	-	<1	-	-		mg/kg	1	A-T-055s
Ali >C16-C21$_A$$^{M\#}$	<1	-	-	<1	-	-		mg/kg	1	A-T-055s
Ali >C21-C35$_A$$^{M\#}$	<1	-	-	2	-	-		mg/kg	1	A-T-055s
Total Aliphatics$_A$	<1	-	-	2	-	-		mg/kg	1	Calc-As Recd
Aro >C5-C7$_A$$^{\#}$	<0.01	-	-	<0.01	-	-		mg/kg	0.01	A-T-022s
Aro >C7-C8$_A$$^{\#}$	<0.01	-	-	<0.01	-	-		mg/kg	0.01	A-T-022s
Aro >C8-C10$_A$	<1	-	-	<1	-	-		mg/kg	1	A-T-055s
Aro >C10-C12$_A$	<1	-	-	<1	-	-		mg/kg	1	A-T-055s
Aro >C12-C16$_A$	<1	-	-	<1	-	-		mg/kg	1	A-T-055s
Aro >C16-C21$_A$$^{M\#}$	<1	-	-	<1	-	-		mg/kg	1	A-T-055s
Aro >C21-C35$_A$$^{M\#}$	<1	-	-	<1	-	-		mg/kg	1	A-T-055s
Total Aromatics$_A$	<1	-	-	<1	-	-		mg/kg	1	Calc-As Recd
TPH (Ali & Aro >C5-C35)$_A$	<1	-	-	2	-	-		mg/kg	1	Calc-As Recd
BTEX - Benzene$_A$$^{\#}$	<0.01	-	-	<0.01	-	-		mg/kg	0.01	A-T-022s
BTEX - Toluene$_A$$^{\#}$	<0.01	-	-	<0.01	-	-		mg/kg	0.01	A-T-022s
BTEX - Ethyl Benzene$_A$$^{\#}$	<0.01	-	-	<0.01	-	-		mg/kg	0.01	A-T-022s
BTEX - m & p Xylene$_A$$^{\#}$	<0.01	-	-	<0.01	-	-		mg/kg	0.01	A-T-022s
BTEX - o Xylene$_A$$^{\#}$	<0.01	-	-	<0.01	-	-		mg/kg	0.01	A-T-022s
MTBE$_A$$^{\#}$	<0.01	-	-	<0.01	-	-		mg/kg	0.01	A-T-022s

Report Notes

General

•This report shall not be reproduced, except in full, without written approval from Envirolab.
•The client Sample No, Client Sample ID, Depth to top, Depth to Bottom and Date Sampled are all provided by the client and can affect the validity of results.
•The results reported herein relate only to the material supplied to the laboratory.
•The residue of any samples contained within this report, and any received within the same delivery, will be disposed of **four weeks** after the initial scheduling. For samples tested for Asbestos we will retain a portion of the dried sample for a minimum of **six months** after the initial Asbestos testing is completed.
•Analytical results reflect the quality of the sample at the time of analysis only.
•Opinions and Interpretations expressed are outside our scope of accreditation.
•A deviating sample report is appended and will indicate if samples or tests have been found to be deviating. Any test results affected may not be an accurate record of the concentration at the time of sampling and, as a result, may be invalid.
•If a sample is outside of the calibration range or affected by interferences then it may need diluting. This will result in the limit of detection (LOD) being raised.
•Subcontracted Analysis: Please see the appended report for any deviations, current LODs and accreditation status of the test.

Key

Superscript "#"	Accredited to ISO 17025
Superscript "M"	Accredited to MCertS
Superscript "U"	Individual result not accredited
None of the above symbols	Analysis unaccredited
Subscript "A"	Analysis performed on as-received Sample
Subscript "D"	Analysis performed on the dried sample, crushed to pass 2mm sieve.
Subscript "D" on Asbestos	Analysis performed on a dried aliquot of sample provided.
Subscript "^"	Analysis has dependant options against results. Details appear in the comments of your Sample receipt
IS	Insufficient Sample for analysis
US	Unsuitable Sample for analysis
NDP	No Determination Possible
NAD	No Asbestos Detected
Trace	Asbestos found not suitable for Gravimetric Quantification – not enough to accurately weigh.
N/A	Not applicable

Asbestos

Identification: Asbestos in soil analysis is performed on a dried aliquot of the submitted sample and cannot guarantee to identify asbestos if only present in small numbers as discrete fibres/fragments in the original sample.
Stones etc. are not removed from the sample prior to analysis
"Trace Asbestos Identified" will be reported if there is not enough present to verify the type.
Quantification: Generally a 2 stage process including visual identification, hand picking and weighing, and fibre counting. Where ACMs are found a percentage asbestos is assigned to each with reference to 'HSG264, Asbestos: The survey guide' and the calculated asbestos content is expressed as a percentage of the dried soil sample aliquot used. If asbestos is identified as being present but is not in a form that is suitable for analysis by hand picking and weighing (normally if the asbestos is present as free fibres). "TRACE" will be reported as a quantification result.
PLEASE INFORM THE LABORATORY IF YOU WOULD LIKE THE STAGE 3 SEDIMENTATION PROCESS CARRIED OUT. Note this will be subcontracted.

Assigned Matrix Codes

1	SAND	6	CLAY/LOAM	A	Contains Stones
2	LOAM	7	OTHER	B	Contains Construction Rubble
3	CLAY	8	Asbestos Bulk (Only Asbestos ID accredited)	C	Contains visible hydrocarbons
4	LOAM/SAND	9	Incinerator Ash (some Metals accredited)	D	Contains glass / metal
5	SAND/CLAY			E	Contains roots / twigs
Note: 7,8,9 matrices are not covered by our ISO 17025 or MCertS accreditation, unless stated above.					

Soil Chemical Analysis:
All results are reported as dry weight (<40°C).
For samples with Matrix Codes 1 - 6 natural stones, brick and concrete fragments >10mm and any extraneous material (visible glass, metal or twigs) are removed and excluded from the sample prior to analysis and reported results corrected to a whole sample basis. This is reported as '% stones >10mm'.
For samples with Matrix Code 7 the whole sample is dried and crushed prior to analysis and this supersedes any "A" subscripts
All analysis is performed on the sample as received for soil samples which are positive for asbestos or the client has informed asbestos may be present and/or if they are from outside the European Union and this supersedes any "D" subscripts.

TPH by method A-T-007:
For waters, free and visible oils are excluded from the sample used for analysis, so the reported result represents the dissolved phase only.
Results "with Clean up" indicates samples cleaned up with Silica during extraction.

EPH CWG (method A-T-055) from TPH CWG:
EPH CWG results have humics mathematically subtracted through instrument calculation.
Where these humic substances have been identified in any IDs from "TPH CWG with clean up" please note that the concentration is **NOT** included in the quantified results but present in the ID for information.

Electrical Conductivity of water by method A-T-037:
Results greater than 12900µS/cm @ 25^0C / 11550µS/cm @ 20^0C fall outside the calibration range and as such are unaccredited.

Please contact your client manager if you require any further information.

Envirolab Deviating Samples Report

Hattersley Science & Technology Park, Stockport Road, Hattersley, SK14 3QU
Tel. 0161 368 4921 email. ask@envlab.co.uk

Client: Central Alliance, Alliance House, South Park Way, South Park Way, Wakefield 41 Business Park, Wakefield, WF2 0XJ

Project: One Earth Solar Farm

Clients Project No: 2372986

Project No: 24/10027

Date Received: 17/10/2024 (am)

Cool Box Temperatures (°C): 12.6 & 13.0

Lab Sample ID	24/10027/1	24/10027/12
Client Sample No	101	101
Client Sample ID/Depth	BH012 0.30m	BH013 0.30m
Date Sampled	24/09/24	24/09/24
Deviation Code		
F	✓	✓

Key
F *Maximum holding time exceeded between sampling date and analysis for analytes listed below*

HOLDING TIME EXCEEDANCES

Lab Sample ID	24/10027/1	24/10027/12
Client Sample No	101	101
Client Sample ID/Depth	BH012 0.30m	BH013 0.30m
Date Sampled	24/09/24	24/09/24
VPHCWG	✓	✓
PAH-16MS	✓	✓
VOC	✓	✓
SVOC excluding PAH-16	✓	✓
Cyanide (total)	✓	✓

If, at any point before reaching the laboratory, the temperature of the samples has breached those set in published standards, e.g. BS-EN 5667-3, ISO 18400-102:2017, then the concentration of any affected analytes may differ from that at the time of sampling.

Envirolab Analysis Dates

Lab Sample ID	24/10027/1	24/10027/2	24/10027/5	24/10027/12	24/10027/13	24/10027/14
Client Sample No	101	102	105	101	102	103
Client Sample ID/Depth	BH012 0.30m	BH012 0.50m	BH012 2.90m	BH013 0.30m	BH013 0.50m	BH013 1.00m
Date Sampled	24/09/24	24/09/24	24/09/24	24/09/24	24/09/24	24/09/24
A-T-006s	18/10/2024			18/10/2024		
A-T-019s	24/10/2024			24/10/2024		
A-T-022s	18/10/2024			18/10/2024		
A-T-024s	23/10/2024	23/10/2024	23/10/2024	23/10/2024	23/10/2024	23/10/2024
A-T-026s	22/10/2024	22/10/2024	22/10/2024	22/10/2024	22/10/2024	22/10/2024
A-T-027s	22/10/2024	22/10/2024	22/10/2024	22/10/2024	22/10/2024	22/10/2024
A-T-031s	22/10/2024	22/10/2024	22/10/2024	22/10/2024	22/10/2024	22/10/2024
A-T-032s	22/10/2024	22/10/2024	22/10/2024	22/10/2024	22/10/2024	22/10/2024
A-T-042sTCN	18/10/2024			18/10/2024		
A-T-044	24/10/2024	24/10/2024	24/10/2024	24/10/2024	24/10/2024	24/10/2024
A-T-045				18/10/2024		
A-T-050s	21/10/2024			22/10/2024		
A-T-052s	21/10/2024			21/10/2024		
A-T-055s	21/10/2024			21/10/2024		
Calc-As Recd	21/10/2024			21/10/2024		

The above dates are the analysis completion dates, please note that these are not necessarily the date that the analysis was weighed/extracted.

End of Report

envirolab
Hattersley Science & Technology Park
Stockport Road, Hattersley, SK14 3QU

FINAL ANALYTICAL TEST REPORT

Envirolab Job Number: 24/10044
Issue Number: 1 **Date:** 24 October, 2024

Client:
Central Alliance
Alliance House
South Park Way
South Park Way
Wakefield 41 Business Park
Wakefield
WF2 0XJ

Project Manager: John Parkinson/Lab results
Project Name: One Earth Solar Farm
Project Ref: 2372986
Order No: N/A
Date Samples Received: 30/09/24
Date Instructions Received: 17/10/24
Date Analysis Completed: 24/10/24

Approved by:

[redacted]

Richard Wong
Client Manager

mCERTS THE ENVIRONMENT AGENCY'S MONITORING CERTIFICATION SCHEME
UKAS TESTING 1247

Envirolab Job Number: 24/10044

Client Project Name: One Earth Solar Farm

Client Project Ref: 2372986

Lab Sample ID	24/10044/1	24/10044/2	24/10044/3	24/10044/4				Units	Limit of Detection	Method ref
Client Sample No	3	6	3	6						
Client Sample ID	TP008	TP008	TP009	TP009						
Depth to Top	0.40	1.00	0.40	1.00						
Depth To Bottom										
Date Sampled	27-Sep-24	27-Sep-24	27-Sep-24	27-Sep-24						
Sample Type	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES						
Sample Matrix Code	6AE	6AE	3AE	6AE						
% Stones >10mm$_A$	<0.1	<0.1	<0.1	<0.1				% w/w	0.1	A-T-044
pH$_D$$^{M\#}$	7.09	6.67	7.31	7.43				pH	0.01	A-T-031s
Sulphate (water sol 2:1)$_D$$^{M\#}$	0.07	0.31	0.03	0.10				g/l	0.01	A-T-026s
Cyanide (total)$_A$$^{M\#}$	<1	<1	<1	-				mg/kg	1	A-T-042sTCN
Phenol$_A$	<0.2	<0.2	<0.2	-				mg/kg	0.2	A-T-050s
Organic Matter$_D$$^{M\#}$	2.3	2.5	2.0	1.9				% w/w	0.1	A-T-032s
Arsenic$_D$$^{M\#}$	7	5	6	10				mg/kg	1	A-T-024s
Boron (water soluble)$_D$$^{M\#}$	1.2	1.5	<1.0	1.1				mg/kg	1	A-T-027s
Cadmium$_D$$^{M\#}$	2.1	2.6	1.7	2.9				mg/kg	0.5	A-T-024s
Copper$_D$$^{M\#}$	32	29	29	26				mg/kg	1	A-T-024s
Chromium$_D$$^{M\#}$	40	40	34	37				mg/kg	1	A-T-024s
Lead$_D$$^{M\#}$	228	268	205	273				mg/kg	1	A-T-024s
Mercury$_D$	<0.17	<0.17	<0.17	<0.17				mg/kg	0.17	A-T-024s
Nickel$_D$$^{M\#}$	37	45	29	40				mg/kg	1	A-T-024s
Zinc$_D$$^{M\#}$	239	267	191	250				mg/kg	5	A-T-024s

Envirolab Job Number: 24/10044

Client Project Name: One Earth Solar Farm

Client Project Ref: 2372986

Lab Sample ID	24/10044/1	24/10044/2	24/10044/3	24/10044/4				Units	Limit of Detection	Method ref
Client Sample No	3	6	3	6						
Client Sample ID	TP008	TP008	TP009	TP009						
Depth to Top	0.40	1.00	0.40	1.00						
Depth To Bottom										
Date Sampled	27-Sep-24	27-Sep-24	27-Sep-24	27-Sep-24						
Sample Type	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES						
Sample Matrix Code	6AE	6AE	3AE	6AE						
Asbestos in Soil (inc. matrix) ^										
Asbestos in soil$_{D}^{\#}$	NAD	-	NAD	-						A-T-045
Asbestos Matrix (visual)$_{D}$	-	-	-	-						A-T-045
Asbestos Matrix (microscope)$_{D}$	-	-	-	-						A-T-045
Asbestos ACM - Suitable for Water Absorption Test?$_{D}$	N/A	-	N/A	-						A-T-045

Envirolab Job Number: 24/10044

Client Project Name: One Earth Solar Farm

Client Project Ref: 2372986

Lab Sample ID	24/10044/1	24/10044/2	24/10044/3	24/10044/4				Units	Limit of Detection	Method ref
Client Sample No	3	6	3	6						
Client Sample ID	TP008	TP008	TP009	TP009						
Depth to Top	0.40	1.00	0.40	1.00						
Depth To Bottom										
Date Sampled	27-Sep-24	27-Sep-24	27-Sep-24	27-Sep-24						
Sample Type	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES						
Sample Matrix Code	6AE	6AE	3AE	6AE						
PAH-16MS										
Acenaphthene$_A^{M\#}$	<0.01	<0.01	<0.01	-				mg/kg	0.01	A-T-019s
Acenaphthylene$_A^{M\#}$	<0.01	<0.01	<0.01	-				mg/kg	0.01	A-T-019s
Anthracene$_A^{M\#}$	<0.02	<0.02	<0.02	-				mg/kg	0.02	A-T-019s
Benzo(a)anthracene$_A^{M\#}$	<0.04	<0.04	<0.04	-				mg/kg	0.04	A-T-019s
Benzo(a)pyrene$_A^{M\#}$	<0.04	<0.04	<0.04	-				mg/kg	0.04	A-T-019s
Benzo(b)fluoranthene$_A^{M\#}$	<0.05	<0.05	<0.05	-				mg/kg	0.05	A-T-019s
Benzo(ghi)perylene$_A^{M\#}$	<0.05	<0.05	<0.05	-				mg/kg	0.05	A-T-019s
Benzo(k)fluoranthene$_A^{M\#}$	<0.07	<0.07	<0.07	-				mg/kg	0.07	A-T-019s
Chrysene$_A^{M\#}$	<0.06	<0.06	<0.06	-				mg/kg	0.06	A-T-019s
Dibenzo(ah)anthracene$_A^{M\#}$	<0.04	<0.04	<0.04	-				mg/kg	0.04	A-T-019s
Fluoranthene$_A^{M\#}$	<0.08	<0.08	<0.08	-				mg/kg	0.08	A-T-019s
Fluorene$_A^{M\#}$	<0.01	<0.01	<0.01	-				mg/kg	0.01	A-T-019s
Indeno(123-cd)pyrene$_A^{M\#}$	<0.03	<0.03	<0.03	-				mg/kg	0.03	A-T-019s
Naphthalene $_A^{M\#}$	<0.03	<0.03	<0.03	-				mg/kg	0.03	A-T-019s
Phenanthrene$_A^{M\#}$	<0.03	<0.03	<0.03	-				mg/kg	0.03	A-T-019s
Pyrene$_A^{M\#}$	<0.07	<0.07	<0.07	-				mg/kg	0.07	A-T-019s
Total PAH-16MS$_A^{M\#}$	<0.08	<0.08	<0.08	-				mg/kg	0.01	A-T-019s

Lab Sample ID	24/10044/1	24/10044/2	24/10044/3	24/10044/4				Units	Limit of Detection	Method ref
Client Sample No	3	6	3	6						
Client Sample ID	TP008	TP008	TP009	TP009						
Depth to Top	0.40	1.00	0.40	1.00						
Depth To Bottom										
Date Sampled	27-Sep-24	27-Sep-24	27-Sep-24	27-Sep-24						
Sample Type	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES						
Sample Matrix Code	6AE	6AE	3AE	6AE						
SVOC excluding PAH-16										
4-Bromophenyl phenyl ether$_A$	<100	<100	<100	-				µg/kg	100	A-T-052s
Hexachlorobenzene$_A$	<100	<100	<100	-				µg/kg	100	A-T-052s
Diethyl phthalate$_A$	<100	<100	<100	-				µg/kg	100	A-T-052s
Dimethyl phthalate$_A$	<100	<100	<100	-				µg/kg	100	A-T-052s
Dibenzofuran$_A$	<100	<100	<100	-				µg/kg	100	A-T-052s
Carbazole$_A$	<100	<100	<100	-				µg/kg	100	A-T-052s
Butylbenzyl phthalate$_A$	<100	<100	<100	-				µg/kg	100	A-T-052s
Bis(2-ethylhexyl)phthalate$_A$	<500	<500	<500	-				µg/kg	500	A-T-052s
Bis(2-chloroethoxy)methane$_A$	<100	<100	<100	-				µg/kg	100	A-T-052s
Bis(2-chloroethyl)ether$_A$	<100	<100	<100	-				µg/kg	100	A-T-052s
4-Nitrophenol$_A$	<100	<100	<100	-				µg/kg	100	A-T-052s
3+4-Methylphenol$_A$	<100	<100	<100	-				µg/kg	100	A-T-052s
4-Chloro-3-methylphenol$_A$	<100	<100	<100	-				µg/kg	100	A-T-052s
2-Nitrophenol$_A$	<100	<100	<100	-				µg/kg	100	A-T-052s
2-Methylphenol$_A$	<100	<100	<100	-				µg/kg	100	A-T-052s
1,2,4-Trichlorobenzene$_A$	<100	<100	<100	-				µg/kg	100	A-T-052s
2-Chlorophenol$_A$	<100	<100	<100	-				µg/kg	100	A-T-052s
2,6-Dinitrotoluene$_A$	<100	<100	<100	-				µg/kg	100	A-T-052s
2,4-Dinitrotoluene$_A$	<100	<100	<100	-				µg/kg	100	A-T-052s
2,4-Dimethylphenol$_A$	<100	<100	<100	-				µg/kg	100	A-T-052s
2,4-Dichlorophenol$_A$	<100	<100	<100	-				µg/kg	100	A-T-052s
2,4,6-Trichlorophenol$_A$	<100	<100	<100	-				µg/kg	100	A-T-052s
2,4,5-Trichlorophenol$_A$	<100	<100	<100	-				µg/kg	100	A-T-052s
1,4-Dichlorobenzene$_A$	<100	<100	<100	-				µg/kg	100	A-T-052s
1,3-Dichlorobenzene$_A$	<100	<100	<100	-				µg/kg	100	A-T-052s
1,2-Dichlorobenzene$_A$	<100	<100	<100	-				µg/kg	100	A-T-052s
2-Chloronaphthalene$_A$	<100	<100	<100	-				µg/kg	100	A-T-052s
2-Methylnaphthalene$_A$	<100	<100	<100	-				µg/kg	100	A-T-052s
Bis(2-chloroisopropyl)ether$_A$	<100	<100	<100	-				µg/kg	100	A-T-052s
Phenol$_A$	<100	<100	<100	-				µg/kg	100	A-T-052s
Pentachlorophenol$_A$	<100	<100	<100	-				µg/kg	100	A-T-052s
n-Nitroso-n-dipropylamine$_A$	<100	<100	<100	-				µg/kg	100	A-T-052s

Envirolab Job Number: 24/10044

Client Project Name: One Earth Solar Farm

Client Project Ref: 2372986

Lab Sample ID	24/10044/1	24/10044/2	24/10044/3	24/10044/4				Units	Limit of Detection	Method ref
Client Sample No	3	6	3	6						
Client Sample ID	TP008	TP008	TP009	TP009						
Depth to Top	0.40	1.00	0.40	1.00						
Depth To Bottom										
Date Sampled	27-Sep-24	27-Sep-24	27-Sep-24	27-Sep-24						
Sample Type	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES						
Sample Matrix Code	6AE	6AE	3AE	6AE						
n-Dioctylphthalate$_A$	<500	<500	<500	-				µg/kg	500	A-T-052s
n-Dibutylphthalate$_A$	<100	<100	<100	-				µg/kg	100	A-T-052s
Nitrobenzene$_A$	<100	<100	<100	-				µg/kg	100	A-T-052s
Isophorone$_A$	<100	<100	<100	-				µg/kg	100	A-T-052s
Hexachloroethane$_A$	<100	<100	<100	-				µg/kg	100	A-T-052s
Hexachlorobutadiene$_A$	<100	<100	<100	-				µg/kg	100	A-T-052s
Perylene$_A$	<100	<100	<100	-				µg/kg	100	A-T-052s

Envirolab Job Number: 24/10044

Client Project Name: One Earth Solar Farm

Client Project Ref: 2372986

Lab Sample ID	24/10044/1	24/10044/2	24/10044/3	24/10044/4				Units	Limit of Detection	Method ref
Client Sample No	3	6	3	6						
Client Sample ID	TP008	TP008	TP009	TP009						
Depth to Top	0.40	1.00	0.40	1.00						
Depth To Bottom										
Date Sampled	27-Sep-24	27-Sep-24	27-Sep-24	27-Sep-24						
Sample Type	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES						
Sample Matrix Code	6AE	6AE	3AE	6AE						
VOC										
Dichlorodifluoromethane$_{A}$	<25	<25	<25	-				µg/kg	1	A-T-006s
Chloromethane$_{A}$	<250	<250	<250	-				µg/kg	10	A-T-006s
Vinyl Chloride (Chloroethene)$_{A}^{\#}$	<25	<25	<25	-				µg/kg	1	A-T-006s
Bromomethane$_{A}^{\#}$	<25	<25	<25	-				µg/kg	1	A-T-006s
Chloroethane$_{A}^{\#}$	<25	<25	<25	-				µg/kg	1	A-T-006s
Trichlorofluoromethane$_{A}^{\#}$	<25	<25	<25	-				µg/kg	1	A-T-006s
1,1-Dichloroethene$_{A}^{\#}$	<25	<25	<25	-				µg/kg	1	A-T-006s
Carbon Disulphide$_{A}^{\#}$	<25	<25	<25	-				µg/kg	1	A-T-006s
Dichloromethane$_{A}$	<125	<125	<125	-				µg/kg	5	A-T-006s
trans 1,2-Dichloroethene$_{A}^{\#}$	<25	<25	<25	-				µg/kg	1	A-T-006s
1,1-Dichloroethane$_{A}^{\#}$	<25	<25	<25	-				µg/kg	1	A-T-006s
cis 1,2-Dichloroethene$_{A}^{\#}$	<25	<25	<25	-				µg/kg	1	A-T-006s
2,2-Dichloropropane$_{A}^{\#}$	<25^{U}	<25^{U}	<25^{U}	-				µg/kg	1	A-T-006s
Bromochloromethane$_{A}^{\#}$	<125	<125	<125	-				µg/kg	5	A-T-006s
Chloroform$_{A}^{\#}$	<25	<25	<25	-				µg/kg	1	A-T-006s
1,1,1-Trichloroethane$_{A}^{\#}$	<25	<25	<25	-				µg/kg	1	A-T-006s
1,1-Dichloropropene$_{A}^{\#}$	<25	<25	<25	-				µg/kg	1	A-T-006s
Carbon Tetrachloride$_{A}^{\#}$	<25	<25	<25	-				µg/kg	1	A-T-006s
1,2-Dichloroethane$_{A}^{\#}$	<50	<50	<50	-				µg/kg	2	A-T-006s
Benzene$_{A}^{\#}$	<25	<25	<25	-				µg/kg	1	A-T-006s
Trichloroethene$_{A}^{\#}$	<25	<25	<25	-				µg/kg	1	A-T-006s
1,2-Dichloropropane$_{A}^{\#}$	<25	<25	<25	-				µg/kg	1	A-T-006s
Dibromomethane$_{A}^{\#}$	<25	<25	<25	-				µg/kg	1	A-T-006s
Bromodichloromethane$_{A}^{\#}$	<250	<250	<250	-				µg/kg	10	A-T-006s
cis 1,3-Dichloropropene$_{A}^{\#}$	<25	<25	<25	-				µg/kg	1	A-T-006s
Toluene$_{A}^{\#}$	<25	<25	<25	-				µg/kg	1	A-T-006s
trans 1,3-Dichloropropene$_{A}^{\#}$	<25	<25	<25	-				µg/kg	1	A-T-006s
1,1,2-Trichloroethane$_{A}^{\#}$	<25	<25	<25	-				µg/kg	1	A-T-006s
1,3-Dichloropropane$_{A}^{\#}$	<25	<25	<25	-				µg/kg	1	A-T-006s
Tetrachloroethene$_{A}^{\#}$	<25	<25	<25	-				µg/kg	1	A-T-006s
Dibromochloromethane$_{A}^{\#}$	<75	<75	<75	-				µg/kg	3	A-T-006s
1,2-Dibromoethane$_{A}^{\#}$	<25	<25	<25	-				µg/kg	1	A-T-006s

Envirolab Job Number: 24/10044

Client Project Name: One Earth Solar Farm

Client Project Ref: 2372986

Lab Sample ID	24/10044/1	24/10044/2	24/10044/3	24/10044/4				Units	Limit of Detection	Method ref
Client Sample No	3	6	3	6						
Client Sample ID	TP008	TP008	TP009	TP009						
Depth to Top	0.40	1.00	0.40	1.00						
Depth To Bottom										
Date Sampled	27-Sep-24	27-Sep-24	27-Sep-24	27-Sep-24						
Sample Type	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES						
Sample Matrix Code	6AE	6AE	3AE	6AE						
Chlorobenzene$_{A}^{\#}$	<25	<25	<25	-				µg/kg	1	A-T-006s
1,1,1,2-Tetrachloroethane$_{A}$	<25	<25	<25	-				µg/kg	1	A-T-006s
Ethylbenzene$_{A}^{\#}$	<25	<25	<25	-				µg/kg	1	A-T-006s
m & p Xylene$_{A}^{\#}$	<25	<25	<25	-				µg/kg	1	A-T-006s
o-Xylene$_{A}^{\#}$	<25	<25	<25	-				µg/kg	1	A-T-006s
Styrene$_{A}^{\#}$	<25	<25	<25	-				µg/kg	1	A-T-006s
Bromoform$_{A}^{\#}$	<75	<75	<75	-				µg/kg	3	A-T-006s
Isopropylbenzene$_{A}^{\#}$	<25	<25	<25	-				µg/kg	1	A-T-006s
1,1,2,2-Tetrachloroethane$_{A}$	<25	<25	<25	-				µg/kg	1	A-T-006s
1,2,3-Trichloropropane$_{A}^{\#}$	<25	<25	<25	-				µg/kg	1	A-T-006s
Bromobenzene$_{A}^{\#}$	<25	<25	<25	-				µg/kg	1	A-T-006s
n-Propylbenzene$_{A}^{\#}$	<25	<25	<25	-				µg/kg	1	A-T-006s
2-Chlorotoluene$_{A}^{\#}$	<25	<25	<25	-				µg/kg	1	A-T-006s
1,3,5-Trimethylbenzene$_{A}^{\#}$	<25	<25	<25	-				µg/kg	1	A-T-006s
4-Chlorotoluene$_{A}^{\#}$	<25	<25	<25	-				µg/kg	1	A-T-006s
tert-Butylbenzene$_{A}^{\#}$	<50	<50	<50	-				µg/kg	2	A-T-006s
1,2,4-Trimethylbenzene$_{A}^{\#}$	<25	<25	<25	-				µg/kg	1	A-T-006s
sec-Butylbenzene$_{A}^{\#}$	<25	<25	<25	-				µg/kg	1	A-T-006s
4-Isopropyltoluene$_{A}^{\#}$	<25	<25	<25	-				µg/kg	1	A-T-006s
1,3-Dichlorobenzene$_{A}$	<25	<25	<25	-				µg/kg	1	A-T-006s
1,4-Dichlorobenzene$_{A}^{\#}$	<25	<25	<25	-				µg/kg	1	A-T-006s
n-Butylbenzene$_{A}^{\#}$	<25	<25	<25	-				µg/kg	1	A-T-006s
1,2-Dichlorobenzene$_{A}^{\#}$	<25	<25	<25	-				µg/kg	1	A-T-006s
1,2-Dibromo-3-chloropropane (DCBP)$_{A}$	<50	<50	<50	-				µg/kg	2	A-T-006s
1,2,4-Trichlorobenzene$_{A}$	<75	<75	<75	-				µg/kg	3	A-T-006s
Hexachlorobutadiene$_{A}^{\#}$	<25	<25	<25	-				µg/kg	1	A-T-006s
1,2,3-Trichlorobenzene$_{A}$	<75	<75	<75	-				µg/kg	3	A-T-006s

Envirolab Job Number: 24/10044

Client Project Name: One Earth Solar Farm

Client Project Ref: 2372986

Lab Sample ID	24/10044/1	24/10044/2	24/10044/3	24/10044/4				Units	Limit of Detection	Method ref
Client Sample No	3	6	3	6						
Client Sample ID	TP008	TP008	TP009	TP009						
Depth to Top	0.40	1.00	0.40	1.00						
Depth To Bottom										
Date Sampled	27-Sep-24	27-Sep-24	27-Sep-24	27-Sep-24						
Sample Type	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES						
Sample Matrix Code	6AE	6AE	3AE	6AE						
TPH CWG with Clean Up										
Ali >C5-C6$_A$	<0.01	<0.01	<0.01	-				mg/kg	0.01	A-T-022s
Ali >C6-C8$_A$	<0.01	<0.01	<0.01	-				mg/kg	0.01	A-T-022s
Ali >C8-C10$_A$	<1	<1	<1	-				mg/kg	1	A-T-055s
Ali >C10-C12$_A^{M\#}$	<1	<1	<1	-				mg/kg	1	A-T-055s
Ali >C12-C16$_A^{M\#}$	<1	<1	<1	-				mg/kg	1	A-T-055s
Ali >C16-C21$_A^{M\#}$	<1	<1	<1	-				mg/kg	1	A-T-055s
Ali >C21-C35$_A^{M\#}$	2	<1	1	-				mg/kg	1	A-T-055s
Total Aliphatics$_A$	2	<1	1	-				mg/kg	1	Calc-As Recd
Aro >C5-C7$_A^{\#}$	<0.01	<0.01	<0.01	-				mg/kg	0.01	A-T-022s
Aro >C7-C8$_A^{\#}$	<0.01	<0.01	<0.01	-				mg/kg	0.01	A-T-022s
Aro >C8-C10$_A$	<1	<1	<1	-				mg/kg	1	A-T-055s
Aro >C10-C12$_A$	<1	<1	<1	-				mg/kg	1	A-T-055s
Aro >C12-C16$_A$	<1	<1	<1	-				mg/kg	1	A-T-055s
Aro >C16-C21$_A^{M\#}$	<1	<1	<1	-				mg/kg	1	A-T-055s
Aro >C21-C35$_A^{M\#}$	1	<1	<1	-				mg/kg	1	A-T-055s
Total Aromatics$_A$	1	<1	<1	-				mg/kg	1	Calc-As Recd
TPH (Ali & Aro >C5-C35)$_A$	4	<1	1	-				mg/kg	1	Calc-As Recd
BTEX - Benzene$_A^{\#}$	<0.01	<0.01	<0.01	-				mg/kg	0.01	A-T-022s
BTEX - Toluene$_A^{\#}$	<0.01	<0.01	<0.01	-				mg/kg	0.01	A-T-022s
BTEX - Ethyl Benzene$_A^{\#}$	<0.01	<0.01	<0.01	-				mg/kg	0.01	A-T-022s
BTEX - m & p Xylene$_A^{\#}$	<0.01	<0.01	<0.01	-				mg/kg	0.01	A-T-022s
BTEX - o Xylene$_A^{\#}$	<0.01	<0.01	<0.01	-				mg/kg	0.01	A-T-022s
MTBE$_A^{\#}$	<0.01	<0.01	<0.01	-				mg/kg	0.01	A-T-022s

Report Notes

General

•This report shall not be reproduced, except in full, without written approval from Envirolab.
•The client Sample No, Client Sample ID, Depth to top, Depth to Bottom and Date Sampled are all provided by the client and can affect the validity of results.
•The results reported herein relate only to the material supplied to the laboratory.
•The residue of any samples contained within this report, and any received within the same delivery, will be disposed of **four weeks** after the initial scheduling. For samples tested for Asbestos we will retain a portion of the dried sample for a minimum of **six months** after the initial Asbestos testing is completed.
•Analytical results reflect the quality of the sample at the time of analysis only.
•Opinions and Interpretations expressed are outside our scope of accreditation.
•A deviating sample report is appended and will indicate if samples or tests have been found to be deviating. Any test results affected may not be an accurate record of the concentration at the time of sampling and, as a result, may be invalid.
•If a sample is outside of the calibration range or affected by interferences then it may need diluting. This will result in the limit of detection (LOD) being raised.
•Subcontracted Analysis: Please see the appended report for any deviations, current LODs and accreditation status of the test.

Key

Superscript "#"	Accredited to ISO 17025
Superscript "M"	Accredited to MCertS
Superscript "U"	Individual result not accredited
None of the above symbols	Analysis unaccredited
Subscript "A"	Analysis performed on as-received Sample
Subscript "D"	Analysis performed on the dried sample, crushed to pass 2mm sieve.
Subscript "D" on Asbestos	Analysis performed on a dried aliquot of sample provided.
Subscript "^"	Analysis has dependant options against results. Details appear in the comments of your Sample receipt
IS	Insufficient Sample for analysis
US	Unsuitable Sample for analysis
NDP	No Determination Possible
NAD	No Asbestos Detected
Trace	Asbestos found not suitable for Gravimetric Quantification – not enough to accurately weigh.
N/A	Not applicable

Asbestos

Identification: Asbestos in soil analysis is performed on a dried aliquot of the submitted sample and cannot guarantee to identify asbestos if only present in small numbers as discrete fibres/fragments in the original sample.
Stones etc. are not removed from the sample prior to analysis
"Trace Asbestos Identified" will be reported if there is not enough present to verify the type.
Quantification: Generally a 2 stage process including visual identification, hand picking and weighing, and fibre counting. Where ACMs are found a percentage asbestos is assigned to each with reference to 'HSG264, Asbestos: The survey guide' and the calculated asbestos content is expressed as a percentage of the dried soil sample aliquot used. If asbestos is identified as being present but is not in a form that is suitable for analysis by hand picking and weighing (normally if the asbestos is present as free fibres). "TRACE" will be reported as a quantification result.
PLEASE INFORM THE LABORATORY IF YOU WOULD LIKE THE STAGE 3 SEDIMENTATION PROCESS CARRIED OUT. Note this will be subcontracted.

Assigned Matrix Codes

1	SAND	6	CLAY/LOAM	A	Contains Stones
2	LOAM	7	OTHER	B	Contains Construction Rubble
3	CLAY	8	Asbestos Bulk (Only Asbestos ID accredited)	C	Contains visible hydrocarbons
4	LOAM/SAND	9	Incinerator Ash (some Metals accredited)	D	Contains glass / metal
5	SAND/CLAY			E	Contains roots / twigs
Note: 7,8,9 matrices are not covered by our ISO 17025 or MCertS accreditation, unless stated above.					

Soil Chemical Analysis:
All results are reported as dry weight (<40°C).
For samples with Matrix Codes 1 - 6 natural stones, brick and concrete fragments >10mm and any extraneous material (visible glass, metal or twigs) are removed and excluded from the sample prior to analysis and reported results corrected to a whole sample basis. This is reported as '% stones >10mm'.
For samples with Matrix Code 7 the whole sample is dried and crushed prior to analysis and this supersedes any "A" subscripts
All analysis is performed on the sample as received for soil samples which are positive for asbestos or the client has informed asbestos may be present and/or if they are from outside the European Union and this supersedes any "D" subscripts.

TPH by method A-T-007:
For waters, free and visible oils are excluded from the sample used for analysis, so the reported result represents the dissolved phase only.
Results "with Clean up" indicates samples cleaned up with Silica during extraction.

EPH CWG (method A-T-055) from TPH CWG:
EPH CWG results have humics mathematically subtracted through instrument calculation.
Where these humic substances have been identified in any IDs from "TPH CWG with clean up" please note that the concentration is **NOT** included in the quantified results but present in the ID for information.

Electrical Conductivity of water by method A-T-037:
Results greater than 12900µS/cm @ 25^0C / 11550µS/cm @ 20^0C fall outside the calibration range and as such are unaccredited.

Please contact your client manager if you require any further information.

Envirolab Deviating Samples Report

Hattersley Science & Technology Park, Stockport Road, Hattersley, SK14 3QU
Tel. 0161 368 4921 email. ask@envlab.co.uk

Client: Central Alliance, Alliance House, South Park Way, South Park Way, Wakefield 41 Business Park, Wakefield, WF2 0XJ

Project: One Earth Solar Farm

Clients Project No: 2372986

Project No: 24/10044

Date Received: 17/10/2024 (am)

Cool Box Temperatures (°C): 12.8

Lab Sample ID	24/10044/1	24/10044/2	24/10044/3
Client Sample No	3	6	3
Client Sample ID/Depth	TP008 0.40m	TP008 1.00m	TP009 0.40m
Date Sampled	27/09/24	27/09/24	27/09/24
Deviation Code			
F	✓	✓	✓

Key
F *Maximum holding time exceeded between sampling date and analysis for analytes listed below*

HOLDING TIME EXCEEDANCES

Lab Sample ID	24/10044/1	24/10044/2	24/10044/3
Client Sample No	3	6	3
Client Sample ID/Depth	TP008 0.40m	TP008 1.00m	TP009 0.40m
Date Sampled	27/09/24	27/09/24	27/09/24
VPHCWG	✓	✓	✓
PAH-16MS	✓	✓	✓
VOC	✓	✓	✓
SVOC excluding PAH-16	✓	✓	✓
Cyanide (total)	✓	✓	✓

If, at any point before reaching the laboratory, the temperature of the samples has breached those set in published standards, e.g. BS-EN 5667-3, ISO 18400-102:2017, then the concentration of any affected analytes may differ from that at the time of sampling.

Envirolab Analysis Dates

Lab Sample ID	24/10044/1	24/10044/2	24/10044/3	24/10044/4
Client Sample No	3	6	3	6
Client Sample ID/Depth	TP008 0.40m	TP008 1.00m	TP009 0.40m	TP009 1.00m
Date Sampled	27/09/24	27/09/24	27/09/24	27/09/24
A-T-006s	23/10/2024	23/10/2024	23/10/2024	
A-T-019s	24/10/2024	24/10/2024	24/10/2024	
A-T-022s	22/10/2024	22/10/2024	22/10/2024	
A-T-024s	22/10/2024	22/10/2024	22/10/2024	22/10/2024
A-T-026s	22/10/2024	22/10/2024	22/10/2024	22/10/2024
A-T-027s	22/10/2024	22/10/2024	22/10/2024	22/10/2024
A-T-031s	22/10/2024	22/10/2024	22/10/2024	22/10/2024
A-T-032s	22/10/2024	22/10/2024	22/10/2024	22/10/2024
A-T-042sTCN	21/10/2024	21/10/2024	21/10/2024	
A-T-044	24/10/2024	24/10/2024	24/10/2024	24/10/2024
A-T-045	18/10/2024		18/10/2024	
A-T-050s	21/10/2024	21/10/2024	21/10/2024	
A-T-052s	21/10/2024	21/10/2024	21/10/2024	
A-T-055s	21/10/2024	21/10/2024	21/10/2024	
Calc-As Recd	22/10/2024	22/10/2024	22/10/2024	

The above dates are the analysis completion dates, please note that these are not necessarily the date that the analysis was weighed/extracted.

End of Report

envirolab
Hattersley Science & Technology Park
Stockport Road, Hattersley, SK14 3QU

FINAL ANALYTICAL TEST REPORT

Envirolab Job Number: 24/10045
Issue Number: 1 **Date:** 25 October, 2024

Client:
Central Alliance
Alliance House
South Park Way
South Park Way
Wakefield 41 Business Park
Wakefield
WF2 0XJ

Project Manager: John Parkinson/Lab results
Project Name: One Earth Solar Farm
Project Ref: 2372986
Order No: N/A
Date Samples Received: 30/09/24
Date Instructions Received: 17/10/24
Date Analysis Completed: 25/10/24

Approved by:

[redacted]

Richard Wong
Client Manager

mCERTS THE ENVIRONMENT AGENCY'S MONITORING CERTIFICATION SCHEME
UKAS TESTING 1247

Envirolab Job Number: 24/10045

Client Project Name: One Earth Solar Farm

Client Project Ref: 2372986

Lab Sample ID	24/10045/1	24/10045/2	24/10045/3	24/10045/5	24/10045/7	24/10045/9	24/10045/10	Units	Limit of Detection	Method ref
Client Sample No	3	6	3	3	3	3	6			
Client Sample ID	TP001	TP001	TP002	TP003	TP004	TP005	TP005			
Depth to Top	0.30	1.00	0.30	0.30	0.30	0.10	1.00			
Depth To Bottom										
Date Sampled	26-Sep-24	26-Sep-24	26-Sep-24	26-Sep-24	29-Sep-24	26-Sep-24	26-Sep-24			
Sample Type	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES			
Sample Matrix Code	6A	5AE	6AE	4AE	6AE	4AE	5AE			
% Stones >10mm$_A$	24.5	<0.1	<0.1	3.9	<0.1	3.0	<0.1	% w/w	0.1	A-T-044
pH$_D$$^{M\#}$	7.38	7.86	8.25	6.88	7.26	7.49	7.63	pH	0.01	A-T-031s
Sulphate (water sol 2:1)$_D$$^{M\#}$	0.02	<0.01	<0.01	<0.01	0.01	<0.01	<0.01	g/l	0.01	A-T-026s
Cyanide (total)$_A$$^{M\#}$	<1	-	<1	-	<1	<1	-	mg/kg	1	A-T-042sTCN
Phenol$_A$	<0.2	-	<0.2	-	<0.2	<0.2	-	mg/kg	0.2	A-T-050s
Organic Matter$_D$$^{M\#}$	2.1	0.4	2.5	1.5	2.8	2.0	0.5	% w/w	0.1	A-T-032s
Arsenic$_D$$^{M\#}$	2	2	<1	2	2	<1	<1	mg/kg	1	A-T-024s
Boron (water soluble)$_D$$^{M\#}$	<1.0	<1.0	1.5	<1.0	1.2	<1.0	<1.0	mg/kg	1	A-T-027s
Cadmium$_D$$^{M\#}$	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	mg/kg	0.5	A-T-024s
Copper$_D$$^{M\#}$	8	7	15	12	14	11	21	mg/kg	1	A-T-024s
Chromium$_D$$^{M\#}$	26	32	42	20	47	20	41	mg/kg	1	A-T-024s
Lead$_D$$^{M\#}$	11	6	19	14	14	16	13	mg/kg	1	A-T-024s
Mercury$_D$	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	mg/kg	0.17	A-T-024s
Nickel$_D$$^{M\#}$	20	29	30	15	40	14	39	mg/kg	1	A-T-024s
Zinc$_D$$^{M\#}$	38	35	70	53	64	49	68	mg/kg	5	A-T-024s

Envirolab Job Number: 24/10045

Client Project Name: One Earth Solar Farm

Client Project Ref: 2372986

Lab Sample ID	24/10045/1	24/10045/2	24/10045/3	24/10045/5	24/10045/7	24/10045/9	24/10045/10	Units	Limit of Detection	Method ref
Client Sample No	3	6	3	3	3	3	6			
Client Sample ID	TP001	TP001	TP002	TP003	TP004	TP005	TP005			
Depth to Top	0.30	1.00	0.30	0.30	0.30	0.10	1.00			
Depth To Bottom										
Date Sampled	26-Sep-24	26-Sep-24	26-Sep-24	26-Sep-24	29-Sep-24	26-Sep-24	26-Sep-24			
Sample Type	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES			
Sample Matrix Code	6A	5AE	6AE	4AE	6AE	4AE	5AE			
Asbestos in Soil (inc. matrix) ^										
Asbestos in soil$_{D}^{\#}$	NAD	-	NAD	-	NAD	NAD	-			A-T-045
Asbestos Matrix (visual)$_{D}$	-	-	-	-	-	-	-			A-T-045
Asbestos Matrix (microscope)$_{D}$	-	-	-	-	-	-	-			A-T-045
Asbestos ACM - Suitable for Water Absorption Test?$_{D}$	N/A	-	N/A	-	N/A	N/A	-			A-T-045

Envirolab Job Number: 24/10045

Client Project Name: One Earth Solar Farm

Client Project Ref: 2372986

Lab Sample ID	24/10045/1	24/10045/2	24/10045/3	24/10045/5	24/10045/7	24/10045/9	24/10045/10	Units	Limit of Detection	Method ref
Client Sample No	3	6	3	3	3	3	6			
Client Sample ID	TP001	TP001	TP002	TP003	TP004	TP005	TP005			
Depth to Top	0.30	1.00	0.30	0.30	0.30	0.10	1.00			
Depth To Bottom										
Date Sampled	26-Sep-24	26-Sep-24	26-Sep-24	26-Sep-24	29-Sep-24	26-Sep-24	26-Sep-24			
Sample Type	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES			
Sample Matrix Code	6A	5AE	6AE	4AE	6AE	4AE	5AE			
PAH-16MS										
Acenaphthene$_A^{M\#}$	<0.01	-	<0.01	-	<0.01	<0.01	-	mg/kg	0.01	A-T-019s
Acenaphthylene$_A^{M\#}$	<0.01	-	<0.01	-	<0.01	<0.01	-	mg/kg	0.01	A-T-019s
Anthracene$_A^{M\#}$	<0.02	-	<0.02	-	<0.02	<0.02	-	mg/kg	0.02	A-T-019s
Benzo(a)anthracene$_A^{M\#}$	<0.04	-	<0.04	-	<0.04	<0.04	-	mg/kg	0.04	A-T-019s
Benzo(a)pyrene$_A^{M\#}$	<0.04	-	<0.04	-	<0.04	<0.04	-	mg/kg	0.04	A-T-019s
Benzo(b)fluoranthene$_A^{M\#}$	<0.05	-	<0.05	-	<0.05	<0.05	-	mg/kg	0.05	A-T-019s
Benzo(ghi)perylene$_A^{M\#}$	<0.05	-	<0.05	-	<0.05	<0.05	-	mg/kg	0.05	A-T-019s
Benzo(k)fluoranthene$_A^{M\#}$	<0.07	-	<0.07	-	<0.07	<0.07	-	mg/kg	0.07	A-T-019s
Chrysene$_A^{M\#}$	<0.06	-	<0.06	-	<0.06	<0.06	-	mg/kg	0.06	A-T-019s
Dibenzo(ah)anthracene$_A^{M\#}$	<0.04	-	<0.04	-	<0.04	<0.04	-	mg/kg	0.04	A-T-019s
Fluoranthene$_A^{M\#}$	<0.08	-	<0.08	-	<0.08	<0.08	-	mg/kg	0.08	A-T-019s
Fluorene$_A^{M\#}$	<0.01	-	<0.01	-	<0.01	<0.01	-	mg/kg	0.01	A-T-019s
Indeno(123-cd)pyrene$_A^{M\#}$	<0.03	-	<0.03	-	<0.03	<0.03	-	mg/kg	0.03	A-T-019s
Naphthalene $_A^{M\#}$	<0.03	-	<0.03	-	<0.03	<0.03	-	mg/kg	0.03	A-T-019s
Phenanthrene$_A^{M\#}$	<0.03	-	<0.03	-	<0.03	<0.03	-	mg/kg	0.03	A-T-019s
Pyrene$_A^{M\#}$	<0.07	-	<0.07	-	<0.07	<0.07	-	mg/kg	0.07	A-T-019s
Total PAH-16MS$_A^{M\#}$	<0.08	-	<0.08	-	<0.08	<0.08	-	mg/kg	0.01	A-T-019s

Envirolab Job Number: 24/10045

Client Project Name: One Earth Solar Farm

Client Project Ref: 2372986

Lab Sample ID	24/10045/1	24/10045/2	24/10045/3	24/10045/5	24/10045/7	24/10045/9	24/10045/10	Units	Limit of Detection	Method ref
Client Sample No	3	6	3	3	3	3	6			
Client Sample ID	TP001	TP001	TP002	TP003	TP004	TP005	TP005			
Depth to Top	0.30	1.00	0.30	0.30	0.30	0.10	1.00			
Depth To Bottom										
Date Sampled	26-Sep-24	26-Sep-24	26-Sep-24	26-Sep-24	29-Sep-24	26-Sep-24	26-Sep-24			
Sample Type	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES			
Sample Matrix Code	6A	5AE	6AE	4AE	6AE	4AE	5AE			
SVOC excluding PAH-16										
4-Bromophenyl phenyl ether$_A$	<100	-	<100	-	-	-	-	µg/kg	100	A-T-052s
Hexachlorobenzene$_A$	<100	-	<100	-	-	-	-	µg/kg	100	A-T-052s
Diethyl phthalate$_A$	<100	-	<100	-	-	-	-	µg/kg	100	A-T-052s
Dimethyl phthalate$_A$	<100	-	<100	-	-	-	-	µg/kg	100	A-T-052s
Dibenzofuran$_A$	<100	-	<100	-	-	-	-	µg/kg	100	A-T-052s
Carbazole$_A$	<100	-	<100	-	-	-	-	µg/kg	100	A-T-052s
Butylbenzyl phthalate$_A$	<100	-	<100	-	-	-	-	µg/kg	100	A-T-052s
Bis(2-ethylhexyl)phthalate$_A$	<500	-	<500	-	-	-	-	µg/kg	500	A-T-052s
Bis(2-chloroethoxy)methane$_A$	<100	-	<100	-	-	-	-	µg/kg	100	A-T-052s
Bis(2-chloroethyl)ether$_A$	<100	-	<100	-	-	-	-	µg/kg	100	A-T-052s
4-Nitrophenol$_A$	<100	-	<100	-	-	-	-	µg/kg	100	A-T-052s
3+4-Methylphenol$_A$	<100	-	<100	-	-	-	-	µg/kg	100	A-T-052s
4-Chloro-3-methylphenol$_A$	<100	-	<100	-	-	-	-	µg/kg	100	A-T-052s
2-Nitrophenol$_A$	<100	-	<100	-	-	-	-	µg/kg	100	A-T-052s
2-Methylphenol$_A$	<100	-	<100	-	-	-	-	µg/kg	100	A-T-052s
1,2,4-Trichlorobenzene$_A$	<100	-	<100	-	-	-	-	µg/kg	100	A-T-052s
2-Chlorophenol$_A$	<100	-	<100	-	-	-	-	µg/kg	100	A-T-052s
2,6-Dinitrotoluene$_A$	<100	-	<100	-	-	-	-	µg/kg	100	A-T-052s
2,4-Dinitrotoluene$_A$	<100	-	<100	-	-	-	-	µg/kg	100	A-T-052s
2,4-Dimethylphenol$_A$	<100	-	<100	-	-	-	-	µg/kg	100	A-T-052s
2,4-Dichlorophenol$_A$	<100	-	<100	-	-	-	-	µg/kg	100	A-T-052s
2,4,6-Trichlorophenol$_A$	<100	-	<100	-	-	-	-	µg/kg	100	A-T-052s
2,4,5-Trichlorophenol$_A$	<100	-	<100	-	-	-	-	µg/kg	100	A-T-052s
1,4-Dichlorobenzene$_A$	<100	-	<100	-	-	-	-	µg/kg	100	A-T-052s
1,3-Dichlorobenzene$_A$	<100	-	<100	-	-	-	-	µg/kg	100	A-T-052s
1,2-Dichlorobenzene$_A$	<100	-	<100	-	-	-	-	µg/kg	100	A-T-052s
2-Chloronaphthalene$_A$	<100	-	<100	-	-	-	-	µg/kg	100	A-T-052s
2-Methylnaphthalene$_A$	<100	-	<100	-	-	-	-	µg/kg	100	A-T-052s
Bis(2-chloroisopropyl)ether$_A$	<100	-	<100	-	-	-	-	µg/kg	100	A-T-052s
Phenol$_A$	<100	-	<100	-	-	-	-	µg/kg	100	A-T-052s
Pentachlorophenol$_A$	<100	-	<100	-	-	-	-	µg/kg	100	A-T-052s
n-Nitroso-n-dipropylamine$_A$	<100	-	<100	-	-	-	-	µg/kg	100	A-T-052s

Envirolab Job Number: 24/10045

Client Project Name: One Earth Solar Farm

Client Project Ref: 2372986

Lab Sample ID	24/10045/1	24/10045/2	24/10045/3	24/10045/5	24/10045/7	24/10045/9	24/10045/10	Units	Limit of Detection	Method ref
Client Sample No	3	6	3	3	3	3	6			
Client Sample ID	TP001	TP001	TP002	TP003	TP004	TP005	TP005			
Depth to Top	0.30	1.00	0.30	0.30	0.30	0.10	1.00			
Depth To Bottom										
Date Sampled	26-Sep-24	26-Sep-24	26-Sep-24	26-Sep-24	29-Sep-24	26-Sep-24	26-Sep-24			
Sample Type	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES			
Sample Matrix Code	6A	5AE	6AE	4AE	6AE	4AE	5AE			
n-Dioctylphthalate$_A$	<500	-	<500	-	-	-	-	µg/kg	500	A-T-052s
n-Dibutylphthalate$_A$	<100	-	<100	-	-	-	-	µg/kg	100	A-T-052s
Nitrobenzene$_A$	<100	-	<100	-	-	-	-	µg/kg	100	A-T-052s
Isophorone$_A$	<100	-	<100	-	-	-	-	µg/kg	100	A-T-052s
Hexachloroethane$_A$	<100	-	<100	-	-	-	-	µg/kg	100	A-T-052s
Hexachlorobutadiene$_A$	<100	-	<100	-	-	-	-	µg/kg	100	A-T-052s
Perylene$_A$	<100	-	<100	-	-	-	-	µg/kg	100	A-T-052s

Lab Sample ID	24/10045/1	24/10045/2	24/10045/3	24/10045/5	24/10045/7	24/10045/9	24/10045/10	Units	Limit of Detection	Method ref
Client Sample No	3	6	3	3	3	3	6			
Client Sample ID	TP001	TP001	TP002	TP003	TP004	TP005	TP005			
Depth to Top	0.30	1.00	0.30	0.30	0.30	0.10	1.00			
Depth To Bottom										
Date Sampled	26-Sep-24	26-Sep-24	26-Sep-24	26-Sep-24	29-Sep-24	26-Sep-24	26-Sep-24			
Sample Type	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES			
Sample Matrix Code	6A	5AE	6AE	4AE	6AE	4AE	5AE			
VOC										
Dichlorodifluoromethane$_A$	<25	-	<25	-	-	-	-	µg/kg	1	A-T-006s
Chloromethane$_A$	<250	-	<250	-	-	-	-	µg/kg	10	A-T-006s
Vinyl Chloride (Chloroethene)$_A^{\#}$	<25	-	<25	-	-	-	-	µg/kg	1	A-T-006s
Bromomethane$_A^{\#}$	<25	-	<25	-	-	-	-	µg/kg	1	A-T-006s
Chloroethane$_A^{\#}$	<25	-	<25	-	-	-	-	µg/kg	1	A-T-006s
Trichlorofluoromethane$_A^{\#}$	<25	-	<25	-	-	-	-	µg/kg	1	A-T-006s
1,1-Dichloroethene$_A^{\#}$	<25	-	<25	-	-	-	-	µg/kg	1	A-T-006s
Carbon Disulphide$_A^{\#}$	<25	-	<25	-	-	-	-	µg/kg	1	A-T-006s
Dichloromethane$_A$	<125	-	<125	-	-	-	-	µg/kg	5	A-T-006s
trans 1,2-Dichloroethene$_A^{\#}$	<25	-	<25	-	-	-	-	µg/kg	1	A-T-006s
1,1-Dichloroethane$_A^{\#}$	<25	-	<25	-	-	-	-	µg/kg	1	A-T-006s
cis 1,2-Dichloroethene$_A^{\#}$	<25	-	<25	-	-	-	-	µg/kg	1	A-T-006s
2,2-Dichloropropane$_A^{\#}$	<25^U	-	<25^U	-	-	-	-	µg/kg	1	A-T-006s
Bromochloromethane$_A^{\#}$	<125	-	<125	-	-	-	-	µg/kg	5	A-T-006s
Chloroform$_A^{\#}$	<25	-	<25	-	-	-	-	µg/kg	1	A-T-006s
1,1,1-Trichloroethane$_A^{\#}$	<25	-	<25	-	-	-	-	µg/kg	1	A-T-006s
1,1-Dichloropropene$_A^{\#}$	<25	-	<25	-	-	-	-	µg/kg	1	A-T-006s
Carbon Tetrachloride$_A^{\#}$	<25	-	<25	-	-	-	-	µg/kg	1	A-T-006s
1,2-Dichloroethane$_A^{\#}$	<50	-	<50	-	-	-	-	µg/kg	2	A-T-006s
Benzene$_A^{\#}$	<25	-	<25	-	-	-	-	µg/kg	1	A-T-006s
Trichloroethene$_A^{\#}$	<25	-	<25	-	-	-	-	µg/kg	1	A-T-006s
1,2-Dichloropropane$_A^{\#}$	<25	-	<25	-	-	-	-	µg/kg	1	A-T-006s
Dibromomethane$_A^{\#}$	<25	-	<25	-	-	-	-	µg/kg	1	A-T-006s
Bromodichloromethane$_A^{\#}$	<250	-	<250	-	-	-	-	µg/kg	10	A-T-006s
cis 1,3-Dichloropropene$_A^{\#}$	<25	-	<25	-	-	-	-	µg/kg	1	A-T-006s
Toluene$_A^{\#}$	<25	-	<25	-	-	-	-	µg/kg	1	A-T-006s
trans 1,3-Dichloropropene$_A^{\#}$	<25	-	<25	-	-	-	-	µg/kg	1	A-T-006s
1,1,2-Trichloroethane$_A^{\#}$	<25	-	<25	-	-	-	-	µg/kg	1	A-T-006s
1,3-Dichloropropane$_A^{\#}$	<25	-	<25	-	-	-	-	µg/kg	1	A-T-006s
Tetrachloroethene$_A^{\#}$	<25	-	<25	-	-	-	-	µg/kg	1	A-T-006s
Dibromochloromethane$_A^{\#}$	<75	-	<75	-	-	-	-	µg/kg	3	A-T-006s
1,2-Dibromoethane$_A^{\#}$	<25	-	<25	-	-	-	-	µg/kg	1	A-T-006s

Envirolab Job Number: 24/10045

Client Project Name: One Earth Solar Farm

Client Project Ref: 2372986

Lab Sample ID	24/10045/1	24/10045/2	24/10045/3	24/10045/5	24/10045/7	24/10045/9	24/10045/10	Units	Limit of Detection	Method ref
Client Sample No	3	6	3	3	3	3	6			
Client Sample ID	TP001	TP001	TP002	TP003	TP004	TP005	TP005			
Depth to Top	0.30	1.00	0.30	0.30	0.30	0.10	1.00			
Depth To Bottom										
Date Sampled	26-Sep-24	26-Sep-24	26-Sep-24	26-Sep-24	29-Sep-24	26-Sep-24	26-Sep-24			
Sample Type	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES			
Sample Matrix Code	6A	5AE	6AE	4AE	6AE	4AE	5AE			
Chlorobenzene$_{A}^{\#}$	<25	-	<25	-	-	-	-	µg/kg	1	A-T-006s
1,1,1,2-Tetrachloroethane$_{A}$	<25	-	<25	-	-	-	-	µg/kg	1	A-T-006s
Ethylbenzene$_{A}^{\#}$	<25	-	<25	-	-	-	-	µg/kg	1	A-T-006s
m & p Xylene$_{A}^{\#}$	<25	-	<25	-	-	-	-	µg/kg	1	A-T-006s
o-Xylene$_{A}^{\#}$	<25	-	<25	-	-	-	-	µg/kg	1	A-T-006s
Styrene$_{A}^{\#}$	<25	-	<25	-	-	-	-	µg/kg	1	A-T-006s
Bromoform$_{A}^{\#}$	<75	-	<75	-	-	-	-	µg/kg	3	A-T-006s
Isopropylbenzene$_{A}^{\#}$	<25	-	<25	-	-	-	-	µg/kg	1	A-T-006s
1,1,2,2-Tetrachloroethane$_{A}$	<25	-	<25	-	-	-	-	µg/kg	1	A-T-006s
1,2,3-Trichloropropane$_{A}^{\#}$	<25	-	<25	-	-	-	-	µg/kg	1	A-T-006s
Bromobenzene$_{A}^{\#}$	<25	-	<25	-	-	-	-	µg/kg	1	A-T-006s
n-Propylbenzene$_{A}^{\#}$	<25	-	<25	-	-	-	-	µg/kg	1	A-T-006s
2-Chlorotoluene$_{A}^{\#}$	<25	-	<25	-	-	-	-	µg/kg	1	A-T-006s
1,3,5-Trimethylbenzene$_{A}^{\#}$	<25	-	<25	-	-	-	-	µg/kg	1	A-T-006s
4-Chlorotoluene$_{A}^{\#}$	<25	-	<25	-	-	-	-	µg/kg	1	A-T-006s
tert-Butylbenzene$_{A}^{\#}$	<50	-	<50	-	-	-	-	µg/kg	2	A-T-006s
1,2,4-Trimethylbenzene$_{A}^{\#}$	<25	-	<25	-	-	-	-	µg/kg	1	A-T-006s
sec-Butylbenzene$_{A}^{\#}$	<25	-	<25	-	-	-	-	µg/kg	1	A-T-006s
4-Isopropyltoluene$_{A}^{\#}$	<25	-	<25	-	-	-	-	µg/kg	1	A-T-006s
1,3-Dichlorobenzene$_{A}$	<25	-	<25	-	-	-	-	µg/kg	1	A-T-006s
1,4-Dichlorobenzene$_{A}^{\#}$	<25	-	<25	-	-	-	-	µg/kg	1	A-T-006s
n-Butylbenzene$_{A}^{\#}$	<25	-	<25	-	-	-	-	µg/kg	1	A-T-006s
1,2-Dichlorobenzene$_{A}^{\#}$	<25	-	<25	-	-	-	-	µg/kg	1	A-T-006s
1,2-Dibromo-3-chloropropane (DCBP)$_{A}$	<50	-	<50	-	-	-	-	µg/kg	2	A-T-006s
1,2,4-Trichlorobenzene$_{A}$	<75	-	<75	-	-	-	-	µg/kg	3	A-T-006s
Hexachlorobutadiene$_{A}^{\#}$	<25	-	<25	-	-	-	-	µg/kg	1	A-T-006s
1,2,3-Trichlorobenzene$_{A}$	<75	-	<75	-	-	-	-	µg/kg	3	A-T-006s

Envirolab Job Number: 24/10045

Client Project Name: One Earth Solar Farm

Client Project Ref: 2372986

Lab Sample ID	24/10045/1	24/10045/2	24/10045/3	24/10045/5	24/10045/7	24/10045/9	24/10045/10	Units	Limit of Detection	Method ref
Client Sample No	3	6	3	3	3	3	6			
Client Sample ID	TP001	TP001	TP002	TP003	TP004	TP005	TP005			
Depth to Top	0.30	1.00	0.30	0.30	0.30	0.10	1.00			
Depth To Bottom										
Date Sampled	26-Sep-24	26-Sep-24	26-Sep-24	26-Sep-24	29-Sep-24	26-Sep-24	26-Sep-24			
Sample Type	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES			
Sample Matrix Code	6A	5AE	6AE	4AE	6AE	4AE	5AE			
TPH CWG with Clean Up										
Ali >C5-C6$_A$	<0.01	-	<0.01	-	-	-	-	mg/kg	0.01	A-T-022s
Ali >C6-C8$_A$	<0.01	-	<0.01	-	-	-	-	mg/kg	0.01	A-T-022s
Ali >C8-C10$_A$	<1	-	<1	-	-	-	-	mg/kg	1	A-T-055s
Ali >C10-C12$_A^{M\#}$	<1	-	<1	-	-	-	-	mg/kg	1	A-T-055s
Ali >C12-C16$_A^{M\#}$	<1	-	<1	-	-	-	-	mg/kg	1	A-T-055s
Ali >C16-C21$_A^{M\#}$	<1	-	<1	-	-	-	-	mg/kg	1	A-T-055s
Ali >C21-C35$_A^{M\#}$	3	-	5	-	-	-	-	mg/kg	1	A-T-055s
Total Aliphatics$_A$	3	-	5	-	-	-	-	mg/kg	1	Calc-As Recd
Aro >C5-C7$_A^{\#}$	<0.01	-	<0.01	-	-	-	-	mg/kg	0.01	A-T-022s
Aro >C7-C8$_A^{\#}$	<0.01	-	<0.01	-	-	-	-	mg/kg	0.01	A-T-022s
Aro >C8-C10$_A$	<1	-	<1	-	-	-	-	mg/kg	1	A-T-055s
Aro >C10-C12$_A$	<1	-	<1	-	-	-	-	mg/kg	1	A-T-055s
Aro >C12-C16$_A$	<1	-	<1	-	-	-	-	mg/kg	1	A-T-055s
Aro >C16-C21$_A^{M\#}$	<1	-	<1	-	-	-	-	mg/kg	1	A-T-055s
Aro >C21-C35$_A^{M\#}$	<1	-	<1	-	-	-	-	mg/kg	1	A-T-055s
Total Aromatics$_A$	<1	-	<1	-	-	-	-	mg/kg	1	Calc-As Recd
TPH (Ali & Aro >C5-C35)$_A$	3	-	5	-	-	-	-	mg/kg	1	Calc-As Recd
BTEX - Benzene$_A^{\#}$	<0.01	-	<0.01	-	-	-	-	mg/kg	0.01	A-T-022s
BTEX - Toluene$_A^{\#}$	<0.01	-	<0.01	-	-	-	-	mg/kg	0.01	A-T-022s
BTEX - Ethyl Benzene$_A^{\#}$	<0.01	-	<0.01	-	-	-	-	mg/kg	0.01	A-T-022s
BTEX - m & p Xylene$_A^{\#}$	<0.01	-	<0.01	-	-	-	-	mg/kg	0.01	A-T-022s
BTEX - o Xylene$_A^{\#}$	<0.01	-	<0.01	-	-	-	-	mg/kg	0.01	A-T-022s
MTBE$_A^{\#}$	<0.01	-	<0.01	-	-	-	-	mg/kg	0.01	A-T-022s

Report Notes

General

•This report shall not be reproduced, except in full, without written approval from Envirolab.
•The client Sample No, Client Sample ID, Depth to top, Depth to Bottom and Date Sampled are all provided by the client and can affect the validity of results.
•The results reported herein relate only to the material supplied to the laboratory.
•The residue of any samples contained within this report, and any received within the same delivery, will be disposed of **four weeks** after the initial scheduling. For samples tested for Asbestos we will retain a portion of the dried sample for a minimum of **six months** after the initial Asbestos testing is completed.
•Analytical results reflect the quality of the sample at the time of analysis only.
•Opinions and Interpretations expressed are outside our scope of accreditation.
•A deviating sample report is appended and will indicate if samples or tests have been found to be deviating. Any test results affected may not be an accurate record of the concentration at the time of sampling and, as a result, may be invalid.
•If a sample is outside of the calibration range or affected by interferences then it may need diluting. This will result in the limit of detection (LOD) being raised.
•Subcontracted Analysis: Please see the appended report for any deviations, current LODs and accreditation status of the test.

Key

Superscript "#"	Accredited to ISO 17025
Superscript "M"	Accredited to MCertS
Superscript "U"	Individual result not accredited
None of the above symbols	Analysis unaccredited
Subscript "A"	Analysis performed on as-received Sample
Subscript "D"	Analysis performed on the dried sample, crushed to pass 2mm sieve.
Subscript "D" on Asbestos	Analysis performed on a dried aliquot of sample provided.
Subscript "^"	Analysis has dependant options against results. Details appear in the comments of your Sample receipt
IS	Insufficient Sample for analysis
US	Unsuitable Sample for analysis
NDP	No Determination Possible
NAD	No Asbestos Detected
Trace	Asbestos found not suitable for Gravimetric Quantification – not enough to accurately weigh.
N/A	Not applicable

Asbestos

Identification: Asbestos in soil analysis is performed on a dried aliquot of the submitted sample and cannot guarantee to identify asbestos if only present in small numbers as discrete fibres/fragments in the original sample.
Stones etc. are not removed from the sample prior to analysis
"Trace Asbestos Identified" will be reported if there is not enough present to verify the type.
Quantification: Generally a 2 stage process including visual identification, hand picking and weighing, and fibre counting. Where ACMs are found a percentage asbestos is assigned to each with reference to 'HSG264, Asbestos: The survey guide' and the calculated asbestos content is expressed as a percentage of the dried soil sample aliquot used. If asbestos is identified as being present but is not in a form that is suitable for analysis by hand picking and weighing (normally if the asbestos is present as free fibres). "TRACE" will be reported as a quantification result.
PLEASE INFORM THE LABORATORY IF YOU WOULD LIKE THE STAGE 3 SEDIMENTATION PROCESS CARRIED OUT. Note this will be subcontracted.

Assigned Matrix Codes

1	SAND	6	CLAY/LOAM	A	Contains Stones
2	LOAM	7	OTHER	B	Contains Construction Rubble
3	CLAY	8	Asbestos Bulk (Only Asbestos ID accredited)	C	Contains visible hydrocarbons
4	LOAM/SAND	9	Incinerator Ash (some Metals accredited)	D	Contains glass / metal
5	SAND/CLAY			E	Contains roots / twigs
Note: 7,8,9 matrices are not covered by our ISO 17025 or MCertS accreditation, unless stated above.					

Soil Chemical Analysis:
All results are reported as dry weight (<40°C).
For samples with Matrix Codes 1 - 6 natural stones, brick and concrete fragments >10mm and any extraneous material (visible glass, metal or twigs) are removed and excluded from the sample prior to analysis and reported results corrected to a whole sample basis. This is reported as '% stones >10mm'.
For samples with Matrix Code 7 the whole sample is dried and crushed prior to analysis and this supersedes any "A" subscripts
All analysis is performed on the sample as received for soil samples which are positive for asbestos or the client has informed asbestos may be present and/or if they are from outside the European Union and this supersedes any "D" subscripts.

TPH by method A-T-007:
For waters, free and visible oils are excluded from the sample used for analysis, so the reported result represents the dissolved phase only.
Results "with Clean up" indicates samples cleaned up with Silica during extraction.

EPH CWG (method A-T-055) from TPH CWG:
EPH CWG results have humics mathematically subtracted through instrument calculation.
Where these humic substances have been identified in any IDs from "TPH CWG with clean up" please note that the concentration is **NOT** included in the quantified results but present in the ID for information.

Electrical Conductivity of water by method A-T-037:
Results greater than 12900µS/cm @ 25^0C / 11550µS/cm @ 20^0C fall outside the calibration range and as such are unaccredited.

Please contact your client manager if you require any further information.

Envirolab Deviating Samples Report

Hattersley Science & Technology Park, Stockport Road, Hattersley, SK14 3QU
Tel. 0161 368 4921 email. ask@envlab.co.uk

Client: Central Alliance, Alliance House, South Park Way, South Park Way, Wakefield 41 Business Park, Wakefield, WF2 0XJ

Project: One Earth Solar Farm

Clients Project No: 2372986

Project No: 24/10045

Date Received: 17/10/2024 (am)

Cool Box Temperatures (°C): 12.8

Lab Sample ID	24/10045/1	24/10045/3	24/10045/7	24/10045/9
Client Sample No	3	3	3	3
Client Sample ID/Depth	TP001 0.30m	TP002 0.30m	TP004 0.30m	TP005 0.10m
Date Sampled	26/09/24	26/09/24	29/09/24	26/09/24
Deviation Code				
F	✓	✓	✓	✓

Key
F *Maximum holding time exceeded between sampling date and analysis for analytes listed below*

HOLDING TIME EXCEEDANCES

Lab Sample ID	24/10045/1	24/10045/3	24/10045/7	24/10045/9
Client Sample No	3	3	3	3
Client Sample ID/Depth	TP001 0.30m	TP002 0.30m	TP004 0.30m	TP005 0.10m
Date Sampled	26/09/24	26/09/24	29/09/24	26/09/24
VPHCWG	✓	✓		
VOC	✓	✓		
SVOC excluding PAH-16	✓	✓		
PAH-16MS	✓	✓	✓	✓
Cyanide (total)	✓	✓	✓	✓

If, at any point before reaching the laboratory, the temperature of the samples has breached those set in published standards, e.g. BS-EN 5667-3, ISO 18400-102:2017, then the concentration of any affected analytes may differ from that at the time of sampling.

Envirolab Analysis Dates

Lab Sample ID	24/10045/1	24/10045/2	24/10045/3	24/10045/5	24/10045/7	24/10045/9	24/10045/10
Client Sample No	3	6	3	3	3	3	6
Client Sample ID/Depth	TP001 0.30m	TP001 1.00m	TP002 0.30m	TP003 0.30m	TP004 0.30m	TP005 0.10m	TP005 1.00m
Date Sampled	26/09/24	26/09/24	26/09/24	26/09/24	29/09/24	26/09/24	26/09/24
A-T-006s	23/10/2024		23/10/2024				
A-T-019s	25/10/2024		25/10/2024		25/10/2024	25/10/2024	
A-T-022s	22/10/2024		22/10/2024				
A-T-024s	22/10/2024	22/10/2024	22/10/2024	22/10/2024	22/10/2024	22/10/2024	22/10/2024
A-T-026s	22/10/2024	22/10/2024	22/10/2024	22/10/2024	22/10/2024	22/10/2024	22/10/2024
A-T-027s	22/10/2024	22/10/2024	22/10/2024	22/10/2024	22/10/2024	22/10/2024	22/10/2024
A-T-031s	22/10/2024	22/10/2024	22/10/2024	22/10/2024	22/10/2024	22/10/2024	22/10/2024
A-T-032s	22/10/2024	22/10/2024	22/10/2024	22/10/2024	22/10/2024	22/10/2024	22/10/2024
A-T-042sTCN	21/10/2024		21/10/2024		21/10/2024	21/10/2024	
A-T-044	24/10/2024	24/10/2024	24/10/2024	24/10/2024	24/10/2024	24/10/2024	24/10/2024
A-T-045	18/10/2024		18/10/2024		18/10/2024	18/10/2024	
A-T-050s	21/10/2024		21/10/2024		21/10/2024	21/10/2024	
A-T-052s	21/10/2024		21/10/2024				
A-T-055s	21/10/2024		21/10/2024				
Calc-As Recd	22/10/2024		22/10/2024				

The above dates are the analysis completion dates, please note that these are not necessarily the date that the analysis was weighed/extracted.

End of Report

envirolab
Hattersley Science & Technology Park
Stockport Road, Hattersley, SK14 3QU

FINAL ANALYTICAL TEST REPORT

Envirolab Job Number: 24/10046
Issue Number: 1 **Date:** 24 October, 2024

Client:
Central Alliance
Alliance House
South Park Way
South Park Way
Wakefield 41 Business Park
Wakefield
WF2 0XJ

Project Manager: John Parkinson/Lab results
Project Name: One Earth Solar Farm
Project Ref: 2372986
Order No: N/A
Date Samples Received: 07/10/24
Date Instructions Received: 17/10/24
Date Analysis Completed: 24/10/24

Approved by:

[redacted]

Richard Wong
Client Manager

Envirolab Job Number: 24/10046

Client Project Name: One Earth Solar Farm

Client Project Ref: 2372986

Lab Sample ID	24/10046/1	24/10046/2	24/10046/3	24/10046/5				Units	Limit of Detection	Method ref
Client Sample No	1	4	7	17						
Client Sample ID	BH003	BH003	BH003	BH003						
Depth to Top	0.30	0.50	1.00	3.00						
Depth To Bottom										
Date Sampled	02-Oct-24	02-Oct-24	02-Oct-24	03-Oct-24						
Sample Type	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES						
Sample Matrix Code	6A	6A	6A	6A						
% Stones >10mm$_A$	<0.1	<0.1	<0.1	<0.1				% w/w	0.1	A-T-044
pH$_D$$^{M\#}$	7.86	8.09	8.30	8.52				pH	0.01	A-T-031s
Sulphate (water sol 2:1)$_D$$^{M\#}$	<0.01	0.01	0.04	0.04				g/l	0.01	A-T-026s
Cyanide (total)$_A$$^{M\#}$	<1	-	-	-				mg/kg	1	A-T-042sTCN
Phenol$_A$	<0.2	-	-	-				mg/kg	0.2	A-T-050s
Organic Matter$_D$$^{M\#}$	1.2	0.9	0.6	0.9				% w/w	0.1	A-T-032s
Arsenic$_D$$^{M\#}$	2	1	3	<1				mg/kg	1	A-T-024s
Boron (water soluble)$_D$$^{M\#}$	<1.0	<1.0	<1.0	1.4				mg/kg	1	A-T-027s
Cadmium$_D$$^{M\#}$	<0.5	<0.5	<0.5	<0.5				mg/kg	0.5	A-T-024s
Copper$_D$$^{M\#}$	9	8	12	11				mg/kg	1	A-T-024s
Chromium$_D$$^{M\#}$	26	32	53	70				mg/kg	1	A-T-024s
Lead$_D$$^{M\#}$	12	6	5	2				mg/kg	1	A-T-024s
Mercury$_D$	<0.17	<0.17	<0.17	<0.17				mg/kg	0.17	A-T-024s
Nickel$_D$$^{M\#}$	22	25	49	68				mg/kg	1	A-T-024s
Zinc$_D$$^{M\#}$	45	45	56	71				mg/kg	5	A-T-024s

Envirolab Job Number: 24/10046

Client Project Name: One Earth Solar Farm

Client Project Ref: 2372986

Lab Sample ID	24/10046/1	24/10046/2	24/10046/3	24/10046/5				Units	Limit of Detection	Method ref
Client Sample No	1	4	7	17						
Client Sample ID	BH003	BH003	BH003	BH003						
Depth to Top	0.30	0.50	1.00	3.00						
Depth To Bottom										
Date Sampled	02-Oct-24	02-Oct-24	02-Oct-24	03-Oct-24						
Sample Type	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES						
Sample Matrix Code	6A	6A	6A	6A						
PAH-16MS										
Acenaphthene$_A^{M\#}$	<0.01	-	-	-				mg/kg	0.01	A-T-019s
Acenaphthylene$_A^{M\#}$	<0.01	-	-	-				mg/kg	0.01	A-T-019s
Anthracene$_A^{M\#}$	<0.02	-	-	-				mg/kg	0.02	A-T-019s
Benzo(a)anthracene$_A^{M\#}$	<0.04	-	-	-				mg/kg	0.04	A-T-019s
Benzo(a)pyrene$_A^{M\#}$	<0.04	-	-	-				mg/kg	0.04	A-T-019s
Benzo(b)fluoranthene$_A^{M\#}$	<0.05	-	-	-				mg/kg	0.05	A-T-019s
Benzo(ghi)perylene$_A^{M\#}$	<0.05	-	-	-				mg/kg	0.05	A-T-019s
Benzo(k)fluoranthene$_A^{M\#}$	<0.07	-	-	-				mg/kg	0.07	A-T-019s
Chrysene$_A^{M\#}$	<0.06	-	-	-				mg/kg	0.06	A-T-019s
Dibenzo(ah)anthracene$_A^{M\#}$	<0.04	-	-	-				mg/kg	0.04	A-T-019s
Fluoranthene$_A^{M\#}$	<0.08	-	-	-				mg/kg	0.08	A-T-019s
Fluorene$_A^{M\#}$	<0.01	-	-	-				mg/kg	0.01	A-T-019s
Indeno(123-cd)pyrene$_A^{M\#}$	<0.03	-	-	-				mg/kg	0.03	A-T-019s
Naphthalene $_A^{M\#}$	<0.03	-	-	-				mg/kg	0.03	A-T-019s
Phenanthrene$_A^{M\#}$	<0.03	-	-	-				mg/kg	0.03	A-T-019s
Pyrene$_A^{M\#}$	<0.07	-	-	-				mg/kg	0.07	A-T-019s
Total PAH-16MS$_A^{M\#}$	<0.08	-	-	-				mg/kg	0.01	A-T-019s

Lab Sample ID	24/10046/1	24/10046/2	24/10046/3	24/10046/5				Units	Limit of Detection	Method ref
Client Sample No	1	4	7	17						
Client Sample ID	BH003	BH003	BH003	BH003						
Depth to Top	0.30	0.50	1.00	3.00						
Depth To Bottom										
Date Sampled	02-Oct-24	02-Oct-24	02-Oct-24	03-Oct-24						
Sample Type	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES						
Sample Matrix Code	6A	6A	6A	6A						
SVOC excluding PAH-16										
4-Bromophenyl phenyl ether$_A$	<100	-	-	-				µg/kg	100	A-T-052s
Hexachlorobenzene$_A$	<100	-	-	-				µg/kg	100	A-T-052s
Diethyl phthalate$_A$	<100	-	-	-				µg/kg	100	A-T-052s
Dimethyl phthalate$_A$	<100	-	-	-				µg/kg	100	A-T-052s
Dibenzofuran$_A$	<100	-	-	-				µg/kg	100	A-T-052s
Carbazole$_A$	<100	-	-	-				µg/kg	100	A-T-052s
Butylbenzyl phthalate$_A$	<100	-	-	-				µg/kg	100	A-T-052s
Bis(2-ethylhexyl)phthalate$_A$	<500	-	-	-				µg/kg	500	A-T-052s
Bis(2-chloroethoxy)methane$_A$	<100	-	-	-				µg/kg	100	A-T-052s
Bis(2-chloroethyl)ether$_A$	<100	-	-	-				µg/kg	100	A-T-052s
4-Nitrophenol$_A$	<100	-	-	-				µg/kg	100	A-T-052s
3+4-Methylphenol$_A$	<100	-	-	-				µg/kg	100	A-T-052s
4-Chloro-3-methylphenol$_A$	<100	-	-	-				µg/kg	100	A-T-052s
2-Nitrophenol$_A$	<100	-	-	-				µg/kg	100	A-T-052s
2-Methylphenol$_A$	<100	-	-	-				µg/kg	100	A-T-052s
1,2,4-Trichlorobenzene$_A$	<100	-	-	-				µg/kg	100	A-T-052s
2-Chlorophenol$_A$	<100	-	-	-				µg/kg	100	A-T-052s
2,6-Dinitrotoluene$_A$	<100	-	-	-				µg/kg	100	A-T-052s
2,4-Dinitrotoluene$_A$	<100	-	-	-				µg/kg	100	A-T-052s
2,4-Dimethylphenol$_A$	<100	-	-	-				µg/kg	100	A-T-052s
2,4-Dichlorophenol$_A$	<100	-	-	-				µg/kg	100	A-T-052s
2,4,6-Trichlorophenol$_A$	<100	-	-	-				µg/kg	100	A-T-052s
2,4,5-Trichlorophenol$_A$	<100	-	-	-				µg/kg	100	A-T-052s
1,4-Dichlorobenzene$_A$	<100	-	-	-				µg/kg	100	A-T-052s
1,3-Dichlorobenzene$_A$	<100	-	-	-				µg/kg	100	A-T-052s
1,2-Dichlorobenzene$_A$	<100	-	-	-				µg/kg	100	A-T-052s
2-Chloronaphthalene$_A$	<100	-	-	-				µg/kg	100	A-T-052s
2-Methylnaphthalene$_A$	<100	-	-	-				µg/kg	100	A-T-052s
Bis(2-chloroisopropyl)ether$_A$	<100	-	-	-				µg/kg	100	A-T-052s
Phenol$_A$	<100	-	-	-				µg/kg	100	A-T-052s
Pentachlorophenol$_A$	<100	-	-	-				µg/kg	100	A-T-052s
n-Nitroso-n-dipropylamine$_A$	<100	-	-	-				µg/kg	100	A-T-052s

Envirolab Job Number: 24/10046

Client Project Name: One Earth Solar Farm

Client Project Ref: 2372986

Lab Sample ID	24/10046/1	24/10046/2	24/10046/3	24/10046/5				Units	Limit of Detection	Method ref
Client Sample No	1	4	7	17						
Client Sample ID	BH003	BH003	BH003	BH003						
Depth to Top	0.30	0.50	1.00	3.00						
Depth To Bottom										
Date Sampled	02-Oct-24	02-Oct-24	02-Oct-24	03-Oct-24						
Sample Type	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES						
Sample Matrix Code	6A	6A	6A	6A						
n-Dioctylphthalate$_A$	<500	-	-	-				µg/kg	500	A-T-052s
n-Dibutylphthalate$_A$	<100	-	-	-				µg/kg	100	A-T-052s
Nitrobenzene$_A$	<100	-	-	-				µg/kg	100	A-T-052s
Isophorone$_A$	<100	-	-	-				µg/kg	100	A-T-052s
Hexachloroethane$_A$	<100	-	-	-				µg/kg	100	A-T-052s
Hexachlorobutadiene$_A$	<100	-	-	-				µg/kg	100	A-T-052s
Perylene$_A$	<100	-	-	-				µg/kg	100	A-T-052s

Envirolab Job Number: 24/10046

Client Project Name: One Earth Solar Farm

Client Project Ref: 2372986

Lab Sample ID	24/10046/1	24/10046/2	24/10046/3	24/10046/5				Units	Limit of Detection	Method ref
Client Sample No	1	4	7	17						
Client Sample ID	BH003	BH003	BH003	BH003						
Depth to Top	0.30	0.50	1.00	3.00						
Depth To Bottom										
Date Sampled	02-Oct-24	02-Oct-24	02-Oct-24	03-Oct-24						
Sample Type	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES						
Sample Matrix Code	6A	6A	6A	6A						
VOC										
Dichlorodifluoromethane$_{A}$	<25	-	-	-				µg/kg	1	A-T-006s
Chloromethane$_{A}$	<250	-	-	-				µg/kg	10	A-T-006s
Vinyl Chloride (Chloroethene)$_{A}^{\#}$	<25	-	-	-				µg/kg	1	A-T-006s
Bromomethane$_{A}^{\#}$	<25	-	-	-				µg/kg	1	A-T-006s
Chloroethane$_{A}^{\#}$	<25	-	-	-				µg/kg	1	A-T-006s
Trichlorofluoromethane$_{A}^{\#}$	<25	-	-	-				µg/kg	1	A-T-006s
1,1-Dichloroethene$_{A}^{\#}$	<25	-	-	-				µg/kg	1	A-T-006s
Carbon Disulphide$_{A}^{\#}$	<25	-	-	-				µg/kg	1	A-T-006s
Dichloromethane$_{A}$	<125	-	-	-				µg/kg	5	A-T-006s
trans 1,2-Dichloroethene$_{A}^{\#}$	<25	-	-	-				µg/kg	1	A-T-006s
1,1-Dichloroethane$_{A}^{\#}$	<25	-	-	-				µg/kg	1	A-T-006s
cis 1,2-Dichloroethene$_{A}^{\#}$	<25	-	-	-				µg/kg	1	A-T-006s
2,2-Dichloropropane$_{A}^{\#}$	<25^{U}	-	-	-				µg/kg	1	A-T-006s
Bromochloromethane$_{A}^{\#}$	<125	-	-	-				µg/kg	5	A-T-006s
Chloroform$_{A}^{\#}$	<25	-	-	-				µg/kg	1	A-T-006s
1,1,1-Trichloroethane$_{A}^{\#}$	<25	-	-	-				µg/kg	1	A-T-006s
1,1-Dichloropropene$_{A}^{\#}$	<25	-	-	-				µg/kg	1	A-T-006s
Carbon Tetrachloride$_{A}^{\#}$	<25	-	-	-				µg/kg	1	A-T-006s
1,2-Dichloroethane$_{A}^{\#}$	<50	-	-	-				µg/kg	2	A-T-006s
Benzene$_{A}^{\#}$	<25	-	-	-				µg/kg	1	A-T-006s
Trichloroethene$_{A}^{\#}$	<25	-	-	-				µg/kg	1	A-T-006s
1,2-Dichloropropane$_{A}^{\#}$	<25	-	-	-				µg/kg	1	A-T-006s
Dibromomethane$_{A}^{\#}$	<25	-	-	-				µg/kg	1	A-T-006s
Bromodichloromethane$_{A}^{\#}$	<250	-	-	-				µg/kg	10	A-T-006s
cis 1,3-Dichloropropene$_{A}^{\#}$	<25	-	-	-				µg/kg	1	A-T-006s
Toluene$_{A}^{\#}$	<25	-	-	-				µg/kg	1	A-T-006s
trans 1,3-Dichloropropene$_{A}^{\#}$	<25	-	-	-				µg/kg	1	A-T-006s
1,1,2-Trichloroethane$_{A}^{\#}$	<25	-	-	-				µg/kg	1	A-T-006s
1,3-Dichloropropane$_{A}^{\#}$	<25	-	-	-				µg/kg	1	A-T-006s
Tetrachloroethene$_{A}^{\#}$	<25	-	-	-				µg/kg	1	A-T-006s
Dibromochloromethane$_{A}^{\#}$	<75	-	-	-				µg/kg	3	A-T-006s
1,2-Dibromoethane$_{A}^{\#}$	<25	-	-	-				µg/kg	1	A-T-006s

Envirolab Job Number: 24/10046

Client Project Name: One Earth Solar Farm

Client Project Ref: 2372986

Lab Sample ID	24/10046/1	24/10046/2	24/10046/3	24/10046/5				Units	Limit of Detection	Method ref
Client Sample No	1	4	7	17						
Client Sample ID	BH003	BH003	BH003	BH003						
Depth to Top	0.30	0.50	1.00	3.00						
Depth To Bottom										
Date Sampled	02-Oct-24	02-Oct-24	02-Oct-24	03-Oct-24						
Sample Type	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES						
Sample Matrix Code	6A	6A	6A	6A						
Chlorobenzene$_{A}^{\#}$	<25	-	-	-				µg/kg	1	A-T-006s
1,1,1,2-Tetrachloroethane$_{A}$	<25	-	-	-				µg/kg	1	A-T-006s
Ethylbenzene$_{A}^{\#}$	<25	-	-	-				µg/kg	1	A-T-006s
m & p Xylene$_{A}^{\#}$	<25	-	-	-				µg/kg	1	A-T-006s
o-Xylene$_{A}^{\#}$	<25	-	-	-				µg/kg	1	A-T-006s
Styrene$_{A}^{\#}$	<25	-	-	-				µg/kg	1	A-T-006s
Bromoform$_{A}^{\#}$	<75	-	-	-				µg/kg	3	A-T-006s
Isopropylbenzene$_{A}^{\#}$	<25	-	-	-				µg/kg	1	A-T-006s
1,1,2,2-Tetrachloroethane$_{A}$	<25	-	-	-				µg/kg	1	A-T-006s
1,2,3-Trichloropropane$_{A}^{\#}$	<25	-	-	-				µg/kg	1	A-T-006s
Bromobenzene$_{A}^{\#}$	<25	-	-	-				µg/kg	1	A-T-006s
n-Propylbenzene$_{A}^{\#}$	<25	-	-	-				µg/kg	1	A-T-006s
2-Chlorotoluene$_{A}^{\#}$	<25	-	-	-				µg/kg	1	A-T-006s
1,3,5-Trimethylbenzene$_{A}^{\#}$	<25	-	-	-				µg/kg	1	A-T-006s
4-Chlorotoluene$_{A}^{\#}$	<25	-	-	-				µg/kg	1	A-T-006s
tert-Butylbenzene$_{A}^{\#}$	<50	-	-	-				µg/kg	2	A-T-006s
1,2,4-Trimethylbenzene$_{A}^{\#}$	<25	-	-	-				µg/kg	1	A-T-006s
sec-Butylbenzene$_{A}^{\#}$	<25	-	-	-				µg/kg	1	A-T-006s
4-Isopropyltoluene$_{A}^{\#}$	<25	-	-	-				µg/kg	1	A-T-006s
1,3-Dichlorobenzene$_{A}$	<25	-	-	-				µg/kg	1	A-T-006s
1,4-Dichlorobenzene$_{A}^{\#}$	<25	-	-	-				µg/kg	1	A-T-006s
n-Butylbenzene$_{A}^{\#}$	<25	-	-	-				µg/kg	1	A-T-006s
1,2-Dichlorobenzene$_{A}^{\#}$	<25	-	-	-				µg/kg	1	A-T-006s
1,2-Dibromo-3-chloropropane (DCBP)$_{A}$	<50	-	-	-				µg/kg	2	A-T-006s
1,2,4-Trichlorobenzene$_{A}$	<75	-	-	-				µg/kg	3	A-T-006s
Hexachlorobutadiene$_{A}^{\#}$	<25	-	-	-				µg/kg	1	A-T-006s
1,2,3-Trichlorobenzene$_{A}$	<75	-	-	-				µg/kg	3	A-T-006s

Envirolab Job Number: 24/10046

Client Project Name: One Earth Solar Farm

Client Project Ref: 2372986

Lab Sample ID	24/10046/1	24/10046/2	24/10046/3	24/10046/5				Units	Limit of Detection	Method ref
Client Sample No	1	4	7	17						
Client Sample ID	BH003	BH003	BH003	BH003						
Depth to Top	0.30	0.50	1.00	3.00						
Depth To Bottom										
Date Sampled	02-Oct-24	02-Oct-24	02-Oct-24	03-Oct-24						
Sample Type	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES						
Sample Matrix Code	6A	6A	6A	6A						
TPH CWG with Clean Up										
Ali >C5-C6$_A$	<0.01	-	-	-				mg/kg	0.01	A-T-022s
Ali >C6-C8$_A$	<0.01	-	-	-				mg/kg	0.01	A-T-022s
Ali >C8-C10$_A$	<1	-	-	-				mg/kg	1	A-T-055s
Ali >C10-C12$_A^{M\#}$	<1	-	-	-				mg/kg	1	A-T-055s
Ali >C12-C16$_A^{M\#}$	<1	-	-	-				mg/kg	1	A-T-055s
Ali >C16-C21$_A^{M\#}$	<1	-	-	-				mg/kg	1	A-T-055s
Ali >C21-C35$_A^{M\#}$	<1	-	-	-				mg/kg	1	A-T-055s
Total Aliphatics$_A$	<1	-	-	-				mg/kg	1	Calc-As Recd
Aro >C5-C7$_A^{\#}$	<0.01	-	-	-				mg/kg	0.01	A-T-022s
Aro >C7-C8$_A^{\#}$	<0.01	-	-	-				mg/kg	0.01	A-T-022s
Aro >C8-C10$_A$	<1	-	-	-				mg/kg	1	A-T-055s
Aro >C10-C12$_A$	<1	-	-	-				mg/kg	1	A-T-055s
Aro >C12-C16$_A$	<1	-	-	-				mg/kg	1	A-T-055s
Aro >C16-C21$_A^{M\#}$	<1	-	-	-				mg/kg	1	A-T-055s
Aro >C21-C35$_A^{M\#}$	<1	-	-	-				mg/kg	1	A-T-055s
Total Aromatics$_A$	<1	-	-	-				mg/kg	1	Calc-As Recd
TPH (Ali & Aro >C5-C35)$_A$	<1	-	-	-				mg/kg	1	Calc-As Recd
BTEX - Benzene$_A^{\#}$	<0.01	-	-	-				mg/kg	0.01	A-T-022s
BTEX - Toluene$_A^{\#}$	<0.01	-	-	-				mg/kg	0.01	A-T-022s
BTEX - Ethyl Benzene$_A^{\#}$	<0.01	-	-	-				mg/kg	0.01	A-T-022s
BTEX - m & p Xylene$_A^{\#}$	<0.01	-	-	-				mg/kg	0.01	A-T-022s
BTEX - o Xylene$_A^{\#}$	<0.01	-	-	-				mg/kg	0.01	A-T-022s
MTBE$_A^{\#}$	<0.01	-	-	-				mg/kg	0.01	A-T-022s

Report Notes

General

•This report shall not be reproduced, except in full, without written approval from Envirolab.
•The client Sample No, Client Sample ID, Depth to top, Depth to Bottom and Date Sampled are all provided by the client and can affect the validity of results.
•The results reported herein relate only to the material supplied to the laboratory.
•The residue of any samples contained within this report, and any received within the same delivery, will be disposed of **four weeks** after the initial scheduling. For samples tested for Asbestos we will retain a portion of the dried sample for a minimum of **six months** after the initial Asbestos testing is completed.
•Analytical results reflect the quality of the sample at the time of analysis only.
•Opinions and Interpretations expressed are outside our scope of accreditation.
•A deviating sample report is appended and will indicate if samples or tests have been found to be deviating. Any test results affected may not be an accurate record of the concentration at the time of sampling and, as a result, may be invalid.
•If a sample is outside of the calibration range or affected by interferences then it may need diluting. This will result in the limit of detection (LOD) being raised.
•Subcontracted Analysis: Please see the appended report for any deviations, current LODs and accreditation status of the test.

Key

Superscript "#"	Accredited to ISO 17025
Superscript "M"	Accredited to MCertS
Superscript "U"	Individual result not accredited
None of the above symbols	Analysis unaccredited
Subscript "A"	Analysis performed on as-received Sample
Subscript "D"	Analysis performed on the dried sample, crushed to pass 2mm sieve.
Subscript "D" on Asbestos	Analysis performed on a dried aliquot of sample provided.
Subscript "^"	Analysis has dependant options against results. Details appear in the comments of your Sample receipt
IS	Insufficient Sample for analysis
US	Unsuitable Sample for analysis
NDP	No Determination Possible
NAD	No Asbestos Detected
Trace	Asbestos found not suitable for Gravimetric Quantification – not enough to accurately weigh.
N/A	Not applicable

Asbestos

Identification: Asbestos in soil analysis is performed on a dried aliquot of the submitted sample and cannot guarantee to identify asbestos if only present in small numbers as discrete fibres/fragments in the original sample.
Stones etc. are not removed from the sample prior to analysis
"Trace Asbestos Identified" will be reported if there is not enough present to verify the type.
Quantification: Generally a 2 stage process including visual identification, hand picking and weighing, and fibre counting. Where ACMs are found a percentage asbestos is assigned to each with reference to 'HSG264, Asbestos: The survey guide' and the calculated asbestos content is expressed as a percentage of the dried soil sample aliquot used. If asbestos is identified as being present but is not in a form that is suitable for analysis by hand picking and weighing (normally if the asbestos is present as free fibres). "TRACE" will be reported as a quantification result.
PLEASE INFORM THE LABORATORY IF YOU WOULD LIKE THE STAGE 3 SEDIMENTATION PROCESS CARRIED OUT. Note this will be subcontracted.

Assigned Matrix Codes

1	SAND	6	CLAY/LOAM	A	Contains Stones
2	LOAM	7	OTHER	B	Contains Construction Rubble
3	CLAY	8	Asbestos Bulk (Only Asbestos ID accredited)	C	Contains visible hydrocarbons
4	LOAM/SAND	9	Incinerator Ash (some Metals accredited)	D	Contains glass / metal
5	SAND/CLAY			E	Contains roots / twigs
Note: 7,8,9 matrices are not covered by our ISO 17025 or MCertS accreditation, unless stated above.					

Soil Chemical Analysis:
All results are reported as dry weight (<40°C).
For samples with Matrix Codes 1 - 6 natural stones, brick and concrete fragments >10mm and any extraneous material (visible glass, metal or twigs) are removed and excluded from the sample prior to analysis and reported results corrected to a whole sample basis. This is reported as '% stones >10mm'.
For samples with Matrix Code 7 the whole sample is dried and crushed prior to analysis and this supersedes any "A" subscripts
All analysis is performed on the sample as received for soil samples which are positive for asbestos or the client has informed asbestos may be present and/or if they are from outside the European Union and this supersedes any "D" subscripts.

TPH by method A-T-007:
For waters, free and visible oils are excluded from the sample used for analysis, so the reported result represents the dissolved phase only.
Results "with Clean up" indicates samples cleaned up with Silica during extraction.

EPH CWG (method A-T-055) from TPH CWG:
EPH CWG results have humics mathematically subtracted through instrument calculation.
Where these humic substances have been identified in any IDs from "TPH CWG with clean up" please note that the concentration is **NOT** included in the quantified results but present in the ID for information.

Electrical Conductivity of water by method A-T-037:
Results greater than 12900µS/cm @ 25^0C / 11550µS/cm @ 20^0C fall outside the calibration range and as such are unaccredited.

Please contact your client manager if you require any further information.

Envirolab Deviating Samples Report

Hattersley Science & Technology Park, Stockport Road, Hattersley, SK14 3QU
Tel. 0161 368 4921 email. ask@envlab.co.uk

Client: Central Alliance, Alliance House, South Park Way, South Park Way, Wakefield 41 Business Park, Wakefield, WF2 0XJ

Project: One Earth Solar Farm

Clients Project No: 2372986

Project No: 24/10046

Date Received: 17/10/2024 (am)

Cool Box Temperatures (°C): 13.5

Lab Sample ID	24/10046/1
Client Sample No	1
Client Sample ID/Depth	BH003 0.30m
Date Sampled	02/10/24
Deviation Code	
F	✓

Key
F *Maximum holding time exceeded between sampling date and analysis for analytes listed below*

HOLDING TIME EXCEEDANCES

Lab Sample ID	24/10046/1
Client Sample No	1
Client Sample ID/Depth	BH003 0.30m
Date Sampled	02/10/24
VPHCWG	✓
PAH-16MS	✓
VOC	✓
SVOC excluding PAH-16	✓
Cyanide (total)	✓

If, at any point before reaching the laboratory, the temperature of the samples has breached those set in published standards, e.g. BS-EN 5667-3, ISO 18400-102:2017, then the concentration of any affected analytes may differ from that at the time of sampling.

Envirolab Analysis Dates

Lab Sample ID	24/10046/1	24/10046/2	24/10046/3	24/10046/5
Client Sample No	1	4	7	17
Client Sample ID/Depth	BH003 0.30m	BH003 0.50m	BH003 1.00m	BH003 3.00m
Date Sampled	02/10/24	02/10/24	02/10/24	03/10/24
A-T-006s	23/10/2024			
A-T-019s	24/10/2024			
A-T-022s	22/10/2024			
A-T-024s	22/10/2024	22/10/2024	22/10/2024	22/10/2024
A-T-026s	22/10/2024	22/10/2024	22/10/2024	22/10/2024
A-T-027s	21/10/2024	21/10/2024	21/10/2024	21/10/2024
A-T-031s	21/10/2024	21/10/2024	21/10/2024	21/10/2024
A-T-032s	21/10/2024	21/10/2024	22/10/2024	21/10/2024
A-T-042sTCN	21/10/2024			
A-T-044	22/10/2024	22/10/2024	22/10/2024	22/10/2024
A-T-050s	21/10/2024			
A-T-052s	21/10/2024			
A-T-055s	21/10/2024			
Calc-As Recd	22/10/2024			

The above dates are the analysis completion dates, please note that these are not necessarily the date that the analysis was weighed/extracted.

End of Report

envirolab
Hattersley Science & Technology Park
Stockport Road, Hattersley, SK14 3QU

FINAL ANALYTICAL TEST REPORT

Envirolab Job Number: 24/10047
Issue Number: 1 **Date:** 25 October, 2024

Client:
Central Alliance
Alliance House
South Park Way
South Park Way
Wakefield 41 Business Park
Wakefield
WF2 0XJ

Project Manager: John Hutton/Lab results
Project Name: One Earth Solar Farm
Project Ref: 2372986
Order No: N/A
Date Samples Received: 02/10/24
Date Instructions Received: 17/10/24
Date Analysis Completed: 25/10/24

Approved by:

[redacted]

Richard Wong
Client Manager

mCERTS THE ENVIRONMENT AGENCY'S MONITORING CERTIFICATION SCHEME
UKAS TESTING 1247

Envirolab Job Number: 24/10047

Client Project Name: One Earth Solar Farm

Client Project Ref: 2372986

Lab Sample ID	24/10047/1	24/10047/2	24/10047/3	24/10047/4	24/10047/5	24/10047/6	24/10047/7	Units	Limit of Detection	Method ref
Client Sample No	3	6	3	6	3	6	3			
Client Sample ID	TP006	TP006	TP007	TP007	TP010	TP010	TP011			
Depth to Top	0.30	1.00	0.30	1.00	0.40	1.00	0.50			
Depth To Bottom										
Date Sampled	01-Oct-24	01-Oct-24	01-Oct-24	01-Oct-24	30-Sep-24	30-Sep-24	30-Sep-24			
Sample Type	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES			
Sample Matrix Code	6AE	6AE	6AE	6AE	6AE	6AE	4AE			
% Stones >10mm$_A$	<0.1	<0.1	<0.1	<0.1	3.5	<0.1	13.7	% w/w	0.1	A-T-044
pH$_D$$^{M\#}$	6.74	7.41	6.68	7.33	7.21	8.11	7.08	pH	0.01	A-T-031s
Sulphate (water sol 2:1)$_D$$^{M\#}$	0.01	0.03	<0.01	0.03	<0.01	<0.01	<0.01	g/l	0.01	A-T-026s
Cyanide (total)$_A$$^{M\#}$	<1	-	<1	-	<1	-	<1	mg/kg	1	A-T-042sTCN
Phenol$_A$	<0.2	-	<0.2	-	<0.2	<0.2	<0.2	mg/kg	0.2	A-T-050s
Organic Matter$_D$$^{M\#}$	5.9	1.9	5.2	2.2	1.8	0.3	1.3	% w/w	0.1	A-T-032s
Arsenic$_D$$^{M\#}$	6	9	7	7	3	<1	4	mg/kg	1	A-T-024s
Boron (water soluble)$_D$$^{M\#}$	1.5	<1.0	1.5	1.1	<1.0	<1.0	<1.0	mg/kg	1	A-T-027s
Cadmium$_D$$^{M\#}$	2.2	2.6	2.5	2.0	<0.5	<0.5	<0.5	mg/kg	0.5	A-T-024s
Copper$_D$$^{M\#}$	34	24	36	28	15	20	10	mg/kg	1	A-T-024s
Chromium$_D$$^{M\#}$	54	36	53	39	16	38	10	mg/kg	1	A-T-024s
Lead$_D$$^{M\#}$	266	122	269	182	18	13	16	mg/kg	1	A-T-024s
Mercury$_D$	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	mg/kg	0.17	A-T-024s
Nickel$_D$$^{M\#}$	43	39	45	41	12	36	7	mg/kg	1	A-T-024s
Zinc$_D$$^{M\#}$	253	278	299	198	48	71	36	mg/kg	5	A-T-024s

Envirolab Job Number: 24/10047

Client Project Name: One Earth Solar Farm

Client Project Ref: 2372986

Lab Sample ID	24/10047/1	24/10047/2	24/10047/3	24/10047/4	24/10047/5	24/10047/6	24/10047/7	Units	Limit of Detection	Method ref
Client Sample No	3	6	3	6	3	6	3			
Client Sample ID	TP006	TP006	TP007	TP007	TP010	TP010	TP011			
Depth to Top	0.30	1.00	0.30	1.00	0.40	1.00	0.50			
Depth To Bottom										
Date Sampled	01-Oct-24	01-Oct-24	01-Oct-24	01-Oct-24	30-Sep-24	30-Sep-24	30-Sep-24			
Sample Type	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES			
Sample Matrix Code	6AE	6AE	6AE	6AE	6AE	6AE	4AE			
Asbestos in Soil (inc. matrix) ^										
Asbestos in soil$_{D}^{\#}$	-	-	-	-	NAD	-	NAD			A-T-045
Asbestos Matrix (visual)$_{D}$	-	-	-	-	-	-	-			A-T-045
Asbestos Matrix (microscope)$_{D}$	-	-	-	-	-	-	-			A-T-045
Asbestos ACM - Suitable for Water Absorption Test?$_{D}$	-	-	-	-	N/A	-	N/A			A-T-045

Envirolab Job Number: 24/10047

Client Project Name: One Earth Solar Farm

Client Project Ref: 2372986

Lab Sample ID	24/10047/1	24/10047/2	24/10047/3	24/10047/4	24/10047/5	24/10047/6	24/10047/7	Units	Limit of Detection	Method ref
Client Sample No	3	6	3	6	3	6	3			
Client Sample ID	TP006	TP006	TP007	TP007	TP010	TP010	TP011			
Depth to Top	0.30	1.00	0.30	1.00	0.40	1.00	0.50			
Depth To Bottom										
Date Sampled	01-Oct-24	01-Oct-24	01-Oct-24	01-Oct-24	30-Sep-24	30-Sep-24	30-Sep-24			
Sample Type	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES			
Sample Matrix Code	6AE	6AE	6AE	6AE	6AE	6AE	4AE			
PAH-16MS										
Acenaphthene$_A^{M\#}$	<0.01	-	<0.01	-	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-019s
Acenaphthylene$_A^{M\#}$	<0.01	-	<0.01	-	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-019s
Anthracene$_A^{M\#}$	<0.02	-	<0.02	-	<0.02	<0.02	<0.02	mg/kg	0.02	A-T-019s
Benzo(a)anthracene$_A^{M\#}$	<0.04	-	<0.04	-	<0.04	<0.04	<0.04	mg/kg	0.04	A-T-019s
Benzo(a)pyrene$_A^{M\#}$	<0.04	-	<0.04	-	<0.04	<0.04	<0.04	mg/kg	0.04	A-T-019s
Benzo(b)fluoranthene$_A^{M\#}$	<0.05	-	<0.05	-	<0.05	<0.05	<0.05	mg/kg	0.05	A-T-019s
Benzo(ghi)perylene$_A^{M\#}$	<0.05	-	<0.05	-	<0.05	<0.05	<0.05	mg/kg	0.05	A-T-019s
Benzo(k)fluoranthene$_A^{M\#}$	<0.07	-	<0.07	-	<0.07	<0.07	<0.07	mg/kg	0.07	A-T-019s
Chrysene$_A^{M\#}$	<0.06	-	<0.06	-	<0.06	<0.06	<0.06	mg/kg	0.06	A-T-019s
Dibenzo(ah)anthracene$_A^{M\#}$	<0.04	-	<0.04	-	<0.04	<0.04	<0.04	mg/kg	0.04	A-T-019s
Fluoranthene$_A^{M\#}$	<0.08	-	<0.08	-	<0.08	<0.08	<0.08	mg/kg	0.08	A-T-019s
Fluorene$_A^{M\#}$	<0.01	-	<0.01	-	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-019s
Indeno(123-cd)pyrene$_A^{M\#}$	<0.03	-	<0.03	-	<0.03	<0.03	<0.03	mg/kg	0.03	A-T-019s
Naphthalene $_A^{M\#}$	<0.03	-	<0.03	-	<0.03	<0.03	<0.03	mg/kg	0.03	A-T-019s
Phenanthrene$_A^{M\#}$	<0.03	-	<0.03	-	<0.03	<0.03	<0.03	mg/kg	0.03	A-T-019s
Pyrene$_A^{M\#}$	<0.07	-	<0.07	-	<0.07	<0.07	<0.07	mg/kg	0.07	A-T-019s
Total PAH-16MS$_A^{M\#}$	<0.08	-	<0.08	-	<0.08	<0.08	<0.08	mg/kg	0.01	A-T-019s

Lab Sample ID	24/10047/1	24/10047/2	24/10047/3	24/10047/4	24/10047/5	24/10047/6	24/10047/7	Units	Limit of Detection	Method ref
Client Sample No	3	6	3	6	3	6	3			
Client Sample ID	TP006	TP006	TP007	TP007	TP010	TP010	TP011			
Depth to Top	0.30	1.00	0.30	1.00	0.40	1.00	0.50			
Depth To Bottom										
Date Sampled	01-Oct-24	01-Oct-24	01-Oct-24	01-Oct-24	30-Sep-24	30-Sep-24	30-Sep-24			
Sample Type	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES			
Sample Matrix Code	6AE	6AE	6AE	6AE	6AE	6AE	4AE			
SVOC excluding PAH-16										
4-Bromophenyl phenyl ether$_A$	-	-	-	-	<100	<100	<100	µg/kg	100	A-T-052s
Hexachlorobenzene$_A$	-	-	-	-	<100	<100	<100	µg/kg	100	A-T-052s
Diethyl phthalate$_A$	-	-	-	-	<100	<100	<100	µg/kg	100	A-T-052s
Dimethyl phthalate$_A$	-	-	-	-	<100	<100	<100	µg/kg	100	A-T-052s
Dibenzofuran$_A$	-	-	-	-	<100	<100	<100	µg/kg	100	A-T-052s
Carbazole$_A$	-	-	-	-	<100	<100	<100	µg/kg	100	A-T-052s
Butylbenzyl phthalate$_A$	-	-	-	-	<100	<100	<100	µg/kg	100	A-T-052s
Bis(2-ethylhexyl)phthalate$_A$	-	-	-	-	<500	<500	<500	µg/kg	500	A-T-052s
Bis(2-chloroethoxy)methane$_A$	-	-	-	-	<100	<100	<100	µg/kg	100	A-T-052s
Bis(2-chloroethyl)ether$_A$	-	-	-	-	<100	<100	<100	µg/kg	100	A-T-052s
4-Nitrophenol$_A$	-	-	-	-	<100	<100	<100	µg/kg	100	A-T-052s
3+4-Methylphenol$_A$	-	-	-	-	<100	<100	<100	µg/kg	100	A-T-052s
4-Chloro-3-methylphenol$_A$	-	-	-	-	<100	<100	<100	µg/kg	100	A-T-052s
2-Nitrophenol$_A$	-	-	-	-	<100	<100	<100	µg/kg	100	A-T-052s
2-Methylphenol$_A$	-	-	-	-	<100	<100	<100	µg/kg	100	A-T-052s
1,2,4-Trichlorobenzene$_A$	-	-	-	-	<100	<100	<100	µg/kg	100	A-T-052s
2-Chlorophenol$_A$	-	-	-	-	<100	<100	<100	µg/kg	100	A-T-052s
2,6-Dinitrotoluene$_A$	-	-	-	-	<100	<100	<100	µg/kg	100	A-T-052s
2,4-Dinitrotoluene$_A$	-	-	-	-	<100	<100	<100	µg/kg	100	A-T-052s
2,4-Dimethylphenol$_A$	-	-	-	-	<100	<100	<100	µg/kg	100	A-T-052s
2,4-Dichlorophenol$_A$	-	-	-	-	<100	<100	<100	µg/kg	100	A-T-052s
2,4,6-Trichlorophenol$_A$	-	-	-	-	<100	<100	<100	µg/kg	100	A-T-052s
2,4,5-Trichlorophenol$_A$	-	-	-	-	<100	<100	<100	µg/kg	100	A-T-052s
1,4-Dichlorobenzene$_A$	-	-	-	-	<100	<100	<100	µg/kg	100	A-T-052s
1,3-Dichlorobenzene$_A$	-	-	-	-	<100	<100	<100	µg/kg	100	A-T-052s
1,2-Dichlorobenzene$_A$	-	-	-	-	<100	<100	<100	µg/kg	100	A-T-052s
2-Chloronaphthalene$_A$	-	-	-	-	<100	<100	<100	µg/kg	100	A-T-052s
2-Methylnaphthalene$_A$	-	-	-	-	<100	<100	<100	µg/kg	100	A-T-052s
Bis(2-chloroisopropyl)ether$_A$	-	-	-	-	<100	<100	<100	µg/kg	100	A-T-052s
Phenol$_A$	-	-	-	-	<100	<100	<100	µg/kg	100	A-T-052s
Pentachlorophenol$_A$	-	-	-	-	<100	<100	<100	µg/kg	100	A-T-052s
n-Nitroso-n-dipropylamine$_A$	-	-	-	-	<100	<100	<100	µg/kg	100	A-T-052s

Envirolab Job Number: 24/10047

Client Project Name: One Earth Solar Farm

Client Project Ref: 2372986

Lab Sample ID	24/10047/1	24/10047/2	24/10047/3	24/10047/4	24/10047/5	24/10047/6	24/10047/7	Units	Limit of Detection	Method ref
Client Sample No	3	6	3	6	3	6	3			
Client Sample ID	TP006	TP006	TP007	TP007	TP010	TP010	TP011			
Depth to Top	0.30	1.00	0.30	1.00	0.40	1.00	0.50			
Depth To Bottom										
Date Sampled	01-Oct-24	01-Oct-24	01-Oct-24	01-Oct-24	30-Sep-24	30-Sep-24	30-Sep-24			
Sample Type	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES			
Sample Matrix Code	6AE	6AE	6AE	6AE	6AE	6AE	4AE			
n-Dioctylphthalate$_A$	-	-	-	-	<500	<500	<500	µg/kg	500	A-T-052s
n-Dibutylphthalate$_A$	-	-	-	-	<100	<100	<100	µg/kg	100	A-T-052s
Nitrobenzene$_A$	-	-	-	-	<100	<100	<100	µg/kg	100	A-T-052s
Isophorone$_A$	-	-	-	-	<100	<100	<100	µg/kg	100	A-T-052s
Hexachloroethane$_A$	-	-	-	-	<100	<100	<100	µg/kg	100	A-T-052s
Hexachlorobutadiene$_A$	-	-	-	-	<100	<100	<100	µg/kg	100	A-T-052s
Perylene$_A$	-	-	-	-	<100	<100	<100	µg/kg	100	A-T-052s

Lab Sample ID	24/10047/1	24/10047/2	24/10047/3	24/10047/4	24/10047/5	24/10047/6	24/10047/7	Units	Limit of Detection	Method ref
Client Sample No	3	6	3	6	3	6	3			
Client Sample ID	TP006	TP006	TP007	TP007	TP010	TP010	TP011			
Depth to Top	0.30	1.00	0.30	1.00	0.40	1.00	0.50			
Depth To Bottom										
Date Sampled	01-Oct-24	01-Oct-24	01-Oct-24	01-Oct-24	30-Sep-24	30-Sep-24	30-Sep-24			
Sample Type	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES			
Sample Matrix Code	6AE	6AE	6AE	6AE	6AE	6AE	4AE			
VOC										
Dichlorodifluoromethane$_{A}$	-	-	-	-	<1	<1	<1	µg/kg	1	A-T-006s
Chloromethane$_{A}$	-	-	-	-	<10	<10	<10	µg/kg	10	A-T-006s
Vinyl Chloride (Chloroethene)$_{A}^{\#}$	-	-	-	-	<1	<1	<1	µg/kg	1	A-T-006s
Bromomethane$_{A}^{\#}$	-	-	-	-	<1	<1	<1	µg/kg	1	A-T-006s
Chloroethane$_{A}^{\#}$	-	-	-	-	<1	<1	<1	µg/kg	1	A-T-006s
Trichlorofluoromethane$_{A}^{\#}$	-	-	-	-	<1	<1	<1	µg/kg	1	A-T-006s
1,1-Dichloroethene$_{A}^{\#}$	-	-	-	-	<1	<1	<1	µg/kg	1	A-T-006s
Carbon Disulphide$_{A}^{\#}$	-	-	-	-	<1	<1	<1	µg/kg	1	A-T-006s
Dichloromethane$_{A}$	-	-	-	-	<5	<5	<5	µg/kg	5	A-T-006s
trans 1,2-Dichloroethene$_{A}^{\#}$	-	-	-	-	<1	<1	<1	µg/kg	1	A-T-006s
1,1-Dichloroethane$_{A}^{\#}$	-	-	-	-	<1	<1	<1	µg/kg	1	A-T-006s
cis 1,2-Dichloroethene$_{A}^{\#}$	-	-	-	-	<2	<2	<2	µg/kg	1	A-T-006s
2,2-Dichloropropane$_{A}^{\#}$	-	-	-	-	<1^{U}	<1^{U}	<1^{U}	µg/kg	1	A-T-006s
Bromochloromethane$_{A}^{\#}$	-	-	-	-	<5	<5	<5	µg/kg	5	A-T-006s
Chloroform$_{A}^{\#}$	-	-	-	-	<1	<1	<1	µg/kg	1	A-T-006s
1,1,1-Trichloroethane$_{A}^{\#}$	-	-	-	-	<1	<1	<1	µg/kg	1	A-T-006s
1,1-Dichloropropene$_{A}^{\#}$	-	-	-	-	<1	<1	<1	µg/kg	1	A-T-006s
Carbon Tetrachloride$_{A}^{\#}$	-	-	-	-	<1	<1	<1	µg/kg	1	A-T-006s
1,2-Dichloroethane$_{A}^{\#}$	-	-	-	-	<2	<2	<2	µg/kg	2	A-T-006s
Benzene$_{A}^{\#}$	-	-	-	-	<1	<1	<1	µg/kg	1	A-T-006s
Trichloroethene$_{A}^{\#}$	-	-	-	-	<1	<1	<1	µg/kg	1	A-T-006s
1,2-Dichloropropane$_{A}^{\#}$	-	-	-	-	<1	<1	<1	µg/kg	1	A-T-006s
Dibromomethane$_{A}^{\#}$	-	-	-	-	<1	<1	<1	µg/kg	1	A-T-006s
Bromodichloromethane$_{A}^{\#}$	-	-	-	-	<10	<10	<10	µg/kg	10	A-T-006s
cis 1,3-Dichloropropene$_{A}^{\#}$	-	-	-	-	<1	<1	<1	µg/kg	1	A-T-006s
Toluene$_{A}^{\#}$	-	-	-	-	<1	<1	<1	µg/kg	1	A-T-006s
trans 1,3-Dichloropropene$_{A}^{\#}$	-	-	-	-	<1	<1	<1	µg/kg	1	A-T-006s
1,1,2-Trichloroethane$_{A}^{\#}$	-	-	-	-	<1	<1	<1	µg/kg	1	A-T-006s
1,3-Dichloropropane$_{A}^{\#}$	-	-	-	-	<1	<1	<1	µg/kg	1	A-T-006s
Tetrachloroethene$_{A}^{\#}$	-	-	-	-	<1	<1	<1	µg/kg	1	A-T-006s
Dibromochloromethane$_{A}^{\#}$	-	-	-	-	<3	<3	<3	µg/kg	3	A-T-006s
1,2-Dibromoethane$_{A}^{\#}$	-	-	-	-	<1	<1	<1	µg/kg	1	A-T-006s

Envirolab Job Number: 24/10047

Client Project Name: One Earth Solar Farm

Client Project Ref: 2372986

Lab Sample ID	24/10047/1	24/10047/2	24/10047/3	24/10047/4	24/10047/5	24/10047/6	24/10047/7	Units	Limit of Detection	Method ref
Client Sample No	3	6	3	6	3	6	3			
Client Sample ID	TP006	TP006	TP007	TP007	TP010	TP010	TP011			
Depth to Top	0.30	1.00	0.30	1.00	0.40	1.00	0.50			
Depth To Bottom										
Date Sampled	01-Oct-24	01-Oct-24	01-Oct-24	01-Oct-24	30-Sep-24	30-Sep-24	30-Sep-24			
Sample Type	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES			
Sample Matrix Code	6AE	6AE	6AE	6AE	6AE	6AE	4AE			
Chlorobenzene$_{A}^{\#}$	-	-	-	-	<1	<1	<1	µg/kg	1	A-T-006s
1,1,1,2-Tetrachloroethane$_{A}$	-	-	-	-	<1	<1	<1	µg/kg	1	A-T-006s
Ethylbenzene$_{A}^{\#}$	-	-	-	-	<1	<1	<1	µg/kg	1	A-T-006s
m & p Xylene$_{A}^{\#}$	-	-	-	-	<1	<1	<1	µg/kg	1	A-T-006s
o-Xylene$_{A}^{\#}$	-	-	-	-	<1	<1	<1	µg/kg	1	A-T-006s
Styrene$_{A}^{\#}$	-	-	-	-	<1	<1	<1	µg/kg	1	A-T-006s
Bromoform$_{A}^{\#}$	-	-	-	-	<3	<3	<3	µg/kg	3	A-T-006s
Isopropylbenzene$_{A}^{\#}$	-	-	-	-	<1	<1	<1	µg/kg	1	A-T-006s
1,1,2,2-Tetrachloroethane$_{A}$	-	-	-	-	<1	<1	<1	µg/kg	1	A-T-006s
1,2,3-Trichloropropane$_{A}^{\#}$	-	-	-	-	<1	<1	<1	µg/kg	1	A-T-006s
Bromobenzene$_{A}^{\#}$	-	-	-	-	<1	<1	<1	µg/kg	1	A-T-006s
n-Propylbenzene$_{A}^{\#}$	-	-	-	-	<1	<1	<1	µg/kg	1	A-T-006s
2-Chlorotoluene$_{A}^{\#}$	-	-	-	-	<1	<1	<1	µg/kg	1	A-T-006s
1,3,5-Trimethylbenzene$_{A}^{\#}$	-	-	-	-	<1	<1	<1	µg/kg	1	A-T-006s
4-Chlorotoluene$_{A}^{\#}$	-	-	-	-	<1	<1	<1	µg/kg	1	A-T-006s
tert-Butylbenzene$_{A}^{\#}$	-	-	-	-	<2	<2	<2	µg/kg	2	A-T-006s
1,2,4-Trimethylbenzene$_{A}^{\#}$	-	-	-	-	<1	<1	<1	µg/kg	1	A-T-006s
sec-Butylbenzene$_{A}^{\#}$	-	-	-	-	<1	<1	<1	µg/kg	1	A-T-006s
4-Isopropyltoluene$_{A}^{\#}$	-	-	-	-	<1	<1	<1	µg/kg	1	A-T-006s
1,3-Dichlorobenzene$_{A}$	-	-	-	-	<1	<1	<1	µg/kg	1	A-T-006s
1,4-Dichlorobenzene$_{A}^{\#}$	-	-	-	-	<1	<1	<1	µg/kg	1	A-T-006s
n-Butylbenzene$_{A}^{\#}$	-	-	-	-	<1	<1	<1	µg/kg	1	A-T-006s
1,2-Dichlorobenzene$_{A}^{\#}$	-	-	-	-	<1	<1	<1	µg/kg	1	A-T-006s
1,2-Dibromo-3-chloropropane (DCBP)$_{A}$	-	-	-	-	<2	<2	<2	µg/kg	2	A-T-006s
1,2,4-Trichlorobenzene$_{A}$	-	-	-	-	<3	<3	<3	µg/kg	3	A-T-006s
Hexachlorobutadiene$_{A}^{\#}$	-	-	-	-	<1	<1	<1	µg/kg	1	A-T-006s
1,2,3-Trichlorobenzene$_{A}$	-	-	-	-	<3	<3	<3	µg/kg	3	A-T-006s

Envirolab Job Number: 24/10047

Client Project Name: One Earth Solar Farm

Client Project Ref: 2372986

Lab Sample ID	24/10047/1	24/10047/2	24/10047/3	24/10047/4	24/10047/5	24/10047/6	24/10047/7	Units	Limit of Detection	Method ref
Client Sample No	3	6	3	6	3	6	3			
Client Sample ID	TP006	TP006	TP007	TP007	TP010	TP010	TP011			
Depth to Top	0.30	1.00	0.30	1.00	0.40	1.00	0.50			
Depth To Bottom										
Date Sampled	01-Oct-24	01-Oct-24	01-Oct-24	01-Oct-24	30-Sep-24	30-Sep-24	30-Sep-24			
Sample Type	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES			
Sample Matrix Code	6AE	6AE	6AE	6AE	6AE	6AE	4AE			
TPH CWG with Clean Up										
Ali >C5-C6$_A$	-	-	-	-	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
Ali >C6-C8$_A$	-	-	-	-	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
Ali >C8-C10$_A$	-	-	-	-	<1	<1	<1	mg/kg	1	A-T-055s
Ali >C10-C12$_A^{M\#}$	-	-	-	-	<1	<1	<1	mg/kg	1	A-T-055s
Ali >C12-C16$_A^{M\#}$	-	-	-	-	<1	<1	<1	mg/kg	1	A-T-055s
Ali >C16-C21$_A^{M\#}$	-	-	-	-	<1	<1	<1	mg/kg	1	A-T-055s
Ali >C21-C35$_A^{M\#}$	-	-	-	-	1	<1	4	mg/kg	1	A-T-055s
Total Aliphatics$_A$	-	-	-	-	1	<1	4	mg/kg	1	Calc-As Recd
Aro >C5-C7$_A^{\#}$	-	-	-	-	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
Aro >C7-C8$_A^{\#}$	-	-	-	-	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
Aro >C8-C10$_A$	-	-	-	-	<1	<1	<1	mg/kg	1	A-T-055s
Aro >C10-C12$_A$	-	-	-	-	<1	<1	<1	mg/kg	1	A-T-055s
Aro >C12-C16$_A$	-	-	-	-	<1	<1	<1	mg/kg	1	A-T-055s
Aro >C16-C21$_A^{M\#}$	-	-	-	-	<1	<1	<1	mg/kg	1	A-T-055s
Aro >C21-C35$_A^{M\#}$	-	-	-	-	<1	<1	2	mg/kg	1	A-T-055s
Total Aromatics$_A$	-	-	-	-	<1	<1	2	mg/kg	1	Calc-As Recd
TPH (Ali & Aro >C5-C35)$_A$	-	-	-	-	1	<1	6	mg/kg	1	Calc-As Recd
BTEX - Benzene$_A^{\#}$	-	-	-	-	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
BTEX - Toluene$_A^{\#}$	-	-	-	-	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
BTEX - Ethyl Benzene$_A^{\#}$	-	-	-	-	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
BTEX - m & p Xylene$_A^{\#}$	-	-	-	-	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
BTEX - o Xylene$_A^{\#}$	-	-	-	-	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
MTBE$_A^{\#}$	-	-	-	-	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s

Envirolab Job Number: 24/10047

Client Project Name: One Earth Solar Farm

Client Project Ref: 2372986

Lab Sample ID	24/10047/8	24/10047/9	24/10047/10					Units	Limit of Detection	Method ref
Client Sample No	6	3	6							
Client Sample ID	TP011	TP012	TP012							
Depth to Top	1.00	0.40	1.00							
Depth To Bottom										
Date Sampled	30-Sep-24	30-Sep-24	30-Sep-24							
Sample Type	SOIL - ES	SOIL - ES	SOIL - ES							
Sample Matrix Code	5A	4A	5A							
% Stones >10mm$_A$	<0.1	3.4	<0.1					% w/w	0.1	A-T-044
pH$_D$$^{M\#}$	7.76	7.11	7.91					pH	0.01	A-T-031s
Sulphate (water sol 2:1)$_D$$^{M\#}$	0.01	<0.01	<0.01					g/l	0.01	A-T-026s
Cyanide (total)$_A$$^{M\#}$	<1	<1	<1					mg/kg	1	A-T-042sTCN
Phenol$_A$	<0.2	<0.2	<0.2					mg/kg	0.2	A-T-050s
Organic Matter$_D$$^{M\#}$	0.3	1.4	0.6					% w/w	0.1	A-T-032s
Arsenic$_D$$^{M\#}$	1	4	<1					mg/kg	1	A-T-024s
Boron (water soluble)$_D$$^{M\#}$	<1.0	<1.0	<1.0					mg/kg	1	A-T-027s
Cadmium$_D$$^{M\#}$	<0.5	<0.5	<0.5					mg/kg	0.5	A-T-024s
Copper$_D$$^{M\#}$	37	12	33					mg/kg	1	A-T-024s
Chromium$_D$$^{M\#}$	37	14	32					mg/kg	1	A-T-024s
Lead$_D$$^{M\#}$	4	17	5					mg/kg	1	A-T-024s
Mercury$_D$	<0.17	<0.17	<0.17					mg/kg	0.17	A-T-024s
Nickel$_D$$^{M\#}$	37	10	32					mg/kg	1	A-T-024s
Zinc$_D$$^{M\#}$	63	43	61					mg/kg	5	A-T-024s

Envirolab Job Number: 24/10047

Client Project Name: One Earth Solar Farm

Client Project Ref: 2372986

Lab Sample ID	24/10047/8	24/10047/9	24/10047/10					Units	Limit of Detection	Method ref
Client Sample No	6	3	6							
Client Sample ID	TP011	TP012	TP012							
Depth to Top	1.00	0.40	1.00							
Depth To Bottom										
Date Sampled	30-Sep-24	30-Sep-24	30-Sep-24							
Sample Type	SOIL - ES	SOIL - ES	SOIL - ES							
Sample Matrix Code	5A	4A	5A							
Asbestos in Soil (inc. matrix) ^										
Asbestos in soil$_{D}^{\#}$	-	NAD	-							A-T-045
Asbestos Matrix (visual)$_{D}$	-	-	-							A-T-045
Asbestos Matrix (microscope)$_{D}$	-	-	-							A-T-045
Asbestos ACM - Suitable for Water Absorption Test?$_{D}$	-	N/A	-							A-T-045

Envirolab Job Number: 24/10047

Client Project Name: One Earth Solar Farm

Client Project Ref: 2372986

Lab Sample ID	24/10047/8	24/10047/9	24/10047/10					Units	Limit of Detection	Method ref
Client Sample No	6	3	6							
Client Sample ID	TP011	TP012	TP012							
Depth to Top	1.00	0.40	1.00							
Depth To Bottom										
Date Sampled	30-Sep-24	30-Sep-24	30-Sep-24							
Sample Type	SOIL - ES	SOIL - ES	SOIL - ES							
Sample Matrix Code	5A	4A	5A							
PAH-16MS										
Acenaphthene$_A^{M\#}$	<0.01	<0.01	<0.01					mg/kg	0.01	A-T-019s
Acenaphthylene$_A^{M\#}$	<0.01	<0.01	<0.01					mg/kg	0.01	A-T-019s
Anthracene$_A^{M\#}$	<0.02	<0.02	<0.02					mg/kg	0.02	A-T-019s
Benzo(a)anthracene$_A^{M\#}$	<0.04	<0.04	<0.04					mg/kg	0.04	A-T-019s
Benzo(a)pyrene$_A^{M\#}$	<0.04	<0.04	<0.04					mg/kg	0.04	A-T-019s
Benzo(b)fluoranthene$_A^{M\#}$	<0.05	<0.05	<0.05					mg/kg	0.05	A-T-019s
Benzo(ghi)perylene$_A^{M\#}$	<0.05	<0.05	<0.05					mg/kg	0.05	A-T-019s
Benzo(k)fluoranthene$_A^{M\#}$	<0.07	<0.07	<0.07					mg/kg	0.07	A-T-019s
Chrysene$_A^{M\#}$	<0.06	<0.06	<0.06					mg/kg	0.06	A-T-019s
Dibenzo(ah)anthracene$_A^{M\#}$	<0.04	<0.04	<0.04					mg/kg	0.04	A-T-019s
Fluoranthene$_A^{M\#}$	<0.08	<0.08	<0.08					mg/kg	0.08	A-T-019s
Fluorene$_A^{M\#}$	<0.01	<0.01	<0.01					mg/kg	0.01	A-T-019s
Indeno(123-cd)pyrene$_A^{M\#}$	<0.03	<0.03	<0.03					mg/kg	0.03	A-T-019s
Naphthalene $_A^{M\#}$	<0.03	<0.03	<0.03					mg/kg	0.03	A-T-019s
Phenanthrene$_A^{M\#}$	<0.03	<0.03	<0.03					mg/kg	0.03	A-T-019s
Pyrene$_A^{M\#}$	<0.07	<0.07	<0.07					mg/kg	0.07	A-T-019s
Total PAH-16MS$_A^{M\#}$	<0.08	<0.08	<0.08					mg/kg	0.01	A-T-019s

Lab Sample ID	24/10047/8	24/10047/9	24/10047/10					Units	Limit of Detection	Method ref
Client Sample No	6	3	6							
Client Sample ID	TP011	TP012	TP012							
Depth to Top	1.00	0.40	1.00							
Depth To Bottom										
Date Sampled	30-Sep-24	30-Sep-24	30-Sep-24							
Sample Type	SOIL - ES	SOIL - ES	SOIL - ES							
Sample Matrix Code	5A	4A	5A							
SVOC excluding PAH-16										
4-Bromophenyl phenyl ether$_A$	<100	<100	<100					µg/kg	100	A-T-052s
Hexachlorobenzene$_A$	<100	<100	<100					µg/kg	100	A-T-052s
Diethyl phthalate$_A$	<100	<100	<100					µg/kg	100	A-T-052s
Dimethyl phthalate$_A$	<100	<100	<100					µg/kg	100	A-T-052s
Dibenzofuran$_A$	<100	<100	<100					µg/kg	100	A-T-052s
Carbazole$_A$	<100	<100	<100					µg/kg	100	A-T-052s
Butylbenzyl phthalate$_A$	<100	<100	<100					µg/kg	100	A-T-052s
Bis(2-ethylhexyl)phthalate$_A$	<500	<500	<500					µg/kg	500	A-T-052s
Bis(2-chloroethoxy)methane$_A$	<100	<100	<100					µg/kg	100	A-T-052s
Bis(2-chloroethyl)ether$_A$	<100	<100	<100					µg/kg	100	A-T-052s
4-Nitrophenol$_A$	<100	<100	<100					µg/kg	100	A-T-052s
3+4-Methylphenol$_A$	<100	<100	<100					µg/kg	100	A-T-052s
4-Chloro-3-methylphenol$_A$	<100	<100	<100					µg/kg	100	A-T-052s
2-Nitrophenol$_A$	<100	<100	<100					µg/kg	100	A-T-052s
2-Methylphenol$_A$	<100	<100	<100					µg/kg	100	A-T-052s
1,2,4-Trichlorobenzene$_A$	<100	<100	<100					µg/kg	100	A-T-052s
2-Chlorophenol$_A$	<100	<100	<100					µg/kg	100	A-T-052s
2,6-Dinitrotoluene$_A$	<100	<100	<100					µg/kg	100	A-T-052s
2,4-Dinitrotoluene$_A$	<100	<100	<100					µg/kg	100	A-T-052s
2,4-Dimethylphenol$_A$	<100	<100	<100					µg/kg	100	A-T-052s
2,4-Dichlorophenol$_A$	<100	<100	<100					µg/kg	100	A-T-052s
2,4,6-Trichlorophenol$_A$	<100	<100	<100					µg/kg	100	A-T-052s
2,4,5-Trichlorophenol$_A$	<100	<100	<100					µg/kg	100	A-T-052s
1,4-Dichlorobenzene$_A$	<100	<100	<100					µg/kg	100	A-T-052s
1,3-Dichlorobenzene$_A$	<100	<100	<100					µg/kg	100	A-T-052s
1,2-Dichlorobenzene$_A$	<100	<100	<100					µg/kg	100	A-T-052s
2-Chloronaphthalene$_A$	<100	<100	<100					µg/kg	100	A-T-052s
2-Methylnaphthalene$_A$	<100	<100	<100					µg/kg	100	A-T-052s
Bis(2-chloroisopropyl)ether$_A$	<100	<100	<100					µg/kg	100	A-T-052s
Phenol$_A$	<100	<100	<100					µg/kg	100	A-T-052s
Pentachlorophenol$_A$	<100	<100	<100					µg/kg	100	A-T-052s
n-Nitroso-n-dipropylamine$_A$	<100	<100	<100					µg/kg	100	A-T-052s

Envirolab Job Number: 24/10047

Client Project Name: One Earth Solar Farm

Client Project Ref: 2372986

Lab Sample ID	24/10047/8	24/10047/9	24/10047/10					Units	Limit of Detection	Method ref
Client Sample No	6	3	6							
Client Sample ID	TP011	TP012	TP012							
Depth to Top	1.00	0.40	1.00							
Depth To Bottom										
Date Sampled	30-Sep-24	30-Sep-24	30-Sep-24							
Sample Type	SOIL - ES	SOIL - ES	SOIL - ES							
Sample Matrix Code	5A	4A	5A							
n-Dioctylphthalate$_A$	<500	<500	<500					µg/kg	500	A-T-052s
n-Dibutylphthalate$_A$	<100	<100	<100					µg/kg	100	A-T-052s
Nitrobenzene$_A$	<100	<100	<100					µg/kg	100	A-T-052s
Isophorone$_A$	<100	<100	<100					µg/kg	100	A-T-052s
Hexachloroethane$_A$	<100	<100	<100					µg/kg	100	A-T-052s
Hexachlorobutadiene$_A$	<100	<100	<100					µg/kg	100	A-T-052s
Perylene$_A$	<100	<100	<100					µg/kg	100	A-T-052s

Lab Sample ID	24/10047/8	24/10047/9	24/10047/10					Units	Limit of Detection	Method ref
Client Sample No	6	3	6							
Client Sample ID	TP011	TP012	TP012							
Depth to Top	1.00	0.40	1.00							
Depth To Bottom										
Date Sampled	30-Sep-24	30-Sep-24	30-Sep-24							
Sample Type	SOIL - ES	SOIL - ES	SOIL - ES							
Sample Matrix Code	5A	4A	5A							
VOC										
Dichlorodifluoromethane$_A$	<1	<1	<1					µg/kg	1	A-T-006s
Chloromethane$_A$	<10	<10	<10					µg/kg	10	A-T-006s
Vinyl Chloride (Chloroethene)$_A^{\#}$	<1	<1	<1					µg/kg	1	A-T-006s
Bromomethane$_A^{\#}$	<1	<1	<1					µg/kg	1	A-T-006s
Chloroethane$_A^{\#}$	<1	<1	<1					µg/kg	1	A-T-006s
Trichlorofluoromethane$_A^{\#}$	<1	<1	<1					µg/kg	1	A-T-006s
1,1-Dichloroethene$_A^{\#}$	<1	<1	<1					µg/kg	1	A-T-006s
Carbon Disulphide$_A^{\#}$	<1	<1	<1					µg/kg	1	A-T-006s
Dichloromethane$_A$	<5	<5	<5					µg/kg	5	A-T-006s
trans 1,2-Dichloroethene$_A^{\#}$	<1	<1	<1					µg/kg	1	A-T-006s
1,1-Dichloroethane$_A^{\#}$	<1	<1	<1					µg/kg	1	A-T-006s
cis 1,2-Dichloroethene$_A^{\#}$	<2	<2	<2					µg/kg	1	A-T-006s
2,2-Dichloropropane$_A^{\#}$	<1^U	<1^U	<1^U					µg/kg	1	A-T-006s
Bromochloromethane$_A^{\#}$	<5	<5	<5					µg/kg	5	A-T-006s
Chloroform$_A^{\#}$	<1	<1	<1					µg/kg	1	A-T-006s
1,1,1-Trichloroethane$_A^{\#}$	<1	<1	<1					µg/kg	1	A-T-006s
1,1-Dichloropropene$_A^{\#}$	<1	<1	<1					µg/kg	1	A-T-006s
Carbon Tetrachloride$_A^{\#}$	<1	<1	<1					µg/kg	1	A-T-006s
1,2-Dichloroethane$_A^{\#}$	<2	<2	<2					µg/kg	2	A-T-006s
Benzene$_A^{\#}$	<1	<1	<1					µg/kg	1	A-T-006s
Trichloroethene$_A^{\#}$	<1	<1	<1					µg/kg	1	A-T-006s
1,2-Dichloropropane$_A^{\#}$	<1	<1	<1					µg/kg	1	A-T-006s
Dibromomethane$_A^{\#}$	<1	<1	<1					µg/kg	1	A-T-006s
Bromodichloromethane$_A^{\#}$	<10	<10	<10					µg/kg	10	A-T-006s
cis 1,3-Dichloropropene$_A^{\#}$	<1	<1	<1					µg/kg	1	A-T-006s
Toluene$_A^{\#}$	<1	<1	<1					µg/kg	1	A-T-006s
trans 1,3-Dichloropropene$_A^{\#}$	<1	<1	<1					µg/kg	1	A-T-006s
1,1,2-Trichloroethane$_A^{\#}$	<1	<1	<1					µg/kg	1	A-T-006s
1,3-Dichloropropane$_A^{\#}$	<1	<1	<1					µg/kg	1	A-T-006s
Tetrachloroethene$_A^{\#}$	<1	<1	<1					µg/kg	1	A-T-006s
Dibromochloromethane$_A^{\#}$	<3	<3	<3					µg/kg	3	A-T-006s
1,2-Dibromoethane$_A^{\#}$	<1	<1	<1					µg/kg	1	A-T-006s

Lab Sample ID	24/10047/8	24/10047/9	24/10047/10					Units	Limit of Detection	Method ref
Client Sample No	6	3	6							
Client Sample ID	TP011	TP012	TP012							
Depth to Top	1.00	0.40	1.00							
Depth To Bottom										
Date Sampled	30-Sep-24	30-Sep-24	30-Sep-24							
Sample Type	SOIL - ES	SOIL - ES	SOIL - ES							
Sample Matrix Code	5A	4A	5A							
Chlorobenzene$_{A}^{\#}$	<1	<1	<1					µg/kg	1	A-T-006s
1,1,1,2-Tetrachloroethane$_{A}$	<1	<1	<1					µg/kg	1	A-T-006s
Ethylbenzene$_{A}^{\#}$	<1	<1	<1					µg/kg	1	A-T-006s
m & p Xylene$_{A}^{\#}$	<1	<1	<1					µg/kg	1	A-T-006s
o-Xylene$_{A}^{\#}$	<1	<1	<1					µg/kg	1	A-T-006s
Styrene$_{A}^{\#}$	<1	<1	<1					µg/kg	1	A-T-006s
Bromoform$_{A}^{\#}$	<3	<3	<3					µg/kg	3	A-T-006s
Isopropylbenzene$_{A}^{\#}$	<1	<1	<1					µg/kg	1	A-T-006s
1,1,2,2-Tetrachloroethane$_{A}$	<1	<1	<1					µg/kg	1	A-T-006s
1,2,3-Trichloropropane$_{A}^{\#}$	<1	<1	<1					µg/kg	1	A-T-006s
Bromobenzene$_{A}^{\#}$	<1	<1	<1					µg/kg	1	A-T-006s
n-Propylbenzene$_{A}^{\#}$	<1	<1	<1					µg/kg	1	A-T-006s
2-Chlorotoluene$_{A}^{\#}$	<1	<1	<1					µg/kg	1	A-T-006s
1,3,5-Trimethylbenzene$_{A}^{\#}$	<1	<1	<1					µg/kg	1	A-T-006s
4-Chlorotoluene$_{A}^{\#}$	<1	<1	<1					µg/kg	1	A-T-006s
tert-Butylbenzene$_{A}^{\#}$	<2	<2	<2					µg/kg	2	A-T-006s
1,2,4-Trimethylbenzene$_{A}^{\#}$	<1	<1	<1					µg/kg	1	A-T-006s
sec-Butylbenzene$_{A}^{\#}$	<1	<1	<1					µg/kg	1	A-T-006s
4-Isopropyltoluene$_{A}^{\#}$	<1	<1	<1					µg/kg	1	A-T-006s
1,3-Dichlorobenzene$_{A}$	<1	<1	<1					µg/kg	1	A-T-006s
1,4-Dichlorobenzene$_{A}^{\#}$	<1	<1	<1					µg/kg	1	A-T-006s
n-Butylbenzene$_{A}^{\#}$	<1	<1	<1					µg/kg	1	A-T-006s
1,2-Dichlorobenzene$_{A}^{\#}$	<1	<1	<1					µg/kg	1	A-T-006s
1,2-Dibromo-3-chloropropane (DCBP)$_{A}$	<2	<2	<2					µg/kg	2	A-T-006s
1,2,4-Trichlorobenzene$_{A}$	<3	<3	<3					µg/kg	3	A-T-006s
Hexachlorobutadiene$_{A}^{\#}$	<1	<1	<1					µg/kg	1	A-T-006s
1,2,3-Trichlorobenzene$_{A}$	<3	<3	<3					µg/kg	3	A-T-006s

Envirolab Job Number: 24/10047

Client Project Name: One Earth Solar Farm

Client Project Ref: 2372986

Lab Sample ID	24/10047/8	24/10047/9	24/10047/10					Units	Limit of Detection	Method ref
Client Sample No	6	3	6							
Client Sample ID	TP011	TP012	TP012							
Depth to Top	1.00	0.40	1.00							
Depth To Bottom										
Date Sampled	30-Sep-24	30-Sep-24	30-Sep-24							
Sample Type	SOIL - ES	SOIL - ES	SOIL - ES							
Sample Matrix Code	5A	4A	5A							
TPH CWG with Clean Up										
Ali >C5-C6$_A$	<0.01	<0.01	<0.01					mg/kg	0.01	A-T-022s
Ali >C6-C8$_A$	<0.01	<0.01	<0.01					mg/kg	0.01	A-T-022s
Ali >C8-C10$_A$	<1	<1	<1					mg/kg	1	A-T-055s
Ali >C10-C12$_A^{M\#}$	<1	<1	<1					mg/kg	1	A-T-055s
Ali >C12-C16$_A^{M\#}$	<1	<1	<1					mg/kg	1	A-T-055s
Ali >C16-C21$_A^{M\#}$	<1	<1	<1					mg/kg	1	A-T-055s
Ali >C21-C35$_A^{M\#}$	<1	2	<1					mg/kg	1	A-T-055s
Total Aliphatics$_A$	<1	2	<1					mg/kg	1	Calc-As Recd
Aro >C5-C7$_A^{\#}$	<0.01	<0.01	<0.01					mg/kg	0.01	A-T-022s
Aro >C7-C8$_A^{\#}$	<0.01	<0.01	<0.01					mg/kg	0.01	A-T-022s
Aro >C8-C10$_A$	<1	<1	<1					mg/kg	1	A-T-055s
Aro >C10-C12$_A$	<1	<1	<1					mg/kg	1	A-T-055s
Aro >C12-C16$_A$	<1	<1	<1					mg/kg	1	A-T-055s
Aro >C16-C21$_A^{M\#}$	<1	<1	<1					mg/kg	1	A-T-055s
Aro >C21-C35$_A^{M\#}$	<1	<1	<1					mg/kg	1	A-T-055s
Total Aromatics$_A$	<1	<1	<1					mg/kg	1	Calc-As Recd
TPH (Ali & Aro >C5-C35)$_A$	<1	2	<1					mg/kg	1	Calc-As Recd
BTEX - Benzene$_A^{\#}$	<0.01	<0.01	<0.01					mg/kg	0.01	A-T-022s
BTEX - Toluene$_A^{\#}$	<0.01	<0.01	<0.01					mg/kg	0.01	A-T-022s
BTEX - Ethyl Benzene$_A^{\#}$	<0.01	<0.01	<0.01					mg/kg	0.01	A-T-022s
BTEX - m & p Xylene$_A^{\#}$	<0.01	<0.01	<0.01					mg/kg	0.01	A-T-022s
BTEX - o Xylene$_A^{\#}$	<0.01	<0.01	<0.01					mg/kg	0.01	A-T-022s
MTBE$_A^{\#}$	<0.01	<0.01	<0.01					mg/kg	0.01	A-T-022s

Report Notes

General

•This report shall not be reproduced, except in full, without written approval from Envirolab.
•The client Sample No, Client Sample ID, Depth to top, Depth to Bottom and Date Sampled are all provided by the client and can affect the validity of results.
•The results reported herein relate only to the material supplied to the laboratory.
•The residue of any samples contained within this report, and any received within the same delivery, will be disposed of **four weeks** after the initial scheduling. For samples tested for Asbestos we will retain a portion of the dried sample for a minimum of **six months** after the initial Asbestos testing is completed.
•Analytical results reflect the quality of the sample at the time of analysis only.
•Opinions and Interpretations expressed are outside our scope of accreditation.
•A deviating sample report is appended and will indicate if samples or tests have been found to be deviating. Any test results affected may not be an accurate record of the concentration at the time of sampling and, as a result, may be invalid.
•If a sample is outside of the calibration range or affected by interferences then it may need diluting. This will result in the limit of detection (LOD) being raised.
•Subcontracted Analysis: Please see the appended report for any deviations, current LODs and accreditation status of the test.

Key

Superscript "#"	Accredited to ISO 17025
Superscript "M"	Accredited to MCertS
Superscript "U"	Individual result not accredited
None of the above symbols	Analysis unaccredited
Subscript "A"	Analysis performed on as-received Sample
Subscript "D"	Analysis performed on the dried sample, crushed to pass 2mm sieve.
Subscript "D" on Asbestos	Analysis performed on a dried aliquot of sample provided.
Subscript "^"	Analysis has dependant options against results. Details appear in the comments of your Sample receipt
IS	Insufficient Sample for analysis
US	Unsuitable Sample for analysis
NDP	No Determination Possible
NAD	No Asbestos Detected
Trace	Asbestos found not suitable for Gravimetric Quantification – not enough to accurately weigh.
N/A	Not applicable

Asbestos

Identification: Asbestos in soil analysis is performed on a dried aliquot of the submitted sample and cannot guarantee to identify asbestos if only present in small numbers as discrete fibres/fragments in the original sample.
Stones etc. are not removed from the sample prior to analysis
"Trace Asbestos Identified" will be reported if there is not enough present to verify the type.
Quantification: Generally a 2 stage process including visual identification, hand picking and weighing, and fibre counting. Where ACMs are found a percentage asbestos is assigned to each with reference to 'HSG264, Asbestos: The survey guide' and the calculated asbestos content is expressed as a percentage of the dried soil sample aliquot used. If asbestos is identified as being present but is not in a form that is suitable for analysis by hand picking and weighing (normally if the asbestos is present as free fibres). "TRACE" will be reported as a quantification result.
PLEASE INFORM THE LABORATORY IF YOU WOULD LIKE THE STAGE 3 SEDIMENTATION PROCESS CARRIED OUT. Note this will be subcontracted.

Assigned Matrix Codes

1	SAND	6	CLAY/LOAM	A	Contains Stones
2	LOAM	7	OTHER	B	Contains Construction Rubble
3	CLAY	8	Asbestos Bulk (Only Asbestos ID accredited)	C	Contains visible hydrocarbons
4	LOAM/SAND	9	Incinerator Ash (some Metals accredited)	D	Contains glass / metal
5	SAND/CLAY			E	Contains roots / twigs
Note: 7,8,9 matrices are not covered by our ISO 17025 or MCertS accreditation, unless stated above.					

Soil Chemical Analysis:
All results are reported as dry weight (<40°C).
For samples with Matrix Codes 1 - 6 natural stones, brick and concrete fragments >10mm and any extraneous material (visible glass, metal or twigs) are removed and excluded from the sample prior to analysis and reported results corrected to a whole sample basis. This is reported as '% stones >10mm'.
For samples with Matrix Code 7 the whole sample is dried and crushed prior to analysis and this supersedes any "A" subscripts
All analysis is performed on the sample as received for soil samples which are positive for asbestos or the client has informed asbestos may be present and/or if they are from outside the European Union and this supersedes any "D" subscripts.

TPH by method A-T-007:
For waters, free and visible oils are excluded from the sample used for analysis, so the reported result represents the dissolved phase only.
Results "with Clean up" indicates samples cleaned up with Silica during extraction.

EPH CWG (method A-T-055) from TPH CWG:
EPH CWG results have humics mathematically subtracted through instrument calculation.
Where these humic substances have been identified in any IDs from "TPH CWG with clean up" please note that the concentration is **NOT** included in the quantified results but present in the ID for information.

Electrical Conductivity of water by method A-T-037:
Results greater than 12900µS/cm @ 25^0C / 11550µS/cm @ 20^0C fall outside the calibration range and as such are unaccredited.

Please contact your client manager if you require any further information.

Envirolab Deviating Samples Report

Hattersley Science & Technology Park, Stockport Road, Hattersley, SK14 3QU
Tel. 0161 368 4921 email. ask@envlab.co.uk

Client: Central Alliance, Alliance House, South Park Way, South Park Way, Wakefield 41 Business Park, Wakefield, WF2 0XJ

Project: One Earth Solar Farm

Clients Project No: 2372986

Project No: 24/10047

Date Received: 17/10/2024 (am)

Cool Box Temperatures (°C): 15.3 & 15.4

Lab Sample ID	24/10047/1	24/10047/3	24/10047/5	24/10047/6	24/10047/7	24/10047/8	24/10047/9	24/10047/10
Client Sample No	3	3	3	6	3	6	3	6
Client Sample ID/Depth	TP006 0.30m	TP007 0.30m	TP010 0.40m	TP010 1.00m	TP011 0.50m	TP011 1.00m	TP012 0.40m	TP012 1.00m
Date Sampled	01/10/24	01/10/24	30/09/24	30/09/24	30/09/24	30/09/24	30/09/24	30/09/24
Deviation Code								
F	✓	✓	✓	✓	✓	✓	✓	✓

Key
F *Maximum holding time exceeded between sampling date and analysis for analytes listed below*

HOLDING TIME EXCEEDANCES

Lab Sample ID	24/10047/1	24/10047/3	24/10047/5	24/10047/6	24/10047/7	24/10047/8	24/10047/9	24/10047/10
Client Sample No	3	3	3	6	3	6	3	6
Client Sample ID/Depth	TP006 0.30m	TP007 0.30m	TP010 0.40m	TP010 1.00m	TP011 0.50m	TP011 1.00m	TP012 0.40m	TP012 1.00m
Date Sampled	01/10/24	01/10/24	30/09/24	30/09/24	30/09/24	30/09/24	30/09/24	30/09/24
PAH-16MS	✓	✓	✓	✓	✓	✓	✓	✓
Cyanide (total)	✓	✓	✓		✓	✓	✓	✓
VPHCWG			✓	✓	✓	✓	✓	✓
VOC			✓	✓	✓	✓	✓	✓
SVOC excluding PAH-16			✓	✓	✓	✓	✓	✓

If, at any point before reaching the laboratory, the temperature of the samples has breached those set in published standards, e.g. BS-EN 5667-3, ISO 18400-102:2017, then the concentration of any affected analytes may differ from that at the time of sampling.

Envirolab Analysis Dates

Lab Sample ID	24/10047/1	24/10047/2	24/10047/3	24/10047/4	24/10047/5	24/10047/6	24/10047/7	24/10047/8	24/10047/9	24/10047/10
Client Sample No	3	6	3	6	3	6	3	6	3	6
Client Sample ID/Depth	TP006 0.30m	TP006 1.00m	TP007 0.30m	TP007 1.00m	TP010 0.40m	TP010 1.00m	TP011 0.50m	TP011 1.00m	TP012 0.40m	TP012 1.00m
Date Sampled	01/10/24	01/10/24	01/10/24	01/10/24	30/09/24	30/09/24	30/09/24	30/09/24	30/09/24	30/09/24
A-T-006s					23/10/2024	23/10/2024	23/10/2024	23/10/2024	23/10/2024	23/10/2024
A-T-019s	25/10/2024		25/10/2024		25/10/2024	25/10/2024	25/10/2024	25/10/2024	25/10/2024	25/10/2024
A-T-022s					22/10/2024	22/10/2024	22/10/2024	22/10/2024	22/10/2024	22/10/2024
A-T-024s	23/10/2024	23/10/2024	23/10/2024	23/10/2024	23/10/2024	23/10/2024	23/10/2024	23/10/2024	23/10/2024	23/10/2024
A-T-026s	22/10/2024	22/10/2024	22/10/2024	22/10/2024	22/10/2024	22/10/2024	22/10/2024	22/10/2024	22/10/2024	22/10/2024
A-T-027s	22/10/2024	22/10/2024	22/10/2024	22/10/2024	22/10/2024	22/10/2024	22/10/2024	22/10/2024	22/10/2024	22/10/2024
A-T-031s	22/10/2024	22/10/2024	22/10/2024	22/10/2024	22/10/2024	22/10/2024	22/10/2024	22/10/2024	22/10/2024	22/10/2024
A-T-032s	22/10/2024	22/10/2024	22/10/2024	22/10/2024	22/10/2024	22/10/2024	22/10/2024	22/10/2024	22/10/2024	22/10/2024
A-T-042sTCN	21/10/2024		21/10/2024		21/10/2024		21/10/2024	21/10/2024	21/10/2024	21/10/2024
A-T-044	24/10/2024	24/10/2024	24/10/2024	24/10/2024	24/10/2024	24/10/2024	24/10/2024	24/10/2024	24/10/2024	24/10/2024
A-T-045					18/10/2024		18/10/2024		18/10/2024	
A-T-050s	21/10/2024		21/10/2024		21/10/2024	21/10/2024	21/10/2024	21/10/2024	21/10/2024	21/10/2024
A-T-052s					21/10/2024	21/10/2024	21/10/2024	21/10/2024	21/10/2024	21/10/2024
A-T-055s					21/10/2024	21/10/2024	21/10/2024	21/10/2024	21/10/2024	21/10/2024
Calc-As Recd					22/10/2024	22/10/2024	22/10/2024	22/10/2024	22/10/2024	22/10/2024

The above dates are the analysis completion dates, please note that these are not necessarily the date that the analysis was weighed/extracted.

End of Report

envirolab
Hattersley Science & Technology Park
Stockport Road, Hattersley, SK14 3QU

FINAL ANALYTICAL TEST REPORT
SUPPLEMENT TO TEST REPORT 24/10048/1

Amendments: Request for project/sample information change

Envirolab Job Number: 24/10048
Issue Number: 2 **Date:** 27 January, 2025

Client:
Central Alliance
Alliance House
South Park Way
South Park Way
Wakefield 41 Business Park
Wakefield
WF2 0XJ

Project Manager: John Parkinson/Lab results
Project Name: One Earth Solar Farm
Project Ref: 2372986
Order No: N/A
Date Samples Received: 04/10/24
Date Instructions Received: 17/10/24
Date Analysis Completed: 24/10/24

Approved by:

[redacted]

Sophie France
Client Manager

mCERTS THE ENVIRONMENT AGENCY'S MONITORING CERTIFICATION SCHEME
UKAS TESTING 1247

Envirolab Job Number: 24/10048

Client Project Name: One Earth Solar Farm

Client Project Ref: 2372986

Lab Sample ID	24/10048/1	24/10048/2	24/10048/4	24/10048/9	24/10048/10	24/10048/11		Units	Limit of Detection	Method ref
Client Sample No	1	2	4	2	5	8				
Client Sample ID	BH001	BH001	BH0001	BH002	BH002	BH002				
Depth to Top	0.30	0.50	2.00	0.30	0.50	1.00				
Depth To Bottom										
Date Sampled				02-Oct-24	02-Oct-24	02-Oct-24				
Sample Type	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES				
Sample Matrix Code	4AE	4AE	5A	5A	6AE	5AE				
% Stones >10mm$_A$	2.1	1.4	<0.1	<0.1	<0.1	<0.1		% w/w	0.1	A-T-044
pH$_D$$^{M\#}$	7.55	7.37	8.06	8.02	8.05	8.17		pH	0.01	A-T-031s
Sulphate (water sol 2:1)$_D$$^{M\#}$	0.02	<0.01	0.09	<0.01	0.01	0.01		g/l	0.01	A-T-026s
Cyanide (total)$_A$$^{M\#}$	<1	-	-	<1	-	-		mg/kg	1	A-T-042sTCN
Phenol$_A$	<0.2	-	-	<0.2	-	-		mg/kg	0.2	A-T-050s
Organic Matter$_D$$^{M\#}$	2.45	2.37	2.10	0.90	0.50	0.40		% w/w	0.14	A-T-032s
Arsenic$_D$$^{M\#}$	<1	<1	<1	5	6	2		mg/kg	1	A-T-024s
Boron (water soluble)$_D$$^{M\#}$	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0		mg/kg	1	A-T-027s
Cadmium$_D$$^{M\#}$	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		mg/kg	0.5	A-T-024s
Copper$_D$$^{M\#}$	11	11	14	11	13	12		mg/kg	1	A-T-024s
Chromium$_D$$^{M\#}$	21	22	54	36	34	37		mg/kg	1	A-T-024s
Lead$_D$$^{M\#}$	12	13	4	9	9	7		mg/kg	1	A-T-024s
Mercury$_D$	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17		mg/kg	0.17	A-T-024s
Nickel$_D$$^{M\#}$	14	15	45	27	31	30		mg/kg	1	A-T-024s
Zinc$_D$$^{M\#}$	45	48	55	58	59	50		mg/kg	5	A-T-024s

Envirolab Job Number: 24/10048

Client Project Name: One Earth Solar Farm

Client Project Ref: 2372986

Lab Sample ID	24/10048/1	24/10048/2	24/10048/4	24/10048/9	24/10048/10	24/10048/11		Units	Limit of Detection	Method ref
Client Sample No	1	2	4	2	5	8				
Client Sample ID	BH001	BH001	BH0001	BH002	BH002	BH002				
Depth to Top	0.30	0.50	2.00	0.30	0.50	1.00				
Depth To Bottom										
Date Sampled				02-Oct-24	02-Oct-24	02-Oct-24				
Sample Type	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES				
Sample Matrix Code	4AE	4AE	5A	5A	6AE	5AE				
Asbestos in Soil (inc. matrix) ^										
Asbestos in soil$_{D}^{\#}$	NAD	-	-	NAD	-	-				A-T-045
Asbestos Matrix (visual)$_{D}$	-	-	-	-	-	-				A-T-045
Asbestos Matrix (microscope)$_{D}$	-	-	-	-	-	-				A-T-045
Asbestos ACM - Suitable for Water Absorption Test?$_{D}$	N/A	-	-	N/A	-	-				A-T-045

Envirolab Job Number: 24/10048

Client Project Name: One Earth Solar Farm

Client Project Ref: 2372986

Lab Sample ID	24/10048/1	24/10048/2	24/10048/4	24/10048/9	24/10048/10	24/10048/11		Units	Limit of Detection	Method ref
Client Sample No	1	2	4	2	5	8				
Client Sample ID	BH001	BH001	BH0001	BH002	BH002	BH002				
Depth to Top	0.30	0.50	2.00	0.30	0.50	1.00				
Depth To Bottom										
Date Sampled				02-Oct-24	02-Oct-24	02-Oct-24				
Sample Type	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES				
Sample Matrix Code	4AE	4AE	5A	5A	6AE	5AE				
PAH-16MS										
Acenaphthene$_A^{M\#}$	<0.01	-	-	<0.01	-	-		mg/kg	0.01	A-T-019s
Acenaphthylene$_A^{M\#}$	<0.01	-	-	<0.01	-	-		mg/kg	0.01	A-T-019s
Anthracene$_A^{M\#}$	<0.02	-	-	<0.02	-	-		mg/kg	0.02	A-T-019s
Benzo(a)anthracene$_A^{M\#}$	<0.04	-	-	<0.04	-	-		mg/kg	0.04	A-T-019s
Benzo(a)pyrene$_A^{M\#}$	<0.04	-	-	<0.04	-	-		mg/kg	0.04	A-T-019s
Benzo(b)fluoranthene$_A^{M\#}$	<0.05	-	-	<0.05	-	-		mg/kg	0.05	A-T-019s
Benzo(ghi)perylene$_A^{M\#}$	<0.05	-	-	<0.05	-	-		mg/kg	0.05	A-T-019s
Benzo(k)fluoranthene$_A^{M\#}$	<0.07	-	-	<0.07	-	-		mg/kg	0.07	A-T-019s
Chrysene$_A^{M\#}$	<0.06	-	-	<0.06	-	-		mg/kg	0.06	A-T-019s
Dibenzo(ah)anthracene$_A^{M\#}$	<0.04	-	-	<0.04	-	-		mg/kg	0.04	A-T-019s
Fluoranthene$_A^{M\#}$	<0.08	-	-	<0.08	-	-		mg/kg	0.08	A-T-019s
Fluorene$_A^{M\#}$	<0.01	-	-	<0.01	-	-		mg/kg	0.01	A-T-019s
Indeno(123-cd)pyrene$_A^{M\#}$	<0.03	-	-	<0.03	-	-		mg/kg	0.03	A-T-019s
Naphthalene $_A^{M\#}$	<0.03	-	-	<0.03	-	-		mg/kg	0.03	A-T-019s
Phenanthrene$_A^{M\#}$	<0.03	-	-	<0.03	-	-		mg/kg	0.03	A-T-019s
Pyrene$_A^{M\#}$	<0.07	-	-	<0.07	-	-		mg/kg	0.07	A-T-019s
Total PAH-16MS$_A^{M\#}$	<0.08	-	-	<0.08	-	-		mg/kg	0.01	A-T-019s

Envirolab Job Number: 24/10048

Client Project Name: One Earth Solar Farm

Client Project Ref: 2372986

Lab Sample ID	24/10048/1	24/10048/2	24/10048/4	24/10048/9	24/10048/10	24/10048/11		Units	Limit of Detection	Method ref
Client Sample No	1	2	4	2	5	8				
Client Sample ID	BH001	BH001	BH0001	BH002	BH002	BH002				
Depth to Top	0.30	0.50	2.00	0.30	0.50	1.00				
Depth To Bottom										
Date Sampled				02-Oct-24	02-Oct-24	02-Oct-24				
Sample Type	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES				
Sample Matrix Code	4AE	4AE	5A	5A	6AE	5AE				
SVOC excluding PAH-16										
4-Bromophenyl phenyl ether$_A$	<100	-	-	<100	-	-		µg/kg	100	A-T-052s
Hexachlorobenzene$_A$	<100	-	-	<100	-	-		µg/kg	100	A-T-052s
Diethyl phthalate$_A$	<100	-	-	<100	-	-		µg/kg	100	A-T-052s
Dimethyl phthalate$_A$	<100	-	-	<100	-	-		µg/kg	100	A-T-052s
Dibenzofuran$_A$	<100	-	-	<100	-	-		µg/kg	100	A-T-052s
Carbazole$_A$	<100	-	-	<100	-	-		µg/kg	100	A-T-052s
Butylbenzyl phthalate$_A$	<100	-	-	<100	-	-		µg/kg	100	A-T-052s
Bis(2-ethylhexyl)phthalate$_A$	<500	-	-	<500	-	-		µg/kg	500	A-T-052s
Bis(2-chloroethoxy)methane$_A$	<100	-	-	<100	-	-		µg/kg	100	A-T-052s
Bis(2-chloroethyl)ether$_A$	<100	-	-	<100	-	-		µg/kg	100	A-T-052s
4-Nitrophenol$_A$	<100	-	-	<100	-	-		µg/kg	100	A-T-052s
3+4-Methylphenol$_A$	<100	-	-	<100	-	-		µg/kg	100	A-T-052s
4-Chloro-3-methylphenol$_A$	<100	-	-	<100	-	-		µg/kg	100	A-T-052s
2-Nitrophenol$_A$	<100	-	-	<100	-	-		µg/kg	100	A-T-052s
2-Methylphenol$_A$	<100	-	-	<100	-	-		µg/kg	100	A-T-052s
1,2,4-Trichlorobenzene$_A$	<100	-	-	<100	-	-		µg/kg	100	A-T-052s
2-Chlorophenol$_A$	<100	-	-	<100	-	-		µg/kg	100	A-T-052s
2,6-Dinitrotoluene$_A$	<100	-	-	<100	-	-		µg/kg	100	A-T-052s
2,4-Dinitrotoluene$_A$	<100	-	-	<100	-	-		µg/kg	100	A-T-052s
2,4-Dimethylphenol$_A$	<100	-	-	<100	-	-		µg/kg	100	A-T-052s
2,4-Dichlorophenol$_A$	<100	-	-	<100	-	-		µg/kg	100	A-T-052s
2,4,6-Trichlorophenol$_A$	<100	-	-	<100	-	-		µg/kg	100	A-T-052s
2,4,5-Trichlorophenol$_A$	<100	-	-	<100	-	-		µg/kg	100	A-T-052s
1,4-Dichlorobenzene$_A$	<100	-	-	<100	-	-		µg/kg	100	A-T-052s
1,3-Dichlorobenzene$_A$	<100	-	-	<100	-	-		µg/kg	100	A-T-052s
1,2-Dichlorobenzene$_A$	<100	-	-	<100	-	-		µg/kg	100	A-T-052s
2-Chloronaphthalene$_A$	<100	-	-	<100	-	-		µg/kg	100	A-T-052s
2-Methylnaphthalene$_A$	<100	-	-	<100	-	-		µg/kg	100	A-T-052s
Bis(2-chloroisopropyl)ether$_A$	<100	-	-	<100	-	-		µg/kg	100	A-T-052s
Phenol$_A$	<100	-	-	<100	-	-		µg/kg	100	A-T-052s
Pentachlorophenol$_A$	<100	-	-	<100	-	-		µg/kg	100	A-T-052s
n-Nitroso-n-dipropylamine$_A$	<100	-	-	<100	-	-		µg/kg	100	A-T-052s

Lab Sample ID	24/10048/1	24/10048/2	24/10048/4	24/10048/9	24/10048/10	24/10048/11		Units	Limit of Detection	Method ref
Client Sample No	1	2	4	2	5	8				
Client Sample ID	BH001	BH001	BH0001	BH002	BH002	BH002				
Depth to Top	0.30	0.50	2.00	0.30	0.50	1.00				
Depth To Bottom										
Date Sampled				02-Oct-24	02-Oct-24	02-Oct-24				
Sample Type	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES				
Sample Matrix Code	4AE	4AE	5A	5A	6AE	5AE				
n-Dioctylphthalate$_A$	<500	-	-	<500	-	-		µg/kg	500	A-T-052s
n-Dibutylphthalate$_A$	<100	-	-	<100	-	-		µg/kg	100	A-T-052s
Nitrobenzene$_A$	<100	-	-	<100	-	-		µg/kg	100	A-T-052s
Isophorone$_A$	<100	-	-	<100	-	-		µg/kg	100	A-T-052s
Hexachloroethane$_A$	<100	-	-	<100	-	-		µg/kg	100	A-T-052s
Hexachlorobutadiene$_A$	<100	-	-	<100	-	-		µg/kg	100	A-T-052s
Perylene$_A$	<100	-	-	<100	-	-		µg/kg	100	A-T-052s

Lab Sample ID	24/10048/1	24/10048/2	24/10048/4	24/10048/9	24/10048/10	24/10048/11		Units	Limit of Detection	Method ref
Client Sample No	1	2	4	2	5	8				
Client Sample ID	BH001	BH001	BH0001	BH002	BH002	BH002				
Depth to Top	0.30	0.50	2.00	0.30	0.50	1.00				
Depth To Bottom										
Date Sampled				02-Oct-24	02-Oct-24	02-Oct-24				
Sample Type	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES				
Sample Matrix Code	4AE	4AE	5A	5A	6AE	5AE				
VOC										
Dichlorodifluoromethane$_A$	<25	-	-	<25	-	-		µg/kg	1	A-T-006s
Chloromethane$_A$	<250	-	-	<250	-	-		µg/kg	10	A-T-006s
Vinyl Chloride (Chloroethene)$_A^{\#}$	<25	-	-	<25	-	-		µg/kg	1	A-T-006s
Bromomethane$_A^{\#}$	<25	-	-	<25	-	-		µg/kg	1	A-T-006s
Chloroethane$_A^{\#}$	<25	-	-	<25	-	-		µg/kg	1	A-T-006s
Trichlorofluoromethane$_A^{\#}$	<25	-	-	<25	-	-		µg/kg	1	A-T-006s
1,1-Dichloroethene$_A^{\#}$	<25	-	-	<25	-	-		µg/kg	1	A-T-006s
Carbon Disulphide$_A^{\#}$	<25	-	-	<25	-	-		µg/kg	1	A-T-006s
Dichloromethane$_A$	<125	-	-	<125	-	-		µg/kg	5	A-T-006s
trans 1,2-Dichloroethene$_A^{\#}$	<25	-	-	<25	-	-		µg/kg	1	A-T-006s
1,1-Dichloroethane$_A^{\#}$	<25	-	-	<25	-	-		µg/kg	1	A-T-006s
cis 1,2-Dichloroethene$_A^{\#}$	<25	-	-	<25	-	-		µg/kg	1	A-T-006s
2,2-Dichloropropane$_A^{\#}$	<25^U	-	-	<25^U	-	-		µg/kg	1	A-T-006s
Bromochloromethane$_A^{\#}$	<125	-	-	<125	-	-		µg/kg	5	A-T-006s
Chloroform$_A^{\#}$	<25	-	-	<25	-	-		µg/kg	1	A-T-006s
1,1,1-Trichloroethane$_A^{\#}$	<25	-	-	<25	-	-		µg/kg	1	A-T-006s
1,1-Dichloropropene$_A^{\#}$	<25	-	-	<25	-	-		µg/kg	1	A-T-006s
Carbon Tetrachloride$_A^{\#}$	<25	-	-	<25	-	-		µg/kg	1	A-T-006s
1,2-Dichloroethane$_A^{\#}$	<50	-	-	<50	-	-		µg/kg	2	A-T-006s
Benzene$_A^{\#}$	<25	-	-	<25	-	-		µg/kg	1	A-T-006s
Trichloroethene$_A^{\#}$	<25	-	-	<25	-	-		µg/kg	1	A-T-006s
1,2-Dichloropropane$_A^{\#}$	<25	-	-	<25	-	-		µg/kg	1	A-T-006s
Dibromomethane$_A^{\#}$	<25	-	-	<25	-	-		µg/kg	1	A-T-006s
Bromodichloromethane$_A^{\#}$	<250	-	-	<250	-	-		µg/kg	10	A-T-006s
cis 1,3-Dichloropropene$_A^{\#}$	<25	-	-	<25	-	-		µg/kg	1	A-T-006s
Toluene$_A^{\#}$	<25	-	-	<25	-	-		µg/kg	1	A-T-006s
trans 1,3-Dichloropropene$_A^{\#}$	<25	-	-	<25	-	-		µg/kg	1	A-T-006s
1,1,2-Trichloroethane$_A^{\#}$	<25	-	-	<25	-	-		µg/kg	1	A-T-006s
1,3-Dichloropropane$_A^{\#}$	<25	-	-	<25	-	-		µg/kg	1	A-T-006s
Tetrachloroethene$_A^{\#}$	<25	-	-	<25	-	-		µg/kg	1	A-T-006s
Dibromochloromethane$_A^{\#}$	<75	-	-	<75	-	-		µg/kg	3	A-T-006s
1,2-Dibromoethane$_A^{\#}$	<25	-	-	<25	-	-		µg/kg	1	A-T-006s

Envirolab Job Number: 24/10048

Client Project Name: One Earth Solar Farm

Client Project Ref: 2372986

Lab Sample ID	24/10048/1	24/10048/2	24/10048/4	24/10048/9	24/10048/10	24/10048/11		Units	Limit of Detection	Method ref
Client Sample No	1	2	4	2	5	8				
Client Sample ID	BH001	BH001	BH0001	BH002	BH002	BH002				
Depth to Top	0.30	0.50	2.00	0.30	0.50	1.00				
Depth To Bottom										
Date Sampled				02-Oct-24	02-Oct-24	02-Oct-24				
Sample Type	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES				
Sample Matrix Code	4AE	4AE	5A	5A	6AE	5AE				
Chlorobenzene$_{A}^{\#}$	<25	-	-	<25	-	-		µg/kg	1	A-T-006s
1,1,1,2-Tetrachloroethane$_{A}$	<25	-	-	<25	-	-		µg/kg	1	A-T-006s
Ethylbenzene$_{A}^{\#}$	<25	-	-	<25	-	-		µg/kg	1	A-T-006s
m & p Xylene$_{A}^{\#}$	<25	-	-	<25	-	-		µg/kg	1	A-T-006s
o-Xylene$_{A}^{\#}$	<25	-	-	<25	-	-		µg/kg	1	A-T-006s
Styrene$_{A}^{\#}$	<25	-	-	<25	-	-		µg/kg	1	A-T-006s
Bromoform$_{A}^{\#}$	<75	-	-	<75	-	-		µg/kg	3	A-T-006s
Isopropylbenzene$_{A}^{\#}$	<25	-	-	<25	-	-		µg/kg	1	A-T-006s
1,1,2,2-Tetrachloroethane$_{A}$	<25	-	-	<25	-	-		µg/kg	1	A-T-006s
1,2,3-Trichloropropane$_{A}^{\#}$	<25	-	-	<25	-	-		µg/kg	1	A-T-006s
Bromobenzene$_{A}^{\#}$	<25	-	-	<25	-	-		µg/kg	1	A-T-006s
n-Propylbenzene$_{A}^{\#}$	<25	-	-	<25	-	-		µg/kg	1	A-T-006s
2-Chlorotoluene$_{A}^{\#}$	<25	-	-	<25	-	-		µg/kg	1	A-T-006s
1,3,5-Trimethylbenzene$_{A}^{\#}$	<25	-	-	<25	-	-		µg/kg	1	A-T-006s
4-Chlorotoluene$_{A}^{\#}$	<25	-	-	<25	-	-		µg/kg	1	A-T-006s
tert-Butylbenzene$_{A}^{\#}$	<50	-	-	<50	-	-		µg/kg	2	A-T-006s
1,2,4-Trimethylbenzene$_{A}^{\#}$	<25	-	-	<25	-	-		µg/kg	1	A-T-006s
sec-Butylbenzene$_{A}^{\#}$	<25	-	-	<25	-	-		µg/kg	1	A-T-006s
4-Isopropyltoluene$_{A}^{\#}$	<25	-	-	<25	-	-		µg/kg	1	A-T-006s
1,3-Dichlorobenzene$_{A}$	<25	-	-	<25	-	-		µg/kg	1	A-T-006s
1,4-Dichlorobenzene$_{A}^{\#}$	<25	-	-	<25	-	-		µg/kg	1	A-T-006s
n-Butylbenzene$_{A}^{\#}$	<25	-	-	<25	-	-		µg/kg	1	A-T-006s
1,2-Dichlorobenzene$_{A}^{\#}$	<25	-	-	<25	-	-		µg/kg	1	A-T-006s
1,2-Dibromo-3-chloropropane (DCBP)$_{A}$	<50	-	-	<50	-	-		µg/kg	2	A-T-006s
1,2,4-Trichlorobenzene$_{A}$	<75	-	-	<75	-	-		µg/kg	3	A-T-006s
Hexachlorobutadiene$_{A}^{\#}$	<25	-	-	<25	-	-		µg/kg	1	A-T-006s
1,2,3-Trichlorobenzene$_{A}$	<75	-	-	<75	-	-		µg/kg	3	A-T-006s

Envirolab Job Number: 24/10048

Client Project Name: One Earth Solar Farm

Client Project Ref: 2372986

Lab Sample ID	24/10048/1	24/10048/2	24/10048/4	24/10048/9	24/10048/10	24/10048/11		Units	Limit of Detection	Method ref
Client Sample No	1	2	4	2	5	8				
Client Sample ID	BH001	BH001	BH0001	BH002	BH002	BH002				
Depth to Top	0.30	0.50	2.00	0.30	0.50	1.00				
Depth To Bottom										
Date Sampled				02-Oct-24	02-Oct-24	02-Oct-24				
Sample Type	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES				
Sample Matrix Code	4AE	4AE	5A	5A	6AE	5AE				
TPH CWG with Clean Up										
Ali >C5-C6$_A$	<0.01	-	-	<0.01	-	-		mg/kg	0.01	A-T-022s
Ali >C6-C8$_A$	<0.01	-	-	<0.01	-	-		mg/kg	0.01	A-T-022s
Ali >C8-C10$_A$	<1	-	-	<1	-	-		mg/kg	1	A-T-055s
Ali >C10-C12$_A^{M\#}$	<1	-	-	<1	-	-		mg/kg	1	A-T-055s
Ali >C12-C16$_A^{M\#}$	<1	-	-	<1	-	-		mg/kg	1	A-T-055s
Ali >C16-C21$_A^{M\#}$	<1	-	-	<1	-	-		mg/kg	1	A-T-055s
Ali >C21-C35$_A^{M\#}$	9	-	-	4	-	-		mg/kg	1	A-T-055s
Total Aliphatics$_A$	9	-	-	4	-	-		mg/kg	1	Calc-As Recd
Aro >C5-C7$_A^{\#}$	<0.01	-	-	<0.01	-	-		mg/kg	0.01	A-T-022s
Aro >C7-C8$_A^{\#}$	<0.01	-	-	<0.01	-	-		mg/kg	0.01	A-T-022s
Aro >C8-C10$_A$	<1	-	-	<1	-	-		mg/kg	1	A-T-055s
Aro >C10-C12$_A$	<1	-	-	<1	-	-		mg/kg	1	A-T-055s
Aro >C12-C16$_A$	<1	-	-	<1	-	-		mg/kg	1	A-T-055s
Aro >C16-C21$_A^{M\#}$	<1	-	-	<1	-	-		mg/kg	1	A-T-055s
Aro >C21-C35$_A^{M\#}$	<1	-	-	<1	-	-		mg/kg	1	A-T-055s
Total Aromatics$_A$	<1	-	-	<1	-	-		mg/kg	1	Calc-As Recd
TPH (Ali & Aro >C5-C35)$_A$	9	-	-	4	-	-		mg/kg	1	Calc-As Recd
BTEX - Benzene$_A^{\#}$	<0.01	-	-	<0.01	-	-		mg/kg	0.01	A-T-022s
BTEX - Toluene$_A^{\#}$	<0.01	-	-	<0.01	-	-		mg/kg	0.01	A-T-022s
BTEX - Ethyl Benzene$_A^{\#}$	<0.01	-	-	<0.01	-	-		mg/kg	0.01	A-T-022s
BTEX - m & p Xylene$_A^{\#}$	<0.01	-	-	<0.01	-	-		mg/kg	0.01	A-T-022s
BTEX - o Xylene$_A^{\#}$	<0.01	-	-	<0.01	-	-		mg/kg	0.01	A-T-022s
MTBE$_A^{\#}$	<0.01	-	-	<0.01	-	-		mg/kg	0.01	A-T-022s

Report Notes

General

•This report shall not be reproduced, except in full, without written approval from Envirolab.
•The client Sample No, Client Sample ID, Depth to top, Depth to Bottom and Date Sampled are all provided by the client and can affect the validity of results.
•The results reported herein relate only to the material supplied to the laboratory.
•The residue of any samples contained within this report, and any received within the same delivery, will be disposed of **four weeks** after the initial scheduling. For samples tested for Asbestos we will retain a portion of the dried sample for a minimum of **six months** after the initial Asbestos testing is completed.
•Analytical results reflect the quality of the sample at the time of analysis only.
•Opinions and Interpretations expressed are outside our scope of accreditation.
•A deviating sample report is appended and will indicate if samples or tests have been found to be deviating. Any test results affected may not be an accurate record of the concentration at the time of sampling and, as a result, may be invalid.
•If a sample is outside of the calibration range or affected by interferences then it may need diluting. This will result in the limit of detection (LOD) being raised.
•Subcontracted Analysis: Please see the appended report for any deviations, current LODs and accreditation status of the test.

Key

Superscript "#"	Accredited to ISO 17025
Superscript "M"	Accredited to MCertS
Superscript "U"	Individual result not accredited
None of the above symbols	Analysis unaccredited
Subscript "A"	Analysis performed on as-received Sample
Subscript "D"	Analysis performed on the dried sample, crushed to pass 2mm sieve.
Subscript "D" on Asbestos	Analysis performed on a dried aliquot of sample provided.
Subscript "^"	Analysis has dependant options against results. Details appear in the comments of your Sample receipt
IS	Insufficient Sample for analysis
US	Unsuitable Sample for analysis
NDP	No Determination Possible
NAD	No Asbestos Detected
Trace	Asbestos found not suitable for Gravimetric Quantification – not enough to accurately weigh.
N/A	Not applicable

Asbestos

Identification: Asbestos in soil analysis is performed on a dried aliquot of the submitted sample and cannot guarantee to identify asbestos if only present in small numbers as discrete fibres/fragments in the original sample.
Stones etc. are not removed from the sample prior to analysis
"Trace Asbestos Identified" will be reported if there is not enough present to verify the type.
Quantification: Generally a 2 stage process including visual identification, hand picking and weighing, and fibre counting. Where ACMs are found a percentage asbestos is assigned to each with reference to 'HSG264, Asbestos: The survey guide' and the calculated asbestos content is expressed as a percentage of the dried soil sample aliquot used. If asbestos is identified as being present but is not in a form that is suitable for analysis by hand picking and weighing (normally if the asbestos is present as free fibres). "TRACE" will be reported as a quantification result.
PLEASE INFORM THE LABORATORY IF YOU WOULD LIKE THE STAGE 3 SEDIMENTATION PROCESS CARRIED OUT. Note this will be subcontracted.

Assigned Matrix Codes

1	SAND	6	CLAY/LOAM	A	Contains Stones
2	LOAM	7	OTHER	B	Contains Construction Rubble
3	CLAY	8	Asbestos Bulk (Only Asbestos ID accredited)	C	Contains visible hydrocarbons
4	LOAM/SAND	9	Incinerator Ash (some Metals accredited)	D	Contains glass / metal
5	SAND/CLAY			E	Contains roots / twigs
Note: 7,8,9 matrices are not covered by our ISO 17025 or MCertS accreditation, unless stated above.					

Soil Chemical Analysis:
All results are reported as dry weight (<40°C).
For samples with Matrix Codes 1 - 6 natural stones, brick and concrete fragments >10mm and any extraneous material (visible glass, metal or twigs) are removed and excluded from the sample prior to analysis and reported results corrected to a whole sample basis. This is reported as '% stones >10mm'.
For samples with Matrix Code 7 the whole sample is dried and crushed prior to analysis and this supersedes any "A" subscripts
All analysis is performed on the sample as received for soil samples which are positive for asbestos or the client has informed asbestos may be present and/or if they are from outside the European Union and this supersedes any "D" subscripts.

TPH by method A-T-007:
For waters, free and visible oils are excluded from the sample used for analysis, so the reported result represents the dissolved phase only.
Results "with Clean up" indicates samples cleaned up with Silica during extraction.

EPH CWG (method A-T-055) from TPH CWG:
EPH CWG results have humics mathematically subtracted through instrument calculation.
Where these humic substances have been identified in any IDs from "TPH CWG with clean up" please note that the concentration is **NOT** included in the quantified results but present in the ID for information.

Electrical Conductivity of water by method A-T-037:
Results greater than 12900µS/cm @ 25^0C / 11550µS/cm @ 20^0C fall outside the calibration range and as such are unaccredited.

Please contact your client manager if you require any further information.

Envirolab Deviating Samples Report

Hattersley Science & Technology Park, Stockport Road, Hattersley, SK14 3QU
Tel. 0161 368 4921 email. ask@envlab.co.uk

Client: Central Alliance, Alliance House, South Park Way, South Park Way, Wakefield 41 Business Park, Wakefield, WF2 0XJ

Project: One Earth Solar Farm

Clients Project No: 2372986

Project No: 24/10048

Date Received: 17/10/2024 (am)

Cool Box Temperatures (°C): 13.6 & 14.7

Lab Sample ID	24/10048/1	24/10048/2	24/10048/4	24/10048/9
Client Sample No	1	2	4	2
Client Sample ID/Depth	BH001 0.30m	BH001 0.50m	BH0001 2.00m	BH002 0.30m
Date Sampled				02/10/24
Deviation Code				
E (no date)	✓	✓	✓	
F				✓

Key
E (no date) *No sampling date provided (all results affected if not provided)*
F *Maximum holding time exceeded between sampling date and analysis for analytes listed below*

HOLDING TIME EXCEEDANCES

Lab Sample ID	24/10048/9
Client Sample No	2
Client Sample ID/Depth	BH002 0.30m
Date Sampled	02/10/24
VPHCWG	✓
PAH-16MS	✓
VOC	✓
SVOC excluding PAH-16	✓
Cyanide (total)	✓

Note: If, at any point before reaching the laboratory, the temperature of the samples has breached those set in published standards, e.g. BS-EN 5667-3 (for water samples 5 ± 3°C), ISO 18400-105:2017, then the concentration of any affected analytes may differ from that at the time of sampling.

Envirolab Analysis Dates

Lab Sample ID	24/10048/1	24/10048/2	24/10048/4	24/10048/9	24/10048/10	24/10048/11
Client Sample No	1	2	4	2	5	8
Client Sample ID/Depth	BH001 0.30m	BH001 0.50m	BH0001 2.00m	BH002 0.30m	BH002 0.50m	BH002 1.00m
Date Sampled				02/10/24	02/10/24	02/10/24
A-T-006s	23/10/2024			23/10/2024		
A-T-019s	24/10/2024			24/10/2024		
A-T-022s	22/10/2024			22/10/2024		
A-T-024s	23/10/2024	23/10/2024	23/10/2024	23/10/2024	23/10/2024	23/10/2024
A-T-026s	22/10/2024	22/10/2024	22/10/2024	22/10/2024	22/10/2024	22/10/2024
A-T-027s	22/10/2024	22/10/2024	22/10/2024	22/10/2024	22/10/2024	22/10/2024
A-T-031s	22/10/2024	22/10/2024	22/10/2024	22/10/2024	22/10/2024	22/10/2024
A-T-032s	22/10/2024	22/10/2024	22/10/2024	22/10/2024	22/10/2024	23/10/2024
A-T-042sTCN	21/10/2024			21/10/2024		
A-T-044	24/10/2024	24/10/2024	24/10/2024	24/10/2024	24/10/2024	24/10/2024
A-T-045	18/10/2024			18/10/2024		
A-T-050s	21/10/2024			21/10/2024		
A-T-052s	21/10/2024			21/10/2024		
A-T-055s	21/10/2024			21/10/2024		
Calc-As Recd	22/10/2024			22/10/2024		

The above dates are the analysis completion dates, please note that these are not necessarily the date that the analysis was weighed/extracted.

End of Report

envirolab
Hattersley Science & Technology Park
Stockport Road, Hattersley, SK14 3QU

FINAL ANALYTICAL TEST REPORT

Envirolab Job Number: 24/10378
Issue Number: 1 **Date:** 04 November, 2024

Client:
Central Alliance
Alliance House
South Park Way
South Park Way
Wakefield 41 Business Park
Wakefield
WF2 0XJ

Project Manager: John Parkinson/Lab results
Project Name: One Earth Solar Farm
Project Ref: 2372986
Order No: N/A
Date Samples Received: 22/10/24
Date Instructions Received: 25/10/24
Date Analysis Completed: 04/11/24

Approved by:

[redacted]

Richard Wong
Client Manager

Envirolab Job Number: 24/10378

Client Project Name: One Earth Solar Farm

Client Project Ref: 2372986

Lab Sample ID	24/10378/1	24/10378/2						Units	Limit of Detection	Method ref
Client Sample No	3	6								
Client Sample ID	BH009	BH009								
Depth to Top	0.25	1.00								
Depth To Bottom										
Date Sampled	10-Oct-24	10-Oct-24								
Sample Type	SOIL - ES	SOIL - ES								
Sample Matrix Code	6AE	4AE								
% Stones >10mm$_A$	<0.1	<0.1						% w/w	0.1	A-T-044
pH$_D$$^{M\#}$	7.42	7.69						pH	0.01	A-T-031s
Sulphate (water sol 2:1)$_D$$^{M\#}$	<0.01	0.03						g/l	0.01	A-T-026s
Cyanide (total)$_A$$^{M\#}$	<1	-						mg/kg	1	A-T-042sTCN
Phenol$_A$	<0.2	-						mg/kg	0.2	A-T-050s
Organic Matter$_D$$^{M\#}$	4.7	1.3						% w/w	0.1	A-T-032s
Arsenic$_D$$^{M\#}$	9	6						mg/kg	1	A-T-024s
Boron (water soluble)$_D$$^{M\#}$	1.4	<1.0						mg/kg	1	A-T-027s
Cadmium$_D$$^{M\#}$	2.0	1.2						mg/kg	0.5	A-T-024s
Copper$_D$$^{M\#}$	38	18						mg/kg	1	A-T-024s
Chromium$_D$$^{M\#}$	32	28						mg/kg	1	A-T-024s
Lead$_D$$^{M\#}$	215	105						mg/kg	1	A-T-024s
Mercury$_D$	<0.17	<0.17						mg/kg	0.17	A-T-024s
Nickel$_D$$^{M\#}$	30	25						mg/kg	1	A-T-024s
Zinc$_D$$^{M\#}$	244	141						mg/kg	5	A-T-024s

Envirolab Job Number: 24/10378

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Client Sample ID	BH009	BH009								
Depth to Top	0.25	1.00								
Depth To Bottom										
Date Sampled	10-Oct-24	10-Oct-24								
Sample Type	SOIL - ES	SOIL - ES								
Sample Matrix Code	6AE	4AE								
Asbestos in Soil (inc. matrix) ^										
Asbestos in soil$_{D}^{\#}$	NAD	-								A-T-045
Asbestos Matrix (visual)$_{D}$	-	-								A-T-045
Asbestos Matrix (microscope)$_{D}$	-	-								A-T-045
Asbestos ACM - Suitable for Water Absorption Test?$_{D}$	N/A	-								A-T-045

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Client Sample No	3	6								
Client Sample ID	BH009	BH009								
Depth to Top	0.25	1.00								
Depth To Bottom										
Date Sampled	10-Oct-24	10-Oct-24								
Sample Type	SOIL - ES	SOIL - ES								
Sample Matrix Code	6AE	4AE								
PAH-16MS										
Acenaphthene$_A^{M\#}$	<0.01	-						mg/kg	0.01	A-T-019s
Acenaphthylene$_A^{M\#}$	<0.01	-						mg/kg	0.01	A-T-019s
Anthracene$_A^{M\#}$	<0.02	-						mg/kg	0.02	A-T-019s
Benzo(a)anthracene$_A^{M\#}$	<0.04	-						mg/kg	0.04	A-T-019s
Benzo(a)pyrene$_A^{M\#}$	<0.04	-						mg/kg	0.04	A-T-019s
Benzo(b)fluoranthene$_A^{M\#}$	0.06	-						mg/kg	0.05	A-T-019s
Benzo(ghi)perylene$_A^{M\#}$	<0.05	-						mg/kg	0.05	A-T-019s
Benzo(k)fluoranthene$_A^{M\#}$	<0.07	-						mg/kg	0.07	A-T-019s
Chrysene$_A^{M\#}$	<0.06	-						mg/kg	0.06	A-T-019s
Dibenzo(ah)anthracene$_A^{M\#}$	<0.04	-						mg/kg	0.04	A-T-019s
Fluoranthene$_A^{M\#}$	0.13	-						mg/kg	0.08	A-T-019s
Fluorene$_A^{M\#}$	<0.01	-						mg/kg	0.01	A-T-019s
Indeno(123-cd)pyrene$_A^{M\#}$	<0.03	-						mg/kg	0.03	A-T-019s
Naphthalene $_A^{M\#}$	<0.03	-						mg/kg	0.03	A-T-019s
Phenanthrene$_A^{M\#}$	0.08	-						mg/kg	0.03	A-T-019s
Pyrene$_A^{M\#}$	0.11	-						mg/kg	0.07	A-T-019s
Total PAH-16MS$_A^{M\#}$	0.38	-						mg/kg	0.01	A-T-019s

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Depth To Bottom										
Date Sampled	10-Oct-24	10-Oct-24								
Sample Type	SOIL - ES	SOIL - ES								
Sample Matrix Code	6AE	4AE								
SVOC										
4-Bromophenyl phenyl ether$_A$	<100	-						µg/kg	100	A-T-052s
Hexachlorobenzene$_A$	<100	-						µg/kg	100	A-T-052s
Diethyl phthalate$_A$	<100	-						µg/kg	100	A-T-052s
Dimethyl phthalate$_A$	<100	-						µg/kg	100	A-T-052s
Dibenzofuran$_A$	<100	-						µg/kg	100	A-T-052s
Carbazole$_A$	<100	-						µg/kg	100	A-T-052s
Butylbenzyl phthalate$_A$	<100	-						µg/kg	100	A-T-052s
Bis(2-ethylhexyl)phthalate$_A$	<500	-						µg/kg	500	A-T-052s
Bis(2-chloroethoxy)methane$_A$	<100	-						µg/kg	100	A-T-052s
Bis(2-chloroethyl)ether$_A$	<100	-						µg/kg	100	A-T-052s
4-Nitrophenol$_A$	<100	-						µg/kg	100	A-T-052s
3+4-Methylphenol$_A$	<100	-						µg/kg	100	A-T-052s
4-Chloro-3-methylphenol$_A$	<100	-						µg/kg	100	A-T-052s
2-Nitrophenol$_A$	<100	-						µg/kg	100	A-T-052s
2-Methylphenol$_A$	<100	-						µg/kg	100	A-T-052s
1,2,4-Trichlorobenzene$_A$	<100	-						µg/kg	100	A-T-052s
2-Chlorophenol$_A$	<100	-						µg/kg	100	A-T-052s
2,6-Dinitrotoluene$_A$	<100	-						µg/kg	100	A-T-052s
2,4-Dinitrotoluene$_A$	<100	-						µg/kg	100	A-T-052s
2,4-Dimethylphenol$_A$	<100	-						µg/kg	100	A-T-052s
2,4-Dichlorophenol$_A$	<100	-						µg/kg	100	A-T-052s
2,4,6-Trichlorophenol$_A$	<100	-						µg/kg	100	A-T-052s
2,4,5-Trichlorophenol$_A$	<100	-						µg/kg	100	A-T-052s
1,4-Dichlorobenzene$_A$	<100	-						µg/kg	100	A-T-052s
1,3-Dichlorobenzene$_A$	<100	-						µg/kg	100	A-T-052s
1,2-Dichlorobenzene$_A$	<100	-						µg/kg	100	A-T-052s
2-Chloronaphthalene$_A$	<100	-						µg/kg	100	A-T-052s
2-Methylnaphthalene$_A$	<100	-						µg/kg	100	A-T-052s
Acenaphthylene$_A$	<100	-						µg/kg	100	A-T-052s
Acenaphthene$_A$	<100	-						µg/kg	100	A-T-052s
Anthracene$_A$	<100	-						µg/kg	100	A-T-052s
Benzo(a)anthracene$_A$	<100	-						µg/kg	100	A-T-052s

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Sample Matrix Code	6AE	4AE								
Benzo(b)fluoranthene$_A$	<100	-						µg/kg	100	A-T-052s
Benzo(k)fluoranthene$_A$	<100	-						µg/kg	100	A-T-052s
Benzo(a)pyrene$_A$	126	-						µg/kg	100	A-T-052s
Benzo(ghi)perylene$_A$	<100	-						µg/kg	100	A-T-052s
Chrysene$_A$	<100	-						µg/kg	100	A-T-052s
Fluoranthene$_A$	189	-						µg/kg	100	A-T-052s
Fluorene$_A$	<100	-						µg/kg	100	A-T-052s
Indeno(1,2,3-cd)pyrene$_A$	<100	-						µg/kg	100	A-T-052s
Phenanthrene$_A$	<100	-						µg/kg	100	A-T-052s
Pyrene$_A$	166	-						µg/kg	100	A-T-052s
Naphthalene$_A$	<100	-						µg/kg	100	A-T-052s
Dibenzo(ah)anthracene$_A$	<100	-						µg/kg	100	A-T-052s
Bis(2-chloroisopropyl)ether$_A$	<100	-						µg/kg	100	A-T-052s
Phenol$_A$	<100	-						µg/kg	100	A-T-052s
Pentachlorophenol$_A$	<100	-						µg/kg	100	A-T-052s
n-Nitroso-n-dipropylamine$_A$	<100	-						µg/kg	100	A-T-052s
n-Dioctylphthalate$_A$	<500	-						µg/kg	500	A-T-052s
n-Dibutylphthalate$_A$	<100	-						µg/kg	100	A-T-052s
Nitrobenzene$_A$	<100	-						µg/kg	100	A-T-052s
Isophorone$_A$	<100	-						µg/kg	100	A-T-052s
Hexachloroethane$_A$	<100	-						µg/kg	100	A-T-052s
Hexachlorobutadiene$_A$	<100	-						µg/kg	100	A-T-052s
Perylene$_A$	<100	-						µg/kg	100	A-T-052s

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Depth to Top	0.25	1.00								
Depth To Bottom										
Date Sampled	10-Oct-24	10-Oct-24								
Sample Type	SOIL - ES	SOIL - ES								
Sample Matrix Code	6AE	4AE								
VOC										
Dichlorodifluoromethane$_{A}$	<1	-						µg/kg	1	A-T-006s
Chloromethane$_{A}$	<10	-						µg/kg	10	A-T-006s
Vinyl Chloride (Chloroethene)$_{A}^{\#}$	<1	-						µg/kg	1	A-T-006s
Bromomethane$_{A}^{\#}$	<1^{U}	-						µg/kg	1	A-T-006s
Chloroethane$_{A}^{\#}$	<1	-						µg/kg	1	A-T-006s
Trichlorofluoromethane$_{A}^{\#}$	<1	-						µg/kg	1	A-T-006s
1,1-Dichloroethene$_{A}^{\#}$	<1	-						µg/kg	1	A-T-006s
Carbon Disulphide$_{A}^{\#}$	<1	-						µg/kg	1	A-T-006s
Dichloromethane$_{A}$	<5	-						µg/kg	5	A-T-006s
trans 1,2-Dichloroethene$_{A}^{\#}$	<1	-						µg/kg	1	A-T-006s
1,1-Dichloroethane$_{A}^{\#}$	<1	-						µg/kg	1	A-T-006s
cis 1,2-Dichloroethene$_{A}^{\#}$	<1	-						µg/kg	1	A-T-006s
2,2-Dichloropropane$_{A}^{\#}$	<1	-						µg/kg	1	A-T-006s
Bromochloromethane$_{A}^{\#}$	<5	-						µg/kg	5	A-T-006s
Chloroform$_{A}^{\#}$	<1	-						µg/kg	1	A-T-006s
1,1,1-Trichloroethane$_{A}^{\#}$	<1	-						µg/kg	1	A-T-006s
1,1-Dichloropropene$_{A}^{\#}$	<1	-						µg/kg	1	A-T-006s
Carbon Tetrachloride$_{A}^{\#}$	<1	-						µg/kg	1	A-T-006s
1,2-Dichloroethane$_{A}^{\#}$	<2	-						µg/kg	2	A-T-006s
Benzene$_{A}^{\#}$	<1	-						µg/kg	1	A-T-006s
Trichloroethene$_{A}^{\#}$	<1	-						µg/kg	1	A-T-006s
1,2-Dichloropropane$_{A}^{\#}$	<1	-						µg/kg	1	A-T-006s
Dibromomethane$_{A}^{\#}$	<1	-						µg/kg	1	A-T-006s
Bromodichloromethane$_{A}^{\#}$	<10	-						µg/kg	10	A-T-006s
cis 1,3-Dichloropropene$_{A}^{\#}$	<1	-						µg/kg	1	A-T-006s
Toluene$_{A}^{\#}$	<1	-						µg/kg	1	A-T-006s
trans 1,3-Dichloropropene$_{A}^{\#}$	<1	-						µg/kg	1	A-T-006s
1,1,2-Trichloroethane$_{A}^{\#}$	<1	-						µg/kg	1	A-T-006s
1,3-Dichloropropane$_{A}^{\#}$	<1	-						µg/kg	1	A-T-006s
Tetrachloroethene$_{A}^{\#}$	<1^{U}	-						µg/kg	1	A-T-006s
Dibromochloromethane$_{A}^{\#}$	<3	-						µg/kg	3	A-T-006s
1,2-Dibromoethane$_{A}^{\#}$	<1	-						µg/kg	1	A-T-006s

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Depth To Bottom										
Date Sampled	10-Oct-24	10-Oct-24								
Sample Type	SOIL - ES	SOIL - ES								
Sample Matrix Code	6AE	4AE								
Chlorobenzene$_{A}^{\#}$	<1	-						µg/kg	1	A-T-006s
1,1,1,2-Tetrachloroethane$_{A}$	<1	-						µg/kg	1	A-T-006s
Ethylbenzene$_{A}^{\#}$	<1	-						µg/kg	1	A-T-006s
m & p Xylene$_{A}^{\#}$	<1	-						µg/kg	1	A-T-006s
o-Xylene$_{A}^{\#}$	<1	-						µg/kg	1	A-T-006s
Styrene$_{A}^{\#}$	<1	-						µg/kg	1	A-T-006s
Bromoform$_{A}^{\#}$	<3	-						µg/kg	3	A-T-006s
Isopropylbenzene$_{A}^{\#}$	<1	-						µg/kg	1	A-T-006s
1,1,2,2-Tetrachloroethane$_{A}$	<1	-						µg/kg	1	A-T-006s
1,2,3-Trichloropropane$_{A}^{\#}$	<1	-						µg/kg	1	A-T-006s
Bromobenzene$_{A}^{\#}$	<1	-						µg/kg	1	A-T-006s
n-Propylbenzene$_{A}^{\#}$	<1	-						µg/kg	1	A-T-006s
2-Chlorotoluene$_{A}^{\#}$	<1	-						µg/kg	1	A-T-006s
1,3,5-Trimethylbenzene$_{A}^{\#}$	<1	-						µg/kg	1	A-T-006s
4-Chlorotoluene$_{A}^{\#}$	<1	-						µg/kg	1	A-T-006s
tert-Butylbenzene$_{A}^{\#}$	<2	-						µg/kg	2	A-T-006s
1,2,4-Trimethylbenzene$_{A}^{\#}$	<1	-						µg/kg	1	A-T-006s
sec-Butylbenzene$_{A}^{\#}$	<1	-						µg/kg	1	A-T-006s
4-Isopropyltoluene$_{A}^{\#}$	<1	-						µg/kg	1	A-T-006s
1,3-Dichlorobenzene$_{A}$	<1	-						µg/kg	1	A-T-006s
1,4-Dichlorobenzene$_{A}^{\#}$	<1^{U}	-						µg/kg	1	A-T-006s
n-Butylbenzene$_{A}^{\#}$	<1	-						µg/kg	1	A-T-006s
1,2-Dichlorobenzene$_{A}^{\#}$	<1	-						µg/kg	1	A-T-006s
1,2-Dibromo-3-chloropropane (DCBP)$_{A}$	<2	-						µg/kg	2	A-T-006s
1,2,4-Trichlorobenzene$_{A}$	<3	-						µg/kg	3	A-T-006s
Hexachlorobutadiene$_{A}^{\#}$	<1	-						µg/kg	1	A-T-006s
1,2,3-Trichlorobenzene$_{A}$	<3	-						µg/kg	3	A-T-006s

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Client Sample ID	BH009	BH009								
Depth to Top	0.25	1.00								
Depth To Bottom										
Date Sampled	10-Oct-24	10-Oct-24								
Sample Type	SOIL - ES	SOIL - ES								
Sample Matrix Code	6AE	4AE								
TPH CWG with Clean Up										
Ali >C5-C6$_A$	<0.01	-						mg/kg	0.01	A-T-022s
Ali >C6-C8$_A$	<0.01	-						mg/kg	0.01	A-T-022s
Ali >C8-C10$_A$	<1	-						mg/kg	1	A-T-055s
Ali >C10-C12$_A^{M\#}$	<1	-						mg/kg	1	A-T-055s
Ali >C12-C16$_A^{M\#}$	<1	-						mg/kg	1	A-T-055s
Ali >C16-C21$_A^{M\#}$	<1	-						mg/kg	1	A-T-055s
Ali >C21-C35$_A^{M\#}$	3	-						mg/kg	1	A-T-055s
Total Aliphatics$_A$	3	-						mg/kg	1	Calc-As Recd
Aro >C5-C7$_A^{\#}$	<0.01	-						mg/kg	0.01	A-T-022s
Aro >C7-C8$_A^{\#}$	<0.01	-						mg/kg	0.01	A-T-022s
Aro >C8-C10$_A$	<1	-						mg/kg	1	A-T-055s
Aro >C10-C12$_A$	<1	-						mg/kg	1	A-T-055s
Aro >C12-C16$_A$	<1	-						mg/kg	1	A-T-055s
Aro >C16-C21$_A^{M\#}$	<1	-						mg/kg	1	A-T-055s
Aro >C21-C35$_A^{M\#}$	3	-						mg/kg	1	A-T-055s
Total Aromatics$_A$	3	-						mg/kg	1	Calc-As Recd
TPH (Ali & Aro >C5-C35)$_A$	5	-						mg/kg	1	Calc-As Recd
BTEX - Benzene$_A^{\#}$	<0.01	-						mg/kg	0.01	A-T-022s
BTEX - Toluene$_A^{\#}$	<0.01	-						mg/kg	0.01	A-T-022s
BTEX - Ethyl Benzene$_A^{\#}$	<0.01	-						mg/kg	0.01	A-T-022s
BTEX - m & p Xylene$_A^{\#}$	<0.01	-						mg/kg	0.01	A-T-022s
BTEX - o Xylene$_A^{\#}$	<0.01	-						mg/kg	0.01	A-T-022s
MTBE$_A^{\#}$	<0.01	-						mg/kg	0.01	A-T-022s

Report Notes

General

•This report shall not be reproduced, except in full, without written approval from Envirolab.
•The client Sample No, Client Sample ID, Depth to top, Depth to Bottom and Date Sampled are all provided by the client and can affect the validity of results.
•The results reported herein relate only to the material supplied to the laboratory.
•The residue of any samples contained within this report, and any received within the same delivery, will be disposed of **four weeks** after the initial scheduling. For samples tested for Asbestos we will retain a portion of the dried sample for a minimum of **six months** after the initial Asbestos testing is completed.
•Analytical results reflect the quality of the sample at the time of analysis only.
•Opinions and Interpretations expressed are outside our scope of accreditation.
•A deviating sample report is appended and will indicate if samples or tests have been found to be deviating. Any test results affected may not be an accurate record of the concentration at the time of sampling and, as a result, may be invalid.
•If a sample is outside of the calibration range or affected by interferences then it may need diluting. This will result in the limit of detection (LOD) being raised.
•Subcontracted Analysis: Please see the appended report for any deviations, current LODs and accreditation status of the test.

Key

Superscript "#"	Accredited to ISO 17025
Superscript "M"	Accredited to MCertS
Superscript "U"	Individual result not accredited
None of the above symbols	Analysis unaccredited
Subscript "A"	Analysis performed on as-received Sample
Subscript "D"	Analysis performed on the dried sample, crushed to pass 2mm sieve.
Subscript "D" on Asbestos	Analysis performed on a dried aliquot of sample provided.
Subscript "^"	Analysis has dependant options against results. Details appear in the comments of your Sample receipt
IS	Insufficient Sample for analysis
US	Unsuitable Sample for analysis
NDP	No Determination Possible
NAD	No Asbestos Detected
Trace	Asbestos found not suitable for Gravimetric Quantification – not enough to accurately weigh.
N/A	Not applicable

Asbestos

Identification: Asbestos in soil analysis is performed on a dried aliquot of the submitted sample and cannot guarantee to identify asbestos if only present in small numbers as discrete fibres/fragments in the original sample.
Stones etc. are not removed from the sample prior to analysis
"Trace Asbestos Identified" will be reported if there is not enough present to verify the type.
Quantification: Generally a 2 stage process including visual identification, hand picking and weighing, and fibre counting. Where ACMs are found a percentage asbestos is assigned to each with reference to 'HSG264, Asbestos: The survey guide' and the calculated asbestos content is expressed as a percentage of the dried soil sample aliquot used. If asbestos is identified as being present but is not in a form that is suitable for analysis by hand picking and weighing (normally if the asbestos is present as free fibres). "TRACE" will be reported as a quantification result.
PLEASE INFORM THE LABORATORY IF YOU WOULD LIKE THE STAGE 3 SEDIMENTATION PROCESS CARRIED OUT. Note this will be subcontracted.

Assigned Matrix Codes

1	SAND	6	CLAY/LOAM	A	Contains Stones
2	LOAM	7	OTHER	B	Contains Construction Rubble
3	CLAY	8	Asbestos Bulk (Only Asbestos ID accredited)	C	Contains visible hydrocarbons
4	LOAM/SAND	9	Incinerator Ash (some Metals accredited)	D	Contains glass / metal
5	SAND/CLAY			E	Contains roots / twigs
Note: 7,8,9 matrices are not covered by our ISO 17025 or MCertS accreditation, unless stated above.					

Soil Chemical Analysis:
All results are reported as dry weight (<40°C).
For samples with Matrix Codes 1 - 6 natural stones, brick and concrete fragments >10mm and any extraneous material (visible glass, metal or twigs) are removed and excluded from the sample prior to analysis and reported results corrected to a whole sample basis. This is reported as '% stones >10mm'.
For samples with Matrix Code 7 the whole sample is dried and crushed prior to analysis and this supersedes any "A" subscripts
All analysis is performed on the sample as received for soil samples which are positive for asbestos or the client has informed asbestos may be present and/or if they are from outside the European Union and this supersedes any "D" subscripts.

TPH by method A-T-007:
For waters, free and visible oils are excluded from the sample used for analysis, so the reported result represents the dissolved phase only.
Results "with Clean up" indicates samples cleaned up with Silica during extraction.

EPH CWG (method A-T-055) from TPH CWG:
EPH CWG results have humics mathematically subtracted through instrument calculation.
Where these humic substances have been identified in any IDs from "TPH CWG with clean up" please note that the concentration is **NOT** included in the quantified results but present in the ID for information.

Electrical Conductivity of water by method A-T-037:
Results greater than 12900µS/cm @ 25^0C / 11550µS/cm @ 20^0C fall outside the calibration range and as such are unaccredited.

Please contact your client manager if you require any further information.

Envirolab Deviating Samples Report

Hattersley Science & Technology Park, Stockport Road, Hattersley, SK14 3QU
Tel. 0161 368 4921 email. ask@envlab.co.uk

Client: Central Alliance, Alliance House, South Park Way, South Park Way, Wakefield 41 Business Park, Wakefield, WF2 0XJ

Project: One Earth Solar Farm

Clients Project No: 2372986

Project No: 24/10378

Date Received: 25/10/2024 (am)

Cool Box Temperatures (°C): 11.7

Lab Sample ID	24/10378/1
Client Sample No	3
Client Sample ID/Depth	BH009 0.25m
Date Sampled	10/10/24
Deviation Code	
F	✓

Key
F *Maximum holding time exceeded between sampling date and analysis for analytes listed below*

HOLDING TIME EXCEEDANCES

Lab Sample ID	24/10378/1
Client Sample No	3
Client Sample ID/Depth	BH009 0.25m
Date Sampled	10/10/24
VPHCWG	✓
VOC	✓
SVOC	✓
PAH-16MS	✓
Cyanide (total)	✓

If, at any point before reaching the laboratory, the temperature of the samples has breached those set in published standards, e.g. BS-EN 5667-3, ISO 18400-102:2017, then the concentration of any affected analytes may differ from that at the time of sampling.

Envirolab Analysis Dates

Lab Sample ID	24/10378/1	24/10378/2
Client Sample No	3	6
Client Sample ID/Depth	BH009 0.25m	BH009 1.00m
Date Sampled	10/10/24	10/10/24
A-T-006s	30/10/2024	
A-T-019s	04/11/2024	
A-T-022s	29/10/2024	
A-T-024s	31/10/2024	31/10/2024
A-T-026s	30/10/2024	30/10/2024
A-T-027s	30/10/2024	30/10/2024
A-T-031s	30/10/2024	30/10/2024
A-T-032s	04/11/2024	04/11/2024
A-T-042sTCN	29/10/2024	
A-T-044	31/10/2024	31/10/2024
A-T-045	28/10/2024	
A-T-050s	31/10/2024	
A-T-052s	30/10/2024	
A-T-055s	29/10/2024	
Calc-As Recd	29/10/2024	

The above dates are the analysis completion dates, please note that these are not necessarily the date that the analysis was weighed/extracted.

End of Report

envirolab
Hattersley Science & Technology Park
Stockport Road, Hattersley, SK14 3QU

FINAL ANALYTICAL TEST REPORT

Envirolab Job Number: 24/10379
Issue Number: 1 **Date:** 07 November, 2024

Client:
Central Alliance
Alliance House
South Park Way
South Park Way
Wakefield 41 Business Park
Wakefield
WF2 0XJ

Project Manager: John Parkinson/Lab results
Project Name: One Earth Solar Farm
Project Ref: 2372986
Order No: N/A
Date Samples Received: 22/10/24
Date Instructions Received: 25/10/24
Date Analysis Completed: 07/11/24

Approved by:



Richard Wong
Client Manager

Envirolab Job Number: 24/10379

Client Project Name: One Earth Solar Farm

Client Project Ref: 2372986

Lab Sample ID	24/10379/1	24/10379/2	24/10379/8	24/10379/9				Units	Limit of Detection	Method ref
Client Sample No	101	102	2	5						
Client Sample ID	BH007	BH007	BH010	BH010						
Depth to Top	0.30	0.90	0.10	0.50						
Depth To Bottom										
Date Sampled	14-Oct-24	14-Oct-24	15-Oct-24	15-Oct-24						
Sample Type	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES						
Sample Matrix Code	6AE	6E	6AE	6E						
% Stones >10mm$_A$	<0.1	<0.1	<0.1	<0.1				% w/w	0.1	A-T-044
pH$_D^{M\#}$	7.52	-	7.71	-				pH	0.01	A-T-031s
Sulphate (water sol 2:1)$_D^{M\#}$	0.10	-	0.02	-				g/l	0.01	A-T-026s
Cyanide (total)$_A^{M\#}$	<1	<1	<1	<1				mg/kg	1	A-T-042sTCN
Phenol$_A$	<0.2	<0.2	<0.2	<0.2				mg/kg	0.2	A-T-050s
Organic Matter$_D^{M\#}$	4.5	-	5.7	-				% w/w	0.1	A-T-032s
Arsenic$_D^{M\#}$	6	-	8	-				mg/kg	1	A-T-024s
Boron (water soluble)$_D^{M\#}$	1.1	-	1.4	-				mg/kg	1	A-T-027s
Cadmium$_D^{M\#}$	2.5	-	2.5	-				mg/kg	0.5	A-T-024s
Copper$_D^{M\#}$	31	-	39	-				mg/kg	1	A-T-024s
Chromium$_D^{M\#}$	43	-	44	-				mg/kg	1	A-T-024s
Lead$_D^{M\#}$	244	-	229	-				mg/kg	1	A-T-024s
Mercury$_D$	<0.17	-	<0.17	-				mg/kg	0.17	A-T-024s
Nickel$_D^{M\#}$	42	-	38	-				mg/kg	1	A-T-024s
Zinc$_D^{M\#}$	236	-	266	-				mg/kg	5	A-T-024s

Envirolab Job Number: 24/10379

Client Project Name: One Earth Solar Farm

Client Project Ref: 2372986

Lab Sample ID	24/10379/1	24/10379/2	24/10379/8	24/10379/9				Units	Limit of Detection	Method ref
Client Sample No	101	102	2	5						
Client Sample ID	BH007	BH007	BH010	BH010						
Depth to Top	0.30	0.90	0.10	0.50						
Depth To Bottom										
Date Sampled	14-Oct-24	14-Oct-24	15-Oct-24	15-Oct-24						
Sample Type	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES						
Sample Matrix Code	6AE	6E	6AE	6E						
Asbestos in Soil (inc. matrix) ^										
Asbestos in soil$_{D}^{\#}$	NAD	NAD	NAD	NAD						A-T-045
Asbestos Matrix (visual)$_{D}$	-	-	-	-						A-T-045
Asbestos Matrix (microscope)$_{D}$	-	-	-	-						A-T-045
Asbestos ACM - Suitable for Water Absorption Test?$_{D}$	N/A	N/A	N/A	N/A						A-T-045

Envirolab Job Number: 24/10379

Client Project Name: One Earth Solar Farm

Client Project Ref: 2372986

Lab Sample ID	24/10379/1	24/10379/2	24/10379/8	24/10379/9				Units	Limit of Detection	Method ref
Client Sample No	101	102	2	5						
Client Sample ID	BH007	BH007	BH010	BH010						
Depth to Top	0.30	0.90	0.10	0.50						
Depth To Bottom										
Date Sampled	14-Oct-24	14-Oct-24	15-Oct-24	15-Oct-24						
Sample Type	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES						
Sample Matrix Code	6AE	6E	6AE	6E						
PAH-16MS										
Acenaphthene$_A^{M\#}$	<0.01	<0.01	<0.01	<0.01				mg/kg	0.01	A-T-019s
Acenaphthylene$_A^{M\#}$	<0.01	<0.01	<0.01	<0.01				mg/kg	0.01	A-T-019s
Anthracene$_A^{M\#}$	<0.02	<0.02	<0.02	<0.02				mg/kg	0.02	A-T-019s
Benzo(a)anthracene$_A^{M\#}$	<0.04	<0.04	<0.04	<0.04				mg/kg	0.04	A-T-019s
Benzo(a)pyrene$_A^{M\#}$	<0.04	<0.04	<0.04	<0.04				mg/kg	0.04	A-T-019s
Benzo(b)fluoranthene$_A^{M\#}$	<0.05	<0.05	<0.05	<0.05				mg/kg	0.05	A-T-019s
Benzo(ghi)perylene$_A^{M\#}$	<0.05	<0.05	<0.05	<0.05				mg/kg	0.05	A-T-019s
Benzo(k)fluoranthene$_A^{M\#}$	<0.07	<0.07	<0.07	<0.07				mg/kg	0.07	A-T-019s
Chrysene$_A^{M\#}$	<0.06	<0.06	<0.06	<0.06				mg/kg	0.06	A-T-019s
Dibenzo(ah)anthracene$_A^{M\#}$	<0.04	<0.04	<0.04	<0.04				mg/kg	0.04	A-T-019s
Fluoranthene$_A^{M\#}$	<0.08	<0.08	<0.08	<0.08				mg/kg	0.08	A-T-019s
Fluorene$_A^{M\#}$	<0.01	<0.01	<0.01	<0.01				mg/kg	0.01	A-T-019s
Indeno(123-cd)pyrene$_A^{M\#}$	<0.03	<0.03	<0.03	<0.03				mg/kg	0.03	A-T-019s
Naphthalene $_A^{M\#}$	<0.03	<0.03	<0.03	<0.03				mg/kg	0.03	A-T-019s
Phenanthrene$_A^{M\#}$	<0.03	<0.03	<0.03	<0.03				mg/kg	0.03	A-T-019s
Pyrene$_A^{M\#}$	<0.07	<0.07	<0.07	<0.07				mg/kg	0.07	A-T-019s
Total PAH-16MS$_A^{M\#}$	<0.08	<0.08	<0.08	<0.08				mg/kg	0.01	A-T-019s

Lab Sample ID	24/10379/1	24/10379/2	24/10379/8	24/10379/9				Units	Limit of Detection	Method ref
Client Sample No	101	102	2	5						
Client Sample ID	BH007	BH007	BH010	BH010						
Depth to Top	0.30	0.90	0.10	0.50						
Depth To Bottom										
Date Sampled	14-Oct-24	14-Oct-24	15-Oct-24	15-Oct-24						
Sample Type	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES						
Sample Matrix Code	6AE	6E	6AE	6E						
SVOC excluding PAH-16										
4-Bromophenyl phenyl ether$_A$	<100	<100	<100	<100				µg/kg	100	A-T-052s
Hexachlorobenzene$_A$	<100	<100	<100	<100				µg/kg	100	A-T-052s
Diethyl phthalate$_A$	<100	<100	<100	<100				µg/kg	100	A-T-052s
Dimethyl phthalate$_A$	<100	<100	<100	<100				µg/kg	100	A-T-052s
Dibenzofuran$_A$	<100	<100	<100	<100				µg/kg	100	A-T-052s
Carbazole$_A$	<100	<100	<100	<100				µg/kg	100	A-T-052s
Butylbenzyl phthalate$_A$	<100	<100	<100	<100				µg/kg	100	A-T-052s
Bis(2-ethylhexyl)phthalate$_A$	<500	<500	<500	<500				µg/kg	500	A-T-052s
Bis(2-chloroethoxy)methane$_A$	<100	<100	<100	<100				µg/kg	100	A-T-052s
Bis(2-chloroethyl)ether$_A$	<100	<100	<100	<100				µg/kg	100	A-T-052s
4-Nitrophenol$_A$	<100	<100	<100	<100				µg/kg	100	A-T-052s
3+4-Methylphenol$_A$	<100	<100	<100	<100				µg/kg	100	A-T-052s
4-Chloro-3-methylphenol$_A$	<100	<100	<100	<100				µg/kg	100	A-T-052s
2-Nitrophenol$_A$	<100	<100	<100	<100				µg/kg	100	A-T-052s
2-Methylphenol$_A$	<100	<100	<100	<100				µg/kg	100	A-T-052s
1,2,4-Trichlorobenzene$_A$	<100	<100	<100	<100				µg/kg	100	A-T-052s
2-Chlorophenol$_A$	<100	<100	<100	<100				µg/kg	100	A-T-052s
2,6-Dinitrotoluene$_A$	<100	<100	<100	<100				µg/kg	100	A-T-052s
2,4-Dinitrotoluene$_A$	<100	<100	<100	<100				µg/kg	100	A-T-052s
2,4-Dimethylphenol$_A$	<100	<100	<100	<100				µg/kg	100	A-T-052s
2,4-Dichlorophenol$_A$	<100	<100	<100	<100				µg/kg	100	A-T-052s
2,4,6-Trichlorophenol$_A$	<100	<100	<100	<100				µg/kg	100	A-T-052s
2,4,5-Trichlorophenol$_A$	<100	<100	<100	<100				µg/kg	100	A-T-052s
1,4-Dichlorobenzene$_A$	<100	<100	<100	<100				µg/kg	100	A-T-052s
1,3-Dichlorobenzene$_A$	<100	<100	<100	<100				µg/kg	100	A-T-052s
1,2-Dichlorobenzene$_A$	<100	<100	<100	<100				µg/kg	100	A-T-052s
2-Chloronaphthalene$_A$	<100	<100	<100	<100				µg/kg	100	A-T-052s
2-Methylnaphthalene$_A$	<100	<100	<100	<100				µg/kg	100	A-T-052s
Bis(2-chloroisopropyl)ether$_A$	<100	<100	<100	<100				µg/kg	100	A-T-052s
Phenol$_A$	<100	<100	<100	<100				µg/kg	100	A-T-052s
Pentachlorophenol$_A$	<100	<100	<100	<100				µg/kg	100	A-T-052s
n-Nitroso-n-dipropylamine$_A$	<100	<100	<100	<100				µg/kg	100	A-T-052s

Envirolab Job Number: 24/10379

Client Project Name: One Earth Solar Farm

Client Project Ref: 2372986

Lab Sample ID	24/10379/1	24/10379/2	24/10379/8	24/10379/9				Units	Limit of Detection	Method ref
Client Sample No	101	102	2	5						
Client Sample ID	BH007	BH007	BH010	BH010						
Depth to Top	0.30	0.90	0.10	0.50						
Depth To Bottom										
Date Sampled	14-Oct-24	14-Oct-24	15-Oct-24	15-Oct-24						
Sample Type	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES						
Sample Matrix Code	6AE	6E	6AE	6E						
n-Dioctylphthalate$_A$	<500	<500	<500	<500				µg/kg	500	A-T-052s
n-Dibutylphthalate$_A$	<300	<100	<100	<100				µg/kg	100	A-T-052s
Nitrobenzene$_A$	<100	<100	<100	<100				µg/kg	100	A-T-052s
Isophorone$_A$	<100	<100	<100	<100				µg/kg	100	A-T-052s
Hexachloroethane$_A$	<100	<100	<100	<100				µg/kg	100	A-T-052s
Hexachlorobutadiene$_A$	<100	<100	<100	<100				µg/kg	100	A-T-052s
Perylene$_A$	<100	<100	<100	<100				µg/kg	100	A-T-052s

Envirolab Job Number: 24/10379

Client Project Name: One Earth Solar Farm

Client Project Ref: 2372986

Lab Sample ID	24/10379/1	24/10379/2	24/10379/8	24/10379/9				Units	Limit of Detection	Method ref
Client Sample No	101	102	2	5						
Client Sample ID	BH007	BH007	BH010	BH010						
Depth to Top	0.30	0.90	0.10	0.50						
Depth To Bottom										
Date Sampled	14-Oct-24	14-Oct-24	15-Oct-24	15-Oct-24						
Sample Type	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES						
Sample Matrix Code	6AE	6E	6AE	6E						
VOC										
Dichlorodifluoromethane$_{A}$	<25	<25	<1	<1				µg/kg	1	A-T-006s
Chloromethane$_{A}$	<250	<250	<10	<10				µg/kg	10	A-T-006s
Vinyl Chloride (Chloroethene)$_{A}^{\#}$	<25	<25	<1	<1				µg/kg	1	A-T-006s
Bromomethane$_{A}^{\#}$	<25	<25	<1	<1				µg/kg	1	A-T-006s
Chloroethane$_{A}^{\#}$	<25	<25	<1	<1				µg/kg	1	A-T-006s
Trichlorofluoromethane$_{A}^{\#}$	<25	<25	<1	<1				µg/kg	1	A-T-006s
1,1-Dichloroethene$_{A}^{\#}$	<25	<25	<1	<1				µg/kg	1	A-T-006s
Carbon Disulphide$_{A}^{\#}$	<25	<25	<1	<1				µg/kg	1	A-T-006s
Dichloromethane$_{A}$	<125	<125	<5	<5				µg/kg	5	A-T-006s
trans 1,2-Dichloroethene$_{A}^{\#}$	<25	<25	<1	<1				µg/kg	1	A-T-006s
1,1-Dichloroethane$_{A}^{\#}$	<25	<25	<1	<1				µg/kg	1	A-T-006s
cis 1,2-Dichloroethene$_{A}^{\#}$	<25	<25	<1	<1				µg/kg	1	A-T-006s
2,2-Dichloropropane$_{A}^{\#}$	<25	<25	<1	<1				µg/kg	1	A-T-006s
Bromochloromethane$_{A}^{\#}$	<125	<125	<5	<5				µg/kg	5	A-T-006s
Chloroform$_{A}^{\#}$	<25	<25	<1	<1				µg/kg	1	A-T-006s
1,1,1-Trichloroethane$_{A}^{\#}$	<25	<25	<1	<1				µg/kg	1	A-T-006s
1,1-Dichloropropene$_{A}^{\#}$	<25	<25	<1	<1				µg/kg	1	A-T-006s
Carbon Tetrachloride$_{A}^{\#}$	<25	<25	<1	<1				µg/kg	1	A-T-006s
1,2-Dichloroethane$_{A}^{\#}$	<50	<50	<2	<2				µg/kg	2	A-T-006s
Benzene$_{A}^{\#}$	<25	<25	<1	<1				µg/kg	1	A-T-006s
Trichloroethene$_{A}^{\#}$	<25	<25	<1	<1				µg/kg	1	A-T-006s
1,2-Dichloropropane$_{A}^{\#}$	<25	<25	<1	<1				µg/kg	1	A-T-006s
Dibromomethane$_{A}^{\#}$	<25	<25	<1	<1				µg/kg	1	A-T-006s
Bromodichloromethane$_{A}^{\#}$	<250	<250	<10	<10				µg/kg	10	A-T-006s
cis 1,3-Dichloropropene$_{A}^{\#}$	<25	<25	<1	<1				µg/kg	1	A-T-006s
Toluene$_{A}^{\#}$	<25	<25	<1	<1				µg/kg	1	A-T-006s
trans 1,3-Dichloropropene$_{A}^{\#}$	<25	<25	<1	<1				µg/kg	1	A-T-006s
1,1,2-Trichloroethane$_{A}^{\#}$	<25	<25	<1	<1				µg/kg	1	A-T-006s
1,3-Dichloropropane$_{A}^{\#}$	<25	<25	<1	<1				µg/kg	1	A-T-006s
Tetrachloroethene$_{A}^{\#}$	<25^{U}	<25^{U}	<1	<1				µg/kg	1	A-T-006s
Dibromochloromethane$_{A}^{\#}$	<75	<75	<3	<3				µg/kg	3	A-T-006s
1,2-Dibromoethane$_{A}^{\#}$	<25	<25	<1	<1				µg/kg	1	A-T-006s

Envirolab Job Number: 24/10379

Client Project Name: One Earth Solar Farm

Client Project Ref: 2372986

Lab Sample ID	24/10379/1	24/10379/2	24/10379/8	24/10379/9				Units	Limit of Detection	Method ref
Client Sample No	101	102	2	5						
Client Sample ID	BH007	BH007	BH010	BH010						
Depth to Top	0.30	0.90	0.10	0.50						
Depth To Bottom										
Date Sampled	14-Oct-24	14-Oct-24	15-Oct-24	15-Oct-24						
Sample Type	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES						
Sample Matrix Code	6AE	6E	6AE	6E						
Chlorobenzene$_{A}^{\#}$	<25	<25	<1	<1				µg/kg	1	A-T-006s
1,1,1,2-Tetrachloroethane$_{A}$	<25	<25	<1	<1				µg/kg	1	A-T-006s
Ethylbenzene$_{A}^{\#}$	<25	<25	<1	<1				µg/kg	1	A-T-006s
m & p Xylene$_{A}^{\#}$	<25	<25	<1	<1				µg/kg	1	A-T-006s
o-Xylene$_{A}^{\#}$	<25	<25	<1	<1				µg/kg	1	A-T-006s
Styrene$_{A}^{\#}$	<25	<25	<1	<1				µg/kg	1	A-T-006s
Bromoform$_{A}^{\#}$	<75	<75	<3	<3				µg/kg	3	A-T-006s
Isopropylbenzene$_{A}^{\#}$	<25	<25	<1	<1				µg/kg	1	A-T-006s
1,1,2,2-Tetrachloroethane$_{A}$	<25	<25	<1	<1				µg/kg	1	A-T-006s
1,2,3-Trichloropropane$_{A}^{\#}$	<25	<25	<1	<1				µg/kg	1	A-T-006s
Bromobenzene$_{A}^{\#}$	<25^{U}	<25^{U}	<1	<1				µg/kg	1	A-T-006s
n-Propylbenzene$_{A}^{\#}$	<25	<25	<1	<1				µg/kg	1	A-T-006s
2-Chlorotoluene$_{A}^{\#}$	<25	<25	<1	<1				µg/kg	1	A-T-006s
1,3,5-Trimethylbenzene$_{A}^{\#}$	<25	<25	<1	<1				µg/kg	1	A-T-006s
4-Chlorotoluene$_{A}^{\#}$	<25	<25	<1	<1				µg/kg	1	A-T-006s
tert-Butylbenzene$_{A}^{\#}$	<50	<50	<2	<2				µg/kg	2	A-T-006s
1,2,4-Trimethylbenzene$_{A}^{\#}$	<25	<25	<1	<1				µg/kg	1	A-T-006s
sec-Butylbenzene$_{A}^{\#}$	<25	<25	<1	<1				µg/kg	1	A-T-006s
4-Isopropyltoluene$_{A}^{\#}$	<25	<25	<1	<1				µg/kg	1	A-T-006s
1,3-Dichlorobenzene$_{A}$	<25	<25	<1	<1				µg/kg	1	A-T-006s
1,4-Dichlorobenzene$_{A}^{\#}$	<25^{U}	<25^{U}	<1	<1				µg/kg	1	A-T-006s
n-Butylbenzene$_{A}^{\#}$	<25	<25	<1	<1				µg/kg	1	A-T-006s
1,2-Dichlorobenzene$_{A}^{\#}$	<25	<25	<1	<1				µg/kg	1	A-T-006s
1,2-Dibromo-3-chloropropane (DCBP)$_{A}$	<50	<50	<2	<2				µg/kg	2	A-T-006s
1,2,4-Trichlorobenzene$_{A}$	<75	<75	<3	<3				µg/kg	3	A-T-006s
Hexachlorobutadiene$_{A}^{\#}$	<25^{U}	<25^{U}	<1	<1				µg/kg	1	A-T-006s
1,2,3-Trichlorobenzene$_{A}$	<75	<75	<3	<3				µg/kg	3	A-T-006s

Envirolab Job Number: 24/10379

Client Project Name: One Earth Solar Farm

Client Project Ref: 2372986

Lab Sample ID	24/10379/1	24/10379/2	24/10379/8	24/10379/9				Units	Limit of Detection	Method ref
Client Sample No	101	102	2	5						
Client Sample ID	BH007	BH007	BH010	BH010						
Depth to Top	0.30	0.90	0.10	0.50						
Depth To Bottom										
Date Sampled	14-Oct-24	14-Oct-24	15-Oct-24	15-Oct-24						
Sample Type	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES						
Sample Matrix Code	6AE	6E	6AE	6E						
TPH CWG with Clean Up										
Ali >C5-C6$_A$	<0.01	<0.01	<0.01	<0.01				mg/kg	0.01	A-T-022s
Ali >C6-C8$_A$	<0.01	<0.01	<0.01	<0.01				mg/kg	0.01	A-T-022s
Ali >C8-C10$_A$	<1	<1	<1	<1				mg/kg	1	A-T-055s
Ali >C10-C12$_A^{M\#}$	<1	<1	<1	<1				mg/kg	1	A-T-055s
Ali >C12-C16$_A^{M\#}$	<1	<1	<1	<1				mg/kg	1	A-T-055s
Ali >C16-C21$_A^{M\#}$	<1	<1	<1	<1				mg/kg	1	A-T-055s
Ali >C21-C35$_A^{M\#}$	1	7	5	1				mg/kg	1	A-T-055s
Total Aliphatics$_A$	1	7	5	1				mg/kg	1	Calc-As Recd
Aro >C5-C7$_A^{\#}$	<0.01	<0.01	<0.01	<0.01				mg/kg	0.01	A-T-022s
Aro >C7-C8$_A^{\#}$	<0.01	<0.01	<0.01	<0.01				mg/kg	0.01	A-T-022s
Aro >C8-C10$_A$	<1	<1	<1	<1				mg/kg	1	A-T-055s
Aro >C10-C12$_A$	<1	<1	<1	<1				mg/kg	1	A-T-055s
Aro >C12-C16$_A$	<1	<1	<1	<1				mg/kg	1	A-T-055s
Aro >C16-C21$_A^{M\#}$	<1	<1	<1	<1				mg/kg	1	A-T-055s
Aro >C21-C35$_A^{M\#}$	<1	1	3	<1				mg/kg	1	A-T-055s
Total Aromatics$_A$	<1	1	3	<1				mg/kg	1	Calc-As Recd
TPH (Ali & Aro >C5-C35)$_A$	1	8	8	1				mg/kg	1	Calc-As Recd
BTEX - Benzene$_A^{\#}$	<0.01	<0.01	<0.01	<0.01				mg/kg	0.01	A-T-022s
BTEX - Toluene$_A^{\#}$	<0.01	<0.01	<0.01	<0.01				mg/kg	0.01	A-T-022s
BTEX - Ethyl Benzene$_A^{\#}$	<0.01	<0.01	<0.01	<0.01				mg/kg	0.01	A-T-022s
BTEX - m & p Xylene$_A^{\#}$	<0.01	<0.01	<0.01	<0.01				mg/kg	0.01	A-T-022s
BTEX - o Xylene$_A^{\#}$	<0.01	<0.01	<0.01	<0.01				mg/kg	0.01	A-T-022s
MTBE$_A^{\#}$	<0.01	<0.01	<0.01	<0.01				mg/kg	0.01	A-T-022s

Report Notes

General

•This report shall not be reproduced, except in full, without written approval from Envirolab.
•The client Sample No, Client Sample ID, Depth to top, Depth to Bottom and Date Sampled are all provided by the client and can affect the validity of results.
•The results reported herein relate only to the material supplied to the laboratory.
•The residue of any samples contained within this report, and any received within the same delivery, will be disposed of **four weeks** after the initial scheduling. For samples tested for Asbestos we will retain a portion of the dried sample for a minimum of **six months** after the initial Asbestos testing is completed.
•Analytical results reflect the quality of the sample at the time of analysis only.
•Opinions and Interpretations expressed are outside our scope of accreditation.
•A deviating sample report is appended and will indicate if samples or tests have been found to be deviating. Any test results affected may not be an accurate record of the concentration at the time of sampling and, as a result, may be invalid.
•If a sample is outside of the calibration range or affected by interferences then it may need diluting. This will result in the limit of detection (LOD) being raised.
•Subcontracted Analysis: Please see the appended report for any deviations, current LODs and accreditation status of the test.

Key

Superscript "#"	Accredited to ISO 17025
Superscript "M"	Accredited to MCertS
Superscript "U"	Individual result not accredited
None of the above symbols	Analysis unaccredited
Subscript "A"	Analysis performed on as-received Sample
Subscript "D"	Analysis performed on the dried sample, crushed to pass 2mm sieve.
Subscript "D" on Asbestos	Analysis performed on a dried aliquot of sample provided.
Subscript "^"	Analysis has dependant options against results. Details appear in the comments of your Sample receipt
IS	Insufficient Sample for analysis
US	Unsuitable Sample for analysis
NDP	No Determination Possible
NAD	No Asbestos Detected
Trace	Asbestos found not suitable for Gravimetric Quantification – not enough to accurately weigh.
N/A	Not applicable

Asbestos

Identification: Asbestos in soil analysis is performed on a dried aliquot of the submitted sample and cannot guarantee to identify asbestos if only present in small numbers as discrete fibres/fragments in the original sample.
Stones etc. are not removed from the sample prior to analysis
"Trace Asbestos Identified" will be reported if there is not enough present to verify the type.
Quantification: Generally a 2 stage process including visual identification, hand picking and weighing, and fibre counting. Where ACMs are found a percentage asbestos is assigned to each with reference to 'HSG264, Asbestos: The survey guide' and the calculated asbestos content is expressed as a percentage of the dried soil sample aliquot used. If asbestos is identified as being present but is not in a form that is suitable for analysis by hand picking and weighing (normally if the asbestos is present as free fibres). "TRACE" will be reported as a quantification result.
PLEASE INFORM THE LABORATORY IF YOU WOULD LIKE THE STAGE 3 SEDIMENTATION PROCESS CARRIED OUT. Note this will be subcontracted.

Assigned Matrix Codes

1	SAND	6	CLAY/LOAM	A	Contains Stones
2	LOAM	7	OTHER	B	Contains Construction Rubble
3	CLAY	8	Asbestos Bulk (Only Asbestos ID accredited)	C	Contains visible hydrocarbons
4	LOAM/SAND	9	Incinerator Ash (some Metals accredited)	D	Contains glass / metal
5	SAND/CLAY			E	Contains roots / twigs
Note: 7,8,9 matrices are not covered by our ISO 17025 or MCertS accreditation, unless stated above.					

Soil Chemical Analysis:
All results are reported as dry weight (<40°C).
For samples with Matrix Codes 1 - 6 natural stones, brick and concrete fragments >10mm and any extraneous material (visible glass, metal or twigs) are removed and excluded from the sample prior to analysis and reported results corrected to a whole sample basis. This is reported as '% stones >10mm'.
For samples with Matrix Code 7 the whole sample is dried and crushed prior to analysis and this supersedes any "A" subscripts
All analysis is performed on the sample as received for soil samples which are positive for asbestos or the client has informed asbestos may be present and/or if they are from outside the European Union and this supersedes any "D" subscripts.

TPH by method A-T-007:
For waters, free and visible oils are excluded from the sample used for analysis, so the reported result represents the dissolved phase only.
Results "with Clean up" indicates samples cleaned up with Silica during extraction.

EPH CWG (method A-T-055) from TPH CWG:
EPH CWG results have humics mathematically subtracted through instrument calculation.
Where these humic substances have been identified in any IDs from "TPH CWG with clean up" please note that the concentration is **NOT** included in the quantified results but present in the ID for information.

Electrical Conductivity of water by method A-T-037:
Results greater than 12900µS/cm @ 25^0C / 11550µS/cm @ 20^0C fall outside the calibration range and as such are unaccredited.

Please contact your client manager if you require any further information.

Envirolab Deviating Samples Report

Hattersley Science & Technology Park, Stockport Road, Hattersley, SK14 3QU
Tel. 0161 368 4921 email. ask@envlab.co.uk

Client: Central Alliance, Alliance House, South Park Way, South Park Way, Wakefield 41 Business Park, Wakefield, WF2 0XJ

Project: One Earth Solar Farm

Clients Project No: 2372986

Project No: 24/10379

Date Received: 25/10/2024 (am)

Cool Box Temperatures (°C): 14.3, 14.6

Lab Sample ID	24/10379/1	24/10379/2
Client Sample No	101	102
Client Sample ID/Depth	BH007 0.30m	BH007 0.90m
Date Sampled	14/10/24	14/10/24
Deviation Code		
F	✓	✓

Key
F *Maximum holding time exceeded between sampling date and analysis for analytes listed below*

HOLDING TIME EXCEEDANCES

Lab Sample ID	24/10379/1	24/10379/2
Client Sample No	101	102
Client Sample ID/Depth	BH007 0.30m	BH007 0.90m
Date Sampled	14/10/24	14/10/24
VOC	✓	✓
SVOC excluding PAH-16	✓	

If, at any point before reaching the laboratory, the temperature of the samples has breached those set in published standards, e.g. BS-EN 5667-3, ISO 18400-102:2017, then the concentration of any affected analytes may differ from that at the time of sampling.

Envirolab Analysis Dates

Lab Sample ID	24/10379/1	24/10379/2	24/10379/8	24/10379/9
Client Sample No	101	102	2	5
Client Sample ID/Depth	BH007 0.30m	BH007 0.90m	BH010 0.10m	BH010 0.50m
Date Sampled	14/10/24	14/10/24	15/10/24	15/10/24
A-T-006s	30/10/2024	30/10/2024	29/10/2024	29/10/2024
A-T-019s	30/10/2024	30/10/2024	30/10/2024	30/10/2024
A-T-022s	29/10/2024	29/10/2024	29/10/2024	29/10/2024
A-T-024s	31/10/2024		01/11/2024	
A-T-026s	30/10/2024		30/10/2024	
A-T-027s	30/10/2024		30/10/2024	
A-T-031s	30/10/2024		30/10/2024	
A-T-032s	04/11/2024		04/11/2024	
A-T-042sTCN	29/10/2024	29/10/2024	29/10/2024	29/10/2024
A-T-044	30/10/2024	30/10/2024	30/10/2024	30/10/2024
A-T-045	28/10/2024	28/10/2024	28/10/2024	28/10/2024
A-T-050s	31/10/2024	31/10/2024	31/10/2024	31/10/2024
A-T-052s	07/11/2024	30/10/2024	30/10/2024	30/10/2024
A-T-055s	29/10/2024	29/10/2024	29/10/2024	29/10/2024
Calc-As Recd	29/10/2024	29/10/2024	29/10/2024	29/10/2024

The above dates are the analysis completion dates, please note that these are not necessarily the date that the analysis was weighed/extracted.

End of Report

envirolab
Hattersley Science & Technology Park
Stockport Road, Hattersley, SK14 3QU

FINAL ANALYTICAL TEST REPORT

Envirolab Job Number: 24/10380
Issue Number: 1 **Date:** 04 November, 2024

Client:
Central Alliance
Alliance House
South Park Way
South Park Way
Wakefield 41 Business Park
Wakefield
WF2 0XJ

Project Manager: John Parkinson/Lab results
Project Name: One Earth Solar Farm
Project Ref: 2372986
Order No: N/A
Date Samples Received: 22/10/24
Date Instructions Received: 25/10/24
Date Analysis Completed: 04/11/24

Approved by:

[redacted]

Richard Wong
Client Manager

Envirolab Job Number: 24/10380

Client Project Name: One Earth Solar Farm

Client Project Ref: 2372986

Lab Sample ID	24/10380/1	24/10380/2						Units	Limit of Detection	Method ref
Client Sample No	1	5								
Client Sample ID	BH006	BH006								
Depth to Top	0.30	0.80								
Depth To Bottom										
Date Sampled	10-Oct-24	10-Oct-24								
Sample Type	SOIL - ES	SOIL - ES								
Sample Matrix Code	6AE	4AE								
% Stones >10mm$_A$	<0.1	<0.1						% w/w	0.1	A-T-044
pH$_D^{M\#}$	6.89	-						pH	0.01	A-T-031s
Sulphate (water sol 2:1)$_D^{M\#}$	0.02	-						g/l	0.01	A-T-026s
Cyanide (total)$_A^{M\#}$	<1	<1						mg/kg	1	A-T-042sTCN
Phenol$_A$	<0.2	<0.2						mg/kg	0.2	A-T-050s
Organic Matter$_D^{M\#}$	2.1	-						% w/w	0.1	A-T-032s
Arsenic$_D^{M\#}$	4	-						mg/kg	1	A-T-024s
Boron (water soluble)$_D^{M\#}$	<1.0	-						mg/kg	1	A-T-027s
Cadmium$_D^{M\#}$	1.4	-						mg/kg	0.5	A-T-024s
Copper$_D^{M\#}$	18	-						mg/kg	1	A-T-024s
Chromium$_D^{M\#}$	34	-						mg/kg	1	A-T-024s
Lead$_D^{M\#}$	115	-						mg/kg	1	A-T-024s
Mercury$_D$	<0.17	-						mg/kg	0.17	A-T-024s
Nickel$_D^{M\#}$	29	-						mg/kg	1	A-T-024s
Zinc$_D^{M\#}$	145	-						mg/kg	5	A-T-024s

Envirolab Job Number: 24/10380

Client Project Name: One Earth Solar Farm

Client Project Ref: 2372986

Lab Sample ID	24/10380/1	24/10380/2						Units	Limit of Detection	Method ref
Client Sample No	1	5								
Client Sample ID	BH006	BH006								
Depth to Top	0.30	0.80								
Depth To Bottom										
Date Sampled	10-Oct-24	10-Oct-24								
Sample Type	SOIL - ES	SOIL - ES								
Sample Matrix Code	6AE	4AE								
Asbestos in Soil (inc. matrix) ^										
Asbestos in soil$_{D}^{\#}$	NAD	NAD								A-T-045
Asbestos Matrix (visual)$_{D}$	-	-								A-T-045
Asbestos Matrix (microscope)$_{D}$	-	-								A-T-045
Asbestos ACM - Suitable for Water Absorption Test?$_{D}$	N/A	N/A								A-T-045

Envirolab Job Number: 24/10380

Client Project Name: One Earth Solar Farm

Client Project Ref: 2372986

Lab Sample ID	24/10380/1	24/10380/2						Units	Limit of Detection	Method ref
Client Sample No	1	5								
Client Sample ID	BH006	BH006								
Depth to Top	0.30	0.80								
Depth To Bottom										
Date Sampled	10-Oct-24	10-Oct-24								
Sample Type	SOIL - ES	SOIL - ES								
Sample Matrix Code	6AE	4AE								
PAH-16MS										
Acenaphthene$_A^{M\#}$	<0.01	<0.01						mg/kg	0.01	A-T-019s
Acenaphthylene$_A^{M\#}$	<0.01	<0.01						mg/kg	0.01	A-T-019s
Anthracene$_A^{M\#}$	<0.02	<0.02						mg/kg	0.02	A-T-019s
Benzo(a)anthracene$_A^{M\#}$	<0.04	<0.04						mg/kg	0.04	A-T-019s
Benzo(a)pyrene$_A^{M\#}$	<0.04	<0.04						mg/kg	0.04	A-T-019s
Benzo(b)fluoranthene$_A^{M\#}$	<0.05	<0.05						mg/kg	0.05	A-T-019s
Benzo(ghi)perylene$_A^{M\#}$	<0.05	<0.05						mg/kg	0.05	A-T-019s
Benzo(k)fluoranthene$_A^{M\#}$	<0.07	<0.07						mg/kg	0.07	A-T-019s
Chrysene$_A^{M\#}$	<0.06	<0.06						mg/kg	0.06	A-T-019s
Dibenzo(ah)anthracene$_A^{M\#}$	<0.04	<0.04						mg/kg	0.04	A-T-019s
Fluoranthene$_A^{M\#}$	<0.08	<0.08						mg/kg	0.08	A-T-019s
Fluorene$_A^{M\#}$	<0.01	<0.01						mg/kg	0.01	A-T-019s
Indeno(123-cd)pyrene$_A^{M\#}$	<0.03	<0.03						mg/kg	0.03	A-T-019s
Naphthalene $_A^{M\#}$	<0.03	<0.03						mg/kg	0.03	A-T-019s
Phenanthrene$_A^{M\#}$	<0.03	<0.03						mg/kg	0.03	A-T-019s
Pyrene$_A^{M\#}$	<0.07	<0.07						mg/kg	0.07	A-T-019s
Total PAH-16MS$_A^{M\#}$	<0.08	<0.08						mg/kg	0.01	A-T-019s

Envirolab Job Number: 24/10380

Client Project Name: One Earth Solar Farm

Client Project Ref: 2372986

Lab Sample ID	24/10380/1	24/10380/2						Units	Limit of Detection	Method ref
Client Sample No	1	5								
Client Sample ID	BH006	BH006								
Depth to Top	0.30	0.80								
Depth To Bottom										
Date Sampled	10-Oct-24	10-Oct-24								
Sample Type	SOIL - ES	SOIL - ES								
Sample Matrix Code	6AE	4AE								
SVOC excluding PAH-16										
4-Bromophenyl phenyl ether$_A$	<100	<100						µg/kg	100	A-T-052s
Hexachlorobenzene$_A$	<100	<100						µg/kg	100	A-T-052s
Diethyl phthalate$_A$	<100	<100						µg/kg	100	A-T-052s
Dimethyl phthalate$_A$	<100	<100						µg/kg	100	A-T-052s
Dibenzofuran$_A$	<100	<100						µg/kg	100	A-T-052s
Carbazole$_A$	<100	<100						µg/kg	100	A-T-052s
Butylbenzyl phthalate$_A$	<100	<100						µg/kg	100	A-T-052s
Bis(2-ethylhexyl)phthalate$_A$	<500	<500						µg/kg	500	A-T-052s
Bis(2-chloroethoxy)methane$_A$	<100	<100						µg/kg	100	A-T-052s
Bis(2-chloroethyl)ether$_A$	<100	<100						µg/kg	100	A-T-052s
4-Nitrophenol$_A$	<100	<100						µg/kg	100	A-T-052s
3+4-Methylphenol$_A$	<100	<100						µg/kg	100	A-T-052s
4-Chloro-3-methylphenol$_A$	<100	<100						µg/kg	100	A-T-052s
2-Nitrophenol$_A$	<100	<100						µg/kg	100	A-T-052s
2-Methylphenol$_A$	<100	<100						µg/kg	100	A-T-052s
1,2,4-Trichlorobenzene$_A$	<100	<100						µg/kg	100	A-T-052s
2-Chlorophenol$_A$	<100	<100						µg/kg	100	A-T-052s
2,6-Dinitrotoluene$_A$	<100	<100						µg/kg	100	A-T-052s
2,4-Dinitrotoluene$_A$	<100	<100						µg/kg	100	A-T-052s
2,4-Dimethylphenol$_A$	<100	<100						µg/kg	100	A-T-052s
2,4-Dichlorophenol$_A$	<100	<100						µg/kg	100	A-T-052s
2,4,6-Trichlorophenol$_A$	<100	<100						µg/kg	100	A-T-052s
2,4,5-Trichlorophenol$_A$	<100	<100						µg/kg	100	A-T-052s
1,4-Dichlorobenzene$_A$	<100	<100						µg/kg	100	A-T-052s
1,3-Dichlorobenzene$_A$	<100	<100						µg/kg	100	A-T-052s
1,2-Dichlorobenzene$_A$	<100	<100						µg/kg	100	A-T-052s
2-Chloronaphthalene$_A$	<100	<100						µg/kg	100	A-T-052s
2-Methylnaphthalene$_A$	<100	<100						µg/kg	100	A-T-052s
Bis(2-chloroisopropyl)ether$_A$	<100	<100						µg/kg	100	A-T-052s
Phenol$_A$	<100	<100						µg/kg	100	A-T-052s
Pentachlorophenol$_A$	<100	<100						µg/kg	100	A-T-052s
n-Nitroso-n-dipropylamine$_A$	<100	<100						µg/kg	100	A-T-052s

Envirolab Job Number: 24/10380

Client Project Name: One Earth Solar Farm

Client Project Ref: 2372986

Lab Sample ID	24/10380/1	24/10380/2						Units	Limit of Detection	Method ref
Client Sample No	1	5								
Client Sample ID	BH006	BH006								
Depth to Top	0.30	0.80								
Depth To Bottom										
Date Sampled	10-Oct-24	10-Oct-24								
Sample Type	SOIL - ES	SOIL - ES								
Sample Matrix Code	6AE	4AE								
n-Dioctylphthalate$_A$	<500	<500						µg/kg	500	A-T-052s
n-Dibutylphthalate$_A$	<100	<100						µg/kg	100	A-T-052s
Nitrobenzene$_A$	<100	<100						µg/kg	100	A-T-052s
Isophorone$_A$	<100	<100						µg/kg	100	A-T-052s
Hexachloroethane$_A$	<100	<100						µg/kg	100	A-T-052s
Hexachlorobutadiene$_A$	<100	<100						µg/kg	100	A-T-052s
Perylene$_A$	<100	<100						µg/kg	100	A-T-052s

Envirolab Job Number: 24/10380

Client Project Name: One Earth Solar Farm

Client Project Ref: 2372986

Lab Sample ID	24/10380/1	24/10380/2						Units	Limit of Detection	Method ref
Client Sample No	1	5								
Client Sample ID	BH006	BH006								
Depth to Top	0.30	0.80								
Depth To Bottom										
Date Sampled	10-Oct-24	10-Oct-24								
Sample Type	SOIL - ES	SOIL - ES								
Sample Matrix Code	6AE	4AE								
VOC										
Dichlorodifluoromethane$_{A}$	<1	<1						µg/kg	1	A-T-006s
Chloromethane$_{A}$	<10	<10						µg/kg	10	A-T-006s
Vinyl Chloride (Chloroethene)$_{A}^{\#}$	<1	<1						µg/kg	1	A-T-006s
Bromomethane$_{A}^{\#}$	<1	<1						µg/kg	1	A-T-006s
Chloroethane$_{A}^{\#}$	<1	<1						µg/kg	1	A-T-006s
Trichlorofluoromethane$_{A}^{\#}$	<1	<1						µg/kg	1	A-T-006s
1,1-Dichloroethene$_{A}^{\#}$	<1	<1						µg/kg	1	A-T-006s
Carbon Disulphide$_{A}^{\#}$	<1	<1						µg/kg	1	A-T-006s
Dichloromethane$_{A}$	<5	<5						µg/kg	5	A-T-006s
trans 1,2-Dichloroethene$_{A}^{\#}$	<1	<1						µg/kg	1	A-T-006s
1,1-Dichloroethane$_{A}^{\#}$	<1	<1						µg/kg	1	A-T-006s
cis 1,2-Dichloroethene$_{A}^{\#}$	<1	<1						µg/kg	1	A-T-006s
2,2-Dichloropropane$_{A}^{\#}$	<1	<1						µg/kg	1	A-T-006s
Bromochloromethane$_{A}^{\#}$	<5	<5						µg/kg	5	A-T-006s
Chloroform$_{A}^{\#}$	<1	<1						µg/kg	1	A-T-006s
1,1,1-Trichloroethane$_{A}^{\#}$	<1	<1						µg/kg	1	A-T-006s
1,1-Dichloropropene$_{A}^{\#}$	<1	<1						µg/kg	1	A-T-006s
Carbon Tetrachloride$_{A}^{\#}$	<1	<1						µg/kg	1	A-T-006s
1,2-Dichloroethane$_{A}^{\#}$	<2	<2						µg/kg	2	A-T-006s
Benzene$_{A}^{\#}$	<1	<1						µg/kg	1	A-T-006s
Trichloroethene$_{A}^{\#}$	<1	<1						µg/kg	1	A-T-006s
1,2-Dichloropropane$_{A}^{\#}$	<1	<1						µg/kg	1	A-T-006s
Dibromomethane$_{A}^{\#}$	<1	<1						µg/kg	1	A-T-006s
Bromodichloromethane$_{A}^{\#}$	<10	<10						µg/kg	10	A-T-006s
cis 1,3-Dichloropropene$_{A}^{\#}$	<1	<1						µg/kg	1	A-T-006s
Toluene$_{A}^{\#}$	<1	<1						µg/kg	1	A-T-006s
trans 1,3-Dichloropropene$_{A}^{\#}$	<1	<1						µg/kg	1	A-T-006s
1,1,2-Trichloroethane$_{A}^{\#}$	<1	<1						µg/kg	1	A-T-006s
1,3-Dichloropropane$_{A}^{\#}$	<1	<1						µg/kg	1	A-T-006s
Tetrachloroethene$_{A}^{\#}$	<1^{U}	<1^{U}						µg/kg	1	A-T-006s
Dibromochloromethane$_{A}^{\#}$	<3	<3						µg/kg	3	A-T-006s
1,2-Dibromoethane$_{A}^{\#}$	<1	<1						µg/kg	1	A-T-006s

Envirolab Job Number: 24/10380

Client Project Name: One Earth Solar Farm

Client Project Ref: 2372986

Lab Sample ID	24/10380/1	24/10380/2						Units	Limit of Detection	Method ref
Client Sample No	1	5								
Client Sample ID	BH006	BH006								
Depth to Top	0.30	0.80								
Depth To Bottom										
Date Sampled	10-Oct-24	10-Oct-24								
Sample Type	SOIL - ES	SOIL - ES								
Sample Matrix Code	6AE	4AE								
Chlorobenzene$_{A}^{\#}$	<1	<1						µg/kg	1	A-T-006s
1,1,1,2-Tetrachloroethane$_{A}$	<1	<1						µg/kg	1	A-T-006s
Ethylbenzene$_{A}^{\#}$	<1	<1						µg/kg	1	A-T-006s
m & p Xylene$_{A}^{\#}$	<1	<1						µg/kg	1	A-T-006s
o-Xylene$_{A}^{\#}$	<1	<1						µg/kg	1	A-T-006s
Styrene$_{A}^{\#}$	<1	<1						µg/kg	1	A-T-006s
Bromoform$_{A}^{\#}$	<3	<3						µg/kg	3	A-T-006s
Isopropylbenzene$_{A}^{\#}$	<1	<1						µg/kg	1	A-T-006s
1,1,2,2-Tetrachloroethane$_{A}$	<1	<1						µg/kg	1	A-T-006s
1,2,3-Trichloropropane$_{A}^{\#}$	<1	<1						µg/kg	1	A-T-006s
Bromobenzene$_{A}^{\#}$	<1	<1						µg/kg	1	A-T-006s
n-Propylbenzene$_{A}^{\#}$	<1	<1						µg/kg	1	A-T-006s
2-Chlorotoluene$_{A}^{\#}$	<1	<1						µg/kg	1	A-T-006s
1,3,5-Trimethylbenzene$_{A}^{\#}$	<1	<1						µg/kg	1	A-T-006s
4-Chlorotoluene$_{A}^{\#}$	<1	<1						µg/kg	1	A-T-006s
tert-Butylbenzene$_{A}^{\#}$	<2	<2						µg/kg	2	A-T-006s
1,2,4-Trimethylbenzene$_{A}^{\#}$	<1	<1						µg/kg	1	A-T-006s
sec-Butylbenzene$_{A}^{\#}$	<1	<1						µg/kg	1	A-T-006s
4-Isopropyltoluene$_{A}^{\#}$	<1	<1						µg/kg	1	A-T-006s
1,3-Dichlorobenzene$_{A}$	<1	<1						µg/kg	1	A-T-006s
1,4-Dichlorobenzene$_{A}^{\#}$	<1	<1						µg/kg	1	A-T-006s
n-Butylbenzene$_{A}^{\#}$	<1	<1						µg/kg	1	A-T-006s
1,2-Dichlorobenzene$_{A}^{\#}$	<1	<1						µg/kg	1	A-T-006s
1,2-Dibromo-3-chloropropane (DCBP)$_{A}$	<2	<2						µg/kg	2	A-T-006s
1,2,4-Trichlorobenzene$_{A}$	<3	<3						µg/kg	3	A-T-006s
Hexachlorobutadiene$_{A}^{\#}$	<1^{U}	<1^{U}						µg/kg	1	A-T-006s
1,2,3-Trichlorobenzene$_{A}$	<3	<3						µg/kg	3	A-T-006s

Envirolab Job Number: 24/10380

Client Project Name: One Earth Solar Farm

Client Project Ref: 2372986

Lab Sample ID	24/10380/1	24/10380/2						Units	Limit of Detection	Method ref
Client Sample No	1	5								
Client Sample ID	BH006	BH006								
Depth to Top	0.30	0.80								
Depth To Bottom										
Date Sampled	10-Oct-24	10-Oct-24								
Sample Type	SOIL - ES	SOIL - ES								
Sample Matrix Code	6AE	4AE								
TPH CWG with Clean Up										
Ali >C5-C6$_A$	<0.01	<0.01						mg/kg	0.01	A-T-022s
Ali >C6-C8$_A$	<0.01	<0.01						mg/kg	0.01	A-T-022s
Ali >C8-C10$_A$	<1	<1						mg/kg	1	A-T-055s
Ali >C10-C12$_A^{M\#}$	<1	<1						mg/kg	1	A-T-055s
Ali >C12-C16$_A^{M\#}$	<1	<1						mg/kg	1	A-T-055s
Ali >C16-C21$_A^{M\#}$	<1	<1						mg/kg	1	A-T-055s
Ali >C21-C35$_A^{M\#}$	1	<1						mg/kg	1	A-T-055s
Total Aliphatics$_A$	1	<1						mg/kg	1	Calc-As Recd
Aro >C5-C7$_A^{\#}$	<0.01	<0.01						mg/kg	0.01	A-T-022s
Aro >C7-C8$_A^{\#}$	<0.01	<0.01						mg/kg	0.01	A-T-022s
Aro >C8-C10$_A$	<1	<1						mg/kg	1	A-T-055s
Aro >C10-C12$_A$	<1	<1						mg/kg	1	A-T-055s
Aro >C12-C16$_A$	<1	<1						mg/kg	1	A-T-055s
Aro >C16-C21$_A^{M\#}$	<1	<1						mg/kg	1	A-T-055s
Aro >C21-C35$_A^{M\#}$	<1	<1						mg/kg	1	A-T-055s
Total Aromatics$_A$	<1	<1						mg/kg	1	Calc-As Recd
TPH (Ali & Aro >C5-C35)$_A$	1	<1						mg/kg	1	Calc-As Recd
BTEX - Benzene$_A^{\#}$	<0.01	<0.01						mg/kg	0.01	A-T-022s
BTEX - Toluene$_A^{\#}$	<0.01	<0.01						mg/kg	0.01	A-T-022s
BTEX - Ethyl Benzene$_A^{\#}$	<0.01	<0.01						mg/kg	0.01	A-T-022s
BTEX - m & p Xylene$_A^{\#}$	<0.01	<0.01						mg/kg	0.01	A-T-022s
BTEX - o Xylene$_A^{\#}$	<0.01	<0.01						mg/kg	0.01	A-T-022s
MTBE$_A^{\#}$	<0.01	<0.01						mg/kg	0.01	A-T-022s

Report Notes

General

•This report shall not be reproduced, except in full, without written approval from Envirolab.
•The client Sample No, Client Sample ID, Depth to top, Depth to Bottom and Date Sampled are all provided by the client and can affect the validity of results.
•The results reported herein relate only to the material supplied to the laboratory.
•The residue of any samples contained within this report, and any received within the same delivery, will be disposed of **four weeks** after the initial scheduling. For samples tested for Asbestos we will retain a portion of the dried sample for a minimum of **six months** after the initial Asbestos testing is completed.
•Analytical results reflect the quality of the sample at the time of analysis only.
•Opinions and Interpretations expressed are outside our scope of accreditation.
•A deviating sample report is appended and will indicate if samples or tests have been found to be deviating. Any test results affected may not be an accurate record of the concentration at the time of sampling and, as a result, may be invalid.
•If a sample is outside of the calibration range or affected by interferences then it may need diluting. This will result in the limit of detection (LOD) being raised.
•Subcontracted Analysis: Please see the appended report for any deviations, current LODs and accreditation status of the test.

Key

Superscript "#"	Accredited to ISO 17025
Superscript "M"	Accredited to MCertS
Superscript "U"	Individual result not accredited
None of the above symbols	Analysis unaccredited
Subscript "A"	Analysis performed on as-received Sample
Subscript "D"	Analysis performed on the dried sample, crushed to pass 2mm sieve.
Subscript "D" on Asbestos	Analysis performed on a dried aliquot of sample provided.
Subscript "^"	Analysis has dependant options against results. Details appear in the comments of your Sample receipt
IS	Insufficient Sample for analysis
US	Unsuitable Sample for analysis
NDP	No Determination Possible
NAD	No Asbestos Detected
Trace	Asbestos found not suitable for Gravimetric Quantification – not enough to accurately weigh.
N/A	Not applicable

Asbestos

Identification: Asbestos in soil analysis is performed on a dried aliquot of the submitted sample and cannot guarantee to identify asbestos if only present in small numbers as discrete fibres/fragments in the original sample.
Stones etc. are not removed from the sample prior to analysis
"Trace Asbestos Identified" will be reported if there is not enough present to verify the type.
Quantification: Generally a 2 stage process including visual identification, hand picking and weighing, and fibre counting. Where ACMs are found a percentage asbestos is assigned to each with reference to 'HSG264, Asbestos: The survey guide' and the calculated asbestos content is expressed as a percentage of the dried soil sample aliquot used. If asbestos is identified as being present but is not in a form that is suitable for analysis by hand picking and weighing (normally if the asbestos is present as free fibres). "TRACE" will be reported as a quantification result.
PLEASE INFORM THE LABORATORY IF YOU WOULD LIKE THE STAGE 3 SEDIMENTATION PROCESS CARRIED OUT. Note this will be subcontracted.

Assigned Matrix Codes

1	SAND	6	CLAY/LOAM	A	Contains Stones
2	LOAM	7	OTHER	B	Contains Construction Rubble
3	CLAY	8	Asbestos Bulk (Only Asbestos ID accredited)	C	Contains visible hydrocarbons
4	LOAM/SAND	9	Incinerator Ash (some Metals accredited)	D	Contains glass / metal
5	SAND/CLAY			E	Contains roots / twigs
Note: 7,8,9 matrices are not covered by our ISO 17025 or MCertS accreditation, unless stated above.					

Soil Chemical Analysis:
All results are reported as dry weight (<40°C).
For samples with Matrix Codes 1 - 6 natural stones, brick and concrete fragments >10mm and any extraneous material (visible glass, metal or twigs) are removed and excluded from the sample prior to analysis and reported results corrected to a whole sample basis. This is reported as '% stones >10mm'.
For samples with Matrix Code 7 the whole sample is dried and crushed prior to analysis and this supersedes any "A" subscripts
All analysis is performed on the sample as received for soil samples which are positive for asbestos or the client has informed asbestos may be present and/or if they are from outside the European Union and this supersedes any "D" subscripts.

TPH by method A-T-007:
For waters, free and visible oils are excluded from the sample used for analysis, so the reported result represents the dissolved phase only.
Results "with Clean up" indicates samples cleaned up with Silica during extraction.

EPH CWG (method A-T-055) from TPH CWG:
EPH CWG results have humics mathematically subtracted through instrument calculation.
Where these humic substances have been identified in any IDs from "TPH CWG with clean up" please note that the concentration is **NOT** included in the quantified results but present in the ID for information.

Electrical Conductivity of water by method A-T-037:
Results greater than 12900µS/cm @ 25^0C / 11550µS/cm @ 20^0C fall outside the calibration range and as such are unaccredited.

Please contact your client manager if you require any further information.

Envirolab Deviating Samples Report

Hattersley Science & Technology Park, Stockport Road, Hattersley, SK14 3QU
Tel. 0161 368 4921 email. ask@envlab.co.uk

Client: Central Alliance, Alliance House, South Park Way, South Park Way, Wakefield 41 Business Park, Wakefield, WF2 0XJ

Project: One Earth Solar Farm

Clients Project No: 2372986

Project No: 24/10380

Date Received: 25/10/2024 (am)

Cool Box Temperatures (°C): 14.3, 14.0

Lab Sample ID	24/10380/1	24/10380/2
Client Sample No	1	5
Client Sample ID/Depth	BH006 0.30m	BH006 0.80m
Date Sampled	10/10/24	10/10/24
Deviation Code		
F	✓	✓

Key
F *Maximum holding time exceeded between sampling date and analysis for analytes listed below*

HOLDING TIME EXCEEDANCES

Lab Sample ID	24/10380/1	24/10380/2
Client Sample No	1	5
Client Sample ID/Depth	BH006 0.30m	BH006 0.80m
Date Sampled	10/10/24	10/10/24
VPHCWG	✓	✓
VOC	✓	✓
SVOC excluding PAH-16	✓	✓
PAH-16MS	✓	✓
Cyanide (total)	✓	✓

If, at any point before reaching the laboratory, the temperature of the samples has breached those set in published standards, e.g. BS-EN 5667-3, ISO 18400-102:2017, then the concentration of any affected analytes may differ from that at the time of sampling.

Envirolab Analysis Dates

Lab Sample ID	24/10380/1	24/10380/2
Client Sample No	1	5
Client Sample ID/Depth	BH006 0.30m	BH006 0.80m
Date Sampled	10/10/24	10/10/24
A-T-006s	29/10/2024	29/10/2024
A-T-019s	31/10/2024	31/10/2024
A-T-022s	29/10/2024	29/10/2024
A-T-024s	31/10/2024	
A-T-026s	31/10/2024	
A-T-027s	31/10/2024	
A-T-031s	31/10/2024	
A-T-032s	04/11/2024	
A-T-042sTCN	30/10/2024	30/10/2024
A-T-044	30/10/2024	30/10/2024
A-T-045	29/10/2024	29/10/2024
A-T-050s	01/11/2024	01/11/2024
A-T-052s	30/10/2024	30/10/2024
A-T-055s	29/10/2024	29/10/2024
Calc-As Recd	29/10/2024	29/10/2024

The above dates are the analysis completion dates, please note that these are not necessarily the date that the analysis was weighed/extracted.

End of Report

envirolab
Hattersley Science & Technology Park
Stockport Road, Hattersley, SK14 3QU

FINAL ANALYTICAL TEST REPORT

Envirolab Job Number: 24/10382
Issue Number: 1 **Date:** 04 November, 2024

Client:
Central Alliance
Alliance House
South Park Way
South Park Way
Wakefield 41 Business Park
Wakefield
WF2 0XJ

Project Manager: John Parkinson/Lab results
Project Name: One Earth Solar Farm
Project Ref: 2372986
Order No: N/A
Date Samples Received: 22/10/24
Date Instructions Received: 25/10/24
Date Analysis Completed: 04/11/24

Approved by:

[redacted]
Richard Wong
Client Manager

Envirolab Job Number: 24/10382

Client Project Name: One Earth Solar Farm

Client Project Ref: 2372986

Lab Sample ID	24/10382/1	24/10382/3						Units	Limit of Detection	Method ref
Client Sample No	3	9								
Client Sample ID	BH008	BH008								
Depth to Top	0.50	2.00								
Depth To Bottom										
Date Sampled	07-Oct-24	07-Oct-24								
Sample Type	SOIL - ES	SOIL - ES								
Sample Matrix Code	6A	6A								
% Stones >10mm$_A$	<0.1	<0.1						% w/w	0.1	A-T-044
pH$_D$$^{M\#}$	7.38	5.28						pH	0.01	A-T-031s
Sulphate (water sol 2:1)$_D$$^{M\#}$	0.09	0.50						g/l	0.01	A-T-026s
Cyanide (total)$_A$$^{M\#}$	<1	<1						mg/kg	1	A-T-042sTCN
Phenol$_A$	<0.2	<0.2						mg/kg	0.2	A-T-050s
Organic Matter$_D$$^{M\#}$	2.0	7.0						% w/w	0.1	A-T-032s
Arsenic$_D$$^{M\#}$	8	14						mg/kg	1	A-T-024s
Boron (water soluble)$_D$$^{M\#}$	1.2	1.3						mg/kg	1	A-T-027s
Cadmium$_D$$^{M\#}$	2.7	5.7						mg/kg	0.5	A-T-024s
Copper$_D$$^{M\#}$	29	29						mg/kg	1	A-T-024s
Chromium$_D$$^{M\#}$	41	49						mg/kg	1	A-T-024s
Lead$_D$$^{M\#}$	175	146						mg/kg	1	A-T-024s
Mercury$_D$	<0.17	<0.17						mg/kg	0.17	A-T-024s
Nickel$_D$$^{M\#}$	42	43						mg/kg	1	A-T-024s
Zinc$_D$$^{M\#}$	226	315						mg/kg	5	A-T-024s

Envirolab Job Number: 24/10382

Client Project Name: One Earth Solar Farm

Client Project Ref: 2372986

Lab Sample ID	24/10382/1	24/10382/3						Units	Limit of Detection	Method ref
Client Sample No	3	9								
Client Sample ID	BH008	BH008								
Depth to Top	0.50	2.00								
Depth To Bottom										
Date Sampled	07-Oct-24	07-Oct-24								
Sample Type	SOIL - ES	SOIL - ES								
Sample Matrix Code	6A	6A								
Asbestos in Soil (inc. matrix) ^										
Asbestos in soil$_{D}^{\#}$	NAD	NAD								A-T-045
Asbestos Matrix (visual)$_{D}$	-	-								A-T-045
Asbestos Matrix (microscope)$_{D}$	-	-								A-T-045
Asbestos ACM - Suitable for Water Absorption Test?$_{D}$	N/A	N/A								A-T-045

Lab Sample ID	24/10382/1	24/10382/3						Units	Limit of Detection	Method ref
Client Sample No	3	9								
Client Sample ID	BH008	BH008								
Depth to Top	0.50	2.00								
Depth To Bottom										
Date Sampled	07-Oct-24	07-Oct-24								
Sample Type	SOIL - ES	SOIL - ES								
Sample Matrix Code	6A	6A								
PAH-16MS										
Acenaphthene$_A^{M\#}$	<0.01	<0.01						mg/kg	0.01	A-T-019s
Acenaphthylene$_A^{M\#}$	<0.01	<0.01						mg/kg	0.01	A-T-019s
Anthracene$_A^{M\#}$	<0.02	<0.02						mg/kg	0.02	A-T-019s
Benzo(a)anthracene$_A^{M\#}$	<0.04	<0.04						mg/kg	0.04	A-T-019s
Benzo(a)pyrene$_A^{M\#}$	<0.04	<0.04						mg/kg	0.04	A-T-019s
Benzo(b)fluoranthene$_A^{M\#}$	<0.05	<0.05						mg/kg	0.05	A-T-019s
Benzo(ghi)perylene$_A^{M\#}$	<0.05	<0.05						mg/kg	0.05	A-T-019s
Benzo(k)fluoranthene$_A^{M\#}$	<0.07	<0.07						mg/kg	0.07	A-T-019s
Chrysene$_A^{M\#}$	<0.06	<0.06						mg/kg	0.06	A-T-019s
Dibenzo(ah)anthracene$_A^{M\#}$	<0.04	<0.04						mg/kg	0.04	A-T-019s
Fluoranthene$_A^{M\#}$	<0.08	<0.08						mg/kg	0.08	A-T-019s
Fluorene$_A^{M\#}$	<0.01	<0.01						mg/kg	0.01	A-T-019s
Indeno(123-cd)pyrene$_A^{M\#}$	<0.03	<0.03						mg/kg	0.03	A-T-019s
Naphthalene $_A^{M\#}$	<0.03	<0.03						mg/kg	0.03	A-T-019s
Phenanthrene$_A^{M\#}$	<0.03	<0.03						mg/kg	0.03	A-T-019s
Pyrene$_A^{M\#}$	<0.07	<0.07						mg/kg	0.07	A-T-019s
Total PAH-16MS$_A^{M\#}$	<0.08	<0.08						mg/kg	0.01	A-T-019s

Lab Sample ID	24/10382/1	24/10382/3						Units	Limit of Detection	Method ref
Client Sample No	3	9								
Client Sample ID	BH008	BH008								
Depth to Top	0.50	2.00								
Depth To Bottom										
Date Sampled	07-Oct-24	07-Oct-24								
Sample Type	SOIL - ES	SOIL - ES								
Sample Matrix Code	6A	6A								
SVOC excluding PAH-16										
4-Bromophenyl phenyl ether$_A$	<100	<100						µg/kg	100	A-T-052s
Hexachlorobenzene$_A$	<100	<100						µg/kg	100	A-T-052s
Diethyl phthalate$_A$	<100	<100						µg/kg	100	A-T-052s
Dimethyl phthalate$_A$	<100	<100						µg/kg	100	A-T-052s
Dibenzofuran$_A$	<100	<100						µg/kg	100	A-T-052s
Carbazole$_A$	<100	<100						µg/kg	100	A-T-052s
Butylbenzyl phthalate$_A$	<100	<100						µg/kg	100	A-T-052s
Bis(2-ethylhexyl)phthalate$_A$	<500	<500						µg/kg	500	A-T-052s
Bis(2-chloroethoxy)methane$_A$	<100	<100						µg/kg	100	A-T-052s
Bis(2-chloroethyl)ether$_A$	<100	<100						µg/kg	100	A-T-052s
4-Nitrophenol$_A$	<100	<100						µg/kg	100	A-T-052s
3+4-Methylphenol$_A$	<100	<100						µg/kg	100	A-T-052s
4-Chloro-3-methylphenol$_A$	<100	<100						µg/kg	100	A-T-052s
2-Nitrophenol$_A$	<100	<100						µg/kg	100	A-T-052s
2-Methylphenol$_A$	<100	<100						µg/kg	100	A-T-052s
1,2,4-Trichlorobenzene$_A$	<100	<100						µg/kg	100	A-T-052s
2-Chlorophenol$_A$	<100	<100						µg/kg	100	A-T-052s
2,6-Dinitrotoluene$_A$	<100	<100						µg/kg	100	A-T-052s
2,4-Dinitrotoluene$_A$	<100	<100						µg/kg	100	A-T-052s
2,4-Dimethylphenol$_A$	<100	<100						µg/kg	100	A-T-052s
2,4-Dichlorophenol$_A$	<100	<100						µg/kg	100	A-T-052s
2,4,6-Trichlorophenol$_A$	<100	<100						µg/kg	100	A-T-052s
2,4,5-Trichlorophenol$_A$	<100	<100						µg/kg	100	A-T-052s
1,4-Dichlorobenzene$_A$	<100	<100						µg/kg	100	A-T-052s
1,3-Dichlorobenzene$_A$	<100	<100						µg/kg	100	A-T-052s
1,2-Dichlorobenzene$_A$	<100	<100						µg/kg	100	A-T-052s
2-Chloronaphthalene$_A$	<100	<100						µg/kg	100	A-T-052s
2-Methylnaphthalene$_A$	<100	<100						µg/kg	100	A-T-052s
Bis(2-chloroisopropyl)ether$_A$	<100	<100						µg/kg	100	A-T-052s
Phenol$_A$	<100	<100						µg/kg	100	A-T-052s
Pentachlorophenol$_A$	<100	<100						µg/kg	100	A-T-052s
n-Nitroso-n-dipropylamine$_A$	<100	<100						µg/kg	100	A-T-052s

Envirolab Job Number: 24/10382

Client Project Name: One Earth Solar Farm

Client Project Ref: 2372986

Lab Sample ID	24/10382/1	24/10382/3						Units	Limit of Detection	Method ref
Client Sample No	3	9								
Client Sample ID	BH008	BH008								
Depth to Top	0.50	2.00								
Depth To Bottom										
Date Sampled	07-Oct-24	07-Oct-24								
Sample Type	SOIL - ES	SOIL - ES								
Sample Matrix Code	6A	6A								
n-Dioctylphthalate$_A$	<500	<500						µg/kg	500	A-T-052s
n-Dibutylphthalate$_A$	<600	<600						µg/kg	100	A-T-052s
Nitrobenzene$_A$	<100	<100						µg/kg	100	A-T-052s
Isophorone$_A$	<100	<100						µg/kg	100	A-T-052s
Hexachloroethane$_A$	<100	<100						µg/kg	100	A-T-052s
Hexachlorobutadiene$_A$	<100	<100						µg/kg	100	A-T-052s
Perylene$_A$	<100	<100						µg/kg	100	A-T-052s

Envirolab Job Number: 24/10382

Client Project Name: One Earth Solar Farm

Client Project Ref: 2372986

Lab Sample ID	24/10382/1	24/10382/3						Units	Limit of Detection	Method ref
Client Sample No	3	9								
Client Sample ID	BH008	BH008								
Depth to Top	0.50	2.00								
Depth To Bottom										
Date Sampled	07-Oct-24	07-Oct-24								
Sample Type	SOIL - ES	SOIL - ES								
Sample Matrix Code	6A	6A								
VOC										
Dichlorodifluoromethane$_{A}$	<1	<1						µg/kg	1	A-T-006s
Chloromethane$_{A}$	<10	<10						µg/kg	10	A-T-006s
Vinyl Chloride (Chloroethene)$_{A}^{\#}$	<1	<1						µg/kg	1	A-T-006s
Bromomethane$_{A}^{\#}$	<1	<1						µg/kg	1	A-T-006s
Chloroethane$_{A}^{\#}$	<1	<1						µg/kg	1	A-T-006s
Trichlorofluoromethane$_{A}^{\#}$	<1	<1						µg/kg	1	A-T-006s
1,1-Dichloroethene$_{A}^{\#}$	<1	<1						µg/kg	1	A-T-006s
Carbon Disulphide$_{A}^{\#}$	<1	5						µg/kg	1	A-T-006s
Dichloromethane$_{A}$	<5	<5						µg/kg	5	A-T-006s
trans 1,2-Dichloroethene$_{A}^{\#}$	<1	<1						µg/kg	1	A-T-006s
1,1-Dichloroethane$_{A}^{\#}$	<1	<1						µg/kg	1	A-T-006s
cis 1,2-Dichloroethene$_{A}^{\#}$	<1	<1						µg/kg	1	A-T-006s
2,2-Dichloropropane$_{A}^{\#}$	<1	<1						µg/kg	1	A-T-006s
Bromochloromethane$_{A}^{\#}$	<5	<5						µg/kg	5	A-T-006s
Chloroform$_{A}^{\#}$	<1	<1						µg/kg	1	A-T-006s
1,1,1-Trichloroethane$_{A}^{\#}$	<1	<1						µg/kg	1	A-T-006s
1,1-Dichloropropene$_{A}^{\#}$	<1	<1						µg/kg	1	A-T-006s
Carbon Tetrachloride$_{A}^{\#}$	<1	<1						µg/kg	1	A-T-006s
1,2-Dichloroethane$_{A}^{\#}$	<2	<2						µg/kg	2	A-T-006s
Benzene$_{A}^{\#}$	<1	<1						µg/kg	1	A-T-006s
Trichloroethene$_{A}^{\#}$	<1	<1						µg/kg	1	A-T-006s
1,2-Dichloropropane$_{A}^{\#}$	<1	<1						µg/kg	1	A-T-006s
Dibromomethane$_{A}^{\#}$	<1	<1						µg/kg	1	A-T-006s
Bromodichloromethane$_{A}^{\#}$	<10	<10						µg/kg	10	A-T-006s
cis 1,3-Dichloropropene$_{A}^{\#}$	<1	<1						µg/kg	1	A-T-006s
Toluene$_{A}^{\#}$	<1	<1						µg/kg	1	A-T-006s
trans 1,3-Dichloropropene$_{A}^{\#}$	<1	<1						µg/kg	1	A-T-006s
1,1,2-Trichloroethane$_{A}^{\#}$	<1	<1						µg/kg	1	A-T-006s
1,3-Dichloropropane$_{A}^{\#}$	<1	<1						µg/kg	1	A-T-006s
Tetrachloroethene$_{A}^{\#}$	<1^{U}	<1^{U}						µg/kg	1	A-T-006s
Dibromochloromethane$_{A}^{\#}$	<3	<3						µg/kg	3	A-T-006s
1,2-Dibromoethane$_{A}^{\#}$	<1	<1						µg/kg	1	A-T-006s

Envirolab Job Number: 24/10382

Client Project Name: One Earth Solar Farm

Client Project Ref: 2372986

Lab Sample ID	24/10382/1	24/10382/3						Units	Limit of Detection	Method ref
Client Sample No	3	9								
Client Sample ID	BH008	BH008								
Depth to Top	0.50	2.00								
Depth To Bottom										
Date Sampled	07-Oct-24	07-Oct-24								
Sample Type	SOIL - ES	SOIL - ES								
Sample Matrix Code	6A	6A								
Chlorobenzene$_{A}^{\#}$	<1	<1						µg/kg	1	A-T-006s
1,1,1,2-Tetrachloroethane$_{A}$	<1	<1						µg/kg	1	A-T-006s
Ethylbenzene$_{A}^{\#}$	<1	<1						µg/kg	1	A-T-006s
m & p Xylene$_{A}^{\#}$	<1	<1						µg/kg	1	A-T-006s
o-Xylene$_{A}^{\#}$	<1	<1						µg/kg	1	A-T-006s
Styrene$_{A}^{\#}$	<1	<1						µg/kg	1	A-T-006s
Bromoform$_{A}^{\#}$	<3	<3						µg/kg	3	A-T-006s
Isopropylbenzene$_{A}^{\#}$	<1	<1						µg/kg	1	A-T-006s
1,1,2,2-Tetrachloroethane$_{A}$	<1	<1						µg/kg	1	A-T-006s
1,2,3-Trichloropropane$_{A}^{\#}$	<1	<1						µg/kg	1	A-T-006s
Bromobenzene$_{A}^{\#}$	<1	<1						µg/kg	1	A-T-006s
n-Propylbenzene$_{A}^{\#}$	<1	<1						µg/kg	1	A-T-006s
2-Chlorotoluene$_{A}^{\#}$	<1	<1						µg/kg	1	A-T-006s
1,3,5-Trimethylbenzene$_{A}^{\#}$	<1	<1						µg/kg	1	A-T-006s
4-Chlorotoluene$_{A}^{\#}$	<1	<1						µg/kg	1	A-T-006s
tert-Butylbenzene$_{A}^{\#}$	<2	<2						µg/kg	2	A-T-006s
1,2,4-Trimethylbenzene$_{A}^{\#}$	<1	<1						µg/kg	1	A-T-006s
sec-Butylbenzene$_{A}^{\#}$	<1	<1						µg/kg	1	A-T-006s
4-Isopropyltoluene$_{A}^{\#}$	<1	<1						µg/kg	1	A-T-006s
1,3-Dichlorobenzene$_{A}$	<1	<1						µg/kg	1	A-T-006s
1,4-Dichlorobenzene$_{A}^{\#}$	<1	<1						µg/kg	1	A-T-006s
n-Butylbenzene$_{A}^{\#}$	<1	<1						µg/kg	1	A-T-006s
1,2-Dichlorobenzene$_{A}^{\#}$	<1	<1						µg/kg	1	A-T-006s
1,2-Dibromo-3-chloropropane (DCBP)$_{A}$	<2	<2						µg/kg	2	A-T-006s
1,2,4-Trichlorobenzene$_{A}$	<3	<3						µg/kg	3	A-T-006s
Hexachlorobutadiene$_{A}^{\#}$	<1^{U}	<1^{U}						µg/kg	1	A-T-006s
1,2,3-Trichlorobenzene$_{A}$	<3	<3						µg/kg	3	A-T-006s

Envirolab Job Number: 24/10382

Client Project Name: One Earth Solar Farm

Client Project Ref: 2372986

Lab Sample ID	24/10382/1	24/10382/3						Units	Limit of Detection	Method ref
Client Sample No	3	9								
Client Sample ID	BH008	BH008								
Depth to Top	0.50	2.00								
Depth To Bottom										
Date Sampled	07-Oct-24	07-Oct-24								
Sample Type	SOIL - ES	SOIL - ES								
Sample Matrix Code	6A	6A								
TPH CWG with Clean Up										
Ali >C5-C6$_A$	<0.01	<0.01						mg/kg	0.01	A-T-022s
Ali >C6-C8$_A$	<0.01	<0.01						mg/kg	0.01	A-T-022s
Ali >C8-C10$_A$	<1	<1						mg/kg	1	A-T-055s
Ali >C10-C12$_A^{M\#}$	<1	<1						mg/kg	1	A-T-055s
Ali >C12-C16$_A^{M\#}$	<1	<1						mg/kg	1	A-T-055s
Ali >C16-C21$_A^{M\#}$	<1	2						mg/kg	1	A-T-055s
Ali >C21-C35$_A^{M\#}$	1	11						mg/kg	1	A-T-055s
Total Aliphatics$_A$	1	13						mg/kg	1	Calc-As Recd
Aro >C5-C7$_A^{\#}$	<0.01	<0.01						mg/kg	0.01	A-T-022s
Aro >C7-C8$_A^{\#}$	<0.01	<0.01						mg/kg	0.01	A-T-022s
Aro >C8-C10$_A$	<1	2						mg/kg	1	A-T-055s
Aro >C10-C12$_A$	<1	<1						mg/kg	1	A-T-055s
Aro >C12-C16$_A$	<1	<1						mg/kg	1	A-T-055s
Aro >C16-C21$_A^{M\#}$	<1	4						mg/kg	1	A-T-055s
Aro >C21-C35$_A^{M\#}$	<1	4						mg/kg	1	A-T-055s
Total Aromatics$_A$	<1	9						mg/kg	1	Calc-As Recd
TPH (Ali & Aro >C5-C35)$_A$	1	21						mg/kg	1	Calc-As Recd
BTEX - Benzene$_A^{\#}$	<0.01	<0.01						mg/kg	0.01	A-T-022s
BTEX - Toluene$_A^{\#}$	<0.01	<0.01						mg/kg	0.01	A-T-022s
BTEX - Ethyl Benzene$_A^{\#}$	<0.01	<0.01						mg/kg	0.01	A-T-022s
BTEX - m & p Xylene$_A^{\#}$	<0.01	<0.01						mg/kg	0.01	A-T-022s
BTEX - o Xylene$_A^{\#}$	<0.01	<0.01						mg/kg	0.01	A-T-022s
MTBE$_A^{\#}$	<0.01	<0.01						mg/kg	0.01	A-T-022s

Report Notes

General

•This report shall not be reproduced, except in full, without written approval from Envirolab.
•The client Sample No, Client Sample ID, Depth to top, Depth to Bottom and Date Sampled are all provided by the client and can affect the validity of results.
•The results reported herein relate only to the material supplied to the laboratory.
•The residue of any samples contained within this report, and any received within the same delivery, will be disposed of **four weeks** after the initial scheduling. For samples tested for Asbestos we will retain a portion of the dried sample for a minimum of **six months** after the initial Asbestos testing is completed.
•Analytical results reflect the quality of the sample at the time of analysis only.
•Opinions and Interpretations expressed are outside our scope of accreditation.
•A deviating sample report is appended and will indicate if samples or tests have been found to be deviating. Any test results affected may not be an accurate record of the concentration at the time of sampling and, as a result, may be invalid.
•If a sample is outside of the calibration range or affected by interferences then it may need diluting. This will result in the limit of detection (LOD) being raised.
•Subcontracted Analysis: Please see the appended report for any deviations, current LODs and accreditation status of the test.

Key

Superscript "#"	Accredited to ISO 17025
Superscript "M"	Accredited to MCertS
Superscript "U"	Individual result not accredited
None of the above symbols	Analysis unaccredited
Subscript "A"	Analysis performed on as-received Sample
Subscript "D"	Analysis performed on the dried sample, crushed to pass 2mm sieve.
Subscript "D" on Asbestos	Analysis performed on a dried aliquot of sample provided.
Subscript "^"	Analysis has dependant options against results. Details appear in the comments of your Sample receipt
IS	Insufficient Sample for analysis
US	Unsuitable Sample for analysis
NDP	No Determination Possible
NAD	No Asbestos Detected
Trace	Asbestos found not suitable for Gravimetric Quantification – not enough to accurately weigh.
N/A	Not applicable

Asbestos

Identification: Asbestos in soil analysis is performed on a dried aliquot of the submitted sample and cannot guarantee to identify asbestos if only present in small numbers as discrete fibres/fragments in the original sample.
Stones etc. are not removed from the sample prior to analysis
"Trace Asbestos Identified" will be reported if there is not enough present to verify the type.
Quantification: Generally a 2 stage process including visual identification, hand picking and weighing, and fibre counting. Where ACMs are found a percentage asbestos is assigned to each with reference to 'HSG264, Asbestos: The survey guide' and the calculated asbestos content is expressed as a percentage of the dried soil sample aliquot used. If asbestos is identified as being present but is not in a form that is suitable for analysis by hand picking and weighing (normally if the asbestos is present as free fibres). "TRACE" will be reported as a quantification result.
PLEASE INFORM THE LABORATORY IF YOU WOULD LIKE THE STAGE 3 SEDIMENTATION PROCESS CARRIED OUT. Note this will be subcontracted.

Assigned Matrix Codes

1	SAND	6	CLAY/LOAM	A	Contains Stones
2	LOAM	7	OTHER	B	Contains Construction Rubble
3	CLAY	8	Asbestos Bulk (Only Asbestos ID accredited)	C	Contains visible hydrocarbons
4	LOAM/SAND	9	Incinerator Ash (some Metals accredited)	D	Contains glass / metal
5	SAND/CLAY			E	Contains roots / twigs
Note: 7,8,9 matrices are not covered by our ISO 17025 or MCertS accreditation, unless stated above.					

Soil Chemical Analysis:
All results are reported as dry weight (<40°C).
For samples with Matrix Codes 1 - 6 natural stones, brick and concrete fragments >10mm and any extraneous material (visible glass, metal or twigs) are removed and excluded from the sample prior to analysis and reported results corrected to a whole sample basis. This is reported as '% stones >10mm'.
For samples with Matrix Code 7 the whole sample is dried and crushed prior to analysis and this supersedes any "A" subscripts
All analysis is performed on the sample as received for soil samples which are positive for asbestos or the client has informed asbestos may be present and/or if they are from outside the European Union and this supersedes any "D" subscripts.

TPH by method A-T-007:
For waters, free and visible oils are excluded from the sample used for analysis, so the reported result represents the dissolved phase only.
Results "with Clean up" indicates samples cleaned up with Silica during extraction.

EPH CWG (method A-T-055) from TPH CWG:
EPH CWG results have humics mathematically subtracted through instrument calculation.
Where these humic substances have been identified in any IDs from "TPH CWG with clean up" please note that the concentration is **NOT** included in the quantified results but present in the ID for information.

Electrical Conductivity of water by method A-T-037:
Results greater than 12900µS/cm @ 25^0C / 11550µS/cm @ 20^0C fall outside the calibration range and as such are unaccredited.

Please contact your client manager if you require any further information.

Envirolab Deviating Samples Report

Hattersley Science & Technology Park, Stockport Road, Hattersley, SK14 3QU
Tel. 0161 368 4921 email. ask@envlab.co.uk

Client: Central Alliance, Alliance House, South Park Way, South Park Way, Wakefield 41 Business Park, Wakefield, WF2 0XJ

Project: One Earth Solar Farm

Clients Project No: 2372986

Project No: 24/10382

Date Received: 25/10/2024 (am)

Cool Box Temperatures (°C): 11.7

Lab Sample ID	24/10382/1	24/10382/3
Client Sample No	3	9
Client Sample ID/Depth	BH008 0.50m	BH008 2.00m
Date Sampled	07/10/24	07/10/24
Deviation Code		
F	✓	✓

Key
F *Maximum holding time exceeded between sampling date and analysis for analytes listed below*

HOLDING TIME EXCEEDANCES

Lab Sample ID	24/10382/1	24/10382/3
Client Sample No	3	9
Client Sample ID/Depth	BH008 0.50m	BH008 2.00m
Date Sampled	07/10/24	07/10/24
VPHCWG	✓	✓
VOC	✓	✓
SVOC excluding PAH-16	✓	✓
PAH-16MS	✓	✓
Cyanide (total)	✓	✓

If, at any point before reaching the laboratory, the temperature of the samples has breached those set in published standards, e.g. BS-EN 5667-3, ISO 18400-102:2017, then the concentration of any affected analytes may differ from that at the time of sampling.

Envirolab Analysis Dates

Lab Sample ID	24/10382/1	24/10382/3
Client Sample No	3	9
Client Sample ID/Depth	BH008 0.50m	BH008 2.00m
Date Sampled	07/10/24	07/10/24
A-T-006s	29/10/2024	29/10/2024
A-T-019s	31/10/2024	31/10/2024
A-T-022s	29/10/2024	29/10/2024
A-T-024s	31/10/2024	01/11/2024
A-T-026s	31/10/2024	31/10/2024
A-T-027s	31/10/2024	31/10/2024
A-T-031s	31/10/2024	31/10/2024
A-T-032s	04/11/2024	04/11/2024
A-T-042sTCN	30/10/2024	30/10/2024
A-T-044	30/10/2024	30/10/2024
A-T-045	29/10/2024	29/10/2024
A-T-050s	31/10/2024	31/10/2024
A-T-052s	30/10/2024	30/10/2024
A-T-055s	29/10/2024	29/10/2024
Calc-As Recd	29/10/2024	29/10/2024

The above dates are the analysis completion dates, please note that these are not necessarily the date that the analysis was weighed/extracted.

End of Report

envirolab
Hattersley Science & Technology Park
Stockport Road, Hattersley, SK14 3QU

FINAL ANALYTICAL TEST REPORT

Envirolab Job Number: 24/10415
Issue Number: 1 **Date:** 05 November, 2024

Client:
Central Alliance
Alliance House
South Park Way
South Park Way
Wakefield 41 Business Park
Wakefield
WF2 0XJ

Project Manager: John Parkinson/Lab results
Project Name: One Earth Solar Farm
Project Ref: 2372986
Order No: N/A
Date Samples Received: 22/10/24
Date Instructions Received: 28/10/24
Date Analysis Completed: 05/11/24

Approved by:



Gemma Berrisford
Deputy Client Services Supervisor

Envirolab Job Number: 24/10415

Client Project Name: One Earth Solar Farm

Client Project Ref: 2372986

Lab Sample ID	24/10415/1	24/10415/7	24/10415/8					Units	Limit of Detection	Method ref
Client Sample No	4	101	102							
Client Sample ID	BH004	BH005	BH005							
Depth to Top	0.30	0.80	2.50							
Depth To Bottom										
Date Sampled	04-Oct-24	17-Oct-24	17-Oct-24							
Sample Type	SOIL - ES	SOIL - ES	SOIL - ES							
Sample Matrix Code	6AE	6A	6A							
% Stones >10mm$_A$	<0.1	<0.1	<0.1					% w/w	0.1	A-T-044
pH$_D$$^{M\#}$	7.65	-	7.01					pH	0.01	A-T-031s
Sulphate (water sol 2:1)$_D$$^{M\#}$	0.02	-	0.17					g/l	0.01	A-T-026s
Cyanide (total)$_A$$^{M\#}$	<1	<1	<1					mg/kg	1	A-T-042sTCN
Phenol$_A$	<0.2	<0.2	<0.2					mg/kg	0.2	A-T-050s
Organic Matter$_D$$^{M\#}$	0.5	-	1.5					% w/w	0.1	A-T-032s
Arsenic$_D$$^{M\#}$	<1	-	9					mg/kg	1	A-T-024s
Boron (water soluble)$_D$$^{M\#}$	<1.0	-	1.4					mg/kg	1	A-T-027s
Cadmium$_D$$^{M\#}$	<0.5	-	2.5					mg/kg	0.5	A-T-024s
Copper$_D$$^{M\#}$	11	-	25					mg/kg	1	A-T-024s
Chromium$_D$$^{M\#}$	22	-	39					mg/kg	1	A-T-024s
Lead$_D$$^{M\#}$	9	-	44					mg/kg	1	A-T-024s
Mercury$_D$	<0.17	-	<0.17					mg/kg	0.17	A-T-024s
Nickel$_D$$^{M\#}$	19	-	41					mg/kg	1	A-T-024s
Zinc$_D$$^{M\#}$	42	-	276					mg/kg	5	A-T-024s

Envirolab Job Number: 24/10415

Client Project Name: One Earth Solar Farm

Client Project Ref: 2372986

Lab Sample ID	24/10415/1	24/10415/7	24/10415/8					Units	Limit of Detection	Method ref
Client Sample No	4	101	102							
Client Sample ID	BH004	BH005	BH005							
Depth to Top	0.30	0.80	2.50							
Depth To Bottom										
Date Sampled	04-Oct-24	17-Oct-24	17-Oct-24							
Sample Type	SOIL - ES	SOIL - ES	SOIL - ES							
Sample Matrix Code	6AE	6A	6A							
Asbestos in Soil (inc. matrix) ^										
Asbestos in soil$_{D}^{\#}$	NAD	-	-							A-T-045
Asbestos Matrix (visual)$_{D}$	-	-	-							A-T-045
Asbestos Matrix (microscope)$_{D}$	-	-	-							A-T-045
Asbestos ACM - Suitable for Water Absorption Test?$_{D}$	N/A	-	-							A-T-045

Envirolab Job Number: 24/10415

Client Project Name: One Earth Solar Farm

Client Project Ref: 2372986

Lab Sample ID	24/10415/1	24/10415/7	24/10415/8					Units	Limit of Detection	Method ref
Client Sample No	4	101	102							
Client Sample ID	BH004	BH005	BH005							
Depth to Top	0.30	0.80	2.50							
Depth To Bottom										
Date Sampled	04-Oct-24	17-Oct-24	17-Oct-24							
Sample Type	SOIL - ES	SOIL - ES	SOIL - ES							
Sample Matrix Code	6AE	6A	6A							
PAH-16MS										
Acenaphthene$_A^{M\#}$	<0.01	<0.01	<0.01					mg/kg	0.01	A-T-019s
Acenaphthylene$_A^{M\#}$	<0.01	<0.01	<0.01					mg/kg	0.01	A-T-019s
Anthracene$_A^{M\#}$	<0.02	<0.02	<0.02					mg/kg	0.02	A-T-019s
Benzo(a)anthracene$_A^{M\#}$	<0.04	<0.04	<0.04					mg/kg	0.04	A-T-019s
Benzo(a)pyrene$_A^{M\#}$	<0.04	<0.04	<0.04					mg/kg	0.04	A-T-019s
Benzo(b)fluoranthene$_A^{M\#}$	<0.05	<0.05	<0.05					mg/kg	0.05	A-T-019s
Benzo(ghi)perylene$_A^{M\#}$	<0.05	<0.05	<0.05					mg/kg	0.05	A-T-019s
Benzo(k)fluoranthene$_A^{M\#}$	<0.07	<0.07	<0.07					mg/kg	0.07	A-T-019s
Chrysene$_A^{M\#}$	<0.06	<0.06	<0.06					mg/kg	0.06	A-T-019s
Dibenzo(ah)anthracene$_A^{M\#}$	<0.04	<0.04	<0.04					mg/kg	0.04	A-T-019s
Fluoranthene$_A^{M\#}$	<0.08	<0.08	<0.08					mg/kg	0.08	A-T-019s
Fluorene$_A^{M\#}$	<0.01	<0.01	<0.01					mg/kg	0.01	A-T-019s
Indeno(123-cd)pyrene$_A^{M\#}$	<0.03	<0.03	<0.03					mg/kg	0.03	A-T-019s
Naphthalene $_A^{M\#}$	<0.03	<0.03	<0.03					mg/kg	0.03	A-T-019s
Phenanthrene$_A^{M\#}$	<0.03	<0.03	<0.03					mg/kg	0.03	A-T-019s
Pyrene$_A^{M\#}$	<0.07	<0.07	<0.07					mg/kg	0.07	A-T-019s
Total PAH-16MS$_A^{M\#}$	<0.08	<0.08	<0.08					mg/kg	0.01	A-T-019s

Envirolab Job Number: 24/10415

Client Project Name: One Earth Solar Farm

Client Project Ref: 2372986

Lab Sample ID	24/10415/1	24/10415/7	24/10415/8					Units	Limit of Detection	Method ref
Client Sample No	4	101	102							
Client Sample ID	BH004	BH005	BH005							
Depth to Top	0.30	0.80	2.50							
Depth To Bottom										
Date Sampled	04-Oct-24	17-Oct-24	17-Oct-24							
Sample Type	SOIL - ES	SOIL - ES	SOIL - ES							
Sample Matrix Code	6AE	6A	6A							
SVOC excluding PAH-16										
4-Bromophenyl phenyl ether$_A$	<100	<100	<100					µg/kg	100	A-T-052s
Hexachlorobenzene$_A$	<100	<100	<100					µg/kg	100	A-T-052s
Diethyl phthalate$_A$	<100	<100	<100					µg/kg	100	A-T-052s
Dimethyl phthalate$_A$	<100	<100	<100					µg/kg	100	A-T-052s
Dibenzofuran$_A$	<100	<100	<100					µg/kg	100	A-T-052s
Carbazole$_A$	<100	<100	<100					µg/kg	100	A-T-052s
Butylbenzyl phthalate$_A$	<100	<100	<100					µg/kg	100	A-T-052s
Bis(2-ethylhexyl)phthalate$_A$	<500	<500	<500					µg/kg	500	A-T-052s
Bis(2-chloroethoxy)methane$_A$	<100	<100	<100					µg/kg	100	A-T-052s
Bis(2-chloroethyl)ether$_A$	<100	<100	<100					µg/kg	100	A-T-052s
4-Nitrophenol$_A$	<100	<100	<100					µg/kg	100	A-T-052s
3+4-Methylphenol$_A$	<100	<100	<100					µg/kg	100	A-T-052s
4-Chloro-3-methylphenol$_A$	<100	<100	<100					µg/kg	100	A-T-052s
2-Nitrophenol$_A$	<100	<100	<100					µg/kg	100	A-T-052s
2-Methylphenol$_A$	<100	<100	<100					µg/kg	100	A-T-052s
1,2,4-Trichlorobenzene$_A$	<100	<100	<100					µg/kg	100	A-T-052s
2-Chlorophenol$_A$	<100	<100	<100					µg/kg	100	A-T-052s
2,6-Dinitrotoluene$_A$	<100	<100	<100					µg/kg	100	A-T-052s
2,4-Dinitrotoluene$_A$	157	<100	<100					µg/kg	100	A-T-052s
2,4-Dimethylphenol$_A$	<100	<100	<100					µg/kg	100	A-T-052s
2,4-Dichlorophenol$_A$	<100	<100	<100					µg/kg	100	A-T-052s
2,4,6-Trichlorophenol$_A$	<100	<100	<100					µg/kg	100	A-T-052s
2,4,5-Trichlorophenol$_A$	<100	<100	<100					µg/kg	100	A-T-052s
1,4-Dichlorobenzene$_A$	<100	<100	<100					µg/kg	100	A-T-052s
1,3-Dichlorobenzene$_A$	<100	<100	<100					µg/kg	100	A-T-052s
1,2-Dichlorobenzene$_A$	<100	<100	<100					µg/kg	100	A-T-052s
2-Chloronaphthalene$_A$	<100	<100	<100					µg/kg	100	A-T-052s
2-Methylnaphthalene$_A$	267	<100	<100					µg/kg	100	A-T-052s
Bis(2-chloroisopropyl)ether$_A$	<100	<100	<100					µg/kg	100	A-T-052s
Phenol$_A$	<100	<100	<100					µg/kg	100	A-T-052s
Pentachlorophenol$_A$	<100	<100	<100					µg/kg	100	A-T-052s
n-Nitroso-n-dipropylamine$_A$	<100	<100	<100					µg/kg	100	A-T-052s

Envirolab Job Number: 24/10415

Client Project Name: One Earth Solar Farm

Client Project Ref: 2372986

Lab Sample ID	24/10415/1	24/10415/7	24/10415/8					Units	Limit of Detection	Method ref
Client Sample No	4	101	102							
Client Sample ID	BH004	BH005	BH005							
Depth to Top	0.30	0.80	2.50							
Depth To Bottom										
Date Sampled	04-Oct-24	17-Oct-24	17-Oct-24							
Sample Type	SOIL - ES	SOIL - ES	SOIL - ES							
Sample Matrix Code	6AE	6A	6A							
n-Dioctylphthalate$_A$	<500	<500	<500					µg/kg	500	A-T-052s
n-Dibutylphthalate$_A$	<300	<300	<300					µg/kg	100	A-T-052s
Nitrobenzene$_A$	<100	<100	<100					µg/kg	100	A-T-052s
Isophorone$_A$	<100	<100	<100					µg/kg	100	A-T-052s
Hexachloroethane$_A$	<100	<100	<100					µg/kg	100	A-T-052s
Hexachlorobutadiene$_A$	<100	<100	<100					µg/kg	100	A-T-052s
Perylene$_A$	<100	<100	<100					µg/kg	100	A-T-052s

Envirolab Job Number: 24/10415

Client Project Name: One Earth Solar Farm

Client Project Ref: 2372986

Lab Sample ID	24/10415/1	24/10415/7	24/10415/8					Units	Limit of Detection	Method ref
Client Sample No	4	101	102							
Client Sample ID	BH004	BH005	BH005							
Depth to Top	0.30	0.80	2.50							
Depth To Bottom										
Date Sampled	04-Oct-24	17-Oct-24	17-Oct-24							
Sample Type	SOIL - ES	SOIL - ES	SOIL - ES							
Sample Matrix Code	6AE	6A	6A							
VOC										
Dichlorodifluoromethane$_{A}$	<1	<1	<1					µg/kg	1	A-T-006s
Chloromethane$_{A}$	<10	<10	<10					µg/kg	10	A-T-006s
Vinyl Chloride (Chloroethene)$_{A}^{\#}$	<1	<1	<1					µg/kg	1	A-T-006s
Bromomethane$_{A}^{\#}$	<1^{U}	<1^{U}	<1^{U}					µg/kg	1	A-T-006s
Chloroethane$_{A}^{\#}$	<1	<1	<1					µg/kg	1	A-T-006s
Trichlorofluoromethane$_{A}^{\#}$	<1	<1	<1					µg/kg	1	A-T-006s
1,1-Dichloroethene$_{A}^{\#}$	<1	<1	<1					µg/kg	1	A-T-006s
Carbon Disulphide$_{A}^{\#}$	<1	<1	<1					µg/kg	1	A-T-006s
Dichloromethane$_{A}$	<5	<5	<5					µg/kg	5	A-T-006s
trans 1,2-Dichloroethene$_{A}^{\#}$	<1	<1	<1					µg/kg	1	A-T-006s
1,1-Dichloroethane$_{A}^{\#}$	<1	<1	<1					µg/kg	1	A-T-006s
cis 1,2-Dichloroethene$_{A}^{\#}$	<1	<1	<1					µg/kg	1	A-T-006s
2,2-Dichloropropane$_{A}^{\#}$	<1	<1	<1					µg/kg	1	A-T-006s
Bromochloromethane$_{A}^{\#}$	<5	<5	<5					µg/kg	5	A-T-006s
Chloroform$_{A}^{\#}$	<1	<1	<1					µg/kg	1	A-T-006s
1,1,1-Trichloroethane$_{A}^{\#}$	<1	<1	<1					µg/kg	1	A-T-006s
1,1-Dichloropropene$_{A}^{\#}$	<1	<1	<1					µg/kg	1	A-T-006s
Carbon Tetrachloride$_{A}^{\#}$	<1	<1	<1					µg/kg	1	A-T-006s
1,2-Dichloroethane$_{A}^{\#}$	<2	<2	<2					µg/kg	2	A-T-006s
Benzene$_{A}^{\#}$	<1	<1	<1					µg/kg	1	A-T-006s
Trichloroethene$_{A}^{\#}$	<1	<1	<1					µg/kg	1	A-T-006s
1,2-Dichloropropane$_{A}^{\#}$	<1	<1	<1					µg/kg	1	A-T-006s
Dibromomethane$_{A}^{\#}$	<1	<1	<1					µg/kg	1	A-T-006s
Bromodichloromethane$_{A}^{\#}$	<10	<10	<10					µg/kg	10	A-T-006s
cis 1,3-Dichloropropene$_{A}^{\#}$	<1	<1	<1					µg/kg	1	A-T-006s
Toluene$_{A}^{\#}$	<1	<1	<1					µg/kg	1	A-T-006s
trans 1,3-Dichloropropene$_{A}^{\#}$	<1	<1	<1					µg/kg	1	A-T-006s
1,1,2-Trichloroethane$_{A}^{\#}$	<1	<1	<1					µg/kg	1	A-T-006s
1,3-Dichloropropane$_{A}^{\#}$	<1	<1	<1					µg/kg	1	A-T-006s
Tetrachloroethene$_{A}^{\#}$	<1^{U}	<1^{U}	<1^{U}					µg/kg	1	A-T-006s
Dibromochloromethane$_{A}^{\#}$	<3	<3	<3					µg/kg	3	A-T-006s
1,2-Dibromoethane$_{A}^{\#}$	<1	<1	<1					µg/kg	1	A-T-006s

Envirolab Job Number: 24/10415

Client Project Name: One Earth Solar Farm

Client Project Ref: 2372986

Lab Sample ID	24/10415/1	24/10415/7	24/10415/8					Units	Limit of Detection	Method ref
Client Sample No	4	101	102							
Client Sample ID	BH004	BH005	BH005							
Depth to Top	0.30	0.80	2.50							
Depth To Bottom										
Date Sampled	04-Oct-24	17-Oct-24	17-Oct-24							
Sample Type	SOIL - ES	SOIL - ES	SOIL - ES							
Sample Matrix Code	6AE	6A	6A							
Chlorobenzene$_{A}^{\#}$	<1	<1	<1					µg/kg	1	A-T-006s
1,1,1,2-Tetrachloroethane$_{A}$	<1	<1	<1					µg/kg	1	A-T-006s
Ethylbenzene$_{A}^{\#}$	<1	<1	<1					µg/kg	1	A-T-006s
m & p Xylene$_{A}^{\#}$	<1	<1	<1					µg/kg	1	A-T-006s
o-Xylene$_{A}^{\#}$	<1	<1	<1					µg/kg	1	A-T-006s
Styrene$_{A}^{\#}$	<1	<1	<1					µg/kg	1	A-T-006s
Bromoform$_{A}^{\#}$	<3	<3	<3					µg/kg	3	A-T-006s
Isopropylbenzene$_{A}^{\#}$	<1	<1	<1					µg/kg	1	A-T-006s
1,1,2,2-Tetrachloroethane$_{A}$	<1	<1	<1					µg/kg	1	A-T-006s
1,2,3-Trichloropropane$_{A}^{\#}$	<1	<1	<1					µg/kg	1	A-T-006s
Bromobenzene$_{A}^{\#}$	<1	<1	<1					µg/kg	1	A-T-006s
n-Propylbenzene$_{A}^{\#}$	<1	<1	<1					µg/kg	1	A-T-006s
2-Chlorotoluene$_{A}^{\#}$	<1	<1	<1					µg/kg	1	A-T-006s
1,3,5-Trimethylbenzene$_{A}^{\#}$	<1	<1	<1					µg/kg	1	A-T-006s
4-Chlorotoluene$_{A}^{\#}$	<1	<1	<1					µg/kg	1	A-T-006s
tert-Butylbenzene$_{A}^{\#}$	<2	<2	<2					µg/kg	2	A-T-006s
1,2,4-Trimethylbenzene$_{A}^{\#}$	<1	<1	<1					µg/kg	1	A-T-006s
sec-Butylbenzene$_{A}^{\#}$	<1	<1	<1					µg/kg	1	A-T-006s
4-Isopropyltoluene$_{A}^{\#}$	<1	<1	<1					µg/kg	1	A-T-006s
1,3-Dichlorobenzene$_{A}$	<1	<1	<1					µg/kg	1	A-T-006s
1,4-Dichlorobenzene$_{A}^{\#}$	<1^{U}	<1^{U}	<1^{U}					µg/kg	1	A-T-006s
n-Butylbenzene$_{A}^{\#}$	<1	<1	<1					µg/kg	1	A-T-006s
1,2-Dichlorobenzene$_{A}^{\#}$	<1	<1	<1					µg/kg	1	A-T-006s
1,2-Dibromo-3-chloropropane (DCBP)$_{A}$	<2	<2	<2					µg/kg	2	A-T-006s
1,2,4-Trichlorobenzene$_{A}$	<3	<3	<3					µg/kg	3	A-T-006s
Hexachlorobutadiene$_{A}^{\#}$	<1	<1	<1					µg/kg	1	A-T-006s
1,2,3-Trichlorobenzene$_{A}$	<3	<3	<3					µg/kg	3	A-T-006s

Envirolab Job Number: 24/10415

Client Project Name: One Earth Solar Farm

Client Project Ref: 2372986

Lab Sample ID	24/10415/1	24/10415/7	24/10415/8					Units	Limit of Detection	Method ref
Client Sample No	4	101	102							
Client Sample ID	BH004	BH005	BH005							
Depth to Top	0.30	0.80	2.50							
Depth To Bottom										
Date Sampled	04-Oct-24	17-Oct-24	17-Oct-24							
Sample Type	SOIL - ES	SOIL - ES	SOIL - ES							
Sample Matrix Code	6AE	6A	6A							
TPH CWG with Clean Up										
Ali >C5-C6$_A$	<0.01	<0.01	<0.01					mg/kg	0.01	A-T-022s
Ali >C6-C8$_A$	<0.01	<0.01	<0.01					mg/kg	0.01	A-T-022s
Ali >C8-C10$_A$	<1	<1	<1					mg/kg	1	A-T-055s
Ali >C10-C12$_A^{M\#}$	<1	<1	<1					mg/kg	1	A-T-055s
Ali >C12-C16$_A^{M\#}$	<1	<1	<1					mg/kg	1	A-T-055s
Ali >C16-C21$_A^{M\#}$	<1	<1	<1					mg/kg	1	A-T-055s
Ali >C21-C35$_A^{M\#}$	<1	<1	1					mg/kg	1	A-T-055s
Total Aliphatics$_A$	<1	<1	1					mg/kg	1	Calc-As Recd
Aro >C5-C7$_A^{\#}$	<0.01	<0.01	<0.01					mg/kg	0.01	A-T-022s
Aro >C7-C8$_A^{\#}$	<0.01	<0.01	<0.01					mg/kg	0.01	A-T-022s
Aro >C8-C10$_A$	<1	<1	<1					mg/kg	1	A-T-055s
Aro >C10-C12$_A$	<1	<1	<1					mg/kg	1	A-T-055s
Aro >C12-C16$_A$	<1	<1	<1					mg/kg	1	A-T-055s
Aro >C16-C21$_A^{M\#}$	<1	<1	<1					mg/kg	1	A-T-055s
Aro >C21-C35$_A^{M\#}$	<1	<1	<1					mg/kg	1	A-T-055s
Total Aromatics$_A$	<1	<1	<1					mg/kg	1	Calc-As Recd
TPH (Ali & Aro >C5-C35)$_A$	<1	<1	1					mg/kg	1	Calc-As Recd
BTEX - Benzene$_A^{\#}$	<0.01	<0.01	<0.01					mg/kg	0.01	A-T-022s
BTEX - Toluene$_A^{\#}$	<0.01	<0.01	<0.01					mg/kg	0.01	A-T-022s
BTEX - Ethyl Benzene$_A^{\#}$	<0.01	<0.01	<0.01					mg/kg	0.01	A-T-022s
BTEX - m & p Xylene$_A^{\#}$	0.01	<0.01	<0.01					mg/kg	0.01	A-T-022s
BTEX - o Xylene$_A^{\#}$	<0.01	<0.01	<0.01					mg/kg	0.01	A-T-022s
MTBE$_A^{\#}$	<0.01	<0.01	<0.01					mg/kg	0.01	A-T-022s

Report Notes

General

•This report shall not be reproduced, except in full, without written approval from Envirolab.
•The client Sample No, Client Sample ID, Depth to top, Depth to Bottom and Date Sampled are all provided by the client and can affect the validity of results.
•The results reported herein relate only to the material supplied to the laboratory.
•The residue of any samples contained within this report, and any received within the same delivery, will be disposed of **four weeks** after the initial scheduling. For samples tested for Asbestos we will retain a portion of the dried sample for a minimum of **six months** after the initial Asbestos testing is completed.
•Analytical results reflect the quality of the sample at the time of analysis only.
•Opinions and Interpretations expressed are outside our scope of accreditation.
•A deviating sample report is appended and will indicate if samples or tests have been found to be deviating. Any test results affected may not be an accurate record of the concentration at the time of sampling and, as a result, may be invalid.
•If a sample is outside of the calibration range or affected by interferences then it may need diluting. This will result in the limit of detection (LOD) being raised.
•Subcontracted Analysis: Please see the appended report for any deviations, current LODs and accreditation status of the test.

Key

Superscript "#"	Accredited to ISO 17025
Superscript "M"	Accredited to MCertS
Superscript "U"	Individual result not accredited
None of the above symbols	Analysis unaccredited
Subscript "A"	Analysis performed on as-received Sample
Subscript "D"	Analysis performed on the dried sample, crushed to pass 2mm sieve.
Subscript "D" on Asbestos	Analysis performed on a dried aliquot of sample provided.
Subscript "^"	Analysis has dependant options against results. Details appear in the comments of your Sample receipt
IS	Insufficient Sample for analysis
US	Unsuitable Sample for analysis
NDP	No Determination Possible
NAD	No Asbestos Detected
Trace	Asbestos found not suitable for Gravimetric Quantification – not enough to accurately weigh.
N/A	Not applicable

Asbestos

Identification: Asbestos in soil analysis is performed on a dried aliquot of the submitted sample and cannot guarantee to identify asbestos if only present in small numbers as discrete fibres/fragments in the original sample.
Stones etc. are not removed from the sample prior to analysis
"Trace Asbestos Identified" will be reported if there is not enough present to verify the type.
Quantification: Generally a 2 stage process including visual identification, hand picking and weighing, and fibre counting. Where ACMs are found a percentage asbestos is assigned to each with reference to 'HSG264, Asbestos: The survey guide' and the calculated asbestos content is expressed as a percentage of the dried soil sample aliquot used. If asbestos is identified as being present but is not in a form that is suitable for analysis by hand picking and weighing (normally if the asbestos is present as free fibres). "TRACE" will be reported as a quantification result.
PLEASE INFORM THE LABORATORY IF YOU WOULD LIKE THE STAGE 3 SEDIMENTATION PROCESS CARRIED OUT. Note this will be subcontracted.

Assigned Matrix Codes

1	SAND	6	CLAY/LOAM	A	Contains Stones
2	LOAM	7	OTHER	B	Contains Construction Rubble
3	CLAY	8	Asbestos Bulk (Only Asbestos ID accredited)	C	Contains visible hydrocarbons
4	LOAM/SAND	9	Incinerator Ash (some Metals accredited)	D	Contains glass / metal
5	SAND/CLAY			E	Contains roots / twigs
Note: 7,8,9 matrices are not covered by our ISO 17025 or MCertS accreditation, unless stated above.					

Soil Chemical Analysis:
All results are reported as dry weight (<40°C).
For samples with Matrix Codes 1 - 6 natural stones, brick and concrete fragments >10mm and any extraneous material (visible glass, metal or twigs) are removed and excluded from the sample prior to analysis and reported results corrected to a whole sample basis. This is reported as '% stones >10mm'.
For samples with Matrix Code 7 the whole sample is dried and crushed prior to analysis and this supersedes any "A" subscripts
All analysis is performed on the sample as received for soil samples which are positive for asbestos or the client has informed asbestos may be present and/or if they are from outside the European Union and this supersedes any "D" subscripts.

TPH by method A-T-007:
For waters, free and visible oils are excluded from the sample used for analysis, so the reported result represents the dissolved phase only.
Results "with Clean up" indicates samples cleaned up with Silica during extraction.

EPH CWG (method A-T-055) from TPH CWG:
EPH CWG results have humics mathematically subtracted through instrument calculation.
Where these humic substances have been identified in any IDs from "TPH CWG with clean up" please note that the concentration is **NOT** included in the quantified results but present in the ID for information.

Electrical Conductivity of water by method A-T-037:
Results greater than 12900µS/cm @ 25^0C / 11550µS/cm @ 20^0C fall outside the calibration range and as such are unaccredited.

Please contact your client manager if you require any further information.

Envirolab Deviating Samples Report

Hattersley Science & Technology Park, Stockport Road, Hattersley, SK14 3QU
Tel. 0161 368 4921 email. ask@envlab.co.uk

Client: Central Alliance, Alliance House, South Park Way, South Park Way, Wakefield 41 Business Park, Wakefield, WF2 0XJ

Project: One Earth Solar Farm

Clients Project No: 2372986

Project No: 24/10415

Date Received: 28/10/2024 (am)

Cool Box Temperatures (°C): 11.7

Lab Sample ID	24/10415/1
Client Sample No	4
Client Sample ID/Depth	BH004 0.30m
Date Sampled	04/10/24
Deviation Code	
F	✓

Key
F *Maximum holding time exceeded between sampling date and analysis for analytes listed below*

HOLDING TIME EXCEEDANCES

Lab Sample ID	24/10415/1
Client Sample No	4
Client Sample ID/Depth	BH004 0.30m
Date Sampled	04/10/24
VPHCWG	✓
VOC	✓
SVOC excluding PAH-16	✓
PAH-16MS	✓
Cyanide (total)	✓

If, at any point before reaching the laboratory, the temperature of the samples has breached those set in published standards, e.g. BS-EN 5667-3, ISO 18400-102:2017, then the concentration of any affected analytes may differ from that at the time of sampling.

Envirolab Analysis Dates

Lab Sample ID	24/10415/1	24/10415/7	24/10415/8
Client Sample No	4	101	102
Client Sample ID/Depth	BH004 0.30m	BH005 0.80m	BH005 2.50m
Date Sampled	04/10/24	17/10/24	17/10/24
A-T-006s	30/10/2024	30/10/2024	30/10/2024
A-T-019s	31/10/2024	31/10/2024	31/10/2024
A-T-022s	31/10/2024	31/10/2024	31/10/2024
A-T-024s	31/10/2024		31/10/2024
A-T-026s	31/10/2024		31/10/2024
A-T-027s	31/10/2024		31/10/2024
A-T-031s	31/10/2024		31/10/2024
A-T-032s	05/11/2024		04/11/2024
A-T-042sTCN	30/10/2024	30/10/2024	30/10/2024
A-T-044	04/11/2024	04/11/2024	04/11/2024
A-T-045	29/10/2024		
A-T-050s	30/10/2024	30/10/2024	30/10/2024
A-T-052s	30/10/2024	30/10/2024	30/10/2024
A-T-055s	30/10/2024	30/10/2024	30/10/2024
Calc-As Recd	31/10/2024	31/10/2024	31/10/2024

The above dates are the analysis completion dates, please note that these are not necessarily the date that the analysis was weighed/extracted.

End of Report

envirolab
Hattersley Science & Technology Park
Stockport Road, Hattersley, SK14 3QU

FINAL ANALYTICAL TEST REPORT

Envirolab Job Number: 24/12413
Issue Number: 1 **Date:** 13 January, 2025

Client:
Central Alliance
Alliance House
South Park Way
South Park Way
Wakefield 41 Business Park
Wakefield
WF2 0XJ

Project Manager: John Parkinson/Lab results
Project Name: One Earth Solar Farm
Project Ref: 2372986
Order No: N/A
Date Samples Received: 17/12/24
Date Instructions Received: 23/12/24
Date Analysis Completed: 13/01/25

Approved by:

[redacted]

Richard Wong
Client Manager

UKAS TESTING
1247

Envirolab Job Number: 24/12413

Client Project Name: One Earth Solar Farm

Client Project Ref: 2372986

Lab Sample ID	24/12413/1	24/12413/2	24/12413/3	24/12413/4	24/12413/5	24/12413/6	24/12413/7	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	BH001	BH002	BH003	BH004	BH007	BH008	BH011			
Depth to Top	3.51	3.45	3.40	3.41	5.40	7.76	4.66			
Depth To Bottom										
Date Sampled	17-Dec-24	17-Dec-24	17-Dec-24	17-Dec-24	17-Dec-24	17-Dec-24	17-Dec-24			
Sample Type	WATER - GW	WATER - GW	WATER - GW	WATER - GW	WATER - GW	WATER - GW	WATER - GW			
Sample Matrix Code	N/A	N/A	N/A	N/A	N/A	N/A	N/A			
pH (w)$_{A}^{\#}$	7.01	7.17	7.21	7.26	7.12	6.76	7.79	pH	0.01	A-T-031w
Alkalinity (total) (w) Colorimetry$_{A}^{\#}$	296	289	337	312	322	165	630	mg/l Ca CO3	20	A-T-038w
Hardness Total$_{A}^{\#}$	1106	536	2908	1130	661	528	1019	mg/l Ca CO3	4	A-T-049w
Total Dissolved Solids (w)$_{A}^{\#}$	880	1073	5906	517	938	707	11280	mg/l	20	A-T-035w
Ammoniacal nitrogen as N (w)$_{A}^{\#}$	0.14	0.06	0.13	0.13	1.85	0.06	0.54	mg/l	0.05	A-T-033w
Chloride (w)$_{A}^{\#}$	18	20	20	21	31	22	63	mg/l	1	A-T-026w
Fluoride (w)$_{A}^{\#}$	0.19	0.30	0.35	0.40	0.33	0.59	0.48	mg/l	0.1	A-T-026w (F)
Nitrate (w)$_{A}^{\#}$	43.8	51.2	113	29.2	<0.1	21.0	8.0	mg/l	0.1	A-T-026w (N)
Sulphate (w)$_{A}^{\#}$	322	446	722	72	359	331	2900	mg/l	1	A-T-026w
Cyanide (free) (w)$_{A}^{\#}$	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	mg/l	0.005	A-T-042wFCN
Cyanide (total) (w)$_{A}^{\#}$	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	mg/l	0.005	A-T-042wTCN
Antimony (dissolved)$_{A}$	<1	<1	<5	<1	<1	<1	<5	µg/l	1	A-T-025w
Arsenic (dissolved)$_{A}^{\#}$	9	<1	27	1	<1	<1	<5	µg/l	1	A-T-025w
Boron (dissolved)$_{A}^{\#}$	72	91	135	59	125	113	113	µg/l	10	A-T-025w
Barium (dissolved)$_{A}^{\#}$	142	114	138	177	66	49	37	µg/l	1	A-T-025w
Beryllium (dissolved)$_{A}^{\#}$	1	<1	<5	<1	<1	<1	<5	µg/l	1	A-T-025w
Cadmium (dissolved)$_{A}^{\#}$	0.6	<0.2	1.3	<0.2	<0.2	0.3	<1.0	µg/l	0.2	A-T-025w
Calcium (dissolved)$_{A}^{\#}$	271	147	793	255	183	160	310	mg/l	1	A-T-049w
Copper (dissolved)$_{A}^{\#}$	20	<4	<20	<4	<4	<4	<20	µg/l	4	A-T-025w
Chromium (dissolved)$_{A}^{\#}$	11	7	<5	1	<1	<1	<1	µg/l	1	A-T-025w
Chromium (hexavalent) (w)$_{A}^{\#}$	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/l	0.01	A-T-040w
Chromium (trivalent) (w)	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/l	0.01	Calc
Iron (dissolved)$_{A}^{\#}$	5140	39	1190	229	340	155	<50	µg/l	10	A-T-025w
Lead (dissolved)$_{A}^{\#}$	6	<1	6	<1	<1	2	<5	µg/l	1	A-T-025w
Manganese (dissolved)$_{A}^{\#}$	1400	6	3430	30	3800	629	650	µg/l	1	A-T-025w
Magnesium (dissolved)$_{A}^{\#}$	104	41	225	120	50	31	59	mg/l	1	A-T-049w
Mercury (dissolved)$_{A}^{\#}$	<0.1	<0.1	<0.5	<0.1	<0.1	<0.1	<0.5	µg/l	0.1	A-T-025w
Molybdenum (dissolved)$_{A}^{\#}$	<0.5	1.2	<2.5	0.7	1.3	0.6	26.4	µg/l	0.5	A-T-025w
Nickel (dissolved)$_{A}^{\#}$	20	3	17	6	<2	3	<10	µg/l	2	A-T-025w
Selenium (dissolved)$_{A}^{\#}$	4	10	36	2	<1	12	328	µg/l	1	A-T-025w
Sodium (dissolved)$_{A}^{\#}$	49	65	121	61	48	16	1290	mg/l	1	A-T-049w
Sulphur, Total (dissolved)$_{A}$	102	104	251	22	117	105	1120	mg/l	1	A-T-072w
Vanadium (dissolved)$_{A}^{\#}$	40	3	6	2	<1	<1	<5	µg/l	1	A-T-025w

Envirolab Job Number: 24/12413

Client Project Name: One Earth Solar Farm

Client Project Ref: 2372986

Lab Sample ID	24/12413/1	24/12413/2	24/12413/3	24/12413/4	24/12413/5	24/12413/6	24/12413/7	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	BH001	BH002	BH003	BH004	BH007	BH008	BH011			
Depth to Top	3.51	3.45	3.40	3.41	5.40	7.76	4.66			
Depth To Bottom										
Date Sampled	17-Dec-24	17-Dec-24	17-Dec-24	17-Dec-24	17-Dec-24	17-Dec-24	17-Dec-24			
Sample Type	WATER - GW	WATER - GW	WATER - GW	WATER - GW	WATER - GW	WATER - GW	WATER - GW			
Sample Matrix Code	N/A	N/A	N/A	N/A	N/A	N/A	N/A			
Zinc (dissolved)$_{A}^{\#}$	51	<2	25	3	3	7	<10	µg/l	2	A-T-025w

Envirolab Job Number: 24/12413

Client Project Name: One Earth Solar Farm

Client Project Ref: 2372986

Lab Sample ID	24/12413/1	24/12413/2	24/12413/3	24/12413/4	24/12413/5	24/12413/6	24/12413/7	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	BH001	BH002	BH003	BH004	BH007	BH008	BH011			
Depth to Top	3.51	3.45	3.40	3.41	5.40	7.76	4.66			
Depth To Bottom										
Date Sampled	17-Dec-24	17-Dec-24	17-Dec-24	17-Dec-24	17-Dec-24	17-Dec-24	17-Dec-24			
Sample Type	WATER - GW	WATER - GW	WATER - GW	WATER - GW	WATER - GW	WATER - GW	WATER - GW			
Sample Matrix Code	N/A	N/A	N/A	N/A	N/A	N/A	N/A			
PAH 16MS (w)										
Acenaphthene (w)$_{A}^{\#}$	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	µg/l	0.01	A-T-019w
Acenaphthylene (w)$_{A}^{\#}$	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	µg/l	0.01	A-T-019w
Anthracene (w)$_{A}^{\#}$	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	µg/l	0.01	A-T-019w
Benzo(a)anthracene (w)$_{A}^{\#}$	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	µg/l	0.01	A-T-019w
Benzo(a)pyrene (w)$_{A}^{\#}$	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	µg/l	0.01	A-T-019w
Benzo(b)fluoranthene (w)$_{A}^{\#}$	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	µg/l	0.01	A-T-019w
Benzo(ghi)perylene (w)$_{A}^{\#}$	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	µg/l	0.01	A-T-019w
Benzo(k)fluoranthene (w)$_{A}^{\#}$	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	µg/l	0.01	A-T-019w
Chrysene (w)$_{A}^{\#}$	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	µg/l	0.01	A-T-019w
Dibenzo(ah)anthracene (w)$_{A}^{\#}$	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	µg/l	0.01	A-T-019w
Fluoranthene (w)$_{A}^{\#}$	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	µg/l	0.01	A-T-019w
Fluorene (w)$_{A}^{\#}$	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	µg/l	0.01	A-T-019w
Indeno(123-cd)pyrene (w)$_{A}^{\#}$	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	µg/l	0.01	A-T-019w
Naphthalene (w)$_{A}^{\#}$	0.05	<0.01	0.09	0.14	0.08	<0.01	<0.01	µg/l	0.01	A-T-019w
Phenanthrene (w)$_{A}^{\#}$	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	µg/l	0.01	A-T-019w
Pyrene (w)$_{A}^{\#}$	<0.01	<0.01	0.01	<0.01	<0.01	<0.01	<0.01	µg/l	0.01	A-T-019w
Total PAH 16MS (w)$_{A}^{\#}$	0.05	<0.01	0.10	0.14	0.08	<0.01	<0.01	µg/l	0.01	A-T-019w
Phenols NG (speciated HPLC) (w)										
Phenol (w)$_{A}$	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/l	0.01	A-T-050w
Cresols (w)$_{A}$	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/l	0.01	A-T-050w
Catechol (w)$_{A}$	<0.01	<0.01	<0.01	<0.01	0.07	<0.01	<0.01	mg/l	0.01	A-T-050w
Resorcinol (w) $_{A}$	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/l	0.01	A-T-050w
Xylenols & Ethylphenols (w)$_{A}$	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/l	0.01	A-T-050w
Naphthols (w)$_{A}$	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/l	0.01	A-T-050w
Trimethylphenol (w)$_{A}$	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/l	0.01	A-T-050w
Phenols - Total by HPLC (w)$_{A}$	<0.01	<0.01	<0.01	<0.01	0.07	<0.01	<0.01	mg/l	0.01	A-T-050w

Envirolab Job Number: 24/12413

Client Project Name: One Earth Solar Farm

Client Project Ref: 2372986

Lab Sample ID	24/12413/1	24/12413/2	24/12413/3	24/12413/4	24/12413/5	24/12413/6	24/12413/7	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	BH001	BH002	BH003	BH004	BH007	BH008	BH011			
Depth to Top	3.51	3.45	3.40	3.41	5.40	7.76	4.66			
Depth To Bottom										
Date Sampled	17-Dec-24	17-Dec-24	17-Dec-24	17-Dec-24	17-Dec-24	17-Dec-24	17-Dec-24			
Sample Type	WATER - GW	WATER - GW	WATER - GW	WATER - GW	WATER - GW	WATER - GW	WATER - GW			
Sample Matrix Code	N/A	N/A	N/A	N/A	N/A	N/A	N/A			
VOC excl. BTEX										
Dichlorodifluoromethane$_A$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-006w
Chloromethane$_A$	<10	<10	<10	<10	<10	<10	<10	µg/l	10	A-T-006w
Vinyl Chloride$_A^{\#}$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-006w
Bromomethane$_A^{\#}$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-006w
Chloroethane$_A^{\#}$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-006w
Trichlorofluoromethane$_A^{\#}$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-006w
trans 1,2-Dichloroethene$_A^{\#}$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-006w
Dichloromethane$_A$	<5	<5	<5	<5	<5	<5	<5	µg/l	5	A-T-006w
Carbon Disulphide$_A^{\#}$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-006w
1,1-Dichloroethene$_A^{\#}$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-006w
1,1-Dichloroethane$_A^{\#}$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-006w
cis 1,2-Dichloroethene$_A^{\#}$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-006w
Bromochloromethane$_A^{\#}$	<5	<5	<5	<5	<5	<5	<5	µg/l	5	A-T-006w
Chloroform$_A^{\#}$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-006w
2,2-Dichloropropane$_A^{\#}$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-006w
1,2-Dichloroethane$_A^{\#}$	<2	<2	<2	<2	<2	<2	<2	µg/l	2	A-T-006w
1,1,1-Trichloroethane$_A^{\#}$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-006w
1,1-Dichloropropene$_A^{\#}$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-006w
Carbon Tetrachloride$_A^{\#}$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-006w
Dibromomethane$_A^{\#}$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-006w
1,2-Dichloropropane$_A^{\#}$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-006w
Bromodichloromethane$_A^{\#}$	<10	<10	<10	<10	<10	<10	<10	µg/l	10	A-T-006w
Trichloroethene$_A^{\#}$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-006w
cis 1,3-Dichloropropene$_A^{\#}$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-006w
trans 1,3-Dichloropropene$_A^{\#}$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-006w
1,1,2-Trichloroethane$_A^{\#}$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-006w
1,3-Dichloropropane$_A^{\#}$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-006w
Dibromochloromethane$_A^{\#}$	<3	<3	<3	<3	<3	<3	<3	µg/l	3	A-T-006w
1,2-Dibromoethane$_A^{\#}$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-006w
Tetrachloroethene$_A$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-006w
1,1,1,2-Tetrachloroethane$_A$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-006w
Chlorobenzene$_A^{\#}$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-006w

Lab Sample ID	24/12413/1	24/12413/2	24/12413/3	24/12413/4	24/12413/5	24/12413/6	24/12413/7	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	BH001	BH002	BH003	BH004	BH007	BH008	BH011			
Depth to Top	3.51	3.45	3.40	3.41	5.40	7.76	4.66			
Depth To Bottom										
Date Sampled	17-Dec-24	17-Dec-24	17-Dec-24	17-Dec-24	17-Dec-24	17-Dec-24	17-Dec-24			
Sample Type	WATER - GW	WATER - GW	WATER - GW	WATER - GW	WATER - GW	WATER - GW	WATER - GW			
Sample Matrix Code	N/A	N/A	N/A	N/A	N/A	N/A	N/A			
Bromoform$_A^{\#}$	<3	<3	<3	<3	<3	<3	<3	µg/l	3	A-T-006w
Styrene$_A^{\#}$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-006w
1,1,2,2-Tetrachloroethane$_A$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-006w
1,2,3-Trichloropropane$_A^{\#}$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-006w
Isopropylbenzene$_A^{\#}$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-006w
Bromobenzene$_A^{\#}$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-006w
2-Chlorotoluene$_A^{\#}$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-006w
n-propylbenzene$_A^{\#}$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-006w
4-Chlorotoluene$_A^{\#}$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-006w
1,2,4-Trimethylbenzene$_A^{\#}$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-006w
4-Isopropyltoluene$_A^{\#}$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-006w
1,3,5-Trimethylbenzene$_A^{\#}$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-006w
1,2-Dichlorobenzene$_A^{\#}$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-006w
1,4-Dichlorobenzene$_A^{\#}$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-006w
sec-Butylbenzene$_A^{\#}$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-006w
tert-Butylbenzene$_A^{\#}$	<2	<2	<2	<2	<2	<2	<2	µg/l	2	A-T-006w
1,3-Dichlorobenzene$_A^{\#}$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-006w
n-butylbenzene$_A^{\#}$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-006w
1,2-Dibromo-3-chloropropane$_A^{\#}$	<2	<2	<2	<2	<2	<2	<2	µg/l	2	A-T-006w
1,2,4-Trichlorobenzene$_A^{\#}$	<3	<3	<3	<3	<3	<3	<3	µg/l	3	A-T-006w
1,2,3-Trichlorobenzene$_A^{\#}$	<3	<3	<3	<3	<3	<3	<3	µg/l	3	A-T-006w
Hexachlorobutadiene$_A^{\#}$	<1^U	<1^U	<1^U	<1^U	<1^U	<1^U	<1^U	µg/l	1	A-T-006w

Envirolab Job Number: 24/12413

Client Project Name: One Earth Solar Farm

Client Project Ref: 2372986

Lab Sample ID	24/12413/1	24/12413/2	24/12413/3	24/12413/4	24/12413/5	24/12413/6	24/12413/7	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	BH001	BH002	BH003	BH004	BH007	BH008	BH011			
Depth to Top	3.51	3.45	3.40	3.41	5.40	7.76	4.66			
Depth To Bottom										
Date Sampled	17-Dec-24	17-Dec-24	17-Dec-24	17-Dec-24	17-Dec-24	17-Dec-24	17-Dec-24			
Sample Type	WATER - GW	WATER - GW	WATER - GW	WATER - GW	WATER - GW	WATER - GW	WATER - GW			
Sample Matrix Code	N/A	N/A	N/A	N/A	N/A	N/A	N/A			
TPH CWG (w) with Clean Up										
Ali >C5-C6 (w)$_A^{\#}$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-022w
Ali >C6-C8 (w)$_A^{\#}$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-022w
Ali >C8-C10 (w)$_A^{\#}$	<5	<5	<5	<5	<5	<5	<5	µg/l	5	A-T-055w
Ali >C10-C12 (w)$_A^{\#}$	<5	<5	<5	<5	<5	<5	<5	µg/l	5	A-T-055w
Ali >C12-C16 (w)$_A^{\#}$	<5	<5	<5	<5	<5	<5	8	µg/l	5	A-T-055w
Ali >C16-C21 (w)$_A^{\#}$	<5	<5	<5	<5	<5	<5	32	µg/l	5	A-T-055w
Ali >C21-C35 (w)$_A^{\#}$	<5	<5	<5	<5	<5	<5	599	µg/l	5	A-T-055w
Total Aliphatics (w)$_A^{\#}$	<5	<5	<5	<5	<5	<5	639	µg/l	5	Calc-As Recd
Aro >C5-C7 (w)$_A^{\#}$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-022w
Aro >C7-C8 (w)$_A^{\#}$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-022w
Aro >C8-C10 (w)$_A$	<5	<5	<5	<5	<5	<5	7	µg/l	5	A-T-055w
Aro >C10-C12 (w)$_A^{\#}$	<5	<5	<5	<5	<5	<5	<5	µg/l	5	A-T-055w
Aro >C12-C16 (w)$_A^{\#}$	<5	<5	<5	<5	<5	<5	15	µg/l	5	A-T-055w
Aro >C16-C21 (w)$_A^{\#}$	7	<5	<5	<5	<5	6	37	µg/l	5	A-T-055w
Aro >C21-C35 (w)$_A^{\#}$	<10	<10	<10	<10	<10	<10	21	µg/l	10	A-T-055w
Total Aromatics (w)$_A^{\#}$	<10	<10	<10	<10	<10	<10	80	µg/l	10	Calc-As Recd
TPH (Ali & Aro >C5-C35) (w)$_A$	<10	<10	<10	<10	<10	<10	719	µg/l	10	Calc-As Recd
BTEX - Benzene (w)$_A^{\#}$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-022w
BTEX - Toluene (w)$_A^{\#}$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-022w
BTEX - Ethyl Benzene (w)$_A^{\#}$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-022w
BTEX - m & p Xylene (w)$_A^{\#}$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-022w
BTEX - o Xylene (w)$_A^{\#}$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-022w
MTBE (w)$_A^{\#}$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-022w

Envirolab Job Number: 24/12413

Client Project Name: One Earth Solar Farm

Client Project Ref: 2372986

Lab Sample ID	24/12413/8							Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	BH013									
Depth to Top	3.87									
Depth To Bottom										
Date Sampled	17-Dec-24									
Sample Type	WATER - GW									
Sample Matrix Code	N/A									
pH (w)$_{A}^{\#}$	7.13							pH	0.01	A-T-031w
Alkalinity (total) (w) Colorimetry$_{A}^{\#}$	277							mg/l Ca CO3	20	A-T-038w
Hardness Total$_{A}^{\#}$	1483							mg/l Ca CO3	4	A-T-049w
Total Dissolved Solids (w)$_{A}^{\#}$	2082							mg/l	20	A-T-035w
Ammoniacal nitrogen as N (w)$_{A}^{\#}$	<0.05							mg/l	0.05	A-T-033w
Chloride (w)$_{A}^{\#}$	32							mg/l	1	A-T-026w
Fluoride (w)$_{A}^{\#}$	<0.10							mg/l	0.1	A-T-026w (F)
Nitrate (w)$_{A}^{\#}$	81.3							mg/l	0.1	A-T-026w (N)
Sulphate (w)$_{A}^{\#}$	1210							mg/l	1	A-T-026w
Cyanide (free) (w)$_{A}^{\#}$	<0.005							mg/l	0.005	A-T-042wFCN
Cyanide (total) (w)$_{A}^{\#}$	<0.005							mg/l	0.005	A-T-042wTCN
Antimony (dissolved)$_{A}$	<2							µg/l	1	A-T-025w
Arsenic (dissolved)$_{A}^{\#}$	<2							µg/l	1	A-T-025w
Boron (dissolved)$_{A}^{\#}$	97							µg/l	10	A-T-025w
Barium (dissolved)$_{A}^{\#}$	42							µg/l	1	A-T-025w
Beryllium (dissolved)$_{A}^{\#}$	<2							µg/l	1	A-T-025w
Cadmium (dissolved)$_{A}^{\#}$	<0.4							µg/l	0.2	A-T-025w
Calcium (dissolved)$_{A}^{\#}$	425							mg/l	1	A-T-049w
Copper (dissolved)$_{A}^{\#}$	<8							µg/l	4	A-T-025w
Chromium (dissolved)$_{A}^{\#}$	8							µg/l	1	A-T-025w
Chromium (hexavalent) (w)$_{A}^{\#}$	<0.01							mg/l	0.01	A-T-040w
Chromium (trivalent) (w)	<0.01							mg/l	0.01	Calc
Iron (dissolved)$_{A}^{\#}$	48							µg/l	10	A-T-025w
Lead (dissolved)$_{A}^{\#}$	<2							µg/l	1	A-T-025w
Manganese (dissolved)$_{A}^{\#}$	9							µg/l	1	A-T-025w
Magnesium (dissolved)$_{A}^{\#}$	102							mg/l	1	A-T-049w
Mercury (dissolved)$_{A}^{\#}$	0.4							µg/l	0.1	A-T-025w
Molybdenum (dissolved)$_{A}^{\#}$	1.4							µg/l	0.5	A-T-025w
Nickel (dissolved)$_{A}^{\#}$	<4							µg/l	2	A-T-025w
Selenium (dissolved)$_{A}^{\#}$	4							µg/l	1	A-T-025w
Sodium (dissolved)$_{A}^{\#}$	44							mg/l	1	A-T-049w
Sulphur, Total (dissolved)$_{A}$	412							mg/l	1	A-T-072w
Vanadium (dissolved)$_{A}^{\#}$	<2							µg/l	1	A-T-025w

Envirolab Job Number: 24/12413

Client Project Name: One Earth Solar Farm

Client Project Ref: 2372986

Lab Sample ID	**24/12413/8**							**Units**	**Limit of Detection**	**Method ref**
Client Sample No										
Client Sample ID	**BH013**									
Depth to Top	**3.87**									
Depth To Bottom										
Date Sampled	**17-Dec-24**									
Sample Type	**WATER - GW**									
Sample Matrix Code	**N/A**									
Zinc (dissolved)$_{A}^{\#}$	**6**							**µg/l**	**2**	**A-T-025w**

Lab Sample ID	24/12413/8							Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	BH013									
Depth to Top	3.87									
Depth To Bottom										
Date Sampled	17-Dec-24									
Sample Type	WATER - GW									
Sample Matrix Code	N/A									
PAH 16MS (w)										
Acenaphthene (w)$_A^{\#}$	<0.01							µg/l	0.01	A-T-019w
Acenaphthylene (w)$_A^{\#}$	<0.01							µg/l	0.01	A-T-019w
Anthracene (w)$_A^{\#}$	<0.01							µg/l	0.01	A-T-019w
Benzo(a)anthracene (w)$_A^{\#}$	<0.01							µg/l	0.01	A-T-019w
Benzo(a)pyrene (w)$_A^{\#}$	<0.01							µg/l	0.01	A-T-019w
Benzo(b)fluoranthene (w)$_A^{\#}$	<0.01							µg/l	0.01	A-T-019w
Benzo(ghi)perylene (w)$_A^{\#}$	<0.01							µg/l	0.01	A-T-019w
Benzo(k)fluoranthene (w)$_A^{\#}$	<0.01							µg/l	0.01	A-T-019w
Chrysene (w)$_A^{\#}$	<0.01							µg/l	0.01	A-T-019w
Dibenzo(ah)anthracene (w)$_A^{\#}$	<0.01							µg/l	0.01	A-T-019w
Fluoranthene (w)$_A^{\#}$	<0.01							µg/l	0.01	A-T-019w
Fluorene (w)$_A^{\#}$	<0.01							µg/l	0.01	A-T-019w
Indeno(123-cd)pyrene (w)$_A^{\#}$	<0.01							µg/l	0.01	A-T-019w
Naphthalene (w)$_A^{\#}$	<0.01							µg/l	0.01	A-T-019w
Phenanthrene (w)$_A^{\#}$	<0.01							µg/l	0.01	A-T-019w
Pyrene (w)$_A^{\#}$	0.01							µg/l	0.01	A-T-019w
Total PAH 16MS (w)$_A^{\#}$	0.01							µg/l	0.01	A-T-019w
Phenols NG (speciated HPLC) (w)										
Phenol (w)$_A$	<0.01							mg/l	0.01	A-T-050w
Cresols (w)$_A$	<0.01							mg/l	0.01	A-T-050w
Catechol (w)$_A$	<0.01							mg/l	0.01	A-T-050w
Resorcinol (w) $_A$	<0.01							mg/l	0.01	A-T-050w
Xylenols & Ethylphenols (w)$_A$	<0.01							mg/l	0.01	A-T-050w
Naphthols (w)$_A$	<0.01							mg/l	0.01	A-T-050w
Trimethylphenol (w)$_A$	<0.01							mg/l	0.01	A-T-050w
Phenols - Total by HPLC (w)$_A$	<0.01							mg/l	0.01	A-T-050w

Lab Sample ID	24/12413/8							Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	BH013									
Depth to Top	3.87									
Depth To Bottom										
Date Sampled	17-Dec-24									
Sample Type	WATER - GW									
Sample Matrix Code	N/A									
VOC excl. BTEX										
Dichlorodifluoromethane$_A$	<1							µg/l	1	A-T-006w
Chloromethane$_A$	<10							µg/l	10	A-T-006w
Vinyl Chloride$_A^\#$	<1							µg/l	1	A-T-006w
Bromomethane$_A^\#$	<1							µg/l	1	A-T-006w
Chloroethane$_A^\#$	<1							µg/l	1	A-T-006w
Trichlorofluoromethane$_A^\#$	<1							µg/l	1	A-T-006w
trans 1,2-Dichloroethene$_A^\#$	<1							µg/l	1	A-T-006w
Dichloromethane$_A$	<5							µg/l	5	A-T-006w
Carbon Disulphide$_A^\#$	<1							µg/l	1	A-T-006w
1,1-Dichloroethene$_A^\#$	<1							µg/l	1	A-T-006w
1,1-Dichloroethane$_A^\#$	<1							µg/l	1	A-T-006w
cis 1,2-Dichloroethene$_A^\#$	<1							µg/l	1	A-T-006w
Bromochloromethane$_A^\#$	<5							µg/l	5	A-T-006w
Chloroform$_A^\#$	<1							µg/l	1	A-T-006w
2,2-Dichloropropane$_A^\#$	<1							µg/l	1	A-T-006w
1,2-Dichloroethane$_A^\#$	<2							µg/l	2	A-T-006w
1,1,1-Trichloroethane$_A^\#$	<1							µg/l	1	A-T-006w
1,1-Dichloropropene$_A^\#$	<1							µg/l	1	A-T-006w
Carbon Tetrachloride$_A^\#$	<1							µg/l	1	A-T-006w
Dibromomethane$_A^\#$	<1							µg/l	1	A-T-006w
1,2-Dichloropropane$_A^\#$	<1							µg/l	1	A-T-006w
Bromodichloromethane$_A^\#$	<10							µg/l	10	A-T-006w
Trichloroethene$_A^\#$	<1							µg/l	1	A-T-006w
cis 1,3-Dichloropropene$_A^\#$	<1							µg/l	1	A-T-006w
trans 1,3-Dichloropropene$_A^\#$	<1							µg/l	1	A-T-006w
1,1,2-Trichloroethane$_A^\#$	<1							µg/l	1	A-T-006w
1,3-Dichloropropane$_A^\#$	<1							µg/l	1	A-T-006w
Dibromochloromethane$_A^\#$	<3							µg/l	3	A-T-006w
1,2-Dibromoethane$_A^\#$	<1							µg/l	1	A-T-006w
Tetrachloroethene$_A$	<1							µg/l	1	A-T-006w
1,1,1,2-Tetrachloroethane$_A$	<1							µg/l	1	A-T-006w
Chlorobenzene$_A^\#$	<1							µg/l	1	A-T-006w

Envirolab Job Number: 24/12413

Client Project Name: One Earth Solar Farm

Client Project Ref: 2372986

Lab Sample ID	24/12413/8							Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	BH013									
Depth to Top	3.87									
Depth To Bottom										
Date Sampled	17-Dec-24									
Sample Type	WATER - GW									
Sample Matrix Code	N/A									
Bromoform$_{A}^{\#}$	<3							µg/l	3	A-T-006w
Styrene$_{A}^{\#}$	<1							µg/l	1	A-T-006w
1,1,2,2-Tetrachloroethane$_{A}$	<1							µg/l	1	A-T-006w
1,2,3-Trichloropropane$_{A}^{\#}$	<1							µg/l	1	A-T-006w
Isopropylbenzene$_{A}^{\#}$	<1							µg/l	1	A-T-006w
Bromobenzene$_{A}^{\#}$	<1							µg/l	1	A-T-006w
2-Chlorotoluene$_{A}^{\#}$	<1							µg/l	1	A-T-006w
n-propylbenzene$_{A}^{\#}$	<1							µg/l	1	A-T-006w
4-Chlorotoluene$_{A}^{\#}$	<1							µg/l	1	A-T-006w
1,2,4-Trimethylbenzene$_{A}^{\#}$	<1							µg/l	1	A-T-006w
4-Isopropyltoluene$_{A}^{\#}$	<1							µg/l	1	A-T-006w
1,3,5-Trimethylbenzene$_{A}^{\#}$	<1							µg/l	1	A-T-006w
1,2-Dichlorobenzene$_{A}^{\#}$	<1							µg/l	1	A-T-006w
1,4-Dichlorobenzene$_{A}^{\#}$	<1							µg/l	1	A-T-006w
sec-Butylbenzene$_{A}^{\#}$	<1							µg/l	1	A-T-006w
tert-Butylbenzene$_{A}^{\#}$	<2							µg/l	2	A-T-006w
1,3-Dichlorobenzene$_{A}^{\#}$	<1							µg/l	1	A-T-006w
n-butylbenzene$_{A}^{\#}$	<1							µg/l	1	A-T-006w
1,2-Dibromo-3-chloropropane$_{A}^{\#}$	<2							µg/l	2	A-T-006w
1,2,4-Trichlorobenzene$_{A}^{\#}$	<3							µg/l	3	A-T-006w
1,2,3-Trichlorobenzene$_{A}^{\#}$	<3							µg/l	3	A-T-006w
Hexachlorobutadiene$_{A}^{\#}$	<1^{U}							µg/l	1	A-T-006w

Envirolab Job Number: 24/12413

Client Project Name: One Earth Solar Farm

Client Project Ref: 2372986

Lab Sample ID	24/12413/8							Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	BH013									
Depth to Top	3.87									
Depth To Bottom										
Date Sampled	17-Dec-24									
Sample Type	WATER - GW									
Sample Matrix Code	N/A									
TPH CWG (w) with Clean Up										
Ali >C5-C6 $(w)_A^{\#}$	<1							µg/l	1	A-T-022w
Ali >C6-C8 $(w)_A^{\#}$	<1							µg/l	1	A-T-022w
Ali >C8-C10 $(w)_A^{\#}$	<5							µg/l	5	A-T-055w
Ali >C10-C12 $(w)_A^{\#}$	<5							µg/l	5	A-T-055w
Ali >C12-C16 $(w)_A^{\#}$	<5							µg/l	5	A-T-055w
Ali >C16-C21 $(w)_A^{\#}$	<5							µg/l	5	A-T-055w
Ali >C21-C35 $(w)_A^{\#}$	<5							µg/l	5	A-T-055w
Total Aliphatics $(w)_A^{\#}$	<5							µg/l	5	Calc-As Recd
Aro >C5-C7 $(w)_A^{\#}$	<1							µg/l	1	A-T-022w
Aro >C7-C8 $(w)_A^{\#}$	<1							µg/l	1	A-T-022w
Aro >C8-C10 $(w)_A$	<5							µg/l	5	A-T-055w
Aro >C10-C12 $(w)_A^{\#}$	<5							µg/l	5	A-T-055w
Aro >C12-C16 $(w)_A^{\#}$	<5							µg/l	5	A-T-055w
Aro >C16-C21 $(w)_A^{\#}$	<5							µg/l	5	A-T-055w
Aro >C21-C35 $(w)_A^{\#}$	<10							µg/l	10	A-T-055w
Total Aromatics $(w)_A^{\#}$	<10							µg/l	10	Calc-As Recd
TPH (Ali & Aro >C5-C35) $(w)_A$	<10							µg/l	10	Calc-As Recd
BTEX - Benzene $(w)_A^{\#}$	<1							µg/l	1	A-T-022w
BTEX - Toluene $(w)_A^{\#}$	<1							µg/l	1	A-T-022w
BTEX - Ethyl Benzene $(w)_A^{\#}$	<1							µg/l	1	A-T-022w
BTEX - m & p Xylene $(w)_A^{\#}$	<1							µg/l	1	A-T-022w
BTEX - o Xylene $(w)_A^{\#}$	<1							µg/l	1	A-T-022w
MTBE $(w)_A^{\#}$	<1							µg/l	1	A-T-022w

Report Notes

General

•This report shall not be reproduced, except in full, without written approval from Envirolab.
•The client Sample No, Client Sample ID, Depth to top, Depth to Bottom and Date Sampled are all provided by the client and can affect the validity of results.
•The results reported herein relate only to the material supplied to the laboratory.
•The residue of any samples contained within this report, and any received within the same delivery, will be disposed of **four weeks** after the initial scheduling. For samples tested for Asbestos we will retain a portion of the dried sample for a minimum of **six months** after the initial Asbestos testing is completed.
•Analytical results reflect the quality of the sample at the time of analysis only.
•Opinions and Interpretations expressed are outside our scope of accreditation.
•A deviating sample report is appended and will indicate if samples or tests have been found to be deviating. Any test results affected may not be an accurate record of the concentration at the time of sampling and, as a result, may be invalid.
•If a sample is outside of the calibration range or affected by interferences then it may need diluting. This will result in the limit of detection (LOD) being raised.
•Subcontracted Analysis: Please see the appended report for any deviations, current LODs and accreditation status of the test.

Key

Superscript "#"	Accredited to ISO 17025
Superscript "M"	Accredited to MCertS
Superscript "U"	Individual result not accredited
None of the above symbols	Analysis unaccredited
Subscript "A"	Analysis performed on as-received Sample
Subscript "D"	Analysis performed on the dried sample, crushed to pass 2mm sieve.
Subscript "D" on Asbestos	Analysis performed on a dried aliquot of sample provided.
Subscript "^"	Analysis has dependant options against results. Details appear in the comments of your Sample receipt
IS	Insufficient Sample for analysis
US	Unsuitable Sample for analysis
NDP	No Determination Possible
NAD	No Asbestos Detected
Trace	Asbestos found not suitable for Gravimetric Quantification – not enough to accurately weigh.
N/A	Not applicable

Asbestos

Identification: Asbestos in soil analysis is performed on a dried aliquot of the submitted sample and cannot guarantee to identify asbestos if only present in small numbers as discrete fibres/fragments in the original sample.
Stones etc. are not removed from the sample prior to analysis
"Trace Asbestos Identified" will be reported if there is not enough present to verify the type.
Quantification: Generally a 2 stage process including visual identification, hand picking and weighing, and fibre counting. Where ACMs are found a percentage asbestos is assigned to each with reference to 'HSG264, Asbestos: The survey guide' and the calculated asbestos content is expressed as a percentage of the dried soil sample aliquot used. If asbestos is identified as being present but is not in a form that is suitable for analysis by hand picking and weighing (normally if the asbestos is present as free fibres). "TRACE" will be reported as a quantification result.
PLEASE INFORM THE LABORATORY IF YOU WOULD LIKE THE STAGE 3 SEDIMENTATION PROCESS CARRIED OUT. Note this will be subcontracted.

Assigned Matrix Codes

1	SAND	6	CLAY/LOAM	A	Contains Stones
2	LOAM	7	OTHER	B	Contains Construction Rubble
3	CLAY	8	Asbestos Bulk (Only Asbestos ID accredited)	C	Contains visible hydrocarbons
4	LOAM/SAND	9	Incinerator Ash (some Metals accredited)	D	Contains glass / metal
5	SAND/CLAY			E	Contains roots / twigs
Note: 7,8,9 matrices are not covered by our ISO 17025 or MCertS accreditation, unless stated above.					

Soil Chemical Analysis:
All results are reported as dry weight (<40°C).
For samples with Matrix Codes 1 - 6 natural stones, brick and concrete fragments >10mm and any extraneous material (visible glass, metal or twigs) are removed and excluded from the sample prior to analysis and reported results corrected to a whole sample basis. This is reported as '% stones >10mm'.
For samples with Matrix Code 7 the whole sample is dried and crushed prior to analysis and this supersedes any "A" subscripts
All analysis is performed on the sample as received for soil samples which are positive for asbestos or the client has informed asbestos may be present and/or if they are from outside the European Union and this supersedes any "D" subscripts.

TPH by method A-T-007:
For waters, free and visible oils are excluded from the sample used for analysis, so the reported result represents the dissolved phase only.
Results "with Clean up" indicates samples cleaned up with Silica during extraction.

EPH CWG (method A-T-055) from TPH CWG:
EPH CWG results have humics mathematically subtracted through instrument calculation.
Where these humic substances have been identified in any IDs from "TPH CWG with clean up" please note that the concentration is **NOT** included in the quantified results but present in the ID for information.

Electrical Conductivity of water by method A-T-037:
Results greater than 12900µS/cm @ 25^0C / 11550µS/cm @ 20^0C fall outside the calibration range and as such are unaccredited.

Please contact your client manager if you require any further information.

Envirolab Deviating Samples Report

Hattersley Science & Technology Park, Stockport Road, Hattersley, SK14 3QU
Tel. 0161 368 4921 email. ask@envlab.co.uk

Client: Central Alliance, Alliance House, South Park Way, South Park Way, Wakefield 41 Business Park, Wakefield, WF2 0XJ

Project: One Earth Solar Farm

Clients Project No: 2372986

Project No: 24/12413

Date Received: 23/12/2024 (am)

Cool Box Temperatures (°C): 12.2 - 13.3

Lab Sample ID	24/12413/1	24/12413/2	24/12413/3	24/12413/4	24/12413/5	24/12413/6	24/12413/7	24/12413/8
Client Sample No								
Client Sample ID/Depth	BH001 3.51m	BH002 3.45m	BH003 3.40m	BH004 3.41m	BH007 5.40m	BH008 7.76m	BH011 4.66m	BH013 3.87m
Date Sampled	17/12/24	17/12/24	17/12/24	17/12/24	17/12/24	17/12/24	17/12/24	17/12/24
Deviation Code								
A7 (no HNO3)							✓	
F	✓	✓	✓	✓	✓	✓	✓	✓

Key

A7 (no HNO3) *No HNO3 preserved bottle provided (dissolved metals will be deviating)*

F *Maximum holding time exceeded between sampling date and analysis for analytes listed below*

HOLDING TIME EXCEEDANCES

Lab Sample ID	24/12413/1	24/12413/2	24/12413/3	24/12413/4	24/12413/5	24/12413/6	24/12413/7	24/12413/8
Client Sample No								
Client Sample ID/Depth	BH001 3.51m	BH002 3.45m	BH003 3.40m	BH004 3.41m	BH007 5.40m	BH008 7.76m	BH011 4.66m	BH013 3.87m
Date Sampled	17/12/24	17/12/24	17/12/24	17/12/24	17/12/24	17/12/24	17/12/24	17/12/24
Nitrate (w)	✓	✓	✓	✓	✓	✓	✓	✓
pH (w)	✓	✓	✓	✓	✓	✓	✓	✓
PAH 16MS (w)								✓

If, at any point before reaching the laboratory, the temperature of the samples has breached those set in published standards, e.g. BS-EN 5667-3, ISO 18400-102:2017, then the concentration of any affected analytes may differ from that at the time of sampling.

Envirolab Analysis Dates

Lab Sample ID	24/12413/1	24/12413/2	24/12413/3	24/12413/4	24/12413/5	24/12413/6	24/12413/7	24/12413/8
Client Sample No								
Client Sample ID/Depth	BH001 3.51m	BH002 3.45m	BH003 3.40m	BH004 3.41m	BH007 5.40m	BH008 7.76m	BH011 4.66m	BH013 3.87m
Date Sampled	17/12/24	17/12/24	17/12/24	17/12/24	17/12/24	17/12/24	17/12/24	17/12/24
A-T-006w	02/01/2025	02/01/2025	02/01/2025	02/01/2025	02/01/2025	02/01/2025	02/01/2025	02/01/2025
A-T-019w	02/01/2025	02/01/2025	02/01/2025	02/01/2025	02/01/2025	02/01/2025	02/01/2025	07/01/2025
A-T-022w	02/01/2025	02/01/2025	02/01/2025	02/01/2025	02/01/2025	02/01/2025	02/01/2025	02/01/2025
A-T-025w	24/12/2024	24/12/2024	24/12/2024	24/12/2024	24/12/2024	24/12/2024	24/12/2024	24/12/2024
A-T-026w	06/01/2025	06/01/2025	24/12/2024	24/12/2024	06/01/2025	06/01/2025	24/12/2024	24/12/2024
A-T-026w (F)	24/12/2024	24/12/2024	24/12/2024	24/12/2024	24/12/2024	24/12/2024	24/12/2024	24/12/2024
A-T-026w (N)	24/12/2024	24/12/2024	24/12/2024	24/12/2024	24/12/2024	24/12/2024	24/12/2024	24/12/2024
A-T-031w	24/12/2024	24/12/2024	24/12/2024	24/12/2024	24/12/2024	24/12/2024	24/12/2024	24/12/2024
A-T-033w	24/12/2024	24/12/2024	24/12/2024	24/12/2024	24/12/2024	24/12/2024	24/12/2024	24/12/2024
A-T-035w	03/01/2025	03/01/2025	03/01/2025	03/01/2025	03/01/2025	03/01/2025	03/01/2025	03/01/2025
A-T-038w	24/12/2024	24/12/2024	24/12/2024	24/12/2024	24/12/2024	24/12/2024	24/12/2024	24/12/2024
A-T-040w	24/12/2024	24/12/2024	24/12/2024	24/12/2024	24/12/2024	24/12/2024	24/12/2024	24/12/2024
A-T-042wFCN	24/12/2024	24/12/2024	24/12/2024	24/12/2024	24/12/2024	24/12/2024	24/12/2024	24/12/2024
A-T-042wTCN	24/12/2024	24/12/2024	24/12/2024	24/12/2024	24/12/2024	24/12/2024	24/12/2024	24/12/2024
A-T-049w	23/12/2024	23/12/2024	23/12/2024	23/12/2024	23/12/2024	23/12/2024	23/12/2024	23/12/2024
A-T-050w	09/01/2025	09/01/2025	09/01/2025	09/01/2025	13/01/2025	09/01/2025	07/01/2025	07/01/2025
A-T-055w	30/12/2024	30/12/2024	30/12/2024	30/12/2024	30/12/2024	30/12/2024	30/12/2024	30/12/2024
A-T-072w	03/01/2025	10/01/2025	03/01/2025	03/01/2025	03/01/2025	03/01/2025	03/01/2025	03/01/2025
Calc	24/12/2024	24/12/2024	24/12/2024	24/12/2024	24/12/2024	24/12/2024	24/12/2024	24/12/2024
Calc-As Recd	02/01/2025	02/01/2025	02/01/2025	02/01/2025	02/01/2025	02/01/2025	02/01/2025	02/01/2025

The above dates are the analysis completion dates, please note that these are not necessarily the date that the analysis was weighed/extracted.

End of Report