

Transpennine Route Upgrade GI

BAM Ritchies - W1B - SPO5.3W - MVL1 Drainage Tanker Access Assessment - GRIP 5

Factual Account of Ground Investigation



01 September 2022

BAM Ritchies Project Reference: 322Q-26a

TRU Chainage: A:5300m to A:5350m

PW Reference: 151667-TSA-W1B-MVL1-DM3-X-MF-800401

Control Sheet

Project Name:	Transpennine Route Upgrade SI / GI
Project No:	322Q-26a
Client:	Transpire Alliance
Engineer:	Transpire Alliance
Status:	DRAFT
Revision No:	01

Authorisation

	Name	Signature	Date
Prepared by	A Pearce		01/09/2022
Checked by	J Elson		01/09/2022
Approved for issue by	J Hogg		01/09/2022

Distribution

Copy	To	Controlled / Uncontrolled	Date of Issue
1	Transpire Alliance	Uncontrolled	01/09/2022

Revision History

Revision Reference	Revision Description	Date
01	DRAFT	01/09/2022

Note

The scope of the investigation was determined by the Engineer for the particular project requirements set out in the Specification for the Contract.

The investigation was carried out by BAM Ritchies and this report has been prepared for the sole use of the Client. This report shall not be relied upon or transferred to any other parties without the express written authorisation of BAM Ritchies.

This report has been produced by BAM Ritchies

5 Taurus Park, Europa Boulevard; Gemini Business Park; Warrington; WA5 7ZT. Tel:01925 405178

BAM Ritchies is an operating division of BAM Nuttall Ltd, Registered Office, St James House, Knoll Road, Camberley, Surrey GU15 3XW. Registered Number 305189 England and Wales.

Contents

Control Sheet	2
1.0 Introduction	5
2.0 The site and geology	6
2.1 Site description	6
2.2 Geology	6
3.0 Fieldwork	6
3.1 General	6
3.2 Exploratory holes	6
3.3 In situ testing	7
4.0 Laboratory testing	7
4.1 Geotechnical testing	7
4.2 Geoenvironmental testing	7
Tables	
Fieldwork summary	
Laboratory summary	
Figures	
Site Location Plan	
Exploratory Hole Location Plan	
Appendix 1	
Key to exploratory hole logs	
Logs and Photographs	
Appendix 2	
Geo environmental Testing	
Geotechnical Testing	

1.0 Introduction

Commencing August 2022, BAM Ritchies was commissioned by the Transpire Alliance to carry out an exploratory ground investigation as part of the Transpennine Route Upgrade SI GI, through the collection of samples along the side of MVL1 and on the western approach to the Berry Brow Railway crossing, Manchester – MVL1: 3mi18ch to 3mi22ch..

The investigation was commissioned to determine the composition of the ground where the drainage tanker will potentially be placed and enable the collection of samples for subsequent laboratory testing to determine any possible contamination and waste characteristics.

The scope of the investigation, which was specified by the Transpire design engineers, comprised hand dug trial pits to depths of up to 1.20m and a Cable Percussion bore hole drilled to 11.00m below ground level

The objectives of the investigation were to confirm the ground and groundwater conditions at the exploratory hole locations and to establish the geo-environmental properties of material encountered.

This report presents the factual records of the fieldworks and any subsequent laboratory testing. The report has been prepared in accordance with BS5930:2015, NR/L2/TRK/4239 and the requirements of the Client. The data is also presented separately in digital format following AGS:2011¹: 151667-TSA-W1B-MVL1-DM3-X-MF-800402

1 AGS:2011 Electronic Transfer of Geotechnical Data AGS 4, Association of Geotechnical Specialists

2.0 The site and geology

2.1 Site description

The site is centred on National Grid Reference SJ 88915 99583 at the Western approach to the Berry Brow Railway crossing, Manchester. Figure 1 shows the location of the site within the region.

2.2 Geology

Information from the BGS indicates bedrock underlying the site is composed of the Collyhurst Sandstone Formation of the Permian period

Superficial deposits are shown to be Glacial Till of the Devensian Stage and Alluvium of the Quaternary period.

3.0 Fieldwork

3.1 General

The scope of the ground investigation was determined by the Transpire Alliance. The fieldwork to date was carried out commencing March 2022.

3.2 Exploratory holes

The exploratory hole locations were set out by a BAM Ritchies Geotechnical Engineer using the site plan and coordinates provided. The positions are shown on the exploratory hole plans which comprise Figure 2.

The exploratory holes are summarised in Table 1 which includes a summary of the sampling and in situ testing carried out.

The exploratory hole logs and photographs are presented in Appendix 1. Any chainage or mileage stated in the exploratory hole records should be considered a best estimate

and the OS grid coordinates should be considered the true exploratory hole position.

Recovered samples were transported to BAM Ritchies stores in Warrington for temporary retention and sampling as appropriate.

3.3 In situ testing

In-situ testing was carried out in exploratory hole locations, This included DCP's, PID's and SPT's.

4.0 Laboratory testing

4.1 Geotechnical testing

A programme of laboratory based geotechnical testing scheduled by the Transpire Alliance was carried out on selected samples.

The testing undertaken is summarised in Table 2 with the results, references and methods for each test detailed on the appropriate result sheets in Appendix 2.

4.2 Geoenvironmental testing

A programme of laboratory based geoenvironmental testing scheduled by the Transpire Alliance was carried out on selected samples.

The testing undertaken is summarised in Table 3 with the results, references and methods for each test detailed on the appropriate result sheets in Appendix 3.

Tables

- 1 Fieldwork summary
- 2 Laboratory summary

TABLE 1 - FIELDWORK SUMMARY

Project Name: Transpennine Route Upgrade SIGI Client: Transpire Alliance

Project No: 322Q-26a Engineer: Transpire Alliance

DEPTH RELATED EXPLORATORY HOLE INFORMATION						
Hole No	Type	From m	To m	Date		Plant
				Start	End	
W1 -Clayton-BH1	IP	0.00	1.20	2/28/2022	2/28/2022	Hand tools
W1 -Clayton-BH1	WS	1.20	12.50	2/28/2022	2/28/2022	T820-068
W1-Clayton-BH2	IP	0.00	1.20	5/26/2022	5/26/2022	Insulated hand tools
W1-Clayton-BH2	WS	1.20	11.00	5/26/2022	5/27/2022	T820-068
W1-Clayton-BH2A	IP	0.00	1.20	7/1/2022	7/1/2022	Hand tools
W1-Clayton-BH2A	WLS	1.20	6.00	7/1/2022	7/1/2022	T820-773
W1-Clayton-DCP1	IP	0.00	1.00	3/8/2022	3/8/2022	Dart Rig
W1-Clayton-DCP2	IP	0.00	1.00	3/8/2022	3/8/2022	Dart Rig
W1-Clayton-DCP3	IP	0.00	1.20	3/2/2022	3/2/2022	Hand tools
W1-Clayton-DCP4	IP	0.00	1.20	3/3/2022	3/3/2022	Hand tools
W1-Clayton-TP1	IP	0.00	1.20	3/3/2022	3/3/2022	Hand tools

For Abbreviations see Key to Exploratory Hole Records

TABLE 1 - FIELDWORK SUMMARY

Project Name: Transpennine Route Upgrade SIGI Client: Transpire Alliance

Project No: 322Q-26a Engineer: Transpire Alliance

DEPTH RELATED EXPLORATORY HOLE INFORMATION						
Hole No	Type	From m	To m	Date		Plant
				Start	End	
W1-Clayton-TP2	IP	0.00	1.20	3/2/2022	3/2/2022	Hand tools

For Abbreviations see Key to Exploratory Hole Records

TABLE 1 - FIELDWORK SUMMARY

INSTALLATION DETAILS				
Hole No	Type	Depth to Base m	Response Zone	
			From m	To m
W1-Clayton-BH2	SP	11.00	10.00	11.00
W1-Clayton-BH2A	SP	6.00	1.00	6.00

For Abbreviations see Key to Exploratory Hole Records

TABLE 1 - FIELDWORK SUMMARY

BACKFILL DETAILS			
Hole No	From m	To m	Description
W1 -Clayton-BH1	0.00	12.50	Bentonite
W1-Clayton-BH2	0.00	0.10	Flush cover
W1-Clayton-BH2	0.10	0.40	Concrete
W1-Clayton-BH2	0.40	10.00	Bentonite
W1-Clayton-BH2	10.00	11.00	Gravel Backfill
W1-Clayton-BH2A	0.00	0.50	Flush cover
W1-Clayton-BH2A	0.50	1.00	Bentonite
W1-Clayton-BH2A	1.00	6.00	Gravel Backfill
W1-Clayton-DCP1	0.00	1.00	Bentonite
W1-Clayton-DCP2	0.00	1.00	Arisings
W1-Clayton-DCP3	0.00	1.20	Arisings

For Abbreviations see Key to Exploratory Hole Records

TABLE 1 - FIELDWORK SUMMARY

BACKFILL DETAILS			
Hole No	From m	To m	Description
W1-Clayton-DCP4	0.00	1.20	Arisings
W1-Clayton-TP2	0.00	0.30	Asphalt
W1-Clayton-TP2	0.30	1.20	Bentonite

For Abbreviations see Key to Exploratory Hole Records

TABLE 1 - FIELDWORK SUMMARY

Project Name: Transpennine Route Upgrade SIGI Client: Transpire Alliance

Project No: 322Q-26a Engineer: Transpire Alliance

Hole No	Hole Type	Final Depth m	Date		SAMPLES					IN SITU TESTS	
					Count of Types						
			Start	End	D	B	Liner	UT	ES	SPT S	C
Totals					55	41	5	3	45	11	6
W1 -Clayton-BH1	CP	12.50	2/28/2022	2/8/2022	21	12		2	11	6	2
W1-Clayton-BH2	CP	11.00	5/26/2022	5/27/2022	17	12		1	12	5	4
W1-Clayton-BH2A	WLS	6.00	7/1/2022	7/1/2022			5				
W1-Clayton-DCP1	TP	1.00	3/8/2022	3/8/2022	3	3			4		
W1-Clayton-DCP2	TP	1.00	3/8/2022	3/8/2022	2	2			3		
W1-Clayton-DCP3	TP	1.20	3/3/2022	3/2/2022	3	3			4		
W1-Clayton-DCP4	TP	1.20	3/3/2022	3/4/2022	3	3			4		
W1-Clayton-TP1	TP	1.20	3/3/2022	3/3/2022	3	3			4		
W1-Clayton-TP2	TP	1.20	3/3/2022	3/2/2022	3	3			3		

For Abbreviations see Key to Exploratory Hole Records

TABLE 2 LABORATORY TESTING SUMMARY

Project Name: Transpennine Route Upgrade Client:
 Project No: 322Q-26a Engineer:

Hole No	Soils Testing					Chemical	
	Moisture Content	Liquid and Plastic Limit Tests	Liquid and Plastic Limit Tests	Particle Size Distribution by Sieving	Particle Size Distribution by Sedimentation	Geotechnical Chemical Testing No of determinands	Geoenvironmental Chemical Testing No of Determinands
Totals	10		2	5	5	12	2532
W1 -Clayton-BH1		40					633
W1-Clayton-BH2	10	31	2	5	5	12	1436
W1-Clayton-BH2A							
W1-Clayton-DCP1							208
W1-Clayton-DCP2							26
W1-Clayton-DCP3							26
W1-Clayton-DCP4							181
W1-Clayton-TP1							22
W1-Clayton-TP2							

Figures

- 1 Site Location Plan
- 2 Exploratory Hole Location Plan



Legend Key	Remarks	Site Location Plan Project Name: Transpennine Route Upgrade SIGI Project No: 322Q-26a Client: Transpire Alliance Engineer: Transpire Alliance Contractor: BAM Ritchies Date: 22/08/2022 Scale: 1:3000 Figure No: 322Q-26a / xxx BAM R Hole Location Plan A4 27/09/2016	
Site Location			



Legend Key	Remarks	Exploratory Hole Locations Project Name: Transpennine Route Upgrade SIGI Project No: 322Q-26a Client: Transpire Alliance Engineer: Transpire Alliance Contractor: BAM Ritchies Date: 22/08/2022 Scale: 1:500 Figure No: 322Q-26a / xxx BAM R Hole Location Plan A4 27/09/2016	
+ Exploratory Hole Locations			

Appendix 1

- 1 Key to exploratory hole logs
- 2 Logs and Photographs

KEY TO EXPLORATORY HOLE RECORDS

LOCATION TYPES

(abbreviations based on AGS 4.0 : 2011)

CP	Cable percussion	PM	Pressuremeter test hole
DCP	Dynamic cone penetrometer	RC	Rotary cored
DP	Dynamic probe sampling	RO	Rotary open hole
EXP	Logged exposure	SCP	Static cone penetrometer
HA	Hand Auger	SNC	Sonic core drilling
ICBR	In situ CBR test	TP	Trial pit/trench
IDEN	In situ density test	TRAV	Linear logging traverse or scanline survey
INST	instrument	VC	Vibrocore
IP	Inspection pit	W	Wash boring
IRDX	In situ redox test	WLS	Dynamic (windowless) sampler
IRES	In situ resistivity	WS	Window Sampler
IVAN	In situ vane test	CC	Concrete core
OP	Observation pit/trench	IPLT	In situ plate loading test

SAMPLES

(abbreviations based on AGS 4.0 : 2011)

AMAL	Amalgamated sample	L / Liner	Window Sample Liner Sample
B	Bulk disturbed sample	LB	Large bulk disturbed sample
BLK	Block sample	P	Piston sample
C	Core sample	TW	Thin walled push in sample
CBR	CBR mould sample	U	Undisturbed sample - open drive
D	Small disturbed sample	UT	Thin wall open drive tube sampler
ES	Soil sample for environmental testing (suite of containers)	W	Water sample
EW	Water sample for environmental testing (suite of containers)	G	Gas sample
RC	Rotary Core Run	NR	No recovery
WS(1)	Window Sample Run No.	D-NR	No recovery from SPT

IN SITU TESTS

SPT S or SPT C	Standard Penetration Test, open shoe (S) or solid cone (C) Incremental blow count / penetration given on Borehole Hole Information Sheet Summary result given on borehole log as N value, N=**, where the full test drive of 300mm is reached otherwise as blow count/penetration in mm. Details result, Self Weight Penetration and Hammer Energy Ratio given on Borehole Information Sheet
BHV	Borehole Vane Test - result given as peak(remoulded)
HV	Hand Vane Test - result given as peak(remoulded)
PP	Pocket Penetrometer Test, result given as shear strength
KBFH	Borehole Falling Head Permeability Test
KBRH	Borehole Rising Head Permeability Test
KBCH	Borehole Constant Head Permeability Test
KBPT	Borehole Contant Head Packer Permeability Test
KSPFH	Standpipe/Piezometer Falling Head Permeability Test
KSPRH	Standpipe/Piezometer Rising Head Permeability Test
KSPCH	Standpipe/Piezometer Constant Head Permeability Test
Soak	Soakaway Test
Eh	Redox Potential Test
Rs	Resistivity Test
SRDS	Sand Replacement Density Test, Small Pouring Cylinder
SRDL	Sand Replacement Density Test, Large Pouring Cylinder
CCD	Core Cutter Density Test
DCP	CBR from Dynamic Cone Penetrometer (DMRB HD29/08 Section 7.27)
CBR	In situ CBR apparatus (BS1377-9:1990 Section 4.3)
MEX	Mexecone

CORE RECORDS

(abbreviations based on BS5930:2015)

TCR	Total Core Recovery
SCR	Solid Core Recovery
RQD	Rock Quality Designation
If min	Minimum Fracture Spacing
If ave	Average Fracture Spacing
If max	Maximum Fracture Spacing
FI	Fracture Index - number of fractures per metre
CRF	Core recovered in the following run given in detailed description
AZCL	Assessed zone of core loss
NR	No recovery
NI	Non-intact

In inclined boreholes depth is measured along the core axis and dips are given with respect to the normal to the core axis The assessment of SCR, ROD and Fracture Spacing excludes artificial fractures

FLUSH Flush type, returns percentage and colour given on Borehole Information Sheet

GROUNDWATER Details are given on Borehole Hole Information Sheet



Groundwater strike



Groundwater level after standing period



Groundwater strike where level rise recorded after entry.

INSTALLATIONS Type and details of installation and backfill are given on Borehole Hole Information Sheet (based on AGS 4.0 : 2011)

EPIE	Electronic Piezometer	ICM	Inclinometer - Manual
ETM	Magnetic Extensometer	PPIE	Pneumatic Piezometer
ETR	Rod Extensometer	SLIP	Slip indicator
ETT	Tape Extensometer	SP	Standpipe
HPIE	Hydraulic piezometer	SPIE	Standpipe piezometer
ICE	Inclinometer		

Notes

Soils and rocks are described in accordance with BS EN ISO 14688-1 : 2002, 14688-2 : 2004, 14689-1 : 2003 and BS 5930 :2015

References

AGS: 2011 Electronic Transfer of Geotechnical and Geoenvironmental Data AGS4

BS EN ISO 14688-1 : 2002: Geotechnical investigation and testing - Identification and classification of soil - Part 1 Identification and description. BSI

BS EN ISO 14688-2: 2004: Geotechnical investigation and testing - Identification and classification of soil - Part 2 Principles for a classification. BSI

BS EN ISO 14689-1 : 2003: Geotechnical investigation and testing - identification and classification of rock - Part 1 Identification and description. BSI

BS EN ISO 22476-3 : 2005 : Geotechnical investigation and testing - Field testing - Part 3 Standard penetration test. BSI

BS 1377-9:1990, Methods of test for soils for civil engineering purposes – Part 9: In-situ tests. BSI

BS 5930 : 2015 Code of Practice for site investigations. British Standards Institution. BSI

The Highways Agency : 2008 : Volume 7 Section 3 Part 2 HD29/08. Testing at Investigation Sites

KEY TO EXPLORATORY HOLE RECORDS

Network Rail Legend Codes

1 BALLAST

a) With no subgrade erosion

- | | | |
|---|---|-----------------------------------|
| 1 |  | Clean Ballast |
| 2 |  | Slightly Dirty Ballast |
| 3 |  | Dirty Ballast |
| 4 |  | Very Dirty Ballast (non-cohesive) |
| 5 |  | Very Dirty Ballast (cohesive) |
| 6 |  | Very dirty ballast (slurried) |

b) With subgrade erosion

- | | | |
|----|---|--|
| 7 |  | Slurried Ballast < 10% fines |
| 8 |  | Slurried Ballast > 10% fines |
| 9 |  | Ballast - Voids filled with silt/fine sand |
| 10 |  | Ballast - Voids Filled with soft/firm clay |

2 TRACKBED LAYERS/FILLS

a) Derived from naturally occurring Sands and Gravels. (% refers to clay/ silt content)

- | | | |
|----|---|--|
| 11 |  | Fine/Medium Sand (<5%) |
| 12 |  | Coarse Sand (<5%) |
| 13 |  | Sand and Gravel (<5%) |
| 14 |  | Clayey/silty Sand and/or Gravel (5 to 20%) |
| 15 |  | Slurried Sand and/or Gravel (5 to 20%) |

b) Quarry Products

- | | | |
|----|---|---|
| 16 |  | Stone dust (<5%) |
| 17 |  | Coarse Crushed stone aggregate (<5%) |
| 18 |  | Clayey/silty Crushed Stone Aggregate (5 to 20%) |
| 19 |  | Slurried Crushed Stone Aggregate |

c) Ash

- | | | |
|----|---|-------------------------------------|
| 20 |  | Fine ash (sand sized) (<5%) |
| 21 |  | Coarse ash (gravel sized) (<5%) and |
| 22 |  | Clayey/silty Ash (5 to 20%) |
| 23 |  | Slurried Ash |

d) Other granular trackbed materials

- | | | |
|----|--|--|
| 24 |  | Fine grained, susceptible to erosion (<5%) |
| 25 |  | Coarse Granular Layer (<5%) |
| 26 |  | Clayey/silty Granular Layer (5 to 20%) |
| 27 |  | Slurried Granular Layer |
| 28 |  | Any of 2 a-d in a clay matrix (20 to 50%) |

3 SUBGRADE

Use legends from section 2 where appropriate,
legend with bold outline indicates natural ground

4 PITCHING LAYERS

- | | | |
|----|---|-------------------|
| 29 |  | Clean pitching |
| 30 |  | Slurried Pitching |

5 SAMPLE LOSS IN ABS

- | | | |
|----|---|--|
| 0x |  | Soil penetrated by ABS, but not recovered |
| 0d |  | Soil displaced by ABS – indicative of very soft soil |

6 ADDITIONAL INFORMATION

- g** – permeable geotextile separator
- c** – permeable geocomposite
- m** – reinforcing mesh (geogrid)
- p** – impermeable membrane (polythene)
- h** – impermeable geocomposite
- w** – water level (wet samples)
- ws** – standing water (recorded in drill hole)
- hs** – historical slurring
- 34** – shear strength kN/m²
- e** – likely chemical contamination
- L** – >10 % limestone ballast

a) Homogenous Fine Soils (Clay and Silt)

- | | | |
|----|---|--|
| 31 |  | Organic/Very Soft |
| 32 |  | Soft Cu < 40kN/m ² |
| 33 |  | Firm Cu = 40 to 75kN/m ² |
| 34 |  | Stiff Cu = 75 to 150kN/m ² |
| 35 |  | Very Stiff / Hard / Very weak Mudstone Cu > 150kN/m ² |

b) Mixed (Fine and Coarse) Soils

- | | | |
|----|---|--|
| 36 |  | Unstratified (clayey/silty Coarse Soil OR sandy or gravelly Fine Soil) |
| 37 |  | Interbedded or weathered/ weakly cemented fine grained rocks |

c) Rock or Rockfill

- | | | |
|----|---|--|
| 38 |  | Weak fine grained (mudstone, limestone, chalk, fine sandstone) |
| 39 |  | Moderately strong to hard rock |

KEY TO EXPLORATORY HOLE RECORDS

101 - TOPSOIL	
102 - MADE GROUND	
103 - Bituminous Material	
104 - CONCRETE	
201 - CLAY	
202 - Silty CLAY	
203 - Sandy CLAY	
204 - Gravelly CLAY	
205 - Cobbly CLAY	
206 - Bouldery CLAY	
207 - Silty sandy CLAY	
208 - Silty gravelly CLAY	
209 - Silty cobbly CLAY	
210 - Silty bouldery CLAY	
211 - Silty sandy gravelly CLAY	
212 - Silty sandy cobbly CLAY	
213 - Silty sandy bouldery CLAY	
214 - Silty sandy gravelly cobbly CLAY	
215 - Silty sandy gravelly bouldery CLAY	
216 - Silty sandy gravelly cobbly bouldery CLAY	
217 - Silty sandy organic CLAY	
218 - Silty sandy gravelly organic CLAY	
219 - Silty organic CLAY	
220 - Sandy gravelly CLAY	
222 - Sandy cobbly CLAY	
223 - Sandy bouldery CLAY	
224 - Sandy gravelly cobbly CLAY	
225 - Sandy gravelly bouldery CLAY	
226 - Sandy gravelly cobbly bouldery CLAY	
228 - Sandy gravelly organic CLAY	
229 - Organic CLAY	
230 - Gravelly cobbly CLAY	
231 - Silty gravelly cobbly CLAY	
301 - SILT	
302 - Clay/Silt	
303 - Sandy SILT	
304 - Gravelly SILT	
305 - Organic SILT	
309 - Clayey sandy SILT	
310 - Sandy gravelly SILT	
314 - Clayey sandy gravelly organic cobbly SILT	
316 - Sandy cobbly SILT	
317 - Sandy bouldery SILT	
318 - Sandy organic SILT	
319 - Sandy gravelly organic SILT	
320 - Sandy gravelly cobbly SILT	
321 - Sandy gravelly organic cobbly SILT	
322 - Gravelly cobbly SILT	
323 - Gravelly bouldery SILT	
324 - Gravelly organic SILT	

KEY TO EXPLORATORY HOLE RECORDS

325 - Gravelly organic cobbly SILT	
326 - Cobbly SILT	
327 - Cobbly bouldery SILT	
328 - Organic cobbly SILT	
331 - Bouldery SILT	
401 - SAND	
402 - Clayey SAND	
403 - Silty SAND	
404 - Gravelly SAND	
405 - Cobbly SAND	
406 - Bouldery SAND	
410 - Clayey gravelly SAND	
411 - Clayey gravelly cobbly SAND	
412 - Silty gravelly SAND	
413 - Silty gravelly cobbly SAND	
414 - Silty gravelly cobbly bouldery SAND	
415 - Gravelly cobbly SAND	
416 - Gravelly cobbly bouldery SAND	
417 - Gravelly bouldery SAND	
418 - Cobbly bouldery SAND	
430 - SAND and GRAVEL	
431 - Organic SAND	
433 - Silty organic SAND	
434 - Gravelly organic SAND	
435 - Cobbly organic SAND	
436 - Bouldery organic SAND	
501 - GRAVEL	
502 - Clayey GRAVEL	
503 - Silty GRAVEL	
504 - Sandy GRAVEL	
505 - Organic GRAVEL	
506 - Cobbly GRAVEL	
507 - Bouldery GRAVEL	
509 - Clayey sandy GRAVEL	
510 - Clayey cobbly GRAVEL	
511 - Clayey bouldery GRAVEL	
512 - Clayey organic GRAVEL	
513 - Clayey sandy cobbly GRAVEL	
517 - Clayey sandy organic GRAVEL	
520 - Silty sandy GRAVEL	
521 - Silty cobbly GRAVEL	
522 - Silty bouldery GRAVEL	
523 - Silty organic GRAVEL	
524 - Silty organic sandy GRAVEL	
525 - Sandy cobbly GRAVEL	
526 - Sandy bouldery GRAVEL	
527 - Sandy organic GRAVEL	
528 - Silty sandy cobbly GRAVEL	
601 - PEAT	
602 - Clayey PEAT	

KEY TO EXPLORATORY HOLE RECORDS

603 - Silty PEAT	
604 - Sandy PEAT	
605 - Gravelly PEAT	
606 - Cobbly PEAT	
608 - Clayey sandy PEAT	
609 - Clayey gravelly PEAT	
612 - Silty sandy PEAT	
613 - Silty sandy gravelly PEAT	
614 - Sandy gravelly PEAT	
701 - COBBLES	
702 - Clayey COBBLES	
703 - Silty COBBLES	
704 - Sandy COBBLES	
705 - Gravelly COBBLES	
706 - Organic COBBLES	
708 - Clayey sandy COBBLES	
709 - Clayey gravelly COBBLES	
713 - Silty sandy COBBLES	
714 - Silty gravelly COBBLES	
715 - Silty organic COBBLES	
716 - Silty gravelly sandy COBBLES	
717 - Silty sandy organic COBBLES	
718 - Silty sandy gravelly organic COBBLES	
719 - Sandy gravelly COBBLES	
720 - Sandy organic COBBLES	
721 - Gravelly organic COBBLES	
725 - COBBLES and BOULDERS	
730 - BOULDERS	
731 - Gravelly cobbly BOULDERS	
801 - MUDSTONE	
802 - SILTSTONE	
803 - SANDSTONE	
804 - LIMESTONE	
805 - CHALK	
806 - COAL	
807 - BRECCIA	
808 - CONGLOMERATE	
809 - Fine grained IGNEOUS	
810 - Medium grained IGNEOUS	
811 - Coarse grained IGNEOUS	
812 - Fine grained METAMORPHIC	
813 - Medium grained METAMORPHIC	
814 - Coarse grained METAMORPHIC	
997 - Undetermined	
998 - No Recovery	
999 - Void	

KEY TO EXPLORATORY HOLE RECORDS

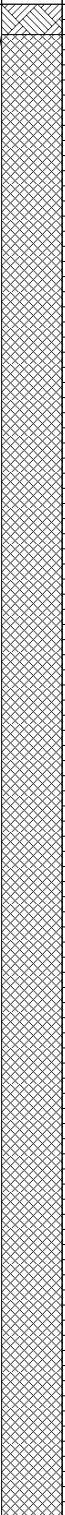
Backfill / Installations

901 - Sand Backfill	
902 - Gravel Backfill	
903 - Bentonite	
904 - Grout	
905 - Arisings	
906 - Concrete	
907 - Asphalt	
909 - Upstand cover	
910 - Flush cover	
Plain Pipe	
Slotted Pipe	

BOREHOLE LOG

Borehole No:
W1 -Clayton-BH1
Sheet 1 of 3

Project Name:	Transpennine Route Upgrade SIGI Clayton Bridge Drainage Tanker Access GI	Survey Grid System:	OSGB	Hole Type:	CP
Project No:	322Q-26a	Co-ordinates:	388934.09 mE 399580.71 mN	Checked By:	AP
Client:	Transpire Alliance	Ground Level:	70.69 mOD	Approved By:	JE
Engineer:	Transpire Alliance	Orientation:	- - deg.	Log Status:	DRAFT
Date Started:	28/02/2022	Inclination:	90 deg.	Print Date:	05/09/2022
Date Completed:	08/02/2022			Final Depth:	12.50m

Stratum Description	Legend	Depth (Thickness) (m)	Level (m)	Sampling, Coring and In Situ Testing								TCR SCR RQD %	If min If ave If max (mm)	Water	Well/ Backfill
				Depth (m)	Type	Dia (mm)	Rec %	Blows (mins)	Test	Test Result	Units				
TOPSOIL: Dark greyish black slightly sandy gravelly CLAY. Sand is fine to coarse. Gravel is angular to sub-angular fine to coarse of quartzite and siltstone. [TOPSOIL] MADE GROUND: Loose becoming stiff with depth dark greyish black slightly silty slightly gravelly fine to coarse SAND of ash with rare rootlets (<15mm). Gravel sized fragments are angular to sub-angular fine to coarse of brick coal and sandstone. [MADE GROUND]		0.10	70.59												
				0.20	B										
				0.20	B										
				0.20	D										
				0.20	ES										
				0.50	B				PID	0.00	ppm				
				0.50	D										
				0.50	ES				PID	0.00	ppm				
				1.00	B										
				1.00	D										
				1.00	ES				PID	0.00	ppm				
				1.20	ES				PID	0.00	ppm				
				1.20 - 1.65	B										
				1.20 - 1.65	D				S	N=6					
				1.20 - 1.65											
				1.70	D										
				2.00	ES				PID	0.00	ppm				
				2.00 - 2.45	B										
				2.00 - 2.45	D				S	N=9					
				2.00 - 2.45											
		(8.60)		2.70	D										
				3.00	ES				PID	0.00	ppm				
				3.00 - 3.45	B										
				3.00 - 3.45	D				S	N=10					
				3.00 - 3.45											
				3.70	D										
				4.00	ES				PID	0.00	ppm				
				4.00 - 4.45	B										
				4.00 - 4.45	D				S	N=13					
				4.00 - 4.45											
				4.70	D										
				5.00	ES				PID	0.00	ppm				

Stratum depths measured along borehole axis.

Groundwater levels may be subject to seasonal, tidal and other fluctuations and should not be taken as constant.

Explanation of symbols and abbreviations given in 'Key to Exploratory Holes'

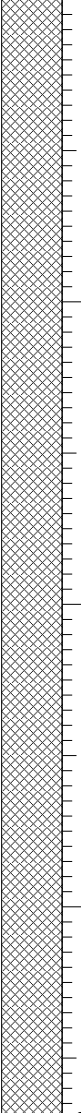
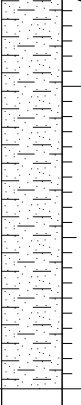
Further details given on appended 'Borehole Information Sheet'.

Please note that this log is still draft and may be subject to change.

BOREHOLE LOG

Borehole No:
W1 -Clayton-BH1
Sheet 2 of 3

Project Name:	Transpennine Route Upgrade SIGI Clayton Bridge Drainage Tanker Access GI	Survey Grid System:	OSGB	Hole Type:	CP
Project No:	322Q-26a	Co-ordinates:	388934.09 mE 399580.71 mN	Checked By:	AP
Client:	Transpire Alliance	Ground Level:	70.69 mOD	Approved By:	JE
Engineer:	Transpire Alliance	Orientation:	- - deg.	Log Status:	DRAFT
Date Started:	28/02/2022	Inclination:	90 deg.	Print Date:	05/09/2022
Date Completed:	08/02/2022			Final Depth:	12.50m

Stratum Description	Legend	Depth (Thickness) (m)	Level (m)	Sampling, Coring and In Situ Testing								TCR SCR RQD %	If min If ave If max (mm)	Water	Well/ Backfill
				Depth (m)	Type	Dia (mm)	Rec %	Blows (mins)	Test	Test Result	Units				
MADE GROUND: Loose becoming stiff with depth dark greyish black slightly silty slightly gravelly fine to coarse SAND of ash with rare rootlets (<15mm). Gravel sized fragments are angular to sub-angular fine to coarse of brick coal and sandstone. [MADE GROUND]		5.00 - 5.45		5.00 - 5.45	B D-NR					C	N=20				
		5.00 - 5.45													
		5.00 - 5.45													
		5.70		5.70	D										
		6.00		6.00	ES					PID	0.00	ppm			
		6.00 - 6.45		6.00 - 6.45	B D-NR					C	N=23				
		6.00 - 6.45													
		6.00 - 6.45													
		6.70		6.70	D										
		7.50		7.50	ES					PID	0.00	ppm			
Stiff dark brown slightly gravelly slightly sandy CLAY. Sand is fine to coarse. Gravel is sub-angular to sub-rounded fine to coarse of siltstone sandstone and quartzite. [SANDY CLAY]		7.50 - 7.95		7.50 - 7.95	B D					S	N=13				
		7.50 - 7.95													
		7.50 - 7.95													
		7.50 - 7.95													
		8.30		8.30	D										
		8.70	61.99												
		9.00 - 9.45		9.00 - 9.45	UT	100	100	66							
		9.45 - 9.50		9.45 - 9.50	D										
		10.00		10.00	D										

Stratum depths measured along borehole axis.

Groundwater levels may be subject to seasonal, tidal and other fluctuations and should not be taken as constant.

Explanation of symbols and abbreviations given in 'Key to Exploratory Holes'

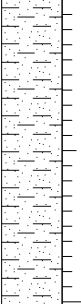
Further details given on appended 'Borehole Information Sheet'.

Please note that this log is still draft and may be subject to change.

BOREHOLE LOG

Borehole No:
W1 -Clayton-BH1
Sheet 3 of 3

Project Name:	Transpennine Route Upgrade SIGI Clayton Bridge Drainage Tanker Access GI	Survey Grid System:	OSGB	Hole Type:	CP
Project No:	322Q-26a	Co-ordinates:	388934.09 mE 399580.71 mN	Checked By:	AP
Client:	Transpire Alliance	Ground Level:	70.69 mOD	Approved By:	JE
Engineer:	Transpire Alliance	Orientation:	- - deg.	Log Status:	DRAFT
Date Started:	28/02/2022	Inclination:	90 deg.	Print Date:	05/09/2022
Date Completed:	08/02/2022			Final Depth:	12.50m

Stratum Description	Legend	Depth (Thickness) (m)	Level (m)	Sampling, Coring and In Situ Testing								TCR SCR RQD %	If min If ave If max (mm)	Water	Well/ Backfill
				Depth (m)	Type	Dia (mm)	Rec %	Blows (mins)	Test	Test Result	Units				
Stiff dark brown slightly gravelly slightly sandy CLAY. Sand is fine to coarse. Gravel is sub-angular to sub-rounded fine to coarse of siltstone sandstone and quartzite. [SANDY CLAY]				10.50	ES										
				10.50 - 10.95	B										
				10.50 - 10.95	D	100									
				10.50 - 10.95					S	N=28					
		(3.80)													
				11.50	D										
				12.00 - 12.45	UT	100	100	85							
				12.45 - 12.50	D										
Borehole Terminated at 12.50m		12.50	58.19												

Stratum depths measured along borehole axis.

Groundwater levels may be subject to seasonal, tidal and other fluctuations and should not be taken as constant.

Explanation of symbols and abbreviations given in 'Key to Exploratory Holes'

Further details given on appended 'Borehole Information Sheet'.

Please note that this log is still draft and may be subject to change.

BOREHOLE INFORMATION SHEET

Borehole No
W1 -Clayton-BH1
Sheet 1 of 1

Project Name:	Transpennine Route Upgrade SIGI Clayton Bridge Drainage Tanker Access GI	Survey Grid:	OSGB	Hole Type:	CP
Project No:	322Q-26a	Co-ordinates:	388934.09 mE 399580.71 mN	Checked By:	AP
Client:	Transpire Alliance	Ground Level:	70.69 mOD	Approved By:	JE
Engineer:	Transpire Alliance	Orientation:	- - deg.	Log Status:	DRAFT
Date Started:	28/02/2022	Inclination:	90 deg.	Print Date:	05/09/2022
Date Completed:	08/02/2022			Final Depth:	12.50m

Depth Related Exploratory Hole Information										
From (m)	To (m)	Type	Start	End	Plant	Barrel	Drill Bit	Lead Driller	Logger	Remarks
0.00 1.20	1.20 12.50	IP WS	28/02/2022 28/02/2022	28/02/2022 28/02/2022	Hand tools T820-068				Omar Coggins	Engineering Line: HIGH 4 FT – MVL1 – 03m20ch Nearest Structure MVL1/10 is approx 250m to the high mileage of the position Nearest Rail: HIGH CESS RAIL 5m

Boring-Drilling Progress						Hole Diameter by Depth			Casing Diameter by Depth		
Date	Time	Depth (m)	Casing (m)	Depth Water (m)	Remarks	Depth (m)	Dia. (mm)	Remarks	Depth (m)	Dia. (mm)	Remarks
28/02/2022 01/03/2022	22:00 05:45	0.00 12.50	0.00 12.00	Dry Dry	Start of shift End of shift	12.50	150				
Water Added Records											
From (m)	To (m)	Volume (litres)	Remarks								

Depth Related Remarks			Chiselling / Hard Boring Details				Drilling Flush Details				
From (m)	To (m)	Remarks	From (m)	To (m)	Duration (hh:mm)	Tool	From (m)	To (m)	Returns (%)	Flush	Colour

Water Strikes							Monitoring Installation Pipe Work							Backfill Details			
Date	Strike (m)	Casing (m)	Time (mins)	Depth (m)	Sealed (m)	Remarks	Type	Pipe ID	From (m)	To (m)	Dia(mm)	Pipe Type	Remarks	From (m)	To (m)	Legend	Description
														0.00	12.50	903	Bentonite
		</															

Standard Penetration Test Results																			
Depth (m)	Type	N Value	Casing (m)	Water (m)	SWPen(mm)	Blows1	Pen1(mm)	Blows2	Pen2(mm)	Blows3	Pen3(mm)	Blows4	Pen4(mm)	Blows5	Pen5(mm)	Blows6	Pen6(mm)	Hammer	E. Ratio%
1.20	S	N=6		Dry		2	75	2	75	1	75	2	75	2	75	1	75	BRW01 (AR3256)	62
2.00	S	N=9	2.00	Dry		2	75	2	75	3	75	2	75	1	75	3	75	BRW01 (AR3256)	62
3.00	S	N=10	3.00	Dry		2	75	2	75	2	75	3	75	3	75	2	75	BRW01 (AR3256)	62
4.00	S	N=13	4.00	Dry		3	75	3	75	2	75	4	75	4	75	3	75	BRW01 (AR3256)	62
5.00	C	N=20	5.00	Dry		6	75	4	75	4	75	5	75	5	75	6	75	BRW01 (AR3256)	62
6.00	C	N=23	6.00	Dry		5	75	5	75	6	75	6	75	5	75	6	75	BRW01 (AR3256)	62
7.50	S	N=13	7.50	Dry		3	75	3	75	3	75	4	75	3	75	3	75	BRW01 (AR3256)	62
10.50	S	N=28	10.50	Dry		7	75	6	75	6	75	7	75	8	75	7	75	BRW01 (AR3256)	62

Reason for Hole Termination: Reached Scheduled depth

Groundwater levels can be subject to seasonal, tidal and other fluctuations and should not be taken as constant.

Please note that this log is still draft and may be subject to change.

PHOTO UNAVAILABLE



Borehole Photographs

Contract No: 322Q-26

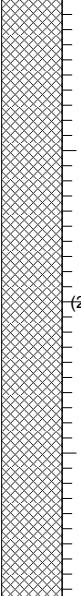
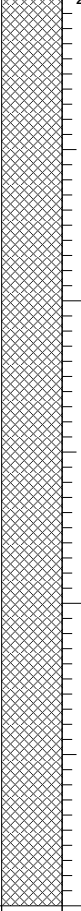
Contract: Transpire Route Upgrade SI GI

Borehole ID: W1-Clayton-BH1

BOREHOLE LOG

Borehole No:
W1-CLAYTON-BH2
Sheet 1 of 3

Project Name:	Transpennine Route Upgrade SIGI Clayton Bridge Drainage Tanker Access GI	Survey Grid System:	OSGB	Hole Type:	WS
Project No:	322Q-26a	Co-ordinates:	388935.80 mE 399580.52 mN	Checked By:	AP
Client:	Transpire Alliance	Ground Level:	70.57 mOD	Approved By:	JE
Engineer:	Transpire Alliance	Orientation:	- - deg.	Log Status:	DRAFT
Date Started:	26/05/2022	Inclination:	90 deg.	Print Date:	05/09/2022
Date Completed:	27/05/2022			Final Depth:	11.00m

Stratum Description	Legend	Depth (Thickness) (m)	Level (m)	Sampling, Coring and In Situ Testing								TCR SCR RQD %	If min If ave If max (mm)	Water	Well/ Backfill
				Depth (m)	Type	Dia (mm)	Rec %	Blows (mins)	Test	Test Result	Units				
MADE GROUND: Loose dark grey to black gravelly SAND with strong creosote odour and occasional plant roots/rootlets (up to 2x3x120mm). Sand is fine to coarse. Gravel is angular to subangular fine to coarse of ash, burnt furnace slag, clinker, granite, ceramic, and rare glass. (Sand comprised mainly of ash). [MADE GROUND] 0.50m : Frequent angular to subangular medium to coarse of burnt furnace slag, partially burnt coal and suspected siltstone. 1.00m : Below 1.00mbgl: Becoming wet, occasional angular to subangular coarse gravels of medium strong sandstone/siltstone and occasional pockets of soft orangish/yellowish brown slightly gravelly sand clay (up to 50x70x100mm). Sand is fine to coarse. Gravel is subangular to subrounded fine to coarse of red brick, medium strong siltstone and sandstone.				0.20	B										
				0.20	D										
				0.20	ES					PID	0.60	ppm			
				0.50	B										
				0.50	D										
				0.50	ES					PID	3.90	ppm			
				1.00	B										
				1.00	D										
				1.00	ES					PID	5.50	ppm			
				1.20 - 1.65	B										
MADE GROUND: Medium dense brownish grey locally yellowish/orangish brown clayey SAND and GRAVEL with varying creosote (hydrocarbon) odour. Sand is fine to coarse. Gravel is angular to subangular fine to coarse of red brick, weak yellowish brown sandstone, medium strong grey siltstone, medium strong mudstone, ash, burnt furnace slag, partially burnt coal and granite. [MADE GROUND] 2.00 - 2.45m : Rare partially decomposed plant material (up to 25x25x75mm). 3.70m : 1no. rare glass fragment (up to 5x40x50mm). 4.00 - 4.45m : 1no. subangular cobble of concrete slab (up to 50x80x130mm).		2.00	68.57	2.00 - 2.45	B										
				2.00 - 2.45	D					S	N=9				
				2.00 - 2.45	ES					PID	1.50	ppm			
				2.40											
				2.70	D										
				3.00 - 3.45	B										
				3.00 - 3.45	D					S	N=10				
				3.00 - 3.45	ES					PID	0.40	ppm			
				3.40											
				3.70	D										
				4.00 - 4.45	B										
				4.00 - 4.45	D					S	N=13				
				4.00 - 4.45	ES					PID	0.50	ppm			
				4.40											
				4.70	D										

Stratum depths measured along borehole axis.

Groundwater levels may be subject to seasonal, tidal and other fluctuations and should not be taken as constant.

Explanation of symbols and abbreviations given in 'Key to Exploratory Holes'

Further details given on appended 'Borehole Information Sheet'.

Please note that this log is still draft and may be subject to change.

BOREHOLE LOG

Borehole No:
W1-CLAYTON-BH2
Sheet 3 of 3

Project Name:	Transpennine Route Upgrade SIGI Clayton Bridge Drainage Tanker Access GI	Survey Grid System:	OSGB	Hole Type:	WS
Project No:	322Q-26a	Co-ordinates:	388935.80 mE 399580.52 mN	Checked By:	AP
Client:	Transpire Alliance	Ground Level:	70.57 mOD	Approved By:	JE
Engineer:	Transpire Alliance	Orientation:	- - deg.	Log Status:	DRAFT
Date Started:	26/05/2022	Inclination:	90 deg.	Print Date:	05/09/2022
Date Completed:	27/05/2022			Final Depth:	11.00m

Stratum Description	Legend	Depth (Thickness) (m)	Level (m)	Sampling, Coring and In Situ Testing								TCR SCR RQD %	If min If ave If max (mm)	Water	Well/ Backfill
				Depth (m)	Type	Dia (mm)	Rec %	Blows (mins)	Test	Test Result	Units				
Firm becoming stiff brown slightly sandy gravelly CLAY with localised pocket of loose brown fine sand. Sand is fine to coarse. Gravel is subangular to rounded fine to coarse of medium strong grey fine to medium grained sandstone/siltstone and suspected quartzite. [GLACIAL DEPOSIT]				10.20 10.00 - 10.45 10.00 - 10.45 10.00 - 10.45	ES B D				PID S	0.40 N=23	ppm				
				10.70	D										
Borehole Terminated at 11.00m		11.00	59.57												

Stratum depths measured along borehole axis.

Groundwater levels may be subject to seasonal, tidal and other fluctuations and should not be taken as constant.

Explanation of symbols and abbreviations given in 'Key to Exploratory Holes'

Further details given on appended 'Borehole Information Sheet'.

Please note that this log is still draft and may be subject to change.

BOREHOLE INFORMATION SHEET

Borehole No
W1-CLAYTON-BH2
Sheet 1 of 1

Project Name:	Transpennine Route Upgrade SIGI Clayton Bridge Drainage Tanker Access GI	Survey Grid:	OSGB	Hole Type:	WS
Project No:	322Q-26a	Co-ordinates:	388935.80 mE 399580.52 mN	Checked By:	AP
Client:	Transpire Alliance	Ground Level:	70.57 mOD	Approved By:	JE
Engineer:	Transpire Alliance	Orientation:	- - deg.	Log Status:	DRAFT
Date Started:	26/05/2022	Inclination:	90 deg.	Print Date:	05/09/2022
Date Completed:	27/05/2022			Final Depth:	11.00m

Depth Related Exploratory Hole Information										
From (m)	To (m)	Type	Start	End	Plant	Barrel	Drill Bit	Lead Driller	Logger	Remarks
0.00	1.20	IP	26/05/2022	26/05/2022	Insulated hand tools					Engineering Line: HIGH 4 FT – MVL1 – 03m20ch Nearest Structure MVL1/10 is approx 250m to the high mileage of the position Nearest Rail: HIGH CESS RAIL 5m
1.20	11.00	WS	26/05/2022	27/05/2022	T820-068					

Boring-Drilling Progress						Hole Diameter by Depth			Casing Diameter by Depth		
Date	Time	Depth (m)	Casing (m)	Depth Water (m)	Remarks	Depth (m)	Dia. (mm)	Remarks	Depth (m)	Dia. (mm)	Remarks
26/05/2022	07:30	0.00	0.00	Dry	Start of shift	11.00	150		11.00	150	
26/05/2022	16:00	11.00	11.00	Dry	End of shift						
27/05/2022	07:30	11.00	11.00	Dry	Start of shift						
27/05/2022	12:00	11.00	11.00	Dry	Hole complete						
Water Added Records											
From (m)	To (m)	Volume (litres)	Remarks								

Depth Related Remarks			Chiselling / Hard Boring Details				Drilling Flush Details				
From (m)	To (m)	Remarks	From (m)	To (m)	Duration (hh:mm)	Tool	From (m)	To (m)	Returns (%)	Flush	Colour

Water Strikes							Monitoring Installation Pipe Work							Backfill Details			
Date	Strike (m)	Casing (m)	Time (mins)	Depth (m)	Sealed (m)	Remarks	Type	Pipe ID	From (m)	To (m)	Dia(mm)	Pipe Type	Remarks	From (m)	To (m)	Legend	Description
								1	0.00	10.00	50	Plain		0.00	0.10	910	Flush cover
								1	10.00	11.00	50	Slotted		0.10	0.40	906	Concrete
														0.40	10.00	903	Bentonite
														10.00	11.00	902	Gravel

Standard Penetration Test Results																			
Depth (m)	Type	N Value	Casing (m)	Water (m)	SWPen(mm)	Blows1	Pen1(mm)	Blows2	Pen2(mm)	Blows3	Pen3(mm)	Blows4	Pen4(mm)	Blows5	Pen5(mm)	Blows6	Pen6(mm)	Hammer	E. Ratio%
1.20	S	N=6		Dry		2	75	2	75	1	75	2	75	2	75	1	75	BRW02 (AR1150)	66
2.00	S	N=9	2.00	Dry		2	75	2	75	3	75	2	75	1	75	3	75	BRW02 (AR1150)	66
3.00	S	N=10	3.00	Dry		2	75	2	75	2	75	3	75	3	75	2	75	BRW02 (AR1150)	66
4.00	S	N=13	4.00	Dry		3	75	3	75	2	75	4	75	4	75	3	75	BRW02 (AR1150)	66
5.00	C	N=22	5.00	Dry		6	75	4	75	6	75	6	75	5	75	5	75	BRW02 (AR1150)	66
6.00	C	N=24	6.00	Dry		5	75	5	75	7	75	5	75	6	75	6	75	BRW02 (AR1150)	66
7.00	C	N=24	7.00	Dry		5	75	5	75	7	75	4	75	7	75	6	75	BRW02 (AR1150)	66
8.00	C	N=14	8.00	Dry		3	75	4	75	3	75	4	75	4	75	3	75	BRW02 (AR1150)	66
10.00	S	N=23	10.00	Dry		5	75	7	75	6	75	5	75	6	75	6	75	BRW02 (AR1150)	66

Reason for Hole Termination: Reached scheduled depth

Groundwater levels can be subject to seasonal, tidal and other fluctuations and should not be taken as constant.

Please note that this log is still draft and may be subject to change.

PHOTO UNAVAILABLE



Borehole Photographs

Contract No: 322Q-26
Contract: Transpire Route Upgrade SI GI
Borehole ID: W1-Clayton-BH2

BOREHOLE LOG

Borehole No:
W1-Clayton-BH2A
Sheet 1 of 2

Project Name:	Transpennine Route Upgrade SIGI Clayton Bridge Drainage Tanker Access GI	Survey Grid System:	OSGB	Hole Type:	WLS
Project No:	322Q-26a	Co-ordinates:	388937.50 mE 399581.34 mN	Checked By:	AP
Client:	Transpire Alliance	Ground Level:	70.55 mOD	Approved By:	JE
Engineer:	Transpire Alliance	Orientation:	- - deg.	Log Status:	DRAFT
Date Started:	01/07/2022	Inclination:	90 deg.	Print Date:	05/09/2022
Date Completed:	01/07/2022			Final Depth:	6.00m

Stratum Description	Legend	Depth (Thickness) (m)	Level (m)	Sampling, Coring and In Situ Testing								TCR SCR RQD %	If min If ave If max (mm)	Water	Well/ Backfill
				Depth (m)	Type	Dia (mm)	Rec %	Blows (mins)	Test	Test Result	Units				
MADE GROUND: Grey very sandy slightly silty GRAVEL with low cobble content. Sand is fine to coarse predominately of ash. Gravel is of mixed lithology (brick, sandstone, coal, slag, clinker, mudstone, limestone, ceramic and timber). Cobbles are of brick and sandstone (130x70x90mm). [MADE GROUND] 0.36 - 0.40m : Concrete Slab.		(1.20)													
MADE GROUND: Soft to firm dark brown mottled reddish brown sandy gravelly CLAY with occasional very fine to fine roots (0.5-2.0mm), rope (<25mm), soft plastics (<10mm) and rare fragments of ceramics (<25mm) and metal (<20mm). Sand is fine to coarse rarely of ash and crushed brick. Gravel is angular to sub-angular fine to coarse of mixed lithologies (fragmented brick, sandstone and blast furnace waste). [MADE GROUND] 1.20 - 1.48m : Assumed zone of core loss 1.78 - 1.81m : Cobble recovered as subangular of red brick (45x65x75).		1.20	69.35	1.20 - 2.00	Liner				PID	0.00	ppm				
2.70 - 3.00m : Assumed zone of core loss		(3.06)		2.00 - 3.00	Liner				PID	0.00	ppm				
3.00 - 3.50m : Assumed zone of core loss				3.00 - 4.00	Liner				PID	0.00	ppm				
3.48 - 3.50m : Cobble recovered as subangular of sandstone (64x70x80).				4.00 - 5.00	Liner				PID	0.00	ppm				
MADE GROUND: Firm to stiff dark grey mottled brown sandy gravelly CLAY with rare fragments of ceramic (<25mm). Sand is fine to coarse rarely of ash and crushed brick. Gravel is angular to sub-angular fine to coarse of mixed lithologies (blast furnace waste, sandstone and fragmented brick) (weak creosote odour noted). [MADE GROUND]		4.26	66.29												

Stratum depths measured along borehole axis.

Groundwater levels may be subject to seasonal, tidal and other fluctuations and should not be taken as constant.

Explanation of symbols and abbreviations given in 'Key to Exploratory Holes'

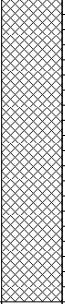
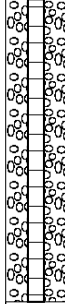
Further details given on appended 'Borehole Information Sheet'.

Please note that this log is still draft and may be subject to change.

BOREHOLE LOG

Borehole No:
W1-Clayton-BH2A
Sheet 2 of 2

Project Name:	Transpennine Route Upgrade SIGI Clayton Bridge Drainage Tanker Access GI	Survey Grid System:	OSGB	Hole Type:	WLS
Project No:	322Q-26a	Co-ordinates:	388937.50 mE 399581.34 mN	Checked By:	AP
Client:	Transpire Alliance	Ground Level:	70.55 mOD	Approved By:	JE
Engineer:	Transpire Alliance	Orientation:	- - deg.	Log Status:	DRAFT
Date Started:	01/07/2022	Inclination:	90 deg.	Print Date:	05/09/2022
Date Completed:	01/07/2022			Final Depth:	6.00m

Stratum Description	Legend	Depth (Thickness) (m)	Level (m)	Sampling, Coring and In Situ Testing								TCR SCR RQD %	If min If ave If max (mm)	Water	Well/ Backfill
				Depth (m)	Type	Dia (mm)	Rec %	Blows (mins)	Test	Test Result	Units				
MADE GROUND: Firm to stiff dark grey mottled brown sandy gravelly CLAY with rare fragments of ceramic (<25mm). Sand is fine to coarse rarely of ash and crushed brick. Gravel is angular to sub-angular fine to coarse of mixed lithologies (blast furnace waste, sandstone and fragmented brick) (weak creosote odour noted). [MADE GROUND] 5.00 - 5.60m : Assumed zone of core loss		(1.74)		5.00 - 6.00	Liner				PID	0.00	ppm				
Borehole Terminated at 6.00m		6.00	64.55												

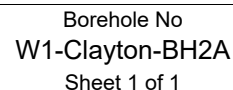
Stratum depths measured along borehole axis.

Groundwater levels may be subject to seasonal, tidal and other fluctuations and should not be taken as constant.

Explanation of symbols and abbreviations given in 'Key to Exploratory Holes'

Further details given on appended 'Borehole Information Sheet'.

Please note that this log is still draft and may be subject to change.



Survey Grid:	OSGB	Hole Type:	WLS
Co-ordinates:	388937.50 mE	Checked By:	AP
	399581.34 mN	Approved By:	JE
Ground Level:	70.55 mOD	Log Status:	DRAFT
		Print Date:	05/09/2022
Orientation:	- - deg.		
Inclination:	90 deg.	Final Depth:	6.00m

[illegible]

BAM R Info 17/10/2017



CLAYTON VALE-BH02A - 0.00 - 1.20m - East



CLAYTON VALE-BH02A - 0.00 - 1.20m - North



CLAYTON VALE-BH02A - 0.00 - 1.20m - South



CLAYTON VALE-BH02A - 0.00 - 1.20m - West



W1-CLAYTON-BH02A_1.20-6.00m



TRIAL PIT LOG

Trial Pit No.
W1-Clayton-TP1
Sheet 1 of 1

Project Name: Transpennine Route Upgrade SIGI
Clayton Bridge Drainage Tanker Access GI
Project No: 322Q-26a
Client: Transpire Alliance
Engineer: Transpire Alliance
Date Started: 03/03/2022
Date Completed: 03/03/2022

Survey Grid: OSGB
Co-ordinates: 388940.02 mE
399583.92 mN
Ground Level: 70.73 mOD
Orientation of Logged Face: -- deg.
Hole Type: TP
Checked By: AP
Approved By: JE
Scale: 1:13
Status: DRAFT
Print Date: 05/09/2022
Final Depth: 1.20m

Stratum Description	Legend	Depth [Thickness] (m)	Level (m)	Sampling and In Situ Testing					Water Strikes	Well
				Depth (m)	Type	Test	Test Result	Units		
MADE GROUND: Dark grey and black very sandy subangular to subrounded fine to coarse (2-60mm) GRAVEL of sandstone, ash, clinker and brick. Sand is fine to medium predominantly of ash. Occasional rootlets. Drillers description: Compact stone. [MADE GROUND]		[0.40]	70.33	0.20 0.20 0.20 0.20	B D ES	PID	0.00	ppm		
MADE GROUND: Black fine to coarse SAND predominantly of ash and angular to subrounded fine to coarse (2-55mm) GRAVEL of ash, clinker, slag, coal, sandstone and brick. [MADE GROUND]		0.40		0.50 0.50 0.50 0.50						
		[0.80]		1.00 1.00 1.00 1.00						
Trial Pit Terminated at 1.20m		1.20	69.53							

Reason for Hole Termination: Reached scheduled depth

Depth Related Exploratory Hole Information								Remarks
From (m)	To (m)	Length (m)	Width (m)	Stability	Shoring	Logger	Plant	
0.00	1.20	0.50	0.50				Hand tools	Engineering Line: HIGH 4 FT – MVL1 – 03m20ch Nearest Structure MVL1/10 is approx 250m to the high mileage of the position Nearest Rail: HIGH CESS RAIL 5m

Depth Related Remarks				Water Strikes		Backfill Details		
From (m)	To (m)	Remarks	Depth (m)	Remarks		Depth Top	Depth Base	Description

Groundwater levels are subject to seasonal, tidal and other fluctuations and should not be taken as constant.

Explanation of symbols and abbreviations given in 'Key to Exploratory holes'

Please note that this log is still draft and may be subject to change.

Office: BAM Ritchies, Unit 5 Taurus Park, Europa Boulevard, Gemini Business Park, Warrington, WA5 7ZT

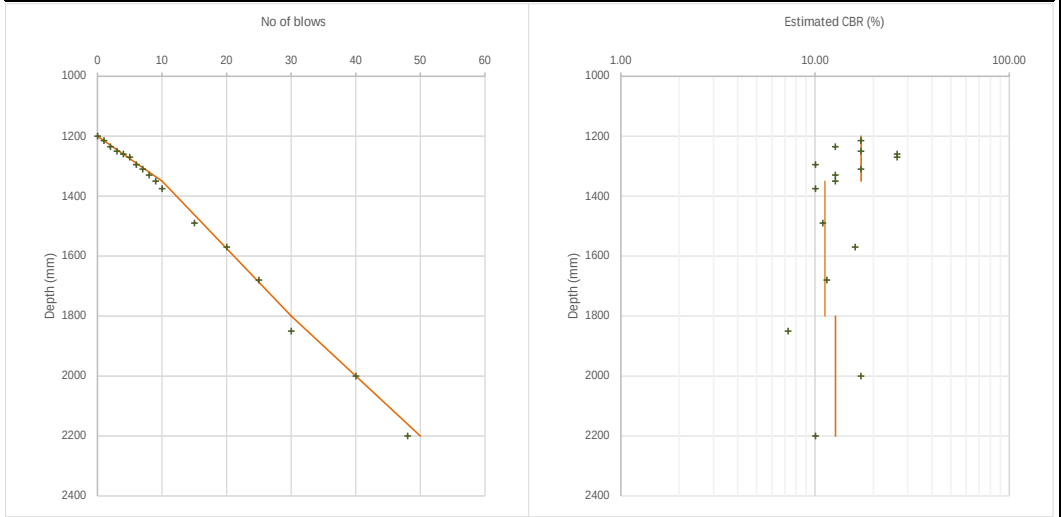
BAM R TP Log 17/10/2017

DYNAMIC CONE PENETRATION TEST

Test Location:
W1-Clayton-TP1
Page 2 of 2

Project Name:	Transpennine Route Upgrade	Survey grid system:	OSGB	Hole type:	DCP
Project No:	322Q-26a	Co-ordinates:	388940.02 mE	Checked by:	JE
Client:	BAM Nuttall		399583.92 mN	Approved by:	JH
Engineer:	IW	Ground level:	70.73 mOD		
Date of test:	1/3/2022	Start Depth:	1200 mm	Weather:	Sunshine
Test number:	1	Inclination:	90 deg.	Equipment:	CNS Farnell DCP Model A2465

Number of blows	Total blows	Reading (mm)	Rod Change Reading (mm)	Penetration Increment (mm)	Depth (mm)



Test No.	Depth from (mm)	Depth to (mm)	CBR value
1	1200	1350	17
2	1350	1800	11
3	1800	2200	13

Estimated CBR value calculated using TRL equation:

$$\log_{10}(CBR) = 2.48 - 1.057 \cdot \log_{10}(mm/blow)$$

References:

CNS Farnell (2003) Dynamic Cone Penetrometer Model A2465 Operating Instructions.
 Transport and Road Research Laboratory (1990) Overseas Road Note 8. A users manual for a program to analyse dynamic cone penetrometer data.
 Transport and Road Research Laboratory (2004) TRL Project Report PR/INT/277/04.

Comments:
 Inspection pit to 1.20mbgl.

PHOTO UNAVAILABLE



Borehole Photographs

Contract No: 322Q-26
Contract: Transpire Route Upgrade SI GI
Borehole ID: W1-Clayton-TP1



TRIAL PIT LOG

Trial Pit No.
W1-Clayton-TP2
Sheet 1 of 1

Project Name: Transpennine Route Upgrade SIGI
Clayton Bridge Drainage Tanker Access GI
Project No: 322Q-26a
Client: Transpire Alliance
Engineer: Transpire Alliance
Date Started: 03/03/2022
Date Completed: 03/03/2022

Survey Grid: OSGB
Co-ordinates: 388952.20 mE
399582.77 mN
Ground Level: 70.70 mOD
Orientation of Logged Face: -- deg.
Hole Type: TP
Checked By: AP
Approved By: JE
Scale: 1:13
Status: DRAFT
Print Date: 05/09/2022
Final Depth: 1.20m

Stratum Description	Legend	Depth [Thickness] (m)	Level (m)	Sampling and In Situ Testing					Water Strikes	Well
				Depth (m)	Type	Test	Test Result	Units		
MADE GROUND: TARMAC [MADE GROUND (BITUMINOUS)]										
MADE GROUND: Grey sandy angular to subangular fine to coarse (2-65mm) GRAVEL of sandstone, clinker and slag. Sand is fine to coarse with ash. [MADE GROUND]		0.20	70.50	0.20 0.20 0.20 0.20	B D ES	PID	0.00	ppm		
MADE GROUND: Black fine to coarse SAND predominantly of ash and angular to subrounded fine to coarse (2-55mm) GRAVEL of ash, clinker, slag, coal, sandstone and brick. [MADE GROUND]		0.40	70.30	0.50 0.50 0.50 0.50	B D ES	PID	0.10	ppm		
		[0.80]								
				1.00 1.00 1.00 1.00	B D ES	PID	2.60	ppm		
Trial Pit Terminated at 1.20m		1.20	69.50							

Reason for Hole Termination: Reached scheduled depth

Depth Related Exploratory Hole Information								Remarks
From (m)	To (m)	Length (m)	Width (m)	Stability	Shoring	Logger	Plant	
0.00	1.20	0.50	0.50				Hand tools	Engineering Line: HIGH 4 FT – MVL1 – 03m20ch Nearest Structure MVL1/10 is approx 250m to the high mileage of the position Nearest Rail: HIGH CESS RAIL 5m
Depth Related Remarks				Water Strikes			Backfill Details	
From (m)	To (m)	Remarks		Depth (m)	Remarks		Depth Top	Description
							0.00 0.30	Asphalt Bentonite
							0.30 1.20	

Groundwater levels are subject to seasonal, tidal and other fluctuations and should not be taken as constant.

Explanation of symbols and abbreviations given in 'Key to Exploratory holes'

Please note that this log is still draft and may be subject to change.

Office: BAM Ritchies, Unit 5 Taurus Park, Europa Boulevard, Gemini Business Park, Warrington, WA5 7ZT

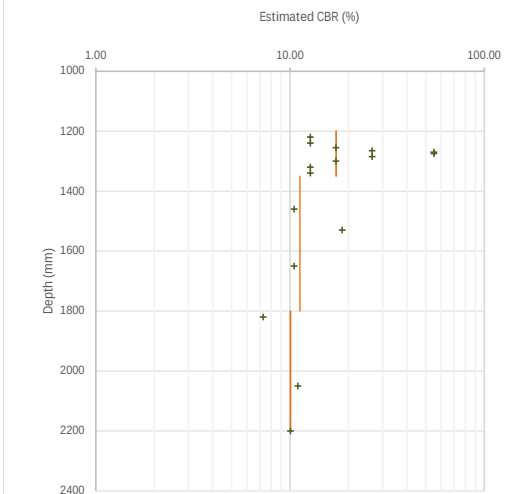
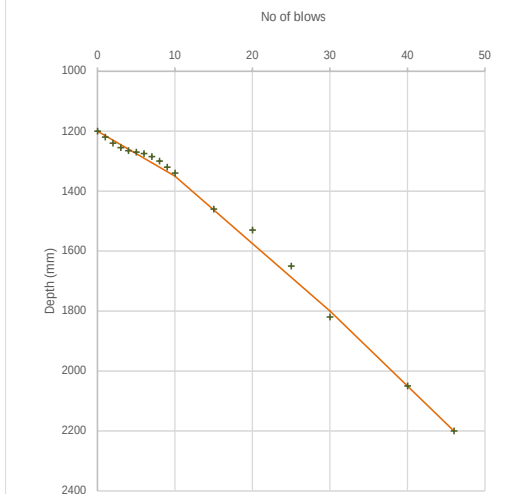
BAM R TP Log 17/10/2017

DYNAMIC CONE PENETRATION TEST

Test Location:
W1-Clayton-TP2
Page 2 of 2

Project Name:	Transpennine Route Upgrade	Survey grid system:	OSGB	Hole type:	DCP
Project No:	322Q-26a	Co-ordinates:	388952.20 mE	Checked by:	JE
Client:	BAM Nuttall		399582.77 mN	Approved by:	JH
Engineer:	IW	Ground level:	70.70 mOD	Weather:	Sunshine
Date of test:	3/3/2022	Start Depth:	1200 mm	Equipment:	CNS Farnell DCP Model A2465
Test number:	1	Inclination:	90 deg.		

Number of blows	Total blows	Reading (mm)	Rod Change Reading (mm)	Penetration Increment (mm)	Depth (mm)



Test No.	Depth from (mm)	Depth to (mm)	CBR value
1	1200	1350	17
2	1350	1800	11
3	1800	2200	10

Estimated CBR value calculated using TRL equation:

$$\log_{10}(CBR) = 2.48 - 1.057 \cdot \log_{10}(mm/blow)$$

References:

CNS Farnell (2003) Dynamic Cone Penetrometer Model A2465 Operating Instructions.
 Transport and Road Research Laboratory (1990) Overseas Road Note 8. A users manual for a program to analyse dynamic cone penetrometer data.
 Transport and Road Research Laboratory (2004) TRL Project Report PR/INT/277/04.

Comments:
Inspection pit down to 1.20mbgl

PHOTO UNAVAILABLE



Borehole Photographs

Contract No: 322Q-26
Contract: Transpire Route Upgrade SI GI
Borehole ID: W1-Clayton-TP2

TRIAL PIT LOG

Trial Pit No.
W1-Clayton-DCP1
Sheet 1 of 1

Project Name: Transpennine Route Upgrade SIGI
Clayton Bridge Drainage Tanker Access GI
Project No: 322Q-26a
Client: Transpire Alliance
Engineer: Transpire Alliance
Date Started: 08/03/2022
Date Completed: 08/03/2022

Survey Grid: OSGB
Co-ordinates: 388925.12 mE
399579.74 mN
Ground Level: 71.23 mOD
Orientation of Logged Face: -- deg.
Hole Type: TP
Checked By: AP
Approved By: JE
Scale: 1:13
Status: DRAFT
Print Date: 05/09/2022
Final Depth: 1.20m

Stratum Description	Legend	Depth [Thickness] (m)	Level (m)	Sampling and In Situ Testing					Water Strikes	Well
				Depth (m)	Type	Test	Test Result	Units		
TOPSOIL: Dark grey slightly sandy slightly gravelly clay with rare rootlets (<20mm). Sand is fine to coarse. Gravel sized fragments are sub-angular to sub-rounded fine to coarse of quartzite and siltstone. [TOPSOIL]										
MADE GROUND: Black slightly gravelly slightly clayey fine to coarse SAND of ash with frequent rootlets (<30mm) and rare wood fragments (<20mm). Gravel sized fragments are angular to sub rounded fine to coarse of brick slag ceramics clinker mudstone coal and sandstone. [MADE GROUND]		0.20	71.03	0.20 0.20 0.20 0.20 0.20	B D ES ES	PID	0.00	ppm		
		[0.30]								
MADE GROUND: Dark grey locally mottled light brown slightly gravelly sandy CLAY with frequent rootlets (<40mm) and frequent wood fragments (<75mm). Sand is fine to coarse of ash. Gravel sized fragments are sub angular to sub rounded of brick sandstone mudstone coal and slate.		0.50	70.73	0.50 0.50 0.50 0.50	B D ES	PID	0.00	ppm		
		[0.70]								
				1.00 1.00 1.00 1.00	B D ES	PID	0.00	ppm		
Trial Pit Terminated at 1.20m		1.20	70.03							

Reason for Hole Termination: Reached scheduled depth

Depth Related Exploratory Hole Information								Remarks
From (m)	To (m)	Length (m)	Width (m)	Stability	Shoring	Logger	Plant	
0.00	1.20					Ethan Richardson	Dart Rig	Engineering Line: HIGH 4 FT – MVL1 – 03m20ch Nearest Structure MVL1/10 is approx 250m to the high mileage of the position Nearest Rail: HIGH CESS RAIL 5m

Depth Related Remarks				Water Strikes		Backfill Details		
From (m)	To (m)	Remarks	Depth (m)	Remarks	Depth Top	Depth Base	Description	
					0.00	1.00	Bentonite	

Groundwater levels are subject to seasonal, tidal and other fluctuations and should not be taken as constant.

Explanation of symbols and abbreviations given in 'Key to Exploratory holes'

Please note that this log is still draft and may be subject to change.

Office: BAM Ritchies, Unit 5 Taurus Park, Europa Boulevard, Gemini Business Park, Warrington, WA5 7ZT

BAM R TP Log 17/10/2017

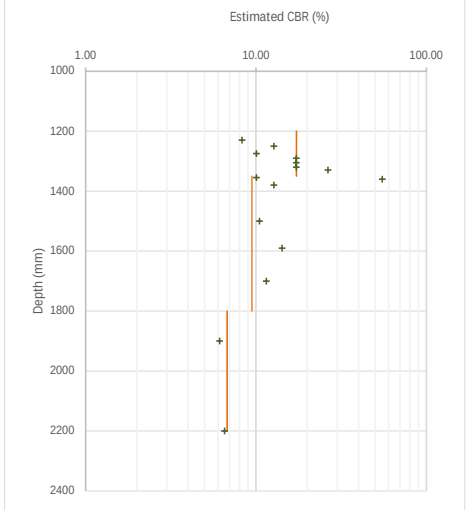
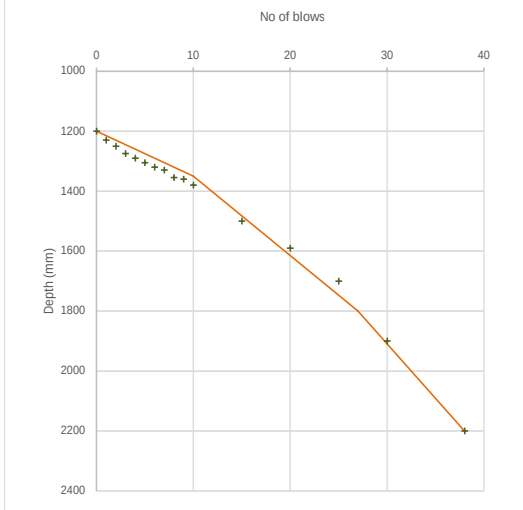
Inspection pit to 1.20mbgl.

DYNAMIC CONE PENETRATION TEST

Test Location:
W1-Clayton-DCP1
Page 2 of 2

Project Name:	Transpennine Route Upgrade	Survey grid system:	OSGB	Hole type:	DCP
Project No:	322Q-26a	Co-ordinates:	388925.12 mE	Checked by:	JE
Client:	BAM Nuttall		399579.74 mN	Approved by:	JH
Engineer:	IW	Ground level:	71.23 mOD		
Date of test:	8/3/2022	Start Depth:	1200 mm	Weather:	Sunshine
Test number:	1	Inclination:	90 deg.	Equipment:	CNS Farnell DCP Model A2465

Number of blows	Total blows	Reading (mm)	Rod Change Reading (mm)	Penetration Increment (mm)	Depth (mm)



Test No.	Depth from (mm)	Depth to (mm)	CBR value
1	1200	1350	17
2	1350	1800	9.5
3	1800	2200	6.8

Estimated CBR value calculated using TRL equation:

$$\log_{10}(CBR) = 2.48 - 1.057 \cdot \log_{10}(mm/blow)$$

References:

CNS Farnell (2003) Dynamic Cone Penetrometer Model A2465 Operating Instructions.
 Transport and Road Research Laboratory (1990) Overseas Road Note 8. A users manual for a program to analyse dynamic cone penetrometer data.
 Transport and Road Research Laboratory (2004) TRL Project Report PR/INT/277/04.

Comments:

Inspection pit to 1.20mbgl.

TRIAL PIT LOG

Trial Pit No.
W1-Clayton-DCP2
Sheet 1 of 1

Project Name: Transpennine Route Upgrade SIGI
Clayton Bridge Drainage Tanker Access GI
Project No: 322Q-26a
Client: Transpire Alliance
Engineer: Transpire Alliance
Date Started: 08/03/2022
Date Completed: 08/03/2022

Survey Grid: OSGB
Co-ordinates: 388933.99 mE
399584.41 mN
Ground Level: 70.95 mOD
Orientation of Logged Face: -- deg.
Hole Type: TP
Checked By: AP
Approved By: JE
Scale: 1:13
Status: DRAFT
Print Date: 05/09/2022
Final Depth: 1.20m

Stratum Description	Legend	Depth [Thickness] (m)	Level (m)	Sampling and In Situ Testing					Water Strikes	Well
				Depth (m)	Type	Test	Test Result	Units		
TOPSOIL: Dark grey slightly sandy slightly gravelly clay with occasional rootlets (2-10mm). Sand is fine to coarse. Gravel sized fragments are sub-angular to sub-rounded fine to coarse of quartzite. [TOPSOIL]		0.20	70.75	0.20 0.20 0.20 0.20	B D ES	PID	0.00	ppm		
MADE GROUND: Black slightly gravelly sandy CLAY with frequent rootlets (<110mm) and wood fragments (<30mm). Sand is fine to coarse occasionally of ash. Gravel sized fragments are sub angular to sub-rounded fine to coarse of concrete brick burnt shale clinker siltstone and coal with low cobble content of angular brick. [MADE GROUND]		[0.70]		0.50 0.50 0.50 0.50	B D ES ES					
Orangish brown fine to coarse SAND. [SAND]		0.90	70.05							
		[0.30]								
Trial Pit Terminated at 1.20m		1.20	69.75							

Reason for Hole Termination: Reached scheduled depth

Depth Related Exploratory Hole Information								Remarks
From (m)	To (m)	Length (m)	Width (m)	Stability	Shoring	Logger	Plant	
0.00	1.20					Ethan Richardson	Dart Rig	Engineering Line: HIGH 4 FT – MVL1 – 03m20ch Nearest Structure MVL1/10 is approx 250m to the high mileage of the position Nearest Rail: HIGH CESS RAIL 5m
Depth Related Remarks				Water Strikes			Backfill Details	
From (m)	To (m)	Remarks		Depth (m)	Remarks		Depth Top	Description
							0.00	1.00 Arisings

Groundwater levels are subject to seasonal, tidal and other fluctuations and should not be taken as constant.

Explanation of symbols and abbreviations given in 'Key to Exploratory holes'

Please note that this log is still draft and may be subject to change.

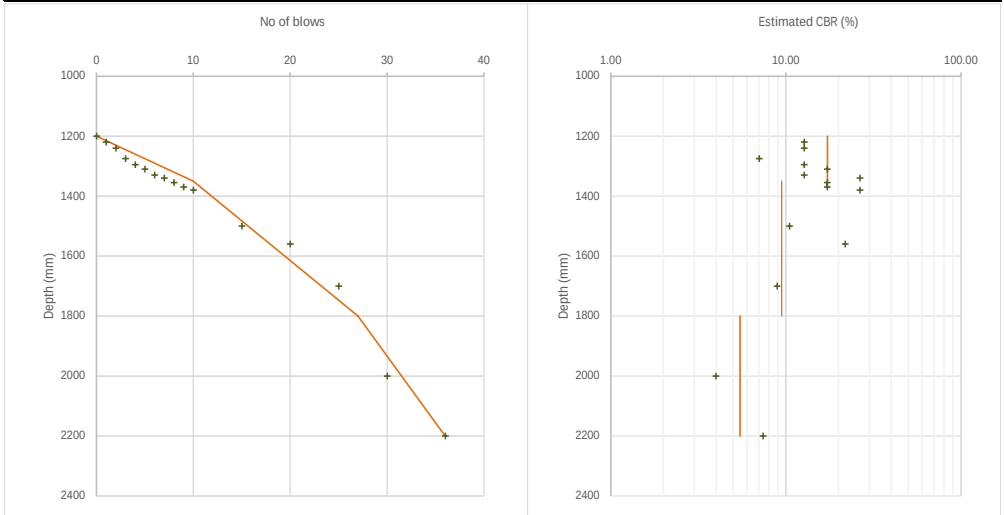
Inspection pit to 1.20mbgl.

DYNAMIC CONE PENETRATION TEST

Test Location:
W1-Clayton-DCP2
Page 2 of 2

Project Name:	Transpennine Route Upgrade	Survey grid system:	OSGB	Hole type:	DCP
Project No:	322Q-26a	Co-ordinates:	388933.99 mE	Checked by:	JE
Client:	BAM Nuttall		399584.41 mN	Approved by:	JH
Engineer:	IW	Ground level:	70.95 mOD	Weather:	Sunshine
Date of test:	8/3/2022	Start Depth:	1200 mm	Equipment:	CNS Farnell DCP Model A2465
Test number:	1	Inclination:	90 deg.		

Number of blows	Total blows	Reading (mm)	Rod Change Reading (mm)	Penetration Increment (mm)	Depth (mm)



Test No.	Depth from (mm)	Depth to (mm)	CBR value
1	1200	1350	17
2	1350	1800	9.5
3	1800	2200	5.5

Estimated CBR value calculated using TRL equation:

$$\log_{10}(CBR) = 2.48 - 1.057 \cdot \log_{10}(mm/blow)$$

References:

CNS Farnell (2003) Dynamic Cone Penetrometer Model A2465 Operating Instructions.
 Transport and Road Research Laboratory (1990) Overseas Road Note 8. A users manual for a program to analyse dynamic cone penetrometer data.
 Transport and Road Research Laboratory (2004) TRL Project Report PR/INT/277/04.

Comments:
 Inspection pit to 1.20mbgl.

TRIAL PIT LOG

Trial Pit No.
W1-Clayton-DCP3
Sheet 1 of 1

Project Name: Transpennine Route Upgrade SIGI
Clayton Bridge Drainage Tanker Access GI
Project No: 322Q-26a
Client: Transpire Alliance
Engineer: Transpire Alliance
Date Started: 03/03/2022
Date Completed: 03/03/2022

Survey Grid: OSGB
Co-ordinates: 388938.02 mE
399583.10 mN
Ground Level: 70.60 mOD
Orientation of Logged Face: -- deg.
Hole Type: TP
Checked By: AP
Approved By: JE
Scale: 1:13
Status: DRAFT
Print Date: 05/09/2022
Final Depth: 1.20m

Stratum Description	Legend	Depth [Thick- ness] (m)	Level (m)	Sampling and In Situ Testing					Water Strikes	Well
				Depth (m)	Type	Test	Test Result	Units		
MADE GROUND: Dark grey and black very sandy subangular to subrounded fine to coarse (2-60mm) GRAVEL of sandstone, granite, ash, clinker and brick. Sand is fine to medium predominantly of ash. Occasional rootlets. Drillers description: Compact stone. [MADE GROUND]		[0.40]	70.20	0.20 0.20 0.20 0.20	B D ES	PID	0.00	ppm		
		0.40								
MADE GROUND: Black fine to coarse SAND predominantly of ash and angular to subrounded fine to coarse (2-65mm) GRAVEL of ash, clinker, slag, coal, sandstone and brick. Low (<100mm) cobble content (sandstone). [MADE GROUND]				0.50 0.50 0.50 0.50	B D ES	PID	0.00	ppm		
		[0.80]								
			1.00 1.00 1.00 1.00	B D ES ES	PID	0.00	ppm			

Reason for Hole Termination: Reached scheduled depth

Depth Related Exploratory Hole Information								Remarks
From (m)	To (m)	Length (m)	Width (m)	Stability	Shoring	Logger	Plant	
0.00	1.20	0.50	0.50				Hand tools	Engineering Line: HIGH 4 FT – MVL1 – 03m20ch Nearest Structure MVL1/10 is approx 250m to the high mileage of the position Nearest Rail: HIGH CESS RAIL 5m

Depth Related Remarks				Water Strikes		Backfill Details		Description
From (m)	To (m)	Remarks		Depth (m)	Remarks	Depth Top	Depth Base	
						0.00	1.20	Arisings

Groundwater levels are subject to seasonal, tidal and other fluctuations and should not be taken as constant.

Explanation of symbols and abbreviations given in 'Key to Exploratory holes'

Please note that this log is still draft and may be subject to change.

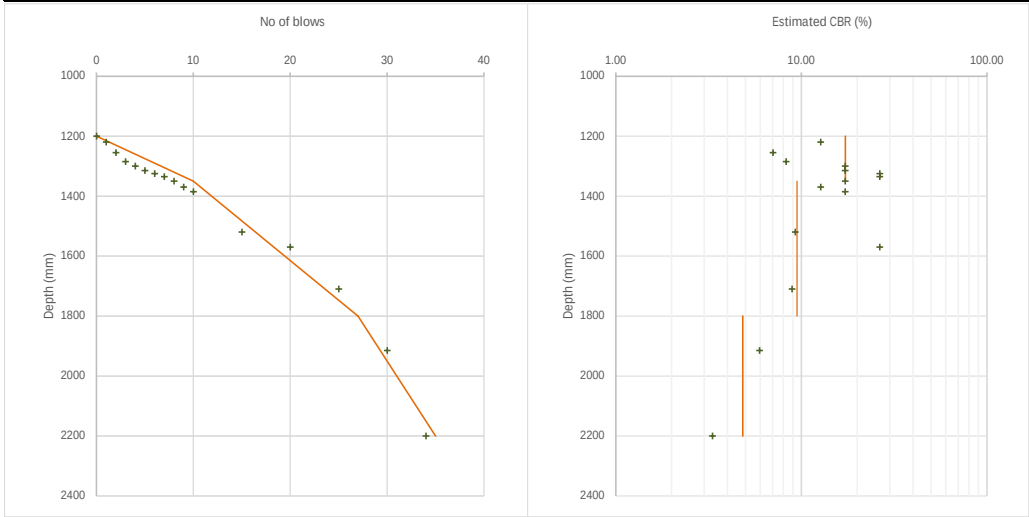
Test Location:
**W1-Clayton-
DCP3**

DYNAMIC CONE PENETRATION TEST

Test Location:
W1-Clayton-DCP3
Page 2 of 2

Project Name:	Transpennine Route Upgrade	Survey grid system:	OSGB	Hole type:	DCP
Project No:	322Q-26a	Co-ordinates:	388938.02 mE 399583.10 mN	Checked by:	JE
Client:	BAM Nuttall	Ground level:	70.60 mOD	Approved by:	JH
Engineer:	IW			Weather:	Sunshine
Date of test:	3/3/2022	Start Depth:	1200 mm	Equipment:	CNS Farnell DCP Model A2465
Test number:	1	Inclination:	90 deg.		

Number of blows	Total blows	Reading (mm)	Rod Change Reading (mm)	Penetration Increment (mm)	Depth (mm)



Test No.	Depth from (mm)	Depth to (mm)	CBR value
1	1200	1350	17
2	1350	1800	9.5
3	1800	2200	4.8

Estimated CBR value calculated using TRL equation:

$$\log_{10}(CBR) = 2.48 - 1.057 \cdot \log_{10}(mm/blow)$$

References:

CNS Farnell (2003) Dynamic Cone Penetrometer Model A2465 Operating Instructions.
 Transport and Road Research Laboratory (1990) Overseas Road Note 8. A users manual for a program to analyse dynamic cone penetrometer data.
 Transport and Road Research Laboratory (2004) TRL Project Report PR/INT/277/04.

Comments:
 Inspection pit to 1.20mbgl.

TRIAL PIT LOG

Trial Pit No.
W1-Clayton-DCP4
Sheet 1 of 1

Project Name: Transpennine Route Upgrade SIGI
Clayton Bridge Drainage Tanker Access GI
Project No: 322Q-26a
Client: Transpire Alliance
Engineer: Transpire Alliance
Date Started: 03/03/2022
Date Completed: 04/03/2022

Survey Grid: OSGB
Co-ordinates: 388944.88 mE
399582.06 mN
Ground Level: 70.43 mOD
Orientation of Logged Face: -- deg.
Hole Type: TP
Checked By: AP
Approved By: JE
Scale: 1:13
Status: DRAFT
Print Date: 05/09/2022
Final Depth: 1.20m

Stratum Description	Legend	Depth [Thickness] (m)	Level (m)	Sampling and In Situ Testing					Water Strikes	Well
				Depth (m)	Type	Test	Test Result	Units		
MADE GROUND: Dark grey and light grey very sandy subangular to subrounded fine to coarse (2-60mm) GRAVEL of sandstone, ash, clinker and brick. Sand is fine to medium predominantly of ash. Drillers description: Compact stone. [MADE GROUND]		[0.40]	70.03	0.20 0.20 0.20 0.20	B D ES	PID	0.00	ppm		
		0.40		0.50 0.50 0.50 0.50						
MADE GROUND: Black fine to coarse SAND predominantly of ash and angular to subrounded fine to coarse (2-55mm) GRAVEL of ash, clinker, slag, coal, sandstone and brick. Low (<110mm) cobble content (sandstone). [MADE GROUND]		[0.80]		1.00 1.00 1.00 1.00						
		1.20								
Trial Pit Terminated at 1.20m			69.23							

Reason for Hole Termination: Reached scheduled depth

Depth Related Exploratory Hole Information								Remarks
From (m)	To (m)	Length (m)	Width (m)	Stability	Shoring	Logger	Plant	
0.00	1.20	0.50	0.50				Hand tools	Engineering Line: HIGH 4 FT – MVL1 – 03m20ch Nearest Structure MVL1/10 is approx 250m to the high mileage of the position Nearest Rail: HIGH CESS RAIL 5m

Depth Related Remarks				Water Strikes		Backfill Details		Description
From (m)	To (m)	Remarks		Depth (m)	Remarks	Depth Top	Depth Base	
						0.00	1.20	Arisings

Groundwater levels are subject to seasonal, tidal and other fluctuations and should not be taken as constant.

Explanation of symbols and abbreviations given in 'Key to Exploratory holes'

Please note that this log is still draft and may be subject to change.

Office: BAM Ritchies, Unit 5 Taurus Park, Europa Boulevard, Gemini Business Park, Warrington, WA5 7ZT

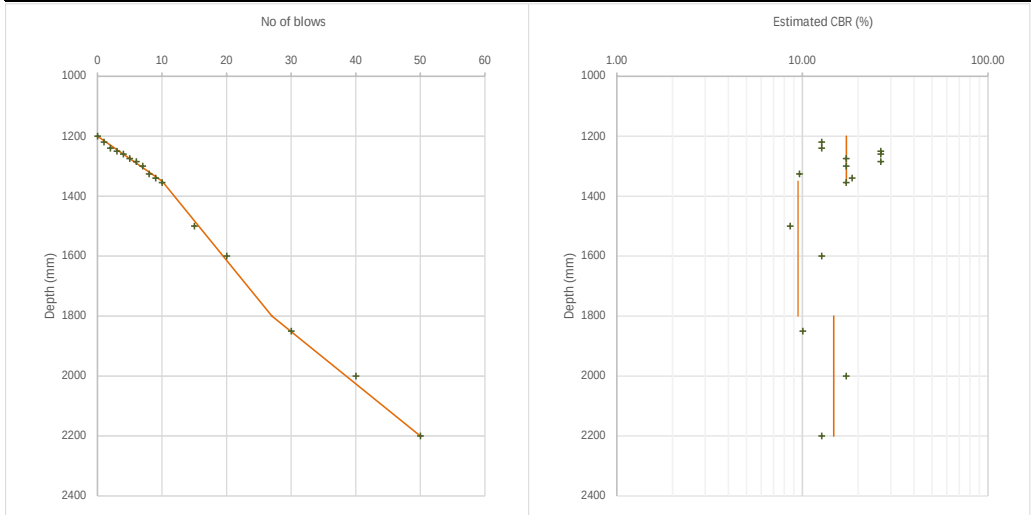
BAM R TP Log 17/10/2017

Test Location:
**W1-Clayton-
DCP4**
Page 1 of 2

DYNAMIC CONE PENETRATION TEST

Project Name:	Transpennine Route Upgrade	Survey grid system:	OSGB	Hole type:	DCP
Project No:	322Q-26a	Co-ordinates:	388944.88 mE 399582.06 mN	Checked by:	JE
Client:	BAM Nuttall	Ground level:	70.43 mOD	Approved by:	JH
Engineer:	IW			Weather:	Sunshine
Date of test:	3/3/2022	Start Depth:	1200 mm	Equipment:	CNS Farnell DCP Model A2465
Test number:	1	Inclination:	90 deg.		

Number of blows	Total blows	Reading (mm)	Rod Change Reading (mm)	Penetration Increment (mm)	Depth (mm)



Test No.	Depth from (mm)	Depth to (mm)	CBR value
1	1200	1350	17
2	1350	1800	9.5
3	1800	2200	15

Estimated CBR value calculated using TRL equation:

$$\log_{10}(CBR) = 2.48 - 1.057 \cdot \log_{10}(mm/blow)$$

References:

CNS Farnell (2003) Dynamic Cone Penetrometer Model A2465 Operating Instructions.
 Transport and Road Research Laboratory (1990) Overseas Road Note 8. A users manual for a program to analyse dynamic cone penetrometer data.
 Transport and Road Research Laboratory (2004) TRL Project Report PR/INT/277/04.

Comments:
 Inspection pit to 1.20mbgl.

Appendix 2

1 Geo environmental Testing

FINAL ANALYTICAL TEST REPORT

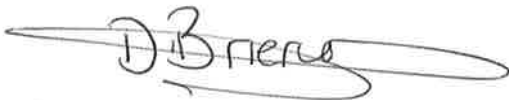
Envirolab Job Number: 22/05555
Issue Number: 1

Date: 28 June, 2022

Client: BAM Ritchies Warrington
Unit 5
Taurus Park
Europa Boulevard
Warrington
UK
WA5 7ZT

Project Manager: TRUtesting
Project Name: TRU West SIGI
Project Ref: 322Q-26
Order No: RIT135 972 058
Date Samples Received: 31/05/22
Date Instructions Received: 07/06/22
Date Analysis Completed: 28/06/22

Approved by:



Danielle Brierley
Deputy Client Services Supervisor

Envirolab Job Number: 22/05555

Client Project Name: TRU West SIGI

Client Project Ref: 322Q-26

Lab Sample ID	22/05555/1	22/05555/2	22/05555/3	22/05555/4	22/05555/5	22/05555/9	22/05555/12	Units	Limit of Detection	Method ref
Client Sample No	W1CLBH2ES 1	W1CLBH2ES 2	W1CLBH2ES 3	W1CLBH2ES 4	W1CLBH2ES 5	W1CLBH2ES 9	W1CLBH2ES 12			
Client Sample ID	W1-CLAYTO N-BH2	W1-CLAYTO N-BH2	W1-CLAYTO N-BH2	W1-CLAYTO N-BH2	W1-CLAYTO N-BH2	W1-CLAYTO N-BH2	W1-CLAYTO N-BH2			
Depth to Top	0.20	0.50	1.00	1.60	2.40	6.40	10.20			
Depth To Bottom										
Date Sampled	26-May-22	26-May-22	26-May-22	27-May-22	27-May-22	27-May-22	27-May-22			
Sample Type	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES			
Sample Matrix Code	4AE	4A	4AE	4AE	5AB	5A	6A			
% Stones >10mm _A	10.8	22.8	9.7	21.1	20.5	<0.1	16.6	% w/w	0.1	A-T-044
pH _D ^{M#}	8.80	8.40	8.65	8.42	8.63	8.33	9.20	pH	0.01	A-T-031s
Chloride (water sol 2:1) _D ^{M#}	<10	12	12	17	14	36	18	mg/kg	10	A-T-026s
Cyanide (free) _A ^{M#}	<1	<1	<1	<1	<1	<1	<1	mg/kg	1	A-T-042sFCN
Cyanide (complex) _A ^{M#}	<1	<1	<1	<1	<1	<1	<1	mg/kg	1	A-T-042sCCN
Cyanide (total) _A ^{M#}	<1	<1	<1	<1	<1	<1	<1	mg/kg	1	A-T-042sTCN
Thiocyanate _A	<5	<5	<5	<5	<5	<5	<5	mg/kg	5	A-T-041s
Phenols - Total by HPLC _A	<0.2	<0.2	1.1	<0.2	<0.2	<0.2	<0.2	mg/kg	0.2	A-T-050s
Sulphide _A	160	170	210	160	170	200	210	mg/kg	5	A-T-043-s
Sulphur (elemental) _D ^{M#}	<5	<5	<5	<5	<5	<5	<5	mg/kg	5	A-T-029s
Loss on ignition (550degC) _D ^{M#}	11.0	15.6	11.7	9.4	5.5	9.7	2.9	% w/w	0.6	A-T-030s
Total Organic Carbon _D ^{M#}	12	14.7	9.31	8.21	4.09	9.56	0.52	% w/w	0.03	A-T-032s
Antimony _D	5	<5	<5	<5	<5	<5	<5	mg/kg	5	A-T-024s
Arsenic _D ^{M#}	28	25	28	19	17	16	4	mg/kg	1	A-T-024s
Barium _D	281	237	262	239	231	221	90	mg/kg	1	A-T-024s
Beryllium _D	2.5	1.6	1.2	1.2	0.7	1.3	0.7	mg/kg	0.5	A-T-024s
Boron (water soluble) _D	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	mg/kg	1	A-T-027s
Cadmium _D ^{M#}	1.6	2.5	2.1	1.6	1.0	1.5	0.8	mg/kg	0.5	A-T-024s
Copper _D ^{M#}	204	147	108	107	60	82	16	mg/kg	1	A-T-024s
Chromium _D ^{M#}	23	22	45	51	82	52	22	mg/kg	1	A-T-024s
Chromium (hexavalent) _D	<1	<1	<1	<1	<1	<1	<1	mg/kg	1	A-T-040s
Iron _D	44600	33100	34500	33800	31600	37500	28400	mg/kg	50	A-T-024s
Lead _D ^{M#}	432	209	312	253	315	206	13	mg/kg	1	A-T-024s
Manganese _D ^{M#}	327	275	316	290	316	416	491	mg/kg	1	A-T-024s
Mercury _D	0.57	0.93	1.07	0.72	0.80	0.64	0.20	mg/kg	0.17	A-T-024s
Molybdenum _D ^{M#}	5	5	4	3	2	2	<1	mg/kg	1	A-T-024s
Nickel _D ^{M#}	59	36	35	29	22	31	22	mg/kg	1	A-T-024s
Selenium _D ^{M#}	<1	<1	<1	<1	<1	<1	<1	mg/kg	1	A-T-024s
Vanadium _D ^{M#}	56	42	34	31	23	38	21	mg/kg	1	A-T-024s
Zinc _D ^{M#}	194	235	263	189	106	164	38	mg/kg	5	A-T-024s
Dioxins like PCBs (WHO-12) SUBCON Marchwood _A	Appended	Appended	Appended	Appended	Appended	Appended	Appended			Subcon March

Envirolab Job Number: 22/05555

Client Project Name: TRU West SIGI

Client Project Ref: 322Q-26

Lab Sample ID	22/05555/1	22/05555/2	22/05555/3	22/05555/4	22/05555/5	22/05555/9	22/05555/12	Units	Limit of Detection	Method ref
Client Sample No	W1CLBH2ES 1	W1CLBH2ES 2	W1CLBH2ES 3	W1CLBH2ES 4	W1CLBH2ES 5	W1CLBH2ES 9	W1CLBH2ES 12			
Client Sample ID	W1-CLAYTO N-BH2	W1-CLAYTO N-BH2	W1-CLAYTO N-BH2	W1-CLAYTO N-BH2	W1-CLAYTO N-BH2	W1-CLAYTO N-BH2	W1-CLAYTO N-BH2			
Depth to Top	0.20	0.50	1.00	1.60	2.40	6.40	10.20			
Depth To Bottom										
Date Sampled	26-May-22	26-May-22	26-May-22	27-May-22	27-May-22	27-May-22	27-May-22			
Sample Type	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES			
Sample Matrix Code	4AE	4A	4AE	4AE	5AB	5A	6A			
Asbestos in Soil (inc. matrix) ^										
Asbestos in soil [#]	NAD	NAD	NAD	NAD	NAD	-	-			A-T-045
Asbestos Matrix (visual) ^o	-	-	-	-	-	-	-			A-T-045
Asbestos Matrix (microscope) ^o	-	-	-	-	-	-	-			A-T-045
Asbestos ACM - Suitable for Water Absorption Test? ^o	N/A	N/A	N/A	N/A	N/A	-	-			A-T-045

Envirolab Job Number: 22/05555

Client Project Name: TRU West SIGI

Client Project Ref: 322Q-26

Lab Sample ID	22/05555/1	22/05555/2	22/05555/3	22/05555/4	22/05555/5	22/05555/9	22/05555/12	Units	Limit of Detection	Method ref
Client Sample No	W1CLBH2ES 1	W1CLBH2ES 2	W1CLBH2ES 3	W1CLBH2ES 4	W1CLBH2ES 5	W1CLBH2ES 9	W1CLBH2ES 12			
Client Sample ID	W1-CLAYTO N-BH2	W1-CLAYTO N-BH2	W1-CLAYTO N-BH2	W1-CLAYTO N-BH2	W1-CLAYTO N-BH2	W1-CLAYTO N-BH2	W1-CLAYTO N-BH2			
Depth to Top	0.20	0.50	1.00	1.60	2.40	6.40	10.20			
Depth To Bottom										
Date Sampled	26-May-22	26-May-22	26-May-22	27-May-22	27-May-22	27-May-22	27-May-22			
Sample Type	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES			
Sample Matrix Code	4AE	4A	4AE	4AE	5AB	5A	6A			
Dioxins & Furans										
Furan 2378-TCDF _A [#]	Appended	Appended	Appended	Appended	Appended	Appended	Appended	ng/kg		Subcon March
Furan 12378-PeCDF _A [#]	Appended	Appended	Appended	Appended	Appended	Appended	Appended	ng/kg		Subcon March
Furan 23478-PeCDF _A [#]	Appended	Appended	Appended	Appended	Appended	Appended	Appended	ng/kg		Subcon March
Furan 123478-HxCDF _A [#]	Appended	Appended	Appended	Appended	Appended	Appended	Appended	ng/kg		Subcon March
Furan 123678-HxCDF _A [#]	Appended	Appended	Appended	Appended	Appended	Appended	Appended	ng/kg		Subcon March
Furan 234678-HxCDF _A [#]	Appended	Appended	Appended	Appended	Appended	Appended	Appended	ng/kg		Subcon March
Furan 123789-HxCDF _A [#]	Appended	Appended	Appended	Appended	Appended	Appended	Appended	ng/kg		Subcon March
Furan 1234678-HpCDF _A [#]	Appended	Appended	Appended	Appended	Appended	Appended	Appended	ng/kg		Subcon March
Furan 1234789-HpCDF _A [#]	Appended	Appended	Appended	Appended	Appended	Appended	Appended	ng/kg		Subcon March
Furan OCDF _A [#]	Appended	Appended	Appended	Appended	Appended	Appended	Appended	ng/kg		Subcon March
Dioxin 2378-TCDD _A [#]	Appended	Appended	Appended	Appended	Appended	Appended	Appended	ng/kg		Subcon March
Dioxin 12378-PeCDD _A [#]	Appended	Appended	Appended	Appended	Appended	Appended	Appended	ng/kg		Subcon March
Dioxin 123478-HxCDD _A [#]	Appended	Appended	Appended	Appended	Appended	Appended	Appended	ng/kg		Subcon March
Dioxin 123678-HxCDD _A [#]	Appended	Appended	Appended	Appended	Appended	Appended	Appended	ng/kg		Subcon March
Dioxin 123789-HxCDD _A [#]	Appended	Appended	Appended	Appended	Appended	Appended	Appended	ng/kg		Subcon March
Dioxin 1234678-HpCDD _A [#]	Appended	Appended	Appended	Appended	Appended	Appended	Appended	ng/kg		Subcon March
Dioxin OCDD _A [#]	Appended	Appended	Appended	Appended	Appended	Appended	Appended	ng/kg		Subcon March

Envirolab Job Number: 22/05555

Client Project Name: TRU West SIGI

Client Project Ref: 322Q-26

Lab Sample ID	22/05555/1	22/05555/2	22/05555/3	22/05555/4	22/05555/5	22/05555/9	22/05555/12	Units	Limit of Detection	Method ref
Client Sample No	W1CLBH2ES 1	W1CLBH2ES 2	W1CLBH2ES 3	W1CLBH2ES 4	W1CLBH2ES 5	W1CLBH2ES 9	W1CLBH2ES 12			
Client Sample ID	W1-CLAYTO N-BH2	W1-CLAYTO N-BH2	W1-CLAYTO N-BH2	W1-CLAYTO N-BH2	W1-CLAYTO N-BH2	W1-CLAYTO N-BH2	W1-CLAYTO N-BH2			
Depth to Top	0.20	0.50	1.00	1.60	2.40	6.40	10.20			
Depth To Bottom										
Date Sampled	26-May-22	26-May-22	26-May-22	27-May-22	27-May-22	27-May-22	27-May-22			
Sample Type	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES			
Sample Matrix Code	4AE	4A	4AE	4AE	5AB	5A	6A			
Speciated PCB-WHO12										
PCB BZ 81 _A ^{M#}	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	mg/kg	0.005	A-T-004s
PCB BZ 105 _A ^{M#}	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	mg/kg	0.005	A-T-004s
PCB BZ 114 _A ^{M#}	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	mg/kg	0.005	A-T-004s
PCB BZ 118 _A ^{M#}	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007	mg/kg	0.007	A-T-004s
PCB BZ 123 _A ^{M#}	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	mg/kg	0.005	A-T-004s
PCB BZ 126 _A ^{M#}	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	mg/kg	0.005	A-T-004s
PCB BZ 156 _A ^{M#}	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	mg/kg	0.005	A-T-004s
PCB BZ 157 _A ^{M#}	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	mg/kg	0.005	A-T-004s
PCB BZ 167 _A ^{M#}	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	mg/kg	0.005	A-T-004s
PCB BZ 169 _A ^{M#}	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	mg/kg	0.005	A-T-004s
PCB BZ 189 _A ^{M#}	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	mg/kg	0.005	A-T-004s
PCB BZ 77 _A ^{M#}	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	mg/kg	0.005	A-T-004s
Total Speciated PCB-WHO12 _A ^{M#}	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007	mg/kg	0.005	A-T-004s

Envirolab Job Number: 22/05555

Client Project Name: TRU West SIGI

Client Project Ref: 322Q-26

Lab Sample ID	22/05555/1	22/05555/2	22/05555/3	22/05555/4	22/05555/5	22/05555/9	22/05555/12	Units	Limit of Detection	Method ref
Client Sample No	W1CLBH2ES 1	W1CLBH2ES 2	W1CLBH2ES 3	W1CLBH2ES 4	W1CLBH2ES 5	W1CLBH2ES 9	W1CLBH2ES 12			
Client Sample ID	W1-CLAYTO N-BH2	W1-CLAYTO N-BH2	W1-CLAYTO N-BH2	W1-CLAYTO N-BH2	W1-CLAYTO N-BH2	W1-CLAYTO N-BH2	W1-CLAYTO N-BH2			
Depth to Top	0.20	0.50	1.00	1.60	2.40	6.40	10.20			
Depth To Bottom										
Date Sampled	26-May-22	26-May-22	26-May-22	27-May-22	27-May-22	27-May-22	27-May-22			
Sample Type	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES			
Sample Matrix Code	4AE	4A	4AE	4AE	5AB	5A	6A			
SVOC										
4-Bromophenyl phenyl ether _A	<1000	<1000	<100	<100	<100	<1000	<100	µg/kg	100	A-T-052s
Hexachlorobenzene _A	<1000	<1000	<100	<100	<100	<1000	<100	µg/kg	100	A-T-052s
Diethyl phthalate _A	<1000	<1000	<100	<100	<100	<1000	<100	µg/kg	100	A-T-052s
Dimethyl phthalate _A	<1000	<1000	<100	<100	<100	<1000	<100	µg/kg	100	A-T-052s
Dibenzofuran _A	3150	13700	<100	<100	5210	8540	<100	µg/kg	100	A-T-052s
Carbazole _A	3010	12000	<100	<100	3190	5550	<100	µg/kg	100	A-T-052s
Butylbenzyl phthalate _A	<1000	<1000	<100	<100	<100	<1000	<100	µg/kg	100	A-T-052s
Bis(2-ethylhexyl)phthalate _A	<5000	<5000	<500	<500	<500	<5000	<500	µg/kg	500	A-T-052s
Bis(2-chloroethoxy)methane _A	<1000	<1000	<100	<100	<100	<1000	<100	µg/kg	100	A-T-052s
Bis(2-chloroethyl)ether _A	<1000	<1000	<100	<100	<100	<1000	<100	µg/kg	100	A-T-052s
4-Nitrophenol _A	<1000	<1000	<100	<100	<100	<1000	<100	µg/kg	100	A-T-052s
3+4-Methylphenol _A	<1000	<1000	<100	<100	<100	<1000	<100	µg/kg	100	A-T-052s
4-Chloro-3-methylphenol _A	<1000	<1000	<100	<100	<100	<1000	<100	µg/kg	100	A-T-052s
2-Nitrophenol _A	<1000	<1000	<100	<100	<100	<1000	<100	µg/kg	100	A-T-052s
2-Methylphenol _A	<1000	<1000	<100	<100	<100	<1000	<100	µg/kg	100	A-T-052s
2-Chlorophenol _A	<1000	<1000	<100	<100	<100	<1000	<100	µg/kg	100	A-T-052s
2,6-Dinitrotoluene _A	<1000	<1000	<100	<100	<100	<1000	<100	µg/kg	100	A-T-052s
2,4-Dinitrotoluene _A	<1000	<1000	<100	<100	<100	<1000	<100	µg/kg	100	A-T-052s
2,4-Dimethylphenol _A	<1000	<1000	<100	<100	169	<1000	<100	µg/kg	100	A-T-052s
2,4-Dichlorophenol _A	<1000	<1000	<100	<100	<100	<1000	<100	µg/kg	100	A-T-052s
2,4,6-Trichlorophenol _A	<1000	<1000	<100	<100	<100	<1000	<100	µg/kg	100	A-T-052s
2,4,5-Trichlorophenol _A	<1000	<1000	<100	<100	<100	<1000	<100	µg/kg	100	A-T-052s
2-Chloronaphthalene _A	<1000	<1000	<100	<100	<100	<1000	<100	µg/kg	100	A-T-052s
2-Methylnaphthalene _A	1950	8230	<100	<100	4520	4750	<100	µg/kg	100	A-T-052s
Bis(2-chloroisopropyl)ether _A	<1000	<1000	<100	<100	<100	<1000	<100	µg/kg	100	A-T-052s
Phenol _A	<1000	<1000	<100	<100	<100	<1000	<100	µg/kg	100	A-T-052s
Pentachlorophenol _A	<1000	<1000	<100	<100	<100	<1000	<100	µg/kg	100	A-T-052s
n-Nitroso-n-dipropylamine _A	<1000	<1000	<100	<100	<100	<1000	<100	µg/kg	100	A-T-052s
n-Dioctylphthalate _A	<5000	<5000	<500	<500	<500	<5000	<500	µg/kg	500	A-T-052s
n-Dibutylphthalate _A	<1000	<1000	<100	<100	<100	<1000	<100	µg/kg	100	A-T-052s
Nitrobenzene _A	<1000	<1000	<100	<100	<100	<1000	<100	µg/kg	100	A-T-052s
Isophorone _A	<1000	<1000	<100	<100	<100	<1000	<100	µg/kg	100	A-T-052s

Envirolab Job Number: 22/05555

Client Project Name: TRU West SIGI

Client Project Ref: 322Q-26

Lab Sample ID	22/05555/1	22/05555/2	22/05555/3	22/05555/4	22/05555/5	22/05555/9	22/05555/12	Units	Limit of Detection	Method ref
Client Sample No	W1CLBH2ES 1	W1CLBH2ES 2	W1CLBH2ES 3	W1CLBH2ES 4	W1CLBH2ES 5	W1CLBH2ES 9	W1CLBH2ES 12			
Client Sample ID	W1-CLAYTO N-BH2	W1-CLAYTO N-BH2	W1-CLAYTO N-BH2	W1-CLAYTO N-BH2	W1-CLAYTO N-BH2	W1-CLAYTO N-BH2	W1-CLAYTO N-BH2			
Depth to Top	0.20	0.50	1.00	1.60	2.40	6.40	10.20			
Depth To Bottom										
Date Sampled	26-May-22	26-May-22	26-May-22	27-May-22	27-May-22	27-May-22	27-May-22			
Sample Type	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES			
Sample Matrix Code	4AE	4A	4AE	4AE	5AB	5A	6A	µg/kg	100	A-T-052s
Hexachloroethane _A	<1000	<1000	<100	<100	<100	<1000	<100			
Hexachlorocyclopentadiene _A	<1000	<1000	<100	<100	<100	<1000	<100			
Perylene _A	6940	22700	<100	<100	3500	6370	<100			

Envirolab Job Number: 22/05555

Client Project Name: TRU West SIGI

Client Project Ref: 322Q-26

Lab Sample ID	22/05555/1	22/05555/2	22/05555/3	22/05555/4	22/05555/5	22/05555/9	22/05555/12	Units	Limit of Detection	Method ref
Client Sample No	W1CLBH2ES 1	W1CLBH2ES 2	W1CLBH2ES 3	W1CLBH2ES 4	W1CLBH2ES 5	W1CLBH2ES 9	W1CLBH2ES 12			
Client Sample ID	W1-CLAYTO N-BH2	W1-CLAYTO N-BH2	W1-CLAYTO N-BH2	W1-CLAYTO N-BH2	W1-CLAYTO N-BH2	W1-CLAYTO N-BH2	W1-CLAYTO N-BH2			
Depth to Top	0.20	0.50	1.00	1.60	2.40	6.40	10.20			
Depth To Bottom										
Date Sampled	26-May-22	26-May-22	26-May-22	27-May-22	27-May-22	27-May-22	27-May-22			
Sample Type	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES			
Sample Matrix Code	4AE	4A	4AE	4AE	5AB	5A	6A			
VOC										
Dichlorodifluoromethane _A	<25	<25	<1	<25	<1	<1	<25	µg/kg	1	A-T-006s
Chloromethane _A	<250	<250	<10	<250	<10	<10	<250	µg/kg	10	A-T-006s
Vinyl Chloride (Chloroethene) _A [#]	<25	<25	<1	<25	<1	<1	<25	µg/kg	1	A-T-006s
Bromomethane _A [#]	<25	<25	<1	<25	<1	<1	<25	µg/kg	1	A-T-006s
Chloroethane _A [#]	<25	<25	<1	<25	<1	<1	<25	µg/kg	1	A-T-006s
Trichlorofluoromethane _A [#]	<25	<25	<1	<25	<1	<1	<25	µg/kg	1	A-T-006s
1,1-Dichloroethene _A [#]	<25	<25	<1	<25	<1	<1	<25	µg/kg	1	A-T-006s
Carbon Disulphide _A [#]	<25	<25	<1	<25	<1	<1	<25	µg/kg	1	A-T-006s
Dichloromethane _A	<125	<125	<5	<125	<5	<5	<125	µg/kg	5	A-T-006s
trans 1,2-Dichloroethene _A [#]	<25	<25	<1	<25	<1	<1	<25	µg/kg	1	A-T-006s
1,1-Dichloroethane _A [#]	<25	<25	<1	<25	<1	<1	<25	µg/kg	1	A-T-006s
cis 1,2-Dichloroethene _A [#]	<25	<25	<1	<25	<1	<1	<25	µg/kg	1	A-T-006s
2,2-Dichloropropane _A [#]	<25	<25	<1	<25	<1	<1	<25	µg/kg	1	A-T-006s
Bromochloromethane _A [#]	<125	<125	<5	<125	<5	<5	<125	µg/kg	5	A-T-006s
Chloroform _A [#]	<25	<25	<1	<25	<1	<1	<25	µg/kg	1	A-T-006s
1,1,1-Trichloroethane _A [#]	<25	<25	<1	<25	<1	<1	<25	µg/kg	1	A-T-006s
1,1-Dichloropropene _A [#]	<25	<25	<1	<25	<1	<1	<25	µg/kg	1	A-T-006s
Carbon Tetrachloride _A [#]	<25	<25	<1	<25	<1	<1	<25	µg/kg	1	A-T-006s
1,2-Dichloroethane _A [#]	<50	<50	<2	<50	<2	<2	<50	µg/kg	2	A-T-006s
Benzene _A [#]	<25	<25	<1	<25	<1	<1	<25	µg/kg	1	A-T-006s
Trichloroethene _A [#]	<25	<25	<1	<25	<1	<1	<25	µg/kg	1	A-T-006s
1,2-Dichloropropane _A [#]	<25	<25	<1	<25	<1	<1	<25	µg/kg	1	A-T-006s
Dibromomethane _A [#]	<25	<25	<1	<25	<1	<1	<25	µg/kg	1	A-T-006s
Bromodichloromethane _A [#]	<250	<250	<10	<250	<10	<10	<250	µg/kg	10	A-T-006s
cis 1,3-Dichloropropene _A [#]	<25	<25	<1	<25	<1	<1	<25	µg/kg	1	A-T-006s
Toluene _A [#]	<25	<25	<1	<25	<1	<1	<25	µg/kg	1	A-T-006s
trans 1,3-Dichloropropene _A [#]	<25	<25	<1	<25	<1	<1	<25	µg/kg	1	A-T-006s
1,1,2-Trichloroethane _A [#]	<25	<25	<1	<25	<1	<1	<25	µg/kg	1	A-T-006s
1,3-Dichloropropane _A [#]	<25	<25	<1	<25	<1	<1	<25	µg/kg	1	A-T-006s
Tetrachloroethene _A [#]	<25	<25	<1	<25	<1	<1	<25	µg/kg	1	A-T-006s
Dibromochloromethane _A [#]	<75	<75	<3	<75	<3	<3	<75	µg/kg	3	A-T-006s
1,2-Dibromoethane _A [#]	<25	<25	<1	<25	<1	<1	<25	µg/kg	1	A-T-006s

Envirolab Job Number: 22/05555

Client Project Name: TRU West SIGI

Client Project Ref: 322Q-26

Lab Sample ID	22/05555/1	22/05555/2	22/05555/3	22/05555/4	22/05555/5	22/05555/9	22/05555/12	Units	Limit of Detection	Method ref
Client Sample No	W1CLBH2ES 1	W1CLBH2ES 2	W1CLBH2ES 3	W1CLBH2ES 4	W1CLBH2ES 5	W1CLBH2ES 9	W1CLBH2ES 12			
Client Sample ID	W1-CLAYTO N-BH2	W1-CLAYTO N-BH2	W1-CLAYTO N-BH2	W1-CLAYTO N-BH2	W1-CLAYTO N-BH2	W1-CLAYTO N-BH2	W1-CLAYTO N-BH2			
Depth to Top	0.20	0.50	1.00	1.60	2.40	6.40	10.20			
Depth To Bottom										
Date Sampled	26-May-22	26-May-22	26-May-22	27-May-22	27-May-22	27-May-22	27-May-22			
Sample Type	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES			
Sample Matrix Code	4AE	4A	4AE	4AE	5AB	5A	6A			
Chlorobenzene _A [#]	<25	<25	<1	<25	<1	<1	<25	µg/kg	1	A-T-006s
1,1,1,2-Tetrachloroethane _A	<25	<25	<1	<25	<1	<1	<25	µg/kg	1	A-T-006s
Ethylbenzene _A [#]	<25	<25	<1	<25	<1	<1	<25	µg/kg	1	A-T-006s
m & p Xylene _A [#]	<25	<25	<1	<25	<1	1	<25	µg/kg	1	A-T-006s
o-Xylene _A [#]	<25	<25	<1	<25	<1	1	<25	µg/kg	1	A-T-006s
Styrene _A [#]	<25	<25	<1	<25	<1	<1	<25	µg/kg	1	A-T-006s
Bromoform _A [#]	<25	<25	<1	<25	<1	<1	<25	µg/kg	1	A-T-006s
Isopropylbenzene _A [#]	<25	<25	<1	<25	<1	<1	<25	µg/kg	1	A-T-006s
1,1,2,2-Tetrachloroethane _A	<25	<25	<1	<25	<1	<1	<25	µg/kg	1	A-T-006s
1,2,3-Trichloropropane _A [#]	<25	<25	<1	<25	<1	<1	<25	µg/kg	1	A-T-006s
Bromobenzene _A [#]	<25	<25	<1	<25	<1	<1	<25	µg/kg	1	A-T-006s
n-Propylbenzene _A [#]	<25	<25	<1	<25	<1	<1	<25	µg/kg	1	A-T-006s
2-Chlorotoluene _A [#]	<25	<25	<1	<25	<1	<1	<25	µg/kg	1	A-T-006s
1,3,5-Trimethylbenzene _A [#]	<25	<25	<1	<25	<1	2	<25	µg/kg	1	A-T-006s
4-Chlorotoluene _A [#]	<25	<25	<1	<25	<1	<1	<25	µg/kg	1	A-T-006s
tert-Butylbenzene _A [#]	<50	<50	<2	<50	<2	<2	<50	µg/kg	2	A-T-006s
1,2,4-Trimethylbenzene _A [#]	<25	<25	1	<25	<1	4	<25	µg/kg	1	A-T-006s
sec-Butylbenzene _A [#]	<25	<25	<1	<25	<1	<1	<25	µg/kg	1	A-T-006s
4-Isopropyltoluene _A [#]	<25	<25	<1	<25	<1	<1	<25	µg/kg	1	A-T-006s
1,3-Dichlorobenzene _A	<25	<25	<1	<25	<1	<1	<25	µg/kg	1	A-T-006s
1,4-Dichlorobenzene _A [#]	<25	<25	<1	<25	<1	<1	<25	µg/kg	1	A-T-006s
n-Butylbenzene _A [#]	<25	<25	<1	<25	<1	<1	<25	µg/kg	1	A-T-006s
1,2-Dichlorobenzene _A [#]	<25	<25	<1	<25	<1	<1	<25	µg/kg	1	A-T-006s
1,2-Dibromo-3-chloropropane (DCBP) _A	<50	<50	<2	<50	<2	<2	<50	µg/kg	2	A-T-006s
1,2,4-Trichlorobenzene _A	<75	<75	<3	<75	<3	<3	<75	µg/kg	3	A-T-006s
Hexachlorobutadiene _A [#]	<25	<25	<1	<25	<1	<1	<25	µg/kg	1	A-T-006s
1,2,3-Trichlorobenzene _A	<75	<75	<3	<75	<3	<3	<75	µg/kg	3	A-T-006s

Envirolab Job Number: 22/05555

Client Project Name: TRU West SIGI

Client Project Ref: 322Q-26

Lab Sample ID	22/05555/1	22/05555/2	22/05555/3	22/05555/4	22/05555/5	22/05555/9	22/05555/12	Units	Limit of Detection	Method ref
Client Sample No	W1CLBH2ES 1	W1CLBH2ES 2	W1CLBH2ES 3	W1CLBH2ES 4	W1CLBH2ES 5	W1CLBH2ES 9	W1CLBH2ES 12			
Client Sample ID	W1-CLAYTO N-BH2	W1-CLAYTO N-BH2	W1-CLAYTO N-BH2	W1-CLAYTO N-BH2	W1-CLAYTO N-BH2	W1-CLAYTO N-BH2	W1-CLAYTO N-BH2			
Depth to Top	0.20	0.50	1.00	1.60	2.40	6.40	10.20			
Depth To Bottom										
Date Sampled	26-May-22	26-May-22	26-May-22	27-May-22	27-May-22	27-May-22	27-May-22			
Sample Type	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES			
Sample Matrix Code	4AE	4A	4AE	4AE	5AB	5A	6A			
TPH UKCWG with Clean Up										
Ali >C5-C6 _A [#]	<0.01	<0.01	<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	<0.01	<0.01	mg/kg	0.01	A-T-022s
Ali >C8-C10 _A	<10	<100	<1	<1	<5	<10	<1	mg/kg	1	A-T-055s
Ali >C10-C12 _A ^{M#}	16	<100	<1	<1	<5	21	<1	mg/kg	1	A-T-055s
Ali >C12-C16 _A ^{M#}	72	133	<1	<1	11	58	<1	mg/kg	1	A-T-055s
Ali >C16-C21 _A ^{M#}	99	184	<1	<1	14	56	<1	mg/kg	1	A-T-055s
Ali >C21-C35 _A ^{M#}	1680	622	2	2	46	143	3	mg/kg	1	A-T-055s
Ali >C35-C44 _A	373	152	<1	<1	45	148	<1	mg/kg	1	A-T-055s
Total Aliphatics _A	2240	1090	2	2	116	427	3	mg/kg	1	A-T-055s
Aro >C5-C7 _A [#]	<0.01	<0.01	<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	<0.01	<0.01	mg/kg	0.01	A-T-022s
Aro >C8-C10 _A	<10	<100	<1	<1	<5	<10	<1	mg/kg	1	A-T-055s
Aro >C10-C12 _A	23	622	<1	<1	17	83	<1	mg/kg	1	A-T-055s
Aro >C12-C16 _A	266	1740	<1	<1	106	611	<1	mg/kg	1	A-T-055s
Aro >C16-C21 _A ^{M#}	1420	4050	<1	<1	331	1480	2	mg/kg	1	A-T-055s
Aro >C21-C35 _A	4640	6430	2	<1	837	3030	6	mg/kg	1	A-T-055s
Aro >C35-C44 _A	123	145	<1	<1	46	147	<1	mg/kg	1	A-T-055s
Total Aromatics _A	6470	13000	2	<1	1340	5360	8	mg/kg	1	A-T-055s
TPH (Ali & Aro >C5-C44) _A	8720	14100	4	3	1450	5780	11	mg/kg	1	A-T-055s
BTEX - Benzene _A [#]	<0.01	<0.01	<0.01	<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	<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	0.02	<0.01	mg/kg	0.01	A-T-022s
BTEX - m & p Xylene _A [#]	<0.01	0.02	<0.01	<0.01	<0.01	0.04	<0.01	mg/kg	0.01	A-T-022s
BTEX - o Xylene _A [#]	<0.01	0.02	<0.01	<0.01	<0.01	0.04	<0.01	mg/kg	0.01	A-T-022s
MTBE _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s

Envirolab Job Number: 22/05555

Client Project Name: TRU West SIGI

Client Project Ref: 322Q-26

Lab Sample ID	22/05555/1	22/05555/2	22/05555/3	22/05555/4	22/05555/5	22/05555/9	22/05555/12	Units	Limit of Detection	Method ref
Client Sample No	W1CLBH2ES 1	W1CLBH2ES 2	W1CLBH2ES 3	W1CLBH2ES 4	W1CLBH2ES 5	W1CLBH2ES 9	W1CLBH2ES 12			
Client Sample ID	W1-CLAYTO N-BH2	W1-CLAYTO N-BH2	W1-CLAYTO N-BH2	W1-CLAYTO N-BH2	W1-CLAYTO N-BH2	W1-CLAYTO N-BH2	W1-CLAYTO N-BH2			
Depth to Top	0.20	0.50	1.00	1.60	2.40	6.40	10.20			
Depth To Bottom										
Date Sampled	26-May-22	26-May-22	26-May-22	27-May-22	27-May-22	27-May-22	27-May-22			
Sample Type	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES			
Sample Matrix Code	4AE	4A	4AE	4AE	5AB	5A	6A			
PAH-16MS										
Acenaphthene _A ^{M#}	4.19	89	<0.01	<0.01	5.39	18.8	0.03	mg/kg	0.01	A-T-019s
Acenaphthylene _A ^{M#}	0.21	0.97	<0.01	<0.01	<0.10	0.21	<0.01	mg/kg	0.01	A-T-019s
Anthracene _A ^{M#}	5.23	94.2	<0.02	<0.02	5.61	15.8	0.04	mg/kg	0.02	A-T-019s
Benzo(a)anthracene _A ^{M#}	30.4	291	<0.04	<0.04	11	21.3	0.06	mg/kg	0.04	A-T-019s
Benzo(a)pyrene _A ^{M#}	23.4	62.4	<0.04	<0.04	7.85	12.7	0.07	mg/kg	0.04	A-T-019s
Benzo(b)fluoranthene _A ^{M#}	32	90.8	<0.05	<0.05	10.5	17.2	0.09	mg/kg	0.05	A-T-019s
Benzo(ghi)perylene _A ^{M#}	14.3	31.2	<0.05	<0.05	3.61	5.85	<0.05	mg/kg	0.05	A-T-019s
Benzo(k)fluoranthene _A ^{M#}	11.7	36	<0.07	<0.07	3.84	6.27	<0.07	mg/kg	0.07	A-T-019s
Chrysene _A ^{M#}	47.2	204	<0.06	<0.06	12.3	22.6	0.07	mg/kg	0.06	A-T-019s
Dibenzo(ah)anthracene _A ^{M#}	3.41	9.25	<0.04	<0.04	0.88	1.45	<0.04	mg/kg	0.04	A-T-019s
Fluoranthene _A ^{M#}	62.8	455	<0.08	<0.08	29.6	64.5	0.20	mg/kg	0.08	A-T-019s
Fluorene _A ^{M#}	1.72	55.6	<0.01	<0.01	3.15	10.6	0.02	mg/kg	0.01	A-T-019s
Indeno(123-cd)pyrene _A ^{M#}	16.6	38.8	<0.03	<0.03	4.57	7.50	0.05	mg/kg	0.03	A-T-019s
Naphthalene _A ^{M#}	0.88	116	<0.03	<0.03	3.48	9.45	<0.03	mg/kg	0.03	A-T-019s
Phenanthrene _A ^{M#}	25.3	377	0.04	<0.03	25.2	63.3	0.16	mg/kg	0.03	A-T-019s
Pyrene _A ^{M#}	55.6	415	<0.07	<0.07	24	51.4	0.16	mg/kg	0.07	A-T-019s
Total PAH-16MS _A ^{M#}	335	2370	<0.08	<0.08	151	329	0.95	mg/kg	0.01	A-T-019s

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

Subscript "A" indicates analysis has dependant options against results. Testing dependant on results appear in the comments area of your sample receipt.

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: BAM Ritchies Warrington, Unit 5, Taurus Park, Europa Boulevard, Warrington, UK, WA5 7ZT **Project No:** 22/05555
Project: TRU West SIGI **Date Received:** 07/06/2022 (am)
Clients Project No: 322Q-26 **Cool Box Temperatures (°C):** 14.1

Lab Sample ID	22/05555/1	22/05555/2	22/05555/3	22/05555/4	22/05555/5	22/05555/9	22/05555/12
Client Sample No	W1CLBH2ES1	W1CLBH2ES2	W1CLBH2ES3	W1CLBH2ES4	W1CLBH2ES5	W1CLBH2ES9	W1CLBH2ES12
Client Sample ID/Depth	W1-CLAYTON-BH2 0.20m	W1-CLAYTON-BH2 0.50m	W1-CLAYTON-BH2 1.00m	W1-CLAYTON-BH2 1.60m	W1-CLAYTON-BH2 2.40m	W1-CLAYTON-BH2 6.40m	W1-CLAYTON-BH2 10.20m
Date Sampled	26/05/22	26/05/22	26/05/22	27/05/22	27/05/22	27/05/22	27/05/22
Deviation Code							
F	✓	✓	✓	✓	✓	✓	✓

Key

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

HOLDING TIME EXCEEDANCES

Lab Sample ID	22/05555/1	22/05555/2	22/05555/3	22/05555/4	22/05555/5	22/05555/9	22/05555/12
Client Sample No	W1CLBH2ES1	W1CLBH2ES2	W1CLBH2ES3	W1CLBH2ES4	W1CLBH2ES5	W1CLBH2ES9	W1CLBH2ES12
Client Sample ID/Depth	W1-CLAYTON-BH2 0.20m	W1-CLAYTON-BH2 0.50m	W1-CLAYTON-BH2 1.00m	W1-CLAYTON-BH2 1.60m	W1-CLAYTON-BH2 2.40m	W1-CLAYTON-BH2 6.40m	W1-CLAYTON-BH2 10.20m
Date Sampled	26/05/22	26/05/22	26/05/22	27/05/22	27/05/22	27/05/22	27/05/22
Cyanide (total)	✓	✓	✓				
VPHCWG	✓	✓	✓				
VOC	✓	✓	✓	✓			✓
SVOC	✓	✓	✓				
Cyanide (free)	✓	✓	✓				
Sulphide	✓	✓	✓	✓	✓	✓	✓
BTEX (total)		✓					

If, at any point before reaching the laboratory, the temperature of the samples has breached those set in published standards, e.g. BS-EN 5667-3, ISO 18400-102:2017, then the concentration of any affected analytes may differ from that at the time of sampling.

Envirolab Analysis Dates

Lab Sample ID	22/05555/1	22/05555/2	22/05555/3	22/05555/4	22/05555/5	22/05555/9	22/05555/12
Client Sample No	W1CLBH2ES1	W1CLBH2ES2	W1CLBH2ES3	W1CLBH2ES4	W1CLBH2ES5	W1CLBH2ES9	W1CLBH2ES12
Client Sample ID/Depth	W1-CLAYTON-BH2 0.20m	W1-CLAYTON-BH2 0.50m	W1-CLAYTON-BH2 1.00m	W1-CLAYTON-BH2 1.60m	W1-CLAYTON-BH2 2.40m	W1-CLAYTON-BH2 6.40m	W1-CLAYTON-BH2 10.20m
Date Sampled	26/05/22	26/05/22	26/05/22	27/05/22	27/05/22	27/05/22	27/05/22
A-T-004s	14/06/2022	14/06/2022	14/06/2022	14/06/2022	14/06/2022	14/06/2022	14/06/2022
A-T-006s	20/06/2022	20/06/2022	16/06/2022	20/06/2022	16/06/2022	16/06/2022	20/06/2022
A-T-007s		13/06/2022					
A-T-019s	14/06/2022	14/06/2022	14/06/2022	14/06/2022	14/06/2022	14/06/2022	14/06/2022
A-T-022s	13/06/2022	13/06/2022	13/06/2022	13/06/2022	13/06/2022	13/06/2022	13/06/2022
A-T-024s	16/06/2022	16/06/2022	16/06/2022	16/06/2022	16/06/2022	16/06/2022	16/06/2022
A-T-025w		21/06/2022					
A-T-026s	17/06/2022	17/06/2022	17/06/2022	17/06/2022	17/06/2022	17/06/2022	17/06/2022
A-T-026w		21/06/2022					
A-T-027s	16/06/2022	16/06/2022	16/06/2022	16/06/2022	16/06/2022	16/06/2022	16/06/2022
A-T-029s	20/06/2022	20/06/2022	20/06/2022	20/06/2022	20/06/2022	20/06/2022	16/06/2022
A-T-030s	15/06/2022	15/06/2022	15/06/2022	15/06/2022	15/06/2022	15/06/2022	15/06/2022
A-T-031s	16/06/2022	16/06/2022	16/06/2022	16/06/2022	16/06/2022	16/06/2022	16/06/2022
A-T-031w		21/06/2022					
A-T-032s	16/06/2022	16/06/2022	16/06/2022	16/06/2022	16/06/2022	16/06/2022	16/06/2022
A-T-032w		21/06/2022					
A-T-037w		21/06/2022					
A-T-040s	17/06/2022	17/06/2022	17/06/2022	17/06/2022	17/06/2022	17/06/2022	17/06/2022
A-T-041s	10/06/2022	10/06/2022	10/06/2022	10/06/2022	10/06/2022	10/06/2022	10/06/2022
A-T-042sCCN	10/06/2022	10/06/2022	10/06/2022	10/06/2022	10/06/2022	10/06/2022	10/06/2022
A-T-042sFCN	10/06/2022	10/06/2022	10/06/2022	10/06/2022	10/06/2022	10/06/2022	10/06/2022
A-T-042sTCN	10/06/2022	10/06/2022	10/06/2022	10/06/2022	10/06/2022	10/06/2022	10/06/2022
A-T-043-s	13/06/2022	13/06/2022	13/06/2022	13/06/2022	13/06/2022	13/06/2022	13/06/2022
A-T-044	13/06/2022	13/06/2022	13/06/2022	13/06/2022	13/06/2022	20/06/2022	13/06/2022
A-T-045	09/06/2022	09/06/2022	09/06/2022	09/06/2022	09/06/2022		
A-T-050s	09/06/2022	09/06/2022	13/06/2022	09/06/2022	09/06/2022	09/06/2022	13/06/2022
A-T-050w		21/06/2022					
A-T-052s	15/06/2022	20/06/2022	15/06/2022	15/06/2022	15/06/2022	15/06/2022	15/06/2022
A-T-055s	13/06/2022	13/06/2022	13/06/2022	13/06/2022	13/06/2022	13/06/2022	13/06/2022
Calc-no stones		21/06/2022					
Probe (w)		21/06/2022					

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: 22/02306
Issue Number: 1
Date: 28 March, 2022

Client: BAM Ritchies Warrington
Unit 5
Taurus Park
Europa Boulevard
Warrington
UK
WA5 7ZT

Project Manager: Mailing list 1/Mailing list 2
Project Name: TRU West SIGI
Project Ref: 322Q-26
Order No: RIT 262 915 759
Date Samples Received: 10/03/22
Date Instructions Received: 11/03/22
Date Analysis Completed: 28/03/22

Approved by:



Sophie France
Client Service Manager

Envirolab Job Number: 22/02306

Client Project Name: TRU West SIGI

Client Project Ref: 322Q-26

Lab Sample ID	22/02306/1	22/02306/5	22/02306/8					Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	BH1	BH1	BH1							
Depth to Top	0.20	2.00	5.00							
Depth To Bottom										
Date Sampled	07-Mar-22	07-Mar-22	07-Mar-22							
Sample Type	Soil - ES	Soil - ES	Soil - ES							
Sample Matrix Code	4AE	5AE	5A							
% Stones >10mm _A	16.8	3.7	41.2					% w/w	0.1	A-T-044
pH _D ^{M#}	8.58	8.63	8.65					pH	0.01	A-T-031s
Cyanide (free) _A ^{M#}	<1	<1	<1					mg/kg	1	A-T-042sFCN
Cyanide (complex) _A ^{M#}	<1	1	<1					mg/kg	1	A-T-042sCCN
Cyanide (total) _A ^{M#}	<1	1	<1					mg/kg	1	A-T-042sTCN
Thiocyanate _A	<5	<5	<5					mg/kg	5	A-T-041s
Phenols - Total by HPLC _A	<0.2	<0.2	<0.2					mg/kg	0.2	A-T-050s
Total Organic Carbon _D ^{M#}	12.7	2.74	2.33					% w/w	0.03	A-T-032s
Antimony _D	<5	<5	<5					mg/kg	5	A-T-024s
Arsenic _D ^{M#}	23	13	11					mg/kg	1	A-T-024s
Beryllium _D	2.0	1.1	0.6					mg/kg	0.5	A-T-024s
Boron (water soluble) _D	<1.0	<1.0	<1.0					mg/kg	1	A-T-027s
Cadmium _D ^{M#}	1.0	0.6	<0.5					mg/kg	0.5	A-T-024s
Copper _D ^{M#}	153	57	49					mg/kg	1	A-T-024s
Chromium _D ^{M#}	20	107	87					mg/kg	1	A-T-024s
Chromium (hexavalent) _D	<1	<1	<1					mg/kg	1	A-T-040s
Lead _D ^{M#}	157	223	252					mg/kg	1	A-T-024s
Mercury _D	0.72	0.68	0.63					mg/kg	0.17	A-T-024s
Nickel _D ^{M#}	43	26	15					mg/kg	1	A-T-024s
Selenium _D ^{M#}	<1	<1	<1					mg/kg	1	A-T-024s
Vanadium _D ^{M#}	49	29	18					mg/kg	1	A-T-024s
Zinc _D ^{M#}	144	127	121					mg/kg	5	A-T-024s
pH (leachable) _A [#]	7.73	-	-					pH	0.01	A-T-031w
Ammoniacal nitrogen as N (leachable) _A	<0.02	-	-					mg/l	0.02	A-T-033w
Sulphate (leachable) _A [#]	2.75	-	-					mg/l	1	A-T-026w
Cyanide (free) (leachable) _A [#]	<0.005	-	-					mg/l	0.005	A-T-042wFCN
Cyanide (total) (leachable) _A [#]	<0.005	-	-					mg/l	0.005	A-T-042wTCN
Antimony (leachable) _A [#]	2	-	-					µg/l	1	A-T-025w
Arsenic (leachable) _A [#]	18	-	-					µg/l	1	A-T-025w
Boron (leachable) _A [#]	<10	-	-					µg/l	10	A-T-025w
Cadmium (leachable) _A [#]	<1	-	-					µg/l	1	A-T-025w
Copper (leachable) _A [#]	57	-	-					µg/l	1	A-T-025w
Chromium (leachable) _A [#]	1	-	-					µg/l	1	A-T-025w

Envirolab Job Number: 22/02306

Client Project Name: TRU West SIGI

Client Project Ref: 322Q-26

Lab Sample ID	22/02306/1	22/02306/5	22/02306/8					Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	BH1	BH1	BH1							
Depth to Top	0.20	2.00	5.00							
Depth To Bottom										
Date Sampled	07-Mar-22	07-Mar-22	07-Mar-22							
Sample Type	Soil - ES	Soil - ES	Soil - ES							
Sample Matrix Code	4AE	5AE	5A							
Lead (leachable) _A [#]	78	-	-					µg/l	1	A-T-025w
Magnesium (leachable) _A	<1	-	-					mg/l	1	A-T-049w
Mercury (leachable) _A [#]	<0.1	-	-					µg/l	0.1	A-T-025w
Nickel (leachable) _A [#]	4	-	-					µg/l	1	A-T-025w
Selenium (leachable) _A [#]	<1	-	-					µg/l	1	A-T-025w
Vanadium (leachable) _A [#]	9	-	-					µg/l	1	A-T-025w
Zinc (leachable) _A [#]	57	-	-					µg/l	1	A-T-025w
Leachate Prep BS EN 12457-1 (2:1) (1 no.)	*	-	-							

Envirolab Job Number: 22/02306

Client Project Name: TRU West SIGI

Client Project Ref: 322Q-26

Lab Sample ID	22/02306/1	22/02306/5	22/02306/8					Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	BH1	BH1	BH1							
Depth to Top	0.20	2.00	5.00							
Depth To Bottom										
Date Sampled	07-Mar-22	07-Mar-22	07-Mar-22							
Sample Type	Soil - ES	Soil - ES	Soil - ES							
Sample Matrix Code	4AE	5AE	5A							
Asbestos in Soil (inc. matrix) ^										
Asbestos in soil [#]	NAD	NAD	NAD							A-T-045
Asbestos Matrix (visual) _o	-	-	-							A-T-045
Asbestos Matrix (microscope) _o	-	-	-							A-T-045
Asbestos ACM - Suitable for Water Absorption Test? _o	N/A	N/A	N/A							A-T-045

Envirolab Job Number: 22/02306

Client Project Name: TRU West SIGI

Client Project Ref: 322Q-26

Lab Sample ID	22/02306/1	22/02306/5	22/02306/8					Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	BH1	BH1	BH1							
Depth to Top	0.20	2.00	5.00							
Depth To Bottom										
Date Sampled	07-Mar-22	07-Mar-22	07-Mar-22							
Sample Type	Soil - ES	Soil - ES	Soil - ES							
Sample Matrix Code	4AE	5AE	5A							
PAH 16MS (leachable)										
Acenaphthene (leachable) _A	0.13	-	-					µg/l	0.02	A-T-019w
Acenaphthylene (leachable) _A	<0.02	-	-					µg/l	0.02	A-T-019w
Anthracene (leachable) _A	0.08	-	-					µg/l	0.02	A-T-019w
Benzo(a)anthracene (leachable) _A	0.62	-	-					µg/l	0.02	A-T-019w
Benzo(a)pyrene (leachable) _A	0.32	-	-					µg/l	0.02	A-T-019w
Benzo(b)fluoranthene (leachable) _A	0.41	-	-					µg/l	0.02	A-T-019w
Benzo(ghi)perylene (leachable) _A	0.39	-	-					µg/l	0.02	A-T-019w
Benzo(k)fluoranthene (leachable) _A	0.15	-	-					µg/l	0.02	A-T-019w
Chrysene (leachable) _A	0.74	-	-					µg/l	0.02	A-T-019w
Dibenzo(ah)anthracene (leachable) _A	0.04	-	-					µg/l	0.02	A-T-019w
Fluoranthene (leachable) _A	2.82	-	-					µg/l	0.02	A-T-019w
Fluorene (leachable) _A	0.03	-	-					µg/l	0.02	A-T-019w
Indeno(123-cd)pyrene (leachable) _A	0.32	-	-					µg/l	0.02	A-T-019w
Naphthalene (leachable) _A	<0.02	-	-					µg/l	0.02	A-T-019w
Phenanthrene (leachable) _A	0.13	-	-					µg/l	0.02	A-T-019w
Pyrene (leachable) _A	1.82	-	-					µg/l	0.02	A-T-019w
Total PAH 16MS (leachable) _A	8.00	-	-					µg/l	0.02	A-T-019w

Envirolab Job Number: 22/02306

Client Project Name: TRU West SIGI

Client Project Ref: 322Q-26

Lab Sample ID	22/02306/1	22/02306/5	22/02306/8					Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	BH1	BH1	BH1							
Depth to Top	0.20	2.00	5.00							
Depth To Bottom										
Date Sampled	07-Mar-22	07-Mar-22	07-Mar-22							
Sample Type	Soil - ES	Soil - ES	Soil - ES							
Sample Matrix Code	4AE	5AE	5A							
Speciated PCB-WHO12										
PCB BZ 81 _A	<0.050	-	-					mg/kg	0.005	A-T-004s
PCB BZ 105 _A	<0.050	-	-					mg/kg	0.005	A-T-004s
PCB BZ 114 _A	<0.050	-	-					mg/kg	0.005	A-T-004s
PCB BZ 118 _A ^{M#}	<0.070	-	-					mg/kg	0.007	A-T-004s
PCB BZ 123 _A	<0.050	-	-					mg/kg	0.005	A-T-004s
PCB BZ 126 _A	<0.050	-	-					mg/kg	0.005	A-T-004s
PCB BZ 156 _A	<0.050	-	-					mg/kg	0.005	A-T-004s
PCB BZ 157 _A	<0.050	-	-					mg/kg	0.005	A-T-004s
PCB BZ 167 _A	<0.050	-	-					mg/kg	0.005	A-T-004s
PCB BZ 169 _A	<0.050	-	-					mg/kg	0.005	A-T-004s
PCB BZ 189 _A	<0.050	-	-					mg/kg	0.005	A-T-004s
PCB BZ 77 _A	<0.050	-	-					mg/kg	0.005	A-T-004s
Total Speciated PCB-WHO12 _A	<0.070	-	-					mg/kg	0.005	A-T-004s

Envirolab Job Number: 22/02306

Client Project Name: TRU West SIGI

Client Project Ref: 322Q-26

Lab Sample ID	22/02306/1	22/02306/5	22/02306/8					Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	BH1	BH1	BH1							
Depth to Top	0.20	2.00	5.00							
Depth To Bottom										
Date Sampled	07-Mar-22	07-Mar-22	07-Mar-22							
Sample Type	Soil - ES	Soil - ES	Soil - ES							
Sample Matrix Code	4AE	5AE	5A							
SVOC										
4-Bromophenyl phenyl ether _A	<1000	-	-					µg/kg	100	A-T-052s
Hexachlorobenzene _A	<1000	-	-					µg/kg	100	A-T-052s
Diethyl phthalate _A	<1000	-	-					µg/kg	100	A-T-052s
Dimethyl phthalate _A	<1000	-	-					µg/kg	100	A-T-052s
Dibenzofuran _A	5050	-	-					µg/kg	100	A-T-052s
Carbazole _A	4460	-	-					µg/kg	100	A-T-052s
Butylbenzyl phthalate _A	<1000	-	-					µg/kg	100	A-T-052s
Bis(2-ethylhexyl)phthalate _A	<5000	-	-					µg/kg	500	A-T-052s
Bis(2-chloroethoxy)methane _A	<1000	-	-					µg/kg	100	A-T-052s
Bis(2-chloroethyl)ether _A	<1000	-	-					µg/kg	100	A-T-052s
4-Nitrophenol _A	<1000	-	-					µg/kg	100	A-T-052s
3+4-Methylphenol _A	<1000	-	-					µg/kg	100	A-T-052s
4-Chloro-3-methylphenol _A	<1000	-	-					µg/kg	100	A-T-052s
2-Nitrophenol _A	<1000	-	-					µg/kg	100	A-T-052s
2-Methylphenol _A	<1000	-	-					µg/kg	100	A-T-052s
2-Chlorophenol _A	<1000	-	-					µg/kg	100	A-T-052s
2,6-Dinitrotoluene _A	<1000	-	-					µg/kg	100	A-T-052s
2,4-Dinitrotoluene _A	<1000	-	-					µg/kg	100	A-T-052s
2,4-Dimethylphenol _A	<1000	-	-					µg/kg	100	A-T-052s
2,4-Dichlorophenol _A	<1000	-	-					µg/kg	100	A-T-052s
2,4,6-Trichlorophenol _A	<1000	-	-					µg/kg	100	A-T-052s
2,4,5-Trichlorophenol _A	<1000	-	-					µg/kg	100	A-T-052s
2-Chloronaphthalene _A	<1000	-	-					µg/kg	100	A-T-052s
2-Methylnaphthalene _A	2110	-	-					µg/kg	100	A-T-052s
Bis(2-chloroisopropyl)ether _A	<1000	-	-					µg/kg	100	A-T-052s
Phenol _A	<1000	-	-					µg/kg	100	A-T-052s
Pentachlorophenol (SVOC) _A	<1000	-	-					µg/kg	100	A-T-052s
n-Nitroso-n-dipropylamine _A	<1000	-	-					µg/kg	100	A-T-052s
n-Dioctylphthalate _A	<5000	-	-					µg/kg	500	A-T-052s
n-Dibutylphthalate _A	<1000	-	-					µg/kg	100	A-T-052s
Nitrobenzene _A	<1000	-	-					µg/kg	100	A-T-052s
Isophorone _A	<1000	-	-					µg/kg	100	A-T-052s

Envirolab Job Number: 22/02306

Client Project Name: TRU West SIGI

Client Project Ref: 322Q-26

Lab Sample ID	22/02306/1	22/02306/5	22/02306/8					Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	BH1	BH1	BH1							
Depth to Top	0.20	2.00	5.00							
Depth To Bottom										
Date Sampled	07-Mar-22	07-Mar-22	07-Mar-22							
Sample Type	Soil - ES	Soil - ES	Soil - ES							
Sample Matrix Code	4AE	5AE	5A							
Hexachloroethane _A	<1000	-	-					µg/kg	100	A-T-052s
Hexachlorocyclopentadiene _A	<1000	-	-					µg/kg	100	A-T-052s
Perylene _A	25100	-	-					µg/kg	100	A-T-052s

Envirolab Job Number: 22/02306

Client Project Name: TRU West SIGI

Client Project Ref: 322Q-26

Lab Sample ID	22/02306/1	22/02306/5	22/02306/8					Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	BH1	BH1	BH1							
Depth to Top	0.20	2.00	5.00							
Depth To Bottom										
Date Sampled	07-Mar-22	07-Mar-22	07-Mar-22							
Sample Type	Soil - ES	Soil - ES	Soil - ES							
Sample Matrix Code	4AE	5AE	5A							
VOC										
Dichlorodifluoromethane _A	<1	-	-					µg/kg	1	A-T-006s
Chloromethane _A	<10	-	-					µg/kg	10	A-T-006s
Vinyl Chloride (Chloroethene) _A [#]	<1	-	-					µg/kg	1	A-T-006s
Bromomethane _A [#]	<1	-	-					µg/kg	1	A-T-006s
Chloroethane _A [#]	<1	-	-					µg/kg	1	A-T-006s
Trichlorofluoromethane _A [#]	<1	-	-					µg/kg	1	A-T-006s
1,1-Dichloroethene _A [#]	<1	-	-					µg/kg	1	A-T-006s
Carbon Disulphide _A [#]	<1	-	-					µg/kg	1	A-T-006s
Dichloromethane _A	<5	-	-					µg/kg	5	A-T-006s
trans 1,2-Dichloroethene _A [#]	<1	-	-					µg/kg	1	A-T-006s
1,1-Dichloroethane _A [#]	<1	-	-					µg/kg	1	A-T-006s
cis 1,2-Dichloroethene _A [#]	<1	-	-					µg/kg	1	A-T-006s
2,2-Dichloropropane _A [#]	<1	-	-					µg/kg	1	A-T-006s
Bromochloromethane _A [#]	<5	-	-					µg/kg	5	A-T-006s
Chloroform _A [#]	<1	-	-					µg/kg	1	A-T-006s
1,1,1-Trichloroethane _A [#]	<1	-	-					µg/kg	1	A-T-006s
1,1-Dichloropropene _A [#]	<1	-	-					µg/kg	1	A-T-006s
Carbon Tetrachloride _A [#]	<1	-	-					µg/kg	1	A-T-006s
1,2-Dichloroethane _A [#]	<2	-	-					µg/kg	2	A-T-006s
Benzene _A [#]	<1	-	-					µg/kg	1	A-T-006s
Trichloroethene _A [#]	<1	-	-					µg/kg	1	A-T-006s
1,2-Dichloropropane _A [#]	<1	-	-					µg/kg	1	A-T-006s
Dibromomethane _A [#]	<1	-	-					µg/kg	1	A-T-006s
Bromodichloromethane _A [#]	<10	-	-					µg/kg	10	A-T-006s
cis 1,3-Dichloropropene _A [#]	<1	-	-					µg/kg	1	A-T-006s
Toluene _A [#]	<1	-	-					µg/kg	1	A-T-006s
trans 1,3-Dichloropropene _A [#]	<1	-	-					µg/kg	1	A-T-006s
1,1,2-Trichloroethane _A [#]	<1	-	-					µg/kg	1	A-T-006s
1,3-Dichloropropane _A [#]	<1	-	-					µg/kg	1	A-T-006s
Tetrachloroethene _A [#]	<1	-	-					µg/kg	1	A-T-006s
Dibromochloromethane _A [#]	<3	-	-					µg/kg	3	A-T-006s
1,2-Dibromoethane _A [#]	<1	-	-					µg/kg	1	A-T-006s

Envirolab Job Number: 22/02306

Client Project Name: TRU West SIGI

Client Project Ref: 322Q-26

Lab Sample ID	22/02306/1	22/02306/5	22/02306/8					Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	BH1	BH1	BH1							
Depth to Top	0.20	2.00	5.00							
Depth To Bottom										
Date Sampled	07-Mar-22	07-Mar-22	07-Mar-22							
Sample Type	Soil - ES	Soil - ES	Soil - ES							
Sample Matrix Code	4AE	5AE	5A							
Chlorobenzene _A [#]	<1	-	-					µg/kg	1	A-T-006s
1,1,1,2-Tetrachloroethane _A	<1	-	-					µg/kg	1	A-T-006s
Ethylbenzene _A [#]	<1	-	-					µg/kg	1	A-T-006s
m & p Xylene _A [#]	<1	-	-					µg/kg	1	A-T-006s
o-Xylene _A [#]	<1	-	-					µg/kg	1	A-T-006s
Styrene _A [#]	<1	-	-					µg/kg	1	A-T-006s
Bromoform _A [#]	<1	-	-					µg/kg	1	A-T-006s
Isopropylbenzene _A [#]	<1	-	-					µg/kg	1	A-T-006s
1,1,2,2-Tetrachloroethane _A	<1	-	-					µg/kg	1	A-T-006s
1,2,3-Trichloropropane _A [#]	<1	-	-					µg/kg	1	A-T-006s
Bromobenzene _A [#]	<1	-	-					µg/kg	1	A-T-006s
n-Propylbenzene _A [#]	<1	-	-					µg/kg	1	A-T-006s
2-Chlorotoluene _A [#]	<1	-	-					µg/kg	1	A-T-006s
1,3,5-Trimethylbenzene _A [#]	<1	-	-					µg/kg	1	A-T-006s
4-Chlorotoluene _A [#]	<1	-	-					µg/kg	1	A-T-006s
tert-Butylbenzene _A [#]	<2	-	-					µg/kg	2	A-T-006s
1,2,4-Trimethylbenzene _A [#]	<1	-	-					µg/kg	1	A-T-006s
sec-Butylbenzene _A [#]	<1	-	-					µg/kg	1	A-T-006s
4-Isopropyltoluene _A [#]	<1	-	-					µg/kg	1	A-T-006s
1,3-Dichlorobenzene _A	<1	-	-					µg/kg	1	A-T-006s
1,4-Dichlorobenzene _A [#]	<1	-	-					µg/kg	1	A-T-006s
n-Butylbenzene _A [#]	<1	-	-					µg/kg	1	A-T-006s
1,2-Dichlorobenzene _A [#]	<1	-	-					µg/kg	1	A-T-006s
1,2-Dibromo-3-chloropropane (DCBP) _A	<2	-	-					µg/kg	2	A-T-006s
1,2,4-Trichlorobenzene _A	<3	-	-					µg/kg	3	A-T-006s
Hexachlorobutadiene _A [#]	<1	-	-					µg/kg	1	A-T-006s
1,2,3-Trichlorobenzene _A	<3	-	-					µg/kg	3	A-T-006s

Envirolab Job Number: 22/02306

Client Project Name: TRU West SIGI

Client Project Ref: 322Q-26

Lab Sample ID	22/02306/1	22/02306/5	22/02306/8					Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	BH1	BH1	BH1							
Depth to Top	0.20	2.00	5.00							
Depth To Bottom										
Date Sampled	07-Mar-22	07-Mar-22	07-Mar-22							
Sample Type	Soil - ES	Soil - ES	Soil - ES							
Sample Matrix Code	4AE	5AE	5A							
TPH UKCWG 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	<20	-	-					mg/kg	1	A-T-055s
Ali >C10-C12 _A ^{M#}	<20	-	-					mg/kg	1	A-T-055s
Ali >C12-C16 _A ^{M#}	69	-	-					mg/kg	1	A-T-055s
Ali >C16-C21 _A ^{M#}	82	-	-					mg/kg	1	A-T-055s
Ali >C21-C35 _A ^{M#}	743	-	-					mg/kg	1	A-T-055s
Ali >C35-C44 _A	139	-	-					mg/kg	1	A-T-055s
Total Aliphatics _A	1040	-	-					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-C10 _A	<20	-	-					mg/kg	1	A-T-055s
Aro >C10-C12 _A	42	-	-					mg/kg	1	A-T-055s
Aro >C12-C16 _A	286	-	-					mg/kg	1	A-T-055s
Aro >C16-C21 _A ^{M#}	1210	-	-					mg/kg	1	A-T-055s
Aro >C21-C35 _A	4530	-	-					mg/kg	1	A-T-055s
Aro >C35-C44 _A	119	-	-					mg/kg	1	A-T-055s
Total Aromatics _A	6190	-	-					mg/kg	1	A-T-055s
TPH (Ali & Aro >C5-C44) _A	7220	-	-					mg/kg	1	A-T-055s
BTEX - Benzene _A [#]	<0.01	-	-					mg/kg	0.01	A-T-022s
BTEX - Toluene _A [#]	<0.01	-	-					mg/kg	0.01	A-T-022s
BTEX - Ethyl Benzene _A [#]	<0.01	-	-					mg/kg	0.01	A-T-022s
BTEX - m & p Xylene _A [#]	<0.01	-	-					mg/kg	0.01	A-T-022s
BTEX - o Xylene _A [#]	<0.01	-	-					mg/kg	0.01	A-T-022s
MTBE _A [#]	<0.01	-	-					mg/kg	0.01	A-T-022s

Envirolab Job Number: 22/02306

Client Project Name: TRU West SIGI

Client Project Ref: 322Q-26

Lab Sample ID	22/02306/1	22/02306/5	22/02306/8					Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	BH1	BH1	BH1							
Depth to Top	0.20	2.00	5.00							
Depth To Bottom										
Date Sampled	07-Mar-22	07-Mar-22	07-Mar-22							
Sample Type	Soil - ES	Soil - ES	Soil - ES							
Sample Matrix Code	4AE	5AE	5A							
PAH-16MS										
Acenaphthene _A ^{M#}	13.7	-	-					mg/kg	0.01	A-T-019s
Acenaphthylene _A ^{M#}	0.23	-	-					mg/kg	0.01	A-T-019s
Anthracene _A ^{M#}	14.5	-	-					mg/kg	0.02	A-T-019s
Benzo(a)anthracene _A ^{M#}	55.1	-	-					mg/kg	0.04	A-T-019s
Benzo(a)pyrene _A ^{M#}	41.9	-	-					mg/kg	0.04	A-T-019s
Benzo(b)fluoranthene _A ^{M#}	66.2	-	-					mg/kg	0.05	A-T-019s
Benzo(ghi)perylene _A ^{M#}	20.6	-	-					mg/kg	0.05	A-T-019s
Benzo(k)fluoranthene _A ^{M#}	18.9	-	-					mg/kg	0.07	A-T-019s
Chrysene _A ^{M#}	65.3	-	-					mg/kg	0.06	A-T-019s
Dibenzo(ah)anthracene _A ^{M#}	5.70	-	-					mg/kg	0.04	A-T-019s
Fluoranthene _A ^{M#}	147	-	-					mg/kg	0.08	A-T-019s
Fluorene _A ^{M#}	5.82	-	-					mg/kg	0.01	A-T-019s
Indeno(123-cd)pyrene _A ^{M#}	24.2	-	-					mg/kg	0.03	A-T-019s
Naphthalene _A ^{M#}	3.27	-	-					mg/kg	0.03	A-T-019s
Phenanthrene _A ^{M#}	63	-	-					mg/kg	0.03	A-T-019s
Pyrene _A ^{M#}	127	-	-					mg/kg	0.07	A-T-019s
Total PAH-16MS _A ^{M#}	672	-	-					mg/kg	0.01	A-T-019s

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:	BAM Ritchies Warrington, Unit 5, Taurus Park, Europa Boulevard, Warrington, UK, WA5 7ZT	Project No:	22/02306
Project:	TRU West SIGI	Date Received:	11/03/2022 (am)
Clients Project No:	322Q-26	Cool Box Temperatures (°C):	9.2

NO DEVIATIONS IDENTIFIED

If, at any point before reaching the laboratory, the temperature of the samples has breached those set in published standards, e.g. BS-EN 5667-3, ISO 18400-102:2017, then the concentration of any affected analytes may differ from that at the time of sampling.

Envirolab Analysis Dates

Lab Sample ID	22/02306/1	22/02306/5	22/02306/8
Client Sample No			
Client Sample ID/Depth	BH1 0.20m	BH1 2.00m	BH1 5.00m
Date Sampled	07/03/22	07/03/22	07/03/22
A-T-004s	28/03/2022		
A-T-006s	18/03/2022		
A-T-019s	18/03/2022		
A-T-019w	17/03/2022		
A-T-022s	17/03/2022		
A-T-024s	23/03/2022	23/03/2022	23/03/2022
A-T-025w	22/03/2022		
A-T-026w	16/03/2022		
A-T-027s	22/03/2022	22/03/2022	22/03/2022
A-T-031s	22/03/2022	22/03/2022	22/03/2022
A-T-031w	18/03/2022		
A-T-032s	24/03/2022	24/03/2022	24/03/2022
A-T-033w	18/03/2022		
A-T-040s	22/03/2022	22/03/2022	22/03/2022
A-T-041s	18/03/2022	18/03/2022	18/03/2022
A-T-042sCCN	17/03/2022	18/03/2022	17/03/2022
A-T-042sFCN	17/03/2022	18/03/2022	17/03/2022
A-T-042sTCN	17/03/2022	17/03/2022	17/03/2022
A-T-042wFCN	17/03/2022		
A-T-042wTCN	17/03/2022		
A-T-044	22/03/2022	22/03/2022	22/03/2022
A-T-045	14/03/2022	14/03/2022	14/03/2022
A-T-049w	22/03/2022		
A-T-050s	17/03/2022	17/03/2022	17/03/2022
A-T-052s	21/03/2022		
A-T-055s	17/03/2022		

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: 22/02121
Issue Number: 1

Date: 24 March, 2022

Client: BAM Ritchies Warrington
Unit 5
Taurus Park
Europa Boulevard
Warrington
UK
WA5 7ZT

Project Manager: Alex Pearce/Andy Bird/Jamie Hogg / Simon Fell/Tom
Project Name: TRU West SIGI
Project Ref: 322Q-26
Order No: RIT135 972 058
Date Samples Received: 04/03/22
Date Instructions Received: 08/03/22
Date Analysis Completed: 23/03/22

Approved by:



Sophie France
Client Service Manager

Envirolab Job Number: 22/02121

Client Project Name: TRU West SIGI

Client Project Ref: 322Q-26

Lab Sample ID	22/02121/1	22/02121/5	22/02121/8	22/02121/10	22/02121/13			Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	DCP1	DCP2	DCP3	DCP4	TP1					
Depth to Top	0.20	0.50	1.00	0.50	0.50					
Depth To Bottom										
Date Sampled	04-Mar-22	03-Mar-22	03-Mar-22	03-Mar-22	03-Mar-22					
Sample Type	Solid	Soil - ES	Soil - ES	Soil - ES	Soil - ES					
Sample Matrix Code	7	4AE	4AE	4A	4A					
% Stones >10mm _A	<0.1	6.8	12.4	8.7	4.4			% w/w	0.1	A-T-044
pH _D ^{M#}	7.53	8.13	8.40	8.91	8.53			pH	0.01	A-T-031s
Chloride (water sol 2:1) _D ^{M#}	-	-	-	38	-			mg/kg	10	A-T-026s
Cyanide (free) _A ^{M#}	<1	<1	<1	<1	-			mg/kg	1	A-T-042sFCN
Cyanide (complex) _A ^{M#}	<1	<1	<1	<1	-			mg/kg	1	A-T-042sCCN
Cyanide (total) _A ^{M#}	<1	<1	<1	<1	<1			mg/kg	1	A-T-042sTCN
Thiocyanate _A	<5	<5	<5	<5	-			mg/kg	5	A-T-041s
Phenols - Total by HPLC _A	<0.2	<0.2	<0.2	<0.2	<0.2			mg/kg	0.2	A-T-050s
Sulphide _A	-	-	-	37	-			mg/kg	5	A-T-043-s
Sulphur (elemental) _D ^{M#}	-	-	-	<5	-			mg/kg	5	A-T-029s
Loss on ignition (550degC) _D ^{M#}	-	-	-	9.8	-			% w/w	0.6	A-T-030s
Total Organic Carbon _D ^{M#}	13.2	23.6	9.50	14.7	10.3			% w/w	0.03	A-T-032s
Antimony _D	16	9	5	6	<5			mg/kg	5	A-T-024s
Arsenic _D ^{M#}	37	25	16	18	17			mg/kg	1	A-T-024s
Barium _D	-	-	-	247	-			mg/kg	1	A-T-024s
Beryllium _D	3.1	2.2	1.4	2.2	1.3			mg/kg	0.5	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#}	1.4	3.5	1.1	1.0	2.0			mg/kg	0.5	A-T-024s
Copper _D ^{M#}	508	208	143	126	105			mg/kg	1	A-T-024s
Chromium _D ^{M#}	28	28	28	28	36			mg/kg	1	A-T-024s
Chromium (hexavalent) _D	<1	<1	<1	<1	-			mg/kg	1	A-T-040s
Lead _D ^{M#}	589	322	173	242	226			mg/kg	1	A-T-024s
Mercury _D	<0.17	0.28	0.18	0.26	5.90			mg/kg	0.17	A-T-024s
Molybdenum _D ^{M#}	-	-	-	5	-			mg/kg	1	A-T-024s
Nickel _D ^{M#}	70	39	32	46	46			mg/kg	1	A-T-024s
Selenium _D ^{M#}	<1	<1	<1	<1	<1			mg/kg	1	A-T-024s
Vanadium _D ^{M#}	56	48	38	56	47			mg/kg	1	A-T-024s
Zinc _D ^{M#}	476	462	171	149	322			mg/kg	5	A-T-024s
pH (leachable) _A [#]	7.24	-	-	-	-			pH	0.01	A-T-031w
Ammoniacal nitrogen as N (leachable) _A	0.03	-	-	-	-			mg/l	0.02	A-T-033w
Sulphate (leachable) _A [#]	11.74	-	-	-	-			mg/l	1	A-T-026w
Cyanide (free) (leachable) _A [#]	<0.005	-	-	-	-			mg/l	0.005	A-T-042wFCN
Cyanide (total) (leachable) _A [#]	<0.005	-	-	-	-			mg/l	0.005	A-T-042wTCN

Envirolab Job Number: 22/02121

Client Project Name: TRU West SIGI

Client Project Ref: 322Q-26

Lab Sample ID	22/02121/1	22/02121/5	22/02121/8	22/02121/10	22/02121/13			Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	DCP1	DCP2	DCP3	DCP4	TP1					
Depth to Top	0.20	0.50	1.00	0.50	0.50					
Depth To Bottom										
Date Sampled	04-Mar-22	03-Mar-22	03-Mar-22	03-Mar-22	03-Mar-22					
Sample Type	Solid	Soil - ES	Soil - ES	Soil - ES	Soil - ES					
Sample Matrix Code	7	4AE	4AE	4A	4A					
Antimony (leachable) _A [#]	6	-	-	-	-			µg/l	1	A-T-025w
Arsenic (leachable) _A [#]	12	-	-	-	-			µg/l	1	A-T-025w
Boron (leachable) _A [#]	12	-	-	-	-			µg/l	10	A-T-025w
Cadmium (leachable) _A [#]	<1	-	-	-	-			µg/l	1	A-T-025w
Copper (leachable) _A [#]	94	-	-	-	-			µg/l	1	A-T-025w
Chromium (leachable) _A [#]	<1	-	-	-	-			µg/l	1	A-T-025w
Lead (leachable) _A [#]	96	-	-	-	-			µg/l	1	A-T-025w
Magnesium (leachable) _A	1	-	-	-	-			mg/l	1	A-T-049w
Mercury (leachable) _A [#]	<0.1	-	-	-	-			µg/l	0.1	A-T-025w
Nickel (leachable) _A [#]	12	-	-	-	-			µg/l	1	A-T-025w
Selenium (leachable) _A [#]	<1	-	-	-	-			µg/l	1	A-T-025w
Vanadium (leachable) _A [#]	5	-	-	-	-			µg/l	1	A-T-025w
Zinc (leachable) _A [#]	104	-	-	-	-			µg/l	1	A-T-025w
Leachate Prep BS EN 12457-1 (2:1) (1 no.)	*	-	-	-	-					

Envirolab Job Number: 22/02121

Client Project Name: TRU West SIGI

Client Project Ref: 322Q-26

Lab Sample ID	22/02121/1	22/02121/5	22/02121/8	22/02121/10	22/02121/13			Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	DCP1	DCP2	DCP3	DCP4	TP1					
Depth to Top	0.20	0.50	1.00	0.50	0.50					
Depth To Bottom										
Date Sampled	04-Mar-22	03-Mar-22	03-Mar-22	03-Mar-22	03-Mar-22					
Sample Type	Solid	Soil - ES	Soil - ES	Soil - ES	Soil - ES					
Sample Matrix Code	7	4AE	4AE	4A	4A					
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

Envirolab Job Number: 22/02121

Client Project Name: TRU West SIGI

Client Project Ref: 322Q-26

Lab Sample ID	22/02121/1	22/02121/5	22/02121/8	22/02121/10	22/02121/13			Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	DCP1	DCP2	DCP3	DCP4	TP1					
Depth to Top	0.20	0.50	1.00	0.50	0.50					
Depth To Bottom										
Date Sampled	04-Mar-22	03-Mar-22	03-Mar-22	03-Mar-22	03-Mar-22					
Sample Type	Solid	Soil - ES	Soil - ES	Soil - ES	Soil - ES					
Sample Matrix Code	7	4AE	4AE	4A	4A					
PAH 16MS (leachable)										
Acenaphthene (leachable) _A	0.02	-	-	-	-			µg/l	0.02	A-T-019w
Acenaphthylene (leachable) _A	<0.02	-	-	-	-			µg/l	0.02	A-T-019w
Anthracene (leachable) _A	<0.02	-	-	-	-			µg/l	0.02	A-T-019w
Benzo(a)anthracene (leachable) _A	<0.02	-	-	-	-			µg/l	0.02	A-T-019w
Benzo(a)pyrene (leachable) _A	<0.02	-	-	-	-			µg/l	0.02	A-T-019w
Benzo(b)fluoranthene (leachable) _A	<0.02	-	-	-	-			µg/l	0.02	A-T-019w
Benzo(ghi)perylene (leachable) _A	<0.02	-	-	-	-			µg/l	0.02	A-T-019w
Benzo(k)fluoranthene (leachable) _A	<0.02	-	-	-	-			µg/l	0.02	A-T-019w
Chrysene (leachable) _A	<0.02	-	-	-	-			µg/l	0.02	A-T-019w
Dibenzo(ah)anthracene (leachable) _A	<0.02	-	-	-	-			µg/l	0.02	A-T-019w
Fluoranthene (leachable) _A	<0.02	-	-	-	-			µg/l	0.02	A-T-019w
Fluorene (leachable) _A	<0.02	-	-	-	-			µg/l	0.02	A-T-019w
Indeno(123-cd)pyrene (leachable) _A	<0.02	-	-	-	-			µg/l	0.02	A-T-019w
Naphthalene (leachable) _A	0.06	-	-	-	-			µg/l	0.02	A-T-019w
Phenanthrene (leachable) _A	0.05	-	-	-	-			µg/l	0.02	A-T-019w
Pyrene (leachable) _A	<0.02	-	-	-	-			µg/l	0.02	A-T-019w
Total PAH 16MS (leachable) _A	0.13	-	-	-	-			µg/l	0.02	A-T-019w

Envirolab Job Number: 22/02121

Client Project Name: TRU West SIGI

Client Project Ref: 322Q-26

Lab Sample ID	22/02121/1	22/02121/5	22/02121/8	22/02121/10	22/02121/13			Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	DCP1	DCP2	DCP3	DCP4	TP1					
Depth to Top	0.20	0.50	1.00	0.50	0.50					
Depth To Bottom										
Date Sampled	04-Mar-22	03-Mar-22	03-Mar-22	03-Mar-22	03-Mar-22					
Sample Type	Solid	Soil - ES	Soil - ES	Soil - ES	Soil - ES					
Sample Matrix Code	7	4AE	4AE	4A	4A					
Speciated PCB-WHO12										
PCB BZ 81 _A	<0.005	-	-	<0.005	-			mg/kg	0.005	A-T-004s
PCB BZ 105 _A	<0.005	-	-	<0.005	-			mg/kg	0.005	A-T-004s
PCB BZ 114 _A	<0.005	-	-	<0.005	-			mg/kg	0.005	A-T-004s
PCB BZ 118 _A ^{M#}	<0.007	-	-	<0.007	-			mg/kg	0.007	A-T-004s
PCB BZ 123 _A	<0.005	-	-	<0.005	-			mg/kg	0.005	A-T-004s
PCB BZ 126 _A	<0.005	-	-	<0.005	-			mg/kg	0.005	A-T-004s
PCB BZ 156 _A	<0.005	-	-	<0.005	-			mg/kg	0.005	A-T-004s
PCB BZ 157 _A	<0.005	-	-	<0.005	-			mg/kg	0.005	A-T-004s
PCB BZ 167 _A	<0.005	-	-	<0.005	-			mg/kg	0.005	A-T-004s
PCB BZ 169 _A	<0.005	-	-	<0.005	-			mg/kg	0.005	A-T-004s
PCB BZ 189 _A	<0.005	-	-	<0.005	-			mg/kg	0.005	A-T-004s
PCB BZ 77 _A	<0.005	-	-	<0.005	-			mg/kg	0.005	A-T-004s
Total Speciated PCB-WHO12 _A	<0.007	-	-	<0.007	-			mg/kg	0.005	A-T-004s

Envirolab Job Number: 22/02121

Client Project Name: TRU West SIGI

Client Project Ref: 322Q-26

Lab Sample ID	22/02121/1	22/02121/5	22/02121/8	22/02121/10	22/02121/13			Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	DCP1	DCP2	DCP3	DCP4	TP1					
Depth to Top	0.20	0.50	1.00	0.50	0.50					
Depth To Bottom										
Date Sampled	04-Mar-22	03-Mar-22	03-Mar-22	03-Mar-22	03-Mar-22					
Sample Type	Solid	Soil - ES	Soil - ES	Soil - ES	Soil - ES					
Sample Matrix Code	7	4AE	4AE	4A	4A					
SVOC										
4-Bromophenyl phenyl ether _A	<100	-	-	<100	-			µg/kg	100	A-T-052s
Hexachlorobenzene _A	<100	-	-	<100	-			µg/kg	100	A-T-052s
Diethyl phthalate _A	<100	-	-	<100	-			µg/kg	100	A-T-052s
Dimethyl phthalate _A	<100	-	-	<100	-			µg/kg	100	A-T-052s
Dibenzofuran _A	<100	-	-	2260	-			µg/kg	100	A-T-052s
Carbazole _A	<100	-	-	1770	-			µg/kg	100	A-T-052s
Butylbenzyl phthalate _A	<100	-	-	<100	-			µg/kg	100	A-T-052s
Bis(2-ethylhexyl)phthalate _A	<500	-	-	<500	-			µg/kg	500	A-T-052s
Bis(2-chloroethoxy)methane _A	<100	-	-	<100	-			µg/kg	100	A-T-052s
Bis(2-chloroethyl)ether _A	<100	-	-	<100	-			µg/kg	100	A-T-052s
4-Nitrophenol _A	<100	-	-	<100	-			µg/kg	100	A-T-052s
3+4-Methylphenol _A	<100	-	-	<100	-			µg/kg	100	A-T-052s
4-Chloro-3-methylphenol _A	<100	-	-	<100	-			µg/kg	100	A-T-052s
2-Nitrophenol _A	<100	-	-	<100	-			µg/kg	100	A-T-052s
2-Methylphenol _A	<100	-	-	<100	-			µg/kg	100	A-T-052s
2-Chlorophenol _A	<100	-	-	<100	-			µg/kg	100	A-T-052s
2,6-Dinitrotoluene _A	<100	-	-	<100	-			µg/kg	100	A-T-052s
2,4-Dinitrotoluene _A	<100	-	-	<100	-			µg/kg	100	A-T-052s
2,4-Dimethylphenol _A	<100	-	-	<100	-			µg/kg	100	A-T-052s
2,4-Dichlorophenol _A	<100	-	-	<100	-			µg/kg	100	A-T-052s
2,4,6-Trichlorophenol _A	<100	-	-	<100	-			µg/kg	100	A-T-052s
2,4,5-Trichlorophenol _A	<100	-	-	<100	-			µg/kg	100	A-T-052s
2-Chloronaphthalene _A	<100	-	-	<100	-			µg/kg	100	A-T-052s
2-Methylnaphthalene _A	<100	-	-	867	-			µg/kg	100	A-T-052s
Bis(2-chloroisopropyl)ether _A	<100	-	-	<100	-			µg/kg	100	A-T-052s
Phenol _A	<100	-	-	<100	-			µg/kg	100	A-T-052s
Pentachlorophenol (SVOC) _A	<100	-	-	<100	-			µg/kg	100	A-T-052s
n-Nitroso-n-dipropylamine _A	<100	-	-	<100	-			µg/kg	100	A-T-052s
n-Dioctylphthalate _A	<500	-	-	<500	-			µg/kg	500	A-T-052s
n-Dibutylphthalate _A	<100	-	-	<100	-			µg/kg	100	A-T-052s
Nitrobenzene _A	<100	-	-	<100	-			µg/kg	100	A-T-052s
Isophorone _A	<100	-	-	<100	-			µg/kg	100	A-T-052s

Envirolab Job Number: 22/02121

Client Project Name: TRU West SIGI

Client Project Ref: 322Q-26

Lab Sample ID	22/02121/1	22/02121/5	22/02121/8	22/02121/10	22/02121/13			Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	DCP1	DCP2	DCP3	DCP4	TP1					
Depth to Top	0.20	0.50	1.00	0.50	0.50					
Depth To Bottom										
Date Sampled	04-Mar-22	03-Mar-22	03-Mar-22	03-Mar-22	03-Mar-22					
Sample Type	Solid	Soil - ES	Soil - ES	Soil - ES	Soil - ES					
Sample Matrix Code	7	4AE	4AE	4A	4A					
Hexachloroethane _A	<100	-	-	<100	-			µg/kg	100	A-T-052s
Hexachlorocyclopentadiene _A	<100	-	-	<100	-			µg/kg	100	A-T-052s
Perylene _A	419	-	-	4740	-			µg/kg	100	A-T-052s

Envirolab Job Number: 22/02121

Client Project Name: TRU West SIGI

Client Project Ref: 322Q-26

Lab Sample ID	22/02121/1	22/02121/5	22/02121/8	22/02121/10	22/02121/13			Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	DCP1	DCP2	DCP3	DCP4	TP1					
Depth to Top	0.20	0.50	1.00	0.50	0.50					
Depth To Bottom										
Date Sampled	04-Mar-22	03-Mar-22	03-Mar-22	03-Mar-22	03-Mar-22					
Sample Type	Solid	Soil - ES	Soil - ES	Soil - ES	Soil - ES					
Sample Matrix Code	7	4AE	4AE	4A	4A					
VOC										
Dichlorodifluoromethane _A	<1	-	-	<1	-			µg/kg	1	A-T-006s
Chloromethane _A	<10	-	-	<10	-			µg/kg	10	A-T-006s
Vinyl Chloride (Chloroethene) _A [#]	<1	-	-	<1	-			µg/kg	1	A-T-006s
Bromomethane _A [#]	<1	-	-	<1	-			µg/kg	1	A-T-006s
Chloroethane _A [#]	<1	-	-	<1	-			µg/kg	1	A-T-006s
Trichlorofluoromethane _A [#]	<1	-	-	<1	-			µg/kg	1	A-T-006s
1,1-Dichloroethene _A [#]	<1	-	-	<1	-			µg/kg	1	A-T-006s
Carbon Disulphide _A [#]	<1	-	-	<1	-			µg/kg	1	A-T-006s
Dichloromethane _A	<5	-	-	<5	-			µg/kg	5	A-T-006s
trans 1,2-Dichloroethene _A [#]	<1	-	-	<1	-			µg/kg	1	A-T-006s
1,1-Dichloroethane _A [#]	<1	-	-	<1	-			µg/kg	1	A-T-006s
cis 1,2-Dichloroethene _A [#]	<1	-	-	<1	-			µg/kg	1	A-T-006s
2,2-Dichloropropane _A [#]	<1	-	-	<1	-			µg/kg	1	A-T-006s
Bromochloromethane _A [#]	<5	-	-	<5	-			µg/kg	5	A-T-006s
Chloroform _A [#]	<1	-	-	<1	-			µg/kg	1	A-T-006s
1,1,1-Trichloroethane _A [#]	<1	-	-	<1	-			µg/kg	1	A-T-006s
1,1-Dichloropropene _A [#]	<1	-	-	<1	-			µg/kg	1	A-T-006s
Carbon Tetrachloride _A [#]	<1	-	-	<1	-			µg/kg	1	A-T-006s
1,2-Dichloroethane _A [#]	<2	-	-	<2	-			µg/kg	2	A-T-006s
Benzene _A [#]	<1	-	-	<1	-			µg/kg	1	A-T-006s
Trichloroethene _A [#]	<1	-	-	<1	-			µg/kg	1	A-T-006s
1,2-Dichloropropane _A [#]	<1	-	-	<1	-			µg/kg	1	A-T-006s
Dibromomethane _A [#]	<1	-	-	<1	-			µg/kg	1	A-T-006s
Bromodichloromethane _A [#]	<10	-	-	<10	-			µg/kg	10	A-T-006s
cis 1,3-Dichloropropene _A [#]	<1	-	-	<1	-			µg/kg	1	A-T-006s
Toluene _A [#]	<1	-	-	<1	-			µg/kg	1	A-T-006s
trans 1,3-Dichloropropene _A [#]	<1	-	-	<1	-			µg/kg	1	A-T-006s
1,1,2-Trichloroethane _A [#]	<1	-	-	<1	-			µg/kg	1	A-T-006s
1,3-Dichloropropane _A [#]	<1	-	-	<1	-			µg/kg	1	A-T-006s
Tetrachloroethene _A [#]	<1	-	-	<1	-			µg/kg	1	A-T-006s
Dibromochloromethane _A [#]	<3	-	-	<3	-			µg/kg	3	A-T-006s
1,2-Dibromoethane _A [#]	<1	-	-	<1	-			µg/kg	1	A-T-006s

Envirolab Job Number: 22/02121

Client Project Name: TRU West SIGI

Client Project Ref: 322Q-26

Lab Sample ID	22/02121/1	22/02121/5	22/02121/8	22/02121/10	22/02121/13			Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	DCP1	DCP2	DCP3	DCP4	TP1					
Depth to Top	0.20	0.50	1.00	0.50	0.50					
Depth To Bottom										
Date Sampled	04-Mar-22	03-Mar-22	03-Mar-22	03-Mar-22	03-Mar-22					
Sample Type	Solid	Soil - ES	Soil - ES	Soil - ES	Soil - ES					
Sample Matrix Code	7	4AE	4AE	4A	4A					
Chlorobenzene _A [#]	<1	-	-	<1	-			µg/kg	1	A-T-006s
1,1,1,2-Tetrachloroethane _A	<1	-	-	<1	-			µg/kg	1	A-T-006s
Ethylbenzene _A [#]	<1	-	-	<1	-			µg/kg	1	A-T-006s
m & p Xylene _A [#]	<1	-	-	<1	-			µg/kg	1	A-T-006s
o-Xylene _A [#]	<1	-	-	<1	-			µg/kg	1	A-T-006s
Styrene _A [#]	<1	-	-	<1	-			µg/kg	1	A-T-006s
Bromoform _A [#]	<1	-	-	<1	-			µg/kg	1	A-T-006s
Isopropylbenzene _A [#]	<1	-	-	<1	-			µg/kg	1	A-T-006s
1,1,1,2,2-Tetrachloroethane _A	<1	-	-	<1	-			µg/kg	1	A-T-006s
1,2,3-Trichloropropane _A [#]	<1	-	-	<1	-			µg/kg	1	A-T-006s
Bromobenzene _A [#]	<1	-	-	<1	-			µg/kg	1	A-T-006s
n-Propylbenzene _A [#]	<1	-	-	<1	-			µg/kg	1	A-T-006s
2-Chlorotoluene _A [#]	<1	-	-	<1	-			µg/kg	1	A-T-006s
1,3,5-Trimethylbenzene _A [#]	<1	-	-	<1	-			µg/kg	1	A-T-006s
4-Chlorotoluene _A [#]	<1	-	-	<1	-			µg/kg	1	A-T-006s
tert-Butylbenzene _A [#]	<2	-	-	<2	-			µg/kg	2	A-T-006s
1,2,4-Trimethylbenzene _A [#]	<1	-	-	<1	-			µg/kg	1	A-T-006s
sec-Butylbenzene _A [#]	<1	-	-	<1	-			µg/kg	1	A-T-006s
4-Isopropyltoluene _A [#]	<1	-	-	<1	-			µg/kg	1	A-T-006s
1,3-Dichlorobenzene _A	<1	-	-	<1	-			µg/kg	1	A-T-006s
1,4-Dichlorobenzene _A [#]	<1	-	-	<1	-			µg/kg	1	A-T-006s
n-Butylbenzene _A [#]	<1	-	-	<1	-			µg/kg	1	A-T-006s
1,2-Dichlorobenzene _A [#]	<1	-	-	<1	-			µg/kg	1	A-T-006s
1,2-Dibromo-3-chloropropane (DCBP) _A	<2	-	-	<2	-			µg/kg	2	A-T-006s
1,2,4-Trichlorobenzene _A	<3	-	-	<3	-			µg/kg	3	A-T-006s
Hexachlorobutadiene _A [#]	<1	-	-	<1	-			µg/kg	1	A-T-006s
1,2,3-Trichlorobenzene _A	<3	-	-	<3	-			µg/kg	3	A-T-006s

Envirolab Job Number: 22/02121

Client Project Name: TRU West SIGI

Client Project Ref: 322Q-26

Lab Sample ID	22/02121/1	22/02121/5	22/02121/8	22/02121/10	22/02121/13			Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	DCP1	DCP2	DCP3	DCP4	TP1					
Depth to Top	0.20	0.50	1.00	0.50	0.50					
Depth To Bottom										
Date Sampled	04-Mar-22	03-Mar-22	03-Mar-22	03-Mar-22	03-Mar-22					
Sample Type	Solid	Soil - ES	Soil - ES	Soil - ES	Soil - ES					
Sample Matrix Code	7	4AE	4AE	4A	4A					
TPH UKCWG 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	-	-	<10	-			mg/kg	1	A-T-055s
Ali >C10-C12 _A ^{M#}	<1	-	-	<10	-			mg/kg	1	A-T-055s
Ali >C12-C16 _A ^{M#}	2	-	-	28	-			mg/kg	1	A-T-055s
Ali >C16-C21 _A ^{M#}	3	-	-	40	-			mg/kg	1	A-T-055s
Ali >C21-C35 _A ^{M#}	14	-	-	121	-			mg/kg	1	A-T-055s
Ali >C35-C44 _A	9	-	-	152	-			mg/kg	1	A-T-055s
Total Aliphatics _A	30	-	-	340	-			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	3	-	-	<10	-			mg/kg	1	A-T-055s
Aro >C10-C12 _A	3	-	-	24	-			mg/kg	1	A-T-055s
Aro >C12-C16 _A	10	-	-	294	-			mg/kg	1	A-T-055s
Aro >C16-C21 _A ^{M#}	28	-	-	1230	-			mg/kg	1	A-T-055s
Aro >C21-C35 _A	94	-	-	2670	-			mg/kg	1	A-T-055s
Aro >C35-C44 _A	7	-	-	115	-			mg/kg	1	A-T-055s
Total Aromatics _A	147	-	-	4340	-			mg/kg	1	A-T-055s
TPH (Ali & Aro >C5-C44) _A	177	-	-	4680	-			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

Envirolab Job Number: 22/02121

Client Project Name: TRU West SIGI

Client Project Ref: 322Q-26

Lab Sample ID	22/02121/1	22/02121/5	22/02121/8	22/02121/10	22/02121/13			Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	DCP1	DCP2	DCP3	DCP4	TP1					
Depth to Top	0.20	0.50	1.00	0.50	0.50					
Depth To Bottom										
Date Sampled	04-Mar-22	03-Mar-22	03-Mar-22	03-Mar-22	03-Mar-22					
Sample Type	Solid	Soil - ES	Soil - ES	Soil - ES	Soil - ES					
Sample Matrix Code	7	4AE	4AE	4A	4A					
PAH-16MS										
Acenaphthene _A ^{M#}	0.13	-	-	6.86	-			mg/kg	0.01	A-T-019s
Acenaphthylene _A ^{M#}	0.01	-	-	0.28	-			mg/kg	0.01	A-T-019s
Anthracene _A ^{M#}	0.16	-	-	9.69	-			mg/kg	0.02	A-T-019s
Benzo(a)anthracene _A ^{M#}	0.65	-	-	25	-			mg/kg	0.04	A-T-019s
Benzo(a)pyrene _A ^{M#}	0.77	-	-	21.8	-			mg/kg	0.04	A-T-019s
Benzo(b)fluoranthene _A ^{M#}	0.88	-	-	26.8	-			mg/kg	0.05	A-T-019s
Benzo(ghi)perylene _A ^{M#}	0.43	-	-	10.2	-			mg/kg	0.05	A-T-019s
Benzo(k)fluoranthene _A ^{M#}	0.30	-	-	9.54	-			mg/kg	0.07	A-T-019s
Chrysene _A ^{M#}	0.80	-	-	31.8	-			mg/kg	0.06	A-T-019s
Dibenzo(ah)anthracene _A ^{M#}	0.10	-	-	2.64	-			mg/kg	0.04	A-T-019s
Fluoranthene _A ^{M#}	1.23	-	-	69.6	-			mg/kg	0.08	A-T-019s
Fluorene _A ^{M#}	0.08	-	-	3.88	-			mg/kg	0.01	A-T-019s
Indeno(123-cd)pyrene _A ^{M#}	0.52	-	-	13	-			mg/kg	0.03	A-T-019s
Naphthalene _A ^{M#}	0.16	-	-	1.40	-			mg/kg	0.03	A-T-019s
Phenanthrene _A ^{M#}	0.76	-	-	50.4	-			mg/kg	0.03	A-T-019s
Pyrene _A ^{M#}	1.09	-	-	72.2	-			mg/kg	0.07	A-T-019s
Total PAH-16MS _A ^{M#}	8.07	-	-	355	-			mg/kg	0.01	A-T-019s

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:	BAM Ritchies Warrington, Unit 5, Taurus Park, Europa Boulevard, Warrington, UK, WA5 7ZT	Project No:	22/02121
Project:	TRU West SIGI	Date Received:	08/03/2022 (am)
Clients Project No:	322Q-26	Cool Box Temperatures (°C):	7.7

NO DEVIATIONS IDENTIFIED

If, at any point before reaching the laboratory, the temperature of the samples has breached those set in published standards, e.g. BS-EN 5667-3, ISO 18400-102:2017, then the concentration of any affected analytes may differ from that at the time of sampling.

Envirolab Analysis Dates

Lab Sample ID	22/02121/1	22/02121/5	22/02121/8	22/02121/10	22/02121/13
Client Sample No					
Client Sample ID/Depth	DCP1 0.20m	DCP2 0.50m	DCP3 1.00m	DCP4 0.50m	TP1 0.50m
Date Sampled	04/03/22	03/03/22	03/03/22	03/03/22	03/03/22
A-T-004s	11/03/2022			11/03/2022	
A-T-006s	14/03/2022			14/03/2022	
A-T-019s	15/03/2022			15/03/2022	
A-T-019w	14/03/2022				
A-T-022s	14/03/2022			14/03/2022	
A-T-024s	21/03/2022	21/03/2022	21/03/2022	21/03/2022	21/03/2022
A-T-025w	16/03/2022				
A-T-026s				17/03/2022	
A-T-026w	14/03/2022				
A-T-027s	16/03/2022	16/03/2022	16/03/2022	16/03/2022	16/03/2022
A-T-029s				17/03/2022	
A-T-030s				23/03/2022	
A-T-031s	17/03/2022	17/03/2022	17/03/2022	17/03/2022	17/03/2022
A-T-031w	17/03/2022				
A-T-032s	22/03/2022	22/03/2022	22/03/2022	23/03/2022	22/03/2022
A-T-033w	17/03/2022				
A-T-040s	17/03/2022	17/03/2022	17/03/2022	17/03/2022	
A-T-041s	16/03/2022	16/03/2022	16/03/2022	16/03/2022	
A-T-042sCCN	11/03/2022	11/03/2022	11/03/2022	11/03/2022	
A-T-042sFCN	11/03/2022	11/03/2022	11/03/2022	11/03/2022	
A-T-042sTCN	11/03/2022	11/03/2022	11/03/2022	11/03/2022	11/03/2022
A-T-042wFCN	14/03/2022				
A-T-042wTCN	14/03/2022				
A-T-043-s				16/03/2022	
A-T-044	17/03/2022	17/03/2022	17/03/2022	17/03/2022	17/03/2022
A-T-045	10/03/2022	10/03/2022	10/03/2022	10/03/2022	10/03/2022
A-T-049w	21/03/2022				
A-T-050s	14/03/2022	14/03/2022	14/03/2022	14/03/2022	14/03/2022
A-T-052s	14/03/2022			14/03/2022	
A-T-055s	14/03/2022			14/03/2022	

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

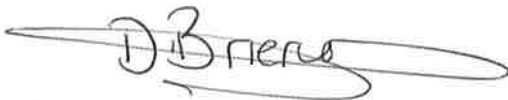
Envirolab Job Number: 22/02053
Issue Number: 1

Date: 23 March, 2022

Client: BAM Ritchies Warrington
Unit 5
Taurus Park
Europa Boulevard
Warrington
UK
WA5 7ZT

Project Manager: Mailing list 1/Mailing list 2
Project Name: TRU West SIGI
Project Ref: 332Q-26
Order No: RIT135 972 058
Date Samples Received: 03/03/22
Date Instructions Received: 04/03/22
Date Analysis Completed: 23/03/22

Approved by:



Danielle Brierley
Deputy Client Services Supervisor

Envirolab Job Number: 22/02053

Client Project Name: TRU West SIGI

Client Project Ref: 332Q-26

Lab Sample ID	22/02053/1	22/02053/2	22/02053/3					Units	Limit of Detection	Method ref
Client Sample No	TP2ES01	TP2ES02	TP2ES03							
Client Sample ID	TP2	TP2	TP2							
Depth to Top	0.20	0.50	1.00							
Depth To Bottom										
Date Sampled	02-Mar-22	02-Mar-22	02-Mar-22							
Sample Type	Solid	Soil	Soil							
Sample Matrix Code	7	4A	4A							
% Stones >10mm _A	<0.1	<0.1	<0.1					% w/w	0.1	A-T-044
pH _D ^{M#}	11.60	9.55	8.81					pH	0.01	A-T-031s
Chloride (water sol 2:1) _D ^{M#}	89	31	26					mg/kg	10	A-T-026s
Cyanide (free) _A ^{M#}	<1	<1	<1					mg/kg	1	A-T-042sFCN
Cyanide (complex) _A ^{M#}	<1	<1	<1					mg/kg	1	A-T-042sCCN
Cyanide (total) _A ^{M#}	<1	<1	<1					mg/kg	1	A-T-042sTCN
Thiocyanate _A	<5	<5	<5					mg/kg	5	A-T-041s
Phenols - Total by HPLC _A	<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
Sulphur (elemental) _D ^{M#}	<5	<5	<50					mg/kg	5	A-T-029s
Loss on ignition (550degC) _D ^{M#}	2.6	13.1	13.6					% w/w	0.6	A-T-030s
Total Organic Carbon _D ^{M#}	0.38	11.4	13.1					% w/w	0.03	A-T-032s
Antimony _D	<5	7	6					mg/kg	5	A-T-024s
Arsenic _D ^{M#}	<1	23	23					mg/kg	1	A-T-024s
Barium _D	65	308	286					mg/kg	1	A-T-024s
Beryllium _D	0.5	2.7	2.4					mg/kg	0.5	A-T-024s
Boron (water soluble) _D	<1.0	<1.0	<1.0					mg/kg	1	A-T-027s
Cadmium _D ^{M#}	1.0	2.3	2.6					mg/kg	0.5	A-T-024s
Copper _D ^{M#}	19	915	173					mg/kg	1	A-T-024s
Chromium _D ^{M#}	23	31	44					mg/kg	1	A-T-024s
Chromium (hexavalent) _D	-	<1	<1					mg/kg	1	A-T-040s
Iron _D	33300	33800	36800					mg/kg	50	A-T-024s
Lead _D ^{M#}	14	251	227					mg/kg	1	A-T-024s
Manganese _D ^{M#}	136	488	495					mg/kg	1	A-T-024s
Mercury _D	2.82	1.98	1.38					mg/kg	0.17	A-T-024s
Molybdenum _D ^{M#}	1	5	5					mg/kg	1	A-T-024s
Nickel _D ^{M#}	17	65	51					mg/kg	1	A-T-024s
Selenium _D ^{M#}	<1	<1	<1					mg/kg	1	A-T-024s
Vanadium _D ^{M#}	16	54	54					mg/kg	1	A-T-024s
Zinc _D ^{M#}	62	300	290					mg/kg	5	A-T-024s
pH (leachable) _A [#]	-	6.96	-					pH	0.01	A-T-031w
Ammoniacal nitrogen as N (leachable) _A	-	<0.02	-					mg/l	0.02	A-T-033w
Sulphate (leachable) _A [#]	-	18.11	-					mg/l	1	A-T-026w

Envirolab Job Number: 22/02053

Client Project Name: TRU West SIGI

Client Project Ref: 332Q-26

Lab Sample ID	22/02053/1	22/02053/2	22/02053/3					Units	Limit of Detection	Method ref
Client Sample No	TP2ES01	TP2ES02	TP2ES03							
Client Sample ID	TP2	TP2	TP2							
Depth to Top	0.20	0.50	1.00							
Depth To Bottom										
Date Sampled	02-Mar-22	02-Mar-22	02-Mar-22							
Sample Type	Solid	Soil	Soil							
Sample Matrix Code	7	4A	4A							
Cyanide (free) (leachable) _A [#]	-	<0.005	-					mg/l	0.005	A-T-042wFCN
Cyanide (total) (leachable) _A [#]	-	<0.005	-					mg/l	0.005	A-T-042wTCN
Antimony (leachable) _A [#]	-	5	-					µg/l	1	A-T-025w
Arsenic (leachable) _A [#]	-	20	-					µg/l	1	A-T-025w
Boron (leachable) _A [#]	-	14	-					µg/l	10	A-T-025w
Cadmium (leachable) _A [#]	-	<1	-					µg/l	1	A-T-025w
Copper (leachable) _A [#]	-	48	-					µg/l	1	A-T-025w
Chromium (leachable) _A [#]	-	4	-					µg/l	1	A-T-025w
Lead (leachable) _A [#]	-	69	-					µg/l	1	A-T-025w
Magnesium (leachable) _A	-	<1	-					mg/l	1	A-T-049w
Mercury (leachable) _A [#]	-	0.1	-					µg/l	0.1	A-T-025w
Nickel (leachable) _A [#]	-	2	-					µg/l	1	A-T-025w
Selenium (leachable) _A [#]	-	<1	-					µg/l	1	A-T-025w
Vanadium (leachable) _A [#]	-	10	-					µg/l	1	A-T-025w
Zinc (leachable) _A [#]	-	66	-					µg/l	1	A-T-025w
Leachate Prep BS EN 12457-1 (2:1) (1 no.)	-	*	-							
Dioxins like PCBs (WHO-12) SUBCON Marchwood _A	Appended	Appended	Appended							Subcon March

Envirolab Job Number: 22/02053

Client Project Name: TRU West SIGI

Client Project Ref: 332Q-26

Lab Sample ID	22/02053/1	22/02053/2	22/02053/3					Units	Limit of Detection	Method ref
Client Sample No	TP2ES01	TP2ES02	TP2ES03							
Client Sample ID	TP2	TP2	TP2							
Depth to Top	0.20	0.50	1.00							
Depth To Bottom										
Date Sampled	02-Mar-22	02-Mar-22	02-Mar-22							
Sample Type	Solid	Soil	Soil							
Sample Matrix Code	7	4A	4A							
Asbestos in Soil (inc. matrix) ^										
Asbestos in soil [#]	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

Envirolab Job Number: 22/02053

Client Project Name: TRU West SIGI

Client Project Ref: 332Q-26

Lab Sample ID	22/02053/1	22/02053/2	22/02053/3					Units	Limit of Detection	Method ref
Client Sample No	TP2ES01	TP2ES02	TP2ES03							
Client Sample ID	TP2	TP2	TP2							
Depth to Top	0.20	0.50	1.00							
Depth To Bottom										
Date Sampled	02-Mar-22	02-Mar-22	02-Mar-22							
Sample Type	Solid	Soil	Soil							
Sample Matrix Code	7	4A	4A							
Dioxins & Furans										
Furan 2378-TCDF _A [#]	Appended	Appended	Appended					ng/kg		Subcon March
Furan 12378-PeCDF _A [#]	Appended	Appended	Appended					ng/kg		Subcon March
Furan 23478-PeCDF _A [#]	Appended	Appended	Appended					ng/kg		Subcon March
Furan 123478-HxCDF _A [#]	Appended	Appended	Appended					ng/kg		Subcon March
Furan 123678-HxCDF _A [#]	Appended	Appended	Appended					ng/kg		Subcon March
Furan 234678-HxCDF _A [#]	Appended	Appended	Appended					ng/kg		Subcon March
Furan 123789-HxCDF _A [#]	Appended	Appended	Appended					ng/kg		Subcon March
Furan 1234678-HpCDF _A [#]	Appended	Appended	Appended					ng/kg		Subcon March
Furan 1234789-HpCDF _A [#]	Appended	Appended	Appended					ng/kg		Subcon March
Furan OCDF _A [#]	Appended	Appended	Appended					ng/kg		Subcon March
Dioxin 2378-TCDD _A [#]	Appended	Appended	Appended					ng/kg		Subcon March
Dioxin 12378-PeCDD _A [#]	Appended	Appended	Appended					ng/kg		Subcon March
Dioxin 123478-HxCDD _A [#]	Appended	Appended	Appended					ng/kg		Subcon March
Dioxin 123678-HxCDD _A [#]	Appended	Appended	Appended					ng/kg		Subcon March
Dioxin 123789-HxCDD _A [#]	Appended	Appended	Appended					ng/kg		Subcon March
Dioxin 1234678-HpCDD _A [#]	appended	appended	Appended					ng/kg		Subcon March
Dioxin OCDD _A [#]	Appended	Appended	Appended					ng/kg		Subcon March

Envirolab Job Number: 22/02053

Client Project Name: TRU West SIGI

Client Project Ref: 332Q-26

Lab Sample ID	22/02053/1	22/02053/2	22/02053/3					Units	Limit of Detection	Method ref
Client Sample No	TP2ES01	TP2ES02	TP2ES03							
Client Sample ID	TP2	TP2	TP2							
Depth to Top	0.20	0.50	1.00							
Depth To Bottom										
Date Sampled	02-Mar-22	02-Mar-22	02-Mar-22							
Sample Type	Solid	Soil	Soil							
Sample Matrix Code	7	4A	4A							
PAH 16MS (leachable)										
Acenaphthene (leachable) _A	-	2.30	-					µg/l	0.02	A-T-019w
Acenaphthylene (leachable) _A	-	0.09	-					µg/l	0.02	A-T-019w
Anthracene (leachable) _A	-	0.47	-					µg/l	0.02	A-T-019w
Benzo(a)anthracene (leachable) _A	-	0.42	-					µg/l	0.02	A-T-019w
Benzo(a)pyrene (leachable) _A	-	0.18	-					µg/l	0.02	A-T-019w
Benzo(b)fluoranthene (leachable) _A	-	0.22	-					µg/l	0.02	A-T-019w
Benzo(ghi)perylene (leachable) _A	-	0.10	-					µg/l	0.02	A-T-019w
Benzo(k)fluoranthene (leachable) _A	-	0.07	-					µg/l	0.02	A-T-019w
Chrysene (leachable) _A	-	0.47	-					µg/l	0.02	A-T-019w
Dibenzo(ah)anthracene (leachable) _A	-	<0.02	-					µg/l	0.02	A-T-019w
Fluoranthene (leachable) _A	-	2.10	-					µg/l	0.02	A-T-019w
Fluorene (leachable) _A	-	0.81	-					µg/l	0.02	A-T-019w
Indeno(123-cd)pyrene (leachable) _A	-	0.11	-					µg/l	0.02	A-T-019w
Naphthalene (leachable) _A	-	<0.02	-					µg/l	0.02	A-T-019w
Phenanthrene (leachable) _A	-	2.10	-					µg/l	0.02	A-T-019w
Pyrene (leachable) _A	-	1.62	-					µg/l	0.02	A-T-019w
Total PAH 16MS (leachable) _A	-	11.1	-					µg/l	0.02	A-T-019w

Envirolab Job Number: 22/02053

Client Project Name: TRU West SIGI

Client Project Ref: 332Q-26

Lab Sample ID	22/02053/1	22/02053/2	22/02053/3					Units	Limit of Detection	Method ref
Client Sample No	TP2ES01	TP2ES02	TP2ES03							
Client Sample ID	TP2	TP2	TP2							
Depth to Top	0.20	0.50	1.00							
Depth To Bottom										
Date Sampled	02-Mar-22	02-Mar-22	02-Mar-22							
Sample Type	Solid	Soil	Soil							
Sample Matrix Code	7	4A	4A							
Speciated PCB-WHO12										
PCB BZ 81 _A	<0.050	<0.005	<0.005					mg/kg	0.005	A-T-004s
PCB BZ 105 _A	<0.050	<0.005	<0.005					mg/kg	0.005	A-T-004s
PCB BZ 114 _A	<0.050	<0.005	<0.005					mg/kg	0.005	A-T-004s
PCB BZ 118 _A ^{M#}	<0.070	<0.007	<0.007					mg/kg	0.007	A-T-004s
PCB BZ 123 _A	<0.050	<0.005	<0.005					mg/kg	0.005	A-T-004s
PCB BZ 126 _A	<0.050	<0.005	<0.005					mg/kg	0.005	A-T-004s
PCB BZ 156 _A	<0.050	<0.005	<0.005					mg/kg	0.005	A-T-004s
PCB BZ 157 _A	<0.050	<0.005	<0.005					mg/kg	0.005	A-T-004s
PCB BZ 167 _A	<0.050	<0.005	<0.005					mg/kg	0.005	A-T-004s
PCB BZ 169 _A	<0.050	<0.005	<0.005					mg/kg	0.005	A-T-004s
PCB BZ 189 _A	<0.050	<0.005	<0.005					mg/kg	0.005	A-T-004s
PCB BZ 77 _A	<0.050	<0.005	<0.005					mg/kg	0.005	A-T-004s
Total Speciated PCB-WHO12 _A	<0.070	<0.007	<0.007					mg/kg	0.005	A-T-004s

Envirolab Job Number: 22/02053

Client Project Name: TRU West SIGI

Client Project Ref: 332Q-26

Lab Sample ID	22/02053/1	22/02053/2	22/02053/3					Units	Limit of Detection	Method ref
Client Sample No	TP2ES01	TP2ES02	TP2ES03							
Client Sample ID	TP2	TP2	TP2							
Depth to Top	0.20	0.50	1.00							
Depth To Bottom										
Date Sampled	02-Mar-22	02-Mar-22	02-Mar-22							
Sample Type	Solid	Soil	Soil							
Sample Matrix Code	7	4A	4A							
SVOC										
4-Bromophenyl phenyl ether _A	<100	<1000	<1000					µg/kg	100	A-T-052s
Hexachlorobenzene _A	<100	<1000	<1000					µg/kg	100	A-T-052s
Diethyl phthalate _A	<100	<1000	<1000					µg/kg	100	A-T-052s
Dimethyl phthalate _A	<100	<1000	<1000					µg/kg	100	A-T-052s
Dibenzofuran _A	<100	16100	10700					µg/kg	100	A-T-052s
Carbazole _A	156	11400	8340					µg/kg	100	A-T-052s
Butylbenzyl phthalate _A	<100	<1000	<1000					µg/kg	100	A-T-052s
Bis(2-ethylhexyl)phthalate _A	<500	<5000	<5000					µg/kg	500	A-T-052s
Bis(2-chloroethoxy)methane _A	<100	<1000	<1000					µg/kg	100	A-T-052s
Bis(2-chloroethyl)ether _A	<100	<1000	<1000					µg/kg	100	A-T-052s
4-Nitrophenol _A	<100	<1000	<1000					µg/kg	100	A-T-052s
3+4-Methylphenol _A	183	<1000	<1000					µg/kg	100	A-T-052s
4-Chloro-3-methylphenol _A	<100	<1000	<1000					µg/kg	100	A-T-052s
2-Nitrophenol _A	<100	<1000	<1000					µg/kg	100	A-T-052s
2-Methylphenol _A	<100	<1000	<1000					µg/kg	100	A-T-052s
2-Chlorophenol _A	<100	<1000	<1000					µg/kg	100	A-T-052s
2,6-Dinitrotoluene _A	<100	<1000	<1000					µg/kg	100	A-T-052s
2,4-Dinitrotoluene _A	<100	<1000	<1000					µg/kg	100	A-T-052s
2,4-Dimethylphenol _A	<100	<1000	<1000					µg/kg	100	A-T-052s
2,4-Dichlorophenol _A	<100	<1000	<1000					µg/kg	100	A-T-052s
2,4,6-Trichlorophenol _A	<100	<1000	<1000					µg/kg	100	A-T-052s
2,4,5-Trichlorophenol _A	<100	<1000	<1000					µg/kg	100	A-T-052s
2-Chloronaphthalene _A	<100	<1000	<1000					µg/kg	100	A-T-052s
2-Methylnaphthalene _A	<100	9080	5070					µg/kg	100	A-T-052s
Bis(2-chloroisopropyl)ether _A	<100	<1000	<1000					µg/kg	100	A-T-052s
Phenol _A	<100	<1000	<1000					µg/kg	100	A-T-052s
Pentachlorophenol (SVOC) _A	<100	<1000	<1000					µg/kg	100	A-T-052s
n-Nitroso-n-dipropylamine _A	<100	<1000	<1000					µg/kg	100	A-T-052s
n-Dioctylphthalate _A	<500	<5000	<5000					µg/kg	500	A-T-052s
n-Dibutylphthalate _A	<100	<1000	<1000					µg/kg	100	A-T-052s
Nitrobenzene _A	<100	<1000	<1000					µg/kg	100	A-T-052s
Isophorone _A	<100	<1000	<1000					µg/kg	100	A-T-052s

Envirolab Job Number: 22/02053

Client Project Name: TRU West SIGI

Client Project Ref: 332Q-26

Lab Sample ID	22/02053/1	22/02053/2	22/02053/3					Units	Limit of Detection	Method ref
Client Sample No	TP2ES01	TP2ES02	TP2ES03							
Client Sample ID	TP2	TP2	TP2							
Depth to Top	0.20	0.50	1.00							
Depth To Bottom										
Date Sampled	02-Mar-22	02-Mar-22	02-Mar-22							
Sample Type	Solid	Soil	Soil							
Sample Matrix Code	7	4A	4A							
Hexachloroethane _A	<100	<1000	<1000					µg/kg	100	A-T-052s
Hexachlorocyclopentadiene _A	<100	<1000	<1000					µg/kg	100	A-T-052s
Perylene _A	1160	21300	18600					µg/kg	100	A-T-052s

Envirolab Job Number: 22/02053

Client Project Name: TRU West SIGI

Client Project Ref: 332Q-26

Lab Sample ID	22/02053/1	22/02053/2	22/02053/3					Units	Limit of Detection	Method ref
Client Sample No	TP2ES01	TP2ES02	TP2ES03							
Client Sample ID	TP2	TP2	TP2							
Depth to Top	0.20	0.50	1.00							
Depth To Bottom										
Date Sampled	02-Mar-22	02-Mar-22	02-Mar-22							
Sample Type	Solid	Soil	Soil							
Sample Matrix Code	7	4A	4A							
VOC										
Dichlorodifluoromethane _A	<5	<1	<1					µg/kg	1	A-T-006s
Chloromethane _A	<50	<10	<10					µg/kg	10	A-T-006s
Vinyl Chloride (Chloroethene) _A [#]	<5	<1	<1					µg/kg	1	A-T-006s
Bromomethane _A [#]	<5	<1	<1					µg/kg	1	A-T-006s
Chloroethane _A [#]	<5	<1	<1					µg/kg	1	A-T-006s
Trichlorofluoromethane _A [#]	<5	<1	<1					µg/kg	1	A-T-006s
1,1-Dichloroethene _A [#]	<5	<1	<1					µg/kg	1	A-T-006s
Carbon Disulphide _A [#]	<5	<1	<1					µg/kg	1	A-T-006s
Dichloromethane _A	<25	<5	<5					µg/kg	5	A-T-006s
trans 1,2-Dichloroethene _A [#]	<5	<1	<1					µg/kg	1	A-T-006s
1,1-Dichloroethane _A [#]	<5	<1	<1					µg/kg	1	A-T-006s
cis 1,2-Dichloroethene _A [#]	<5	<1	<1					µg/kg	1	A-T-006s
2,2-Dichloropropane _A [#]	<5	<1	<1					µg/kg	1	A-T-006s
Bromochloromethane _A [#]	<25	<5	<5					µg/kg	5	A-T-006s
Chloroform _A [#]	<5	<1	<1					µg/kg	1	A-T-006s
1,1,1-Trichloroethane _A [#]	<5	<1	<1					µg/kg	1	A-T-006s
1,1-Dichloropropene _A [#]	<5	<1	<1					µg/kg	1	A-T-006s
Carbon Tetrachloride _A [#]	<5	<1	<1					µg/kg	1	A-T-006s
1,2-Dichloroethane _A [#]	<10	<2	<2					µg/kg	2	A-T-006s
Benzene _A [#]	<5	<1	<1					µg/kg	1	A-T-006s
Trichloroethene _A [#]	<5	<1	<1					µg/kg	1	A-T-006s
1,2-Dichloropropane _A [#]	<5	<1	<1					µg/kg	1	A-T-006s
Dibromomethane _A [#]	<5	<1	<1					µg/kg	1	A-T-006s
Bromodichloromethane _A [#]	<50	<10	<10					µg/kg	10	A-T-006s
cis 1,3-Dichloropropene _A [#]	<5	<1	<1					µg/kg	1	A-T-006s
Toluene _A [#]	<5	<1	<1					µg/kg	1	A-T-006s
trans 1,3-Dichloropropene _A [#]	<5	<1	<1					µg/kg	1	A-T-006s
1,1,2-Trichloroethane _A [#]	<5	<1	<1					µg/kg	1	A-T-006s
1,3-Dichloropropane _A [#]	<5	<1	<1					µg/kg	1	A-T-006s
Tetrachloroethene _A [#]	<5	<1	<1					µg/kg	1	A-T-006s
Dibromochloromethane _A [#]	<15	<3	<3					µg/kg	3	A-T-006s
1,2-Dibromoethane _A [#]	<5	<1	<1					µg/kg	1	A-T-006s

Envirolab Job Number: 22/02053

Client Project Name: TRU West SIGI

Client Project Ref: 332Q-26

Lab Sample ID	22/02053/1	22/02053/2	22/02053/3					Units	Limit of Detection	Method ref
Client Sample No	TP2ES01	TP2ES02	TP2ES03							
Client Sample ID	TP2	TP2	TP2							
Depth to Top	0.20	0.50	1.00							
Depth To Bottom										
Date Sampled	02-Mar-22	02-Mar-22	02-Mar-22							
Sample Type	Solid	Soil	Soil							
Sample Matrix Code	7	4A	4A							
Chlorobenzene _A [#]	<5	<1	<1					µg/kg	1	A-T-006s
1,1,1,2-Tetrachloroethane _A	<5	<1	<1					µg/kg	1	A-T-006s
Ethylbenzene _A [#]	<5	<1	<1					µg/kg	1	A-T-006s
m & p Xylene _A [#]	<5	<1	<1					µg/kg	1	A-T-006s
o-Xylene _A [#]	<5	<1	<1					µg/kg	1	A-T-006s
Styrene _A [#]	<5	<1	<1					µg/kg	1	A-T-006s
Bromoform _A [#]	<5	<1	<1					µg/kg	1	A-T-006s
Isopropylbenzene _A [#]	<5	<1	<1					µg/kg	1	A-T-006s
1,1,2,2-Tetrachloroethane _A	<5	<1	<1					µg/kg	1	A-T-006s
1,2,3-Trichloropropane _A [#]	<5	<1	<1					µg/kg	1	A-T-006s
Bromobenzene _A [#]	<5	<1	<1					µg/kg	1	A-T-006s
n-Propylbenzene _A [#]	<5	<1	<1					µg/kg	1	A-T-006s
2-Chlorotoluene _A [#]	<5	<1	<1					µg/kg	1	A-T-006s
1,3,5-Trimethylbenzene _A [#]	<5	<1	2					µg/kg	1	A-T-006s
4-Chlorotoluene _A [#]	<5	<1	<1					µg/kg	1	A-T-006s
tert-Butylbenzene _A [#]	<10	<2	<2					µg/kg	2	A-T-006s
1,2,4-Trimethylbenzene _A [#]	<5	<1	2					µg/kg	1	A-T-006s
sec-Butylbenzene _A [#]	<5	<1	<1					µg/kg	1	A-T-006s
4-Isopropyltoluene _A [#]	<5	<1	<1					µg/kg	1	A-T-006s
1,3-Dichlorobenzene _A	<5	<1	<1					µg/kg	1	A-T-006s
1,4-Dichlorobenzene _A [#]	<5	<1	<1					µg/kg	1	A-T-006s
n-Butylbenzene _A [#]	<5	<1	<1					µg/kg	1	A-T-006s
1,2-Dichlorobenzene _A [#]	<5	<1	<1					µg/kg	1	A-T-006s
1,2-Dibromo-3-chloropropane (DCBP) _A	<10	<2	<2					µg/kg	2	A-T-006s
1,2,4-Trichlorobenzene _A	<15	<3	<3					µg/kg	3	A-T-006s
Hexachlorobutadiene _A [#]	<5	<1	<1					µg/kg	1	A-T-006s
1,2,3-Trichlorobenzene _A	<15	<3	<3					µg/kg	3	A-T-006s

Envirolab Job Number: 22/02053

Client Project Name: TRU West SIGI

Client Project Ref: 332Q-26

Lab Sample ID	22/02053/1	22/02053/2	22/02053/3					Units	Limit of Detection	Method ref
Client Sample No	TP2ES01	TP2ES02	TP2ES03							
Client Sample ID	TP2	TP2	TP2							
Depth to Top	0.20	0.50	1.00							
Depth To Bottom										
Date Sampled	02-Mar-22	02-Mar-22	02-Mar-22							
Sample Type	Solid	Soil	Soil							
Sample Matrix Code	7	4A	4A							
TPH UKCWG 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	<10	<10	<10					mg/kg	1	A-T-055s
Ali >C10-C12 _A ^{M#}	<10	<10	16					mg/kg	1	A-T-055s
Ali >C12-C16 _A ^{M#}	<10	31	91					mg/kg	1	A-T-055s
Ali >C16-C21 _A ^{M#}	<10	42	114					mg/kg	1	A-T-055s
Ali >C21-C35 _A ^{M#}	1630	294	291					mg/kg	1	A-T-055s
Ali >C35-C44 _A	1180	272	183					mg/kg	1	A-T-055s
Total Aliphatics _A	2810	639	696					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	<10	<10	<10					mg/kg	1	A-T-055s
Aro >C10-C12 _A	<10	43	167					mg/kg	1	A-T-055s
Aro >C12-C16 _A	18	253	761					mg/kg	1	A-T-055s
Aro >C16-C21 _A ^{M#}	68	877	2510					mg/kg	1	A-T-055s
Aro >C21-C35 _A	682	2050	5030					mg/kg	1	A-T-055s
Aro >C35-C44 _A	517	126	154					mg/kg	1	A-T-055s
Total Aromatics _A	1290	3360	8630					mg/kg	1	A-T-055s
TPH (Ali & Aro >C5-C44) _A	4080	4000	9330					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	0.02					mg/kg	0.01	A-T-022s
BTEX - o Xylene _A [#]	<0.01	<0.01	0.02					mg/kg	0.01	A-T-022s
MTBE _A [#]	<0.01	<0.01	<0.01					mg/kg	0.01	A-T-022s

Envirolab Job Number: 22/02053

Client Project Name: TRU West SIGI

Client Project Ref: 332Q-26

Lab Sample ID	22/02053/1	22/02053/2	22/02053/3					Units	Limit of Detection	Method ref
Client Sample No	TP2ES01	TP2ES02	TP2ES03							
Client Sample ID	TP2	TP2	TP2							
Depth to Top	0.20	0.50	1.00							
Depth To Bottom										
Date Sampled	02-Mar-22	02-Mar-22	02-Mar-22							
Sample Type	Solid	Soil	Soil							
Sample Matrix Code	7	4A	4A							
PAH-16MS										
Acenaphthene _A ^{M#}	<0.10	17.6	48.6					mg/kg	0.01	A-T-019s
Acenaphthylene _A ^{M#}	<0.10	0.41	<0.20					mg/kg	0.01	A-T-019s
Anthracene _A ^{M#}	<0.20	19.6	47.3					mg/kg	0.02	A-T-019s
Benzo(a)anthracene _A ^{M#}	<0.40	43.9	70.6					mg/kg	0.04	A-T-019s
Benzo(a)pyrene _A ^{M#}	0.83	35.6	50.6					mg/kg	0.04	A-T-019s
Benzo(b)fluoranthene _A ^{M#}	1.01	40.9	59.3					mg/kg	0.05	A-T-019s
Benzo(ghi)perylene _A ^{M#}	<0.50	21.2	27.2					mg/kg	0.05	A-T-019s
Benzo(k)fluoranthene _A ^{M#}	<0.70	18.6	25.8					mg/kg	0.07	A-T-019s
Chrysene _A ^{M#}	0.83	59	105					mg/kg	0.06	A-T-019s
Dibenzo(ah)anthracene _A ^{M#}	<0.40	7.30	9.59					mg/kg	0.04	A-T-019s
Fluoranthene _A ^{M#}	1.25	87.2	147					mg/kg	0.08	A-T-019s
Fluorene _A ^{M#}	<0.10	10.4	35.4					mg/kg	0.01	A-T-019s
Indeno(123-cd)pyrene _A ^{M#}	0.56	26	34.3					mg/kg	0.03	A-T-019s
Naphthalene _A ^{M#}	<0.30	8.23	61.8					mg/kg	0.03	A-T-019s
Phenanthrene _A ^{M#}	0.60	86.5	237					mg/kg	0.03	A-T-019s
Pyrene _A ^{M#}	1.38	74.6	125					mg/kg	0.07	A-T-019s
Total PAH-16MS _A ^{M#}	6.46	557	1080					mg/kg	0.01	A-T-019s

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:	BAM Ritchies Warrington, Unit 5, Taurus Park, Europa Boulevard, Warrington, UK, WA5 7ZT	Project No:	22/02053
Project:	TRU West SIGI	Date Received:	04/03/2022 (am)
Clients Project No:	332Q-26	Cool Box Temperatures (°C):	7.4

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 $5 \pm 3^{\circ}\text{C}$), 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	22/02053/1	22/02053/2	22/02053/3
Client Sample No	TP2ES01	TP2ES02	TP2ES03
Client Sample ID/Depth	TP2 0.20m	TP2 0.50m	TP2 1.00m
Date Sampled	02/03/22	02/03/22	02/03/22
A-T-004s	11/03/2022	10/03/2022	10/03/2022
A-T-006s	14/03/2022	14/03/2022	10/03/2022
A-T-019s	10/03/2022	10/03/2022	10/03/2022
A-T-019w		11/03/2022	
A-T-022s	10/03/2022	10/03/2022	10/03/2022
A-T-024s	16/03/2022	16/03/2022	16/03/2022
A-T-025w		16/03/2022	
A-T-026s	15/03/2022	15/03/2022	15/03/2022
A-T-026w		10/03/2022	
A-T-027s	15/03/2022	15/03/2022	15/03/2022
A-T-029s	16/03/2022	16/03/2022	16/03/2022
A-T-030s	15/03/2022	15/03/2022	15/03/2022
A-T-031s	15/03/2022	18/03/2022	15/03/2022
A-T-031w		09/03/2022	
A-T-032s	20/03/2022	20/03/2022	20/03/2022
A-T-033w		10/03/2022	
A-T-040s		15/03/2022	15/03/2022
A-T-041s	09/03/2022	09/03/2022	09/03/2022
A-T-042sCCN	10/03/2022	10/03/2022	10/03/2022
A-T-042sFCN	10/03/2022	10/03/2022	10/03/2022
A-T-042sTCN	10/03/2022	10/03/2022	10/03/2022
A-T-042wFCN		10/03/2022	
A-T-042wTCN		10/03/2022	
A-T-043-s	09/03/2022	09/03/2022	09/03/2022
A-T-044	15/03/2022	15/03/2022	15/03/2022
A-T-045	08/03/2022	08/03/2022	08/03/2022
A-T-049w		10/03/2022	
A-T-050s	14/03/2022	14/03/2022	14/03/2022
A-T-052s	10/03/2022	14/03/2022	14/03/2022
A-T-055s	11/03/2022	11/03/2022	11/03/2022

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: 22/01981
Issue Number: 1
Date: 25 March, 2022

Client: BAM Ritchies Warrington
Unit 5
Taurus Park
Europa Boulevard
Warrington
UK
WA5 7ZT

Project Manager: Mailing list 1/Mailing list 2
Project Name: TRU West SIGI
Project Ref: 322Q-26
Order No: RIT135 972 058
Date Samples Received: 03/03/22
Date Instructions Received: 03/03/22
Date Analysis Completed: 25/03/22

Approved by:



Sophie France
Client Service Manager

Envirolab Job Number: 22/01981

Client Project Name: TRU West SIGI

Client Project Ref: 322Q-26

Lab Sample ID	22/01981/1	22/01981/2	22/01981/3					Units	Limit of Detection	Method ref
Client Sample No	BH1ES01	BH1ES02	BH1ES03							
Client Sample ID	BH1	BH1	BH1							
Depth to Top	0.20	0.50	1.00							
Depth To Bottom										
Date Sampled	01-Mar-22	01-Mar-22	01-Mar-22							
Sample Type	Soil - ES	Soil - ES	Soil - ES							
Sample Matrix Code	4AE	4A	4A							
% Stones >10mm _A	<0.1	12.4	15.4					% w/w	0.1	A-T-044
pH _D ^{M#}	8.78	8.52	8.47					pH	0.01	A-T-031s
Chloride (water sol 2:1) _D ^{M#}	12	<10	<10					mg/kg	10	A-T-026s
Cyanide (free) _A ^{M#}	<1	<1	<1					mg/kg	1	A-T-042sFCN
Cyanide (complex) _A ^{M#}	<1	<1	<1					mg/kg	1	A-T-042sCCN
Cyanide (total) _A ^{M#}	<1	<1	<1					mg/kg	1	A-T-042sTCN
Thiocyanate _A	<5	<5	<5					mg/kg	5	A-T-041s
Phenols - Total by HPLC _A	<0.2	<0.2	<0.2					mg/kg	0.2	A-T-050s
Sulphide _A	9	<5	6					mg/kg	5	A-T-043-s
Sulphur (elemental) _D ^{M#}	<5	<5	<5					mg/kg	5	A-T-029s
Loss on ignition (550degC) _D ^{M#}	13.2	12.5	9.1					% w/w	0.6	A-T-030s
Total Organic Carbon _D ^{M#}	10.8	8.42	9.00					% w/w	0.03	A-T-032s
Antimony _D	<5	<5	<5					mg/kg	5	A-T-024s
Arsenic _D ^{M#}	20	18	20					mg/kg	1	A-T-024s
Barium _D	231	194	330					mg/kg	1	A-T-024s
Beryllium _D	2.2	1.3	1.3					mg/kg	0.5	A-T-024s
Boron (water soluble) _D	<1.0	<1.0	<1.0					mg/kg	1	A-T-027s
Cadmium _D ^{M#}	1.4	1.8	1.5					mg/kg	0.5	A-T-024s
Copper _D ^{M#}	165	95	92					mg/kg	1	A-T-024s
Chromium _D ^{M#}	28	24	36					mg/kg	1	A-T-024s
Chromium (hexavalent) _D	<1	<1	<1					mg/kg	1	A-T-040s
Iron _D	32000	34000	26600					mg/kg	50	A-T-024s
Lead _D ^{M#}	169	177	555					mg/kg	1	A-T-024s
Manganese _D ^{M#}	349	484	339					mg/kg	1	A-T-024s
Mercury _D	1.07	0.18	0.44					mg/kg	0.17	A-T-024s
Molybdenum _D ^{M#}	5	4	3					mg/kg	1	A-T-024s
Nickel _D ^{M#}	54	29	30					mg/kg	1	A-T-024s
Selenium _D ^{M#}	<1	<1	<1					mg/kg	1	A-T-024s
Vanadium _D ^{M#}	60	34	33					mg/kg	1	A-T-024s
Zinc _D ^{M#}	168	103	115					mg/kg	5	A-T-024s
pH (leachable) _A [#]	8.02	-	-					pH	0.01	A-T-031w
Ammoniacal nitrogen as N (leachable) _A	<0.02	-	-					mg/l	0.02	A-T-033w
Sulphate (leachable) _A [#]	6.06	-	-					mg/l	1	A-T-026w

Envirolab Job Number: 22/01981

Client Project Name: TRU West SIGI

Client Project Ref: 322Q-26

Lab Sample ID	22/01981/1	22/01981/2	22/01981/3					Units	Limit of Detection	Method ref
Client Sample No	BH1ES01	BH1ES02	BH1ES03							
Client Sample ID	BH1	BH1	BH1							
Depth to Top	0.20	0.50	1.00							
Depth To Bottom										
Date Sampled	01-Mar-22	01-Mar-22	01-Mar-22							
Sample Type	Soil - ES	Soil - ES	Soil - ES							
Sample Matrix Code	4AE	4A	4A							
Cyanide (free) (leachable) _A [#]	<0.005	-	-					mg/l	0.005	A-T-042wFCN
Cyanide (total) (leachable) _A [#]	<0.005	-	-					mg/l	0.005	A-T-042wTCN
Antimony (leachable) _A [#]	5	-	-					µg/l	1	A-T-025w
Arsenic (leachable) _A [#]	22	-	-					µg/l	1	A-T-025w
Boron (leachable) _A [#]	13	-	-					µg/l	10	A-T-025w
Cadmium (leachable) _A [#]	<1	-	-					µg/l	1	A-T-025w
Copper (leachable) _A [#]	44	-	-					µg/l	1	A-T-025w
Chromium (leachable) _A [#]	2	-	-					µg/l	1	A-T-025w
Lead (leachable) _A [#]	53	-	-					µg/l	1	A-T-025w
Magnesium (leachable) _A	<1	-	-					mg/l	1	A-T-049w
Mercury (leachable) _A [#]	<0.1	-	-					µg/l	0.1	A-T-025w
Nickel (leachable) _A [#]	3	-	-					µg/l	1	A-T-025w
Selenium (leachable) _A [#]	<1	-	-					µg/l	1	A-T-025w
Vanadium (leachable) _A [#]	10	-	-					µg/l	1	A-T-025w
Zinc (leachable) _A [#]	33	-	-					µg/l	1	A-T-025w
Leachate Prep BS EN 12457-1 (2:1) (1 no.)	*	-	-							
Dioxins like PCBs (WHO-12) SUBCON Marchwood _A	Appended	Appended	Appended							Subcon March

Envirolab Job Number: 22/01981

Client Project Name: TRU West SIGI

Client Project Ref: 322Q-26

Lab Sample ID	22/01981/1	22/01981/2	22/01981/3					Units	Limit of Detection	Method ref
Client Sample No	BH1ES01	BH1ES02	BH1ES03							
Client Sample ID	BH1	BH1	BH1							
Depth to Top	0.20	0.50	1.00							
Depth To Bottom										
Date Sampled	01-Mar-22	01-Mar-22	01-Mar-22							
Sample Type	Soil - ES	Soil - ES	Soil - ES							
Sample Matrix Code	4AE	4A	4A							
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

Envirolab Job Number: 22/01981

Client Project Name: TRU West SIGI

Client Project Ref: 322Q-26

Lab Sample ID	22/01981/1	22/01981/2	22/01981/3					Units	Limit of Detection	Method ref
Client Sample No	BH1ES01	BH1ES02	BH1ES03							
Client Sample ID	BH1	BH1	BH1							
Depth to Top	0.20	0.50	1.00							
Depth To Bottom										
Date Sampled	01-Mar-22	01-Mar-22	01-Mar-22							
Sample Type	Soil - ES	Soil - ES	Soil - ES							
Sample Matrix Code	4AE	4A	4A							
Dioxins & Furans										
Furan 2378-TCDF _A [#]	Appended	Appended	Appended					ng/kg		Subcon March
Furan 12378-PeCDF _A [#]	Appended	Appended	Appended					ng/kg		Subcon March
Furan 23478-PeCDF _A [#]	Appended	Appended	Appended					ng/kg		Subcon March
Furan 123478-HxCDF _A [#]	Appended	Appended	Appended					ng/kg		Subcon March
Furan 123678-HxCDF _A [#]	Appended	Appended	Appended					ng/kg		Subcon March
Furan 234678-HxCDF _A [#]	Appended	Appended	Appended					ng/kg		Subcon March
Furan 123789-HxCDF _A [#]	Appended	Appended	Appended					ng/kg		Subcon March
Furan 1234678-HpCDF _A [#]	Appended	Appended	Appended					ng/kg		Subcon March
Furan 1234789-HpCDF _A [#]	Appended	Appended	Appended					ng/kg		Subcon March
Furan OCDF _A [#]	Appended	Appended	Appended					ng/kg		Subcon March
Dioxin 2378-TCDD _A [#]	Appended	Appended	Appended					ng/kg		Subcon March
Dioxin 12378-PeCDD _A [#]	Appended	Appended	Appended					ng/kg		Subcon March
Dioxin 123478-HxCDD _A [#]	Appended	Appended	Appended					ng/kg		Subcon March
Dioxin 123678-HxCDD _A [#]	Appended	Appended	Appended					ng/kg		Subcon March
Dioxin 123789-HxCDD _A [#]	Appended	Appended	Appended					ng/kg		Subcon March
Dioxin 1234678-HpCDD _A [#]	Appended	Appended	Appended					ng/kg		Subcon March
Dioxin OCDD _A [#]	Appended	Appended Appended	Appended					ng/kg		Subcon March

Envirolab Job Number: 22/01981

Client Project Name: TRU West SIGI

Client Project Ref: 322Q-26

Lab Sample ID	22/01981/1	22/01981/2	22/01981/3					Units	Limit of Detection	Method ref
Client Sample No	BH1ES01	BH1ES02	BH1ES03							
Client Sample ID	BH1	BH1	BH1							
Depth to Top	0.20	0.50	1.00							
Depth To Bottom										
Date Sampled	01-Mar-22	01-Mar-22	01-Mar-22							
Sample Type	Soil - ES	Soil - ES	Soil - ES							
Sample Matrix Code	4AE	4A	4A							
PAH 16MS (leachable)										
Acenaphthene (leachable) _A	4.86	-	-					µg/l	0.02	A-T-019w
Acenaphthylene (leachable) _A	0.09	-	-					µg/l	0.02	A-T-019w
Anthracene (leachable) _A	1.68	-	-					µg/l	0.02	A-T-019w
Benzo(a)anthracene (leachable) _A	1.69	-	-					µg/l	0.02	A-T-019w
Benzo(a)pyrene (leachable) _A	0.75	-	-					µg/l	0.02	A-T-019w
Benzo(b)fluoranthene (leachable) _A	0.87	-	-					µg/l	0.02	A-T-019w
Benzo(ghi)perylene (leachable) _A	0.47	-	-					µg/l	0.02	A-T-019w
Benzo(k)fluoranthene (leachable) _A	0.37	-	-					µg/l	0.02	A-T-019w
Chrysene (leachable) _A	1.66	-	-					µg/l	0.02	A-T-019w
Dibenzo(ah)anthracene (leachable) _A	0.08	-	-					µg/l	0.02	A-T-019w
Fluoranthene (leachable) _A	10.56	-	-					µg/l	0.02	A-T-019w
Fluorene (leachable) _A	1.09	-	-					µg/l	0.02	A-T-019w
Indeno(123-cd)pyrene (leachable) _A	0.49	-	-					µg/l	0.02	A-T-019w
Naphthalene (leachable) _A	<0.02	-	-					µg/l	0.02	A-T-019w
Phenanthrene (leachable) _A	1.11	-	-					µg/l	0.02	A-T-019w
Pyrene (leachable) _A	8.09	-	-					µg/l	0.02	A-T-019w
Total PAH 16MS (leachable) _A	33.9	-	-					µg/l	0.02	A-T-019w

Envirolab Job Number: 22/01981

Client Project Name: TRU West SIGI

Client Project Ref: 322Q-26

Lab Sample ID	22/01981/1	22/01981/2	22/01981/3					Units	Limit of Detection	Method ref
Client Sample No	BH1ES01	BH1ES02	BH1ES03							
Client Sample ID	BH1	BH1	BH1							
Depth to Top	0.20	0.50	1.00							
Depth To Bottom										
Date Sampled	01-Mar-22	01-Mar-22	01-Mar-22							
Sample Type	Soil - ES	Soil - ES	Soil - ES							
Sample Matrix Code	4AE	4A	4A							
Speciated PCB-WHO12										
PCB BZ 81 _A	<0.050	<0.005	<0.005					mg/kg	0.005	A-T-004s
PCB BZ 105 _A	<0.050	<0.005	<0.005					mg/kg	0.005	A-T-004s
PCB BZ 114 _A	<0.050	<0.005	<0.005					mg/kg	0.005	A-T-004s
PCB BZ 118 _A ^{M#}	<0.070	<0.007	<0.007					mg/kg	0.007	A-T-004s
PCB BZ 123 _A	<0.050	<0.005	<0.005					mg/kg	0.005	A-T-004s
PCB BZ 126 _A	<0.050	<0.005	<0.005					mg/kg	0.005	A-T-004s
PCB BZ 156 _A	<0.050	<0.005	<0.005					mg/kg	0.005	A-T-004s
PCB BZ 157 _A	<0.050	<0.005	<0.005					mg/kg	0.005	A-T-004s
PCB BZ 167 _A	<0.050	<0.005	<0.005					mg/kg	0.005	A-T-004s
PCB BZ 169 _A	<0.050	<0.005	<0.005					mg/kg	0.005	A-T-004s
PCB BZ 189 _A	<0.050	<0.005	<0.005					mg/kg	0.005	A-T-004s
PCB BZ 77 _A	<0.050	<0.005	<0.005					mg/kg	0.005	A-T-004s
Total Speciated PCB-WHO12 _A	<0.070	<0.007	<0.007					mg/kg	0.005	A-T-004s

Envirolab Job Number: 22/01981

Client Project Name: TRU West SIGI

Client Project Ref: 322Q-26

Lab Sample ID	22/01981/1	22/01981/2	22/01981/3					Units	Limit of Detection	Method ref
Client Sample No	BH1ES01	BH1ES02	BH1ES03							
Client Sample ID	BH1	BH1	BH1							
Depth to Top	0.20	0.50	1.00							
Depth To Bottom										
Date Sampled	01-Mar-22	01-Mar-22	01-Mar-22							
Sample Type	Soil - ES	Soil - ES	Soil - ES							
Sample Matrix Code	4AE	4A	4A							
SVOC										
4-Bromophenyl phenyl ether _A	<1000	<100	<100					µg/kg	100	A-T-052s
Hexachlorobenzene _A	<1000	<100	<100					µg/kg	100	A-T-052s
Diethyl phthalate _A	<1000	<100	<100					µg/kg	100	A-T-052s
Dimethyl phthalate _A	<1000	<100	<100					µg/kg	100	A-T-052s
Dibenzofuran _A	6510	1920	2300					µg/kg	100	A-T-052s
Carbazole _A	3930	1580	2230					µg/kg	100	A-T-052s
Butylbenzyl phthalate _A	<1000	<100	<100					µg/kg	100	A-T-052s
Bis(2-ethylhexyl)phthalate _A	<5000	<500	<500					µg/kg	500	A-T-052s
Bis(2-chloroethoxy)methane _A	<1000	<100	<100					µg/kg	100	A-T-052s
Bis(2-chloroethyl)ether _A	<1000	<100	<100					µg/kg	100	A-T-052s
4-Nitrophenol _A	<1000	<100	<100					µg/kg	100	A-T-052s
3+4-Methylphenol _A	<1000	125	554					µg/kg	100	A-T-052s
4-Chloro-3-methylphenol _A	<1000	<100	<100					µg/kg	100	A-T-052s
2-Nitrophenol _A	<1000	<100	<100					µg/kg	100	A-T-052s
2-Methylphenol _A	<1000	<100	295					µg/kg	100	A-T-052s
2-Chlorophenol _A	<1000	<100	<100					µg/kg	100	A-T-052s
2,6-Dinitrotoluene _A	<1000	<100	<100					µg/kg	100	A-T-052s
2,4-Dinitrotoluene _A	<1000	<100	<100					µg/kg	100	A-T-052s
2,4-Dimethylphenol _A	<1000	140	504					µg/kg	100	A-T-052s
2,4-Dichlorophenol _A	<1000	<100	<100					µg/kg	100	A-T-052s
2,4,6-Trichlorophenol _A	<1000	<100	<100					µg/kg	100	A-T-052s
2,4,5-Trichlorophenol _A	<1000	<100	<100					µg/kg	100	A-T-052s
2-Chloronaphthalene _A	<1000	<100	<100					µg/kg	100	A-T-052s
2-Methylnaphthalene _A	3210	1120	1720					µg/kg	100	A-T-052s
Bis(2-chloroisopropyl)ether _A	<1000	<100	<100					µg/kg	100	A-T-052s
Phenol _A	<1000	<100	151					µg/kg	100	A-T-052s
Pentachlorophenol (SVOC) _A	<1000	<100	<100					µg/kg	100	A-T-052s
n-Nitroso-n-dipropylamine _A	<1000	<100	<100					µg/kg	100	A-T-052s
n-Diethylphthalate _A	<5000	<500	<500					µg/kg	500	A-T-052s
n-Dibutylphthalate _A	<1000	<300	<300					µg/kg	100	A-T-052s
Nitrobenzene _A	<1000	<100	<100					µg/kg	100	A-T-052s
Isophorone _A	<1000	<100	<100					µg/kg	100	A-T-052s

Envirolab Job Number: 22/01981

Client Project Name: TRU West SIGI

Client Project Ref: 322Q-26

Lab Sample ID	22/01981/1	22/01981/2	22/01981/3					Units	Limit of Detection	Method ref
Client Sample No	BH1ES01	BH1ES02	BH1ES03							
Client Sample ID	BH1	BH1	BH1							
Depth to Top	0.20	0.50	1.00							
Depth To Bottom										
Date Sampled	01-Mar-22	01-Mar-22	01-Mar-22							
Sample Type	Soil - ES	Soil - ES	Soil - ES							
Sample Matrix Code	4AE	4A	4A							
Hexachloroethane _A	<1000	<100	<100					µg/kg	100	A-T-052s
Hexachlorocyclopentadiene _A	<1000	<100	<100					µg/kg	100	A-T-052s
Perylene _A	23600	4010	3690					µg/kg	100	A-T-052s

Envirolab Job Number: 22/01981

Client Project Name: TRU West SIGI

Client Project Ref: 322Q-26

Lab Sample ID	22/01981/1	22/01981/2	22/01981/3					Units	Limit of Detection	Method ref
Client Sample No	BH1ES01	BH1ES02	BH1ES03							
Client Sample ID	BH1	BH1	BH1							
Depth to Top	0.20	0.50	1.00							
Depth To Bottom										
Date Sampled	01-Mar-22	01-Mar-22	01-Mar-22							
Sample Type	Soil - ES	Soil - ES	Soil - ES							
Sample Matrix Code	4AE	4A	4A							
VOC										
Dichlorodifluoromethane _A	<5	<1	<1					µg/kg	1	A-T-006s
Chloromethane _A	<50	<10	<10					µg/kg	10	A-T-006s
Vinyl Chloride (Chloroethene) _A [#]	<5	<1	<1					µg/kg	1	A-T-006s
Bromomethane _A [#]	<5	<1	<1					µg/kg	1	A-T-006s
Chloroethane _A [#]	<5	<1	<1					µg/kg	1	A-T-006s
Trichlorofluoromethane _A [#]	<5	<1	<1					µg/kg	1	A-T-006s
1,1-Dichloroethene _A [#]	<5	<1	<1					µg/kg	1	A-T-006s
Carbon Disulphide _A [#]	<5	<1	<1					µg/kg	1	A-T-006s
Dichloromethane _A	<25	<5	<5					µg/kg	5	A-T-006s
trans 1,2-Dichloroethene _A [#]	<5	<1	<1					µg/kg	1	A-T-006s
1,1-Dichloroethane _A [#]	<5	<1	<1					µg/kg	1	A-T-006s
cis 1,2-Dichloroethene _A [#]	<5	<1	<1					µg/kg	1	A-T-006s
2,2-Dichloropropane _A [#]	<5	<1	<1					µg/kg	1	A-T-006s
Bromochloromethane _A [#]	<25	<5	<5					µg/kg	5	A-T-006s
Chloroform _A [#]	<5	<1	<1					µg/kg	1	A-T-006s
1,1,1-Trichloroethane _A [#]	<5	<1	<1					µg/kg	1	A-T-006s
1,1-Dichloropropene _A [#]	<5	<1	<1					µg/kg	1	A-T-006s
Carbon Tetrachloride _A [#]	<5	<1	<1					µg/kg	1	A-T-006s
1,2-Dichloroethane _A [#]	<10	<2	<2					µg/kg	2	A-T-006s
Benzene _A [#]	<5	<1	<1					µg/kg	1	A-T-006s
Trichloroethene _A [#]	<5	<1	<1					µg/kg	1	A-T-006s
1,2-Dichloropropane _A [#]	<5	<1	<1					µg/kg	1	A-T-006s
Dibromomethane _A [#]	<5	<1	<1					µg/kg	1	A-T-006s
Bromodichloromethane _A [#]	<50	<10	<10					µg/kg	10	A-T-006s
cis 1,3-Dichloropropene _A [#]	<5	<1	<1					µg/kg	1	A-T-006s
Toluene _A [#]	<5	<1	<1					µg/kg	1	A-T-006s
trans 1,3-Dichloropropene _A [#]	<5	<1	<1					µg/kg	1	A-T-006s
1,1,2-Trichloroethane _A [#]	<5	<1	<1					µg/kg	1	A-T-006s
1,3-Dichloropropane _A [#]	<5	<1	<1					µg/kg	1	A-T-006s
Tetrachloroethene _A [#]	<5	<1	<1					µg/kg	1	A-T-006s
Dibromochloromethane _A [#]	<15	<3	<3					µg/kg	3	A-T-006s
1,2-Dibromoethane _A [#]	<5	<1	<1					µg/kg	1	A-T-006s

Envirolab Job Number: 22/01981

Client Project Name: TRU West SIGI

Client Project Ref: 322Q-26

Lab Sample ID	22/01981/1	22/01981/2	22/01981/3					Units	Limit of Detection	Method ref
Client Sample No	BH1ES01	BH1ES02	BH1ES03							
Client Sample ID	BH1	BH1	BH1							
Depth to Top	0.20	0.50	1.00							
Depth To Bottom										
Date Sampled	01-Mar-22	01-Mar-22	01-Mar-22							
Sample Type	Soil - ES	Soil - ES	Soil - ES							
Sample Matrix Code	4AE	4A	4A							
Chlorobenzene _A [#]	<5	<1	<1					µg/kg	1	A-T-006s
1,1,1,2-Tetrachloroethane _A	<5	<1	<1					µg/kg	1	A-T-006s
Ethylbenzene _A [#]	<5	<1	<1					µg/kg	1	A-T-006s
m & p Xylene _A [#]	<5	<1	<1					µg/kg	1	A-T-006s
o-Xylene _A [#]	<5	<1	<1					µg/kg	1	A-T-006s
Styrene _A [#]	<5	<1	<1					µg/kg	1	A-T-006s
Bromoform _A [#]	<5	<1	<1					µg/kg	1	A-T-006s
Isopropylbenzene _A [#]	<5	<1	<1					µg/kg	1	A-T-006s
1,1,2,2-Tetrachloroethane _A	<5	<1	<1					µg/kg	1	A-T-006s
1,2,3-Trichloropropane _A [#]	<5	<1	<1					µg/kg	1	A-T-006s
Bromobenzene _A [#]	<5	<1	<1					µg/kg	1	A-T-006s
n-Propylbenzene _A [#]	<5	<1	<1					µg/kg	1	A-T-006s
2-Chlorotoluene _A [#]	<5	<1	<1					µg/kg	1	A-T-006s
1,3,5-Trimethylbenzene _A [#]	<5	<1	<1					µg/kg	1	A-T-006s
4-Chlorotoluene _A [#]	<5	<1	<1					µg/kg	1	A-T-006s
tert-Butylbenzene _A [#]	<10	<2	<2					µg/kg	2	A-T-006s
1,2,4-Trimethylbenzene _A [#]	<5	<1	<1					µg/kg	1	A-T-006s
sec-Butylbenzene _A [#]	<5	<1	<1					µg/kg	1	A-T-006s
4-Isopropyltoluene _A [#]	<5	<1	<1					µg/kg	1	A-T-006s
1,3-Dichlorobenzene _A	<5	<1	<1					µg/kg	1	A-T-006s
1,4-Dichlorobenzene _A [#]	<5	<1	<1					µg/kg	1	A-T-006s
n-Butylbenzene _A [#]	<5	<1	<1					µg/kg	1	A-T-006s
1,2-Dichlorobenzene _A [#]	<5	<1	<1					µg/kg	1	A-T-006s
1,2-Dibromo-3-chloropropane (DCBP) _A	<10	<2	<2					µg/kg	2	A-T-006s
1,2,4-Trichlorobenzene _A	<15	<3	<3					µg/kg	3	A-T-006s
Hexachlorobutadiene _A [#]	<5	<1	<1					µg/kg	1	A-T-006s
1,2,3-Trichlorobenzene _A	<15	<3	<3					µg/kg	3	A-T-006s

Envirolab Job Number: 22/01981

Client Project Name: TRU West SIGI

Client Project Ref: 322Q-26

Lab Sample ID	22/01981/1	22/01981/2	22/01981/3					Units	Limit of Detection	Method ref
Client Sample No	BH1ES01	BH1ES02	BH1ES03							
Client Sample ID	BH1	BH1	BH1							
Depth to Top	0.20	0.50	1.00							
Depth To Bottom										
Date Sampled	01-Mar-22	01-Mar-22	01-Mar-22							
Sample Type	Soil - ES	Soil - ES	Soil - ES							
Sample Matrix Code	4AE	4A	4A							
TPH UKCWG 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	<10	<10	<10					mg/kg	1	A-T-055s
Ali >C10-C12 _A ^{M#}	29	<10	<10					mg/kg	1	A-T-055s
Ali >C12-C16 _A ^{M#}	111	21	22					mg/kg	1	A-T-055s
Ali >C16-C21 _A ^{M#}	129	32	27					mg/kg	1	A-T-055s
Ali >C21-C35 _A ^{M#}	967	179	124					mg/kg	1	A-T-055s
Ali >C35-C44 _A	246	59	49					mg/kg	1	A-T-055s
Total Aliphatics _A	1480	292	223					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	<10	<10	<10					mg/kg	1	A-T-055s
Aro >C10-C12 _A	64	14	36					mg/kg	1	A-T-055s
Aro >C12-C16 _A	558	111	173					mg/kg	1	A-T-055s
Aro >C16-C21 _A ^{M#}	2010	467	626					mg/kg	1	A-T-055s
Aro >C21-C35 _A	6630	1270	1230					mg/kg	1	A-T-055s
Aro >C35-C44 _A	245	55	42					mg/kg	1	A-T-055s
Total Aromatics _A	9510	1920	2110					mg/kg	1	A-T-055s
TPH (Ali & Aro >C5-C44) _A	11000	2210	2330					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

Envirolab Job Number: 22/01981

Client Project Name: TRU West SIGI

Client Project Ref: 322Q-26

Lab Sample ID	22/01981/1	22/01981/2	22/01981/3					Units	Limit of Detection	Method ref
Client Sample No	BH1ES01	BH1ES02	BH1ES03							
Client Sample ID	BH1	BH1	BH1							
Depth to Top	0.20	0.50	1.00							
Depth To Bottom										
Date Sampled	01-Mar-22	01-Mar-22	01-Mar-22							
Sample Type	Soil - ES	Soil - ES	Soil - ES							
Sample Matrix Code	4AE	4A	4A							
PAH-16MS										
Acenaphthene _A ^{M#}	22.7	4.92	3.76					mg/kg	0.01	A-T-019s
Acenaphthylene _A ^{M#}	<0.20	0.26	0.17					mg/kg	0.01	A-T-019s
Anthracene _A ^{M#}	21.9	5.26	4.49					mg/kg	0.02	A-T-019s
Benzo(a)anthracene _A ^{M#}	70.3	17	11.7					mg/kg	0.04	A-T-019s
Benzo(a)pyrene _A ^{M#}	50.9	15.5	10.6					mg/kg	0.04	A-T-019s
Benzo(b)fluoranthene _A ^{M#}	60.5	19.6	12.1					mg/kg	0.05	A-T-019s
Benzo(ghi)perylene _A ^{M#}	35.7	8.49	5.48					mg/kg	0.05	A-T-019s
Benzo(k)fluoranthene _A ^{M#}	26.2	6.98	4.87					mg/kg	0.07	A-T-019s
Chrysene _A ^{M#}	947	21.1	14.5					mg/kg	0.06	A-T-019s
Dibenzo(ah)anthracene _A ^{M#}	8.28	2.00	1.32					mg/kg	0.04	A-T-019s
Fluoranthene _A ^{M#}	145	52.8	33.2					mg/kg	0.08	A-T-019s
Fluorene _A ^{M#}	10.5	2.30	2.00					mg/kg	0.01	A-T-019s
Indeno(123-cd)pyrene _A ^{M#}	40.7	10.5	6.89					mg/kg	0.03	A-T-019s
Naphthalene _A ^{M#}	4.46	2.23	2.83					mg/kg	0.03	A-T-019s
Phenanthrene _A ^{M#}	104	27.2	21.4					mg/kg	0.03	A-T-019s
Pyrene _A ^{M#}	137	37.3	25.1					mg/kg	0.07	A-T-019s
Total PAH-16MS _A ^{M#}	1690	233	160					mg/kg	0.01	A-T-019s

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: BAM Ritchies Warrington, Unit 5, Taurus Park, Europa Boulevard, Warrington, UK, WA5 7ZT

Project No: 22/01981

Date Received: 03/03/2022 (am)

Project: TRU West SIGI

Cool Box Temperatures (°C): 6.1

Clients Project No: 322Q-26

Lab Sample ID	22/01981/1	22/01981/2	22/01981/3
Client Sample No	BH1ES01	BH1ES02	BH1ES03
Client Sample ID/Depth	BH1 0.20m	BH1 0.50m	BH1 1.00m
Date Sampled	01/03/22	01/03/22	01/03/22
Deviation Code			
F	✓	✓	✓

Key

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

HOLDING TIME EXCEEDANCES

Lab Sample ID	22/01981/1	22/01981/2	22/01981/3
Client Sample No	BH1ES01	BH1ES02	BH1ES03
Client Sample ID/Depth	BH1 0.20m	BH1 0.50m	BH1 1.00m
Date Sampled	01/03/22	01/03/22	01/03/22
Sulphide	✓	✓	✓

If, at any point before reaching the laboratory, the temperature of the samples has breached those set in published standards, e.g. BS-EN 5667-3, ISO 18400-102:2017, then the concentration of any affected analytes may differ from that at the time of sampling.

Envirolab Analysis Dates

Lab Sample ID	22/01981/1	22/01981/2	22/01981/3
Client Sample No	BH1ES01	BH1ES02	BH1ES03
Client Sample ID/Depth	BH1 0.20m	BH1 0.50m	BH1 1.00m
Date Sampled	01/03/22	01/03/22	01/03/22
A-T-004s	10/03/2022	11/03/2022	11/03/2022
A-T-006s	10/03/2022	10/03/2022	10/03/2022
A-T-019s	09/03/2022	15/03/2022	15/03/2022
A-T-019w	09/03/2022		
A-T-022s	10/03/2022	10/03/2022	10/03/2022
A-T-024s	18/03/2022	18/03/2022	18/03/2022
A-T-025w	16/03/2022		
A-T-026s	17/03/2022	17/03/2022	17/03/2022
A-T-026w	10/03/2022		
A-T-027s	14/03/2022	16/03/2022	16/03/2022
A-T-029s	22/03/2022	22/03/2022	22/03/2022
A-T-030s	17/03/2022	17/03/2022	17/03/2022
A-T-031s	11/03/2022	16/03/2022	16/03/2022
A-T-031w	09/03/2022		
A-T-032s	11/03/2022	21/03/2022	21/03/2022
A-T-033w	10/03/2022		
A-T-040s	11/03/2022	16/03/2022	16/03/2022
A-T-041s	09/03/2022	16/03/2022	18/03/2022
A-T-042sCCN	14/03/2022	14/03/2022	14/03/2022
A-T-042sFCN	14/03/2022	14/03/2022	14/03/2022
A-T-042sTCN	14/03/2022	14/03/2022	14/03/2022
A-T-042wFCN	10/03/2022		
A-T-042wTCN	10/03/2022		
A-T-043-s	25/03/2022	25/03/2022	25/03/2022
A-T-044	14/03/2022	16/03/2022	16/03/2022
A-T-045	04/03/2022	09/03/2022	09/03/2022
A-T-049w	10/03/2022		
A-T-050s	14/03/2022	14/03/2022	14/03/2022
A-T-052s	10/03/2022	14/03/2022	14/03/2022
A-T-055s	10/03/2022	14/03/2022	14/03/2022

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

UKAS accredited testing laboratory No. 1668

Name of Client : Envirolab Ltd

Test Certificate No: 188518

Address : Units 7&8, Sandpits Business Park, Mottram Road, Hyde, SK14 3AR

ANALYSIS OF PCDDs and PCDFs

Job Reference: 22/02053

Date of Receipt : 08/03/22

Sample Identifier : 22/02053/1 TP2ES01, TP2 0.20m

Date of Analysis : 18/03/22

Sample No: 188518

Date of Report : 23/03/22

Order No: P0748448

Sample Type: Soil

Sample Condition : conforming

Instrument : Thermo DFS

GC Column : DB5

Calibration File : 220321

Test Method : 2002a

Blank : 220314

Sample size: 1

expressed as ng /kg

Congener	Conc	DL	Rec %	Congener	Conc	DL	Rec %
2378-TCDF	0.697	0.217	97	2378-TCDD	*	0.157	108
12378-PCDF	0.750	0.144	98	12378-PCDD	*	0.271	98
23478-PCDF	*	0.149	89	123478-HxCDD	0.500	0.185	90
123478-HxCDF	*	0.113	90	123678-HxCDD	0.741	0.188	88
123678-HxCDF	*	0.115	90	123789-HxCDD	0.710	0.193	
234678-HxCDF	1.06	0.117	85	1234678-HpCDD	9.50	0.467	66
123789-HxCDF	*	0.146	85	OCDD	32.0	1.27	45
1234678-HpCDF	4.33	0.163	72				
1234789-HpCDF	*	0.275	65				
OCDF	3.42	0.625					
Total 2,3,7,8-Furans	10.3			Total 2,3,7,8-Dioxins	43.4		
		TEQ¹	TEQ²			TEQ¹	TEQ²
TEQ (Nato)		0.990	0.582	TEQ (WHO)- Mammals		1.06	0.543
				TEQ (WHO)- Fish		1.04	0.500
				TEQ (WHO)- Birds		1.66	1.04

* Isomer Not detected
TEQ Toxic Equivalent Value
TEF Toxic Equivalent Factor
Conc Concentration
DL Detection Value
REC Recovery

TEQ¹ Concentration of Non Detected
Congeners at Detection Limit
TEQ² Concentration of Non Detected
Congeners at Zero

Approved by : Mafalda Catarro
Position : Team Leader

Signature : Mafalda Catarro



UKAS accredited testing laboratory No. 1668

Name of Client : Envirolab Ltd

Test Certificate No: 188518

Address : Units 7&8, Sandpits Business Park, Mottram Road, Hyde, SK14 3AR

ANALYSIS OF PCBs

Job Reference: 22/02053

Date of Receipt : 08/03/22

Sample Identifier : 22/02053/1 TP2ES01, TP2 0.20m

Date of Analysis : 18/03/22

Sample No: 188518

Date of Report : 23/03/22

Order No: P0748448

Sample Type: Soil

Sample Condition : conforming

Instrument : Micromass Ultima NT

Test Method : 2002

GC Column : DB5

Blank : 220314

Calibration File : 220321

Sample size: 1

expressed as ng /kg

Congener	Conc	DL	Rec %
PCB-81	0.351	0.103	103
PCB-77	8.40	0.109	97
PCB-123	4.31	1.58	96
PCB-118	114	1.57	89
PCB-114	1.81	1.51	97
PCB-105	49.5	1.33	99
PCB-126	1.59	0.307	106
PCB-167	20.7	1.27	102
PCB-156	28.9	1.52	105
PCB-157	7.76	1.54	104
PCB-169	*	0.0575	95
PCB-189	10.8	0.503	109
Total-PCBs	248		
	TEQ1	TEQ2	
TEQ (WHO)- Mammals	0.169	0.167	
TEQ (WHO)- Fish	0.0102	0.0102	
TEQ (WHO)- Birds	0.624	0.624	

* Isomer Not detected
TEQ Toxic Equivalent Value
TEF Toxic Equivalent Factor
Conc Concentration
DL Detection Value
REC Recovery

TEQ¹ Concentration of Non Detected
Congeners at Detection Limit
TEQ² Concentration of Non Detected
Congeners at Zero

Approved by : Mafalda Catarro
Position : Team Leader

Signature : Mafalda Catarro



UKAS accredited testing laboratory No. 1668

Name of Client : Envirolab Ltd

Test Certificate No: 188519

Address : Units 7&8, Sandpits Business Park, Mottram Road, Hyde, SK14 3AR

ANALYSIS OF PCDDs and PCDFs

Job Reference: 22/02053

Date of Receipt : 08/03/22

Sample Identifier : 22/02053/2 TP2ES02, TP2 0.50m

Date of Analysis : 18/03/22

Sample No: 188519

Date of Report : 23/03/22

Order No: P0748448

Sample Type: Soil

Sample Condition : conforming

Instrument : Thermo DFS

GC Column : DB5

Calibration File : 220321

Test Method : 2002a

Blank : 220314

Sample size: 1

expressed as ng /kg

Congener	Conc	DL	Rec %	Congener	Conc	DL	Rec %
2378-TCDF	17.1	1.10	90	2378-TCDD	1.64	0.585	106
12378-PCDF	6.46	0.528	90	12378-PCDD	3.87	0.764	89
23478-PCDF	12.7	0.587	81	123478-HxCDD	3.37	0.686	70
123478-HxCDF	9.75	0.402	70	123678-HxCDD	7.90	0.685	73
123678-HxCDF	7.81	0.417	67	123789-HxCDD	4.40	0.702	
234678-HxCDF	6.96	0.436	61	1234678-HpCDD	54.0	0.702	53
123789-HxCDF	0.866	0.489	67	OCDD	194	2.32	35
1234678-HpCDF	59.2	0.481	54				
1234789-HpCDF	2.05	0.693	52				
OCDF	54.3	0.999					
Total 2,3,7,8-Furans	177			Total 2,3,7,8-Dioxins	269		
TEQ (Nato)		TEQ ¹ 17.5	TEQ ² 17.5	TEQ (WHO)- Mammals		TEQ ¹ 16.6	TEQ ² 16.6
				TEQ (WHO)- Fish		18.1	18.1
				TEQ (WHO)- Birds		39.8	39.8

* Isomer Not detected
TEQ Toxic Equivalent Value
TEF Toxic Equivalent Factor
Conc Concentration
DL Detection Value
REC Recovery

TEQ¹ Concentration of Non Detected
Congeners at Detection Limit
TEQ² Concentration of Non Detected
Congeners at Zero

Approved by : Mafalda Catarro
Position : Team Leader

Signature : Mafalda Catarro



UKAS accredited testing laboratory No. 1668

Name of Client : Envirolab Ltd

Test Certificate No: 188519

Address : Units 7&8, Sandpits Business Park, Mottram Road, Hyde, SK14 3AR

ANALYSIS OF PCBs

Job Reference: 22/02053

Date of Receipt : 08/03/22

Sample Identifier : 22/02053/2 TP2ES02, TP2 0.50m

Date of Analysis : 18/03/22

Sample No: 188519

Date of Report : 23/03/22

Order No: P0748448

Sample Type: Soil

Sample Condition : conforming

Instrument : Micromass Ultima NT

Test Method : 2002

GC Column : DB5

Blank : 220314

Calibration File : 220321

Sample size: 1

expressed as ng /kg

Congener	Conc	DL	Rec %
PCB-81	2.85	0.353	98
PCB-77	84.2	0.345	95
PCB-123	50.5	8.92	90
PCB-118	701	9.35	82
PCB-114	11.9	8.33	91
PCB-105	322	6.85	100
PCB-126	11.4	0.522	105
PCB-167	219	2.12	93
PCB-156	248	2.54	96
PCB-157	77.3	2.73	95
PCB-169	4.45	0.345	93
PCB-189	152	1.30	102
Total-PCBs	1880		
	TEQ1	TEQ2	
TEQ (WHO)- Mammals	1.34	1.34	
TEQ (WHO)- Fish	0.0762	0.0762	
TEQ (WHO)- Birds	5.72	5.72	

* Isomer Not detected
TEQ Toxic Equivalent Value
TEF Toxic Equivalent Factor
Conc Concentration
DL Detection Value
REC Recovery

TEQ¹ Concentration of Non Detected
Congeners at Detection Limit
TEQ² Concentration of Non Detected
Congeners at Zero

Approved by : Mafalda Catarro
Position : Team Leader

Signature : Mafalda Catarro



UKAS accredited testing laboratory No. 1668

Name of Client : Envirolab Ltd

Test Certificate No: 188520

Address : Units 7&8, Sandpits Business Park, Mottram Road, Hyde, SK14 3AR

ANALYSIS OF PCDDs and PCDFs

Job Reference:

Sample Identifier : 22/02053/3 TP2ES03, TP2 1.00m

Sample No: 188520

Order No: P0748448

Sample Type: Soil

Sample Condition : conforming

Instrument : Thermo DFS

GC Column : DB5

Calibration File : 220321

Date of Receipt : 08/03/22

Date of Analysis : 18/03/22

Date of Report : 23/03/22

Test Method : 2002a

Blank : 220314

Sample size: 1

expressed as ng /kg

Congener	Conc	DL	Rec %	Congener	Conc	DL	Rec %
2378-TCDF	18.2	1.14	89	2378-TCDD	*	0.929	99
12378-PCDF	7.91	0.648	87	12378-PCDD	5.99	0.998	84
23478-PCDF	16.7	0.720	76	123478-HxCDD	4.86	0.690	71
123478-HxCDF	14.8	0.505	72	123678-HxCDD	13.8	0.692	71
123678-HxCDF	11.2	0.521	72	123789-HxCDD	9.21	0.710	
234678-HxCDF	8.63	0.543	67	1234678-HpCDD	74.7	0.741	46
123789-HxCDF	*	0.667	66	OCDD	243	3.22	24**
1234678-HpCDF	55.8	0.481	50				
1234789-HpCDF	4.05	0.767	44				
OCDF	45.8	1.97					
Total 2,3,7,8-Furans	183			Total 2,3,7,8-Dioxins	351		
		TEQ ¹	TEQ ²			TEQ ¹	TEQ ²
TEQ (Nato)		22.5	21.5	TEQ (WHO)- Mammals		21.7	20.8
				TEQ (WHO)- Fish		23.5	22.5
				TEQ (WHO)- Birds		48.2	47.2

* Isomer Not detected
TEQ Toxic Equivalent Value
TEF Toxic Equivalent Factor
Conc Concentration
DL Detection Value
REC Recovery

** Internal standard recovery for a congener is <30%. However signal to noise ratio is >10:1 & the total contribution to TEQ are <10%, therefore data is considered as valid

TEQ¹ Concentration of Non Detected
Congeners at Detection Limit
TEQ² Concentration of Non Detected
Congeners at Zero

Approved by : Mafalda Catarro
Position : Team Leader

Signature : Mafalda Catarro



1668

UKAS accredited testing laboratory No. 1668

Name of Client : Envirolab Ltd

Test Certificate No: 188520

Address : Units 7&8, Sandpits Business Park, Mottram Road, Hyde, SK14 3AR

ANALYSIS OF PCBs

Job Reference:

Sample Identifier : 22/02053/3 TP2ES03, TP2 1.00m

Sample No: 188520

Order No: P0748448

Sample Type: Soil

Sample Condition : conforming

Instrument : Micromass Ultima NT

GC Column : DB5

Calibration File : 220321

Date of Receipt : 08/03/22

Date of Analysis : 18/03/22

Date of Report : 23/03/22

Test Method : 2002

Blank : 220314

Sample size: 1

expressed as ng /kg

Congener	Conc	DL	Rec %
PCB-81	5.18	0.454	74
PCB-77	167	0.355	93
PCB-123	45.5	3.80	94
PCB-118	2010	4.13	86
PCB-114	23.5	3.69	93
PCB-105	869	3.23	97
PCB-126	15.4	0.446	105
PCB-167	354	3.19	98
PCB-156	476	3.92	98
PCB-157	136	4.08	100
PCB-169	4.82	0.272	91
PCB-189	231	7.02	102
Total-PCBs	4330		
	TEQ1	TEQ2	
TEQ (WHO)- Mammals	1.83	1.83	
TEQ (WHO)- Fish	0.117	0.117	
TEQ (WHO)- Birds	10.6	10.6	

* Isomer Not detected
TEQ Toxic Equivalent Value
TEF Toxic Equivalent Factor
Conc Concentration
DL Detection Value
REC Recovery

TEQ¹ Concentration of Non Detected
Congeners at Detection Limit
TEQ² Concentration of Non Detected
Congeners at Zero

Approved by : Mafalda Catarro
Position : Team Leader

Signature : Mafalda Catarro



UKAS accredited testing laboratory No. 1668

Name of Client : Envirolab Ltd

Test Certificate No: 188847

Address : Units 7&8, Sandpits Business Park, Mottram Road, Hyde, SK14 3AR

ANALYSIS OF PCDDs and PCDFs

Job Reference:

Sample Identifier : 22/01981/1 BH1ES01 BH 0.20m

Sample No: 188847

Order No: P0748455

Sample Type: Soil

Sample Condition : conforming

Instrument : Thermo DFS

GC Column : DB5

Calibration File : 220321

Date of Receipt : 09/03/22

Date of Analysis : 18/03/22

Date of Report : 23/03/22

Test Method : 2002a

Blank : 220314

Sample size: 1

expressed as ng /kg

Congener	Conc	DL	Rec %	Congener	Conc	DL	Rec %
2378-TCDF	6.40	1.04	66	2378-TCDD	*	0.545	75
12378-PCDF	6.49	0.726	59	12378-PCDD	4.47	0.662	57
23478-PCDF	11.9	0.814	52	123478-HxCDD	2.21	0.548	45
123478-HxCDF	12.0	0.578	43	123678-HxCDD	6.22	0.541	44
123678-HxCDF	6.04	0.574	43	123789-HxCDD	4.08	0.555	
234678-HxCDF	4.36	0.636	37	1234678-HpCDD	36.7	0.817	30
123789-HxCDF	*	0.735	40	OCDD	141	4.05	21
1234678-HpCDF	31.2	0.533	31				
1234789-HpCDF	*	0.794	30				
OCDF	30.5	1.78					
Total 2,3,7,8-Furans	109			Total 2,3,7,8-Dioxins	195		
		TEQ ¹	TEQ ²			TEQ ¹	TEQ ²
TEQ (Nato)		14.1	13.5	TEQ (WHO)- Mammals		13.7	13.1
				TEQ (WHO)- Fish		15.5	14.9
				TEQ (WHO)- Birds		27.3	26.6

* Isomer Not detected
TEQ Toxic Equivalent Value
TEF Toxic Equivalent Factor
Conc Concentration
DL Detection Value
REC Recovery
** Internal standard recovery for several congeners are <30%. However signal to noise ratio is >10:1 & the total contribution to TEQ are <10%, therefore data is considered as valid

TEQ¹ Concentration of Non Detected Congeners at Detection Limit
TEQ² Concentration of Non Detected Congeners at Zero

Approved by : Mafalda Catarro
Position : Team Leader

Signature : Mafalda Catarro



UKAS accredited testing laboratory No. 1668

Name of Client : Envirolab Ltd

Test Certificate No: 188847

Address : Units 7&8, Sandpits Business Park, Mottram Road, Hyde, SK14 3AR

ANALYSIS OF PCBs

Job Reference:

Sample Identifier : 22/01981/1 BH1ES01 BH 0.20m

Sample No: 188847

Order No: P0748455

Sample Type: Soil

Sample Condition : conforming

Instrument : Micromass Ultima NT

GC Column : DB5

Calibration File : 220321

Date of Receipt : 09/03/22

Date of Analysis : 18/03/22

Date of Report : 23/03/22

Test Method : 2002

Blank : 220314

Sample size: 1

expressed as ng /kg

Congener	Conc	DL	Rec %
PCB-81	1.39	0.145	87
PCB-77	12.2	0.144	83
PCB-123	3.50	2.92	83
PCB-118	138	2.82	76
PCB-114	3.49	2.65	83
PCB-105	54.4	2.39	84
PCB-126	3.25	0.435	91
PCB-167	16.7	2.11	96
PCB-156	31.7	2.59	96
PCB-157	7.84	2.71	95
PCB-169	1.46	0.154	73
PCB-189	8.71	0.985	108
Total-PCBs	282		
	TEQ1	TEQ2	
TEQ (WHO)- Mammals	0.378	0.378	
TEQ (WHO)- Fish	0.0195	0.0195	
TEQ (WHO)- Birds	1.09	1.09	

* Isomer Not detected
TEQ Toxic Equivalent Value
TEF Toxic Equivalent Factor
Conc Concentration
DL Detection Value
REC Recovery

TEQ¹ Concentration of Non Detected
Congeners at Detection Limit
TEQ² Concentration of Non Detected
Congeners at Zero

Approved by : Mafalda Catarro
Position : Team Leader

Signature : Mafalda Catarro



UKAS accredited testing laboratory No. 1668

Name of Client : Envirolab Ltd

Test Certificate No: 188848

Address : Units 7&8, Sandpits Business Park, Mottram Road, Hyde, SK14 3AR

ANALYSIS OF PCDDs and PCDFs

Job Reference:

Sample Identifier : 22/01981/2 BH1ES02 BH1 0.50m

Sample No: 188848

Order No: P0748455

Sample Type: Soil

Sample Condition : conforming

Instrument : Thermo DFS

GC Column : DB5

Calibration File : 220321

Date of Receipt : 09/03/22

Date of Analysis : 18/03/22

Date of Report : 23/03/22

Test Method : 2002a

Blank : 220314

Sample size: 1

expressed as ng /kg

Congener	Conc	DL	Rec %	Congener	Conc	DL	Rec %
2378-TCDF	7.56	1.13	58	2378-TCDD	*	1.09	67
12378-PCDF	7.12	0.675	54	12378-PCDD	5.20	1.46	51
23478-PCDF	9.66	0.744	47	123478-HxCDD	7.06	1.07	44
123478-HxCDF	10.2	0.622	45	123678-HxCDD	17.1	1.13	46
123678-HxCDF	9.45	0.616	44	123789-HxCDD	8.32	1.16	
234678-HxCDF	6.92	0.668	39	1234678-HpCDD	92.4	0.929	31
123789-HxCDF	*	0.819	41	OCDD	192	4.40	17**
1234678-HpCDF	39.4	0.740	31				
1234789-HpCDF	*	1.26	28**				
OCDF	17.1	2.37					
Total 2,3,7,8-Furans	107			Total 2,3,7,8-Dioxins	322		
		TEQ ¹	TEQ ²			TEQ ¹	TEQ ²
TEQ (Nato)		17.2	16.0	TEQ (WHO)- Mammals		17.5	16.3
				TEQ (WHO)- Fish		18.9	17.7
				TEQ (WHO)- Birds		28.8	27.7

* Isomer Not detected
TEQ Toxic Equivalent Value
TEF Toxic Equivalent Factor
Conc Concentration
DL Detection Value
REC Recovery
** Internal standard recovery for a congener is <30%. However signal to noise ratio is >10:1 & the total contribution to TEQ are <10%, therefore data is considered as valid

TEQ¹ Concentration of Non Detected Congeners at Detection Limit
TEQ² Concentration of Non Detected Congeners at Zero

Approved by : Mafalda Catarro
Position : Team Leader

Signature : Mafalda Catarro



UKAS accredited testing laboratory No. 1668

Name of Client : Envirolab Ltd

Test Certificate No: 188848

Address : Units 7&8, Sandpits Business Park, Mottram Road, Hyde, SK14 3AR

ANALYSIS OF PCBs

Job Reference:

Sample Identifier : 22/01981/2 BH1ES02 BH1 0.50m

Sample No: 188848

Order No: P0748455

Sample Type: Soil

Sample Condition : conforming

Instrument : Micromass Ultima NT

GC Column : DB5

Calibration File : 220321

Date of Receipt : 09/03/22

Date of Analysis : 18/03/22

Date of Report : 23/03/22

Test Method : 2002

Blank : 220314

Sample size: 1

expressed as ng /kg

Congener	Conc	DL	Rec %
PCB-81	2.07	0.183	78
PCB-77	9.52	0.192	72
PCB-123	*	5.00	71
PCB-118	64.8	5.18	65
PCB-114	*	4.66	73
PCB-105	26.8	3.78	80
PCB-126	5.62	0.606	76
PCB-167	23.3	2.87	75
PCB-156	33.5	3.66	74
PCB-157	*	3.83	75
PCB-169	2.10	0.322	62
PCB-189	19.1	1.16	80
Total-PCBs	187		
	TEQ1	TEQ2	
TEQ (WHO)- Mammals	0.632	0.632	
TEQ (WHO)- Fish	0.0311	0.0310	
TEQ (WHO)- Birds	1.26	1.25	

* Isomer Not detected
TEQ Toxic Equivalent Value
TEF Toxic Equivalent Factor
Conc Concentration
DL Detection Value
REC Recovery

TEQ¹ Concentration of Non Detected
Congeners at Detection Limit
TEQ² Concentration of Non Detected
Congeners at Zero

Approved by : Mafalda Catarro
Position : Team Leader

Signature : Mafalda Catarro



UKAS accredited testing laboratory No. 1668

Name of Client : Envirolab Ltd

Test Certificate No: 188849

Address : Units 7&8, Sandpits Business Park, Mottram Road, Hyde, SK14 3AR

ANALYSIS OF PCDDs and PCDFs

Job Reference:

Sample Identifier : 22/01981/3 BH1ES03 BH1 1.00m

Sample No: 188849

Order No: P0748455

Sample Type: Soil

Sample Condition : conforming

Instrument : Thermo DFS

GC Column : DB5

Calibration File : 220321

Date of Receipt : 09/03/22

Date of Analysis : 18/03/22

Date of Report : 23/03/22

Test Method : 2002a

Blank : 220314

Sample size: 1

expressed as ng /kg

Congener	Conc	DL	Rec %	Congener	Conc	DL	Rec %
2378-TCDF	26.5	1.61	94	2378-TCDD	3.72	1.19	108
12378-PCDF	23.0	0.777	96	12378-PCDD	33.4	0.904	95
23478-PCDF	35.9	0.811	88	123478-HxCDD	41.5	0.780	87
123478-HxCDF	33.9	0.455	85	123678-HxCDD	111	0.788	83
123678-HxCDF	29.2	0.479	81	123789-HxCDD	66.8	0.808	
234678-HxCDF	22.9	0.488	80	1234678-HpCDD	542	0.782	67
123789-HxCDF	1.26	0.527	85	OCDD	918	1.57	45
1234678-HpCDF	126	0.348	68				
1234789-HpCDF	6.03	0.507	66				
OCDF	42.2	0.681					
Total 2,3,7,8-Furans	347			Total 2,3,7,8-Dioxins	1720		
		TEQ ¹	TEQ ²			TEQ ¹	TEQ ²
TEQ (Nato)		80.5	80.5	TEQ (WHO)- Mammals		88.9	88.9
				TEQ (WHO)- Fish		90.7	90.7
				TEQ (WHO)- Birds		122	122

* Isomer Not detected
TEQ Toxic Equivalent Value
TEF Toxic Equivalent Factor
Conc Concentration
DL Detection Value
REC Recovery

TEQ¹ Concentration of Non Detected
Congeners at Detection Limit
TEQ² Concentration of Non Detected
Congeners at Zero

Approved by : Mafalda Catarro
Position : Team Leader

Signature : Mafalda Catarro



UKAS accredited testing laboratory No. 1668

Name of Client : Envirolab Ltd

Test Certificate No: 188849

Address : Units 7&8, Sandpits Business Park, Mottram Road, Hyde, SK14 3AR

ANALYSIS OF PCBs

Job Reference:

Sample Identifier : 22/01981/3 BH1ES03 BH1 1.00m

Sample No: 188849

Order No: P0748455

Sample Type: Soil

Sample Condition : conforming

Instrument : Micromass Ultima NT

GC Column : DB5

Calibration File : 220321

Date of Receipt : 09/03/22

Date of Analysis : 18/03/22

Date of Report : 23/03/22

Test Method : 2002

Blank : 220314

Sample size: 1

expressed as ng /kg

Congener	Conc	DL	Rec %
PCB-81	11.5	0.303	100
PCB-77	39.2	0.307	97
PCB-123	4.54	2.57	87
PCB-118	92.2	2.64	80
PCB-114	6.52	2.38	90
PCB-105	45.0	2.03	94
PCB-126	21.8	0.621	109
PCB-167	20.4	1.37	96
PCB-156	33.4	1.66	99
PCB-157	15.7	1.69	99
PCB-169	12.3	0.370	97
PCB-189	26.8	0.581	103
Total-PCBs	329		
	TEQ1	TEQ2	
TEQ (WHO)- Mammals	2.56	2.56	
TEQ (WHO)- Fish	0.120	0.120	
TEQ (WHO)- Birds	5.32	5.32	

* Isomer Not detected
TEQ Toxic Equivalent Value
TEF Toxic Equivalent Factor
Conc Concentration
DL Detection Value
REC Recovery

TEQ¹ Concentration of Non Detected
Congeners at Detection Limit
TEQ² Concentration of Non Detected
Congeners at Zero

Approved by : Mafalda Catarro
Position : Team Leader

Signature : Mafalda Catarro



Final Test Report

Envirolab Job Number: 22/05555
Issue Number: 1

Date: 21-Jun-22

Client: BAM Ritchies Warrington
Unit 5
Taurus Park
Europa Boulevard
Warrington
UK, WA5 7ZT

Project Manager: TRUtesting
Project Name: TRU West SIGI
Project Ref: 322Q-26
Order No: RIT135 972 058

Date Samples Received: 31-May-22
Date Instructions Received: 7-Jun-22
Date Analysis Completed: 21-Jun-22

Notes - Soil analysis

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

For samples with Matrix Codes 1 - 6 natural stones >10mm are removed or excluded from the sample prior to analysis and reported results corrected to a whole sample basis.

For samples with Matrix Code 7 the whole sample is dried and crushed prior to analysis.

Notes - General

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

Subscript "A" indicates analysis performed on the sample as received. "D" indicates analysis performed on the dried sample, crushed to pass a 2mm sieve, unless asbestos is found to be present in which case all analysis is performed on the sample as received.

All analysis is performed on the dried and crushed sample for samples with Matrix Code 7 and this supercedes any "A" subscripts.

All analysis is performed on the sample as received for soil samples from outside the European Union and this supercedes any "D" subscripts

For complex, multi-compound analysis, quality control results do not always fall within chart limits for every compound and we have criteria for reporting in these situations.

If results are in italic font they are associated with such quality control failures and may be 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

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

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

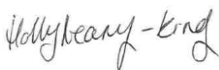
IS indicates Insufficient sample for analysis, NDP indicates No Determination Possible and NAD indicates No Asbestos Detected.

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.

Please contact us if you need any further information.

HWOL TPH Code: EH_CU_1D_AL: Extractable hydrocarbons - i.e. everything extracted by the solvent(s), Clean-up - e.g. by florisil, silica gel, GC - Single coil gas chromatography, Aliphatics only

Approved by:



Holly Neary-King
Client Services Supervisor

Sample Details								
Lab Sample ID	Method	ISO17025	MCERTS	22/05555/2	Landfill Waste Acceptance Criteria Limits			
Client Sample Number				W1CLBH2ES2	Inert Waste Landfill	Stable Non-reactive Hazardous Waste in Non-Hazardous Landfill	Hazardous Waste Landfill	
Client Sample ID				W1-CLAYTON-BH2				
Depth to Top				0.5				
Depth to Bottom								
Date Sampled				26/05/2022				
Sample Type				Soil - ES				
Sample Matrix Code				4A				
Solid Waste Analysis								
pH (pH Units) _D	A-T-031	N	N	8.40	-	>6	-	
ANC to pH 4 (mol/kg) _D	A-T-ANC	N	N		-	to be evaluated	to be evaluated	
ANC to pH 6 (mol/kg) _D	A-T-ANC	N	N		-	to be evaluated	to be evaluated	
Loss on Ignition (%) _D	A-T-030	N	N	15.6	-	-	10	
Total Organic Carbon (%) _D	A-T-032	N	N	14.7	3	5	6	
PAH Sum of 17 (mg/kg) _A	A-T-019	N	N	2380	100	-	-	
Mineral Oil (mg/kg) _{A EH, CU, 1D, AL}	A-T-007	N	N	52	500	-	-	
Sum of 7 PCBs (mg/kg) _A	A-T-004	N	N	<0.007	1	-	-	
Sum of BTEX (mg/kg) _A	A-T-022	N	N	0.04	6	-	-	
Eluate Analysis				10:1	10:1	Limit values for compliance leaching test using BS EN 12457-2 at L/S 10 l/kg (mg/kg)		
				mg/l	mg/kg			
Arsenic	A-T-025	N	N	0.016	0.160	0.5	2	25
Barium	A-T-025	N	N	0.132	1.320	20	100	300
Cadmium	A-T-025	N	N	0.002	0.020	0.04	1	5
Chromium	A-T-025	N	N	<0.001	<0.01	0.5	10	70
Copper	A-T-025	N	N	0.080	0.800	2	50	100
Mercury	A-T-025	N	N	<0.0005	<0.005	0.01	0.2	2
Molybdenum	A-T-025	N	N	0.006	0.060	0.5	10	30
Nickel	A-T-025	N	N	0.004	0.040	0.4	10	40
Lead	A-T-025	N	N	0.213	2.130	0.5	10	50
Antimony	A-T-025	N	N	0.004	0.040	0.06	0.7	5
Selenium	A-T-025	N	N	<0.001	<0.01	0.1	0.5	7
Zinc	A-T-025	N	N	0.136	1.360	4	50	200
Chloride	A-T-026	N	N	28	282	800	15000	25000
Fluoride	A-T-026	N	N	0.1	1.0	10	150	500
Sulphate as SO ₄	A-T-026	N	N	6	57	1000	20000	50000
Total Dissolved Solids	A-T-035	N	N	140	1400	4000	60000	100000
Phenol Index	A-T-050	N	N	<0.01	<0.1	1	-	-
Dissolved Organic Carbon	A-T-032	N	N	<2.0	<200	500	800	1000
Leach Test Information								
pH (pH Units)	A-T-031	N	N	7.6				
Conductivity (µS/cm)	A-T-037			279				
Mass Sample (kg)				0.163				
Dry Matter (%)	A-T-044	N	N	107.5				
Stated acceptance limits are for guidance only and Envirolab cannot be held responsible for any discrepancies with current legislation								

UKAS accredited testing laboratory No. 1668

Name of Client : Envirolab Ltd

Test Certificate No: 212398

Address : Units 7&8, Sandpits Business Park, Mottram Road, Hyde, SK14 3AR

ANALYSIS OF PCDDs and PCDFs

Job Reference: 22/05555

Date of Receipt : 09/06/22

Sample Identifier : 22/05555/1 W1CLBH2ES1 W1-CLAYTON-BH2 0.20m

Date of Analysis : 21/06/22

Sample No: 212398

Date of Report : 28/06/22

Order No: P0749095

Sample Type: Soil

Sample Condition : conforming

Instrument : Thermo DFS

GC Column : DB5

Calibration File : 220622

Test Method : 2002a

Blank : 220620

Sample size: 1

expressed as ng /kg

Congener	Conc	DL	Rec %	Congener	Conc	DL	Rec %
2378-TCDF	9.33	1.67	83	2378-TCDD	*	0.726	110
12378-PCDF	11.4	1.92	90	12378-PCDD	*	2.23	79
23478-PCDF	20.1	2.15	73	123478-HxCDD	6.53	1.67	76
123478-HxCDF	20.9	1.16	84	123678-HxCDD	11.3	1.54	79
123678-HxCDF	16.8	1.17	77	123789-HxCDD	3.99	1.65	
234678-HxCDF	12.9	1.30	68	1234678-HpCDD	56.5	1.97	51
123789-HxCDF	*	1.49	75	OCDD	174	2.02	39
1234678-HpCDF	43.1	1.23	58				
1234789-HpCDF	4.83	1.65	53				
OCDF	55.5	1.43					
Total 2,3,7,8-Furans	195			Total 2,3,7,8-Dioxins	252		
		TEQ ¹	TEQ ²			TEQ ¹	TEQ ²
TEQ (Nato)		22.0	20.1	TEQ (WHO)- Mammals		18.8	15.7
				TEQ (WHO)- Fish		23.2	20.1
				TEQ (WHO)- Birds		40.1	37.0

*	Isomer Not detected
TEQ	Toxic Equivalent Value
TEF	Toxic Equivalent Factor
Conc	Concentration
DL	Detection Value
REC	Recovery

TEQ ¹	Concentration of Non Detected Congeners at Detection Limit
TEQ ²	Concentration of Non Detected Congeners at Zero

Approved by : Mafalda Catarro
Position : Team Leader

Signature : Mafalda Catarro



1668

UKAS accredited testing laboratory No. 1668

Name of Client : Envirolab Ltd

Test Certificate No: 212398

Address : Units 7&8, Sandpits Business Park, Mottram Road, Hyde, SK14 3AR

ANALYSIS OF PCBs

Job Reference: 22/05555

Date of Receipt : 09/06/22

Sample Identifier : 22/05555/1 W1CLBH2ES1 W1-CLAYTON-BH2 0.20m

Date of Analysis : 21/06/22

Sample No: 212398

Date of Report : 28/06/22

Order No: P0749095

Sample Type: Soil

Sample Condition : conforming

Instrument : Premier

GC Column : DB5

Calibration File : 220620

Test Method : 2002

Blank : 220620

Sample size: 1

expressed as ng /kg

Congener	Conc	DL	Rec %
PCB-81	2.93	0.324	109
PCB-77	21.9	0.418	103
PCB-123	6.23	5.65	95
PCB-118	139	5.36	87
PCB-114	*	6.14	91
PCB-105	64.1	4.95	91
PCB-126	11.9	1.71	124
PCB-167	19.5	6.29	95
PCB-156	33.8	6.48	95
PCB-157	*	6.72	97
PCB-169	*	0.708	111
PCB-189	11.4	4.54	89
Total-PCBs	310		
	TEQ1	TEQ2	
TEQ (WHO)- Mammals	1.22	1.20	
TEQ (WHO)- Fish	0.0645	0.0644	
TEQ (WHO)- Birds	2.59	2.59	

* Isomer Not detected
TEQ Toxic Equivalent Value
TEF Toxic Equivalent Factor
Conc Concentration
DL Detection Value
REC Recovery

TEQ¹ Concentration of Non Detected
Congeners at Detection Limit
TEQ² Concentration of Non Detected
Congeners at Zero

Approved by : Mafalda Catarro
Position : Team Leader

Signature : Mafalda Catarro



UKAS accredited testing laboratory No. 1668

Name of Client : Envirolab Ltd

Test Certificate No: 212399

Address : Units 7&8, Sandpits Business Park, Mottram Road, Hyde, SK14 3AR

ANALYSIS OF PCDDs and PCDFs

Job Reference: 22/05555
Sample Identifier : 22/05555/2 W1CLBH2ES2 W1-CLAYTON-BH2 0.50m
Sample No: 212399
Order No: P0749095
Sample Type: Soil
Sample Condition : conforming
Instrument : Thermo DFS
GC Column : DB5
Calibration File : 220616

Date of Receipt : 09/06/22
Date of Analysis : 21/06/22
Date of Report : 28/06/22

Test Method : 2002a
Blank : 220620
Sample size: 1

expressed as ng /kg

Congener	Conc	DL	Rec %	Congener	Conc	DL	Rec %
2378-TCDF	58.9	1.35	73	2378-TCDD	2.52	0.817	75
12378-PCDF	51.5	0.946	66	12378-PCDD	18.1	1.13	58
23478-PCDF	37.3	1.00	57	123478-HxCDD	12.5	0.662	62
123478-HxCDF	52.6	0.634	64	123678-HxCDD	29.4	0.664	65
123678-HxCDF	19.1	0.631	64	123789-HxCDD	22.9	0.631	
234678-HxCDF	11.8	0.680	58	1234678-HpCDD	136	0.714	45
123789-HxCDF	1.47	0.802	56	OCDD	217	1.55	30
1234678-HpCDF	43.7	0.535	49				
1234789-HpCDF	5.19	0.715	45				
OCDF	24.1	1.12					
Total 2,3,7,8-Furans	306			Total 2,3,7,8-Dioxins	438		
		TEQ ¹	TEQ ²		TEQ ¹	TEQ ²	
TEQ (Nato)		55.8	55.8	TEQ (WHO)- Mammals	56.2	56.2	
				TEQ (WHO)- Fish	60.8	60.8	
				TEQ (WHO)- Birds	134	134	

* Isomer Not detected
TEQ Toxic Equivalent Value
TEF Toxic Equivalent Factor
Conc Concentration
DL Detection Value
REC Recovery

TEQ¹ Concentration of Non Detected
 Congeners at Detection Limit
 TEQ² Concentration of Non Detected
 Congeners at Zero

Approved by : Mafalda Catarro
Position : Team Leader

Signature : Mafalda Catarro



UKAS accredited testing laboratory No. 1668

Name of Client : Envirolab Ltd

Test Certificate No: 212399

Address : Units 7&8, Sandpits Business Park, Mottram Road, Hyde, SK14 3AR

ANALYSIS OF PCBs

Job Reference: 22/05555

Date of Receipt : 09/06/22

Sample Identifier : 22/05555/2 W1CLBH2ES2 W1-CLAYTON-BH2 0.50m

Date of Analysis : 21/06/22

Sample No: 212399

Date of Report : 28/06/22

Order No: P0749095

Sample Type: Soil

Sample Condition : conforming

Instrument : Premier

GC Column : DB5

Calibration File : 220627

Test Method : 2002

Blank : 220620

Sample size: 1

expressed as ng /kg

Congener	Conc	DL	Rec %
PCB-81	3.45	0.166	58
PCB-77	27.3	0.112	81
PCB-123	6.51	1.66	94
PCB-118	150	1.61	91
PCB-114	3.41	1.47	101
PCB-105	61.9	1.30	106
PCB-126	8.68	0.593	94
PCB-167	28.2	0.731	83
PCB-156	37.5	0.778	86
PCB-157	11.1	0.798	88
PCB-169	2.67	0.270	75
PCB-189	13.0	1.26	83
Total-PCBs	354		
	TEQ1	TEQ2	
TEQ (WHO)- Mammals	0.961	0.961	
TEQ (WHO)- Fish	0.0495	0.0495	
TEQ (WHO)- Birds	2.59	2.59	

* Isomer Not detected
TEQ Toxic Equivalent Value
TEF Toxic Equivalent Factor
Conc Concentration
DL Detection Value
REC Recovery

TEQ¹ Concentration of Non Detected
Congeners at Detection Limit
TEQ² Concentration of Non Detected
Congeners at Zero

Approved by : Mafalda Catarro
Position : Team Leader

Signature : Mafalda Catarro



UKAS accredited testing laboratory No. 1668

Name of Client : Envirolab Ltd

Test Certificate No: 212400

Address : Units 7&8, Sandpits Business Park, Mottram Road, Hyde, SK14 3AR

ANALYSIS OF PCDDs and PCDFs

Job Reference: 22/05555

Date of Receipt : 09/06/22

Sample Identifier : 22/05555/3 W1CLBH2ES3 W1-CLAYTON-BH2 1.00m

Date of Analysis : 21/06/22

Sample No: 212400

Date of Report : 28/06/22

Order No: P0749095

Sample Type: Soil

Sample Condition : conforming

Instrument : Thermo DFS

GC Column : DB5

Calibration File : 220616

Test Method : 2002a

Blank : 220620

Sample size: 1

expressed as ng /kg

Congener	Conc	DL	Rec %	Congener	Conc	DL	Rec %
2378-TCDF	280	1.36	86	2378-TCDD	8.72	0.987	86
12378-PCDF	428	1.34	82	12378-PCDD	90.5	1.01	78
23478-PCDF	238	1.37	76	123478-HxCDD	76.3	0.713	73
123478-HxCDF	400	0.586	75	123678-HxCDD	318	0.709	74
123678-HxCDF	161	0.584	73	123789-HxCDD	197	0.673	
234678-HxCDF	81.4	0.582	71	1234678-HpCDD	1210	0.701	60
123789-HxCDF	25.0	0.624	76	OCDD	1100	1.01	45
1234678-HpCDF	321	0.425	63				
1234789-HpCDF	57.7	0.493	66				
OCDF	215	0.421					
Total 2,3,7,8-Furans	2210			Total 2,3,7,8-Dioxins	3000		
		TEQ ¹	TEQ ²			TEQ ¹	TEQ ²
TEQ (Nato)		366	366	TEQ (WHO)- Mammals		354	354
				TEQ (WHO)- Fish		369	369
				TEQ (WHO)- Birds		759	759

*	Isomer Not detected
TEQ	Toxic Equivalent Value
TEF	Toxic Equivalent Factor
Conc	Concentration
DL	Detection Value
REC	Recovery

TEQ ¹	Concentration of Non Detected Congeners at Detection Limit
TEQ ²	Concentration of Non Detected Congeners at Zero

Approved by : Mafalda Catarro
Position : Team Leader

Signature : Mafalda Catarro



1668

UKAS accredited testing laboratory No. 1668

Name of Client : Envirolab Ltd

Test Certificate No: 212400

Address : Units 7&8, Sandpits Business Park, Mottram Road, Hyde, SK14 3AR

ANALYSIS OF PCBs

Job Reference: 22/05555

Date of Receipt : 09/06/22

Sample Identifier : 22/05555/3 W1CLBH2ES3 W1-CLAYTON-BH2 1.00m

Date of Analysis : 21/06/22

Sample No: 212400

Date of Report : 28/06/22

Order No: P0749095

Sample Type: Soil

Sample Condition : conforming

Instrument : Premier

GC Column : DB5

Calibration File : 220627

Test Method : 2002

Blank : 220620

Sample size: 1

expressed as ng /kg

Congener	Conc	DL	Rec %
PCB-81	9.05	1.65	73
PCB-77	58.3	0.173	69
PCB-123	16.4	2.50	93
PCB-118	180	2.50	90
PCB-114	9.28	2.16	98
PCB-105	72.7	1.85	106
PCB-126	48.4	0.565	89
PCB-167	59.6	0.958	87
PCB-156	68.7	1.01	91
PCB-157	23.2	1.04	94
PCB-169	10.7	0.525	79
PCB-189	32.2	1.18	88
Total-PCBs	589		
	TEQ1	TEQ2	
TEQ (WHO)- Mammals	5.19	5.19	
TEQ (WHO)- Fish	0.255	0.255	
TEQ (WHO)- Birds	8.70	8.70	

* Isomer Not detected
TEQ Toxic Equivalent Value
TEF Toxic Equivalent Factor
Conc Concentration
DL Detection Value
REC Recovery

TEQ¹ Concentration of Non Detected
Congeners at Detection Limit
TEQ² Concentration of Non Detected
Congeners at Zero

Approved by : Mafalda Catarro
Position : Team Leader

Signature : Mafalda Catarro



UKAS accredited testing laboratory No. 1668

Name of Client : Envirolab Ltd

Test Certificate No: 212401

Address : Units 7&8, Sandpits Business Park, Mottram Road, Hyde, SK14 3AR

ANALYSIS OF PCDDs and PCDFs

Job Reference: 22/05555
Sample Identifier : 22/05555/4 W1CLBH2ES4 W1-CLAYTON-BH2 1.60m
Sample No: 212401
Order No: P0749095
Sample Type: Soil
Sample Condition : conforming
Instrument : Thermo DFS
GC Column : DB5
Calibration File : 220622

Date of Receipt : 09/06/22
Date of Analysis : 21/06/22
Date of Report : 28/06/22

Test Method : 2002a
Blank : 220620
Sample size: 1

expressed as ng /kg

Congener	Conc	DL	Rec %	Congener	Conc	DL	Rec %
2378-TCDF	37.8	1.92	80	2378-TCDD	2.14	0.933	108
12378-PCDF	53.7	2.58	84	12378-PCDD	12.9	3.13	86
23478-PCDF	47.2	2.64	72	123478-HxCDD	13.8	2.56	70
123478-HxCDF	58.7	1.59	75	123678-HxCDD	48.8	2.63	71
123678-HxCDF	25.8	1.59	73	123789-HxCDD	23.4	2.81	
234678-HxCDF	19.4	1.85	60	1234678-HpCDD	190	2.73	44
123789-HxCDF	*	2.01	69	OCDD	321	2.43	30
1234678-HpCDF	78.8	1.30	49				
1234789-HpCDF	7.73	1.84	44				
OCDF	34.7	1.01					
Total 2,3,7,8-Furans	364			Total 2,3,7,8-Dioxins	612		
TEQ (Nato)		TEQ ¹ 61.0	TEQ ² 60.8	TEQ (WHO)- Mammals		TEQ ¹ 56.7	TEQ ² 56.5
				TEQ (WHO)- Fish		62.5	62.3
				TEQ (WHO)- Birds		121	120

* Isomer Not detected
TEQ Toxic Equivalent Value
TEF Toxic Equivalent Factor
Conc Concentration
DL Detection Value
REC Recovery

TEQ¹ Concentration of Non Detected
Congeners at Detection Limit
TEQ² Concentration of Non Detected
Congeners at Zero

Approved by : Mafalda Catarro
Position : Team Leader

Signature : Mafalda Catarro



UKAS accredited testing laboratory No. 1668

Name of Client : Envirolab Ltd

Test Certificate No: 212401

Address : Units 7&8, Sandpits Business Park, Mottram Road, Hyde, SK14 3AR

ANALYSIS OF PCBs

Job Reference: 22/05555

Date of Receipt : 09/06/22

Sample Identifier : 22/05555/4 W1CLBH2ES4 W1-CLAYTON-BH2 1.60m

Date of Analysis : 21/06/22

Sample No: 212401

Date of Report : 28/06/22

Order No: P0749095

Sample Type: Soil

Sample Condition : conforming

Instrument : Premier

GC Column : DB5

Calibration File : 220620

Test Method : 2002

Blank : 220620

Sample size: 1

expressed as ng /kg

Congener	Conc	DL	Rec %
PCB-81	4.81	0.359	108
PCB-77	35.6	0.449	108
PCB-123	8.09	4.60	102
PCB-118	187	4.27	94
PCB-114	*	4.94	98
PCB-105	99.7	4.09	100
PCB-126	12.6	1.31	133
PCB-167	28.6	3.57	92
PCB-156	52.1	4.01	89
PCB-157	14.4	4.18	93
PCB-169	*	0.788	100
PCB-189	20.0	4.61	81
Total-PCBs	463		
	TEQ1	TEQ2	
TEQ (WHO)- Mammals	1.30	1.28	
TEQ (WHO)- Fish	0.0712	0.0712	
TEQ (WHO)- Birds	3.54	3.54	

* Isomer Not detected
TEQ Toxic Equivalent Value
TEF Toxic Equivalent Factor
Conc Concentration
DL Detection Value
REC Recovery

TEQ¹ Concentration of Non Detected
Congeners at Detection Limit
TEQ² Concentration of Non Detected
Congeners at Zero

Approved by : Mafalda Catarro
Position : Team Leader

Signature : Mafalda Catarro



UKAS accredited testing laboratory No. 1668

Name of Client : Envirolab Ltd

Test Certificate No: 212402

Address : Units 7&8, Sandpits Business Park, Mottram Road, Hyde, SK14 3AR

ANALYSIS OF PCDDs and PCDFs

Job Reference: 22/05555

Date of Receipt : 09/06/22

Sample Identifier : 22/05555/5 W1CLBH2ES5 W1-CLAYTON-BH2 2.40m

Date of Analysis : 21/06/22

Sample No: 212402

Date of Report : 28/06/22

Order No: P0749095

Sample Type: Soil

Sample Condition : conforming

Instrument : Thermo DFS

GC Column : DB5

Calibration File : 220622

Test Method : 2002a

Blank : 220620

Sample size: 1

expressed as ng /kg

Congener	Conc	DL	Rec %	Congener	Conc	DL	Rec %
2378-TCDF	37.1	2.25	68	2378-TCDD	3.02	0.869	91
12378-PCDF	69.9	3.18	71	12378-PCDD	14.5	3.66	63
23478-PCDF	63.7	3.44	60	123478-HxCDD	15.4	3.33	55
123478-HxCDF	87.5	2.43	57	123678-HxCDD	32.7	3.24	60
123678-HxCDF	38.6	2.67	53	123789-HxCDD	30.9	3.47	
234678-HxCDF	28.7	2.64	50	1234678-HpCDD	152	2.40	39
123789-HxCDF	11.6	2.98	55	OCDD	178	2.79	30
1234678-HpCDF	104	2.71	36				
1234789-HpCDF	20.8	3.04	38				
OCDF	92.3	1.58					
Total 2,3,7,8-Furans	555			Total 2,3,7,8-Dioxins	427		
		TEQ ¹	TEQ ²			TEQ ¹	TEQ ²
TEQ (Nato)		76.9	76.9	TEQ (WHO)- Mammals		69.8	69.8
				TEQ (WHO)- Fish		81.1	81.1
				TEQ (WHO)- Birds		148	148

*	Isomer Not detected
TEQ	Toxic Equivalent Value
TEF	Toxic Equivalent Factor
Conc	Concentration
DL	Detection Value
REC	Recovery

TEQ ¹	Concentration of Non Detected Congeners at Detection Limit
TEQ ²	Concentration of Non Detected Congeners at Zero

Approved by : Mafalda Catarro
Position : Team Leader

Signature : Mafalda Catarro



1668

UKAS accredited testing laboratory No. 1668

Name of Client : Envirolab Ltd

Test Certificate No: 212402

Address : Units 7&8, Sandpits Business Park, Mottram Road, Hyde, SK14 3AR

ANALYSIS OF PCBs

Job Reference: 22/05555

Date of Receipt : 09/06/22

Sample Identifier : 22/05555/5 W1CLBH2ES5 W1-CLAYTON-BH2 2.40m

Date of Analysis : 21/06/22

Sample No: 212402

Date of Report : 28/06/22

Order No: P0749095

Sample Type: Soil

Sample Condition : conforming

Instrument : Premier

GC Column : DB5

Calibration File : 220620

Test Method : 2002

Blank : 220620

Sample size: 1

expressed as ng /kg

Congener	Conc	DL	Rec %
PCB-81	3.46	0.305	95
PCB-77	15.2	0.350	91
PCB-123	7.30	6.74	95
PCB-118	50.3	6.24	86
PCB-114	*	6.54	96
PCB-105	18.7	6.17	89
PCB-126	15.2	1.83	134
PCB-167	*	4.77	87
PCB-156	38.8	5.34	85
PCB-157	*	5.55	86
PCB-169	*	0.637	89
PCB-189	21.1	4.61	79
Total-PCBs	170		
	TEQ1	TEQ2	
TEQ (WHO)- Mammals	1.55	1.53	
TEQ (WHO)- Fish	0.0801	0.0800	
TEQ (WHO)- Birds	2.64	2.63	

* Isomer Not detected
TEQ Toxic Equivalent Value
TEF Toxic Equivalent Factor
Conc Concentration
DL Detection Value
REC Recovery

TEQ¹ Concentration of Non Detected
Congeners at Detection Limit
TEQ² Concentration of Non Detected
Congeners at Zero

Approved by : Mafalda Catarro
Position : Team Leader

Signature : Mafalda Catarro



UKAS accredited testing laboratory No. 1668

Name of Client : Envirolab Ltd

Test Certificate No: 212403

Address : Units 7&8, Sandpits Business Park, Mottram Road, Hyde, SK14 3AR

ANALYSIS OF PCDDs and PCDFs

Job Reference: 22/05555

Date of Receipt : 09/06/22

Sample Identifier : 22/05555/9 W1CLBH2ES9 W1-CLAYTON-BH2 6.40m

Date of Analysis : 21/06/22

Sample No: 212403

Date of Report : 28/06/22

Order No: P0749095

Sample Type: Soil

Sample Condition : conforming

Instrument : Thermo DFS

GC Column : DB5

Calibration File : 220622

Test Method : 2002a

Blank : 220620

Sample size: 1

expressed as ng /kg

Congener	Conc	DL	Rec %	Congener	Conc	DL	Rec %
2378-TCDF	*	0.909	65	2378-TCDD	*	0.284	97
12378-PCDF	*	0.595	80	12378-PCDD	*	1.31	75
23478-PCDF	*	0.573	71	123478-HxCDD	3.02	0.941	67
123478-HxCDF	*	0.392	71	123678-HxCDD	*	0.966	69
123678-HxCDF	*	0.417	68	123789-HxCDD	1.58	1.03	
234678-HxCDF	*	0.479	57	1234678-HpCDD	*	0.706	53
123789-HxCDF	*	0.506	65	OCDD	41.6	1.50	42
1234678-HpCDF	9.50	0.409	55				
1234789-HpCDF	1.68	0.510	54				
OCDF	14.0	0.683					
Total 2,3,7,8-Furans	25.1			Total 2,3,7,8-Dioxins	46.2		
		TEQ¹	TEQ²			TEQ¹	TEQ²
TEQ (Nato)		2.26	0.628	TEQ (WHO)- Mammals		2.75	0.589
				TEQ (WHO)- Fish		3.79	1.65
				TEQ (WHO)- Birds		3.75	0.427

* Isomer Not detected
TEQ Toxic Equivalent Value
TEF Toxic Equivalent Factor
Conc Concentration
DL Detection Value
REC Recovery

TEQ¹ Concentration of Non Detected
Congeners at Detection Limit
TEQ² Concentration of Non Detected
Congeners at Zero

Approved by : Mafalda Catarro
Position : Team Leader

Signature : Mafalda Catarro



UKAS accredited testing laboratory No. 1668

Name of Client : Envirolab Ltd

Test Certificate No: 212403

Address : Units 7&8, Sandpits Business Park, Mottram Road, Hyde, SK14 3AR

ANALYSIS OF PCBs

Job Reference: 22/05555

Date of Receipt : 09/06/22

Sample Identifier : 22/05555/9 W1CLBH2ES9 W1-CLAYTON-BH2 6.40m

Date of Analysis : 21/06/22

Sample No: 212403

Date of Report : 28/06/22

Order No: P0749095

Sample Type: Soil

Sample Condition : conforming

Instrument : Premier

GC Column : DB5

Calibration File : 220620

Test Method : 2002

Blank : 220620

Sample size: 1

expressed as ng /kg

Congener	Conc	DL	Rec %
PCB-81	*	0.156	101
PCB-77	3.38	0.210	91
PCB-123	*	5.16	99
PCB-118	*	4.85	93
PCB-114	*	5.07	100
PCB-105	*	4.68	93
PCB-126	*	1.60	135
PCB-167	*	4.00	87
PCB-156	*	4.14	88
PCB-157	*	4.50	87
PCB-169	*	0.148	87
PCB-189	*	5.42	75
Total-PCBs	3.38		
		TEQ1	TEQ2
TEQ (WHO)- Mammals		0.166	0.0003
TEQ (WHO)- Fish		0.0086	0.0003
TEQ (WHO)- Birds		0.347	0.169

* Isomer Not detected
TEQ Toxic Equivalent Value
TEF Toxic Equivalent Factor
Conc Concentration
DL Detection Value
REC Recovery

TEQ¹ Concentration of Non Detected
Congeners at Detection Limit
TEQ² Concentration of Non Detected
Congeners at Zero

Approved by : Mafalda Catarro
Position : Team Leader

Signature : Mafalda Catarro



UKAS accredited testing laboratory No. 1668

Name of Client : Envirolab Ltd

Test Certificate No: 212404

Address : Units 7&8, Sandpits Business Park, Mottram Road, Hyde, SK14 3AR

ANALYSIS OF PCDDs and PCDFs

Job Reference: 22/05555
Sample Identifier : 22/05555/12 W1CLBH2ES12 W1-CLAYTON-BH2 10.20m
Sample No: 212404
Order No: P0749095
Sample Type: Soil
Sample Condition : conforming
Instrument : Thermo DFS
GC Column : DB5
Calibration File : 220622

Date of Receipt : 09/06/22
Date of Analysis : 21/06/22
Date of Report : 28/06/22

Test Method : 2002a
Blank : 220620
Sample size: 1

expressed as ng /kg

Congener	Conc	DL	Rec %	Congener	Conc	DL	Rec %
2378-TCDF	*	0.558	86	2378-TCDD	*	0.152	114
12378-PCDF	*	0.0956	101	12378-PCDD	*	0.218	97
23478-PCDF	*	0.102	90	123478-HxCDD	*	0.157	82
123478-HxCDF	*	0.0915	85	123678-HxCDD	*	0.168	82
123678-HxCDF	*	0.0888	85	123789-HxCDD	*	0.180	
234678-HxCDF	*	0.0886	80	1234678-HpCDD	*	0.289	70
123789-HxCDF	*	0.105	83	OCDD	14.6	0.625	68
1234678-HpCDF	*	0.168	72				
1234789-HpCDF	*	0.204	73				
OCDF	3.44	0.243					
Total 2,3,7,8-Furans	3.44			Total 2,3,7,8-Dioxins	14.6		
		TEQ ¹	TEQ ²			TEQ ¹	TEQ ²
TEQ (Nato)		0.485	0.0181	TEQ (WHO)- Mammals		0.559	0.0054
				TEQ (WHO)- Fish		0.579	0.0018
				TEQ (WHO)- Birds		1.11	0.0018

* Isomer Not detected
 TEQ Toxic Equivalent Value
 TEF Toxic Equivalent Factor
 Conc Concentration
 DL Detection Value
 REC Recovery

TEQ¹ Concentration of Non Detected
 Congeners at Detection Limit
 TEQ² Concentration of Non Detected
 Congeners at Zero

Approved by : Mafalda Catarro
Position : Team Leader

Signature : Mafalda Catarro



UKAS accredited testing laboratory No. 1668

Name of Client : Envirolab Ltd

Test Certificate No: 212404

Address : Units 7&8, Sandpits Business Park, Mottram Road, Hyde, SK14 3AR

ANALYSIS OF PCBs

Job Reference: 22/05555

Date of Receipt : 09/06/22

Sample Identifier : 22/05555/12 W1CLBH2ES12 W1-CLAYTON-BH2 10.20m

Date of Analysis : 21/06/22

Sample No: 212404

Date of Report : 28/06/22

Order No: P0749095

Sample Type: Soil

Sample Condition : conforming

Instrument : Premier

GC Column : DB5

Calibration File : 220620

Test Method : 2002

Blank : 220620

Sample size: 1

expressed as ng /kg

Congener	Conc	DL	Rec %
PCB-81	*	0.135	106
PCB-77	0.496	0.162	102
PCB-123	*	4.71	78
PCB-118	*	4.52	70
PCB-114	*	4.58	80
PCB-105	*	4.38	71
PCB-126	*	1.16	135
PCB-167	*	4.27	73
PCB-156	*	4.31	74
PCB-157	*	4.56	74
PCB-169	*	0.112	101
PCB-189	*	6.19	68
Total-PCBs	0.496		
		TEQ1	TEQ2
TEQ (WHO)- Mammals		0.121	0.0000
TEQ (WHO)- Fish		0.0061	0.0000
TEQ (WHO)- Birds		0.156	0.0248

* Isomer Not detected
TEQ Toxic Equivalent Value
TEF Toxic Equivalent Factor
Conc Concentration
DL Detection Value
REC Recovery

TEQ¹ Concentration of Non Detected
Congeners at Detection Limit
TEQ² Concentration of Non Detected
Congeners at Zero

Approved by : Mafalda Catarro
Position : Team Leader

Signature : Mafalda Catarro



Appendix 2

2 Geotechnical Testing



For the attention of TRU Testing

Project Name	TRU West SIGI	Schedule received	2022-06-21
Project Number	BAZ.322Q-26	Samples received	2022-05-05
Certificate No:	322Q-W1B-MVL1-Grip 5-W1-CLAYTON-BH2-20220621	Testing commenced	2022-08-10
Client:	TRU West Alliance	Report issue date	2022-08-25

Test Name	Quantity	UKAS Accredited
K1.1 - Moisture content	7	UKAS
K1.2 - Liquid limit, plastic limit and plasticity index	2	UKAS
K1.9 - Particle size distribution by wet sieving	5	UKAS
K1.12 - Sedimentation by hydrometer	5	UKAS

Approved:

Jack Ross
Laboratory Technical Manager

Paul



PARTICLE SIZE DISTRIBUTION

Job Ref

322Q-26

Borehole/Pit No.

W1-CLAYTON-BH2

Site Name

TRU West SIGI

Sample No.

WA1026508

Soil Description

Brown ashy gravelly SAND

Depth, m

1.20

Specimen Reference

2

Specimen Depth

m

Sample Type

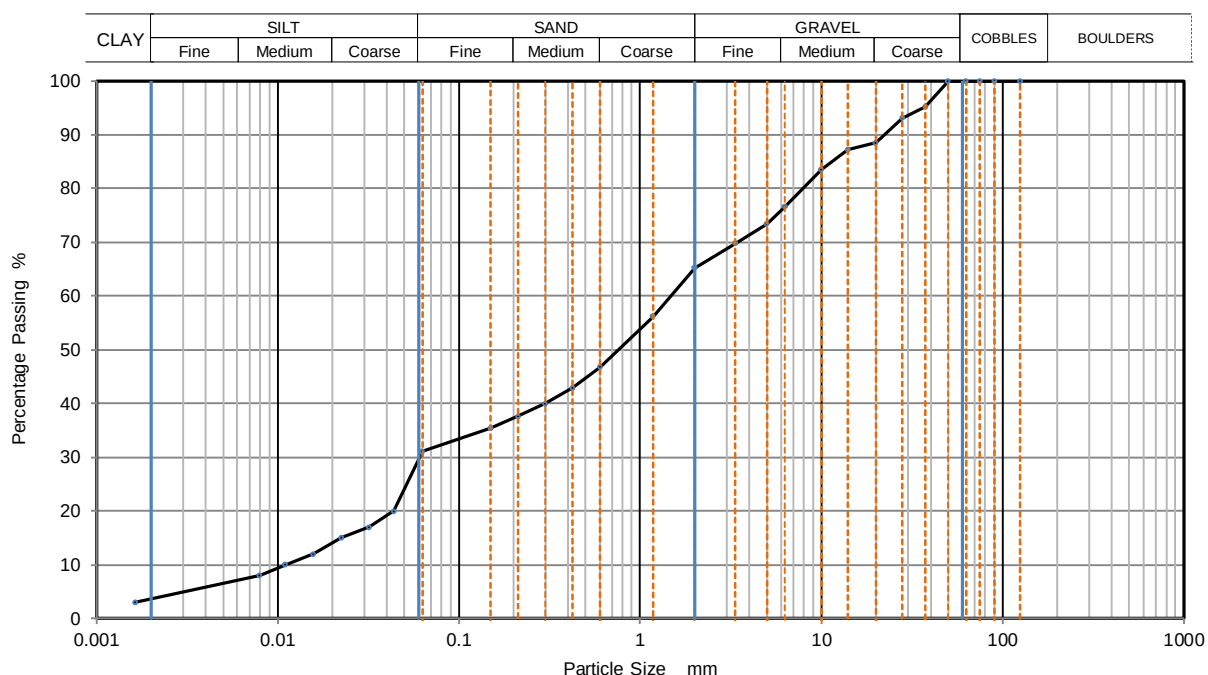
B

Test Method

BS1377:Part 2:1990, clauses 9.2 and 9.5

KeyLAB ID

WA1026508



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100	0.0437	20
90	100	0.0321	17
75	100	0.0225	15
63	100	0.0157	12
50	100	0.0110	10
37.5	95	0.0080	8
28	93	0.0016	3
20	89		
14	87		
10	84		
6.3	77		
5	73		
3.35	70		
2	65		
1.18	56		
0.6	47	Particle density (assumed) 2.67 Mg/m3	
0.425	43		
0.3	40		
0.212	38		
0.15	35		
0.063	31		

Dry Mass of sample, g.

4702

Sample Proportions	% dry mass
Very coarse	0
Gravel	35
Sand	34
Silt	28
Clay	4

Grading Analysis	
D100	mm
D60	mm
D30	mm
D10	mm
Uniformity Coefficient	130
Curvature Coefficient	0.22

Remarks

Preparation and testing in accordance with BS1377 unless noted below



PARTICLE SIZE DISTRIBUTION

Job Ref

322Q-26

Borehole/Pit No.

W1-CLAYTON-BH2

Site Name

TRU West SIGI

Sample No.

WA1026511

Soil Description

Brown sandy gravelly CLAY

Depth, m

2.00

Specimen Reference

2

Specimen Depth

m

Sample Type

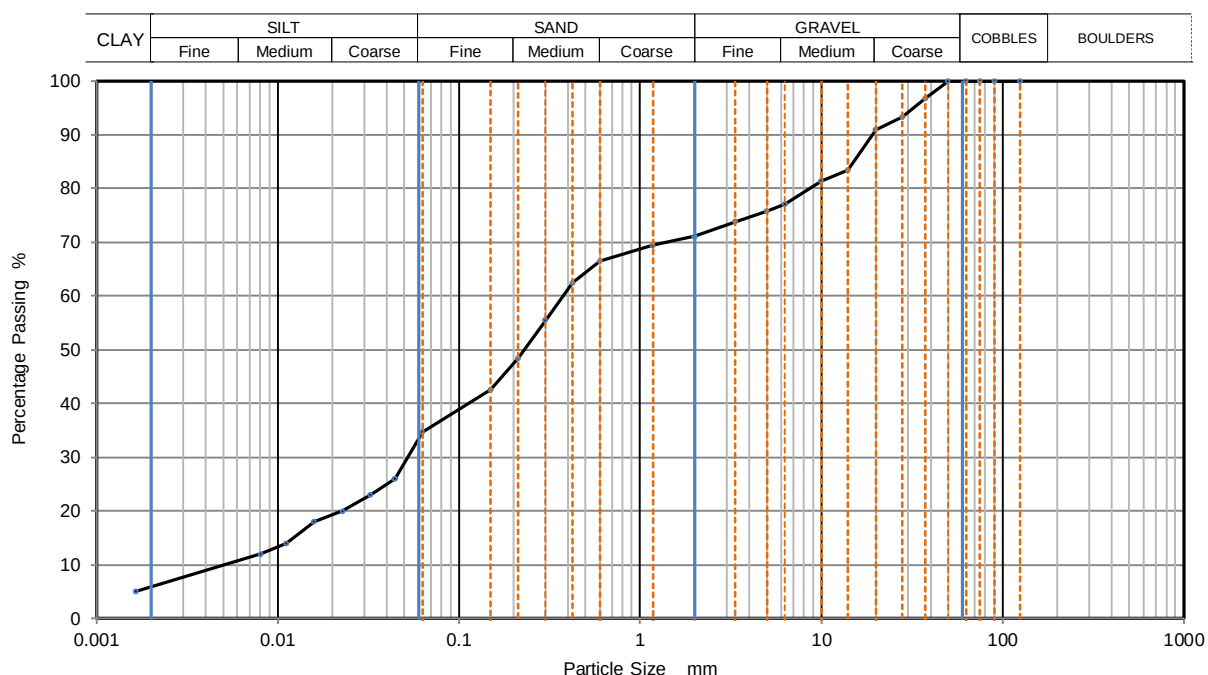
B

Test Method

BS1377:Part 2:1990, clauses 9.2 and 9.5

KeyLAB ID

WA1026511



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100	0.0444	26
90	100	0.0326	23
75	100	0.0228	20
63	100	0.0160	18
50	100	0.0112	14
37.5	97	0.0081	12
28	93	0.0017	5
20	91		
14	83		
10	81		
6.3	77		
5	76		
3.35	74		
2	71		
1.18	69		
0.6	67	Particle density (assumed) 2.67 Mg/m ³	
0.425	62		
0.3	56		
0.212	48		
0.15	43		
0.063	35		

Dry Mass of sample, g.

4877

Sample Proportions

% dry mass

Very coarse	0
Gravel	29
Sand	36
Silt	28
Clay	6

Grading Analysis

D100	mm	
D60	mm	0.377
D30	mm	0.0517
D10	mm	0.00488
Uniformity Coefficient		77
Curvature Coefficient		1.5

Remarks

Preparation and testing in accordance with BS1377 unless noted below



PARTICLE SIZE DISTRIBUTION

Job Ref

322Q-26

Borehole/Pit No.

W1-CLAYTON-BH2

Site Name

TRU West SIGI

Sample No.

WA1026517

Soil Description

Brown gravelly sandy CLAY + COBBLE

Depth, m

4.00

Specimen Reference

2

Specimen Depth

m

Sample Type

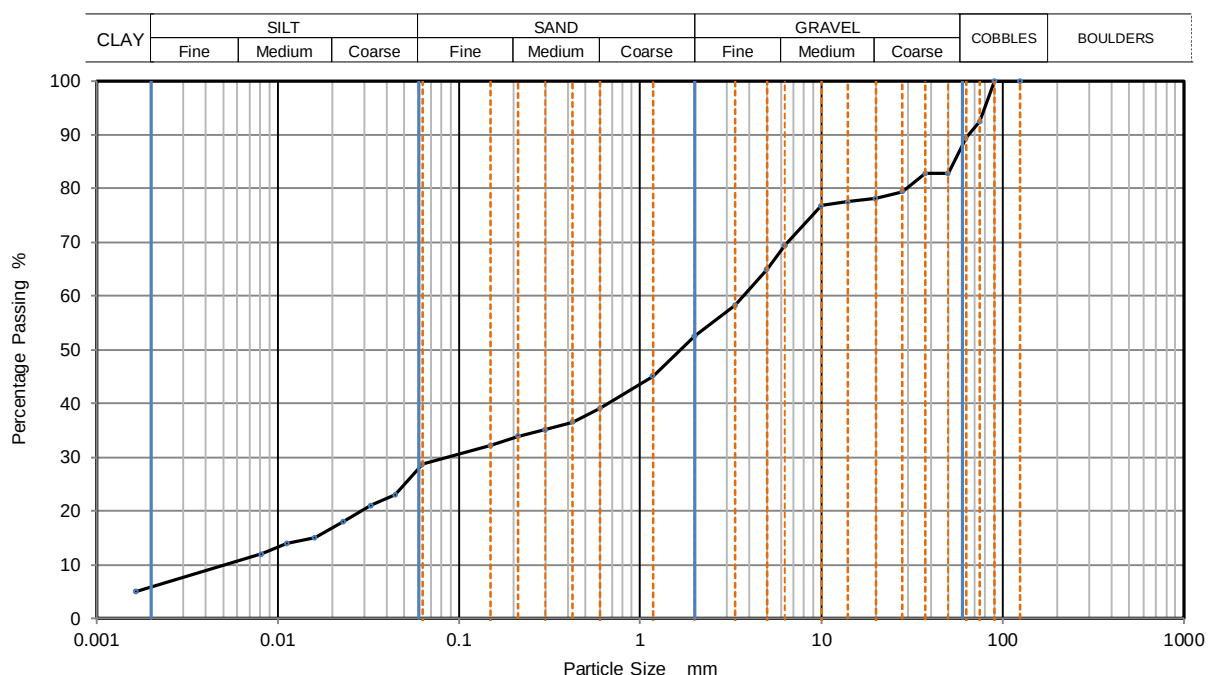
B

Test Method

BS1377:Part 2:1990, clauses 9.2 and 9.5

KeyLAB ID

WA1026517



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100	0.0448	23
90	100	0.0329	21
75	92	0.0230	18
63	89	0.0161	15
50	83	0.0113	14
37.5	83	0.0082	12
28	79	0.0017	5
20	78		
14	78		
10	77		
6.3	69		
5	65		
3.35	58		
2	53		
1.18	45		
0.6	39	Particle density (assumed) 2.67 Mg/m3	
0.425	37		
0.3	35		
0.212	34		
0.15	32		
0.063	29		

Dry Mass of sample, g.

9780

Sample Proportions

% dry mass

Very coarse	11
Gravel	37
Sand	24
Silt	23
Clay	6

Grading Analysis

D100	mm	
D60	mm	3.72
D30	mm	0.0868
D10	mm	0.0053
Uniformity Coefficient		700
Curvature Coefficient		0.38

Remarks

Preparation and testing in accordance with BS1377 unless noted below



PARTICLE SIZE DISTRIBUTION

Job Ref

322Q-26

Borehole/Pit No.

W1-CLAYTON-BH2

Site Name

TRU West SIGI

Sample No.

WA1026523

Soil Description

Brown sandy gravelly CLAY + COBBLES

Depth, m

7.00

Specimen Reference

2

Specimen Depth

m

Sample Type

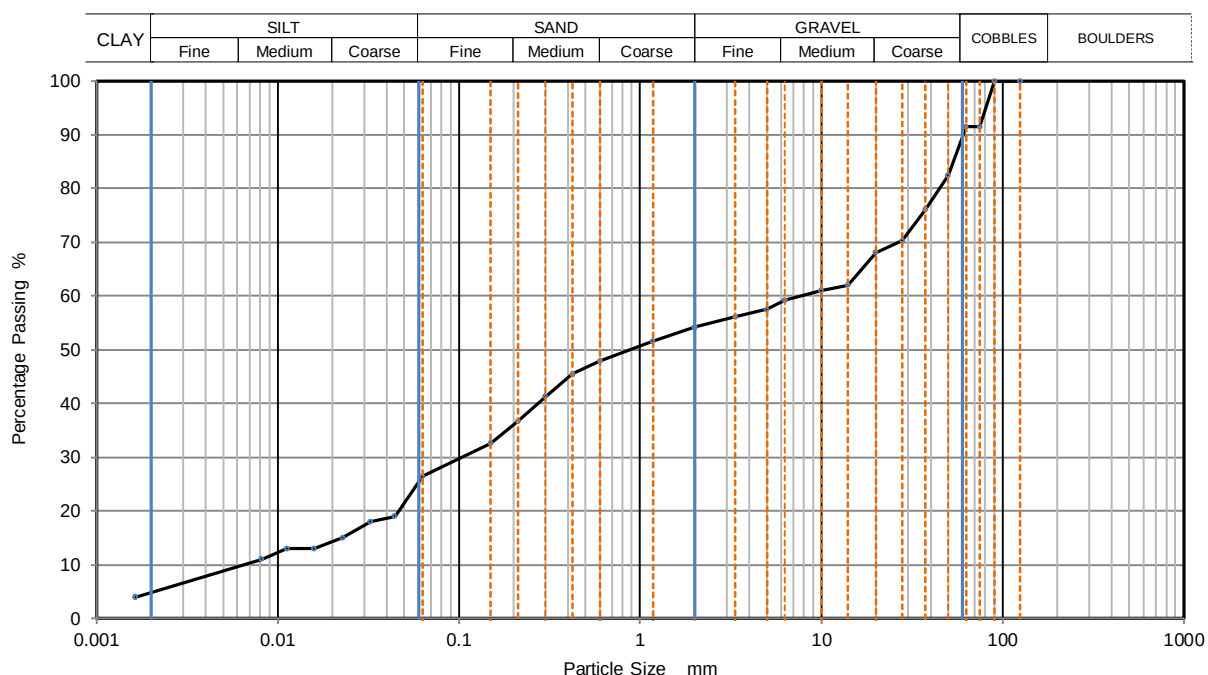
B

Test Method

BS1377:Part 2:1990, clauses 9.2 and 9.5

KeyLAB ID

WA1026523



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100	0.0442	19
90	100	0.0326	18
75	92	0.0228	15
63	92	0.0160	13
50	83	0.0113	13
37.5	76	0.0082	11
28	70	0.0016	4
20	68		
14	62		
10	61		
6.3	59		
5	58		
3.35	56		
2	54		
1.18	52		
0.6	48	Particle density (assumed) 2.67 Mg/m3	
0.425	46		
0.3	41		
0.212	37		
0.15	33		
0.063	26		

Dry Mass of sample, g.

5869

Sample Proportions

% dry mass

Very coarse	9
Gravel	37
Sand	28
Silt	21
Clay	5

Grading Analysis

D100	mm	
D60	mm	7.74
D30	mm	0.104
D10	mm	0.00652
Uniformity Coefficient		1200
Curvature Coefficient		0.22

Remarks

Preparation and testing in accordance with BS1377 unless noted below



PARTICLE SIZE DISTRIBUTION

Job Ref

322Q-26

Borehole/Pit No.

W1-CLAYTON-BH2

Site Name

TRU West SIGI

Sample No.

WA1026529

Soil Description

Brown gravelly sandy CLAY

Depth, m

10.00

Specimen Reference

2

Specimen Depth

m

Sample Type

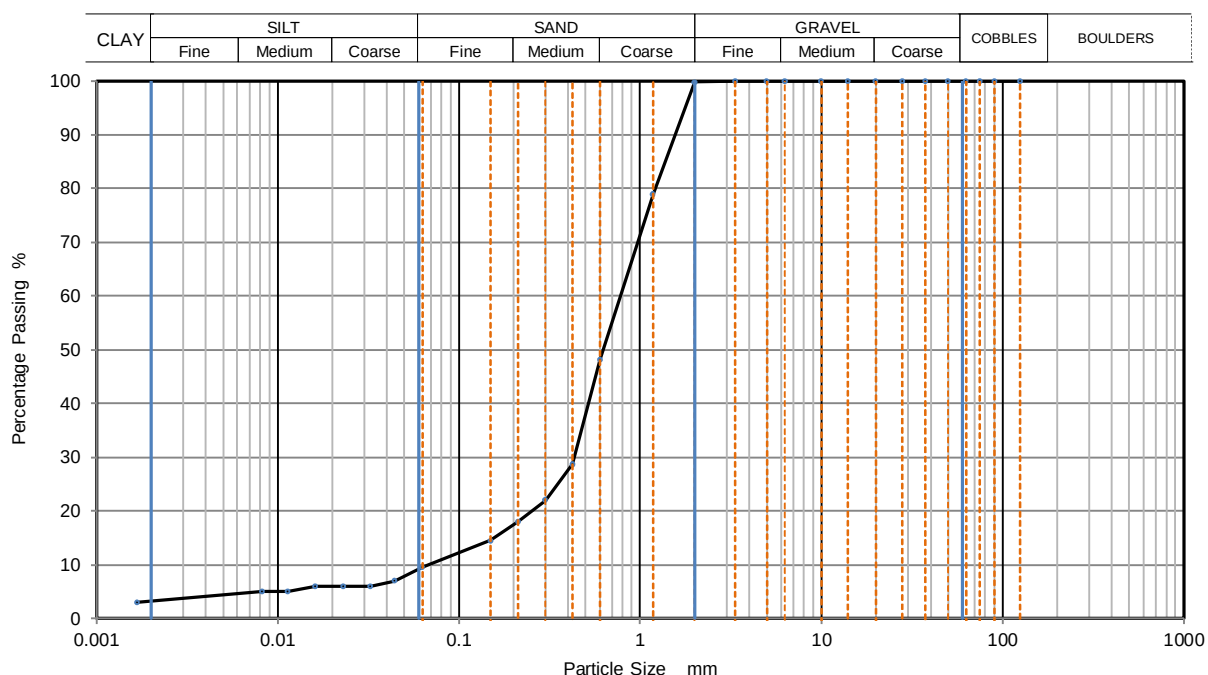
B

Test Method

BS1377:Part 2:1990, clauses 9.2 and 9.5

KeyLAB ID

WA1026529



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100	0.0441	7
90	100	0.0326	6
75	100	0.0230	6
63	100	0.0162	6
50	100	0.0114	5
37.5	100	0.0083	5
28	100	0.0017	3
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	79		
0.6	48	Particle density (assumed) 2.67 Mg/m3	
0.425	29		
0.3	22		
0.212	18		
0.15	15		
0.063	10		

Dry Mass of sample, g.

1981

Sample Proportions	% dry mass
Very coarse	0
Gravel	0
Sand	90
Silt	7
Clay	3

Grading Analysis	
D100	mm
D60	mm
D30	mm
D10	mm
Uniformity Coefficient	11
Curvature Coefficient	3.5

Remarks

Preparation and testing in accordance with BS1377 unless noted below



2183

Final Report

Report No.:	22-29577-1		
Initial Date of Issue:	08-Aug-2022		
Client	BAM Ritchies		
Client Address:	Glasgow Road Kilsyth Glasgow Lanarkshire G65 9BL		
Contact(s):	Jack Ross Kevin Jack		
Project	322Q-26 TRU West SIGI		
Quotation No.:		Date Received:	04-Aug-2022
Order No.:	RIT 276 201 429	Date Instructed:	04-Aug-2022
No. of Samples:	3		
Turnaround (Wkdays):	5	Results Due:	10-Aug-2022
Date Approved:	08-Aug-2022		
Approved By:			
Details:	Stuart Henderson, Technical Manager		

Results - Soil

Project: 322Q-26 TRU West SIGI

Client: BAM Ritchies	Chemtest Job No.:				22-29577	22-29577	22-29577
Quotation No.:	Chemtest Sample ID.:				1481232	1481233	1481234
Order No.: RIT 276 201 429	Client Sample Ref.:				WA1026501	WA1026506	WA1026511
	Client Sample ID.:				WA1026501	WA1026506	WA1026511
	Sample Location:				W1-CLAYTON-BH2	W1-CLAYTON-BH2	W1-CLAYTON-BH2
	Sample Type:				SOIL	SOIL	SOIL
	Top Depth (m):				0.20	1.00	2.00
	Bottom Depth (m):						2.45
Determinand	Accred.	SOP	Units	LOD			
Moisture	N	2030	%	0.020	7.3	15	15
pH (2.5:1)	N	2010		4.0	[A] 8.3	[A] 9.4	[A] 8.9
Sulphate (2:1 Water Soluble) as SO ₄	U	2120	g/l	0.010	[A] 0.23	[A] 0.045	[A] 0.054
Total Sulphur	U	2175	%	0.010	[A] 0.29	[A] 0.42	[A] 0.14
Sulphate (Acid Soluble)	U	2430	%	0.010	[A] 0.046	[A] 0.12	[A] 0.065

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:
1481232	WA1026501	WA1026501	W1-CLAYTON-BH2		A	Plastic Tub 1000g
1481233	WA1026506	WA1026506	W1-CLAYTON-BH2		A	Plastic Tub 1000g
1481234	WA1026511	WA1026511	W1-CLAYTON-BH2		A	Plastic Tub 1000g

Test Methods

SOP	Title	Parameters included	Method summary
2010	pH Value of Soils	pH	pH Meter
2030	Moisture and Stone Content of Soils(Requirement of MCERTS)	Moisture content	Determination of moisture content of soil as a percentage of its as received mass obtained at <37°C.
2040	Soil Description(Requirement of MCERTS)	Soil description	As received soil is described based upon BS5930
2120	Water Soluble Boron, Sulphate, Magnesium & Chromium	Boron; Sulphate; Magnesium; Chromium	Aqueous extraction / ICP-OES
2175	Total Sulphur in Soils	Total Sulphur	Determined by high temperature combustion under oxygen, using an Eltra elemental analyser.
2430	Total Sulphate in soils	Total Sulphate	Acid digestion followed by determination of sulphate in extract by ICP-OES.

Report Information

Key

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

Comments or interpretations are beyond the scope of UKAS accreditation

The results relate only to the items tested

Uncertainty of measurement for the determinands tested are available upon request

None of the results in this report have been recovery corrected

All results are expressed on a dry weight basis

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

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

All Asbestos testing is performed at the indicated laboratory

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

Sample Deviation Codes

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

Sample Retention and Disposal

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

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

Charges may apply to extended sample storage

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

customerservices@chemtest.com