

Results - Soil

Project: AG3268-21 Land Adjacent to Junction 10, M40, Ardley

Client: Applied Geology	Chemtest Job No.:		21-19819	21-19819
	Quotation No.: Q17-09497	Chemtest Sample ID.:		
	Sample Location:		TP149	TP150
	Sample Type:		SOIL	SOIL
	Top Depth (m):		0.30	0.20
	Bottom Depth (m):		0.40	0.30
	Date Sampled:		03-Jun-2021	03-Jun-2021
	Asbestos Lab:		DURHAM	DURHAM
Determinand	Accred.	SOP	Units	LOD
Benzene	M	2760	µg/kg	1.0
				< 1.0
Toluene	M	2760	µg/kg	1.0
				< 1.0
Ethylbenzene	M	2760	µg/kg	1.0
				< 1.0
m & p-Xylene	M	2760	µg/kg	1.0
				< 1.0
o-Xylene	M	2760	µg/kg	1.0
				< 1.0
Aliphatic TPH >C5-C8	N	2680	mg/kg	1.0
				< 1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0
				< 1.0
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0
				< 1.0
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0
				< 1.0
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0
				< 1.0
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0
				< 1.0
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0
				< 1.0
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0
				< 1.0
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0
				< 5.0
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0
				< 1.0
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0
				< 1.0
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0
				< 1.0
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0
				< 1.0
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0
				< 1.0
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0
				< 1.0
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0
				< 1.0
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0
				< 1.0
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0
				< 5.0
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0
				< 10
Sulphate (2:1 Water Soluble) as SO4	M	2120	g/l	0.010
				< 0.010
ACM Type	U	2192		N/A
				-
Asbestos Identification	U	2192		N/A
				No Asbestos Detected
Moisture	N	2030	%	0.020
				12
Soil Colour	N	2040		N/A
				Brown
Other Material	N	2040		N/A
				Stones and Roots
Soil Texture	N	2040		N/A
				Sand
pH	M	2010		4.0
				8.4
Boron	N	2450	mg/kg	0.40
				12
Beryllium	U	2450	mg/kg	1.0
				1.2
Methyl Tert-Butyl Ether	M	2760	µg/kg	1.0
				< 1.0

Results - Soil

Project: AG3268-21 L and Adjacent to Junction 10, M40, Ardley

Determinand	Accred.	SOP	Units	LOD	Chemtest Job No.:	
					21-19819	21-19819
Demeton-O	N	2820	mg/kg	0.20	< 0.20	1218953
Phorate	N	2820	mg/kg	0.20	< 0.20	1218954
Demeton-S	N	2820	mg/kg	0.20	< 0.20	TP149
Disulfoton	N	2820	mg/kg	0.20	< 0.20	SOIL
Fenthion	N	2820	mg/kg	0.20	< 0.20	SOIL
Trichloronate	N	2820	mg/kg	0.20	< 0.20	0.30
Prothiofos	N	2820	mg/kg	0.20	< 0.20	0.40
Fensulphothion	N	2820	mg/kg	0.20	< 0.20	03-Jun-2021
Sulprofos	N	2820	mg/kg	0.20	< 0.20	DURHAM
Azinphos-Methyl	N	2820	mg/kg	0.20	< 0.20	DURHAM
Coumaphos	N	2820	mg/kg	0.20	< 0.20	DURHAM
Atraton	N	2830	mg/kg	0.20	< 0.20	DURHAM
Prometon	N	2830	mg/kg	0.20	< 0.20	DURHAM
Simazine	N	2830	mg/kg	0.20	< 0.20	DURHAM
Atrazine	N	2830	mg/kg	0.20	< 0.20	DURHAM
Propazine	N	2830	mg/kg	0.20	< 0.20	DURHAM
Terbutylazine	N	2830	mg/kg	0.20	< 0.20	DURHAM
Secbumeton	N	2830	mg/kg	0.20	< 0.20	DURHAM
Simetryn	N	2830	mg/kg	0.20	< 0.20	DURHAM
Ametryn	N	2830	mg/kg	0.20	< 0.20	DURHAM
Prometryn	N	2830	mg/kg	0.20	< 0.20	DURHAM
Terbutryn	N	2830	mg/kg	0.20	< 0.20	DURHAM
Alpha-HCH	N	2840	mg/kg	0.20	< 0.20	DURHAM
Gamma-HCH (Lindane)	N	2840	mg/kg	0.20	< 0.20	DURHAM
Beta-HCH	N	2840	mg/kg	0.20	< 0.20	DURHAM
Delta-HCH	N	2840	mg/kg	0.20	< 0.20	DURHAM
Heptachlor	N	2840	mg/kg	0.20	< 0.20	DURHAM
Aldrin	N	2840	mg/kg	0.20	< 0.20	DURHAM
Heptachlor Epoxide	N	2840	mg/kg	0.20	< 0.20	DURHAM
Gamma-Chlordane	N	2840	mg/kg	0.20	< 0.20	DURHAM
Alpha-Chlordane	N	2840	mg/kg	0.20	< 0.20	DURHAM
Endosulfan I	N	2840	mg/kg	0.20	< 0.20	DURHAM
4,4-DDE	N	2840	mg/kg	0.20	< 0.20	DURHAM
Dieldrin	N	2840	mg/kg	0.20	< 0.20	DURHAM
Endrin	N	2840	mg/kg	0.20	< 0.20	DURHAM
4,4-DDD	N	2840	mg/kg	0.20	< 0.20	DURHAM
Endosulfan II	N	2840	mg/kg	0.20	< 0.20	DURHAM

Results - Soil

Project: AG3268-21 Land Adjacent to Junction 10, M40, Ardley

Client: Applied Geology	Chemtest Job No.: 21-19819	21-19819
Quotation No.: Q17-09497	Chemtest Sample ID.: 1218953	1218954
	Sample Location: TP149	TP150
	Sample Type: SOIL	SOIL
	Top Depth (m): 0.30	0.20
	Bottom Depth (m): 0.40	0.30
	Date Sampled: 03-Jun-2021	03-Jun-2021
	Asbestos Lab: DURHAM	DURHAM
Determinand	Accred.	SOP
Endrin Aldehyde	N	2840 mg/kg
4,4-DDT	N	2840 mg/kg
Endosulfan Sulphate	N	2840 mg/kg
Methoxychlor	N	2840 mg/kg
Endrin Ketone	N	2840 mg/kg
		LOD
		< 0.20
		< 0.20
		< 0.20
		< 0.20
		< 0.20

Test Methods

SOP	Title	Parameters included	Method summary
1010	pH Value of Waters	pH	pH Meter
1220	Anions, Alkalinity & Ammonium in Waters	Fluoride; Chloride; Nitrite; Nitrate; Total; Oxidisable Nitrogen (TON); Sulfate; Phosphate; Alkalinity; Ammonium	Automated colorimetric analysis using 'Aquakem 600' Discrete Analyser.
1455	Metals in Waters by ICP-MS	Metals, including: Antimony; Arsenic; Barium; Beryllium; Boron; Cadmium; Chromium; Cobalt; Copper; Lead; Manganese; Mercury; Molybdenum; Nickel; Selenium; Tin; Vanadium; Zinc	Filtration of samples followed by direct determination by inductively coupled plasma mass spectrometry (ICP-MS).
1700	Speciated Polynuclear Aromatic Hydrocarbons (PAH) in Waters by GC-FID	Acenaphthene; Acenaphthylene; Anthracene; Benzo[a]Anthracene; Benzo[a]Pyrene; Benzo[b]Fluoranthene; Benzo[ghi]Perylene; Benzo[k]Fluoranthene; Chrysene; Dibenz[ah]Anthracene; Fluoranthene; Fluorene; Indeno[123cd]Pyrene; Naphthalene; Phenanthrene; Pyrene	Dichloromethane extraction / GC-FID (GC-FID detection is non-selective and can be subject to interference from co-eluting compounds)
2010	pH Value of Soils	pH	pH Meter
2030	Moisture and Stone Content of Soils(Requirement of MCERTS)	Moisture content	Determination of moisture content of soil as a percentage of its as received mass obtained at <37°C.
2040	Soil Description(Requirement of MCERTS)	Soil description	As received soil is described based upon BS5930
2120	Water Soluble Boron, Sulphate, Magnesium & Chromium	Boron; Sulphate; Magnesium; Chromium	Aqueous extraction / ICP-OES
2192	Asbestos	Asbestos	Polarised light microscopy / Gravimetry
2450	Acid Soluble Metals in Soils	Metals, including: Arsenic; Barium; Beryllium; Cadmium; Chromium; Cobalt; Copper; Lead; Manganese; Mercury; Molybdenum; Nickel; Selenium; Vanadium; Zinc	Acid digestion followed by determination of metals in extract by ICP-MS.
2490	Hexavalent Chromium in Soils	Chromium [VI]	Soil extracts are prepared by extracting dried and ground soil samples into boiling water. Chromium [VI] is determined by 'Aquakem 600' Discrete Analyser using 1,5-diphenylcarbazide.
2625	Total Organic Carbon in Soils	Total organic Carbon (TOC)	Determined by high temperature combustion under oxygen, using an Eltra elemental analyser.
2680	TPH A/A Split	Aliphatics: >C5-C6, >C6-C8,>C8-C10, >C10-C12, >C12-C16, >C16-C21, >C21-C35, >C35- C44Aromatics: >C5-C7, >C7-C8, >C8- C10, >C10-C12, >C12-C16, >C16- C21, >C21- C35, >C35- C44	Dichloromethane extraction / GCxGC FID detection
2700	Speciated Polynuclear Aromatic Hydrocarbons (PAH) in Soil by GC-FID	Acenaphthene; Acenaphthylene; Anthracene; Benzo[a]Anthracene; Benzo[a]Pyrene; Benzo[b]Fluoranthene; Benzo[ghi]Perylene; Benzo[k]Fluoranthene; Chrysene; Dibenz[ah]Anthracene; Fluoranthene; Fluorene; Indeno[123cd]Pyrene; Naphthalene; Phenanthrene; Pyrene	Dichloromethane extraction / GC-FID (GC-FID detection is non-selective and can be subject to interference from co-eluting compounds)
2760	Volatile Organic Compounds (VOCs) in Soils by Headspace GC-MS	Volatile organic compounds, including BTEX and halogenated Aliphatic/Aromatics.(cf. USEPA Method 8260)*please refer to UKAS schedule	Automated headspace gas chromatographic (GC) analysis of a soil sample, as received, with mass spectrometric (MS) detection of volatile organic compounds.
2820	Organophosphorus (O-P) Pesticides in Soils by GC-MS	Organophosphorus pesticide representative suite including Parathion, Malathion etc, plus client specific determinands	Dichloromethane extraction / GC-MS

Test Methods

SOP	Title	Parameters included	Method summary
2830	Organonitrogen (O-N) Pesticides in Soils by GC-MS	Organonitrogen pesticide representative suite including Triazines etc, plus client specific determinands	Dichloromethane extraction / GC-MS
2840	Organochlorine (O-Cl) Pesticides in Soils by GC-MS	Organochlorine pesticide representative suite including DDT and its metabolites, 'drins' and HCH etc, plus client specific determinands	Dichloromethane extraction / GC-MS
2920	Phenols in Soils by HPLC	Phenolic compounds including Resorcinol, Phenol, Methylphenols, Dimethylphenols, 1-Naphthol and Trimethylphenols Note: chlorophenols are excluded.	60:40 methanol/water mixture extraction, followed by HPLC determination using electrochemical detection.
640	Characterisation of Waste (Leaching C10)	Waste material including soil, sludges and granular waste	Compliance Test for Leaching of Granular Waste Material and Sludge

Report Information

Key

U	UKAS accredited
M	MCERTS and UKAS accredited
N	Unaccredited
S	This analysis has been subcontracted to a UKAS accredited laboratory that is accredited for this analysis
SN	This analysis has been subcontracted to a UKAS accredited laboratory that is not accredited for this analysis
T	This analysis has been subcontracted to an unaccredited laboratory
I/S	Insufficient Sample
U/S	Unsuitable Sample
N/E	not evaluated
<	"less than"
>	"greater than"
SOP	Standard operating procedure
LOD	Limit of detection

Comments or interpretations are beyond the scope of UKAS accreditation

The results relate only to the items tested

Uncertainty of measurement for the determinands tested are available upon request

None of the results in this report have been recovery corrected

All results are expressed on a dry weight basis

The following tests were analysed on samples as received and the results subsequently corrected to a dry weight basis TPH, BTEX, VOCs, SVOCs, PCBs, Phenols

For all other tests the samples were dried at < 37°C prior to analysis

All Asbestos testing is performed at the indicated laboratory

Issue numbers are sequential starting with 1 all subsequent reports are incremented by 1

Sample Deviation Codes

- A - Date of sampling not supplied
- B - Sample age exceeds stability time (sampling to extraction)
- C - Sample not received in appropriate containers
- D - Broken Container
- E - Insufficient Sample (Applies to LOI in Trommel Fines Only)

Sample Retention and Disposal

All soil samples will be retained for a period of 30 days from the date of receipt

All water samples will be retained for 14 days from the date of receipt

Charges may apply to extended sample storage


If you require extended retention of samples, please email your requirements to:

customerservices@chemtest.com

Applied Geology Ltd
 Unit 23 Abbey Park
 Stareton
 Kenilworth
 Warwickshire
 CV8 2LY
 For the attention of Andrew Smith

Report No: **B26845**
 Issue No **01**



LABORATORY TEST REPORT

Project Name		LAND ADJACENT TO JUNCTION 10, M40, ARDLEY	
Project Number	B26845	Date samples received	29/06/2021
Your Ref	AG3268-21	Date written instructions received	29/06/2021
Purchase Order	17014	Date testing commenced	29/06/2021
Please find enclosed the results as summarised below			
Figure / Table	Test Quantity	Description	ISO 17025 Accredited
1	34	BRE Suites - Soil	Yes
Remarks :			
Issued by : Stephen Langman		Date of Issue : 13/07/2021	
Approved Signatories :		Key to symbols used in this report S/C : Testing was sub-contracted	
 13/07/2021 S Langman (Laboratory Coordinator), D Bowen (Production Manager)			
<p>Unless we are notified to the contrary, samples will be disposed after a period of one month from this date. The results reported relate to samples received in the laboratory only. All results contained in this report are provisional unless signed by an approved signatory This report should not be reproduced except in full without the written approval of the laboratory. Under multisite accreditation the testing contained in this report may have been performed at another Terra Tek laboratory. The enclosed results remain the property of Terra Tek Limited and we reserve the right to withdraw our report if we have not received cleared funds in accordance with our standard terms and conditions Only those results indicated in this report are UKAS accredited and any opinions or interpretations expressed are outside the scope of UKAS accreditation. Feedback on the this report may be left via our website www.terratek.co.uk/contact-us</p>			



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Terra Tek Ltd is registered in Scotland No. 121594
 Offices in Airdrie, Birmingham, Belfast and Aston Clinton

		LAND ADJACENT TO JUNCTION 10, M40, ARDLEY										Contract No AG32688-21								
		Client										Engineer								
Sample Identification		Depth m	Sample Ref	Sample Type	Lab Sample ID	pH	Sulphate (soluble in 2:1 water extract) as SO4 g/l	Sulphate (acid soluble as SO4) %	Total Sulphur %											
TP105		1.00-1.10		D	782466	7.9	0.02	~	~											
TP107		0.80-0.90		D	782468	8.5	<0.01	0.11	0.04											
TP11		0.40-0.50		D	782471	8.3	0.01	~	~											
TP113		0.90-1.00		D	782475	8.3	0.02	~	~											
TP120		0.60-0.70		D	782482	8.5	<0.01	0.09	0.03											
TP127		0.90-1.00		D	782489	8.3	0.02	0.09	0.03											
TP135		0.40-0.50		D	782496	8.2	0.02	~	~											
TP147		0.90-1.00		D	782508	8.5	<0.01	~	~											
TP16		1.40-1.50		D	782514	8.4	0.01	~	~											
TP21		0.80-0.90		D	782518	8.4	0.01	~	~											
Limits of Detection Terra Tek Analysis Method TP019 M Accreditation M=Moerts U=UKAS N=No accreditation						~	0.01	0.01	0.01											
Originator	Checked & Approved																			
DAB	 13/07/2021																			




BRE SUITE







Figure 1

Sheet 1 of 4

TERRA TEK SITE INVESTIGATION AND LABORATORY SERVICES		LAND ADJACENT TO JUNCTION 10, M40, ARDLEY										Contract No AG32688-21									
Client		Engineer																			
Sample Identification		Depth m	Sample Ref	Sample Type	Lab Sample ID	pH	Sulphate (soluble in 2:1 water extract) as SO4 g/l	Sulphate (acid soluble as SO4) %	Total Sulphur %												
TP29		0.70-0.80		D	782526	8.4	0.01	0.09	0.04												
TP36		0.80-0.90		D	782533	8.5	0.01	~	~												
TP41		1.50-1.60		D	782539	8.5	0.03	~	~												
TP48		0.50-0.60		D	782543	8.3	0.01	~	~												
TP5		0.60-0.70		D	782545	8.5	0.01	0.11	0.04												
TP52		0.60-0.70		D	782547	8.5	0.01	~	~												
TP55		0.90-1.00		D	782550	8.5	0.01	0.10	0.03												
TP64		0.70-0.80		D	782556	8.5	0.01	~	~												
TP68		0.80-0.90		B	782559	8.5	0.01	0.10	0.04												
TP83		0.50-0.60		D	782573	8.3	0.01	0.10	0.04												
Limits of Detection						~	0.01	0.01	0.01												
Terra Tek Analysis Method						TP019	TP169	TP171	TP129												
Accreditation M=Moerts U=UKAS N=No accreditation						M	M	M	M												
Originator	Checked & Approved		BRE SUITE																		
DAB	S. Langman 13/07/2021		TK Figure 1 Sheet 2 of 4																		

 SITE INVESTIGATION AND LABORATORY SERVICES		Site		Contract No				
		LAND ADJACENT TO JUNCTION 10, M40, ARDLEY		AG32688-21				
Sample Identification		Client		 Figure 1				
		Engineer						
Hole	Depth m	Sample Ref	Sample Type	Lab Sample ID	pH	Sulphate (soluble in 2:1 water extract) as SO4 g/l	Sulphate (acid soluble as SO4) %	Total Sulphur %
TP84	0.80-0.90		D	782575	8.8	0.01	~	~
TP87	1.10-1.20		D	782598	8.5	0.01	~	~
TP98	0.60-0.70		D	782585	8.3	<0.01	~	~
TP9	1.60		D	782596	8.5	0.01	0.11	0.04
TP26	1.90		D	782588	8.5	0.02	0.11	0.04
TP37	2.00		B	782589	8.6	0.02	~	~
TP40	1.60		D	782590	8.6	0.01	0.08	0.03
TP72	1.50-1.60		D	782564	8.6	0.01	~	~
TP63	1.60		D	782591	8.5	0.01	~	~
TP76	1.60		D	782592	8.5	0.01	0.11	0.04
Limits of Detection Terra Tek Analysis Method TP019 M TP169 M TP171 M TP129 M					~	0.01	0.01	0.01
Accreditation M=Moerts U=UKAS N=No accreditation					TP019 M	TP169 M	TP171 M	TP129 M
Originator	Checked & Approved		 13/07/2021			BRE SUITE		
DAB								

 TERRA TEK <small>SITE INVESTIGATION AND LABORATORY SERVICES</small>		Site LAND ADJACENT TO JUNCTION 10, M40, ARDLEY Contract No AG32688-21										
		Client Engineer										
Sample Identification												
Hole	Depth m	Sample Ref	Sample Type	Lab Sample ID	pH	Sulphate (soluble in 2:1 water extract) as SO4 g/l	Sulphate (acid soluble as SO4) %	Total Sulphur %				
TP115	1.40		D	782593	8.4	0.02	?	?				
TP145	1.40		D	782594	8.6	0.01	?	?				
TP129	1.90		D	782595	8.6	0.01	?	?				
TP126	1.00		D	782597	8.4	0.02	?	?				
Accreditation M=Moerts U=UKAS N=No accreditation Limits of Detection Terra Tek Analysis Method TP019 M TP169 M TP171 M TP129 M					~	0.01	0.01	0.01				
Originator	Checked & Approved		BRE SUITE									
DAB	 13/07/2021		 Figure 1 Sheet 4 of 4									

 TERRA TEK <small>SITE INVESTIGATION AND LABORATORY SERVICES</small>	Site	LAND ADJACENT TO JUNCTION 10, M40, ARDLEY	Contract No	AG3268-21
	Client			
	Engineer			

Sample Identification				Lab Sample ID	Date Sampled	Temperature on receipt °C	PRIMARY MATRIX	Secondary Matrix	Additional matrix	% Loss at 30C	% Retained 2mm
Exploratory Hole	Depth m	Sample Ref	Sample Type								
TP107	0.80-0.90		D	782468	02/06/21		Clayey SAND	Fine to medium gravel		8.7	38.0
TP11	0.40-0.50		D	782471	18/05/21		Sandy CLAY	Fine to medium gravel		12.2	48.8
TP113	0.90-1.00		D	782475	27/05/21		CLAY	Fine gravel		17.5	15.0
TP120	0.60-0.70		D	782482	01/06/21		Clayey SAND	Fine to medium gravel		8.2	43.0
TP127	0.90-1.00		D	782489	03/06/21		CLAY	Fine gravel		14.6	14.0
TP135	0.40-0.50		D	782496	04/06/21		CLAY	Fine gravel		22.8	14.3
TP147	0.90-1.00		D	782508	03/06/21		Clayey SAND	Fine to medium gravel		8.6	25.8
TP16	1.40-1.50		D	782514	17/05/21		CLAY	Fine gravel		12.0	19.2
TP21	0.80-0.90		D	782518	25/05/21		Sandy CLAY	Fine to medium gravel		7.8	19.6
TP29	0.70-0.80		D	782526	26/05/21		Sandy CLAY	Fine to medium gravel		12.1	25.9
TP36	0.80-0.90		D	782533	18/05/21		Sandy CLAY	Fine gravel		10.6	59.4
TP41	1.50-1.60		D	782539	18/05/21		CLAY	Fine gravel		17.2	7.9
TP48	0.50-0.60		D	782543	25/05/21		Sandy CLAY	Fine to medium gravel		15.1	44.3
TP5	0.60-0.70		D	782545	25/05/21		Clayey SAND	Fine to medium gravel		10.8	16.6
TP52	0.60-0.70		D	782547	20/05/21		Clayey SAND	Fine to medium gravel		11.9	13.1

Notes


Terra Tek are accredited for clay, sand and loam matrix types only, where they constitute the major component of the sample. Other coarse granular materials such as gravel, are not accredited where they comprise the major component of the sample.

Results are expressed on a dry-weight basis (samples dried at <30°C) except where stated. Samples for asbestos testing are dried at 85°C.

With the exception of samples analysed for asbestos, the laboratory removes any material > 2mm prior to analysis. The quantity and nature of the material is shown as the secondary and additional matrix types in the above table.

Where a parameter cannot be determined in house it is our policy to use a UKAS/MCERTS accredited laboratory wherever possible. Terra Tek will assume responsibility for the quality of subcontracted tests and the performance of the subcontractor chosen. Where there is no known UKAS/MCERTS laboratory for a particular parameter, a laboratory listed within the Terra Tek Approved Subcontractors List, which is subject to performance assessment, will be selected.

Originator	Checked & Approved	SAMPLE DESCRIPTIONS	Appendix S1
DAB	<i>S. Langren</i> 13/01/2021		Sheet 1 of 3

 TERRA TEK <small>SITE INVESTIGATION AND LABORATORY SERVICES</small>	Site	LAND ADJACENT TO JUNCTION 10, M40, ARDLEY	Contract No	AG3268-21
	Client			
	Engineer			

Sample Identification				Lab Sample ID	Date Sampled	Temperature on receipt °C	PRIMARY MATRIX	Secondary Matrix	Additional matrix	% Loss at 30C	% Retained 2mm
Exploratory Hole	Depth m	Sample Ref	Sample Type								
TP55	0.90-1.00		D	782550	24/05/21		Clayey SAND	Fine to medium gravel		10.0	36.7
TP64	0.70-0.80		D	782556	20/05/21		Sandy CLAY	Fine to medium gravel		11.9	28.2
TP68	0.80-0.90		B	782559	24/05/21		Silty CLAY	Fine gravel		15.6	18.2
TP72	1.50-1.60		D	782564	20/05/21		Clayey SAND	Fine to medium gravel		9.2	25.3
TP83	0.50-0.60		D	782573	17/05/21		Sandy CLAY	Fine to medium gravel		11.9	59.9
TP84	0.80-0.90		D	782575	20/05/21		Sandstone			3.0	~
TP98	0.60-0.70		D	782585	28/05/21		Sandy CLAY	Fine to medium gravel		12.2	35.7
TP26	1.90		D	782588	26/05/21		Sandy CLAY	Fine to medium gravel		6.6	32.8
TP37	2.00		B	782589	24/05/21		Silty SAND	Fine to medium gravel	SLURRY	16.4	14.4
TP40	1.60		D	782590	18/05/21		Silty CLAY	Fine gravel	SLURRY	15.6	22.4
TP63	1.60		D	782591	20/05/21		Silty CLAY	Fine gravel		15.5	119.9
TP76	1.60		D	782592	19/05/21		Silty CLAY	Fine to medium gravel		16.0	23.4
TP115	1.40		D	782593	27/05/21		CLAY	Fine gravel		18.0	22.8
TP145	1.40		D	782594	04/06/21		Clayey SAND	Fine to medium gravel		7.1	27.5
TP129	1.90		D	782595	01/06/21		Clayey SAND	Fine to medium gravel		10.4	20.2

Notes


Terra Tek are accredited for clay, sand and loam matrix types only, where they constitute the major component of the sample. Other coarse granular materials such as gravel, are not accredited where they comprise the major component of the sample.

Results are expressed on a dry-weight basis (samples dried at <30°C) except where stated. Samples for asbestos testing are dried at 85°C.

With the exception of samples analysed for asbestos, the laboratory removes any material > 2mm prior to analysis. The quantity and nature of the material is shown as the secondary and additional matrix types in the above table.

Where a parameter cannot be determined in house it is our policy to use a UKAS/MCERTS accredited laboratory wherever possible. Terra Tek will assume responsibility for the quality of subcontracted tests and the performance of the subcontractor chosen. Where there is no known UKAS/MCERTS laboratory for a particular parameter, a laboratory listed within the Terra Tek Approved Subcontractors List, which is subject to performance assessment, will be selected.

Originator	Checked & Approved	SAMPLE DESCRIPTIONS	Appendix S1
DAB	<i>S. Langren</i> 13/01/2021		

 TERRA TEK <small>SITE INVESTIGATION AND LABORATORY SERVICES</small>	Site	LAND ADJACENT TO JUNCTION 10, M40, ARDLEY	Contract No	AG3268-21
	Client			
	Engineer			

Sample Identification				Lab Sample ID	Date Sampled	Temperature on receipt °C	PRIMARY MATRIX	Secondary Matrix	Additional matrix	% Loss at 30C	% Retained 2mm
Exploratory Hole	Depth m	Sample Ref	Sample Type								
TP9	1.60		D	782596	Deviating		Sandy CLAY	Fine to medium gravel		9.6	33.1
TP126	1.00		D	782597	03/06/21		Sandy CLAY	Fine to medium gravel		12.3	19.8
TP87	1.10-1.20		D	782598	19/05/21		Sandy CLAY	Fine gravel		9.7	23.2
TP105	1.00-1.10		D	782466	02/06/21		Clayey SAND	Fine to medium gravel		8.4	27.2

Notes


Terra Tek are accredited for clay, sand and loam matrix types only, where they constitute the major component of the sample. Other coarse granular materials such as gravel, are not accredited where they comprise the major component of the sample.

Results are expressed on a dry-weight basis (samples dried at <30°C) except where stated. Samples for asbestos testing are dried at 85°C.

With the exception of samples analysed for asbestos, the laboratory removes any material > 2mm prior to analysis. The quantity and nature of the material is shown as the secondary and additional matrix types in the above table.

Where a parameter cannot be determined in house it is our policy to use a UKAS/MCERTS accredited laboratory wherever possible. Terra Tek will assume responsibility for the quality of subcontracted tests and the performance of the subcontractor chosen. Where there is no known UKAS/MCERTS laboratory for a particular parameter, a laboratory listed within the Terra Tek Approved Subcontractors List, which is subject to performance assessment, will be selected.




Originator	Checked & Approved	SAMPLE DESCRIPTIONS	Appendix S1
DAB	<i>S. Langren</i> 13/01/2021		




 TERRA TEK <small>SITE INVESTIGATION AND LABORATORY SERVICES</small>				Site LAND ADJACENT TO JUNCTION 10, M40, ARDLEY		Contract No AG3268-21					
				Client							
				Engineer							
Sample Identification				Lab Sample ID	Date Sampled	Deviating conditions					Preservatives used
Exploratory Hole	Depth m	Sample Ref	Sample Type			Sampling date has not been provided	Exceeded maximum holding time for selected test(s)	Presence of headspace in sample vial	Poorly fitting cap or lid	Damaged container	
TP105	1.00-1.10		D	782466	02/06/21						
TP107	0.80-0.90		D	782468	02/06/21						
TP11	0.40-0.50		D	782471	18/05/21						
TP113	0.90-1.00		D	782475	27/05/21						
TP120	0.60-0.70		D	782482	01/06/21						
TP127	0.90-1.00		D	782489	03/06/21						
TP135	0.40-0.50		D	782496	04/06/21						
TP147	0.90-1.00		D	782508	03/06/21						
TP16	1.40-1.50		D	782514	17/05/21						
TP21	0.80-0.90		D	782518	25/05/21						
TP29	0.70-0.80		D	782526	26/05/21						
TP36	0.80-0.90		D	782533	18/05/21						
TP41	1.50-1.60		D	782539	18/05/21						
TP48	0.50-0.60		D	782543	25/05/21						
TP5	0.60-0.70		D	782545	25/05/21						



NOTES



- 1 Results reported for samples classified as deviating may be compromised. Deviation types are shown as "X" or "Yes" in the table above.
- 2 The absence of "X" or "Yes" in the table above indicates no reported deviations.
- 3 Deviations due to use of incorrect sample container are shown on result tables.
- 4 Deviating results are indicated within result tables.

Originator	Checked & Approved	DEVIATING SAMPLES - SOIL	 Appendix S2
DAB	 13/07/2021		

 TERRA TEK <small>SITE INVESTIGATION AND LABORATORY SERVICES</small>				Site LAND ADJACENT TO JUNCTION 10, M40, ARDLEY		Contract No AG3268-21						
				Client								
				Engineer								
Sample Identification						Deviating conditions						
Exploratory Hole	Depth m	Sample Ref	Sample Type	Lab Sample ID	Date Sampled	Sampling date has not been provided	Exceeded maximum holding time for selected test(s)	Presence of headspace in sample vial	Poorly fitting cap or lid	Damaged container	Preservatives used	
TP52	0.60-0.70		D	782547	20/05/21							
TP55	0.90-1.00		D	782550	24/05/21							
TP64	0.70-0.80		D	782556	20/05/21							
TP68	0.80-0.90		B	782559	24/05/21							
TP83	0.50-0.60		D	782573	17/05/21							
TP84	0.80-0.90		D	782575	20/05/21							
TP87	1.10-1.20		D	782598	19/05/21							
TP98	0.60-0.70		D	782585	28/05/21							
TP9	1.60		D	782596	Deviating							
TP26	1.90		D	782588	26/05/21							
TP37	2.00		B	782589	24/05/21							
TP40	1.60		D	782590	18/05/21							
TP72	1.50-1.60		D	782564	20/05/21							
TP63	1.60		D	782591	20/05/21							
TP76	1.60		D	782592	19/05/21							
NOTES 1 Results reported for samples classified as deviating may be compromised. Deviation types are shown as "X" or "Yes" in the table above. 2 The absence of "X" or "Yes" in the table above indicates no reported deviations. 3 Deviations due to use of incorrect sample container are shown on result tables. 4 Deviating results are indicated within result tables.												
Originator		Checked & Approved		DEVIATING SAMPLES - SOIL					 Appendix S2 Sheet 2 of 3			
DAB		 13/07/2021										

 TERRA TEK <small>SITE INVESTIGATION AND LABORATORY SERVICES</small>				Site LAND ADJACENT TO JUNCTION 10, M40, ARDLEY		Contract No AG3268-21					
				Client							
				Engineer							
Sample Identification						Deviating conditions			Preservatives used		
Exploratory Hole	Depth m	Sample Ref	Sample Type	Lab Sample ID	Date Sampled	Sampling date has not been provided	Exceeded maximum holding time for selected test(s)	Presence of headspace in sample vial		Poorly fitting cap or lid	Damaged container
TP115	1.40		D	782593	27/05/21						
TP145	1.40		D	782594	04/06/21						
TP129	1.90		D	782595	01/06/21						
TP126	1.00		D	782597	03/06/21						
NOTES 1 Results reported for samples classified as deviating may be compromised. Deviation types are shown as "X" or "Yes" in the table above. 2 The absence of "X" or "Yes" in the table above indicates no reported deviations. 3 Deviations due to use of incorrect sample container are shown on result tables. 4 Deviating results are indicated within result tables.											
Originator		Checked & Approved		DEVIATING SAMPLES - SOIL				 Appendix S2			
DAB		 13/07/2021								Sheet 3 of 3	

 TERRA TEK <small>SITE INVESTIGATION AND LABORATORY SERVICES</small>		Site LAND ADJACENT TO JUNCTION 10, M40, ARDLEY	Contract No AG3268-21		
		Client			
		Engineer			
Method Code	Reference	Description of Method	ISO17025 Accredited	MCERTS Accredited	Wet/Dry Sample Tested
GP001	BS1377, Part 3, 1990: Soils for Civil Engineering Purposes.	Preparation of soil samples for chemical analysis	Yes	Yes	N/A
GP012	BS EN 12457-3: Characterisation of Waste - Compliance test for leaching of granular waste materials and sludges (two-stage batch test)	Preparation of soil samples for two-stage leachate test			Dry
TP019	BS1377, Part 3, 1990: Soils for Civil Engineering Purposes.	Determination of pH in 2.5:1 water/soil extract using pH meter.	Yes	Yes	Dry
TP032	MAFF Book 427: The Analysis of Agricultural Materials: Method 8	Determination of water soluble boron by ICP-OES	Yes		Dry
TP040	APHA/AWWA, 19th edition: Method 3500Cr-D	Determination of hexavalent chromium by colorimetry.	Yes		Dry
TP041	BS1377, Part 3, 1990: Soils for Civil Engineering Purposes.	Determination of organic matter by titrimetry.	Yes		Dry
TP042	BS1377, Part 3, 1990: Soils for Civil Engineering Purposes.	Determination of loss on ignition at 50-440°C by gravimetry	Yes	Yes	Dry
TP045	GACHAMJA A.M. Chromatography and Analysis: 1992 9-11 (modified)	Determination of polyaromatic hydrocarbons extractable in dichloromethane, by GC/MS	Yes	Yes	Dry
TP046	MEWAM method: Phenols in water and Effluents: 4-aminoantipyrine method	Determination of monohydric phenols by steam distillation/colorimetry	Yes	Yes	Dry
TP047	MEWAM method: Cyanide in Waters etc	Determination of free cyanide by steam distillation/colorimetry	Yes		Dry
TP048	MEWAM method: Cyanide in Waters etc	Determination of total cyanide by steam distillation/colorimetry.	Yes	Yes	Dry
TP049	MEWAM method: Cyanide in Waters etc	Determination of complex cyanide by calculation	Yes		Dry
TP050	MEWAM method: Determination of Thiocyanate ,1985	Determination of thiocyanate by colorimetry	Yes	Yes	Dry
TP051	USEPA Method 9030B	Determination of acid soluble sulphides by steam distillation/colorimetry.	Yes	Yes	Wet
TP067	TNRCC Method 1005: 2001 (modified)	Determination of pentane/acetone extractable petroleum hydrocarbons (C8 - C40) by GC/FID	Yes	Yes	Wet
TP072	In-house documented method	Determination of ammoniacal nitrogen by colorimetry			Dry
TP074	In-house documented method	Determination of water soluble fluoride by ion selective electrode			Dry
TP098	BS1377, Part 3, 1990: Soils for Civil Engineering Purposes.	Determination of acid soluble chloride by titrimetry			Dry
TP099	BS1377, Part 3, 1990: Soils for Civil Engineering Purposes.	Determination of water soluble chloride by titrimetry	Yes	Yes	Dry
TP100	Wisconsin DNR Modified GRO method, Method for Determining Gasoline Range Organics	Determination of Volatile Petroleum Hydrocarbons/GRO.	Yes	Yes	Wet
Notes 1. Terra Tek (Birmingham) are MCERTS accredited for clay, sand & loam matrix types only, where they constitute the major component of the sample. Other coarse granular materials, ie gravel, are not accredited where they comprise the major component of the sample. 2. Results are expressed on a dry-weight basis (samples dried at <30°C) except where stated. 3. With the exception of samples analysed for asbestos, the laboratory removes any material >2mm prior to analysis. The quantity and nature of any material removed from samples is recorded and the information is available on request. 4. The laboratory records the date of analysis of each parameter. This information is available on request. 5. The test results pertain only to the samples provided and is not guaranteed to be representative of the parent material in whole or part from which the sample was taken. Sample location, site address, taken by and client reference are included where provided by the client, Terra Tek accepts no responsibility for the validity or accuracy of this information.					
Originator	Checked & Approved	SUMMARY OF IN-HOUSE ANALYTICAL TEST METHODS (SOIL)		 Appendix S3	Sheet 1 of 2
N/A	N/A				

 TERRA TEK <small>SITE INVESTIGATION AND LABORATORY SERVICES</small>		Site LAND ADJACENT TO JUNCTION 10, M40, ARDLEY	Contract No AG3268-21		
		Client			
		Engineer			
Method Code	Reference	Description of Method	ISO17025 Accredited	MCERTS Accredited	Wet/Dry Sample Tested
TP110	USEPA Methods 8082A & 3665A	Determination of Total & Speciated 7 PCB Congeners by GC/MS SIM	Yes	Yes	Wet
TP114	BS1377, Part 3, 1990: Soils for Civil Engineering Purposes.	Determination of carbonate in soil (rapid titration method)			Dry
TP126	TNRCC Method 1006 (modified)	Extracted petroleum hydrocarbons from TP067 split into aromatic and aliphatic fractions. Analysed by GC/FID.	Yes		Wet
TP129	In-house documented method	Determination of total sulphur by ICP-OES spectroscopy	Yes	Yes	Dry
TP134	In-house documented method	Determination of water soluble chloride by titrimetry	Yes	Yes	Dry
TP135	USEPA Methods 8100 & 8270D. In-house method TP045	Determination of polyaromatic hydrocarbons extractable in dichloromethane, by GC/MS (with concentration stage)			Dry
TP137	BS7755: Section 3.9: 1995/ISO 11466:1995	Determination of acid extractable metals in soil by ICP-OES	Selected	Selected	Dry
TP145	USEPA Methods 3550C & 8270D	Determination of Semi-Volatile Organic Compounds by GC/MS	Yes	Yes	Wet
TP147	USEPA Methods 8082A & 3665A	Determination of total & speciated WHO 12 PCB Congeners by GC/MS SIM.			Wet
TP150	USEPA Methods 8081B & 8141B	Determination of pesticides and herbicides in soil by GC/MS SIM			Dry
TP152	USEPA Method 556	Determination of carbonyls by GC/MS.			Wet
TP154	USEPA Method 5021. Wisconsin DNR modified GRO method	Determination of volatiles in by GC/MS headspace	Yes	Selected	Wet
TP158	USEPA Method 1671	Determination of glycols by GC/FID DI			Wet
TP169	In-house documented method	Determination of water soluble sulphate in 2:1 water/soil extract by ICP-OES spectroscopy	Yes	Yes	Wet
TP171	In-house documented method	Determination of acid soluble sulphate by ICP-OES spectroscopy	Yes	Yes	Dry
TP174	In-house documented method	Determination of Total Organic Carbon in soils by high temperature combustion & NDIR detection	Yes		Dry
TP178	In-house documented method	Determination of water soluble nitrate by ion selective electrode			Dry
TP181	HSG 248 Asbestos: The Analysts Guide (Appendix 2)	Asbestos Identification in bulk materials	Yes	No	Dry
TP183	HSG 248 Asbestos: The Analysts Guide (Appendix 2) & Standing Committee of Analysts: The Quantification of Asbestos in Soil (2017)	Asbestos Identification & Quantification in soils	Yes	No	Dry
TP185	In-house documented method	Determination of loss on ignition at 150-440°C by gravimetry	No	No	Dry
Notes 1. Terra Tek (Birmingham) are MCERTS accredited for clay, sand & loam matrix types only, where they constitute the major component of the sample. Other coarse granular materials, ie gravel, are not accredited where they comprise the major component of the sample. 2. Results are expressed on a dry-weight basis (samples dried at <30°C) except where stated. 3. With the exception of samples analysed for asbestos, the laboratory removes any material >2mm prior to analysis. The quantity and nature of any material removed from samples is recorded and the information is available on request. 4. The laboratory records the date of analysis of each parameter. This information is available on request. 5. The test results pertain only to the samples provided and is not guaranteed to be representative of the parent material in whole or part from which the sample was taken. Sample location, site address, taken by and client reference are included where provided by the client, Terra Tek accepts no responsibility for the validity or accuracy of this information.					
Originator	Checked & Approved	SUMMARY OF IN-HOUSE ANALYTICAL TEST METHODS (SOIL)		 Appendix S3	Sheet 2 of 2
N/A	N/A				

Applied Geology Ltd
 Unit 23 Abbey Park
 Stareton
 Kenilworth
 Warwickshire
 CV8 2LY
 For the attention of Andrew Smith

Report No: **B26845**
 Issue No **02**

LABORATORY TEST REPORT

Project Name	LAND ADJACENT TO JUNCTION 10, M40, ARDLEY		
Project Number	B26845	Date samples received	29/06/2021
Your Ref	AG3268-21	Date written instructions received	29/06/2021
Purchase Order	17014	Date testing commenced	29/06/2021
Please find enclosed the results as summarised below			
Figure / Table	Test Quantity	Description	ISO 17025 Accredited
	137	Summary of Geotechnical Tests	See report
	20	Atterberg Limit	Yes
	20	Particle Size Distribution	Yes
	10	Moisture Condition Value	Yes
	22	California Bearing Ratio	Yes
Remarks :			
Issued by : Stephen Langman		Date of Issue : 12/08/2021	Key to symbols used in this report S/C : Testing was sub-contracted
Approved Signatories : <i>S. Langman</i> 12/08/2021			
S Langman (Laboratory Coordinator), D Bowen (Production Manager)			
<p>Unless we are notified to the contrary, samples will be disposed after a period of one month from this date. The results reported relate to samples received in the laboratory only. All results contained in this report are provisional unless signed by an approved signatory This report should not be reproduced except in full without the written approval of the laboratory. Under multisite accreditation the testing contained in this report may have been performed at another Terra Tek laboratory. The enclosed results remain the property of Terra Tek Limited and we reserve the right to withdraw our report if we have not received cleared funds in accordance with our standard terms and conditions Only those results indicated in this report are UKAS accredited and any opinions or interpretations expressed are outside the scope of UKAS accreditation. Feedback on the this report may be left via our website www.terratek.co.uk/contact-us</p>			



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Terra Tek Ltd is registered in Scotland No. 121594
 Offices in Airdrie, Birmingham, Belfast and Aston Clinton

TERRA TEK SITE INVESTIGATION AND LABORATORY SERVICES		Site AG3268-21 LAND ADJACENT TO JUNCTION 10, M40, ARDLEY		Contract No B26845													
Client Applied Geology Limited		~ Indicates test not carried out															
Engineer																	
Sample Identification		Non Engineering Sample Description		Atterberg limits		Density		Total Stress		Other Tests							
Exploratory Hole	Depth m	Sample Ref	Sample Type	Lab Sample ID	Moisture Content %	Liquid Limit %	Plastic Limit %	Plasticity Index	Percentage retained 425µm %	Atterberg Classification	Particle Density Mg/m³	Bulk Mg/m³	Dry Mg/m³	Shear Strength kPa	Apparent Cohesion C kPa	Angle of Shearing Resistance Phi	
TP1	0.90-1.00		D	782460	11	~	~	~	~	~	~	~	~	~	~	~	
TP10	0.90-1.00		D	782461	26.9	~	~	~	~	~	~	~	~	~	~	~	
TP100	0.50-0.60		D	782462	17	~	~	~	~	~	~	~	~	~	~	~	
TP101	1.50-1.60		D	782463	12.8	~	~	~	~	~	~	~	~	~	~	~	
TP102	0.80-0.90		B	782464	41	72	32	40	58	CV	~	~	~	~	~	~	
Notes		Opinions and interpretations are outside the scope of UKAS accreditation		UKAS Accredited Test Y/N		Test details are given on the 'Notes on Laboratory Procedures' sheet										See individual report sheets	
Originator	Checked & Approved	SUMMARY OF GEOTECHNICAL TESTS										TK					
CD	CD 05/08/2021																

TERRA TEK SITE INVESTIGATION AND LABORATORY SERVICES		Site AG3268-21 LAND ADJACENT TO JUNCTION 10, M40, ARDLEY		Contract No B26845													
Client Applied Geology Limited		~ Indicates test not carried out															
Engineer																	
Sample Identification		Non Engineering Sample Description		Atterberg limits		Density		Total Stress		Other Tests							
Exploratory Hole	Depth m	Sample Ref	Sample Type	Lab Sample ID	Moisture Content %	Liquid Limit %	Plastic Limit %	Plasticity Index	Percentage retained 425µm %	Atterberg Classification	Particle Density Mg/m³	Bulk Mg/m³	Dry Mg/m³	Shear Strength kPa	Apparent Cohesion kPa	Angle of Shearing Resistance Phi	
TP103	0.50-0.60		D	782465	12	?	?	?	?		?	?	?	?	?	?	
TP105	1.00-1.10		D	782466	9.9	?	?	?	?		?	?	?	?	?	?	
TP106	0.80-0.90		D	782467	12.8	?	?	?	?		?	?	?	?	?	?	
TP107	0.80-0.90		D	782468	8.9	?	?	?	?		?	?	?	?	?	?	
TP108	0.90-0.90		B	782469	9.9	?	?	?	?		?	?	?	?	?	?	CBR
Notes	Opinions and interpretations are outside the scope of UKAS accreditation		UKAS Accredited Test Y/N		Y	Y	Y	Y	Y	-	Y	Y	Y	Y	Y	Y	See individual report sheets
Originator	Checked & Approved				SUMMARY OF GEOTECHNICAL TESTS												
CD	CD 05/08/2021				TK												

TERRA TEK SITE INVESTIGATION AND LABORATORY SERVICES		AG3268-21 LAND ADJACENT TO JUNCTION 10, M40, ARDLEY					Contract No B26845													
Client Applied Geology Limited		~ Indicates test not carried out																		
Engineer																				
Sample Identification		Sample Type		Lab Sample ID		Non Engineering Sample Description		Moisture Content		Atterberg limits				Density		Total Stress			Other Tests	
Exploratory Hole	Depth m	Sample Ref	Sample Type	Lab Sample ID	Non Engineering Sample Description	Moisture Content	Liquid Limit	Plastic Limit	Plasticity Index	Percentage retained 425µm	Atterberg Classification	Particle Density	Bulk	Dry	Shear Strength	Apparent Cohesion	Angle of Shearing Resistance Phi	Other Tests		
Notes	Opinions and interpretations are outside the scope of UKAS accreditation			UKAS Accredited Test Y/N		Test details are given on the 'Notes on Laboratory Procedures' sheet														See individual report sheets
Originator	Checked & Approved																			
TP109	1.00-1.10		D	782470	Brown gravely very sandy CLAY. Gravel is fine to coarse	13	~	~	~	~	~	~	~	~	~	~	~	~		
TP11	0.40-0.50		D	782471	Brown gravely very sandy CLAY. Gravel is fine to coarse	11.4	~	~	~	~	~	~	~	~	~	~	~	~		
TP110	0.60-0.70		D	782472	Brown gravely very sandy CLAY. Gravel is fine to coarse	12.9	~	~	~	~	~	~	~	~	~	~	~	~		
TP111	0.80-0.90		D	782473	Brown gravely very sandy CLAY. Gravel is fine to coarse	13	~	~	~	~	~	~	~	~	~	~	~	~		
TP112	0.50-0.60		D	782474	Brown gravely sandy very silty CLAY with rootlets. Gravel is fine to coarse	29.7	~	~	~	~	~	~	~	~	~	~	~	~		
CD																				



SUMMARY OF GEOTECHNICAL TESTS




TERRA TEK SITE INVESTIGATION AND LABORATORY SERVICES		Site AG3268-21 LAND ADJACENT TO JUNCTION 10, M40, ARDLEY				Contract No B26845																		
Client Applied Geology Limited		~ Indicates test not carried out																						
Engineer																								
Sample Identification		Sample Type		Lab Sample ID		Non Engineering Sample Description		Moisture Content		Atterberg limits				Density		Total Stress			Other Tests					
Exploratory Hole	Depth m	Sample Ref	Sample Type	Lab Sample ID	Non Engineering Sample Description		Moisture Content	%	Liquid Limit	Plastic Limit	Plasticity Index	Percentage retained 425µm	Atterberg Classification	Particle Density	Mg/m³	Bulk	Mg/m³	Dry	Mg/m³	Shear Strength	kPa	Apparent Cohesion	C	Angle of Shearing Resistance Phi
TP113	0.90-1.00		D	782475	Brown gravelly very sandy CLAY. Gravel is fine to coarse		14	%	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?
TP114	0.55-0.65		B	782476	Brown gravelly sandy very silty CLAY. Gravel is fine to coarse		22	%	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?
TP115	0.70-0.80		D	782477	Brown gravelly sandy very silty CLAY. Gravel is fine to coarse		25.8	%	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?
TP117	0.50-0.60		D	782478	Brown gravelly very sandy CLAY. Gravel is fine to coarse		12.1	%	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?
TP118	0.80-0.90		D	782479	Brown gravelly very sandy CLAY. Gravel is fine to coarse		11.3	%	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?
Notes	Opinions and interpretations are outside the scope of UKAS accreditation			UKAS Accredited Test Y/N		Test details are given on the 'Notes on Laboratory Procedures' sheet												See individual report sheets						
Originator	Checked & Approved																							
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
SUMMARY OF GEOTECHNICAL TESTS



TERRA TEK SITE INVESTIGATION AND LABORATORY SERVICES		Site AG3268-21 LAND ADJACENT TO JUNCTION 10, M40, ARDLEY		Contract No B26845													
Client Applied Geology Limited		~ Indicates test not carried out															
Engineer																	
Sample Identification		Non Engineering Sample Description		Atterberg limits		Density		Total Stress		Other Tests							
Exploratory Hole	Depth m	Sample Ref	Sample Type	Lab Sample ID	Moisture Content %	Liquid Limit %	Plastic Limit %	Plasticity Index	Percentage retained 425µm %	Atterberg Classification	Particle Density Mg/m³	Bulk Mg/m³	Dry Mg/m³	Shear Strength kPa	Apparent Cohesion C kPa	Angle of Shearing Resistance Phi	
TP119	0.50-0.60		D	782480	13	~	~	~	~	~	~	~	~	~	~	~	~
TP12	0.90-1.00		D	782481	14.7	~	~	~	~	~	~	~	~	~	~	~	~
TP120	0.60-0.70		D	782482	9	~	~	~	~	~	~	~	~	~	~	~	~
TP121	1.00-1.10		D	782483	7.4	~	~	~	~	~	~	~	~	~	~	~	~
TP122	0.80-0.90		D	782484	11	~	~	~	~	~	~	~	~	~	~	~	~
Notes	Opinions and interpretations are outside the scope of UKAS accreditation		UKAS Accredited Test Y/N		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Originator	Checked & Approved		CD		SUMMARY OF GEOTECHNICAL TESTS												See individual report sheets
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TERRA TEK <small>SITE INVESTIGATION AND LABORATORY SERVICES</small>				Site AG3268-21 LAND ADJACENT TO JUNCTION 10, M40, ARDLEY			Contract No B26845														
				Client Applied Geology Limited			~ Indicates test not carried out														
Engineer				Applied Geology Limited																	
Sample Identification				Lab Sample ID	Moisture Content	Atterberg limits				Particle Density		Density		Total Stress			Other Tests				
Exploratory Hole	Depth m	Sample Ref	Sample Type	Non Engineering Sample Description	%	Liquid Limit	Plastic Limit	Plasticity Index	Percentage retained 425µm	Atterberg Classification	Mg/m³	Bulk	Dry	Shear Strength	Apparent Cohesion	Angle of Shearing Resistance Phi					
TP123	0.85-0.90		D	Brown gravelly very sandy CLAY. Gravel is fine to coarse	15	41	14	27	39	CI	?	?	?	?	?	?					
TP124	1.80-1.90		D	Brown gravelly sandy very silty CLAY. Gravel is fine to coarse	30.6	?	?	?	?		?	?	?	?	?	?					
TP125	0.90-1.00		B	Brown slightly gravelly sandy CLAY with rootlets. Gravel is fine	49	68	27	41	49	CH	2.62	?	?	?	?	?	PSD Compaction CBR				
TP126	0.50-0.60		D	Brown gravelly sandy very silty CLAY. Gravel is fine to coarse	32.3	?	?	?	?		?	?	?	?	?	?					
TP127	0.90-1.00		D	Brown gravelly very sandy CLAY. Gravel is fine to coarse	16.1	41	15	26	28	CI	?	?	?	?	?	?					
Notes	Opinions and interpretations are outside the scope of UKAS accreditation			UKAS Accredited Test Y/N	Test details are given on the 'Notes on Laboratory Procedures' sheet																See individual report sheets
Originator	Checked & Approved			SUMMARY OF GEOTECHNICAL TESTS																	
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 <small>SITE INVESTIGATION AND LABORATORY SERVICES</small>		AG3268-21 LAND ADJACENT TO JUNCTION 10, M40, ARDLEY Contract No B26845																	
		Client Applied Geology Limited					Engineer ~ Indicates test not carried out												
Exploratory Hole	Depth m	Sample Ref	Sample Type	Lab Sample ID	Non Engineering Sample Description	Moisture Content %	Atterberg limits				Particle Density Mg/m ³	Density		Total Stress			Other Tests		
							Liquid Limit %	Plastic Limit %	Plasticity Index	Percentage retained 425µm %		Atterberg Classification	Bulk Mg/m ³	Dry Mg/m ³	Shear Strength kPa	Apparent Cohesion C kPa		Angle of Shearing Resistance Phi	
TP128	0.50-0.60		D	782490	Brown gravelly very sandy CLAY. Gravel is fine to coarse	10													
TP129	0.60-0.70		D	782491	Brown very gravelly very sandy CLAY. Gravel is fine to coarse	9.4													
TP13	0.70-0.70		BX2	782492	Brown sandy clayey fine to coarse GRAVEL with cobbles	14.8													PSD CBR
TP130	1.00-1.10		B	782493	Brown very gravelly very sandy CLAY. Gravel is fine to coarse	10.9													
TP133	0.60-0.70		D	782494	Brown gravelly sandy very silty CLAY with rootlets. Gravel is fine to coarse	28.7	47	19	28	27	CI								
Notes		Opinions and interpretations are outside the scope of UKAS accreditation			UKAS Accredited Test Y/N			Test details are given on the 'Notes on Laboratory Procedures' sheet										See individual report sheets	
Originator	Checked & Approved			<div style="text-align: center;">  </div> <h2 style="text-align: center;">SUMMARY OF GEOTECHNICAL TESTS</h2>															
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TERRA TEK SITE INVESTIGATION AND LABORATORY SERVICES		Site AG3268-21 LAND ADJACENT TO JUNCTION 10, M40, ARDLEY		Contract No B26845													
Client Applied Geology Limited		~ Indicates test not carried out															
Engineer																	
Sample Identification		Non Engineering Sample Description		Atterberg limits		Density		Total Stress		Other Tests							
Exploratory Hole	Depth m	Sample Ref	Sample Type	Lab Sample ID	Moisture Content %	Liquid Limit %	Plastic Limit %	Plasticity Index	Percentage retained 425µm %	Atterberg Classification	Particle Density Mg/m³	Bulk Mg/m³	Dry Mg/m³	Shear Strength kPa	Apparent Cohesion C kPa	Angle of Shearing Resistance Phi	
TP134	0.70-0.80		D	782495	25												
TP135	0.40-0.50		D	782496	30.9												
TP136	1.30-1.40		D	782497	19.9												
TP138	0.60-0.60		B	782498	12.7	40	17	23	76	CI	2.66						PSD Compaction CBR
TP139	0.60-0.70		D	782499	8.6												
Notes		Opinions and interpretations are outside the scope of UKAS accreditation		UKAS Accredited Test Y/N		Test details are given on the 'Notes on Laboratory Procedures' sheet										See individual report sheets	
Originator	Checked & Approved												TK				
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TERRA TEK SITE INVESTIGATION AND LABORATORY SERVICES		Site AG3268-21 LAND ADJACENT TO JUNCTION 10, M40, ARDLEY		Contract No B26845														
Client Applied Geology Limited		~ Indicates test not carried out																
Engineer																		
Sample Identification		Non Engineering Sample Description		Atterberg limits		Density		Total Stress		Other Tests								
Exploratory Hole	Depth m	Sample Ref	Sample Type	Lab Sample ID	Moisture Content %	Liquid Limit %	Plastic Limit %	Plasticity Index	Percentage retained 425µm %	Atterberg Classification	Particle Density Mg/m³	Bulk Mg/m³	Dry Mg/m³	Shear Strength kPa	Apparent Cohesion C kPa	Angle of Shearing Resistance Phi		
TP14	1.10-1.20		D	782500	9.7	~	~	~	~	~	~	~	~	~	~	~	~	
TP140	0.50-0.60		D	782501	10	~	~	~	~	~	~	~	~	~	~	~	~	
TP141	0.80-0.90		D	782502	9.8	~	~	~	~	~	~	~	~	~	~	~	~	
TP142	0.60-0.60		B	782503	27.2	~	~	~	~	~	~	~	~	~	~	~	PSD CBR	
TP143	0.50-0.60		D	782504	9.1	~	~	~	~	~	~	~	~	~	~	~	~	
Notes	Opinions and interpretations are outside the scope of UKAS accreditation			UKAS Accredited Test Y/N		Test details are given on the 'Notes on Laboratory Procedures' sheet												See individual report sheets
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		Site		Contract No		B26845														
		AG3268-21 LAND ADJACENT TO JUNCTION 10, M40, ARDLEY																		
Client		Applied Geology Limited		Density		Total Stress		Other Tests												
		Engineer																		
Sample Identification		Exploratory Hole	Depth m	Sample Ref	Sample Type	Lab Sample ID	Non Engineering Sample Description	Moisture Content %	Liquid Limit %	Plastic Limit %	Plasticity Index	Percentage retained 425µm %	Atterberg Classification	Particle Density Mg/m³	Bulk Mg/m³	Dry Mg/m³	Shear Strength kPa	Apparent Cohesion C kPa	Angle of Shearing Resistance Phi	
TP144	0.40-0.50		D	782505		Brown gravelly very sandy CLAY. Gravel is fine to coarse	15													
TP145	0.70-0.70		B	782506		Brown sandy clayey fine to coarse GRAVEL with cobbles	11.1													PSD CBR
TP146	1.00-1.10		D	782507		Brown sandy clayey fine to coarse GRAVEL	8.9													
TP147	0.90-1.00		D	782508		Brown sandy clayey fine to coarse GRAVEL	9.4													
TP148	1.10-1.20		D	782509		Brown gravelly sandy CLAY. Gravel is fine to medium	17.9													
Notes		Opinions and interpretations are outside the scope of UKAS accreditation			UKAS Accredited Test Y/N		Y		Y	Y	Y	Y	-	Y	Y	Y	Y	Y	Y	See individual report sheets
Originator	Checked & Approved	SUMMARY OF GEOTECHNICAL TESTS 																		
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TERRA TEK SITE INVESTIGATION AND LABORATORY SERVICES		Site AG3268-21 LAND ADJACENT TO JUNCTION 10, M40, ARDLEY				Contract No B26845																
Client Applied Geology Limited		~ Indicates test not carried out																				
Engineer																						
Sample Identification		Sample Type		Lab Sample ID		Non Engineering Sample Description		Moisture Content		Atterberg limits				Particle Density		Density		Total Stress			Other Tests	
Exploratory Hole	Depth m	Sample Ref	Sample Type	Lab Sample ID	Non Engineering Sample Description		Moisture Content	Liquid Limit	Plastic Limit	Plasticity Index	Percentage retained 425µm	Atterberg Classification	Mg/m³	Bulk	Dry	Shear Strength	Apparent Cohesion	Angle of Shearing Resistance Phi				
TP149	0.70-0.80		D	189008	Brown gravelly sandy silty CLAY. Gravel is fine to coarse		23	34	20	14	62	CL	2.65	?	?	?	?	?	?	?	PSD Compaction CBR	
TP15	0.70-0.70		B	782510	Brown very clayey SAND and GRAVEL with cobbles. Gravel is fine to coarse		15.9	?	?	?	?	?	?	?	?	?	?	?	?	?		
TP150	0.80-0.90		D	782511	Brown sandy clayey fine to coarse GRAVEL		6.9	?	?	?	?	?	?	?	?	?	?	?	?	?		
TP151	1.10-1.20		D	782512	Brown sandy clayey fine to coarse GRAVEL		11.2	?	?	?	?	?	?	?	?	?	?	?	?	?		
TP152	0.80-0.90		D	782513	Brown gravelly very sandy CLAY. Gravel is fine to coarse		12.3	?	?	?	?	?	?	?	?	?	?	?	?	?		
Notes	Opinions and interpretations are outside the scope of UKAS accreditation			UKAS Accredited Test Y/N		Test details are given on the 'Notes on Laboratory Procedures' sheet																See individual report sheets
Originator	Checked & Approved			SUMMARY OF GEOTECHNICAL TESTS																		TK
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TERRA TEK SITE INVESTIGATION AND LABORATORY SERVICES		Site AG3268-21 LAND ADJACENT TO JUNCTION 10, M40, ARDLEY				Contract No B26845																
Client Applied Geology Limited		~ Indicates test not carried out																				
Engineer																						
Sample Identification		Sample Type		Lab Sample ID		Non Engineering Sample Description		Moisture Content		Atterberg limits				Density		Total Stress		Other Tests				
Exploratory Hole	Depth m	Sample Ref	Sample Type	Lab Sample ID	Non Engineering Sample Description		Moisture Content	%	Liquid Limit	Plastic Limit	Plasticity Index	Percentage retained 425µm	Atterberg Classification	Particle Density	Mg/m³	Bulk	Dry	Shear Strength	Apparent Cohesion C	Angle of Shearing Resistance Phi		
TP16	1.40-1.50		D	782514	Brown gravelly very sandy CLAY. Gravel is fine to coarse		12	%	~	~	~	~	~	~	~	~	~	~	~	~	~	
TP17	0.60-0.70		D	782515	Brown gravelly silty very sandy CLAY. Gravel is fine to coarse		15.3	%	~	~	~	~	~	~	~	~	~	~	~	~	~	
TP18	0.60-0.70		D	782516	Brown gravelly sandy very silty CLAY. Gravel is fine to coarse		27.8	%	~	~	~	~	~	~	~	~	~	~	~	~	~	
TP2	0.90-0.90		B	782517	Brown very clayey SAND and GRAVEL with cobbles. Gravel is fine to coarse		13	%	~	~	~	~	~	~	~	~	~	~	~	~	PSD CBR	
TP21	0.80-0.90		D	782518	Brown gravelly sandy very silty CLAY. Gravel is fine to coarse		12.8	%	~	~	~	~	~	~	~	~	~	~	~	~	~	
Notes		Opinions and interpretations are outside the scope of UKAS accreditation		UKAS Accredited Test Y/N		Y		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	See individual report sheets
Originator	Checked & Approved	SUMMARY OF GEOTECHNICAL TESTS																				
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




TERRA TEK SITE INVESTIGATION AND LABORATORY SERVICES		Site AG3268-21 LAND ADJACENT TO JUNCTION 10, M40, ARDLEY		Contract No B26845													
Client Applied Geology Limited		Engineer		~ Indicates test not carried out													
Sample Identification		Non Engineering Sample Description		Atterberg limits													
Exploratory Hole	Depth m	Sample Ref	Sample Type	Lab Sample ID	Moisture Content %	Liquid Limit %	Plastic Limit %	Plasticity Index	Percentage retained 425µm %	Atterberg Classification	Particle Density Mg/m³	Density	Total Stress	Other Tests			
												Bulk Mg/m³	Dry Mg/m³	Shear Strength kPa	Apparent Cohesion C kPa	Angle of Shearing Resistance Phi	
TP22	0.40-0.50		D	782519	9.9	47	24	23	83	CI	?	?	?	?	?	?	
TP24	1.80-1.90		D	782520	32.1	69	26	43	64	CH	?	?	?	?	?	?	
TP24	2.40-2.80		D	782521	38.3						?	?	?	?	?	?	
TP25	0.40-0.50		D	782522	26.2						?	?	?	?	?	?	
TP26	1.20-1.30		D	782523	16.9						?	?	?	?	?	?	
Notes		Opinions and interpretations are outside the scope of UKAS accreditation		UKAS Accredited Test Y/N		Y		Y	Y	Y	Y	Y	Y	Y	Y	Y	
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SUMMARY OF GEOTECHNICAL TESTS														See individual report sheets			
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		AG3268-21 LAND ADJACENT TO JUNCTION 10, M40, ARDLEY		B26845														
Client		Applied Geology Limited																
Engineer																		
Sample Identification		Sample Type		Lab Sample ID		Non Engineering Sample Description	Moisture Content	Atterberg limits				Particle Density	Density		Total Stress			Other Tests
Exploratory Hole	Depth m	Sample Ref	Sample Type	Lab Sample ID	Sample Description			Moisture Content	Liquid Limit	Plastic Limit	Plasticity Index		Percentage retained 425µm	Atterberg Classification	Bulk	Dry	Shear Strength	
TP27	1.40-1.50		D	782524	Brown gravelly very sandy CLAY. Gravel is fine to medium	13	37	15	22	61	CI	2.67	?	?	?	?	?	PSD Compaction CBR
TP28	0.50-0.60		B	782525	Brown sandy very clayey fine to coarse GRAVEL with cobbles	21.8	?	?	?	?	?	?	?	?	?	?	?	
TP29	0.70-0.80		D	782526	Brown gravelly very sandy CLAY. Gravel is fine to coarse	16.9	?	?	?	?	?	?	?	?	?	?	?	
TP3	0.90-1.00		D	782527	Brown gravelly very sandy CLAY. Gravel is fine to coarse	12.4	?	?	?	?	?	?	?	?	?	?	?	
TP30	1.30-1.40		B	782528	Brown slightly sandy gravelly CLAY. Gravel is fine to coarse	9.1	?	?	?	?	?	?	?	?	?	?	?	
Notes		Opinions and interpretations are outside the scope of UKAS accreditation			UKAS Accredited Test Y/N		Y	Y	Y	Y	-	Y	Y	Y	Y	Y	Y	See individual report sheets
Originator	Checked & Approved																	
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SUMMARY OF GEOTECHNICAL TESTS

				Site AG3268-21 LAND ADJACENT TO JUNCTION 10, M40, ARDLEY		Contract No B26845																						
Client Applied Geology Limited				~ Indicates test not carried out																								
Engineer																												
Sample Identification				Lab Sample ID	Non Engineering Sample Description	Moisture Content %	Atterberg limits				Particle Density Mg/m ³	Density		Total Stress			Other Tests											
Exploratory Hole	Depth m	Sample Ref	Sample Type				Liquid Limit %	Plastic Limit %	Plasticity Index	Percentage retained 425µm %		Atterberg Classification	Bulk Mg/m ³	Dry Mg/m ³	Shear Strength kPa	Apparent Cohesion C		Angle of Shearing Resistance Phi										
TP31	0.70-0.80		B	782529	Brown very gravelly very sandy CLAY. Gravel is fine to coarse	15	27	14	13	65	CL	?	?	?	?	?	?	?	?	?	?	?	?	?	?	CBR		
TP32	0.50-0.60		D	782530	Brown very gravelly very sandy CLAY. Gravel is fine to coarse	13	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	
TP34	0.50-0.60		D	782531	Brown sandy clayey fine to coarse GRAVEL	5.4	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	
TP35	1.90-2.00		D	782532	Brown sandy clayey fine to coarse GRAVEL	6.7	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	
TP36	0.80-0.90		D	782533	Brown very gravelly very sandy CLAY. Gravel is fine to coarse	16	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	
Notes Opinions and interpretations are outside the scope of UKAS accreditation				UKAS Accredited Test Y/N		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	See individual report sheets
Originator				Checked & Approved		SUMMARY OF GEOTECHNICAL TESTS																						
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 <small>SITE INVESTIGATION AND LABORATORY SERVICES</small>		Site		Contract No		B26845															
		AG3268-21 LAND ADJACENT TO JUNCTION 10, M40, ARDLEY																			
Client Applied Geology Limited		Engineer		~ Indicates test not carried out																	
Sample Identification		Exploratory Hole	Depth m	Sample Ref	Sample Type	Lab Sample ID	Non Engineering Sample Description	Moisture Content %	Atterberg limits				Density		Total Stress			Other Tests			
									Liquid Limit %	Plastic Limit %	Plasticity Index	Percentage retained 425µm %	Atterberg Classification	Particle Density Mg/m³	Bulk Mg/m³	Dry Mg/m³	Shear Strength kPa	Apparent Cohesion C kPa	Angle of Shearing Resistance Phi		
TP37		0.40-0.50			B	189009	Brown gravelly very sandy CLAY. Gravel is fine to coarse	14	?	?	?	?	?	?	?	?	?	?	?	?	CBR
TP38		1.00-1.10			D	782534	Brown gravelly sandy CLAY. Gravel is fine to coarse	11.9	?	?	?	?	?	?	?	?	?	?	?	?	PSD
TP38		1.60-1.70			B	782535	Brown sandy clayey fine to coarse GRAVEL with cobbles	15.3	?	?	?	?	?	?	?	?	?	?	?	?	
TP39		0.70-0.80			D	782536	Brown gravelly sandy CLAY. Gravel is fine to coarse	16.2	?	?	?	?	?	?	?	?	?	?	?	?	
TP4		1.20-1.30			D	782537	Brown gravelly sandy CLAY. Gravel is fine to coarse	21.9	?	?	?	?	?	?	?	?	?	?	?	?	
Notes		Opinions and interpretations are outside the scope of UKAS accreditation					UKAS Accredited Test Y/N					Test details are given on the 'Notes on Laboratory Procedures' sheet					See individual report sheets				
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SUMMARY OF GEOTECHNICAL TESTS

TERRA TEK SITE INVESTIGATION AND LABORATORY SERVICES				AG3268-21 LAND ADJACENT TO JUNCTION 10, M40, ARDLEY										Contract No B26845						
Client Applied Geology Limited				Engineer												~ Indicates test not carried out				
Sample Identification				Lab Sample ID		Moisture Content	Atterberg limits					Particle Density	Density		Total Stress			Other Tests		
Exploratory Hole	Depth m	Sample Ref	Sample Type	Non Engineering Sample Description	%		Liquid Limit	Plastic Limit	Plasticity Index	Percentage retained 425µm	Atterberg Classification		Mg/m ³	Bulk	Dry	Shear Strength	Apparent Cohesion		Angle of Shearing Resistance Phi	
TP40	0.50-0.60		D	782538	Brown gravelly sandy CLAY. Gravel is fine to coarse	13	?	?	?	?	?	?	?	?	?	?	?			
TP41	1.50-1.60		D	782539	Brown gravelly sandy CLAY. Gravel is fine to coarse	12	?	?	?	?	?	?	?	?	?	?	?			
TP42	0.40-0.50		D	782540	Brown very sandy very clayey fine to coarse GRAVEL	8.5	?	?	?	?	?	?	?	?	?	?	?			
TP44	0.40-0.50		D	782600	Brown very sandy very clayey fine to coarse GRAVEL with cobbles	11.8	?	?	?	?	?	?	?	?	?	?	?	PSD CBR		
TP45	1.60-1.70		D	782541	Brown very sandy very clayey fine to coarse GRAVEL	8.5	?	?	?	?	?	?	?	?	?	?	?			
Notes				Opinions and interpretations are outside the scope of UKAS accreditation		UKAS Accredited Test Y/N		Test details are given on the 'Notes on Laboratory Procedures' sheet											See individual report sheets	
Originator	Checked & Approved																			
CD	 05/08/2021																			



SUMMARY OF GEOTECHNICAL TESTS



TERRA TEK SITE INVESTIGATION AND LABORATORY SERVICES		AG3268-21 LAND ADJACENT TO JUNCTION 10, M40, ARDLEY							Contract No B26845										
Client Applied Geology Limited		~ Indicates test not carried out																	
Engineer																			
Sample Identification		Sample Type		Lab Sample ID		Non Engineering Sample Description		Moisture Content		Atterberg limits		Particle Density		Density		Total Stress		Other Tests	
Exploratory Hole	Depth m	Sample Ref	Sample Type	Lab Sample ID	Non Engineering Sample Description	Moisture Content	Liquid Limit	Plastic Limit	Plasticity Index	Percentage retained 425µm	Atterberg Classification	Mg/m³	Bulk	Dry	Shear Strength	Apparent Cohesion	Angle of Shearing Resistance Phi		
Notes	Opinions and interpretations are outside the scope of UKAS accreditation			UKAS Accredited Test Y/N		Y	Y	Y	Y	Y	-	Y	Y	Y	Y	Y	Y	See individual report sheets	
Originator	Checked & Approved																		
TP46	0.50-0.60		D	782542	Brown very gravelly very sandy CLAY. Gravel is fine to coarse	12	?	?	?	?	?	?	?	?	?	?	?	?	PSD CBR
TP48	0.50-0.60		D	782543	Brown clayey very sandy fine to coarse GRAVEL	15.3	?	?	?	?	?	?	?	?	?	?	?	?	
TP49	1.20-1.50		D	782544	Brown very gravelly very sandy CLAY. Gravel is fine to coarse	14.8	?	?	?	?	?	?	?	?	?	?	?	?	
TP5	0.60-0.70		D	782545	Brown clayey very sandy fine to coarse GRAVEL	8.8	?	?	?	?	?	?	?	?	?	?	?	?	
TP5	1.90-2.00		D	782605	Brown very gravelly very sandy CLAY. Gravel is fine to coarse	12.3	?	?	?	?	?	?	?	?	?	?	?	?	
CD	CD 05/08/2021																		





SUMMARY OF GEOTECHNICAL TESTS

		Site		Contract No		B26845																	
		AG3268-21 LAND ADJACENT TO JUNCTION 10, M40, ARDLEY																					
Client		Applied Geology Limited																					
		Engineer																					
Sample Identification		Exploratory Hole	Depth m	Sample Ref	Sample Type	Lab Sample ID	Non Engineering Sample Description	Moisture Content	Liquid Limit	Plastic Limit	Plasticity Index	Percentage retained 425µm	Atterberg Classification	Particle Density	Density	Total Stress	Other Tests						
								%	%	%	%	%	Mg/m³	Mg/m³	Mg/m³	kPa	kPa						
	TP50		0.40-0.50		D	189010	Brown gravelly sandy CLAY. Gravel is fine to coarse	18	?	?	?	?	?	?	?	?	?	?	?				
	TP51		1.00-1.10		D	782546	Brown gravelly sandy CLAY. Gravel is fine to coarse	16.2	?	?	?	?	?	?	?	?	?	?	?				
	TP52		0.60-0.70		D	782547	Brown gravelly sandy CLAY. Gravel is fine to coarse	16.4	?	?	?	?	?	?	?	?	?	?	?				
	TP53		1.40-1.50		D	782548	Brown gravelly sandy CLAY. Gravel is fine to coarse	13.1	?	?	?	?	?	?	?	?	?	?	?				
	TP54		0.70-0.80		D	782549	Brown gravelly sandy CLAY. Gravel is fine to coarse	15.8	?	?	?	?	?	?	?	?	?	?	?				
Notes		Opinions and interpretations are outside the scope of UKAS accreditation					UKAS Accredited Test Y/N					Test details are given on the 'Notes on Laboratory Procedures' sheet											
	Originator																						
	Checked & Approved																						
	CD																						
																							
SUMMARY OF GEOTECHNICAL TESTS																							
See individual report sheets																							
Sheet 19 of 28																							

TERRA TEK SITE INVESTIGATION AND LABORATORY SERVICES		AG3268-21 LAND ADJACENT TO JUNCTION 10, M40, ARDLEY										Contract No B26845								
Client		Applied Geology Limited										~ Indicates test not carried out								
Engineer																				
Sample Identification		Non Engineering Sample Description										Other Tests								
Exploratory Hole	Depth m	Sample Ref	Sample Type	Lab Sample ID	Moisture Content %	Liquid Limit %	Plastic Limit %	Plasticity Index	Percentage retained 425µm %	Atterberg Classification	Particle Density Mg/m³	Density Bulk Mg/m³	Density Dry Mg/m³	Shear Strength kPa	Apparent Cohesion C kPa	Angle of Shearing Resistance Phi	Other Tests			
TP55	0.90-1.00		D	782550	12	35	14	21	46	CL	?	?	?	?	?	?	CBR			
TP56	0.50-0.50		B	782551	20.2	?	?	?	?	?	?	?	?	?	?	?				
TP57	1.10-1.20		D	189011	7.7	?	?	?	?	?	?	?	?	?	?	?				
TP59	0.50-0.60		D	782552	14.2	?	?	?	?	?	?	?	?	?	?	?	PSD Compaction CBR			
TP60	0.70-0.80		B	782553	37.2	61	20	41	62	CH	2.62	?	?	?	?	?				
Notes	Opinions and interpretations are outside the scope of UKAS accreditation										UKAS Accredited Test Y/N									
Originator	Checked & Approved										Test details are given on the 'Notes on Laboratory Procedures' sheet									
CD	CD 05/08/2021										See individual report sheets									



SUMMARY OF GEOTECHNICAL TESTS

				Site AG3268-21 LAND ADJACENT TO JUNCTION 10, M40, ARDLEY				Contract No B26845													
Client Applied Geology Limited				Engineer				~ Indicates test not carried out													
Sample Identification				Lab Sample ID	Non Engineering Sample Description	Moisture Content %	Atterberg limits				Particle Density Mg/m³	Density		Total Stress			Other Tests				
Exploratory Hole	Depth m	Sample Ref	Sample Type				Liquid Limit %	Plastic Limit %	Plasticity Index	Percentage retained 425µm %		Atterberg Classification	Bulk Mg/m³	Dry Mg/m³	Shear Strength kPa	Apparent Cohesion C kPa		Angle of Shearing Resistance Phi			
TP61	1.20-1.30		D	782554	Brown gravelly sandy CLAY. Gravel is fine to coarse	15															
TP62	0.50-0.50		B	782555	Brown sandy silty fine to coarse GRAVEL with cobbles	20.1													PSD CBR		
TP63	1.60-1.70		D	189012	Brown very sandy very silty CLAY	18.1															
TP64	0.70-0.80		D	782556	Brown gravelly sandy CLAY. Gravel is fine to coarse	13															
TP66	1.50-1.60		D	782557	Brown gravelly sandy CLAY. Gravel is fine to coarse	14.2															
Notes Opinions and interpretations are outside the scope of UKAS accreditation				UKAS Accredited Test Y/N				Test details are given on the 'Notes on Laboratory Procedures' sheet												See individual report sheets	
Originator	Checked & Approved																				
CD	 05/08/2021																				

SUMMARY OF GEOTECHNICAL TESTS



TERRA TEK SITE INVESTIGATION AND LABORATORY SERVICES		Site AG3268-21 LAND ADJACENT TO JUNCTION 10, M40, ARDLEY		Contract No B26845													
Client Applied Geology Limited		~ Indicates test not carried out															
Engineer																	
Sample Identification		Non Engineering Sample Description		Atterberg limits		Density		Total Stress		Other Tests							
Exploratory Hole	Depth m	Sample Ref	Sample Type	Lab Sample ID	Moisture Content %	Liquid Limit %	Plastic Limit %	Plasticity Index	Percentage retained 425µm %	Atterberg Classification	Particle Density Mg/m³	Bulk Mg/m³	Dry Mg/m³	Shear Strength kPa	Apparent Cohesion C kPa	Angle of Shearing Resistance Phi	
TP67	0.90-1.00		D	782558	13	~	~	~	~	~	~	~	~	~	~	~	~
TP68	0.80-0.90		B	782609	17.7	~	~	~	~	~	~	~	~	~	~	~	~
TP69	0.90-1.00		D	782560	12	~	15	14	28	CL	~	~	~	~	~	~	~
TP7	0.80-0.90		D	782561	19.9	~	~	~	~	~	~	~	~	~	~	~	~
TP70	0.80-0.80		B	782562	13	~	~	~	~	~	~	~	~	~	~	~	CBR
Notes		Opinions and interpretations are outside the scope of UKAS accreditation		UKAS Accredited Test Y/N		Test details are given on the 'Notes on Laboratory Procedures' sheet										See individual report sheets	
Originator	Checked & Approved																
CD	CD 05/08/2021																




SUMMARY OF GEOTECHNICAL TESTS

TERRA TEK SITE INVESTIGATION AND LABORATORY SERVICES		Site AG3268-21 LAND ADJACENT TO JUNCTION 10, M40, ARDLEY				Contract No B26845																
Client Applied Geology Limited		~ Indicates test not carried out																				
Engineer																						
Sample Identification		Sample Type		Lab Sample ID		Non Engineering Sample Description		Moisture Content		Atterberg limits				Particle Density		Density		Total Stress			Other Tests	
Exploratory Hole	Depth m	Sample Ref	Sample Type	Lab Sample ID	Non Engineering Sample Description		Moisture Content	%	Liquid Limit	Plastic Limit	Plasticity Index	Percentage retained 425µm	Atterberg Classification	Mg/m³	Bulk	Dry	Shear Strength	Apparent Cohesion	Angle of Shearing Resistance Phi	Other Tests		
TP71	0.60-0.70		D	782563	Brown gravelly sandy CLAY. Gravel is fine to coarse		14															
TP72	1.50-1.60		D	782564	Brown gravelly sandy CLAY. Gravel is fine to coarse		9.2															
TP73	1.20-1.30		D	782565	Brown gravelly sandy CLAY. Gravel is fine to coarse		14															
TP74	0.40-0.40		D	782566	Brown gravelly sandy very silty CLAY. Gravel is fine to medium		28.6		42	21	21	17	CI									
TP75	0.80-0.80		B	782567	Brown sandy clayey fine to coarse GRAVEL with cobbles		15.2		31	17	14	59	CL	2.66							PSD Compaction CBR	
Notes		Opinions and interpretations are outside the scope of UKAS accreditation		UKAS Accredited Test Y/N		Test details are given on the 'Notes on Laboratory Procedures' sheet																See individual report sheets
Originator	Checked & Approved																					
CD	CD 05/08/2021																					



SUMMARY OF GEOTECHNICAL TESTS

TERRA TEK SITE INVESTIGATION AND LABORATORY SERVICES				AG3268-21 LAND ADJACENT TO JUNCTION 10, M40, ARDLEY				Contract No B26845											
Client Applied Geology Limited				~ Indicates test not carried out															
Engineer																			
Sample Identification				Atterberg limits				Density		Total Stress		Other Tests							
Exploratory Hole	Depth m	Sample Ref	Sample Type	Lab Sample ID	Non Engineering Sample Description	Moisture Content	Liquid Limit	Plastic Limit	Plasticity Index	Percentage retained 425µm	Atterberg Classification		Particle Density	Bulk	Dry	Shear Strength	Apparent Cohesion	Angle of Shearing Resistance Phi	
Notes	Opinions and interpretations are outside the scope of UKAS accreditation			UKAS Accredited Test Y/N		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	
Originator	Checked & Approved		SUMMARY OF GEOTECHNICAL TESTS																
CD	CD 05/08/2021																		
TP76	0.80-0.90		D	782568	Brown sandy clayey fine to coarse GRAVEL	12													
TP78	0.50-0.60		D	782569	Brown gravelly sandy very silty CLAY. Gravel is fine to medium	25.7													
TP79	0.90-0.90		B	782570	Brown slightly gravelly sandy CLAY with rootlets. Gravel is fine	20.2	43	21	22	40	CI	2.60							PSD Compaction CBR
TP8	0.80-0.90		D	782571	Brown sandy clayey fine to coarse GRAVEL	19.9													
TP80	0.80-0.90		D	782572	Brown gravelly very sandy silty CLAY. Gravel is fine to coarse	9.6													

TERRA TEK SITE INVESTIGATION AND LABORATORY SERVICES		Site AG3268-21 LAND ADJACENT TO JUNCTION 10, M40, ARDLEY		Contract No B26845													
Client Applied Geology Limited		~ Indicates test not carried out															
Engineer																	
Sample Identification		Non Engineering Sample Description		Atterberg limits		Density		Total Stress		Other Tests							
Exploratory Hole	Depth m	Sample Ref	Sample Type	Lab Sample ID	Moisture Content %	Liquid Limit %	Plastic Limit %	Plasticity Index	Percentage retained 425µm %	Atterberg Classification	Particle Density Mg/m³	Bulk Mg/m³	Dry Mg/m³	Shear Strength kPa	Apparent Cohesion C kPa	Angle of Shearing Resistance Phi	
TP82	0.50-0.60		D	782574	28	38	21	17	51	CI	?	?	?	?	?	?	
TP83	0.50-0.60		D	782573	13.8	?	?	?	?	?	?	?	?	?	?	?	
TP84	0.80-0.90		D	782575	9.8	?	?	?	?	?	?	?	?	?	?	?	
TP86	0.90-1.00		D	782576	11	?	?	?	?	?	?	?	?	?	?	?	
TP87	1.10-1.20		D	782598	9.3	?	?	?	?	?	?	?	?	?	?	?	
Notes		Opinions and interpretations are outside the scope of UKAS accreditation		UKAS Accredited Test Y/N		Test details are given on the 'Notes on Laboratory Procedures' sheet										See individual report sheets	
Originator	Checked & Approved																
CD	CD 05/08/2021																



SUMMARY OF GEOTECHNICAL TESTS

TERRA TEK SITE INVESTIGATION AND LABORATORY SERVICES		Site AG3268-21 LAND ADJACENT TO JUNCTION 10, M40, ARDLEY		Contract No B26845													
Client Applied Geology Limited		~ Indicates test not carried out															
Engineer																	
Sample Identification		Non Engineering Sample Description		Atterberg limits		Density		Total Stress		Other Tests							
Exploratory Hole	Depth m	Sample Ref	Sample Type	Lab Sample ID	Moisture Content %	Liquid Limit %	Plastic Limit %	Plasticity Index	Percentage retained 425µm %	Atterberg Classification	Particle Density Mg/m³	Bulk Mg/m³	Dry Mg/m³	Shear Strength kPa	Apparent Cohesion kPa	Angle of Shearing Resistance Phi	
TP88	0.70-0.80		D	189013	36	?	?	?	?	?	?	?	?	?	?	?	?
TP89	0.80-0.80		B	782577	17	?	?	?	?	?	?	?	?	?	?	?	PSD CBR
TP9	1.00-1.10		D	782578	11.9	?	?	?	?	?	?	?	?	?	?	?	
TP90	0.60-0.70		D	782579	10.8	?	?	?	?	?	?	?	?	?	?	?	
TP91	1.30-1.40		D	782580	10.9	?	?	?	?	?	?	?	?	?	?	?	
Notes		Opinions and interpretations are outside the scope of UKAS accreditation		UKAS Accredited Test Y/N		Test details are given on the 'Notes on Laboratory Procedures' sheet										See individual report sheets	
Originator	Checked & Approved																
CD	CD 05/08/2021																





SUMMARY OF GEOTECHNICAL TESTS

TERRA TEK SITE INVESTIGATION AND LABORATORY SERVICES		AG3268-21 LAND ADJACENT TO JUNCTION 10, M40, ARDLEY					Contract No B26845													
Client Applied Geology Limited		~ Indicates test not carried out																		
Engineer																				
Sample Identification		Sample Type		Lab Sample ID		Non Engineering Sample Description			Moisture Content		Atterberg limits				Density		Total Stress			Other Tests
Exploratory Hole	Depth m	Sample Ref	Sample Type	Lab Sample ID	Non Engineering Sample Description	Moisture Content	Liquid Limit	Plastic Limit	Plasticity Index	Percentage retained 425µm	Atterberg Classification	Particle Density	Bulk	Dry	Shear Strength	Apparent Cohesion	Angle of Shearing Resistance Phi	Other Tests		
Notes	Opinions and interpretations are outside the scope of UKAS accreditation			UKAS Accredited Test Y/N		Y	Y	Y	Y	Y	-	Y	Y	Y	Y	Y	Y	See individual report sheets		
Originator	Checked & Approved																			
CD	CD 05/08/2021																			
TP92	0.80-0.90		D	782581	Brown gravelly sandy CLAY. Gravel is fine to coarse	11	47	25	22	31	CI	?	?	?	?	?	?	PSD CBR		
TP93	0.60-0.70		D	782582	Brown gravelly sandy CLAY. Gravel is fine to coarse	18.9	?	?	?	?		?	?	?	?	?	?	PSD CBR		
TP94	0.70		Bx2	188976	COBBLES with brown sandy clayey fine to coarse gravel	14.8	?	?	?	?		?	?	?	?	?	?	PSD CBR		
TP96	0.60-0.70		D	782583	Brown gravelly sandy CLAY. Gravel is fine to coarse	17	?	?	?	?		?	?	?	?	?	?	PSD CBR		
TP97	1.00-1.10		B	782584	Brown gravelly very sandy very silty CLAY with cobbles. Gravel is fine to coarse	22.4	47	25	22	31	CI	?	?	?	?	?	?	PSD CBR		



SUMMARY OF GEOTECHNICAL TESTS

				Site AG3268-21 LAND ADJACENT TO JUNCTION 10, M40, ARDLEY		Contract No B26845											
Client Applied Geology Limited				~ Indicates test not carried out													
Engineer																	
Sample Identification				Lab Sample ID	Non Engineering Sample Description	Moisture Content	Atterberg limits				Particle Density	Density		Total Stress			Other Tests
Exploratory Hole	Depth m	Sample Ref	Sample Type				Liquid Limit	Plastic Limit	Plasticity Index	Percentage retained 425µm		Atterberg Classification	Bulk	Dry	Shear Strength	Apparent Cohesion	
Notes	Opinions and interpretations are outside the scope of UKAS accreditation			UKAS Accredited Test Y/N		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	See individual report sheets
Originator	Checked & Approved			SUMMARY OF GEOTECHNICAL TESTS													
CD	 05/08/2021																
TP98	0.60-0.70		D	782585	Brown gravelly sandy CLAY. Gravel is fine to coarse	18											
TP99	0.90-1.00		D	782586	Brown gravelly very sandy CLAY. Gravel is fine to coarse	8.7											





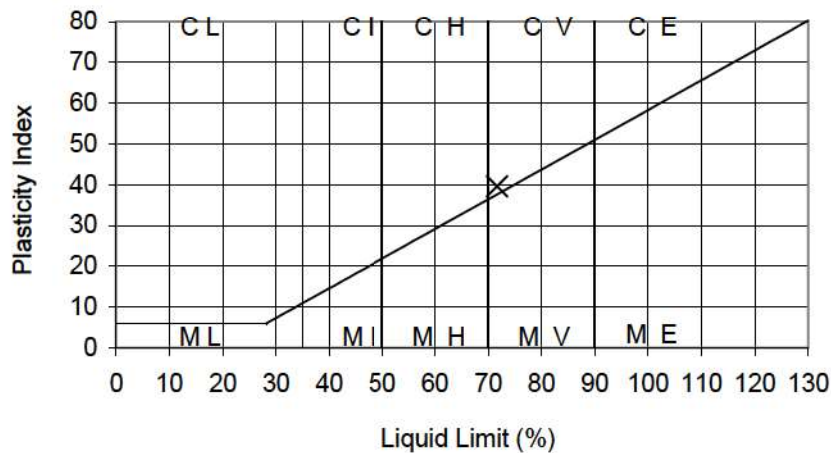
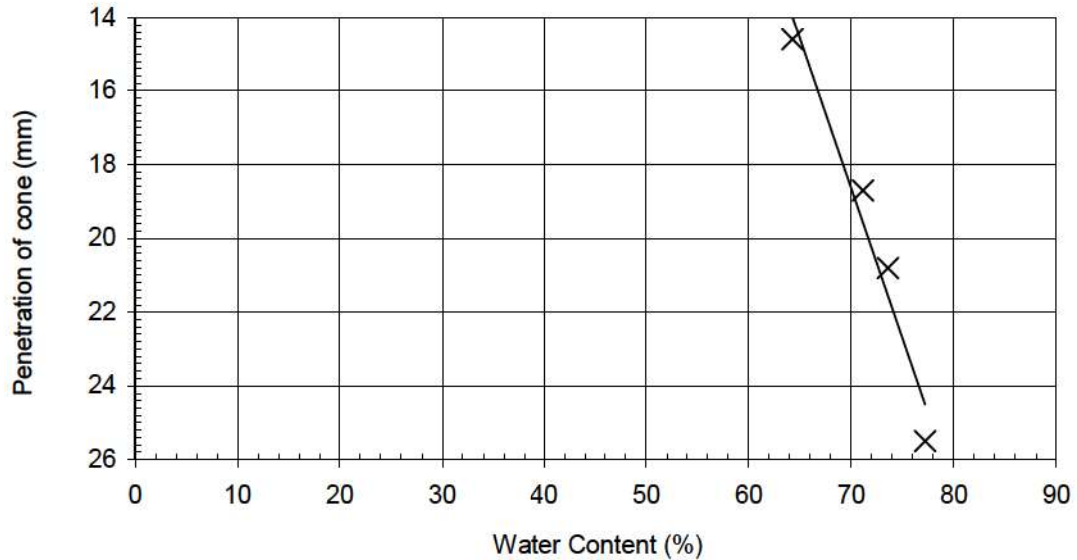
SITE INVESTIGATION AND LABORATORY SERVICES

Site	AG3268-21 LAND ADJACENT TO JUNCTION 10, M40, ARDLEY
Client	Applied Geology Limited
Engineer	

Contract No.	B26845
Hole ID	TP102
Sample Ref	
Depth (m)	0.80-0.90
Sample Type	B

Non Engineering Description : Brown sandy clayey fine to coarse GRAVEL with cobbles and organic matter

Preparation : Sample oven dried, Percentage retained on 425µm sieve measured by wet sieving



Liquid Limit was determined by mixing using increasing water content and 30° cone

Results :

As Received Water Content : (BS EN ISO 17892-1:2014)	41.0 %
Percentage retained on 425µm sieve :	58 %
Liquid Limit :	72 %
Plastic Limit :	32 %
Plasticity Index :	40
Equivalent water content of material passing 425µm sieve :	97.6 %
Liquidity Index :	1.64

Originator	Checked & Approved
AK	CD 05/08/2021

**Liquid Limit (Four Point Cone Penetrometer Method)
 Plastic Limit, Plasticity Index & Liquidity Index**
 BS EN ISO 17892-12:2018 Clause 5.3
 BS EN ISO 17892-12:2018 Clause 5.5

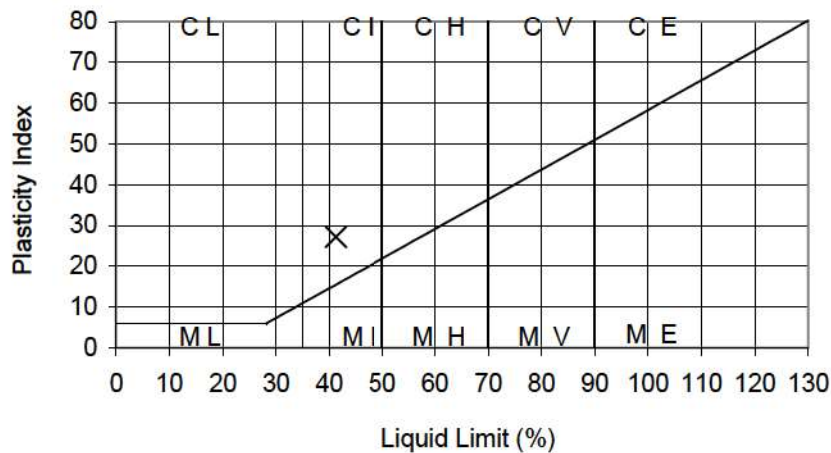
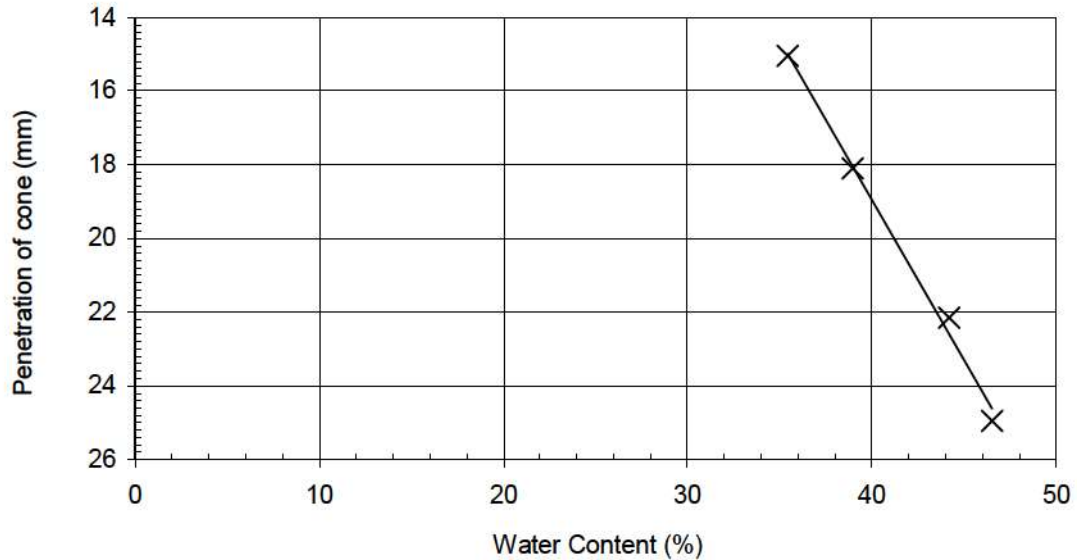


Site	AG3268-21 LAND ADJACENT TO JUNCTION 10, M40, ARDLEY
Client	Applied Geology Limited
Engineer	

Contract No.	B26845
Hole ID	TP123
Sample Ref	
Depth (m)	0.85-0.90
Sample Type	D

Non Engineering Description : Brown gravelly very sandy CLAY. Gravel is fine to coarse

Preparation : Sample oven dried, Percentage retained on 425µm sieve measured by wet sieving



Liquid Limit was determined by mixing using increasing water content and 30° cone

Results :

As Received Water Content : (BS EN ISO 17892-1:2014)	14.9 %
Percentage retained on 425µm sieve :	39 %
Liquid Limit :	41 %
Plastic Limit :	14 %
Plasticity Index :	27
Equivalent water content of material passing 425µm sieve :	24.4 %
Liquidity Index :	0.39

Originator	Checked & Approved
SR	CD 05/08/2021

**Liquid Limit (Four Point Cone Penetrometer Method)
 Plastic Limit, Plasticity Index & Liquidity Index**
 BS EN ISO 17892-12:2018 Clause 5.3
 BS EN ISO 17892-12:2018 Clause 5.5





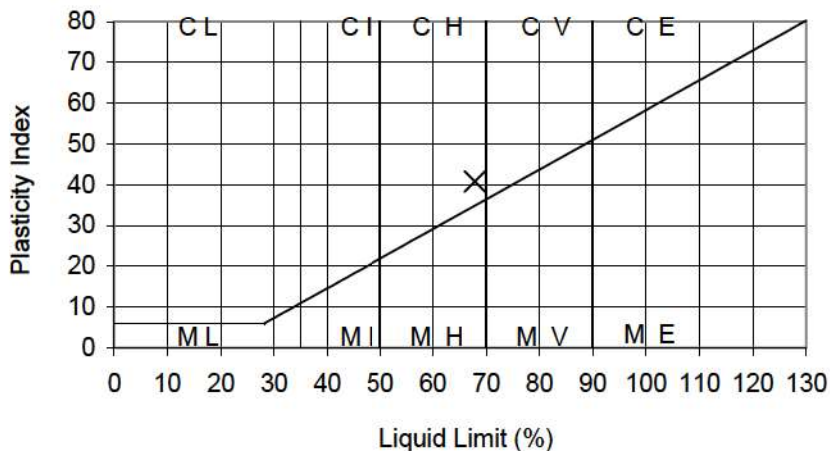
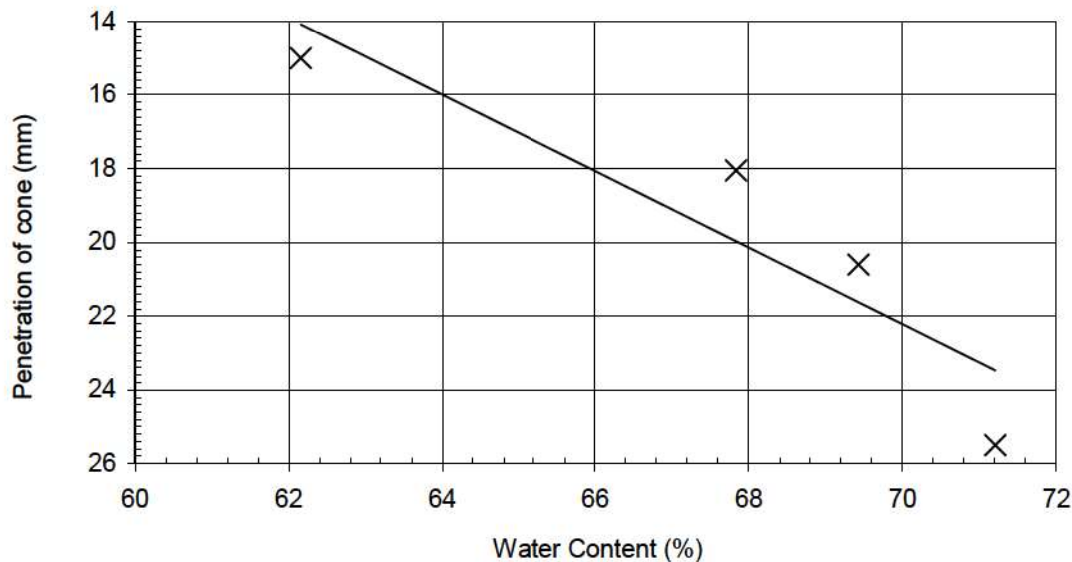
SITE INVESTIGATION AND LABORATORY SERVICES

Site	AG3268-21 LAND ADJACENT TO JUNCTION 10, M40, ARDLEY
Client	Applied Geology Limited
Engineer	

Contract No.	B26845
Hole ID	TP125
Sample Ref	
Depth (m)	0.90-1.00
Sample Type	B

Non Engineering Description : Brown slightly gravelly sandy CLAY with rootlets. Gravel is fine

Preparation : Sample oven dried, Percentage retained on 425µm sieve measured by wet sieving



Liquid Limit was determined by mixing using increasing water content and 30° cone

Results :

As Received Water Content : (BS EN ISO 17892-1:2014)	49.0 %
Percentage retained on 425µm sieve :	49 %
Liquid Limit :	68 %
Plastic Limit :	27 %
Plasticity Index :	41
Equivalent water content of material passing 425µm sieve :	96.1 %
Liquidity Index :	1.69

Originator	Checked & Approved
DW	CD 05/08/2021

Liquid Limit (Four Point Cone Penetrometer Method)
Plastic Limit, Plasticity Index & Liquidity Index
BS EN ISO 17892-12:2018 Clause 5.3
BS EN ISO 17892-12:2018 Clause 5.5

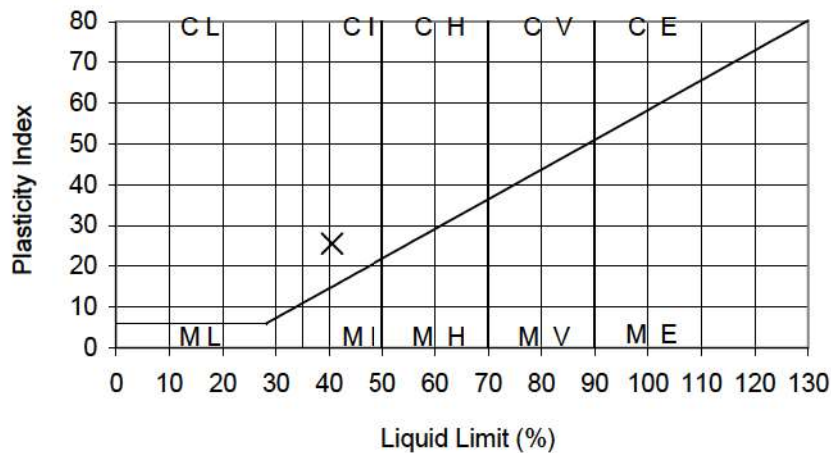
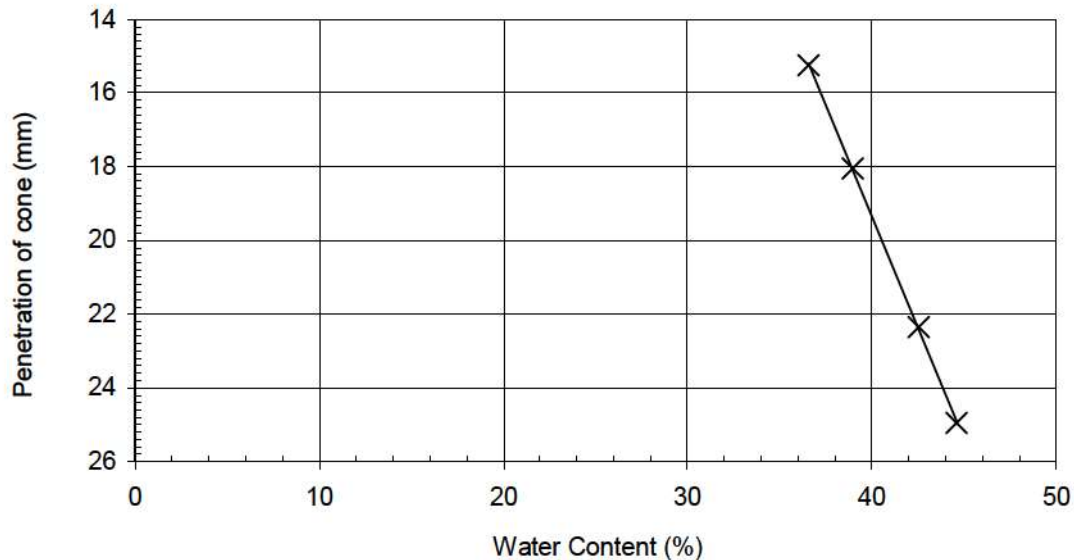


Site	AG3268-21 LAND ADJACENT TO JUNCTION 10, M40, ARDLEY
Client	Applied Geology Limited
Engineer	

Contract No.	B26845
Hole ID	TP127
Sample Ref	
Depth (m)	0.90-1.00
Sample Type	D

Non Engineering Description : Brown gravelly very sandy CLAY. Gravel is fine to coarse

Preparation : Sample oven dried, Percentage retained on 425µm sieve measured by wet sieving



Liquid Limit was determined by mixing using increasing water content and 30° cone

Results :

As Received Water Content : (BS EN ISO 17892-1:2014)	16.1 %
Percentage retained on 425µm sieve :	28 %
Liquid Limit :	41 %
Plastic Limit :	15 %
Plasticity Index :	26
Equivalent water content of material passing 425µm sieve :	22.4 %
Liquidity Index :	0.28

Originator	Checked & Approved
SR	CD 05/08/2021

Liquid Limit (Four Point Cone Penetrometer Method)
Plastic Limit, Plasticity Index & Liquidity Index
 BS EN ISO 17892-12:2018 Clause 5.3
 BS EN ISO 17892-12:2018 Clause 5.5





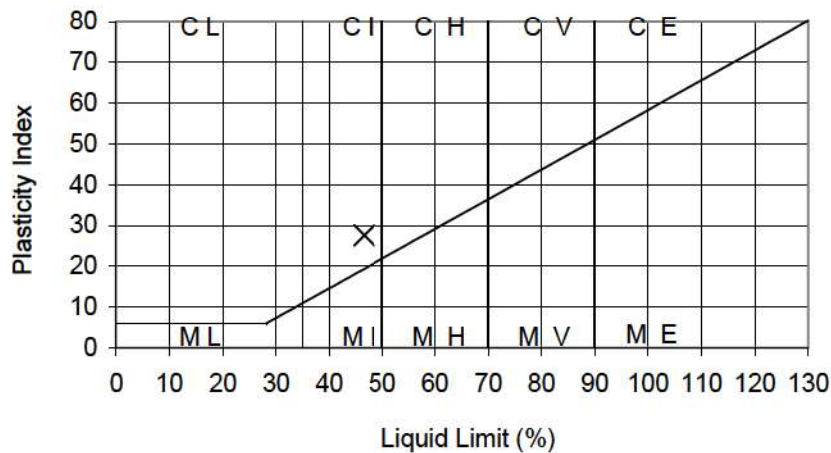
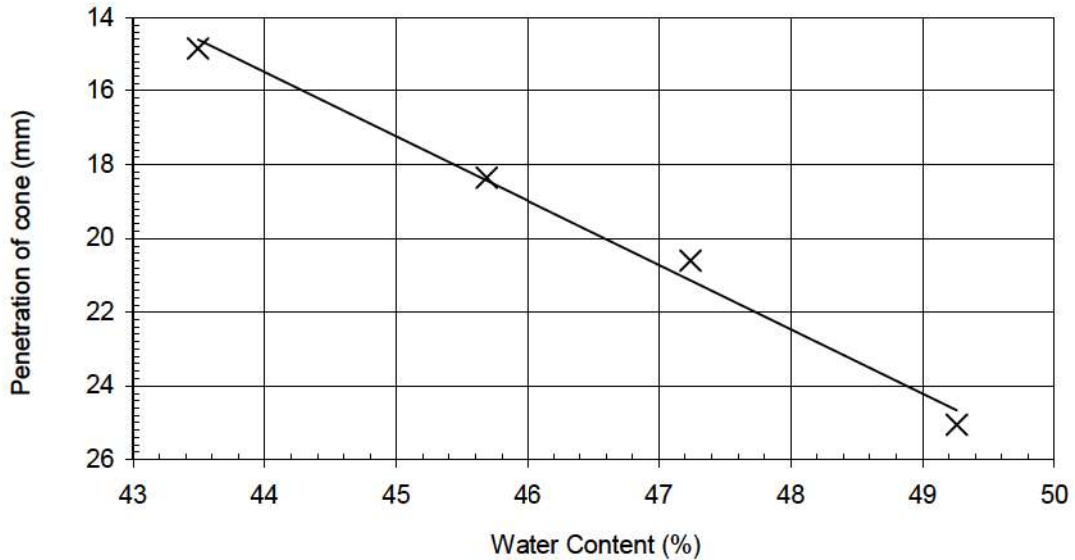
SITE INVESTIGATION AND LABORATORY SERVICES

Site	AG3268-21 LAND ADJACENT TO JUNCTION 10, M40, ARDLEY
Client	Applied Geology Limited
Engineer	

Contract No.	B26845
Hole ID	TP133
Sample Ref	
Depth (m)	0.60-0.70
Sample Type	D

Non Engineering Description : Brown gravelly sandy very silty CLAY with rootlets. Gravel is fine to coarse

Preparation : Sample oven dried, Percentage retained on 425µm sieve measured by wet sieving



Liquid Limit was determined by mixing using increasing water content and 30° cone

Results :

As Received Water Content : (BS EN ISO 17892-1:2014)	28.7 %
Percentage retained on 425µm sieve :	27 %
Liquid Limit :	47 %
Plastic Limit :	19 %
Plasticity Index :	28
Equivalent water content of material passing 425µm sieve :	39.3 %
Liquidity Index :	0.73

Originator	Checked & Approved
DW	 U5/08/2021

Liquid Limit (Four Point Cone Penetrometer Method)
Plastic Limit, Plasticity Index & Liquidity Index
 BS EN ISO 17892-12:2018 Clause 5.3
 BS EN ISO 17892-12:2018 Clause 5.5





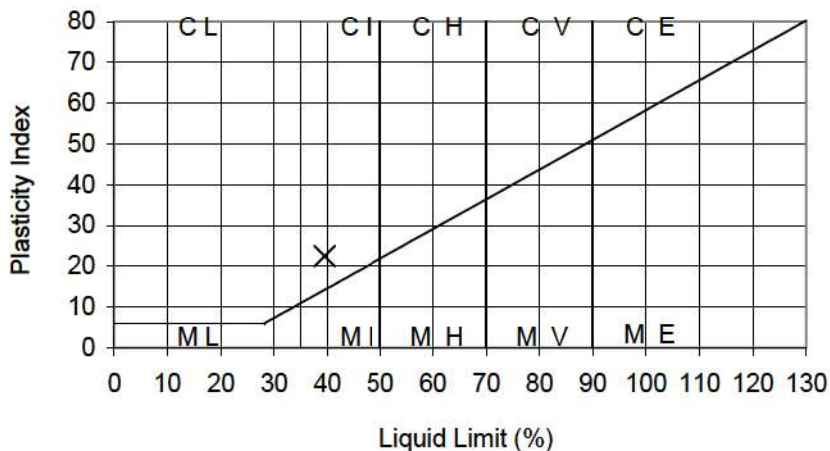
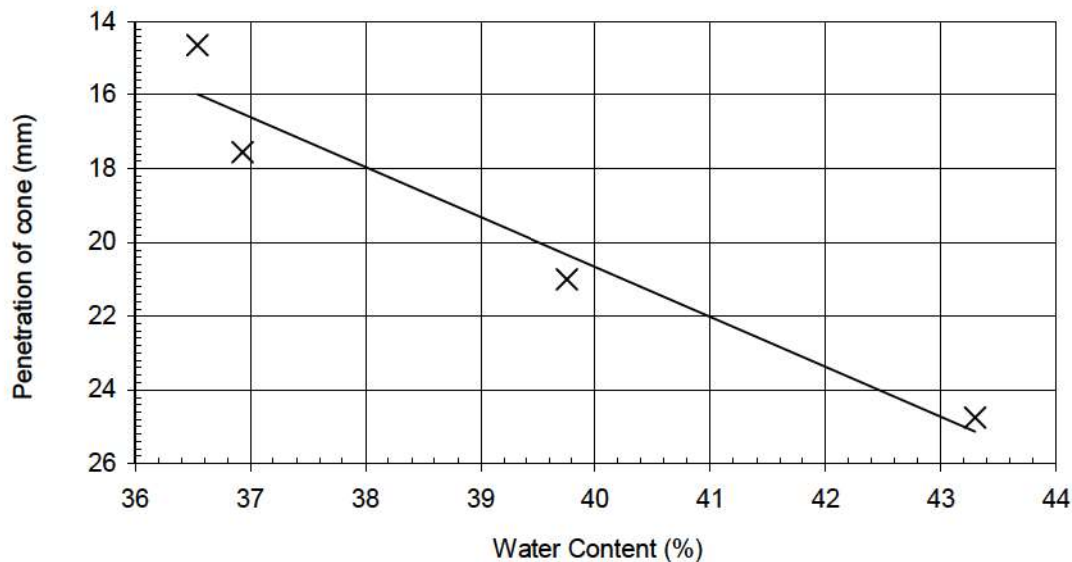
SITE INVESTIGATION AND LABORATORY SERVICES

Site	AG3268-21 LAND ADJACENT TO JUNCTION 10, M40, ARDLEY
Client	Applied Geology Limited
Engineer	

Contract No.	B26845
Hole ID	TP138
Sample Ref	
Depth (m)	0.60-0.60
Sample Type	B

Non Engineering Description : Brown sandy clayey fine to coarse GRAVEL with cobbles

Preparation : Sample oven dried, Percentage retained on 425µm sieve measured by wet sieving



Liquid Limit was determined by mixing using increasing water content and 30° cone

Results :

As Received Water Content : (BS EN ISO 17892-1:2014)	12.7 %
Percentage retained on 425µm sieve :	76 %
Liquid Limit :	40 %
Plastic Limit :	17 %
Plasticity Index :	23
Equivalent water content of material passing 425µm sieve :	52.9 %
Liquidity Index :	1.56

Originator	Checked & Approved
DW	CD 05/08/2021

**Liquid Limit (Four Point Cone Penetrometer Method)
 Plastic Limit, Plasticity Index & Liquidity Index**
 BS EN ISO 17892-12:2018 Clause 5.3
 BS EN ISO 17892-12:2018 Clause 5.5

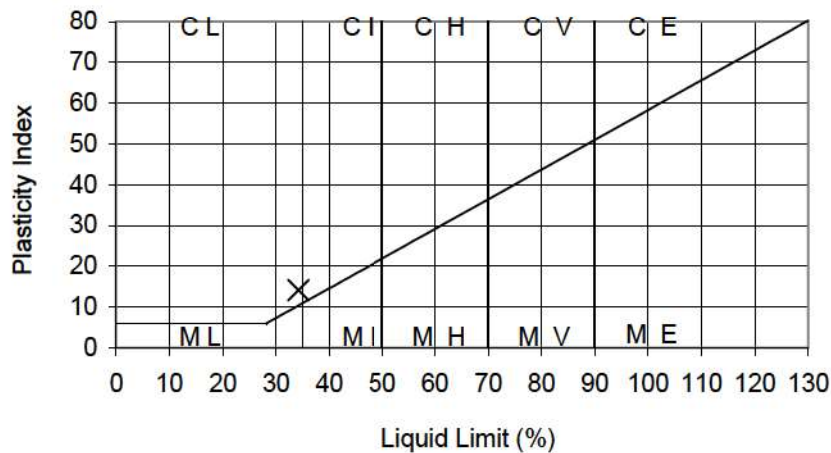
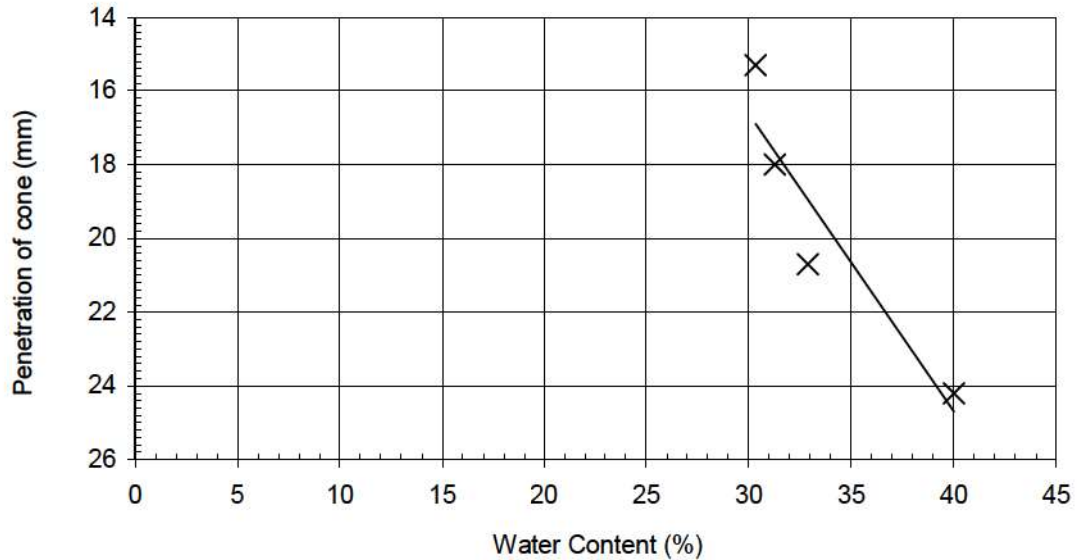


Site	AG3268-21 LAND ADJACENT TO JUNCTION 10, M40, ARDLEY
Client	Applied Geology Limited
Engineer	

Contract No.	B26845
Hole ID	TP15
Sample Ref	
Depth (m)	0.70-0.70
Sample Type	B

Non Engineering Description : Brown very clayey SAND and GRAVEL with cobbles. Gravel is fine to coarse

Preparation : Sample oven dried, Percentage retained on 425µm sieve measured by wet sieving



Liquid Limit was determined by mixing using increasing water content and 30° cone

Results :

As Received Water Content : (BS EN ISO 17892-1:2014)	15.9 %
Percentage retained on 425µm sieve :	62 %
Liquid Limit :	34 %
Plastic Limit :	20 %
Plasticity Index :	14
Equivalent water content of material passing 425µm sieve :	41.8 %
Liquidity Index :	1.56

Originator	Checked & Approved
AK	CD 05/08/2021

Liquid Limit (Four Point Cone Penetrometer Method)
Plastic Limit, Plasticity Index & Liquidity Index
BS EN ISO 17892-12:2018 Clause 5.3
BS EN ISO 17892-12:2018 Clause 5.5





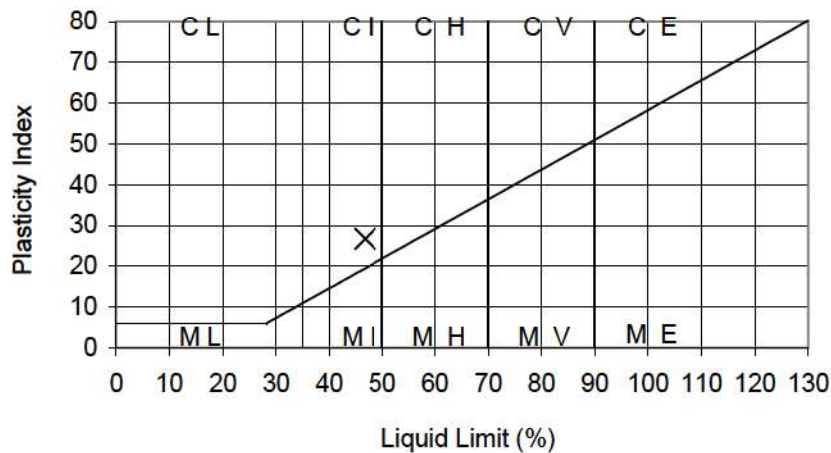
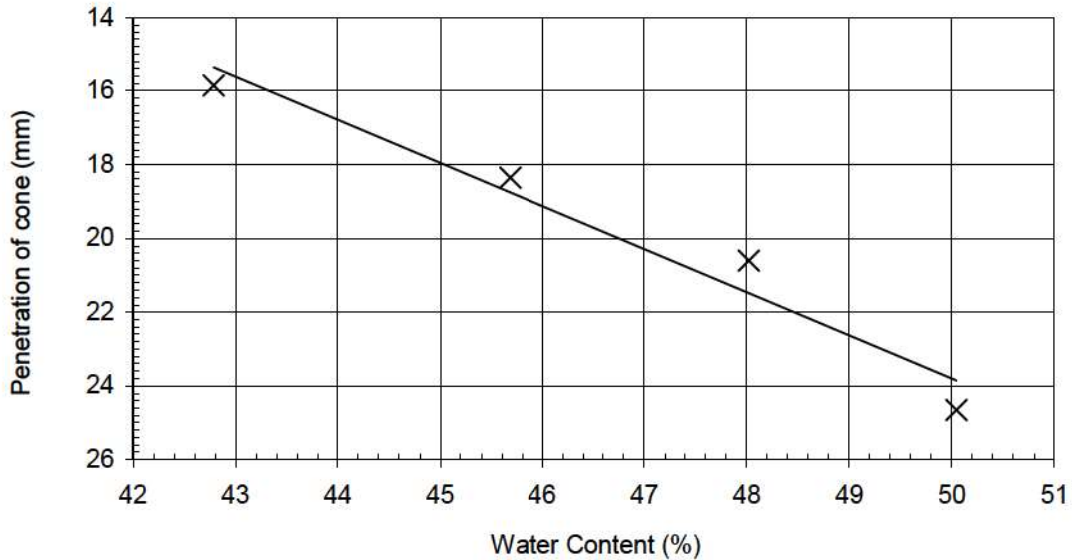
SITE INVESTIGATION AND LABORATORY SERVICES

Site	AG3268-21 LAND ADJACENT TO JUNCTION 10, M40, ARDLEY
Client	Applied Geology Limited
Engineer	

Contract No.	B26845
Hole ID	TP18
Sample Ref	
Depth (m)	0.60-0.70
Sample Type	D

Non Engineering Description : Brown gravelly sandy very silty CLAY. Gravel is fine to coarse

Preparation : Sample oven dried, Percentage retained on 425µm sieve measured by wet sieving



Liquid Limit was determined by mixing using increasing water content and 30° cone

Results :

As Received Water Content : (BS EN ISO 17892-1:2014)	27.8 %
Percentage retained on 425µm sieve :	30 %
Liquid Limit :	47 %
Plastic Limit :	20 %
Plasticity Index :	27
Equivalent water content of material passing 425µm sieve :	39.7 %
Liquidity Index :	0.73

Originator	Checked & Approved
DW	CD 05/08/2021

**Liquid Limit (Four Point Cone Penetrometer Method)
 Plastic Limit, Plasticity Index & Liquidity Index**
 BS EN ISO 17892-12:2018 Clause 5.3
 BS EN ISO 17892-12:2018 Clause 5.5





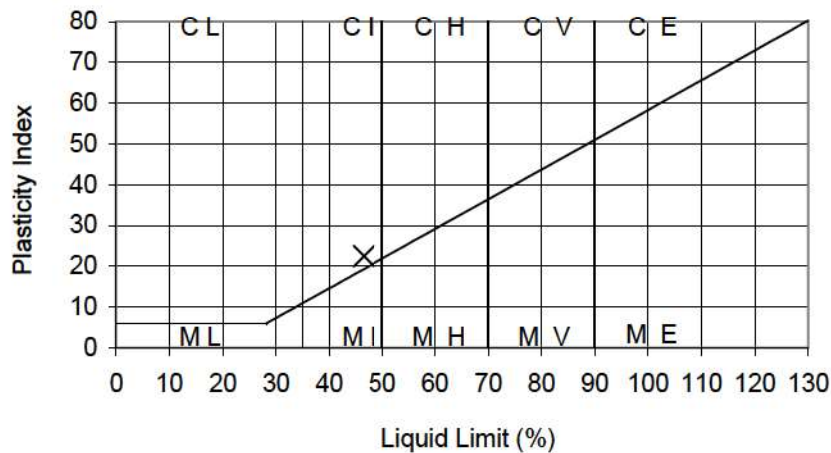
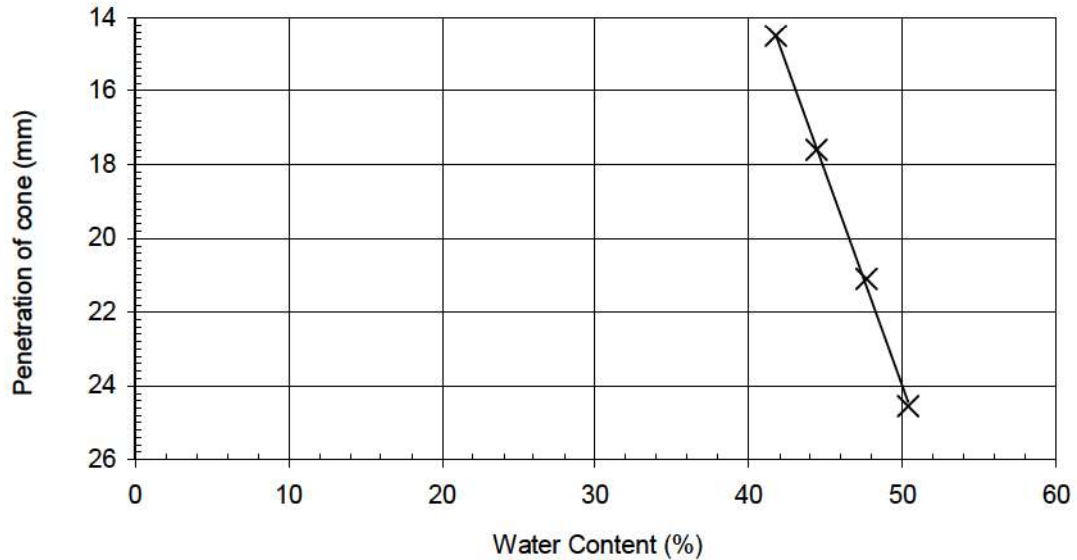
SITE INVESTIGATION AND LABORATORY SERVICES

Site	AG3268-21 LAND ADJACENT TO JUNCTION 10, M40, ARDLEY
Client	Applied Geology Limited
Engineer	

Contract No.	B26845
Hole ID	TP24
Sample Ref	
Depth (m)	1.80-1.90
Sample Type	D

Non Engineering Description : Brown gravelly sandy very silty CLAY with rootlets. Gravel is fine to coarse

Preparation : Sample oven dried, Percentage retained on 425µm sieve measured by wet sieving



Liquid Limit was determined by mixing using increasing water content and 30° cone

Results :

As Received Water Content : (BS EN ISO 17892-1:2014)	32.1 %
Percentage retained on 425µm sieve :	83 %
Liquid Limit :	47 %
Plastic Limit :	24 %
Plasticity Index :	23
Equivalent water content of material passing 425µm sieve :	189 %
Liquidity Index :	7.17

Originator	Checked & Approved
DW	CD 05/08/2021

**Liquid Limit (Four Point Cone Penetrometer Method)
 Plastic Limit, Plasticity Index & Liquidity Index**
 BS EN ISO 17892-12:2018 Clause 5.3
 BS EN ISO 17892-12:2018 Clause 5.5





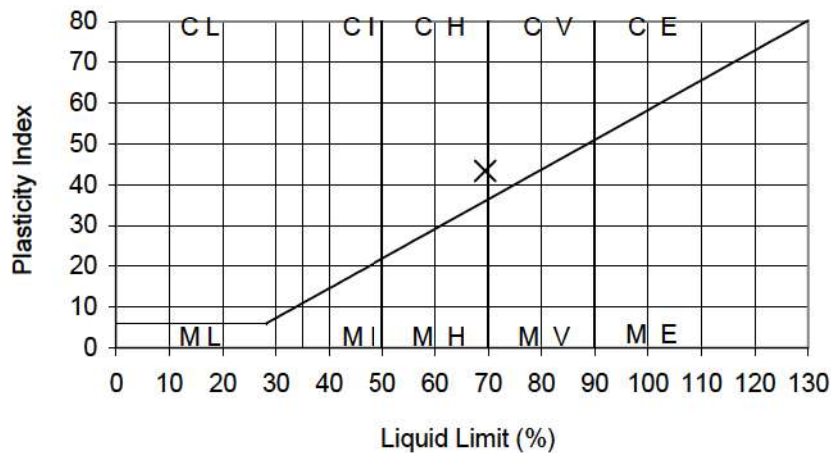
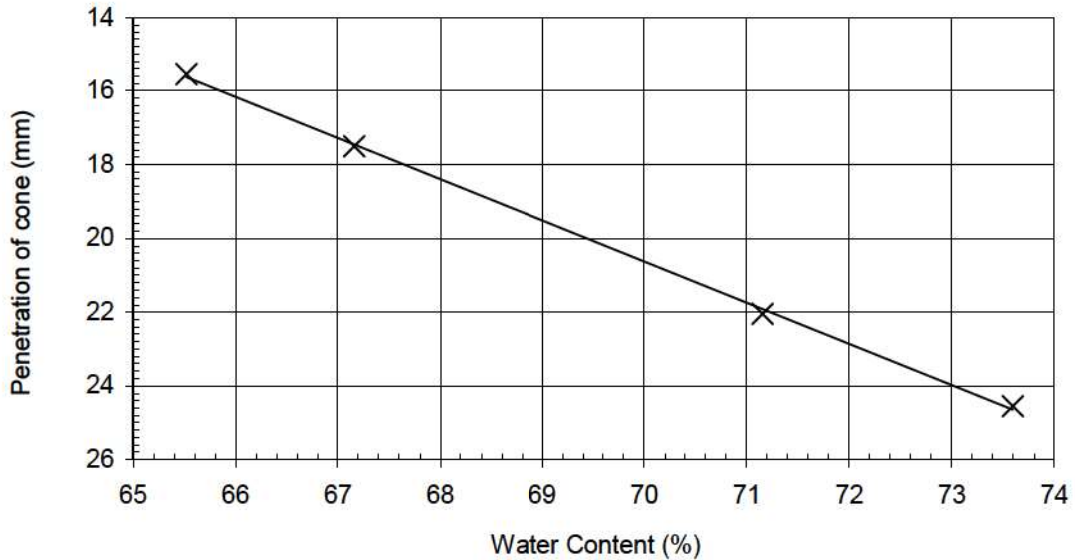
SITE INVESTIGATION AND LABORATORY SERVICES

Site	AG3268-21 LAND ADJACENT TO JUNCTION 10, M40, ARDLEY
Client	Applied Geology Limited
Engineer	

Contract No.	B26845
Hole ID	TP24
Sample Ref	
Depth (m)	2.40-2.80
Sample Type	D

Non Engineering Description : Brown gravelly sandy very silty CLAY with rootlets. Gravel is fine to coarse

Preparation : Sample oven dried, Percentage retained on 425µm sieve measured by wet sieving



Liquid Limit was determined by mixing using increasing water content and 30° cone

Results :

As Received Water Content : (BS EN ISO 17892-1:2014)	38.3 %
Percentage retained on 425µm sieve :	64 %
Liquid Limit :	69 %
Plastic Limit :	26 %
Plasticity Index :	43
Equivalent water content of material passing 425µm sieve :	106 %
Liquidity Index :	1.86

Originator	Checked & Approved
DW	CD 05/08/2021

Liquid Limit (Four Point Cone Penetrometer Method)
Plastic Limit, Plasticity Index & Liquidity Index
 BS EN ISO 17892-12:2018 Clause 5.3
 BS EN ISO 17892-12:2018 Clause 5.5





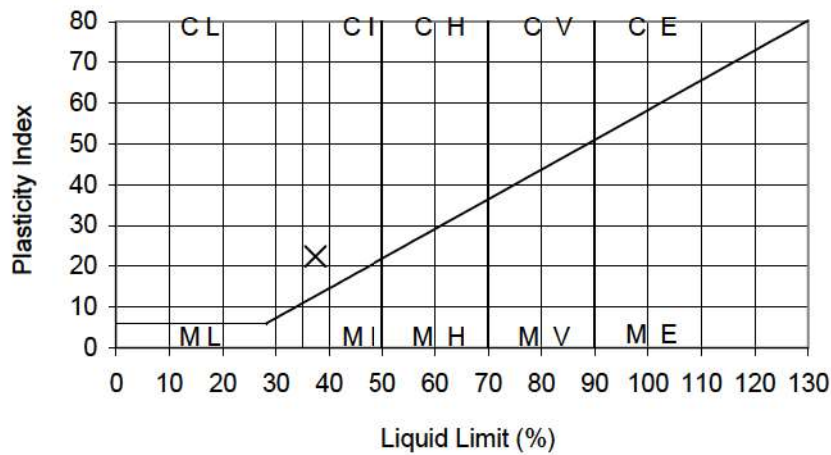
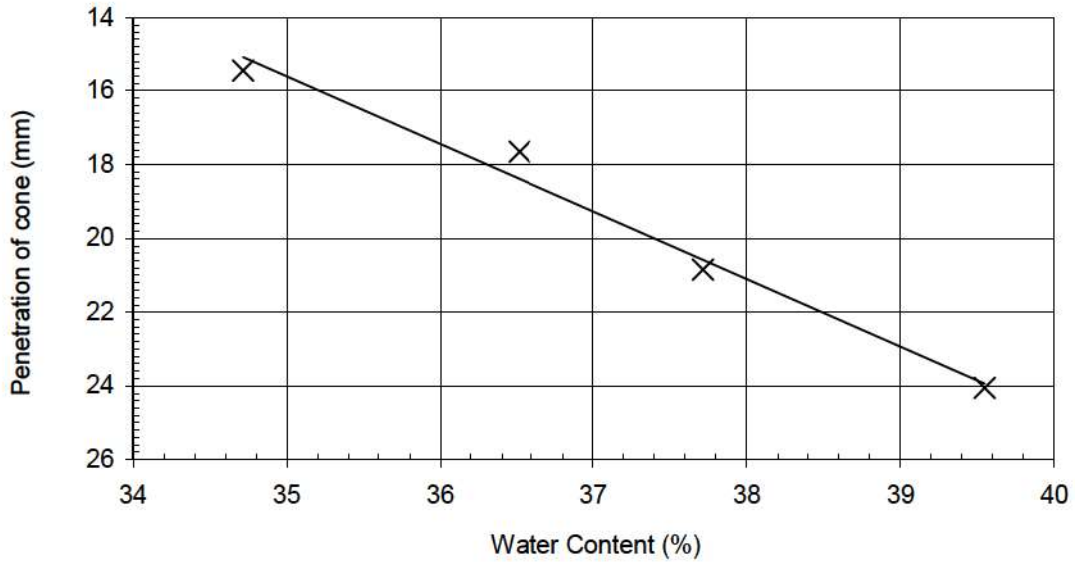
SITE INVESTIGATION AND LABORATORY SERVICES

Site	AG3268-21 LAND ADJACENT TO JUNCTION 10, M40, ARDLEY
Client	Applied Geology Limited
Engineer	

Contract No.	B26845
Hole ID	TP28
Sample Ref	
Depth (m)	0.50-0.60
Sample Type	B

Non Engineering Description : Brown sandy very clayey fine to coarse GRAVEL with cobbles

Preparation : Sample oven dried, Percentage retained on 425µm sieve measured by wet sieving



Liquid Limit was determined by mixing using increasing water content and 30° cone

Results :

As Received Water Content : (BS EN ISO 17892-1:2014)	21.8 %
Percentage retained on 425µm sieve :	61 %
Liquid Limit :	37 %
Plastic Limit :	15 %
Plasticity Index :	22
Equivalent water content of material passing 425µm sieve :	55.9 %
Liquidity Index :	1.86

Originator	Checked & Approved
DW	CD 05/08/2021

Liquid Limit (Four Point Cone Penetrometer Method)
Plastic Limit, Plasticity Index & Liquidity Index
 BS EN ISO 17892-12:2018 Clause 5.3
 BS EN ISO 17892-12:2018 Clause 5.5





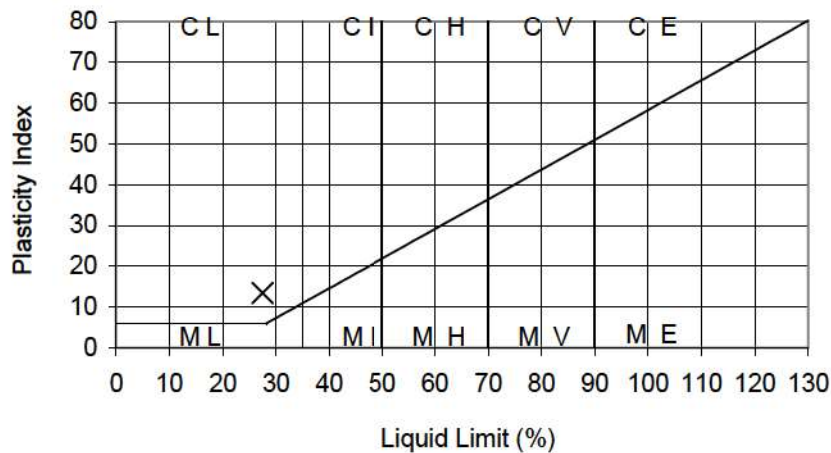
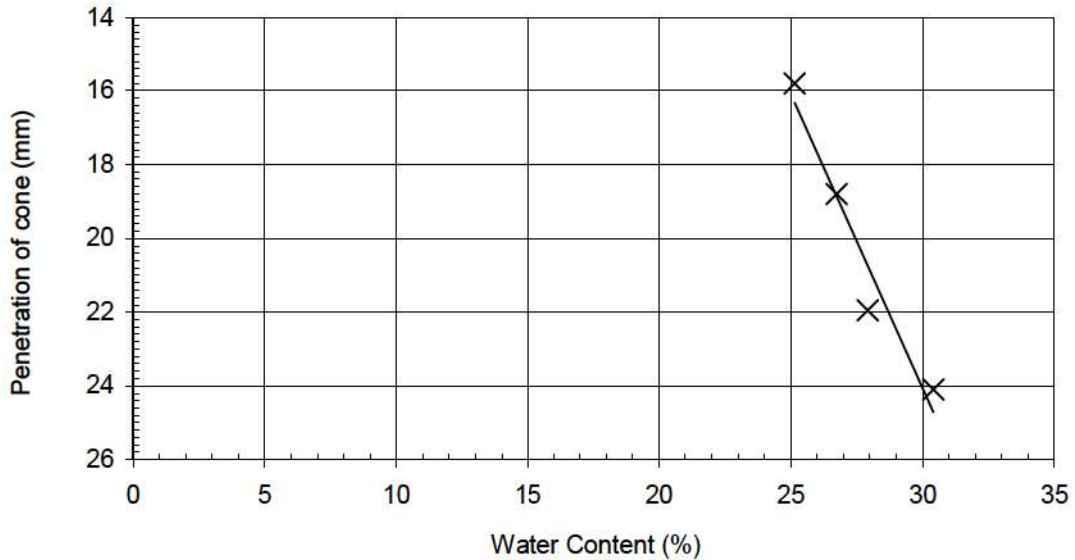
SITE INVESTIGATION AND LABORATORY SERVICES

Site	AG3268-21 LAND ADJACENT TO JUNCTION 10, M40, ARDLEY
Client	Applied Geology Limited
Engineer	

Contract No.	B26845
Hole ID	TP31
Sample Ref	
Depth (m)	0.70-0.80
Sample Type	B

Non Engineering Description : Brown very gravelly very sandy CLAY. Gravel is fine to coarse

Preparation : Sample oven dried, Percentage retained on 425µm sieve measured by wet sieving



Liquid Limit was determined by mixing using increasing water content and 30° cone

Results :

As Received Water Content : (BS EN ISO 17892-1:2014)	14.7 %
Percentage retained on 425µm sieve :	65 %
Liquid Limit :	27 %
Plastic Limit :	14 %
Plasticity Index :	13
Equivalent water content of material passing 425µm sieve :	42.0 %
Liquidity Index :	2.15

Originator	Checked & Approved
DW	CD 05/08/2021

**Liquid Limit (Four Point Cone Penetrometer Method)
 Plastic Limit, Plasticity Index & Liquidity Index**
 BS EN ISO 17892-12:2018 Clause 5.3
 BS EN ISO 17892-12:2018 Clause 5.5





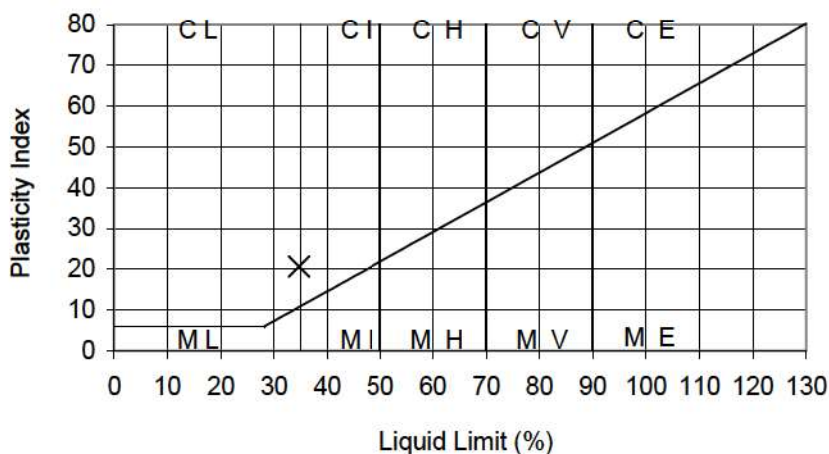
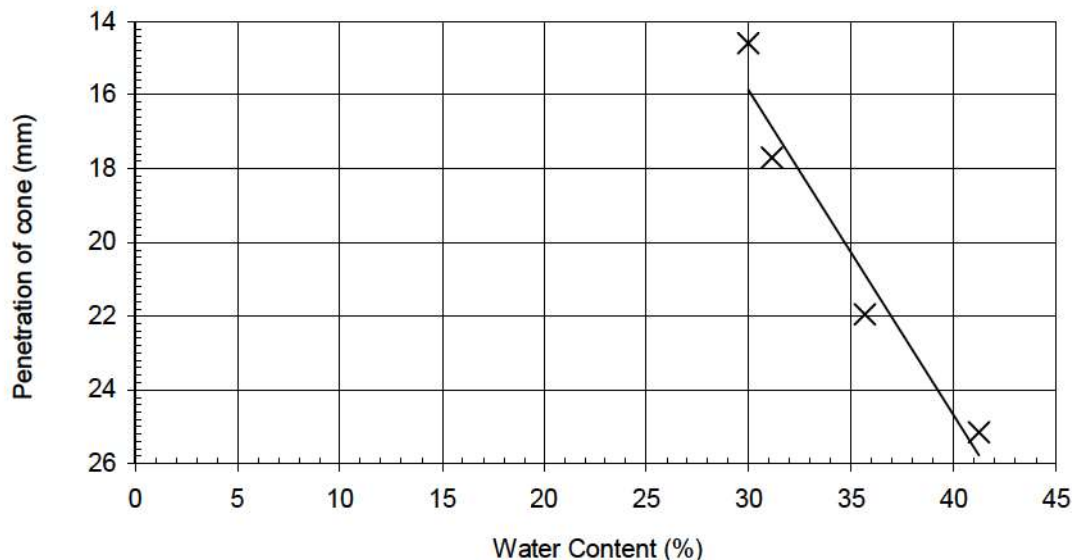
SITE INVESTIGATION AND LABORATORY SERVICES

Site	AG3268-21 LAND ADJACENT TO JUNCTION 10, M40, ARDLEY
Client	Applied Geology Limited
Engineer	

Contract No.	B26845
Hole ID	TP56
Sample Ref	
Depth (m)	0.50-0.50
Sample Type	B

Non Engineering Description : Brown gravelly very sandy CLAY. Gravel is fine to coarse

Preparation : Sample oven dried, Percentage retained on 425µm sieve measured by wet sieving



Liquid Limit was determined by mixing using increasing water content and 30° cone

Results :

As Received Water Content : (BS EN ISO 17892-1:2014)	20.2 %
Percentage retained on 425µm sieve :	46 %
Liquid Limit :	35 %
Plastic Limit :	14 %
Plasticity Index :	21

Equivalent water content of material passing 425µm sieve :	37.4 %
Liquidity Index :	1.11

Originator	Checked & Approved
DW	CD 05/08/2021

**Liquid Limit (Four Point Cone Penetrometer Method)
 Plastic Limit, Plasticity Index & Liquidity Index**
 BS EN ISO 17892-12:2018 Clause 5.3
 BS EN ISO 17892-12:2018 Clause 5.5

