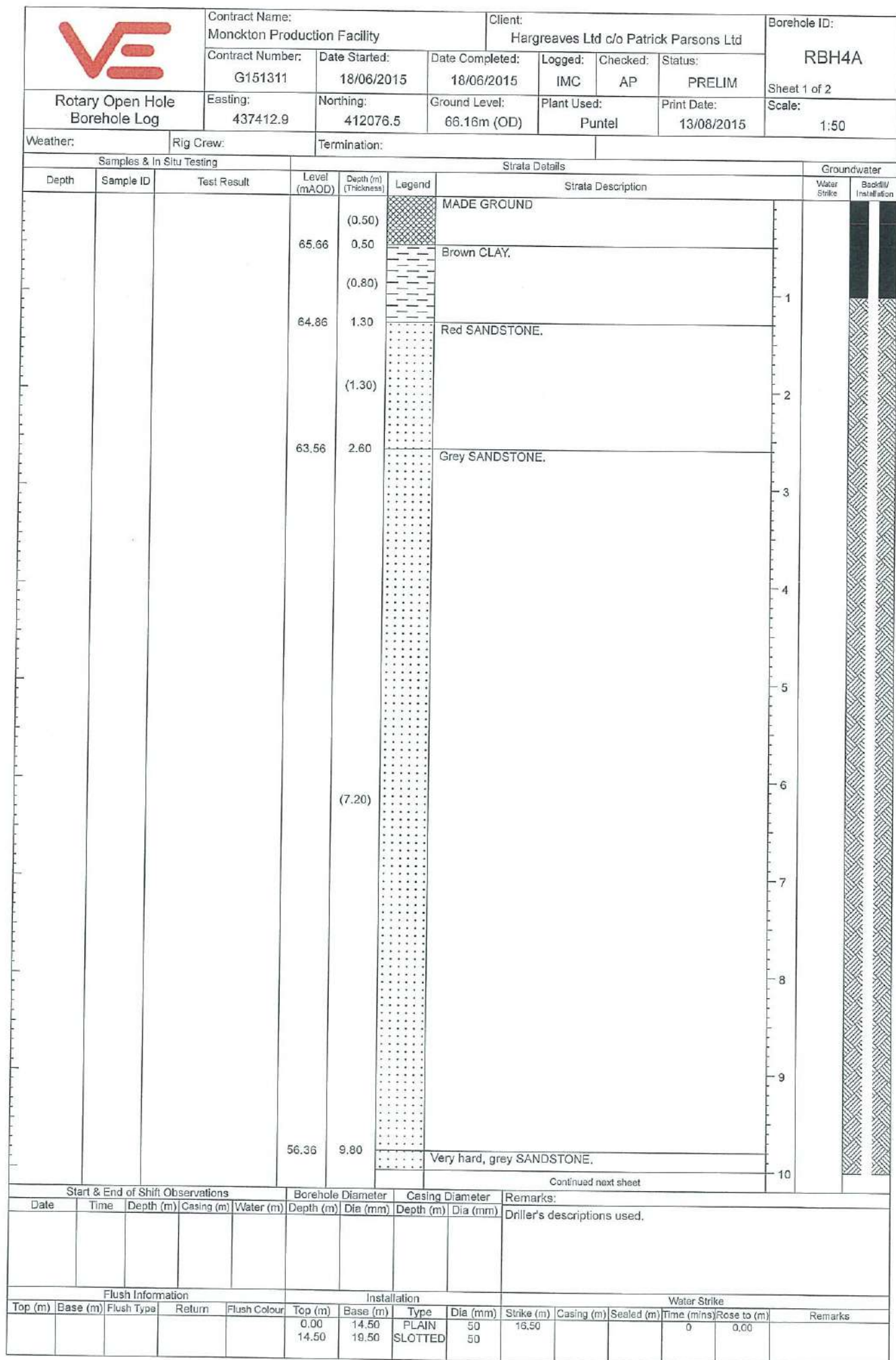
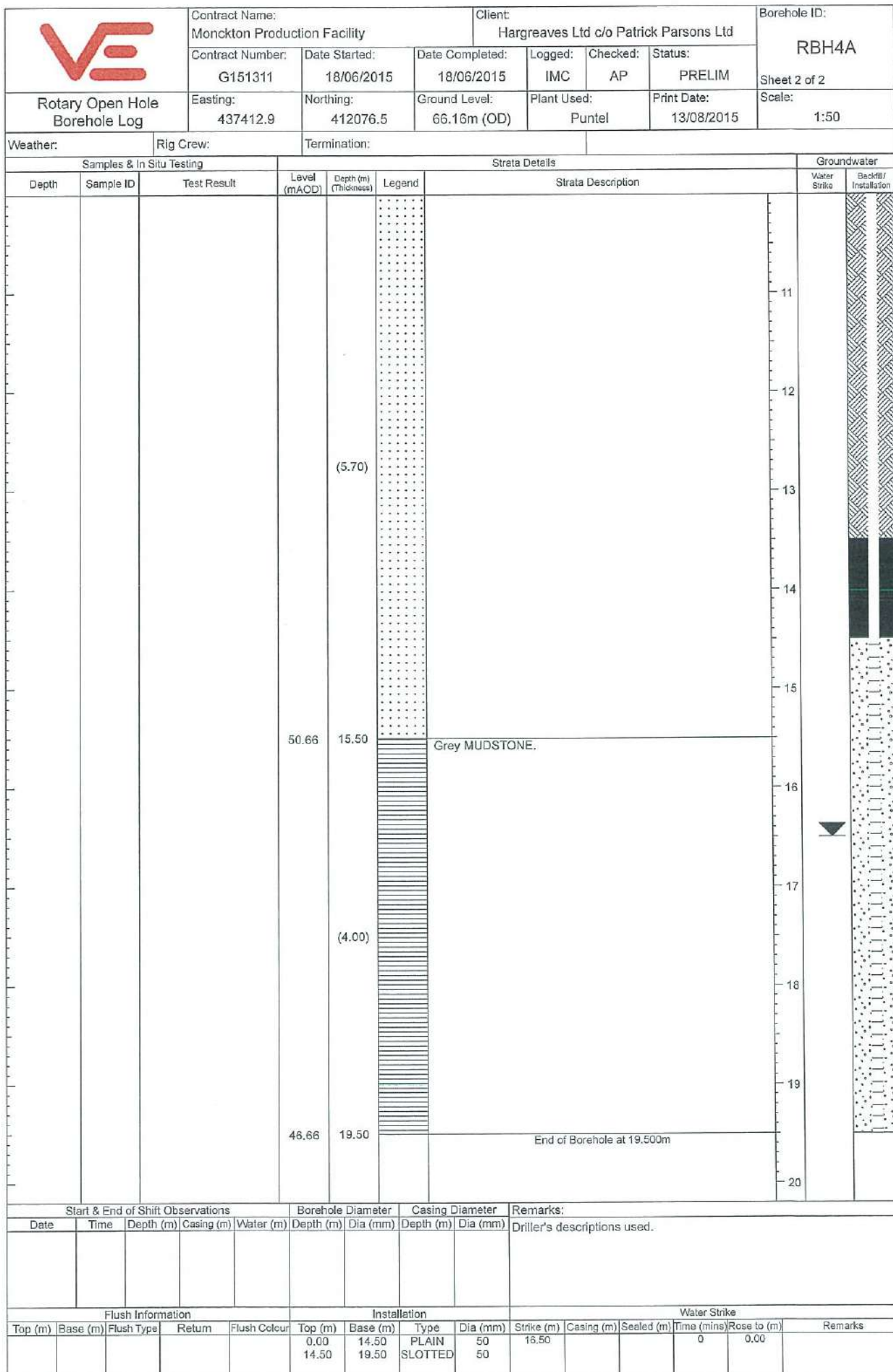




	Contract Name: Monckton Production Facility				Client: Hargreaves Ltd c/o Patrick Parsons Ltd			Borehole ID: RBH4						
	Contract Number: G151311	Date Started: 01/05/2015	Date Completed: 01/05/2015	Logged: IMC	Checked: AP	Status: PRELIM	Sheet 2 of 2							
	Rotary Open Hole Borehole Log		Easting: 437414.0	Northing: 412077.1	Ground Level: 66.23m (OD)	Plant Used: GEO 602	Print Date: 13/08/2015	Scale: 1:50						
Weather:		Rig Crew: I.Mountain, L.Thomas		Termination:										
Samples & In Situ Testing				Strata Details				Groundwater						
Depth	Sample ID	Test Result	Level (mAOD)	Depth (m) (Thickness)	Legend	Strata Description		Water Strike	Backfill/ Installation					
				(12.70)										
			48.23	18.00		End of Borehole at 18.000m								
Start & End of Shift Observations				Borehole Diameter		Casing Diameter		Remarks:						
Date	Time	Depth (m)	Casing (m)	Water (m)	Depth (m)	Dia (mm)	Depth (m)	Dia (mm)	Backfilled with gravel and bentonite. slotted and plain pipe installed with stand up cover. Groundwater struck at 13.9m, with no rise recorded.					
Flush Information					Installation				Water Strike					
Top (m)	Base (m)	Flush Type	Return	Flush Colour	Top (m)	Base (m)	Type	Dia (mm)	Strike (m)	Casing (m)	Sealed (m)	Time (mins)	Rose to (m)	Remarks
					0.00	14.00	PLAIN	50				0	0.00	
					14.00	18.00	SLOTTED	50	13.90			20	13.90	







	Contract Name: Monckton Production Facility				Client: Hargreaves Ltd c/o Patrick Parsons Ltd			Borehole ID: RBH5						
	Contract Number: G151311	Date Started: 12/06/2015	Date Completed: 12/06/2015	Logged: IMC	Checked: AP	Status: PRELIM		Sheet 2 of 2						
	Rotary Open Hole Borehole Log		Easting: 437471.1	Northing: 411825.9	Ground Level: 62.18m (OD)	Plant Used: Comacchio 305	Print Date: 13/08/2015	Scale: 1:50						
Weather:		Rig Crew:		Termination:										
Samples & In Situ Testing			Strata Details					Groundwater						
Depth	Sample ID	Test Result	Level (mAOD)	Depth (m) (Thickness)	Legend	Strata Description		Water Strike	Backfill/Installation					
				(2.00)		Grey SANDSTONE.		11						
			50.18	12.00		Grey MUDSTONE.		12						
				(4.00)				13						
								14						
								15						
			46.18	16.00		End of Borehole at 16.000m		16						
								17						
								18						
								19						
								20						
Start & End of Shift Observations			Borehole Diameter		Casing Diameter		Remarks:							
Date	Time	Depth (m)	Casing (m)	Water (m)	Depth (m)	Dia (mm)	Depth (m)	Dia (mm)	Driller's descriptions used.					
Flush Information					Installation				Water Strike					
Top (m)	Base (m)	Flush Type	Return	Flush Colour	Top (m)	Base (m)	Type	Dia (mm)	Strike (m)	Casing (m)	Sealed (m)	Time (mins)	Rose to (m)	Remarks
					0.00	12.00	PLAIN	50	14.00	13.00		0	0.00	
					12.00	16.00	SLOTTED	50						



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
3.60Scale
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				
	0.25 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					
	2.50 2.50 2.50	B D ES		2.50	58.23		
	3.00 3.00 3.00	B D ES					
	3.50 3.50 3.60	D ES B		3.60	57.13		Weak, brittle, medium coarse orange SANDSTONE.
							
							
							
							
							
							
							
							
							
							
							
							
							

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.
G151311

Co-ords: 437227.60 - 412283.55
Level: 61.10

Date
15/05/2015

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

Dimensions
(m):

Depth
3.50

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				
	0.30 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:





Trial Pit Log

Trialpit No

TP3

Sheet 1 of 1

Project Name: Monckton Production Facility

Project No.
G151311

Co-ords: 437381.76 - 412168.12

Level: 64.19

Date

14/05/2015

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

Dimensions
(m):Depth
3.80

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					
	0.30 0.30 0.30	B D ES					MADE GROUND - Fine to coarse, dark greyish black, crushed and compacted coke fill ('carpet').	
	0.80 0.80 0.80	B D ES		0.80	63.38		CONCRETE - Reinforced slab.	1
	1.50 1.50 1.50	B D ES		1.50	62.68		MADE GROUND - Mixed rubble fill with brick, coal, coke and ash fragments in a reworked sandy gravelly clay matrix. Frequent buried metal and timber objects.	
	2.00 2.00 2.00	B D ES		2.00	62.18		Medium dense, orange gravelly cobbly fine to coarse SAND. Gravel is medium to coarse (mostly coarse) sub-angular to angular of sandstone. Cobbles are small to medium sub-angular to angular of sandstone.	2
	3.00 3.00 3.00	B D ES		3.00	61.18		Weak, brittle, coarse orange SANDSTONE.	3
	3.80 3.80 3.80	B D ES		3.80	60.38		End of pit at 3.80 m	4
								5

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

Stability:





Trial Pit Log

Trialpit No

TP4

Sheet 1 of 1

Project Name: Monckton Production Facility

Project No.
G151311Co-ords: 437437.73 - 412225.69
Level: 64.66Date
14/05/2015

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

Dimensions
(m):Depth
3.20Scale
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		0.35	64.31		MADE GROUND - Fine to medium, crushed compacted coke ('carpet').
	1.00 1.00 1.00	B D ES					MADE GROUND - Reddish brown mixed brick rubble fill, comprising crushed brick fill, weathered bricks, lumps of concrete, occasional coke, coal, ash, sand and gravel. Gravel is fine to medium of sandstone, sand is fine to coarse.
	2.00 2.00 2.00	B D ES					
	3.00 3.00 3.00	B D ES		3.00	61.66		CONCRETE - Large concrete obstruction encountered. Attempted to break through.
				3.20 3.20	61.46 61.46		Trial pit terminated on concrete obstruction. 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

TP5

Sheet 1 of 1

Project Name: Monckton Production Facility

Project No.
G151311Co-ords: 437519.17 - 412136.50
Level: 66.31Date
20/05/2015

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				
	0.15			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					
	0.30	D					
	0.30	ES					
	0.50	B					
	0.50	D					
	0.50	ES					
	1.00	B					
	1.00	D					
	1.00	ES					
	1.20			1.20	65.11		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.
	1.50	B					
	1.50	D					
	1.50	ES					
	2.00	B					
	2.00	D					
	2.00	ES					
	2.30			2.30	64.01		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.
	2.50	B					
	2.50	D					
	2.50	ES					
	2.70			2.70	63.61		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.
	3.00	B					
	3.00	D					
	3.00	ES					
	3.00			3.00	63.31		Weak, brittle, coarse orangish brown SANDSTONE.
							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

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 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.
	1.50 1.50 1.50	B D ES					
	2.00 2.00	D ES		2.00	62.12		Weak, brittle, medium to coarse orange SANDSTONE.
	2.50 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

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.
G151311

Co-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.
G151311

Co-ords: 437349.63 - 412081.39
Level: 65.08

Date
19/05/2015

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

Dimensions
(m):

Depth
2.20

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				
	0.30 0.30 0.30	B D ES		0.30	64.78		MADE GROUND - Crushed compacted coke fill ('carpet').
	0.60 0.60 0.60	B D ES		0.50	64.58		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	63.08		MADE GROUND - Crushed brick and rubble fill.
				2.20 2.20	62.88 62.88		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.
G151311

Co-ords: 437459.54 - 412065.00

Level: 66.16

Date

19/05/2015

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

Dimensions
(m):

Depth

1.80

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				
	0.30 0.30 0.30 0.50 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.
				1.60	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.
G151311

Co-ords: 437332.04 - 412071.02

Level: 64.62

Date

16/06/2015

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

Dimensions
(m):Depth
3.00

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				
	0.30 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					
							
							
							
							
							
	2.50	B		2.50	62.12		Weak, brittle, coarse, dark orangish grey SANDSTONE.
	3.00	B		3.00	61.62		
							
							
							
							
							
							
							



Trial Pit Log

Trialpit No

TP11

Sheet 1 of 1

Project Name: Monckton Production Facility

Project No.
G151311Co-ords: 437353.89 - 412007.06
Level: 66.89Date
18/05/2015

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

Dimensions
(m):Depth
1.60Scale
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	66.59		CONCRETE - Reinforced concrete slab.
	0.40 0.40 0.40	B D ES		0.60	66.29		MADE GROUND - Dark greyish black, mixed fill of coke, coal, ash, brick and concrete fragments.
	0.80 0.80 0.80	B D ES					Weak, brittle, coarse orange SANDSTONE.
	1.50 1.50 1.50	B D ES		1.60	65.29		End of pit at 1.60 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.
G151311

Co-ords: 437392.40 - 412029.48

Level: 68.61

Date

16/06/2015

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

Dimensions
(m):

Depth

2.50

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				
	0.30			0.30	68.31		MADE GROUND - Concrete.
	0.50	B					
	1.00	B					
	1.00	D					
	1.00	ES		1.20	67.41		MADE GROUND - Mixed brick and rubble fill within an orangish brown sandy gravel matrix.
	2.00	B					
	2.00	D					
	2.00	ES					
	2.50	B		2.50	66.11		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.
	2.50	D					
	2.50	ES					
							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.
	1.50 1.50 1.50	B D ES					
				2.00	66.70		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.
	2.30 2.30 2.30	B D ES		2.30	66.40		End of pit at 2.30 m

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

Stability:





Trial Pit Log

Trialpit No

TP14

Sheet 1 of 1

Project Name: Monckton Production Facility

Project No.
G151311

Co-ords: 437434.10 - 412038.82

Level: 68.72

Date

15/05/2015

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

Dimensions
(m):Depth
1.20

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				
	0.60 0.60 0.60	B D ES		0.50	68.22		CONCRETE - Heavily reinforced concrete slab.
	1.10 1.10 1.10	B D ES		1.00 1.20 1.20	67.72 67.52 67.52	 	MADE GROUND - Mixed rubble fill with abundant whole and half bricks, crushed brick fragments, lumps of concrete, coke, coal and ash. CONCRETE - Very hard buried reinforced concrete structure.
							Trial pit terminated on concrete obstruction after 1 hour attempting to break through. End of pit at 1.20 m

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.
G151311

Co-ords: 437456.00 - 412023.50

Level: 68.71

Date

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	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

TP16

Sheet 1 of 1

Project Name: Monckton Production Facility

Project No.
G151311Co-ords: 437433.52 - 411986.21
Level: 69.72Date
14/05/2015

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	B D ES		0.40	69.32		MADE GROUND - Compacted mixed rubble fill with coal, ash, tar, clinker and brick fragments. Very strong hydrocarbon odour and visible oil on bricks.
				1.20	68.52		MADE GROUND - Buried brick structure encountered: Visible brick arch structure and brick walls encountered - Identified on site as former Exhaust House cellar (local site knowledge). Infilled with bricks and rubble fill.
	1.50 1.50 1.50	B D ES		1.60	68.12		MADE GROUND - Mixed rubble fill with brick fragments and abundant whole and half bricks. Black stained with very strong hydrocarbon odour - heavy oil. Visible oil on bricks. Frequent buried metal and timber objects and buried rags within the fill.
	1.80 1.80 1.80	B D ES		1.80	67.92		Weak, brittle, medium to coarse SANDSTONE. Black oil staining and strong hydrocarbon odour - heavy oil.
							End of pit at 1.80 m

5

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

Stability:





Trial Pit Log

Trialpit No

TP17

Sheet 1 of 1

Project Name: Monckton Production Facility

Project No.
G151311

Co-ords: 437479.19 - 411980.04

Level: 69.28

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		0.50	68.78		MADE GROUND - Compacted coke, coal and ash fill. <i>Visible evidence of oil spillage on ground surface.</i> <i>Strong hydrocarbon odour - heavy oil.</i>
				0.80	68.48		CONCRETE
	1.00 1.00 1.00	B D ES		1.00	68.28		MADE GROUND - Mixed rubble fill comprising reworked, fragmented sandstone as a sandy cobbly fine to coarse sub-angular to angular gravel of sandstone. Occasional bricks and fragments of coke, coal and ash. Weak, brittle, medium to coarse light orangish brown SANDSTONE.
	2.00 2.00 2.00	B D ES					
	3.00 3.00 3.00	B D ES		3.00 3.00	66.28 66.28		Trial pit terminated in sandstone. End of pit at 8.00 m

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

Stability:





Trial Pit Log

Trialpit No

TP18

Sheet 1 of 1

Project Name: Monckton Production Facility

Project No.
G151311Co-ords: 437550.99 - 412006.03
Level: 69.81Date
20/05/2015

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				
	0.50 0.50 0.50	B D ES		0.60	69.21		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.
							CONCRETE - Old concrete slab/footing.
	1.00 1.00 1.00	B D ES		0.90	68.91		Loose, medium to coarse, orange, sandy cobbly GRAVEL of sandstone. Sand is fine to coarse, cobbles are small to medium, sub-rounded to sub-angular.
				1.20	68.61		Weak, brittle, coarse, orange SANDSTONE.
	1.50 1.50 1.50	B D ES		1.50	68.31		End of pit at 1.50 m

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

Stability:





Trial Pit Log

Trialpit No
TP19
Sheet 1 of 1

Project Name: Monckton Production Facility

Project No.
G151311

Co-ords: 437387.87 - 411952.01
Level: 69.94

Date
15/05/2015

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

Dimensions
(m):

Depth
1.75

Scale
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				
	0.50 0.50 0.50	B D ES		0.60	69.34		MADE GROUND - Compacted reddish brown sandy gravel fill. Sand is fine to coarse. Gravel is mostly fine, occasionally medium and coarse, sub-angular to angular of sandstone and mudstone. Frequent crushed brick, concrete fragments, coke, coal and ash.
	1.00 1.00 1.00	B D ES		1.20	68.74		MADE GROUND - Reworked orangish brown gravelly fine to coarse sand. Gravel is fine to medium, occasionally coarse, sub-rounded to sub-angular of sandstone. Occasional brick and concrete fragments.
	1.50 1.50 1.50	B D ES		1.75	68.19		Weak, brittle, coarse orange SANDSTONE.
							End of pit at 1.75 m

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

Stability:





Trial Pit Log

Trialpit No

TP20

Sheet 1 of 1

Project Name:	Monckton Production Facility	Project No.	G151311	Co-ords:	437406.58 - 411947.35	Date	15/05/2015
Location:	Lund Hill Lane, Royston, Barnsley, S71 4BD	Dimensions (m):	Depth	1.80		Scale	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					
	0.50 0.50 0.50	B D ES		0.70	69.85		MADE GROUND - Compacted reddish brown mixed rubble fill with brick fragments, whole and half bricks, coke, coal, ash, sand and gravel.	
	1.00 1.00 1.00	B D ES		1.25	89.30		MADE GROUND - Reworked orange sandstone, sandy medium to coarse, sub-angular to angular gravel and small to medium sub-angular to angular cobbles. Bluish green colouring visible to sand and fine gravel.	1
	1.50 1.50 1.50	B D ES		1.80	68.75		Weak, brittle orange SANDSTONE.	
							End of pit at 1.80 m	2
								3
								4
								5

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

Stability:





Trial Pit Log

Trialpit No

TP21

Sheet 1 of 1

Project Name: Monckton Production Facility

Project No.
G151311Co-ords: 437442.60 - 411957.08
Level: 71.35

Date

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

Dimensions
(m):Depth
2.10Scale
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 0.40 0.40 0.40	B D ES B D ES		0.35	71.00		MADE GROUND - Compacted fill comprising fine to medium sub-rounded to sub-angular sandy gravel of sandstone. Sand is fine to coarse. Occasional coke, coal, ash, brick and concrete fragments.	
	1.00 1.00 1.00	B D ES					MADE GROUND - Reddish brown, rubble fill of broken and crushed bricks with occasional concrete fragments and some coke, coal and ash.	1
	1.50 1.50 1.50	B D ES		1.50	69.85		Medium dense, orange gravelly cobbly fine to coarse sand. Gravel is fine to coarse, sub-rounded to sub-angular of sandstone. Cobbles are mostly small occasionally medium sub-rounded to sub-angular of sandstone.	
				1.85	69.50		Weak, brittle coarse orange SANDSTONE.	2
				2.10	69.25		End of pit at 2.10 m	3
								4
								5

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

Stability:





Trial Pit Log

Trialpit No

TP22

Sheet 1 of 1

Project Name: Monckton Production Facility

Project No.
G151311

Co-ords: 437478.00 - 411967.00

Level: 69.31

Date

18/05/2015

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

Dimensions
(m):Depth
1.10Scale
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	69.11		CONCRETE - Reinforced slab.
	0.30 0.30 0.30	B D ES					MADE GROUND - Mixed rubble fill of brick fragments, coke, coal, ash and mixed gravel of sandstone and mudstone. <i>Black oil staining visible and strong hydrocarbon (heavy oil) odour.</i>
	0.60 0.60 0.60	B D ES		0.80	68.51		Weak, brittle, coarse SANDSTONE. Dark coloured/ stained with a moderate to strong hydrocarbon odour.
	1.10 1.10 1.10	B D ES		1.10 1.10	68.21 68.21		Trial pit terminated at 1.1m bgl in sandstone. 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

TP23

Sheet 1 of 1

Project Name: Monckton Production Facility

Project No.
G151311Co-ords: 437496.54 - 411952.73
Level: 71.60Date
19/05/2015

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				
				0.20	71.40		MADE GROUND - Orangish brown, compacted fine to coarse, sub-angular, sandstone gravel fill.
	0.30	B					MADE GROUND - Reddish brown, mixed compacted rubble fill of crushed brick, coal, coke and ash, within a gravelly fine to coarse sand matrix. Gravel is fine to coarse, sub-angular to angular of sandstone. Frequent small to large sub-angular cobbles of sandstone.
	0.30	D					
	0.30	ES					
	0.50	B					
	0.50	D					
	0.50	ES					
	1.00	B					Weak, brittle, coarse orangish brown SANDSTONE.
	1.00	D					
	1.00	ES					
	1.50	B					
	1.50	D					
	1.50	ES					
				2.20	69.40		
				2.50	69.10		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

TP25

Sheet 1 of 1

Project Name: Monckton Production Facility

Project No.
G151311Co-ords: 437426.80 - 411940.94
Level: 71.80Date
19/05/2015

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					
				0.25	71.55		MADE GROUND - Yellowish orange, compacted fine to coarse, sub-angular, sandstone gravel fill.	
	0.30	B					MADE GROUND - Brick rubble fill with abundant whole bricks, occasional pieces of pottery, glass, ceramic, metal and timber, with frequent coke, coal and ash.	
	0.30	D						
	0.30	ES						
	0.50	B						
	0.50	D						
	0.50	ES						
	1.00	B					Medium dense orange gravelly cobbly SAND. Gravel is fine to coarse, sub-rounded to sub-angular of sandstone. Cobbles are small to medium, sub-angular of sandstone.	1
	1.00	D						
	1.00	ES						
	1.50	B						
	1.50	D						
	1.50	ES						
				1.80	70.00		Weak, brittle, coarse, orange SANDSTONE.	2
	2.00	B						
	2.00	D						
	2.00	ES					Trial pit terminated at 2.5m bgl in sandstone. End of pit at 2.50 m	
	2.50	B		2.50	69.30			
	2.50	D		2.50	69.30			
	2.50	ES						3
								4
								5

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

Stability:







Trial Pit Log

Trialpit No

TP31

Sheet 1 of 1

Project Name: Monckton Production Facility

Project No.
G151311Co-ords: 437425.31 - 412322.93
Level: 63.89Date
12/05/2015

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

Dimensions
(m):Depth
2.00Scale
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 0.50	B D ES B D ES		0.60	63.29		MADE GROUND - Dark grey/black mixed rubble fill of coke, coal, ash, clinker brick and concrete fragments.
	1.00 1.00 1.00	B D ES					Weak, brittle coarse orange SANDSTONE.
	1.50 1.50 1.50	B D ES					
	2.00 2.00	B D		2.00	61.89		End of pit at 2.00 m

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

Stability:





Trial Pit Log

Trialpit No
TP32
Sheet 1 of 1

Project Name:	Monckton Production Facility	Project No.	G151311	Co-ords:	437475.14 - 412311.83	Date	12/05/2015
Location:	Lund Hill Lane, Royston, Barnsley, S71 4BD	Dimensions (m):	Depth	2.20	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				
	0.00 - 0.30	B					MADE GROUND - Crushed coke, coal, ash fill with occasional fine sandstone gravels and fine to coarse sand.
	0.30	D					
	0.30	ES		0.40	64.41		MADE GROUND - Reworked crushed mudstone fill with occasional brick, coke, coal and ash.
	0.50	D					
	0.50	ES					
	0.50 - 0.80	B		0.80	64.01		MADE GROUND - Reworked sandy gravel fill with coal, coke and ash fragments. Gravel is fine to coarse, sub-rounded to sub-angular of mudstone. Sand is fine to coarse.
	1.00	D					
	1.00	ES		1.25	63.56		
	1.00 - 1.40	B		1.40	63.41		Trial pit terminated in mudstone. Weak, brittle, orangish grey MUDSTONE.
	1.50 - 1.80	B					
	2.00 - 2.20	B		2.20	62.61		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

TP33

Sheet 1 of 1

Project Name: Monckton Production Facility

Project No.
G151311

Co-ords: 437470.73 - 411928.50

Level: 70.98

Date
20/05/2015

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

Dimensions
(m):Depth
0.40Scale
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				
	0.10	B					
	0.10	D		0.20	70.78		MADE GROUND - Medium to coarse sub-angular gravel fill (hard core).
	0.10	ES					Weak, brittle, coarse orange SANDSTONE.
	0.40	B		0.40	70.58		
	0.40	D		0.40	70.58		Trial pit terminated at 0.4m bgl in SANDSTONE.
	0.40	ES					End of pit at 0.40 m

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

Stability:





Trial Pit Log

Trialpit No
TP101
Sheet 1 of 1

Project Name: Monckton Production Facility

Project No.
G151311

Co-ords: 437323.61 - 412101.74
Level: 63.97

Date
29/04/2015

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

Dimensions
(m):

Depth
1.50

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

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		0.30	60.25		MADE GROUND - Coke, coal, ash fill ('Carpet').
	1.00 1.00 1.00	B D ES		1.35 1.35	59.20 59.20		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.
							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	D		0.20	62.49		MADE GROUND - Dark grey/black coarse coke fill ('Carpet').
	0.30	ES					
	0.30	B					MADE GROUND - Reddish orange crushed brick fill with occasional weathered half bricks.
	0.40 - 1.00						
	0.50	ES					
	0.50						
	1.00	D		1.00	61.69		MADE GROUND - Mixed brick rubble, coke, coal and ash fill with some fine to coarse, sub-angular crushed mudstone gravels.
	1.00	ES					
	1.50	D					
	1.50	ES					
	3.00 - 3.50	B		3.00	59.69		Dark orangish grey MUDSTONE with frequent iron ore colouring.
	3.20	D		3.20	59.49		Trial pit terminated on mudstone.
	3.20	ES		3.20	59.49		End of pit at 3.20 m

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

Stability:

