APPENDIX A

Site Location Plan

Dwg No. E20/7786/03 - Site Investigation Plan

Dwg No. E20/7786/32 - Typical Site Conceptual Model

Dwg No. E20/7786/03/02 - Sections Through Site



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Oivil Structural Engineering Consultants

t 01924 464342 f 01924 450662 e Trevor.haigh@haighhuddleston.co.uk

Firth Building 99-101 Leeds Road Dewsbury WF12 7BU

Barratt David Wilson Homes Client:

Pennine View, Darton Job Title:

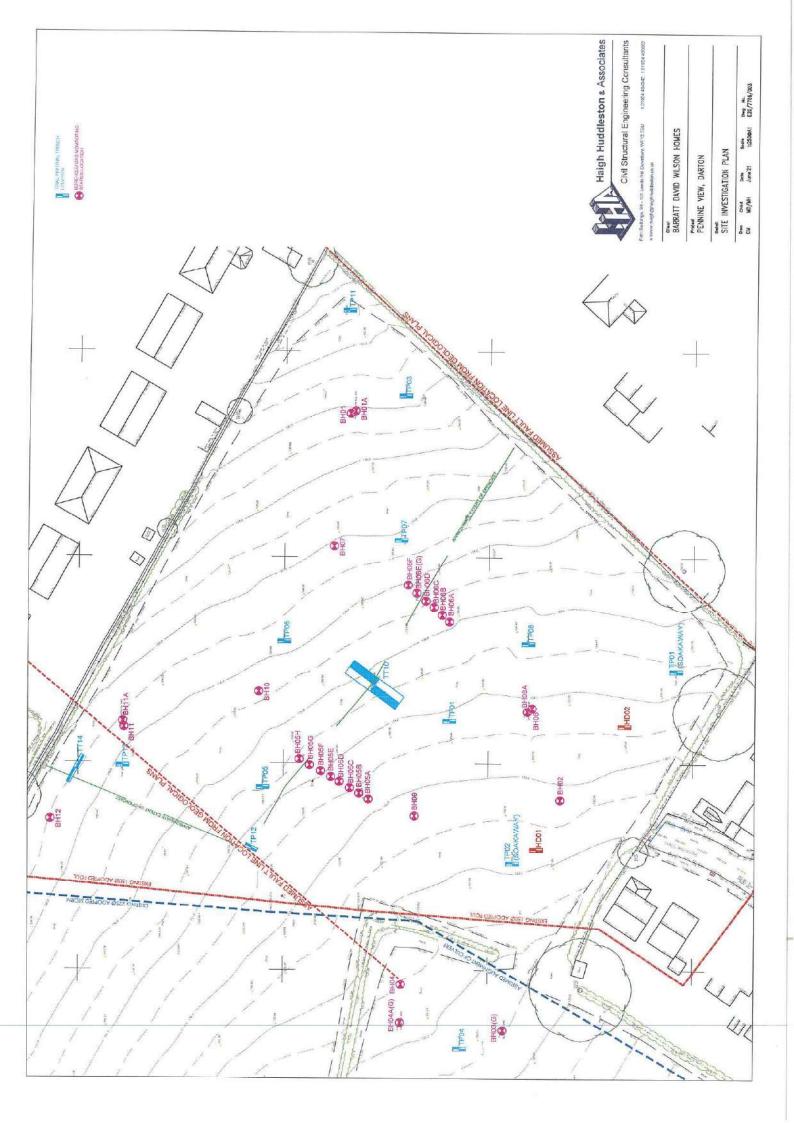
Job Number: E20/7786

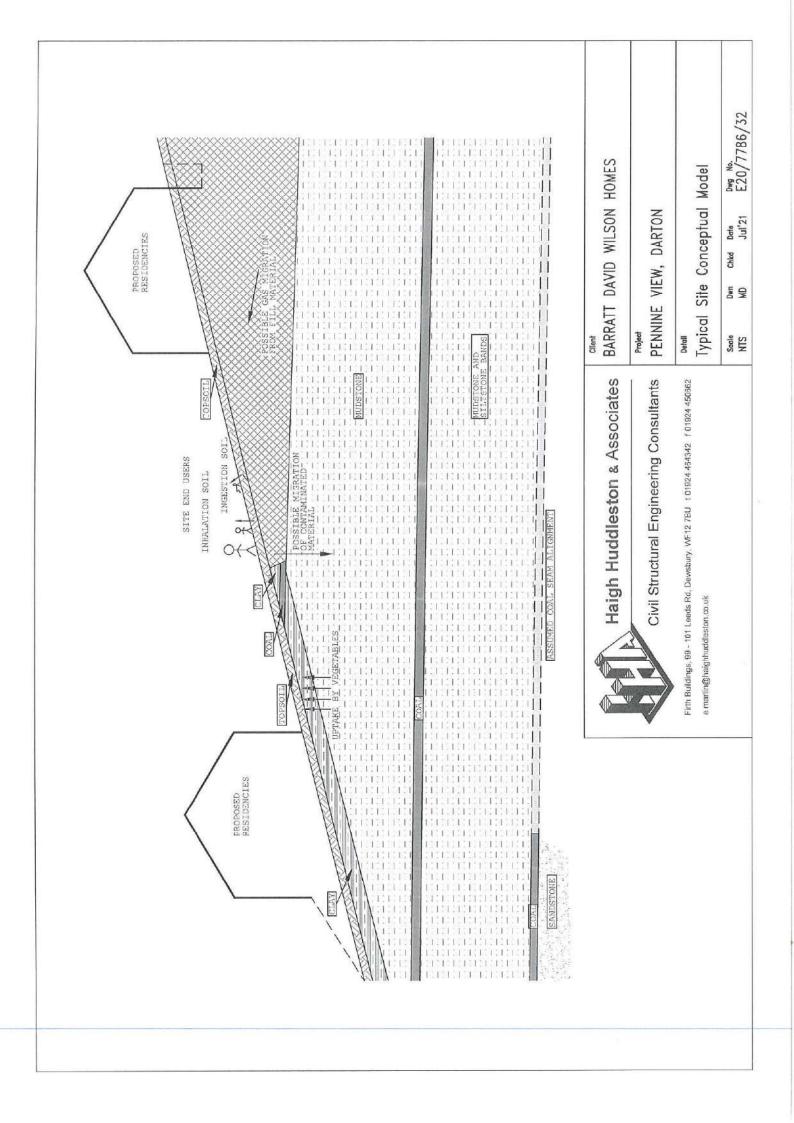
LOCATION PLAN

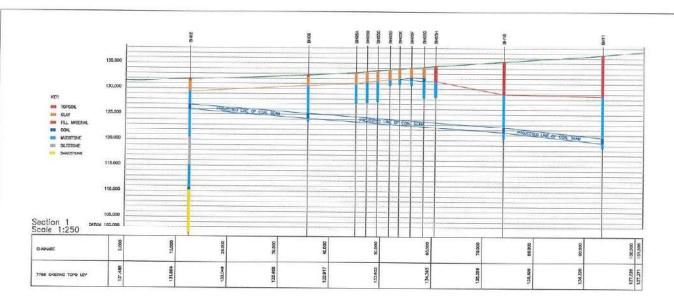
OS Grid Reference : SE 321108 Easting : 432172 Northing : 410861

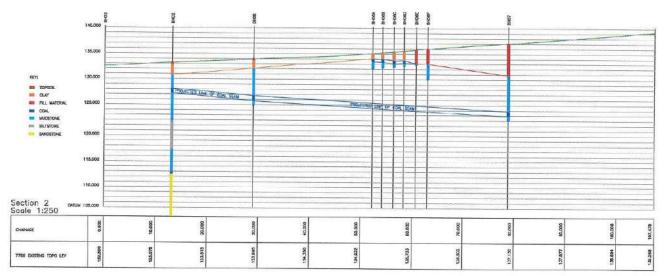
Topographical Survey carried out using GPS.

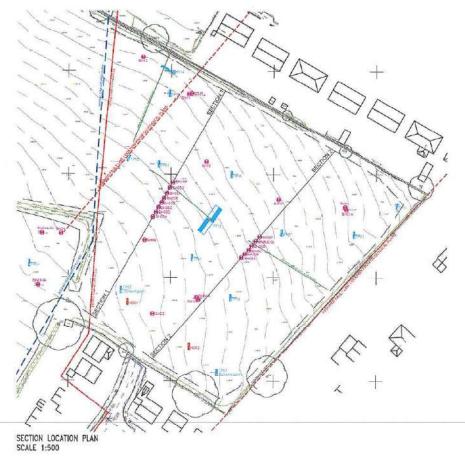














Civil Structural Engineering Consultants

e trever heigh@ninghtuddeston.co.uk

CERT BARRATT DAVID WILSON HOMES

Project
PENNINE VIEW, DARTON

SECTIONS THROUGH SITE

Date July 21

Scale Dwg No. 1:250@A1 E20/7786/003/02

APPENDIX B

Trial Hole Logs

Borehole Log

Soakaway Results



Civil & Structural Engineering Consultants

Firth Buildings, 99 -101 Leeds Road, Dewsbury, WF12 7BU 1 01924 464342 | 1 01924 450662 | e martin@halghhuddleston.co.uk

Client:		BARRATT LEEDS	Job No :	7786		
Site:		PENNINE VIEW, DARTON	Date:	02 JUNE 2021		
0.0	type of the second					
	0.25	Crop overlying dark brown topsoi	I.			
0.5		Firm orangish brown mottled gree	y very sandy clay.			
	0.9	Clay land drain at 900mm.				
1.0		Stiff brown mottled grey sandy cla	ay.			
	1.3					
1.5	1.6	Firm brown/grey clay with small w	veak gravels of muds	tone.		
2.0		Stiff grey clay containing numerous gravels of mudstone.				
2.5	2.5					
		Weak grey mudstone excavated as	s horizontally bedde	d gravels.		
3.0	2.9					
3.5						
4.0						
REMAR						
		encountered during excavation				
Sample		ation remained stable	YES at 0.1m	n. & 0.6m.		
Level	excav	ation remained stable	YES			
NOTES:						

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Client :		BA	BARRATT LEEDS Job No: 7786				
Site:		PE	ENNINE VIEW, DARTON Date : 02 JUNE 2021				
0.0							
	-		Corn crop overlying dark brown topsoil	•			
	0.4						
0.5	0.4						
			Firm brown mottled grey sandy clay.				
	-						
1.0	1						
1.5	1.4	-					
1.0							
			Firm brown/grey clay with numerous m	udstone gravel	s.		
2.0	-						
2.0							
2.5	2.6						
	2.0	-	Moderately weak grey mudstone excav	ated as shalev	gravels.		
	2.8		8.7		g		
3.0							
]						
3.5							
4.0							
REMAR							
Ground	wate	r er	ncountered during excavation	NO			
Sample	taken	1		YES at 0.2n	n.		
Sides of	f excav	vati	on remained stable	YES			
Level							
NOTES:							
A CONTRACTOR OF THE PARTY OF TH							



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Client:		BARRATT LEEDS Job No: 7786		
Site:		PENNINE VIEW, DARTON	Date:	02 JUNE 2021
0.0	-			
	0.2	Corn crop overlying dark brown topsoil	•)	
	0.2			
		Re-engineered dark brown/grey clays v	vith occasional r	nudstone gravels and occasional bricks/red
0.5		shale.		
2.2				
1.0		1		
1.5				
1.5				
2.0				
2.0				
				10
2.5				
3.0				
3.5				
	3.6			
4.0			V= 1	
REMARI				
		encountered during excavation	NO	
Sample			YES at 2.5m	
	excav	ation remained stable	YES	
Level				
NOTES:				
***********			*******	

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Firth Buildings, 99 -101 Leeds Road, Dewsbury, WF12 7BU I 01924 464342 1 01924 450862 e martin@haighhuddleston.co.uk

Client:		BARRATT LEEDS	Job No:	7786	
Site:		PENNINE VIEW, DARTON	Date:	02 JUNE 2021	
0.0	Charles on section				
	0.35	Corn crop overlying dark brown to	opsoil.		
	0.25				
		Firm light brown very sandy slight	ly mottled grey clay.		
0.5					
	-				
10020022					
1.0	1.1				
	1.1				
		Firm grey/brown clay with occasion	onal mudstone.		
1.5	1.5				
1.0	1.0				
		Firm light grey clay with numerou	s gravels of mudston	e (completed weathered mudstone).	
	1.8				
2.0		Weak light grey mudstone excava	ted as angular grave	ls.	
	2.4				
2.5					
2.0					
3.0					
		- 10			
3.5					
4.0				1	
REMAR					
		encountered during excavation			
Sample			YES at 0.2n	n.	
	excav	ation remained stable	YES		
Level					
NOTES:					



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Client:		BARRATT LEEDS Job No: 7786					
Site:		PE	NNINE VIEW, DARTON	Date:	02 JUNE 2021		
0.0							
	0.3		Crop overlying dark brown topsoil.				
0.5			Re-engineered light brown/grey clays.				
1.0							
1.5	1.5						
			Re-engineered dark brown/grey sandy	clay with occasion	onal mudstone.		
2.0							
2.5	2.5						
3.0							
3.5							
4.0							
	REMARKS:						
Ground	water	end	countered during excavation	NO			
Sample	taken			YES			
	excav	atio	n remained stable	YES			
Level							
NOTES:							
			•••••	*******			

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Civil & Structural Engineering Consultants

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Client:		BA	ARRATT LEEDS Job No : 7786					
Site:					02 JUNE 2021			
0.0	,							
	0.2		Crop overlying dark brown topsoil.					
	0.2							
			Re-engineered light brown/grey sandy	clay with occasi	onal mudstone pockets.			
0.5								
1.0								
		- 1						
	1.2	_						
			Re-engineered very weak light grey mu	dstone with occ	asional brick fragments.			
1.5			,					
2.0								
2.5								
2,5								
3.0	3.0							
3.5								
4.0								
410								
REMAR	KS:							
Ground	water	r en	countered during excavation	NO				
Sample	taken			YES				
	excav	/ati	on remained stable	YES				
Level								
NOTES:								



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Client:		BARRATT LEEDS Job No: 7786				
Site:		PENNINE VIEW, DARTON	Date:	02 JUNE 2021		
0.0						
		Crop overlying dark brown topsoil.				
	0.2					
		Re-engineered dark grey very sandy c	lay with mudsto	ine gravels		
0.5		in an amount of the state of th	idy with madsto	nie graveis.		
	0.6					
		Re-engineered very weak dark grey m	udstone evcava	ted as gravels		
1.0		the engineered very weak dark grey in	dustone excava	ted as graveis.		
1.5						
			ŷ.			
2.0						
2.5						
3.0		Sides collapsing and very unstable.				
	3.1	Sides collapsing and very difstable.				
		y.				
3.5						
3.3						
		*				
4.0						
4.0						
REMARK	· S ·					
		encountered during excavation	NO			
Sample t		encountered during excavation	YES at 0.2n	n 8 3 0m		
		ation remained stable		11 & 3.UIII.		
Level	CXCdV	ation remained stable	NO			
NOTES:						

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Civil & Structural Engineering Consultants

Firth Buildings, 99 -101 Leeds Road, Dewsbury, WF12 7BU t 01924 464342 | f 01924 450662 | e martin@haighhuddleston.co.uk

Client:		BARRATT LEEDS Job No: 7786			
Site:		PENNINE VIEW, DARTON	Date:	02 JUNE 2021	
0.0	,				
		Crop overlying dark brown	tonsoil		
	0.3	crop overlying dark brown	topson.		
0.5		Re-engineered brown sand	v clav		
0.5		ne engineered brown sand	y clay.		
1.0					
	1.1				
		Firm light brown/grey clay.			
1.5					
	00.500				
2.0	1.9				
2.0					
		Weak like grey shaley muds	tone.		
2.5					
	2.7				
3.0					
-					
2 F					
3.5					
4.0					
					
REMAR	KS:				
		encountered during exca			
Sample			YES at 0	0.2m	
	exca	ation remained stable	YES		
Level					
NOTES:					



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Client:		BARRATT LEEDS	Job No :	7786		
Site:		PENNINE VIEW, DARTON	Date: 02 JUNE 2021			
0.0	-					
	0.3	Crop overlying dark brown tops	oil.			
0.5		Moderately firm light brown/gr	ey sandy clay.			
1.0	1.4					
2.0		Weak light grey mudstone excav	vated as sub-angular g	ravels.		
2.0	2.1					
2.5						
3.0						
3.5						
4.0						
REMAR	KS:					
		encountered during excavatio				
Sample Sides of		ation remained stable	NO YES			
Level	CACGV	ation remained stable	163			
NOTES:						
	•••••••					

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Firth Buildings, 99 -101 Leeds Road, Dewsbury, WF12 7BU 101924 464342 | 101924 450662 | e martin@haighhuddleston.co.uk

Client :			ARRATT LEEDS	Job No:	7786		
		02 JUNE 2021					
0.0	0.0						
			Dark brown topsoil.				
	0.2	_					
			Re-engineered ground identified coal u	psweep.			
0.5							
	0.7	-					
1.0							
1.5							
2.0							
2.5							
3.0							
)#/N W							
3.5							
5.5							
]						
4.0							
4.0							
REMAR	KS:						
The second second second second		or A	ncountered during excavation	NO			
Sample			reduitered during excevation	NO			
Sides	faves	vat	ion remained stable	YES			
	i exca	vat	IOII TEITIAITIEU STADIE				
Level	2			***************************************			
NOTES	:						



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Client:		BARR	ATT LEEDS	Job No:	7786	
Site:			INE VIEW, DARTON	Date:	02 JUNE 2021	
0.0		4 M				
	0.2	Ro	ugh grass over dark brown topsoil.			
	OIL.					
0.5		Re	-engineered ground primarily consist	ing of clays with	occasional gravels and brick.	
1.0						
1.5						
2.0	2.0					
2.5						
3.0						
3.5						
4.0		1				
REMARK	S:					
		encou	ntered during excavation	NO		
Sample t	aken			YES at 0.2m	& 1.0m.	
	excava	ation r	emained stable	YES		
Level						
NOTES:		•••••				

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Civil & Structural Engineering Consultants

Firth Buildings, 99 -101 Leeds Road, Dewsbury, WF12 7BU 101924 464342 | 101924 450882 | e-martin@halghhuddleston.co.uk

Client:		BARRATT LEEDS Job No: 7786			
Site:		PENNINE VIEW, DARTON	Date:	02 JUNE 2021	
0.0					
		Corn crop overlying dark brown t	opsoil.		
	0.2				
		Re-engineered ground consisting	of brown/yellow/gre	y clays and mudstone gravels.	
0.5					
	-				
1.0					
	1.1				
	1.3	Weak immature soft coal/clay.			
	1.3				
1.5	1	Firm light brown clay with occasi	onal mudstone grave	s.	
	1.9				
2.0	2.0	Weak dark grey mudstone excava	ated as small angular	gravels.	
	-				
2.5					
	-				
1100					
3.0					
3.5	-				
	1				
4.0					
REMAR	WC.				
1000		er encountered during excavatio	n NO		
1			NO NO		
Sample		n Ivation remained stable	YES		
Level	ii exca	ivacion remaineu stable			
TOTAL STREET					
NOTES					



Civil & Structural Engineering Consultants

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Client :		ARRATT LEEDS	Job No:	7786			
Site:	P	ENNINE VIEW, DARTON	Date:	02 JUNE 2021			
0.0			100000000000000000000000000000000000000				
	0.2	Corn crop overlying dark brown to	psoil.				
	0.2						
0.5		Made ground consisting of re-engi	ineered clay and oc	casional mudstone gravels.			
		1					
1.0							
1.5							
2.0							
0							
2.5	2.5						
3.0							
.5							
.0							
REMARKS	c.						
		ncountered during excavation	NO				
ample ta		icountered during excavation	NO YES at 0.8n	2			
		on remained stable	YES at 0.8n	(Ia)			
ides of e		T TITION TO SCUDIC	1 2				
ides of e evel			(880,000,000,000,00				

TRIAL TRENCH HOLE NO. 14

Client: BARRATT LEEDS			Job No:		7786		
Site:		PI	ENNINE VIEW, DARTON		Date: 2 nd JUNE 20		2 nd JUNE 2021
0.0			Window			T. 1. 222	
	0.20		WEST Crop overlying dark grey topsoil.	0.2	0	EAST Crop over	lying dark grey topsoil.
	0.20		crop overlying dark grey topson.	17.20	0	Crop over	ying dark grey topsoil.
0.5							
0.5							
1.0							
	1.40		Re-engineered ground primarily consisting of clays with occasional gravels and brick.				
1.5	1.40		or erays with occusional gravers and oriek.				
2.0							
2.0							
2.5	2.50		Firm light brown sandy gravelly clay.	200			ered ground primarily consisting of
	2.60	-	Weak light grey mudstone.	2.6	U	clays with	occasional gravels and brick.
3.0							
3.5							
4.0							
REMA			No.	10			
Sample				O O			
Sides o	f exca	vat		ES			
Level						••	
NOTE	S:						
				• • • • • •	• • •		

STRATIGRAPHY GROUND ENGINEERS DAILY DRILLING LOG

Site	Darton, Barnsley	Date: 01/06/2021
Driller	G Lee	Flush Water

bh	depth	description	bh	depth	description
1	GL to 8.10	Colliery Spoil	2	GL to 0.40	Soil
	8.10 to 16.20	Grey Silty Mudstone		0.40 to 2.50	Brown Clay
	16.20 to 17.20	Coal		2.50 to 5.10	Grey Silty Mudstone
	17.20 to 22.70	Grey Silty Mudstone		5.10 to 6.00	Coal
	22.70 to 23.90	Brown Sandstone		6.00 to 11.40	Grey Silty Mudstone
	23.90 to 27.00	Solid Strata-Lost Flush		11.40 to 16.80	Grey Siltstone
				16.80 to 21.30	Grey Silty Mudstone
1A	GL to 3.00	Colliery Spoil		21.30 to21.70	Coal
		Install to 3m		21.70 to 30.00	Brown Sandstone
		2m slotted, 1m plain			
		End cap, gas valve			
		Flush Cover			

TODAYS TOTAL	PREVIOUS TOTAL	
TOTAL TO DATE	TOTAL CASING	

STRATIGRAPHY GROUND ENGINEERS

DAILY DRILLING LOG

Site	Darton, Barnsley	Date: 01/06/2021
Driller	G Lcc	Flush Water

	Soil			
2 30 1		4A	GL to 0.40	Soil
2.30	Brown Clay		0.40 to 2.60	Brown Clay
3.30	Grey Silty Mudstone		2.60 to 3.00	Brown Mudstone
4.30	Coal			Install to 3m
5.00	Grey Silty Mudstone			2m slotted, 1m plain
I	Install to 5m			End cap, gas valve
4	4m slotted, 1m plain			Flush Cover
I	End cap, gas valve			
I	Flush Cover			
0.40	Soil			
2.60 I	Brown Clay			
5.80	Brown Mudstone			
7.00	Grey Silty Mudstone			
700	2.60 J	2.60 Brown Clay 5.80 Brown Mudstone	2.60 Brown Clay 5.80 Brown Mudstone	2.60 Brown Clay 5.80 Brown Mudstone

TODAYS TOTAL	·	PREVIOUS TOTAL				
TOTAL TO DATE		TOTAL CASING				

STRATIGRAPHY GROUND ENGINEERS DAILY DRILLING LOG

Site	Darton, Barnsley	Date: 02/06/2021
Driller	G Lee	Flush Water

bh	depth	description	bh	depth	description
5A	GL to 2.20	Brown Clay	5E	GL to 1.40	Brown Clay
	2.20 to 6.00	Grey Silty Mudstone		1.40 to 2.00	Coal
				2.00 to 3.00	Grey Silty Mudstone
5B	GL to 2.10	Brown Clay			
	2.10 to 6.00	Grey Silty Mudstone	5F	GL to 1.80	Brown Clay
		S.		1.80 to 2.40	Coal
5C	GL to 2.10	Brown Clay		2.40 to 3.00	Grey Silty Mudstone
	2.10 to 6.00	Grey Silty Mudstone			
			5G	GL to 2.10	Brown Clay
				2.10 to 2.80	Coal
5D	GL to 1.40	Brown Clay		2.80 to 6.00	Grey Silty Mudstone
	1.40 to 2.00	Coal			
	2.00 to 3.00	Grey Silty Mudstone	5H	GL to 3.00	Clay Fill
				3.00 to 6.00	Grey Silty Mudstone

TODAYS TOTAL	-	PREVIOUS TOTAL	
TOTAL TO DATE	-	TOTAL CASING	

STRATIGRAPHY GROUND ENGINEERS

DA	II	Y	D	R	II	L	IN	J	G	L	O	G
-					-		-		_	_	_	777

Site	Darton, Barnsley	Date: 02/06/2021
Driller	G Lee	Flush Water

bh	depth	description	bh	depth	description
6A	GL to 1.00	Brown Clay	6E	GL to 2.70	Clay Fill
	1.00 to 1.60	Coal		2.70 to 3.00	Grey Silty Mudstone
	1.60 to 3.00	Grey Silty Mudstone			Install to 3m
					2m slotted, 1m plain
6B	GL to 1.20	Brown Clay			End cap, gas valve
	1.20 to 1.80	Coal			Flush Cover
	1.80 to 3.00	Grey Silty Mudstone			
			6F	GL to 3.00	Clay Fill
6C	GL to 1.70	Brown Clay		3.00 to 6.00	Grey Silty Mudstone
	1.70 to 2.30	Coal			
	2.30 to 3.00	Grey Silty Mudstone	7	GL to 6.30	Colliery Spoil
				6.30 to 13.20	Grey Silty Mudstone
6D	GL to 1.80	Brown Clay		13.20 to 14.20	Coal
	1.80 to 2.40	Coal		14.20 to 15.00	Grey Silty Mudstone
	2.40 to 3.00	Grey Silty Mudstone			

TODAYS TOTAL	 PREVIOUS TOTAL	
TOTAL TO DATE	 TOTAL CASING	

STRATIGRAPHY GROUND ENGINEERS DAILY DRILLING LOG

Site	Darton, Barnsley	Date: 02/06/2021
Driller	G Lee	Flush Water

bh	depth	description	bh	depth	description
8	GL to 0.30	Soil	9	GL to 0.30	Soil
	0.30 to 1.90	Brown Clay		0.30 to 2.10	Brown Clay
	1.90 to 7.20	Grey Silty Mudstone		2.10 to 4.20	Brown Mudstone
	7.20 to 8.20	Coal		4.20 to 7.50	Grey Silty Mudstone
	8.20 to 9.00	Grey Silty Mudstone		7.50 to 8.50	Coal
				8.50 to 9.00	Grey Silty Mudstone
8A	GL to 0.30	Soil			
	0.30 to 1.90	Brown Clay	10	GL to 6.30	Colliery Spoil
	1.90 to 3.00	Grey Silty Mudstone		6.30 to 12.80	Grey Silty Mudstone
		Install to 3m		12.80 to 13.80	Coal
		2m slotted, 1m plain		13.80 to 15.00	Grey Silty Mudstone
		End cap, gas valve			
		Flush Cover	11	GL to 8.00	Colliery Spoil
				8.00 to 16.10	Grey Silty Mudstone
				16.10 to 17.10	Coal
				17.10 to 18.00	Grey Silty Mudstone

TODAYS TOTAL	 PREVIOUS TOTAL	
TOTAL TO DATE	 TOTAL CASING	42_1

STRATIGRAPHY GROUND ENGINEERS

DAILY DRILLING LOG

Site	Darton, Barnsley	Date: 02/06/2021
Driller	G Lee	Flush Water

bh	depth	description	bh	depth	description
11 A	GL to 3.00	Colliery Spoil			
		Install to 3m			
		2m slotted, 1m plain			
		End cap, gas valve			
		Flush Cover			
12	GL to 2.00	Clay Fill			
	2.00 to 6.30	Brown Mudstone/Sandstone			
	6.30 to 7.30	Coal			
	7.30 to 16.20	Grey Silty Mudstone			
	16.20 to 17.10	Coal			
	17.10 to 18.00	Grey Silty Mudstone			

TODAYS TOTAL		PREVIOUS TOTAL	r
TOTAL TO DATE	-	TOTAL CASING	:

Soil Permeability test

Client Barratt David Wilson Homes Pennine View, Darton Site

Date

Jun-21

E20/7786	
Job No.	

Ε	1.6	0.6	2.9	
Pit dimensions	Length	Width	Depth	

Permeability lit/ sq.m/sec	-	0.00000	0.00000	0.00549	0.00056
Contact area	3.73200	3.73200	3.73200	3.55600	3.42400
Vol Change cu.m		0.0000	0.00000	0.03840	0.02880
Vol cu.m	0.60480	0.60480	0.60480	0.56640	0.53760
Dip Reading mm	2270	2270	2270	2310	2340
Time into Test Mins	0	10	59	61	305
Time	9.41	9.51	10.10	10.42	14.46

BRE Value 0.0013079 lit/ sq.m/sec

Average Permeabilty Value: 0.001513036 lit/sq.m/sec

Jun-21

Soil Permeability test

a) l	No. E20/7786
Date	Job No.
Pennine View, Darton	Barratt David Wilson Homes
Site	Client

 T20//XC
2

Client Barratt D	Client Barratt David Wilson Homes	Job No.	E20/7786	
Pit dimensions Length Width Depth	7.6 0.6 2.8			

Permeability	lit/ sq.m/sec		0.0000	0.00000	0.0000
Contact area	Avge sq.m	3.48000	3.48000	3.48000	3.48000
Vol Change	cu.m		0.00000	0.00000	0.00000
Vol	cu.m	0.46800	0.46800	0.46800	0.46800
Dip Reading	шш	2500	2500	2500	2500
Time into	Test Mins	0	21	61	300
Time		9.49	10.10	10.50	14.49

ABANDONED DUE TO STATIONARY WATER LEVEL

Average Permeabilty Value: 0.000000000 lit/ sq.m/sec

APPENDIX C

Chemical Analysis of Samples
Geotechnical Analysis of Samples



Certificate Number 21-12096

Issued:

15-Jun-21

Client Haigh Huddleston & Associates Ltd

Firth Buildings 99-101 Leeds Road

Dewsbury WF12 7BU

Our Reference 21-12096

Client Reference 7786

Order No (not supplied)

Contract Title Darton

Description 11 Soil samples.

Date Received 08-Jun-21

Date Started 08-Jun-21

Date Completed 15-Jun-21

Test Procedures Identified by prefix DETSn (details on request).

Notes Opinions and interpretations are outside the laboratory's scope of ISO 17025 accreditation. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be

reproduced except in full, without the prior written approval of the laboratory.

Approved By

110



Adam Fenwick Contracts Manager





Summary of Chemical Analysis Matrix Descriptions

Our Ref 21-12096 Client Ref 7786 Contract Title Darton

Sample ID	Depth	Lab No	Completed	Matrix Description
TP05	0.2	1859604	15/06/2021	Dark brown slightly gravelly, sandy CLAY including odd rootlets
TP06	0.2	1859605	15/06/2021	Dark brown slightly gravelly, sandy CLAY including odd rootlets
TP01	0.2	1859606	15/06/2021	Dark brown slightly gravelly, sandy CLAY including odd rootlets
TP07	0.2	1859607	15/06/2021	Dark brown slightly gravelly, sandy CLAY including odd rootlets
TP11	0.2	1859608	15/06/2021	Dark brown slightly gravelly, sandy CLAY including odd rootlets
TPO2	0.2	1859609	15/06/2021	Dark brown slightly gravelly, sandy CLAY including odd rootlets
TPO4	0.2	1859610	15/06/2021	Dark brown slightly gravelly, sandy CLAY including odd rootlets
TP08	0.2	1859611	15/06/2021	Dark brown slightly gravelly, sandy CLAY including odd rootlets
TP11	1	1859612	15/06/2021	Dark brown slightly gravelly, sandy CLAY
TP06	2.5	1859613	15/06/2021	Dark brown slightly gravelly, sandy CLAY
TP01	0.6	1859614	15/06/2021	Brown sandy CLAY



Summary of Chemical Analysis Soil Samples

Our Ref 21-12096 Client Ref 7786 Contract Title Darton

Lab No	1859604	1859605	1859606	1859607	1859608	1859609	1859610
.Sample ID		TP06	TP01	TP07	TP11	TP02	TP04
Depth		0.20	0.20	0.20	0.20	0.20	0.20
Other ID							
Sample Type	SOIL						
Sampling Date	02/06/2021	02/06/2021	01/06/2021	02/06/2021	02/06/2021	01/06/2021	01/06/2021
Sampling Time	n/s						

				117.0	7.56.51					
Test	Method	LOD	Units							
Metals										
Arsenic	DETSC 2301#	0.2	mg/kg	8.8	11	13	11	14	15	11
Cadmium	DETSC 2301#	0.1	mg/kg	< 0.1	0.2	0.2	0.2	0.2	0.2	0.2
Chromium	DETSC 2301#	0.15	mg/kg	19	18	17	19	17	17	20
Copper	DETSC 2301#	0.2	mg/kg	30	28	27	30	36	27	25
Lead	DETSC 2301#	0.3	mg/kg	38	33	42	34	45	44	32
Mercury	DETSC 2325#	0.05	mg/kg	< 0.05	< 0.05	0.06	< 0.05	0.06	0.05	< 0.05
Nickel	DETSC 2301#	1	mg/kg	26	17	18	21	18	16	15
Selenium	DETSC 2301#	0.5	mg/kg	< 0.5	< 0.5	2.0	0.8	0.6	0.7	1.0
Zinc	DETSC 2301#	1	mg/kg	93	74	77	79	78	72	71
Inorganics										
pH	DETSC 2008#		рН	6.9	6.6	6.6	6.5	6.1	6.9	7.0
Thiocyanate	DETSC 2130#	0.6	mg/kg	1.4	1.6	1.8	1.9	2.4	1.4	1.5
Sulphide	DETSC 2024*	10	mg/kg	< 10	16	< 10	< 10	16	< 10	< 10
Sulphate as SO4, Total	DETSC 2321#	0.01	%	0.04	0.06	0.07	0.06	0.07	0.06	0.06
PAHs										
Naphthalene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthylene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Fluorene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Phenanthrene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	0.1	< 0.1	< 0.1	< 0.1	< 0.1
Anthracene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Fluoranthene	DETSC 3301	0.1	mg/kg	< 0.1	0.1	0.2	< 0.1	< 0.1	< 0.1	< 0.1
Pyrene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	0.2	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(a)anthracene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Chrysene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(b)fluoranthene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(k)fluoranthene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(a)pyrene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Indeno(1,2,3-c,d)pyrene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Dibenzo(a,h)anthracene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(g,h,i)perylene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
PAH Total	DETSC 3301	1.6	mg/kg	< 1.6	< 1.6	< 1.6	< 1.6	< 1.6	< 1.6	< 1.6
Phenols									- 111	
Phenol - Monohydric	DETSC 2130#	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3



Summary of Chemical Analysis Soil Samples

Our Ref 21-12096 Client Ref 7786 Contract Title Darton

Lab No	1859611	1859612	1859613	1859614
.Sample ID	TP08	TP11	TP06	TP01
Depth	0.20	1.00	2.50	0.60
Other ID				
Sample Type	SOIL	SOIL	SOIL	SOIL
Sampling Date	02/06/2021	02/06/2021	02/06/2021	01/06/2021
Sampling Time	n/s	n/s	n/s	n/s

Test	Method	LOD	Units				
Metals							
Arsenic	DETSC 2301#	0.2	mg/kg	10	6.3	5.8	8.7
Cadmium	DETSC 2301#	0.1	mg/kg	0.1	< 0.1	< 0.1	< 0.1
Chromium	DETSC 2301#	0.15	mg/kg	17	17	16	21
Copper	DETSC 2301#	0.2	mg/kg	25	34	35	21
Lead	DETSC 2301#	0.3	mg/kg	34	21	20	19
Mercury	DETSC 2325#	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Nickel	DETSC 2301#	1	mg/kg	15	32	33	16
Selenium	DETSC 2301#	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Zinc	DETSC 2301#	1	mg/kg	61	78	79	66
Inorganics							
рН	DETSC 2008#		рН	6.8	5.4	5.9	6.8
Thiocyanate	DETSC 2130#	0.6	mg/kg	1.5	1.4	0.6	0.8
Sulphide	DETSC 2024*	10	mg/kg	100	< 10	< 10	< 10
Sulphate as SO4, Total	DETSC 2321#	0.01	%	0.04	0.05	0.05	0.03
PAHs	All Assessment of the second o						
Naphthalene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthylene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Fluorene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Phenanthrene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Anthracene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Fluoranthene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Pyrene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(a)anthracene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Chrysene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(b)fluoranthene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(k)fluoranthene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(a)pyrene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Indeno(1,2,3-c,d)pyrene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibenzo(a,h)anthracene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(g,h,i)perylene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
PAH Total	DETSC 3301	1.6	mg/kg	< 1.6	< 1.6	< 1.6	< 1.6
Phenols							
Phenol - Monohydric	DETSC 2130#	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3



Summary of Asbestos Analysis Soil Samples

Our Ref 21-12096 Client Ref 7786 Contract Title Darton

Lab No	Sample ID	Material Type	Result	Comment*	Analyst
1859604	TP05 0.20	SOIL	NAD	none	Colin Patrick
1859605	TP06 0.20	SOIL	NAD	none	Colin Patrick
1859606	TP01 0.20	SOIL	NAD	none	Colin Patrick
1859607	TP07 0.20	SOIL	NAD	none	Colin Patrick
1859608	TP11 0.20	SOIL	NAD	none	Colin Patrick
1859609	TPO2 0.20	SOIL	NAD	none	Colin Patrick
1859610	TP04 0.20	SOIL	NAD	none	Colin Patrick
1859611	TP08 0.20	SOIL	NAD	none	Colin Patrick
1859612	TP11 1.00	SOIL	NAD	none	Colin Patrick
1859613	TP06 2.50	SOIL	NAD	none	Colin Patrick
1859614	TP01 0.60	SOIL	NAD	none	Colin Patrick

Crocidolite = Blue Asbestos, Amosite = Brown Asbestos, Chrysotile = White Asbestos. Anthophyllite, Actinolite and Tremolite are other forms of Asbestos.

Samples are analysed by DETSC 1101 using polarised light microscopy in accordance with HSG248 and documented in-house methods. NAD = No Asbestos

Detected. Where a sample is NAD, the result is based on analysis of at least 2 sub-samples and should be taken to mean 'no asbestos detected in sample'. Key: *

not included in laboratory scope of accreditation.



Information in Support of the Analytical Results

Our Ref 21-12096 Client Ref 7786 Contract Darton

Containers Received & Deviating Samples

Sample ID TP05 0.20 SOIL TP06 0.20 SOIL	5ampled 02/06/21	Containers Received			
	02/06/21		tests	container for tests	
TPOS O 20 SOIL	01/00/11	GJ 250ml, PT 1L			
11 00 0.20 JUIL	02/06/21	GJ 250ml, PT 1L			
TP01 0.20 SOIL	01/06/21	GJ 250ml, PT 1L			
TP07 0.20 SOIL	02/06/21	GJ 250ml, PT 1L			
TP11 0.20 SOIL	02/06/21	GJ 250ml, PT 1L			
TP02 0.20 SOIL	01/06/21	GJ 250ml, PT 1L			
TP04 0.20 SOIL	01/06/21	GJ 250ml, PT 1L			
TP08 0.20 SOIL	02/06/21	GJ 250ml, PT 1L			
ΓΡ11 1.00 SOIL	02/06/21	GJ 250ml, PT 1L			
ΓΡ06 2.50 SOIL	02/06/21	GJ 250ml, PT 1L			
TP01 0.60 SOIL					
	P07 0.20 SOIL P11 0.20 SOIL P02 0.20 SOIL P04 0.20 SOIL P08 0.20 SOIL P11 1.00 SOIL P06 2.50 SOIL	PO7 0.20 SOIL 02/06/21 P11 0.20 SOIL 02/06/21 P02 0.20 SOIL 01/06/21 P04 0.20 SOIL 01/06/21 P08 0.20 SOIL 02/06/21 P11 1.00 SOIL 02/06/21 P06 2.50 SOIL 02/06/21 P01 0.60 SOIL 01/06/21	PO7 0.20 SOIL 02/06/21 GJ 250ml, PT 1L P11 0.20 SOIL 02/06/21 GJ 250ml, PT 1L P02 0.20 SOIL 01/06/21 GJ 250ml, PT 1L P04 0.20 SOIL 01/06/21 GJ 250ml, PT 1L P08 0.20 SOIL 02/06/21 GJ 250ml, PT 1L P11 1.00 SOIL 02/06/21 GJ 250ml, PT 1L P06 2.50 SOIL 02/06/21 GJ 250ml, PT 1L P07 0.20 SOIL 02/06/21 GJ 250ml, PT 1L P08 0.20 SOIL 02/06/21 GJ 250ml, PT 1L P09 0.20 SOIL 02/06/21 GJ 250ml, PT 1L P09 0.20 SOIL 01/06/21 GJ 250ml, PT 1L	PO7 0.20 SOIL 02/06/21 GJ 250ml, PT 1L P11 0.20 SOIL 02/06/21 GJ 250ml, PT 1L P02 0.20 SOIL 01/06/21 GJ 250ml, PT 1L P04 0.20 SOIL 01/06/21 GJ 250ml, PT 1L P08 0.20 SOIL 02/06/21 GJ 250ml, PT 1L P11 1.00 SOIL 02/06/21 GJ 250ml, PT 1L P06 2.50 SOIL 02/06/21 GJ 250ml, PT 1L P07 0.20 SOIL 02/06/21 GJ 250ml, PT 1L P08 0.20 SOIL 02/06/21 GJ 250ml, PT 1L	

Key: G-Glass P-Plastic J-Jar T-Tub

DETS cannot be held responsible for the integrity of samples received whereby the laboratory did not undertake the sampling. In this instance samples received may be deviating. Deviating Sample criteria are based on British and International standards and laboratory trials in conjunction with the UKAS note 'Guidance on Deviating Samples'. All samples received are listed above. However, those samples that have additional comments in relation to hold time, inappropriate containers etc are deviating due to the reasons stated. This means that the analysis is accredited where applicable, but results may be compromised due to sample deviations. If no sampled date (soils) or date+time (waters) has been supplied then samples are deviating. However, if you are able to supply a sampled date (and time for waters) this will prevent samples being reported as deviating where specific hold times are not exceeded and where the container supplied is suitable.

Soil Analysis Notes

Inorganic soil analysis was carried out on a dried sample, crushed to pass a 425 µm sieve, in accordance with BS1377.

Organic soil analysis was carried out on an 'as received' sample. Organics results are corrected for moisture and expressed on a dry weight basis.

The Loss on Drying, used to express organics analysis on an air dried basis, is carried out at a temperature of 28°C+/-2°C.

Disposal

From the issue date of this test certificate, samples will be held for the following times prior to disposal:-

Soils - 1 month, Liquids - 2 weeks, Asbestos (test portion) - 6 months



Appendix A - Details of Analysis

		•	Limit of	Sample			
Method	Parameter	Units	Detection	Preparation	Sub-Contracted	UKAS	MCERTS
DETSC 2002	Organic matter	%	0.1	Air Dried	No	Yes	Yes
DETSC 2003	Loss on ignition	%	0.01	Air Dried	No	Yes	Yes
DETSC 2008	pH	pH Units	1	Air Dried	No	Yes	Yes
DETSC 2024	Sulphide	mg/kg	10	Air Dried	No	Yes	Yes
DETSC 2076	Sulphate Aqueous Extract as SO4	mg/l	10	Air Dried	No	Yes	Yes
DETSC 2084	Total Carbon	%	0.5	Air Dried	No	Yes	Yes
DETSC 2084	Total Organic Carbon	%	0.5	Air Dried	No	Yes	Yes
DETSC 2119	Ammoniacal Nitrogen as N	mg/kg	0.5	Air Dried	No	Yes	Yes
DETSC 2130	Cyanide free	mg/kg	0.1	Air Dried	No	Yes	Yes
DETSC 2130	Cyanide total	mg/kg	0.1	Air Dried	No	Yes	Yes
DETSC 2130	Phenol - Monohydric	mg/kg	0.3	Air Dried	No	Yes	Yes
DETSC 2130	Thiocyanate	mg/kg	0.6	Air Dried	No	Yes	Yes
DETSC 2321	Total Sulphate as SO4	%	0.01	Air Dried	No	Yes	Yes
DETSC 2325	Mercury	mg/kg	0.05	Air Dried	No	Yes	Yes
DETSC 3049	Sulphur (free)	mg/kg	0.75	Air Dried	No	Yes	Yes
DETSC2123	Boron (water soluble)	mg/kg	0.2	Air Dried	No	Yes	Yes
DETSC2301	Arsenic	mg/kg	0.2	Air Dried	No	Yes	Yes
DETSC2301	Barium	mg/kg	1.5	Air Dried	No	Yes	Yes
DETSC2301	Beryllium	mg/kg	0.2	Air Dried	No	Yes	Yes
DETSC2301	Cadmium Available	mg/kg	0.1	Air Dried	No	Yes	Yes
DETSC2301	Cadmium	mg/kg	0.1	Air Dried	No	Yes	Yes
DETSC2301	Cobalt	mg/kg	0.7	Air Dried	No	Yes	Yes
DETSC2301	Chromium	mg/kg	0.15	Air Dried	No	Yes	Yes
DETSC2301	Copper	mg/kg	0.2	Air Dried	No	Yes	Yes
DETSC2301	Manganese	mg/kg	20	Air Dried	No	Yes	Yes
DETSC2301	Molybdenum	mg/kg	0.4	Air Dried	No	Yes	Yes
DETSC2301	Nickel	mg/kg	1	Air Dried	No	Yes	Yes
DETSC2301	Lead	mg/kg	0.3	Air Dried	No	Yes	Yes
DETSC2301	Selenium	mg/kg	0.5	Air Dried	No	Yes	Yes
DETSC2301	Zinc	mg/kg	1	Air Dried	No	Yes	Yes
DETSC 3072	Ali/Aro C10-C35	mg/kg	10	As Received	No	Yes	Yes
DETSC 3072	Aliphatic C10-C12	mg/kg	1.5	As Received	No	Yes	Yes
DETSC 3072	Aliphatic C10-C12	mg/kg	10	As Received	No	Yes	Yes
DETSC 3072	Aliphatic C10-C35	mg/kg	10	As Received	No	Yes	Yes
DETSC 3072	Aliphatic C12-C16	mg/kg	1.2	As Received	No	Yes	Yes
DETSC 3072	Aliphatic C12-C16	mg/kg	10	As Received	No	Yes	Yes
DETSC 3072	Aliphatic C16-C21	mg/kg	1.5	As Received	No	Yes	Yes
DETSC 3072	Aliphatic C16-C21	mg/kg	10	As Received	No	Yes	Yes
DETSC 3072	Aliphatic C21-C35	mg/kg	3.4	As Received	No	Yes	Yes
DETSC 3072	Aliphatic C21-C35	mg/kg	3.4	As Received	No	Yes	Yes
DETSC 3072	Aromatic C10-C12	mg/kg	0.9	As Received	No	Yes	Yes
DETSC 3072	Aromatic C10-C12	mg/kg	10	As Received	No	Yes	Yes
DETSC 3072	Aromatic C10-C35	mg/kg	10	As Received	No	Yes	Yes
DETSC 3072	Aromatic C12-C16	mg/kg	0.5	As Received	No	Yes	Yes
DETSC 3072	Aromatic C12-C16	mg/kg	10	As Received	No	Yes	Yes
DETSC 3072	Aromatic C16-C21	mg/kg	0.6	As Received	No	Yes	Yes
DETSC 3072	Aromatic C16-C21	mg/kg	10	As Received	No	Yes	Yes
DETSC 3072	Aromatic C21-C35	mg/kg	1.4	As Received	No	Yes	Yes
DETSC 3072	Aromatic C21-C35	mg/kg	1.4	As Received	No	Yes	Yes
DETS 062	Benzene	mg/kg	0.01	As Received	No	Yes	Yes
DETS 062	Ethylbenzene	mg/kg	0.01	As Received	No	Yes	Yes
DETS 062	Toluene	mg/kg	0.01	As Received	No	Yes	Yes
DETS 062	Xylene	mg/kg	0.01	As Received	No	Yes	Yes
DETS 062	m+p Xylene	mg/kg	0.01	As Received	No	Yes	Yes
DETS 062	o Xylene	mg/kg	0.01	As Received	No	Yes	Yes
DETSC 3311	C10-C24 Diesel Range Organics (DRO)	mg/kg	10	As Received	No	Yes	Yes
DETSC 3311	C24-C40 Lube Oil Range Organics (LORO)	mg/kg	10	As Received	No	Yes	Yes
DETSC 3311	EPH (C10-C40)	mg/kg	10	As Received	No	Yes	Yes



Appendix A - Details of Analysis

			Limit of	Sample			
Method	Parameter	Units	Detection	Preparation	Sub-Contracted	UKAS	MCERTS
DETSC 3303	Acenaphthene	mg/kg	0.03	As Received	No	Yes	Yes
DETSC 3303	Acenaphthylene	mg/kg	0.03	As Received	No	Yes	Yes
DETSC 3303	Benzo(a)pyrene	mg/kg	0.03	As Received	No	Yes	Yes
DETSC 3303	Benzo(a)anthracene	mg/kg	0.03	As Received	No	Yes	Yes
DETSC 3303	Benzo(b)fluoranthene	mg/kg	0.03	As Received	No	Yes	Yes
DETSC 3303	Benzo(k)fluoranthene	mg/kg	0.03	As Received	No	Yes	Yes
DETSC 3303	Benzo(g,h,i)perylene	mg/kg	0.03	As Received	No	Yes	Yes
DETSC 3303	Dibenzo(a,h)anthracene	mg/kg	0.03	As Received	No	Yes	Yes
DETSC 3303	Fluoranthene	mg/kg	0.03	As Received	No	Yes	Yes
DETSC 3303	Indeno(1,2,3-c,d)pyrene	mg/kg	0.03	As Received	No	Yes	Yes
DETSC 3303	Naphthalene	mg/kg	0.03	As Received	No	Yes	Yes
DETSC 3303	Phenanthrene	mg/kg	0.03	As Received	No	Yes	Yes
DETSC 3303	Pyrene	mg/kg	0.03	As Received	No	Yes	Yes
DETSC 3401	PCB 28 + PCB 31	mg/kg	0.01	As Received	No	Yes	Yes
DETSC 3401	PCB 52	mg/kg	0.01	As Received	No	Yes	Yes
DETSC 3401	PCB 101	mg/kg	0.01	As Received	No	Yes	Yes
DETSC 3401	PCB 118	mg/kg	0.01	As Received	No	Yes	Yes
DETSC 3401	PCB 153	mg/kg	0.01	As Received	No	Yes	Yes
DETSC 3401	PCB 138	mg/kg	0.01	As Received	No	Yes	Yes
DETSC 3401	PCB 180	mg/kg	0.01	As Received	No	Yes	Yes
DETSC 3401	PCB Total	mg/kg	0.01	As Received	No	Yes	Yes

Method details are shown only for those determinands listed in Annex A of the MCERTS standard. Anything not included on this list falls outside the scope of MCERTS. No Recovery Factors are used in the determination of results. Results reported assume 100% recovery. Full method statements are available on request.

End of Report



STRUCTURAL SOILS LTD

TEST REPORT



Report No. 784962 R1

1774

Date

07-July-2021

Contract

Darton

Client

Haigh Huddleston Associates

Address

Firth Building 99-101 Leeds Road

Dewsbury WF12 7BU

For the Attention of

Martin Huddleston

Samples submitted by client

16/06/2021

Client Reference

Testing Started

29/06/2021

Client Order No.

Testing Completed

07/07/2021

Instruction Type

Written

Tests marked 'Not UKAS Accredited' in this report are not included in the UKAS Accreditation Schedule for our Laboratory.

UKAS Accredited Tests Undertaken

Moisture Content (oven drying method) BS1377:Part 2:1990,clause 3.2 (superseded)** Liquid Limit (definitive method) BS1377:Part 2:1990,clause 4.3 Plastic Limit BS1377:Part 2:1990,clause 5.3

Plasticity Index Derivation BS1377:Part 2:1990,clause 5.4

* This clause of BS1377 is no longer the most up to date method due to the publication of ISO17892

Please Note: Remaining samples will be retained for a period of one month from today and will then be disposed of. Test were undertaken on samples 'as received' unless otherwise stated.

Opinions and interpretations expressed in this report are outside the scope of accreditation for this laboratory.

Structural Soils Ltd, The Potteries, Pottery Street, Castleford, WF10 1NJ Tel.01977 552255. E-mail mark.athorne@soils.co.uk

SUMMARY OF SOIL CLASSIFICATION TESTS In accordance with clauses 3.2,4.3,4.4,5.3,5.4,7.2,8.2,8.3 of BS1377:Part 2:1990

Description of Sample	Dark brown slightly sandy slightly gravelly CLAY	Light brown slightly sandy slightly gravelly CLAY	Brown light brown slightly gravelly slightly sandy CLAY					
% <425 µ m	98	75	98					
Plasticity Index	6	22	21					
Plastic Limit %	23	25	21					
Liquid Limit %	42	47	42					
Moisture Content %	18	9	23					
Depth (m)	0.40	0.40	0.80					
Sample Type	۵	Q	٥					
Sample Ref	-	-	-					
Exploratory Position ID	HD01	HD02	TP13					

Contract:

STRUCTURAL SOILS LTD

Darton

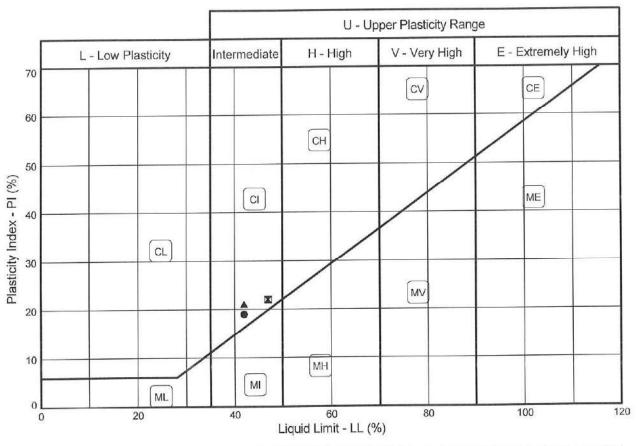
Contract Ref:

784962

AGS

GINT_LIBRARY_V10_01.GLB: L - SUMMARY OF CLASSIFICATION - A4L: 784962-DARTON LAB SCHEDULE.GPU: 07/07/21 13:41: LW5:

PLASTICITY CHART - PI Vs LL In accordance with BS5930:2015 Testing in accordance with BS1377-2:1990



	Sample	Identificat	ion	BS Test Preparation	Preparation	MC	LL	PL	PI %	<425 µ m %	O Lab location
	Exploratory Position ID	Sample	Depth (m)	Method #	Preparation Method +	%	%	%			Lab k
9	HD01	1D	0.40	3.2/4.3/5.3/5.4	4.2.4	18	42	23	19	86	C
X	HD02	1D	0.40	3.2/4.3/5.3/5.4	4.2.4	19	47	25	22	75	С
A	TP13	1D	0.80	3.2/4.3/5.3/5.4	4.2.4	23	42	21	21	86	С
+											
-											l
											+
											-
-											
-											

Tested in accordance with the following clauses of BS1377-2:1990.

3.2 - Moisture Content

3.2 - Moisture Content
4.3 - Cone Penetrometer Method
4.4 - One Point Cone Penetrometer Method
4.6 - One Point Casagrande Method
5.3 - Plastic Limit Method

5.4 - Plasticity Index

+ Tested in accordance with the following clauses of BS1377-2:1990.

4.2.3 - Natural State

4.2.4 - Wet Sieved

Key: * = Non-standard test, NP = Non plastic.

Lab location: B = Bristol (BS3 4AG), C = Castleford (WF10 1NJ), H = Hemel Hempstead (HP3 9RT), T = Tonbridge (TN11 9HU)

STRUCTURAL SOILS The Potteries Pottery Street Castleford W. Yorkshire WF10 1NJ

Com	piled By	
(18 colle		

LORNA WHITWORTH

Date 07/07/21

Contract

Contract Ref:

Darton

784962



GINT_LIBRARY_V10_01.GLB LibVersion: ve_07_001 PryVersion: ve_07_1 Graph L - ALINE STANDARD - A4P | 784962-DARTON LAB SCHEDULE.GPJ - v10_01.
Stutchural Soils Lid, Branch Office - Cestleford: The Potteries, Pottery Street, Castleford, West Yorkshire, WF10 1NJ. Tel: 01977-552255, Fax: 01977-552299, Web: www.soils.co.uk, Email: ask@soils.co.uk, | 07/07/21 - 13:41 | LW5 |

GINT_LIBRARY V10_01.GLB LibVersion: v8_07_001 PriVersion: v8_07 | GrteText L - LAB VERFICATION REPORT - v02 - A4P | 784962-DARTON LAB SCHEDULE.GPJ - v10_01. Structural Soils Ltd. Branch Office - Castleford: The Pottenes. Pottens. Potteny Street, Castleford, West Yorkshire, WF10 1NJ. Tel: 01977-552256, Fax: 01977-552299, Web: www.soils.co.uk, Email: ask@soils.co.uk, | 07/07/21 - 14:00 | LF1

TESTING VERIFICATION CERTIFICATE



1774

The test results included in this report are certified as:-

ISSUE STATUS: FINAL

In accordance with the Structural Soils Ltd Laboratory Quality Management System, results sheets and summaries of results issued by the laboratory are checked by an approved signatory. The integrity of the test data and results are ensured by control of the computer system employed by the laboratory as part of the Software Verification Program as detailed in the Laboratory Quality Manual.

This testing verification certificate covers all testing compiled on or before the following datetime: 07/07/2021 13:58:39.

Testing reported after this date is not covered by this Verification Certificate.

heich

Approved Signatory
Luke Fisher (Laboratory Manager)

(Head Office)
Bristol Laboratory
Unit 1A, Princess Street
Bedminster
Bristol
BS3 4AG

Castleford Laboratory
The Potteries, Pottery Street
Castleford
West Yorkshire
WF10 1NJ

Hemel Laboratory 18 Frogmore Road Hemel Hempstead Hertfordshire HP3 9RT

Tonbridge Laboratory
Anerley Court, Half Moon Lane
Hildenborough
Tonbridge
TN11 9HU



STRUCTURAL SOILS LTD

Contract:

Job No:

Darton

784962



APPENDIX D

Coal Authority Report