



Laboratory Report



GEO Site & Testing Services Ltd

Contract Number: 51940

Client Ref: **18860**

Report Date: **21-01-2021**

Client PO:

Client **Soils Limited**
Newton House
Cross Road
Tadworth
Surrey
KT20 5SR

Contract Title: **28 Charlotte street, London W1T 2NF**

For the attention of: **Dante Valerio Tedesco**

Date Received: **06-01-2021**

Date Completed: **21-01-2021**

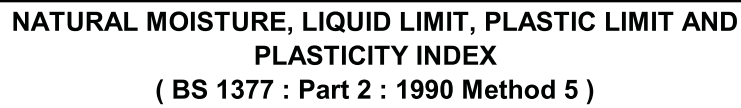
Test Description	Qty
Moisture Content BS 1377:1990 - Part 2 : 3.2 - * UKAS	1
1 Point Liquid & Plastic Limit BS 1377:1990 - Part 2 : 4.4 & 5.3 - * UKAS	1
PSD Wet Sieve method BS 1377:1990 - Part 2 : 9.2 - * UKAS	3
Samples Received - @ Non Accredited Test	4
Disposal of samples for job	1

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 certificate shall not be reproduced except in full, without the prior written approval of the laboratory.

Approved Signatories:

Emma Sharp (Office Manager/Director) - Paul Evans (Quality/Technical Manager) - Richard John (Advanced Testing Manager)
Shaun Jones (Laboratory manager) - Wayne Honey (Administrative/Quality Assistant)



51940

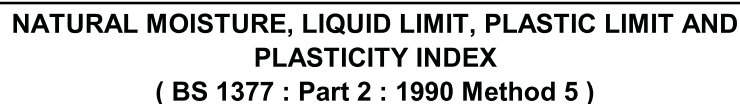
28 Charlotte street, London W1T 2NF

18/01/2021

DESCRIPTIONS

Operators	Checked	21/01/2021	Wayne Honey (Administrative/Quality Assistant)
Ieuan Williams	Approved	21/01/2021	Paul Evans (Quality/Technical Manager)



[illegible]

PLASTICITY CHART FOR CASAGRANDE CLASSIFICATION BS 5930:1999+A2:2010





PARTICLE SIZE DISTRIBUTION
BS 1377 Part 2:1990
Wet Sieve, Clause 9.2

Contract Number **51940**

Borehole/Pit No. **TP1**

Site Name **28 Charlotte street, London W1T 2NF**

Sample No.

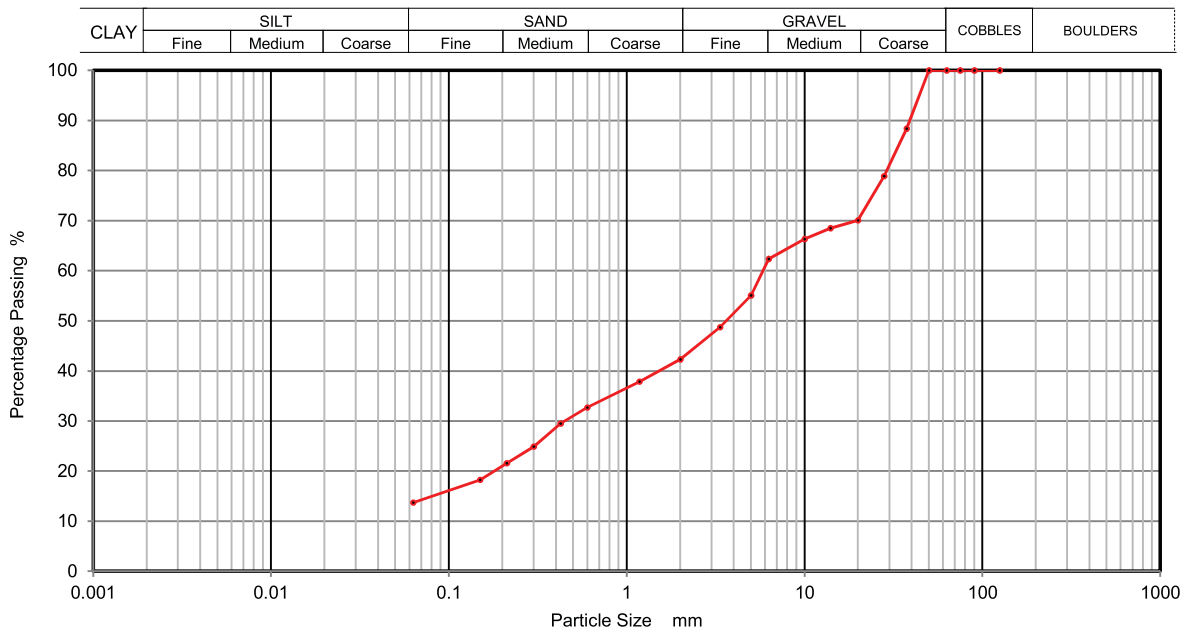
Soil Description **Grey clayey/silty fine to coarse sandy fine to coarse GRAVEL**

Depth Top **1.00**

Depth Base

Date Tested **16/01/2021**

Sample Type **D**



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	88		
28	79		
20	70		
14	69		
10	66		
6.3	62		
5	55		
3.35	49		
2	42		
1.18	38		
0.6	33		
0.425	30		
0.3	25		
0.212	22		
0.15	18		
0.063	14		

Sample Proportions	% dry mass
Cobbles	0
Gravel	58
Sand	28
Silt and Clay	14

Remarks

Preparation and testing in accordance with BS1377 unless noted below

Operators	Checked	20/01/2021	Wayne Honey	W. Honey
RO/MH	Approved	21/01/2021	Paul Evans	P. Evans





PARTICLE SIZE DISTRIBUTION
BS 1377 Part 2:1990
Wet Sieve, Clause 9.2

Contract Number **51940**

Borehole/Pit No. **TP1**

Site Name **28 Charlotte street, London W1T 2NF**

Sample No.

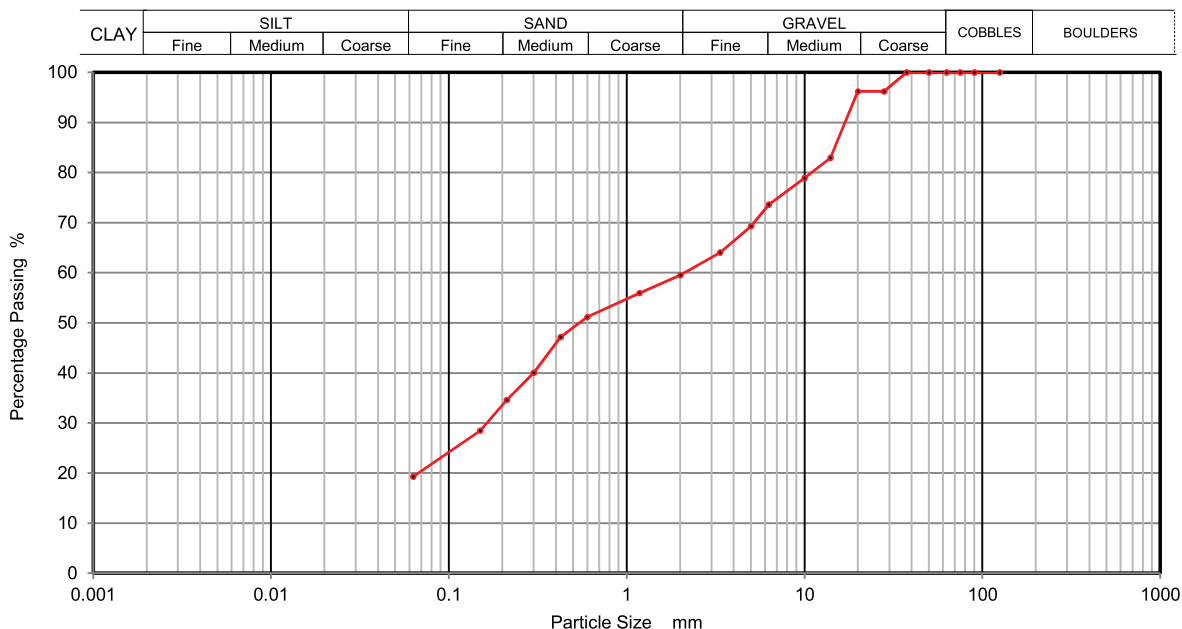
Soil Description **Grey clayey/silty fine to coarse gravelly fine to coarse SAND**

Depth Top **2.00**

Depth Base

Date Tested **16/01/2021**

Sample Type **D**



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	96		
20	96		
14	83		
10	79		
6.3	74		
5	69		
3.35	64		
2	60		
1.18	56		
0.6	51		
0.425	47		
0.3	40		
0.212	35		
0.15	28		
0.063	19		

Sample Proportions	% dry mass
Cobbles	0
Gravel	40
Sand	41
Silt and Clay	19

Remarks

Preparation and testing in accordance with BS1377 unless noted below

Operators	Checked	20/01/2021	Wayne Honey	W. Honey
RO/MH	Approved	21/01/2021	Paul Evans	P. Evans





PARTICLE SIZE DISTRIBUTION
BS 1377 Part 2:1990
Wet Sieve, Clause 9.2

Contract Number **51940**

Borehole/Pit No. **TP1**

Site Name **28 Charlotte street, London W1T 2NF**

Sample No.

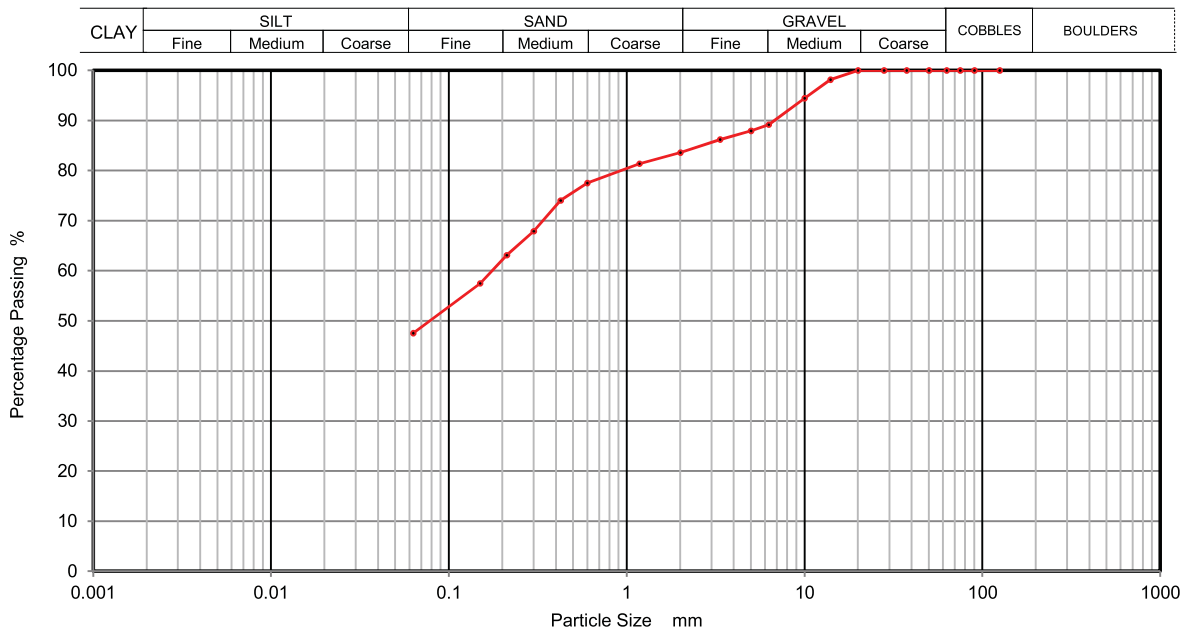
Soil Description **Brown fine to medium gravelly fine to coarse sandy SILT/CLAY**

Depth Top **3.00**

Depth Base

Date Tested **16/01/2021**

Sample Type **D**



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	100		
20	100		
14	98		
10	94		
6.3	89		
5	88		
3.35	86		
2	84		
1.18	81		
0.6	78		
0.425	74		
0.3	68		
0.212	63		
0.15	57		
0.063	48		

Sample Proportions	% dry mass
Cobbles	0
Gravel	16
Sand	36
Silt and Clay	48

Remarks

Preparation and testing in accordance with BS1377 unless noted below

Operators	Checked	20/01/2021	Wayne Honey	<i>W. Honey</i>
RO/MH	Approved	21/01/2021	Paul Evans	<i>P. Evans</i>





Dante Valerio Tedesco
Soils Ltd
Thomas Telford House - Unit 11
Sun Valley Business Park
Winnall Close
Winchester
SO23 0LB

DETS Ltd
Unit 1
Rose Lane Industrial Estate
Rose Lane
Lenham Heath
Kent
ME17 2JN
t: 01622 850410

DETS Report No: 20-15109

Site Reference: 28 Charlotte Street, London, W1T 2NF

Project / Job Ref: 18860

Order No: 18860_B

Sample Receipt Date: 21/12/2020

Sample Scheduled Date: 21/12/2020

Report Issue Number: 1

Reporting Date: 04/01/2021

Authorised by:

Dave Ashworth
Technical Manager

Dates of laboratory activities for each tested analyte are available upon request.

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



DETS Ltd
Unit 1, Rose Lane Industrial Estate
Rose Lane
Lenham Heath
Maidstone
Kent ME17 2JN
Tel : 01622 850410



Soil Analysis Certificate						
DETS Report No: 20-15109	Date Sampled	None Supplied	None Supplied			
Soils Ltd	Time Sampled	None Supplied	None Supplied			
Site Reference: 28 Charlotte Street, London, W1T 2NF	TP / BH No	TP1	TP1			
Project / Job Ref: 18860	Additional Refs	None Supplied	None Supplied			
Order No: 18860_B	Depth (m)	1.50	2.50			
Reporting Date: 04/01/2021	DETS Sample No	517703	517704			

Determinand	Unit	RL	Accreditation				
pH	pH Units	N/a	MCERTS	8.0	7.7		
Total Sulphate as SO ₄	mg/kg	< 200	MCERTS	7978	1759		
Total Sulphate as SO ₄	%	< 0.02	MCERTS	0.80	0.18		
W/S Sulphate as SO ₄ (2:1)	mg/l	< 10	MCERTS	1290	461		
W/S Sulphate as SO ₄ (2:1)	g/l	< 0.01	MCERTS	1.28	0.46		
Total Sulphur	%	< 0.02	NONE	0.28	0.08		
Ammonium as NH ₄	mg/kg	< 0.5	NONE	< 0.5	0.8		
Ammonium as NH ₄	mg/l	< 0.05	NONE	< 0.05	0.08		
W/S Chloride (2:1)	mg/kg	< 1	MCERTS	203	75		
W/S Chloride (2:1)	mg/l	< 0.5	MCERTS	102	37.6		
Water Soluble Nitrate (2:1) as NO ₃	mg/kg	< 3	MCERTS	1210	221		
Water Soluble Nitrate (2:1) as NO ₃	mg/l	< 1.5	MCERTS	604	111		
W/S Magnesium	mg/l	< 0.1	NONE	15	3.5		

Analytical results are expressed on a dry weight basis where samples are assisted-dried at less than 30°C. The Samples Descriptions page describes if the test is performed on the dried or as-received portion
Subcontracted analysis (S)



DETS Ltd
Unit 1, Rose Lane Industrial Estate
Rose Lane
Lenham Heath
Maidstone
Kent ME17 2JN
Tel : 01622 850410



Soil Analysis Certificate - Sample Descriptions

DETS Report No: 20-15109

Soils Ltd

Site Reference: 28 Charlotte Street, London, W1T 2NF

Project / Job Ref: 18860

Order No: 18860_B

Reporting Date: 04/01/2021

DETS Sample No	TP / BH No	Additional Refs	Depth (m)	Moisture Content (%)	Sample Matrix Description
^ 517703	TP1	None Supplied	1.50	13.6	Brown gravelly sand with stones and brick
^ 517704	TP1	None Supplied	2.50	10.6	Brown loamy sand with stones

Moisture content is part of procedure E003 & is not an accredited test

Insufficient Sample ^{1/5}

Unsuitable Sample ^{4/5}

^ no sampling date provided; unable to confirm if samples are within acceptable holding times



DETS Ltd
Unit 1, Rose Lane Industrial Estate
Rose Lane
Lenham Heath
Maidstone
Kent ME17 2JN
Tel : 01622 850410



Soil Analysis Certificate - Methodology & Miscellaneous Information	
DETS Report No: 20-15109	
Soils Ltd	
Site Reference: 28 Charlotte Street, London, W1T 2NF	
Project / Job Ref: 18860	
Order No: 18860_B	
Reporting Date: 04/01/2021	

Matrix	Analysed On	Determinand	Brief Method Description	Method No
Soil	D	Boron - Water Soluble	Determination of water soluble boron in soil by 2:1 hot water extract followed by ICP-OES	E012
Soil	AR	BTEX	Determination of BTEX by headspace GC-MS	E001
Soil	D	Cations	Determination of cations in soil by aqua-regia digestion followed by ICP-OES	E002
Soil	D	Chloride - Water Soluble (2:1)	Determination of chloride by extraction with water & analysed by ion chromatography	E009
Soil	AR	Chromium - Hexavalent	Determination of hexavalent chromium in soil by extraction in water then by acidification, addition of 1,5 diphénylcarbazine followed by colorimetry	E016
Soil	AR	Cyanide - Complex	Determination of complex cyanide by distillation followed by colorimetry	E015
Soil	AR	Cyanide - Free	Determination of free cyanide by distillation followed by colorimetry	E015
Soil	AR	Cyanide - Total	Determination of total cyanide by distillation followed by colorimetry	E015
Soil	D	Cyclohexane Extractable Matter (CEM)	Gravimetrically determined through extraction with cyclohexane	E011
Soil	AR	Diesel Range Organics (C10 - C24)	Determination of hexane/acetone extractable hydrocarbons by GC-FID	E004
Soil	AR	Electrical Conductivity	Determination of electrical conductivity by addition of saturated calcium sulphate followed by electrometric measurement	E022
Soil	AR	Electrical Conductivity	Determination of electrical conductivity by addition of water followed by electrometric measurement	E023
Soil	D	Elemental Sulphur	Determination of elemental sulphur by solvent extraction followed by GC-MS	E020
Soil	AR	EPH (C10 - C40)	Determination of acetone/hexane extractable hydrocarbons by GC-FID	E004
Soil	AR	EPH Product ID	Determination of acetone/hexane extractable hydrocarbons by GC-FID	E004
Soil	AR	EPH TEXAS (C6-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C40)	Determination of acetone/hexane extractable hydrocarbons by GC-FID for C8 to C40. C6 to C8 by headspace GC-MS	E004
Soil	D	Fluoride - Water Soluble	Determination of Fluoride by extraction with water & analysed by ion chromatography	E009
Soil	D	Fraction Organic Carbon (FOC)	Determination of TOC by combustion analyser.	E027
Soil	D	Organic Matter (SOM)	Determination of TOC by combustion analyser.	E027
Soil	D	TOC (Total Organic Carbon)	Determination of TOC by combustion analyser.	E027
Soil	AR	Exchangeable Ammonium	Determination of ammonium by discrete analyser.	E029
Soil	D	FOC (Fraction Organic Carbon)	Determination of fraction of organic carbon by oxidising with potassium dichromate followed by titration with iron (II) sulphate	E010
Soil	D	Loss on Ignition @ 450oC	Determination of loss on ignition in soil by gravimetrically with the sample being ignited in a muffle furnace	E019
Soil	D	Magnesium - Water Soluble	Determination of water soluble magnesium by extraction with water followed by ICP-OES	E025
Soil	D	Metals	Determination of metals by aqua-regia digestion followed by ICP-OES	E002
Soil	AR	Mineral Oil (C10 - C40)	Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge	E004
Soil	AR	Moisture Content	Moisture content; determined gravimetrically	E003
Soil	D	Nitrate - Water Soluble (2:1)	Determination of nitrate by extraction with water & analysed by ion chromatography	E009
Soil	D	Organic Matter	Determination of organic matter by oxidising with potassium dichromate followed by titration with iron (II) sulphate	E010
Soil	AR	PAH - Speciated (EPA 16)	Determination of PAH compounds by extraction in acetone and hexane followed by GC-MS with the use of surrogate and internal standards	E005
Soil	AR	PCB - 7 Congeners	Determination of PCB by extraction with acetone and hexane followed by GC-MS	E008
Soil	D	Petroleum Ether Extract (PEE)	Gravimetrically determined through extraction with petroleum ether	E011
Soil	AR	pH	Determination of pH by addition of water followed by electrometric measurement	E007
Soil	AR	Phenols - Total (monohydric)	Determination of phenols by distillation followed by colorimetry	E021
Soil	D	Phosphate - Water Soluble (2:1)	Determination of phosphate by extraction with water & analysed by ion chromatography	E009
Soil	D	Sulphate (as SO4) - Total	Determination of total sulphate by extraction with 10% HCl followed by ICP-OES	E013
Soil	D	Sulphate (as SO4) - Water Soluble (2:1)	Determination of sulphate by extraction with water & analysed by ion chromatography	E009
Soil	D	Sulphate (as SO4) - Water Soluble (2:1)	Determination of water soluble sulphate by extraction with water followed by ICP-OES	E014
Soil	AR	Sulphide	Determination of sulphide by distillation followed by colorimetry	E018
Soil	D	Sulphur - Total	Determination of total sulphur by extraction with aqua-regia followed by ICP-OES	E024
Soil	AR	SVOC	Determination of semi-volatile organic compounds by extraction in acetone and hexane followed by GC-MS	E006
Soil	AR	Thiocyanate (as SCN)	Determination of thiocyanate by extraction in caustic soda followed by acidification followed by addition of ferric nitrate followed by colorimetry	E017
Soil	D	Toluene Extractable Matter (TEM)	Gravimetrically determined through extraction with toluene	E011
Soil	D	Total Organic Carbon (TOC)	Determination of organic matter by oxidising with potassium dichromate followed by titration with iron (II) sulphate	E010
Soil	AR	TPH CWG (ali: C5- C6, C6-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C34, aro: C5-C7, C7-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C35)	Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge for C8 to C35. C5 to C8 by headspace GC-MS	E004
Soil	AR	TPH LQM (ali: C5-C6, C6-C8, C8-C10, C10-C12, C12-C16, C16-C35, C35-C44, aro: C5-C7, C7-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C35, C35-C44)	Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge for C8 to C44. C5 to C8 by headspace GC-MS	E004
Soil	AR	VOCs	Determination of volatile organic compounds by headspace GC-MS	E001
Soil	AR	VPH (C6-C8 & C8-C10)	Determination of hydrocarbons C6-C8 by headspace GC-MS & C8-C10 by GC-FID	E001

D Dried
AR As Received