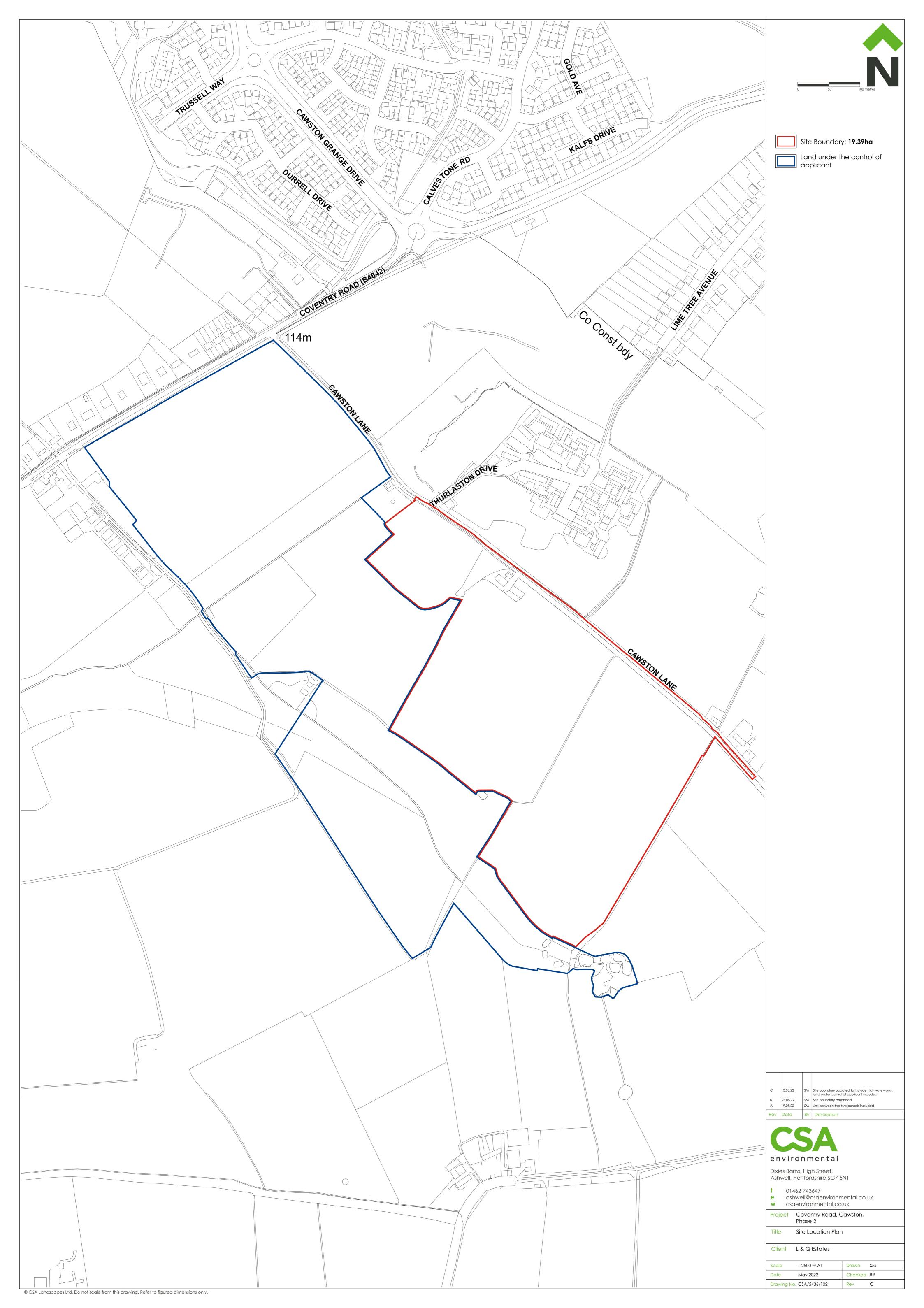
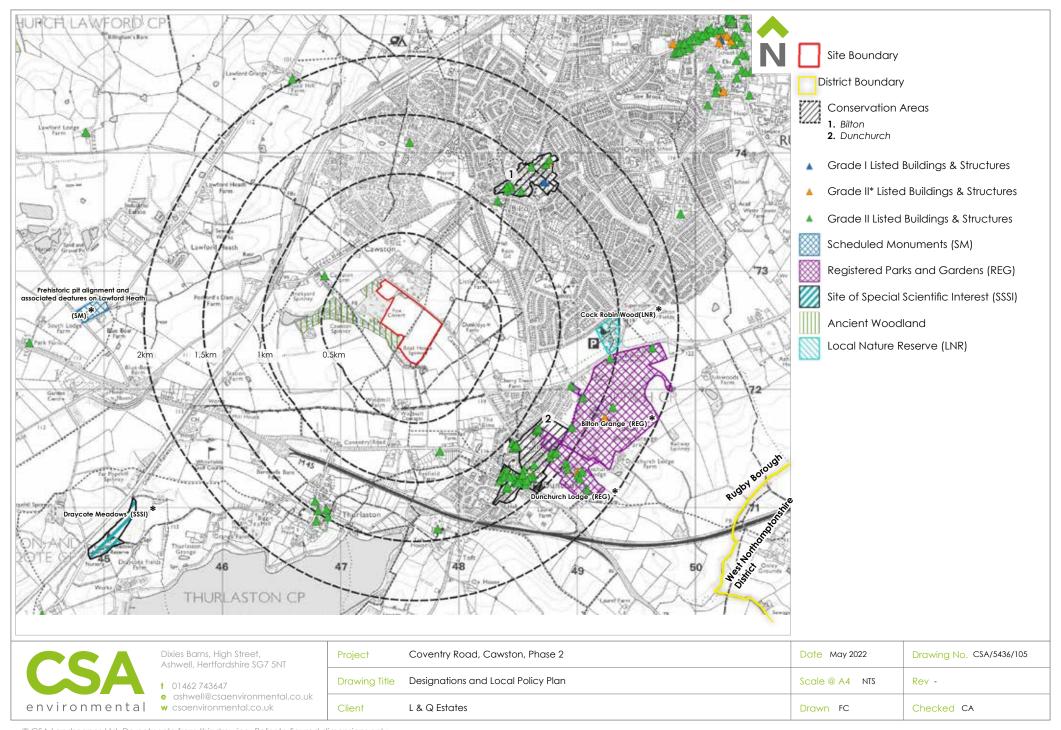
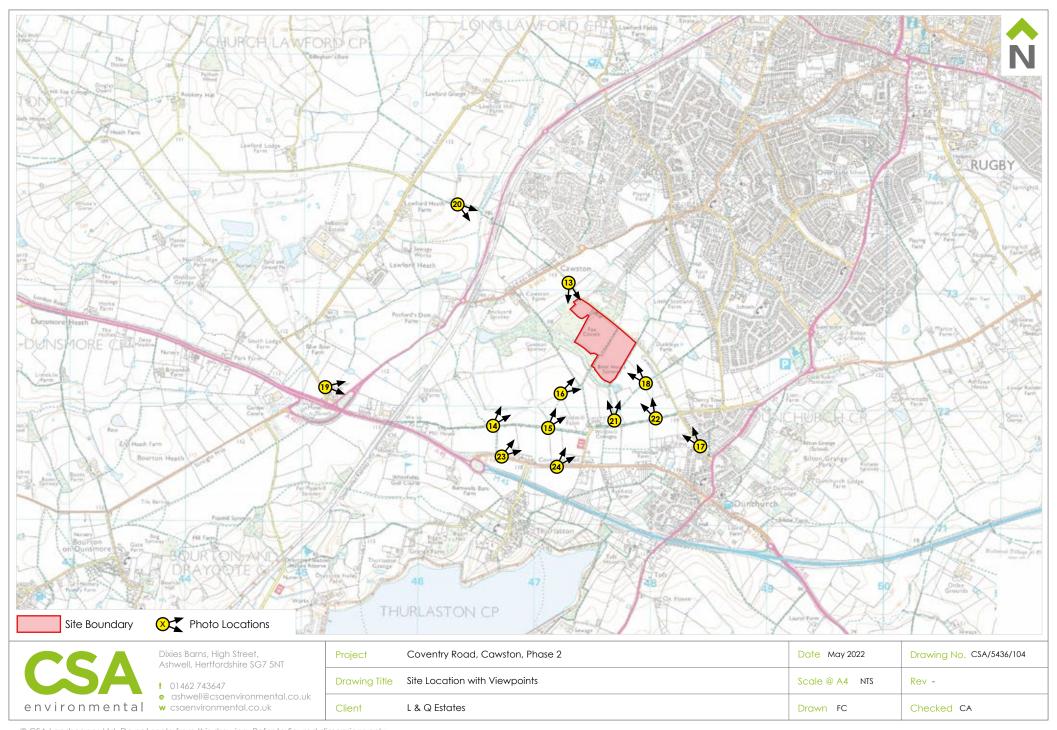
Site Location Plan



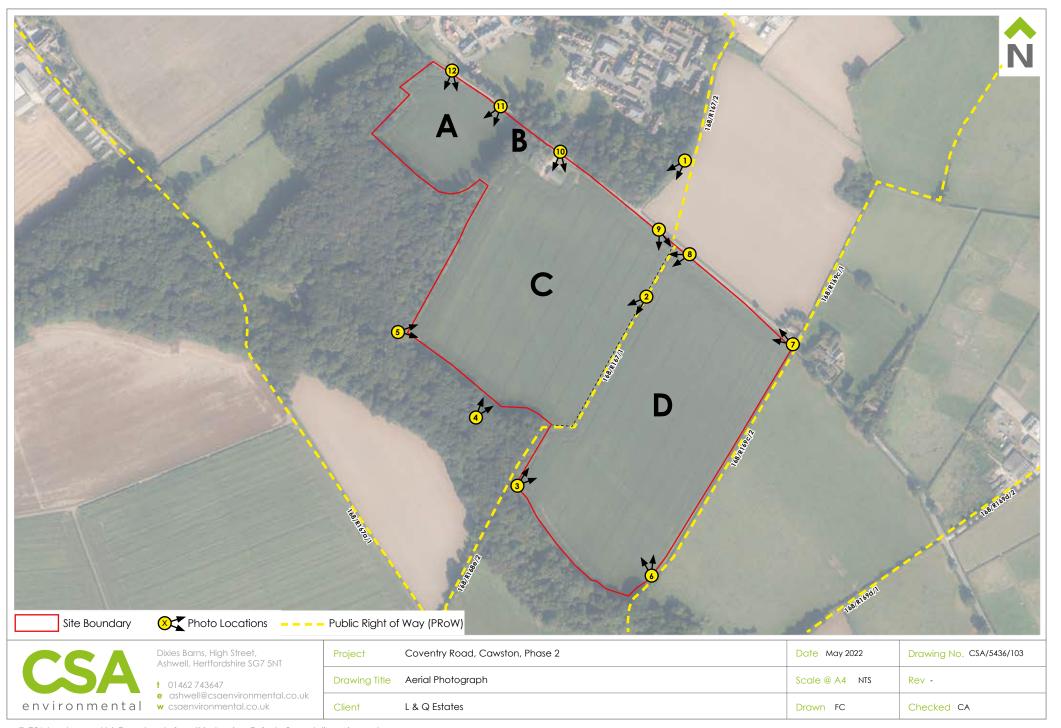
Study Area Designations



Site Location Plan with Viewpoints



Aerial Photograph



Site Investigation Factual Report



L & Q ESTATES LIMITED

LAND SOUTH OF CAWSTON LANE, SOUTH RUGBY

SITE INVESTIGATION FACTUAL REPORT

MARCH 2022



Wardell Armstrong

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DATE ISSUED:	MARCH 2022								
JOB NUMBER:	BM11254								
REPORT NUMBER:	001								
VERSION:	V1.0								
STATUS:	FINAL								
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SITE INVESTIGATION FACTUAL REPORT									
MARCH 2022									
PREPARED BY:									
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APPROVED BY:									
Samantha Nevitt	Technical Director	Leneury.							

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CONTENTS		PAGE NUMBER
1	Introduction	1
2	Site Description and Setting	2
3	Site Investigation Works	3
4	Site Investigation Records	6
5	Conclusions	7

APPENDICES

Appendix 1	Exploratory Hole Logs
Appendix 2	Gas and Groundwater Monitoring Results
Appendix 3	Soakaway Testing
Appendix 4	California Bearing Ratio Test Results
Appendic 5	Geotechnical Laboratory Test Results
Appendix 6	Chemical Laboratory Testing Results

DRAWINGS

Drawing No.	Title	Scale
BM11254-001	Site Location Plan	1:10,000
BM11254-002	Site Investigation Plan	1:2,500
BM11254-003	Indicative Site Plan	1:2,500



1. INTRODUCTION

- 1.1 This report has been prepared in accordance with instructions issued on behalf of L&Q Estates Limited. These instructions follow Wardell Armstrong's original proposals for undertaking site investigation works which were outlined in a letter dated 12th January 2022.
- 1.2 The site is located to south of Cawston Lane in Rugby, Warwickshire. The general site location is shown on Drawing Number BM11254-001 with the site investigation positions shown on Drawing Number BM11254-002.
- 1.3 This factual report outlines the results of site investigation works carried out, the ground conditions encountered and the testing undertaken to establish, in broad terms, the geochemical and geotechnical setting of the site. The scope of the intrusive ground investigation works has been designed to provide information for the design of the proposed residential development and to inform the foundation and civil engineering design of the proposed development and associated infrastructure.
- 1.4 The ground investigation at the site was designed to provide good general coverage of the geotechnical and geochemical nature of the sub-surface materials, and included a contaminated land assessment, foundation assessment and soakaway drainage assessment.



2. SITE DESCRIPTION AND SETTING

- 2.1 The proposed development area is currently undeveloped agricultural land, located directly south of Cawston Lane approximately 3.5km southwest of Rugby town centre. The site is centred at National Grid Reference 447083, 273010. The site measures approximately 19.3 hectares in area. Development considerations for the site include residential buildings, a primary school, and associated infrastructure.
- 2.2 The site area is situated south of Cawston Lane and Coventry Road. The site is bound to the north by residential developments off Coventry Road, and bound to the south by woodland and agricultural land. Commercial Premises, a track, and open fields are seen to the west, with a housing development currently under construction at the time of writing towards the east of the Site. A small unnamed watercourse flows northeast-southwest through the south of the site, with an easement either side. Access onto the site is off Cawston Road at the northeast corner of the site.

Geology

Superficial Deposits

2.3 The published geological mapping for the area based on the BGS website and Envirocheck Report indicates that the site has two superficial units present. The Dunsmore Gravel is present in the northwest of the site and in the southern boundary. This unit is described as flinty gravel with lenses of coarse sand. The Bosworth Clay Member is present in the Southeast of the Site and underlies the Dunsmore Gravel. This unit is described as clay and silt.

Bedrock Geology

2.4 The published geological mapping indicates that the site is underlain by the Charmouth Mudstone Formation, part of the Lias Group. This formation is described as laminated shales and mudstones. Geological mapping shows there are no geological faults crossing or in the vicinity of the site. There is a moderate hazard for compressible ground stability hazards on site.



3. SITE INVESTIGATION WORKS

3.1 The Site investigation works were designed in general accordance with current UK guidance and undertaken between 24th and 28th January 2022. The scope and rationale are summarised in Table 3.1.

Table 3.1: Rationale of Site Investigation Works										
Exploratory Hole Type	Exploratory Hole Ref.	Exploratory Hole Depth (m bgl)	Rationale							
Cable Percussive Boreholes	CBB01-CBB02	10.45-12.45	 Confirm the ground and groundwater conditions; Collect soil samples for chemical & geotechnical testing; 							
Trial pits	TP01-TP26	3.40-4.50	 Confirm the shallow ground and groundwater conditions; Collect soil samples for chemical & geotechnical testing. Undertake in-situ testing 							
Window Sample Boreholes	WS01-WS18	4.50- 5.00	 Confirm the shallow ground and groundwater conditions; Collect soil samples for chemical & geotechnical testing; Undertake in-situ testing. 							
Soakaway / permeability tests	SA01-SA07	-	Determine typical permeability characteristics of the ground conditions.							
Standpipe Installation	WS01, WS04, WS08, WS11, WS14, WS16	2.80-5.00	Monitor the gas and groundwater conditions on four occasions over a one-month period							
In-situ CBR tests	CBR01-CBR08	0.50-0.55	 Determine the strength of the surrounding roads and pavements; Determine CBR Values of the site for pavement design. 							

- 3.2 The site investigation works were undertaken by Ground Investigation & Piling Ltd (GIP) under direct supervision of Wardell Armstrong engineers. The approximate location of all investigation points in the site investigation are shown on Drawing BM11254-002.
- 3.3 Exploratory borehole arisings were logged on site by qualified engineers. All exploratory holes were logged in accordance with the requirements of BS5930:2015



including recording observed visual and olfactory indications of contamination. Exploratory hole logs are provided in Appendix 1.

Monitoring Well Installations

- 3.4 Ground gas and groundwater monitoring standpipes were installed within 6 No. window sample boreholes (WS01, WS04, WS08, WS11, WS14 and WS16).
- 3.5 The monitoring wells were primarily designed to assess the potential for ground gas in the boreholes and to collect groundwater for further testing where possible.
- 3.6 Gas and groundwater has been monitored four times over a one-month period following the completion of the ground investigation works on 3rd February, 9th February, 21st February and 2nd March. The monitoring data sheets are attached as Appendix 2.

In-Situ Testing

- 3.7 Standard Penetration Tests (SPTs) were carried out at appropriate intervals within all of the window sampling and cable percussive boreholes. The results are recorded on the borehole logs attached as Appendix 1.
- 3.8 Soakaway tests were undertaken in 7 trial pit holes (SA01-SA07) and are attached within the GIP Factual Report as Appendix 3.
- 3.9 California Bearing Ratio (CBR) Tests were carried out at 0.50–0.55m at 8 locations throughout the site. The results are attached as Appendix 4.

Laboratory Analysis

- 3.10 Representative soil samples were selected for laboratory geotechnical and geochemical testing, based on field observations, to inform the proposed works.
- 3.11 Selected environmental soil samples were placed in laboratory provided containers and stored in cool boxes prior to being transported to the nominated laboratory under the laboratory's chain of custody documentation. The laboratory selected by Wardell Armstrong for chemical analysis was Envirolab (UKAS and MCERTS accredited) and for geotechnical testing were GIP (UKAS accredited).



Geotechnical Testing

- 3.12 The following geotechnical tests were carried out:
 - 12 Atterberg Limit tests;
 - 14 Sieve analysis tests;
 - 7 compaction tests (2.5kg);
 - 26 Natural Water Content tests;
 - 1 Undrained Triaxial Compression test;
 - 2 pH tests;
 - 2 Water soluble sulphate tests.
- 3.13 The results of the geotechnical testing is attached as Appendix 5.
- 3.14 Testing has also been scheduled to determine the pH and sulphate levels with regard to determining the concrete conditions in accordance with BRE Special Digest 1. The results of this testing are included within the soils chemical testing results which are presented in Appendix 5.

Geochemical Testing

3.15 Selected soil and water samples were tested for a suite of commonly encountered metals and non-metal compounds identified as potential contaminants of concern by the preliminary CSM which are considered to be detrimental to the environment or potentially harmful to human health. Samples were tested using a Greenfield and Brownfield suite, which test for pH, Sulphate (Water soluble and acid soluble) and Total Sulphur. A number of samples were also tested for organic compounds and hydrocarbons. The results of the geochemical testing are presented in Appendix 6.



4. SITE INVESTIGATION RECORDS

4.1 A summary of the ground conditions encountered during the site investigation works is presented in Table 4.1, with detailed information presented in the exploratory hole logs included in Appendix 1.

Table 4.1: Encountered Ground Conditions											
Stratum	Depth to top of	Thickness (m)		Description							
Strucum	strata (m bgl)	Min	Max	Description							
TOPSOIL	0.00	0.20	0.60	Dark brown orangish brown fibrous gravelly sand. Sand is fine to medium. Gravel is rounded to subangular fine to medium consisting of chalk, flint and mudstone.							
MADE GROUND	0.50	1.70	1.70	Wet dark grey angular to subrounded coarse gravel. Gravel is flint and sandstone with cobbles of flint and sandstone. Slight organic smell.							
SUPERFICIAL DEPOSITS (Dunsmore Gravel and Bosworth Clay)	0.20 - 2.20	NP	NP	Dunsmore Gravel recovered as loose to dense light brown orangish brown gravelly clayey SAND and sandy GRAVEL. Gravel is angular to rounded medium to coarse of chalk, flint and quartz. Bosworth Clay recovered as soft to stiff light brown, grey silty CLAY with lenses of clayey sand.							

NP – Base of deposit not proven

Geotechnical Results

4.2 Geotechnical laboratory results are presented in Appendix 5. Insitu geotechnical results are presented on the investigation logs in Appendix 1.

Gas and Groundwater Data

4.3 Gas and groundwater monitoring standpipes were installed in 6 of the windowless sample boreholes. These have been monitored on four (4 No.) occasions between 3rd February and 2nd March 2022. The results of the Gas and Groundwater monitoring data is presented in Appendix 2.

Chemical Data

4.4 Geochemical laboratory results are presented in Appendix 6.



5. CONCLUSIONS

- 5.1 Site investigation works have been undertaken at the site to provide a broad understanding of the geotechnical, geological, geochemical and hydrogeological setting of the site. The results from this work also provide basic ground engineering related information for the design of development works planned to be carried out at the site.
- 5.2 Windowless sample boreholes, cable percussive boreholes, trial pits, soakaways tests and CBR tests were undertaken to enable detailed investigation of the sub-surface ground conditions at the site. Selected samples from the investigation positions have been tested for a range of geotechnical and geochemical analyses to inform, so far as possible, the proposed development of the site.



APPENDICES



Appendix 1
Exploratory Hole Logs



Building 62, Third Avenue The Pensnett Estate
Kingswinford
DY6 7XT
Tel: 01902 459558
Email: info@gipuk.com www.gipuk.com

Cable Percussion Borehole Log

Project Number: 30925

Project Name: Cawston Lane, South Rugby Wardell Armstrong LLP Client:

Engineer:

Date Drilled: 25/01/2022 Diameter: 150mm 10.00m

Borehole: CPB01 Sheet 1 of 2 Logged By: CJB Checked By: ML Drilled By: ΕB

National Grid: E: 447187.82 N: 273027.88 Ground Level: +113.07mAOD

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Soft and in parts very soft light brown and brown slightly gravelly stlty CLAY. Gravel is sub-angular chert. (Superficial Deposits). Soft and in parts very soft with occasional firm pockets reddish brown slightly sandy slightly gravelly CLAY. Gravel is sub-angular to sub-rounded mudstone, and stone, chert and quartz. (Superficial Deposits). Stiff and in parts very stiff reddish brown slightly sandy slightly gravelly CLAY with occasional sand pockets. Gravel is sub-angular to sub-rounded mudstone, quartz, siltstone and sandstone. (Superficial Deposits). Stiff and in parts very stiff reddish brown slightly sandy slightly gravelly CLAY with occasional sand pockets. Gravel is sub-angular to sub-rounded mudstone, quartz, siltstone and sandstone. (Superficial Deposits). Medium dense (from 9.00m) brown clayey and in parts very clayey slightly gravelly SAND with some clay bands. Gravel is sub-angular to sub-rounded mudstone and sandstone. (Superficial Deposits). Medium dense (from 9.00m) brown clayey and in parts very clayey slightly gravelly SAND with some clay bands. Gravel is sub-angular to sub-rounded mudstone and sandstone. (Superficial Deposits).			္က ိုင္င				2.50				
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slightly gravelly CLAY with occasional sand pockets. Gravel is sub-angular to sub-rounded mudstone, quartz, sittstone and sandstone. (Superficial Deposits). Continue of the continue of t	Chert and quartz. (Superiiciai	Deposits).	<u> </u>					1.00			
slightly gravelly CLAY with occasional sand pockets. Gravel is sub-angular to sub-rounded mudstone, quartz, sittstone and sandstone. (Superficial Deposits). Sub-angular to sub-rounded mudstone, quartz, sittstone and sandstone. (Superficial Deposits). Sub-angular to sub-rounded mudstone and sandstone. (Superficial Deposits). Sub-angular to sub-rounded mudstone. (Superficial Deposits). Sub-	- -		<u> </u>								
is sub-angular to sub-rounded mudstone, quartz, siltstone and sandstone. (Superficial Deposits). Continue of the continue o			0-0-0	5.00	108.07			5.00	U	[48]	
and sandstone. (Superficial Deposits).			0-0-0-								
Medium dense (from 9.00m) brown clayey and in parts very clayey slightly gravelly SAND with some clay bands. Gravel is sub-angular to sub-rounded mudstone and sandstone. (Superficial Deposits). Sand (Sanda Sanda			0 0	1				5.45	D		
Medium dense (from 9.00m) brown clayey and in parts very clayey slightly gravelly SAND with some clay bands. Gravel is sub-angular to sub-rounded mudstone and sandstone. (Superficial Deposits). Superficial Deposits Superficial Depos	F		0 0 0	1							
Medium dense (from 9.00m) brown clayey and in parts very clayey slightly gravelly SAND with some clay bands. Gravel is sub-angular to sub-rounded mudstone and sandstone. (Superficial Deposits). Superficial Deposits Superficial Depos			<u> </u>					6.00	٠	20 (2566910)	
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Medium dense (from 9.00m) brown clayey and in parts very clayey slightly gravelly SAND with some clay bands. Gravel is sub-angular to sub-rounded mudstone and sandstone. (Superficial Deposits).	_		<u> </u>			_	6.50				
Medium dense (from 9.00m) brown clayey and in parts very clayey slightly gravelly SAND with some clay bands. Gravel is sub-angular to sub-rounded mudstone and sandstone. (Superficial Deposits).	_		<u> </u>								
Medium dense (from 9.00m) brown clayey and in parts very clayey slightly gravelly SAND with some clay bands. Gravel is sub-angular to sub-rounded mudstone and sandstone. (Superficial Deposits).	- -		0 0 0 0				7.00	7.00	В		
Medium dense (from 9.00m) brown clayey and in parts very clayey slightly gravelly SAND with some clay bands. Gravel is sub-angular to sub-rounded mudstone and sandstone. (Superficial Deposits).	- -		0 0 0								
Medium dense (from 9.00m) brown clayey and in parts very clayey slightly gravelly SAND with some clay bands. Gravel is sub-angular to sub-rounded mudstone and sandstone. (Superficial Deposits).	- -		0 0]					_	04 (0.5.0.0.45)	
Medium dense (from 9.00m) brown clayey and in parts very clayey slightly gravelly SAND with some clay bands. Gravel is sub-angular to sub-rounded mudstone and sandstone. (Superficial Deposits).	- -		<u>0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 </u>	1						34 (3,5,8,8,8,10)	
— Medium dense (from 9.00m) brown clayey and in parts very clayey slightly gravelly SAND with some clay bands. Gravel is sub-angular to sub-rounded mudstone and sandstone. (Superficial Deposits). 9.00 S 27 (2,4,4,7,7,9)			<u> </u>	1							
— Medium dense (from 9.00m) brown clayey and in parts very clayey slightly gravelly SAND with some clay bands. Gravel is sub-angular to sub-rounded mudstone and sandstone. (Superficial Deposits). 9.00 S 27 (2,4,4,7,7,9)			0 0 0								
— Medium dense (from 9.00m) brown clayey and in parts very clayey slightly gravelly SAND with some clay bands. Gravel is sub-angular to sub-rounded mudstone and sandstone. (Superficial Deposits). 9.00 S 27 (2,4,4,7,7,9)	_ - -		<u> </u>								
— Medium dense (from 9.00m) brown clayey and in parts very clayey slightly gravelly SAND with some clay bands. Gravel is sub-angular to sub-rounded mudstone and sandstone. (Superficial Deposits). 9.00 S 27 (2,4,4,7,7,9)			0-0-0	8.50	104 57			8.50	R		
is sub-angular to sub-rounded mudstone and sandstone. — (Superficial Deposits). 9.00 S 27 (2,4,4,7,7,9)			ို ေ	1				0.00			
─ (Superficial Deposits).	is sub-angular to sub-rounded		0 0						_	(0 5)	
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			o C								
	 - -		0 C								
- 10.00 S 40 (5,5,8,9,11,12)			္က					10.00	۾ع	40 (5 5 8 9 11 12)	
Continued on Next Sheet	Continued Samples/Tests									(0,0,0,0,0,1.1)	

Samples/Tests

Undisturbed

Disturbed

D В

Bulk W

Water S/C SPT/CPT

ES Environmental Sample

HV Hand Shear Vane

No Recovery

Water Strike

Water Level Document 4.144

- 1. Hand excavated service avoidance pit dug to 1.20m.
 2. Groundwater strike encountered at 2.50m rising to 2.20m after 20 minutes observation.
 3. Second groundwater strike encountered at 7.00m rising to 6.50m after 20 minutes observation.
 4. Instructed to terminate borehole at 10.45m by Wardell Armstrong.
 5. Borehole backfilled with arisings on completion.



Building 62, Third Avenue The Pensnett Estate
Kingswinford
DY6 7XT
Tel: 01902 459558
Email: info@gipuk.com

Cable Percussion Borehole Log

Project Number: 30925

Project Name: Cawston Lane, South Rugby Wardell Armstrong LLP Client:

Engineer:

Date Drilled: 25/01/2022 Diameter: 150mm

Borehole: CPB01 Sheet 2 of 2 Logged By: CJB Checked By: ML Drilled By: ΕB

National Grid: E: 447187.82 N: 273027.88 Ground Level: +113.07mAOD

www.gipuk.com	Depth Cased: 10.00m					Final D	epth:	10.45m	
	cription of Strata	Legend	Depth (m bgl)	Level (mAD)	Water Level (m bgl)	Depth (m bgl)	Type	SPT 'N' Value [U100 Blows] Hand Vane	Installation /Backfill
	9.00m) brown clayey and in parts very SAND with some clay bands. Gravel rounded mudstone and sandstone.	, a	10.45	102.62					
- - - - - - - -									
- - - - - - - -									
- - - - - - - - -									
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			l			1	l .		

Samples/Tests

Undisturbed

D Disturbed

В Bulk

W Water

S/C SPT/CPT

Environmental Sample ES

HV Hand Shear Vane

No Recovery

Water Strike

Water Level Document 4.144

- 1. Hand excavated service avoidance pit dug to 1.20m.
 2. Groundwater strike encountered at 2.50m rising to 2.20m after 20 minutes observation.
 3. Second groundwater strike encountered at 7.00m rising to 6.50m after 20 minutes observation.
 4. Instructed to terminate borehole at 10.45m by Wardell Armstrong.
 5. Borehole backfilled with arisings on completion.



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Email: info@gipuk.com

Cable Percussion Borehole Log

Project Number: 30925

Project Name: Cawston Lane, South Rugby Wardell Armstrong LLP Client:

Engineer:

Date Drilled: 24/01/2022 Diameter: 150mm

Borehole: CPB02 Sheet 1 of 2 Logged By: CJB Checked By: ML Drilled By: ΕB

National Grid: E: 447243.02 N: 273041.01 Ground Level: +112.81mAOD

www.gipuk.com Depth Cased: 12.00m						inal De		12.45m	
Description of Strata	Legend	Depth (m bgl)	Level (mAD)	Wate Level (m		Sample Depth (m bgl)	Type	SPT 'N' Value [U100 Blows] Hand Vane	Installation /Backfill
TOPSOIL: Brown clayey gravelly SAND with some rootlets. Gravel is sub-angular to sub-rounded quartz and chert.						0.10	В		
Orange brown silty gravelly SAND. Gravel is sub-angular to	0 6	0.40	112.41			0.40	В		
sub-rounded quartz and chert. (Superficial Deposits).	° °								
	0 0								
Firm and in parts stiff orange brown, brown and light brown	<i>°</i> ° ° ° ° ° ° ° ° ° ° ° ° ° ° ° ° ° °	1.20	111.61			1.20		23 (3,3,4,5,6,8)	
sandy slightly gravelly CLAY. Gravel is sub-angular to sub- rounded quartz and chert. (Superficial Deposits).	0 0 0					1.20	В		
- Tourided quartz and criert. (Superficial Deposits).	0-0-0								
-	0-0-0			▼ 1	1.95	2.00		27 (4,4,7,7,6,7)	
- -	<u>0 0 0 0</u>					2.00	В		
-	0-0-0				2.50				
_	0 0 0								
Loose brown and orange brown clayey gravelly SAND.	0-0-5	3.00	109.81			3.00 3.00	S B	5 (1,1,2,1,1,1)	
Gravel is sub-angular to sub-rounded quartz and chert. (Superficial Depsoits).	o °c					0.00			
	ິດ								
- -	0 0	4.00	100.04			4.00		C (4.0.4.0.2.2)	
Loose brown clayey very gravelly SAND. Gravel is subangular to sub-rounded quartz and chert. (Superficial	ွိတ	4.00	108.81			4.00 4.00	S	6 (1,0,1,0,3,2)	
Deposits).	္ ေ								
-	0 ° c								
Very soft brown slightly gravelly silty CLAY. Gravel is sub-	್ಲಿ €	5.00	107.81			5.00	s	2 (1,0,0,1,0,1)	
angular to sub-rounded quartz and chert. (Superficial	0 0 0					5.00	В		
L Deposits).	0 0 0								
Stiff reddish brown slightly sandy slightly gravelly CLAY.	<u> </u>	5.80	107.01			5.80	D		
Gravel is sub-angular to sub-rounded quartz, mudstone, sandstone and siltstone. (Superficial Deposits).	0-0-0					6.00 6.00	S B	31 (3,3,5,7,7,12)	
Saliustorie and sitistorie. (Superiidai Deposits).	<u> </u>			▼ 6	6.30	0.00			
Stiff and in parts very stiff with occasional firm pockets	× × ×	6.50	106.31			6.50	В		
reddish brown sandy and in parts slightly gravelly silty CLAY. Superficial Deposits).	××				7.00				
F	× – ×			" '	7.00				
Ė	××					7.50	9	30 (3,5,5,7,8,10)	
E	×_×_×					7.50	В	0,0,0,1,0,10)	
<u> </u>	××								
-	××								
E	××								
- -	××								
Medium dense reddish brown silty SAND with occasional	××	9.00	103.81			9.00 9.00	S B	27 (3,3,5,6,8,8)	
clay pockets. (Superficial Deposits).	ິດໍ					3.00	٥		
- -	o °								
-	o o								
Continued on Next Sheet			1						MXXXXXXX

Samples/Tests

Undisturbed

D Disturbed

В Bulk

W Water

S/C SPT/CPT

ES Environmental Sample

HV Hand Shear Vane

No Recovery

Water Strike

Water Level Document 4.144

- 1. Hand excavated service avoidance pit dug to 1.20m.
 2. Groundwater strike encountered at 2.50m rising to 1.95m after 20 minutes observation.
 3. Second groundwater strike encountered at 7.00m rising to 6.30m after 20 minutes observation.
 4. Instructed to terminate borehole at 12.45m by Wardell Armstrong.
 5. Borehole backfilled with arisings on completion.



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Cable Percussion Borehole Log

Project Number: 30925

Project Name: Cawston Lane, South Rugby Wardell Armstrong LLP Client:

Engineer:

Date Drilled: 24/01/2022 Diameter: 150mm

Borehole: CPB02 Sheet 2 of 2 Logged By: CJB Checked By: ML Drilled By: ΕB

National Grid: E: 447243.02 N: 273041.01

Ground Level: +112.81mAOD Final Depth:

Email: info@gipuk.com www.gipuk.com	Diameter: 150mm							+112.81MAOD	
www.gipuk.com	Depth Cased: 12.00m	1			Water	Final De	epth:	12.45m	
Description		Legend	Depth (m bgl)	Level (mAD)	Level (m bgl)	Depth (m bgl)	Type	SPT 'N' Value [U100 Blows] Hand Vane	Installation /Backfill
Medium dense reddish brown s clay pockets. (Superficial Depo	sits).					10.50 10.50	SB	26 (2,4,4,6,7,9)	
Stiff and in parts very stiff reddi (Superficial Deposits). Borehole Comp			12.00 12.45	100.81		12.00	S	35 (4,6,7,8,10,10)	
Borenoie Comp	лене ан 12.49111								
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- - - - - -									
- - - - - - - -									
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-									

Samples/Tests

Undisturbed

D Disturbed

В Bulk

W Water

S/C SPT/CPT

ES **Environmental Sample**

HV Hand Shear Vane

No Recovery

Water Strike

Water Level Document 4.144

- 1. Hand excavated service avoidance pit dug to 1.20m.
 2. Groundwater strike encountered at 2.50m rising to 1.95m after 20 minutes observation.
 3. Second groundwater strike encountered at 7.00m rising to 6.30m after 20 minutes observation.
 4. Instructed to terminate borehole at 12.45m by Wardell Armstrong.
 5. Borehole backfilled with arisings on completion.



Hand Auger Log

BOREHOLE REFERENCE

HA01 Sheet 1 of 2

Project Name: South West Rugby Client: L&Q Date: 28/01/2022 Contractor: GIP Co-ords: E447142.00 N272766.00 Location: Rugby

oject		3M11254		Drilling Equipment: Hand Auger Level : 107.21m AoD											
	Logge			Checked By SN		Approved By							nal Depth		
≣ V	vv Water		and I	า Situ Testing	1 D	epth	Level		% 2.00m Stratum Description						
Backfill	Strikes	Depth (m)	Туре	Results		m)	(m)	Legend							
		0.30	ES		C	0.30	106.91		mediun mediun	n Sand. Gra n consisting	h brown fibrovel is angula of flint.	r to suba	angular	fine to	
		0.50 – 1.00	В						is angu	ılar to suban	gular fine to more Gravel	medium	consist	ing of flint.	
	\searrow				1	1.30	105.91		Damp f (Superi	firm reddish ficial - Bosw	brown sand orth Clay).	/ CLAY. S	Sand is	fine.	
Hole Depth Bas	e Diameter se Dia	Casing meter Depth Base	Diameter Diame	tler Depth Top	Chisellin Depth Base	g Duration	Tool	Top	Inclination Base	and Orientation	Orientation	Тор	li Base	nstallation Pipe Type	Dia

Remarks

Groundwater encountered at 1.3m bgl

Log printed on 17/03/2022 at 14:03



Hand Auger Log

BOREHOLE REFERENCE

HA01 Sheet 2 of 2

roject Name: South West Rugby	Client: L&Q	Date: 28/01/2022
" D I	0 1 1 010	0 5447440 00 N070700 00

Projec	i warne	: South West	Rugby		Client: L&Q Date: 28/01/2022										
Locati	ion: Rug	by			Contractor: GIP Co-ords: E447142.00 N272766.00										
Projec	ct No. : E	3M11254			Drilling Equ	ipment: I	Hand Au	uger		Level :	107.21m	AoD			
	Logge W			Checked By SN	′	App	oroved E SN	Зу	SP	T Energy %	Ratio			nal Depth 2.00m	_
Install. / Backfill	Water Strikes	Sampl Depth (m)	e and In	Situ Testing Results		epth (m)	Level (m)	Legend	Stratum Description						Scale
	lole Diameter		Jameter 3 Diameter	Results	,	2.00	105.21			irm reddish icial - Bosw	brown sandy orth Clay). I of Boreho	y CLAY.	Sand is	fine.	3-
Depth E		meter Depth Bas		er Depth Top	Depth Base	Duration	Tool	Тор	Base	Inclination	Orientation	Тор	Base	Pipe Type	Diameter
Sopri dade Sameer Sopri rep															

Remarks

Groundwater encountered at 1.3m bgl

Log printed on 17/03/2022 at 14:03



TRIAL PIT REFERENCE TP01

	Sheet 1 of 1		
roject Name: South West Rugby	Client: L&Q	Date: 24/01/202	22
ocation: Rugby	Contractor: GIP	Co-ords: E4469	30.02 N273030.04

Project No. : BM11254		Excavator: JCB		Dim	ensions :		Final Depth: 4.00m
Logged By	Checked By	Approved By	Level	1		Ε	Orientation
WP	SN	SN	112.86m AoD				0

Water Sample and In Situ Testing Depth (m) Type Results Depth (m) Dep	Logged WP	Ву	Che	ecked By SN	Ap	oproved By SN		Leve 112.86m			m		Orientati 。	on
O 25 ES O 30 112.56 O 30 112.		Sam	nple and		esting	Depth				Q+r.		ecrinti	on.	Τ.
Sand. Clavel is submigliar for number of medium commissing with an amulations. O 30 112.56 Commission of the medium co	Strikes	Depth (r	n) Typ	e Re	esults	(m)	(m)	Legend						(
3.30 109.58 Damp arangish brown sandy angular to rounded fine to coarse CRAWEL consisting up finit, sandstone and muldisons and finit, sandstone and muldisons and finit sandstone and muldisons and finit sandstone and muldisons. 3.70 HSV 27kPa 3.70 109.18 Damp arangish brown sandy angular to rounded finit and muldisons for muldisons for the property of the propert						0.30	112.56		Sand. Gravel is subangular to rounded fine to medium consisting of flint and mudstone. Reddish brown to orangish brown gravelly medium SAND with occasional pockets of CLAY. Gravel is angular to subrounded fine to medium consisting flint, sandstone and					
3.30 109.56 Damp orangish brown sandy angular to rounded fine to coarse GRAVEL consisting of limit, sandstone and mudstone. Sand is fine. (Superficial - Dunsmore Gravel). 3.70 HSV 27kPa 3.70 109.16 Damp soft to firm brown slightly gravelly CLAV Gravel is medium angular to rounded filmt and mudstone. (Superficial - Bosworth Clay). 4.00 HSV 50kPa 4.00 108.86 Base of Excavation at 4.00m		0.70	В											
Damp orangish brown sandy angular to rounded fine to coarse GRAVEL consisting of flint, sandstone and mudstone. Sand is fine. (Superficial - Dunsmore Gravel). 3.70 HSV 27kPa 3.70 109.16 3.80 B 4.00 HSV 50kPa 4.00 108.86 Trench Support and Comment Pumping Data		1.10	ES			2 20	100 ES							
3.80 B 4.00 HSV 50kPa 4.00 108.86 Damp sort to 1irm brown singhtly gravelily CLAY. Gravel is medium angular to rounded flint and mudstone. (Superficial - Bosworth Clay). Base of Excavation at 4.00m		3.70	HS	V 2	7kPa				coarse GF mudstone	RĀVEL con . Sand is fil	sisting of fl ne. (Super	lint, sand ficial - D	Istone and unsmore Gravel).	
Base of Excavation at 4.00m Trench Support and Comment Pumping Data		3.80	В						medium a	ngular to re	unded flin	/ gravelly t and mu	/ ULAY. Gravel is udstone.	
		4.00	HS)	v 5	uk r a	4.00	108.86			Base o	f Excava	tion at 4	1.00m	
										-				
PIL Stability Shoring Used Remarks Date Rate Remarks	D# 07 : ::::	T ~:	Head J	Trench	Support and Comm						T = :	Pump		
	rii olability	Shoring	oseu			Kemarks				Date	Rate		Remarks	

General Remarks

Groundwater encountered at 3.3m bgl HSV - Small Vane Used. HSV @ 3.75m - 24,26,30 = 27kPa HSV @ 4m - 52,51,48 = 50kPa

TRIAL PIT REFERENCE **Trial Pit Log** TP02 Sheet 1 of 1 Project Name: South West Rugby Client: L&Q Date: 24/01/2022 Contractor: GIP Co-ords: E446975.95 N273055.96 Location: Rugby Dimensions: Project No.: BM11254 Final Depth: 3.40m Excavator: JCB Ε Approved By Logged By Checked By Level Orientation SN WP SN 113.08m AoD m Scale Sample and In Situ Testing Water Depth Level Legend Stratum Description Strikes (m) (m) Depth (m) Type Results TOPSOIL: Dark brown fibrous slightly gravelly medium Sand. Gravel is subangular to rounded fine to medium 0.15 ES consisting of flint and mudstone. 0.30 112.78 Reddish brown to orangish brown gravelly medium SAND with occasional pockets of CLAY. Gravel is angular to subrounded fine to medium consisting flint, sandstone and mudstone. (Superficial - Dunsmore Gravel). 0.70 ES 1.50 В 2 \searrow 2.70 110.38 Damp dark brown slightly clayey sandy angular to rounded fine to coarse GRAVEL consisting of flint, sandstone and mudstone. Sand is fine. (Superficial - Dunsmore Gravel). 3 3.40 В 3.40 109.68 Base of Excavation at 3.40m

Trench Support and Comment Pumping Data

Pit Stability Shoring Used Remarks Date Rate Remarks

General Remarks

Groundwater encountered at 2.7m bgl



Log printed on 17/03/2022 at 14:03

Trial Pit Log

TRIAL PIT REFERENCE

TP03 Sheet 1 of 1 Project Name: South West Rugby Client: L&Q Date: 24/01/2022 Contractor: GIP Co-ords: E447034.97 N273093.67 Location: Rugby Dimensions: Project No.: BM11254 Final Depth: 3.80m Excavator: JCB Ε Approved By Logged By Checked By Level Orientation SN WP SN 113.22m AoD m Scale Sample and In Situ Testing Water Depth Level Stratum Description Legend Strikes (m) (m) Depth (m) Type Results TOPSOIL: Dark brown fibrous slightly gravelly medium Sand. Gravel is subangular to rounded fine to medium consisting of flint and mudstone. 0.40 112.82 Reddish brown to orangish brown gravelly medium SAND with occasional pockets of CLAY. Gravel is angular to subrounded fine to medium consisting of flint, sandstone and mudstone (Superficial - Dunsmore Gravel) 1.80 ES 2 В 2.00 2.30m - 2.60m : Occasional small pockets of black 2.40 ES organic matter. \searrow 2.60 110.62 Wet orangish brown sandy angular to rounded fine to coarse GRAVEL consisting of flint, sandstone and mudstone. Sand is fine. (Superficial - Dunsmore Gravel). 3 3.80 Base of Excavation at 3.80m Trench Support and Comment Pumping Data Pit Stability Rate Shoring Used Date General Remarks Groundwater encountered at 2.6m bgl



TRIAL PIT REFERENCE

~ 7	armstr	ong		Sheet 1 of 1										
	me: South W			Client: L&Q Date: 24/01/2022										
Location: R	Rugby			Contrac	tor: GIP				Co-ords:	E44707	5.15 N	l273102.55		
Project No.	: BM11254			Excavat	or: JCB				Dimensio	Dimensions : Final Depth: 3				
	ed By /P		ked By SN	Арі	proved By SN		Leve 113.42m			m	Е	Orientatio °	on	
₩ate	er Sam	ple and li	n Situ Testii		Depth (m)	Level	Legend		Stratum Description					
yea Strik	0.40 0.50		Resul		2.70 2.70	(m) 113.07		Reddish with occasubround - Dunsmo	in Dark brown are avel is subating of flint and brown to oral assional pocked and medium ore Gravel). In a substitution of the substitution of th	n fibrous s ngular to re mudstone ingish brovets of CLA' to coarse of to coarse of the coarse of file.	ular to roint, sandicial - Di	ravelly medium fine to medium SAND at its angular to grint. (Superficial sunded fine to listone and unsmore Gravel).	Scale 3	
			Trench Supp	oort and Comme		I					Pump	ing Data		
Pit Stability General R					Remarks	S			Date	Rate		Remarks		
Groundwate	r encountered	at 2.7m bgl												



TRIAL PIT REFERENCE

TP05

	ar	mstr	ong			m	Log		Sheet 1 of 1								
Proje	ct Name	South W	est Rugby	,	Client: L	.&Q		Date: 24/01/2022									
Locat	ion: Rug	by			Contrac	tor: GIP				Co-ords: E	447128.9	96 N	1273146.96				
Proje	ct No. : E	3M11254			Excavat	or: JCB				Dimensions : Final Depth: 4.0				m			
	Logged	Ву		ked By	Ар	proved By SN		Leve				Ε	Orientation				
Backfill	WP Water Strikes		nple and l	SN n Situ Testii Resul		Depth (m)	Level (m)	113.51m Legend	AOD		m ım Desci	riptio		Scale			
	Depth (m) Type Results 1.20 B					0.30	113.21		Sand. Gr consistin Reddish with occa subround	ravel is subang g of flint and m brown to orang	int, sandstone and	1-					
	2.00 ES					2.60	110.91		coarse G	RAVFI consist	gish brown sandy angular to rounded fine to RAVEL consisting of flint, sandstone and e. Sand is fine. (Superficial - Dunsmore Gravel).						
		3.80	В			4.00	109.51			Base of E	excavation	ı at 4	9.00m	4 -			
				Transh Com-	ort and Commit	nt						Direct	ing Data				
Pit	t Stability	Shoring	g Used	rench Supp	ort and Comme	nt Remarks				Date	Rate	rump	ing Data Remarks				
	eral Ren dwater er		at 2.6m bg	I													



TRIAL PIT REFERENCE **TP06**

arm	ISTFO	ng		Sheet 1 of 1								Sheet 1 of 1		
Project Name: Sc	outh West	Rugby		Client: L	_&Q				Date: 24/01/2022					
Location: Rugby				Contrac	tor: GIP						l6.92 N	N272990.04		
Project No. : BM1					tor: JCB				Dimensi	ons:		Final Depth: 4.00		
Logged By WP			ked By SN	Ар	proved By SN		Level 112.95m			m	Ε	Orientation °		
₩ater	Sample		n Situ Testi	ng	Depth	Level	Legend	(OB	Str	atum De	ecrinti	on	Scale	
Strikes D	epth (m)	Туре	Resu	lts	(m)	(m)	Legend	TOPSOIL				gravelly medium	Sc	
	0.60 0.90 1.40	ES B ES	39kPi		3.10 3.80 4.00	109.85 109.85 108.95		Reddish I with occa subround mudstone organic 1.10m - organic 2.70m: Wet brow GRAVEL medium.	brown to onsisional pockled fine to ne. (Superficial Recovered Consisting (Superficial Colay).	angular to rd mudstoned mudstoned mudstoned angular brown angular contests of CLA medium cortial - Dunsmo angular of flint and recognition of the company of	wn grawy. Y. Grawnsisting the round sandstore Grawy. The CLAY. Condition at a con	elly medium SAND el is angular to flint, sandstone and avel). pockets of black ded fine to medium one. Sand is fine to el). Gravel is medium (Superficial - 4.00m	2	
Pit Stability	Shoring User		Trench Supp	ort and Comme					Date	Rate	Pump	ping Data Remarks		
Pit Stability General Remar Groundwater encou			HSV - Small	Vane Use	Remarks ed. HSV @ 3		40,42 = 39k	Pa	Date	Rate		Remarks		



TRIAL PIT REFERENCE **TP07**

Project No. : BM11254 Excavator: JCB

Logged By Checked By Approved By Level

SN 113 16m Approved By Tevel

113 16m Approved By Tevel

Orientation

WF	o	5	SN	SN		113.16m	AoD		m		٥	
₩ Water Strikes	_		n Situ Testing	Depth (m)	Level (m)	Legend		Stra	atum De	scription	า	-
	Depth (m)	Type ES	Results	0.30	112.86		Sand. Gra consisting Reddish b with occas	orown to ora	ngular to r mudstone ingish brodets of CLA	ounded fir e. wn gravell Y. Gravel	velly medium ne to medium y medium SANE is angular to)
							mudstone	ed line to m	edium cor al - Dunsm	nore Grave	ıt, sandstone an el).	u
	2.00	ES										
abla	2.60	В		2.50	110.66		GRAVEL (consisting o	of flint and	to rounded fine to medium sandstone. Sand is fine to ore Gravel).		1
	3.40	HSV	25kPa	3.20	109.96		medium a	o firm browi ngular to ro al - Bosworl	unded flin	ravelly CL t and mud	AY. Gravel is stone.	_
	4.00	HSV	45kPa	4.00	109.16			Base o	f Excava	tion at 4.	00m	
	Trench Support a		Trooph Support and C	omment								
Pit Stability	Shoring Us		Trench Support and C	Remark				Date	Rate	Pumping	g Data Remarks	

General Remarks

Groundwater encountered at 2.5m bgl. HSV - Small Vane Used. HSV @ 3.4m - 24,26,26 = 25kPa. HSV @ 4m - 54,42,38 = 45kPa

TRIAL PIT REFERENCE **Trial Pit Log** TP08 Sheet 1 of 1 Project Name: South West Rugby Client: L&Q Date: 24/01/2022 Co-ords: E447068.02 N273042.13 Location: Rugby Contractor: GIP Dimensions: Project No. : BM11254 Final Depth: 4.00m Excavator: JCB Ε Approved By Logged By Checked By Level Orientation WP SN SN 113.52m AoD m Scale Sample and In Situ Testing Water Depth Level Stratum Description Legend Strikes (m) (m) Depth (m) Type Results TOPSOIL: Dark brown fibrous slightly gravelly medium Sand. Gravel is subangular to rounded fine to medium consisting of flint and mudstone. 0.30 ES 0.30 113.22 Reddish brown to orangish brown gravelly medium SAND with occasional pockets of CLAY. Gravel is angular to subrounded fine to medium consisting flint, sandstone and mudstone. (Superficial - Dunsmore Gravel). В 2.00 2 \bigvee 2.20 111.32 Wet brown very sandy angular to rounded fine to medium GRAVEL consisting of flint and sandstone. Sand is fine to medium. (Superficial - Dunsmore Gravel). 2.50 ES 3 3.30 110.22 Wet soft to firm brown slightly gravelly CLAY. Gravel is medium angular to rounded flint and mudstone. (Superficial - Bosworth Clay). 3.80 HSV 39kPa 4.00 4.00 109.52 Base of Excavation at 4.00m

				Pumping Data									
Pit	Pit Stability Shoring Used Remarks										Remarks		

General Remarks

Groundwater encountered at 2.2m bgl. HSV - Small Vane Used. HSV @ 3.8m - 44,32,41 = 39kPa



TRIAL PIT REFERENCE **TP09**

Sheet 1 of 1 Project Name: South West Rugby Client: L&Q Date: 24/01/2022 Contractor: GIP Co-ords: E447138.03 N273084.94 Location: Rugby Dimensions: Project No.: BM11254 Final Depth: 4.00m Excavator: JCB Ε Approved By Logged By Checked By Level Orientation SN WP SN 113.60m AoD m Scale Sample and In Situ Testing Water Depth Level Legend Stratum Description Strikes (m) (m) Depth (m) Type Results TOPSOIL: Dark brown fibrous slightly gravelly medium Sand. Gravel is subangular to rounded fine to medium consisting of flint and mudstone. 0.30 113.30 Reddish brown to orangish brown gravelly medium SAND with occasional pockets of CLAY. Gravel is angular to subrounded fine to medium consisting flint, sandstone and mudstone. (Superficial - Dunsmore Gravel). 1.50 1.70 В 2 \subseteq 3.00 110.60 3 Wet orangish brown sandy angular to rounded fine to coarse GRAVEL consisting of flint, sandstone and mudstone. Sand is fine. (Superficial - Dunsmore Gravel). 3.10 ES 4.00 109.60 Base of Excavation at 4.00m Trench Support and Comment Pumping Data Pit Stability Shoring Used Date Rate General Remarks Groundwater encountered at 3.0m bgl



Trial Dit Loa

TRIAL PIT REFERENCE

armst	rong			ırıaı	PIT	Log				Sheet 1 of 1	
Project Name: South \			Client: L&	Q				Date: 24/01/20	 22	Sileet 1 Of 1	
Location: Rugby			Contracto	r: GIP				Co-ords: E447	189.16 N	N273115.94	
Project No. : BM11254	 4		Excavator	: JCB				Dimensions :		Final Depth: 3.70	0m
Logged By		ked By		oved By		Level			Ε	Orientation	
WP		SN		SN		113.62m	AoD	m		0	
<u> </u>		n Situ Testin		Depth (m)	Level (m)	Legend		Stratum D	escripti	on	Scale
V///		Result	S	()	()	X((X(X)	TOPSOIL	.: Dark brown fibrou	s slightly g	gravelly medium	0)
0.10	D ES						consisting	avel is subangular to g of flint and mudsto	ne.	tine to medium	
0.80 1.00	D B			2.70	113.32		with occa subround mudstone	gish brown sandy an RAVEL consisting oe. Sand is fine. (Superficial - Dune)	AY. Grave onsisting to smore Gra	el is angular to fiint, sandstone and vel).	2-
				3.70	109.92			Base of Excav	ation at a	3.70m	4-
Die Chalaille.	ing Head	Trench Suppor	rt and Comment	D 1		1		Data 2 :	Pump	ping Data	<u> </u>
Pit Stability Shor	ring Used			Remarks				Date Rate		Remarks	
General Remarks Groundwater encountere	ed at 2.7m bgl										



TRIAL PIT REFERENCE **TP11**

ar	mstr	ong			1114		LUg				Sheet 1 of 1	
Project Name	: South V	Vest Rugby	,	Client: L	_&Q				Date: 25/01/20	22		
_ocation: Rug	ıby			Contrac	tor: GIP				Co-ords: E4469	952.88	N272927.04	
Project No. : E	3M11254			Excava	tor: JCB				Dimensions :		Final Depth: 4.00)m
Logged WP	Ву		ked By SN	Ар	proved By SN		Leve 112.23m		m	Ε	Orientation °	1
₩ Water Strikes			n Situ Testi	_	Depth (m)	Level (m)	Legend		Stratum D	escript	ion	Scale
a cumos	Depth ((m) Type	Resu	Its	()	()		TOPSOI Sand, G	L: Dark brown fibrou	s slightly o rounded	gravelly medium	-
	1.50	ES			1.30	111.93		Medium SAND w to subro and muc	ng of flint and mudsto	ingish browning ingish browning in consisti Dunsmor	own gravelly medium Y. Gravel is angular ng flint, sandstone e Gravel).	1-
	2.40 HSV 5 2.60 B				2.30 2.50	109.93 109.73		angular Boswort		nudstone		2-
	3.50	HSV	81kP:	a	4.00	108.23	X		Base of Excav	ation at	4.00m	- 4-
Pit Stability General Rer		ig Used	Trench Supp	ort and Comme	nt Remark:	3			Date Rate	Pun	nping Data Remarks	-
HSV - Small Va HSV @ 2.4m -	ne Used.	: 52kPa										



TRIAL PIT REFERENCE

TP12

11714

arristrong					Sheet 1 of 1	
Project Name: South West Rugby	Client: L&Q		Date: 25/01/202	22		
_ocation: Rugby	Contractor: GIP		Co-ords: E4469	98.00 N	272956.02	
Project No. : BM11254	Excavator: JCB		Dimensions :		Final Depth: 4.00	m
Logged By Checked By	Approved By	Level			Orientation	
WP SN ₩ater Sample and In Situ Tes	SN SIN Le	112.56m AoD	m m		-	Φ
WaterSample and In Situ TesStrikesDepth (m)TypeRes	(m) (evel m) Legend	Stratum D	escriptio	n	Scale
0.75 B 0.85 ES	0.30 11:	2.26 Red. with subr mud	SOIL: Dark brown fibrous J. Gravel is subangular to sisting of flint and mudstor dish brown to orangish bro occasional pockets of CL ounded fine to medium co stone. (Superficial - Duns up orangish brown sandy a se GRAVEL consisting of stone. Sand is fine. (Supe	own gravel AY. Gravel consisting fli more Grave angular to 1 flint, sands	ly medium SAND is angular to nt, sandstone and el).	1-
2.90 HSV 32H	Pa	med (Sup	ip soft to firm brown slight ium angular to rounded fli erficial - Bosworth Clay). ip stiff grey slightly silty Cl).	int and mud	dstone.	3-
3.60 B 3.85 HSV 103		- x x x x x x x - x	Base of Excava	ation at 4.	.00m	4-
Trench S Pit Stability Shoring Used General Remarks Groundwater encountered at 1.5m bgl. HSV - Sm	pport and Comment Remarks	25 32 32 = 32\Da U	Date Rate	Pumpin	Remarks	- - - -



Trial Dit Loa

TRIAL PIT REFERENCE

\sim	ar	mstro	ng		ır	iai P	it LO	9				Sheet 1 of 1	
Projec		South Wes	_		Client: L&Q				Date: 25/0)1/2022		Sileet 1 0i 1	
Locati	ion: Rug	by		C	Contractor: GII	P			Co-ords: E	 E447065	.95 N	1272960.04	
Projed	ct No. : E	BM11254		E	Excavator: JCE	 В			Dimension	าร :	1	Final Depth: 4.0	0m
	Logged WP	Ву	Check	-	Approved SN	Ву		evel 3m AoD		m	Е	Orientation	1
Backfill	Water Strikes		le and In	Situ Testing	(m)		el		Strat	tum Desc	criptio	on	Scale
		Depth (m) 0.10	Type	Results	5 (***/	(TOPS	OIL: Dark brown Gravel is suban	fibrous sliç	ghtly g	ravelly medium	0)
					0.30	111.8	33	consis Reddis Gravel	ting of flint and r	mudstone. ngish brown	ı grave	elly medium SAND. n to coarse	1 -
	abla	1.20 1.30	ES B		1.70	110.4	13	coarse	angish brown ve GRAVEL consi one. (Superficial	sting of flint	t, sand		2-
		3.00	HSV	23kPa	2.80	109.	33	mediui	oft to firm brown n angular to rou ficial - Bosworth	inded flint a			3-
		3.75 3.90	HSV B	37kPa	3.30	108.	33		oft to firm grey sl rth Clay).	ightly silty (CLAY.	(Superficial -	
		0.50			4.00	108.	13	x	Base of	Excavatio			- 4-
Pit Stability Shoring Used General Remarks					Remarks Name Used. HSV @ 3m - 18,22,28 = 23kPa. HSV @					Rate 35,31 = 3		ing Data Remarks	



TRIAL PIT REFERENCE **TP14**

	اله ح	11130101	ğ									Sheet 1 of 1	
Proje	ct Name:	South West I	Rugby		Client: I	L&Q				Date: 25/01/20	22		
Locat	ion: Rug	by			Contrac	ctor: GIP				Co-ords: E447	118.03 I	N272999.06	
Proje	ct No. : E	BM11254			Excava	tor: JCB				Dimensions :		Final Depth: 4.00	m
	Logged	Ву	Chec	ked By	Ap	proved By		Level		-	Ε	Orientation	
	WP			SN		SN		112.88m	AoD	m		0	4)
Backfill	Water Strikes	Sample Depth (m)	Type	n Situ Testir Resul		Depth (m)	Level (m)	Legend		Stratum [Descripti	ion	Scale
	0.90 ES 1.05 B 1.75 ES 3.40 HSV			27kPa	1	0.40 1.60 2.90	112.48 111.28 109.98		Sand. Gr consistin Soft to fir angular t Dunsmore Damp or to coarse mudston 1.70m -	L: Dark brown fibrouravel is subangular to g of flint and mudstom brown clayey GR or rounded flint and re Gravel) angish brown very set GRAVEL consistinge. (Superficial - Dun 1.80m : Cobble company of the flint and results of the flint and re	andy angg andy angg g of flint, s smore Gra of Flint.	avel is medium (Superficial -	2
										Base of Excar	auoir at	4.00111	- - - - - -
Pi	t Stability	Shoring Used		Trench Suppo	ort and Comme	ent Remarks				Date Rate	Pum	ping Data Remarks	
Pi	. Grability	Shoring Used				петагкз				Date Rate		remarks	
	eral Ren		-								ı		
	dwater en Small Vai	icountered at 1. ne Used.	.6m bgl										



TRIAL PIT REFERENCE

armstrong	Iriai Pit Log		IP15 Sheet 1 of 1
Project Name: South West Rugby	Client: L&Q	Date: 25/01/202	
Location: Rugby	Contractor: GIP	Co-ords: E4471	188.98 N273045.00

Dimensions: Project No. : BM11254 Excavator: JCB Final Depth: 4.00m Ε Logged By Checked By Approved By Level Orientation

	WP	_,		SN	SN	-,	113.37m	AoD		m			0	
Backfill	Water	Sampl	e and I	n Situ Testing		Level	Legend	·	Str	atum De	scriptio	n		Scale
Ba	Strikes	Depth (m)	Туре	Results	(m)	(m)	Logona							တိ
		1.60	ES		0.35	113.02		Sand. Grav consisting	vel is suba of flint and rown to or angular to	angular to r d mudstone angish brows subrounde	ounded fi e. wn gravel d medium		m	1
		3.70 3.70	B HSV	31kPa	2.90	110.47 109.87		mudstone.	o firm browngular to r	ne. (Super rn slightly g	ravelly C t and mud	00m	vel).	3-
Pi	it Stability	Shoring Used	<u>. </u>	Trench Support a		narks			Date	Rate	Pumpir	g Data Remark	(S	
F-1	Judiny	Onloning Used			iteli				Date	i vaic		remair		

General Remarks

Groundwater encountered at 2.9m bgl HSV - Small Vane Used. HSV @ 3.7m - 35,28,31 = 31kPa



TRIAL PIT REFERENCE

Trial Pit Log TP16 Sheet 1 of 1 Project Name: South West Rugby Client: L&Q Date: 25/01/2022 Contractor: GIP Co-ords: E446974.96 N272891.01 Location: Rugby Dimensions: Project No. : BM11254 Final Depth: 4.50m Excavator: JCB Ε Logged By Checked By Approved By Level Orientation SN WP SN 110.87m AoD m Scale Sample and In Situ Testing Water Depth Level Stratum Description Legend Strikes (m) (m) Depth (m) Type Results TOPSOIL: Dark brown fibrous slightly gravelly medium Sand. Gravel is subangular to rounded fine to medium consisting of flint and mudstone. 0.20 110.67 Reddish brown slightly gravelly medium SAND with occasional pockets of CLAY. Gravel is rounded medium consisting flint and mudstone. (Superficial - Dunsmore 0.55 ES 1.00 109.87 Firm brown slightly gravelly CLAY. Gravel is medium angular to rounded flint and mudstone. (Superficial -Bosworth Clay). 1.20 ES 1.30 1.30 HSV 48kPa 1.60 109.27 Firm to stiff grey to bluish grey CLAY. (Superficial - Bosworth Clay). 2 HSV 77kPa 2.30 3 3.30 HSV 74kPa 4 4.30 4.30 HSV 61kPa 4.50 106.37 Base of Excavation at 4.50m Trench Support and Comment Pumping Data Pit Stability Shoring Used Rate Date General Remarks HSV - Small Vane Used. HSV @ 1.3m - 60,44,40 = 48kPa HSV @ 2.3m - 88,72,70 = 77kPa

HSV @ 3.3m - 82,72,68 = 74kPa



TRIAL PIT REFERENCE **TP17**

Project Name: South West Rugby

Client: L&Q

Date: 25/01/2022

Location: Rugby

Co-ords: E447051.01 N272913.00

Project No. : BM11254 Excavator: JCB

Logged By Checked By Approved By Level Orientation

NP SN SN 110.34m AoD m

Final Depth: 4.50m

WP		s	SN	SN		110.34m	AoD	m	۰			
₩ Water Strikes			n Situ Testing	Depth	Level	Legend		Stratum Description	on	Scale		
Strikes	Depth (m)	Туре	Results	(m)	(m)	V//XV//XV/	TORCOU			Ŏ		
	0.15	ES		0.40	109.94		Sand. Gr consisting Reddish occasion	Dark brown fibrous slightly gavel is subangular to rounded ig of flint and mudstone. brown slightly gravelly medium al pockets of CLAY. Gravel is rig flint and mudstone. (Superfic	SAND with			
	1.00	В		1.40	108.94		Stiff brow	n slightly gravelly CLAY Grave	l is medium			
	1.60	HSV	102kPa				Stiff brown slightly gravelly CLAY. Gravel is medium angular to rounded flint and mudstone. (Superficial - Bosworth Clay).					
						2.20	108.14	× × × × × × × × × × × × × × × × × × ×		slightly silty CLAY. (Superficial		
	2.70	.70 HSV 80kPa	2.80	107.54	× × × × × × × × × × × × × × × × × × ×	brown s						
	2.90	ES					(Superfic	ial - Bosworth Clay).	CLAY. Sand is line.			
	3.10	HSV	61kPa				Firm bluish grey to reddish grey sandy CLAY. Sand is fin (Superficial - Bosworth Clay).					
	4.30	HSV	31kPa	4.50	105.84		4.30m :	Om : Becoming soft at 4.30m bgl Base of Excavation at 4.50m				
			Trench Support and Cor	mment				Dumo	ing Data			
Pit Stability	Shoring Used		port and Out	Remarks				Date Rate	Remarks			

Trench Support and Comment Pumping Data

Pit Stability Shoring Used Remarks Date Rate Remarks

General Remarks

EOH. HSV - Small Vane Used. HSV @ 1.6m - 120,98,89 = 102kPa. HSV @ 2.7m - 82,72,86 = 80kPa. HSV @ 3.1m - 62,52,70 = 61kPa. HSV @ 4.3m - 32,40,21 = 31kPa



TRIAL PIT REFERENCE **TP18**

Sheet 1 of 1

roje	ct Name	: South West	Rugby	C	Client: L	&Q				Date: 25/01/20	1 22	Choot i oi i	
	ion: Rug				Contract					Co-ords: E447		272940.98	
		3M11254		E	xcavato	or: JCB				Dimensions :	1	Final Depth: 4.00)m
	Logged		Chec	ked By		proved By		Level]	1	٤	Orientation	
	WP					SN		110.30m	AoD	m		0	
Backfill	Water Strikes	_		n Situ Testing Results		Depth (m)	Level (m)	Legend		Stratum D	escriptic	on	Scale
	Sample and In Situ Test Strikes Depth (m) Type Rest			44kPa 61kPa 117kPa		0.40 0.90 4.00	109.40		Orangish occasion consistin Gravel). Firm to s (Superfice)	L: Dark brown fibrouravel is subangular to go of flint and mudston in brown slightly gravual pockets of CLAY. In grant and mudstone stiff reddish grey to go in a Bosworth Clay) Base of Excavers of reddish brown	elly medium Gravel is ro. (Superfici	n SAND with bunded medium al - Dunsmore CLAY. Sand is fine.	2-
Sene	eral Ren	narks											

Groundwater encountered at 2.3m bgl. HSV - Small Vane Used. HSV @ 1.1m - 50,42,40 = 44kPa. HSV @ 2.1m - 60,66,58 = 61kPa. HSV @ 3.2m - 120,120,110 = 117kPa



TRIAL PIT REFERENCE

armstrong		Trial	Pit	Log			TP19 Sheet 1 of 1	
roject Name: South West Rugby	Client: L	_&Q		_		Date: 25/01/202	22	
ocation: Rugby	Contrac	tor: GIP			(Co-ords: E4471	190.82 N272988.75	
roject No. : BM11254	Excavat	tor: JCB			I	Dimensions :	Final Depth: 4.0	0m
Logged By Checke WP SN		proved By SN		Level 111.82m		m	E Orientation	า
Water Strikes Depth (m) Type	Situ Testing Results	Depth (m)	Level (m)	Legend		Stratum D	escription	Scale
0.05 ES		0.50	111.32		Sand. Gra consisting	ivel is subangular to of flint and mudstor		
					occasiona consisting Gravel).	I pockets of CLAY. (ly medium SAND with Gravel is rounded medium (Superficial - Dunsmore	1
1.25 ES					1.20m - organic r		nal small pockets of black	
1.75 B		1.90	109.92		Damp firm is fine. (Su	n to soft reddish grey uperficial - Bosworth	y to grey sandy CLAY. Sand n Clay).	2
2.60 HSV	51kPa							3
3.30 HSV	27kPa				3.30m : I	Becoming soft at	3.30m bgl	
		4.00	107.82			Base of Excav	ation at 4.00m	- 4
Pit Stability Shoring Used	Trench Support and Comme	ent Remarks				Date Rate	Pumping Data Remarks	
Seneral Remarks		Tomans				1146	* CONTINUED	

HSV - Small Vane Used. HSV @ 2.6m - 72,32,48 = 51kPa HSV @ 3.3m - 30,29,21 = 27kPa



Trial Dit Loa

TRIAL PIT REFERENCE

\sim	ar	mstr	ong			mai Pit Log								S	heet 1		
Proje			Vest Rugb	у	Client:	L&Q				Date	: 25/	01/202	22		iicci i	01 1	
ocat	ion: Rug	ıby			Contra	ctor: GIP				Co-c	rds:	E4472	253.02	2 N27	3027.9	6	
Proje	ct No. : E	BM11254			Excava	ator: JCB				Dime	ensio	ns:		Fir	nal Dep	th: 4.00	0m
	Logged WP	Ву	Che	cked By SN	Ap	oproved By SN		Level 112.35m				m	Ε		Orie	ntation	1
Backfill	Water Strikes			In Situ Test		Depth (m)	Level (m)	Legend			Stra	tum D	escrip	otion			Scale
B	2.00 2.90		ES			2.10	111.95		Reddish occasion consisting Gravel).	ravel is right of the control of the	slighth sets of multiple states	n fibrous ngular to mudston y gravel CLAY. 0 udstone	s slighth o roundene.	y gravved fine	elly mediu to mediu	m um	2-
Pi	Stability	3.60	HSV		Pa	4.00	108.35				ase of	Excav		at 4.00		cs	4-
EOH. HSV -		marks ne Used. 82,55,77 =	: 71kPa														

HSV @ 3.6m - 80,52,65 = 66kPa



TRIAL PIT REFERENCE

\approx	ar	mstro	ong			Tria	I Pit	Log		_			TP21 Sheet 1 of 1	
Proje	ct Name	: South We	st Rugby		Client:	L&Q				Date: 26	/01/202	2		
Locat	ion: Rug	by			Contra	ctor: GIP						1 99.80	N272843.75	
Proje		BM11254				tor: JCB				Dimensi	ons :	1.00m	Final Depth: 4.	
	Logged FL	Ву		ked By SN	Αţ	proved By SN		Leve 108.85m			2.00m		Orientati	on
Backfill	Water Strikes			n Situ Testin		Depth (m)	Level (m)	Legend		Str	atum De	escripti	on	Scale
Ď.	STINES	0.40 0.80	B ES	Result	S	0.30	108.55		Sand. Gi consistin Light bro GRAVEL	ravel is suba ig of flint and own sandy a consisting	ingular to ingular to softlint with	rounded e. ubangula occasio	ar, fine to coarse nal organic - Dunsmore	1
		2.10 HSV 3. 2.10 HSV 3. 2.10 HSV 4. 2.20 ES				2.00	106.85	X	subround		to coarse	consisti	CLAY. Gravel is ing of flint and	2
		2.50	В			2.50	106.35		Gravel is	brown claye s angular, fin superficial - E	e to medic	ım consi:	nedium SAND. sting of flint and	3
		4.10 4.10 4.10	HSV HSV HSV	74kPa 74kPa 78kPa		4.20	104.65			Base c	ıf Excava	ition at 4	4.20m	4
				Trench Suppor	t and Comm	ent						Pump	oing Data	
Pit Stability Shoring Used General Remarks						Remark	S			Date	Rate		Remarks	
	Small Va ② 2.1m - 2	ne Used. 28,32,40 = 3	33kPa											

HSV @ 4.1m - 74,74,78 = 75kPa



TRIAL PIT REFERENCE **TP22**

Sheet 1 of 1

Proje	ct Name	: South West	Rugby	(Client: L	.&Q				Date: 26	6/01/202	2		
ocat	ion: Rug	by		(Contrac	tor: GIP				Co-ords:	: E44710	08.01	N272879.18	
Proje	ct No. : E	3M11254		I	Excavat	or: JCB				Dimensi	ons:	٦٤	Final Depth: 4.2	20m
	Logged	Ву		ked By SN	Ap	proved By SN		Level			2.00m	1.00m	Orientatio	n
Kfiii	FL Water	Sampl		n Situ Testin	g	Depth	Level	108.13m	AOD			4		ale B
Bac	Strikes	Depth (m)	Туре	Results	S	(m)	(m)	Legend						Sc
Backfill								Legend X X X X X X X X X X X X X X X X X X X	Sand. G consisting and the consisting of the consisting of flint. So the consisting of flint. So the consisting of flint. So the consisting of the consistency of the consisting of the consistency of	it. Dark brow iravel is subarg of flint and own sandy and consisting of and is coars and is coars irm light brow Gravel is subangula (Superficial	grey grave ar, fine too	slightly gravined a cocasion of the cocasion o	gravelly medium I fine to medium lar, fine to coarse onal small cobbles unsmore Gravel). relly CLAY. Sand is to coarse consisting of flint and y). ff CLAY	9esos
														- - -
Pi	t Stability	Shoring Used	1	Trench Suppor	and Comme	nt Remarks	s			Date	Rate	Pum	nping Data Remarks	
Gene	eral Ren	narks												



TRIAL PIT REFERENCE **TP23**

	01	11136101	اه									Sheet 1 of 1	
Proje	ct Name	: South West	Rugby		Client: I	_&Q				Date: 26/01/2022	2		
ocat	ion: Rug	by			Contrac	tor: GIP				Co-ords: E44719	5.96	N272942.87	
Proje	ct No. : E	3M11254			Excava	tor: JCB				Dimensions :		Final Depth: 4.5	0m
	Logged		Chec	ked By		proved By		Level		1	1.00m	Orientation	
	FL			SN		SN		109.24m	AoD	2.00m		0	1
Backfill	Water Strikes			n Situ Testii		Depth (m)	Level (m)	Legend		Stratum De	script	ion	Scale
		Depth (m)	Туре	Resul	ts	(***)	()	X/(X/(X)	TOPSOI	L: Dark brown fibrous s	slightly	gravelly medium	0)
									Sand. G consistir	ravel is subangular to renge of flint and mudstone	ounded e.	I fine to medium	
						0.30	108.94		Light bro	own sandy angular to su	ubangu	lar, fine to coarse	-
		0.50	ES						GRAVEI	L consisting of flint with Sand is coarse. (Superfi	occasio	onal small cobbles	-
		0.50	E3										-
													-
													1 -
													-
													-
													-
													-
													2-
													-
													-
													-
													-
		2.80 2.80	HSV HSV	36kPa 38kPa									-
		2.80	HSV	40kPa		2.90	106.34	× × ×	~ · ·	t brown silty sandy grav			3-
		3.10	ES					× × ×		s subangular, medium to Superficial - Bosworth C		ic consisting of	.
								<u> </u>					-
								<u> </u>					
								X X	3 50m	- 4.00m : Occasiona	l band	s of arevish	-
								XX	green s	soft CLAY			-
								\$ X X					
	\supset							<u> </u>					-
	_					4.00	105.24		Wet firm	to stiff dark grey grave ded, coarse consisting	lly CLA	Y. Gravels are	4-
									(Superfic	cial - Bosworth Clay).	7201		
				=									-
		4.40 4.40	HSV	72kPa 72kPa	а	4.50	104.74					4.50	
		4.40 4.50	HSV B	74kPa	a					Base of Excavat	tion at	4.50m	-
													-
				Tronch Sum	ort and Commo	ent					Dure	nping Data	_
Pi	it Stability	Shoring Used		пенси эирр	ortana comm	Remarks				Date Rate	rum	Remarks	
	eral Ren	narks ncountered at 4	0m hal										
		ne Used.	. Jin byi										

HSV @ 2.8m - 36,38,40 = 38kPa HSV @ 4.4m - 72,72,74 = 72kPa



TRIAL PIT REFERENCE

TP24

arı	nstror	ng					9				Sheet 1 of 1	
Project Name:	South West	Rugby		Client: I	_&Q				Date: 26/01/202	22		
Location: Rugb	у			Contrac	tor: GIP				Co-ords: E4470	70.89	N272808.99	
Project No. : BN					tor: JCB				Dimensions :	E	Final Depth: 3.50	0m
Logged E FL	Ву		ked By SN	Ap	proved By SN		Leve 105.13m		2.00m	1.00m	Orientatior °	า
₩ater		and li	n Situ Testi		Depth (m)	Level (m)	Legend	7.02	Stratum D	escript	ion	Scale
STITIKES	0.50 0.50 3.00	ES ES B	Trench Supp	ort and Common	2.20	104.63 102.93		MADE Graconsisting MADE Gracorse Gracobles of the control of the	GOUND: Wet dark gravel is subangular to gof flint and mudston and substance of flint and sandstone and substance of the subst	rey angul flint and Solight of the solight of the s	gravelly medium If fine to medium If the to subrounded, sandstone with organic smell. Inents of metal Coarse GRAVEL cobbles of flint and ravel).	3- 4-
Pit Stability	Shoring Used		rrench Supp	ort and Comme	Remarks				Date Rate	Pum	nping Data Remarks	
General Rema Groundwater end Unsuitable for HS	countered at 0	.5m bgl			COLLAPS							



TRIAL PIT REFERENCE **TP25**

diffiscions		Sheet 1 of 1
Project Name: South West Rugby	Client: L&Q	Date: 26/01/2022
Location: Rugby	Contractor: GIP	Co-ords: E447169.25 N272868.59
Project No. : BM11254	Excavator: JCB	Dimensions : Final Depth: 3.50m
Logged By Checked By	Approved By Level	Final Depth: 3.50m Orientation
FL SN	SN 105.55m AoD	2.00m °
Water Sample and In Situ Testil Strikes Depth (m) Type Resul	, ', , , Legeng	Stratum Description $\frac{v}{v}$
0.50 B 0.50 ES	TOPSOIL Sand. Graconsisting	Dark brown fibrous slightly gravelly medium vel is subangular to rounded fine to medium of flint and mudstone. Grey silty CLAY. (Superficial - Bosworth Clay).
1.90 HSV 40kP: 1.90 HSV 40kP: 1.90 HSV 42kP:	1	2.00m : Recovered as Wet. prown clayey fine to medium SAND. (Superficial an Clay).
3.50 B 3.50 ES	3.50 102.05	Base of Excavation at 3.50m
Pit Stability Shoring Used	ort and Comment Remarks	Pumping Data Date Rate Remarks
General Remarks Groundwater encountered at 1.8m bgl HSV - Small Vane Used. HSV @ 1.9 - 40, 42, 40 = 4	Trial Pit collapsed at 3.5m COLLAPSE 11kPa	



TRIAL PIT REFERENCE

TP26

- GITTISCI OTIO			Sheet 1 of 1
roject Name: South West Rugby	Client: L&Q	Date: 26/01/202	22
ocation: Rugby	Contractor: GIP	Co-ords: E4472	52.98 N272931.90

Project No.: BM11254 Excavator: JCB

Logged By Checked By Approved By Level
FI SN SN 107 66m AoD 2 00m

Final Depth: 4.50m

Orientation

	FL	,	5	SN	SN		107.66m	AoD		2.00m	<u> </u>	•		
Backfill	Water			n Situ Testing	Depth	Level	Legend		Stra	atum De	scriptio	n	Scale	
8	Strikes	Depth (m)	Туре	Results	(m)	(m)	\//\\\/\\\	TOPSOIL:				avelly medium	Й	_
					0.50	107.16		Sand. Gra consisting	vel is suba of flint and rn sandy su RAVEL con	Ingular to r I mudstone Ibrounded sisting of q	ounded fi	ne to medium ed, medium to sandstone. Sa	and	-
		1.00	ES		1.00	106.66		C-# 1:b4 b		do : OL 4	V (C	ficial Decour		1 -
		1.40 1.40 1.40	HSV HSV HSV	36kPa 38kPa 38kPa	1.50	106.16		Clay).	grey silty s	andy CLA\	∕ with lam	ficial - Bosworl		-
	\searrow	2.00 2.20	B	66kPa	2.20	105.46	* × × × × × × × × × × × × × × × × × × ×							2 -
		2.20 2.20 2.20	HSV HSV	66kPa 66kPa 68kPa	2.20	100.40		Wet light b - Bosworth	orown claye n Clay).	ey fine to n	nedium S	AND. (Superfic		3 -
		3.20 3.20	B ES											
					4.50	103.16			Base o	f Excavat	ion at 4.	50m		
Di	it Stability	Shoring Hea	. I	Trench Support ar	nd Comment Remarks				Date	Rate	Pumpin	g Data Remarks		\exists
Pi	it Stability	Shoring Use	·u		Remark	•			Date	rate		remarks		\dashv

General Remarks

Groundwater encountered at 2.2m bgl HSV @ 1.4m - 36,38,38 = 37kPa HSV @ 2.2m - 66, 68, 66 = 66kPa

HSV - Small Vane Used.



BOREHOLE REFERENCE

WS01

Sheet 1 of 2

Project Name: South West Rugby Client: L&Q Date: 26/01/2022

Location: Rugby Contractor: GIP Co-ords: E446881.05 N273009.04

	ion: Rug					Jontrac							S: E44688		N2730	09.04	
Proje	ct No. : E		:54				Equip		WS Rig				112.54m	٩oD			
	Logge W				Checked By SN	/		Ap	proved SN	Ву	SF	T Energy 73.01%			Fii	nal Depth 5.00	
<u></u>	Water	,	Sample	and In	Situ Testin	g	De	pth	Level	ļ							<u>a</u> e
Install. / Backfill	Strikes			Туре	Results			n)	(m)	Legend		Si	ratum De	scripti	on		Scale
			0.20	ES				45	440.00		mediur	OIL: Orangis n Sand. Gra n consisting	h brown fibro vel is angula of flint.	ous sligh r to sub	ntly grav angular	elly fine to fine to	-
		1	- 1.45 .00	D SPT ES	N=27 (4,4/6,7	7,7,7)	0.	45	112.09				ngish brown nore Gravel		n to coar	se SAND.	1-
	\Box		- 2.45 2.00	D SPT	N=18 (4,5/5,4	1 ,5,4)	2.	20	110.34		subang mudsto Gravel	gular fine to o one and sand).	own to brown coarse GRA dstone. (Sup red as Dam	/EL con erficial -	sisting o	of flint,	2-
		3.00	- 3.45 - 4.00 .00	D B SPT	N=7 (2,3/2,2	,1,2)					3.00m	i : Recover	ed as Wet				3-
				SPT	N=4 (1,1/0,1 N=9 (1,1/2,2						4.00m	n - 5.00m :	Low recove	əry.			4
																	-
	Hole Diameter		Casing D				Chiselling		T -			and Orientation	I a			Installation	T a
Depth	pase Dia	meter	Depth Base	Diamet	er Depth Top	Depth I	pase	Duration	1 Tool	Тор	Base	Inclination	Orientation	0.00m 3.00m	3.00m 4.00m	Pipe Type PLAIN SLOTTED	Diameter

Remarks

Groundwater encountered at 2.5m bgl



BOREHOLE REFERENCE

WS01

Sheet 2 of 2

Project Name: South West Rugby

Client: L&Q

Date: 26/01/2022

Location: Rugby

Co-ords: E446881.05 N273009.04

Project No.: BM11254

Drilling Equipment: WS Rig

Level: 112.54m AoD

.ocation:	Rugh	ру		C	contractor:	GIP				Co-ords	s: E44688	1.05 N	12730	09.04	
Project N	lo. : B	M11254		D	rilling Equ	ipment	: WS Rig			Level :	112.54m	٩oD			
L	_ogge Wi			Checked By SN		Ap	oproved SN	Ву	SF	T Energy 73.01%			Fir	nal Depth 5.00	
	ater		and In	Situ Testing		epth	Level							0.00	e
Install. / Str	rikes	Depth (m)	Туре	Results		(m)	(m)	Legend			tratum De				Scale
						5.00	107.54		Loose (subang mudsto Gravel)	one and sand).	own to brown coarse GRA dstone. (Sup I of Boreho	erficial -	Dunsm	jular to of flint, ore	5
															6
															7
															8
														•	
Hole Di	iameter Diam		Diameter Diamete	Ponth T-	Chiselli Donth Rose	ing Duratio	n Tool	Tar	Inclination Base	and Orientation	Orientation	Tas	Base	nstallation	Diamete
Depth Base	ыап	neter Depth Base	Diamete	er Depth Top	Depth Base	Duratio	1001	Тор	Dase	momation	Onemation	Top 0.00m 3.00m	3.00m 4.00m	Pipe Type PLAIN SLOTTED	Diame

Remarks

Groundwater encountered at 2.5m bgl



BOREHOLE REFERENCE

WS02

Sheet 1 of 2

Project Name: South West Rugby Client: L&Q Date: 26/01/2022 Location: Rugby Contractor: GIP Co-ords: E446992.87 N273068.15

Projec	ct No. : I	3M11254	1		[Orilling Ed	quipmen	: WS Rig	ı		Level :	113.19m	AoD			
		ed By /P			Checked By SN	'	Α	pproved SN	Ву	SF	T Energy 73.019			Fir	nal Depth 5.00	
Install. / Backfill	Water Strikes				Situ Testino		Depth (m)	Level (m)	Legend		St	tratum De	scripti	on		Scale
1 11		Depth 0.40		Type	Results	3				mediur	OIL: Orangis n Sand. Gra n consisting	h brown fibro vel is angula of flint.	ous sligh ar to sub	ntly grave angular	elly fine to fine to	-
		1.00 - 1.00 - 1.00	1.50	D B SPT	N=23 (4,4/4,6	5,6,7)	0.50	112.69		SAND.	Gravel is ar	ngish brown ngular to sub Superficial -	angular	fine to n	nedium	1-
		2.00 2.00 – 2 2.00	2.45	ES D SPT	N=25 (4,4/6,6	5,6,7)	1.80	111.39		angula	r to subangւ mudstone a	ngish brown ılar fine to co nd sandstor	oarse GF	RAVEL c	onsisting	2-
	abla	3.00 – 3 3.00		D SPT	N=16 (4,4/3,5	i,4,4)				-		ed as Dan				3-
		4.00		SPT	N=7 (1,1/1,2, N=7 (1,1/2,1,					4.00m	n : Becomin	ng loose at	4.00m			4-
	lole Diameter		Casing Di	ameter		Chis	selling			Inclination	and Orientation			, lı	nstallation	
Depth	Base Dia	ameter De	pth Base	Diamete	Pr Depth Top	Depth Base	e Durati	on Tool	Тор	Base	Inclination	Orientation	Тор	Base	Pipe Type	Diameter

Remarks

Groundwater encountered at 2.8m bgl



BOREHOLE REFERENCE

WS02

Sheet 2 of 2

Project Name: South West Rugby

Client: L&Q

Date: 26/01/2022

Location: Rugby

Co-ords: E446992.87 N273068.15

Location: Rugby		Contractor:	GIP				Co-ords	s: E44699	2.87 N	127306	88.15	
Project No. : BM11254		Drilling Equi	ipment: W	S Rig			Level :	113.19m <i>i</i>	٩oD			
Logged By WP	Checked E SN	Зу		oved By	у	SP1	Γ Energy 73.01%			Fir	nal Depth 5.00	
# 0 0 1	e and In Situ Testi		epth Lo	ovel	Legend			ratum De	scription	on		Scale
Strikes Depth (m) 5.00	Type Result D			(111)		Medium angular t of flint, m Gravel).	dense orar to subangu nudstone a	ngish brown lar fine to co nd sandston of Boreho	to brown earse GF e. (Supe	n very sa RAVEL c erficial -	andy onsisting Dunsmore	5
	Diameter Donth Top	Chisellin	1	Tool	Ton		and Orientation	Orientati	Tas		nstallation	Diameter
Depth Base Diameter Depth Base	e Diameter Depth Top	Depth Base	Duration	Tool	Тор	Base	Inclination	Orientation	Тор	Base	Pipe Type	Diameter

Remarks

Groundwater encountered at 2.8m bgl



BOREHOLE REFERENCE

WS03

Sheet 1 of 2

Project Name: South West Rugby Client: L&Q Date: 26/01/2022

Location: Rugby Contractor: GIP Co-ords: E447059.06 N273105.90

Project No. : BM11254 Drilling Equipment: WS Rig Level : 113.27m AoD

		3M11254		l'	Drilling Eqเ			,		LCVCI .	113.27m	7100			
L	Logge			Checked By	У	Α	pproved	Ву	SP	T Energy			Fir	nal Depth	
,.	W		alo as d !	SN n Situ Tootin	<u> </u>	N = 11 11	SN			73.01	%			5.00	Т
	/ater rikes	Depth (m		n Situ Testin Results		Depth (m)	Level (m)	Legend		S	stratum De	escripti	on		
		Dopar (III	iy Type	result					mediun	OIL: Orangis n Sand. Gra n consisting	sh brown fibr avel is angula g of flint.	ous sligh ar to sub	ntly grav	elly fine to fine to	
						0.40	112.87		SAND.	Gravel is a	angish browr ingular to sul (Superficial -	bangular	fine to r	nedium	
		0.80 1.00 – 1.45	ES 5 D												
		1.00	SPT	N=27 (4,4/6,7	7,7,7)										
		1.50	ES												
		2.00 – 2.45 2.00	5 D SPT	N=24 (6,5/5,6	5,6,7)										
<u> </u>	abla					2.30	110.97		angular of flint, Gravel)	r to subang mudstone a	angish brown ular fine to o and sandstor	oarse GF ne. (Supe	RAVEL o	consisting	
		3.00 – 3.45 3.00	5 D SPT	N=12 (3,3/3,3	3,3,3)				3.00m	: Recove	red as Wei	t.			
	4	4.00	SPT	N=2 (1,0/0,0	,1,1)				4.00m	ı : Becomi	ing loose a	t 4.00m			
	4.50 – 5.00 4.50) B SPT	N=11 (1,2/2,3		4.50	108.77	X	Wet firr Clay).	m grey sligh	ntly silty CLA	Y. (Supe	rficial - E	Bosworth	
Hole D	Diameter	Ca	sing Diameter		Chisell	ing		—×—	Inclination	and Orientation	1		II.	nstallation	\exists
pth Base		meter Depth E		eter Depth Top	Depth Base	Durati	on Tool	Тор	Base	Inclination	Orientation	Тор	Base	Pipe Type	Di

Remarks

Groundwater encountered at 2.7m bgl



BOREHOLE REFERENCE

WS03 Sheet 2 of 2

Project Name: South West Rugby Client: L&Q Date: 26/01/2022

Location: Rugby Contractor: GIP Co-ords: E447059.06 N273105.90

Locatio	n: Rug	by			C	Contractor:	GIP				Co-ords	s: E44705	9.06 N	127310	05.90	
Project		BM11254			С	rilling Equi					1	113.27m	AoD			
	Logge W	ed By P			Checked By SN		Apı	proved E SN	Зу	SP ⁻	73.01%			Fir	nal Depth 5.00	
Install. / Backfill	Water Strikes				Situ Testing	,	epth m)	Level (m)	Legend		St	ratum De	scription	on		Scale
<u> </u>		Depth ((m) I	Гуре	Results				<u> </u>	Wet firm	grey slight	ly silty CLAY	/. (Super	ficial - B	Sosworth	
		5.00		D		5	5.00	108.27	<u>× </u>	Clay).		of Boreho			oswortn	5-
																8-
	Holo Diamoter Coning Diamoter															- - -
Hol Depth Ba	Hole Diameter Casing Diameter ppth Base Diameter Depth Base Diameter Depth T					Chisellin	g Duration	Tool	Тор	Inclination a	Inclination	Orientation	Тор	Ir Base	nstallation Pipe Type	Diameter

Remarks

Groundwater encountered at 2.7m bgl



BOREHOLE REFERENCE

WS04

Sheet 1 of 2

Project Name: South West Rugby Client: L&Q Date: 26/01/2022

Location: Rugby Contractor: GIP Co-ords: E447155.03 N273161.04

		by			Contract					00 014	s: E4471	0.00 1	127010	71.01	
Proje		3M11254				Equipment					113.63m	AoD			
	Logge W			Checked B SN	У	A	pproved SN	Ву	SF	T Energy 73.019			Fir	nal Depth 5.00	
Install. / Backfill	Water Strikes			Situ Testin		Depth	Level	Legend		S	tratum De	escription	on		Scale
<u>≅</u> 8	Strikes	Depth (m)	Туре	Result	S	(m)	(m)	\//\\\/	TOPSO		h brown fibr	•		ally fine to	Ŏ
		0.10	ES			0.40	113.23		mediun mediun Mediun SAND.	n Sand. Gra n consisting n dense ora Gravel is a	ivel is angula	ar to suba gravelly pangular	mediun	i to coarse	
		1.00 – 1.45 1.00	D SPT	N=29 (4,6/6,	7,8,8)				0.80m	1 - 1.30m :	Increase g	gravel co	ontent.		1
		2.00 – 2.45 2.00 2.20	D SPT ES	N=19 (3,3/4,	4,5,6)	1.70	111.93		angulai	r to subangı mudstone a	ngish brown ular fine to co and sandstor	oarse GF	RAVEL c	onsisting	2
	∇	2.50 - 4.50 3.00 - 3.45 3.00	D SPT	N=11 (2,3/3,	2,3,3)						red as Dan Decrease		ontent.		3
		4.00	SPT	N=6 (1,1/1,2	2,1,2)				4.00m	n : Becomii	ng loose at	† 4.00m			4
		4.70	SPT	N=14 (2,3/3,	3,4,4)	4.70	108.93	X X X	Damp f Clay).	firm grey sliç	ghtly silty CL	AY. (Sup	erficial -	Bosworth	
Depth	Hole Diameter	Casing meter Depth Base	Diameter Diame	ter Depth Top	Ch Depth Ba	niselling ase Duration	on Tool	Тор	Inclination	and Orientation	Orientation	Тор	Base	nstallation Pipe Type	Diameter
Sahru	Susc DIA	otor Deptil base	Diame	Берш юр	Debui Ba	Duratio	1001	тор	Dase	monnation	Grientation	0.00m 2.50m	2.50m 3.50m	PLAIN SLOTTED	Diametel

Remarks

Groundwater encountered at 2.5m bgl



BOREHOLE REFERENCE

WS04 Sheet 2 of 2

Project Name: South West Rugby Client: L&Q Date: 26/01/2022 Location: Rugby Contractor: GIP Co-ords: E447155.03 N273161.04

Project No. : BM11254 Drilling Equipment: WS Rig Level: 113.63m AoD

Logged By Checked By Approved By SPT Energy Ratio Final Depth

Lo	gged By WP		Checked By SN		Αţ	oproved E SN	Зу	SF	T Energy 73.01%			Fir	nal Depth 5.00	
₩at		le and li	n Situ Testing	ı D	epth						ı			<u>o</u>
Wate Strik	es Depth (m)		Results		(m)	Level (m)	Legend			tratum De				Scale
	5.00	D		5	5.00	108.63	<u>×</u> _ <u>×</u>	Damp f Clay).		ghtly silty CL			- Bosworth	5
														6
														7
														\$
														Ş
Hole Diam	ater Casi Diameter Depth Ba	ng Diameter se Diame	elter Depth Top	Chisellin Depth Base	g Duratio	n Tool	Тор	Inclination Base	and Orientation	Orientation	Тор	Base	nstallation Pipe Type	Diamete
	1				T		<u> </u>					2.50m	PLAIN	1
	1									1	0.00m 2.50m	3.50m	SLOTTED	

Hole Diar	neter	Casing Dia	meter		Chisellin	g			Inclination	and Orientation			Ir	nstallation	
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Тор	Base	Inclination	Orientation	Тор	Base	Pipe Type	Diameter
												0.00m 2.50m	2.50m 3.50m	PLAIN SLOTTED	
												2.30111	3.30111	SLOTTED	1
															i I
															1

Remarks

Groundwater encountered at 2.5m bgl



BOREHOLE REFERENCE

WS05

Sheet 1 of 2

Project Name: South West Rugby Client: L&Q Date: 26/01/2022

Location: Rugby Contractor: GIP Co-ords: E446926.91 N272960.06

Project No. : BM11254 Drilling Equipment: WS Rig Level : 112.72m AoD

	Logge F			Checked By SN	A	SN			T Energy 73.01%				nal Depth 5.00	
Dack	Water Strikes			n Situ Testing	Depth (m)	Level (m)	Legend			ratum De	scription	on		
	Ottikes	Depth (m)	Туре	Results	(111)	(111)		Sand. G	IL: Dark bro Fravel is sub ng of flint an	angular to r	ounded			
		0.50	ES		0.40	112.32		SAND w medium	dense light vith small co to coarse c nore Gravel)	bbles of flin onsisting of	t. Grave	l is subr	parse rounded, (Superficial	_
		1.00 – 1.45 1.00 – 1.45 1.00	D D SPT	N=22 (3,3/3,6,6,7)										
					1.70	111.02	X X X X X X X X X X X X X X X X X X X	Firm ligh	nt brown silt	y CLAY. (Su	ıperficial	- Bosw	orth Clay).	_
		2.00 – 2.45 2.00 – 2.45 2.00	D D SPT	N=14 (2,3/3,4,4,3)	2.10	110.62	XX X		- 2.05m : I dense light th Clay).				LAY. Superficial -	
		2.40 – 2.80	В		2.50	110.22		Firm ligh	nt brown silt	y CLAY. (Su	ıperficial	- Bosw	orth Clay).	
	\searrow	3.00 3.00 – 3.45 3.00	ES D SPT	N=10 (2,2/3,2,3,2)				3.00m	- 5.00m : I	Recovered	d as We	t.		
		4.00 – 4.45 4.00 – 4.45 4.00	D D SPT	N=10 (2,3/3,4,2,1)			X - X - X - X - X - X - X - X - X - X -							
		4.50	SPT	N=13 (3,2/3,4,3,3)			X X X							
	lole Diameter		Diameter		Chiselling	on T	Tor		and Orientation	Oriente ⁴¹	Tar		Installation	ᅳ
epth l	Dase Dia	meter Depth Base	Diame	eter Depth Top Depth	Base Durati	on Tool	Тор	Base	Inclination	Orientation	Тор	Base	Pipe Type	Di

Remarks

Groundwater encountered at 3.0m bgl



BOREHOLE REFERENCE

WS05 Sheet 2 of 2

Project Name: South West Rugby

Client: L&Q

Date: 26/01/2022

Location: Rugby

Contractor: GIP

Co-ords: E446926.91 N272960.06

Project No. : BM11254	Location: Rugby	Contra	ractor: GIP		Co-ords: E44692	26.91 N272960.06	
FL SN SN 73.01% 5.00 Water Strikes Strikes Depth (m) Type Results Depth (m) Type Results Firm light brown silty CLAY, (Superficial - Bosworth Clay).	Project No. : BM11254	Drilling	ng Equipment: WS Rig		Level : 112.72m	AoD	
Firm light brown silty CLAY. (Superficial - Bosworth Clay).	FL			Ву			
Firm light brown silty CLAY. (Superficial - Bosworth Clay).	Water Sample and Strikes Depth (m) Tyl		Depth Level (m)	Legend	Stratum De	escription	Scale
			(m) (m)		Firm light brown silty CLAY. (Su	uperficial - Bosworth Clay).	8 8 9
Hole Diameter Casing Diameter Chiselling Inclination and Orientation Installation	Hole Diameter Casing Diameter		Chiselling		Inclination and Orientation	Installation	
Depth Base Diameter Depth Base Diameter Depth Top Depth Base Duration Tool Top Base Inclination Orientation Top Base Pipe Type	Depth Base Diameter Depth Base [meter Depth Top Dept	epth Base Duration Tool	Тор	Base Inclination Orientation	Top Base Pipe Type	Diamete

Remarks

Groundwater encountered at 3.0m bgl



Wardell Windowless Sample Borehole Log

BOREHOLE REFERENCE

WS06

Sheet 1 of 2

Client: L&Q Project Name: South West Rugby Date: 27/01/2022 Co-ords: E447025.01 N272983.14 Location: Rugby Contractor: GIP

Project No.: BM11254 Drilling Equipment: WS Rig Level: 112.90m AoD

Approved By Final Depth Logged By Checked By SPT Energy Ratio FL SN SN 73.01% 5.00 Scale Sample and In Situ Testing Water Depth Level Stratum Description Legend Strikes (m) (m) Depth (m) Type Results TOPSOIL: Dark brown fibrous slightly gravelly medium Sand. Gravel is subangular to rounded fine to medium consisting of flint and mudstone. 0.40 112.50 Medium dense light brown clayey gravelly fine SAND. Gravel is angular to subangular, coarse consisting of flint and chalk. (Superficial - Dunsmore Gravel). 1.00 - 1.45 1.00 - 1.45 D D 1.00 SPT N=28 (5,5/6,7,7,8) 2.00 - 2.45 2.00 - 2.45 2 D SPT 2.00 N=19 (3,6/5,5,4,5) 2.30 - 2.70В \subseteq 2.70m : Recovered as Wet. 2.80 ES 3.00 - 3.453.00 - 3.45D 3 3.00m : Becoming loose at 3.00m D 3.00 SPT N=5 (1,2/1,2,1,1) 4.00 - 4.454.00 SPT N=1 (1,0/1,0,0,0) SPT 4.50 N=7 (2,2/2,2,1,2) 4.50m - 4.80m : Cobbles of flint Damp soft dark grey silty CLAY with laminations (Superficial - Bosworth Clay). 4.80 108.10 Casing Diameter Inclination and Orientation Installation Depth Base Diameter Depth Base Diameter Diamete Depth Top Depth Base Duration Top Base Inclination Orientation Тор Base Pipe Type

Remarks

Groundwater encountered at 2.7m bgl



BOREHOLE REFERENCE

WS06

Sheet 2 of 2

Project Name: South West Rugby Client: L&Q Date: 27/01/2022

Location: Rugby Contractor: GIP Co-ords: E447025.01 N272983.14

	Rugb	ру		(Contracto	or: GIP				Co-ords	s: E44702	25.01 N	127298	33.14	
oject N	lo. : Bl	M11254		[Orilling Ed	quipment	: WS Rig	l		Level:	112.90m	AoD			
L	ogge	d By		Checked By	/	Α	pproved	Ву	SF	T Energy	Ratio		Fir	nal Depth	
	FL	5		SN			SN			73.01%	, 0			5.00	
≣ Wa	ater	Sample	and In	Situ Testing	g	Depth	Level			0.1	. 5				000
Wa Stri	rikes	Depth (m)	Туре	Results		(m)	(m)	Legend			ratum De				2
		5.00 5.00	D D			5.00	107.90	<u>×_^_×</u>	Damp s (Super	soft dark gre ficial - Boswo End	y silty CLAY orth Clay). of Boreho	with lam	ninations 00m	5.	
Hole Dia	iameter Diam		Diameter Diameter	er Depth Top	Chis Depth Base	e Duratio	on Tool	Тор	Inclination	and Orientation	Orientation	Тор	Base	nstallation Pipe Type	Diam

Remarks

Groundwater encountered at 2.7m bgl



BOREHOLE REFERENCE

WS07

Sheet 1 of 2

Project Name: South West Rugby Client: L&Q Date: 27/01/2022

Location: Rugby Contractor: GIP Co-ords: E447127.79 N273051.87

Project No. : BM11254 Drilling Equipment: WS Rig Level : 113.51m AoD

	Logge			Checked By	A	pproved	Ву	SF	T Energy			Fir	nal Depth	
	F			SN		SN			73.01%	6			5.00	-
Backfill	Water Strikes	Sample Depth (m)	Type	n Situ Testing Results	Depth (m)	Level (m)	Legend		Si	tratum De	scripti	on		2
		0.50	ES	rteoune	0.50	113.01		Sand. (consist Mediur small c subang	DIL: Dark bro Gravel is sulting of flint and in dense ligh sobbles of fling gular, fine to lore Gravel).	t brown grav t and chalk.	rounded e. velly coa . Gravel	rse SAN	nedium ID with ar to	
		1.00 – 1.45 1.00 – 1.45 1.00	D D SPT	N=20 (2,4/5,5,5,5)	1.10	112.41			n dense ligh lore Gravel).		ey fine S	SAND. (S	Superficial -	
					1.50	112.01		small c	n dense ligh obbles of flir gular, fine to lore Gravel).	nt and chalk. coarse cons	Gravel	is angul	ar to	
		2.00 - 2.45 2.00 - 2.45 2.00 2.20	D D SPT ES	N=27 (7,7/6,7,7,7)										
	ightharpoons	3.00 – 3.45 3.00	D SPT	N=10 (3,2/2,3,2,3)				3.00m	1 - 5.00m :	Recovered	d as We	et.		
		3.60 – 4.00	В											
		4.00 – 4.45 4.00	D SPT	N=6 (1,1/1,2,1,2)				4.00m	ı : Becomii	ng loose at	4.00m			
		4.50	SPT	N=8 (2,2/2,2,2,2)										
X														\dashv
	ole Diameter		Diameter		Chiselling				and Orientation	T			nstallation	
epth E	pase Dia	meter Depth Base	Diame	eter Depth Top Dep	th Base Durat	ion Tool	Тор	Base	Inclination	Orientation	Тор	Base	Pipe Type	Diam

Remarks

Groundwater encountered at 3.0m bgl



BOREHOLE REFERENCE

WS07

Sheet 2 of 2

Project Name: South West Rugby

Client: L&Q

Date: 27/01/2022

Location: Rugby

Co-ords: E447127.79 N273051.87

	Rugby			١	Contractor:	GIF				Co-oras	s: E44712	27.79 N	127305	01.87	
roject No	o. : BM11	254		Г	Drilling Equi	pment: V	VS Rig			Level :	113.51m	AoD			
	ogged By FL	,		Checked By SN	,	Арр	roved E SN	Зу	SP	T Energy 73.01%			Fir	al Depth 5.00	
Wackfill Stril				Situ Testino		epth m)	Level (m)	Legend		St	tratum De	scription	on		Scale
Wastall National Strill National Nation	kes De		Type D D	Results	, (m)	Level (m) 108.51	Legend	l∖ suband	n dense ligh obbles of flir jular, fine to ore Gravel).	t brown grav nt and chalk. coarse cons	relly coar Gravel i isting of	se SAN s angula flint. (Su	D with ar to uperficial -	ESS 5 6 7 7 8 8 9
Hole Dia	meter	Casing D	Diameter		Chisellin	g			Inclination	and Orientation			Ir	stallation	
Depth Base	Diameter	Depth Base	Diamet	ter Depth Top	Depth Base	Duration	Tool	Тор	Base	Inclination	Orientation	Тор	Base	Pipe Type	Diamet

Remarks

Groundwater encountered at 3.0m bgl



BOREHOLE REFERENCE

WS08

Sheet 1 of 2

Project Name: South West Rugby

Client: L&Q

Date: 27/01/2022

Location: Rugby

Co-ords: E447232.00 N273073.99

Project No.: BM11254

Drilling Equipment: WS Rig

Level: 113.28m AoD

roject N	No. : E	3M11254				Drilling I	Equipme	nt: WS Rio	3		Level:	113.28m	AoD			
	Logge F				Checked By SN	У		Approved SN	Ву	SP	T Energy 73.01%			Fir	nal Depth 5.00	
	Vater trikes	Sar			Situ Testin		Depth (m)		Legend			tratum De	scripti	on		
		Depth (<u>(m)</u>	Туре	Results	5				Sand. 0	Gravel is sub	own fibrous s pangular to r nd mudstone	ounded	ravelly r	medium nedium	
		1.00		ES			0.50	112.78		small co subang Dunsm	obbles of flir ular, fine to ore Gravel). 1 - 1.00m:	t brown grav nt and chalk coarse cons	. Gravel sisting of	is angul flint. (S	ar to uperficial -	
		1.00 – 1. 1.00 – 1. 1.00		D D SPT	N=23 (4,4/5,5	5,7,6)										
		2.00 – 2. 2.00 – 2. 2.00	.45	D D SPT	N=17 (3,4/5,8	5,4,3)				2.50m	- 3.60m :	Recovered	d as We	et.		
		3.00 – 3. 3.00 – 3. 3.00		D D SPT	N=3 (1,1/0,1	,1,1)				3.00m	: Becomir	ng loose at	3.00m			
		3.50 – 4. 3.55	.00	B ES			3.60	109.68	× × × × × × × × × × × × × × × × × × ×	Wet sof Clay).	ft light browi	n silty CLAY.	(Superf	icial - Bo	osworth	
		4.00 – 4. 4.00 – 4. 4.00		D D SPT	N=3 (0,0/0,1	,1,1)			X _ X _ X _ X _ X _ X _ X _ X _ X _ X _							
		4.50		SPT	N=6 (1,1/1,1	,2,2)			X X X X X X X X _ X							
	Diameter		Casing Dia	_			hiselling				and Orientation				Installation	
Depth Base	e Dia	meter Dep	th Base	Diamet	er Depth Top	Depth B	ase Du	ration Tool	Тор	Base	Inclination	Orientation	Top 0.00m	Base 2.00m	Pipe Type PLAIN	Dian
													2.00m	4.00m	SLOTTED	

Remarks

Groundwater encountered at 2.5m bgl



BOREHOLE REFERENCE

WS08

Sheet 2 of 2

Project Name: South West Rugby Client: L&Q Date: 27/01/2022 Location: Rugby Contractor: GIP Co-ords: E447232.00 N273073.99

Project No. : BM11254 Drilling Equipment: WS Rig Level: 113.28m AoD Einal Donth

	Logg	ged By			Checked By		App	roved E	Зу	SF	T Energy	Ratio		Fir	nal Depth	
	F	-L			SN			SN			73.01%	6			5.00	
Install. / Backfill	Water Strikes				Situ Testing	_	epth I	Level (m)	Legend		St	ratum De	scription	on		Scale
		Ворг	th (m)	Type D D	Results			108.28	<u>×_^</u> _x	Wet so Clay).	ft light browr	n silty CLAY.			osworth	5 -
																6 -
																7 -
																8 -
																9-
																-
	Hole Diameter		Casing Di	ameter		Chisellin	q			Inclination	and Orientation			li	nstallation	
Depth			Depth Base	Diameter	r Depth Top	Depth Base	Duration	Tool	Тор	Base	Inclination	Orientation	Top 0.00m 2.00m	Base 2.00m 4.00m	Pipe Type PLAIN SLOTTED	Diameter

Remarks

Groundwater encountered at 2.5m bgl



BOREHOLE REFERENCE

WS09

Sheet 1 of 2

Project Name: South West Rugby Client: L&Q Date: 26/01/2022

Location: Rugby Co-ords: E446982.14 N272903.20

Project No. : BM11254 Drilling Equipment: WS Rig Level : 111.15m AoD

L	Logge Fl	ed By L		Checked By SN	A	pproved I SN	3y	SP	T Energy 73.01%			FII	nal Depth 5.00	
	ater rikes	Sample		n Situ Testing	Depth (m)	Level (m)	Legend			ratum De	scription	on		
m 011		Depth (m) 0.50	Type	Results	0.50	110.65		Sand. (consisti	Gravel is sub ing of flint ar ight brown g	own fibrous s pangular to r and mudstone gravelly coar chalk. Grav- isting of flint	ounded e. se SANI el is and	D with s	medium small subangular.	+
		1.00 – 1.45 1.00 – 1.45 1.00	D D SPT	N=8 (3,2/1,2,2,3)	1.20	109.95		fragme	nts (Superfic	isting of flint cial - Dunsm y CLAY. (Su	ore Grav	vel).		
		2.00 – 2.45 2.00 – 2.45 2.00	D D SPT	N=4 (1,1/1,1,1,1)	2.30	108.85	X			Recovered			3osworth	
		3.00 – 3.45 3.00 – 3.45 3.00	D D SPT	N=6 (1,1/1,2,1,2)			X							
2	Z	4.00 4.00 - 4.45 4.00 - 4.45 4.00 4.20 - 4.60	ES D D SPT B	N=5 (1,0/1,1,1,2) N=11 (1,2/2,2,3,4)				4.00m	- 5.00m :	Recovered	l as We	et.		
Hole Di	Diameter	Casing	Diameter		Chiselling		× × ×	Inclination	and Orientation				Installation	1
epth Base	Diar	meter Depth Base	Diame	eter Depth Top Depth	n Base Durati	on Tool	Тор	Base	Inclination	Orientation	Тор	Base	Pipe Type	Di

Remarks

Groundwater encountered at 4.0m bgl



BOREHOLE REFERENCE

WS09

Sheet 2 of 2

Project Name: South West Rugby

Client: L&Q

Date: 26/01/2022

Location: Rugby

Co-ords: E446982.14 N272903.20

		Contractor. C				00 0140	J. E 11000	/			
Project No. : BM11254		Drilling Equip	ment: WS Rig	1		Level:	111.15m	AoD			
Logged By FL	Checked SN	Ву	Approved SN	Ву	SF	T Energy 73.01%			Fir	nal Depth 5.00	
Water Strikes Depth (m)	e and In Situ Testi		pth Level (m)	Legend		St	ratum De	scription	on		Scale
			100.45	××	Soft to	firm light gre	y silty CLAY	'. (Superl	ficial - B	osworth	
5.00		5.0	00 106.15		Clay).	End	of Boreho	ele at 5.0	00m		6 8
	g Diameter	Chiselling				and Orientation				nstallation	
Depth Base Diameter Depth Base	e Diameter Depth Top	Depth Base	Duration Too	Тор	Base	Inclination	Orientation	Тор	Base	Pipe Type	Diameter
	1	1									

Remarks

Groundwater encountered at 4.0m bgl



Wardell Windowless Sample Borehole Log

BOREHOLE REFERENCE

WS10

Sheet 1 of 2

Client: L&Q Project Name: South West Rugby Date: 27/01/2022 Co-ords: E447085.97 N272941.00 Location: Rugby Contractor: GIP

Project No.: BM11254 Drilling Equipment: WS Rig Level: 110.87m AoD Logged By Checked By Approved By SPT Energy Ratio Final Depth FΙ SN SN 73.01% 5.00 Scale Sample and In Situ Testing Water Depth Level Legend Stratum Description (m) Strikes (m) Depth (m) Type Results TOPSOIL: Dark brown fibrous slightly gravelly medium 0.10 ES Sand. Gravel is subangular to rounded fine to medium consisting of flint and mudstone. 0.60 110.27 Medium dense light brown gravelly coarse SAND with small cobbles of flint and chalk. Gravel is angular to subangular fine to coarse consisting of flint. (Superficial -Dunsmore Gravel). 1.00 – 1.45 1.00 – 1.45 1.00 D D SPT \subseteq 1.10 109.77 Damp medium dense light brown clayey fine SAND (Superficial - Bosworth Clay). N=19 (4,5/6,5,4,4) 1.10 - 1.50В 1.80 109.07 Damp very soft to soft light brown silty CLAY. (Superficial - Bosworth Clay).

1.80m - 2.00m : Recovered as Firm. HSV 44kPa 1.90 2.00 - 2.45 2.00 - 2.45 D 2 SPT 2.00 N=1 (0,0/0,0,0,1) 3.00 - 3.453.00 - 3.45D 3 D 3.00 SPT N=5 (0,1/1,1,2,1) 3.70 Damp firm to stiff dark grey silty CLAY. (Superficial -3.80 3.70m - 4.00m : Recovered as Stiff. 3.80 HSV 102kPa 4.00 - 4.45 4.00 - 4.45 4.00 ח SPT N=10 (1,2/2,2,3,3) SPT 4.50 N=33 (4,5/6,8,9,10) Casing Diameter Inclination and Orientation Installation Depth Base Diameter Depth Base Depth Base Diameter Diamete Depth Top Duration Тор Base Inclination Orientation Тор Base Pipe Type

Remarks

Groundwater encountered at 1.1m bgl



BOREHOLE REFERENCE

WS10

Sheet 2 of 2

Project Name: South West Rugby

Client: L&Q

Date: 27/01/2022

Location: Rugby

Co-ords: E447085.97 N272941.00

Location.	. IXugu	у			Julilaciul.	GIF				CO-OIG	5. L44700	55.87	NZ 1 Z 3 ·	41.00	
Project N	No. : Bl	M11254			rilling Equi	ipment:	WS Rig			Level :	110.87m	AoD			
	Logge FL			Checked By SN		Ap	proved I SN	Зу	SF	T Energy 73.01%			Fir	nal Depth 5.00	
Nstall. / Backfill Str	/ater rikes	Sample Depth (m)	Type	Situ Testing Results		epth (m)	Level (m)	Legend		St	tratum De	scripti	on		Scale
		5.00	D D			5.00	105.87	<u> </u>	Damp f Boswor	irm to stiff d rth Clay). End	ark grey silty	CLAY. ((Superfic	cial -	5
															6
															7
															8
															9
	Diameter		Diameter		Chisellin					and Orientation	1			nstallation	
Depth Base	Diam	neter Depth Base	Diameter	r Depth Top	Depth Base	Duration	Tool	Тор	Base	Inclination	Orientation	Тор	Base	Pipe Type	Diameter

Remarks

Groundwater encountered at 1.1m bgl



BOREHOLE REFERENCE

WS11

Sheet 1 of 2

Project Name: South West Rugby Client: L&Q Date: 27/01/2022

Location: Rugby Contractor: GIP Co-ords: E447167.98 N272953.95

roject No. : I	BM11254		Drilling	Equipment	t: WS Rig	ļ	Level : 110.30m A	.oD	
	ed By :L		Checked By SN	A	pproved SN	Ву	SPT Energy Ratio 73.01%	Final Depth 5.00	
Bag Strikes Water Strikes		and Ir	n Situ Testing Results	Depth (m)	Level (m)	Legend	Stratum Des	cription	Scale
	Sopul (III)	1,750	rissaic	0.50	109.80	XX	TOPSOIL: Dark brown fibrous sli Sand. Gravel is subangular to ro consisting of flint and mudstone. Firm to stiff dark greyish brown s Bosworth Clay).	unded fine to medium	
	0.90 1.00 – 1.45 1.00 – 1.45 1.00 1.10	HSV D D SPT HSV	80kPa N=13 (2,3/3,4,3,3) 100kPa	1.20	109.10		Firm to stiff light brown silty CLA'Clay).	Y. (Superficial - Bosworth	1
	2.00 2.00 - 2.45 2.00 - 2.45 2.00	ES D D SPT	N=12 (2,3/3,3,3,3)			X X X			2
*	2.40 2.60 – 3.00	HSV B	42kPa	2.50	107.80	×	Wet medium dense light brown o (Superficial - Bosworth Clay).	clayey fine SAND	
	3.00 – 3.45 3.00 – 3.45 3.00	D D SPT	N=19 (2,3/3,5,5,6)						3
∃ °.	4.00 4.00 – 4.45	ES D		3.50	106.80		Wet stiff dark grey silty gravelly (surrounded, medium to coarse c flint. (Superficial - Bosworth Clay	onsisting of chalk and	
	4.00 – 4.45 4.00 4.45 – 5.00 4.45 – 5.00 4.50 4.50	D SPT D D HSV SPT	N=34 (4,4/5,7,10,12) 110kPa N=25 (5,5/7,7,5,6)			* * * * * * * * * * * * * * * * * * *			
						× × ×	4.80m - 5.00m : Recovered		
Hole Diameter Depth Base Dia	Casing Depth Base	Diameter Diame	ter Depth Top Depth	Chiselling Base Durati	on Tool	Тор	Inclination and Orientation Base Inclination Orientation	Installation	Diamete
								2.50m 3.50m SLOTTED	

Remarks

Groundwater encountered at 2.5m bgl



BOREHOLE REFERENCE

WS11

Sheet 2 of 2

Project Name: South West Rugby

Client: L&Q

Date: 27/01/2022

Co-ords: E447167.98 N272953.95

Proje		3M11254		Drilling	g Equipment	t: WS Rig			Level : 110.30m A	oD	
	Logg ₍			Checked By SN	A	pproved SN	Ву	SP	T Energy Ratio 73.01%	Final Depth 5.00	
Install. / Backfill	Water Strikes	Sample		n Situ Testing	Depth (m)	Level (m)	Legend		Stratum Des	1	Scale
<u> </u>		Depth (m)	Туре	Results	5.00	105.30	<u> </u>	Wet stiff surround flint. (Su	dark grey silty gravelly C ded, medium to coarse co perficial - Bosworth Clay End of Borehole	CLAY. Gravel is onsisting of chalk and b. at 5.00m	5-
											6 -
											7-
											8 -

Н	ole Diameter		Casing D	iameter			C	Chiselling				Inclination	and Orientation			Ir	nstallation	
Depth E	Base Dia	ameter	Depth Base	Diame	eter	Depth Top	Depth E	Base Durat	ion	Tool	Тор	Base	Inclination	Orientation	Тор	Base	Pipe Type	Diameter
															0.00m 2.50m	2.50m 3.50m	PLAIN SLOTTED	

Remarks

Groundwater encountered at 2.5m bgl



BOREHOLE REFERENCE

WS12

Sheet 1 of 2

Project Name: South West Rugby Client: L&Q Date: 26/01/2022

Location: Rugby Contractor: GIP Co-ords: E447035.10 N272830.07

Project No. : BM11254 Drilling Equipment: WS Rig Level : 107.73m AoD

FL Sar Strikes	0 ES 1.45 D 1.45 D 2.45 D 2.45 D 2.45 D 3.97	S PT N=11 (1,2/2,3,3,3)	Depth (m)	SN Level (m)	Legend	73.01% Stratum Desc TOPSOIL: Dark brown fibrous slig Sand. Gravel is subangular to rou consisting of flint and mudstone. Firm light brown silty gravelly CLA fragments of organics. Gravel is at coarse consisting of flint, chalk and Bosworth Clay).	y with occasional
2.00 - 2. 2.00 - 2. 2.00 - 2. 2.00 - 2. 2.00 - 2. 3.00 - 3. 3.00 - 3. 3.00 - 3. 3.00 - 3. 3.00 - 3.	0 ES 1.45 D 1.45 D 0 SPT	S PT N=11 (1,2/2,3,3,3)				Sand. Gravel is subangular to rour consisting of flint and mudstone. Firm light brown silty gravelly CLA fragments of organics. Gravel is at coarse consisting of flint, chalk and	nded fine to medium Y with occasional ngular to subangular,
2.00 - 2. 2.00 - 2. 2.00 - 2. 2.00 - 2. 2.00 2.10 - 2. 2.60 3.00 - 3. 3.00 - 3. 3.00 - 3. 3.00 - 3. 3.00 - 4. 4.00 - 4. 4.00 - 4.	1.45 D 1.45 D 0 SPT 2.45 D 2.45 D 0 SPT	N=11 (1,2/2,3,3,3)	0.00	107.20		fragments of organics. Gravel is an coarse consisting of flint, chalk and	ngular to subangular,
2.00 - 2. 2.00 - 2. 2.00 - 2. 2.00 2.10 - 2. 2.60 3.00 - 3. 3.00 - 3. 3.00 - 3. 3.00 - 3.	1.45 D 0 SPT 2.45 D 2.45 D 0 SPT	N=11 (1,2/2,3,3,3)			X X - X - X - X - X - X - X - X - X		
2.00 - 2. 2.00 2.10 - 2. 2.60 3.00 - 3. 3.00 - 3. 3.00 - 3. 3.00 - 3.	2.45 D 0 SPT)			× × ×		
3.00 - 3. 3.00 - 3. 3.00 - 3. 3.00			2.20	105.53	<u>X</u>	2.00m : Becoming soft at 2.00 Light brown clayey fine SAND (Su Clay).	
3.00 – 3. 3.00 4.00 – 4. 4.00 – 4.			2.50	105.23		Stiff light brown silty sandy CLAY. Clay).	(Superficial - Bosworth
4.00 – 4.	3.45 D)				3.00m - 5.00m : Recovered a	s Wet.
4.45 – 5. 4.45 – 5.	4.45 D 0 SPT 5.00 D 5.00 D	N=18 (3,4/4,4,5,5)					
4.50	0 SPT		Chiselling		X X X	Inclination and Orientation	In again as a
epth Base Diameter Dept	Casing Diameter		n Base Duration	n Tool	Тор		Installation Top Base Pipe Type

Remarks

Groundwater encountered at 3.0m bgl



BOREHOLE REFERENCE

WS12

Sheet 2 of 2

Project Name: South West Rugby

Client: L&Q

Date: 26/01/2022

Location: Rugby

Co-ords: E447035.10 N272830.07

Location։ Ru	gby		C	contractor:	GIP				Co-ords	s: E44703	85.10 N	12728	30.07	
Project No. :	BM11254		D	rilling Equi	pment:	WS Rig			Level :	107.73m	AoD			
F	ged By FL		Checked By SN		Ар	proved E SN	Зу	SF	T Energy 73.01%			Fir	nal Depth 5.00	
Mater Strikes			Situ Testing		epth m)	Level (m)	Legend		St	tratum De	scription	on		Scale
E M Offices	Depth (m)	Туре	Results				×	Stiff lig	ht brown silt	y sandy CLA	Y. (Supe	erficial -	Bosworth	
223372					5.00	102.73		Clay).	End	l of Boreho	le at 5.0	00m		5
														6
														7
														8
														Ş
Hole Diameter	r Casing	g Diameter		Chisellin	9			Inclination	and Orientation			11	nstallation	
	liameter Depth Base		er Depth Top	Depth Base	Duration	Tool	Тор	Base	Inclination	Orientation	Тор	Base	Pipe Type	Diamete

Remarks

Groundwater encountered at 3.0m bgl



BOREHOLE REFERENCE

WS13

Sheet 1 of 2

Project Name: South West Rugby Client: L&Q Date: 28/01/2022

Location: Rugby Contractor: GIP Co-ords: E447209.08 N272900.07

Project No. : BM11254 Drilling Equipment: WS Rig Level : 105.87m AoD

oject No. :	BM11254			Drilling I	Equip	ment: V	VS Rig			Level:	105.87m	AoD			
	ged By VP		Checked B SN	У		App	roved E SN	Ву	SF	T Energy 73.01%			Fir	nal Depth 5.00	
₩ Water Strikes		and li	n Situ Testir	ıg	Dep		Level	Legend		St	ratum De	scripti	on		0000
ន្នី Strikes	Depth (m)	Туре	Result	S	(n	n)	(m)	Logona							ď
	0.15	ES			0.3	30	105.57		mediun mediun Brown Gravel	OIL: Orangis n Sand. Gra n consisting mottled oran is subangula and mudstor	vel is angula of flint. ngish brown ar to rounde	gravelly d fine to	angular medium medium	n SAND.	
\supset	1.00 – 1.45 1.00	D SPT	N=7 (1,1/2,:	2,1,2)	3.0	80	105.07	*	Boswoi	ht grey silty rth Clay). .: Recover			Y. (Supe	erficial -	
	1.80	ES SPT	N=7 (2,1/1,	2,2,2)					2.00m	ı : Recover	ed as Wet	:			
	3.00 – 3.45 3.00 – 4.00 3.00	D B SPT	N=31 (3,4/6,	7,9,9)	2.9	90	102.97		clayey	gravelly SAľ	۷D. Gravel i	brown medium to coarse is angular to rounded fine ne. (Superficial - Bosworth			
	4.00 – 4.45 4.00	D SPT	N=23 (4,4/4	5,7,7)											
	4.50	SPT	N=54 (7,9/12,1		4.8	80	101.07		Wet sti	ff grey CLAY	y CLAY. (Superficial - Bosworth Clay).				
Hole Diameter	r Casing iameter Depth Base	Diameter Diame	eter Depth Top	Depth B	Chiselling Base	Duration	Tool	Тор	Inclination Base	and Orientation	Orientation	Тор	Base	nstallation Pipe Type	Diam
, , , , , , , , , , , , , , , , , , , ,	Doput Date	Siant	23941.139	Sopula			100.	135				.sp		, , , ,	_ 10111

Remarks

Groundwater encountered at 1.0m bgl



BOREHOLE REFERENCE

WS13

Sheet 2 of 2

Project Name: South West Rugby Client: L&Q Date: 28/01/2022 Contractor: GIP Co-ords: E447209.08 N272900.07 Location: Rugby

Project No.: BM11254 Drilling Equipment: WS Rig Level: 105.87m AoD Checked By Approved By Final Depth Logged By SPT Energy Ratio WP SN SN 73.01% 5.00 Scale Sample and In Situ Testing Water Depth Level Legend Stratum Description Strikes (m) (m) Depth (m) Results Туре Wet stiff grey CLAY. (Superficial - Bosworth Clay). 5.00 - 5.45D 5.00 100.87 5 End of Borehole at 5.00m 6 8

Hole Dian	neter	Casing Dia	meter		Chiselling	g			Inclination	and Orientation			lr	stallation	
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Тор	Base	Inclination	Orientation	Тор	Base	Pipe Type	Diameter

Remarks

Groundwater encountered at 1.0m bgl



BOREHOLE REFERENCE

WS14

Sheet 1 of 1

Project Name: South West Rugby Client: L&Q Date: 28/01/2022

Location: Rugby Co-ords: E447288.78 N272953.10

Project No.: BM11254 Drilling Equipment: WS Rig Level: 107.57m AoD Approved By Logged By Checked By SPT Energy Ratio Final Depth WP SN SN 73.01% 4.50 Scale Install. / Backfill Sample and In Situ Testing Water Depth Level Stratum Description Legend Strikes (m) (m) Depth (m) Type Results TOPSOIL: Orangish brown fibrous slightly gravelly fine to medium Sand. Gravel is angular to subangular fine to medium consisting of flint. 0.30 107.27 Brown mottled orangish brown gravelly medium SAND Gravel is subangular to rounded fine to medium consisting of flint and mudstone. (Superficial - Dunsmore Gravel).

Soft grey slightly silty slightly gravelly CLAY. Gravel is angular to subrounded fine to medium consisting of flint and mudstone. (Superficial - Dunsmore Gravel). 0.50 107.07 0.60 ES 1.00 - 1.451.00 SPT N=4 (0,0/0,1,1,2) 1.45 106.12 Soft grey slightly silty very gravelly CLAY. Gravel is angular to rounded fine consisting of flint, mudstone and В 1.50 - 2.00sandstone. (Superficial - Bosworth Clay). ∇ 1.70m : Recovered as Damp. 2.00 - 2.452 D 2.00 105.57 Damp soft grey slightly silty slightly gravelly CLAY. Gravel is angular to subrounded fine to medium consisting of flint 2.00 SPT N=6 (2,2/2,2,1,1) and mudstone. (Superficial - Bosworth Clay). 2.20 105.37 Damp medium dense orangish brown medium to coarse clayey SAND. (Superficial - Bosworth Clay). 2.50 ES 3.00 - 3.453 3.00m : Recovered as Wet. 3.00 SPT N=15 (2,1/2,3,4,6) 4.00 - 4.454.00 N=26 (5,6/5,6,7,8) 4.30 103.27 Wet firm light grey silty CLAY. (Superficial - Bosworth Clay). 103.07 4.50 End of Borehole at 4.50m Casing Diameter Inclination and Orientation Installation Depth Base Diameter Depth Base Depth Base Diameter Diamete Depth Top Duration Top Base Inclination Orientation Тор Base Pipe Type PLAIN SLOTTED 0.00m 2.00m 2.00m 4.00m

Remarks

Groundwater encountered at 1.7m bgl

REFUSAL



BOREHOLE REFERENCE

WS15

Sheet 1 of 2

Project Name: South West Rugby Client: L&Q Date: 28/01/2022

Location: Rugby Contractor: GIP Co-ords: E447121.15 N272719.17

Project No. : BM11254 | Drilling Equipment: WS Rig | Level : 108.04m AoD

	. DIVI I	11254		Drilling	Equipmen	t: WS Rig			Level :	108.04m	AoD			
Logged By Checked By SN SN Sample and In Situ Testing De	А	pproved SN	Ву	SP	73.01%			Final 5.	Depth 00					
Wate Strike					Depth (m)	Level (m)	Legend		Si	tratum De	escripti	on		
	0	ертп (т)	Туре	Results	0.30	107.74	**************************************	mediun mediun	n Sand. Gra n consisting	of flint.	ar to sub	ntly gravelly tangular fine	to	
		0.70	ES					SAND.	Gravel is suing of flint a	ubangular to	rounded	I fine to med rficial - Duns	ium	
								0.80m	: Recovei	red as Dan	пр.			
	1	.00 – 1.45 1.00	D SPT	N=6 (3,3/3,1,1,1)	1.25	106.79								
					25	100.70	X X X X X X X X X X X	Damp f Clay).	îrm light gre	ey silty CLAY	'. (Superi	ficial - Bosw	orth	
							XX XX XX							
	2	2.00 – 2.45 2.00 2.20	D SPT ES	N=11 (2,2/2,3,3,3)	2.00	106.04	××	(Superf 2.00m	ficial - Bosw 1 - 2.25m :	orth Clay). Band of m	edium (light grey CL dense oran vel consist	gish	
									nd mudsto		na. Gra	vor corrore.	, o.	
	3	3.00 – 3.45 3.00	D SPT	N=10 (2,2/2,2,3,3)										
	4	4.00 – 4.45 4.00	D SPT	N=17 (2,2/4,4,4,5)										
		4.00	В	11-17 (2,2/4,4,4,0)	4.30	103.74								
		4.45 – 5.00 4.50	D SPT	N=29 (4,4/6,6,8,9)	4.50	103.74	× × ×	slightly fine to r	gravelly CL medium con	AY. Gravel is	s angula	ey slightly sil r to subroun udstone.	ty ded	
		4.00		14 25 (1,110,0,0,0)				(Зиреп	ficial - Bosw	ortii Clay).				
Hole Diame	eter	Casing I	Diameter		Chiselling	I		Inclination	and Orientation			Installa	tion	L
epth Base	Diameter		Diamet		i	on Tool	Тор	Base	Inclination	Orientation	Тор			Dia

Remarks

Groundwater encountered at 0.8m bgl



BOREHOLE REFERENCE

Windowless Sample Borehole Log **WS15** Sheet 2 of 2 Project Name: South West Rugby Client: L&Q Date: 28/01/2022 Contractor: GIP Co-ords: E447121.15 N272719.17 Location: Rugby Project No.: BM11254 Drilling Equipment: WS Rig Level: 108.04m AoD Logged By Approved By Checked By SPT Energy Ratio Final Depth WP 73.01% SN SN 5.00 Scale Sample and In Situ Testing Water Depth Level Legend Stratum Description Strikes (m) (m) Depth (m) Type Results Damp stiff reddish grey mottled light grey slightly silty slightly gravelly CLAY. Gravel is angular to subrounded fine to medium consisting of flint and mudstone.

(Superficial - Bosworth Clay). 5.00 5 103.04 End of Borehole at 5.00m 6 8 Casing Diameter Inclination and Orientation Installation Depth Base Diameter Depth Base Diameter Depth Top Depth Base Duration Base Orientation Тор Pipe Type Diameter Тор Inclination Base

Remarks

Groundwater encountered at 0.8m bgl



BOREHOLE REFERENCE

WS16

Sheet 1 of 1

Project Name: South West Rugby Client: L&Q Date: 28/01/2022

Location: Rugby Contractor: GIP Co-ords: E447152.09 N272788.14

		by			ontractor: GIP			Co-ords: E44/152		
Projec		3M11254	1		illing Equipme			Level : 106.80m A		
	Logge W	-		Checked By SN		Approved SN	Ву	SPT Energy Ratio 73.01%	Final Depth 4.50	
Install. / Backfill	Water Strikes			n Situ Testing	Depth (m)	Level (m)	Legend	Stratum Des	cription	Scale
		Depth (m) 0.20	Type ES	Results				TOPSOIL: Orangish brown fibror medium Sand. Gravel is angular medium consisting of flint.		0.
	ightharpoons	1.00 – 1.45 1.00 – 2.00 1.00	D B SPT	N=3 (0,0/1,0,1,	1.10	106.30	× × × ×	Very soft reddish grey mottled lic CLAY. Sand is medium. Gravel is fine to medium consisting of flint Clay). 1.00m: Recovered as Damp Damp firm to stiff reddish grey m silty slightly gravelly CLAY. Grav subrounded fine to medium cons mudstone. (Superficial - Boswor 1.40m - 1.50m: Recovered	s angular to subangular (Superficial - Bosworth c. ottled light grey slightly el is angular to sisting of flint and th Clay).	
		2.00 – 2.45 2.00	D SPT	N=22 (0,2/4,6,6				1.40m - 1.30m . Necovereu	as suit.	
		3.00 3.00 – 3.45 3.00	ES D SPT	N=13 (3,3/3,3,4	.3)	104.30		Damp medium dense reddish gr clayey SAND. (Superficial - Bost 3.00m : Recovered as Wet.		
•		4.00 – 4.45 4.00	D SPT	N=22 (4,4/4,6,6		400.00				
H Depth I	lole Diameter Base Diai	4.50 Casing meter Depth Base	SPT Diameter Diame	N=54 (6,7/11,12,1	Chiselling	ation Tool	Тор	End of Borehole Inclination and Orientation Base Inclination Orientation	Installation	Diame

Remarks

Groundwater encountered at 1.0m bgl

REFUSAL



BOREHOLE REFERENCE

WS17

Sheet 1 of 1

Project Name: South West Rugby Client: L&Q Date: 28/01/2022

Location: Rugby Co-ords: E447203.00 N272771.00

Project No.: BM11254 Drilling Equipment: WS Rig Level: 107.82m AoD Approved By Logged By Checked By SPT Energy Ratio Final Depth WP SN SN 73.01% 4.60 Scale Sample and In Situ Testing Water Depth Level Stratum Description Legend Strikes (m) (m) Depth (m) Type Results TOPSOIL: Orangish brown fibrous slightly gravelly fine to medium Sand. Gravel is angular to subangular fine to medium consisting of flint. 0.40 107.42 Soft to firm reddish brown sandy CLAY. Sand is fine. (Superficial - Bosworth Clay). 0.90 ES 1.00 - 1.45SPT 1.00 N=7 (1,2/2,2,1,2) 1.70 106.12 Firm to stiff reddish grey mottled light grey sandy gravelly CLAY. Sand is medium. Gravel is angular to subangular fine to medium consisting of flint. (Superficial - Bosworth 2.00 - 2.452 D 2.00m - 2.20m : Band of fine reddish brown sand. 2.00 N=19 (4,4/5,5,4,5) 3.00 - 3.453 3.00 SPT N=24 (3,3/6,6,6,6) 3.20 3.20 – 3.70 \bigvee 3.70m : Recovered as Wet. 3.90m - 4.20m : Band of medium dense brown 4.00 - 4.45gravelly medium to coarse sand with fine to 4.00 SPT N=16 (4,4/3,4,4,5) medium, angular flint. 4.20 103.62 Wet stiff reddish brown sandy CLAY. Sand is fine. (Superficial - Bosworth Clay) SPT 4.50 N=24 (2,4/6,5,6,7) 4.60 103.22 End of Borehole at 4.60m Casing Diameter Inclination and Orientation Installation Depth Base Diameter Depth Base Depth Base Pipe Type Diameter Diamete Depth Top Duration Тор Base Inclination Orientation Тор Base

Remarks

Groundwater encountered at 3.7m bgl

REFUSAL



BOREHOLE REFERENCE

WS18

Sheet 1 of 1

Project Name: South West Rugby Client: L&Q Date: 28/01/2022

Location: Rugby Contractor: GIP Co-ords: E447081.00 N272753.00

Project No. : BM11254 Drilling Equipment: WS Rig Level : 105.97m AoD

Proje	ct No. : E	3M11254		Drillin	g Equipmen	t: WS Rig	1	Level : 105.97m Ao)	
	Logge W			Checked By SN	Д	pproved SN	Ву	SPT Energy Ratio %	Final Depth 4.00	
Install. / Backfill	Water	Sample	and In	Situ Testing	Depth	Level	Legend	Stratum Descri	ntion	Scale
Inst	Strikes	Depth (m)	Туре	Results	(m)	(m)	Legend			တိ
		0.25 – 0.70	ES					TOPSOIL: Orangish brown fibrous s medium Sand. Gravel is angular to medium consisting of flint.	slightly gravelly fine to subangular fine to	- - -
					0.50	105.47		Orangish brown gravelly clayey SAI to subangular fine to medium consis (Superficial - Bosworth Clay).	ND. Gravel is angular sting of flint.	- - - -
		1.00 – 1.45	D							1 -
		1.25 – 1.70	ES		1.25	104.72		Damp firm reddish grey mottled ligh CLAY. Sand is medium. Gravel is ar fine to medium consisting of flint. (S Clay).	t grey sandy gravelly gular to subangular uperficial - Bosworth	-
	\searrow	2.00 – 2.45 2.50 – 3.00	В							2-
		3.00 – 3.45	D					3.00m - 3.20m : Band of fine re	eddish brown Sand.	3-
		4.00 – 4.45	D		4.00	101.97		End of Borehole a	t 4.00m	- - - 4-
										-
l Depth	Hole Diameter Base Dia	Casing Depth Base	Diameter Diamet	er Depth Top Dep	Chiselling th Base Durati	ion Tool	Тор	Inclination and Orientation Base Inclination Orientation To	Installation p Base Pipe Type	Diameter
Rem	arks									

Remarks

Groundwater encountered at 2.0m bgl

REFUSAL



Appendix 2 Gas and Groundwater Monitoring Results

Client Name: L & Q ESTATES LIMITED

Date of Sampling: 3rd February 2022

Site Name: South West Rugby

Borehole Reference	Borehole Flow	Me	thane	Carbon Dioxide	Oxygen	Balance	Hydrogen Sulphide	Carbon Monoxide	Sample Type	Borehole Pressure	Depth (r	n bgl)
	(I/hr)	(% LEL)	(% by volume)	(% by volume)	(% by volume)	(% by volume)	(ppm)	(ppm)		(mb)	Borehole Base	Water Level
WS01	0.0	-	0.0	0.8	18.4	-	0.0	0.0	Accumulated	0.0	2.24	3.68
WS04	0.0	-	0.0	0.5	18.9	-	0.0	0.0	Accumulated	0.0	2.51	3.32
WS08	0.0	-	0.0	0.5	19.6	-	0.0	0.0	Accumulated	0.0	2.1	3.58
WS11	0.0	-	0.0	0.3	19.1	-	0.0	0.0	Accumulated	0.0	1.2	3.8
WS14	0.0	-	0.0	0.4	19.2	-	0.0	0.0	Accumulated	0.0	0.97	2.72
WS16	0.0	-	0.0	0.4	17.8	-	0.0	0.0	Accumulated	0.0	1.25	2.75
Atmospheric	c Pressure: 9	993-995n	nb		Instrumen	t Type: GA	2000	·	Notes: * Peak			
Pressure Tre	end: Steady				Sample Ty	pe: As indi	cated					



Client Name: L & Q ESTATES LIMITED

Date of Sampling: 9th February 2022

Site Name: South West Rugby

Borehole Reference	Borehole Flow	Me	thane	Carbon Dioxide	Oxygen	Balance	Hydrogen Sulphide	Carbon Monoxide	Sample Type	Borehole Pressure	Depth (r	n bgl)
	(I/hr)	(% LEL)	(% by volume)	(% by volume)	(% by volume)	(% by volume)	(ppm)	(ppm)		(mb)	Borehole Base	Water Level
WS01	0.0	-	0.0	0.8	19.2	-	0.0	0.0	Accumulated	0.0	2.01	3.68
WS04	0.0	-	0.0	0.6	17.8	-	0.0	0.0	Accumulated	0.0	2.32	3.32
WS08	0.0	-	0.0	0.6	19.4	-	0.0	0.0	Accumulated	0.0	1.93	3.58
WS11	0.0	-	0.0	0.4	19.7	-	0.0	0.0	Accumulated	0.0	0.97	3.8
WS14	0.0	-	0.0	0.3	19.7	-	0.0	0.0	Accumulated	0.0	0.89	2.72
WS16	0.0	1	0.0	0.2	19.9	-	0.0	0.0	Accumulated	0.0	1.11	2.75
Atmospheric	Atmospheric Pressure: 993-995mb Instrument Type: GA2000						Notes: * Peak					
Pressure Tre	Pressure Trend: Steady Sample Type: As indicated											



Client Name: L & Q ESTATES LIMITED

Date of Sampling: 21st February 2022

Site Name: South West Rugby

Borehole Reference	Borehole Flow	Me	thane	Carbon Dioxide	Oxygen	Balance	Hydrogen Sulphide	Carbon Monoxide	Sample Type	Borehole Pressure	Depth (r	n bgl)
	(I/hr)	(% LEL)	(% by volume)	(% by volume)	(% by volume)	(% by volume)	(ppm)	(ppm)		(mb)	Borehole Base	Water Level
WS01	0.0	-	0.0	1.0	19.5	-	0.0	0.0	Accumulated	0.0	1.78	3.68
WS04	0.0	-	0.0	0.9	16.2	-	0.0	0.0	Accumulated	0.0	2.25	3.32
WS08	0.0	-	0.0	0.7	19.3	-	0.0	0.0	Accumulated	0.0	1.77	3.13
WS11	0.0	-	0.0	0.7	18.9	-	0.0	0.0	Accumulated	0.0	0.73	3.16
WS14	0.0	-	0.0	0.4	19.8	-	0.0	0.0	Accumulated	0.0	0.48	2.16
WS16	0.0	1	0.0	0.1	20.0	-	0.0	0.0	Accumulated	0.0	1.01	2.50
Atmospheric	Atmospheric Pressure: 997-995mb Instrument Type: GA2000						Notes: * Peak					
Pressure Tre	Pressure Trend: Steady Sample Type: As indicated											



Client Name: L & Q ESTATES LIMITED

Date of Sampling: 2nd March 2022

Site Name: South West Rugby

Borehole Reference	Borehole Flow	Me	thane	Carbon Dioxide	Oxygen	Balance	Hydrogen Sulphide	Carbon Monoxide	Sample Type	Borehole Pressure	Depth (r	n bgl)
	(I/hr)	(% LEL)	(% by volume)	(% by volume)	(% by volume)	(% by volume)	(ppm)	(ppm)		(mb)	Borehole Base	Water Level
WS01	0.0	ı	0.0	0.9	19.6	-	0.0	0.0	Accumulated	0.0	1.88	3.68
WS04	0.0	-	0.0	0.8	16.5	-	0.0	0.0	Accumulated	0.0	2.28	3.32
WS08	0.0	-	0.0	0.8	19.5	-	0.0	0.0	Accumulated	0.0	1.69	3.02
WS11	0.0	-	0.0	0.6	18.8	-	0.0	0.0	Accumulated	0.0	0.70	3.09
WS14	0.0	-	0.0	0.3	19.9	-	0.0	0.0	Accumulated	0.0	0.45	2.12
WS16	0.0	-	0.0	0.1	20.2	-	0.0	0.0	Accumulated	0.0	1.13	2.47
Atmospheri	c Pressure: 9	98mb			Instrumen	t Type: GA	2000		Notes: * Peak			
Pressure Tre	end: Steady				Sample Ty	pe: As indi	cated					





Appendix 3
Soakaway Testing

Contract No: 30925

Site: SW Rugby

Client / Engineer: Wardell Armstrong

Date: 25/01/2022

Type of Test: Soakaway in trial pit.

Width of pit (m) 0.70

Length of pit (m) 1.70

Depth of pit (m) 1.50

Standing Water Level Prior to Test (m) Dry

Depth of Water at T=0 Below g.I (m) 0.31

Time Taken to Fill to Standing Level (mins) 3

Water Level Records

Time	Depth to Water
(mins)	(m.b.g.l.)
0	0.31
1	0.33
2	0.34
3	0.35
4	0.36
5	0.38
10	0.42
15	0.45
20	0.48
25	0.50
30	0.52
40	0.55

Time	Depth to Water
(mins)	(m.b.g.l.)
50	0.57
60	0.59
70	0.63
80	0.64
90	0.66
100	0.68
110	0.70
120	0.72
130	0.74
140	0.75
150	0.76
180	0.79

Time	Depth to Water
(mins)	(m.b.g.l.)
210	0.82
240	0.85
270	0.87
300	0.89
360	0.91
1400	1.13
1520	1.16
1560	1.17
·	·

Test No: SA01



Building 62, Third Avenue, The Pensnett Estate, Kingswinford,

West Midlands, DY6 7XT Tel: 01902 459558 Email: info@gipuk.com

Contract No: 30925

Site: SW Rugby

Client / Engineer: Wardell Armstrong

Date: 26/01/2022

Type of Test: Soakaway in trial pit.

Width of pit (m) 0.70

Length of pit (m) 1.60

Depth of pit (m) 1.70

Standing Water Level Prior to Test (m) Dry

Depth of Water at T=0 Below g.I (m) 0.29

Time Taken to Fill to Standing Level (mins) 1.5

Water Level Records

Time	Depth to Water
(mins)	(m.b.g.l.)
0	0.29
1	0.30
2	0.31
3	0.32
4	0.33
5	0.34
10	0.38
15	0.41
20	0.43
25	0.45
30	0.48
40	0.52

Time	Depth to Water
(mins)	(m.b.g.l.)
50	0.55
60	0.58
70	0.60
80	0.62
90	0.65
100	0.67
110	0.70
120	0.71
130	0.73
140	0.74
150	0.76
180	0.79

Time	Depth to Water
(mins)	(m.b.g.l.)
210	0.81
240	0.80
270	0.82
300	0.84
360	0.87
420	0.90

Test No: SA02



Contract No: 30925

Site: SW Rugby

Client / Engineer: Wardell Armstrong

Date: 25/01/2022

Type of Test: Soakaway in trial pit.

Width of pit (m) 0.70

Length of pit (m) 1.70

Depth of pit (m) 1.60

Standing Water Level Prior to Test (m) Dry

Depth of Water at T=0 Below g.I (m) 0.30

Time Taken to Fill to Standing Level (mins) 1

Water Level Records

Time	Depth to Water
(mins)	(m.b.g.l.)
0	0.30
1	0.30
2	0.30
3	0.30
4	0.30
5	0.30
10	0.30
15	0.30
20	0.30
25	0.30
30	0.30
40	0.30

Time	Depth to Water
(mins)	(m.b.g.l.)
50	0.30
60	0.31
70	0.31
80	0.31
90	0.31
100	0.31
110	0.31
120	0.32
130	0.32
140	0.32
150	0.32
180	0.32

Time	Depth to Water
(mins)	(m.b.g.l.)
210	0.33
240	0.33
270	0.33
300	0.33
360	0.33

Test No: SA03



Building 62, Third Avenue, The Pensnett Estate, Kingswinford, West Midlands, DY6 7XT Tel: 01902 459558

Contract No: 30925

Site: SW Rugby

Client / Engineer: Wardell Armstrong

Date: 25/01/2022

Type of Test: Soakaway in trial pit

Width of pit (m) 0.70

Length of pit (m) 2.10

Depth of pit (m) 1.50

Standing Water Level Prior to Test (m) Dry

Depth of Water at T=0 Below g.I (m) 0.35

Time Taken to Fill to Standing Level (mins) 1

Water Level Records

Time	Depth to Water
(mins)	(m.b.g.l.)
0	0.35
1	0.35
2	0.35
3	0.35
4	0.35
5	0.36
10	0.37
15	0.39
20	0.40
25	0.42
30	0.44
40	0.46

Time	Depth to Water
(mins)	(m.b.g.l.)
50	0.48
60	0.50
70	0.52
80	0.54
90	0.55
100	0.56
110	0.58
120	0.59
130	0.60
140	0.61
150	0.63
180	0.65

Time	Depth to Water
(mins)	(m.b.g.l.)
210	0.67
240	0.70
270	0.72
300	0.73
360	0.76
1410	0.97
1555	1.01
1575	1.01

Test No: SA04



Building 62, Third Avenue, The Pensnett Estate, Kingswinford, West Midlands, DY6 7XT Tel: 01902 459558

Contract No: 30925

Site: SW Rugby

Client / Engineer: Wardell Armstrong

Date: 26/01/2022

Type of Test: Soakaway in trial pit

Width of pit (m) 0.70

Length of pit (m) 1.60

Depth of pit (m) 1.60

Standing Water Level Prior to Test (m) Dry

Depth of Water at T=0 Below g.I (m) 0.28

Time Taken to Fill to Standing Level (mins) 1.5

Water Level Records

Time	Depth to Water
(mins)	(m.b.g.l.)
0	0.28
1	0.31
2	0.34
3	0.36
4	0.37
5	0.39
10	0.44
15	0.49
20	0.51
25	0.55
30	0.59
40	0.65

Time	Depth to Water
(mins)	(m.b.g.l.)
50	0.70
60	0.75
70	0.78
80	0.81
90	0.84
100	0.86
110	0.89
120	0.91
130	0.93
140	0.95
150	0.96
180	1.01

Time	Depth to Water
(mins)	(m.b.g.l.)
210	1.04
240	1.06
270	1.10
300	1.12
360	1.16
420	1.19

Test No: SA05



Contract No: 30925

Site: SW Rugby

Client / Engineer: Wardell Armstrong

Date: 25/01/2022

Type of Test: Soakaway in trial pit.

Width of pit (m) 0.70

Length of pit (m) 2.00

Depth of pit (m) 1.60

Standing Water Level Prior to Test (m) Dry

Depth of Water at T=0 Below g.I (m) 0.36

Time Taken to Fill to Standing Level (mins) 0.67

Water Level Records

Time	Depth to Water
(mins)	(m.b.g.l.)
0	0.36
1	0.36
2	0.37
3	0.37
4	0.37
5	0.37
10	0.37
15	0.38
20	0.38
25	0.38
30	0.38
40	0.38

Time	Depth to Water
(mins)	(m.b.g.l.)
50	0.39
60	0.39
70	0.40
80	0.40
90	0.40
100	0.41
110	0.41
120	0.42
130	0.42
140	0.42
150	0.43
180	0.43

Time	Depth to Water
(mins)	(m.b.g.l.)
210	0.44
240	0.45
270	0.46
300	0.46
360	0.47

Test No: SA06



Contract No: 30925

Site: SW Rugby

Client / Engineer: Wardell Armstrong

Date: 25/01/2022

Type of Test: Soakaway in trial pit.

Width of pit (m) 0.70

Length of pit (m) 1.50

Depth of pit (m) 1.50

Standing Water Level Prior to Test (m) 1.5

Depth of Water at T=0 Below g.I (m) 0.35

Time Taken to Fill to Standing Level (mins) 2

Water Level Records

Time	Depth to Water
(mins)	(m.b.g.l.)
0	0.35
1	0.35
2	0.35
3	0.35
4	0.35
5	0.35
10	0.35
15	0.35
20	0.35
25	0.35
30	0.35
40	0.35

Time	Depth to Water
(mins)	(m.b.g.l.)
50	0.35
60	0.35
70	0.35
80	0.35
90	0.35
100	0.35
110	0.35
120	0.35
130	0.35
140	0.35
150	0.35
180	0.35

Time	Depth to Water
(mins)	(m.b.g.l.)
210	0.35

Test No: SA07



Building 62, Third Avenue, The Pensnett Estate, Kingswinford, West Midlands, DY6 7XT Tel: 01902 459558



Appendix 4
CBR Test Results



Site:- SW Rugby.

Job No:- 30925 Customer:- Wardell Armstrong.

Test No:- 1

Depth:-

Test date:- 28.01.22 Report:- 28.02.22 TEST METHODS:-

California Bearing Ratio: Natural Moisture Content:

2.9 % 8.7 % 9.2 kg

0.50m

BS1377:Part9:1990: Clause 4.3

CBR:

Surcharge: Equivalent overburden pressure: Presence of material > 20.0mm:

1.82 kPa Occasional

Moisture Preparation: BS1377:Part2:1990 Clause 3 Position of material > 20.0mm beneath plunger:

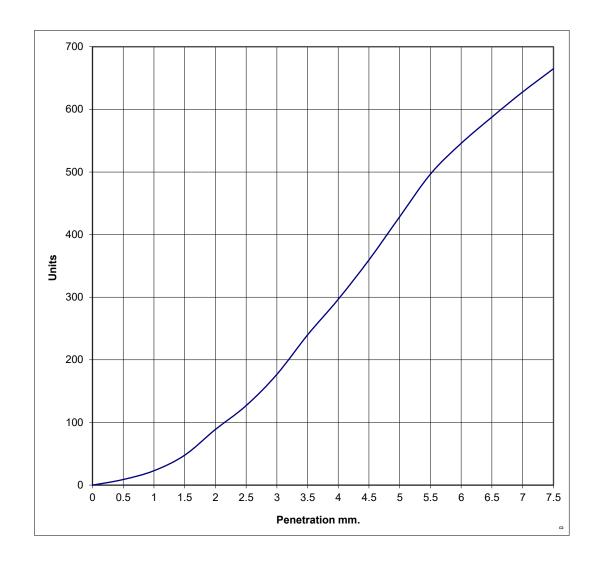
None Dry

Weather conditions:
Temperature:

7 °C

Sample Description:- Brown silty gravelly SAND. Gravel is sub-angular to sub-rounded quartz.

Page 1 of 8





Site:- SW Rugby.
Customer:- Wardell Armstrong.

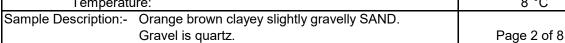
Test date:- 28.01.22

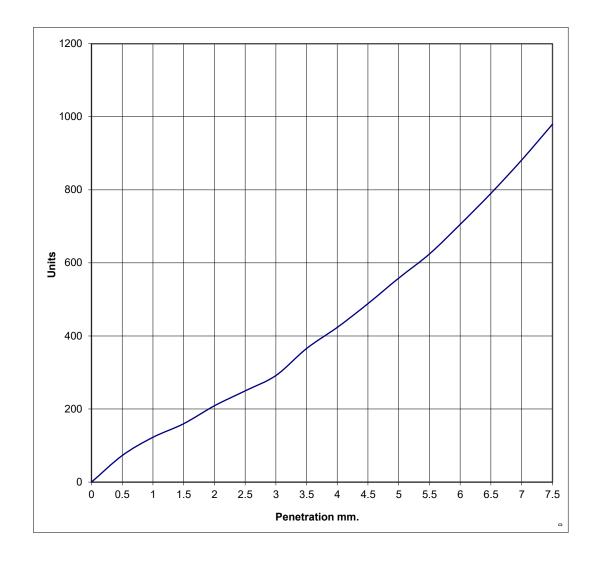
Job No:-

30925

Test No:- 2

1 651 uale 20.0 1.22		
Report:- 28.02.22		Depth:- 0.50m
TEST METHODS:-	California Bearing Ratio:	3.7 %
CBR:	Natural Moisture Content:	11 %
BS1377:Part9:1990:	Surcharge:	9.2 kg
Clause 4.3	Equivalent overburden pressure:	1.82 kPa
	Presence of material > 20.0mm:	None
Moisture Preparation:	Position of material > 20.0mm beneath plunger:	None
BS1377:Part2:1990	Weather conditions:	Dry
Clause 3		
	Temperature:	8 °C







1.9 %

8.8 %

9.20 kg

1.82 kPa

Occasional

0.50m

Site:- SW Rugby.

Job No:- 30925 Customer:- Wardell Armstrong.

Test No:- 3

Depth:-

Test date:- 28.01.22 Report:- 28.02.22 TEST METHODS:-

CBR:

BS1377:Part9:1990:

Clause 4.3

Moisture Preparation:

BS1377:Part2:1990

Clause 3

California Bearing Ratio:

Natural Moisture Content:

Surcharge:

Equivalent overburden pressure: Presence of material > 20.0mm:

Position of material > 20.0mm beneath plunger:

Weather conditions:

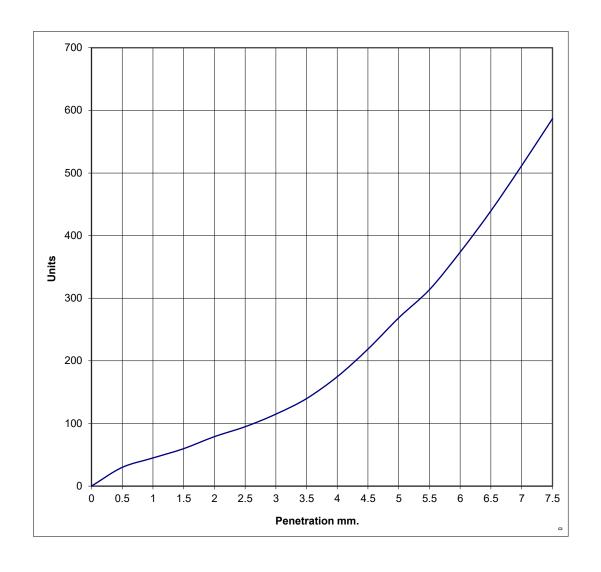
None Dry

Temperature:
Sample Description:- Brown silty gravelly SAND. Gravel is sub-angular

to sub-rounded quartz.

Page 3 of 8

8°C





3.4 %

12 %

9.2 kg

0.50m

Site:- SW Rugby.

Job No:- 30925 Customer:- Wardell Armstrong.

Test No:- 4

Depth:-

Test date:- 28.01.22 Report:- 28.02.22 TEST METHODS:-

CBR:

BS1377:Part9:1990:

Clause 4.3

Moisture Preparation: BS1377:Part2:1990

Clause 3

California Bearing Ratio: Natural Moisture Content:

Surcharge:

Equivalent overburden pressure: Presence of material > 20.0mm:

Position of material > 20.0mm beneath plunger:

Weather conditions:

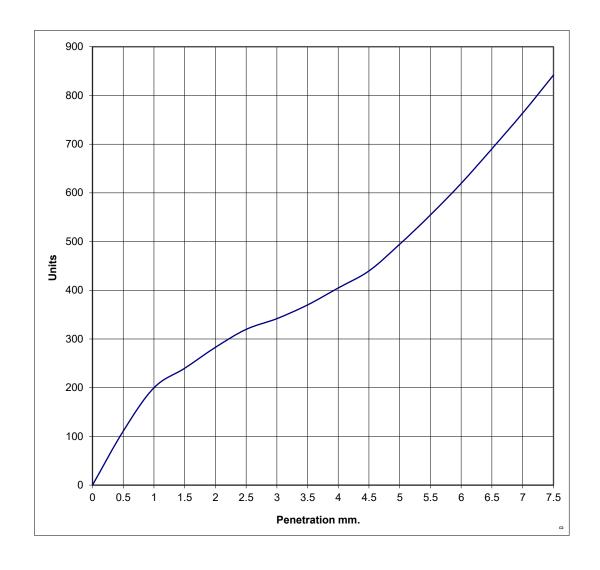
Temperature:

1.82 kPa Occasional None Dry

9 °C

Sample Description:- Brown silty slightly gravelly SAND. Gravel is subangular to sub-rounded quartz.

Page 4 of 8





Site:- SW Rugby.

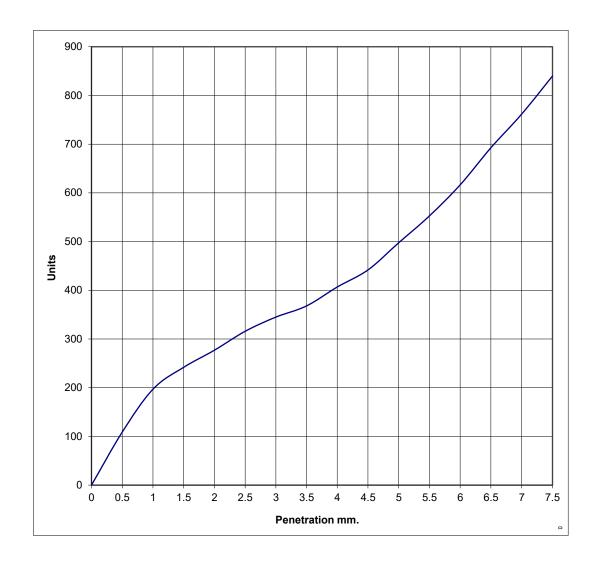
Job No:- 30925 Test date:- 28.01.22 Customer:- Wardell Armstrong.

Test No:- 5

Report:- 28.02.22 Depth:-0.50m TEST METHODS:-California Bearing Ratio: 3.4 % **Natural Moisture Content:** 7.3 % CBR: 9.2 kg BS1377:Part9:1990: Surcharge: Equivalent overburden pressure: 1.82 kPa Clause 4.3 Presence of material > 20.0mm: Occasional Position of material > 20.0mm beneath plunger: None Moisture Preparation: BS1377:Part2:1990 Weather conditions: Dry Clause 3 Temperature: 8°C

Sample Description:- Brown silty slightly gravelly SAND. Gravel is subrounded quartz.

Page 5 of 8



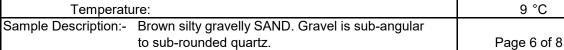


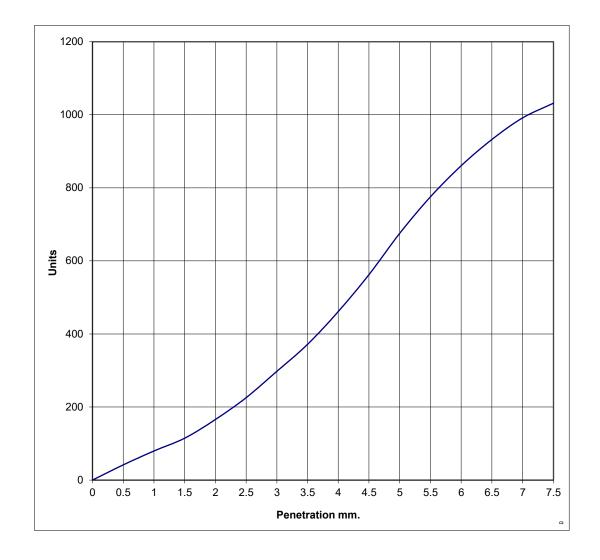
Site:- SW Rugby.

Job No:- 30925 Customer:- Wardell Armstrong.

Test No:- 6

Test date:- 28.01.22		
Report:- 28.02.22		Depth:- 0.50m
TEST METHODS:-	California Bearing Ratio:	4.5 %
CBR:	Natural Moisture Content:	9.2 %
BS1377:Part9:1990:	Surcharge:	9.2 kg
Clause 4.3	Equivalent overburden pressure:	1.82 kPa
	Presence of material > 20.0mm:	Some
Moisture Preparation:	Position of material > 20.0mm beneath plunger:	None
BS1377:Part2:1990	Weather conditions:	Dry
Clause 3		







Site:- SW Rugby.

Test date:- 28.01.22

Job No:-

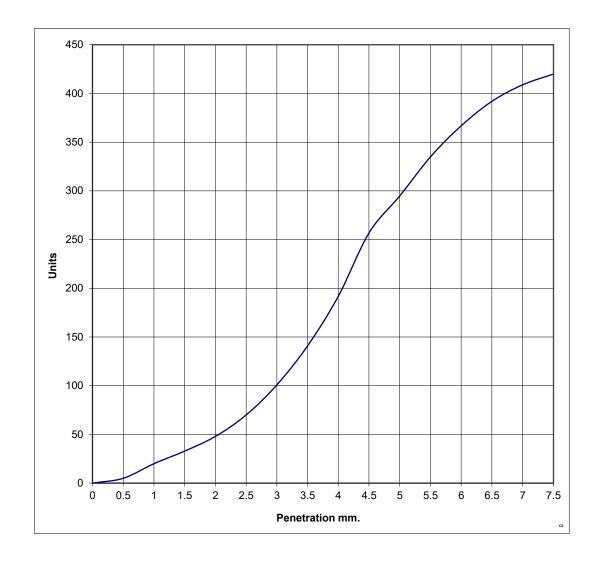
30925

Customer:- Wardell Armstrong.

Test No:- 7

1631 date 20.0 1.22		
Report:- 28.02.22		Depth:- 0.50m
TEST METHODS:-	California Bearing Ratio:	2.1 %
CBR:	Natural Moisture Content:	8.7 %
BS1377:Part9:1990:	Surcharge:	9.2 kg
Clause 4.3	Equivalent overburden pressure:	1.82 kPa
	Presence of material > 20.0mm:	Some
Moisture Preparation:	Position of material > 20.0mm beneath plunger:	None
BS1377:Part2:1990	Weather conditions:	Dry
Clause 3		
	Temperature:	10 °C







Site:- SW Rugby.

30925 Customer: - Wardell Armstrong. Job No:-Test date: 28 01 22

Test No:- 8

rest date.	- 20.01.22			
Report:-	28.02.22			
TEST METHODS:-				

CBR: BS1377:Part9:1990: Clause 4.3

2		Depth:- 0.55m
	California Bearing Ratio:	2.4 %
	Natural Moisture Content:	15 %
	Surcharge:	9.2 kg
	Equivalent overburden pressure:	1.82 kPa
	Presence of material > 20.0mm:	Some
	Position of material > 20.0mm beneath plunger:	None
	Weather conditions:	Dry

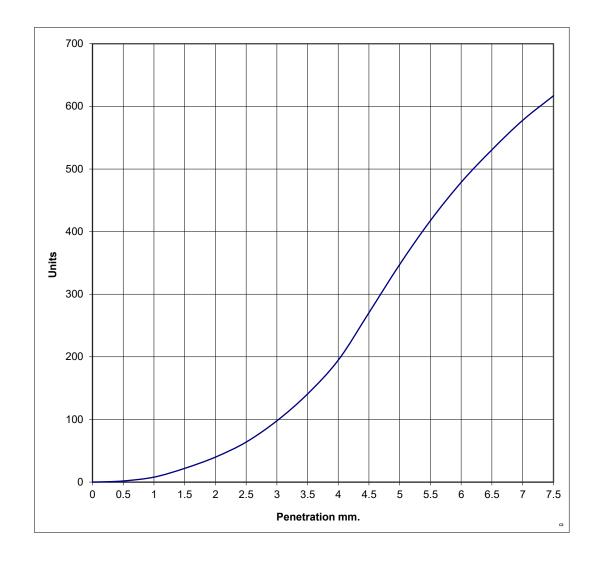
Moisture Preparation: BS1377:Part2:1990 Clause 3

> Temperature: Sample Description:- Brown and light brown clayey gravelly SAND.

> > Gravel is sub-angular to sub-rounded quartz.

Page 8 of 8

9°C





Appendix 5 Geotechnical Laboratory Testing Results



LABORATORY REPORT



4043

Contract Number: PSL22/0966

Report Date: 10 March 2022

Client's Reference: CJB/30925

Client Name: GIP Ltd

Devonshire House Ettingshall Road Wolverhampton

WV2 2JT

For the attention of: Chris Browning/Rob Campbell

Contract Title: SW Rugby

Date Received: 8/2/2022 Date Commenced: 8/2/2022 Date Completed: 10/3/2022

Notes: Opinions and Interpretations are outside the UKAS Accreditation

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

Checked and Approved Signatories:

A Watkins R Berriman S Royle

(Director) (Quality Manager) (Laboratory Manager)

£#

L Knight S Eyre T Watkins
(Assistant Laboratory Manager) (Senior Technician) (Senior Technician)

Page 1 of

5 – 7 Hexthorpe Road, Hexthorpe,

Doncaster DN4 0AR tel: +44 (0)844 815 6641 fax: +44 (0)844 815 6642

e-mail: rgunson@prosoils.co.uk awatkins@prosoils.co.uk

SUMMARY OF LABORATORY SOIL DESCRIPTIONS

Hole Number	Sample Number	Sample Type	Top Depth m	Base Depth m	Description of Sample
TP01		В	0.70		Brown very gravelly slightly clayey silty SAND.
TP01		В	3.80		Brown slightly gravelly sandy CLAY.
TP02		В	3.40		Brown very gravelly clayey silty SAND.
TP05		В	1.20		Brown very gravelly slightly clayey silty SAND.
TP08		В	2.00		Brown very gravelly slightly clayey silty SAND.
TP10		В	3.30		Brown very sandy slightly clayey silty GRAVEL.
TP11		В	2.60		Brown slightly gravelly sandy CLAY.
TP13		В	1.30		Brown very gravelly slightly clayey silty SAND.
TP15		В	1.60		Brown slightly gravelly sandy CLAY.
TP16		В	1.30		Brown slightly gravelly sandy CLAY.
TP16		В	4.30		Brown sandy CLAY.
TP18		В	2.20		Brown slightly gravelly slightly clayey silty SAND.
TP20		В	2.55		Brown slightly gravelly very sandy CLAY.
TP21		В	0.40		Brown very gravelly very sandy CLAY.
TP23		В	4.50		Brown slightly gravelly very sandy CLAY.
TP24		В	3.00		Brown very gravelly very clayey SAND.
WS01		В	3.00		Brown very gravelly slightly clayey silty SAND.
WS07		В	3.60		Brown very sandy clayey silty GRAVEL.
WS08		В	3.50		Brown slightly gravelly sandy CLAY.



	Contract No:
SW Dughy	PSL22/0966
SW Rugby	Client Ref:
	CJB/30925

SUMMARY OF LABORATORY SOIL DESCRIPTIONS

Hole Number	Sample Number	Sample Type	Top Depth m	Base Depth m	Description of Sample
WS13		В	3.00		Brown very gravelly clayey silty SAND.
WS15		В	4.30		Brown slightly gravelly very sandy CLAY.
WS16		В	1.00		Brown very sandy CLAY.
CPB01		U	5.00		Stiff brown slightly gravelly sandy CLAY.
CPB01		В	6.00		Brown slightly gravelly very sandy CLAY.
CPB01		В	7.50		Brown slightly gravelly very sandy CLAY.
CPB02		D	5.80		Brown slightly gravelly very sandy CLAY.
CPB02		В	7.00		Brown slightly gravelly very sandy CLAY.



	Contract No:
CW/ Dughy	PSL22/0966
SW Rugby	Client Ref:
	C.IB/30925

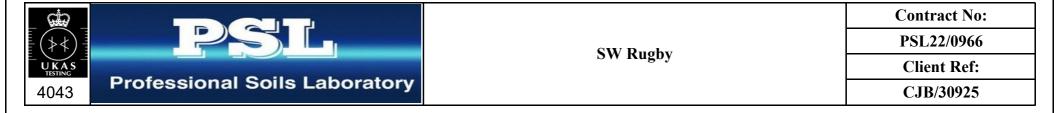
SUMMARY OF SOIL CLASSIFICATION TESTS

(BS1377: PART 2: 1990)

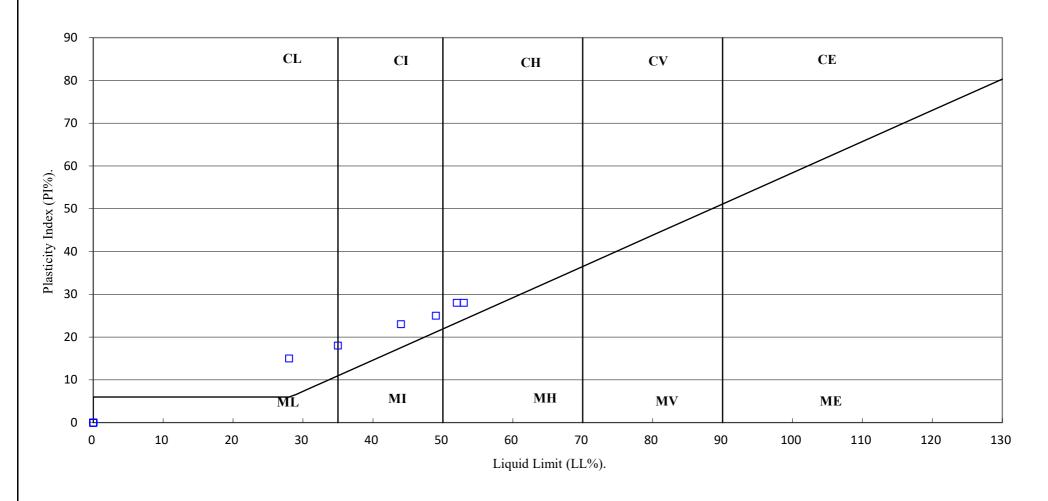
TT 1	G 1		T		Moisture	Linear	Particle	Liquid	Plastic	Plasticity	Passing	ъ .
Hole	Sample	Sample	Top	Base	Content	Shrinkage	Density	Limit	Limit	Index	.425mm	Remarks
Number	Number	Type	Depth	Depth	%	%	Mg/m^3	%	%	%	%	
			m	m	Clause 3.2	Clause 6.5	Clause 8.2	Clause 4.3/4	Clause 5.3	Clause 5.4		
TP01		В	0.70		10							
TP01		В	3.80		32			52	24	28	90	High Plasticity CH
TP02		В	3.40		14							
TP05		В	1.20		8.4							
TP08		В	2.00		12							
TP10		В	3.30		15							
TP11		В	2.60		26			44	21	23	92	Intermediate Plasticity CI
TP13		В	1.30		14							
TP15		В	1.60		23							
TP16		В	1.30		26			53	25	28	97	High Plasticity CH
TP16		В	4.30		28			49	24	25	100	Intermediate Plasticity CI
TP18		В	2.20		12				NP			
TP20		В	2.55		20			35	17	18	93	Intermediate Plasticity CI
TP21		В	0.40		15							
TP23		В	4.50	_	16			28	13	15	96	Low Plasticity CL
TP24		В	3.00		19							
WS01		В	3.00		16							
WS07		В	3.60	_	13				_		_	
WS08		В	3.50		23							

SYMBOLS: NP: Non Plastic

^{*:} Liquid Limit and Plastic Limit Wet Sieved.



PLASTICITY CHART FOR CASAGRANDE CLASSIFICATION.





Contract No:					
PSL22/0966					
Client Ref:					
CJB/30925					

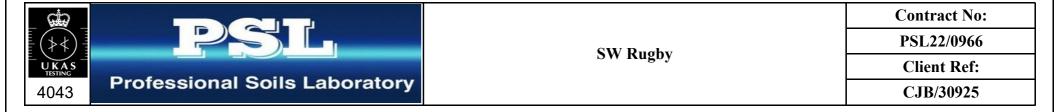
SUMMARY OF SOIL CLASSIFICATION TESTS

(BS1377: PART 2: 1990)

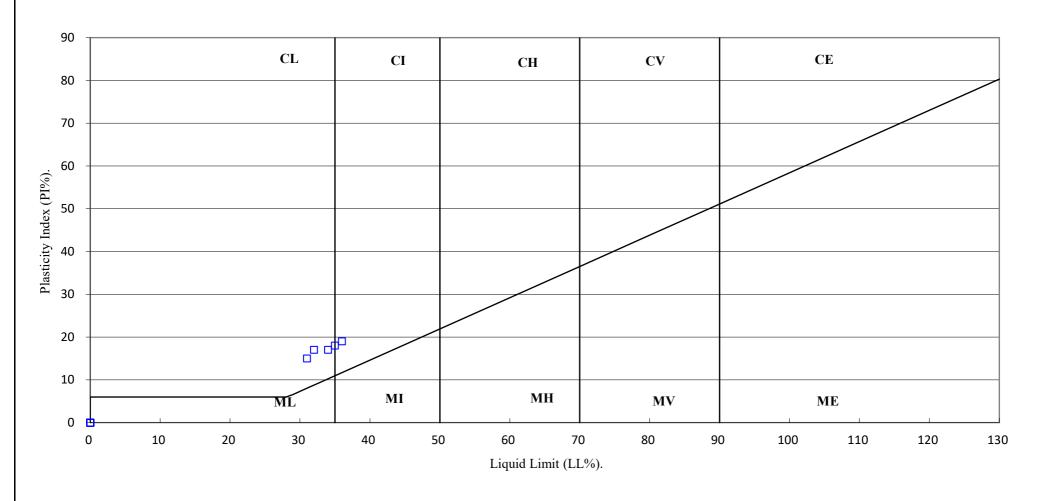
Hole	Sample	Sample	Тор	Base	Moisture Content	Linear Shrinkage	Particle Density	Liquid Limit	Plastic Limit	Plasticity Index	Passing .425mm	Remarks
Number	Number	Туре	Depth	Depth	%	%	Mg/m ³	% %	%	%	%	Temuras
			m	m	Clause 3.2	Clause 6.5	Clause 8.2	Clause 4.3/4	Clause 5.3	Clause 5.4		
WS13		В	3.00		21							
WS15		В	4.30		15			32	15	17	97	Low Plasticity CL
WS16		В	1.00		20			35	17	18	100	Intermediate Plasticity CI
CPB01		U	5.00		16							
CPB01		В	6.00		13			31	16	15	94	Low Plasticity CL
CPB01		В	7.50		20			34	17	17	98	Low Plasticity CL
CPB02		D	5.80		18			36	17	19	95	Intermediate Plasticity CI
CPB02		В	7.00		18							

SYMBOLS: NP: Non Plastic

^{*:} Liquid Limit and Plastic Limit Wet Sieved.



PLASTICITY CHART FOR CASAGRANDE CLASSIFICATION.





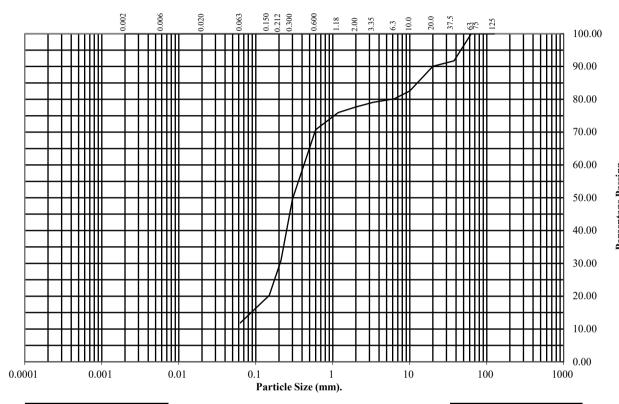
Contract No:					
PSL22/0966					
Client Ref:					
CJB/30925					

BS1377 : Part 2 : 1990 Wet Sieve, Clause 9.2

Hole Number: TP01 Top Depth (m): 0.70

Sample Number: Base Depth(m):

Sample Type: B



BS Test	Percentage
Sieve (mm)	Passing
125	100
75	100
63	100
37.5	92
20	90
10	83
6.3	80
3.35	79
2	78
1.18	76
0.6	71
0.3	50
0.212	31
0.15	20
0.063	12

Soil	Total
Fraction	Percentage
Cobbles Gravel Sand Silt/Clay	0 22 66 12

Remarks:

See Summary of Soil Descriptions





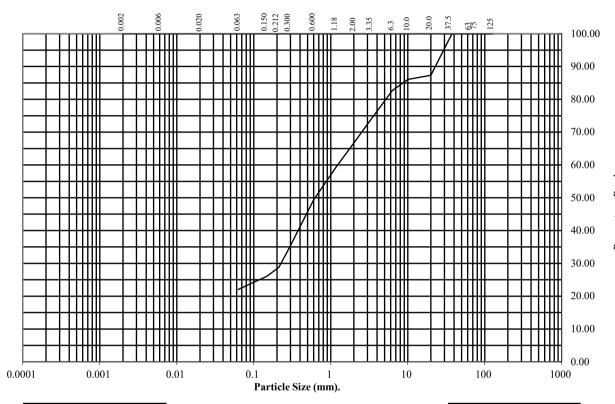
Contract No:
PSL22/0966
Client Ref:
CJB/30925

BS1377 : Part 2 : 1990 Wet Sieve, Clause 9.2

Hole Number: TP02 Top Depth (m): 3.40

Sample Number: Base Depth(m):

Sample Type: B



BS Test	Percentage
Sieve (mm)	Passing
125	100
75	100
63	100
37.5	100
20	87
10	86
6.3	83
3.35	74
2	67
1.18	59
0.6	49
0.3	35
0.212	29
0.15	26
0.063	22

Soil	Total
Fraction	Percentage
Cobbles Gravel Sand Silt/Clay	0 33 45 22

Remarks:

See Summary of Soil Descriptions





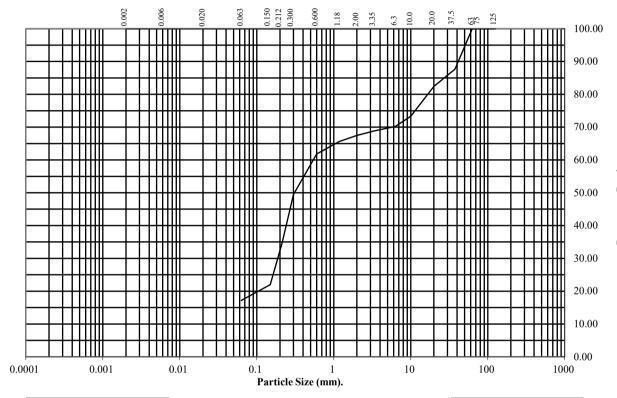
Contract No:
PSL22/0966
Client Ref:
CJB/30925

BS1377 : Part 2 : 1990 Wet Sieve, Clause 9.2

Hole Number: TP05 Top Depth (m): 1.20

Sample Number: Base Depth(m):

Sample Type: B



BS Test	Percentage
Sieve (mm)	Passing
125	100
75	100
63	100
37.5	88
20	82
10	73
6.3	70
3.35	69
2	67
1.18	66
0.6	62
0.3	49
0.212	34
0.15	22
0.063	17

Soil	Total
Fraction	Percentage
Cobbles Gravel Sand Silt/Clay	0 33 50 17

Remarks:

See Summary of Soil Descriptions





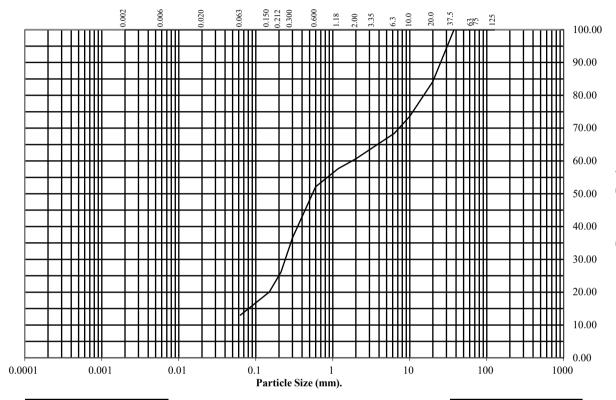
Contract No:
PSL22/0966
Client Ref:
CJB/30925

BS1377 : Part 2 : 1990 Wet Sieve, Clause 9.2

Hole Number: TP08 Top Depth (m): 2.00

Sample Number: Base Depth(m):

Sample Type: B



BS Test	Percentage
Sieve (mm)	Passing
125	100
75	100
63	100
37.5	100
20	84
10	74
6.3	68
3.35	64
2	61
1.18	58
0.6	52
0.3	37
0.212	26
0.15	20
0.063	13

Soil	Total
Fraction	Percentage
Cobbles Gravel Sand Silt/Clay	0 39 48 13

Remarks:

See Summary of Soil Descriptions





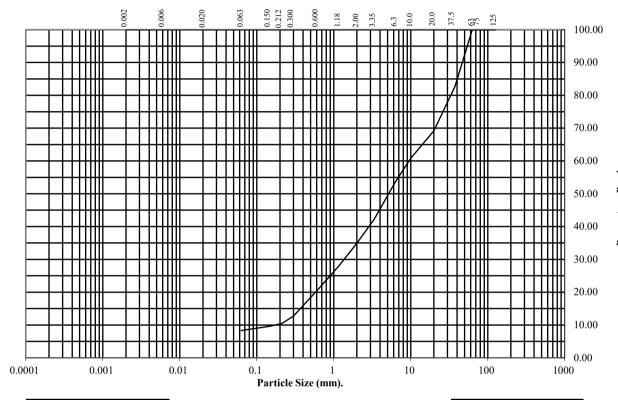
Contract No:
PSL22/0966
Client Ref:
CJB/30925

BS1377 : Part 2 : 1990 Wet Sieve, Clause 9.2

Hole Number: TP10 Top Depth (m): 3.30

Sample Number: Base Depth(m):

Sample Type: B



BS Test	Percentage
Sieve (mm)	Passing
125	100
75	100
63	100
37.5	83
20	69
10	61
6.3	54
3.35	42
2	35
1.18	28
0.6	20
0.3	13
0.212	10
0.15	10
0.063	8

Soil	Total
Fraction	Percentage
Cobbles Gravel Sand Silt/Clay	0 65 27 8

Remarks:

See Summary of Soil Descriptions





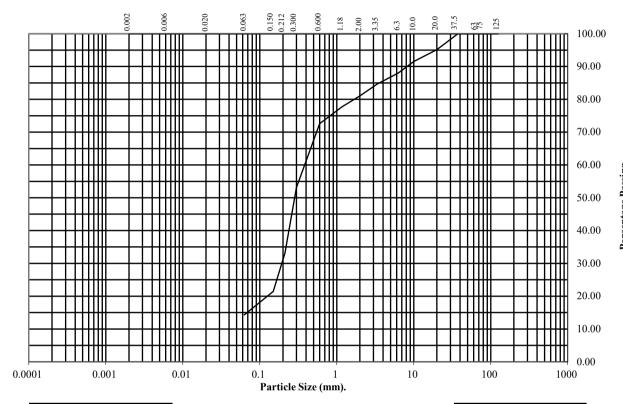
Contract No:
PSL22/0966
Client Ref:
CJB/30925

BS1377 : Part 2 : 1990 Wet Sieve, Clause 9.2

Hole Number: TP13 Top Depth (m): 1.30

Sample Number: Base Depth(m):

Sample Type: B



BS Test	Percentage
Sieve (mm)	Passing
125	100
75	100
63	100
37.5	100
20	95
10	92
6.3	88
3.35	85
2	81
1.18	78
0.6	73
0.3	53
0.212	33
0.15	21
0.063	14

Soil	Total
Fraction	Percentage
Cobbles Gravel Sand Silt/Clay	0 19 67 14

Remarks:

See Summary of Soil Descriptions





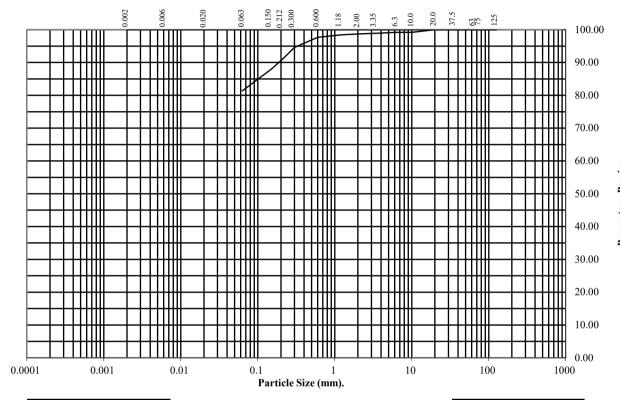
Contract No:
PSL22/0966
Client Ref:
CJB/30925

BS1377 : Part 2 : 1990 Wet Sieve, Clause 9.2

Hole Number: TP15 Top Depth (m): 1.60

Sample Number: Base Depth(m):

Sample Type: B



BS Test	Percentage
Sieve (mm)	Passing
125	100
75	100
63	100
37.5	100
20	100
10	99
6.3	99
3.35	99
2	99
1.18	98
0.6	98
0.3	95
0.212	91
0.15	88
0.063	81

Soil	Total
Fraction	Percentage
Cobbles Gravel Sand Silt/Clay	0 1 18 81

Remarks:

See Summary of Soil Descriptions





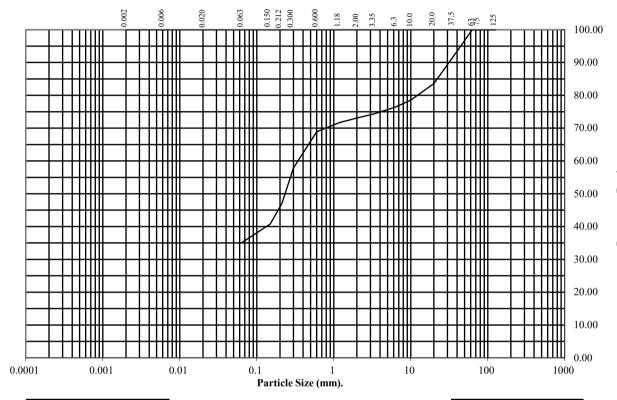
Contract No:
PSL22/0966
Client Ref:
CJB/30925

BS1377 : Part 2 : 1990 Wet Sieve, Clause 9.2

Hole Number: TP21 Top Depth (m): 0.40

Sample Number: Base Depth(m):

Sample Type: B



BS Test	Percentage
Sieve (mm)	Passing
125	100
75	100
63	100
37.5	93
20	84
10	79
6.3	76
3.35	74
2	73
1.18	72
0.6	69
0.3	58
0.212	47
0.15	41
0.063	35

Soil	Total
Fraction	Percentage
Cobbles Gravel Sand Silt/Clay	0 27 38 35

Remarks:

See Summary of Soil Descriptions





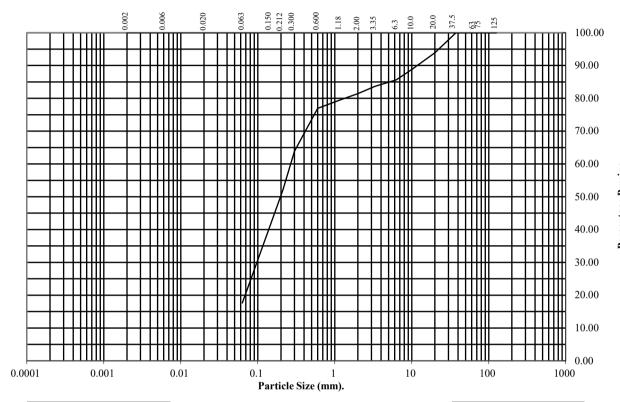
Contract No:
PSL22/0966
Client Ref:
CJB/30925

BS1377 : Part 2 : 1990 Wet Sieve, Clause 9.2

Hole Number: TP24 Top Depth (m): 3.00

Sample Number: Base Depth(m):

Sample Type: B



BS Test	Percentage
Sieve (mm)	Passing
125	100
75	100
63	100
37.5	100
20	94
10	89
6.3	86
3.35	84
2	81
1.18	80
0.6	77
0.3	64
0.212	52
0.15	42
0.063	18

Soil	Total
Fraction	Percentage
Cobbles Gravel Sand Silt/Clay	0 19 63 18

Remarks:

See Summary of Soil Descriptions





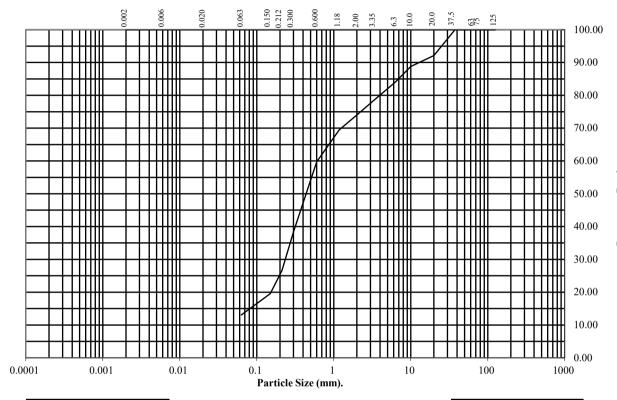
Contract No:
PSL22/0966
Client Ref:
CJB/30925

BS1377 : Part 2 : 1990 Wet Sieve, Clause 9.2

Hole Number: WS01 Top Depth (m): 3.00

Sample Number: Base Depth(m):

Sample Type: B



BS Test	Percentage
Sieve (mm)	Passing
125	100
75	100
63	100
37.5	100
20	92
10	89
6.3	84
3.35	79
2	74
1.18	69
0.6	60
0.3	38
0.212	27
0.15	20
0.063	13

Soil	Total
Fraction	Percentage
Cobbles Gravel Sand Silt/Clay	0 26 61 13

Remarks:

See Summary of Soil Descriptions





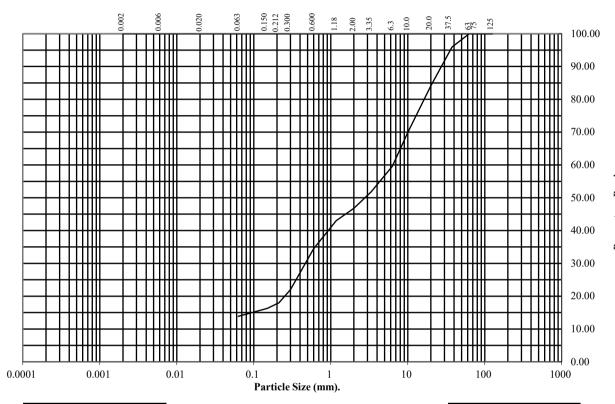
Contract No:
PSL22/0966
Client Ref:
CJB/30925

BS1377 : Part 2 : 1990 Wet Sieve, Clause 9.2

Hole Number: WS07 Top Depth (m): 3.60

Sample Number: Base Depth(m):

Sample Type: B



BS Test	Percentage
Sieve (mm)	Passing
125	100
75	100
63	100
37.5	96
20	84
10	70
6.3	60
3.35	52
2	47
1.18	43
0.6	34
0.3	22
0.212	18
0.15	16
0.063	14

Soil	Total
Fraction	Percentage
Cobbles Gravel Sand Silt/Clay	0 53 33 14

Remarks:

See Summary of Soil Descriptions





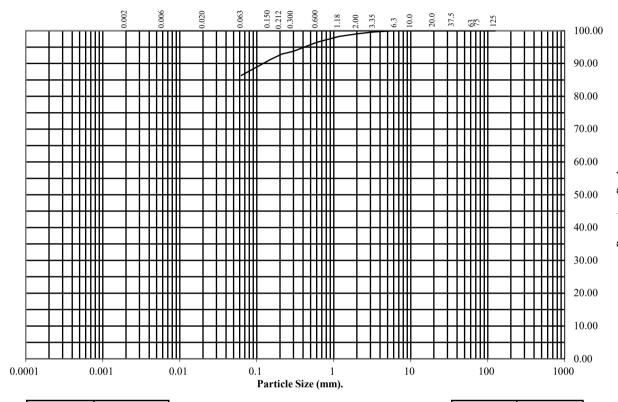
Contract No:
PSL22/0966
Client Ref:
CJB/30925

BS1377 : Part 2 : 1990 Wet Sieve, Clause 9.2

Hole Number: WS08 Top Depth (m): 3.50

Sample Number: Base Depth(m):

Sample Type: B



BS Test	Percentage
Sieve (mm)	Passing
125	100
75	100
63	100
37.5	100
20	100
10	100
6.3	100
3.35	100
2	99
1.18	98
0.6	96
0.3	94
0.212	93
0.15	91
0.063	86

Soil	Total
Fraction	Percentage
Cobbles Gravel Sand Silt/Clay	0 1 13 86

Remarks:

See Summary of Soil Descriptions





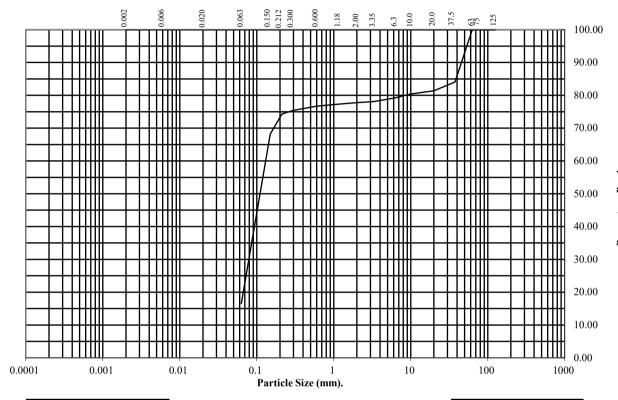
Contract No:
PSL22/0966
Client Ref:
CJB/30925

BS1377 : Part 2 : 1990 Wet Sieve, Clause 9.2

Hole Number: WS13 Top Depth (m): 3.00

Sample Number: Base Depth(m):

Sample Type: B



BS Test	Percentage
Sieve (mm)	Passing
125	100
75	100
63	100
37.5	84
20	81
10	80
6.3	79
3.35	78
2	78
1.18	77
0.6	77
0.3	75
0.212	74
0.15	68
0.063	17

Soil	Total
Fraction	Percentage
Cobbles Gravel Sand Silt/Clay	0 22 61 17

Remarks:

See Summary of Soil Descriptions





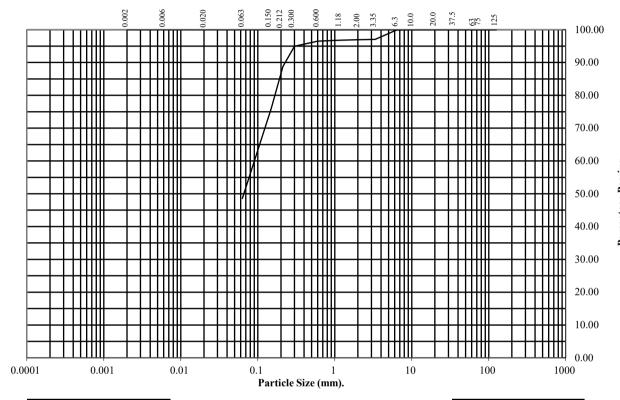
Contract No:
PSL22/0966
Client Ref:
CJB/30925

BS1377 : Part 2 : 1990 Wet Sieve, Clause 9.2

Hole Number: CPB02 Top Depth (m): 7.00

Sample Number: Base Depth(m):

Sample Type: B



BS Test	Percentage
Sieve (mm)	Passing
125	100
75	100
63	100
37.5	100
20	100
10	100
6.3	100
3.35	97
2	97
1.18	97
0.6	97
0.3	95
0.212	89
0.15	76
0.063	49

Soil	Total
Fraction	Percentage
Cobbles Gravel Sand Silt/Clay	0 3 48 49

Remarks:

See Summary of Soil Descriptions





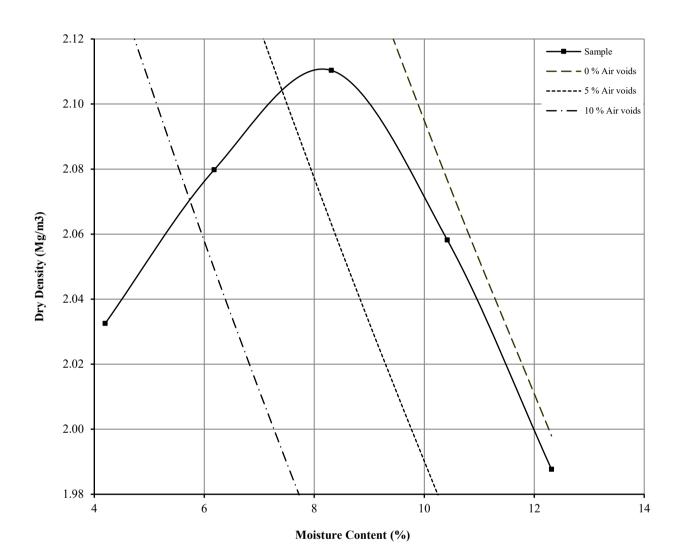
Contract No:
PSL22/0966
Client Ref:
CJB/30925

BS 1377: Part 4: Clause 3.4: 1990

Hole Number: TP01 Top Depth (m): 0.70

Sample Number: Base Depth (m):

Sample Type: B



Initial Moisture Content:		10	Method of Compaction:	2.5kg	Separate Samples
Particle Density (Mg/m3): 2.65		Assumed	Material Retained on 37.5 mm Test Sieve (%):		8
Maximum Dry Density (Mg/m3):		2.11	Material Retained on 20.0 mm Test Sieve	(%):	2
Optimum Moisture Content (%):		8			
Remarks See summary of s	oil descriptions		·		



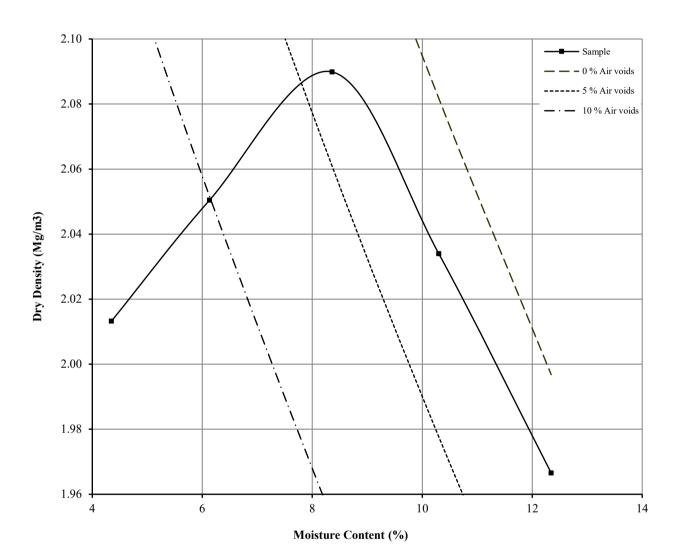
Contract
PSL22/0966
Client Ref
CJB/30925

Non compliance with BS 1377: Part 4: Clause 3.4: 1990

Top Depth (m): **Hole Number: TP05** 1.20

Sample Number: Base Depth (m):

Sample Type: В



Initial Moisture Content:		8.4	Method of Compaction:	2.5kg	Separate Samples
Particle Density (Mg/m3): 2.65		Assumed	Material Retained on 37.5 mm Test Sieve (%):		12
Maximum Dry Density (Mg/m3):		2.09	Material Retained on 20.0 mm Test Sieve	(%):	6
Optimum Moisture Content (%):		8			
Remarks See summary of s	oil descriptions		•		



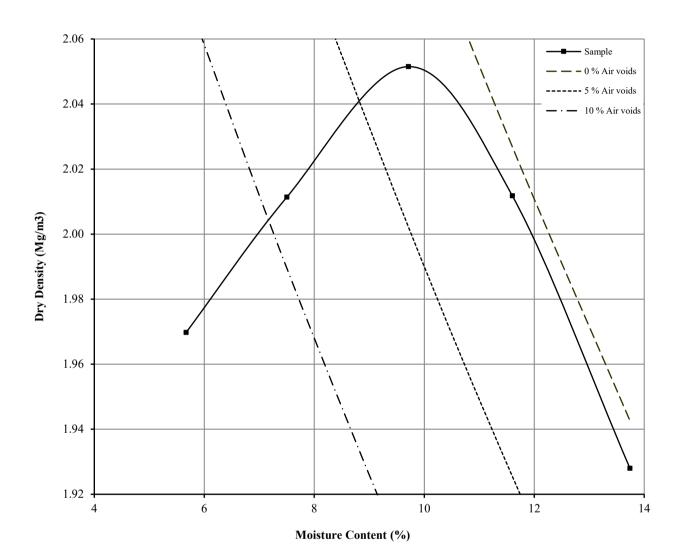
	Contract
CW/ Dugby	PSL22/0966
SW Rugby	Client Ref
	CJB/30925

BS 1377: Part 4: Clause 3.4: 1990

Hole Number: TP08 Top Depth (m): 2.00

Sample Number: Base Depth (m):

Sample Type: B



Initial Moisture Content:		12	Method of Compaction:	2.5kg	Separate Samples
Particle Density (Mg/m3): 2.65		Assumed	Material Retained on 37.5 mm Test Sieve (%):		0
Maximum Dry Density (Mg/m3):		2.05	Material Retained on 20.0 mm Test Sieve	(%):	16
Optimum Moisture Content (%):		10			
Remarks See summary of s	oil descriptions		•		



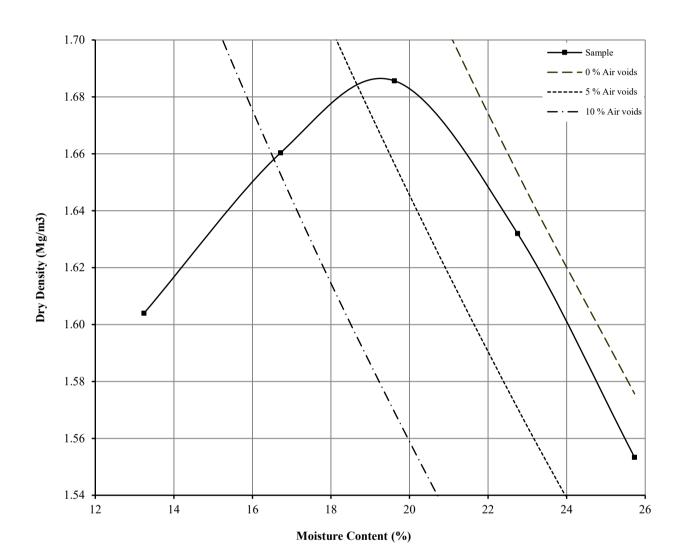
Contract
PSL22/0966
Client Ref
CJB/30925

BS 1377: Part 4: Clause 3.3: 1990

Hole Number: TP15 Top Depth (m): 1.60

Sample Number: Base Depth (m):

Sample Type: B



Initial Moisture Content:		23	Method of Compaction:	2.5kg	Separate Samples
Particle Density (Mg/m3): 2.65		Assumed	Material Retained on 37.5 mm Test Sieve (%):		0
Maximum Dry Density (Mg/m3):		1.69	Material Retained on 20.0 mm Test Sieve (%):		0
Optimum Moisture Content (%):		20			
Remarks See summary of soil descriptions					



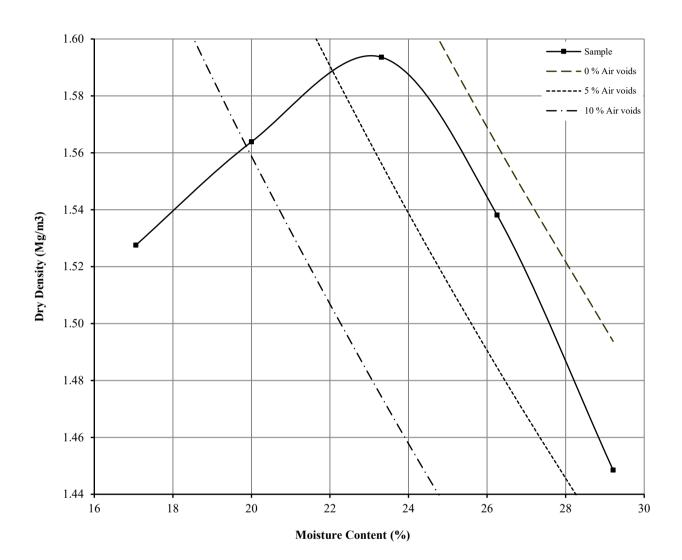
Contract
PSL22/0966
Client Ref
CJB/30925

BS 1377: Part 4: Clause 3.3: 1990

Hole Number: Top Depth (m): **TP16** 1.30

Sample Number: Base Depth (m):

Sample Type: B



Initial Moisture Content:		27	Method of Compaction:	2.5kg	Separate Samples
Particle Density (Mg/m3): 2.65		Assumed	Material Retained on 37.5 mm Test Sieve (%):		0
Maximum Dry Density (Mg/m3):		1.59	Material Retained on 20.0 mm Test Sieve	(%):	0
Optimum Moisture Content (%):		23			
Remarks See summary of s	oil descriptions		•		



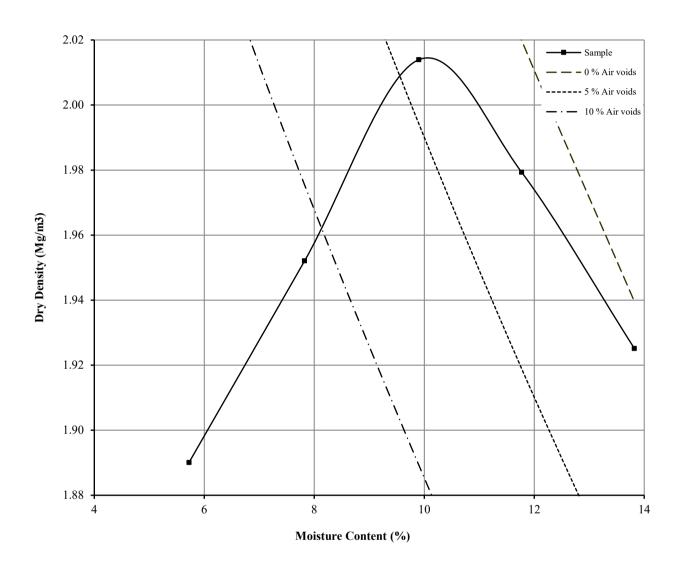
	Contract
CW/ Dughy	PSL22/0966
SW Rugby	Client Ref
	CJB/30925

BS 1377: Part 4: Clause 3.3: 1990

Hole Number: TP18 Top Depth (m): 2.20

Sample Number: Base Depth (m):

Sample Type: B



Initial Moisture Content:		12	Method of Compaction:	2.5kg	Separate Samples
Particle Density (Mg/m3):	2.65	2.65 Assumed Material Retained on 37.5 mm Test Sieve (%):			
Maximum Dry Density (Mg/m3):		2.01	Material Retained on 20.0 mm Test Sieve	2	
Optimum Moisture Content (%): 10		10			
Remarks See summary of s	oil descriptions				



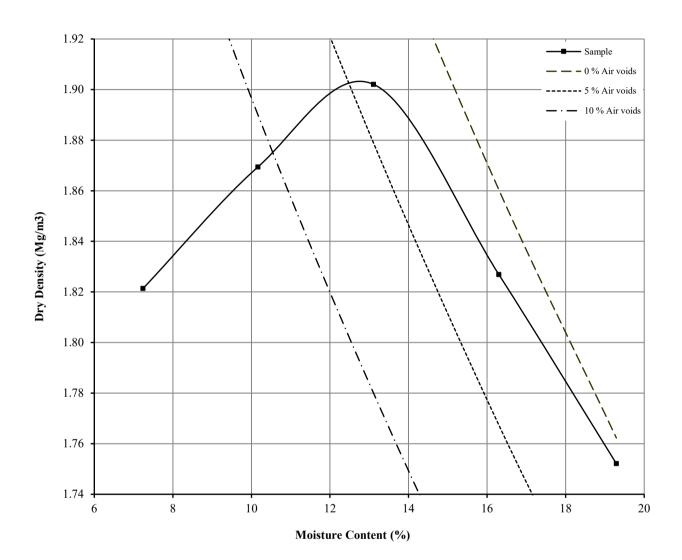
Contract
PSL22/0966
Client Ref
CJB/30925

BS 1377: Part 4: Clause 3.4: 1990

Hole Number: TP24 Top Depth (m): 3.00

Sample Number: Base Depth (m):

Sample Type: B



		19	Method of Compaction:	Separate Samples	
Particle Density (Mg/m3):	2.67	Assumed	Material Retained on 37.5 mm Test Sieve	0	
Maximum Dry Density (Mg/m3):		1.90	Material Retained on 20.0 mm Test Sieve	6	
Optimum Moisture Content (%)):	13			

Remarks See summary of soil descriptions



Contract
PSL22/0966
Client Ref
CJB/30925

UNDRAINED SHEAR STRENGTH IN TRIAXIAL COMPRESSION

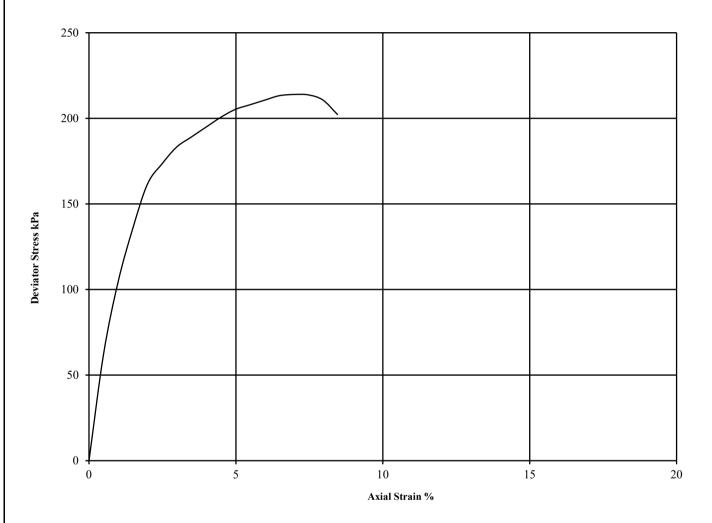
WITHOUT MEASUREMENT OF PORE PRESSURE

BS1377: Part7: 1990: Clause 8

Hole Number: CPB01 Top Depth (m): 5.00

Sample Number: Base Depth (m):

Sample Type U



Diamete	er (mm):	103	Height	(mm):	207	Test:	UU Single Stage		Remarks:
Specimen	Moisture	Bulk	Dry	Cell	Corr. Max.	Shear	Failure	Mode	Undisturbed Sample
	Content	Density	Density	Pressure	Deviator	Strength	Strain	of	Sample taken from top of tube
	(%)	(Mg/m3)	(Mg/m3)	(kPa)	Stress	Cu	(%)	Failure	Rate of strain = 2 %/min
					(kPa)	(kPa)			Latex Membrane used 0.2 mm thick,
				θ_3	$(\theta_1 - \theta_3)_f$	$^{1}/_{2}(\theta_{1}-\theta_{3})_{f}$			Correction applied 0.36
1	16	2.13	1.84	50	214	107	7.0	Brittle	See summary of soil descriptions

^{*} Single stage test due to early brittle failure



SW Rugby

Contract No:
PSL22/0966
Client Ref:
CBJ/30925



eurofins Chemtest

Eurofins Chemtest Ltd Depot Road Newmarket CB8 0AL

Tel: 01638 606070 Email: info@chemtest.com

Final Report

Report No.: 22-04492-1

Initial Date of Issue: 11-Feb-2022

Client Ground Investigation & Piling Ltd

Client Address: Building 62

Third Ave

The Pensnett Estate

Kingswinford West Midlands

DY67XT

Contact(s): Chris Browning

Matthew Laws

Project CJB/30925 SW Rugby

Quotation No.: Q20-21473 Date Received: 08-Feb-2022

Order No.: CB/2022/016 **Date Instructed:** 08-Feb-2022

No. of Samples: 2

Turnaround (Wkdays): 5 Results Due: 14-Feb-2022

Date Approved: 11-Feb-2022

Approved By:

Details: Stuart Henderson, Technical

Manager

Results - Soil

Project: CJB/30925 SW Rugby

Client: Ground Investigation & Piling Ltd	Chemtest Job No.:				22-04492	22-04492	
Quotation No.: Q20-21473	(Chemtest Sample ID.:			1367254	1367255	
		Sample Location:				CPB01	
		Sample Type:				SOIL	
		Top Depth (m):				7.5	
Determinand	Accred.	SOP	Units	LOD			
Moisture	N	2030	%	0.020	14	18	
Soil Colour	N	2040		N/A	Brown	Brown	
Other Material	N	2040		N/A	Stones	Stones	
Soil Texture	N	2040		N/A	Clay	Clay	
pH (2.5:1)	N	2010		4.0	[A] 8.4	[A] 8.8	
Sulphate (2:1 Water Soluble) as SO4	М	2120	g/l	0.010	[A] 0.30	[A] 0.095	

Deviations

In accordance with UKAS Policy on Deviating Samples TPS 63. Chemtest have a procedure to ensure 'upon receipt of each sample a competent laboratory shall assess whether the sample is suitable with regard to the requested test(s)'. This policy and the respective holding times applied, can be supplied upon request. The reason a sample is declared as deviating is detailed below. Where applicable the analysis remains UKAS/MCERTs accredited but the results may be compromised.

Sample:	Sample Ref:	Sample ID:	Sample Location:	Sampled Date:	Deviation Code(s):	Containers Received:
1367254			CPB01		А	Plastic Tub 500g
1367255			CPB01		А	Plastic Tub 500g

Test Methods

SOP	Title	Parameters included	Method summary
2010	pH Value of Soils	рН	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



Appendix 6
Chemical Laboratory Test Results



FINAL ANALYTICAL TEST REPORT

Envirolab Job Number: 22/00841

Issue Number: 1 **Date:** 10 February, 2022

Client: Wardell Armstrong (Birmingham)

2 Devon Way Longbridge Birmingham

UK

B31 2TS

Project Manager: Jamie Lucas

Project Name: South West Rugby

Project Ref: BM11254
Order No: BM9159
Date Samples Received: 26/01/22
Date Instructions Received: 01/02/22
Date Analysis Completed: 10/02/22

Approved by:

Richard Wong Client Manager



Envirolab Job Number: 22/00841 Client Project Name: South West Rugby

Client Project Ref: BM11254

					0.101.16.1.10	ect Kei: Di				
Lab Sample ID	22/00841/2	22/00841/3	22/00841/4	22/00841/5	22/00841/6	22/00841/8	22/00841/9			
Client Sample No										
Client Sample ID	TP01	TP02	TP02	TP03	TP03	TP04	TP05			
Depth to Top	1.1	0.15	0.7	1.8	2.4	1.2	0.25			
Depth To Bottom									ion	
Date Sampled	24-Jan-22	24-Jan-22	24-Jan-22	24-Jan-22	24-Jan-22	24-Jan-22	24-Jan-22		Limit of Detection	4 .
Sample Type	Soil - D	Soil - D	Soil - D		of D	Method ref				
Sample Matrix Code	4A	4AE	4A	4A	4A	4A	4A	Units	Limit	Meth
% Stones >10mm _A	14.8	18.3	8.0	2.0	30.5	6.5	26.8	% w/w	0.1	A-T-044
pH _D ^{M#}	9.61	7.51	7.49	7.32	7.43	5.64	7.23	рН	0.01	A-T-031s
Sulphate (water sol 2:1) _D M#	0.04	<0.01	0.03	0.03	<0.01	0.07	<0.01	g/I	0.01	A-T-026s
Sulphate (acid soluble) _D M#	300	260	<200	<400	<1000	<1000	<200	mg/kg	200	A-T-028s
Sulphur (total) _D	183	145	<50	<50	-	165	69	mg/kg	50	A-T-024s
Cyanide (total) _A ^{M#}	-	-	-	-	<1	-	-	mg/kg	1	A-T-042sTCN
Phenols - Total by HPLC _A	-	-	-	-	<0.2	-	-	mg/kg	0.2	A-T-050s
SulphideA	-	-	-	-	<5	-	-	mg/kg	5	A-T-043-s
Organic matter _D ^{M#}	-	-	-	-	<0.1	-	-	% w/w	0.1	A-T-032 OM
Arsenic _D ^{M#}	16	12	12	32	28	41	10	mg/kg	1	A-T-024s
Boron (water soluble) _D	-	-	-	-	<1.0	-	-	mg/kg	1	A-T-027s
Cadmium _D M#	1.6	1.4	1.1	2.4	2.8	4.0	1.2	mg/kg	0.5	A-T-024s
Copper _D M#	37	16	12	27	23	26	12	mg/kg	1	A-T-024s
Chromium _D ^{M#}	14	20	13	22	22	32	15	mg/kg	1	A-T-024s
Chromium (hexavalent) _□	-	-	-	-	<1	-	-	mg/kg	1	A-T-040s
Lead _D ^{M#}	31	22	8	19	17	22	16	mg/kg	1	A-T-024s
Mercury₀	0.55	<0.17	<0.17	<0.17	<0.34	<0.34	<0.17	mg/kg	0.17	A-T-024s
Nickel _D ^{M#}	18	15	17	28	32	42	13	mg/kg	1	A-T-024s
Selenium _D ^{M#}	<1	<1	<1	<1	<2	<2	<1	mg/kg	1	A-T-024s
Zinc _D ^{M#}	53	66	44	112	131	186	60	mg/kg	5	A-T-024s



Lab Sample ID	22/00841/2	22/00841/3	22/00841/4	22/00841/5	22/00841/6	22/00841/8	22/00841/9			
Client Sample No										
Client Sample ID	TP01	TP02	TP02	TP03	TP03	TP04	TP05			
Depth to Top	1.1	0.15	0.7	1.8	2.4	1.2	0.25			
Depth To Bottom									io	
Date Sampled	24-Jan-22		Detection	5						
Sample Type	Soil - D			Method ref						
Sample Matrix Code	4A	4AE	4A	4A	4A	4A	4A	Units	Limit of	Meth
Asbestos in Soil (inc. matrix)										
Asbestos in soil _D #	-	-	-	-	NAD	-	-			A-T-045
Asbestos Matrix (visual) _D	-	-	-	-	-	-	-			A-T-045
Asbestos Matrix (microscope) _D	-	-	-	-	-	-	-			A-T-045
Asbestos ACM - Suitable for Water Absorption Test? _D	-	-	-	-	N/A	-	-			A-T-045



					Chefit 1 10	ect Ret: Bi	111234			
Lab Sample ID	22/00841/2	22/00841/3	22/00841/4	22/00841/5	22/00841/6	22/00841/8	22/00841/9			
Client Sample No										
Client Sample ID	TP01	TP02	TP02	TP03	TP03	TP04	TP05			
Depth to Top	1.1	0.15	0.7	1.8	2.4	1.2	0.25			
Depth To Bottom									ion	
Date Sampled	24-Jan-22	24-Jan-22	24-Jan-22	24-Jan-22	24-Jan-22	24-Jan-22	24-Jan-22		etect	J .
Sample Type	Soil - D	Soil - D	Soil - D		Limit of Detection	Method ref				
Sample Matrix Code	4A	4AE	4A	4A	4A	4A	4A	Units	Limi	Meth
PAH-16MS										
Acenaphthene _A ^{M#}	-	-	-	-	<0.01	-	-	mg/kg	0.01	A-T-019s
Acenaphthylene _A ^{M#}	-	-	-	-	<0.01	-	-	mg/kg	0.01	A-T-019s
Anthracene _A ^{M#}	-	-	-	-	<0.02	-	-	mg/kg	0.02	A-T-019s
Benzo(a)anthracene ^{M#}	-	-	-	-	<0.04	-	-	mg/kg	0.04	A-T-019s
Benzo(a)pyrene _A ^{M#}	-	-	-	-	<0.04	-	-	mg/kg	0.04	A-T-019s
Benzo(b)fluoranthene _A ^{M#}	-	-	-	-	<0.05	-	-	mg/kg	0.05	A-T-019s
Benzo(ghi)perylene _A ^{M#}	-	-	-	-	<0.05	-	-	mg/kg	0.05	A-T-019s
Benzo(k)fluoranthene _A ^{M#}	-	-	-	-	<0.07	-	-	mg/kg	0.07	A-T-019s
Chrysene _A ^{M#}	-	-	-	-	<0.06	-	-	mg/kg	0.06	A-T-019s
Dibenzo(ah)anthracene _A M#	-	-	-	-	<0.04	-	-	mg/kg	0.04	A-T-019s
Fluoranthene _A ^{M#}	-	-	-	-	<0.08	-	-	mg/kg	0.08	A-T-019s
Fluorene _A ^{M#}	-	-	-		<0.01	•		mg/kg	0.01	A-T-019s
Indeno(123-cd)pyrene _A ^{M#}	-	-	-		<0.03	•		mg/kg	0.03	A-T-019s
Naphthalene A ^{M#}	-	-	-	-	<0.03	-	-	mg/kg	0.03	A-T-019s
Phenanthrene A ^{M#}	-	-	-	-	<0.03	-	-	mg/kg	0.03	A-T-019s
Pyrene _A ^{M#}	-	-	-	-	<0.07	-	-	mg/kg	0.07	A-T-019s
Total PAH-16MS _A ^{M#}	-	-	-	-	<0.08	-	-	mg/kg	0.01	A-T-019s



					Client Pro	ject Ref: BN	//11254			
Lab Sample ID	22/00841/2	22/00841/3	22/00841/4	22/00841/5	22/00841/6	22/00841/8	22/00841/9			
Client Sample No										
Client Sample ID	TP01	TP02	TP02	TP03	TP03	TP04	TP05			
Depth to Top	1.1	0.15	0.7	1.8	2.4	1.2	0.25			
Depth To Bottom									ion	
Date Sampled	24-Jan-22	24-Jan-22	24-Jan-22	24-Jan-22	24-Jan-22	24-Jan-22	24-Jan-22		Limit of Detection	ų.
Sample Type	Soil - D	Soil - D		of D	Method ref					
Sample Matrix Code	4A	4AE	4A	4A	4A	4A	4A	Units	Limit	Meth
TPH CWG with Clean Up *C1										
Ali >C5-C6 _A #	-	-	-	-	<0.01	-	-	mg/kg	0.01	A-T-022s
Ali >C6-C8 _A #	-	-	-	-	<0.01	-	-	mg/kg	0.01	A-T-022s
Ali >C8-C10 _A	-	-	-	-	<1	-	-	mg/kg	1	A-T-055s
Ali >C10-C12AM#	-	-	-	-	<1	-	-	mg/kg	1	A-T-055s
Ali >C12-C16 _A ^{M#}	-	-	-	-	<1	-	-	mg/kg	1	A-T-055s
Ali >C16-C21AM#	-	-	-	-	<1	-	-	mg/kg	1	A-T-055s
Ali >C21-C35AM#	-	-	-	-	<1	-	-	mg/kg	1	A-T-055s
Total Aliphatics _A	-	-	-	-	<1	-	-	mg/kg	1	A-T-055s
Aro >C5-C7 _A #	-	-	-	-	<0.01	-	-	mg/kg	0.01	A-T-022s
Aro >C7-C8 _A #	-	-	-	-	<0.01	-	-	mg/kg	0.01	A-T-022s
Aro >C8-C10A	-	-	-	-	<1	-	-	mg/kg	1	A-T-055s
Aro >C10-C12 _A	-	-	-	-	<1	-	-	mg/kg	1	A-T-055s
Aro >C12-C16 _A	-	-	-	-	<1	-	-	mg/kg	1	A-T-055s
Aro >C16-C21 _A ^{M#}	-	-	-	-	<1	-	-	mg/kg	1	A-T-055s
Aro >C21-C35 _A	-	-	-	-	<1	-	-	mg/kg	1	A-T-055s
Total Aromatics _A	-	-	-	-	<1	-	-	mg/kg	1	A-T-055s
TPH (Ali & Aro >C5-C35)A	-	-	-	-	<1	-	-	mg/kg	1	A-T-055s
BTEX - Benzene [#]	-	-	-	-	<0.01	-	-	mg/kg	0.01	A-T-022s
BTEX - Toluene _A #	-	-	-	-	<0.01	-	-	mg/kg	0.01	A-T-022s
BTEX - Ethyl Benzene _A #	-	-	-	-	<0.01	-	-	mg/kg	0.01	A-T-022s
BTEX - m & p Xylene _A #	-	-	-	-	<0.01	-	-	mg/kg	0.01	A-T-022s
BTEX - o Xylene _A #	-	-	-	-	<0.01	-	-	mg/kg	0.01	A-T-022s
MTBE _A #	-	-	-	-	<0.01	-	-	mg/kg	0.01	A-T-022s



					Client Pro	ject Ref: BN	111234			
Lab Sample ID	22/00841/10	22/00841/11	22/00841/12	22/00841/14	22/00841/15	22/00841/16	22/00841/17			
Client Sample No										
Client Sample ID	TP05	TP06	TP06	TP07	TP08	TP08	TP09			
Depth to Top	2	0.6	1.4	2	0.3	3.50	1.5			
Depth To Bottom									u o	
Date Sampled	24-Jan-22	24-Jan-22	24-Jan-22	24-Jan-22	24-Jan-22	24-Jan-22	24-Jan-22		Limit of Detection	4
Sample Type	Soil - D	Soil - D		of	Method ref					
Sample Matrix Code	4A	4A	4A	4A	4A	4A	4A	Units	Limit	Meth
% Stones >10mm _A	11.2	7.6	17.5	32.7	42.6	1.5	28.5	% w/w	0.1	A-T-044
pH _D ^{M#}	7.34	6.81	6.40	7.51	7.52	7.01	6.78	pН	0.01	A-T-031s
Sulphate (water sol 2:1) _D ^{M#}	<0.01	0.02	0.03	0.03	<0.01	<0.01	0.01	g/I	0.01	A-T-026s
Sulphate (acid soluble) _D M#	<200	<200	<400	<400	<200	<200	<200	mg/kg	200	A-T-028s
Sulphur (total) _D	-	-	-	<50	62	<50	<50	mg/kg	50	A-T-024s
Cyanide (total) _A ^{M#}	<1	<1	<1	-	-	-	-	mg/kg	1	A-T-042sTCN
Phenois - Total by HPLC _A	<0.2	<0.2	<0.2	-	-	-	-	mg/kg	0.2	A-T-050s
Sulphide	<5	140	190	-	-	-	-	mg/kg	5	A-T-043-s
Organic matter _D ^{M#}	0.2	<0.1	<0.1	-	-	-	-	% w/w	0.1	A-T-032 OM
Arsenic _D ^{M#}	21	8	10	18	14	8	25	mg/kg	1	A-T-024s
Boron (water soluble) _D	<1.0	<1.0	<1.0	-	-	-	-	mg/kg	1	A-T-027s
Cadmium _D ^{M#}	1.9	1.0	1.2	1.7	1.4	1.1	2.4	mg/kg	0.5	A-T-024s
Copper _D M#	17	12	14	13	9	10	17	mg/kg	1	A-T-024s
Chromium _D ^{M#}	16	13	12	14	22	18	22	mg/kg	1	A-T-024s
Chromium (hexavalent) _D	<1	<1	<1	-	-	-	-	mg/kg	1	A-T-040s
Lead _D ^{M#}	12	8	9	9	13	11	12	mg/kg	1	A-T-024s
Mercury _D	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	mg/kg	0.17	A-T-024s
Nickel _D ^{M#}	19	14	29	18	17	20	24	mg/kg	1	A-T-024s
Selenium _D ^{M#}	<1	<1	<1	<1	<1	<1	<1	mg/kg	1	A-T-024s
Zinc _D ^{M#}	72	40	45	61	49	57	81	mg/kg	5	A-T-024s



Lab Sample ID	22/00841/10	22/00841/11	22/00841/12	22/00841/14	22/00841/15	22/00841/16	22/00841/17			
Client Sample No										
Client Sample ID	TP05	TP06	TP06	TP07	TP08	TP08	TP09			
Depth to Top	2	0.6	1.4	2	0.3	3.50	1.5			
Depth To Bottom									<u>io</u>	
Date Sampled	24-Jan-22		Detection	4						
Sample Type	Soil - D			Method ref						
Sample Matrix Code	4A	Units	Limit of	Meth						
Asbestos in Soil (inc. matrix)										
Asbestos in soil _D #	NAD	NAD	NAD	-	-	-	-			A-T-045
Asbestos Matrix (visual) _D	-	-	-	-	-	-	-			A-T-045
Asbestos Matrix (microscope) _D	-	-	-	-	-	-	-			A-T-045
Asbestos ACM - Suitable for Water Absorption Test? _D	N/A	N/A	N/A	-	-	-	-			A-T-045



					Chefit 1 10	ect Ret: Bi	111234			
Lab Sample ID	22/00841/10	22/00841/11	22/00841/12	22/00841/14	22/00841/15	22/00841/16	22/00841/17			
Client Sample No										
Client Sample ID	TP05	TP06	TP06	TP07	TP08	TP08	TP09			
Depth to Top	2	0.6	1.4	2	0.3	3.50	1.5			
Depth To Bottom									ion	
Date Sampled	24-Jan-22		etect	4 .						
Sample Type	Soil - D		Limit of Detection	Method ref						
Sample Matrix Code	4A	Units	Limi	Meth						
PAH-16MS										
Acenaphthene _A M#	<0.01	<0.01	<0.01	-	-	-	-	mg/kg	0.01	A-T-019s
Acenaphthylene _A ^{M#}	<0.01	<0.01	<0.01	-	-	-	-	mg/kg	0.01	A-T-019s
Anthracene _A ^{M#}	<0.02	<0.02	<0.02	-	-	•		mg/kg	0.02	A-T-019s
Benzo(a)anthracene _A ^{M#}	<0.04	<0.04	<0.04	-	-	-	-	mg/kg	0.04	A-T-019s
Benzo(a)pyrene _A M#	<0.04	<0.04	<0.04	-	-	-	-	mg/kg	0.04	A-T-019s
Benzo(b)fluoranthene _A ^{M#}	<0.05	<0.05	<0.05	-	-	-	-	mg/kg	0.05	A-T-019s
Benzo(ghi)perylene _A ^{M#}	<0.05	<0.05	<0.05	-	-	-	-	mg/kg	0.05	A-T-019s
Benzo(k)fluoranthene _A ^{M#}	<0.07	<0.07	<0.07	-	-	-	-	mg/kg	0.07	A-T-019s
Chrysene _A ^{M#}	<0.06	<0.06	<0.06	-	-	-	-	mg/kg	0.06	A-T-019s
Dibenzo(ah)anthracene _A M#	<0.04	<0.04	<0.04	-	-	-	-	mg/kg	0.04	A-T-019s
Fluoranthene _A ^{M#}	<0.08	<0.08	<0.08	-	-	-	-	mg/kg	0.08	A-T-019s
Fluorene _A ^{M#}	<0.01	<0.01	<0.01	-	-	-	-	mg/kg	0.01	A-T-019s
Indeno(123-cd)pyrene _A ^{M#}	<0.03	<0.03	<0.03	-	-	-	-	mg/kg	0.03	A-T-019s
Naphthalene A ^{M#}	<0.03	<0.03	<0.03	-	-	-	-	mg/kg	0.03	A-T-019s
Phenanthrene _A ^{M#}	<0.03	<0.03	<0.03	-	-	-	-	mg/kg	0.03	A-T-019s
Pyrene _A ^{M#}	<0.07	<0.07	<0.07	-	-	-	-	mg/kg	0.07	A-T-019s
Total PAH-16MS _A ^{M#}	<0.08	<0.08	<0.08	-	-	-	-	mg/kg	0.01	A-T-019s



					Client Pro	ject Ref: BN	/111254			
Lab Sample ID	22/00841/10	22/00841/11	22/00841/12	22/00841/14	22/00841/15	22/00841/16	22/00841/17			
Client Sample No										
Client Sample ID	TP05	TP06	TP06	TP07	TP08	TP08	TP09			
Depth to Top	2	0.6	1.4	2	0.3	3.50	1.5			
Depth To Bottom									u	
Date Sampled	24-Jan-22	24-Jan-22	24-Jan-22	24-Jan-22	24-Jan-22	24-Jan-22	24-Jan-22		etecti	
Sample Type	Soil - D	Soil - D		οf D	od re					
Sample Matrix Code	4A	4A	4A	4A	4A	4A	4A	Units	Limit of Detection	Method ref
TPH CWG with Clean Up *C1										
Ali >C5-C6 _A #	<0.01	<0.01	<0.01	-	-	-	-	mg/kg	0.01	A-T-022s
Ali >C6-C8 _A #	<0.01	<0.01	<0.01	-	-	-	-	mg/kg	0.01	A-T-022s
Ali >C8-C10 _A	<1	<1	<1	-	-	-	-	mg/kg	1	A-T-055s
Ali >C10-C12AM#	<1	<1	<1	-	-	-	-	mg/kg	1	A-T-055s
Ali >C12-C16AM#	<1	<1	<1	-	-	-	-	mg/kg	1	A-T-055s
Ali >C16-C21AM#	<1	<1	<1	-	-	-	-	mg/kg	1	A-T-055s
Ali >C21-C35AM#	<1	<1	<1	-	-	-	-	mg/kg	1	A-T-055s
Total Aliphatics _A	<1	<1	<1	-	-	-	-	mg/kg	1	A-T-055s
Aro >C5-C7 _A #	<0.01	<0.01	<0.01	-	-	-	-	mg/kg	0.01	A-T-022s
Aro >C7-C8 _A #	<0.01	<0.01	<0.01	-	-	-	-	mg/kg	0.01	A-T-022s
Aro >C8-C10A	<1	<1	<1	-	-	-	-	mg/kg	1	A-T-055s
Aro >C10-C12 _A	<1	<1	<1	-	-	-	-	mg/kg	1	A-T-055s
Aro >C12-C16 _A	<1	<1	<1	-	-	-	-	mg/kg	1	A-T-055s
Aro >C16-C21 _A ^{M#}	<1	<1	<1	-	-	-	-	mg/kg	1	A-T-055s
Aro >C21-C35 _A	<1	<1	<1	-	-	-	-	mg/kg	1	A-T-055s
Total Aromatics _A	<1	<1	<1	-	-	-	-	mg/kg	1	A-T-055s
TPH (Ali & Aro >C5-C35)A	<1	<1	<1	-	-	-	-	mg/kg	1	A-T-055s
BTEX - Benzene _A #	<0.01	<0.01	<0.01	-	-	-	-	mg/kg	0.01	A-T-022s
BTEX - Toluene _A #	<0.01	<0.01	<0.01	-	-	-	-	mg/kg	0.01	A-T-022s
BTEX - Ethyl Benzene _A #	<0.01	<0.01	<0.01	-	-	-	-	mg/kg	0.01	A-T-022s
BTEX - m & p Xylene _A #	<0.01	<0.01	<0.01	-	-	-	-	mg/kg	0.01	A-T-022s
BTEX - o Xylene _A #	<0.01	<0.01	<0.01	-	-	-	-	mg/kg	0.01	A-T-022s
MTBE _A #	<0.01	<0.01	<0.01	-	-	-	-	mg/kg	0.01	A-T-022s



					Cilent Pro	ect Ref: BN	111234			
Lab Sample ID	22/00841/18	22/00841/19	22/00841/21	22/00841/22	22/00841/23	22/00841/24	22/00841/25			
Client Sample No										
Client Sample ID	TP09	TP10	TP11	TP11	TP12	TP12	TP13			
Depth to Top	3.1	0.1	0.2	1.5	0.85	1.8	0.1			
Depth To Bottom									ion	
Date Sampled	24-Jan-22	24-Jan-22	25-Jan-22	25-Jan-22	25-Jan-22	25-Jan-22	25-Jan-22		Limit of Detection	4
Sample Type	Soil - D	Solid	Soil - D		of D	Method ref				
Sample Matrix Code	4A	4AE	4AE	4A	4A	7	4AE	Units	Limit	Meth
% Stones >10mm _A	4.1	0.5	14.9	21.5	7.7	<0.1	16.0	% w/w	0.1	A-T-044
pH _D ^{M#}	6.53	6.89	6.67	6.84	7.23	6.67	6.74	рН	0.01	A-T-031s
Sulphate (water sol 2:1) _D ^{M#}	0.05	<0.01	<0.01	0.02	<0.01	<0.01	<0.01	g/l	0.01	A-T-026s
Sulphate (acid soluble) _D M#	<1000	390	310	<500	<200	<1000	350	mg/kg	200	A-T-028s
Sulphur (total) _D	-	209	163	-	54	<100	154	mg/kg	50	A-T-024s
Cyanide (total) _A ^{M#}	<1	-	-	<1	-	-	-	mg/kg	1	A-T-042sTCN
Phenois - Total by HPLC _A	<0.2	-	-	<0.2	-	-	-	mg/kg	0.2	A-T-050s
Sulphide _A	200	-	-	140	-	-	-	mg/kg	5	A-T-043-s
Organic matter _D ^{M#}	<0.1	-	-	<0.1	-	-	-	% w/w	0.1	A-T-032 OM
Arsenic _D ^{M#}	53	16	15	33	58	30	13	mg/kg	1	A-T-024s
Boron (water soluble) _D	<1.0	-	-	<1.0	-	-	-	mg/kg	1	A-T-027s
Cadmium _D ^{M#}	4.7	2.3	1.8	2.9	5.3	5.1	1.5	mg/kg	0.5	A-T-024s
Copper _D M#	29	24	18	14	25	22	21	mg/kg	1	A-T-024s
Chromium _D M#	33	27	28	22	32	46	24	mg/kg	1	A-T-024s
Chromium (hexavalent) _D	<1	-	-	<1	-	-	-	mg/kg	1	A-T-040s
Lead _D ^{M#}	26	40	25	16	22	32	24	mg/kg	1	A-T-024s
Mercury _D	<0.34	<0.17	<0.17	<0.34	<0.17	<0.34	<0.17	mg/kg	0.17	A-T-024s
Nickel _D ^{M#}	51	21	17	35	41	58	15	mg/kg	1	A-T-024s
Selenium _D ^{M#}	<2	<1	<1	<2	<1	<2	<1	mg/kg	1	A-T-024s
Zinc _D M#	217	123	72	95	150	204	71	mg/kg	5	A-T-024s



Lab Sample ID	22/00841/18	22/00841/19	22/00841/21	22/00841/22	22/00841/23	22/00841/24	22/00841/25			
Client Sample No										
Client Sample ID	TP09	TP10	TP11	TP11	TP12	TP12	TP13			
Depth to Top	3.1	0.1	0.2	1.5	0.85	1.8	0.1			
Depth To Bottom									<u>io</u>	
Date Sampled	24-Jan-22	24-Jan-22	25-Jan-22	25-Jan-22	25-Jan-22	25-Jan-22	25-Jan-22		Detection	4
Sample Type	Soil - D	Solid	Soil - D			Method ref				
Sample Matrix Code	4A	4AE	4AE	4A	4A	7	4AE	Units	Limit of	Meth
Asbestos in Soil (inc. matrix)										
Asbestos in soil _D #	NAD	-	-	NAD	-	-	-			A-T-045
Asbestos Matrix (visual) _D	-	-	-	-	-	-	-			A-T-045
Asbestos Matrix (microscope) _D	-	-	-	-	-	-	-			A-T-045
Asbestos ACM - Suitable for Water Absorption Test? _D	N/A	-	-	N/A	-	-	-			A-T-045



					Chefit 1 10	ect Ret: Bi	111234			
Lab Sample ID	22/00841/18	22/00841/19	22/00841/21	22/00841/22	22/00841/23	22/00841/24	22/00841/25			
Client Sample No										
Client Sample ID	TP09	TP10	TP11	TP11	TP12	TP12	TP13			
Depth to Top	3.1	0.1	0.2	1.5	0.85	1.8	0.1			
Depth To Bottom									io	
Date Sampled	24-Jan-22	24-Jan-22	25-Jan-22	25-Jan-22	25-Jan-22	25-Jan-22	25-Jan-22		Limit of Detection	J .
Sample Type	Soil - D	Solid	Soil - D		of D	Method ref				
Sample Matrix Code	4A	4AE	4AE	4A	4A	7	4AE	Units	E ğ	Meth
PAH-16MS										
Acenaphthene _A ^{M#}	<0.01	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-019s
Acenaphthylene _A ^{M#}	<0.01	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-019s
Anthracene _A ^{M#}	<0.02	-	-	<0.02		•	-	mg/kg	0.02	A-T-019s
Benzo(a)anthracene ^{M#}	<0.04	-	-	<0.04	-	-	-	mg/kg	0.04	A-T-019s
Benzo(a)pyrene _A ^{M#}	<0.04	-	-	<0.04	-	-	-	mg/kg	0.04	A-T-019s
Benzo(b)fluoranthene _A ^{M#}	<0.05	-	-	<0.05	-	-	-	mg/kg	0.05	A-T-019s
Benzo(ghi)perylene _A ^{M#}	<0.05	-	-	<0.05	-	-	-	mg/kg	0.05	A-T-019s
Benzo(k)fluoranthene _A ^{M#}	<0.07	-	-	<0.07	-	-	-	mg/kg	0.07	A-T-019s
Chrysene _A M#	<0.06	-	-	<0.06	-	-	-	mg/kg	0.06	A-T-019s
Dibenzo(ah)anthracene _A M#	<0.04	-	-	<0.04	-	-	-	mg/kg	0.04	A-T-019s
Fluoranthene _A ^{M#}	<0.08	-	-	<0.08	-	-	-	mg/kg	0.08	A-T-019s
Fluorene _A ^{M#}	<0.01	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-019s
Indeno(123-cd)pyrene _A ^{M#}	<0.03	-	-	<0.03	-	-	-	mg/kg	0.03	A-T-019s
Naphthalene A ^{M#}	<0.03	-	-	<0.03	-	-	-	mg/kg	0.03	A-T-019s
Phenanthrene _A ^{M#}	<0.03	-	-	<0.03	-	-	-	mg/kg	0.03	A-T-019s
Pyrene _A ^{M#}	<0.07	-	-	<0.07	-	-	-	mg/kg	0.07	A-T-019s
Total PAH-16MS _A M#	<0.08	-	-	<0.08	-	-	-	mg/kg	0.01	A-T-019s



					Oliche i To	ect Ret: Bi				
Lab Sample ID	22/00841/18	22/00841/19	22/00841/21	22/00841/22	22/00841/23	22/00841/24	22/00841/25			
Client Sample No]
Client Sample ID	TP09	TP10	TP11	TP11	TP12	TP12	TP13			
Depth to Top	3.1	0.1	0.2	1.5	0.85	1.8	0.1			
Depth To Bottom									uo	
Date Sampled	24-Jan-22	24-Jan-22	25-Jan-22	25-Jan-22	25-Jan-22	25-Jan-22	25-Jan-22		etect	_
Sample Type	Soil - D	Solid	Soil - D		Limit of Detection	Method ref				
Sample Matrix Code	4A	4AE	4AE	4A	4A	7	4AE	Units	Limit	Meth
TPH CWG with Clean Up *C1										
Ali >C5-C6 _A #	<0.01	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-022s
Ali >C6-C8 _A #	<0.01	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-022s
Ali >C8-C10 _A	<1	-	-	<1	-	-	-	mg/kg	1	A-T-055s
Ali >C10-C12 _A M#	<1	-	-	<1	-	-	-	mg/kg	1	A-T-055s
Ali >C12-C16 _A M#	<1	-	-	<1	-	-	-	mg/kg	1	A-T-055s
Ali >C16-C21 _A M#	<1	-	-	<1	-	-	-	mg/kg	1	A-T-055s
Ali >C21-C35 _A M#	2	-	-	<1	-	-	-	mg/kg	1	A-T-055s
Total Aliphatics _A	2	-	-	<1	-	-	-	mg/kg	1	A-T-055s
Aro >C5-C7 _A #	<0.01	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-022s
Aro >C7-C8 _A #	<0.01	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-022s
Aro >C8-C10 _A	<1	-	-	<1	-	-	-	mg/kg	1	A-T-055s
Aro >C10-C12 _A	<1	-	-	<1	-	-	-	mg/kg	1	A-T-055s
Aro >C12-C16 _A	<1	-	-	<1	-	-	-	mg/kg	1	A-T-055s
Aro >C16-C21 _A M#	<1	-	-	<1	-	-	-	mg/kg	1	A-T-055s
Aro >C21-C35 _A	<1	-	-	<1	-	-	-	mg/kg	1	A-T-055s
Total Aromatics _A	<1	-	-	<1	-	-	-	mg/kg	1	A-T-055s
TPH (Ali & Aro >C5-C35) _A	2	-	-	<1	-	-	-	mg/kg	1	A-T-055s
BTEX - Benzene _A #	<0.01	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-022s
BTEX - Toluene _A #	<0.01	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-022s
BTEX - Ethyl Benzene _A #	<0.01	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-022s
BTEX - m & p Xylene _A #	<0.01	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-022s
BTEX - o Xylene _A #	<0.01	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-022s
MTBE _A #	<0.01	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-022s



					Cilent Pro	ect Ref: BN	111234			
Lab Sample ID	22/00841/26	22/00841/28	22/00841/30	22/00841/32	22/00841/34	22/00841/35	22/00841/38			
Client Sample No										
Client Sample ID	TP13	TP14	TP15	TP16	TP17	TP18	TP19			
Depth to Top	1.2	1.75	2.05	1.2	2.9	0.75	1.25			
Depth To Bottom									ion	
Date Sampled	25-Jan-22		Limit of Detection	4						
Sample Type	Soil - D		of D	Method ref						
Sample Matrix Code	4A	4A	4A	6A	6A	4A	5A	Units	Limit	Meth
% Stones >10mm _A	8.0	13.3	<0.1	<0.1	<0.1	8.0	37.4	% w/w	0.1	A-T-044
pH _D ^{M#}	7.38	7.56	7.17	8.19	7.99	7.80	7.04	рН	0.01	A-T-031s
Sulphate (water sol 2:1) _D ^{M#}	<0.01	<0.01	<0.01	<0.01	0.15	0.02	0.29	g/l	0.01	A-T-026s
Sulphate (acid soluble) _D ^{M#}	<200	<1000	<200	430	1600	<200	<1000	mg/kg	200	A-T-028s
Sulphur (total) _D	-	-	<50	313	-	<50	-	mg/kg	50	A-T-024s
Cyanide (total) _A ^{M#}	<1	<1	-	-	<1	-	<1	mg/kg	1	A-T-042sTCN
Phenois - Total by HPLC _A	<0.2	<0.2	-	-	<0.2	-	<0.2	mg/kg	0.2	A-T-050s
SulphideA	190	150	-	-	180	-	98	mg/kg	5	A-T-043-s
Organic matter _D ^{M#}	0.2	0.2	-	-	1.7	-	0.1	% w/w	0.1	A-T-032 OM
Arsenic _D ^{M#}	17	47	9	10	8	6	47	mg/kg	1	A-T-024s
Boron (water soluble) _D	<1.0	<1.0	-	-	<1.0	-	<1.0	mg/kg	1	A-T-027s
Cadmium _D M#	2.0	4.2	1.0	1.6	1.5	0.7	3.3	mg/kg	0.5	A-T-024s
Copper _D ^{M#}	11	23	12	26	24	6	20	mg/kg	1	A-T-024s
Chromium _D M#	21	31	18	31	33	15	29	mg/kg	1	A-T-024s
Chromium (hexavalent) _D	<1	<1	-	-	<1	-	<1	mg/kg	1	A-T-040s
Lead _D ^{M#}	13	22	8	15	14	8	21	mg/kg	1	A-T-024s
Mercury _D	<0.17	<0.34	<0.17	1.30	1.10	<0.17	<0.34	mg/kg	0.17	A-T-024s
Nickel _D ^{M#}	20	47	16	34	32	10	43	mg/kg	1	A-T-024s
Selenium _D ^{M#}	<1	<2	<1	1	2	<1	<2	mg/kg	1	A-T-024s
Zinc _D ^{M#}	54	153	42	67	63	29	147	mg/kg	5	A-T-024s



Lab Sample ID	22/00841/26	22/00841/28	22/00841/30	22/00841/32	22/00841/34	22/00841/35	22/00841/38			
Client Sample No										
Client Sample ID	TP13	TP14	TP15	TP16	TP17	TP18	TP19			
Depth to Top	1.2	1.75	2.05	1.2	2.9	0.75	1.25			
Depth To Bottom									io	
Date Sampled	25-Jan-22		Detection	*						
Sample Type	Soil - D			Method ref						
Sample Matrix Code	4A	4A	4A	6A	6A	4A	5A	Units	Limit of	Meth
Asbestos in Soil (inc. matrix)										
Asbestos in soil _D #	NAD	NAD	-	-	NAD	-	NAD			A-T-045
Asbestos Matrix (visual) _D	-	-	-	-	-	-	-			A-T-045
Asbestos Matrix (microscope) _D	-	-	-		-	-	-			A-T-045
Asbestos ACM - Suitable for Water Absorption Test? _D	N/A	N/A	-	-	N/A	-	N/A			A-T-045



					00	ect Kei. Di				
Lab Sample ID	22/00841/26	22/00841/28	22/00841/30	22/00841/32	22/00841/34	22/00841/35	22/00841/38			
Client Sample No										
Client Sample ID	TP13	TP14	TP15	TP16	TP17	TP18	TP19			
Depth to Top	1.2	1.75	2.05	1.2	2.9	0.75	1.25			
Depth To Bottom									ion	
Date Sampled	25-Jan-22		Limit of Detection	4 .						
Sample Type	Soil - D		t of D	Method ref						
Sample Matrix Code	4A	4A	4A	6A	6A	4A	5A	Units	Limit	Meth
PAH-16MS										
Acenaphthene _A ^{M#}	<0.01	<0.01	-	-	<0.01	-	<0.01	mg/kg	0.01	A-T-019s
Acenaphthylene _A ^{M#}	<0.01	<0.01	-	-	<0.01	-	<0.01	mg/kg	0.01	A-T-019s
Anthracene _A ^{M#}	<0.02	<0.02	•	•	<0.02	•	<0.02	mg/kg	0.02	A-T-019s
Benzo(a)anthracene ^{A#}	<0.04	<0.04	•	•	<0.04	•	<0.04	mg/kg	0.04	A-T-019s
Benzo(a)pyrene _A ^{M#}	<0.04	<0.04	-	-	<0.04	-	<0.04	mg/kg	0.04	A-T-019s
Benzo(b)fluoranthene _A ^{M#}	<0.05	<0.05	-	-	<0.05	-	<0.05	mg/kg	0.05	A-T-019s
Benzo(ghi)perylene _A ^{M#}	<0.05	<0.05	-	-	<0.05	-	<0.05	mg/kg	0.05	A-T-019s
Benzo(k)fluoranthene _A M#	<0.07	<0.07	-	-	<0.07	-	<0.07	mg/kg	0.07	A-T-019s
Chrysene _A ^{M#}	<0.06	<0.06	-	-	<0.06	-	<0.06	mg/kg	0.06	A-T-019s
Dibenzo(ah)anthracene _A M#	<0.04	<0.04	-	-	<0.04	-	<0.04	mg/kg	0.04	A-T-019s
Fluoranthene _A ^{M#}	<0.08	<0.08	-	-	<0.08	-	<0.08	mg/kg	0.08	A-T-019s
Fluorene _A ^{M#}	<0.01	<0.01	-	-	<0.01	-	<0.01	mg/kg	0.01	A-T-019s
Indeno(123-cd)pyrene _A ^{M#}	<0.03	<0.03	-	-	<0.03	-	<0.03	mg/kg	0.03	A-T-019s
Naphthalene A ^{M#}	<0.03	<0.03	-	-	<0.03	-	<0.03	mg/kg	0.03	A-T-019s
Phenanthrene _A ^{M#}	<0.03	<0.03	-		<0.03	-	<0.03	mg/kg	0.03	A-T-019s
Pyrene _A ^{M#}	<0.07	<0.07	-	-	<0.07	-	<0.07	mg/kg	0.07	A-T-019s
Total PAH-16MS _A ^{M#}	<0.08	<0.08			<0.08	•	<0.08	mg/kg	0.01	A-T-019s



					Client Pro	ject Ref: BN	/111254			
Lab Sample ID	22/00841/26	22/00841/28	22/00841/30	22/00841/32	22/00841/34	22/00841/35	22/00841/38			
Client Sample No										
Client Sample ID	TP13	TP14	TP15	TP16	TP17	TP18	TP19			
Depth to Top	1.2	1.75	2.05	1.2	2.9	0.75	1.25			
Depth To Bottom									6	
Date Sampled	25-Jan-22	25-Jan-22	25-Jan-22	25-Jan-22	25-Jan-22	25-Jan-22	25-Jan-22		stecti	
Sample Type	Soil - D	Soil - D		of De	od re					
Sample Matrix Code	4A	4A	4A	6A	6A	4A	5A	Units	Limit of Detection	Method ref
TPH CWG with Clean Up *C1										
Ali >C5-C6 _A #	<0.01	<0.01	-	-	<0.01	-	<0.01	mg/kg	0.01	A-T-022s
Ali >C6-C8 _A #	<0.01	<0.01	-	-	<0.01	-	<0.01	mg/kg	0.01	A-T-022s
Ali >C8-C10 _A	<1	<1	-	-	<1	-	<1	mg/kg	1	A-T-055s
Ali >C10-C12 _A M#	<1	<1	-	-	<1	-	<1	mg/kg	1	A-T-055s
Ali >C12-C16 _A M#	<1	<1	-	-	<1	-	<1	mg/kg	1	A-T-055s
Ali >C16-C21AM#	<1	<1	-	-	<1	-	<1	mg/kg	1	A-T-055s
Ali >C21-C35 _A M#	<1	<1	-	-	6	-	<1	mg/kg	1	A-T-055s
Total Aliphatics _A	<1	<1	-	-	6	-	<1	mg/kg	1	A-T-055s
Aro >C5-C7 _A #	<0.01	<0.01	-	-	<0.01	-	<0.01	mg/kg	0.01	A-T-022s
Aro >C7-C8 _A #	<0.01	<0.01	-	-	<0.01	-	<0.01	mg/kg	0.01	A-T-022s
Aro >C8-C10 _A	<1	<1	-	-	<1	-	<1	mg/kg	1	A-T-055s
Aro >C10-C12 _A	<1	<1	-	-	<1	-	<1	mg/kg	1	A-T-055s
Aro >C12-C16 _A	<1	<1	-	-	1	-	<1	mg/kg	1	A-T-055s
Aro >C16-C21 _A M#	<1	<1	-	-	1	-	<1	mg/kg	1	A-T-055s
Aro >C21-C35 _A	<1	<1	-	-	2	-	<1	mg/kg	1	A-T-055s
Total Aromatics _A	<1	<1	-	-	5	-	<1	mg/kg	1	A-T-055s
TPH (Ali & Aro >C5-C35)A	<1	<1	-	-	11	-	<1	mg/kg	1	A-T-055s
BTEX - Benzene _A #	<0.01	<0.01	-	-	<0.01	-	<0.01	mg/kg	0.01	A-T-022s
BTEX - Toluene _A #	<0.01	<0.01	-	-	<0.01	-	<0.01	mg/kg	0.01	A-T-022s
BTEX - Ethyl Benzene _A #	<0.01	<0.01	-	-	<0.01	-	<0.01	mg/kg	0.01	A-T-022s
BTEX - m & p Xylene _A #	<0.01	<0.01	-	-	<0.01	-	<0.01	mg/kg	0.01	A-T-022s
BTEX - o Xylene _A #	<0.01	<0.01	-	-	<0.01	-	<0.01	mg/kg	0.01	A-T-022s
MTBE _A #	<0.01	<0.01	-	-	<0.01	-	<0.01	mg/kg	0.01	A-T-022s



					Client Proj	ject Ref: BN	//11254			
Lab Sample ID	22/00841/39	22/00841/41	22/00841/42	22/00841/44	22/00841/45	22/00841/46	22/00841/47			
Client Sample No										
Client Sample ID	TP20	TP21	TP21	TP22	TP23	TP23	TP24			
Depth to Top	0.35	0.8	2.2	4.0	0.5	3.1	0.5			
Depth To Bottom									uo.	
Date Sampled	25-Jan-22	26-Jan-22	26-Jan-22	26-Jan-22	26-Jan-22	26-Jan-22	26-Jan-22		Limit of Detection	4
Sample Type	Soil - D	Soil - D		of	Method ref					
Sample Matrix Code	4AE	5A	3A	5A	4A	6A	4A	Units	Limit	Meth
% Stones >10mm _A	25.8	11.7	<0.1	<0.1	24.3	13.9	40.2	% w/w	0.1	A-T-044
pH _D ^{M#}	7.38	7.74	8.19	8.36	7.42	7.48	6.81	рН	0.01	A-T-031s
Sulphate (water sol 2:1) _D ^{M#}	<0.01	<0.01	<0.01	0.01	<0.01	<0.01	0.17	g/I	0.01	A-T-026s
Sulphate (acid soluble) _D M#	230	<200	220	260	260	<200	970	mg/kg	200	A-T-028s
Sulphur (total) _D	109	-	-	-	122	<50	4490	mg/kg	50	A-T-024s
Cyanide (total) _A ^{M#}	-	<1	<1	<1	-	-	-	mg/kg	1	A-T-042sTCN
Phenois - Total by HPLCA	-	<0.2	<0.2	<0.2	-	-	-	mg/kg	0.2	A-T-050s
Sulphide _A	-	<5	<5	<5	-	-	-	mg/kg	5	A-T-043-s
Organic matter _D ^{M#}	-	0.4	1.0	0.5	-	-	-	% w/w	0.1	A-T-032 OM
Arsenic _D M#	16	8	2	<1	14	17	18	mg/kg	1	A-T-024s
Boron (water soluble) _D	-	<1.0	<1.0	<1.0	-	-	-	mg/kg	1	A-T-027s
Cadmium _D ^{M#}	1.7	1.3	1.4	0.8	1.3	1.4	1.1	mg/kg	0.5	A-T-024s
Copper _D M#	15	13	23	16	14	22	5	mg/kg	1	A-T-024s
Chromium _D ^{M#}	20	27	44	23	17	39	16	mg/kg	1	A-T-024s
Chromium (hexavalent) _D	-	<1	<1	<1	-	-	-	mg/kg	1	A-T-040s
Lead _D ^{M#}	22	11	16	9	24	13	7	mg/kg	1	A-T-024s
Mercury _D	<0.17	<0.17	0.78	0.52	<0.17	<0.17	<0.17	mg/kg	0.17	A-T-024s
Nickel _D ^{M#}	17	19	41	21	14	32	16	mg/kg	1	A-T-024s
Selenium _D ^{M#}	<1	<1	<1	1	<1	<1	<1	mg/kg	1	A-T-024s
Zinc _D ^{M#}	77	49	69	41	63	70	32	mg/kg	5	A-T-024s



Lab Sample ID	22/00841/39	22/00841/41	22/00841/42	22/00841/44	22/00841/45	22/00841/46	22/00841/47			
Client Sample No										
Client Sample ID	TP20	TP21	TP21	TP22	TP23	TP23	TP24			
Depth to Top	0.35	0.8	2.2	4.0	0.5	3.1	0.5			
Depth To Bottom									io	
Date Sampled	25-Jan-22	26-Jan-22	26-Jan-22	26-Jan-22	26-Jan-22	26-Jan-22	26-Jan-22		Detection	*
Sample Type	Soil - D			Method ref						
Sample Matrix Code	4AE	5A	3A	5A	4A	6A	4A	Units	Limit of	Meth
Asbestos in Soil (inc. matrix)										
Asbestos in soil _D #	-	NAD	NAD	NAD	-	-	-			A-T-045
Asbestos Matrix (visual) _D	-	-	-	-	-	-	-			A-T-045
Asbestos Matrix (microscope) _D	-	-	-	-	-	-	-			A-T-045
Asbestos ACM - Suitable for Water Absorption Test? _D	-	N/A	N/A	N/A	-	-	-			A-T-045



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Lab Sample ID	22/00841/39	22/00841/41	22/00841/42	22/00841/44	22/00841/45	22/00841/46	22/00841/47			
Client Sample No										
Client Sample ID	TP20	TP21	TP21	TP22	TP23	TP23	TP24			
Depth to Top	0.35	0.8	2.2	4.0	0.5	3.1	0.5			
Depth To Bottom									ion	
Date Sampled	25-Jan-22	26-Jan-22	26-Jan-22	26-Jan-22	26-Jan-22	26-Jan-22	26-Jan-22		Limit of Detection	J .
Sample Type	Soil - D		t of D	Method ref						
Sample Matrix Code	4AE	5A	3A	5A	4A	6A	4A	Units	Limit	Meth
PAH-16MS										
Acenaphthene _A ^{M#}	-	<0.01	<0.01	<0.01	-	-	-	mg/kg	0.01	A-T-019s
Acenaphthylene _A ^{M#}	-	<0.01	<0.01	<0.01	-	-		mg/kg	0.01	A-T-019s
Anthracene _A ^{M#}	-	<0.02	<0.02	<0.02		•	•	mg/kg	0.02	A-T-019s
Benzo(a)anthracene ^{A#}	-	<0.04	<0.04	<0.04	•	•	•	mg/kg	0.04	A-T-019s
Benzo(a)pyrene _A ^{M#}	-	<0.04	<0.04	<0.04	•	•	•	mg/kg	0.04	A-T-019s
Benzo(b)fluoranthene _A ^{M#}	-	<0.05	<0.05	<0.05	•	•	•	mg/kg	0.05	A-T-019s
Benzo(ghi)perylene _A ^{M#}	-	<0.05	<0.05	<0.05	-	-		mg/kg	0.05	A-T-019s
Benzo(k)fluoranthene _A ^{M#}	-	<0.07	<0.07	<0.07	•	•	•	mg/kg	0.07	A-T-019s
Chrysene _A ^{M#}	-	<0.06	<0.06	<0.06	•	•	•	mg/kg	0.06	A-T-019s
Dibenzo(ah)anthracene _A M#	-	<0.04	<0.04	<0.04	•	•	•	mg/kg	0.04	A-T-019s
Fluoranthene _A ^{M#}	-	<0.08	<0.08	<0.08	•	•	,	mg/kg	0.08	A-T-019s
Fluorene _A ^{M#}	-	<0.01	<0.01	<0.01	•	•	•	mg/kg	0.01	A-T-019s
Indeno(123-cd)pyrene _A ^{M#}	-	<0.03	<0.03	<0.03	•	•	•	mg/kg	0.03	A-T-019s
Naphthalene A ^{M#}	-	<0.03	<0.03	<0.03	-	-		mg/kg	0.03	A-T-019s
Phenanthrene _A ^{M#}	-	<0.03	<0.03	<0.03			-	mg/kg	0.03	A-T-019s
Pyrene _A ^{M#}	-	<0.07	<0.07	<0.07	-	-	-	mg/kg	0.07	A-T-019s
Total PAH-16MS _A ^{M#}	-	<0.08	<0.08	<0.08	•	•	•	mg/kg	0.01	A-T-019s



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Lab Sample ID	22/00841/39	22/00841/41	22/00841/42	22/00841/44	22/00841/45	22/00841/46	22/00841/47			
Client Sample No										
Client Sample ID	TP20	TP21	TP21	TP22	TP23	TP23	TP24			
Depth to Top	0.35	0.8	2.2	4.0	0.5	3.1	0.5			
Depth To Bottom									u O	
Date Sampled	25-Jan-22	26-Jan-22	26-Jan-22	26-Jan-22	26-Jan-22	26-Jan-22	26-Jan-22		tecti	
Sample Type	Soil - D		of D	od re						
Sample Matrix Code	4AE	5A	3A	5A	4A	6A	4A	Units	Limit of Detection	Method ref
TPH CWG with Clean Up *C1										
Ali >C5-C6 _A #	-	<0.01	<0.01	<0.01	-	-	-	mg/kg	0.01	A-T-022s
Ali >C6-C8 _A #	-	<0.01	<0.01	<0.01	-	-	-	mg/kg	0.01	A-T-022s
Ali >C8-C10 _A	-	<1	<1	<1	-	-	-	mg/kg	1	A-T-055s
Ali >C10-C12 _A M#	-	<1	<1	<1	-	-	-	mg/kg	1	A-T-055s
Ali >C12-C16 _A M#	-	<1	<1	<1	-	-	-	mg/kg	1	A-T-055s
Ali >C16-C21AM#	-	<1	<1	<1	-	-	-	mg/kg	1	A-T-055s
Ali >C21-C35 _A M#	-	<1	<1	<1	-	-	-	mg/kg	1	A-T-055s
Total Aliphatics _A	-	<1	<1	<1	-	-	-	mg/kg	1	A-T-055s
Aro >C5-C7 _A #	-	<0.01	<0.01	<0.01	-	-	-	mg/kg	0.01	A-T-022s
Aro >C7-C8 _A #	-	<0.01	<0.01	<0.01	-	-	-	mg/kg	0.01	A-T-022s
Aro >C8-C10A	-	<1	<1	<1	-	-	-	mg/kg	1	A-T-055s
Aro >C10-C12 _A	-	<1	<1	<1	-	-	-	mg/kg	1	A-T-055s
Aro >C12-C16 _A	-	<1	<1	<1	-	-	-	mg/kg	1	A-T-055s
Aro >C16-C21 _A ^{M#}	-	<1	<1	<1	-	-	-	mg/kg	1	A-T-055s
Aro >C21-C35 _A	-	<1	<1	<1	-	-	-	mg/kg	1	A-T-055s
Total Aromatics _A	-	<1	<1	<1	-	-	-	mg/kg	1	A-T-055s
TPH (Ali & Aro >C5-C35) _A	-	<1	<1	<1	-	-	-	mg/kg	1	A-T-055s
BTEX - Benzene _A #	-	<0.01	<0.01	<0.01	-	-	-	mg/kg	0.01	A-T-022s
BTEX - Toluene _A #	-	<0.01	<0.01	<0.01	-	-	-	mg/kg	0.01	A-T-022s
BTEX - Ethyl Benzene _A #	-	<0.01	<0.01	<0.01	-	-	-	mg/kg	0.01	A-T-022s
BTEX - m & p Xylene _A #	-	<0.01	<0.01	<0.01	-	-	-	mg/kg	0.01	A-T-022s
BTEX - o Xylene _A #	-	<0.01	<0.01	<0.01	-	-	-	mg/kg	0.01	A-T-022s
MTBE _A #	-	<0.01	<0.01	<0.01	-	-	-	mg/kg	0.01	A-T-022s



					Client Pro	ect Ref: BN	111234			
Lab Sample ID	22/00841/49	22/00841/50	22/00841/51	22/00841/52	22/00841/53	22/00841/54	22/00841/57			
Client Sample No										
Client Sample ID	TP25	TP25	TP26	TP26	WS01	WS01	WS03			
Depth to Top	0.5	3.5	1	4.2	0.2	1.2	0.8			
Depth To Bottom									uo	
Date Sampled	26-Jan-22		Limit of Detection	4						
Sample Type	Soil - D		of D	Method ref						
Sample Matrix Code	6A	4	6A	5A	4AE	4A	5A	Units	Limit	Meth
% Stones >10mm _A	<0.1	<0.1	<0.1	<0.1	25.8	1.8	8.0	% w/w	0.1	A-T-044
pH _D ^{M#}	7.97	8.37	7.82	8.44	7.34	7.84	7.70	pН	0.01	A-T-031s
Sulphate (water sol 2:1) _D ^{M#}	0.20	0.05	0.04	0.02	<0.01	<0.01	<0.01	g/I	0.01	A-T-026s
Sulphate (acid soluble) _D M#	940	510	<200	370	280	<200	<1000	mg/kg	200	A-T-028s
Sulphur (total) _D	-	1550	-	-	157	<50	-	mg/kg	50	A-T-024s
Cyanide (total) _A ^{M#}	<1	-	<1	<1	-	-	<1	mg/kg	1	A-T-042sTCN
Phenois - Total by HPLC _A	<0.2	-	<0.2	<0.2	-	-	<0.2	mg/kg	0.2	A-T-050s
SulphideA	<5	-	<5	<5	-	-	<5	mg/kg	5	A-T-043-s
Organic matter _D ^{M#}	1.3	-	0.3	0.7	-	-	0.2	% w/w	0.1	A-T-032 OM
Arsenic _D ^{M#}	6	2	7	<1	9	9	59	mg/kg	1	A-T-024s
Boron (water soluble) _D	<1.0	-	<1.0	<1.0	-	-	<1.0	mg/kg	1	A-T-027s
Cadmium _D M#	0.8	0.7	1.8	0.9	1.1	1.2	6.1	mg/kg	0.5	A-T-024s
Copper _D ^{M#}	17	12	14	13	14	15	44	mg/kg	1	A-T-024s
Chromium _D M#	26	14	31	19	21	17	43	mg/kg	1	A-T-024s
Chromium (hexavalent) _D	<1	-	<1	<1	-	-	<1	mg/kg	1	A-T-040s
Lead _D ^{M#}	11	8	13	9	20	9	29	mg/kg	1	A-T-024s
Mercury _D	0.33	0.68	<0.17	0.61	<0.17	<0.17	<0.85	mg/kg	0.17	A-T-024s
Nickel _D ^{M#}	28	17	28	21	13	17	63	mg/kg	1	A-T-024s
Selenium _D ^{M#}	1	<1	<1	<1	<1	<1	<5	mg/kg	1	A-T-024s
Zinc _D ^{M#}	49	35	61	42	56	44	274	mg/kg	5	A-T-024s



Lab Sample ID	22/00841/49	22/00841/50	22/00841/51	22/00841/52	22/00841/53	22/00841/54	22/00841/57			
Client Sample No										
Client Sample ID	TP25	TP25	TP26	TP26	WS01	WS01	WS03			
Depth to Top	0.5	3.5	1	4.2	0.2	1.2	0.8			
Depth To Bottom									<u></u>	
Date Sampled	26-Jan-22		Detection	4						
Sample Type	Soil - D			Method ref						
Sample Matrix Code	6A	4	6A	5A	4AE	4A	5A	Units	Limit of	Meth
Asbestos in Soil (inc. matrix)										
Asbestos in soil _D #	NAD	-	NAD	NAD	-	-	NAD			A-T-045
Asbestos Matrix (visual) _D	-	-	-	-	-	-	-			A-T-045
Asbestos Matrix (microscope) _□	-	-	-	-	-	-	-			A-T-045
Asbestos ACM - Suitable for Water Absorption Test? _D	N/A	-	N/A	N/A	-	-	N/A			A-T-045



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Lab Sample ID	22/00841/49	22/00841/50	22/00841/51	22/00841/52	22/00841/53	22/00841/54	22/00841/57			
Client Sample No										
Client Sample ID	TP25	TP25	TP26	TP26	WS01	WS01	WS03			
Depth to Top	0.5	3.5	1	4.2	0.2	1.2	0.8			
Depth To Bottom									ion	
Date Sampled	26-Jan-22	26-Jan-22	26-Jan-22	26-Jan-22	26-Jan-22	26-Jan-22	26-Jan-22		Limit of Detection	<u>ب</u>
Sample Type	Soil - D	Soil - D		of D	Method ref					
Sample Matrix Code	6A	4	6A	5A	4AE	4A	5A	Units	Limit	Meth
PAH-16MS										
Acenaphthene _A ^{M#}	<0.01	-	<0.01	<0.01	-	-	<0.01	mg/kg	0.01	A-T-019s
Acenaphthylene _A ^{M#}	<0.01	-	<0.01	<0.01	-	-	<0.01	mg/kg	0.01	A-T-019s
Anthracene _A ^{M#}	<0.02	-	<0.02	<0.02			<0.02	mg/kg	0.02	A-T-019s
Benzo(a)anthracene ^{A#}	<0.04	-	<0.04	<0.04	•	•	<0.04	mg/kg	0.04	A-T-019s
Benzo(a)pyrene _A ^{M#}	<0.04	-	<0.04	<0.04	•	•	<0.04	mg/kg	0.04	A-T-019s
Benzo(b)fluoranthene _A ^{M#}	<0.05	-	<0.05	<0.05	•	•	<0.05	mg/kg	0.05	A-T-019s
Benzo(ghi)perylene _A ^{M#}	<0.05	-	<0.05	<0.05	-	-	<0.05	mg/kg	0.05	A-T-019s
Benzo(k)fluoranthene _A ^{M#}	<0.07	-	<0.07	<0.07	-	-	<0.07	mg/kg	0.07	A-T-019s
Chrysene _A ^{M#}	<0.06	-	<0.06	<0.06	-	-	<0.06	mg/kg	0.06	A-T-019s
Dibenzo(ah)anthracene _A M#	<0.04	-	<0.04	<0.04	-		<0.04	mg/kg	0.04	A-T-019s
Fluoranthene _A ^{M#}	<0.08	-	<0.08	<0.08	•	•	<0.08	mg/kg	0.08	A-T-019s
Fluorene _A ^{M#}	<0.01	-	<0.01	<0.01	•	•	<0.01	mg/kg	0.01	A-T-019s
Indeno(123-cd)pyrene _A ^{M#}	<0.03	-	<0.03	<0.03			<0.03	mg/kg	0.03	A-T-019s
Naphthalene A ^{M#}	<0.03	-	<0.03	<0.03	-		<0.03	mg/kg	0.03	A-T-019s
Phenanthrene _A ^{M#}	<0.03	-	<0.03	<0.03		-	<0.03	mg/kg	0.03	A-T-019s
Pyrene _A ^{M#}	<0.07	-	<0.07	<0.07	-	-	<0.07	mg/kg	0.07	A-T-019s
Total PAH-16MS _A ^{M#}	<0.08	-	<0.08	<0.08	•	•	<0.08	mg/kg	0.01	A-T-019s



					0.10111110	ect Ret: Bi				
Lab Sample ID	22/00841/49	22/00841/50	22/00841/51	22/00841/52	22/00841/53	22/00841/54	22/00841/57			
Client Sample No										
Client Sample ID	TP25	TP25	TP26	TP26	WS01	WS01	WS03			
Depth to Top	0.5	3.5	1	4.2	0.2	1.2	0.8			
Depth To Bottom									ion	
Date Sampled	26-Jan-22		etect	Į.						
Sample Type	Soil - D		Limit of Detection	Method ref						
Sample Matrix Code	6A	4	6A	5A	4AE	4A	5A	Units	Limit	Meth
TPH CWG with Clean Up *C1										
Ali >C5-C6 _A #	<0.01	-	<0.01	<0.01	-	-	<0.01	mg/kg	0.01	A-T-022s
Ali >C6-C8 _A #	<0.01	-	<0.01	<0.01	-	-	<0.01	mg/kg	0.01	A-T-022s
Ali >C8-C10 _A	<1	-	<1	<1	-	-	<1	mg/kg	1	A-T-055s
Ali >C10-C12 _A M#	<1	-	<1	<1	-	-	<1	mg/kg	1	A-T-055s
Ali >C12-C16 _A M#	<1	-	<1	<1	-	-	<1	mg/kg	1	A-T-055s
Ali >C16-C21AM#	<1	-	<1	<1	-	-	<1	mg/kg	1	A-T-055s
Ali >C21-C35 _A M#	<1	-	<1	<1	-	-	<1	mg/kg	1	A-T-055s
Total Aliphatics _A	<1	-	<1	<1	-	-	<1	mg/kg	1	A-T-055s
Aro >C5-C7 _A #	<0.01	-	<0.01	<0.01	-	-	<0.01	mg/kg	0.01	A-T-022s
Aro >C7-C8 _A #	<0.01	-	<0.01	<0.01	-	-	<0.01	mg/kg	0.01	A-T-022s
Aro >C8-C10 _A	<1	-	<1	<1	-	-	<1	mg/kg	1	A-T-055s
Aro >C10-C12 _A	<1	-	<1	<1	-	-	<1	mg/kg	1	A-T-055s
Aro >C12-C16 _A	<1	-	<1	<1	-	-	<1	mg/kg	1	A-T-055s
Aro >C16-C21 _A M#	<1	-	<1	<1	-	-	<1	mg/kg	1	A-T-055s
Aro >C21-C35 _A	<1	-	<1	<1	-	-	<1	mg/kg	1	A-T-055s
Total Aromatics _A	<1	-	<1	<1	-	-	<1	mg/kg	1	A-T-055s
TPH (Ali & Aro >C5-C35) _A	<1	-	<1	<1	-	-	<1	mg/kg	1	A-T-055s
BTEX - Benzene _A #	<0.01	-	<0.01	<0.01	-	-	<0.01	mg/kg	0.01	A-T-022s
BTEX - Toluene _A #	<0.01	-	<0.01	<0.01	-	-	<0.01	mg/kg	0.01	A-T-022s
BTEX - Ethyl Benzene _A #	<0.01	-	<0.01	<0.01	•		<0.01	mg/kg	0.01	A-T-022s
BTEX - m & p Xylene _A #	<0.01	-	<0.01	<0.01	-	-	<0.01	mg/kg	0.01	A-T-022s
BTEX - o Xylene _A #	<0.01	-	<0.01	<0.01	•		<0.01	mg/kg	0.01	A-T-022s
MTBE _A #	<0.01	-	<0.01	<0.01	-	-	<0.01	mg/kg	0.01	A-T-022s



				Chefit 1 10	ject Ret: Bi	111234			
Lab Sample ID	22/00841/59	22/00841/61	22/00841/62						
Client Sample No									
Client Sample ID	WS04	WS05	WS05						
Depth to Top	0.1	0.5	3						
Depth To Bottom								ion	
Date Sampled	26-Jan-22	26-Jan-22	26-Jan-22					etect	بيو
Sample Type	Soil - D	Soil - D	Soil - D					Limit of Detection	Method ref
Sample Matrix Code	4AE	4AE	5A				Units	Limit	Meth
% Stones >10mm _A	10.5	44.8	1.2				% w/w	0.1	A-T-044
pH _D ^{M#}	7.34	7.40	6.97				рН	0.01	A-T-031s
Sulphate (water sol 2:1) _D ^{M#}	<0.01	<0.01	0.02				g/I	0.01	A-T-026s
Sulphate (acid soluble) _D M#	350	<200	<1000				mg/kg	200	A-T-028s
Sulphur (total) _□	196	55	<100				mg/kg	50	A-T-024s
Arsenic _D ^{M#}	18	7	13				mg/kg	1	A-T-024s
Cadmium _D ^{M#}	1.8	0.8	2.2				mg/kg	0.5	A-T-024s
Copper _D M#	17	8	17				mg/kg	1	A-T-024s
Chromium _D ^{M#}	21	11	36				mg/kg	1	A-T-024s
Lead _D ^{M#}	32	9	16				mg/kg	1	A-T-024s
Mercury _D	<0.17	<0.17	<0.34				mg/kg	0.17	A-T-024s
Nickel _D ^{M#}	21	9	34				mg/kg	1	A-T-024s
Selenium _D ^{M#}	<1	<1	<2				mg/kg	1	A-T-024s
Zinc _D ^{M#}	83	36	115				mg/kg	5	A-T-024s



REPORT NOTES

General

This report shall not be reproduced, except in full, without written approval from Envirolab.

The results reported herein relate only to the material supplied to the laboratory.

The residue of any samples contained within this report, and any received with the same delivery, will be disposed of six weeks after initial scheduling. For samples tested for Asbestos we will retain a portion of the dried sample for a minimum of six months after the initial Asbestos testing is completed.

Analytical results reflect the quality of the sample at the time of analysis only.

Opinions and interpretations expressed are outside the scope of our accreditation.

If results are in italic font they are associated with an AQC failure, these are not accredited and are unreliable.

A deviating samples report is appended and will indicate if samples or tests have been found to be deviating. Any test results affected may not be an accurate record of the concentration at the time of sampling and, as a result, may be invalid.

The Client Sample No, Client Sample ID, Depth to Top, Depth to Bottom and Date Sampled were all provided by the client.

Soil chemical analysis:

All results are reported as dry weight (<40°C).

For samples with Matrix Codes 1 - 6 natural stones, brick and concrete fragments >10mm and any extraneous material (visible glass, metal or twigs) are removed and excluded from the sample prior to analysis and reported results corrected to a whole sample basis. This is reported as '% stones >10mm'.

For samples with Matrix Code 7 the whole sample is dried and crushed prior to analysis and this supersedes any "A" subscripts All analysis is performed on the sample as received for soil samples which are positive for asbestos or the client has informed asbestos may be present and/or if they are from outside the European Union and this supersedes any "D" subscripts.

TPH analysis of water by method A-T-007:

Free and visible oils are excluded from the sample used for analysis so that the reported result represents the dissolved phase only.

Electrical Conductivity of water by Method A-T-037:

Results greater than 12900µS/cm @ 25°C / 11550µS/cm @ 20°C fall outside the calibration range and as such are unaccredited.

Asbestos:

Asbestos in soil analysis is performed on a dried aliquot of the submitted sample and cannot guarantee to identify asbestos if only present in small numbers as discrete fibres/fragments in the original sample.

Stones etc. are not removed from the sample prior to analysis.

Quantification of asbestos is a 3 stage process including visual identification, hand picking and weighing and fibre counting by sedimentation/phase contrast optical microscopy if required. If asbestos is identified as being present but is not in a form that is suitable for analysis by hand picking and weighing (normally if the asbestos is present as free fibres) quantification by sedimentation is performed. Where ACMs are found a percentage asbestos is assigned to each with reference to 'HSG264, Asbestos: The survey guide' and the calculated asbestos content is expressed as a percentage of the dried soil sample aliquot used.

Predominant Matrix Codes:

1 = SAND, 2 = LOAM, 3 = CLAY, 4 = LOAM/SAND, 5 = SAND/CLAY, 6 = CLAY/LOAM, 7 = OTHER, 8 = Asbestos bulk ID sample, 9 = INCINERATOR ASH.

Samples with Matrix Code 7 & 8 are not predominantly a SAND/LOAM/CLAY mix and are not covered by our BSEN 17025 or MCERTS accreditations, with the exception of bulk asbestos which are BSEN 17025 accredited.

Secondary Matrix Codes:

A = contains stones, B = contains construction rubble, C = contains visible hydrocarbons, D = contains glass/metal, E = contains roots/twigs.

Key:

IS indicates Insufficient Sample for analysis.

US indicates Unsuitable Sample for analysis.

NDP indicates No Determination Possible.

NAD indicates No Asbestos Detected.

N/A indicates Not Applicable.

Superscript # indicates method accredited to ISO 17025.

Superscript "M" indicates method accredited to MCERTS.

Subscript "A" indicates analysis performed on the sample as received.

Subscript "D" indicates analysis performed on the dried sample, crushed to pass a 2mm sieve

EPH CWG results have humics mathematically subtracted through instrument calculation

TPH results "with Cleanup" indicates results cleaned up with Silica during extraction

EPH CWG GCxGC ID from TPH CWG

Where we have identified humic substances in any ID's from TPH CWG with Clean Up please note that the concentration of these humic substances is not included in the quantified results and are included in the ID for information.

Please contact us if you need any further information.



Envirolab Deviating Samples Report

Units 7&8 Sandpits Business Park, Mottram Road, Hyde, SK14 3AR Tel. 0161 368 4921 email. ask@envlab.co.uk

Client: Wardell Armstrong (Birmingham), 2 Devon Way, Longbridge, Birmingham, UK, **Project No:** 22/00841

Date Received: 01/02/2022 (am)

Project: South West Rugby Cool Box Temperatures (°C): 5.5

Clients Project No: BM11254

Lab Sample ID	22/00841/6	22/00841/10	22/00841/11	22/00841/12	22/00841/18	22/00841/22	22/00841/26	22/00841/28	22/00841/34	22/00841/38	22/00841/41	22/00841/42
Client Sample No												
Client Sample ID/Depth	TP03 2.4m	TP05 2m	TP06 0.6m	TP06 1.4m	TP09 3.1m	TP11 1.5m	TP13 1.2m	TP14 1.75m	TP17 2.9m	TP19 1.25m	TP21 0.8m	TP21 2.2m
Date Sampled	24/01/22	24/01/22	24/01/22	24/01/22	24/01/22	25/01/22	25/01/22	25/01/22	25/01/22	25/01/22	26/01/22	26/01/22
Deviation Code												
F	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	√

Lab Sample ID	22/00841/44	22/00841/49	22/00841/51	22/00841/52	22/00841/57
Client Sample No					
Client Sample ID/Depth	TP22 4.0m	TP25 0.5m	TP26 1m	TP26 4.2m	WS03 0.8m
Date Sampled	26/01/22	26/01/22	26/01/22	26/01/22	26/01/22
Deviation Code					
F	✓	✓	✓	✓	✓

Key

Maximum holding time exceeded between sampling date and analysis for analytes listed below

HOLDING TIME EXCEEDANCES

Lab Sample ID	22/00841/6	22/00841/10	22/00841/11	22/00841/12	22/00841/18	22/00841/22	22/00841/26	22/00841/28	22/00841/34	22/00841/38	22/00841/41	22/00841/42
Client Sample No												
Client Sample ID/Depth	TP03 2.4m	TP05 2m	TP06 0.6m	TP06 1.4m	TP09 3.1m	TP11 1.5m	TP13 1.2m	TP14 1.75m	TP17 2.9m	TP19 1.25m	TP21 0.8m	TP21 2.2m
Date Sampled	24/01/22	24/01/22	24/01/22	24/01/22	24/01/22	25/01/22	25/01/22	25/01/22	25/01/22	25/01/22	26/01/22	26/01/22
Sulphide	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓



Lab Sample ID	22/00841/44	22/00841/49	22/00841/51	22/00841/52	22/00841/57
Client Sample No					
Client Sample ID/Depth	TP22 4.0m	TP25 0.5m	TP26 1m	TP26 4.2m	WS03 0.8m
Date Sampled	26/01/22	26/01/22	26/01/22	26/01/22	26/01/22
Sulphide	✓	✓	✓	✓	✓

Note: If, at any point before reaching the laboratory, the temperature of the samples has breached those set in published standards, e.g. BS-EN 5667-3 (for water samples $5 \pm 3^{\circ}$ C), ISO 18400-105:2017, then the concentration of any affected analytes may differ from that at the time of sampling.



Envirolab Analysis Dates

Lab Sample ID	22/00841/2	22/00841/3	22/00841/4	22/00841/5	22/00841/6	22/00841/8	22/00841/9	22/00841/10	22/00841/11	22/00841/12	22/00841/14	22/00841/15
Client Sample No												
Client Sample ID/Depth	TP01 1.1m	TP02 0.15m	TP02 0.7m	TP03 1.8m	TP03 2.4m	TP04 1.2m	TP05 0.25m	TP05 2m	TP06 0.6m	TP06 1.4m	TP07 2m	TP08 0.3m
Date Sampled	24/01/22	24/01/22	24/01/22	24/01/22	24/01/22	24/01/22	24/01/22	24/01/22	24/01/22	24/01/22	24/01/22	24/01/22
A-T-019s					08/02/2022			08/02/2022	08/02/2022	08/02/2022		
A-T-022s					09/02/2022			09/02/2022	09/02/2022	09/02/2022		
A-T-024s	09/02/2022	09/02/2022	09/02/2022	09/02/2022	10/02/2022	10/02/2022	09/02/2022	09/02/2022	09/02/2022	09/02/2022	09/02/2022	09/02/2022
A-T-026s	08/02/2022	08/02/2022	08/02/2022	08/02/2022	08/02/2022	08/02/2022	08/02/2022	08/02/2022	08/02/2022	08/02/2022	08/02/2022	08/02/2022
A-T-027s					09/02/2022			09/02/2022	09/02/2022	09/02/2022		
A-T-028s	09/02/2022	09/02/2022	09/02/2022	09/02/2022	09/02/2022	09/02/2022	09/02/2022	09/02/2022	09/02/2022	09/02/2022	09/02/2022	09/02/2022
A-T-031s	09/02/2022	09/02/2022	09/02/2022	09/02/2022	09/02/2022	09/02/2022	09/02/2022	09/02/2022	09/02/2022	09/02/2022	09/02/2022	09/02/2022
A-T-032 OM					08/02/2022			08/02/2022	08/02/2022	08/02/2022		
A-T-040s					08/02/2022			08/02/2022	08/02/2022	08/02/2022		
A-T-042sTCN					07/02/2022			07/02/2022	07/02/2022	07/02/2022		
A-T-043-s					08/02/2022			08/02/2022	08/02/2022	08/02/2022		
A-T-044	04/02/2022	04/02/2022	04/02/2022	04/02/2022	04/02/2022	04/02/2022	04/02/2022	04/02/2022	04/02/2022	04/02/2022	04/02/2022	04/02/2022
A-T-045					02/02/2022			02/02/2022	02/02/2022	02/02/2022		
A-T-050s					07/02/2022			07/02/2022	07/02/2022	07/02/2022		
A-T-055s					09/02/2022			09/02/2022	09/02/2022	09/02/2022		



Lab Sample ID	22/00841/16	22/00841/17	22/00841/18	22/00841/19	22/00841/21	22/00841/22	22/00841/23	22/00841/24	22/00841/25	22/00841/26	22/00841/28	22/00841/30
Client Sample No												
Client Sample ID/Depth	TP08 3.50m	TP09 1.5m	TP09 3.1m	TP10 0.1m	TP11 0.2m	TP11 1.5m	TP12 0.85m	TP12 1.8m	TP13 0.1m	TP13 1.2m	TP14 1.75m	TP15 2.05m
Date Sampled	24/01/22	24/01/22	24/01/22	24/01/22	25/01/22	25/01/22	25/01/22	25/01/22	25/01/22	25/01/22	25/01/22	25/01/22
A-T-019s			08/02/2022			08/02/2022				08/02/2022	08/02/2022	
A-T-022s			09/02/2022			09/02/2022				09/02/2022	09/02/2022	
A-T-024s	09/02/2022	09/02/2022	10/02/2022	09/02/2022	09/02/2022	10/02/2022	09/02/2022	10/02/2022	09/02/2022	09/02/2022	10/02/2022	09/02/2022
A-T-026s	08/02/2022	08/02/2022	08/02/2022	08/02/2022	08/02/2022	08/02/2022	08/02/2022	08/02/2022	08/02/2022	08/02/2022	08/02/2022	08/02/2022
A-T-027s			09/02/2022			09/02/2022				09/02/2022	09/02/2022	
A-T-028s	09/02/2022	09/02/2022	09/02/2022	09/02/2022	09/02/2022	09/02/2022	09/02/2022	09/02/2022	09/02/2022	09/02/2022	09/02/2022	09/02/2022
A-T-031s	09/02/2022	09/02/2022	09/02/2022	09/02/2022	09/02/2022	09/02/2022	09/02/2022	09/02/2022	09/02/2022	09/02/2022	09/02/2022	09/02/2022
A-T-032 OM			08/02/2022			08/02/2022				08/02/2022	08/02/2022	
A-T-040s			08/02/2022			08/02/2022				08/02/2022	08/02/2022	
A-T-042sTCN			07/02/2022			07/02/2022				07/02/2022	07/02/2022	
A-T-043-s			08/02/2022			08/02/2022				08/02/2022	08/02/2022	
A-T-044	04/02/2022	04/02/2022	04/02/2022	04/02/2022	04/02/2022	04/02/2022	04/02/2022	04/02/2022	04/02/2022	04/02/2022	04/02/2022	04/02/2022
A-T-045			02/02/2022			02/02/2022				02/02/2022	02/02/2022	
A-T-050s			07/02/2022			07/02/2022				07/02/2022	07/02/2022	
A-T-055s			09/02/2022			09/02/2022				09/02/2022	09/02/2022	



Lab Sample ID	22/00841/32	22/00841/34	22/00841/35	22/00841/38	22/00841/39	22/00841/41	22/00841/42	22/00841/44	22/00841/45	22/00841/46	22/00841/47	22/00841/49
Client Sample No												
Client Sample ID/Depth	TP16 1.2m	TP17 2.9m	TP18 0.75m	TP19 1.25m	TP20 0.35m	TP21 0.8m	TP21 2.2m	TP22 4.0m	TP23 0.5m	TP23 3.1m	TP24 0.5m	TP25 0.5m
Date Sampled	25/01/22	25/01/22	25/01/22	25/01/22	25/01/22	26/01/22	26/01/22	26/01/22	26/01/22	26/01/22	26/01/22	26/01/22
A-T-019s		08/02/2022		08/02/2022		08/02/2022	08/02/2022	08/02/2022				08/02/2022
A-T-022s		09/02/2022		09/02/2022		09/02/2022	09/02/2022	09/02/2022				09/02/2022
A-T-024s	09/02/2022	09/02/2022	09/02/2022	10/02/2022	09/02/2022	09/02/2022	09/02/2022	09/02/2022	09/02/2022	09/02/2022	09/02/2022	09/02/2022
A-T-026s	08/02/2022	08/02/2022	08/02/2022	08/02/2022	08/02/2022	08/02/2022	08/02/2022	08/02/2022	08/02/2022	08/02/2022	08/02/2022	08/02/2022
A-T-027s		09/02/2022		09/02/2022		09/02/2022	09/02/2022	09/02/2022				09/02/2022
A-T-028s	09/02/2022	09/02/2022	09/02/2022	09/02/2022	09/02/2022	09/02/2022	09/02/2022	09/02/2022	09/02/2022	09/02/2022	09/02/2022	09/02/2022
A-T-031s	09/02/2022	09/02/2022	09/02/2022	09/02/2022	09/02/2022	09/02/2022	09/02/2022	09/02/2022	09/02/2022	09/02/2022	09/02/2022	09/02/2022
A-T-032 OM		08/02/2022		09/02/2022		08/02/2022	08/02/2022	08/02/2022				08/02/2022
A-T-040s		08/02/2022		08/02/2022		08/02/2022	08/02/2022	08/02/2022				08/02/2022
A-T-042sTCN		07/02/2022		07/02/2022		07/02/2022	07/02/2022	07/02/2022				07/02/2022
A-T-043-s		08/02/2022		08/02/2022		08/02/2022	08/02/2022	08/02/2022				08/02/2022
A-T-044	04/02/2022	04/02/2022	04/02/2022	04/02/2022	04/02/2022	04/02/2022	04/02/2022	04/02/2022	04/02/2022	04/02/2022	04/02/2022	04/02/2022
A-T-045		02/02/2022		02/02/2022		02/02/2022	02/02/2022	02/02/2022				02/02/2022
A-T-050s		07/02/2022		07/02/2022		07/02/2022	07/02/2022	07/02/2022				07/02/2022
A-T-055s		09/02/2022		09/02/2022		09/02/2022	09/02/2022	09/02/2022				09/02/2022



Lab Sample ID	22/00841/50	22/00841/51	22/00841/52	22/00841/53	22/00841/54	22/00841/57	22/00841/59	22/00841/61	22/00841/62
Client Sample No									
Client Sample ID/Depth	TP25 3.5m	TP26 1m	TP26 4.2m	WS01 0.2m	WS01 1.2m	WS03 0.8m	WS04 0.1m	WS05 0.5m	WS05 3m
Date Sampled	26/01/22	26/01/22	26/01/22	26/01/22	26/01/22	26/01/22	26/01/22	26/01/22	26/01/22
A-T-019s		08/02/2022	08/02/2022			08/02/2022			
A-T-022s		09/02/2022	09/02/2022			09/02/2022			
A-T-024s	10/02/2022	09/02/2022	09/02/2022	09/02/2022	09/02/2022	10/02/2022	09/02/2022	09/02/2022	10/02/2022
A-T-026s	08/02/2022	08/02/2022	08/02/2022	08/02/2022	08/02/2022	08/02/2022	08/02/2022	08/02/2022	08/02/2022
A-T-027s		09/02/2022	09/02/2022			09/02/2022			
A-T-028s	09/02/2022	09/02/2022	09/02/2022	09/02/2022	09/02/2022	09/02/2022	09/02/2022	09/02/2022	09/02/2022
A-T-031s	09/02/2022	09/02/2022	09/02/2022	09/02/2022	09/02/2022	09/02/2022	09/02/2022	09/02/2022	08/02/2022
A-T-032 OM		08/02/2022	08/02/2022			08/02/2022			
A-T-040s		08/02/2022	08/02/2022			08/02/2022			
A-T-042sTCN		07/02/2022	07/02/2022			07/02/2022			
A-T-043-s		08/02/2022	08/02/2022			08/02/2022			
A-T-044	04/02/2022	04/02/2022	04/02/2022	04/02/2022	04/02/2022	04/02/2022	04/02/2022	04/02/2022	04/02/2022
A-T-045		02/02/2022	02/02/2022			02/02/2022			
A-T-050s		07/02/2022	07/02/2022			07/02/2022			
A-T-055s		09/02/2022	09/02/2022			09/02/2022			

The above dates are the analysis completion dates, please note that these are not necessarily the date that the analysis was weighed/extracted.

End of Report



FINAL ANALYTICAL TEST REPORT

Envirolab Job Number: 22/00867

Issue Number: 1 **Date:** 10 February, 2022

Client: Wardell Armstrong (Birmingham)

2 Devon Way Longbridge Birmingham

UK

B31 2TS

Project Manager: Jamie Lucas

Project Name: South West Rugby

Project Ref: BM11254
Order No: TBC
Date Samples Received: 01/02/22
Date Instructions Received: 01/02/22
Date Analysis Completed: 10/02/22

Approved by:

Richard Wong Client Manager



					Onem 110	ject Ret: Bi				
Lab Sample ID	22/00867/1	22/00867/2	22/00867/3	22/00867/4	22/00867/5	22/00867/6	22/00867/8			
Client Sample No										
Client Sample ID	HA01	WS06	WS06	WS07	WS07	WS08	WS09			
Depth to Top	0.3	1	2.8	0.5	2.2	0.9	0.5			
Depth To Bottom									<u>io</u>	
Date Sampled	28-Jan-22	27-Jan-22	27-Jan-22	27-Jan-22	27-Jan-22	27-Jan-22	26-Jan-22		etect	<u></u>
Sample Type	Soil - ES	Soil - ES		Limit of Detection	Method ref					
Sample Matrix Code	4AE	5A	5A	4AE	5A	4A	4A	Units	Limit	Meth
% Stones >10mm _A	16.1	12.1	41.3	14.8	32.7	8.7	29.5	% w/w	0.1	A-T-044
pH _D M#	6.62	6.96	6.94	7.28	6.86	7.30	7.48	рН	0.01	A-T-031s
Sulphate (water sol 2:1) _D M#	<0.01	0.03	0.01	<0.01	0.01	0.04	<0.01	g/I	0.01	A-T-026s
Sulphate (acid soluble) _D M#	270	<400	<1000	<200	<1000	<200	<200	mg/kg	200	A-T-028s
Sulphur (total) _D	-	78	-	161	-	-	-	mg/kg	50	A-T-024s
Cyanide (total) _A ^{M#}	<1	-	<1	-	<1	<1	<1	mg/kg	1	A-T-042sTCN
Phenols - Total by HPLC _A	<0.2	-	<0.2	-	<0.2	<0.2	<0.2	mg/kg	0.2	A-T-050s
Sulphide _A	<5	-	<5	-	<5	<5	<5	mg/kg	5	A-T-043-s
Organic matter _D ^{M#}	1.8	-	0.1	-	0.1	0.4	0.7	% w/w	0.1	A-T-032 OM
Arsenic _D ^{M#}	9	54	23	14	29	10	6	mg/kg	1	A-T-024s
Boron (water soluble) _D	<1.0	-	<1.0	-	<1.0	<1.0	<1.0	mg/kg	1	A-T-027s
Cadmium _D ^{M#}	1.1	4.2	3.0	1.4	2.4	1.4	0.9	mg/kg	0.5	A-T-024s
Copper _D ^{M#}	6	33	16	14	16	10	4	mg/kg	1	A-T-024s
Chromium _D ^{M#}	19	35	21	16	22	14	11	mg/kg	1	A-T-024s
Chromium (hexavalent) _□	<1	-	<1	-	<1	<1	<1	mg/kg	1	A-T-040s
Lead _D ^{M#}	16	23	15	24	12	11	8	mg/kg	1	A-T-024s
Mercury _D	<0.17	<0.17	<0.34	<0.17	-	<0.17	<0.17	mg/kg	0.17	A-T-024s
Mercury₀ [#]	-	-	-	-	<0.17	-	-	mg/kg	0.17	A-T-024s
Nickel _D ^{M#}	9	44	38	15	27	16	10	mg/kg	1	A-T-024s
Selenium _D ^{M#}	<1	<1	<2	<1	<1	<1	<1	mg/kg	1	A-T-024s
Zinc _D ^{M#}	33	149	129	70	91	56	27	mg/kg	5	A-T-024s



Lab Sample ID	22/00867/1	22/00867/2	22/00867/3	22/00867/4	22/00867/5	22/00867/6	22/00867/8			
Client Sample No										
Client Sample ID	HA01	WS06	WS06	WS07	WS07	WS08	WS09			
Depth to Top	0.3	1	2.8	0.5	2.2	0.9	0.5			
Depth To Bottom									ion	
Date Sampled	28-Jan-22	27-Jan-22	27-Jan-22	27-Jan-22	27-Jan-22	27-Jan-22	26-Jan-22		Detection	*
Sample Type	Soil - ES		t of D	Method ref						
Sample Matrix Code	4AE	5A	5A	4AE	5A	4A	4A	Units	Limit of	Meth
Asbestos in Soil (inc. matrix)										
Asbestos in soil _D #	NAD	-	NAD	-	NAD	NAD	NAD			A-T-045
Asbestos Matrix (visual) _D	-		-	-	-	-	-			A-T-045
Asbestos Matrix (microscope) _D	-		-		-	-	-			A-T-045
Asbestos ACM - Suitable for Water Absorption Test? _D	N/A	-	N/A	-	N/A	N/A	N/A			A-T-045



					Cilentino	ect Ret: Bi	111234			
Lab Sample ID	22/00867/1	22/00867/2	22/00867/3	22/00867/4	22/00867/5	22/00867/6	22/00867/8			
Client Sample No										
Client Sample ID	HA01	WS06	WS06	WS07	WS07	WS08	WS09			
Depth to Top	0.3	1	2.8	0.5	2.2	0.9	0.5			
Depth To Bottom									ion	
Date Sampled	28-Jan-22	27-Jan-22	27-Jan-22	27-Jan-22	27-Jan-22	27-Jan-22	26-Jan-22		etect	4 .
Sample Type	Soil - ES	Soil - ES		Limit of Detection	Method ref					
Sample Matrix Code	4AE	5A	5A	4AE	5A	4A	4A	Units	Limi	Meth
PAH-16MS										
Acenaphthene _A M#	<0.01	-	<0.01	-	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-019s
Acenaphthylene _A ^{M#}	<0.01	-	<0.01	-	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-019s
Anthracene _A ^{M#}	<0.02	-	<0.02	-	<0.02	<0.02	<0.02	mg/kg	0.02	A-T-019s
Benzo(a)anthracene _A ^{M#}	<0.04	-	<0.04	-	<0.04	<0.04	<0.04	mg/kg	0.04	A-T-019s
Benzo(a)pyrene ^{M#}	<0.04	-	<0.04	-	<0.04	<0.04	<0.04	mg/kg	0.04	A-T-019s
Benzo(b)fluoranthene _A ^{M#}	<0.05	-	<0.05	-	<0.05	<0.05	<0.05	mg/kg	0.05	A-T-019s
Benzo(ghi)perylene _A ^{M#}	<0.05	-	<0.05	-	<0.05	<0.05	<0.05	mg/kg	0.05	A-T-019s
Benzo(k)fluoranthene _A ^{M#}	<0.07	-	<0.07	-	<0.07	<0.07	<0.07	mg/kg	0.07	A-T-019s
Chrysene _A M#	<0.06	-	<0.06	-	<0.06	<0.06	<0.06	mg/kg	0.06	A-T-019s
Dibenzo(ah)anthracene _A M#	<0.04	-	<0.04	-	<0.04	<0.04	<0.04	mg/kg	0.04	A-T-019s
Fluoranthene _A ^{M#}	<0.08	-	<0.08	-	<0.08	<0.08	<0.08	mg/kg	0.08	A-T-019s
Fluorene _A ^{M#}	<0.01	-	<0.01	-	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-019s
Indeno(123-cd)pyrene _A ^{M#}	<0.03	-	<0.03	-	<0.03	<0.03	<0.03	mg/kg	0.03	A-T-019s
Naphthalene A ^{M#}	<0.03	-	<0.03	-	<0.03	<0.03	<0.03	mg/kg	0.03	A-T-019s
Phenanthrene _A ^{M#}	<0.03	-	<0.03	-	<0.03	<0.03	<0.03	mg/kg	0.03	A-T-019s
Pyrene _A ^{M#}	<0.07	-	<0.07	-	<0.07	<0.07	<0.07	mg/kg	0.07	A-T-019s
Total PAH-16MS _A ^{M#}	<0.08	-	<0.08	-	<0.08	<0.08	<0.08	mg/kg	0.01	A-T-019s



					Client Pro	ject Ref: BN	/111254			
Lab Sample ID	22/00867/1	22/00867/2	22/00867/3	22/00867/4	22/00867/5	22/00867/6	22/00867/8			
Client Sample No										
Client Sample ID	HA01	WS06	WS06	WS07	WS07	WS08	WS09			
Depth to Top	0.3	1	2.8	0.5	2.2	0.9	0.5			
Depth To Bottom									uo	
Date Sampled	28-Jan-22	27-Jan-22	27-Jan-22	27-Jan-22	27-Jan-22	27-Jan-22	26-Jan-22		etecti	_
Sample Type	Soil - ES	Soil - ES		of De	od re					
Sample Matrix Code	4AE	5A	5A	4AE	5A	4A	4A	Units	Limit of Detection	Method ref
TPH CWG with Clean Up *C1										
Ali >C5-C6 _A #	<0.01	-	<0.01	-	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
Ali >C6-C8 _A #	<0.01	-	<0.01	-	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
Ali >C8-C10A	<1	-	<1	-	<1	<1	<1	mg/kg	1	A-T-055s
Ali >C10-C12 _A ^{M#}	<1	-	<1	-	<1	<1	<1	mg/kg	1	A-T-055s
Ali >C12-C16 _A ^{M#}	<1	-	<1	-	<1	<1	<1	mg/kg	1	A-T-055s
Ali >C16-C21 _A ^{M#}	<1	-	<1	-	<1	<1	<1	mg/kg	1	A-T-055s
Ali >C21-C35 _A M#	<1	-	2	-	<1	<1	<1	mg/kg	1	A-T-055s
Total Aliphatics _A	<1	-	2	-	<1	<1	<1	mg/kg	1	A-T-055s
Aro >C5-C7 _A #	<0.01	-	<0.01	-	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
Aro >C7-C8 _A #	<0.01	-	<0.01	-	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
Aro >C8-C10 _A	<1	-	<1	-	<1	<1	<1	mg/kg	1	A-T-055s
Aro >C10-C12 _A	<1	-	<1	-	<1	<1	<1	mg/kg	1	A-T-055s
Aro >C12-C16 _A	<1	-	<1	-	<1	<1	<1	mg/kg	1	A-T-055s
Aro >C16-C21 _A M#	<1	-	<1	-	<1	<1	<1	mg/kg	1	A-T-055s
Aro >C21-C35 _A	<1	-	<1	-	<1	<1	<1	mg/kg	1	A-T-055s
Total Aromatics _A	<1	-	<1	-	<1	<1	<1	mg/kg	1	A-T-055s
TPH (Ali & Aro >C5-C35)A	<1	-	2	-	<1	<1	<1	mg/kg	1	A-T-055s
BTEX - Benzene _A #	<0.01	-	<0.01	-	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
BTEX - Toluene [#]	<0.01	-	<0.01	-	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
BTEX - Ethyl Benzene _A #	<0.01	-	<0.01	-	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
BTEX - m & p Xylene _A #	<0.01	-	<0.01	-	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
BTEX - o Xylene _A #	<0.01	-	<0.01	-	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
MTBE _A #	<0.01	-	<0.01	-	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s



					Cilent Proj	ect Ref: BN	111234			
Lab Sample ID	22/00867/9	22/00867/11	22/00867/12	22/00867/13	22/00867/14	22/00867/15	22/00867/16			
Client Sample No										
Client Sample ID	WS09	WS10	WS11	WS11	WS12	WS12	WS13			
Depth to Top	4	3.8	2	4	0.7	2.6	0.15			
Depth To Bottom									ion	
Date Sampled	26-Jan-22	27-Jan-22	27-Jan-22	27-Jan-22	26-Jan-22	26-Jan-22	28-Jan-22		Limit of Detection	4
Sample Type	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES		of D	Method ref
Sample Matrix Code	6E	6E	5	3A	6A	5	6E	Units	Limit	Meth
% Stones >10mm _A	<0.1	<0.1	<0.1	<0.1	22.3	<0.1	<0.1	% w/w	0.1	A-T-044
pH _D ^{M#}	8.33	8.31	7.78	8.74	8.00	7.90	6.64	рН	0.01	A-T-031s
Sulphate (water sol 2:1) _D ^{M#}	0.32	0.19	0.02	0.02	<0.01	0.02	<0.01	g/I	0.01	A-T-026s
Sulphate (acid soluble) _D ^{M#}	1800	1600	<200	440	<200	<200	1200	mg/kg	200	A-T-028s
Sulphur (total) _D	-	6110	-	780	-	53	906	mg/kg	50	A-T-024s
Cyanide (total) _A ^{M#}	<1	-	<1	-	<1	-	-	mg/kg	1	A-T-042sTCN
Phenois - Total by HPLC _A	<0.2	-	<0.2	-	<0.2	-	-	mg/kg	0.2	A-T-050s
SulphideA	<5	-	<5	-	<5	-	-	mg/kg	5	A-T-043-s
Organic matter _D ^{M#}	1.8	-	0.2	-	0.5	-	-	% w/w	0.1	A-T-032 OM
Arsenic _D ^{M#}	11	5	11	2	10	1	10	mg/kg	1	A-T-024s
Boron (water soluble) _D	<1.0	-	<1.0	-	<1.0	-	-	mg/kg	1	A-T-027s
Cadmium _D M#	1.4	1.5	1.1	1.1	1.4	1.0	1.2	mg/kg	0.5	A-T-024s
Copper _D ^{M#}	23	22	19	18	8	17	18	mg/kg	1	A-T-024s
Chromium _D M#	27	41	25	28	18	29	27	mg/kg	1	A-T-024s
Chromium (hexavalent) _D	<1	-	<1	-	<1	-	-	mg/kg	1	A-T-040s
Lead _D ^{M#}	14	14	13	11	11	12	45	mg/kg	1	A-T-024s
Mercury _D	1.05	0.86	<0.17	0.63	<0.17	<0.17	<0.17	mg/kg	0.17	A-T-024s
Nickel _D ^{M#}	33	37	26	29	14	31	20	mg/kg	1	A-T-024s
Selenium _D ^{M#}	<1	1	<1	<1	<1	<1	<1	mg/kg	1	A-T-024s
Zinc _D ^{M#}	67	68	62	57	41	59	92	mg/kg	5	A-T-024s



Lab Sample ID	22/00867/9	22/00867/11	22/00867/12	22/00867/13	22/00867/14	22/00867/15	22/00867/16			
Client Sample No										
Client Sample ID	WS09	WS10	WS11	WS11	WS12	WS12	WS13			
Depth to Top	4	3.8	2	4	0.7	2.6	0.15			
Depth To Bottom									<u>io</u>	
Date Sampled	26-Jan-22	27-Jan-22	27-Jan-22	27-Jan-22	26-Jan-22	26-Jan-22	28-Jan-22		Detection	4
Sample Type	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES			Method ref
Sample Matrix Code	6E	6E	5	3A	6A	5	6E	Units	Limit of	Meth
Asbestos in Soil (inc. matrix)										
Asbestos in soil _D #	NAD	-	NAD	-	NAD	-	-			A-T-045
Asbestos Matrix (visual) _D	-	-	-	-	-	-	-			A-T-045
Asbestos Matrix (microscope) _D	-	-	-	-	-	-	-			A-T-045
Asbestos ACM - Suitable for Water Absorption Test? _D	N/A	-	N/A	-	N/A	-	-			A-T-045



					Chefit 1 10	ect Ret: Bi	111234			
Lab Sample ID	22/00867/9	22/00867/11	22/00867/12	22/00867/13	22/00867/14	22/00867/15	22/00867/16			
Client Sample No										
Client Sample ID	WS09	WS10	WS11	WS11	WS12	WS12	WS13			
Depth to Top	4	3.8	2	4	0.7	2.6	0.15			
Depth To Bottom									ion	
Date Sampled	26-Jan-22	27-Jan-22	27-Jan-22	27-Jan-22	26-Jan-22	26-Jan-22	28-Jan-22		etect	4
Sample Type	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES		Limit of Detection	Method ref
Sample Matrix Code	6E	6E	5	3A	6A	5	6E	Units	Limi	Meth
PAH-16MS										
Acenaphthene _A M#	<0.01	-	<0.01	-	<0.01	-	-	mg/kg	0.01	A-T-019s
Acenaphthylene _A ^{M#}	<0.01	-	<0.01	-	<0.01	-	-	mg/kg	0.01	A-T-019s
Anthracene _A ^{M#}	<0.02	-	<0.02	-	<0.02	•	-	mg/kg	0.02	A-T-019s
Benzo(a)anthracene _A M#	<0.04	-	<0.04	-	<0.04	-	-	mg/kg	0.04	A-T-019s
Benzo(a)pyrene _A ^{M#}	<0.04	-	<0.04	-	<0.04	-	-	mg/kg	0.04	A-T-019s
Benzo(b)fluoranthene _A ^{M#}	<0.05	-	<0.05	-	<0.05	-	-	mg/kg	0.05	A-T-019s
Benzo(ghi)perylene _A ^{M#}	<0.05	-	<0.05	-	<0.05	-	-	mg/kg	0.05	A-T-019s
Benzo(k)fluoranthene _A ^{M#}	<0.07	-	<0.07	-	<0.07	-	-	mg/kg	0.07	A-T-019s
Chrysene _A ^{M#}	<0.06	-	<0.06	-	<0.06	-	-	mg/kg	0.06	A-T-019s
Dibenzo(ah)anthracene _A M#	<0.04	-	<0.04	-	<0.04	-	-	mg/kg	0.04	A-T-019s
Fluoranthene _A ^{M#}	<0.08	-	<0.08	-	<0.08	-	-	mg/kg	0.08	A-T-019s
Fluorene _A ^{M#}	<0.01	-	<0.01	-	<0.01	-	-	mg/kg	0.01	A-T-019s
Indeno(123-cd)pyrene _A ^{M#}	<0.03	-	<0.03	-	<0.03	-	-	mg/kg	0.03	A-T-019s
Naphthalene A ^{M#}	<0.03	-	<0.03	-	<0.03	-	-	mg/kg	0.03	A-T-019s
Phenanthrene _A ^{M#}	<0.03	-	<0.03	-	<0.03	-	-	mg/kg	0.03	A-T-019s
Pyrene _A ^{M#}	<0.07	-	<0.07	-	<0.07	-	-	mg/kg	0.07	A-T-019s
Total PAH-16MS _A ^{M#}	<0.08	-	<0.08	-	<0.08	-	-	mg/kg	0.01	A-T-019s



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Lab Sample ID	22/00867/9	22/00867/11	22/00867/12	22/00867/13	22/00867/14	22/00867/15	22/00867/16			
Client Sample No										
Client Sample ID	WS09	WS10	WS11	WS11	WS12	WS12	WS13			
Depth to Top	4	3.8	2	4	0.7	2.6	0.15			
Depth To Bottom									uo	
Date Sampled	26-Jan-22	27-Jan-22	27-Jan-22	27-Jan-22	26-Jan-22	26-Jan-22	28-Jan-22		etecti	_
Sample Type	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES		Limit of Detection	Method ref
Sample Matrix Code	6E	6E	5	3A	6A	5	6E	Units	Limit	Meth
TPH CWG with Clean Up *C1										
Ali >C5-C6 _A #	<0.01	-	<0.01	-	<0.01	-	-	mg/kg	0.01	A-T-022s
Ali >C6-C8 _A #	<0.01	-	<0.01	-	<0.01	-	-	mg/kg	0.01	A-T-022s
Ali >C8-C10 _A	<1	-	<1	-	<1	-	-	mg/kg	1	A-T-055s
Ali >C10-C12 _A M#	<1	-	<1	-	<1	-	-	mg/kg	1	A-T-055s
Ali >C12-C16 _A M#	<1	-	<1	-	<1	-	-	mg/kg	1	A-T-055s
Ali >C16-C21AM#	<1	-	<1	-	<1	-	-	mg/kg	1	A-T-055s
Ali >C21-C35 _A M#	2	-	<1	-	<1	-	-	mg/kg	1	A-T-055s
Total Aliphatics _A	2	-	<1	-	<1	-	-	mg/kg	1	A-T-055s
Aro >C5-C7 _A #	<0.01	-	<0.01	-	<0.01	-	-	mg/kg	0.01	A-T-022s
Aro >C7-C8 _A #	<0.01	-	<0.01	-	<0.01	-	-	mg/kg	0.01	A-T-022s
Aro >C8-C10 _A	<1	-	<1	-	<1	-	-	mg/kg	1	A-T-055s
Aro >C10-C12 _A	<1	-	<1	-	<1	-	-	mg/kg	1	A-T-055s
Aro >C12-C16 _A	<1	-	<1	-	<1	-	-	mg/kg	1	A-T-055s
Aro >C16-C21 _A M#	<1	-	<1	-	<1	-	-	mg/kg	1	A-T-055s
Aro >C21-C35 _A	<1	-	<1	-	<1	-	-	mg/kg	1	A-T-055s
Total Aromatics _A	<1	-	<1	-	<1	-	-	mg/kg	1	A-T-055s
TPH (Ali & Aro >C5-C35)A	2	-	<1	-	<1	-	-	mg/kg	1	A-T-055s
BTEX - Benzene _A #	<0.01	-	<0.01	-	<0.01	-	-	mg/kg	0.01	A-T-022s
BTEX - Toluene _A #	<0.01	-	<0.01	-	<0.01	-	-	mg/kg	0.01	A-T-022s
BTEX - Ethyl Benzene _A #	<0.01	-	<0.01		<0.01	-	-	mg/kg	0.01	A-T-022s
BTEX - m & p Xylene _A #	<0.01	-	<0.01	-	<0.01	-	-	mg/kg	0.01	A-T-022s
BTEX - o Xylene _A #	<0.01	-	<0.01		<0.01	-	-	mg/kg	0.01	A-T-022s
MTBE _A #	<0.01	-	<0.01	-	<0.01	-	-	mg/kg	0.01	A-T-022s



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Lab Sample ID	22/00867/17	22/00867/18	22/00867/19	22/00867/20	22/00867/21	22/00867/22	22/00867/23			
Client Sample No										
Client Sample ID	WS13	WS14	WS14	WS15	WS15	WS16	WS16			
Depth to Top	1.8	0.6	2.5	0.7	2.2	0.2	3			
Depth To Bottom									ion	
Date Sampled	28-Jan-22	28-Jan-22	28-Jan-22	28-Jan-22	28-Jan-22	28-Jan-22	28-Jan-22		Limit of Detection	4
Sample Type	Soil - ES	Soil - ES		of D	Method ref					
Sample Matrix Code	6AE	4AE	5A	5A	5A	6AE	4	Units	Limit	Meth
% Stones >10mm _A	<0.1	<0.1	3.2	5.0	6.1	28.6	<0.1	% w/w	0.1	A-T-044
pH _D ^{M#}	8.93	6.24	8.62	6.04	7.01	5.88	8.60	рН	0.01	A-T-031s
Sulphate (water sol 2:1) _D ^{M#}	0.09	<0.01	<0.01	0.02	<0.01	<0.01	0.03	g/I	0.01	A-T-026s
Sulphate (acid soluble) _D M#	1200	490	210	<200	<200	330	410	mg/kg	200	A-T-028s
Sulphur (total) _D	-	297	-	-	127	191	1200	mg/kg	50	A-T-024s
Cyanide (total) _A ^{M#}	<1	-	<1	<1	-	-	-	mg/kg	1	A-T-042sTCN
Phenois - Total by HPLC _A	<0.2	-	<0.2	<0.2	-	-	-	mg/kg	0.2	A-T-050s
SulphideA	<5	-	<5	<5	-	-	-	mg/kg	5	A-T-043-s
Organic matter _D ^{M#}	1.4	-	0.6	0.3	-	-	-	% w/w	0.1	A-T-032 OM
Arsenic _D ^{M#}	13	11	6	7	7	7	3	mg/kg	1	A-T-024s
Boron (water soluble) _D	<1.0	-	<1.0	<1.0	-	-	-	mg/kg	1	A-T-027s
Cadmium _D M#	1.2	0.9	1.0	1.0	1.0	0.8	0.6	mg/kg	0.5	A-T-024s
Copper _D ^{M#}	19	19	15	9	12	7	9	mg/kg	1	A-T-024s
Chromium _D ^{M#}	38	22	25	18	20	26	10	mg/kg	1	A-T-024s
Chromium (hexavalent)₀	<1	-	<1	<1	-	-	-	mg/kg	1	A-T-040s
Lead _D ^{M#}	14	37	12	8	9	18	8	mg/kg	1	A-T-024s
Mercury _D	0.78	<0.17	0.87	<0.17	<0.17	<0.17	0.62	mg/kg	0.17	A-T-024s
Nickel _D ^{M#}	39	14	27	13	18	10	13	mg/kg	1	A-T-024s
Selenium _D ^{M#}	<1	<1	<1	<1	<1	<1	<1	mg/kg	1	A-T-024s
Zinc _D ^{M#}	73	62	67	34	51	37	28	mg/kg	5	A-T-024s



Lab Sample ID	22/00867/17	22/00867/18	22/00867/19	22/00867/20	22/00867/21	22/00867/22	22/00867/23			
Client Sample No										
Client Sample ID	WS13	WS14	WS14	WS15	WS15	WS16	WS16			
Depth to Top	1.8	0.6	2.5	0.7	2.2	0.2	3			
Depth To Bottom									<u></u>	
Date Sampled	28-Jan-22		Detection	4						
Sample Type	Soil - ES			Method ref						
Sample Matrix Code	6AE	4AE	5A	5A	5A	6AE	4	Units	Limit of	Meth
Asbestos in Soil (inc. matrix)										
Asbestos in soil _D #	NAD	-	NAD	NAD	-	-	-			A-T-045
Asbestos Matrix (visual) _D	-	-	-	-	-	-	-			A-T-045
Asbestos Matrix (microscope) _D	-	-	-	-	-	-	-			A-T-045
Asbestos ACM - Suitable for Water Absorption Test? _D	N/A	-	N/A	N/A	-	-	-			A-T-045



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Lab Sample ID	22/00867/17	22/00867/18	22/00867/19	22/00867/20	22/00867/21	22/00867/22	22/00867/23			
Client Sample No										
Client Sample ID	WS13	WS14	WS14	WS15	WS15	WS16	WS16			
Depth to Top	1.8	0.6	2.5	0.7	2.2	0.2	3			
Depth To Bottom									ion	
Date Sampled	28-Jan-22	28-Jan-22	28-Jan-22	28-Jan-22	28-Jan-22	28-Jan-22	28-Jan-22		etect	4
Sample Type	Soil - ES	Soil - ES	Soil - ES		Limit of Detection	Method ref				
Sample Matrix Code	6AE	4AE	5A	5A	5A	6AE	4	Units	Limit	Meth
PAH-16MS										
Acenaphthene _A M#	<0.01	-	<0.01	<0.01	-	-	-	mg/kg	0.01	A-T-019s
Acenaphthylene _A ^{M#}	<0.01	-	<0.01	<0.01	-	-	-	mg/kg	0.01	A-T-019s
Anthracene _A ^{M#}	<0.02	-	<0.02	<0.02	-	-	-	mg/kg	0.02	A-T-019s
Benzo(a)anthracene _A M#	<0.04	-	<0.04	<0.04	-	-	-	mg/kg	0.04	A-T-019s
Benzo(a)pyrene ^{M#}	<0.04	-	<0.04	<0.04		•		mg/kg	0.04	A-T-019s
Benzo(b)fluoranthene _A ^{M#}	<0.05	-	<0.05	<0.05	•	•	•	mg/kg	0.05	A-T-019s
Benzo(ghi)perylene _A ^{M#}	<0.05	-	<0.05	<0.05	-	-	-	mg/kg	0.05	A-T-019s
Benzo(k)fluoranthene _A ^{M#}	<0.07	-	<0.07	<0.07	-	-	-	mg/kg	0.07	A-T-019s
Chrysene _A ^{M#}	<0.06	-	<0.06	<0.06	-	-	-	mg/kg	0.06	A-T-019s
Dibenzo(ah)anthracene _A ^{M#}	<0.04	-	<0.04	<0.04		•		mg/kg	0.04	A-T-019s
Fluoranthene _A ^{M#}	<0.08	-	<0.08	<0.08	-	-	-	mg/kg	0.08	A-T-019s
Fluorene _A ^{M#}	<0.01	-	<0.01	<0.01		•		mg/kg	0.01	A-T-019s
Indeno(123-cd)pyrene _A ^{M#}	<0.03	-	<0.03	<0.03	-	-	-	mg/kg	0.03	A-T-019s
Naphthalene A ^{M#}	<0.03	-	<0.03	<0.03	-	-	-	mg/kg	0.03	A-T-019s
Phenanthrene _A ^{M#}	<0.03	-	<0.03	<0.03	-	-	-	mg/kg	0.03	A-T-019s
Pyrene _A ^{M#}	<0.07	-	<0.07	<0.07	-	-	-	mg/kg	0.07	A-T-019s
Total PAH-16MS _A ^{M#}	<0.08	-	<0.08	<0.08	-	-	-	mg/kg	0.01	A-T-019s



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Lab Sample ID	22/00867/17	22/00867/18	22/00867/19	22/00867/20	22/00867/21	22/00867/22	22/00867/23			
Client Sample No										
Client Sample ID	WS13	WS14	WS14	WS15	WS15	WS16	WS16			
Depth to Top	1.8	0.6	2.5	0.7	2.2	0.2	3			
Depth To Bottom									uo	
Date Sampled	28-Jan-22	28-Jan-22	28-Jan-22	28-Jan-22	28-Jan-22	28-Jan-22	28-Jan-22		etecti	Į.
Sample Type	Soil - ES	Soil - ES		Limit of Detection	Method ref					
Sample Matrix Code	6AE	4AE	5A	5A	5A	6AE	4	Units	Limit	Meth
TPH CWG with Clean Up *C1										
Ali >C5-C6 _A #	<0.01	-	<0.01	<0.01	-	-	-	mg/kg	0.01	A-T-022s
Ali >C6-C8 _A #	<0.01	-	<0.01	<0.01	-	-		mg/kg	0.01	A-T-022s
Ali >C8-C10 _A	<1	-	<1	<1	-	-	-	mg/kg	1	A-T-055s
Ali >C10-C12AM#	<1	-	<1	<1	-	-	-	mg/kg	1	A-T-055s
Ali >C12-C16 _A M#	<1	-	<1	<1	-	-	-	mg/kg	1	A-T-055s
Ali >C16-C21AM#	<1	-	<1	<1	-	-	-	mg/kg	1	A-T-055s
Ali >C21-C35 _A M#	2	-	<1	<1	-	-	-	mg/kg	1	A-T-055s
Total Aliphatics _A	2	-	<1	<1	-	-	-	mg/kg	1	A-T-055s
Aro >C5-C7 _A #	<0.01	-	<0.01	<0.01	-	-	-	mg/kg	0.01	A-T-022s
Aro >C7-C8 _A #	<0.01	-	<0.01	<0.01	-	-	-	mg/kg	0.01	A-T-022s
Aro >C8-C10A	<1	-	<1	<1	-	-		mg/kg	1	A-T-055s
Aro >C10-C12 _A	<1	-	<1	<1	-	-	-	mg/kg	1	A-T-055s
Aro >C12-C16 _A	<1	-	<1	<1	-	-	-	mg/kg	1	A-T-055s
Aro >C16-C21 _A M#	<1	-	<1	<1	-	-	-	mg/kg	1	A-T-055s
Aro >C21-C35 _A	<1	-	<1	<1	-	-	-	mg/kg	1	A-T-055s
Total Aromatics _A	<1	-	<1	<1	-	-	-	mg/kg	1	A-T-055s
TPH (Ali & Aro >C5-C35)A	2	-	<1	<1	-	-	-	mg/kg	1	A-T-055s
BTEX - Benzene _A #	<0.01	-	<0.01	<0.01	-	-	-	mg/kg	0.01	A-T-022s
BTEX - Toluene _A #	<0.01	-	<0.01	<0.01	-	-	-	mg/kg	0.01	A-T-022s
BTEX - Ethyl Benzene _A #	<0.01	-	<0.01	<0.01	-	-	-	mg/kg	0.01	A-T-022s
BTEX - m & p Xylene _A #	<0.01	-	<0.01	<0.01	-	-	-	mg/kg	0.01	A-T-022s
BTEX - o Xylene _A #	<0.01	-	<0.01	<0.01	-	-	-	mg/kg	0.01	A-T-022s
MTBE _A #	<0.01	-	<0.01	<0.01	-	-	-	mg/kg	0.01	A-T-022s



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Lab Sample ID	22/00867/24	22/00867/25	22/00867/26	22/00867/27						
Client Sample No										
Client Sample ID	WS17	WS17	WS18	WS18						
Depth to Top	0.9	3.2	0.25	1.25						
Depth To Bottom									<u>io</u>	
Date Sampled	28-Jan-22	28-Jan-22	28-Jan-22	28-Jan-22					etect	4
Sample Type	Soil - ES	Soil - ES	Soil - ES	Soil - ES				_ ا	Limit of Detection	Method ref
Sample Matrix Code	6A	6AE	6AE	6				Units	Limit	Meth
% Stones >10mm _A	<0.1	<0.1	<0.1	3.5				% w/w	0.1	A-T-044
pH _D M#	6.91	8.68	6.03	7.52				pН	0.01	A-T-031s
Sulphate (water sol 2:1) _D ^{M#}	<0.01	0.05	<0.01	<0.01				g/l	0.01	A-T-026s
Sulphate (acid soluble) _D M#	<400	750	410	<400				mg/kg	200	A-T-028s
Sulphur (total) _□	68	3110	262	69				mg/kg	50	A-T-024s
Arsenic _D ^{M#}	6	4	9	17				mg/kg	1	A-T-024s
Cadmium _D ^{M#}	1.7	1.1	0.9	2.1				mg/kg	0.5	A-T-024s
Copper _D M#	20	24	10	23				mg/kg	1	A-T-024s
Chromium _D ^{M#}	45	32	91	37				mg/kg	1	A-T-024s
Lead _D ^{M#}	14	12	29	16				mg/kg	1	A-T-024s
Mercury _D	<0.17	0.73	<0.17	<0.17				mg/kg	0.17	A-T-024s
Nickel _D ^{M#}	38	29	14	41				mg/kg	1	A-T-024s
Selenium _D ^{M#}	<1	<1	<1	<1				mg/kg	1	A-T-024s
Zinc _D ^{M#}	95	59	53	112				mg/kg	5	A-T-024s



REPORT NOTES

General

This report shall not be reproduced, except in full, without written approval from Envirolab.

The results reported herein relate only to the material supplied to the laboratory.

The residue of any samples contained within this report, and any received with the same delivery, will be disposed of six weeks after initial scheduling. For samples tested for Asbestos we will retain a portion of the dried sample for a minimum of six months after the initial Asbestos testing is completed.

Analytical results reflect the quality of the sample at the time of analysis only.

Opinions and interpretations expressed are outside the scope of our accreditation.

If results are in italic font they are associated with an AQC failure, these are not accredited and are unreliable.

A deviating samples report is appended and will indicate if samples or tests have been found to be deviating. Any test results affected may not be an accurate record of the concentration at the time of sampling and, as a result, may be invalid.

The Client Sample No, Client Sample ID, Depth to Top, Depth to Bottom and Date Sampled were all provided by the client.

Soil chemical analysis:

All results are reported as dry weight (<40°C).

For samples with Matrix Codes 1 - 6 natural stones, brick and concrete fragments >10mm and any extraneous material (visible glass, metal or twigs) are removed and excluded from the sample prior to analysis and reported results corrected to a whole sample basis. This is reported as '% stones >10mm'.

For samples with Matrix Code 7 the whole sample is dried and crushed prior to analysis and this supersedes any "A" subscripts All analysis is performed on the sample as received for soil samples which are positive for asbestos or the client has informed asbestos may be present and/or if they are from outside the European Union and this supersedes any "D" subscripts.

TPH analysis of water by method A-T-007:

Free and visible oils are excluded from the sample used for analysis so that the reported result represents the dissolved phase only.

Electrical Conductivity of water by Method A-T-037:

Results greater than 12900µS/cm @ 25°C / 11550µS/cm @ 20°C fall outside the calibration range and as such are unaccredited.

Asbestos:

Asbestos in soil analysis is performed on a dried aliquot of the submitted sample and cannot guarantee to identify asbestos if only present in small numbers as discrete fibres/fragments in the original sample.

Stones etc. are not removed from the sample prior to analysis.

Quantification of asbestos is a 3 stage process including visual identification, hand picking and weighing and fibre counting by sedimentation/phase contrast optical microscopy if required. If asbestos is identified as being present but is not in a form that is suitable for analysis by hand picking and weighing (normally if the asbestos is present as free fibres) quantification by sedimentation is performed. Where ACMs are found a percentage asbestos is assigned to each with reference to 'HSG264, Asbestos: The survey guide' and the calculated asbestos content is expressed as a percentage of the dried soil sample aliquot used.

Predominant Matrix Codes:

1 = SAND, 2 = LOAM, 3 = CLAY, 4 = LOAM/SAND, 5 = SAND/CLAY, 6 = CLAY/LOAM, 7 = OTHER, 8 = Asbestos bulk ID sample, 9 = INCINERATOR ASH.

Samples with Matrix Code 7 & 8 are not predominantly a SAND/LOAM/CLAY mix and are not covered by our BSEN 17025 or MCERTS accreditations, with the exception of bulk asbestos which are BSEN 17025 accredited.

Secondary Matrix Codes:

A = contains stones, B = contains construction rubble, C = contains visible hydrocarbons, D = contains glass/metal, E = contains roots/twigs.

Key:

IS indicates Insufficient Sample for analysis.

US indicates Unsuitable Sample for analysis.

NDP indicates No Determination Possible.

NAD indicates No Asbestos Detected.

N/A indicates Not Applicable.

Superscript # indicates method accredited to ISO 17025.

Superscript "M" indicates method accredited to MCERTS.

Subscript "A" indicates analysis performed on the sample as received.

Subscript "D" indicates analysis performed on the dried sample, crushed to pass a 2mm sieve

EPH CWG results have humics mathematically subtracted through instrument calculation

TPH results with Cleanup indicates results cleaned up with Silica during extraction

EPH CWG GCxGC ID from TPH CWG

Where we have identified humic substances in any ID's from TPH CWG with Clean Up please note that the concentration of these humic substances is not included in the quantified results and are included in the ID for information.

Please contact us if you need any further information.



Envirolab Deviating Samples Report

Units 7&8 Sandpits Business Park, Mottram Road, Hyde, SK14 3AR Tel. 0161 368 4921 email. ask@envlab.co.uk

Client: Wardell Armstrong (Birmingham), 2 Devon Way, Longbridge, Birmingham, UK, **Project No:** 22/00867

B31 2TS Date Received: 01/02/2022 (am)

Project: South West Rugby Cool Box Temperatures (°C): 7.7 - 8.5

Clients Project No: BM11254

Lab Sample ID	22/00867/3	22/00867/5	22/00867/6	22/00867/8	22/00867/9	22/00867/12	22/00867/14
Client Sample No							
Client Sample ID/Depth	WS06 2.8m	WS07 2.2m	WS08 0.9m	WS09 0.5m	WS09 4m	WS11 2m	WS12 0.7m
Date Sampled	27/01/22	27/01/22	27/01/22	26/01/22	26/01/22	27/01/22	26/01/22
Deviation Code							
F	✓	✓	✓	✓	✓	✓	✓

Key

Maximum holding time exceeded between sampling date and analysis for analytes listed below

HOLDING TIME EXCEEDANCES

Lab Sample ID	22/00867/3	22/00867/5	22/00867/6	22/00867/8	22/00867/9	22/00867/12	22/00867/14
Client Sample No							
Client Sample ID/Depth	WS06 2.8m	WS07 2.2m	WS08 0.9m	WS09 0.5m	WS09 4m	WS11 2m	WS12 0.7m
Date Sampled	27/01/22	27/01/22	27/01/22	26/01/22	26/01/22	27/01/22	26/01/22
Sulphide	✓	✓	✓	✓	✓	✓	✓

Note: If, at any point before reaching the laboratory, the temperature of the samples has breached those set in published standards, e.g. BS-EN 5667-3 (for water samples 5 ± 3°C), ISO 18400-105:2017, then the concentration of any affected analytes may differ from that at the time of sampling.



Envirolab Analysis Dates

Lab Sample ID	22/00867/1	22/00867/2	22/00867/3	22/00867/4	22/00867/5	22/00867/6	22/00867/8	22/00867/9	22/00867/11	22/00867/12	22/00867/13	22/00867/14
Client Sample No												
Client Sample ID/Depth	HA01 0.3m	WS06 1m	WS06 2.8m	WS07 0.5m	WS07 2.2m	WS08 0.9m	WS09 0.5m	WS09 4m	WS10 3.8m	WS11 2m	WS11 4m	WS12 0.7m
Date Sampled	28/01/22	27/01/22	27/01/22	27/01/22	27/01/22	27/01/22	26/01/22	26/01/22	27/01/22	27/01/22	27/01/22	26/01/22
A-T-019s	09/02/2022		09/02/2022		09/02/2022	09/02/2022	09/02/2022	09/02/2022		09/02/2022		09/02/2022
A-T-022s	08/02/2022		08/02/2022		08/02/2022	08/02/2022	08/02/2022	08/02/2022		08/02/2022		08/02/2022
A-T-024s	09/02/2022	09/02/2022	09/02/2022	09/02/2022	09/02/2022	09/02/2022	09/02/2022	09/02/2022	09/02/2022	09/02/2022	09/02/2022	09/02/2022
A-T-026s	09/02/2022	09/02/2022	09/02/2022	09/02/2022	09/02/2022	09/02/2022	09/02/2022	09/02/2022	09/02/2022	09/02/2022	09/02/2022	09/02/2022
A-T-027s	09/02/2022		09/02/2022		09/02/2022	09/02/2022	09/02/2022	09/02/2022		09/02/2022		09/02/2022
A-T-028s	09/02/2022	09/02/2022	09/02/2022	09/02/2022	09/02/2022	09/02/2022	09/02/2022	09/02/2022	09/02/2022	09/02/2022	09/02/2022	09/02/2022
A-T-031s	09/02/2022	09/02/2022	09/02/2022	09/02/2022	09/02/2022	09/02/2022	09/02/2022	09/02/2022	09/02/2022	09/02/2022	09/02/2022	09/02/2022
A-T-032 OM	09/02/2022		09/02/2022		09/02/2022	09/02/2022	09/02/2022	09/02/2022		09/02/2022		09/02/2022
A-T-040s	09/02/2022		09/02/2022		09/02/2022	09/02/2022	09/02/2022	09/02/2022		09/02/2022		09/02/2022
A-T-042sTCN	07/02/2022		07/02/2022		07/02/2022	07/02/2022	07/02/2022	07/02/2022		07/02/2022		07/02/2022
A-T-043-s	08/02/2022		08/02/2022		08/02/2022	08/02/2022	08/02/2022	08/02/2022		08/02/2022		08/02/2022
A-T-044	09/02/2022	09/02/2022	09/02/2022	09/02/2022	09/02/2022	09/02/2022	09/02/2022	09/02/2022	09/02/2022	09/02/2022	09/02/2022	09/02/2022
A-T-045	02/02/2022		02/02/2022		02/02/2022	02/02/2022	02/02/2022	02/02/2022		02/02/2022		02/02/2022
A-T-050s	08/02/2022		08/02/2022		08/02/2022	08/02/2022	08/02/2022	08/02/2022		08/02/2022		08/02/2022
A-T-055s	08/02/2022		08/02/2022		08/02/2022	08/02/2022	08/02/2022	08/02/2022		08/02/2022		08/02/2022



Lab Sample ID	22/00867/15	22/00867/16	22/00867/17	22/00867/18	22/00867/19	22/00867/20	22/00867/21	22/00867/22	22/00867/23	22/00867/24	22/00867/25	22/00867/26
Client Sample No												
Client Sample ID/Depth	WS12 2.6m	WS13 0.15m	WS13 1.8m	WS14 0.6m	WS14 2.5m	WS15 0.7m	WS15 2.2m	WS16 0.2m	WS16 3m	WS17 0.9m	WS17 3.2m	WS18 0.25m
Date Sampled	26/01/22	28/01/22	28/01/22	28/01/22	28/01/22	28/01/22	28/01/22	28/01/22	28/01/22	28/01/22	28/01/22	28/01/22
A-T-019s			09/02/2022		09/02/2022	09/02/2022						
A-T-022s			08/02/2022		08/02/2022	08/02/2022						
A-T-024s	09/02/2022	09/02/2022	09/02/2022	09/02/2022	09/02/2022	09/02/2022	09/02/2022	09/02/2022	09/02/2022	09/02/2022	09/02/2022	09/02/2022
A-T-026s	09/02/2022	09/02/2022	09/02/2022	09/02/2022	09/02/2022	09/02/2022	09/02/2022	09/02/2022	09/02/2022	09/02/2022	09/02/2022	09/02/2022
A-T-027s			09/02/2022		09/02/2022	09/02/2022						
A-T-028s	09/02/2022	09/02/2022	09/02/2022	09/02/2022	09/02/2022	09/02/2022	09/02/2022	09/02/2022	09/02/2022	09/02/2022	09/02/2022	09/02/2022
A-T-031s	09/02/2022	09/02/2022	09/02/2022	09/02/2022	09/02/2022	09/02/2022	09/02/2022	09/02/2022	09/02/2022	09/02/2022	09/02/2022	09/02/2022
A-T-032 OM			09/02/2022		09/02/2022	09/02/2022						
A-T-040s			09/02/2022		09/02/2022	09/02/2022						
A-T-042sTCN			07/02/2022		07/02/2022	07/02/2022						
A-T-043-s			08/02/2022		08/02/2022	08/02/2022						
A-T-044	09/02/2022	09/02/2022	09/02/2022	09/02/2022	09/02/2022	09/02/2022	09/02/2022	09/02/2022	09/02/2022	09/02/2022	10/02/2022	09/02/2022
A-T-045			02/02/2022		02/02/2022	02/02/2022						
A-T-050s			08/02/2022		08/02/2022	08/02/2022						
A-T-055s			08/02/2022		08/02/2022	08/02/2022						



22/00867/27
WS18 1.25m
28/01/22
09/02/2022
09/02/2022
09/02/2022
09/02/2022
09/02/2022

The above dates are the analysis completion dates, please note that these are not necessarily the date that the analysis was weighed/extracted.

End of Report



FINAL ANALYTICAL TEST REPORT

Envirolab Job Number: 22/01086

Issue Number: 1 **Date:** 16 February, 2022

Client: Wardell Armstrong (Birmingham)

2 Devon Way Longbridge Birmingham

UK

B31 2TS

Project Manager: William Phillips
Project Name: South West Rugby

Project Ref: BM11254
Order No: BM9163
Date Samples Received: 08/02/22
Date Instructions Received: 08/02/22
Date Analysis Completed: 16/02/22

Approved by:

Richard Wong Client Manager





					Cilent Pro	ject Ref: BN	WII1234			
Lab Sample ID	22/01086/1	22/01086/2	22/01086/3	22/01086/4	22/01086/5	22/01086/6				
Client Sample No										
Client Sample ID	WS01	WS04	WS08	WS11	WS14	WS16				
Depth to Top										
Depth To Bottom									<u></u>	
Date Sampled	04-Feb-22	04-Feb-22	03-Feb-22	04-Feb-22	03-Feb-22	03-Feb-22			Limit of Detection	4
Sample Type	Water - EW		1	of D	Method ref					
Sample Matrix Code	N/A	N/A	N/A	N/A	N/A	N/A		Units	Limit	Meth
pH (w) _A #	6.38	7.90	7.60	7.22	7.59	7.35		pН	0.01	A-T-031w
Alkalinity (total) (w) Colorimetry _A #	48	259	150	222	357	277		mg/l Ca CO3	20	A-T-038w
Sulphate (w) _A #	68	662	105	41	241	26		mg/l	1	A-T-026w
Cyanide (free) (w) _A #	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005		mg/l	0.005	A-T-042wFCN
Cyanide (total) (w) _A #	0.029	0.217	<0.005	0.013	<0.005	<0.005		mg/l	0.005	A-T-042wTCN
Thiocyanate (w) _A	<0.1	0.6	<0.1	<0.1	<0.1	<0.1		mg/l	0.1	A-T-041w
Phenois - Total by HPLC (w) _A	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		mg/l	0.01	A-T-050w
Sulphide (w) _A	<0.1	<0.1	0.4	0.1	<0.1	0.2		mg/l	0.1	A-T-043-w
DOC (w) _A #	6.1	11.0	6.4	13.2	149	217		mg/l	2	A-T-032w
Arsenic (dissolved) _A #	<1	<1	4	<1	<1	3		μg/l	1	A-T-025w
Boron (dissolved) _A #	30	36	35	48	46	70		μg/l	10	A-T-025w
Cadmium (dissolved) _A #	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2		μg/l	0.2	A-T-025w
Calcium (dissolved) _A #	68	99	46	59	63	54		mg/l	1	A-T-049w
Copper (dissolved) _A #	2	1	4	3	3	10		μg/l	1	A-T-025w
Chromium (dissolved) _A #	<1	<1	<1	2	<1	5		μg/l	1	A-T-025w
Chromium (hexavalent) (w) _A #	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		mg/l	0.01	A-T-040w
Lead (dissolved) _A #	<1	<1	<1	<1	<1	1		μg/l	1	A-T-025w
Mercury (dissolved) _A #	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1		μg/l	0.1	A-T-025w
Nickel (dissolved) _A #	3	3	1	2	2	2		μg/l	1	A-T-025w
Selenium (dissolved) _A #	<1	2	2	<1	1	2		μg/l	1	A-T-025w



					Chefit 1 10	ect Ret: Bi	111234			
Lab Sample ID	22/01086/1	22/01086/2	22/01086/3	22/01086/4	22/01086/5	22/01086/6				
Client Sample No										
Client Sample ID	WS01	WS04	WS08	WS11	WS14	WS16				
Depth to Top										
Depth To Bottom									<u>io</u>	
Date Sampled	04-Feb-22	04-Feb-22	03-Feb-22	04-Feb-22	03-Feb-22	03-Feb-22			etect	J
Sample Type	Water - EW	Water - EW		,,	Limit of Detection	Method ref				
Sample Matrix Code	N/A	N/A	N/A	N/A	N/A	N/A		Units	Li mi	Meth
PAH 16MS (w)										
Acenaphthene (w) _A #	<0.10	<0.10	<0.10	<0.10	0.18	0.95		μg/l	0.01	A-T-019w
Acenaphthylene (w) _A #	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10		μg/l	0.01	A-T-019w
Anthracene (w) _A #	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10		μg/l	0.01	A-T-019w
Benzo(a)anthracene (w) _A #	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10		μg/l	0.01	A-T-019w
Benzo(a)pyrene (w) _A #	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10		μg/l	0.01	A-T-019w
Benzo(b)fluoranthene (w) _A #	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10		μg/l	0.01	A-T-019w
Benzo(ghi)perylene (w) _A #	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10		μg/l	0.01	A-T-019w
Benzo(k)fluoranthene (w) _A #	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10		μg/l	0.01	A-T-019w
Chrysene (w) _A #	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10		μg/l	0.01	A-T-019w
Dibenzo(ah)anthracene (w) _A #	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10		μg/l	0.01	A-T-019w
Fluoranthene (w) _A #	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10		μg/l	0.01	A-T-019w
Fluorene (w) _A #	<0.10	<0.10	<0.10	<0.10	<0.10	0.17		μg/l	0.01	A-T-019w
Indeno(123-cd)pyrene (w) _A #	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10		μg/l	0.01	A-T-019w
Naphthalene (w) _A #	<0.10	<0.10	<0.10	<0.10	0.21	1.10		μg/l	0.01	A-T-019w
Phenanthrene (w) _A #	<0.10	<0.10	<0.10	<0.10	0.14	<0.10		μg/l	0.01	A-T-019w
Pyrene (w) _A #	<0.10	<0.10	<0.10	<0.10	0.11	<0.10		μg/l	0.01	A-T-019w
Total PAH 16MS (w) _A #	<0.10	<0.10	<0.10	<0.10	0.64	2.22		μg/l	0.01	A-T-019w



					Client Pro	ject Ref: BN	/111254			
Lab Sample ID	22/01086/1	22/01086/2	22/01086/3	22/01086/4	22/01086/5	22/01086/6				
Client Sample No										
Client Sample ID	WS01	WS04	WS08	WS11	WS14	WS16				
Depth to Top										
Depth To Bottom									e G	
Date Sampled	04-Feb-22	04-Feb-22	03-Feb-22	04-Feb-22	03-Feb-22	03-Feb-22			etecti	_
Sample Type	Water - EW			δ Č	od re					
Sample Matrix Code	N/A	N/A	N/A	N/A	N/A	N/A		Units	Limit of Detection	Method ref
TPH CWG (w) with Clean Up *C1										
Ali >C5-C6 (w) _A #	<1	<1	<1	<1	<1	<1		μg/l	1	A-T-022w
Ali >C6-C8 (w) _A #	<1	<1	<1	<1	<1	<1		μg/l	1	A-T-022w
Ali >C8-C10 (w) _A #	<50	<50	<50	<50	<50	<50		μg/l	5	A-T-055w
Ali >C10-C12 (w) _A #	<50	<50	<50	<50	<50	<50		μg/l	5	A-T-055w
Ali >C12-C16 (w) _A #	<50	<50	<50	<50	<50	<50		μg/l	5	A-T-055w
Ali >C16-C21 (w) _A #	<50	<50	<50	<50	<50	<50		μg/l	5	A-T-055w
Ali >C21-C35 (w) _A #	<50	93	<50	<50	<50	<50		μg/l	5	A-T-055w
Total Aliphatics (w) _A #	<50	93	<50	<50	<60	<500		μg/l	5	A-T-055w
Aro >C5-C7 (w) _A #	<1	<1	<1	<1	<1	<1		μg/l	1	A-T-022w
Aro >C7-C8 (w) _A #	<1	<1	<1	<1	<1	<1		μg/l	1	A-T-022w
Aro >C8-C10 (w) _A	<50	<50	<50	<50	<50	<50		μg/l	5	A-T-055w
Aro >C10-C12 (w) _A #	<50	<50	<50	<50	<50	<50		μg/l	5	A-T-055w
Aro >C12-C16 (w) _A #	<50	<50	<50	<50	<50	<50		μg/l	5	A-T-055w
Aro >C16-C21 (w) _A #	<50	<50	<50	<50	<50	<50		μg/l	5	A-T-055w
Aro >C21-C35 (w)A	<100	<100	<100	<100	<100	<100		μg/l	10	A-T-055w
Total Aromatics (w)A	<100	<100	<100	<100	<100	<1000		μg/l	10	A-T-055w
TPH (Ali & Aro >C5-C35) (w)A	<100	<100	<100	<100	<100	<1000		μg/l	10	A-T-055w
BTEX - Benzene (w) _A #	<1	<1	<1	<1	<1	<1		μg/l	1	A-T-022w
BTEX - Toluene (w) _A #	<1	<1	<1	<1	<1	<1		μg/l	1	A-T-022w
BTEX - Ethyl Benzene (w) _A #	<1	<1	<1	<1	<1	<1		μg/l	1	A-T-022w
BTEX - m & p Xylene (w) _A #	<1	<1	<1	<1	<1	<1		μg/l	1	A-T-022w
BTEX - o Xylene (w) _A #	<1	<1	<1	<1	<1	<1		μg/l	1	A-T-022w
MTBE (w) _A #	<1	<1	<1	<1	<1	<1		μg/l	1	A-T-022w



REPORT NOTES

General

This report shall not be reproduced, except in full, without written approval from Envirolab.

The results reported herein relate only to the material supplied to the laboratory.

The residue of any samples contained within this report, and any received with the same delivery, will be disposed of six weeks after initial scheduling. For samples tested for Asbestos we will retain a portion of the dried sample for a minimum of six months after the initial Asbestos testing is completed.

Analytical results reflect the quality of the sample at the time of analysis only.

Opinions and interpretations expressed are outside the scope of our accreditation.

If results are in italic font they are associated with an AQC failure, these are not accredited and are unreliable.

A deviating samples report is appended and will indicate if samples or tests have been found to be deviating. Any test results affected may not be an accurate record of the concentration at the time of sampling and, as a result, may be invalid.

The Client Sample No, Client Sample ID, Depth to Top, Depth to Bottom and Date Sampled were all provided by the client.

Soil chemical analysis:

All results are reported as dry weight (<40°C).

For samples with Matrix Codes 1 - 6 natural stones, brick and concrete fragments >10mm and any extraneous material (visible glass, metal or twigs) are removed and excluded from the sample prior to analysis and reported results corrected to a whole sample basis. This is reported as '% stones >10mm'.

For samples with Matrix Code 7 the whole sample is dried and crushed prior to analysis and this supersedes any "A" subscripts All analysis is performed on the sample as received for soil samples which are positive for asbestos or the client has informed asbestos may be present and/or if they are from outside the European Union and this supersedes any "D" subscripts.

TPH analysis of water by method A-T-007:

Free and visible oils are excluded from the sample used for analysis so that the reported result represents the dissolved phase only.

Electrical Conductivity of water by Method A-T-037:

Results greater than 12900µS/cm @ 25°C / 11550µS/cm @ 20°C fall outside the calibration range and as such are unaccredited.

Asbestos:

Asbestos in soil analysis is performed on a dried aliquot of the submitted sample and cannot guarantee to identify asbestos if only present in small numbers as discrete fibres/fragments in the original sample.

Stones etc. are not removed from the sample prior to analysis.

Quantification of asbestos is a 3 stage process including visual identification, hand picking and weighing and fibre counting by sedimentation/phase contrast optical microscopy if required. If asbestos is identified as being present but is not in a form that is suitable for analysis by hand picking and weighing (normally if the asbestos is present as free fibres) quantification by sedimentation is performed. Where ACMs are found a percentage asbestos is assigned to each with reference to 'HSG264, Asbestos: The survey guide' and the calculated asbestos content is expressed as a percentage of the dried soil sample aliquot used.

Predominant Matrix Codes:

1 = SAND, 2 = LOAM, 3 = CLAY, 4 = LOAM/SAND, 5 = SAND/CLAY, 6 = CLAY/LOAM, 7 = OTHER, 8 = Asbestos bulk ID sample, 9 = INCINERATOR ASH.

Samples with Matrix Code 7 & 8 are not predominantly a SAND/LOAM/CLAY mix and are not covered by our BSEN 17025 or MCERTS accreditations, with the exception of bulk asbestos which are BSEN 17025 accredited.

Secondary Matrix Codes:

A = contains stones, B = contains construction rubble, C = contains visible hydrocarbons, D = contains glass/metal, E = contains roots/twigs.

Key:

IS indicates Insufficient Sample for analysis.

US indicates Unsuitable Sample for analysis.

NDP indicates No Determination Possible.

NAD indicates No Asbestos Detected.

N/A indicates Not Applicable.

Superscript # indicates method accredited to ISO 17025.

Superscript "M" indicates method accredited to MCERTS.

Subscript "A" indicates analysis performed on the sample as received.

Subscript "D" indicates analysis performed on the dried sample, crushed to pass a 2mm sieve

EPH CWG results have humics mathematically subtracted through instrument calculation

TPH results "with Cleanup" indicates results cleaned up with Silica during extraction

EPH CWG GCxGC ID from TPH CWG

Where we have identified humic substances in any ID's from TPH CWG with Clean Up please note that the concentration of these humic substances is not included in the quantified results and are included in the ID for information.

Please contact us if you need any further information.



Envirolab Deviating Samples Report

Units 7&8 Sandpits Business Park, Mottram Road, Hyde, SK14 3AR Tel. 0161 368 4921 email. ask@envlab.co.uk

Client: Wardell Armstrong (Birmingham), 2 Devon Way, Longbridge, Birmingham, UK, **Project No:** 22/01086

B31 2TS **Date Received:** 08/02/2022 (am)

Project: South West Rugby Cool Box Temperatures (°C): 9.4

Clients Project No: BM11254

NO DEVIATIONS IDENTIFIED with respect to sampling dates or containers received.

Note: If, at any point before reaching the laboratory, the temperature of the samples has breached those set in published standards, e.g. BS-EN 5667-3 (for water samples 5 ± 3°C), ISO 18400-105:2017, then the concentration of any affected analytes may differ from that at the time of sampling.



Envirolab Analysis Dates

Lab Sample ID	22/01086/1	22/01086/2	22/01086/3	22/01086/4	22/01086/5	22/01086/6
Client Sample No	22/01000/1	22/01000/2	22/01000/0	22/01000/1	LL/01000/0	22/01000/0
Client Sample ID/Depth	WS01	WS04	WS08	WS11	WS14	WS16
Date Sampled	04/02/22	04/02/22	03/02/22	04/02/22	03/02/22	03/02/22
A-T-019w	14/02/2022	14/02/2022	14/02/2022	14/02/2022	14/02/2022	14/02/2022
A-T-022w	14/02/2022	14/02/2022	14/02/2022	14/02/2022	14/02/2022	14/02/2022
A-T-025w	14/02/2022	14/02/2022	14/02/2022	14/02/2022	14/02/2022	14/02/2022
A-T-026w	11/02/2022	11/02/2022	11/02/2022	11/02/2022	11/02/2022	11/02/2022
A-T-031w	11/02/2022	11/02/2022	11/02/2022	11/02/2022	11/02/2022	11/02/2022
A-T-032w	14/02/2022	14/02/2022	14/02/2022	14/02/2022	15/02/2022	15/02/2022
A-T-038w	16/02/2022	16/02/2022	16/02/2022	16/02/2022	16/02/2022	16/02/2022
A-T-040w	11/02/2022	11/02/2022	11/02/2022	11/02/2022	11/02/2022	11/02/2022
A-T-041w	16/02/2022	16/02/2022	16/02/2022	16/02/2022	16/02/2022	16/02/2022
A-T-042wFCN	15/02/2022	15/02/2022	11/02/2022	15/02/2022	11/02/2022	11/02/2022
A-T-042wTCN	11/02/2022	11/02/2022	11/02/2022	11/02/2022	11/02/2022	11/02/2022
A-T-043-w	11/02/2022	11/02/2022	11/02/2022	11/02/2022	11/02/2022	11/02/2022
A-T-049w	15/02/2022	15/02/2022	15/02/2022	15/02/2022	15/02/2022	15/02/2022
A-T-050w	14/02/2022	14/02/2022	14/02/2022	14/02/2022	14/02/2022	14/02/2022
A-T-055w	14/02/2022	14/02/2022	14/02/2022	14/02/2022	14/02/2022	14/02/2022

The above dates are the analysis completion dates, please note that these are not necessarily the date that the analysis was weighed/extracted.

End of Report



FINAL ANALYTICAL TEST REPORT SUPPLEMENT TO TEST REPORT 22/01086/1

Amendments: Re-issue following query/investigation

Envirolab Job Number: 22/01086

Issue Number: 2 **Date:** 17 February, 2022

Client: Wardell Armstrong (Birmingham)

2 Devon Way Longbridge Birmingham

UK

B31 2TS

Project Manager: William Phillips **Project Name:** South West Rugby

Project Ref: BM11254
Order No: BM9163
Date Samples Received: 08/02/22
Date Instructions Received: 08/02/22
Date Analysis Completed: 16/02/22

Approved by:

Danielle Brierley

Deputy Client Services Supervisor





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Lab Sample ID	22/01086/1	22/01086/2	22/01086/3	22/01086/4	22/01086/5	22/01086/6			
Client Sample No									
Client Sample ID	WS01	WS04	WS08	WS11	WS14	WS16			
Depth to Top									
Depth To Bottom								ion	
Date Sampled	04-Feb-22	04-Feb-22	03-Feb-22	04-Feb-22	03-Feb-22	03-Feb-22		etect	4
Sample Type	Water - EW	1 .	Limit of Detection	Method ref					
Sample Matrix Code	N/A	N/A	N/A	N/A	N/A	N/A	Units	Limi	Meth
pH (w) _A #	6.38	7.09	7.06	7.22	7.59	7.35	pН	0.01	A-T-031w
Alkalinity (total) (w) Colorimetry _A #	48	259	150	222	357	277	mg/l Ca CO3	20	A-T-038w
Sulphate (w) _A #	68	662	105	41	241	26	mg/l	1	A-T-026w
Cyanide (free) (w) _A #	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	mg/l	0.005	A-T-042wFCN
Cyanide (total) (w) _A #	0.029	0.217	<0.005	0.013	<0.005	<0.005	mg/l	0.005	A-T-042wTCN
Thiocyanate (w) _A	<0.1	0.6	<0.1	<0.1	<0.1	<0.1	mg/l	0.1	A-T-041w
Phenois - Total by HPLC (w) _A	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/l	0.01	A-T-050w
Sulphide (w) _A	<0.1	<0.1	0.4	0.1	<0.1	0.2	mg/l	0.1	A-T-043-w
DOC (w) _A #	6.1	11.0	6.4	13.2	149	217	mg/l	2	A-T-032w
Arsenic (dissolved) _A #	<1	<1	4	<1	<1	3	μg/l	1	A-T-025w
Boron (dissolved) _A #	30	36	35	48	46	70	μg/l	10	A-T-025w
Cadmium (dissolved) _A #	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	μg/l	0.2	A-T-025w
Calcium (dissolved) _A #	68	99	46	59	63	54	mg/l	1	A-T-049w
Copper (dissolved) _A #	2	1	4	3	3	10	μg/l	1	A-T-025w
Chromium (dissolved) _A #	<1	<1	<1	2	<1	5	μg/l	1	A-T-025w
Chromium (hexavalent) (w) _A #	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/l	0.01	A-T-040w
Lead (dissolved) _A #	<1	<1	<1	<1	<1	1	μg/l	1	A-T-025w
Mercury (dissolved) _A #	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	μg/l	0.1	A-T-025w
Nickel (dissolved) _A #	3	3	1	2	2	2	μg/l	1	A-T-025w
Selenium (dissolved) _A #	<1	2	2	<1	1	2	 μg/l	1	A-T-025w



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Lab Sample ID	22/01086/1	22/01086/2	22/01086/3	22/01086/4	22/01086/5	22/01086/6				
Client Sample No										
Client Sample ID	WS01	WS04	WS08	WS11	WS14	WS16				
Depth to Top										
Depth To Bottom									<u>io</u>	
Date Sampled	04-Feb-22	04-Feb-22	03-Feb-22	04-Feb-22	03-Feb-22	03-Feb-22			etect	J
Sample Type	Water - EW	Water - EW		,,	Limit of Detection	Method ref				
Sample Matrix Code	N/A	N/A	N/A	N/A	N/A	N/A		Units	Li mi	Meth
PAH 16MS (w)										
Acenaphthene (w) _A #	<0.10	<0.10	<0.10	<0.10	0.18	0.95		μg/l	0.01	A-T-019w
Acenaphthylene (w) _A #	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10		μg/l	0.01	A-T-019w
Anthracene (w) _A #	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10		μg/l	0.01	A-T-019w
Benzo(a)anthracene (w) _A #	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10		μg/l	0.01	A-T-019w
Benzo(a)pyrene (w) _A #	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10		μg/l	0.01	A-T-019w
Benzo(b)fluoranthene (w) _A #	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10		μg/l	0.01	A-T-019w
Benzo(ghi)perylene (w) _A #	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10		μg/l	0.01	A-T-019w
Benzo(k)fluoranthene (w) _A #	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10		μg/l	0.01	A-T-019w
Chrysene (w) _A #	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10		μg/l	0.01	A-T-019w
Dibenzo(ah)anthracene (w) _A #	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10		μg/l	0.01	A-T-019w
Fluoranthene (w) _A #	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10		μg/l	0.01	A-T-019w
Fluorene (w) _A #	<0.10	<0.10	<0.10	<0.10	<0.10	0.17		μg/l	0.01	A-T-019w
Indeno(123-cd)pyrene (w) _A #	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10		μg/l	0.01	A-T-019w
Naphthalene (w) _A #	<0.10	<0.10	<0.10	<0.10	0.21	1.10		μg/l	0.01	A-T-019w
Phenanthrene (w) _A #	<0.10	<0.10	<0.10	<0.10	0.14	<0.10		μg/l	0.01	A-T-019w
Pyrene (w) _A #	<0.10	<0.10	<0.10	<0.10	0.11	<0.10		μg/l	0.01	A-T-019w
Total PAH 16MS (w) _A #	<0.10	<0.10	<0.10	<0.10	0.64	2.22		μg/l	0.01	A-T-019w



					Client Pro	ject Ref: BN	/111254			
Lab Sample ID	22/01086/1	22/01086/2	22/01086/3	22/01086/4	22/01086/5	22/01086/6				
Client Sample No										
Client Sample ID	WS01	WS04	WS08	WS11	WS14	WS16				
Depth to Top										
Depth To Bottom									e G	
Date Sampled	04-Feb-22	04-Feb-22	03-Feb-22	04-Feb-22	03-Feb-22	03-Feb-22			etecti	_
Sample Type	Water - EW			δ Č	od re					
Sample Matrix Code	N/A	N/A	N/A	N/A	N/A	N/A		Units	Limit of Detection	Method ref
TPH CWG (w) with Clean Up *C1										
Ali >C5-C6 (w) _A #	<1	<1	<1	<1	<1	<1		μg/l	1	A-T-022w
Ali >C6-C8 (w) _A #	<1	<1	<1	<1	<1	<1		μg/l	1	A-T-022w
Ali >C8-C10 (w) _A #	<50	<50	<50	<50	<50	<50		μg/l	5	A-T-055w
Ali >C10-C12 (w) _A #	<50	<50	<50	<50	<50	<50		μg/l	5	A-T-055w
Ali >C12-C16 (w) _A #	<50	<50	<50	<50	<50	<50		μg/l	5	A-T-055w
Ali >C16-C21 (w) _A #	<50	<50	<50	<50	<50	<50		μg/l	5	A-T-055w
Ali >C21-C35 (w) _A #	<50	93	<50	<50	<50	<50		μg/l	5	A-T-055w
Total Aliphatics (w) _A #	<50	93	<50	<50	<60	<500		μg/l	5	A-T-055w
Aro >C5-C7 (w) _A #	<1	<1	<1	<1	<1	<1		μg/l	1	A-T-022w
Aro >C7-C8 (w) _A #	<1	<1	<1	<1	<1	<1		μg/l	1	A-T-022w
Aro >C8-C10 (w) _A	<50	<50	<50	<50	<50	<50		μg/l	5	A-T-055w
Aro >C10-C12 (w) _A #	<50	<50	<50	<50	<50	<50		μg/l	5	A-T-055w
Aro >C12-C16 (w) _A #	<50	<50	<50	<50	<50	<50		μg/l	5	A-T-055w
Aro >C16-C21 (w) _A #	<50	<50	<50	<50	<50	<50		μg/l	5	A-T-055w
Aro >C21-C35 (w)A	<100	<100	<100	<100	<100	<100		μg/l	10	A-T-055w
Total Aromatics (w)A	<100	<100	<100	<100	<100	<1000		μg/l	10	A-T-055w
TPH (Ali & Aro >C5-C35) (w)A	<100	<100	<100	<100	<100	<1000		μg/l	10	A-T-055w
BTEX - Benzene (w) _A #	<1	<1	<1	<1	<1	<1		μg/l	1	A-T-022w
BTEX - Toluene (w) _A #	<1	<1	<1	<1	<1	<1		μg/l	1	A-T-022w
BTEX - Ethyl Benzene (w) _A #	<1	<1	<1	<1	<1	<1		μg/l	1	A-T-022w
BTEX - m & p Xylene (w) _A #	<1	<1	<1	<1	<1	<1		μg/l	1	A-T-022w
BTEX - o Xylene (w) _A #	<1	<1	<1	<1	<1	<1		μg/l	1	A-T-022w
MTBE (w) _A #	<1	<1	<1	<1	<1	<1		μg/l	1	A-T-022w



REPORT NOTES

General

This report shall not be reproduced, except in full, without written approval from Envirolab.

The results reported herein relate only to the material supplied to the laboratory.

The residue of any samples contained within this report, and any received with the same delivery, will be disposed of six weeks after initial scheduling. For samples tested for Asbestos we will retain a portion of the dried sample for a minimum of six months after the initial Asbestos testing is completed.

Analytical results reflect the quality of the sample at the time of analysis only.

Opinions and interpretations expressed are outside the scope of our accreditation.

If results are in italic font they are associated with an AQC failure, these are not accredited and are unreliable.

A deviating samples report is appended and will indicate if samples or tests have been found to be deviating. Any test results affected may not be an accurate record of the concentration at the time of sampling and, as a result, may be invalid.

The Client Sample No, Client Sample ID, Depth to Top, Depth to Bottom and Date Sampled were all provided by the client.

Soil chemical analysis:

All results are reported as dry weight (<40°C).

For samples with Matrix Codes 1 - 6 natural stones, brick and concrete fragments >10mm and any extraneous material (visible glass, metal or twigs) are removed and excluded from the sample prior to analysis and reported results corrected to a whole sample basis. This is reported as '% stones >10mm'.

For samples with Matrix Code 7 the whole sample is dried and crushed prior to analysis and this supersedes any "A" subscripts All analysis is performed on the sample as received for soil samples which are positive for asbestos or the client has informed asbestos may be present and/or if they are from outside the European Union and this supersedes any "D" subscripts.

TPH analysis of water by method A-T-007:

Free and visible oils are excluded from the sample used for analysis so that the reported result represents the dissolved phase only.

Electrical Conductivity of water by Method A-T-037:

Results greater than 12900µS/cm @ 25°C / 11550µS/cm @ 20°C fall outside the calibration range and as such are unaccredited.

Asbestos:

Asbestos in soil analysis is performed on a dried aliquot of the submitted sample and cannot guarantee to identify asbestos if only present in small numbers as discrete fibres/fragments in the original sample.

Stones etc. are not removed from the sample prior to analysis.

Quantification of asbestos is a 3 stage process including visual identification, hand picking and weighing and fibre counting by sedimentation/phase contrast optical microscopy if required. If asbestos is identified as being present but is not in a form that is suitable for analysis by hand picking and weighing (normally if the asbestos is present as free fibres) quantification by sedimentation is performed. Where ACMs are found a percentage asbestos is assigned to each with reference to 'HSG264, Asbestos: The survey guide' and the calculated asbestos content is expressed as a percentage of the dried soil sample aliquot used.

Predominant Matrix Codes:

1 = SAND, 2 = LOAM, 3 = CLAY, 4 = LOAM/SAND, 5 = SAND/CLAY, 6 = CLAY/LOAM, 7 = OTHER, 8 = Asbestos bulk ID sample, 9 = INCINERATOR ASH.

Samples with Matrix Code 7 & 8 are not predominantly a SAND/LOAM/CLAY mix and are not covered by our BSEN 17025 or MCERTS accreditations, with the exception of bulk asbestos which are BSEN 17025 accredited.

Secondary Matrix Codes:

A = contains stones, B = contains construction rubble, C = contains visible hydrocarbons, D = contains glass/metal, E = contains roots/twigs.

Key:

IS indicates Insufficient Sample for analysis.

US indicates Unsuitable Sample for analysis.

NDP indicates No Determination Possible.

NAD indicates No Asbestos Detected.

N/A indicates Not Applicable.

Superscript # indicates method accredited to ISO 17025.

Superscript "M" indicates method accredited to MCERTS.

Subscript "A" indicates analysis performed on the sample as received.

Subscript "D" indicates analysis performed on the dried sample, crushed to pass a 2mm sieve

EPH CWG results have humics mathematically subtracted through instrument calculation

TPH results "with Cleanup" indicates results cleaned up with Silica during extraction

EPH CWG GCxGC ID from TPH CWG

Where we have identified humic substances in any ID's from TPH CWG with Clean Up please note that the concentration of these humic substances is not included in the quantified results and are included in the ID for information.

Please contact us if you need any further information.



Envirolab Deviating Samples Report

Units 7&8 Sandpits Business Park, Mottram Road, Hyde, SK14 3AR Tel. 0161 368 4921 email. ask@envlab.co.uk

Client: Wardell Armstrong (Birmingham), 2 Devon Way, Longbridge, Birmingham, UK, **Project No:** 22/01086

B31 2TS **Date Received:** 08/02/2022 (am)

Project: South West Rugby Cool Box Temperatures (°C): 9.4

Clients Project No: BM11254

NO DEVIATIONS IDENTIFIED with respect to sampling dates or containers received.

Note: If, at any point before reaching the laboratory, the temperature of the samples has breached those set in published standards, e.g. BS-EN 5667-3 (for water samples 5 ± 3°C), ISO 18400-105:2017, then the concentration of any affected analytes may differ from that at the time of sampling.



Envirolab Analysis Dates

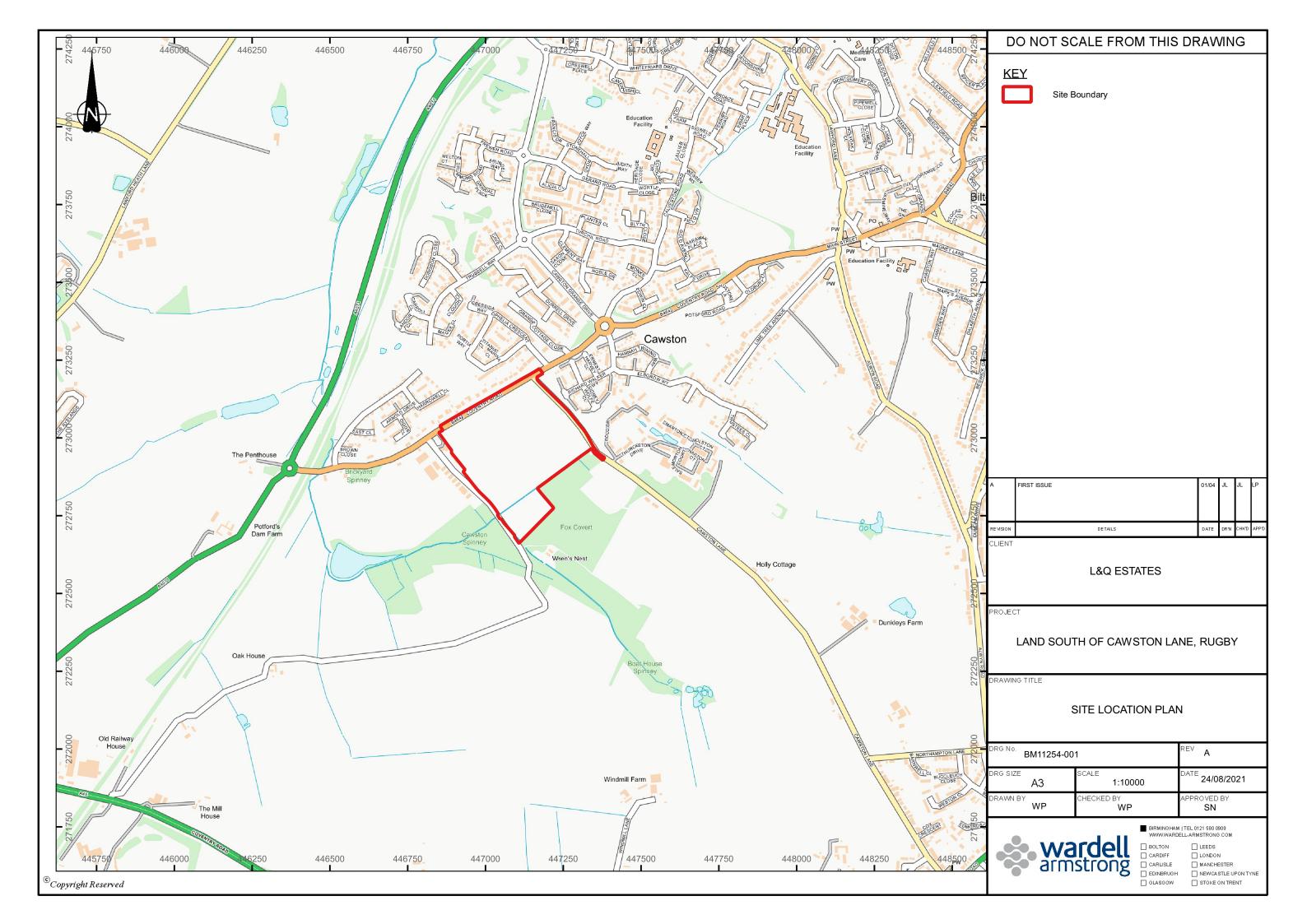
Lab Sample ID	22/01086/1	22/01086/2	22/01086/3	22/01086/4	22/01086/5	22/01086/6
Client Sample No						
Client Sample ID/Depth	WS01	WS04	WS08	WS11	WS14	WS16
Date Sampled	04/02/22	04/02/22	03/02/22	04/02/22	03/02/22	03/02/22
A-T-019w	14/02/2022	14/02/2022	14/02/2022	14/02/2022	14/02/2022	14/02/2022
A-T-022w	14/02/2022	14/02/2022	14/02/2022	14/02/2022	14/02/2022	14/02/2022
A-T-025w	14/02/2022	14/02/2022	14/02/2022	14/02/2022	14/02/2022	14/02/2022
A-T-026w	11/02/2022	11/02/2022	11/02/2022	11/02/2022	11/02/2022	11/02/2022
A-T-031w	11/02/2022	11/02/2022	11/02/2022	11/02/2022	11/02/2022	11/02/2022
A-T-032w	14/02/2022	14/02/2022	14/02/2022	14/02/2022	15/02/2022	15/02/2022
A-T-038w	16/02/2022	16/02/2022	16/02/2022	16/02/2022	16/02/2022	16/02/2022
A-T-040w	11/02/2022	11/02/2022	11/02/2022	11/02/2022	11/02/2022	11/02/2022
A-T-041w	16/02/2022	16/02/2022	16/02/2022	16/02/2022	16/02/2022	16/02/2022
A-T-042wFCN	15/02/2022	15/02/2022	11/02/2022	15/02/2022	11/02/2022	11/02/2022
A-T-042wTCN	11/02/2022	11/02/2022	11/02/2022	11/02/2022	11/02/2022	11/02/2022
A-T-043-w	11/02/2022	11/02/2022	11/02/2022	11/02/2022	11/02/2022	11/02/2022
A-T-049w	15/02/2022	15/02/2022	15/02/2022	15/02/2022	15/02/2022	15/02/2022
A-T-050w	14/02/2022	14/02/2022	14/02/2022	14/02/2022	14/02/2022	14/02/2022
A-T-055w	14/02/2022	14/02/2022	14/02/2022	14/02/2022	14/02/2022	14/02/2022

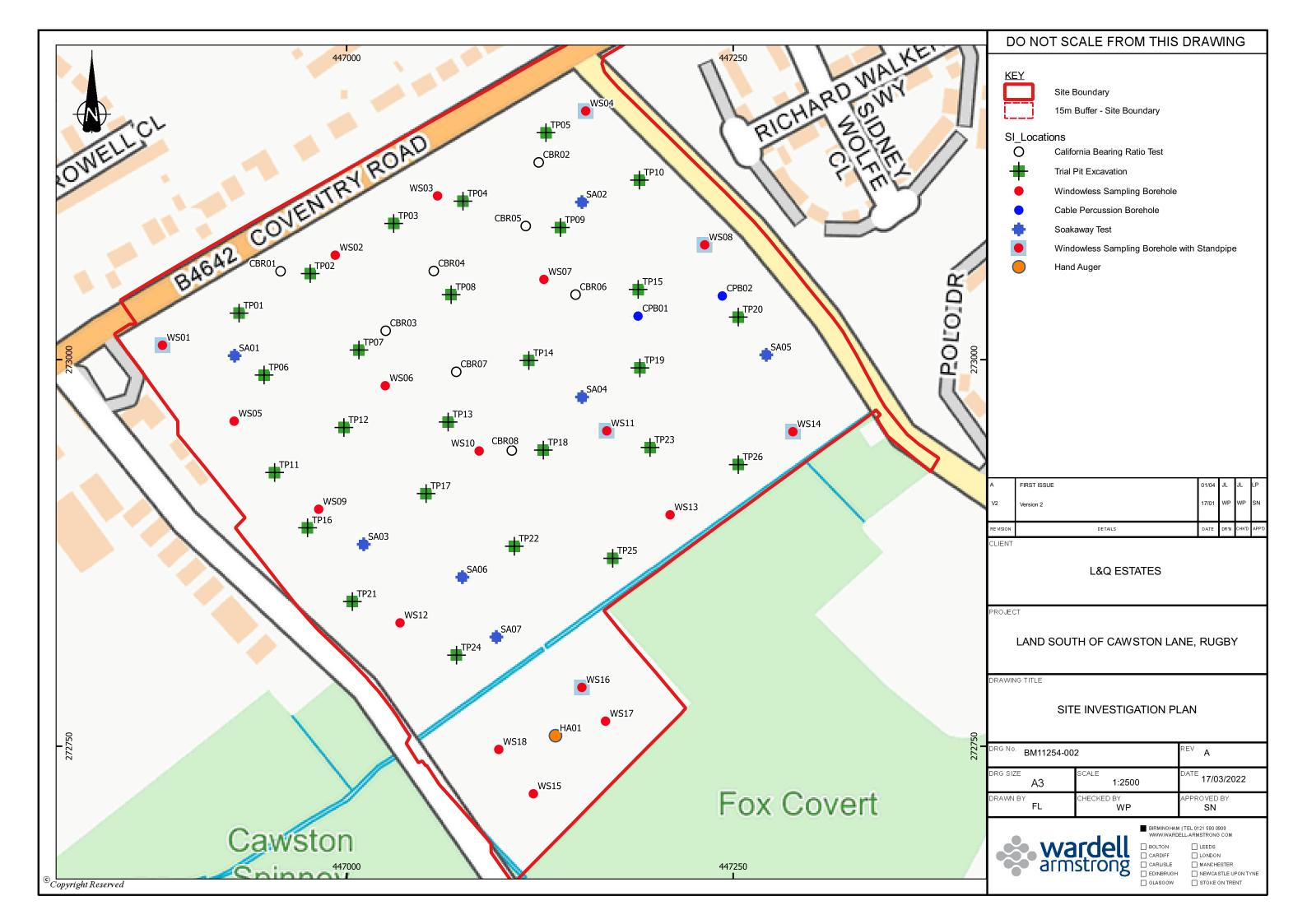
The above dates are the analysis completion dates, please note that these are not necessarily the date that the analysis was weighed/extracted.

End of Report



DRAWINGS







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