



Trial Pit Log

Trialpit No
TP5
Sheet 1 of 1

Project Name:	Monckton Production Facility	Project No.	G151311	Co-ords:	437519.17 - 412136.50	Date	20/05/2015
Location:	Lund Hill Lane, Royston, Barnsley, S71 4BD	Dimensions (m):		Level:	66.31	Scale	1:25
Client:	Hargreaves Ltd c/o Patrick Parsons Ltd	Depth	3.00			Logged	IMC

Water Strike	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
	Depth	Type	Results					
				0.15	66.16		Vegetation (grass) over dark greyish black, sandy, slightly gravelly TOPSOIL with frequent embedded rootlets. Gravel is fine, occasionally medium, sub-rounded to angular. Sand is fine to coarse.	
	0.30	B					MADE GROUND - Compacted mixed fill of crushed coke, coal, ash sand, gravel and occasional brick fragments. Gravel is fine to medium sub-rounded to angular of sandstone and mudstone, sand is fine to coarse.	
	0.30	D						
	0.30	ES						
	0.50	B						
	0.50	D						
	0.50	ES						
	1.00	B						1
	1.00	D						
	1.00	ES		1.20	65.11		MADE GROUND - Reworked orangeish brown fine to coarse, sub-rounded to sub-angular sandy, cobbly gravel of sandstone. Occasional crushed coke, coal and ash. Sand is fine to coarse. Cobbles are small to medium, sub-rounded to sub-angular.	
	1.50	B						
	1.50	D						
	1.50	ES						
	2.00	B						2
	2.00	D						
	2.00	ES						
	2.30	B		2.30	64.01		Loose, fine to coarse, sub-rounded to sub-angular, occasionally angular sandy cobbly GRAVEL of sandstone. Sand is fine to coarse. Cobbles are small to medium occasionally large, sub-rounded to angular.	
	2.50	B						
	2.50	D						
	2.50	ES						
	2.70	B		2.70	63.61		Weak, brittle, coarse orangish brown SANDSTONE.	
	3.00	B		3.00	63.31		End of pit at 3.00 m	3
	3.00	D						
	3.00	ES						
								4
								5

Remarks: No groundwater encountered. Stability: Good. Backfilled with arisings. Log issue: Draft.

Stability:





Trial Pit Log

Trialpit No

TP6

Sheet 1 of 1

Project Name: Monckton Production Facility

Project No.
G151311Co-ords: 437330.11 - 412093.73
Level: 64.12Date
14/05/2015

Location: Lund Hill Lane, Royston, Barnsley, S71 4BD

Dimensions
(m):Depth
3.00Scale
1:25Logged
IMC

Client: Hargreaves Ltd c/o Patrick Parsons Ltd

Water Strike	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
	Depth	Type	Results					
	0.30 0.30 0.30 0.50 0.50	B D ES B D ES					MADE GROUND - Compacted fine to coarse coke fill ('Carpet').	
	1.00 1.00	B ES		1.10	63.02		Medium dense gravelly cobbly SAND. Gravel is fine to coarse sub-angular to angular of sandstone. Cobbles are small to medium, sub-angular to angular.	1
	1.50 1.50 1.50	B D ES						
	2.00 2.00	D ES		2.00	62.12		Weak, brittle, medium to coarse orange SANDSTONE.	2
	2.50 2.50	D ES						
	3.00 3.00	D ES		3.00 3.00	61.12 61.12		Trial pit terminated in sandstone. End of pit at 3.00 m	3
								4
								5

Remarks: No groundwater encountered. Stability: Good. Backfilled with arisings. Log issue: Draft.

Stability:





Trial Pit Log

Trialpit No

TP7

Sheet 1 of 1

Project Name: Monckton Production Facility

Project No.
G151311Co-ords: 437331.06 - 412080.59
Level:Date
14/05/2015

Location: Lund Hill Lane, Royston, Barnsley, S71 4BD

Dimensions
(m):Depth
3.00Scale
1:25Logged
IMC

Client: Hargreaves Ltd c/o Patrick Parsons Ltd

Water Strike	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
	Depth	Type	Results					
	0.50 0.50 0.50	B D ES					MADE GROUND - Crushed coke, coal and ash fill with frequent brick and concrete fragments.	
	1.00 1.00 1.00	B D ES		1.10			MADE GROUND - Concrete (Buried reinforced concrete structure, broken through).	1
				1.40			MADE GROUND - Reworked orange sandy gravel and cobbles of sandstone. Gravel is fine to coarse, sub-angular to angular, sand is medium to coarse.	
	2.00 2.00 2.00	B D ES						2
				2.50			Weak, brittle, coarse orange SANDSTONE.	
	3.00 3.00 3.00	B D ES		3.00			End of pit at 3.00 m	3
								4
								5

Remarks: No groundwater encountered. Stability: Good. Backfilled with arisings. Log issue: Draft.

Stability:





Trial Pit Log

Trialpit No

TP8

Sheet 1 of 1

Project Name: Monckton Production Facility

Project No.
G151311Co-ords: 437349.63 - 412081.39
Level: 65.08Date
19/05/2015

Location: Lund Hill Lane, Royston, Barnsley, S71 4BD

Dimensions
(m):Depth
2.20Scale
1:25Logged
IMC

Client: Hargreaves Ltd c/o Patrick Parsons Ltd

Water Strike	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
	Depth	Type	Results				
	0.30 0.30 0.30	B D ES		0.30 0.50	64.78 64.58		MADE GROUND - Crushed compacted coke fill ('carpet').
	0.60 0.60 0.60	B D ES					MADE GROUND - Mixed rubble fill of crushed brick fragments, coke, coal and ash.
							MADE GROUND - Buried brick built structure encountered with brick arches and walls visible. Infilled with loose whole bricks and brick rubble. - Former Monckton Main Colliery building - according to local site knowledge and visible 'MMC' lettering on bricks.
	2.00 2.00 2.00	B D ES		2.00 2.20 2.20	63.08 62.88 62.88		MADE GROUND - Crushed brick and rubble fill.
							Trial pit abandoned, unable to advance deeper due to obstructions. End of pit at 2.20 m

Remarks: No groundwater encountered. Stability: Good. Backfilled with arisings. Log issue: Draft.

Stability:





Trial Pit Log

Trialpit No

TP9

Sheet 1 of 1

Project Name: Monckton Production Facility

Project No.
G151311Co-ords: 437459.54 - 412065.00
Level: 66.16Date
19/05/2015

Location: Lund Hill Lane, Royston, Barnsley, S71 4BD

Dimensions
(m):Depth
1.80Scale
1:25Logged
IMC

Client: Hargreaves Ltd c/o Patrick Parsons Ltd

Water Strike	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
	Depth	Type	Results				
	0.30 0.30 0.30 0.50 0.50	B D ES B D ES		0.40	65.76		MADE GROUND - Coke and ash fill.
	1.20 1.20 1.20	B D ES					MADE GROUND - Mixed rubble fill of sand, gravel and cobbles. Gravel is fine to coarse, sub-angular to angular. Sand is fine to coarse. Cobbles are small to medium, sub-angular of sandstone. Frequent coke, coal, ash and brick fragments.
				1.80	64.56		Moderately weak, brittle, medium to coarse orange SANDSTONE.
	1.80 1.80 1.80	B D ES		1.80	64.36		End of pit at 1.80 m

Remarks: No groundwater encountered. Stability: Good. Backfilled with arisings. Log issue: Draft.

Stability:





Trial Pit Log

Trialpit No

TP10

Sheet 1 of 1

Project Name: Monckton Production Facility

Project No.
G151311Co-ords: 437332.04 - 412071.02
Level: 64.62Date
16/06/2015

Location: Lund Hill Lane, Royston, Barnsley, S71 4BD

Dimensions
(m):Depth
3.00Scale
1:25Logged
IMC

Client: Hargreaves Ltd c/o Patrick Parsons Ltd

Water Strike	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
	Depth	Type	Results				
	0.30 0.30 0.30	B D ES		0.30	64.32		MADE GROUND - Dark grey/black, crushed coke, coal and ash fill.
	1.00 1.00 1.00	B D ES					MADE GROUND - Reworked coarse gravelly sand fill with frequent fragments of brick, coke, coal ash and concrete.
	1.50 1.50 1.50	B D ES					
							Redundant clay drain pipe encountered.
	2.50	B		2.50	62.12		Weak, brittle, coarse, dark orangish grey SANDSTONE.
	3.00	B		3.00	61.62		End of pit at 3.00 m

Remarks: No groundwater encountered. Stability: Good. Backfilled with arisings. Log issue: Draft.

Stability:







Trial Pit Log

Trialpit No

TP12

Sheet 1 of 1

Project Name: Monckton Production Facility

Project No.
G151311Co-ords: 437392.40 - 412029.48
Level: 68.61Date
16/06/2015

Location: Lund Hill Lane, Royston, Barnsley, S71 4BD

Dimensions
(m):Depth
2.50Scale
1:25Logged
IMC

Client: Hargreaves Ltd c/o Patrick Parsons Ltd

Water Strike	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
	Depth	Type	Results				
				0.30	68.31		MADE GROUND - Concrete.
	0.50	B					MADE GROUND - Mixed brick and rubble fill within an orangish brown sandy gravel matrix.
	1.00 1.00 1.00	B D ES		1.20	67.41		Orange, medium dense gravelly fine to coarse SAND. Gravel is fine to coarse sub-rounded to sub-angular of sandstone. Occasional small sub-angular sandstone cobbles.
	2.00 2.00 2.00	B D ES					
	2.50 2.50 2.50	B D ES		2.50	66.11		End of pit at 2.50 m

Remarks: No groundwater encountered. Stability: Good. Backfilled with arisings. Log issue: Draft.

Stability:





Trial Pit Log

Trialpit No

TP13

Sheet 1 of 1

Project Name: Monckton Production Facility

Project No.
G151311Co-ords: 437357.16 - 412022.63
Level: 68.70Date
17/06/2015

Location: Lund Hill Lane, Royston, Barnsley, S71 4BD

Dimensions
(m):Depth
2.30Scale
1:25Logged
IMC

Client: Hargreaves Ltd c/o Patrick Parsons Ltd

Water Strike	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
	Depth	Type	Results					
				0.20	68.50		MADE GROUND - Vegetation (grass) over black sandy gravelly topsoil with frequent embedded coal fragmetns.	
	0.30 0.30 0.30	B D ES					MADE GROUND - Mixed rubble fill of bricks, coal, coke, and lumps of concrete within a sandy gravel matrix.	
	0.80 0.80 0.80	B D ES		1.00	67.70		MADE GROUND - Abundant large lumps of coal, and ash with frequent embedded metal objects and buried pieces of timber.	1
	1.50 1.50 1.50	B D ES						
				2.00	66.70			2
	2.30 2.30 2.30	B D ES		2.30	66.40		Medium dense, orange, gravelly fine to coarse SAND. Gravel is fine to medium, sub-rounded to sub-angular of sandstone. Occasional small sub-angular sandstone cobbles. End of pit at 2.30 m	
								3
								4
								5

Remarks: No groundwater encountered. Stability: Good. Backfilled with arisings. Log issue: Draft.

Stability:







Trial Pit Log

Trialpit No

TP15

Sheet 1 of 1

Project Name: Monckton Production Facility

Project No.
G151311Co-ords: 437456.00 - 412023.50
Level: 68.71

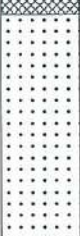
Date

Location: Lund Hill Lane, Royston, Barnsley, S71 4BD

Dimensions
(m):Depth
1.80Scale
1:25

Client: Hargreaves Ltd c/o Patrick Parsons Ltd

Logged
IMC

Water Strike	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
	Depth	Type	Results				
	0.30 0.30 0.30	B D ES		0.40	68.31		MADE GROUND - Dark grey/black crushed coke, coal and ash fill.
							MADE GROUND - Re-worked orangish brown gravelly sand fill with occasional buried whole and half bricks, coke, coal and ash fragments.
				1.00	67.71		Weak, brittle, coarse, orange SANDSTONE.
	1.50 1.50 1.50	B D ES					
	1.80 1.80 1.80	B D ES		1.80	66.91		End of pit at 1.80 m

Remarks: No groundwater encountered. Stability: Good. Backfilled with arisings. Log issue: Draft.

Stability:





Trial Pit Log

Trialpit No

TP108

Sheet 1 of 1

Project Name: Monckton Production Facility

Project No.
G151311Co-ords: 437495.18 - 412301.86
Level: 65.45

Date

Location: Lund Hill Lane, Royston, Barnsley, S71 4BD

Dimensions
(m):Depth
1.10Scale
1:25

Logged

Client: Hargreaves Ltd c/o Patrick Parsons Ltd

Water Strike	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
	Depth	Type	Results				
	0.30 0.30 0.30 0.50 0.50 0.50	B D ES B D ES		0.50	64.95		MADE GROUND - Mixed rubble fill with crushed brick, coal, coke, ash, sand, clay and gravel. Gravel is fine to coarse, sub-rounded to sub-angular of sandstone and mudstone.
	1.00 1.00 1.00	B D ES		1.10	64.35		Orangish grey, weak brittle MUDSTONE. Frequent ironstone nodules and iron ore colouring within the mudstone.
							End of pit at 1.10 m

Remarks: No groundwater encountered. Stability: Good. Backfilled with arisings. Log issue: Draft.

Stability:





Trial Pit Log

Trialpit No

TP109

Sheet 1 of 1

Project Name: Monckton Production Facility

Project No.
G151311Co-ords: 437363.45 - 412266.30
Level: 63.07Date
06/05/2015

Location: Lund Hill Lane, Royston, Barnsley, S71 4BD

Dimensions
(m):Depth
3.50Scale
1:25

Logged

Client: Hargreaves Ltd c/o Patrick Parsons Ltd

Water Strike	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
	Depth	Type	Results				
	0.30 0.30	D ES		0.20	62.87		MADE GROUND - Fine to coarse, dark greyish black coke fill ('carpet').
	0.50 0.50	D ES		0.60	62.47		MADE GROUND - Mixed brick and coke rubble fill with frequent half bricks, lumps of concrete and small to large cobbles of mudstone.
	1.20 1.20	D ES					MADE GROUND - Reworked grey mudstone. Recovered as a fine to coarse sub-angular to angular cobbly gravel of mudstone. Cobbles are small to large, sub-angular to angular of mudstone with frequent visible fossilized plant matter.
	2.50 2.50	D ES					
				3.00	60.07		Orangish brown very sandy, slightly gravelly CLAY. Gravel is fine to medium, sub-angular to angular of sandstone. Sand is fine to coarse.
	3.50 3.50	D ES		3.50	59.57		End of pit at 3.50 m

Remarks: No groundwater encountered. Stability: Good. Backfilled with arisings. Log issue: Draft.

Stability:







Trial Pit Log

Trialpit No
TP1
Sheet 1 of 1

Project Name: Monckton Production Facility

Project No.
G151311

Co-ords: 437241.69 - 412299.81
Level: 60.73

Date
13/05/2015

Location: Lund Hill Lane, Royston, Barnsley, S71 4BD

Dimensions
(m):

Depth
3.60

Scale
1:25

Logged
IMC

Client: Hargreaves Ltd c/o Patrick Parsons Ltd

Water Strike	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
	Depth	Type	Results				
	0.25 0.25 0.25 0.50 0.50 0.50	B D ES B D ES		0.30	60.43		MADE GROUND - Crushed, compacted coke fill. (Carpet).
	1.50 1.50 1.50	B D ES					MADE GROUND - Mixed rubble fill with frequent weathered whole, half and fragmented bricks, coke, coal and ash. Frequent buried metal objects.
	2.00 2.00 2.00	B D ES					
	3.00 3.00 3.00	B D ES		2.50	58.23		Weak, brittle, medium coarse orange SANDSTONE.
	3.50 3.50 3.60	D ES B		3.60	57.13		End of pit at 3.60 m

Remarks: No groundwater encountered. Stability: Good. Backfilled with arisings. Log issue: Draft.

Stability:





Trial Pit Log

Trialpit No

TP2

Sheet 1 of 1

Project Name: Monckton Production Facility

Project No.
G151311Co-ords: 437227.60 - 412283.55
Level: 61.10Date
15/05/2015

Location: Lund Hill Lane, Royston, Barnsley, S71 4BD

Dimensions
(m):Depth
3.50Scale
1:25Logged
IMC

Client: Hargreaves Ltd c/o Patrick Parsons Ltd

Water Strike	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
	Depth	Type	Results				
	0.30 0.30 0.30	B D ES		0.70	60.40		MADE GROUND - Fine to coarse, compacted crushed coke ('carpet').
	0.80 0.80 0.80	B D ES					MADE GROUND - Mixed rubble fill with brick, coal, coke and ash fragments in a reworked sandy gravelly clay matrix.
	1.50 1.50 1.50	B D ES		1.85	59.24		Medium dense, orange gravelly cobbly SAND. Gravel is fine to coarse, sub-angular to angular. Cobbles are small to medium, sub-angular to angular of sandstone.
	2.00 2.00 2.00	B D ES		2.50	58.60		Weak, brittle, coarse orange SANDSTONE.
	3.50 3.50 3.50	B D ES		3.50	57.60		End of pit at 3.50 m

Remarks: No groundwater encountered. Stability: Good. Backfilled with arisings. Log issue: Draft.

Stability:

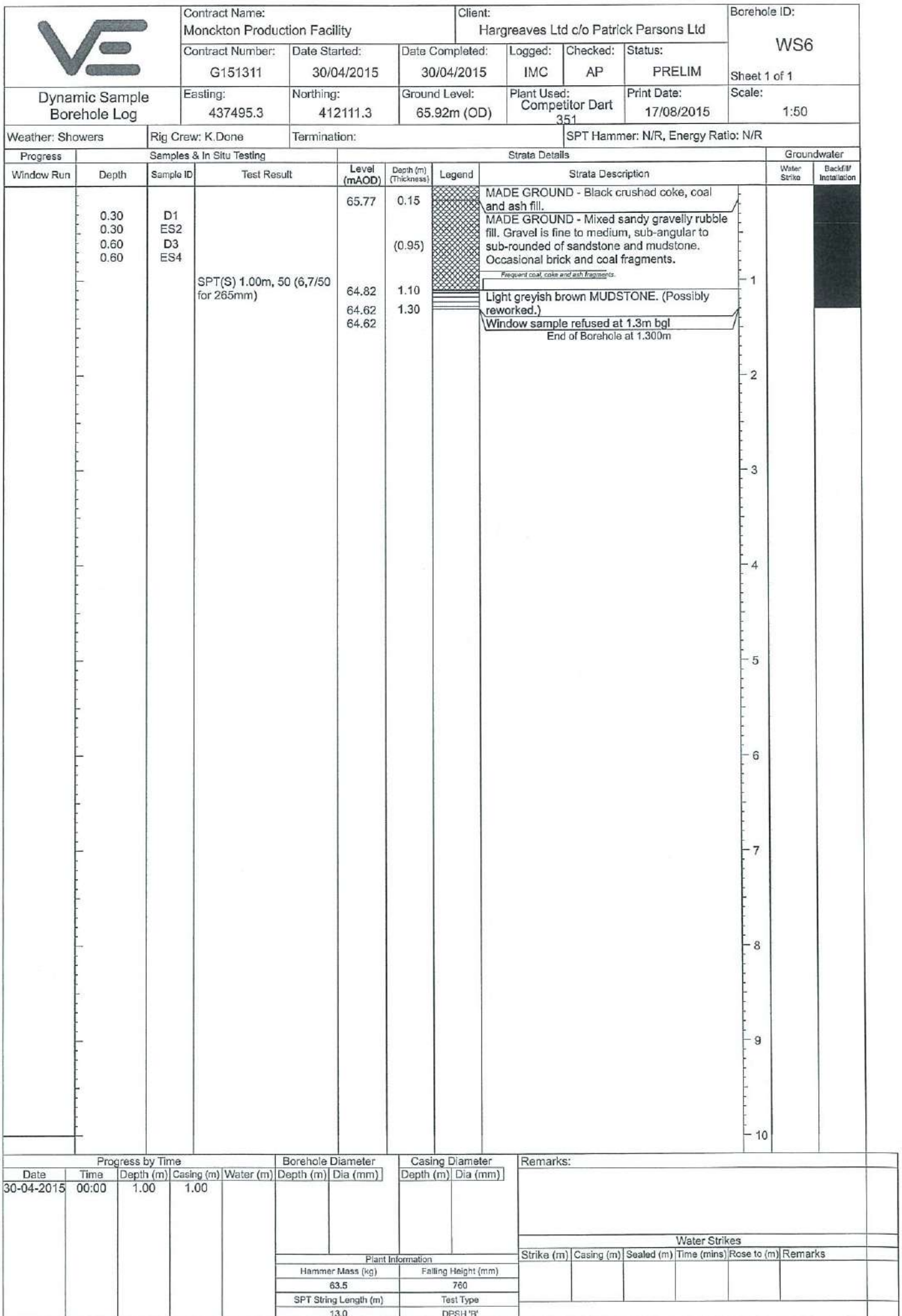


	Contract Name: Monckton Production Facility		Client: Hargreaves Ltd c/o Patrick Parsons Ltd		Borehole ID: WS5	
	Contract Number: G151311	Date Started: 28/04/2015	Date Completed: 28/04/2015	Logged: IMC	Checked: AP	Status: PRELIM
Dynamic Sample Borehole Log		Easting: 437481.8	Northing: 412228.2	Ground Level: 65.19m (OD)	Plant Used: Competitor Dart 351	Print Date: 17/08/2015
				Scale: 1:50		

Weather: Showers Rig Crew: K.Done Termination: SPT Hammer: N/R, Energy Ratio: N/R

Progress		Samples & In Situ Testing			Strata Details			Groundwater	
Window Run	Depth	Sample ID	Test Result	Level (mAOD)	Depth (m) (Thickness)	Legend	Strata Description	Water Strike	Backfill/ Installation
	0.00	D1					MADE GROUND - Black crushed coke fill with coal and ash. (Stockyard 'Carpet').		
	0.30	D2			(0.50)				
	0.50	D3		64.69	0.50				
	0.50	ES4					MADE GROUND - Reworked light gray crushed mudstone fill with fine to coarse sand and fine to medium sub-angular to angular gravel of mudstone and occasional sandstone.		
	1.00	D6	SPT(S) 1.00m, N=18					1	
	1.00	ES7	(3,5/5,4,4,5)		(1.50)				
	1.00 - 1.45	SPTLS 5							
	1.50	D8							
	2.00	D10	SPT(S) 2.00m, N=17	63.19	2.00		MADE GROUND - Reworked reddish brown sandy gravelly clay fill. Sand is fine to coarse, gravel is fine to medium, sub-angular to angular of sandstone and mudstone. Occasional embedded coal, coke and brick fragments.	2	
	2.00	ES11	(3,3/4,4,4,5)						
	2.00 - 2.45	SPTLS 9							
	2.50	D12			(1.70)				
	3.00	D14	SPT(S) 3.00m, N=26					3	
	3.00	ES15	(5,5/5,6,7,8)						
	3.00 - 3.45	SPTLS 13		61.49	3.70		Light orangish grey weak MUDSTONE.		
	4.00	D17	SPT(S) 4.00m, 50 (25 for 135mm/50 for 275mm)	61.19	(0.30)			4	
	4.00 - 4.20	SPTLS 16			4.00		End of Borehole at 4.200m		
								5	
								6	
								7	
								8	
								9	
								10	

Progress by Time				Borehole Diameter		Casing Diameter		Remarks:					
Date	Time	Depth (m)	Casing (m)	Water (m)	Depth (m)	Dia (mm)	Depth (m)	Dia (mm)					
28-04-2015	00:00	1.00	1.00						Groundwater struck at 2.9m, with no rise recorded after 20 minutes. Backfilled with gravel and bentonite. slotted and plain pipe installed with stand up cover.				
28-04-2015	01:00	2.00	1.00										
28-04-2015	02:00	3.00	1.00										
28-04-2015	03:00	4.00	1.00										
Plant Information								Water Strikes					
				Hammer Mass (kg)		Falling Height (mm)		Strike (m)	Casing (m)	Sealed (m)	Time (mins)	Rose to (m)	Remarks
				63.5		760		2.90			0 20	2.90	
				SPT String Length (m)		Test Type							
				13.0		DPSH 1B'							



	Contract Name: Monckton Production Facility		Client: Hargreaves Ltd c/o Patrick Parsons Ltd			Borehole ID: WS7
	Contract Number: G151311	Date Started: 06/05/2015	Date Completed: 06/05/2015	Logged: IMC	Checked: AP	
Dynamic Sample Borehole Log	Easting: 437449.2	Northing: 411838.6	Ground Level: 61.99m (OD)	Plant Used: Competitor Dart 351	Print Date: 17/08/2015	Scale: 1:50

Weather:	Rig Crew: K.Done, G.Griffiths	Termination:	SPT Hammer: N/R, Energy Ratio: N/R
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Progress		Samples & In Situ Testing				Strata Details		Groundwater	
Window Run	Depth	Sample ID	Test Result	Level (mAOD)	Depth (m) (Thickness)	Legend	Strata Description	Water Strike	Backfill/ Installation
	0.30	ES1		61.89	0.10 (0.30)		MADE GROUND - Crushed, compacted dark grey/black coal, ash and coke fill.		
	0.50	D2		61.59	0.40		MADE GROUND - Reworked sandy gravelly clay fill with embedded brick, coal, coke and ash.		
	0.70	3					Orangish brown firm sandy CLAY.		
	1.00	D5	SPT(S) 1.00m, N=25 (5,5/5,6,7,7)					1	
	1.00 - 1.45	SPTLS 4							
	1.50	ES6							
	2.00	D8	SPT(S) 2.00m, N=29 (6,7/7,7,7,8)					2	
	2.00 - 2.45	SPTLS 7			(3.90)				
	2.50	ES9							
	3.00	D11	SPT(S) 3.00m, N=41 (8,8/9,10,10,12)					3	
	3.00 - 3.45	SPTLS 10							
	3.50	ES12							
	4.00	D14	SPT(S) 4.00m, 50 (24 for 95mm/50 for 265mm)	57.69	4.30		Stiff, orangish brown mottled grey slightly sandy CLAY.	4	
	4.00 - 4.45	SPTLS 13			(0.70)				
	4.50	ES15		56.99	5.00		End of Borehole at 5.000m	5	
								6	
								7	
								8	
								9	
								10	

Progress by Time					Borehole Diameter		Casing Diameter		Remarks:	
Date	Time	Depth (m)	Casing (m)	Water (m)	Depth (m)	Dia (mm)	Depth (m)	Dia (mm)		
06-05-2015	00:00	1.00	1.00						Backfilled with gravel and bentonite. slotted and plain pipe installed with stand up cover.	
06-05-2015	01:00	2.00	1.00							
06-05-2015	02:00	3.00	1.00							
11-05-2015	03:00	4.00	1.00	3.80						
					Plant Information		Water Strikes			
					Hammer Mass (kg)	Falling Height (mm)	Strike (m)	Casing (m)	Sealed (m)	Time (mins)
					63.5	760	3.80			0
					SPT String Length (m)	Test Type				20
					13.0	DPSH 'B'				3.80

	Contract Name: Monckton Production Facility			Client: Hargreaves Ltd c/o Patrick Parsons Ltd			Borehole ID: WS9
	Contract Number: G151311	Date Started: 06/05/2015	Date Completed: 06/05/2015	Logged: IMC	Checked: AP	Status: PRELIM	
Dynamic Sample Borehole Log	Easting: 437449.2	Northing: 411805.5	Ground Level: 61.93m (OD)	Plant Used: Competitor Dart 351	Print Date: 17/08/2015	Scale: 1:50	

Weather:	Rig Crew: K.Done, G.Griffiths	Termination:	SPT Hammer: N/R, Energy Ratio: N/R
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Progress		Samples & In Situ Testing			Strata Details			Groundwater	
Window Run	Depth	Sample ID	Test Result	Level (mAOD)	Depth (m) (Thickness)	Legend	Strata Description	Water Strike	Backfill/ Installation
				61.88	0.05		Vegetation (grass) over light orangish brown sandy gravelly clayey TOPSOIL. Gravel is fine sub-angular of mudstone. Sand is fine to coarse.		
	0.50 0.50	D1 ES2		61.53	0.40		MADE GROUND - Medium, occasionally coarse, sub-angular light grey gravel of mudstone.		
	1.00 1.00 1.00 - 1.45	D4 ES5 SPTLS 3	SPT(S) 1.00m, N=3 (1,1/0,1,1,1)		(1.60)		MADE GROUND - Orangish brown sandy gravelly reworked clay fill with embedded brick, coal and coke fragments. <i>Contains angular gravel sized brick fragments.</i>	1	
	2.00 2.00 2.00 - 2.45	D7 ES8 SPTLS 6	SPT(S) 2.00m, N=4 (1,1/1,1,1,1)	59.93	2.00		Soft becoming firm, orangish brown mottled grey sandy, occasionally gravelly CLAY. Gravel is medium to coarse, sub-angular of mudstone. Sand is fine to coarse.	2	
	3.00 3.00 3.00 - 3.45	D10 ES11 SPTLS 9	SPT(S) 3.00m, N=17 (2,4/4,4,5,4)		(3.00)			3	
	4.00 - 4.45	SPTLS 12	SPT(S) 4.00m, N=35 (5,6/7,9,9,10)					4	
	5.00 5.00 5.00 - 5.45	D14 ES15 SPTLS 13	SPT(S) 5.00m, 0 (75 for 30mm/...)	56.93	5.00		End of Borehole at 5.050m	5	
								6	
								7	
								8	
								9	
								10	

Progress by Time					Borehole Diameter		Casing Diameter		Remarks:
Date	Time	Depth (m)	Casing (m)	Water (m)	Depth (m)	Dia (mm)	Depth (m)	Dia (mm)	
06-05-2015	00:00	1.00	1.00						Backfilled with gravel and bentonite. slotted and plain pipe installed with stand up cover. Groundwater encountered at 2.6m bgl with no rise recorded.
06-05-2015	01:00	2.00	2.00						
06-05-2015	02:00	3.00	2.00						
06-05-2015	03:00	4.00	2.00	3.40					
06-05-2015	04:00	5.00	2.00	3.10					
					Plant Information		Water Strikes		
					Hammer Mass (kg)	Falling Height (mm)	Strike (m)	Casing (m)	Sealed (m)
					63.5	760	2.60		
					SPT String Length (m)	Test Type	Time (mins)	Rose to (m)	Remarks
					13.0	DPSH 'B'	0 20	2.60	

	Contract Name: Monckton Production Facility		Client: Hargreaves Ltd c/o Patrick Parsons Ltd		Borehole ID: WS10	
	Contract Number: G151311	Date Started: 06/05/2015	Date Completed: 06/05/2015	Logged:	Checked: AP	Status: PRELIM
Dynamic Sample Borehole Log		Easting: 437433.5	Northing: 411817.3	Ground Level: 61.94m (OD)	Plant Used: Competitor Dart 351	Print Date: 17/08/2015
						Scale: 1:50

Weather:	Rig Crew: K.Done, G.Griffiths	Termination:	SPT Hammer: N/R, Energy Ratio: N/R
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Progress		Samples & In Situ Testing			Strata Details				Groundwater	
Window Run	Depth	Sample ID	Test Result	Level (mAOD)	Depth (m) (Thickness)	Legend	Strata Description		Water Strike	Backfill/ Installation
				61.79	0.15		Vegetation (grass) over light orangish brown sandy gravelly clayey TOPSOIL. Gravel is fine sub-angular of mudstone. Sand is fine to coarse.			
	0.50 0.50	D1 ES2		61.59	0.35		MADE GROUND - Medium to coarse, sub-angular light grey gravel of mudstone.			
	1.00 1.00	D4 ES5	SPT(S) 1.00m, N=5 (1,1/1,2,1,1)		(1.15)		MADE GROUND - Reddish brown to dark greyish brown, reworked sandy gravelly clay fill with frequent embedded brick, coal, coke and ash fragments.	1		
	1.00 - 1.45	SPTLS 3								
	1.50 1.50	D6 ES7		60.44	1.50		Soft, reddish brown, sandy slightly gravelly CLAY. Gravel is fine, sub-angular of mudstone. Sand is fine to coarse.	2		
	2.00 - 2.45	SPTLS 8	SPT(S) 2.00m, 3 (1,1,1,2)							
	2.50 2.50	D9 ES10			(2.10)					
	3.00 - 3.45	SPTLS 11	SPT(S) 3.00m, N=8 (2,3/3,2,2,1)					3		
				58.34	3.60		Firm brownish grey slightly sandy CLAY. Gravel is fine, sub-angular of mudstone. Sand is fine to coarse.	4		
	4.00 4.00	D13 ES14	SPT(S) 4.00m, 50 (25 for 135mm/50 for 290mm)		(1.40)					
	4.00 - 4.45	SPTLS 12								
	5.00 - 5.05	SPTLS 15	SPT(S) 5.00m, 0 (75 for 40mm/...)	56.94	5.00		End of Borehole at 5.050m	5		
								6		
								7		
								8		
								9		
								10		

Progress by Time					Borehole Diameter		Casing Diameter		Remarks: Backfilled with gravel and bentonite. slotted and plain pipe installed with stand up cover. Groundwater encountered at 2.8m, with no rise recorded.					
Date	Time	Depth (m)	Casing (m)	Water (m)	Depth (m)	Dia (mm)	Depth (m)	Dia (mm)						
06-05-2015	00:00	1.00	1.00											
06-05-2015	01:00	2.00	2.00											
06-05-2015	02:00	3.00	2.00	2.80										
06-05-2015	03:00	4.00	2.00	3.40										
06-05-2015	04:00	5.00	2.00	3.80										
					Plant Information		Water Strikes							
					Hammer Mass (kg)		Falling Height (mm)		2.80			0 20	2.80	
					63.5		760							
					SPT String Length (m)		Test Type							
					13.0		DPSH 'B'							



Trial Pit Log

Trialpit No

TP101

Sheet 1 of 1

Project Name: Monckton Production Facility

Project No.
G151311Co-ords: 437323.61 - 412101.74
Level: 63.97Date
29/04/2015

Location: Lund Hill Lane, Royston, Barnsley, S71 4BD

Dimensions
(m):Depth
1.50Scale
1:25

Client: Hargreaves Ltd c/o Patrick Parsons Ltd

Logged
IMC

Water Strike	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
	Depth	Type	Results				
	0.00	D					MADE GROUND - Black crushed coke fill (stock yard 'carpet').
	0.00	ES					
	0.30	B					
	0.30	D					
	0.30	ES					
	0.50	B					
	0.50	D		0.50	63.47		MADE GROUND - Dark reddish brown sandy gravel fill with brick and coke fragments. <i>Frequent buried whole and half bricks.</i>
	1.00	D					
	1.00	ES		1.10	62.87		
	1.50	D					Orange gravelly, slightly clayey fine to medium SAND. Gravel is fine to coarse, sub-angular to angular, of sandstone.
	1.50	ES					
				1.80	62.17		Trial pit abandoned at 1.8m bgl due to drain pipe encountered (redundant). <i>End of pit at 1.50 m</i>
				1.80	62.17		

Remarks: Groundwater was encountered at 1.5m. Stability: Good. Backfilled with arisings. Log issue: Draft.

Stability:





Trial Pit Log

Trialpit No

TP102

Sheet 1 of 1

Project Name: Monckton Production Facility

Project No.
G151311Co-ords: 437353.32 - 412184.34
Level: 63.82Date
29/04/2015

Location: Lund Hill Lane, Royston, Barnsley, S71 4BD

Dimensions
(m):Depth
1.80Scale
1:25

Client: Hargreaves Ltd c/o Patrick Parsons Ltd

Logged

Water Strike	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
	Depth	Type	Results				
	0.00 0.00 0.00	B D ES					MADE GROUND - Crushed coke fill ('Carpet').
	0.50 0.50 0.50	B D ES		0.40	63.42		MADE GROUND - Reinforced concrete slab.
	1.00 1.00 1.00	B D ES		0.70	63.12		MADE GROUND - Reddish brown, mixed rubble fill of crushed brick fragments, frequent whole bricks, coke, coal, ash, clinker and buried metal objects.
				1.00	62.82		MADE GROUND - Old concrete slab or footing.
				1.40	62.42		MADE GROUND - Orangish brown, re-worked gravelly clayey sand.
				1.80 1.80	62.02 62.02		Trial pit abandoned due to obstruction encountered. End of pit at 1.80 m

Remarks: No groundwater encountered. Stability: Good. Backfilled with arisings. Log issue: Draft.

Stability:





Trial Pit Log

Trialpit No

TP103

Sheet 1 of 1

Project Name: Monckton Production Facility

Project No.
G151311

Co-ords: 437264.31 - 412242.75

Level: 61.83

Date

Location: Lund Hill Lane, Royston, Barnsley, S71 4BD

Dimensions
(m):

Depth

Scale

1:25

Logged

Client: Hargreaves Ltd c/o Patrick Parsons Ltd

Water Strike	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
	Depth	Type	Results				
	0.30 0.30 0.30 0.50 0.50	B D ES D ES		0.30	61.52		MADE GROUND - Crushed coke fill ('Stock yard carpet').
	1.00 1.00 1.00	B D ES		1.30	60.52		MADE GROUND - Mixed rubble, coke, coal, ash, clinker and brick fill.
	1.50 1.50 1.50	B D ES		1.60	60.22		MADE GROUND - Re-worked grey crushed mudstone fill, fragmented to a fine to medium sub-angular to angular compacted sandy gravel of mudstone. Sand is fine to coarse.
	1.80 1.80 1.80	B D ES		2.00	59.82		Orange sandy fine to coarse sub-angular to angular GRAVEL of sandstone. Sand is medium to coarse. Frequent small to medium cobbles of sandstone.
	3.00 3.00	B D		3.50 3.50	58.32 58.32		Weak, brittle, medium to coarse, orange SANDSTONE.
							Trial pit terminated on hard grey MUDSTONE.

Remarks: No groundwater encountered. Stability: Good. Backfilled with arisings. Log issue: Draft.

Stability:





Trial Pit Log

Trialpit No

TP104

Sheet 1 of 1

Project Name: Monckton Production Facility

Project No.
G151311Co-ords: 437244.10 - 412305.95
Level: 60.55Date
30/04/2015

Location: Lund Hill Lane, Royston, Barnsley, S71 4BD

Dimensions
(m):Depth
1.30Scale
1:25

Client: Hargreaves Ltd c/o Patrick Parsons Ltd

Logged

Water Strike	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
	Depth	Type	Results				
	0.30 0.30 0.30 0.50 0.50 0.50	B D ES B D ES		0.30	60.25		MADE GROUND - Coke, coal, ash fill ('Carpet'). MADE GROUND - Mixed rubble fill of sandy gravelly clay with embedded pottery, brick, coal, ash. Strong ash/tar/bitumen odour observed. Frequent buried whole and half bricks and pieces of buried timber encountered.
	1.00 1.00 1.00	B D ES		1.35 1.35	59.20 59.20		Trial pit terminated upon encountering a cable at 1.35m bgl. No signal from CAT. End of pit at 1.30 m

Remarks: No groundwater encountered. Stability: Good. Backfilled with arisings. Log issue: Draft.

Stability:





Trial Pit Log

Trialpit No

TP105

Sheet 1 of 1

Project Name: Monckton Production Facility

Project No.
G151311Co-ords: 437331.03 - 412274.23
Level: 62.69Date
06/05/2015

Location: Lund Hill Lane, Royston, Barnsley, S71 4BD

Dimensions
(m):Depth
3.20Scale
1:25

Logged

Client: Hargreaves Ltd c/o Patrick Parsons Ltd

Water Strike	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
	Depth	Type	Results				
				0.20	62.49		MADE GROUND - Dark grey/black coarse coke fill ('Carpet').
	0.30 0.30 0.40 - 1.00 0.50 0.50	D ES B ES					MADE GROUND - Reddish orange crushed brick fill with occasional weathered half bricks.
	1.00 1.00	D ES		1.00	61.69		MADE GROUND - Mixed brick rubble, coke, coal and ash fill with some fine to coarse, sub-angular crushed mudstone gravels.
	1.50 1.50	D ES					
	3.00 - 3.50	B		3.00	59.69		Dark orangish grey MUDSTONE with frequent iron ore colouring.
	3.20 3.20	D ES		3.20 3.20	59.49 59.49		Trial pit terminated on mudstone. End of pit at 3.20 m

Remarks: No groundwater encountered. Stability: Good. Backfilled with arisings. Log Issue: Draft.

Stability:





Trial Pit Log

Trialpit No

TP106

Sheet 1 of 1

Project Name: Monckton Production Facility

Project No.
G151311

Co-ords: 437317.04 - 412340.04

Level: 62.09

Date

01/05/2015

Location: Lund Hill Lane, Royston, Barnsley, S71 4BD

Dimensions
(m):Depth
3.70

Scale

1:25

Logged

Client: Hargreaves Ltd c/o Patrick Parsons Ltd

Water Strike	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
	Depth	Type	Results					
	0.20 0.20 0.20	B D ES		0.25	61.84		MADE GROUND - Coke, ash and coal fill ('Carpet').	
				0.50	61.58		MADE GROUND - Mixed rubble fill of brick and concrete fragments, coke, ash and coal.	
	0.60 0.60 0.60	B D ES		0.80	61.28		MADE GROUND - Crushed red brick fill with occasional coke, coal and ash.	
	1.00 1.00 1.00	B D ES					MADE GROUND - Weathered whole bricks, half bricks and crushed brick fill mixed with a sandy fine to coarse sub-rounded to sub-angular gravel of sandstone and mudstone. Sand is fine to coarse.	1
	1.50 1.50 1.50	B D ES		1.40	60.68		Soft to firm, light grey mottled orange sandy organic CLAY. Sand is fine to coarse.	2
				3.30	58.78	xxxxxx	Weak grey brittle SILTSTONE.	3
	3.50 3.50 3.50	B D ES		3.70 3.70	58.38 58.38		Trial pit terminated in SILTSTONE. End of pit at 3.70 m	4
								5

Remarks: No groundwater encountered. Stability: Good. Backfilled with arisings. Log issue: Draft.

Stability:





Trial Pit Log

Trialpit No

TP107

Sheet 1 of 1

Project Name: Monckton Production Facility

Project No.
G151311Co-ords: 437419.94 - 412327.16
Level: 63.80

Date

Location: Lund Hill Lane, Royston, Bamsley, S71 4BD

Dimensions
(m):Depth
2.00Scale
1:25

Logged

Client: Hargreaves Ltd c/o Patrick Parsons Ltd

Water Strike	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
	Depth	Type	Results				
	0.10 0.10 0.10 0.30	B D ES D		0.20	63.60		MADE GROUND - Coke, ash, coal and gravel fill. Gravel is fine to coarse, sub-rounded to sub-angular of sandstone and mudstone. MADE GROUND - Mixed rubble fill of whole and half bricks, crushed brick fragments, broken concrete, coke, coal, ash and occasional buried metal, timber, steel rope, and rags. <i>Large buried steel lifting cable/rope.</i> <i>Buried railway sleeper encountered.</i>
	0.50 0.50 0.50	B D ES		1.30	62.50		CONCRETE - Large buried concrete structure encountered.
	2.00 2.00	D ES		2.00 2.00	61.80 61.80		Trial pit abandoned after 30 mins attempting to break through concrete obstruction. <i>End of pit at 2.00 m</i>

Remarks: No groundwater encountered. Stability: Good. Backfilled with arisings. Log issue: Draft.

Stability:



