

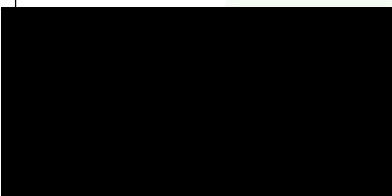
Appendix D: Geotechnical Testing Results



Laboratory Test Report

Client:	Exploration and Testing Associates Limited
Job Number:	C10222
Project:	Lutterworth
Report Number:	L22-013
Date Received:	23.12.2021
Client Contact:	Anthony Owen
Address:	'number three' Siskin Drive, Middlemarch Business Park, Coventry, CV3 4FJ

Testing Required:	Water Content – BS EN ISO 17892-1:2014 Determination of Liquid and Plastic Limits and Plasticity Index – BS EN ISO 17892-12:2018 Particle Size Distribution – BS EN ISO 17892- 4:2016
Date Testing Started:	24.12.2021
Date Testing Finished:	07.01.2022

Date Report Issued:	14.01.2022
Reviewed By:	 J. Round – Quality Technician
Authorised By:	 N. Hodson – Materials Director
Remarks:	(*) Denotes testing is outside of UKAS Accreditation Scope.

Samples will be stored for one month after the report has been issued before being disposed of.

The published results are appertaining only to the specimens tested.

Exploration & Testing Associates Limited, registered in England and Wales # 11803869 at 8B Bowburn South Ind Est,
Bowburn, Durham, DH6 5AD

PARTICLE SIZE DISTRIBUTION

Job Ref

C10222

Borehole/Pit No.

TP19

Site Name

Lutterworth Road, Burbage

Sample No.

1

Soil Description

Brown Slightly Sandy Clay

Depth, m

1.40

Specimen
Reference

Specimen
Depth

m

Sample Type

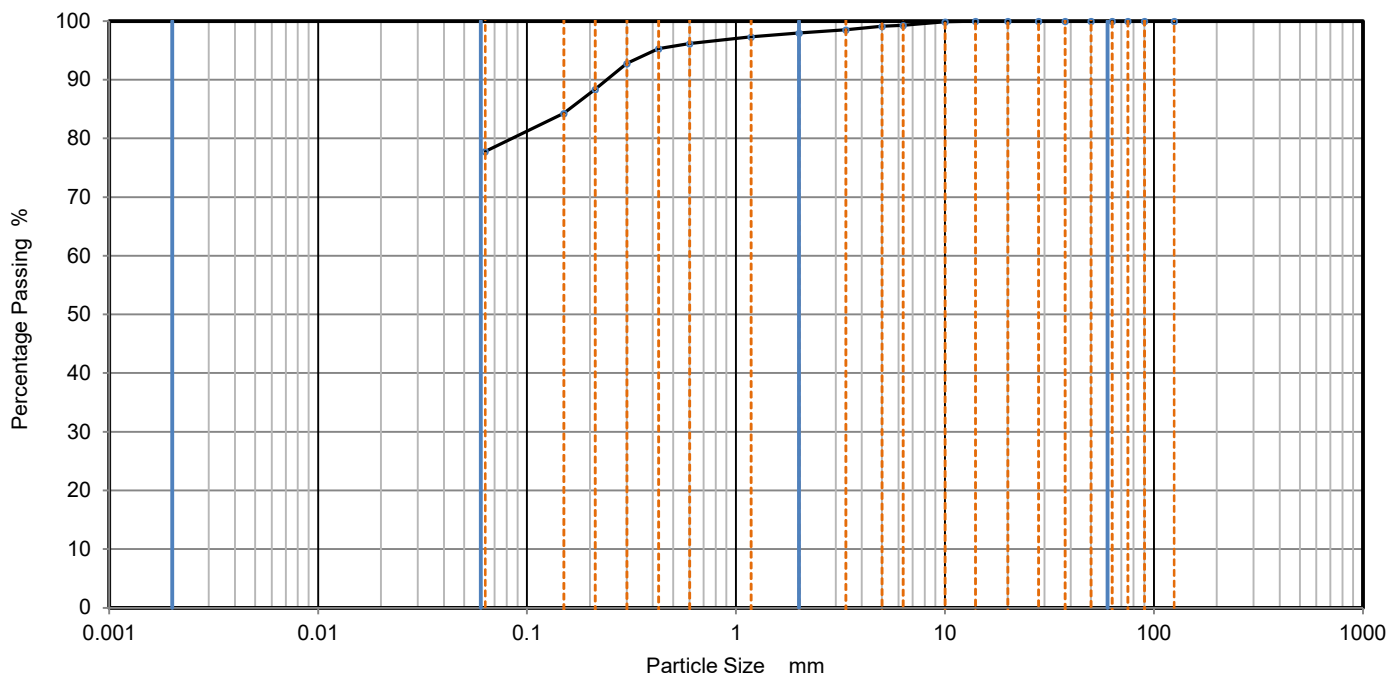
B

Test Method

BS EN ISO 17892-4:2016 - Wet & Dry Sieving

KeyLAB ID

EAT_2022011414



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	100		
20	100		
14	100		
10	100		
6.3	99		
5	99		
3.35	99		
2	98		
1.18	97		
0.6	96		
0.425	95		
0.3	93		
0.212	88		
0.15	84		
0.063	78		

Sample Proportions	% dry mass
Very coarse	0
Gravel	2
Sand	20
Fines <0.063mm	78

Grading Analysis	
D ₁₀₀	mm
D ₆₀	mm
D ₃₀	mm
D ₁₀	mm
Uniformity Coefficient	
Curvature Coefficient	

Remarks

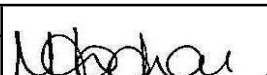
Preparation and testing in accordance with BS EN ISO 17892-4:2016 unless noted below

Date

14/01/2022 15:34

Approved By

N Hodson



UKAS Accredited
Laboratory No. 20632

Appendix E: Gas and Groundwater Monitoring Results



Gas & Groundwater Monitoring Record

Site Name:	Lutterworth Road, Burbage
Undertaken by:	VH
Equipment Used:	GFM436
Atmospheric Pressure Trend	Falling
Temperature:	8

Job Number:	PJSG21-58
Date:	23rd December 2022
Last Calibrated:	26th October 2021
Time of Works:	AM
Weather Conditions:	Overcast / drizzle

Time	BH Ref.	Depth of BH (m)	Depth of Water (m)	Gas Flow (l/hr)		CH ₄ (% v/v)		CO ₂ (% v/v)		O (% v/v)		CO (ppm)	H ₂ S (ppm)	BH Pessure (Pa)	Atmospheric Pressure (mb)
				Peak	Steady	Peak	Steady	Peak	Steady	Low	Steady	Peak	Peak		
11:40	WS01	3.35	2.00	0.3	0.1	< 0.1	< 0.1	2.6	2.6	16.9	16.9	< 1	< 1	0	991
11:32	WS03	2.96	DRY	< 0.1	< 0.1	< 0.1	< 0.1	1.3	1.3	19	19.4	< 1	< 1	0	991
11:15	WS07	3.46	0.60	< 0.1	< 0.1	< 0.1	< 0.1	1.7	1.7	18.5	18.5	16	< 1	0	991
11:52	WS08	3.45	0.70	< 0.1	< 0.1	< 0.1	< 0.1	1.6	1.6	18.5	18.5	< 1	< 1	0	991
11:06	WS10	3.96	0.83	< 0.1	< 0.1	< 0.1	< 0.1	0.5	0.3	20.2	20.2	< 1	< 1	0	991
12:19	WS13	3.72	0.98	2.5	0.1	< 0.1	< 0.1	1.7	1.7	18.1	18.1	10	< 1	0	991
12:10	WS15	2.63	1.50	0.2	0.2	< 0.1	< 0.1	0.9	0.9	19.5	19.5	< 1	< 1	1	991
12:03	WS16	3.85	0.46	< 0.1	< 0.1	< 0.1	< 0.1	0.8	0.8	19.1	19.2	< 1	< 1	0	991

Maximum	2.5	0.2
Minimum	0.2	0.1

<0.1
<0.1

2.6
0.3

20.2	16	0
16.9	10	0

991
991

Background Readings	CH4	CO2	O2	CO	H2S
	<0.1	<0.1	20.3	0	0

General remark/ Observation
Boreholes WS07, WS08, WS10 and WS16 were flooded on arrival. Borehole were subsequently bailed dry and left to stabilise. Monitoring was undertaken after stabilisation.

Gas & Groundwater Monitoring Record

Site Name:	Lutterworth Road, Burbage
Undertaken by:	NB
Equipment Used:	Gas Data (GFM 436)
Atmospheric Pressure Trend	Static
Temperature:	8

Job Number:	PJSG21-58
Date:	13th January 2022
Last Calibrated:	26th October 2021
Time of Works:	AM
Weather Conditions:	Clear, cold, wet ground.

Time	BH Ref.	Depth of BH (m)	Depth of Water (m) on arrival	Depth of Water (m) after bailing	Gas Flow (l/hr)		CH ₄ (% v/v)		CO ₂ (% v/v)		O (% v/v)		CO (ppm)	H ₂ S (ppm)	BH Pessure (Pa)	Atmospheric Pressure (mb)
					Peak	Steady	Peak	Steady	Peak	Steady	Low	Steady	Peak	Peak		
11:08	WS01	3.35	1.33	Not Bailed	0.2	< 0.1	0.2	0.2	0.7	0.7	17.5	17.5	< 1	< 1	1	1025
10:57	WS03	2.96	1.17	Not Bailed	0.3	0.2	0.3	0.3	0.7	0.7	18.6	18.6	< 1	< 1	1	1025
10:14	WS07	3.46	0.63	DRY	0.3	0.3	0.3	0.3	1.7	1.7	14.6	14.6	< 1	< 1	5	1025
10:46	WS08	3.45	0.74	1.03	0.1	0.1	0.3	0.3	0.8	0.8	17.7	17.7	< 1	< 1	1	1025
10:06	WS10	3.96	0.81	1.51	0.1	< 0.1	0.3	0.3	< 0.1	< 0.1	20.4	20.4	< 1	< 1	1	1025
10:25	WS13	3.72	1.02	1.13	< 0.1	< 0.1	0.3	0.3	1.5	1.5	16.4	16.4	< 1	< 1	0	1025
10:33	WS15	2.63	1.37	Not Bailed	0.1	< 0.1	0.3	0.3	1.1	1.1	15.7	15.7	< 1	< 1	1	1025
10:37	WS16	3.85	0.49	1.17	< 0.1	< 0.1	0.3	0.3	0.9	0.9	17.5	17.5	< 1	< 1	0	1025

Maximum	0.3	0.3	0.3	1.7	20.4	0	0	1025
Minimum	0.1	0.1	0.2	0.7	14.6	0	0	1025

Background Readings		CH4	CO2	O2	CO	H2S
		< 0.1	< 0.1	20.3	0	0

General remark/ Observation
Boreholes WS07, WS08, WS10 and WS16 were flooded on arrival. Borehole were subsequently bailed dry and left to stabilise. Monitoring was undertaken after stabilisation.

Gas & Groundwater Monitoring Record

Site Name:	Lutterworth Road, Burbage
Undertaken by:	NB
Equipment Used:	Gas Data (GFM 436)
Atmospheric Pressure Trend	Static
Temperature:	12

Job Number:	PJSG21-58
Date:	27th January 2022
Last Calibrated:	26th October 2021
Time of Works:	AM
Weather Conditions:	Cold, clear, dry.

Time	BH Ref.	Depth of BH (m)	Depth of Water (m) on arrival	Depth of Water (m) after bailing	Gas Flow (l/hr)		CH ₄ (% v/v)		CO ₂ (% v/v)		O (% v/v)		CO (ppm)	H ₂ S (ppm)	BH Pressure (Pa)	Atmospheric Pressure (mb)
					Peak	Steady	Peak	Steady	Peak	Steady	Low	Steady	Peak	Peak		
09:14	WS01	3.35	1.87	Not Bailed	< 0.1	< 0.1	0.2	0.2	< 0.1	< 0.1	20.1	20.1	< 1	< 1	0	1012
09:20	WS03	2.96	0.85	1.73	< 0.1	< 0.1	0.2	0.2	< 0.1	< 0.1	20.2	20.2	< 1	< 1	0	1012
09:06	WS07	3.46	0.63	1.71	< 0.1	< 0.1	0.2	0.2	< 0.1	< 0.1	20.1	20.1	< 1	< 1	0	1012
09:28	WS08	3.45	0.70	1.38	< 0.1	< 0.1	0.2	0.2	< 0.1	< 0.1	20.1	20.1	< 1	< 1	0	1012
09:00	WS10	3.96	0.80	1.72	< 0.1	< 0.1	0.2	0.2	< 0.1	< 0.1	20.1	20.1	< 1	< 1	0	1012
09:48	WS13	3.72	1.04	1.81	< 0.1	< 0.1	0.2	0.2	< 0.1	< 0.1	20.1	20.1	< 1	< 1	0	1012
09:42	WS15	2.63	1.53	Not Bailed	< 0.1	< 0.1	0.2	0.2	< 0.1	< 0.1	20.2	20.2	< 1	< 1	0	1012
09:36	WS16	3.85	0.46	1.28	< 0.1	< 0.1	0.2	0.2	< 0.1	< 0.1	20.3	20.3	< 1	< 1	0	1012

Maximum	<0.1	<0.1	0.2	<0.1	20.3	0	0	1012
Minimum	<0.1	<0.1	0.2	<0.1	20.1	0	0	1012

Background Readings		CH4	CO2	O2	CO	H2S
		<0.1	<0.1	20.2	0	0

General remark/ Observation
Boreholes WS03, WS07, WS08, WS10, WS13, WS16 were bailed dry on arrival and left to stabilise. Monitoring was undertaken after stabilisation.

Gas & Groundwater Monitoring Record

Site Name:	Lutterworth Road, Burbage
Undertaken by:	NB
Equipment Used:	Gas Data (GFM 436)
Atmospheric Pressure Trend	Static
Temperature:	8

Job Number:	PJSG21-58
Date:	14th February 2022
Last Calibrated:	26th October 2021
Time of Works:	AM
Weather Conditions:	Wet, cloudy, standing water

Time	BH Ref.	Depth of BH (m)	Depth of Water (m) on arrival	Depth of Water (m) after bailing	Gas Flow (l/hr)		CH ₄ (% v/v)		CO ₂ (% v/v)		O (% v/v)		CO (ppm)	H ₂ S (ppm)	BH Pessure (Pa)	Atmospheric Pressure (mb)
					Peak	Steady	Peak	Steady	Peak	Steady	Low	Steady	Peak	Peak		
11:40	WS01	3.35	1.39	Not Bailed	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	20.1	20.1	< 1	< 1	0	983
11:32	WS03	2.96	1.32	Not Bailed	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	20.2	20.2	< 1	< 1	0	983
11:15	WS07	3.46	0.32	2.84	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	20.3	20.3	< 1	< 1	0	983
11:52	WS08	3.45	0.48	2.84	0.1	0.1	< 0.1	< 0.1	< 0.1	< 0.1	20.3	20.4	< 1	< 1	1	983
11:06	WS10	3.96	0.73	2.48	< 0.1	< 0.1	< 0.1	< 0.1	0.1	0.1	20.0	20.0	< 1	< 1	0	983
12:19	WS13	3.72	1.28	Not Bailed	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	20.2	20.2	< 1	< 1	0	983
12:10	WS15	2.63	1.34	Not Bailed	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	20.3	20.3	< 1	< 1	0	983
12:03	WS16	3.85	0.39	2.81	0.1	0.1	< 0.1	< 0.1	< 0.1	< 0.1	20.2	20.2	< 1	< 1	1	983

Maximum	0.1	0.1	0	0.1	20.4	0	0	983
Minimum	0.1	0.1	0	0.1	20	0	0	983

Background Readings		CH4	CO2	O2	CO	H2S
		< 0.1	< 0.1	20.2	0	0

General remark/ Observation
Boreholes WS07, WS08, WS10 and WS16 were flooded on arrival. Borehole were subsequently bailed dry and left to stabilise. Monitoring was undertaken after stabilisation.

Gas & Groundwater Monitoring Record

Site Name:	Lutterworth Road, Burbage
Undertaken by:	NB
Equipment Used:	Gas Data (GFM 436)
Atmospheric Pressure Trend	Falling
Temperature:	11

Job Number:	PJSG21-58
Date:	09th March 2022
Last Calibrated:	26th October 2021
Time of Works:	AM
Weather Conditions:	Light wind, cloud, wet underfoot

Time	BH Ref.	Depth of BH (m)	Depth of Water (m) on arrival	Depth of Water (m) after bailing	Gas Flow (l/hr)		CH ₄ (% v/v)		CO ₂ (% v/v)		O (% v/v)		CO (ppm)	H ₂ S (ppm)	BH Pessure (Pa)	Atmospheric Pressure (mb)
					Peak	Steady	Peak	Steady	Peak	Steady	Low	Steady	Peak	Peak		
11:08	WS01	3.35	0.99	DRY	0.7	0.1	< 0.1	< 0.1	0.5	0.5	20.4	20.4	< 1	< 1	3	1000
10:57	WS03	2.96	0.79	DRY	< 0.1	< 0.1	< 0.1	< 0.1	1.3	1.3	16.3	16.3	< 1	< 1	0	1000
10:14	WS07	3.46	0.47	DRY	0.8	< 0.1	< 0.1	< 0.1	1.0	1.0	17.7	17.7	< 1	< 1	7	999
10:46	WS08	3.45	0.33	DRY	0.4	< 0.1	< 0.1	< 0.1	1.0	1.0	14.7	14.7	< 1	< 1	3	1000
10:06	WS10	3.96	1.25	Not Bailed	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	20.8	20.8	< 1	< 1	0	1000
10:25	WS13	3.72	0.93	DRY	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	20.7	20.7	< 1	< 1	0	1000
10:33	WS15	2.63	1.35	Not Bailed	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	20.5	20.5	< 1	< 1	0	999
10:37	WS16	3.85	0.32	DRY	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	20.2	20.2	< 1	< 1	0	999

Maximum	0.8	0.1	0	1.3	20.8	0	0	1000
Minimum	0.4	0.1	0	0.5	14.7	0	0	999

Background Readings		CH4	CO2	O2	CO	H2S
		< 0.1	< 0.1	20.9	< 1	< 1

General remark/ Observation
Boreholes WS01, WS03, WS07, WS08, WS13 and WS16 were flooded on arrival. Borehole were subsequently bailed dry and left to stabilise. Monitoring was undertaken after stabilisation.

Gas & Groundwater Monitoring Record

Site Name:	Lutterworth Road, Burbage
Undertaken by:	NB
Equipment Used:	Gas Data (GFM 436)
Atmospheric Pressure Trend	Static
Temperature:	14

Job Number:	PJSG21-58
Date:	23rd March 2022
Last Calibrated:	26th October 2021
Time of Works:	AM
Weather Conditions:	Clear, warm ,light breeze

Time	BH Ref.	Depth of BH (m)	Depth of Water (m) on arrival	Depth of Water (m) after bailing	Gas Flow (l/hr)		CH ₄ (% v/v)		CO ₂ (% v/v)		O (% v/v)		CO (ppm)	H ₂ S (ppm)	BH Pessure (Pa)	Atmospheric Pressure (mb)
					Peak	Steady	Peak	Steady	Peak	Steady	Low	Steady	Peak	Peak		
09:14	WS01	3.35	1.05	DRY	< 0.1	< 0.1	< 0.1	< 0.1	0.1	0.1	20.7	20.7	< 1	< 1	0	1016
09:20	WS03	2.96	0.97	DRY	< 0.1	< 0.1	< 0.1	< 0.1	0.1	0.1	20.7	20.7	< 1	< 1	0	1016
09:06	WS07	3.46	0.56	DRY	1.8	1.8	< 0.1	< 0.1	0.7	0.7	19.4	19.4	< 1	< 1	15	1016
09:28	WS08	3.45	0.33	DRY	< 0.1	< 0.1	< 0.1	< 0.1	0.9	0.9	15.2	15.2	< 1	< 1	0	1016
09:00	WS10	3.96	0.86	DRY	< 0.1	< 0.1	< 0.1	< 0.1	0.1	0.1	21.2	21.2	< 1	< 1	0	1016
09:48	WS13	3.72	0.91	DRY	< 0.1	< 0.1	< 0.1	< 0.1	0.8	0.8	17.5	17.5	< 1	< 1	0	1016
09:42	WS15	2.63	1.38	Not Bailed	< 0.1	< 0.1	< 0.1	< 0.1	0.8	0.8	18.6	18.6	< 1	< 1	0	1016
09:36	WS16	3.85	0.32	DRY	< 0.1	< 0.1	< 0.1	< 0.1	0.1	0.1	20.7	20.7	< 1	< 1	0	1016

Maximum	1.8	1.8	0	0.9	21.2	0	0	1016
Minimum	1.8	1.8	0	0.1	15.2	0	0	1016

Background Readings		CH4	CO2	O2	CO	H2S
		< 0.1	< 0.1	20.7	< 1	< 1

General remark/ Observation
Boreholes WS01, WS03, WS07, WS08, WS13 and WS16 were flooded on arrival. Borehole were subsequently bailed dry and left to stabilise. Monitoring was undertaken after stabilisation.



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