

Solum House
Unit 1 Elliott Court
St Johns Road
Meadowfield
Durham
DH7 7PN

Tel: (0191) 378 6380
Fax: (0191) 378 0494

e-mail: admin@arc-environmental.com
www.arc-environmental.com



GROUND INVESTIGATION REPORT (FACTUAL)

VISTRY PARTNERSHIPS YORKSHIRE PROPOSED RESIDENTIAL DEVELOPMENT HOLLINGWORTH GATE LITTLEBOROUGH

ARC Project No: 21-763

Prepared By:

Matt Bradford

A handwritten signature in blue ink, appearing to read 'M Bradford'.

Date:

20/12/21

Approved By:

John Ditchburn

A handwritten signature in blue ink, appearing to read 'J.Ditchburn'.

Date:

20/12/21

The information and/or advice contained in this Factual Report is based solely on, and is limited to, the boundaries of the site, the immediate area around the site, and the historical use(s) unless otherwise stated. This 'Report' has been prepared in order to collate information relating to the physical, environmental and industrial setting of the site, and to highlight, where possible, the likely problems that might be encountered when considering the future development of this site for the proposed end use. All comments, opinions, diagrams, cross sections and/or sketches contained within the report, and/or any configuration of the findings is conjectural and given for guidance only and confirmation of the anticipated ground conditions should be considered before development proceeds. Agreement for the use or copying of this report by any Third Party must be obtained in writing from Arc Environmental Limited (ARC). If a change in the proposed land use is envisaged, then a reassessment of the site should be carried out.

CONTENTS

1.0 INTRODUCTION	Page 3
2.0 SITE DETAILS	Page 3
3.0 SCOPE OF WORKS	Page 3
4.0 GROUND CONDITIONS	Page 4
4.1 – Soil Profile	Page 4
4.2 – Groundwater	Page 4
5.0 INSITU TESTING	Page 4
5.1 – Insitu Hand Shear Vane Tests	Page 4
5.2 – Insitu Standard Penetration Tests	Page 4
5.3 – Insitu Gas & Groundwater Monitoring	Page 4
6.0 LABORATORY TESTING	Page 5
6.1 – Geotechnical Testing	Page 5
7.0 OBSERVATIONS	Page 5
Appendix I Investigation Location Plan	
Appendix II Borehole and Trial Pit Record Sheets	
Appendix III Laboratory Results (Geotechnical)	
Appendix IV Insitu Testing Site Data (Gas & Groundwater Monitoring Summary Sheet)	

1.0 Introduction

December 2021

As requested by Vistry Partnerships Yorkshire, ground investigation works have been carried out across a site at Hollingworth Gate in Littleborough where it is proposed to develop residential properties with associated gardens, soft landscaping and access roads.

The intrusive investigation works comprised seven cable percussive boreholes (CP1 to CP7) and five dynamic sampling boreholes (MW1 to MW5) including combined gas and groundwater monitoring standpipes. The fieldworks also included forty mechanically excavated trial pits (TP01 to TP41 – Excluding TP39 owing to the proximity of this position to a badger sett) The positions of all the investigation locations can be seen on a copy of the Borehole and Trial Pit Location Plan, a copy of which can be found in Appendix I. The locations of all the investigation positions were provided by Vistry Partnerships Yorkshire and Eastwood & Partners Consulting Engineers prior to attending site and were undertaken to confirm foundation depths across the site.

2.0 Site Details

Table 2.1

Site Name:	Proposed Residential Development, Hollingworth Gate, Littleborough.
OS Grid References:	393353, 415691 (central part of the site)
Description of Location:	Rough open land with several areas of trees and vegetation.
General Site Boundaries:	N = Canal, E = B6225, S & W = Open farmland.
Site Setting:	Site is situated in a rural setting to the south of Littleborough Town Centre.

3.0 Scope of Works

Table 3.1

Client:	Vistry Partnerships North.
Consulting Engineers:	Eastwood & Partners.
Project Type:	Proposed Residential Development.
Investigation Location Plan:	See Appendix I
Intrusive Investigation Works:	7 no. cable percussive boreholes (CP1 to CP7). 5 no. dynamic sampling boreholes (MW1 to MW5). 12 no. combined gas and groundwater monitoring standpipes (CP1 to CP7 & MW1 to MW5). 40 no. mechanically excavated trial pits (TP01 to TP41 (Excluding TP39 owing to the proximity of this position to a badger sett)).
Laboratory Testing:	Geotechnical.
Reporting:	Factual only.
Comments:	Works were carried out in accordance with BS5930:2015+A1:2020, BS10175 Investigation of Potentially Contaminated Sites – Code of Practice and subsequent laboratory testing in accordance with BS1377-1:2016 and BS EN ISO 14688/2:2018.

The information contained in this report is limited to the areas of the site, as indicated on the Investigation Location Plan shown in Appendix I, and to those areas accessible during the ground investigation. The depths of strata on the record sheets are recorded from current ground levels. A level and co-ordinates survey of each of the exploratory positions was completed and is included on the individual borehole and trial pit logs.

No desk top study or walk over survey was requested or undertaken by ARC and therefore when considering the full scope of the development any features and / or issues not specifically mentioned in this report cannot be assumed to have been covered.

4.0 Ground Conditions

4.1 Soil Profile:-

For an accurate description of the ground conditions encountered at each investigation position, reference should be made to the borehole and trial pit record sheets in Appendix II.

No visual or olfactory evidence of fuel/oil type contamination was noted within the borehole and trial pit locations across the site.

4.2 Groundwater:-

Information relating to water seepages, strikes and standing levels can be found summarised on the borehole and trial pit record sheets in Appendix II.

5.0 Insitu Testing

5.1 Insitu Hand Shear Vane Tests:-

Insitu hand vane tests were carried out using a portable Controls Testing Limited (upper limit 120kN/m²) insitu hand vane tester on the natural clayey soils encountered in the trial pits. The insitu hand vane tester takes direct readings of shear strength. Three vane sizes allow for the direct determination of undrained shear strength of extremely low to high strength clays. The peak vane value is determined by a calibrated scale ring built into the head assembly. The cross handle or dial is used both to push the vane to the desired test depth and apply the shearing torque. A series of tests were carried out with the average results obtained recorded on the graphic trial pit record sheets in Appendix II.

5.2 Insitu Standard Penetration Tests:-

Insitu standard penetration tests were carried out, at regular intervals within the cable percussive boreholes and dynamic sampling boreholes utilising either a standard split spoon sampler (S) in order to determine the relative density of the materials tested. The results are shown as 'N' values on the graphic cable percussive borehole and dynamic sampling borehole record sheets, adjacent to the appropriate sample level in Appendix II.

5.3 Insitu Gas & Groundwater Monitoring: -

Ground gas/vapour & water monitoring standpipes were installed in CP1 to CP7 & MW1 to MW5 to check for the possible presence of ground gas originating from below this site and/or migrating from adjacent sites and to monitor groundwater levels.

A standard 50mm diameter HDPE standpipe, with gravel and geo-wrap surround, bentonite seal, gas valve cap and security cover, were installed. The borehole installation details are presented graphically on the cable percussive and dynamic sampling borehole logs in Appendix II.

The water observations noted during the drilling of the boreholes are presented both on the borehole record sheets within Appendix II and on the Gas and Groundwater Monitoring Summary Sheets in Appendix IV.

Ground gas and water monitoring was completed using a Gas Data gas analyser with integral flow meter and a Geotechnical Instruments electronic dipmeter. A summary of the results for the visits compared with the 'inert' background gas levels are presented on the Gas and Groundwater Monitoring Summary Sheets in Appendix IV.

A further 4 monitoring visits have been programmed and the final results will be issued as an addendum letter on completion.

6.0 Laboratory Testing

All geotechnical testing was carried out in accordance with BS1377:1990:Parts 1-9 unless otherwise stated. Ground contamination screening was undertaken by a suitably experienced and qualified laboratory (UKAS & MCERTS certification enclosed). All laboratory testing was specified by Vistry Partnerships Yorkshire and Eastwood & Partners Consulting Engineers.

6.1 Geotechnical Testing: -

Representative samples of the soils encountered were chosen by Vistry Partnerships Yorkshire and Eastwood & Partners Consulting Engineers for a range of geotechnical testing as follows:-

- Moisture Content (14 no. soil samples)
- Liquid and Plastic Limits (14 no. soil samples)

The full catalogue of testing results (Ian Farmer Associates Report reference 2280802/1) and be found in Appendix III.

7.0 Observations

The existing slope that is present on the south east margin of the site appears generally stable with mature vegetation and trees present. From the trial pits undertaken on the slope (TP40 & TP41), stiff natural clays were recorded below the initial made ground deposits. It is understood that no proposed development works will be undertaken at the top of the slope. However, there are proposals to develop buildings on and at the base of the slope that will require measures to prevent slope future failure. Retaining walls will be required to adequately stabilise the slope during and on completion of the development works. It should be noted that regrading / stabilisation of the slope may be required to ensure long term stability of this feature. Furthermore, excessive development / trafficking should not be undertaken at the toe of the slope

END OF REPORT

APPENDIX I

Investigation Location Plan



ARC ENVIRONMENTAL LTD
Solum House
Unit 1 Elliott Court
St. John's Road
Meadowfield
Durham, DH7 8PN
Tel: (0191) 378 6380
e-mail: admin@arc-environmental.com
web: www.arc-environmental.com

The contractor shall check all dimensions on site prior to commencement of works. No dimensions to be scaled off this drawing.
© Copyright Reserved

LEGEND	
	APPROXIMATE SITE BOUNDARY
	PREVIOUS BOREHOLE POSITION
	PREVIOUS TRIAL PIT POSITION
	ARC ENVIRONMENTAL LTD TRIAL PIT POSITION
	ARC ENVIRONMENTAL LTD WINDOWLESS SAMPLING BOREHOLE
	ARC ENVIRONMENTAL LTD MONITORING WELL

rev.	date	amendments	drawn	checked

Client:
VISTRY PARTNERSHIPS YORKSHIRE

Project Title:
Proposed Residential Development
Hollingworth Gate
Littleborough

Drawing Title:
Exploratory Hole Location Plan

Scale: at A1:
As Shown

Date:
08.11.21

Drawn by:
P.D

Approved by:
M.P.B

Job Ref:
21-763

Dwg no:
—

Rev:
—

APPENDIX II

Borehole and Trial Pit Record Sheets



Solum House, Unit 1 Elliott Court
St Johns Road, Meadowfield
Durham, DH7 8PN
Telephone: 01913786380

BOREHOLE LOG

Project Hollingsworth Gate, Littleborough				BOREHOLE No CP1	
Job No 21-763	Date 01-11-21	Ground Level (m) 153.26	Co-Ordinates () E 393,439.5 N 415,778.6		
Contractor Arc Environmental Limited				Sheet 1 of 1	

SAMPLES & TESTS			Water	STRATA				Geology	Instrument/ Backfill
Depth	Type No	Test Result		Reduced Level	Legend	Depth (Thickness)	DESCRIPTION		
0.00-1.00	B						Vegetation overlying dense and very dense light brown sandy slightly clayey gravel intermixed with concrete, sandstone and cobbles. Metal noted (MADE GROUND).		
1.50-1.80	B					(3.00)			
1.50-1.80	SPT	72 Blows							
2.00-2.20	B								
2.00-2.20	SPT	75 Blows							
3.00-3.45	B			150.26		3.00			
3.00-3.45	SPT	N=35				(1.10)	Medium dense becoming dense and very dense light brown SANDSTONE (LOWER COAL MEASURES).		
4.00-4.10	B			149.16		4.10			
4.00-4.10	SPT	75 Blows					Borehole terminated at 4.10m due to refusal.		

Boring Progress and Water Observations						Chiselling			Water Added		GENERAL REMARKS
Date	Time	Depth	Depth	Casing Dia. mm	Water Dpt	From	To	Hours	From	To	
						0	3	4			Borehole remained dry on completion
All dimensions in metres Scale 1:62.5			Client Vistry Partnerships Yorkshire			Method/ Plant Used Cable Percussive			Logged By MH		

AGS3 UK BH LOGS 21-763.GPJ AGS3 ALL GDT 8/11/21



Solum House, Unit 1 Elliott Court
St Johns Road, Meadowfield
Durham, DH7 8PN
Telephone: 01913786380

BOREHOLE LOG

Project Hollingsworth Gate, Littleborough				BOREHOLE No CP2	
Job No 21-763	Date 04-11-21	Ground Level (m) 153.42	Co-Ordinates () E 393,413.2 N 415,713.4		
Contractor Arc Environmental Limited				Sheet 1 of 1	

SAMPLES & TESTS			Water	STRATA				Geology	Instrument/ Backfill
Depth	Type No	Test Result		Reduced Level	Legend	Depth (Thickness)	DESCRIPTION		
0.00-1.00	B					(1.70)	Vegetation overlying dense light brown sandy slightly clayey gravel intermixed with concrete, sandstone and cobbles (MADE GROUND).		
1.20-1.65 1.20-1.65	B SPT	N=32		151.72		1.70			
2.00-2.45 2.00-2.45	B SPT	N=16				(2.30)	Firm grey sandy gravelly CLAY (RESIDUAL SOIL).		
3.00-3.45 3.00-3.45	B SPT	N=19							
4.00-4.10	SPT	75 Blows		149.42 149.32		4.00 4.10	Yellowish brown SANDSTONE (LOWER COAL MEASURES). Borehole terminated at 4.10m due to refusal.		

Boring Progress and Water Observations						Chiselling			Water Added		GENERAL REMARKS
Date	Time	Depth	Depth	Casing Dia. mm	Water Dpt	From	To	Hours	From	To	
						0	1.7	2			Borehole remained dry on completion
All dimensions in metres Scale 1:62.5			Client Vistry Partnerships Yorkshire			Method/ Plant Used Cable Percussive			Logged By MH		



Solum House, Unit 1 Elliott Court
St Johns Road, Meadowfield
Durham, DH7 8PN
Telephone: 01913786380

BOREHOLE LOG

Project Hollingworth Gate, Littleborough				BOREHOLE No CP3	
Job No 21-763	Date 03-11-21	Ground Level (m) 153.20	Co-Ordinates () E 393,366.3 N 415,662.3		
Contractor Arc Environmental Limited				Sheet 1 of 1	

SAMPLES & TESTS			Water	STRATA				Geology	Instrument/ Backfill
Depth	Type No	Test Result		Reduced Level	Legend	Depth (Thickness)	DESCRIPTION		
0.00-1.00	B						Vegetation overlying medium dense light brown sandy slightly clayey gravel intermixed with concrete, sandstone and cobbles (MADE GROUND).		
1.20-1.65 1.20-1.65	B SPT	N=12				(3.70)			
2.00-2.45 2.00-2.45	B SPT	N=11							
3.00-3.45 3.00-3.45	B SPT	N=15							
4.00-4.45 4.00-4.45	B SPT	N=19		149.50		3.70	Firm grey sandy gravelly CLAY (RESIDUAL SOIL).		
5.00-5.45 5.00-5.45	B SPT	N=20				(3.30)			
6.00-6.45 6.00-6.45	B SPT	N=25							
7.00-7.20 7.00-7.20	B SPT	75 Blows		146.20		7.00	Dense and very dense grey MUDSTONE (LOWER COAL MEASURES).		
7.50-7.60	SPT	75 Blows		145.60		(0.60) 7.60	Borehole terminated at 7.60m due to refusal.		

Boring Progress and Water Observations						Chiselling			Water Added		GENERAL REMARKS
Date	Time	Depth	Casing Depth	Casing Dia. mm	Water Dpt	From	To	Hours	From	To	
						0	3.7	5			Borehole remained dry on completion
All dimensions in metres Scale 1:62.5			Client Vistry Partnerships Yorkshire			Method/ Plant Used Cable Percussive			Logged By MH		

AGS3 UK BH LOGS 21-763.GPJ AGS3 ALL GDT 8/11/21



Solum House, Unit 1 Elliott Court
St Johns Road, Meadowfield
Durham, DH7 8PN
Telephone: 01913786380

BOREHOLE LOG

Project Hollingworth Gate, Littleborough				BOREHOLE No CP4	
Job No 21-763	Date 03-11-21	Ground Level (m) 155.87	Co-Ordinates () E 393,310.1 N 415,625.1		
Contractor Arc Environmental Limited				Sheet 1 of 1	

SAMPLES & TESTS			Water	STRATA				Geology	Instrument/ Backfill
Depth	Type No	Test Result		Reduced Level	Legend	Depth (Thickness)	DESCRIPTION		
0.00-1.00	B					(1.00)	Vegetation overlying light brown and grey sandy slightly clayey gravel intermixed with concrete, sandstone and cobbles (MADE GROUND).		
1.20-1.65	B			154.87		1.00			
1.20-1.65	SPT	N=14				(1.00)	Firm grey sandy gravelly clay with some brick (MADE GROUND).		
2.00-2.45	B			153.87		2.00			
2.00-2.45	SPT	N=13					Firm grey sandy gravelly CLAY (RESIDUAL SOIL).		
3.00-3.45	B								
3.00-3.45	SPT	N=17							
5.00-5.45	B					(6.00)			
5.00-5.45	SPT	N=19							
6.00-6.45	B								
6.00-6.45	SPT	N=20							
7.00-7.45	B								
7.00-7.45	SPT	N=22							
8.00-8.20	B			147.87		8.00			
8.00-8.20	SPT	75 Blows		147.67		8.20	Dense and very dense grey MUDSTONE (LOWER COAL MEASURES).		
							Borehole terminated at 8.20m due to refusal.		

Boring Progress and Water Observations						Chiselling			Water Added		GENERAL REMARKS
Date	Time	Depth	Depth	Casing Dia. mm	Water Dpt	From	To	Hours	From	To	
						0	1	1			Water strike at 8.00m.
All dimensions in metres Scale 1:62.5			Client Vistry Partnerships Yorkshire			Method/ Plant Used Cable Percussive			Logged By MH		

AGS3 UK BH LOGS 21-763.GPJ AGS3 ALL GDT 8/11/21



Solum House, Unit 1 Elliott Court
St Johns Road, Meadowfield
Durham, DH7 8PN
Telephone: 01913786380

BOREHOLE LOG

Project Hollingsworth Gate, Littleborough				BOREHOLE No CP5	
Job No 21-763	Date 01-11-21	Ground Level (m) 152.71	Co-Ordinates () E 393,228.2 N 415,673.9		
Contractor Arc Environmental Limited				Sheet 1 of 1	

SAMPLES & TESTS			Water	STRATA				Geology	Instrument/ Backfill
Depth	Type No	Test Result		Reduced Level	Legend	Depth (Thickness)	DESCRIPTION		
0.00-1.00	B						Vegetation overlying medium dense light brown and grey sandy slightly clayey gravel intermixed with concrete, sandstone and cobbles (MADE GROUND).		
1.50-1.95	B								
1.50-1.95	SPT	N=23				(4.00)			
2.00-2.45	B								
2.00-2.45	SPT	N=16							
3.00-3.45	B								
3.00-3.45	SPT	N=23							
4.00-4.45	B			148.71		4.00			
4.00-4.45	SPT	N=24				(1.50)	Medium dense medium brown SAND (RESIDUAL SOIL).		
5.00-5.45	B								
5.00-5.45	SPT	N=19		147.21		5.50			
5.50-5.95	SPT	N=34				(0.60)	Medium dense becoming dense and very dense grey MUDSTONE (LOWER COAL MEASURES).		
6.00-6.10	SPT	75 Blows		146.61		6.10			
							Borehole terminated at 7.60m due to refusal.		

Boring Progress and Water Observations						Chiselling			Water Added		GENERAL REMARKS
Date	Time	Depth	Depth	Casing Dia. mm	Water Dpt	From	To	Hours	From	To	
						0	4	5			Borehole remained dry on completion
All dimensions in metres Scale 1:62.5			Client Vistry Partnerships Yorkshire			Method/ Plant Used Cable Percussive			Logged By MH		



Solum House, Unit 1 Elliott Court
St Johns Road, Meadowfield
Durham, DH7 8PN
Telephone: 01913786380

BOREHOLE LOG

Project Hollingworth Gate, Littleborough				BOREHOLE No CP6	
Job No 21-763	Date 02-11-21	Ground Level (m) 156.55	Co-Ordinates () E 393,235.3 N 415,610.1		
Contractor Arc Environmental Limited				Sheet 1 of 1	

SAMPLES & TESTS			Water	STRATA				Geology	Instrument/ Backfill
Depth	Type No	Test Result		Reduced Level	Legend	Depth (Thick-ness)	DESCRIPTION		
0.00-0.40	B			156.15		0.40	Vegetation overlying light brown and grey sandy slightly clayey gravel intermixed with concrete, sandstone and cobbles (MADE GROUND).		
0.40-1.00	B					(1.60)	Firm grey and brown sandy clay with some sandstone (MADE GROUND).		
1.20-1.65	B	N=16							
1.20-1.65	SPT			154.55		2.00			
2.00-2.45	B	N=17				(1.00)	Stiff dark brown and grey very sandy very gravelly CLAY with occasional cobbles of sandstone (RESIDUAL SOIL).		
2.00-2.45	SPT			153.55		3.00			
3.00-3.45	B	75 Blows				(1.25)	Dense and very dense grey MUDSTONE (LOWER COAL MEASURES).		
3.00-3.45	SPT			152.30		4.25			
4.00-4.25	B	75 Blows					Borehole terminated at 4.25m due to refusal.		
4.00-4.25	SPT								

Boring Progress and Water Observations						Chiselling			Water Added		GENERAL REMARKS
Date	Time	Depth	Casing Depth	Casing Dia. mm	Water Dpt	From	To	Hours	From	To	
						0	0.4	1			Water strike at 5.20m.
All dimensions in metres Scale 1:62.5			Client Vistry Partnerships Yorkshire			Method/ Plant Used Cable Percussive			Logged By MH		



Solum House, Unit 1 Elliott Court
St Johns Road, Meadowfield
Durham, DH7 8PN
Telephone: 01913786380

BOREHOLE LOG

Project Hollingsworth Gate, Littleborough				BOREHOLE No CP7	
Job No 21-763	Date 02-11-21	Ground Level (m) 157.42	Co-Ordinates () E 393,277.8 N 415,603.8		
Contractor Arc Environmental Limited				Sheet 1 of 1	

SAMPLES & TESTS			Water	STRATA				Geology	Instrument/ Backfill
Depth	Type No	Test Result		Reduced Level	Legend	Depth (Thickness)	DESCRIPTION		
0.00-1.00	B					(1.20)	Vegetation overlying light brown and grey sandy slightly clayey gravel intermixed with concrete, sandstone and cobbles (MADE GROUND).		
1.20-1.65 1.20-1.65	B SPT	N=8		156.22		1.20	Soft brown sandy CLAY with some sand bands (RESIDUAL SOIL).		
2.00-2.45 2.00-2.45	B SPT	N=15				(3.50)			
3.00-3.45 3.00-3.45	B SPT	N=11							
4.00-4.45 4.00-4.45	B SPT	N=10		152.72		4.70			
5.00-5.45 5.00-5.45	B SPT	N=17				(2.00)	Firm brown and grey sandy gravelly CLAY (RESIDUAL SOIL).		
6.00-6.45 6.00-6.45	B SPT	N=18		150.72		6.70			
6.70-7.00 7.00-7.20	B SPT	73 Blows	↓	150.22		(0.50) 7.20	Dense and very dense grey MUDSTONE (LOWER COAL MEASURES).		
							Borehole terminated at 7.20m due to refusal.		

Boring Progress and Water Observations						Chiselling			Water Added		GENERAL REMARKS
Date	Time	Depth	Depth	Casing Dia. mm	Water Dpt	From	To	Hours	From	To	
						0	1.2	2			Water strike at 7.00m.
All dimensions in metres Scale 1:62.5			Client Vistry Partnerships Yorkshire			Method/ Plant Used Cable Percussive			Logged By MH		

AGS3 UK BH LOGS 21-763.GPJ AGS3 ALL GDT 8/11/21



Solum House, Unit 1 Elliott Court
St Johns Road, Meadowfield
Durham, DH7 8PN
Telephone: 01913786380

BOREHOLE LOG

Project Hollingworth Gate, Littleborough				BOREHOLE No MW1	
Job No 21-763	Date 27-10-21	Ground Level (m) 151.62	Co-Ordinates () E 393,509.0 N 415,872.0		
Contractor Arc Environmental Limited				Sheet 1 of 1	

SAMPLES & TESTS			Water	STRATA				Geology	Instrument/ Backfill
Depth	Type No	Test Result		Reduced Level	Legend	Depth (Thickness)	DESCRIPTION		
1.00-1.45	SPT	N=27		151.17		0.45	Grass overlying demolition rubble of broken bricks and concrete intermixed with brown sandy clay (MADE GROUND)		
						(0.85)	Firm (locally stiff) reddish brown (possibly reworked) sandy gravelly clay with occasional coal fragments and cobbles of sandstone (MADE GROUND)		
				150.32		1.30			
2.00-2.27	SPT	75 Blows		150.12		0.20	Stiff (high strength) reddish brown sandy gravelly CLAY with occasional cobbles of sandstone (RESIDUAL SOIL)		
						(0.77)	Yellowish brown completely weathered SILTSTONE recovered as a friable gravel (LOWER COAL MEASURES)		
				149.35		2.27			
							Borehole terminated at c.2.27m due to refusal of sampling equipment		

Boring Progress and Water Observations						Chiselling			Water Added		GENERAL REMARKS
Date	Time	Depth	Depth	Casing Dia. mm	Water Dpt	From	To	Hours	From	To	
											Borehole remained dry on completion
All dimensions in metres Scale 1:18.75			Client Vistry Partnerships Yorkshire			Method/ Plant Used Windowless Sampling			Logged By LJ		

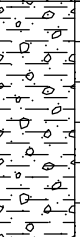
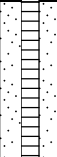
AGS3 UK BH LOGS 21-763.GPJ AGS3 ALL.GDT 8/11/21



Solum House, Unit 1 Elliott Court
St Johns Road, Meadowfield
Durham, DH7 8PN
Telephone: 01913786380

BOREHOLE LOG

Project Hollingsworth Gate, Littleborough				BOREHOLE No MW2	
Job No 21-763	Date 27-10-21	Ground Level (m) 155.41	Co-Ordinates () E 393,481.7 N 415,801.2		
Contractor Arc Environmental Limited				Sheet 1 of 1	

SAMPLES & TESTS			Water	STRATA				Geology	Instrument/ Backfill
Depth	Type No	Test Result		Reduced Level	Legend	Depth (Thickness)	DESCRIPTION		
0.60-0.90	SPT	75 Blows		155.11		(0.30) 0.30	Grass overlying demolition rubble of broken bricks and concrete intermixed with brown sandy clay (MADE GROUND)		
				154.51		(0.60) 0.90	Stiff (high strength) reddish brown sandy gravelly CLAY with occasional cobbles of sandstone (RESIDUAL SOIL)		
							Borehole terminated at c.0.90m due to refusal of sampling equipment		

Boring Progress and Water Observations						Chiselling			Water Added		GENERAL REMARKS
Date	Time	Depth	Depth	Casing Dia. mm	Water Dpt	From	To	Hours	From	To	
											Borehole remained dry on completion
All dimensions in metres Scale 1:18.75			Client Vistry Partnerships Yorkshire			Method/ Plant Used Windowless Sampling			Logged By LJ		

AGS3 UK BH LOGS 21-763.GPJ AGS3 ALL GDT 8/11/21



Solum House, Unit 1 Elliott Court
St Johns Road, Meadowfield
Durham, DH7 8PN
Telephone: 01913786380

BOREHOLE LOG

Project Hollingworth Gate, Littleborough				BOREHOLE No MW3	
Job No 21-763	Date 27-10-21	Ground Level (m) 151.68	Co-Ordinates () E 393,413.2 N 415,776.0		
Contractor Arc Environmental Limited				Sheet 1 of 1	

SAMPLES & TESTS			Water	STRATA				Geology	Instrument/ Backfill
Depth	Type No	Test Result		Reduced Level	Legend	Depth (Thickness)	DESCRIPTION		
1.00-1.09	SPT	75 Blows		151.58		0.10	Grass overlying demolition rubble of broken bricks and concrete intermixed with brown sandy clay (MADE GROUND)		
						(0.70)	Firm (locally stiff) reddish brown (possibly reworked) sandy gravelly clay with occasional coal fragments and cobbles of sandstone (MADE GROUND)		
				150.88		0.80			
						(0.29)	Yellowish brown slightly clayey gravel of sandstone cobbles (MADE GROUND)		
				150.59		1.09			
							Borehole terminated at c.1.09m due to refusal of sampling equipment		

Boring Progress and Water Observations						Chiselling			Water Added		GENERAL REMARKS
Date	Time	Depth	Depth	Casing Dia. mm	Water Dpt	From	To	Hours	From	To	
											Borehole remained dry on completion
All dimensions in metres Scale 1:18.75			Client Vistry Partnerships Yorkshire			Method/ Plant Used Windowless Sampling			Logged By LJ		

AGS3 UK BH LOGS 21-763.GPJ AGS3 ALL GDT 8/11/21



Solum House, Unit 1 Elliott Court
St Johns Road, Meadowfield
Durham, DH7 8PN
Telephone: 01913786380

BOREHOLE LOG

Project Hollingworth Gate, Littleborough				BOREHOLE No MW4	
Job No 21-763	Date 27-10-21	Ground Level (m) 152.28	Co-Ordinates () E 393,196.0 N 415,664.0		
Contractor Arc Environmental Limited				Sheet 1 of 1	

SAMPLES & TESTS			Water	STRATA				Geology	Instrument/ Backfill
Depth	Type No	Test Result		Reduced Level	Legend	Depth (Thickness)	DESCRIPTION		
1.00-1.45	SPT	N=8		151.98		(0.30) 0.30	Grass overlying demolition rubble of broken bricks and concrete intermixed with brown sandy clay (MADE GROUND)		
						(1.80)	Firm greyish brown sandy gravelly clay with brick, sandstone and concrete. Cobbles noted (MADE GROUND)		
2.00-2.45	SPT	N=12		150.18		2.10			
3.00-3.45	SPT	N=8				(2.20)	Stiff (high strength) brown very sandy very gravelly CLAY. Gravel is fine to coarse of sandstone (RESIDUAL SOIL).		
4.00-4.45	SPT	N=10		147.98		4.30			
4.50-4.70	SPT	75 Blows		147.58		(0.40) 4.70	Yellowish brown SANDSTONE (LOWER COAL MEASURES).		

Boring Progress and Water Observations						Chiselling			Water Added		GENERAL REMARKS
Date	Time	Depth	Depth	Casing Dia. mm	Water Dpt	From	To	Hours	From	To	
											Borehole remained dry on completion
All dimensions in metres Scale 1:31.25			Client	Vistry Partnerships Yorkshire			Method/ Plant Used	Windowless Sampling			Logged By MPB

AGS3 UK BH LOGS 21-763.GPJ AGS3 ALL GDT 8/11/21



Solum House, Unit 1 Elliott Court
St Johns Road, Meadowfield
Durham, DH7 8PN
Telephone: 01913786380

BOREHOLE LOG

Project Hollingworth Gate, Littleborough				BOREHOLE No MW5	
Job No 21-763	Date 27-10-21	Ground Level (m) 150.01	Co-Ordinates () E 393,412.9 N 415,811.9		
Contractor Arc Environmental Limited				Sheet 1 of 1	

SAMPLES & TESTS			Water	STRATA				Geology	Instrument/ Backfill
Depth	Type No	Test Result		Reduced Level	Legend	Depth (Thickness)	DESCRIPTION		
0.70-0.82	SPT	75 Blows		149.71		(0.30) 0.30	Grass overlying demolition rubble of broken bricks and concrete intermixed with brown sandy clay (MADE GROUND)		
						(0.52) 0.82	Black very sandy slightly clayey gravel with broken bricks and concrete (MADE GROUND)		
				149.19			Borehole terminated at c.0.82m due to refusal of sampling equipment		

Boring Progress and Water Observations						Chiselling			Water Added		GENERAL REMARKS
Date	Time	Depth	Depth	Casing Dia. mm	Water Dpt	From	To	Hours	From	To	
											Borehole remained dry on completion
All dimensions in metres Scale 1:18.75			Client Vistry Partnerships Yorkshire			Method/ Plant Used Windowless Sampling			Logged By LJ		

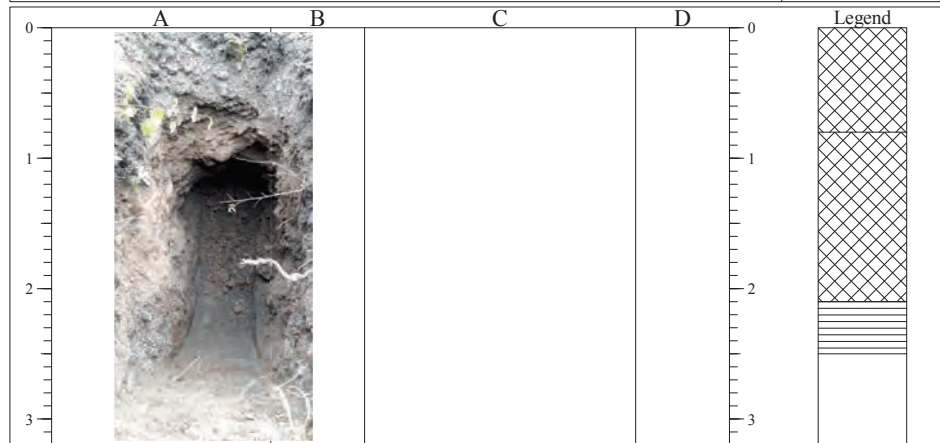
AGS3 UK BH LOGS 21-763.GPJ AGS3 ALL GDT 8/11/21



Solum House, Unit 1 Elliott Court
St Johns Road, Meadowfield
Durham, DH7 8PN
Telephone: 01913786380

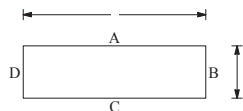
TRIAL PIT LOG

Project Hollingworth Gate, Littleborough				TRIAL PIT No TP01
Job No 21-763	Date 26-10-21	Ground Level (m) 152.32	Co-Ordinates () E 393,520.6 N 415,873.3	
Contractor Arc Environmental Limited				Sheet 1 of 1



STRATA			SAMPLES & TESTS		
Depth	No	DESCRIPTION	Depth	No	Remarks/Tests
0.00-0.80		Vegetation overlying light brown sandy slightly clayey gravel intermixed with broken bricks, sandstone blocks and cobbles (MADE GROUND)			
0.80-2.10		Yellowish brown very gravelly sand intermixed with very sandy gravel with sandstone cobbles and pockets of shaley mudstone gravel (MADE GROUND)			
2.10-2.50		Grey and occasionally ironstained highly weathered MUDSTONE recovered as a shaley gravel (LOWER COAL MEASURES FORMATION)			

Shoring/Support:
Stability:



GENERAL
REMARKS

Trial pit remained dry and stable on completion

All dimensions in metres Scale 1:40	Client Vistry Partnerships Yorkshire	Method/ Plant Used Mechanically Excavated	Logged By LJ
--	--	---	-----------------



Solum House, Unit 1 Elliott Court
St Johns Road, Meadowfield
Durham, DH7 8PN
Telephone: 01913786380

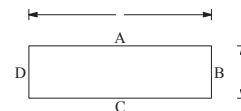
TRIAL PIT LOG

Project Hollingworth Gate, Littleborough				TRIAL PIT No TP02
Job No 21-763	Date 26-10-21	Ground Level (m) 152.14	Co-Ordinates () E 393,497.8 N 415,859.9	
Contractor Arc Environmental Limited				Sheet 1 of 1



STRATA			SAMPLES & TESTS		
Depth	No	DESCRIPTION	Depth	No	Remarks/Tests
0.00-0.80		Vegetation overlying light brown sandy slightly clayey gravel intermixed with concrete, sandstone and cobbles (MADE GROUND)			
0.80-1.90		Brown clayey gravelly sand. (possibly reworked natural) (MADE GROUND).			
1.90-3.00		Blue grey very clayey silty SAND. Cobbles (RESIDUAL SOIL).			

Shoring/Support:
Stability:



GENERAL
REMARKS

Trial pit remained stable with slight ingress from c.1.70m within made ground

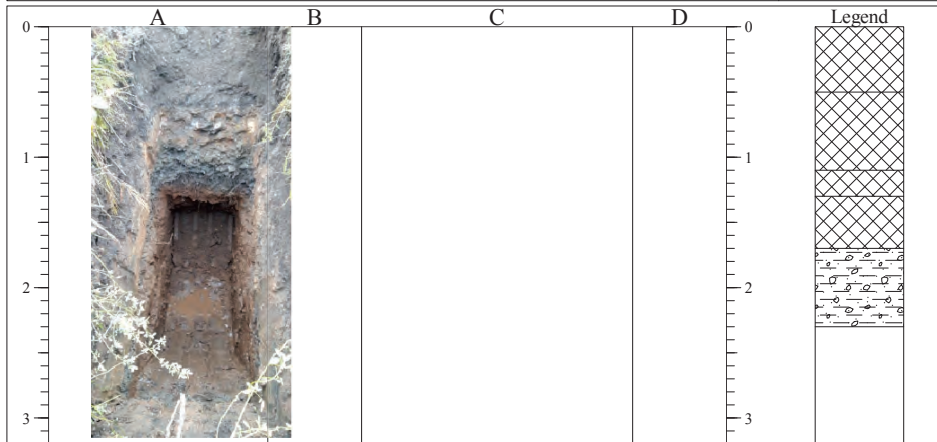
All dimensions in metres Scale 1:40	Client Vistry Partnerships Yorkshire	Method/ Plant Used Mechanically Excavated	Logged By MPB
--	--	---	------------------



Solum House, Unit 1 Elliott Court
St Johns Road, Meadowfield
Durham, DH7 8PN
Telephone: 01913786380

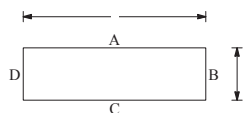
TRIAL PIT LOG

Project Hollingworth Gate, Littleborough				TRIAL PIT No TP03
Job No 21-763	Date 26-10-21	Ground Level (m) 153.54	Co-Ordinates () E 393,492.3 N 415,842.6	
Contractor Arc Environmental Limited				Sheet 1 of 1



STRATA			SAMPLES & TESTS		
Depth	No	DESCRIPTION	Depth	No	Remarks/Tests
0.00-0.50		Vegetation overlying dark brown sandy slightly gravelly clay with rootlets, brick fragments and sandstone blocks (MADE GROUND)			
0.50-1.10		Firm orangish brown and grey slightly gravelly reworked clay (MADE GROUND)			
1.10-1.30		Grey slightly sandy gravel sub-base with broken glass, plastic fragments and water ingress (MADE GROUND)			
1.30-1.70		Firm reddish brown sandy gravelly (possibly reworked) clay (MADE GROUND)			
1.70-2.30		Stiff (high strength) reddish and greyish brown sandy slightly gravelly CLAY (RESIDUAL SOIL)	2.00	B	
			2.00	V	110kN/m ²

Shoring/Support:
Stability:



GENERAL
REMARKS

Trial pit remained stable
with slight ingress from
base of made ground

All dimensions in metres Scale 1:40	Client Vistry Partnerships Yorkshire	Method/ Plant Used Mechanically Excavated	Logged By LJ
--	--	---	-----------------



Solum House, Unit 1 Elliott Court
St Johns Road, Meadowfield
Durham, DH7 8PN
Telephone: 01913786380

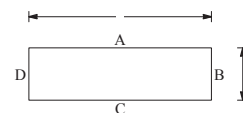
TRIAL PIT LOG

Project Hollingworth Gate, Littleborough				TRIAL PIT No TP04
Job No 21-763	Date 26-10-21	Ground Level (m) 152.34	Co-Ordinates () E 393,470.8 N 415,841.2	
Contractor Arc Environmental Limited				Sheet 1 of 1



STRATA			SAMPLES & TESTS		
Depth	No	DESCRIPTION	Depth	No	Remarks/Tests
0.00-1.80		Vegetation over brown and black sandy gravel of concrete, brick and sandstone with occasional wood (MADE GROUND).			
1.80-2.40		Stiff (high strength) brown very sandy very gravelly CLAY with occasional cobbles of sandstone (RESIDUAL SOIL).	2.00	V	90kN/m ²

Shoring/Support:
Stability:



GENERAL
REMARKS

Trial pit remained dry and
stable on completion

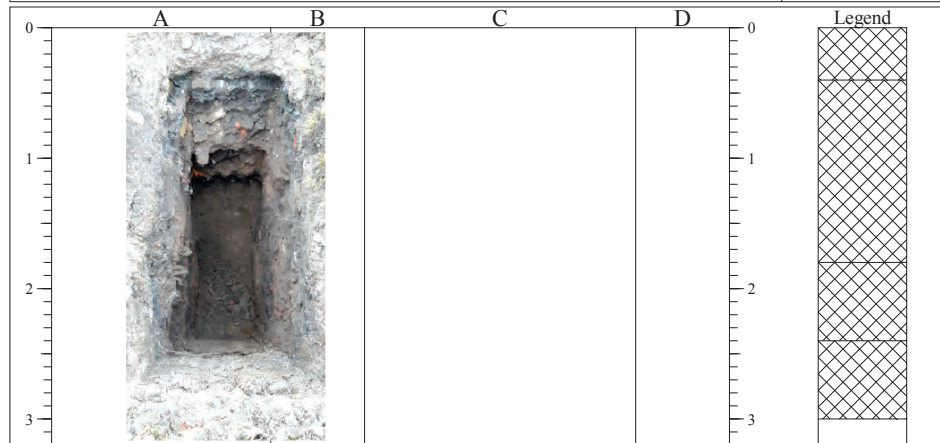
All dimensions in metres Scale 1:40	Client Vistry Partnerships Yorkshire	Method/ Plant Used Mechanically Excavated	Logged By MPB
--	--	---	------------------



Solum House, Unit 1 Elliott Court
St Johns Road, Meadowfield
Durham, DH7 8PN
Telephone: 01913786380

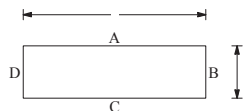
TRIAL PIT LOG

Project Hollingworth Gate, Littleborough				TRIAL PIT No TP05
Job No 21-763	Date 26-10-21	Ground Level (m) 155.43	Co-Ordinates () E 393,516.8 N 415,836.7	
Contractor Arc Environmental Limited				Sheet 1 of 1



STRATA			SAMPLES & TESTS		
Depth	No	DESCRIPTION	Depth	No	Remarks/Tests
0.00-0.40		Grass overlying demolition rubble of broken bricks and concrete intermixed with brown sandy clay (MADE GROUND)			
0.40-1.80		Dark brown sandy gravelly clay with broken bricks, concrete, material, sandstone blocks and metal (MADE GROUND)			
1.80-2.40		Reddish brown very gravelly sand with broken bricks, rootlets and sandstone gravels (MADE GROUND)			
2.40-3.00		Firm (locally soft) greyish brown very sandy gravelly (possibly reworked) clay (MADE GROUND)	2.75	B	

Shoring/Support:
Stability:



GENERAL
REMARKS

Trial pit remained dry and stable on completion

All dimensions in metres Scale 1:40	Client Vistry Partnerships Yorkshire	Method/ Plant Used Mechanically Excavated	Logged By LJ
--	--	---	-----------------



Solum House, Unit 1 Elliott Court
St Johns Road, Meadowfield
Durham, DH7 8PN
Telephone: 01913786380

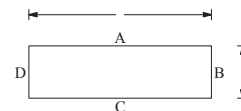
TRIAL PIT LOG

Project Hollingworth Gate, Littleborough				TRIAL PIT No TP06
Job No 21-763	Date 26-10-21	Ground Level (m) 155.46	Co-Ordinates () E 393,502.1 N 415,810.7	
Contractor Arc Environmental Limited				Sheet 1 of 1



STRATA			SAMPLES & TESTS		
Depth	No	DESCRIPTION	Depth	No	Remarks/Tests
0.00-0.60		Grass overlying greyish brown sandy gravel with rootlets and broken bricks (MADE GROUND)			
0.60-1.30		Stiff (high strength) greyish brown slightly sandy slightly gravelly CLAY with occasional cobbles of mudstone (RESIDUAL SOIL)	1.00	V	110kN/m ²
			1.20	B	

Shoring/Support:
Stability:



GENERAL
REMARKS

Trial pit remained stable with slight ingress from base of made ground

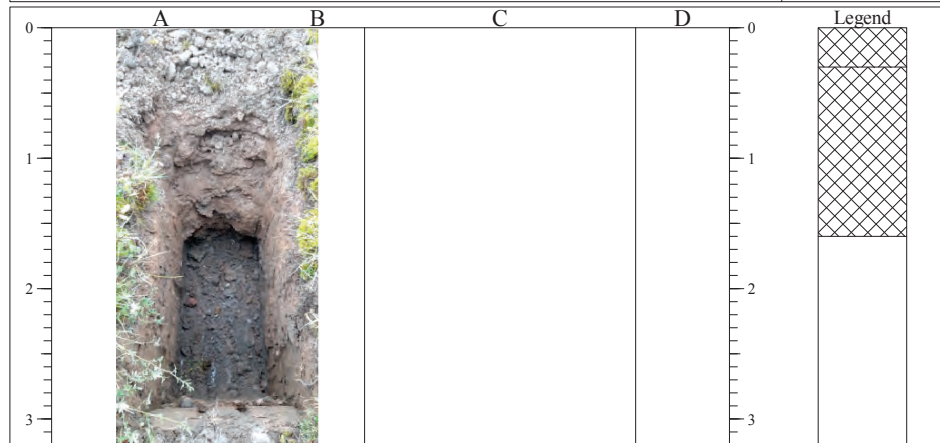
All dimensions in metres Scale 1:40	Client Vistry Partnerships Yorkshire	Method/ Plant Used Mechanically Excavated	Logged By LJ
--	--	---	-----------------



Solum House, Unit 1 Elliott Court
St Johns Road, Meadowfield
Durham, DH7 8PN
Telephone: 01913786380

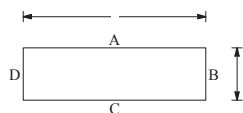
TRIAL PIT LOG

Project Hollingworth Gate, Littleborough				TRIAL PIT No TP07
Job No 21-763	Date 26-10-21	Ground Level (m) 155.25	Co-Ordinates () E 393,470.7 N 415,812.4	
Contractor Arc Environmental Limited				Sheet 1 of 1



STRATA			SAMPLES & TESTS		
Depth	No	DESCRIPTION	Depth	No	Remarks/Tests
0.00-0.30		Grass overlying demolition rubble of broken bricks and concrete intermixed with brown sandy clay (MADE GROUND)			
0.30-1.60		Firm reddish brown slightly sandy gravelly clay with broken bricks and sandstone cobbles (MADE GROUND)			
1.60		Trial pit terminated at c.1.60m on buried concrete			

Shoring/Support:
Stability:



GENERAL
REMARKS

Trial pit remained dry and stable on completion

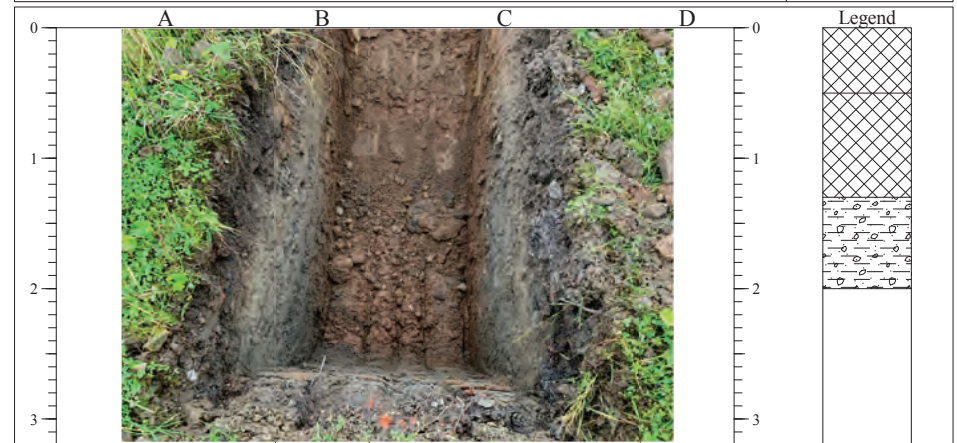
All dimensions in metres Scale 1:40	Client Vistry Partnerships Yorkshire	Method/ Plant Used Mechanically Excavated	Logged By LJ
--	--	---	-----------------



Solum House, Unit 1 Elliott Court
St Johns Road, Meadowfield
Durham, DH7 8PN
Telephone: 01913786380

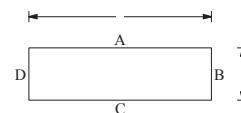
TRIAL PIT LOG

Project Hollingworth Gate, Littleborough				TRIAL PIT No TP08
Job No 21-763	Date 26-10-21	Ground Level (m) 155.42	Co-Ordinates () E 393,470.3 N 415,767.8	
Contractor Arc Environmental Limited				Sheet 1 of 1



STRATA			SAMPLES & TESTS		
Depth	No	DESCRIPTION	Depth	No	Remarks/Tests
0.00-0.50		Vegetation over brown gravel of concrete, brick and sandstone with occasional wood (MADE GROUND).			
0.50-1.30		Brown clayey gravelly sand. (possibly reworked natural) (MADE GROUND).			
1.30-2.00		Stiff (high strength) brown very sandy very gravelly CLAY with occasional cobbles of sandstone (RESIDUAL SOIL).			
			2.00	V	105kN/m ²

Shoring/Support:
Stability:



GENERAL
REMARKS

Trial pit remained dry and stable on completion

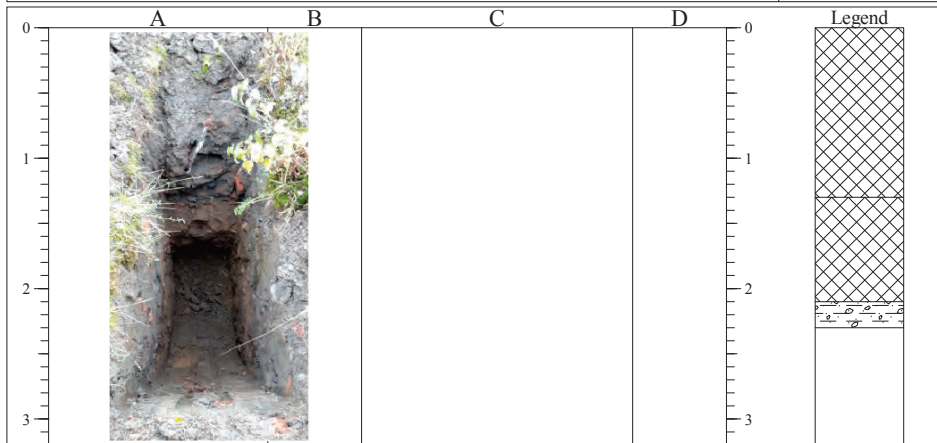
All dimensions in metres Scale 1:40	Client Vistry Partnerships Yorkshire	Method/ Plant Used Mechanically Excavated	Logged By MPB
--	--	---	------------------



Solum House, Unit 1 Elliott Court
St Johns Road, Meadowfield
Durham, DH7 8PN
Telephone: 01913786380

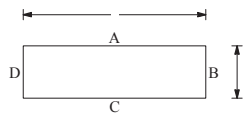
TRIAL PIT LOG

Project Hollingworth Gate, Littleborough				TRIAL PIT No TP09
Job No 21-763	Date 26-10-21	Ground Level (m) 156.35	Co-Ordinates () E 393,489.5 N 415,778.8	
Contractor Arc Environmental Limited				Sheet 1 of 1



STRATA			SAMPLES & TESTS		
Depth	No	DESCRIPTION	Depth	No	Remarks/Tests
0.00-1.30		Vegetation overlying greyish brown sandy gravelly clay with broken bricks, concrete and metal (MADE GROUND)			
1.30-2.10		Orangish brown very sandy slightly clayey gravel with pockets of very sandy very gravelly clay, brick and plastic fragments (MADE GROUND)			
2.10-2.30		Stiff (high strength) orangish brown and grey sandy slightly gravelly CLAY with occasional pockets of very clayey gravelly sand (RESIDUAL SOIL)	2.00	V	95kN/m ²
			2.20	B	

Shoring/Support:
Stability:



GENERAL
REMARKS

Trial pit remained dry and
stable on completion

All dimensions in metres
Scale 1:40

Client
Vistry Partnerships
Yorkshire

Method/
Plant Used Mechanically Excavated

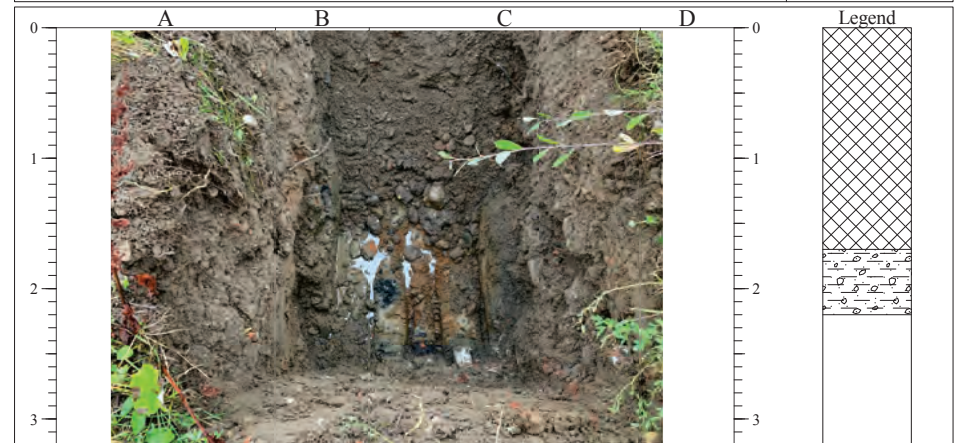
Logged By
LJ



Solum House, Unit 1 Elliott Court
St Johns Road, Meadowfield
Durham, DH7 8PN
Telephone: 01913786380

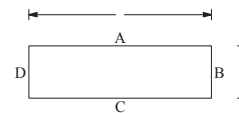
TRIAL PIT LOG

Project Hollingworth Gate, Littleborough				TRIAL PIT No TP10
Job No 21-763	Date 26-10-21	Ground Level (m) 157.75	Co-Ordinates () E 393,480.3 N 415,741.9	
Contractor Arc Environmental Limited				Sheet 1 of 1



STRATA			SAMPLES & TESTS		
Depth	No	DESCRIPTION	Depth	No	Remarks/Tests
0.00-1.70		Vegetation overlying light brown sandy slightly clayey gravel intermixed with brick. Wet at base (MADE GROUND)			
1.70-2.20		Stiff (high strength) brown very sandy very gravelly CLAY with occasional cobbles of sandstone (RESIDUAL SOIL).	2.00	V	91kN/m ²

Shoring/Support:
Stability:



GENERAL
REMARKS

Trial pit remained stable
with slight ingress from
base of made ground

All dimensions in metres
Scale 1:40

Client
Vistry Partnerships
Yorkshire

Method/
Plant Used Mechanically Excavated

Logged By
MPB



Solum House, Unit 1 Elliott Court
St Johns Road, Meadowfield
Durham, DH7 8PN
Telephone: 01913786380

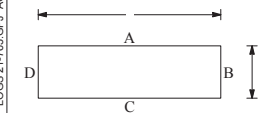
TRIAL PIT LOG

Project Hollingworth Gate, Littleborough				TRIAL PIT No TP11
Job No 21-763	Date 26-10-21	Ground Level (m) 158.08	Co-Ordinates () E 393,498.8 N 415,743.0	
Contractor Arc Environmental Limited				Sheet 1 of 1



STRATA			SAMPLES & TESTS		
Depth	No	DESCRIPTION	Depth	No	Remarks/Tests
0.00-0.90		Vegetation overlying greyish brown sandy gravelly clay with broken bricks, concrete and metal (MADE GROUND)			
0.90-1.40		Firm (locally stiff) (high strength) yellowish brown and grey very sandy slightly gravelly CLAY (RESIDUAL SOIL)	1.00 1.00	B V	80kN/m ²

Shoring/Support:
Stability:



GENERAL
REMARKS

Trial pit remained dry and stable on completion

All dimensions in metres
Scale 1:40

Client
Vistry Partnerships
Yorkshire

Method/
Plant Used Mechanically Excavated

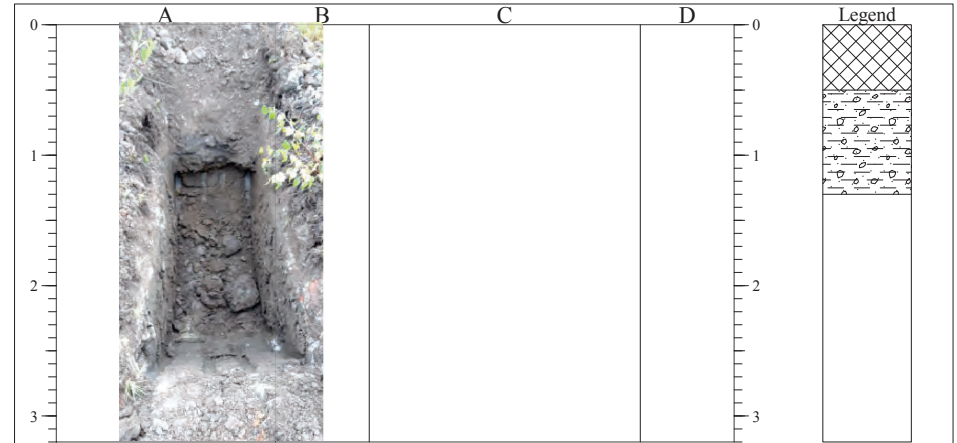
Logged By
LJ



Solum House, Unit 1 Elliott Court
St Johns Road, Meadowfield
Durham, DH7 8PN
Telephone: 01913786380

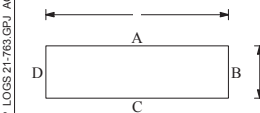
TRIAL PIT LOG

Project Hollingworth Gate, Littleborough				TRIAL PIT No TP12
Job No 21-763	Date 26-10-21	Ground Level (m) 158.52	Co-Ordinates () E 393,532.0 N 415,748.2	
Contractor Arc Environmental Limited				Sheet 1 of 1



STRATA			SAMPLES & TESTS		
Depth	No	DESCRIPTION	Depth	No	Remarks/Tests
0.00-0.50		Grass overlying demolition rubble of broken bricks and concrete intermixed with brown sandy clay (MADE GROUND)			
0.50-1.30		Stiff (high strength) greyish brown slightly sandy slightly gravelly CLAY with occasional cobbles of mudstone and pockets of very clayey sand (RESIDUAL SOIL)	1.00 1.40	V B	95kN/m ²

Shoring/Support:
Stability:



GENERAL
REMARKS

Trial pit remained dry and stable on completion

All dimensions in metres
Scale 1:40

Client
Vistry Partnerships
Yorkshire

Method/
Plant Used Mechanically Excavated

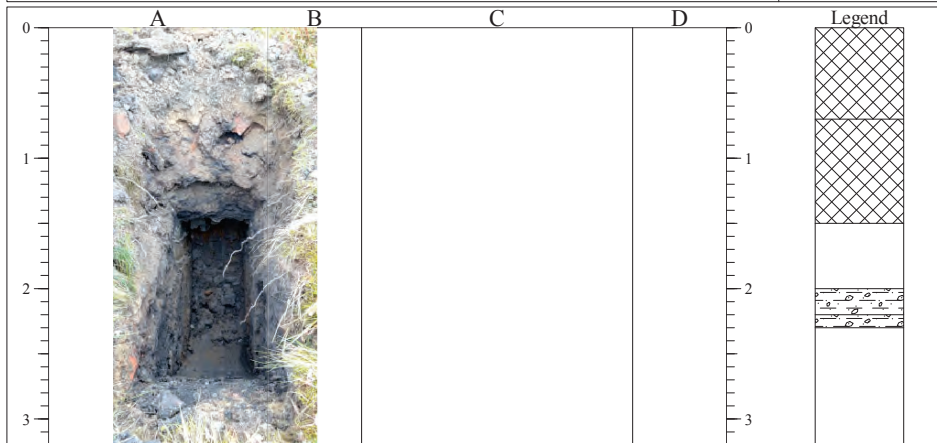
Logged By
LJ



Solum House, Unit 1 Elliott Court
St Johns Road, Meadowfield
Durham, DH7 8PN
Telephone: 01913786380

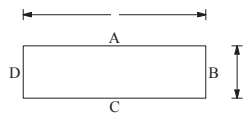
TRIAL PIT LOG

Project Hollingworth Gate, Littleborough				TRIAL PIT No TP13
Job No 21-763	Date 26-10-21	Ground Level (m) 161.80	Co-Ordinates () E 393,542.4 N 415,713.3	
Contractor Arc Environmental Limited				Sheet 1 of 1



STRATA			SAMPLES & TESTS		
Depth	No	DESCRIPTION	Depth	No	Remarks/Tests
0.00-0.70		Grass overlying demolition rubble of broken bricks and concrete intermixed with brown sandy clay (MADE GROUND)			
0.70-1.50		Dark grey and black sandy gravelly clay with broken bricks, sandstone cobbles, plastic and metal (MADE GROUND)			
1.50-2.00		Firm (locally soft) (medium strength) light grey slightly sandy silty CLAY (RESIDUAL SOIL)	1.50	V	45kN/m ²
2.00-2.20		Firm (medium strength) orangish brown and grey sandy slightly gravelly CLAY with pockets of sand (RESIDUAL SOIL)	2.00	V	65kN/m ²
2.20-2.30		Stiff (high strength) greyish brown slightly sandy slightly gravelly CLAY with occasional cobbles of mudstone (RESIDUAL SOIL)	2.20	B	
			2.20	V	95kN/m ²

Shoring/Support:
Stability:



GENERAL
REMARKS

Trial pit remained dry and stable on completion

All dimensions in metres
Scale 1:40

Client
Vistry Partnerships
Yorkshire

Method/
Plant Used Mechanically Excavated

Logged By
LJ



Solum House, Unit 1 Elliott Court
St Johns Road, Meadowfield
Durham, DH7 8PN
Telephone: 01913786380

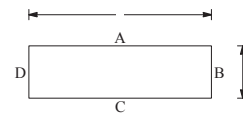
TRIAL PIT LOG

Project Hollingworth Gate, Littleborough				TRIAL PIT No TP14
Job No 21-763	Date 26-10-21	Ground Level (m) 159.03	Co-Ordinates () E 393,489.2 N 415,707.8	
Contractor Arc Environmental Limited				Sheet 1 of 1



STRATA			SAMPLES & TESTS		
Depth	No	DESCRIPTION	Depth	No	Remarks/Tests
0.00-2.00		Soft and firm brown and black sandy gravelly clay. Gravel is fine to coarse comprising fragments of brick and concrete with some metal noted. Concrete at base (MADE GROUND).			

Shoring/Support:
Stability:



GENERAL
REMARKS

Trial pit remained stable with slight ingress from made ground

All dimensions in metres
Scale 1:40

Client
Vistry Partnerships
Yorkshire

Method/
Plant Used Mechanically Excavated

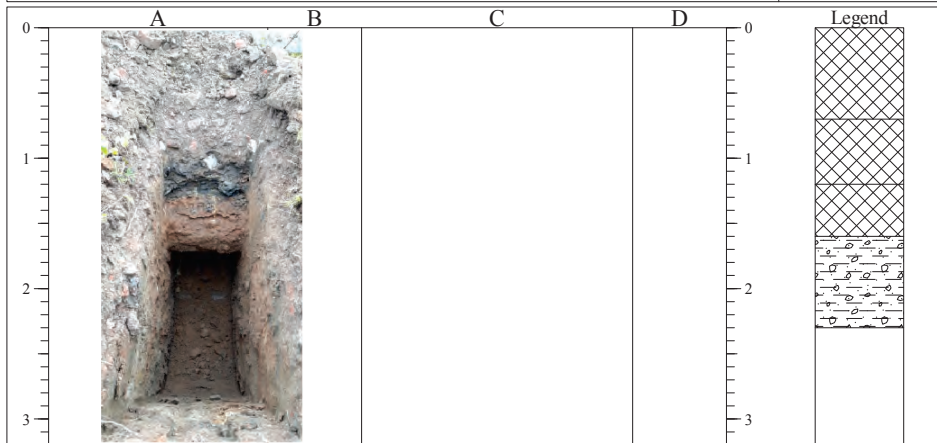
Logged By
MPB



Solum House, Unit 1 Elliott Court
St Johns Road, Meadowfield
Durham, DH7 8PN
Telephone: 01913786380

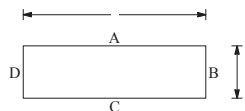
TRIAL PIT LOG

Project Hollingworth Gate, Littleborough				TRIAL PIT No TP15
Job No 21-763	Date 26-10-21	Ground Level (m) 157.47	Co-Ordinates () E 393,453.7 N 415,695.1	
Contractor Arc Environmental Limited				Sheet 1 of 1



STRATA			SAMPLES & TESTS		
Depth	No	DESCRIPTION	Depth	No	Remarks/Tests
0.00-0.70		Grass overlying demolition rubble of broken bricks and concrete intermixed with brown sandy clay (MADE GROUND)			
0.70-1.20		Reddish brown very gravelly sand with occasional brick fragments (MADE GROUND)			
1.20-1.60		Reddish brown very gravelly (possibly reworked) sand (MADE GROUND)			
1.60-2.30		Stiff orangish brown and grey sandy very gravelly CLAY with occasional pockets of very clayey gravelly sand (RESIDUAL SOIL)	2.00	B	

Shoring/Support:
Stability:



GENERAL
REMARKS

Trial pit remained dry and
stable on completion

All dimensions in metres
Scale 1:40

Client
Vistry Partnerships
Yorkshire

Method/
Plant Used
Mechanically Excavated

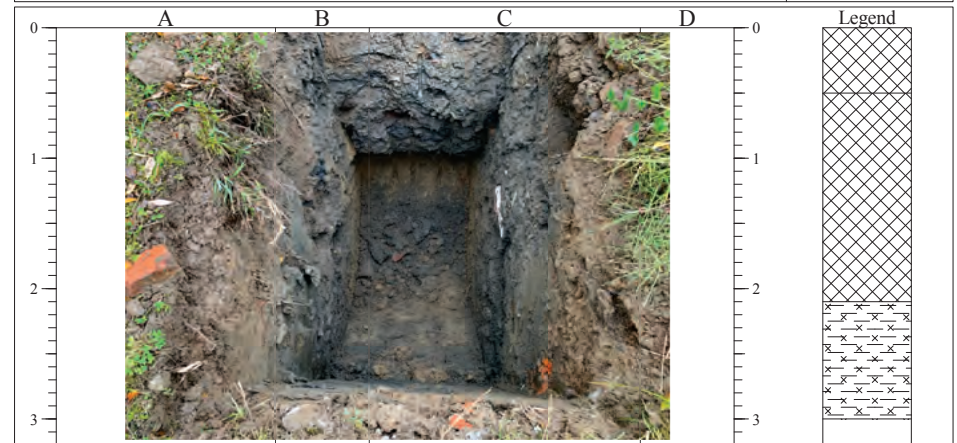
Logged By
LJ



Solum House, Unit 1 Elliott Court
St Johns Road, Meadowfield
Durham, DH7 8PN
Telephone: 01913786380

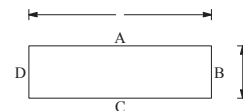
TRIAL PIT LOG

Project Hollingworth Gate, Littleborough				TRIAL PIT No TP16
Job No 21-763	Date 26-10-21	Ground Level (m) 155.00	Co-Ordinates () E 393,422.6 N 415,686.6	
Contractor Arc Environmental Limited				Sheet 1 of 1



STRATA			SAMPLES & TESTS		
Depth	No	DESCRIPTION	Depth	No	Remarks/Tests
0.00-0.50		Soft and firm brown and black sandy gravelly clay. Gravel is fine to coarse comprising fragments of brick and concrete with some metal noted. Concrete at base (MADE GROUND).			
0.50-2.10		Firm grey sandy gravelly clay comprising fragments of brick and concrete with cobbles and rag noted (MADE GROUND).			
2.10-3.00		Soft light brown and grey very sandy silty CLAY. Becoming clayey sand in places (RESIDUAL SOIL).			
			3.00	V	35kN/m ²

Shoring/Support:
Stability:



GENERAL
REMARKS

Trial pit remained dry and
stable on completion

All dimensions in metres
Scale 1:40

Client
Vistry Partnerships
Yorkshire

Method/
Plant Used
Mechanically Excavated

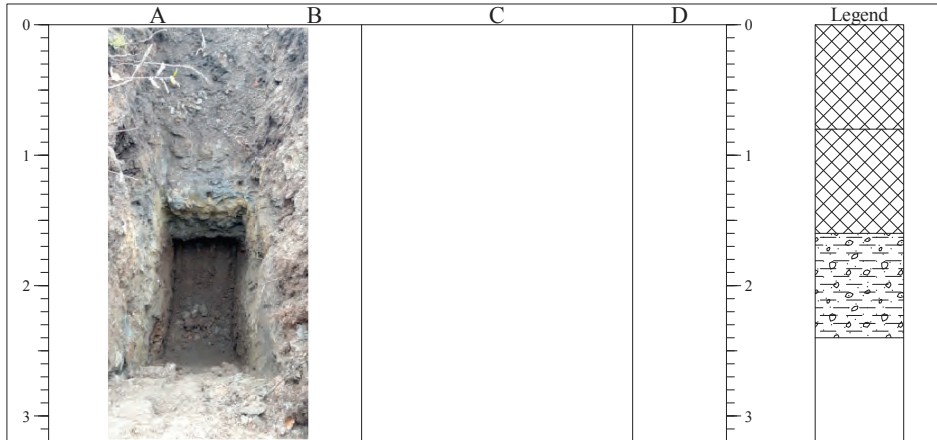
Logged By
MPB



Solum House, Unit 1 Elliott Court
St Johns Road, Meadowfield
Durham, DH7 8PN
Telephone: 01913786380

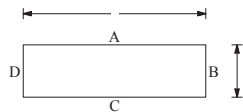
TRIAL PIT LOG

Project Hollingworth Gate, Littleborough				TRIAL PIT No TP17
Job No 21-763	Date 26-10-21	Ground Level (m) 155.88	Co-Ordinates () E 393,444.7 N 415,723.2	
Contractor Arc Environmental Limited				Sheet 1 of 1



STRATA			SAMPLES & TESTS		
Depth	No	DESCRIPTION	Depth	No	Remarks/Tests
0.00-0.80		Grass overlying demolition rubble of broken bricks and concrete intermixed with brown sandy clay (MADE GROUND)			
0.80-1.60		Firm yellowish and greyish brown very sandy (possibly reworked) clay with pockets of sand and sandstone cobbles (MADE GROUND)			
1.60-2.40		Firm (locally stiff) (high strength) orangish and reddish brown sandy slightly gravelly CLAY with occasional cobbles of sandstone (RESIDUAL SOIL)	2.00	B	
			2.00	V	85kN/m ²

Shoring/Support:
Stability:



GENERAL
REMARKS

Trial pit remained dry and stable on completion

All dimensions in metres
Scale 1:40

Client
Vistry Partnerships
Yorkshire

Method/
Plant Used
Mechanically Excavated

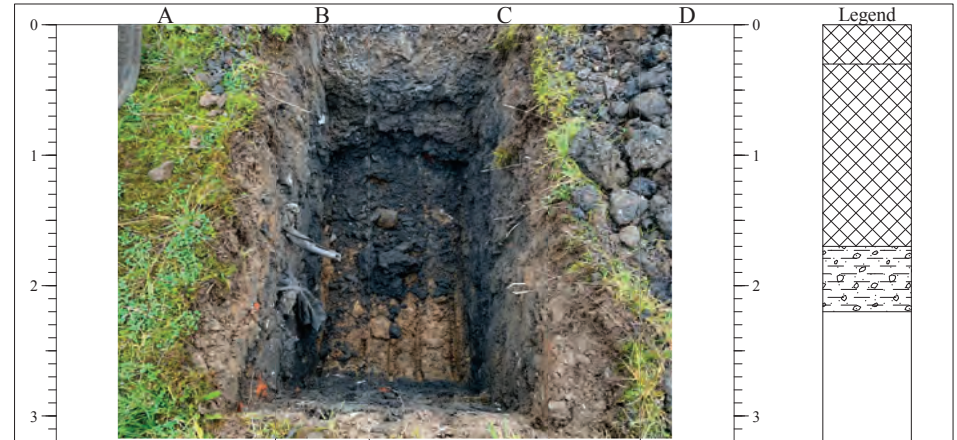
Logged By
LJ



Solum House, Unit 1 Elliott Court
St Johns Road, Meadowfield
Durham, DH7 8PN
Telephone: 01913786380

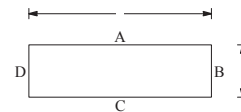
TRIAL PIT LOG

Project Hollingworth Gate, Littleborough				TRIAL PIT No TP18
Job No 21-763	Date 26-10-21	Ground Level (m) 151.86	Co-Ordinates () E 393,388.8 N 415,709.2	
Contractor Arc Environmental Limited				Sheet 1 of 1



STRATA			SAMPLES & TESTS		
Depth	No	DESCRIPTION	Depth	No	Remarks/Tests
0.00-0.30		Vegetation over brown gravel of concrete, brick and sandstone with occasional wood (MADE GROUND).			
0.30-1.70		Firm grey sandy gravelly clay comprising fragments of brick and concrete with cobbles, metal and rag noted (MADE GROUND).			
1.70-2.20		Stiff (high strength) brown very sandy very gravelly CLAY with occasional cobbles of sandstone (RESIDUAL SOIL).	2.00	V	108kN/m ²

Shoring/Support:
Stability:



GENERAL
REMARKS

Trial pit remained dry and stable on completion

All dimensions in metres
Scale 1:40

Client
Vistry Partnerships
Yorkshire

Method/
Plant Used
Mechanically Excavated

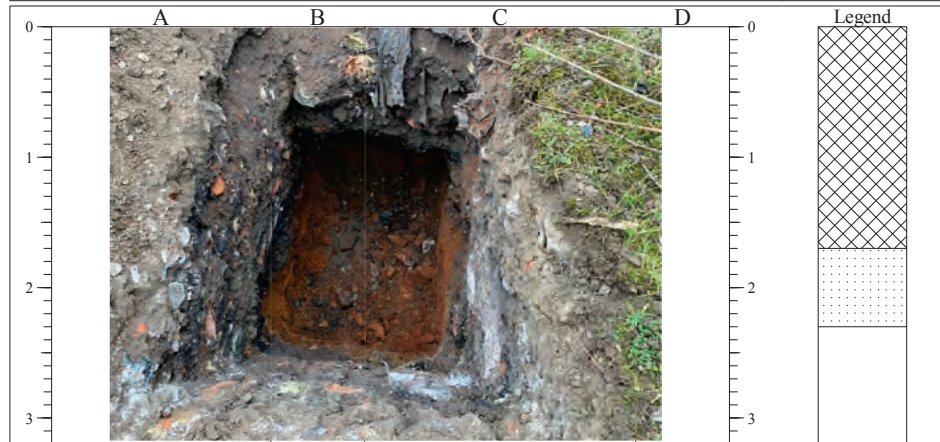
Logged By
MPB



Solum House, Unit 1 Elliott Court
St Johns Road, Meadowfield
Durham, DH7 8PN
Telephone: 01913786380

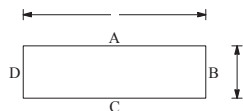
TRIAL PIT LOG

Project Hollingworth Gate, Littleborough				TRIAL PIT No TP19
Job No 21-763	Date 26-10-21	Ground Level (m) 151.98	Co-Ordinates () E 393,404.3 N 415,750.1	
Contractor Arc Environmental Limited				Sheet 1 of 1



STRATA			SAMPLES & TESTS		
Depth	No	DESCRIPTION	Depth	No	Remarks/Tests
0.00-1.70		Compact black and grey sandy gravel intermixed with brick, concrete and sandstone (MADE GROUND).			
1.70-2.30		Reddish brown SANDSTONE. Recovered as sandy gravel (LOWER COAL MEASURES).			

Shoring/Support:
Stability:



GENERAL
REMARKS

Trial pit remained dry and stable on completion

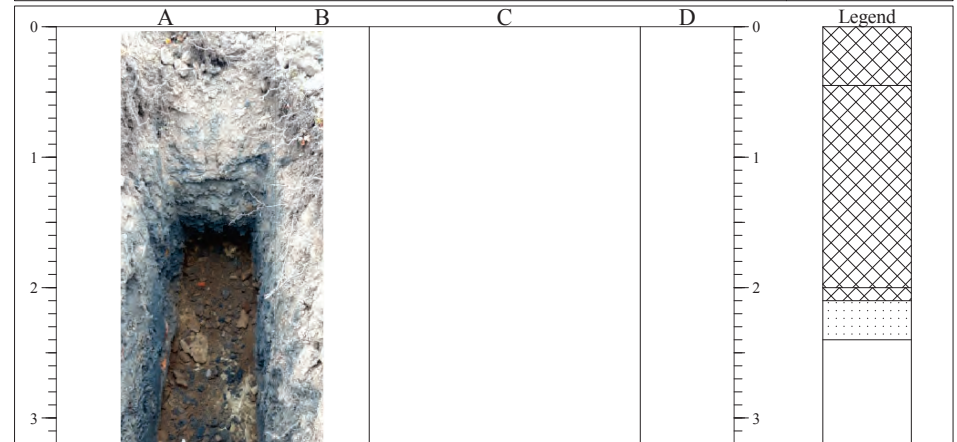
All dimensions in metres Scale 1:40	Client Vistry Partnerships Yorkshire	Method/ Plant Used Mechanically Excavated	Logged By MPB
--	--	---	------------------



Solum House, Unit 1 Elliott Court
St Johns Road, Meadowfield
Durham, DH7 8PN
Telephone: 01913786380

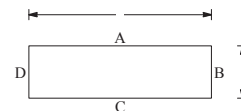
TRIAL PIT LOG

Project Hollingworth Gate, Littleborough				TRIAL PIT No TP20
Job No 21-763	Date 26-10-21	Ground Level (m) 150.94	Co-Ordinates () E 393,411.5 N 415,787.4	
Contractor Arc Environmental Limited				Sheet 1 of 1



STRATA			SAMPLES & TESTS		
Depth	No	DESCRIPTION	Depth	No	Remarks/Tests
0.00-0.45		Grass overlying demolition rubble of broken bricks and concrete intermixed with brown sandy clay (MADE GROUND)			
0.45-2.00		Firm (locally soft) dark grey sandy gravelly clay with brick, metal, timber fragments and sandstone blocks (MADE GROUND)			
2.00-2.10		Firm (locally soft) yellowish brown very sandy gravelly clay with broken bricks and large blocks of sandstone (MADE GROUND)			
2.10-2.40		Yellowish brown SANDSTONE (LOWER COAL MEASURES FORMATION)			

Shoring/Support:
Stability:



GENERAL
REMARKS

Trial pit remained dry and stable on completion

All dimensions in metres Scale 1:40	Client Vistry Partnerships Yorkshire	Method/ Plant Used Mechanically Excavated	Logged By LJ
--	--	---	-----------------



Solum House, Unit 1 Elliott Court
St Johns Road, Meadowfield
Durham, DH7 8PN
Telephone: 01913786380

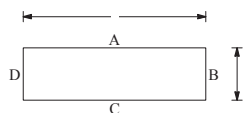
TRIAL PIT LOG

Project Hollingworth Gate, Littleborough				TRIAL PIT No TP21
Job No 21-763	Date 26-10-21	Ground Level (m) 148.96	Co-Ordinates () E 393,326.7 N 415,732.0	
Contractor Arc Environmental Limited				Sheet 1 of 1



STRATA			SAMPLES & TESTS		
Depth	No	DESCRIPTION	Depth	No	Remarks/Tests
0.00-0.50		Vegetation overlying greyish brown sandy gravelly clay with broken bricks (MADE GROUND)			
0.50-1.40		Black very sandy very clayey gravel with sandstone blocks (MADE GROUND)			
1.40-2.20		Soft (locally firm) greyish brown very sandy gravelly CLAY with pockets of very clayey sand (RESIDUAL SOIL)			
2.20-2.40		Firm orangish and greyish brown very sandy gravelly CLAY with cobbles of MUDSTONE (RESIDUAL SOIL)	2.30	B	

Shoring/Support:
Stability:



GENERAL
REMARKS

Trial pit remained stable
with slight ingress from
base of made ground

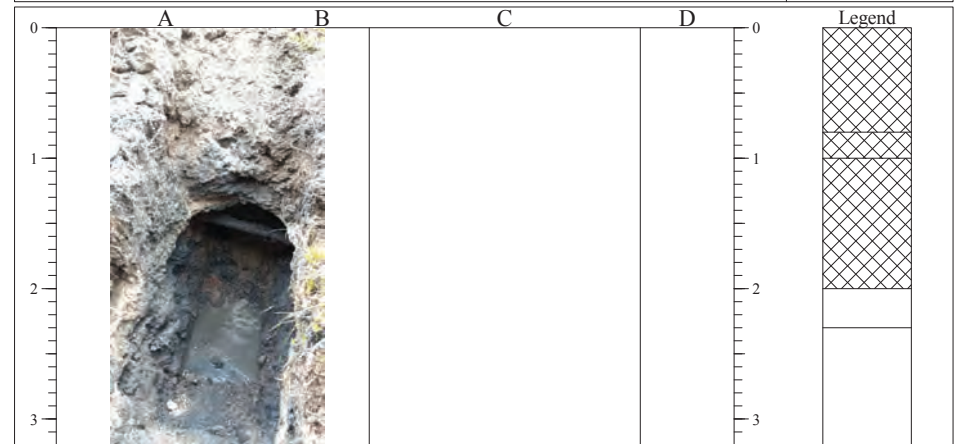
All dimensions in metres Scale 1:40	Client Vistry Partnerships Yorkshire	Method/ Plant Used Mechanically Excavated	Logged By LJ
--	--	---	-----------------



Solum House, Unit 1 Elliott Court
St Johns Road, Meadowfield
Durham, DH7 8PN
Telephone: 01913786380

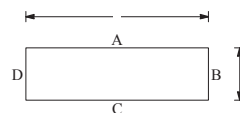
TRIAL PIT LOG

Project Hollingworth Gate, Littleborough				TRIAL PIT No TP22
Job No 21-763	Date 26-10-21	Ground Level (m) 149.38	Co-Ordinates () E 393,303.6 N 415,724.1	
Contractor Arc Environmental Limited				Sheet 1 of 1



STRATA			SAMPLES & TESTS		
Depth	No	DESCRIPTION	Depth	No	Remarks/Tests
0.00-0.80		Vegetation overlying greyish brown sandy gravelly clay with broken bricks (MADE GROUND)			
0.80-1.00		Light grey sandy dolostone gravel with cobbles of sandstone (MADE GROUND)			
1.00-2.00		Grey sandy gravel and cobbles of sandstone with broken sandstone blocks, bricks and concrete (MADE GROUND)			
2.00-2.30		Firm (medium strength) light greyish brown and grey sandy silty CLAY with occasional cobbles of sandstone (RESIDUAL SOIL)	2.20	B	
			2.20	V	70kN/m ²

Shoring/Support:
Stability:



GENERAL
REMARKS

Trial pit remained stable
with slight ingress from
base of made ground

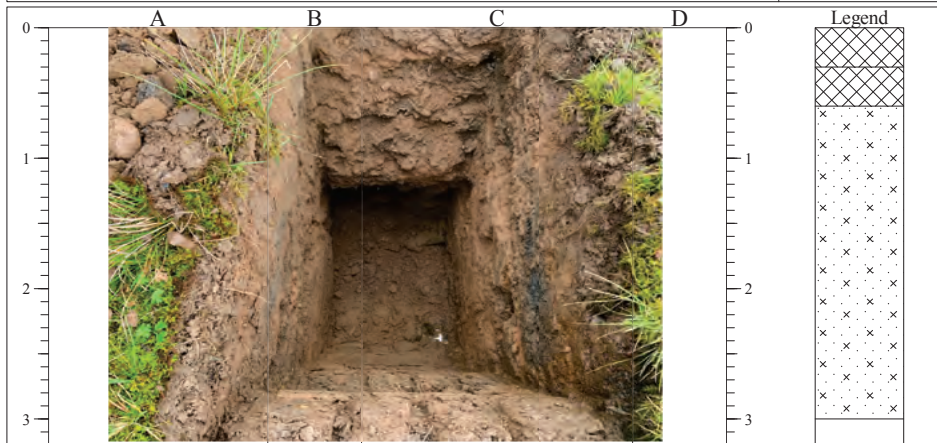
All dimensions in metres Scale 1:40	Client Vistry Partnerships Yorkshire	Method/ Plant Used Mechanically Excavated	Logged By LJ
--	--	---	-----------------



Solum House, Unit 1 Elliott Court
St Johns Road, Meadowfield
Durham, DH7 8PN
Telephone: 01913786380

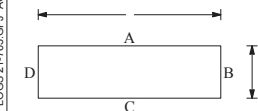
TRIAL PIT LOG

Project Hollingworth Gate, Littleborough				TRIAL PIT No TP23
Job No 21-763	Date 26-10-21	Ground Level (m) 151.37	Co-Ordinates () E 393,318.2 N 415,686.7	
Contractor Arc Environmental Limited				Sheet 1 of 1



STRATA			SAMPLES & TESTS		
Depth	No	DESCRIPTION	Depth	No	Remarks/Tests
0.00-0.30		Vegetation overlying light brown sandy slightly clayey gravel intermixed with concrete, sandstone and cobbles (MADE GROUND)			
0.30-0.60		Firm grey and brown sandy gravelly clay with sandstone (MADE GROUND).			
0.60-3.00		Brown clayey silty SAND with occasional gravel of sandstone (RESIDUAL SOIL).			

Shoring/Support:
Stability:



GENERAL
REMARKS

Trial pit remained dry and stable on completion

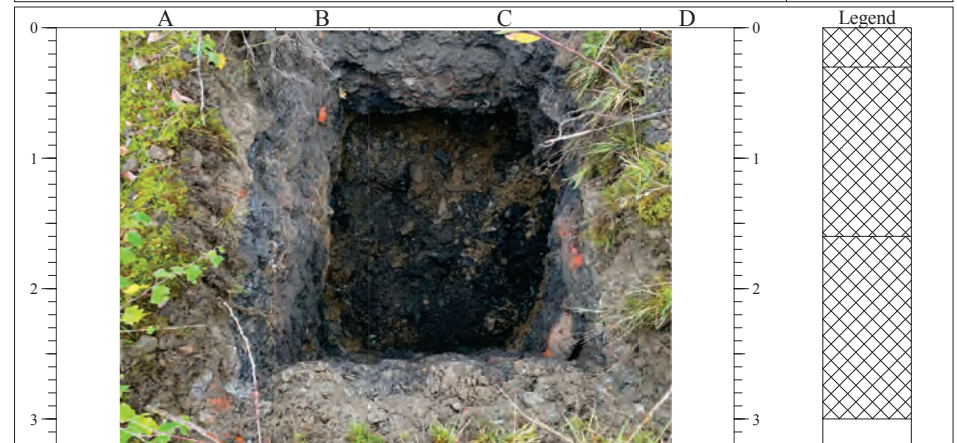
All dimensions in metres Scale 1:40	Client Vistry Partnerships Yorkshire	Method/ Plant Used Mechanically Excavated	Logged By MPB
--	--	---	------------------



Solum House, Unit 1 Elliott Court
St Johns Road, Meadowfield
Durham, DH7 8PN
Telephone: 01913786380

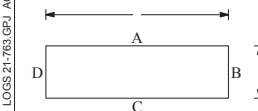
TRIAL PIT LOG

Project Hollingworth Gate, Littleborough				TRIAL PIT No TP24
Job No 21-763	Date 26-10-21	Ground Level (m) 151.52	Co-Ordinates () E 393,353.5 N 415,691.2	
Contractor Arc Environmental Limited				Sheet 1 of 1



STRATA			SAMPLES & TESTS		
Depth	No	DESCRIPTION	Depth	No	Remarks/Tests
0.00-0.30		Vegetation overlying light brown sandy slightly clayey gravel intermixed with concrete, sandstone and cobbles (MADE GROUND)			
0.30-1.60		Black sandy gravel of brick and ash (MADE GROUND).			
1.60-3.00		Black and brown sandy gravel of sandstone and mudstone with cobbles and boulders (MADE GROUND).			

Shoring/Support:
Stability:



GENERAL
REMARKS

Trial pit remained dry and stable on completion

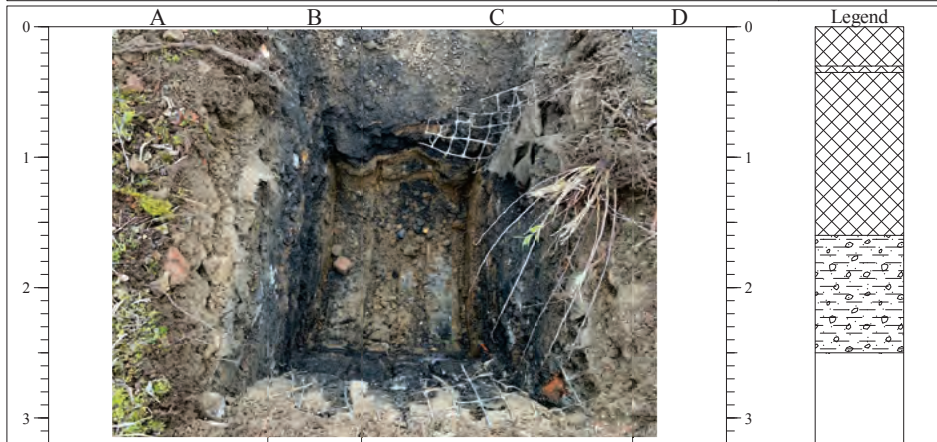
All dimensions in metres Scale 1:40	Client Vistry Partnerships Yorkshire	Method/ Plant Used Mechanically Excavated	Logged By MPB
--	--	---	------------------



Solum House, Unit 1 Elliott Court
St Johns Road, Meadowfield
Durham, DH7 8PN
Telephone: 01913786380

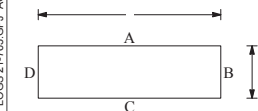
TRIAL PIT LOG

Project Hollingworth Gate, Littleborough				TRIAL PIT No TP25
Job No 21-763	Date 27-10-21	Ground Level (m) 154.08	Co-Ordinates () E 393,338.5 N 415,650.4	
Contractor Arc Environmental Limited				Sheet 1 of 1



STRATA			SAMPLES & TESTS		
Depth	No	DESCRIPTION	Depth	No	Remarks/Tests
0.00-0.30		Brown and grey sandy gravel of concrete and brick (MADE GROUND).			
0.30-0.35		Geogrid (MADE GROUND).			
0.35-1.60		Black and grey clayey sandy gravel. Gravel is fine to coarse comprising fragments of brick, concrete mudstone, shale and ash. Cobbles noted (MADE GROUND).			
1.60-2.50		Stiff (high strength) brown very sandy very gravelly CLAY. Gravel is fine to coarse of sandstone (RESIDUAL SOIL).	2.00	V	102kN/m ²

Shoring/Support:
Stability:



GENERAL
REMARKS

Trial pit remained dry and stable on completion

All dimensions in metres
Scale 1:40

Client
Vistry Partnerships
Yorkshire

Method/
Plant Used Mechanically Excavated

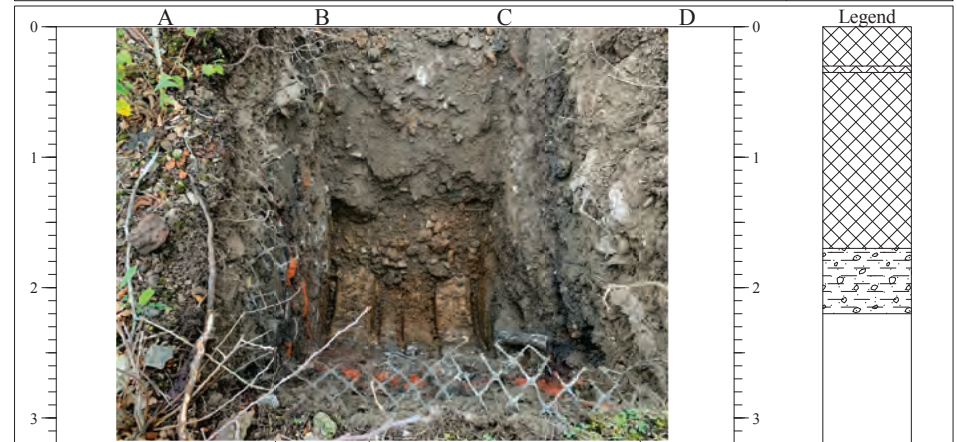
Logged By
MPB



Solum House, Unit 1 Elliott Court
St Johns Road, Meadowfield
Durham, DH7 8PN
Telephone: 01913786380

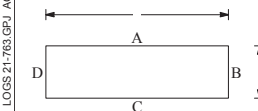
TRIAL PIT LOG

Project Hollingworth Gate, Littleborough				TRIAL PIT No TP26
Job No 21-763	Date 27-10-21	Ground Level (m) 152.95	Co-Ordinates () E 393,381.4 N 415,670.8	
Contractor Arc Environmental Limited				Sheet 1 of 1



STRATA			SAMPLES & TESTS		
Depth	No	DESCRIPTION	Depth	No	Remarks/Tests
0.00-0.30		Brown and grey sandy gravel of concrete and brick (MADE GROUND).			
0.30-0.35		Geogrid (MADE GROUND).			
0.35-1.70		Brown and grey clayey sandy gravel. Gravel is fine to coarse comprising fragments of brick, concrete mudstone, shale and some metal. Cobbles noted (MADE GROUND).			
1.70-2.20		Stiff (high strength) brown very sandy very gravelly CLAY. Gravel is fine to coarse of sandstone (RESIDUAL SOIL).	2.00	V	92kN/m ²

Shoring/Support:
Stability:



GENERAL
REMARKS

Trial pit remained dry and stable on completion

All dimensions in metres
Scale 1:40

Client
Vistry Partnerships
Yorkshire

Method/
Plant Used Mechanically Excavated

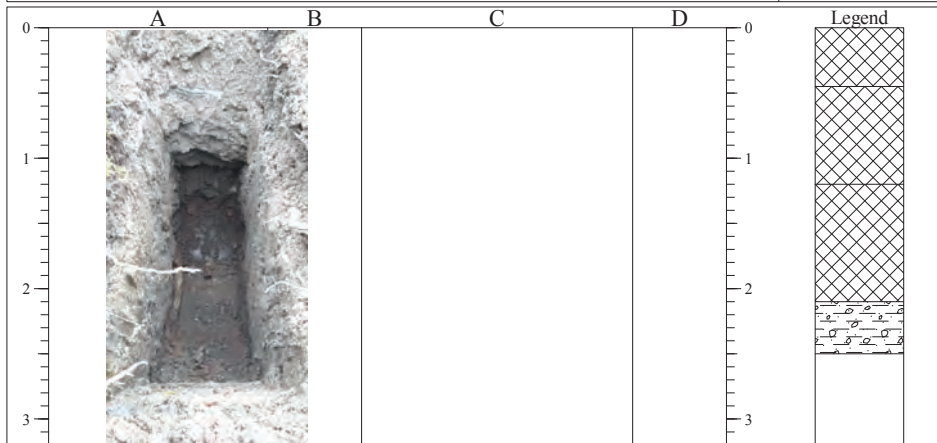
Logged By
MPB



Solum House, Unit 1 Elliott Court
St Johns Road, Meadowfield
Durham, DH7 8PN
Telephone: 01913786380

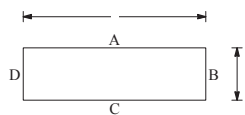
TRIAL PIT LOG

Project Hollingworth Gate, Littleborough				TRIAL PIT No TP27
Job No 21-763	Date 27-10-21	Ground Level (m) 155.11	Co-Ordinates () E 393,316.7 N 415,635.0	
Contractor Arc Environmental Limited				Sheet 1 of 1



STRATA			SAMPLES & TESTS		
Depth	No	DESCRIPTION	Depth	No	Remarks/Tests
0.00-0.45		Grass overlying demolition rubble of broken bricks and concrete intermixed with brown sandy clay (MADE GROUND)			
0.45-1.20		Firm light brown sandy gravelly clay with broken bricks, sandstone blocks, timber fragments and broken concrete (MADE GROUND)			
1.20-2.10		Dark grey sandy gravelly clay with broken bricks, sandstone cobbles and concrete (MADE GROUND)			
2.10-2.50		Stiff (high strength) grey slightly sandy slightly gravelly CLAY with occasional cobbles of mudstone (RESIDUAL SOIL)			
			2.40 2.50	B V	100kN/m ²

Shoring/Support:
Stability:



GENERAL
REMARKS

Trial pit remained stable
with slight ingress from
base of made ground

All dimensions in metres
Scale 1:40

Client
Vistry Partnerships
Yorkshire

Method/
Plant Used
Mechanically Excavated

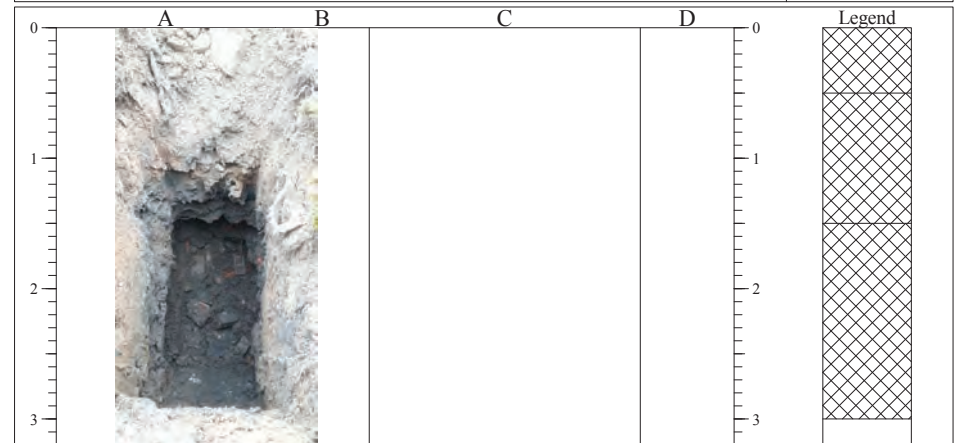
Logged By
LJ



Solum House, Unit 1 Elliott Court
St Johns Road, Meadowfield
Durham, DH7 8PN
Telephone: 01913786380

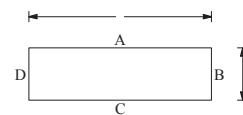
TRIAL PIT LOG

Project Hollingworth Gate, Littleborough				TRIAL PIT No TP28
Job No 21-763	Date 27-10-21	Ground Level (m) 155.10	Co-Ordinates () E 393,289.1 N 415,637.4	
Contractor Arc Environmental Limited				Sheet 1 of 1



STRATA			SAMPLES & TESTS		
Depth	No	DESCRIPTION	Depth	No	Remarks/Tests
0.00-0.50		Grass overlying demolition rubble of broken bricks, concrete and large sandstone blocks intermixed with brown sandy clay (MADE GROUND)			
0.50-1.50		Firm light brown sandy gravelly clay with broken bricks and sandstone blocks and pockets of dark grey very sandy clay with brick fragments (MADE GROUND)			
1.50-3.00		Dark grey sandy gravelly clay with broken bricks, sandstone cobbles, concrete, timber and metal (MADE GROUND)			

Shoring/Support:
Stability:



GENERAL
REMARKS

Trial pit remained dry and
stable on completion

All dimensions in metres
Scale 1:40

Client
Vistry Partnerships
Yorkshire

Method/
Plant Used
Mechanically Excavated

Logged By
LJ



Solum House, Unit 1 Elliott Court
St Johns Road, Meadowfield
Durham, DH7 8PN
Telephone: 01913786380

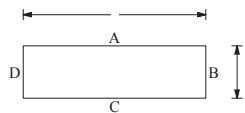
TRIAL PIT LOG

Project Hollingworth Gate, Littleborough				TRIAL PIT No TP29
Job No 21-763	Date 27-10-21	Ground Level (m) 156.48	Co-Ordinates () E 393,273.4 N 415,619.6	
Contractor Arc Environmental Limited				Sheet 1 of 1



STRATA			SAMPLES & TESTS		
Depth	No	DESCRIPTION	Depth	No	Remarks/Tests
0.00-0.70		Grass overlying demolition rubble of broken bricks, concrete and large sandstone blocks intermixed with brown sandy clay (MADE GROUND)			
0.70-1.50		Firm light brown sandy gravelly clay with broken bricks and sandstone blocks (MADE GROUND)			
1.50-1.70		Stiff (high strength) orangish brown and grey very sandy slightly gravelly CLAY (RESIDUAL SOIL)	1.50 1.60	V B	90kN/m ²

Shoring/Support:
Stability:



GENERAL
REMARKS

Trial pit remained dry and stable on completion

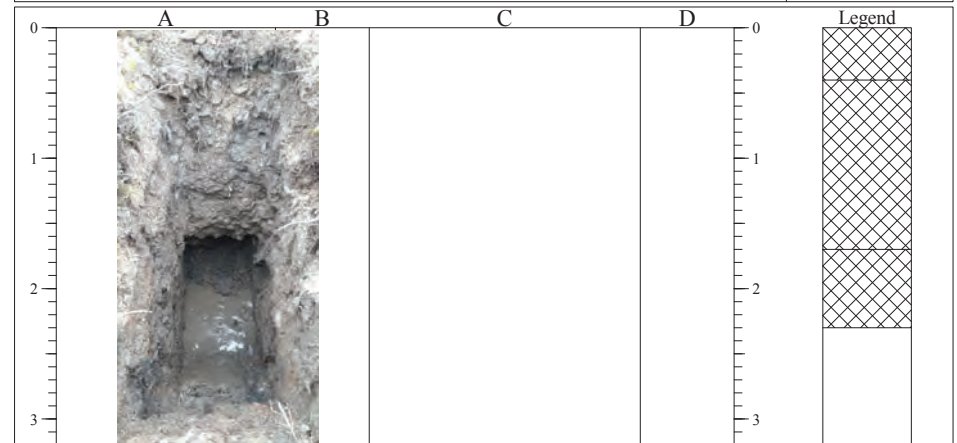
All dimensions in metres Scale 1:40	Client Vistry Partnerships Yorkshire	Method/ Plant Used Mechanically Excavated	Logged By LJ
--	--	---	-----------------



Solum House, Unit 1 Elliott Court
St Johns Road, Meadowfield
Durham, DH7 8PN
Telephone: 01913786380

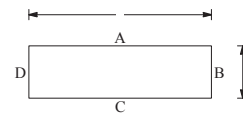
TRIAL PIT LOG

Project Hollingworth Gate, Littleborough				TRIAL PIT No TP30
Job No 21-763	Date 27-10-21	Ground Level (m) 155.52	Co-Ordinates () E 393,255.6 N 415,631.5	
Contractor Arc Environmental Limited				Sheet 1 of 1



STRATA			SAMPLES & TESTS		
Depth	No	DESCRIPTION	Depth	No	Remarks/Tests
0.00-0.40		Grass overlying demolition rubble of broken bricks and concrete intermixed with brown sandy clay with material membrane at base (MADE GROUND)			
0.40-1.70		Greyish brown very sandy clayey gravel with broken bricks, concrete, plastic and metal fragments and slight water ingress from c.1.00m (MADE GROUND)			
1.70-2.30		Greyish brown very sandy clayey gravel intermixed with dark grey sandy gravelly clay with broken bricks, concrete, plastic and metal fragments (MADE GROUND)			
2.30		Trial pit terminated at c.2.30m on buried concrete			

Shoring/Support:
Stability:



GENERAL
REMARKS

Trial pit remained stable with slight ingress from c.0.50m within made ground

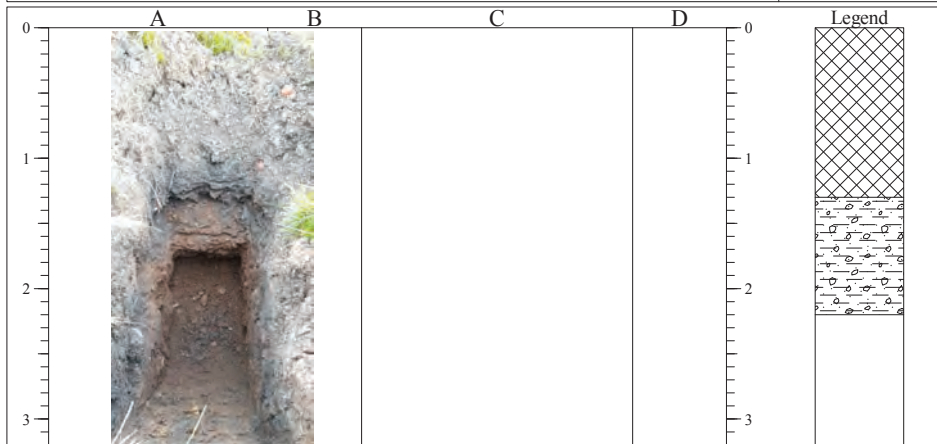
All dimensions in metres Scale 1:40	Client Vistry Partnerships Yorkshire	Method/ Plant Used Mechanically Excavated	Logged By LJ
--	--	---	-----------------



Solum House, Unit 1 Elliott Court
St Johns Road, Meadowfield
Durham, DH7 8PN
Telephone: 01913786380

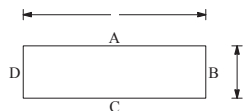
TRIAL PIT LOG

Project Hollingworth Gate, Littleborough				TRIAL PIT No TP31
Job No 21-763	Date 26-10-21	Ground Level (m) 152.46	Co-Ordinates () E 393,293.2 N 415,671.4	
Contractor Arc Environmental Limited				Sheet 1 of 1



STRATA			SAMPLES & TESTS		
Depth	No	DESCRIPTION	Depth	No	Remarks/Tests
0.00-1.30		Vegetation overlying greyish brown sandy gravelly clay with broken bricks and concrete blocks (MADE GROUND)			
1.30-2.20		Firm (locally stiff) very sandy very gravelly CLAY with cobbles of sandstone (RESIDUAL SOIL)			

Shoring/Support:
Stability:



GENERAL
REMARKS

Trial pit remained dry and stable on completion

All dimensions in metres
Scale 1:40

Client
Vistry Partnerships
Yorkshire

Method/
Plant Used
Mechanically Excavated

Logged By
LJ

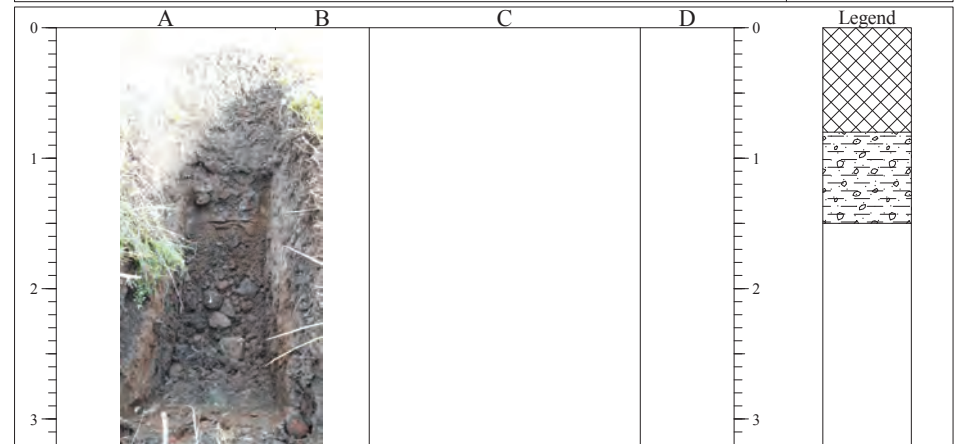
AGS3 UK TP LOGS 21-763.GPJ AGS3 ALL.GDT 8/11/21



Solum House, Unit 1 Elliott Court
St Johns Road, Meadowfield
Durham, DH7 8PN
Telephone: 01913786380

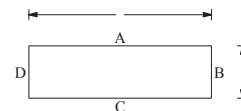
TRIAL PIT LOG

Project Hollingworth Gate, Littleborough				TRIAL PIT No TP32
Job No 21-763	Date 26-10-21	Ground Level (m) 151.90	Co-Ordinates () E 393,294.3 N 415,689.3	
Contractor Arc Environmental Limited				Sheet 1 of 1



STRATA			SAMPLES & TESTS		
Depth	No	DESCRIPTION	Depth	No	Remarks/Tests
0.00-0.80		Vegetation overlying greyish brown sandy gravelly clay with broken bricks (MADE GROUND)			
0.80-1.50		Stiff (high strength) orangish brown and grey slightly sandy slightly gravelly CLAY with pockets of firm very clayey sand (RESIDUAL SOIL)	1.00	B	
			1.00	V	80kN/m ²
			1.50	V	100kN/m ²

Shoring/Support:
Stability:



GENERAL
REMARKS

Trial pit remained dry and stable on completion

All dimensions in metres
Scale 1:40

Client
Vistry Partnerships
Yorkshire

Method/
Plant Used
Mechanically Excavated

Logged By
LJ

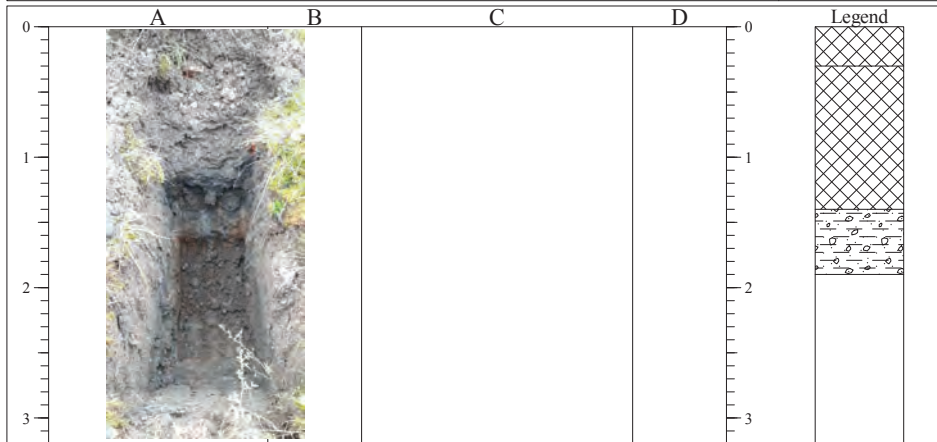
AGS3 UK TP LOGS 21-763.GPJ AGS3 ALL.GDT 8/11/21



Solum House, Unit 1 Elliott Court
St Johns Road, Meadowfield
Durham, DH7 8PN
Telephone: 01913786380

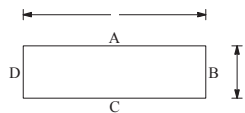
TRIAL PIT LOG

Project Hollingworth Gate, Littleborough				TRIAL PIT No TP33
Job No 21-763	Date 26-10-21	Ground Level (m) 152.27	Co-Ordinates () E 393,260.1 N 415,672.9	
Contractor Arc Environmental Limited				Sheet 1 of 1



STRATA			SAMPLES & TESTS		
Depth	No	DESCRIPTION	Depth	No	Remarks/Tests
0.00-0.30		Vegetation overlying greyish brown sandy gravelly clay with broken bricks (MADE GROUND)			
0.30-1.40		Dark grey sandy gravelly clay with broken sandstone and concrete blocks (MADE GROUND)			
1.40-1.90		Stiff (high strength) dark grey sandy gravelly CLAY with occasional cobbles of mudstone (RESIDUAL SOIL)	1.50	V	90kN/m ²
			1.80	B	

Shoring/Support:
Stability:



GENERAL
REMARKS

Trial pit remained dry and
stable on completion

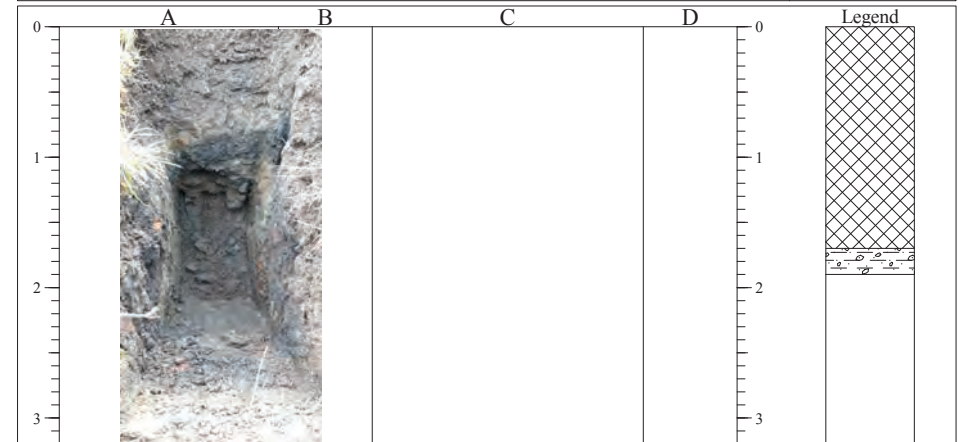
All dimensions in metres Scale 1:40	Client Vistry Partnerships Yorkshire	Method/ Plant Used Mechanically Excavated	Logged By LJ
--	--	---	-----------------



Solum House, Unit 1 Elliott Court
St Johns Road, Meadowfield
Durham, DH7 8PN
Telephone: 01913786380

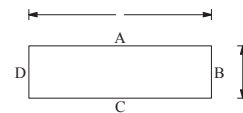
TRIAL PIT LOG

Project Hollingworth Gate, Littleborough				TRIAL PIT No TP34
Job No 21-763	Date 26-10-21	Ground Level (m) 149.83	Co-Ordinates () E 393,251.8 N 415,694.8	
Contractor Arc Environmental Limited				Sheet 1 of 1



STRATA			SAMPLES & TESTS		
Depth	No	DESCRIPTION	Depth	No	Remarks/Tests
0.00-1.70		Vegetation overlying greyish brown sandy gravelly clay with broken bricks (MADE GROUND)			
1.70-1.90		Stiff (high strength) dark grey sandy gravelly CLAY with occasional cobbles of mudstone (RESIDUAL SOIL)	1.80	B	92kN/m ²
			1.80	V	

Shoring/Support:
Stability:



GENERAL
REMARKS

Trial pit remained dry and
stable on completion

All dimensions in metres Scale 1:40	Client Vistry Partnerships Yorkshire	Method/ Plant Used Mechanically Excavated	Logged By LJ
--	--	---	-----------------



Solum House, Unit 1 Elliott Court
St Johns Road, Meadowfield
Durham, DH7 8PN
Telephone: 01913786380

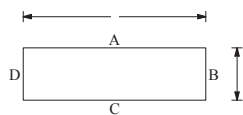
TRIAL PIT LOG

Project Hollingworth Gate, Littleborough				TRIAL PIT No TP35
Job No 21-763	Date 26-10-21	Ground Level (m) 151.80	Co-Ordinates () E 393,194.4 N 415,670.1	
Contractor Arc Environmental Limited				Sheet 1 of 1



STRATA			SAMPLES & TESTS		
Depth	No	DESCRIPTION	Depth	No	Remarks/Tests
0.00-0.50		Grass overlying demolition rubble of broken bricks and concrete intermixed with brown sandy clay (MADE GROUND)			
0.50-1.20		Greyish brown sandy gravelly clay with broken bricks (MADE GROUND)			
1.20-2.90		Black very sandy very clayey gravel with plastic pipe, timber and cable fragments and pockets of sand (MADE GROUND)			

Shoring/Support:
Stability:



GENERAL
REMARKS

Trial pit remained dry and
stable on completion

All dimensions in metres
Scale 1:40

Client
Vistry Partnerships
Yorkshire

Method/
Plant Used
Mechanically Excavated

Logged By
LJ



Solum House, Unit 1 Elliott Court
St Johns Road, Meadowfield
Durham, DH7 8PN
Telephone: 01913786380

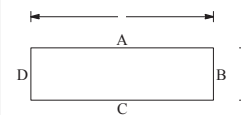
TRIAL PIT LOG

Project Hollingworth Gate, Littleborough				TRIAL PIT No TP36
Job No 21-763	Date 27-10-21	Ground Level (m) 155.47	Co-Ordinates () E 393,206.1 N 415,633.4	
Contractor Arc Environmental Limited				Sheet 1 of 1



STRATA			SAMPLES & TESTS		
Depth	No	DESCRIPTION	Depth	No	Remarks/Tests
0.00-0.35		Grass overlying demolition rubble of broken bricks and concrete intermixed with brown sandy clay (MADE GROUND)			
0.35-1.10		Greyish brown very sandy slightly clayey gravel with broken bricks and concrete (MADE GROUND)			
1.10-1.50		Dark grey sandy gravelly clay with broken bricks, sandstone cobbles and concrete (MADE GROUND)			
1.50-1.90		Firm yellowish brown and grey mottled very sandy slightly gravelly CLAY with occasional cobbles of sandstone (RESIDUAL SOIL)			
1.80		Becomes stiff (high strength) from c.1.80m	1.80 1.80	B V	100kN/m ²

Shoring/Support:
Stability:



GENERAL
REMARKS

Trial pit remained dry and
stable on completion

All dimensions in metres
Scale 1:40

Client
Vistry Partnerships
Yorkshire

Method/
Plant Used
Mechanically Excavated

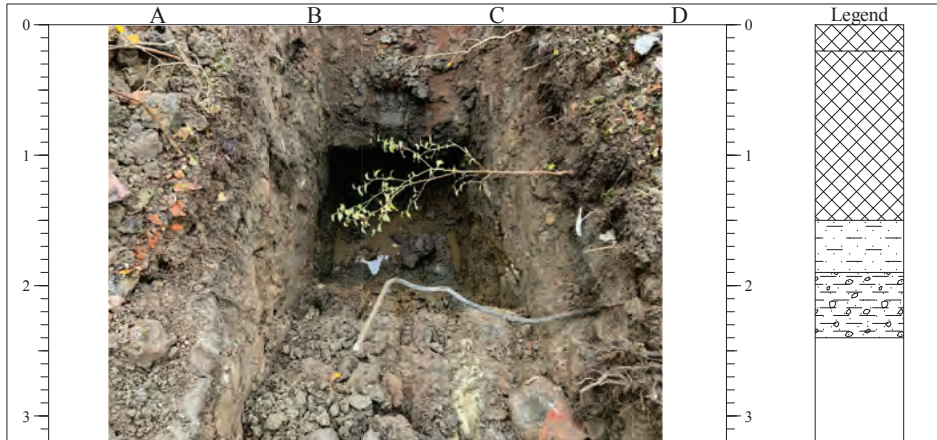
Logged By
LJ



Solum House, Unit 1 Elliott Court
St Johns Road, Meadowfield
Durham, DH7 8PN
Telephone: 01913786380

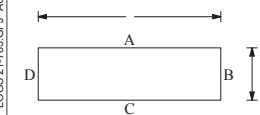
TRIAL PIT LOG

Project				TRIAL PIT No TP37
Hollingworth Gate, Littleborough				
Job No	Date	Ground Level (m)	Co-Ordinates ()	
21-763	26-10-21	156.34	E 393,232.1 N 415,615.1	
Contractor				Sheet
Arc Environmental Limited				1 of 1



STRATA			SAMPLES & TESTS		
Depth	No	DESCRIPTION	Depth	No	Remarks/Tests
0.00-0.20		Vegetation overlying light brown sandy slightly clayey gravel intermixed with concrete, sandstone and cobbles. Geomembrane at base (MADE GROUND)			
0.20-1.50		Firm dark grey and brown sandy gravelly clay of sandstone and brick. Cobbles noted (MADE GROUND).			
1.50-1.90		Brown and grey slightly clayey gravelly SAND. Wet (RESIDUAL SOIL).			
1.90-2.40		Stiff (high strength) dark brown and grey very sandy very gravelly CLAY with occasional cobbles of sandstone (RESIDUAL SOIL).	2.00	V	114kN/m ²

Shoring/Support:
Stability:



GENERAL
REMARKS

Trial pit remained stable with slight ingress from base of made ground

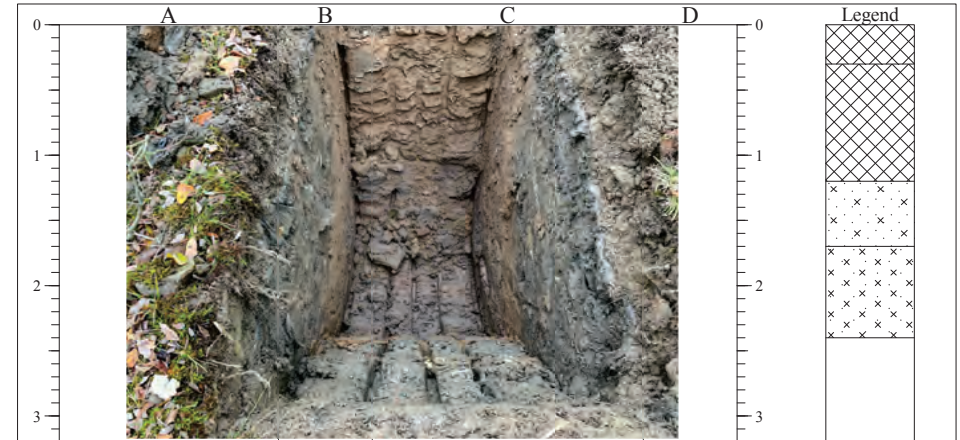
All dimensions in metres Scale 1:40	Client Vistry Partnerships Yorkshire	Method/ Plant Used Mechanically Excavated	Logged By MPB
--	--	---	------------------



Solum House, Unit 1 Elliott Court
St Johns Road, Meadowfield
Durham, DH7 8PN
Telephone: 01913786380

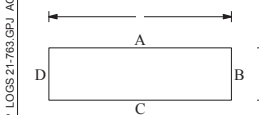
TRIAL PIT LOG

Project				TRIAL PIT No
Hollingworth Gate, Littleborough				
Job No	Date	Ground Level (m)	Co-Ordinates ()	TP38
21-763	26-10-21	157.02	E 393,251.8 N 415,608.6	
Contractor				Sheet
Arc Environmental Limited				1 of 1



STRATA			SAMPLES & TESTS		
Depth	No	DESCRIPTION	Depth	No	Remarks/Tests
0.00-0.30		Vegetation overlying light brown sandy slightly clayey gravel intermixed with concrete, sandstone and cobbles. Geomembrane at base (MADE GROUND)			
0.30-1.20		Firm dark grey and brown sandy gravelly clay of sandstone and brick. Cobbles noted (MADE GROUND).			
1.20-1.70		Brown clayey silty SAND (RESIDUAL SOIL).			
1.70-2.40		Grey and brown sandy SILT (RESIDUAL SOIL).			

Shoring/Support:
Stability:



GENERAL
REMARKS

Trial pit remained dry and stable on completion

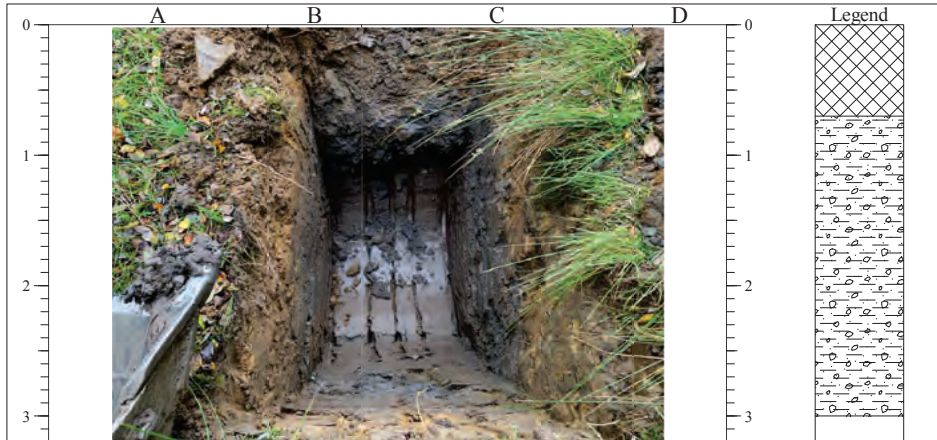
All dimensions in metres Scale 1:40	Client Vistry Partnerships Yorkshire	Method/ Plant Used Mechanically Excavated	Logged By MPB
--	--	---	------------------



Solum House, Unit 1 Elliott Court
St Johns Road, Meadowfield
Durham, DH7 8PN
Telephone: 01913786380

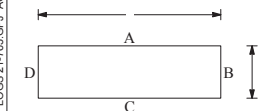
TRIAL PIT LOG

Project Hollingworth Gate, Littleborough				TRIAL PIT No TP40
Job No 21-763	Date 26-10-21	Ground Level (m) 163.99	Co-Ordinates () E 393,275.9 N 415,571.8	
Contractor Arc Environmental Limited				Sheet 1 of 1



STRATA			SAMPLES & TESTS		
Depth	No	DESCRIPTION	Depth	No	Remarks/Tests
0.00-0.70		Vegetation over firm brown and grey very sandy silty clay (MADE GROUND).			
0.70-3.00		Stiff (high strength) dark brown and grey silty slightly gravelly CLAY. Gravel is fine to coarse of sandstone (RESIDUAL SOIL).	1.00	V	102kN/m ²
			1.50	V	95kN/m ²
			2.00	V	100kN/m ²
2.50		Becoming firm (medium strength).	2.50	V	65kN/m ²
			3.00	V	58kN/m ²

Shoring/Support:
Stability:



GENERAL
REMARKS

Trial pit remained dry and stable on completion

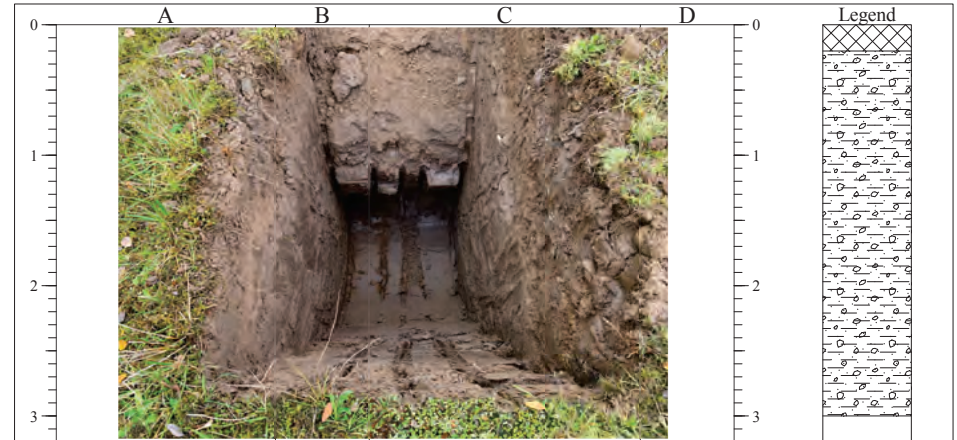
All dimensions in metres Scale 1:40	Client Vistry Partnerships Yorkshire	Method/ Plant Used Mechanically Excavated	Logged By MPB
--	--	---	------------------



Solum House, Unit 1 Elliott Court
St Johns Road, Meadowfield
Durham, DH7 8PN
Telephone: 01913786380

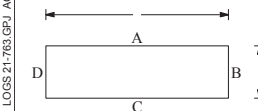
TRIAL PIT LOG

Project Hollingworth Gate, Littleborough				TRIAL PIT No TP41
Job No 21-763	Date 26-10-21	Ground Level (m) 161.04	Co-Ordinates () E 393,288.9 N 415,585.6	
Contractor Arc Environmental Limited				Sheet 1 of 1



STRATA			SAMPLES & TESTS		
Depth	No	DESCRIPTION	Depth	No	Remarks/Tests
0.00-0.20		Vegetation overlying light brown sandy slightly clayey gravel intermixed with concrete, sandstone and cobbles (MADE GROUND)			
0.20-3.00		Stiff (high strength) dark brown and grey silty slightly gravelly CLAY. Gravel is fine to coarse of sandstone (RESIDUAL SOIL).	0.50	V	85kN/m ²
			1.00	V	111kN/m ²
			1.50	V	107kN/m ²
2.20		Becoming firm (medium strength).	2.00	V	91kN/m ²
			2.50	V	65kN/m ²
			3.00	V	60kN/m ²

Shoring/Support:
Stability:



GENERAL
REMARKS

Trial pit remained dry and stable on completion

All dimensions in metres Scale 1:40	Client Vistry Partnerships Yorkshire	Method/ Plant Used Mechanically Excavated	Logged By MPB
--	--	---	------------------

APPENDIX III

Laboratory Results (Geotechnical)

F.A.O.

Final Test Report - 2280802 / 1

Site: Hollingworth Gate, Littleborough

Job Number: 2280802

Originating Client: Arc Environmental

Originating Reference: 21-763

Date Sampled: Not Given

Date Scheduled: 04/11/2021

Date Testing Started: 12/11/2021

Date Testing Finished: 25/11/2021

Previous Reports		Amendments	Date Issued

Amendments:

Authorised By:



Tim Robinson
Quality Supervisor

Report Issue Date: 25/11/2021

Page: 2



Final Test Report - 2280802 / 1

Site: Hollingworth Gate, Littleborough

Job Number: 2280802

Originating Client: Arc Environmental

All opinions and interpretations contained within this report are outside of our Scope of Accreditation.

This test report shall not be reproduced, except in full and only with the written permission of Ian Farmer Associates Ltd.

Samples will be retained for 28 days from date of issue of the final test report before being disposed of, unless we receive written instruction to the contrary.

Report Issue Date: 25/11/2021

APPENDIX IV

Insitu Testing Site Data

(Gas & Groundwater Monitoring Summary Sheet)

arc
environmental

Site:	Littleborough
Ref:	21-763

[illegible]

Notes:

Detection limits - Methane = 0.0%, Carbon Dioxide = 0.0%, LEL = 0.0%, Oxygen = 0.0%, Flow = 0.1l/hr

Monitoring order is from **Left to Right** across table

Monitoring should be for **Not Less** than 3 minutes. However, if high concentrations of gasses initially recorded, monitoring should be for up to 10 minutes.

N/A = Not applicable

= Off the scale

Cf = PID compensation Factor (1-10) - Must be used to multiply the PID reading to give an accurate measure of the total hydrocarbons in the borehole when methane is present

Hex = Hexane (Valid and in range up to 2.000%) - Recorded when abnormally high methane is present.

PID = Photo Ionisation Detector (Calibrated to Isobutylene)

arc
environmental

Site:	Littleborough
Ref:	21-763

[illegible]

Notes:

Detection limits - Methane = 0.0%, Carbon Dioxide = 0.0%, LEL = 0.0%, Oxygen = 0.0%, Flow = 0.1l/hr

Monitoring order is from **Left to Right** across table

Monitoring should be for **Not Less** than 3 minutes. However, if high concentrations of gases initially recorded, monitoring should be for up to 10 minutes.

N/A = Not applicable

= Off the scale

Cf = PID compensation Factor (1-10) - Must be used to multiply the PID reading to give an accurate measure of the total hydrocarbons in the borehole when methane is present

Hex = Hexane (Valid and in range up to 2.000%) - Recorded when abnormally high methane is present.

PID = Photo Ionisation Detector (Calibrated to Isobutylene)