

LEGEND

Site Features

- Site Boundary
- Exploratory Holes
- Rotary Hole ⊗
- Trial Pit ⊕
- Cone Penetrometer Test ⊕



Bing. LIDAR Data (C) Environment Agency



TITLE:
**Brockhampton West Landfill
 Exploratory Hole Locations**

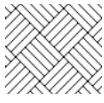
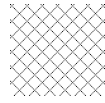
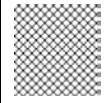







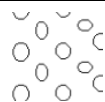
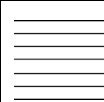


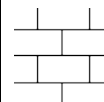
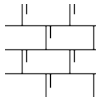



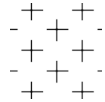

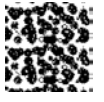


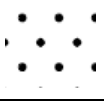

DRAWN BY: MS	SCALE (@A4): 1:2000
CHECKED BY: LB	REVISION: 1
DATE: 02 June 2021	

PROJECT NO: 19-2099.04
FIGURE NO: 2

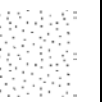


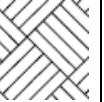

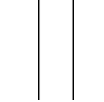
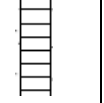
Appendix B – Exploratory Hole Logs (Delta-Simons and WYG)

KEY TO BOREHOLE AND TRIAL PIT LOGS

MATERIAL LEGENDS

	Topsoil		Made Ground		Bituminous Material
	Concrete		Clay		Silt
	Sand		Gravel		Peat
	Cobbles		Boulders		Mudstone
	Siltstone		Sandstone		Limestone
	Chalk		Coal		Breccia
	Conglomerate		Igneous		Metamorphic
	Pyroclastic (volcanic ash)		Gypsum		Shale
	Ironstone		Bedrock (Unidentified)		Void

INSTALLATION/BACKFILL LEGENDS

	Sand		Gravel		Bentonite/Grout
	Arisings		Concrete		Plain Pipe
	Slotted Pipe				

Legend symbols in general accordance with BS 5930:1999+A2:2010 and standard industry practice.

KEY TO BOREHOLE AND TRIAL PIT LOGS

SAMPLE TYPES

ACM	Asbestos Containing Material Sample
B	Bulk Disturbed Sample
BLK	Block Sample
C	Core Sample
CBR	Undisturbed Sample for California Bearing Ratio Test – 154mm diameter
D	Disturbed Sample - Tub
ES	Soil Sample for Environmental Testing
EW	Water Sample for Environmental Testing
G	Gas Sample
U	Undisturbed Driven Tube Sample – 70/102mm diameter, 450mm long
W	Water Sample



TEST TYPES

CPT	Cone Penetrometer Test (kN/m ²)
FID	Flame Ionisation Detector Test (ppm)
HV	In-Situ Hand Shear Vane Test (kN/m ²)
PID	Photoionisation Detector Test (ppm)
SPT (S)	Standard Penetration Test – Split Spoon Sampler
SPT (C)	Standard Penetration Test – Solid 60 Degree Cone

CORE DETAILS

If	Fracture Spacing (mm) – Minimum, Average, Maximum
NI	Non-Intact where >25 fracture spacings per metre
TCR	Total Core Recovery (%)
SCR	Solid Core Recovery (%)
RQD	Rock Quality Designation (%)
AF	Air Flush Return (%)
WF	Water Flush Return (%)

WATER COLUMN DETAILS

	Water Strike
	Water Level



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Project No: **19-2099.04** Hole ID: **DS101** Page: **1 of 2**

Project: **Brockhampton West, Havant**

Rotary Auger Borehole Log

Date: **17/03/2021**

Client: **Exton Estates**

Description of Strata	Legend	Strata Depth (m)	Reduced Level (mAOD)	Casing Diameter (mm)	Water Strike	Sample Details			Test Details		Backfill
						Depth (m)	Type	Ref	Depth (m)	Results	
MADE GROUND: Soft brown slightly sandy CLAY with frequent rootlets. Sand is fine. (TOPSOIL)		0.30	9.12								
MADE GROUND: Brown CLAY. (RE-ENGINEERED COVER SYSTEM)											
MADE GROUND: Landfill. (LANDFILL)		1.90	7.52								

Remarks:
 1. Logged by drilling crew in general accordance with BS5930:2015+A1:2020.
 2. Borehole cleared for services prior to excavating a hand dug service inspection pit to 1.2 m bgl.
 3. Elevation and location data obtained from third-party GPS survey.
 4. Borehole completed utilising rotary open-hole technique.
 5. Borehole installed with a raised steel cover.

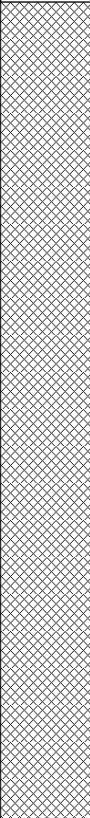
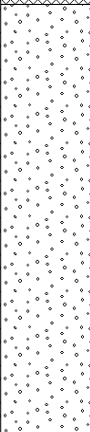

Water Level Observations					Chiselling		
Date	Time	Strike	Duration	Standing	Depth (m)	Time (h:m)	

Coordinates: E470307.47 N105691.80	Elevation (mAOD): 9.42	Drilled By: Delta Drilling	Plant Used: Comacchio GEO300	Logged: LB	Checked: BB	Approved: RM	Scale (m): 1:30
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Rotary Auger Borehole Log

Date: **17/03/2021**

Client: **Exton Estates**

Description of Strata	Legend	Strata Depth (m)	Reduced Level (mAOD)	Casing Diameter (mm)	Water Strike	Sample Details			Test Details		Backfill
						Depth (m)	Type	Ref	Depth (m)	Results	
MADE GROUND: Landfill. (LANDFILL)		9.00	0.42								
Brown GRAVEL. (RIVER TERRACE DEPOSITS)		10.70	-1.28	146							
Borehole complete at 10.70m bgl.											

Remarks:
 1. Logged by drilling crew in general accordance with BS5930:2015+A1:2020.
 2. Borehole cleared for services prior to excavating a hand dug service inspection pit to 1.2 m bgl.
 3. Elevation and location data obtained from third-party GPS survey.
 4. Borehole completed utilising rotary open-hole technique.
 5. Borehole installed with a raised steel cover.

Water Level Observations					Chiselling	
Date	Time	Strike	Duration	Standing	Depth (m)	Time (h:m)

Coordinates: E470307.47 N105691.80	Elevation (mAOD): 9.42	Drilled By: Delta Drilling	Plant Used: Comacchio GEO300	Logged: LB	Checked: BB	Approved: RM	Scale (m): 1:30
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Project No: **19-2099.04** Hole ID: **DS102** Page: **1 of 3**

Project: **Brockhampton West, Havant**

Rotary Auger Borehole Log Date: **17/03/2021** Client: **Exton Estates**

Description of Strata	Legend	Strata Depth (m)	Reduced Level (mAOD)	Casing Diameter (mm)	Water Strike	Sample Details			Test Details		Backfill
						Depth (m)	Type	Ref	Depth (m)	Results	
MADE GROUND: Soft brown slightly sandy CLAY with frequent rootlets. Sand is fine. (TOPSOIL)		0.25	10.60								
MADE GROUND: Brown CLAY. (RE-ENGINEERED COVER SYSTEM)											
MADE GROUND: Landfill. (LANDFILL)		2.00	8.85								

Remarks:
 1. Logged by drilling crew in general accordance with BS5930:2015+A1:2020.
 2. Borehole cleared for services prior to excavating a hand dug service inspection pit to 1.2 m bgl.
 3. Elevation and location data obtained from third-party GPS survey.
 4. Borehole completed utilising rotary open-hole technique.
 5. Borehole installed with a raised steel cover.

Water Level Observations					Chiselling	
Date	Time	Strike	Duration	Standing	Depth (m)	Time (h:m)

Coordinates: E470267.03 N105738.58	Elevation (mAOD): 10.85	Drilled By: Delta Drilling	Plant Used: Comacchio GEO300	Logged: LB	Checked: BB	Approved: RM	Scale (m): 1:30
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Project No: **19-2099.04** Hole ID: **DS102** Page: **2 of 3**

Project: **Brockhampton West, Havant**

Rotary Auger Borehole Log Date: **17/03/2021** Client: **Exton Estates**

Description of Strata	Legend	Strata Depth (m)	Reduced Level (mAOD)	Casing Diameter (mm)	Water Strike	Sample Details			Test Details		Backfill
						Depth (m)	Type	Ref	Depth (m)	Results	
MADE GROUND: Landfill. (LANDFILL)											
		10.00	0.85								
Brown slightly clayey GRAVEL. (RIVER TERRACE DEPOSITS)											

Remarks:
 1. Logged by drilling crew in general accordance with BS5930:2015+A1:2020.
 2. Borehole cleared for services prior to excavating a hand dug service inspection pit to 1.2 m bgl.
 3. Elevation and location data obtained from third-party GPS survey.
 4. Borehole completed utilising rotary open-hole technique.
 5. Borehole installed with a raised steel cover.

Water Level Observations					Chiselling	
Date	Time	Strike	Duration	Standing	Depth (m)	Time (h:m)

Coordinates: E470267.03 N105738.58	Elevation (mAOD): 10.85	Drilled By: Delta Drilling	Plant Used: Comacchio GEO300	Logged: LB	Checked: BB	Approved: RM	Scale (m): 1:30
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Project: **Brockhampton West, Havant**

Rotary Auger Borehole Log Date: **17/03/2021** Client: **Exton Estates**

Description of Strata	Legend	Strata Depth (m)	Reduced Level (mAOD)	Casing Diameter (mm)	Water Strike	Sample Details			Test Details		Backfill
						Depth (m)	Type	Ref	Depth (m)	Results	
Brown slightly clayey GRAVEL. (RIVER TERRACE DEPOSITS)		12.50	-1.65	146							
Borehole complete at 12.50m bgl.											

Remarks:
 1. Logged by drilling crew in general accordance with BS5930:2015+A1:2020.
 2. Borehole cleared for services prior to excavating a hand dug service inspection pit to 1.2 m bgl.
 3. Elevation and location data obtained from third-party GPS survey.
 4. Borehole completed utilising rotary open-hole technique.
 5. Borehole installed with a raised steel cover.

Water Level Observations					Chiselling	
Date	Time	Strike	Duration	Standing	Depth (m)	Time (h:m)

Coordinates: E470267.03 N105738.58	Elevation (mAOD): 10.85	Drilled By: Delta Drilling	Plant Used: Comacchio GEO300	Logged: LB	Checked: BB	Approved: RM	Scale (m): 1:30
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Project No: **19-2099.04** Hole ID: **DS103** Page: **1 of 3**

Project: **Brockhampton West, Havant**

Rotary Auger Borehole Log Date: **17/03/2021** Client: **Exton Estates**

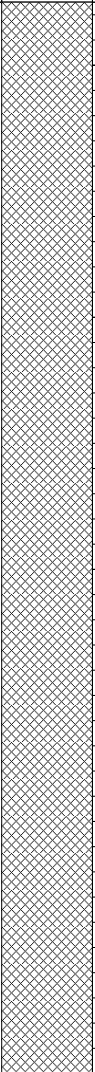

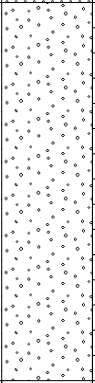
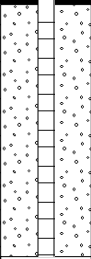
Description of Strata	Legend	Strata Depth (m)	Reduced Level (mAOD)	Casing Diameter (mm)	Water Strike	Sample Details			Test Details		Backfill
						Depth (m)	Type	Ref	Depth (m)	Results	
MADE GROUND: Soft brown slightly sandy CLAY with frequent rootlets. Sand is fine. (TOPSOIL)		0.30	9.62								
MADE GROUND: Brown CLAY. (RE-ENGINEERED COVER SYSTEM)											
MADE GROUND: Landfill. (LANDFILL)		2.10	7.82								

Remarks:
 1. Logged by drilling crew in general accordance with BS5930:2015+A1:2020.
 2. Borehole cleared for services prior to excavating a hand dug service inspection pit to 1.2 m bgl.
 3. Elevation and location data obtained from third-party GPS survey.
 4. SPT Hammer ID 2865 (Energy Ratio Er = 51%).
 5. Borehole completed utilising rotary open-hole technique.
 6. Borehole installed with a raised steel cover.

Water Level Observations					Chiselling	
Date	Time	Strike	Duration	Standing	Depth (m)	Time (h:m)

Coordinates: **E470241.68 N105785.05** Elevation (mAOD): **9.92** Drilled By: **Delta Drilling** Plant Used: **Comacchio GEO300** Logged: **LB** Checked: **BB** Approved: **RM** Scale (m): **1:30**

Rotary Auger Borehole Log Date: **17/03/2021** Client: **Exton Estates**

Description of Strata	Legend	Strata Depth (m)	Reduced Level (mAOD)	Casing Diameter (mm)	Water Strike	Sample Details			Test Details		Backfill
						Depth (m)	Type	Ref	Depth (m)	Results	
MADE GROUND: Landfill. (LANDFILL)		10.00	-0.08						9.80	SPT(S) 50 (5,6/50 for 50mm)	
Dense becoming medium dense brown GRAVEL. (RIVER TERRACE DEPOSITS)											

Remarks:
 1. Logged by drilling crew in general accordance with BS5930:2015+A1:2020.
 2. Borehole cleared for services prior to excavating a hand dug service inspection pit to 1.2 m bgl.
 3. Elevation and location data obtained from third-party GPS survey.
 4. SPT Hammer ID 2865 (Energy Ratio Er = 51%).
 5. Borehole completed utilising rotary open-hole technique.
 6. Borehole installed with a raised steel cover.

Water Level Observations					Chiselling	
Date	Time	Strike	Duration	Standing	Depth (m)	Time (h:m)



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Project No: **19-2099.04**

Hole ID: **DS103**

Page: **3 of 3**

Project: **Brockhampton West, Havant**

Rotary Auger Borehole Log

Date: **17/03/2021**

Client: **Exton Estates**

Description of Strata	Legend	Strata Depth (m)	Reduced Level (mAOD)	Casing Diameter (mm)	Water Strike	Sample Details			Test Details		Backfill
						Depth (m)	Type	Ref	Depth (m)	Results	
Dense becoming medium dense brown GRAVEL. (RIVER TERRACE DEPOSITS)									12.00	SPT(S) N=41 (9,6/11,11,9,10)	
Borehole complete at 13.50m bgl.		13.50	-3.58	146					13.50	SPT(S) N=19 (3,5/5,5,4,5)	

Remarks:
 1. Logged by drilling crew in general accordance with BS5930:2015+A1:2020.
 2. Borehole cleared for services prior to excavating a hand dug service inspection pit to 1.2 m bgl.
 3. Elevation and location data obtained from third-party GPS survey.
 4. SPT Hammer ID 2865 (Energy Ratio Er = 51%).
 5. Borehole completed utilising rotary open-hole technique.
 6. Borehole installed with a raised steel cover.

Water Level Observations					Chiselling		
Date	Time	Strike	Duration	Standing	Depth (m)	Time (h:m)	

Coordinates: E470241.68 N105785.05	Elevation (mAOD): 9.92	Drilled By: Delta Drilling	Plant Used: Comacchio GEO300	Logged: LB	Checked: BB	Approved: RM	Scale (m): 1:30
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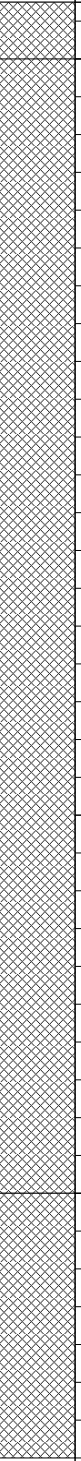
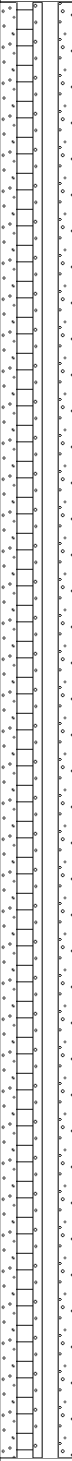
Project No: **19-2099.04** Hole ID: **RO101** Page: **1 of 7**

Project: **Brockhampton West, Havant**

Rotary Core Borehole Log Date: **01/03/2021 - 03/03/2021** Client: **Exton Estates**

Description of Strata	Legend	Strata Depth (m)	Strata Thickness (m)	Reduced Level (mAOD)	Casing Diameter (mm)	Water	Core Recovery			Sample Details		Test Details		Backfill
							Run (m)	TCR% SCR% RQD%	Min. Fl Av. Fl Max. Fl	Depth (m)	Type Ref	Depth (m)	Results	
MADE GROUND: Soft dark brown slightly sandy slightly gravelly CLAY with occasional rootlets. Sand is fine. Gravel is subangular to subrounded fine to medium of natural lithologies. (TOPSOIL)		0.80	(0.80)	10.23										
MADE GROUND: Firm orangish brown slightly gravelly sandy CLAY with rare glass fragments. Sand is fine to medium. Gravel is subangular to rounded fine to medium of flint and rare chalk. (RE-ENGINEERED COVER SYSTEM)		1.00	(0.20)	10.03										
MADE GROUND: Soft dark brown mottled orangish brown and black slightly sandy slightly gravelly CLAY with occasional red staining. Sand is fine. Gravel is angular to subrounded fine to coarse of flint, brick, chalk and rare clinker. (RE-ENGINEERED COVER SYSTEM)		1.25	(0.25)	9.78					1.10 - 1.20	ES	1.20	SPT(S) N=8 (5,2/2,2,2,2)		
MADE GROUND: Firm white slightly gravelly SILT with occasional organic material. Gravel is subangular to subrounded fine to medium of chalk, flint, brick and occasional clinker. (RE-ENGINEERED COVER SYSTEM)		1.70	(0.45)	9.33										
MADE GROUND: Landfill recovered as occasional plastic and glass with approximately 80% matrix of soft black gravelly CLAY. Gravel is subangular to subrounded fine to medium of flint and clinker. (LANDFILL)		2.00	(0.30)	9.03										
MADE GROUND: Soft brown slightly sandy CLAY with occasional green staining. Sand is fine. (SUSPECTED ORIGINAL RE-ENGINEERED COVER SYSTEM)		2.14		8.89										
MADE GROUND: Landfill recovered as frequent wood, occasional metal, plastic and ash (approximately 10%) with approximately 85% matrix of dark brown slightly sandy slightly gravelly CLAY. Sand is fine to medium. Gravel is angular to subrounded fine to coarse of brick and clinker. (LANDFILL)		3.00	(0.86)	8.03					2.30 - 2.60	ES				
MADE GROUND: Landfill recovered as frequent wood and occasional plastic with approximately 80% matrix of black slightly clayey fine SAND. Moderate hydrocarbon odour throughout. (LANDFILL)			(1.00)						3.00 - 4.00	ES				

Remarks: 1. Logged in general accordance with BS5930:2015+A1:2020 and CIRIA C574 (Engineering in Chalk). 2. Borehole cleared for services prior to excavating a hand dug service inspection pit to 1.2 m bgl. 3. Elevation and location data obtained from third-party GPS survey. 4. SPT Hammer ID 2865 (Energy Ratio Er = 51%). 5. Borehole commenced as a dynamic sampler borehole to 3.0 m bgl with rotary open-hole to 14.5 m bgl and rotary core follow-on to completion. 6. Borehole installed with a raised steel cover. 7. Clean drilling techniques utilised with a reduction and bentonite seal installed from 14 m to 15 m bgl.	Water Level Observations				Flush		
	Date	Time	Strike	Duration	Standing	Depth (m)	Return
	03/03/2021		11.50 m	min			
Coordinates: E469964.58 N105679.27	Elevation (mAOD): 11.03	Drilled By: Delta Drilling	Plant Used: Comacchio GEO300	Logged: LB	Checked: BB	Approved: RM	Scale (m): 1:20

Description of Strata	Legend	Strata Depth (m)	Strata Thickness (m)	Reduced Level (mAOD)	Casing Diameter (mm)	Water	Core Recovery			Sample Details		Test Details		Backfill
							Run (m)	TCR% SCR% RQD%	Min. Fl Av. Fl Max. Fl	Depth (m)	Type Ref	Depth (m)	Results	
MADE GROUND: Landfill recovered as frequent wood and occasional plastic with approximately 80% matrix of black slightly clayey fine SAND. Moderate hydrocarbon odour throughout. (LANDFILL)		4.00		7.03										
MADE GROUND: Landfill recovered as frequent wood fragments, occasional plastic and brick with approximately 75% matrix of very soft dark grey slightly sandy slightly gravelly CLAY. Sand is fine to coarse. Gravel is subangular to subrounded of natural lithologies. Moderate hydrocarbon odour. (LANDFILL)				(3.00)						5.00 - 6.00	ES			
MADE GROUND: Landfill recovered as frequent plastic, wood and fabric with approximately 70% matrix of very soft dark grey slightly sandy CLAY. Sand is fine. Occasional organic material. (LANDFILL)		7.00		4.03										

Remarks: 1. Logged in general accordance with BS5930:2015+A1:2020 and CIRIA C574 (Engineering in Chalk). 2. Borehole cleared for services prior to excavating a hand dug service inspection pit to 1.2 m bgl. 3. Elevation and location data obtained from third-party GPS survey. 4. SPT Hammer ID 2865 (Energy Ratio Er = 51%). 5. Borehole commenced as a dynamic sampler borehole to 3.0 m bgl with rotary open-hole to 14.5 m bgl and rotary core follow-on to completion. 6. Borehole installed with a raised steel cover. 7. Clean drilling techniques utilised with a reduction and bentonite seal installed from 14 m to 15 m bgl.	Water Level Observations					Flush	
	Date	Time	Strike	Duration	Standing	Depth (m)	Return
03/03/2021		11.50 m	min				
Coordinates: E469964.58 N105679.27	Elevation (mAOD): 11.03	Drilled By: Delta Drilling	Plant Used: Comacchio GEO300	Logged: LB	Checked: BB	Approved: RM	Scale (m): 1:20



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Project No: **19-2099.04** Hole ID: **RO101** Page: **3 of 7**

Project: **Brockhampton West, Havant**

Rotary Core Borehole Log Date: **01/03/2021 - 03/03/2021** Client: **Exton Estates**

Description of Strata	Legend	Strata Depth (m)	Strata Thickness (m)	Reduced Level (mAOD)	Casing Diameter (mm)	Water	Core Recovery			Sample Details		Test Details		Backfill
							Run (m)	TCR% SCR% RQD%	Min. Fl Av. Fl Max. Fl	Depth (m)	Type Ref	Depth (m)	Results	
MADE GROUND: Landfill recovered as frequent plastic, wood and fabric with approximately 70% matrix of very soft dark grey slightly sandy CLAY. Sand is fine. Occasional organic material. (LANDFILL)			(3.70)											
Soft brown slightly gravelly SILT. Gravel is subangular to rounded fine to medium of chalk. (ALLUVIUM)		10.70	(0.40)	0.33					10.70 - 11.00	D				
Structureless CHALK composed of sandy angular to subangular fine to medium GRAVEL of chalk and flint. Sand is fine to coarse. Clasts are very weak, low density, cream chalk. (LEWES NODULAR CHALK FORMATION, Grade Dc)		11.10		-0.07		11.50			11.10 - 13.90	B				

Remarks:
 1. Logged in general accordance with BS5930:2015+A1:2020 and CIRIA C574 (Engineering in Chalk). 2. Borehole cleared for services prior to excavating a hand dug service inspection pit to 1.2 m bgl. 3. Elevation and location data obtained from third-party GPS survey. 4. SPT Hammer ID 2865 (Energy Ratio Er = 51%). 5. Borehole commenced as a dynamic sampler borehole to 3.0 m bgl with rotary open-hole to 14.5 m bgl and rotary core follow-on to completion. 6. Borehole installed with a raised steel cover. 7. Clean drilling techniques utilised with a reduction and bentonite seal installed from 14 m to 15 m bgl.

Water Level Observations					Flush		
Date	Time	Strike	Duration	Standing	Depth (m)	Return	
03/03/2021		11.50 m	min				

Coordinates: E469964.58 N105679.27	Elevation (mAOD): 11.03	Drilled By: Delta Drilling	Plant Used: Comacchio GEO300	Logged: LB	Checked: BB	Approved: RM	Scale (m): 1:20
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Project No: **19-2099.04** Hole ID: **RO101** Page: **4 of 7**

Project: **Brockhampton West, Havant**

Rotary Core Borehole Log

Date: **01/03/2021 - 03/03/2021** Client: **Exton Estates**

Description of Strata	Legend	Strata Depth (m)	Strata Thickness (m)	Reduced Level (mAOD)	Casing Diameter (mm)	Water	Core Recovery			Sample Details		Test Details		Backfill
							Run (m)	TCR% SCR% RQD%	Min. Fl Av. Fl Max. Fl	Depth (m)	Type Ref	Depth (m)	Results	
Structureless CHALK composed of sandy angular to subangular fine to medium GRAVEL of chalk and flint. Sand is fine to coarse. Clasts are very weak, low density, cream chalk. (LEWES NODULAR CHALK FORMATION, Grade Dc)			(2.80)											
Structureless CHALK composed of cream gravelly SILT. Gravel is very weak, low density, cream chalk. (LEWES NODULAR CHALK FORMATION, Grade Dm)		13.90		-2.87	194		1.0	50 0 0	14.50 - 14.95	D	14.50	SPT(S) N=13 (4,2/3,3,3,4)		

Remarks:
 1. Logged in general accordance with BS5930:2015+A1:2020 and CIRIA C574 (Engineering in Chalk). 2. Borehole cleared for services prior to excavating a hand dug service inspection pit to 1.2 m bgl. 3. Elevation and location data obtained from third-party GPS survey. 4. SPT Hammer ID 2865 (Energy Ratio Er = 51%). 5. Borehole commenced as a dynamic sampler borehole to 3.0 m bgl with rotary open-hole to 14.5 m bgl and rotary core follow-on to completion. 6. Borehole installed with a raised steel cover. 7. Clean drilling techniques utilised with a reduction and bentonite seal installed from 14 m to 15 m bgl.

Water Level Observations				Flush		
Date	Time	Strike	Duration	Standing	Depth (m)	Return
03/03/2021		11.50 m	min			

Coordinates: E469964.58 N105679.27	Elevation (mAOD): 11.03	Drilled By: Delta Drilling	Plant Used: Comacchio GEO300	Logged: LB	Checked: BB	Approved: RM	Scale (m): 1:20
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Project No: **19-2099.04** Hole ID: **RO101** Page: **5 of 7**

Project: **Brockhampton West, Havant**

Rotary Core Borehole Log Date: **01/03/2021 - 03/03/2021** Client: **Exton Estates**

Description of Strata	Legend	Strata Depth (m)	Strata Thickness (m)	Reduced Level (mAOD)	Casing Diameter (mm)	Water	Core Recovery			Sample Details		Test Details		Backfill
							Run (m)	TCR% SCR% RQD%	Min. Fl Av. Fl Max. Fl	Depth (m)	Type Ref	Depth (m)	Results	
Structureless CHALK composed of cream gravelly SILT. Gravel is very weak, low density, cream chalk. (LEWES NODULAR CHALK FORMATION, Grade Dm)		17.50	(3.60)	-6.47			1.5	33 0 0			15.50	SPT(S) N=11 (3,3/2,3,3,3)		
											17.00	SPT(S) N=11 (2,3/2,3,3,3)		
							1.5	93 0 0			18.50	SPT(S) N=15 (2,3/4,4,3,4)		
Structureless CHALK composed of white gravelly SILT. Gravel is upper end of weak, medium density, white chalk. (LEWES NODULAR CHALK FORMATION, Grade Dm)							1.5	87 0 0						

Remarks:
 1. Logged in general accordance with BS5930:2015+A1:2020 and CIRIA C574 (Engineering in Chalk). 2. Borehole cleared for services prior to excavating a hand dug service inspection pit to 1.2 m bgl. 3. Elevation and location data obtained from third-party GPS survey. 4. SPT Hammer ID 2865 (Energy Ratio Er = 51%). 5. Borehole commenced as a dynamic sampler borehole to 3.0 m bgl with rotary open-hole to 14.5 m bgl and rotary core follow-on to completion. 6. Borehole installed with a raised steel cover. 7. Clean drilling techniques utilised with a reduction and bentonite seal installed from 14 m to 15 m bgl.

Water Level Observations					Flush	
Date	Time	Strike	Duration	Standing	Depth (m)	Return
03/03/2021		11.50 m	min			

Coordinates: E469964.58 N105679.27	Elevation (mAOD): 11.03	Drilled By: Delta Drilling	Plant Used: Comacchio GEO300	Logged: LB	Checked: BB	Approved: RM	Scale (m): 1:20
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Project No: **19-2099.04** Hole ID: **RO101** Page: **6 of 7**

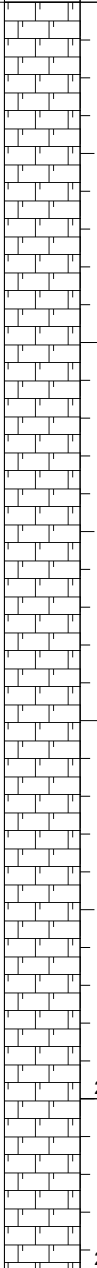
Project: **Brockhampton West, Havant**

Rotary Core Borehole Log Date: **01/03/2021 - 03/03/2021** Client: **Exton Estates**

Description of Strata	Legend	Strata Depth (m)	Strata Thickness (m)	Reduced Level (mAOD)	Casing Diameter (mm)	Water	Core Recovery			Sample Details		Test Details		Backfill
							Run (m)	TCR% SCR% RQD%	Min. Fl Av. Fl Max. Fl	Depth (m)	Type Ref	Depth (m)	Results	
Structureless CHALK composed of white gravelly SILT. Gravel is upper end of weak, medium density, white chalk. (LEWES NODULAR CHALK FORMATION, Grade Dm)														
							1.5	100 0 0		20.20 - 20.50	D	20.00	SPT(S) N=12 (3,2/3,3,3,3)	
Structureless CHALK composed of silty subangular to subrounded fine to coarse GRAVEL. Clasts are upper end to weak, medium density, white with occasional black specks. Matrix is white. (LEWES NODULAR CHALK FORMATION, Grade Dc)			(8.50)				1.5	66 0 0		22.70 - 22.80	D	21.50	SPT(S) N=21 (3,4/5,5,5,6)	
												23.00	SPT(S) N=21 (5,4/5,5,6,5)	

Remarks: 1. Logged in general accordance with BS5930:2015+A1:2020 and CIRIA C574 (Engineering in Chalk). 2. Borehole cleared for services prior to excavating a hand dug service inspection pit to 1.2 m bgl. 3. Elevation and location data obtained from third-party GPS survey. 4. SPT Hammer ID 2865 (Energy Ratio Er = 51%). 5. Borehole commenced as a dynamic sampler borehole to 3.0 m bgl with rotary open-hole to 14.5 m bgl and rotary core follow-on to completion. 6. Borehole installed with a raised steel cover. 7. Clean drilling techniques utilised with a reduction and bentonite seal installed from 14 m to 15 m bgl.	Water Level Observations					Flush	
	Date	Time	Strike	Duration	Standing	Depth (m)	Return
	03/03/2021		11.50 m	min			

Coordinates: E469964.58 N105679.27	Elevation (mAOD): 11.03	Drilled By: Delta Drilling	Plant Used: Comacchio GEO300	Logged: LB	Checked: BB	Approved: RM	Scale (m): 1:20
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Description of Strata	Legend	Strata Depth (m)	Strata Thickness (m)	Reduced Level (mAOD)	Casing Diameter (mm)	Water	Core Recovery			Sample Details		Test Details		Backfill
							Run (m)	TCR% SCR% RQD%	Min. Fl Av. Fl Max. Fl	Depth (m)	Type Ref	Depth (m)	Results	
Structureless CHALK composed of silty subangular to subrounded fine to coarse GRAVEL. Clasts are upper end to weak, medium density, white with occasional black specks. Matrix is white. (LEWES NODULAR CHALK FORMATION, Grade Dc)														
			(5.45)			1.5	86 0 0				24.50	SPT(S) N=39 (4,8/9,12,9,9)		
		26.00		-14.97	146							26.00	SPT(S) N=45 (8,9/9,12,12,12)	
Borehole complete at 26.45 m bgl.		26.45		-15.42										

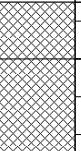
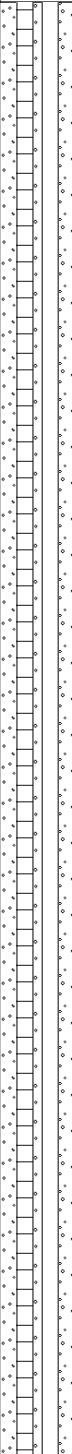
Remarks:
 1. Logged in general accordance with BS5930:2015+A1:2020 and CIRIA C574 (Engineering in Chalk). 2. Borehole cleared for services prior to excavating a hand dug service inspection pit to 1.2 m bgl. 3. Elevation and location data obtained from third-party GPS survey. 4. SPT Hammer ID 2865 (Energy Ratio Er = 51%). 5. Borehole commenced as a dynamic sampler borehole to 3.0 m bgl with rotary open-hole to 14.5 m bgl and rotary core follow-on to completion. 6. Borehole installed with a raised steel cover. 7. Clean drilling techniques utilised with a reduction and bentonite seal installed from 14 m to 15 m bgl.

Water Level Observations					Flush		
Date	Time	Strike	Duration	Standing	Depth (m)	Return	
03/03/2021		11.50 m	min				

Description of Strata	Legend	Strata Depth (m)	Strata Thickness (m)	Reduced Level (mAOD)	Casing Diameter (mm)	Water	Core Recovery			Sample Details		Test Details		Backfill
							Run (m)	TCR% SCR% RQD%	Min. Fl Av. Fl Max. Fl	Depth (m)	Type Ref	Depth (m)	Results	
MADE GROUND: Soft dark brown slightly sandy slightly gravelly CLAY with frequent rootlets. (TOPSOIL)		0.20	(0.20)	9.84										
MADE GROUND: Soft locally firm brown slightly sandy slightly gravelly CLAY with occasional roots. Sand is fine to medium. Gravel is angular to rounded fine to coarse of flint, chalk and brick. (RE-ENGINEERED COVER SYSTEM)			(1.10)							0.30 - 0.60	ES			
		1.30		8.74		1.00						1.20	SPT(S) N=12 (1,1/2,4,3,3)	
MADE GROUND: Soft locally firm grey mottled white gravelly CLAY with rare rootlets. Gravel is subangular to subrounded fine to medium of chalk and flint. (RE-ENGINEERED COVER SYSTEM)			(0.75)							1.50 - 1.80	ES			
		2.05		7.99						2.00 - 2.45	U	2.00	U=69 Blows	
MADE GROUND: Firm locally stiff brown CLAY. (RE-ENGINEERED COVER SYSTEM)		2.20		7.84										
MADE GROUND: Landfill recovered as frequent plastic, fabric and cable fragments with approximately 80% matrix of black slightly gravelly clayey fine SAND. Gravel is angular to subangular fine to medium of flint. Moderate hydrocarbon odour throughout. (LANDFILL)		2.50	(0.30)	7.54						2.30 - 2.40	ES			
MADE GROUND: Landfill recovered as 100% matrix of brown mottled dark grey clayey angular to subangular fine to coarse GRAVEL of flint. Slight hydrocarbon odour. (LANDFILL)		3.00		7.04						3.00 - 4.00	ES			
MADE GROUND: Landfill recovered as frequent plastic and wood with approximately 85% matrix of very soft grey gravelly CLAY. Gravel is angular to subangular fine to medium of flint. (LANDFILL)			(1.00)											

Remarks: 1. Logged in general accordance with BS5930:2015+A1:2020 and CIRIA C574 (Engineering in Chalk). 2. Borehole cleared for services prior to excavating a hand dug service inspection pit to 1.2 m bgl. 3. Elevation and location data obtained from third-party GPS survey. 4. SPT Hammer ID 2865 (Energy Ratio Er = 51%). 5. Borehole commenced as a dynamic sampler borehole to 3.0 m bgl with rotary open-hole to 11.3 m bgl and rotary core follow-on to completion. 6. Borehole installed with a raised steel cover. 7. Clean drilling techniques utilised with a reduction and bentonite seal installed from 10.8 m to 11.8 m bgl.	Water Level Observations					Flush	
	Date	Time	Strike	Duration	Standing	Depth (m)	Return
	17/02/2021		1.00 m	min			
Coordinates: E470113.74 N105723.07	Elevation (mAOD): 10.04	Drilled By: Delta Drilling	Plant Used: Comacchio GEO300	Logged: LB	Checked: BB	Approved: RM	Scale (m): 1:20

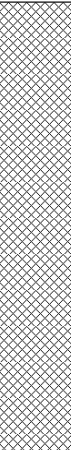



Rotary Core Borehole Log

Description of Strata	Legend	Strata Depth (m)	Strata Thickness (m)	Reduced Level (mAOD)	Casing Diameter (mm)	Water	Core Recovery			Sample Details		Test Details		Backfill
							Run (m)	TCR% SCR% RQD%	Min. Fl Av. Fl Max. Fl	Depth (m)	Type Ref	Depth (m)	Results	
MADE GROUND: Landfill recovered as frequent plastic and wood with approximately 85% matrix of very soft grey gravelly CLAY. Gravel is angular to subangular fine to medium of flint. (LANDFILL)		4.00		6.04						4.00 - 5.00	ES			
MADE GROUND: Landfill recovered as frequent wood, plastic bags, fabric, occasional metal, frequent plastic, occasional rubber, ceramic fragments, rare glass and ash (5%) with approximately 30% matrix of grey gravelly slightly clayey fine to medium SAND. Gravel is angular to rounded fine to medium of flint and brick. Slight organic odour. (LANDFILL)				(4.90)										
From 5.0 to 8.9 m bgl: Matrix approximately 20%.														

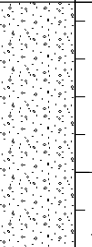
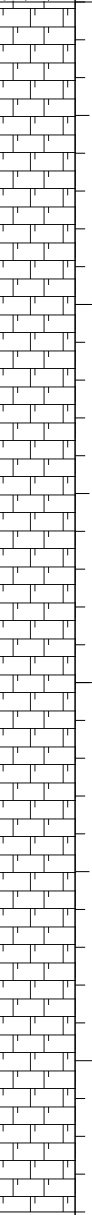
Remarks:
1. Logged in general accordance with BS5930:2015+A1:2020 and CIRIA C574 (Engineering in Chalk). 2. Borehole cleared for services prior to excavating a hand dug service inspection pit to 1.2 m bgl. 3. Elevation and location data obtained from third-party GPS survey. 4. SPT Hammer ID 2865 (Energy Ratio Er = 51%). 5. Borehole commenced as a dynamic sampler borehole to 3.0 m bgl with rotary open-hole to 11.3 m bgl and rotary core follow-on to completion. 6. Borehole installed with a raised steel cover. 7. Clean drilling techniques utilised with a reduction and bentonite seal installed from 10.8 m to 11.8 m bgl.

Water Level Observations					Flush	
Date	Time	Strike	Duration	Standing	Depth (m)	Return
17/02/2021		1.00 m	min			

Coordinates: E470113.74 N105723.07	Elevation (mAOD): 10.04	Drilled By: Delta Drilling	Plant Used: Comacchio GEO300	Logged: LB	Checked: BB	Approved: RM	Scale (m): 1:20
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Description of Strata	Legend	Strata Depth (m)	Strata Thickness (m)	Reduced Level (mAOD)	Casing Diameter (mm)	Water	Core Recovery			Sample Details		Test Details		Backfill
							Run (m)	TCR% SCR% RQD%	Min. Fl Av. Fl Max. Fl	Depth (m)	Type Ref	Depth (m)	Results	
MADE GROUND: Landfill recovered as frequent wood, plastic bags, fabric, occasional metal, frequent plastic, occasional rubber, ceramic fragments, rare glass and ash (5%) with approximately 30% matrix of grey gravelly slightly clayey fine to medium SAND. Gravel is angular to rounded fine to medium of flint and brick. <u>Slight organic odour.</u> (LANDFILL)		8.90		1.14										
Orangish brown angular to subangular fine to medium GRAVEL of flint. (RIVER TERRACE DEPOSITS)			(2.30)			9.00 ▼			9.00 - 10.00	ES				
Firm light brown slightly sandy CLAY. Sand is fine. (RIVER TERRACE DEPOSITS)		11.20		-1.16										
Light orangish brown very gravelly fine to coarse SAND. Gravel is angular to subrounded fine to coarse		11.30		-1.26	194						11.30	SPT(S) N=23 (4,4/6,6,5,6)		

Remarks: 1. Logged in general accordance with BS5930:2015+A1:2020 and CIRIA C574 (Engineering in Chalk). 2. Borehole cleared for services prior to excavating a hand dug service inspection pit to 1.2 m bgl. 3. Elevation and location data obtained from third-party GPS survey. 4. SPT Hammer ID 2865 (Energy Ratio Er = 51%). 5. Borehole commenced as a dynamic sampler borehole to 3.0 m bgl with rotary open-hole to 11.3 m bgl and rotary core follow-on to completion. 6. Borehole installed with a raised steel cover. 7. Clean drilling techniques utilised with a reduction and bentonite seal installed from 10.8 m to 11.8 m bgl.	Water Level Observations				Flush		
	Date	Time	Strike	Duration	Standing	Depth (m)	Return
	17/02/2021		1.00 m	min			
Coordinates: E470113.74 N105723.07	Elevation (mAOD): 10.04	Drilled By: Delta Drilling	Plant Used: Comacchio GEO300	Logged: LB	Checked: BB	Approved: RM	Scale (m): 1:20

Description of Strata	Legend	Strata Depth (m)	Strata Thickness (m)	Reduced Level (mAOD)	Casing Diameter (mm)	Water	Core Recovery			Sample Details		Test Details		Backfill
							Run (m)	TCR% SCR% RQD%	Min. Fl Av. Fl Max. Fl	Depth (m)	Type Ref	Depth (m)	Results	
Light orangish brown very gravelly fine to coarse SAND. Gravel is angular to subrounded fine to coarse of flint. (RIVER TERRACE DEPOSITS)		12.20	(0.90)	-2.16										
Structureless CHALK composed of cream gravelly SILT. Gravel is very weak low density white subangular to subrounded fine to medium of chalk and angular to subangular fine to coarse flint. (LEWES NODULAR CHALK FORMATION, Grade Dm)							1.5	66 0 0			12.80	SPT(S) N=22 (3,4/6,6,5,5)		
							1.5	100 0 0						

Remarks: 1. Logged in general accordance with BS5930:2015+A1:2020 and CIRIA C574 (Engineering in Chalk). 2. Borehole cleared for services prior to excavating a hand dug service inspection pit to 1.2 m bgl. 3. Elevation and location data obtained from third-party GPS survey. 4. SPT Hammer ID 2865 (Energy Ratio Er = 51%). 5. Borehole commenced as a dynamic sampler borehole to 3.0 m bgl with rotary open-hole to 11.3 m bgl and rotary core follow-on to completion. 6. Borehole installed with a raised steel cover. 7. Clean drilling techniques utilised with a reduction and bentonite seal installed from 10.8 m to 11.8 m bgl.	Water Level Observations					Flush	
	Date	Time	Strike	Duration	Standing	Depth (m)	Return
	17/02/2021		1.00 m	min			

Coordinates: E470113.74 N105723.07	Elevation (mAOD): 10.04	Drilled By: Delta Drilling	Plant Used: Comacchio GEO300	Logged: LB	Checked: BB	Approved: RM	Scale (m): 1:20
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Project No: **19-2099.04** Hole ID: **RO102** Page: **5 of 7**

Project: **Brockhampton West, Havant**

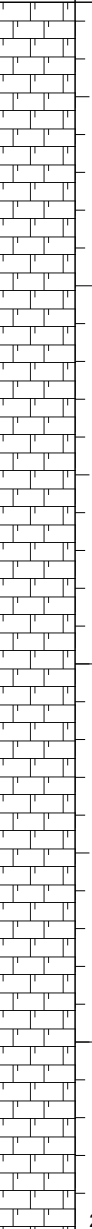
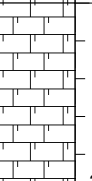

Rotary Core Borehole Log Date: **18/02/2021 - 22/02/2021** Client: **Exton Estates**

Description of Strata	Legend	Strata Depth (m)	Strata Thickness (m)	Reduced Level (mAOD)	Casing Diameter (mm)	Water	Core Recovery			Sample Details		Test Details		Backfill
							Run (m)	TCR% SCR% RQD%	Min. Fl Av. Fl Max. Fl	Depth (m)	Type Ref	Depth (m)	Results	
Structureless CHALK composed of cream gravelly SILT. Gravel is very weak low density white subangular to subrounded fine to medium of chalk and angular to subangular fine to coarse flint. (LEWES NODULAR CHALK FORMATION, Grade Dm)		18.80	(6.60)	-8.76			1.5	100 0 0		15.50	D	15.80	SPT(S) N=24 (3,4/5,6,7,6)	
							1.5	13 0 0		17.30	SPT(S) N=15 (2,3/3,4,4,4)			
Structureless CHALK composed of slightly silty subangular to subrounded fine to coarse GRAVEL. Clasts are weak, low density white chalk. Matrix is white. (LEWES NODULAR CHALK FORMATION, Grade Dm)		19.00	(0.20)	-8.96										

Remarks: 1. Logged in general accordance with BS5930:2015+A1:2020 and CIRIA C574 (Engineering in Chalk). 2. Borehole cleared for services prior to excavating a hand dug service inspection pit to 1.2 m bgl. 3. Elevation and location data obtained from third-party GPS survey. 4. SPT Hammer ID 2865 (Energy Ratio Er = 51%). 5. Borehole commenced as a dynamic sampler borehole to 3.0 m bgl with rotary open-hole to 11.3 m bgl and rotary core follow-on to completion. 6. Borehole installed with a raised steel cover. 7. Clean drilling techniques utilised with a reduction and bentonite seal installed from 10.8 m to 11.8 m bgl.	Water Level Observations				Flush		
	Date	Time	Strike	Duration	Standing	Depth (m)	Return
	17/02/2021		1.00 m	min			

Coordinates: E470113.74 N105723.07	Elevation (mAOD): 10.04	Drilled By: Delta Drilling	Plant Used: Comacchio GEO300	Logged: LB	Checked: BB	Approved: RM	Scale (m): 1:20
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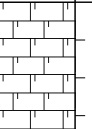
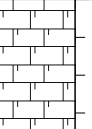
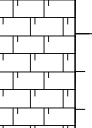
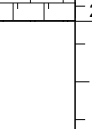
Rotary Core Borehole Log

Description of Strata	Legend	Strata Depth (m)	Strata Thickness (m)	Reduced Level (mAOD)	Casing Diameter (mm)	Water	Core Recovery			Sample Details		Test Details		Backfill
							Run (m)	TCR% SCR% RQD%	Min. Fl Av. Fl Max. Fl	Depth (m)	Type Ref	Depth (m)	Results	
Structureless CHALK composed of white gravelly SILT. Gravel is weak, medium density subangular to subrounded fine to medium of chalk and occasional subangular to subrounded fine to medium flint. (LEWES NODULAR CHALK FORMATION, Grade Dc)			(3.50)				1.5	66 0 0						
							1.5	100 0 0						
							1.7	83 0 0						
Structureless CHALK composed of white gravelly SILT. Gravel is moderately weak, high density subangular fine to coarse chalk. (LEWES NODULAR CHALK FORMATION, Grade Dm)		22.50		-12.46					21.80 - 22.25	D	21.80	SPT(S) N=19 (2,4/4,5,5,5)		
Structureless CHALK composed of		23.00	(0.50)	-12.96										

Remarks:
1. Logged in general accordance with BS5930:2015+A1:2020 and CIRIA C574 (Engineering in Chalk). 2. Borehole cleared for services prior to excavating a hand dug service inspection pit to 1.2 m bgl. 3. Elevation and location data obtained from third-party GPS survey. 4. SPT Hammer ID 2865 (Energy Ratio Er = 51%). 5. Borehole commenced as a dynamic sampler borehole to 3.0 m bgl with rotary open-hole to 11.3 m bgl and rotary core follow-on to completion. 6. Borehole installed with a raised steel cover. 7. Clean drilling techniques utilised with a reduction and bentonite seal installed from 10.8 m to 11.8 m bgl.

Water Level Observations					Flush		
Date	Time	Strike	Duration	Standing	Depth (m)	Return	
17/02/2021		1.00 m	min				

Coordinates: E470113.74 N105723.07	Elevation (mAOD): 10.04	Drilled By: Delta Drilling	Plant Used: Comacchio GEO300	Logged: LB	Checked: BB	Approved: RM	Scale (m): 1:20
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Description of Strata	Legend	Strata Depth (m)	Strata Thickness (m)	Reduced Level (mAOD)	Casing Diameter (mm)	Water	Core Recovery			Sample Details		Test Details		Backfill
							Run (m)	TCR% SCR% RQD%	Min. Fl Av. Fl Max. Fl	Depth (m)	Type Ref	Depth (m)	Results	
Structureless CHALK composed of white slightly gravelly SILT. Gravel is very weak, low density subrounded fine to medium chalk. (LEWES NODULAR CHALK FORMATION, Grade Dm)			(1.50)				1.5	87 0 0						
Structureless CHALK composed of silty subangular to subrounded fine to coarse GRAVEL. Clasts are moderately strong, very high density white chalk. Matrix is white. (LEWES NODULAR CHALK FORMATION, Grade Dc)		24.50		-14.46			1.5	100 0 0	24.50 - 26.00	D	24.50	SPT(S) N=50 (9,9/14,13,13,10)		
			(1.84)		146						26.00	SPT(S) 50 (12,13/50 for 190mm)		
Borehole complete at 26.34 m bgl.		26.34		-16.30										

Remarks:
1. Logged in general accordance with BS5930:2015+A1:2020 and CIRIA C574 (Engineering in Chalk). 2. Borehole cleared for services prior to excavating a hand dug service inspection pit to 1.2 m bgl. 3. Elevation and location data obtained from third-party GPS survey. 4. SPT Hammer ID 2865 (Energy Ratio Er = 51%). 5. Borehole commenced as a dynamic sampler borehole to 3.0 m bgl with rotary open-hole to 11.3 m bgl and rotary core follow-on to completion. 6. Borehole installed with a raised steel cover. 7. Clean drilling techniques utilised with a reduction and bentonite seal installed from 10.8 m to 11.8 m bgl.

Water Level Observations **Flush**

Date	Time	Strike	Duration	Standing	Depth (m)	Return
17/02/2021		1.00 m	min			



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Project No: **19-2099.04** Hole ID: **RO103** Page: **1 of 8**

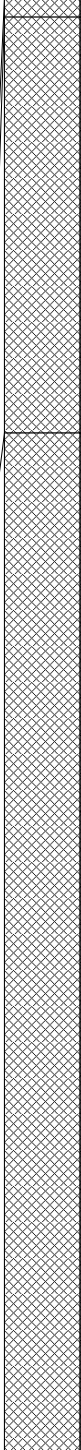
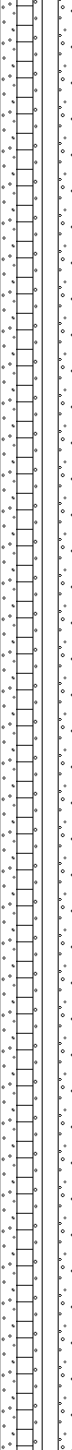
Project: **Brockhampton West, Havant**

Rotary Core Borehole Log Date: **25/02/2021 - 02/03/2021** Client: **Exton Estates**

Description of Strata	Legend	Strata Depth (m)	Strata Thickness (m)	Reduced Level (mAOD)	Casing Diameter (mm)	Water	Core Recovery			Sample Details		Test Details		Backfill
							Run (m)	TCR% SCR% RQD%	Min. Fl Av. Fl Max. Fl	Depth (m)	Type Ref	Depth (m)	Results	
MADE GROUND: Soft dark brown slightly sandy slightly gravelly CLAY with occasional rootlets. Sand is fine. Gravel is subangular to subrounded fine to medium of natural lithologies. (TOPSOIL)		0.40	(0.40)	10.05										
MADE GROUND: Firm brown slightly sandy slightly gravelly CLAY with occasional rubber fragments. Sand is fine to medium. Gravel is subangular to subrounded fine to medium of natural lithologies and brick. (RE-ENGINEERED COVER SYSTEM)		1.20	(0.80)	9.25										
MADE GROUND: Firm locally stiff white gravelly SILT with occasional black organic staining. Gravel is subangular to rounded fine to medium of chalk, occasional flint and reddish orange clinker. (RE-ENGINEERED COVER SYSTEM)		1.45	(0.25)	9.00										
MADE GROUND: Dark brown mottled black gravelly slightly clayey fine SAND. Gravel is angular to subrounded fine to coarse of flint and rare brick. (RE-ENGINEERED COVER SYSTEM)		2.00	(0.55)	8.45										
From 1.9 to 2.0 m bgl: Occasional plastic and wood.														
MADE GROUND: Landfill recovered as frequent wood, occasional plastic and paper with approximately 40% matrix of soft grey slightly sandy CLAY. Sand is fine. (LANDFILL)		3.00		7.45										
MADE GROUND: Landfill recovered as frequent glass fragments, occasional plastic and wood with approximately 80% matrix of soft black slightly sandy CLAY. Sand is fine to medium. Strong hydrocarbon odour noted. (LANDFILL)		3.20	(0.20)	7.25										
From 3.0 to 3.1 m bgl: Slight hydrocarbon sheen.														
MADE GROUND: Landfill recovered as frequent plastic and paper with approximately 85% matrix of soft dark grey slightly sandy slightly gravelly CLAY. Sand is fine to		3.80	(0.60)	6.65										

Remarks: 1. Logged in general accordance with BS5930:2015+A1:2020 and CIRIA C574 (Engineering in Chalk). 2. Borehole cleared for services prior to excavating a hand dug service inspection pit to 1.2 m bgl. 3. Elevation and location data obtained from third-party GPS survey. 4. SPT Hammer ID 2865 (Energy Ratio Er = 51%). 5. Borehole commenced as a dynamic sampler borehole to 5.0 m bgl with rotary open-hole to 13.5 m bgl and rotary core follow-on to completion. 6. Borehole installed with a raised steel cover. 7. Clean drilling techniques utilised with a reduction and bentonite seal installed from 13 m to 14 m bgl.	Water Level Observations				Flush		
	Date	Time	Strike	Duration	Standing	Depth (m)	Return
	12/03/2021		7.60 m	min			
Coordinates: E470052.79 N105649.11	Elevation (mAOD): 10.45	Drilled By: Delta Drilling	Plant Used: Comacchio GEO300	Logged: LB	Checked: BB	Approved: RM	Scale (m): 1:20

Rotary Core Borehole Log

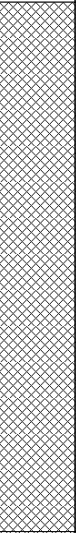
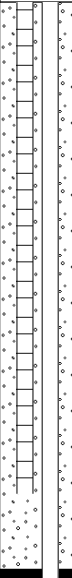


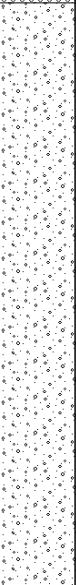

Description of Strata	Legend	Strata Depth (m)	Strata Thickness (m)	Reduced Level (mAOD)	Casing Diameter (mm)	Water	Core Recovery			Sample Details		Test Details		Backfill										
							Run (m)	TCR% SCR% RQD%	Min. Fl Av. Fl Max. Fl	Depth (m)	Type Ref	Depth (m)	Results											
MADE GROUND: Landfill recovered as frequent plastic and paper with approximately 85% matrix of soft dark grey slightly sandy slightly gravelly CLAY. Sand is fine to medium. Gravel is subangular to subrounded fine to medium of brick, flint and chalk. Moderate hydrocarbon odour noted. (LANDFILL)		3.90	(1.10)	6.55																				
MADE GROUND: Firm grey mottled yellowish brown slightly sandy CLAY. Sand is fine. (SUSPECTED ORIGINAL RE-ENGINEERED COVER SYSTEM)		5.00		5.45											5.00 - 6.00	ES								
MADE GROUND: Landfill recovered as frequent plastic, occasional wood, plastic and rare glass with approximately 70% matrix of very soft brown slightly gravelly sandy CLAY. Sand is fine to medium. Gravel is angular to subrounded fine to medium of flint. (LANDFILL)		(4.10)																						
MADE GROUND: Landfill recovered as frequent wood, plastic, occasional fabric, brick and rare netting with approximately 70% matrix of brown slightly clayey fine to medium SAND. (LANDFILL)																								
						7.60																		

Remarks:
1. Logged in general accordance with BS5930:2015+A1:2020 and CIRIA C574 (Engineering in Chalk). 2. Borehole cleared for services prior to excavating a hand dug service inspection pit to 1.2 m bgl. 3. Elevation and location data obtained from third-party GPS survey. 4. SPT Hammer ID 2865 (Energy Ratio Er = 51%). 5. Borehole commenced as a dynamic sampler borehole to 5.0 m bgl with rotary open-hole to 13.5 m bgl and rotary core follow-on to completion. 6. Borehole installed with a raised steel cover. 7. Clean drilling techniques utilised with a reduction and bentonite seal installed from 13 m to 14 m bgl.

Water Level Observations					Flush		
Date	Time	Strike	Duration	Standing	Depth (m)	Return	
12/03/2021		7.60 m	min				

Coordinates: E470052.79 N105649.11	Elevation (mAOD): 10.45	Drilled By: Delta Drilling	Plant Used: Comacchio GEO300	Logged: LB	Checked: BB	Approved: RM	Scale (m): 1:20
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Rotary Core Borehole Log

Description of Strata	Legend	Strata Depth (m)	Strata Thickness (m)	Reduced Level (mAOD)	Casing Diameter (mm)	Water	Core Recovery			Sample Details		Test Details		Backfill
							Run (m)	TCR% SCR% RQD%	Min. Fl Av. Fl Max. Fl	Depth (m)	Type Ref	Depth (m)	Results	
MADE GROUND: Landfill recovered as frequent wood, plastic, occasional fabric, brick and rare netting with approximately 70% matrix of brown slightly clayey fine to medium SAND. (LANDFILL)		9.10		1.35										
MADE GROUND: Very soft orangish brown slightly sandy slightly gravelly CLAY with frequent plastic fragments. Sand is fine to medium. Gravel is angular to subangular fine to medium of flint. (REWORKED RIVER TERRACE DEPOSITS)		10.00	(0.90)	0.45										
Brown sandy angular to subangular fine to medium GRAVEL of flint. Sand is fine to coarse. (RIVER TERRACE DEPOSITS)			(2.00)											

Remarks:
1. Logged in general accordance with BS5930:2015+A1:2020 and CIRIA C574 (Engineering in Chalk). 2. Borehole cleared for services prior to excavating a hand dug service inspection pit to 1.2 m bgl. 3. Elevation and location data obtained from third-party GPS survey. 4. SPT Hammer ID 2865 (Energy Ratio Er = 51%). 5. Borehole commenced as a dynamic sampler borehole to 5.0 m bgl with rotary open-hole to 13.5 m bgl and rotary core follow-on to completion. 6. Borehole installed with a raised steel cover. 7. Clean drilling techniques utilised with a reduction and bentonite seal installed from 13 m to 14 m bgl.

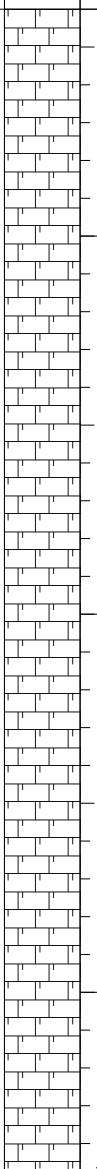
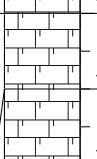
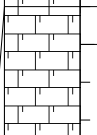
Water Level Observations					Flush		
Date	Time	Strike	Duration	Standing	Depth (m)	Return	
12/03/2021		7.60 m	min				

Coordinates: E470052.79 N105649.11	Elevation (mAOD): 10.45	Drilled By: Delta Drilling	Plant Used: Comacchio GEO300	Logged: LB	Checked: BB	Approved: RM	Scale (m): 1:20
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Description of Strata	Legend	Strata Depth (m)	Strata Thickness (m)	Reduced Level (mAOD)	Casing Diameter (mm)	Water	Core Recovery			Sample Details		Test Details		Backfill
							Run (m)	TCR% SCR% RQD%	Min. Fl Av. Fl Max. Fl	Depth (m)	Type Ref	Depth (m)	Results	
Brown sandy angular to subangular fine to medium GRAVEL of flint. Sand is fine to coarse. (RIVER TERRACE DEPOSITS)		12.00		-1.55										
Soft brown slightly sandy CLAY. Sand is fine. (RIVER TERRACE DEPOSITS)		12.20	(0.20)	-1.75										
Structureless CHALK composed of gravelly fine to coarse SAND. Clasts are very weak, low density cream angular to subrounded fine to coarse chalk and angular fine to coarse flint. Matrix is cream. (LEWES NODULAR CHALK FORMATION, Grade Dc)		13.00	(0.80)	-2.55										
Structureless CHALK composed of cream coarse SAND. Slight hydrocarbon odour. (LEWES NODULAR CHALK FORMATION, Grade Dc)		13.50	(0.50)	-3.05	194				13.00 - 13.50	B				
Structureless CHALK composed of angular to subangular fine to coarse GRAVEL of chalk and flint. Clasts are very weak, low density cream chalk. Moderate hydrocarbon odour. (LEWES NODULAR CHALK FORMATION, Grade Dc)		14.20	(0.70)	-3.75					13.50 - 14.00	ES				
Structureless CHALK composed of greyish white slightly gravelly SILT. Gravel is very weak low density white subangular to subrounded fine to medium chalk and angular to subangular fine to medium flint. (LEWES NODULAR CHALK FORMATION, Grade Dm)								1.0				14.00	SPT(S) N=26 (4,5/6,6,7,7)	

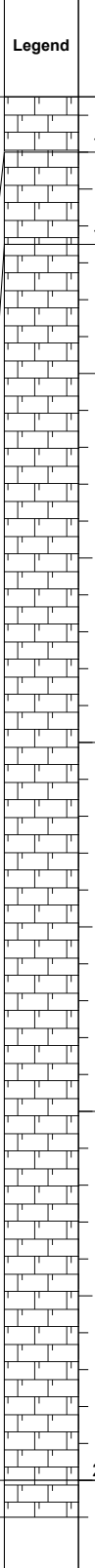
Remarks:
1. Logged in general accordance with BS5930:2015+A1:2020 and CIRIA C574 (Engineering in Chalk). 2. Borehole cleared for services prior to excavating a hand dug service inspection pit to 1.2 m bgl. 3. Elevation and location data obtained from third-party GPS survey. 4. SPT Hammer ID 2865 (Energy Ratio Er = 51%). 5. Borehole commenced as a dynamic sampler borehole to 5.0 m bgl with rotary open-hole to 13.5 m bgl and rotary core follow-on to completion. 6. Borehole installed with a raised steel cover. 7. Clean drilling techniques utilised with a reduction and bentonite seal installed from 13 m to 14 m bgl.

Water Level Observations				Flush		
Date	Time	Strike	Duration	Standing	Depth (m)	Return
12/03/2021		7.60 m	min			

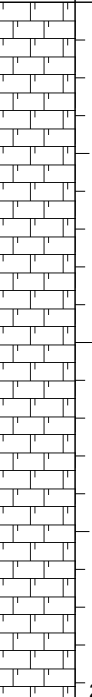
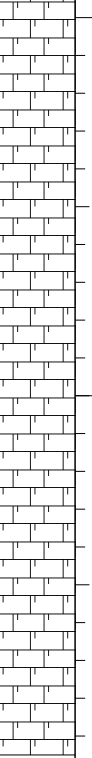
Description of Strata	Legend	Strata Depth (m)	Strata Thickness (m)	Reduced Level (mAOD)	Casing Diameter (mm)	Water	Core Recovery			Sample Details		Test Details		Backfill
							Run (m)	TCR% SCR% RQD%	Min. Fl Av. Fl Max. Fl	Depth (m)	Type Ref	Depth (m)	Results	
Structureless CHALK composed of greyish white slightly gravelly SILT. Gravel is very weak low density white subangular to subrounded fine to medium chalk and angular to subangular fine to medium flint. (LEWES NODULAR CHALK FORMATION, Grade Dm)														
		15.50				27 0 0			15.50		SPT(S) N=17 (3,5/4,5,4,4)			
		17.00 - 17.45		(4.30)					17.00	D	17.00	SPT(S) N=16 (5,4/3,4,4,5)		
		17.50 - 18.00							17.50	D	18.00			
Structureless CHALK composed of subangular to subrounded fine to coarse GRAVEL. Clasts are very weak low density cream of chalk. Matrix is cream. (LEWES NODULAR CHALK FORMATION, Grade Dc)		18.50		-8.05							18.50	SPT(S) N=20 (4,4/5,6,5,4)		
		18.70	(0.20)	-8.25										
		18.90	(0.20)	-8.45										
Structureless CHALK composed of cream slightly gravelly SILT. Gravel is very weak low density subangular to subrounded fine of chalk. (LEWES NODULAR CHALK FORMATION, Grade Dm)			(0.50)											
							1.5	66 0 0						

Remarks: 1. Logged in general accordance with BS5930:2015+A1:2020 and CIRIA C574 (Engineering in Chalk). 2. Borehole cleared for services prior to excavating a hand dug service inspection pit to 1.2 m bgl. 3. Elevation and location data obtained from third-party GPS survey. 4. SPT Hammer ID 2865 (Energy Ratio Er = 51%). 5. Borehole commenced as a dynamic sampler borehole to 5.0 m bgl with rotary open-hole to 13.5 m bgl and rotary core follow-on to completion. 6. Borehole installed with a raised steel cover. 7. Clean drilling techniques utilised with a reduction and bentonite seal installed from 13 m to 14 m bgl.	Water Level Observations				Flush		
	Date	Time	Strike	Duration	Standing	Depth (m)	Return
	12/03/2021		7.60 m	min			

Coordinates: E470052.79 N105649.11	Elevation (mAOD): 10.45	Drilled By: Delta Drilling	Plant Used: Comacchio GEO300	Logged: LB	Checked: BB	Approved: RM	Scale (m): 1:20
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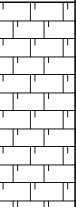


Description of Strata	Legend	Strata Depth (m)	Strata Thickness (m)	Reduced Level (mAOD)	Casing Diameter (mm)	Water	Core Recovery			Sample Details		Test Details		Backfill
							Run (m)	TCR% SCR% RQD%	Min. Fl Av. Fl Max. Fl	Depth (m)	Type Ref	Depth (m)	Results	
Structureless CHALK composed of slightly silty angular to subrounded fine to medium GRAVEL. Clasts are upper end of weak medium density cream of chalk. Matrix is cream. (LEWES NODULAR CHALK FORMATION, Grade Dc) Structureless CHALK composed of silty subangular to subrounded fine to coarse GRAVEL. Clasts are very weak low density white of chalk. Matrix is white. (LEWES NODULAR CHALK FORMATION, Grade Dc) Structureless CHALK composed of white gravelly SILT. Gravel is very weak low density white subangular to subrounded fine to medium of chalk. (LEWES NODULAR CHALK FORMATION, Grade Dm)		19.40		-8.95										
		19.65	(0.25)	-9.20							20.00	SPT(S) N=14 (2,3/4,3,4,3)		
			(3.35)				1.5	33 0 0				21.50	SPT(S) N=16 (2,4/4,4,4,4)	
		23.00		-12.55										
Structureless CHALK composed of											23.00	SPT(S) N=35 (10,8/7,8,8,12)		

Remarks: 1. Logged in general accordance with BS5930:2015+A1:2020 and CIRIA C574 (Engineering in Chalk). 2. Borehole cleared for services prior to excavating a hand dug service inspection pit to 1.2 m bgl. 3. Elevation and location data obtained from third-party GPS survey. 4. SPT Hammer ID 2865 (Energy Ratio Er = 51%). 5. Borehole commenced as a dynamic sampler borehole to 5.0 m bgl with rotary open-hole to 13.5 m bgl and rotary core follow-on to completion. 6. Borehole installed with a raised steel cover. 7. Clean drilling techniques utilised with a reduction and bentonite seal installed from 13 m to 14 m bgl.	Water Level Observations					Flush	
	Date	Time	Strike	Duration	Standing	Depth (m)	Return
12/03/2021		7.60 m	min				
Coordinates: E470052.79 N105649.11	Elevation (mAOD): 10.45	Drilled By: Delta Drilling	Plant Used: Comacchio GEO300	Logged: LB	Checked: BB	Approved: RM	Scale (m): 1:20

Description of Strata	Legend	Strata Depth (m)	Strata Thickness (m)	Reduced Level (mAOD)	Casing Diameter (mm)	Water	Core Recovery			Sample Details		Test Details		Backfill
							Run (m)	TCR% SCR% RQD%	Min. Fl Av. Fl Max. Fl	Depth (m)	Type Ref	Depth (m)	Results	
Structureless CHALK composed of white gravelly SILT. Gravel is subangular to rounded fine to coarse of chalk and angular to subangular fine to medium of flint. (LEWES NODULAR CHALK FORMATION, Grade Dm) <i>Gravel is subangular to rounded fine to coarse of chalk and angular to subangular fine to medium of flint.</i>			(1.95)				1.5	66 0 0			24.50	SPT(S) N=37 (8,9/10,8,9,10)		
Structureless CHALK composed of silty subangular to subrounded fine to coarse GRAVEL. Clasts are very weak low density white of chalk. Matrix is white. (LEWES NODULAR CHALK FORMATION, Grade Dc)		24.95		-14.50			1.5	100 0 0	25.10 - 25.30	D	26.00	SPT(S) N=24 (7,4/7,7,5,5)		
							1.5	100 0 0						

Remarks:	Water Level Observations				Flush		
	Date	Time	Strike	Duration	Standing	Depth (m)	Return
	1. Logged in general accordance with BS5930:2015+A1:2020 and CIRIA C574 (Engineering in Chalk). 2. Borehole cleared for services prior to excavating a hand dug service inspection pit to 1.2 m bgl. 3. Elevation and location data obtained from third-party GPS survey. 4. SPT Hammer ID 2865 (Energy Ratio Er = 51%). 5. Borehole commenced as a dynamic sampler borehole to 5.0 m bgl with rotary open-hole to 13.5 m bgl and rotary core follow-on to completion. 6. Borehole installed with a raised steel cover. 7. Clean drilling techniques utilised with a reduction and bentonite seal installed from 13 m to 14 m bgl.	12/03/2021		7.60 m	min		

Coordinates: E470052.79 N105649.11	Elevation (mAOD): 10.45	Drilled By: Delta Drilling	Plant Used: Comacchio GEO300	Logged: LB	Checked: BB	Approved: RM	Scale (m): 1:20
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Description of Strata	Legend	Strata Depth (m)	Strata Thickness (m)	Reduced Level (mAOD)	Casing Diameter (mm)	Water	Core Recovery			Sample Details		Test Details		Backfill
							Run (m)	TCR% SCR% RQD%	Min. Fl Av. Fl Max. Fl	Depth (m)	Type Ref	Depth (m)	Results	
Structureless CHALK composed of silty subangular to subrounded fine to coarse GRAVEL. Clasts are very weak low density white of chalk. Matrix is white. (LEWES NODULAR CHALK FORMATION, Grade Dc)		27.50		-17.05										
Structureless CHALK composed of white slightly gravelly SILT. Gravel is upper end of weak medium density white subangular to subrounded fine to medium of chalk. (LEWES NODULAR CHALK FORMATION, Grade Dm)			(1.80)		146		1.5	100 0 0	28.30 - 28.45	D	27.50	SPT(S) N=49 (8,8/11,8,10,20)		
Borehole complete at 29.30 m bgl.		29.30		-18.85							29.00	SPT(S) 50 (3,8/50 for 155mm)		

Remarks:
1. Logged in general accordance with BS5930:2015+A1:2020 and CIRIA C574 (Engineering in Chalk). 2. Borehole cleared for services prior to excavating a hand dug service inspection pit to 1.2 m bgl. 3. Elevation and location data obtained from third-party GPS survey. 4. SPT Hammer ID 2865 (Energy Ratio Er = 51%). 5. Borehole commenced as a dynamic sampler borehole to 5.0 m bgl with rotary open-hole to 13.5 m bgl and rotary core follow-on to completion. 6. Borehole installed with a raised steel cover. 7. Clean drilling techniques utilised with a reduction and bentonite seal installed from 13 m to 14 m bgl.

Water Level Observations					Flush	
Date	Time	Strike	Duration	Standing	Depth (m)	Return
12/03/2021		7.60 m	min			

Rotary Core Borehole Log Date: **11/03/2021 - 16/03/2021** Client: **Exton Estates**

Description of Strata	Legend	Strata Depth (m)	Strata Thickness (m)	Reduced Level (mAOD)	Casing Diameter (mm)	Water	Core Recovery			Sample Details		Test Details		Backfill
							Run (m)	TCR% SCR% RQD%	Min. Fl Av. Fl Max. Fl	Depth (m)	Type Ref	Depth (m)	Results	
MADE GROUND: Soft brown slightly sandy slightly gravelly CLAY with frequent rootlets. Sand is fine. Gravel is subrounded fine to medium of natural lithologies. Potential ACM fragment identified (30 mm x 20 mm x 10 mm). (TOPSOIL)		0.39	(0.39)	10.49						0.10 - 0.40	ES			
MADE GROUND: Firm orangish brown slightly sandy CLAY with frequent rootlets. Sand is fine. (RE-ENGINEERED COVER SYSTEM)		0.90	(0.51)	9.98						0.40 - 0.70	ES			
MADE GROUND: Landfill recovered as occasional plastic, wood, metal, flint, wool and rare metal nails, concrete and ceramic with approximately 70% matrix of soft locally firm grey mottled black slightly sandy CLAY. Sand is fine. (RE-ENGINEERED COVER SYSTEM)			(2.10)									1.20	SPT(S) N=16 (2,4/4,5,3,4)	
From 2.0 to 3.0 m bgl: Frequent black sponge.														
		3.00		7.88						3.00 - 4.00	ES			
MADE GROUND: Landfill recovered as occasional wood and rare plastic with approximately 90% matrix of very soft greenish brown mottled orangish brown CLAY. (LANDFILL)														

Remarks: 1. Logged in general accordance with BS5930:2015+A1:2020 and CIRIA C574 (Engineering in Chalk). 2. Borehole cleared for services prior to excavating a hand dug service inspection pit to 1.2 m bgl. 3. Elevation and location data obtained from third-party GPS survey. 4. SPT Hammer ID 2865 (Energy Ratio Er = 51%). 5. Borehole commenced as a dynamic sampler borehole to 5.0 m bgl with rotary open-hole to 14.1 m bgl and rotary core follow-on to completion. 6. Borehole installed with a raised steel cover. 7. Clean drilling techniques utilised with a reduction and bentonite seal installed from 14 m to 15 m bgl.	Water Level Observations					Flush	
	Date	Time	Strike	Duration	Standing	Depth (m)	Return

Coordinates: E470167.04 N105782.85	Elevation (mAOD): 10.88	Drilled By: Delta Drilling	Plant Used: Comacchio GEO300	Logged: LB	Checked: BB	Approved: RM	Scale (m): 1:20
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Project No: **19-2099.04** Hole ID: **RO104** Page: **2 of 7**


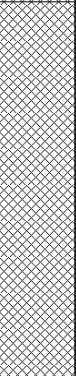
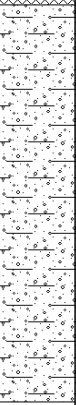
Project: **Brockhampton West, Havant**

Rotary Core Borehole Log Date: **11/03/2021 - 16/03/2021** Client: **Exton Estates**

Description of Strata	Legend	Strata Depth (m)	Strata Thickness (m)	Reduced Level (mAOD)	Casing Diameter (mm)	Water	Core Recovery			Sample Details		Test Details		Backfill
							Run (m)	TCR% SCR% RQD%	Min. Fl Av. Fl Max. Fl	Depth (m)	Type Ref	Depth (m)	Results	
MADE GROUND: Landfill recovered as occasional wood and rare plastic with approximately 90% matrix of very soft greenish brown mottled orangish brown CLAY. (LANDFILL)		5.00	(2.00)	5.88						5.00 - 6.00	ES			
MADE GROUND: Landfill recovered as frequent plastic, wood, occasional sponge and metal with approximately 70% matrix of very soft dark grey slightly gravelly CLAY. Gravel is angular to subangular fine to medium of flint. Moderate hydrocarbon odour and a slight hydrocarbon sheen. (LANDFILL)		7.00	(2.00)	3.88										
<i>From 6.0 to 7.0 m bgl: Hydrocarbon odour becomes slight. No visible sheen.</i>														
MADE GROUND: Landfill recovered as occasional wood and plastic with approximately 80% matrix of brown mottled grey slightly clayey angular to subangular fine to medium GRAVEL of flint. (LANDFILL)														

Remarks: 1. Logged in general accordance with BS5930:2015+A1:2020 and CIRIA C574 (Engineering in Chalk). 2. Borehole cleared for services prior to excavating a hand dug service inspection pit to 1.2 m bgl. 3. Elevation and location data obtained from third-party GPS survey. 4. SPT Hammer ID 2865 (Energy Ratio Er = 51%). 5. Borehole commenced as a dynamic sampler borehole to 5.0 m bgl with rotary open-hole to 14.1 m bgl and rotary core follow-on to completion. 6. Borehole installed with a raised steel cover. 7. Clean drilling techniques utilised with a reduction and bentonite seal installed from 14 m to 15 m bgl.	Water Level Observations					Flush	
	Date	Time	Strike	Duration	Standing	Depth (m)	Return

Coordinates: E470167.04 N105782.85	Elevation (mAOD): 10.88	Drilled By: Delta Drilling	Plant Used: Comacchio GEO300	Logged: LB	Checked: BB	Approved: RM	Scale (m): 1:20
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Description of Strata	Legend	Strata Depth (m)	Strata Thickness (m)	Reduced Level (mAOD)	Casing Diameter (mm)	Water	Core Recovery			Sample Details		Test Details		Backfill
							Run (m)	TCR% SCR% RQD%	Min. Fl Av. Fl Max. Fl	Depth (m)	Type Ref	Depth (m)	Results	
MADE GROUND: Landfill recovered as occasional wood and plastic with approximately 80% matrix of brown mottled grey slightly clayey angular to subangular fine to medium GRAVEL of flint. (LANDFILL)		9.50	(2.50)	1.38										
MADE GROUND: Landfill recovered as rare plastic fragments with approximately 95% matrix of brown clayey angular to subangular fine to medium GRAVEL of flint. (LANDFILL)		10.50	(1.00)	0.38					10.00 - 10.50	ES				
Medium dense brown sandy slightly clayey angular to subangular fine to coarse GRAVEL of flint. Sand is fine to coarse. (RIVER TERRACE DEPOSITS)			(1.50)								10.50	SPT(S) N=25 (4,6/9,8,5,3)		
											11.00	SPT(C) N=20 (5,5/5,5,5,5)		
											11.50	SPT(C) N=21 (5,4/3,5,6,7)		

Remarks:
1. Logged in general accordance with BS5930:2015+A1:2020 and CIRIA C574 (Engineering in Chalk). 2. Borehole cleared for services prior to excavating a hand dug service inspection pit to 1.2 m bgl. 3. Elevation and location data obtained from third-party GPS survey. 4. SPT Hammer ID 2865 (Energy Ratio Er = 51%). 5. Borehole commenced as a dynamic sampler borehole to 5.0 m bgl with rotary open-hole to 14.1 m bgl and rotary core follow-on to completion. 6. Borehole installed with a raised steel cover. 7. Clean drilling techniques utilised with a reduction and bentonite seal installed from 14 m to 15 m bgl.

Water Level Observations					Flush		
Date	Time	Strike	Duration	Standing	Depth (m)	Return	



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Project No: **19-2099.04** Hole ID: **RO104** Page: **4 of 7**

Project: **Brockhampton West, Havant**

Rotary Core Borehole Log Date: **11/03/2021 - 16/03/2021** Client: **Exton Estates**

Description of Strata	Legend	Strata Depth (m)	Strata Thickness (m)	Reduced Level (mAOD)	Casing Diameter (mm)	Water	Core Recovery			Sample Details		Test Details		Backfill
							Run (m)	TCR% SCR% RQD%	Min. Fl Av. Fl Max. Fl	Depth (m)	Type Ref	Depth (m)	Results	
Medium dense brown sandy slightly clayey angular to subangular fine to coarse GRAVEL of flint. Sand is fine to coarse. (RIVER TERRACE DEPOSITS)		12.00		-1.12										
Medium dense becoming dense cream sandy angular to subangular fine to coarse GRAVEL of flint and chalk. Sand is coarse. (RIVER TERRACE DEPOSITS)			(1.90)								12.00	SPT(C) N=14 (4,4/3,3,3,5)		
											12.50	SPT(C) N=42 (8,10/12,12,9,9)		
Structureless CHALK composed of cream slightly sandy gravelly SILT. Sand is fine to coarse. Gravel is very weak, low density, white angular to subrounded fine to medium chalk and angular to subangular fine to medium flint. (LEWES NODULAR CHALK FORMATION, Grade Dm)		13.90		-3.02	194						14.50 - 14.95	U	14.50	U=41 Blows
													15.10	SPT(S) N=17 (4,5/5,4,4,4)

Remarks:
 1. Logged in general accordance with BS5930:2015+A1:2020 and CIRIA C574 (Engineering in Chalk). 2. Borehole cleared for services prior to excavating a hand dug service inspection pit to 1.2 m bgl. 3. Elevation and location data obtained from third-party GPS survey. 4. SPT Hammer ID 2865 (Energy Ratio Er = 51%). 5. Borehole commenced as a dynamic sampler borehole to 5.0 m bgl with rotary open-hole to 14.1 m bgl and rotary core follow-on to completion. 6. Borehole installed with a raised steel cover. 7. Clean drilling techniques utilised with a reduction and bentonite seal installed from 14 m to 15 m bgl.

Water Level Observations					Flush	
Date	Time	Strike	Duration	Standing	Depth (m)	Return

Coordinates: **E470167.04 N105782.85** Elevation (mAOD): **10.88** Drilled By: **Delta Drilling** Plant Used: **Comacchio GEO300** Logged: **LB** Checked: **BB** Approved: **RM** Scale (m): **1:20**



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Project No: **19-2099.04** Hole ID: **RO104** Page: **5 of 7**

Project: **Brockhampton West, Havant**

Rotary Core Borehole Log Date: **11/03/2021 - 16/03/2021** Client: **Exton Estates**

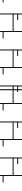

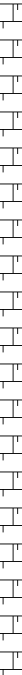

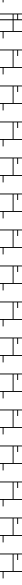
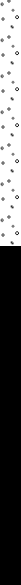
Description of Strata	Legend	Strata Depth (m)	Strata Thickness (m)	Reduced Level (mAOD)	Casing Diameter (mm)	Water	Core Recovery			Sample Details		Test Details		Backfill
							Run (m)	TCR% SCR% RQD%	Min. Fl Av. Fl Max. Fl	Depth (m)	Type Ref	Depth (m)	Results	
Structureless CHALK composed of cream slightly sandy gravelly SILT. Sand is fine to coarse. Gravel is very weak, low density, white angular to subrounded fine to medium chalk and angular to subangular fine to medium flint. (LEWES NODULAR CHALK FORMATION, Grade Dm)				(5.60)			1.5	13 0 0		17.20 - 17.50	D	17.00	SPT(S) N=12 (2,2/3,3,3,3)	
							1.5	66 0 0				18.50	SPT(S) N=6 (2,2/2,1,1,2)	
							1.5	66 0 0						

Remarks:
 1. Logged in general accordance with BS5930:2015+A1:2020 and CIRIA C574 (Engineering in Chalk). 2. Borehole cleared for services prior to excavating a hand dug service inspection pit to 1.2 m bgl. 3. Elevation and location data obtained from third-party GPS survey. 4. SPT Hammer ID 2865 (Energy Ratio Er = 51%). 5. Borehole commenced as a dynamic sampler borehole to 5.0 m bgl with rotary open-hole to 14.1 m bgl and rotary core follow-on to completion. 6. Borehole installed with a raised steel cover. 7. Clean drilling techniques utilised with a reduction and bentonite seal installed from 14 m to 15 m bgl.

Water Level Observations					Flush	
Date	Time	Strike	Duration	Standing	Depth (m)	Return


Coordinates: E470167.04 N105782.85	Elevation (mAOD): 10.88	Drilled By: Delta Drilling	Plant Used: Comacchio GEO300	Logged: LB	Checked: BB	Approved: RM	Scale (m): 1:20
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Rotary Core Borehole Log

Description of Strata	Legend	Strata Depth (m)	Strata Thickness (m)	Reduced Level (mAOD)	Casing Diameter (mm)	Water	Core Recovery			Sample Details		Test Details		Backfill
							Run (m)	TCR% SCR% RQD%	Min. Fl Av. Fl Max. Fl	Depth (m)	Type Ref	Depth (m)	Results	
Structureless CHALK composed of cream slightly sandy gravelly SILT. Sand is fine to coarse. Gravel is very weak, low density, white angular to subrounded fine to medium chalk and angular to subangular fine to medium flint. (LEWES NODULAR CHALK FORMATION, Grade Dm)		19.50		-8.62										
			(2.10)				1.5	80 0 0		20.00 - 20.45	D	20.00		SPT(S) N=14 (2,3/3,3,4,4)
Structureless CHALK composed of white slightly sandy silty subangular to rounded fine to medium GRAVEL of chalk and rare flint. Clasts are upper end of weak medium density white of chalk. Sand is fine to coarse. (LEWES NODULAR CHALK FORMATION, Grade Dc)		21.60		-10.72										
			(2.90)				1.5	33 0 0		22.75 - 22.90	D	21.50		SPT(S) N=20 (4,6/5,5,5,5)
Structureless CHALK composed of white slightly sandy slightly gravelly SILT. Sand is fine to medium. Gravel is very weak low density white subangular to rounded fine to medium of chalk and rare angular to subangular medium flint. (LEWES NODULAR CHALK FORMATION, Grade Dm)														
												23.00		SPT(S) N=21 (3,3/4,5,6,6)

Remarks:
1. Logged in general accordance with BS5930:2015+A1:2020 and CIRIA C574 (Engineering in Chalk). 2. Borehole cleared for services prior to excavating a hand dug service inspection pit to 1.2 m bgl. 3. Elevation and location data obtained from third-party GPS survey. 4. SPT Hammer ID 2865 (Energy Ratio Er = 51%). 5. Borehole commenced as a dynamic sampler borehole to 5.0 m bgl with rotary open-hole to 14.1 m bgl and rotary core follow-on to completion. 6. Borehole installed with a raised steel cover. 7. Clean drilling techniques utilised with a reduction and bentonite seal installed from 14 m to 15 m bgl.

Water Level Observations					Flush		
Date	Time	Strike	Duration	Standing	Depth (m)	Return	

Description of Strata	Legend	Strata Depth (m)	Strata Thickness (m)	Reduced Level (mAOD)	Casing Diameter (mm)	Water	Core Recovery			Sample Details		Test Details		Backfill
							Run (m)	TCR% SCR% RQD%	Min. Fl Av. Fl Max. Fl	Depth (m)	Type Ref	Depth (m)	Results	
Structureless CHALK composed of white slightly sandy slightly gravelly SILT. Sand is fine to medium. Gravel is very weak low density white subangular to rounded fine to medium of chalk and rare angular to subangular medium flint. (LEWES NODULAR CHALK FORMATION, Grade Dm)		24.50		-13.62	146		1.5	66 0 0			24.50	SPT(S) N=50 (9 for 0mm/50 for 0mm)		
Borehole complete at 24.50 m bgl.														

Remarks: 1. Logged in general accordance with BS5930:2015+A1:2020 and CIRIA C574 (Engineering in Chalk). 2. Borehole cleared for services prior to excavating a hand dug service inspection pit to 1.2 m bgl. 3. Elevation and location data obtained from third-party GPS survey. 4. SPT Hammer ID 2865 (Energy Ratio Er = 51%). 5. Borehole commenced as a dynamic sampler borehole to 5.0 m bgl with rotary open-hole to 14.1 m bgl and rotary core follow-on to completion. 6. Borehole installed with a raised steel cover. 7. Clean drilling techniques utilised with a reduction and bentonite seal installed from 14 m to 15 m bgl.	Water Level Observations					Flush	
	Date	Time	Strike	Duration	Standing	Depth (m)	Return

Coordinates: E470167.04 N105782.85	Elevation (mAOD): 10.88	Drilled By: Delta Drilling	Plant Used: Comacchio GEO300	Logged: LB	Checked: BB	Approved: RM	Scale (m): 1:20
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Rotary Core Borehole Log

 Date: **09/03/2021 - 12/03/2021**

 Client: **Exton Estates**

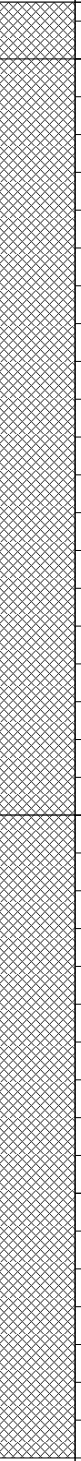
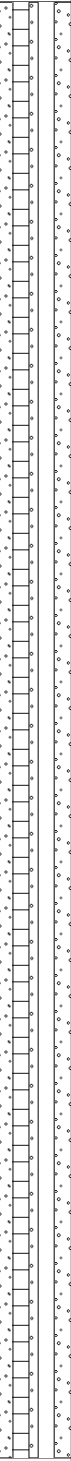
Description of Strata	Legend	Strata Depth (m)	Strata Thickness (m)	Reduced Level (mAOD)	Casing Diameter (mm)	Water	Core Recovery			Sample Details		Test Details		Backfill
							Run (m)	TCR% SCR% RQD%	Min. Fl Av. Fl Max. Fl	Depth (m)	Type Ref	Depth (m)	Results	
MADE GROUND: Soft brown slightly sandy CLAY with frequent rootlets. Sand is fine. (TOPSOIL)		0.15		10.24						0.00 - 0.15	ES			
MADE GROUND: Orangish brown gravelly fine to coarse SAND. Gravel is subangular to rounded fine to medium of flint. (RE-ENGINEERED COVER SYSTEM)		0.50	(0.35)	9.89						0.20 - 0.40	ES			
MADE GROUND: Firm orangish brown mottled dark brown slightly sandy slightly gravelly CLAY with rare glass fragments. Sand is fine to coarse. Gravel is angular to subrounded fine to coarse of flint, brick and chalk. (RE-ENGINEERED COVER SYSTEM)		1.50	(1.00)	8.89								1.20	SPT(S) 50 (4,4/50 for 125mm)	
MADE GROUND: Landfill recovered as frequent wood, occasional fabric, plastic and rare glass with approximately 65% matrix of very soft orangish brown mottled black gravelly CLAY. Gravel is subangular to subrounded fine to medium of brick and flint. (LANDFILL)			(2.50)			2.50				2.00 - 3.00	ES			

Remarks:
 1. Logged in general accordance with BS5930:2015+A1:2020 and CIRIA C574 (Engineering in Chalk). 2. Borehole cleared for services prior to excavating a hand dug service inspection pit to 1.2 m bgl. 3. Elevation and location data obtained from third-party GPS survey. 4. SPT Hammer ID 2865 (Energy Ratio Er = 51%). 5. Borehole commenced as a dynamic sampler borehole to 2.0 m bgl with rotary open-hole to 15 m bgl and rotary core follow-on to completion. 6. Borehole installed with a raised steel cover. 7. Clean drilling techniques utilised with a reduction and bentonite seal installed from 14.5 m to 15.5 m bgl.

Water Level Observations
Flush

Date	Time	Strike	Duration	Standing	Depth (m)	Return
09/03/2021		2.50 m	min			

Coordinates: E470241.77 N105779.04	Elevation (mAOD): 10.39	Drilled By: Delta Drilling	Plant Used: Comacchio GEO300	Logged: LB	Checked: BB	Approved: RM	Scale (m): 1:20
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Description of Strata	Legend	Strata Depth (m)	Strata Thickness (m)	Reduced Level (mAOD)	Casing Diameter (mm)	Water	Core Recovery			Sample Details		Test Details		Backfill
							Run (m)	TCR% SCR% RQD%	Min. Fl Av. Fl Max. Fl	Depth (m)	Type Ref	Depth (m)	Results	
MADE GROUND: Landfill recovered as frequent wood, occasional fabric, plastic and rare glass with approximately 65% matrix of very soft orangish brown mottled black gravelly CLAY. Gravel is subangular to subrounded fine to medium of brick and flint. (LANDFILL)		4.00		6.39										
MADE GROUND: Landfill recovered as frequent wood, occasional plastic, styrofoam, fabric, rare glass, netting, cable and leather with approximately 50% matrix of dark grey slightly clayey subangular to subrounded fine to medium GRAVEL of flint, brick and clinker. (LANDFILL)			(2.00)						5.00 - 6.00	ES				
MADE GROUND: Landfill recovered as frequent wood, occasional plastic, rare leather, styrofoam and rubber with approximately 60% matrix of very soft dark grey gravelly CLAY. Gravel is angular to subrounded fine to medium of clinker and brick. Moderate hydrocarbon odour throughout. (LANDFILL)		6.00		4.39					6.00 - 7.00	ES				
From 7.0 to 10.4 m bgl: Hydrocarbon odour becomes slight.														

Remarks: 1. Logged in general accordance with BS5930:2015+A1:2020 and CIRIA C574 (Engineering in Chalk). 2. Borehole cleared for services prior to excavating a hand dug service inspection pit to 1.2 m bgl. 3. Elevation and location data obtained from third-party GPS survey. 4. SPT Hammer ID 2865 (Energy Ratio Er = 51%). 5. Borehole commenced as a dynamic sampler borehole to 2.0 m bgl with rotary open-hole to 15 m bgl and rotary core follow-on to completion. 6. Borehole installed with a raised steel cover. 7. Clean drilling techniques utilised with a reduction and bentonite seal installed from 14.5 m to 15.5 m bgl.	Water Level Observations					Flush	
	Date	Time	Strike	Duration	Standing	Depth (m)	Return
	09/03/2021		2.50 m	min			
Coordinates: E470241.77 N105779.04	Elevation (mAOD): 10.39	Drilled By: Delta Drilling	Plant Used: Comacchio GEO300	Logged: LB	Checked: BB	Approved: RM	Scale (m): 1:20



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Project No: **19-2099.04** Hole ID: **RO105** Page: **3 of 6**

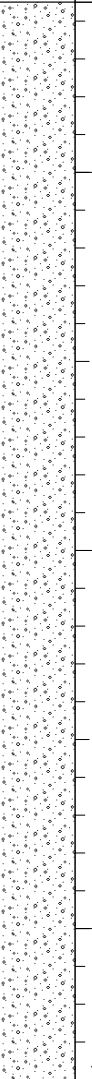
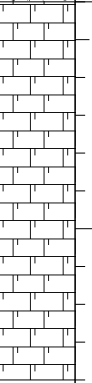
Project: **Brockhampton West, Havant**

Rotary Core Borehole Log Date: **09/03/2021 - 12/03/2021** Client: **Exton Estates**

Description of Strata	Legend	Strata Depth (m)	Strata Thickness (m)	Reduced Level (mAOD)	Casing Diameter (mm)	Water	Core Recovery			Sample Details		Test Details		Backfill
							Run (m)	TCR% SCR% RQD%	Min. Fl Av. Fl Max. Fl	Depth (m)	Type Ref	Depth (m)	Results	
MADE GROUND: Landfill recovered as frequent wood, occasional plastic, rare leather, styrofoam and rubber with approximately 60% matrix of very soft dark grey gravelly CLAY. Gravel is angular to subrounded fine to medium of clinker and brick. Moderate hydrocarbon odour throughout . (LANDFILL)			(4.70)											
Light orange and cream slightly sandy angular to subrounded fine to medium GRAVEL of flint and chalk. Sand is fine to coarse. (RIVER TERRACE DEPOSITS)		10.70		-0.31					11.00 - 12.00	ES				

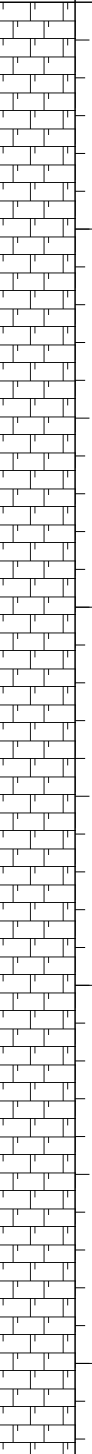
Remarks: 1. Logged in general accordance with BS5930:2015+A1:2020 and CIRIA C574 (Engineering in Chalk). 2. Borehole cleared for services prior to excavating a hand dug service inspection pit to 1.2 m bgl. 3. Elevation and location data obtained from third-party GPS survey. 4. SPT Hammer ID 2865 (Energy Ratio Er = 51%). 5. Borehole commenced as a dynamic sampler borehole to 2.0 m bgl with rotary open-hole to 15 m bgl and rotary core follow-on to completion. 6. Borehole installed with a raised steel cover. 7. Clean drilling techniques utilised with a reduction and bentonite seal installed from 14.5 m to 15.5 m bgl.	Water Level Observations				Flush		
	Date	Time	Strike	Duration	Standing	Depth (m)	Return
09/03/2021		2.50 m	min				

Coordinates: E470241.77 N105779.04	Elevation (mAOD): 10.39	Drilled By: Delta Drilling	Plant Used: Comacchio GEO300	Logged: LB	Checked: BB	Approved: RM	Scale (m): 1:20
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Description of Strata	Legend	Strata Depth (m)	Strata Thickness (m)	Reduced Level (mAOD)	Casing Diameter (mm)	Water	Core Recovery			Sample Details		Test Details		Backfill
							Run (m)	TCR% SCR% RQD%	Min. Fl Av. Fl Max. Fl	Depth (m)	Type Ref	Depth (m)	Results	
Light orange and cream slightly sandy angular to subrounded fine to medium GRAVEL of flint and chalk. Sand is fine to coarse. (RIVER TERRACE DEPOSITS)			(3.70)											
Structureless CHALK composed of cream gravelly SILT. Gravel is very weak, low density white with occasional black specks subangular to subrounded fine to medium chalk and angular to subangular fine to medium flint. (LEWES NODULAR CHALK FORMATION, Grade Dm)		14.40		-4.01	194				15.00 - 15.45	U	15.00	U=21 Blows		

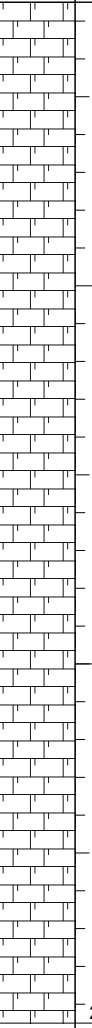
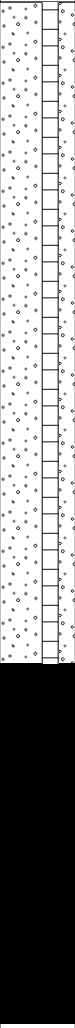
Remarks: 1. Logged in general accordance with BS5930:2015+A1:2020 and CIRIA C574 (Engineering in Chalk). 2. Borehole cleared for services prior to excavating a hand dug service inspection pit to 1.2 m bgl. 3. Elevation and location data obtained from third-party GPS survey. 4. SPT Hammer ID 2865 (Energy Ratio Er = 51%). 5. Borehole commenced as a dynamic sampler borehole to 2.0 m bgl with rotary open-hole to 15 m bgl and rotary core follow-on to completion. 6. Borehole installed with a raised steel cover. 7. Clean drilling techniques utilised with a reduction and bentonite seal installed from 14.5 m to 15.5 m bgl.	Water Level Observations				Flush		
	Date	Time	Strike	Duration	Standing	Depth (m)	Return
	09/03/2021		2.50 m	min			

Coordinates: E470241.77 N105779.04	Elevation (mAOD): 10.39	Drilled By: Delta Drilling	Plant Used: Comacchio GEO300	Logged: LB	Checked: BB	Approved: RM	Scale (m): 1:20
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Description of Strata	Legend	Strata Depth (m)	Strata Thickness (m)	Reduced Level (mAOD)	Casing Diameter (mm)	Water	Core Recovery			Sample Details		Test Details		Backfill
							Run (m)	TCR% SCR% RQD%	Min. Fl Av. Fl Max. Fl	Depth (m)	Type Ref	Depth (m)	Results	
Structureless CHALK composed of cream gravelly SILT. Gravel is very weak, low density white with occasional black specks subangular to subrounded fine to medium chalk and angular to subangular fine to medium flint. (LEWES NODULAR CHALK FORMATION, Grade Dm)				(7.55)										
							1.4	42 0 0		16.00 - 16.25	D	15.60	SPT(S) N=12 (3,3/3,2,4,3)	
										17.00 - 17.45	D	17.00	SPT(S) N=16 (3,3/4,4,4,4)	
												18.50	SPT(S) N=17 (2,3/4,4,4,5)	
							1.5	87 0 0						

Remarks:
1. Logged in general accordance with BS5930:2015+A1:2020 and CIRIA C574 (Engineering in Chalk). 2. Borehole cleared for services prior to excavating a hand dug service inspection pit to 1.2 m bgl. 3. Elevation and location data obtained from third-party GPS survey. 4. SPT Hammer ID 2865 (Energy Ratio Er = 51%). 5. Borehole commenced as a dynamic sampler borehole to 2.0 m bgl with rotary open-hole to 15 m bgl and rotary core follow-on to completion. 6. Borehole installed with a raised steel cover. 7. Clean drilling techniques utilised with a reduction and bentonite seal installed from 14.5 m to 15.5 m bgl.

Water Level Observations					Flush	
Date	Time	Strike	Duration	Standing	Depth (m)	Return
09/03/2021		2.50 m	min			

Description of Strata	Legend	Strata Depth (m)	Strata Thickness (m)	Reduced Level (mAOD)	Casing Diameter (mm)	Water	Core Recovery			Sample Details		Test Details		Backfill
							Run (m)	TCR% SCR% RQD%	Min. Fl Av. Fl Max. Fl	Depth (m)	Type Ref	Depth (m)	Results	
Structureless CHALK composed of cream gravelly SILT. Gravel is very weak, low density white with occasional black specks subangular to subrounded fine to medium chalk and angular to subangular fine to medium flint. (LEWES NODULAR CHALK FORMATION, Grade Dm)		21.95		-11.56	146		1.5	66 0 0		19.70 - 19.80	D	20.00	SPT(S) N=25 (5,5/6,7,7,5)	
									21.25 - 21.50	D	21.50	SPT(S) N=22 (3,5/5,5,6,6)		
Borehole complete at 21.95 m bgl.														

Remarks: 1. Logged in general accordance with BS5930:2015+A1:2020 and CIRIA C574 (Engineering in Chalk). 2. Borehole cleared for services prior to excavating a hand dug service inspection pit to 1.2 m bgl. 3. Elevation and location data obtained from third-party GPS survey. 4. SPT Hammer ID 2865 (Energy Ratio Er = 51%). 5. Borehole commenced as a dynamic sampler borehole to 2.0 m bgl with rotary open-hole to 15 m bgl and rotary core follow-on to completion. 6. Borehole installed with a raised steel cover. 7. Clean drilling techniques utilised with a reduction and bentonite seal installed from 14.5 m to 15.5 m bgl.	Water Level Observations					Flush	
	Date	Time	Strike	Duration	Standing	Depth (m)	Return
	09/03/2021		2.50 m	min			
Coordinates: E470241.77 N105779.04	Elevation (mAOD): 10.39	Drilled By: Delta Drilling	Plant Used: Comacchio GEO300	Logged: LB	Checked: BB	Approved: RM	Scale (m): 1:20

Description of Strata	Legend	Strata Depth (m)	Strata Thickness (m)	Reduced Level (mAOD)	Casing Diameter (mm)	Water	Core Recovery			Sample Details		Test Details		Backfill
							Run (m)	TCR% SCR% RQD%	Min. Fl Av. Fl Max. Fl	Depth (m)	Type Ref	Depth (m)	Results	
MADE GROUND: Soft dark brown slightly sandy slightly gravelly CLAY with occasional rootlets. Sand is fine. Gravel is subangular to subrounded fine to medium of natural lithologies. (TOPSOIL)		0.20	(0.20)	12.48						0.00 - 0.20	ES			
MADE GROUND: Yellow slightly gravelly slightly clayey fine SAND. Gravel is subrounded to rounded fine to medium of sandstone. (RE-ENGINEERED COVER SYSTEM)		1.20	(1.00)	11.48						0.50 - 0.90	ES	1.20	SPT(S) N=15 (3,4/4,4,3,4)	
MADE GROUND: Soft dark grey gravelly CLAY with rare glass fragments. Gravel is subangular to rounded fine to medium of natural lithologies. (RE-ENGINEERED COVER SYSTEM)		1.50	(0.30)	11.18										
MADE GROUND: Landfill recovered as frequent wood, metal and occasional wool fibres with approximately 80% matrix of very soft dark grey slightly gravelly CLAY. Gravel is angular to subrounded fine to medium of flint, brick and concrete. Slight hydrocarbon odour throughout. (LANDFILL)			(2.50)							2.00 - 3.00	ES			

Remarks:
1. Logged in general accordance with BS5930:2015+A1:2020 and CIRIA C574 (Engineering in Chalk). 2. Borehole cleared for services prior to excavating a hand dug service inspection pit to 1.2 m bgl. 3. Elevation and location data obtained from third-party GPS survey. 4. SPT Hammer ID 2865 (Energy Ratio Er = 51%). 5. Borehole commenced as a dynamic sampler borehole to 1.5 m bgl with rotary open-hole to 14.1 m bgl and rotary core follow-on to completion. 6. Borehole installed with a raised steel cover. 7. Clean drilling techniques utilised with a reduction and bentonite seal installed from 13.6 m to 14.6 m bgl.

Water Level Observations					Flush	
Date	Time	Strike	Duration	Standing	Depth (m)	Return



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Project No: **19-2099.04** Hole ID: **RO106** Page: **2 of 8**

Project: **Brockhampton West, Havant**

Rotary Core Borehole Log Date: **16/03/2021 - 18/03/2021** Client: **Exton Estates**

Description of Strata	Legend	Strata Depth (m)	Strata Thickness (m)	Reduced Level (mAOD)	Casing Diameter (mm)	Water	Core Recovery			Sample Details		Test Details		Backfill
							Run (m)	TCR% SCR% RQD%	Min. Fl Av. Fl Max. Fl	Depth (m)	Type Ref	Depth (m)	Results	
MADE GROUND: Landfill recovered as frequent wood, metal and occasional wool fibres with approximately 80% matrix of very soft dark grey slightly gravelly CLAY. Gravel is angular to subrounded fine to medium of flint, brick and concrete. Slight hydrocarbon odour throughout. (LANDFILL)		4.00		8.68										
MADE GROUND: Landfill recovered as occasional wood and rare plastic with approximately 85% matrix of dark grey clayey subangular to subrounded fine to medium GRAVEL of flint, brick and concrete. (LANDFILL)				(7.00)										
From 6.0 to 11.0 m bgl: Frequent plastic, wood, occasional metal, rare glass and occasional fabric.														

Remarks:
 1. Logged in general accordance with BS5930:2015+A1:2020 and CIRIA C574 (Engineering in Chalk). 2. Borehole cleared for services prior to excavating a hand dug service inspection pit to 1.2 m bgl. 3. Elevation and location data obtained from third-party GPS survey. 4. SPT Hammer ID 2865 (Energy Ratio Er = 51%). 5. Borehole commenced as a dynamic sampler borehole to 1.5 m bgl with rotary open-hole to 14.1 m bgl and rotary core follow-on to completion. 6. Borehole installed with a raised steel cover. 7. Clean drilling techniques utilised with a reduction and bentonite seal installed from 13.6 m to 14.6 m bgl.

Water Level Observations					Flush	
Date	Time	Strike	Duration	Standing	Depth (m)	Return

Coordinates: **E470226.12 N105689.00** Elevation (mAOD): **12.68** Drilled By: **Delta Drilling** Plant Used: **Comacchio GEO300** Logged: **LB** Checked: **BB** Approved: **RM** Scale (m): **1:20**



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Project No: **19-2099.04** Hole ID: **RO106** Page: **3 of 8**

Project: **Brockhampton West, Havant**

Rotary Core Borehole Log

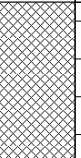
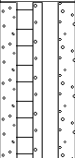
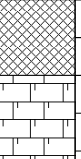
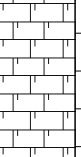

Date: **16/03/2021 - 18/03/2021** Client: **Exton Estates**

Description of Strata	Legend	Strata Depth (m)	Strata Thickness (m)	Reduced Level (mAOD)	Casing Diameter (mm)	Water	Core Recovery			Sample Details		Test Details		Backfill
							Run (m)	TCR% SCR% RQD%	Min. Fl Av. Fl Max. Fl	Depth (m)	Type Ref	Depth (m)	Results	
MADE GROUND: Landfill recovered as occasional wood and rare plastic with approximately 85% matrix of dark grey clayey subangular to subrounded fine to medium GRAVEL of flint, brick and concrete. (LANDFILL)														
		11.00		1.68								10.30	SPT(C) N=16 (6,3/4,4,4,4)	
												10.75	SPT(C) N=20 (4,3/2,3,6,9)	
												11.00 - 11.50	ES	
MADE GROUND: Landfill recovered as frequent plastic, wood, occasional metal and rare plastic with approximately 30% matrix of very soft dark grey slightly gravelly CLAY. Gravel is subangular to rounded fine to medium of flint and brick. Strong sweet solvent odour. (LANDFILL)		11.50	(0.50)	1.18								11.20	SPT(C) N=20 (9,6/6,5,4,5)	

Remarks:
 1. Logged in general accordance with BS5930:2015+A1:2020 and CIRIA C574 (Engineering in Chalk). 2. Borehole cleared for services prior to excavating a hand dug service inspection pit to 1.2 m bgl. 3. Elevation and location data obtained from third-party GPS survey. 4. SPT Hammer ID 2865 (Energy Ratio Er = 51%). 5. Borehole commenced as a dynamic sampler borehole to 1.5 m bgl with rotary open-hole to 14.1 m bgl and rotary core follow-on to completion. 6. Borehole installed with a raised steel cover. 7. Clean drilling techniques utilised with a reduction and bentonite seal installed from 13.6 m to 14.6 m bgl.

Water Level Observations					Flush	
Date	Time	Strike	Duration	Standing	Depth (m)	Return

Coordinates: E470226.12 N105689.00	Elevation (mAOD): 12.68	Drilled By: Delta Drilling	Plant Used: Comacchio GEO300	Logged: LB	Checked: BB	Approved: RM	Scale (m): 1:20
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Description of Strata	Legend	Strata Depth (m)	Strata Thickness (m)	Reduced Level (mAOD)	Casing Diameter (mm)	Water	Core Recovery			Sample Details		Test Details		Backfill
							Run (m)	TCR% SCR% RQD%	Min. Fl Av. Fl Max. Fl	Depth (m)	Type Ref	Depth (m)	Results	
MADE GROUND: Landfill recovered as frequent wood, plastic, fabric, occasional metal, rubber fragments and rare glass with approximately 20% matrix of grey slightly clayey fine SAND. (LANDFILL)											11.65	SPT(C) N=25 (4,5/5,8,7)		
At 12.5 m bgl: Wooden sleeper (approximately 400 mm thickness).			(2.40)								12.50 - 13.00	ES		
MADE GROUND: Brown sandy angular to subangular fine to medium GRAVEL of flint with occasional plastic and wood fragments. Sand is fine to coarse. (REWORKED RIVER TERRACE DEPOSITS)		13.90		-1.22										
Structureless CHALK composed of cream gravelly SILT. Gravel is very weak low density white subangular to rounded fine to medium chalk and angular to subangular fine to medium of flint. (LEWES NODULAR CHALK FORMATION, Grade Dm)		14.10	(0.20)	-1.42		194								
											15.00 - 15.45 15.00 - 15.50	U ES	15.00 U=45 Blows	

Remarks: 1. Logged in general accordance with BS5930:2015+A1:2020 and CIRIA C574 (Engineering in Chalk). 2. Borehole cleared for services prior to excavating a hand dug service inspection pit to 1.2 m bgl. 3. Elevation and location data obtained from third-party GPS survey. 4. SPT Hammer ID 2865 (Energy Ratio Er = 51%). 5. Borehole commenced as a dynamic sampler borehole to 1.5 m bgl with rotary open-hole to 14.1 m bgl and rotary core follow-on to completion. 6. Borehole installed with a raised steel cover. 7. Clean drilling techniques utilised with a reduction and bentonite seal installed from 13.6 m to 14.6 m bgl.	Water Level Observations					Flush	
	Date	Time	Strike	Duration	Standing	Depth (m)	Return

Coordinates: E470226.12 N105689.00	Elevation (mAOD): 12.68	Drilled By: Delta Drilling	Plant Used: Comacchio GEO300	Logged: LB	Checked: BB	Approved: RM	Scale (m): 1:20
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Project No: **19-2099.04** Hole ID: **RO106** Page: **5 of 8**

Project: **Brockhampton West, Havant**

Rotary Core Borehole Log Date: **16/03/2021 - 18/03/2021** Client: **Exton Estates**

Description of Strata	Legend	Strata Depth (m)	Strata Thickness (m)	Reduced Level (mAOD)	Casing Diameter (mm)	Water	Core Recovery			Sample Details		Test Details		Backfill
							Run (m)	TCR% SCR% RQD%	Min. Fl Av. Fl Max. Fl	Depth (m)	Type Ref	Depth (m)	Results	
Structureless CHALK composed of cream gravelly SILT. Gravel is very weak low density white subangular to rounded fine to medium chalk and angular to subangular fine to medium of flint. (LEWES NODULAR CHALK FORMATION, Grade Dm)				(7.40)			1.4	0 0 0				15.60	SPT(S) N=33 (4,6/9,8,8,8)	
							1.5	13 0 0				17.00	SPT(S) N=19 (5,7/5,4,5,5)	
							1.5	0 0 0				18.50	SPT(S) N=16 (2,2/4,4,4,4)	

Remarks:
 1. Logged in general accordance with BS5930:2015+A1:2020 and CIRIA C574 (Engineering in Chalk). 2. Borehole cleared for services prior to excavating a hand dug service inspection pit to 1.2 m bgl. 3. Elevation and location data obtained from third-party GPS survey. 4. SPT Hammer ID 2865 (Energy Ratio Er = 51%). 5. Borehole commenced as a dynamic sampler borehole to 1.5 m bgl with rotary open-hole to 14.1 m bgl and rotary core follow-on to completion. 6. Borehole installed with a raised steel cover. 7. Clean drilling techniques utilised with a reduction and bentonite seal installed from 13.6 m to 14.6 m bgl.

Water Level Observations					Flush	
Date	Time	Strike	Duration	Standing	Depth (m)	Return

Coordinates: E470226.12 N105689.00	Elevation (mAOD): 12.68	Drilled By: Delta Drilling	Plant Used: Comacchio GEO300	Logged: LB	Checked: BB	Approved: RM	Scale (m): 1:20
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Project No: **19-2099.04** Hole ID: **RO106** Page: **6 of 8**

Project: **Brockhampton West, Havant**

Rotary Core Borehole Log Date: **16/03/2021 - 18/03/2021** Client: **Exton Estates**

Description of Strata	Legend	Strata Depth (m)	Strata Thickness (m)	Reduced Level (mAOD)	Casing Diameter (mm)	Water	Core Recovery			Sample Details		Test Details		Backfill
							Run (m)	TCR% SCR% RQD%	Min. Fl Av. Fl Max. Fl	Depth (m)	Type Ref	Depth (m)	Results	
Structureless CHALK composed of cream gravelly SILT. Gravel is very weak low density white subangular to rounded fine to medium chalk and angular to subangular fine to medium of flint. (LEWES NODULAR CHALK FORMATION, Grade Dm)		21.50		-8.82			1.5	66 0 0			20.00	SPT(S) N=16 (2,3/4,4,4,4)		
Structureless CHALK composed of sandy silty angular to subangular fine to coarse GRAVEL of flint and chalk. Sand is fine to coarse. Clasts are very weak low density cream of chalk. (LEWES NODULAR CHALK FORMATION, Grade Dc)		23.00	(1.50)	-10.32			1.5	100 0 0			21.50	SPT(S) N=7 (2,1/2,2,1,2)		
Structureless CHALK composed of											23.00	SPT(S) N=17 (1,2/3,2,5,7)		

Remarks:
 1. Logged in general accordance with BS5930:2015+A1:2020 and CIRIA C574 (Engineering in Chalk). 2. Borehole cleared for services prior to excavating a hand dug service inspection pit to 1.2 m bgl. 3. Elevation and location data obtained from third-party GPS survey. 4. SPT Hammer ID 2865 (Energy Ratio Er = 51%). 5. Borehole commenced as a dynamic sampler borehole to 1.5 m bgl with rotary open-hole to 14.1 m bgl and rotary core follow-on to completion. 6. Borehole installed with a raised steel cover. 7. Clean drilling techniques utilised with a reduction and bentonite seal installed from 13.6 m to 14.6 m bgl.

Water Level Observations					Flush		
Date	Time	Strike	Duration	Standing	Depth (m)	Return	

Coordinates: **E470226.12 N105689.00** Elevation (mAOD): **12.68** Drilled By: **Delta Drilling** Plant Used: **Comacchio GEO300** Logged: **LB** Checked: **BB** Approved: **RM** Scale (m): **1:20**



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Project No: **19-2099.04** Hole ID: **RO106** Page: **7 of 8**

Project: **Brockhampton West, Havant**





Rotary Core Borehole Log Date: **16/03/2021 - 18/03/2021** Client: **Exton Estates**

Description of Strata	Legend	Strata Depth (m)	Strata Thickness (m)	Reduced Level (mAOD)	Casing Diameter (mm)	Water	Core Recovery			Sample Details		Test Details		Backfill
							Run (m)	TCR% SCR% RQD%	Min. Fl Av. Fl Max. Fl	Depth (m)	Type Ref	Depth (m)	Results	
Structureless CHALK composed of cream gravelly SILT. Gravel is very weak low density white subangular to rounded fine to medium chalk and angular to subangular fine to medium of flint. (LEWES NODULAR CHALK FORMATION, Grade Dm)			(4.00)				1.5	66 0 0		24.20 - 24.50	D	24.50	SPT(S) N=15 (2,3/4,4,3,4)	
							1.5	100 0 0		26.00 - 26.45	D	26.00	SPT(S) N=20 (2,4/5,5,4,6)	
							1.5	100 0 0						

Remarks:
 1. Logged in general accordance with BS5930:2015+A1:2020 and CIRIA C574 (Engineering in Chalk). 2. Borehole cleared for services prior to excavating a hand dug service inspection pit to 1.2 m bgl. 3. Elevation and location data obtained from third-party GPS survey. 4. SPT Hammer ID 2865 (Energy Ratio Er = 51%). 5. Borehole commenced as a dynamic sampler borehole to 1.5 m bgl with rotary open-hole to 14.1 m bgl and rotary core follow-on to completion. 6. Borehole installed with a raised steel cover. 7. Clean drilling techniques utilised with a reduction and bentonite seal installed from 13.6 m to 14.6 m bgl.

Water Level Observations					Flush		
Date	Time	Strike	Duration	Standing	Depth (m)	Return	

Coordinates: **E470226.12 N105689.00** Elevation (mAOD): **12.68** Drilled By: **Delta Drilling** Plant Used: **Comacchio GEO300** Logged: **LB** Checked: **BB** Approved: **RM** Scale (m): **1:20**

Description of Strata	Legend	Strata Depth (m)	Strata Thickness (m)	Reduced Level (mAOD)	Casing Diameter (mm)	Water	Core Recovery			Sample Details		Test Details		Backfill
							Run (m)	TCR% SCR% RQD%	Min. Fl Av. Fl Max. Fl	Depth (m)	Type Ref	Depth (m)	Results	
Structureless CHALK composed of cream gravelly SILT. Gravel is very weak low density white subangular to rounded fine to medium chalk and angular to subangular fine to medium of flint. (LEWES NODULAR CHALK FORMATION, Grade Dm)		27.00	(0.50)	-14.32										
Structureless CHALK composed of sandy silty angular to subangular fine to coarse GRAVEL. Sand is fine to coarse. Clasts are very weak low density white of chalk. (LEWES NODULAR CHALK FORMATION, Grade Dc)		27.50		-14.82							27.50	SPT(S) N=27 (5,5/6,7,7,7)		
Structureless CHALK composed of white slightly sandy slightly gravelly SILT. Sand is fine to coarse. Gravel is very weak low density white subangular to subrounded fine to coarse of chalk. (LEWES NODULAR CHALK FORMATION, Grade Dm)		28.50	(1.00)	-15.82			1.5	100 0 0	28.00 - 28.30	D				
Structureless CHALK composed of sandy subangular to rounded fine to medium GRAVEL of chalk and flint. Clasts are very weak, low density white chalk. Matrix is white. (LEWES NODULAR CHALK FORMATION, Grade Dc)		29.45	(0.95)	-16.77	146				29.00 - 29.45	D	29.00	SPT(S) N=47 (6,10/10,12,15,10)		
Borehole complete at 29.45 m bgl.														

Remarks:
1. Logged in general accordance with BS5930:2015+A1:2020 and CIRIA C574 (Engineering in Chalk). 2. Borehole cleared for services prior to excavating a hand dug service inspection pit to 1.2 m bgl. 3. Elevation and location data obtained from third-party GPS survey. 4. SPT Hammer ID 2865 (Energy Ratio Er = 51%). 5. Borehole commenced as a dynamic sampler borehole to 1.5 m bgl with rotary open-hole to 14.1 m bgl and rotary core follow-on to completion. 6. Borehole installed with a raised steel cover. 7. Clean drilling techniques utilised with a reduction and bentonite seal installed from 13.6 m to 14.6 m bgl.

Water Level Observations					Flush		
Date	Time	Strike	Duration	Standing	Depth (m)	Return	

Description of Strata	Legend	Strata Depth (m)	Reduced Level (mAOD)	Casing Diameter (mm)	Water Strike	Sample Details			Test Details		Backfill
						Depth (m)	Type	Ref	Depth (m)	Results	
MADE GROUND: Soft dark brown sandy CLAY with frequent rootlets. Sand is fine. (TOPSOIL)		0.30	10.44			0.10 - 0.30	ES				
MADE GROUND: Firm locally stiff brown slightly sandy CLAY with frequent rootlets. Sand is fine to medium. (RE-ENGINEERED COVER SYSTEM)		1.30	9.44			1.20 - 1.65	D	1.20	U=56 Blows		
MADE GROUND: Orange mottled red and grey slightly sandy slightly gravelly CLAY with occasional rootlets. Sand is fine to medium. Gravel is subangular to subrounded fine to medium of natural lithologies including sandstone, flint and chalk. (RE-ENGINEERED COVER SYSTEM)		1.50	9.24			1.20 - 1.65	U				
MADE GROUND: Stiff locally very stiff dark brown slightly sandy gravelly CLAY with rare glass, ceramic and plastic fragments. Sand is fine. Gravel is angular to rounded fine to medium of mudstone, sandstone, chalk, flint and rare brick. (RE-ENGINEERED COVER SYSTEM)		3.20	7.54			3.00 - 3.45	D	3.00	SPT(S) N=16 (3,4/4,4,4,4)		
MADE GROUND: Firm locally stiff brown gravelly CLAY with occasional plastic, ceramic and paper fragments. Gravel is angular to subangular fine to coarse of brick and natural lithologies including flint. (RE-ENGINEERED COVER SYSTEM)		3.50	7.24			3.50 - 4.00	ES				
MADE GROUND: Landfill recovered as frequent wood, plastic, fabric, occasional brick and rare flint with approximately 70% matrix of very soft brown slightly sandy CLAY. Sand is fine. (LANDFILL)											
At 3.5 m bgl: Plastic obstruction (approximately 100 mm thickness).											
At 3.8 m bgl: Wooden sleeper (approximately 200 mm thickness).											
At 4.5 m bgl: Wooden sleeper (approximately 400 mm thickness).											
		5.40	5.34								
MADE GROUND: Very soft brown slightly sandy CLAY. Sand is fine. (SUSPECTED ORIGINAL RE-ENGINEERED COVER SYSTEM)		5.60	5.14								

Remarks:
1. Logged in general accordance with BS5930:2015+A1:2020 and CIRIA C574 (Engineering in Chalk). 2. Borehole cleared for services prior to excavating a hand dug service inspection pit to 1.2 m bgl. 3. Elevation and location data obtained from third-party GPS survey. 4. SPT Hammer ID 2865 (Energy Ratio Er = 51%). 5. Borehole commenced as a dynamic sampler borehole to 3.0 m bgl with rotary open-hole follow-on to completion. 6. Borehole installed with a raised steel cover. 7. Clean drilling techniques utilised with a reduction and bentonite seal installed from 10 m to 11 m bgl.

Water Level Observations					Chiselling	
Date	Time	Strike	Duration	Standing	Depth (m)	Time (h:m)



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Project No: **19-2099.04** Hole ID: **RO107** Page: **2 of 4**

Project: **Brockhampton West, Havant**

Rotary Auger Borehole Log Date: **23/02/2021 - 24/02/2021** Client: **Exton Estates**

Description of Strata	Legend	Strata Depth (m)	Reduced Level (mAOD)	Casing Diameter (mm)	Water Strike	Sample Details			Test Details		Backfill
						Depth (m)	Type	Ref	Depth (m)	Results	
MADE GROUND: Landfill recovered as frequent plastic, wood, occasional paper, rare brick, rare glass, rare slate and ash (approximately 5%) with approximately 20% matrix of very soft brown slightly sandy CLAY. Sand is fine. (LANDFILL)		9.60	1.14								
Very soft brown mottled grey silty CLAY. (ALLUVIUM)				194							

Remarks:
 1. Logged in general accordance with BS5930:2015+A1:2020 and CIRIA C574 (Engineering in Chalk). 2. Borehole cleared for services prior to excavating a hand dug service inspection pit to 1.2 m bgl. 3. Elevation and location data obtained from third-party GPS survey. 4. SPT Hammer ID 2865 (Energy Ratio Er = 51%). 5. Borehole commenced as a dynamic sampler borehole to 3.0 m bgl with rotary open-hole follow-on to completion. 6. Borehole installed with a raised steel cover. 7. Clean drilling techniques utilised with a reduction and bentonite seal installed from 10 m to 11 m bgl.

Water Level Observations					Chiselling	
Date	Time	Strike	Duration	Standing	Depth (m)	Time (h:m)

Coordinates: E469961.03 N105591.99	Elevation (mAOD): 10.74	Drilled By: Delta Drilling	Plant Used: Comacchio GEO300	Logged: LB	Checked: BB	Approved: RM	Scale (m): 1:30
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Project No: **19-2099.04** Hole ID: **RO107** Page: **3 of 4**

Project: **Brockhampton West, Havant**

Rotary Auger Borehole Log Date: **23/02/2021 - 24/02/2021** Client: **Exton Estates**

Description of Strata	Legend	Strata Depth (m)	Reduced Level (mAOD)	Casing Diameter (mm)	Water Strike	Sample Details			Test Details		Backfill
						Depth (m)	Type	Ref	Depth (m)	Results	
Very soft brown mottled grey silty CLAY. (ALLUVIUM)		12.20	-1.46								
Structureless CHALK composed of slightly sandy silty angular to subangular fine to medium GRAVEL. Sand is fine to medium. Clasts are very weak, low density, cream chalk. Matrix is cream. (LEWES NODULAR CHALK FORMATION, Grade Dc)											

Remarks:
 1. Logged in general accordance with BS5930:2015+A1:2020 and CIRIA C574 (Engineering in Chalk). 2. Borehole cleared for services prior to excavating a hand dug service inspection pit to 1.2 m bgl. 3. Elevation and location data obtained from third-party GPS survey. 4. SPT Hammer ID 2865 (Energy Ratio Er = 51%). 5. Borehole commenced as a dynamic sampler borehole to 3.0 m bgl with rotary open-hole follow-on to completion. 6. Borehole installed with a raised steel cover. 7. Clean drilling techniques utilised with a reduction and bentonite seal installed from 10 m to 11 m bgl.

Water Level Observations					Chiselling	
Date	Time	Strike	Duration	Standing	Depth (m)	Time (h:m)

Coordinates: E469961.03 N105591.99	Elevation (mAOD): 10.74	Drilled By: Delta Drilling	Plant Used: Comacchio GEO300	Logged: LB	Checked: BB	Approved: RM	Scale (m): 1:30
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Project No: **19-2099.04** Hole ID: **RO107** Page: **4 of 4**

Project: **Brockhampton West, Havant**

Rotary Auger Borehole Log Date: **23/02/2021 - 24/02/2021** Client: **Exton Estates**

Description of Strata	Legend	Strata Depth (m)	Reduced Level (mAOD)	Casing Diameter (mm)	Water Strike	Sample Details			Test Details		Backfill
						Depth (m)	Type	Ref	Depth (m)	Results	
Structureless CHALK composed of slightly sandy silty angular to subangular fine to medium GRAVEL. Sand is fine to medium. Clasts are very weak, low density, cream chalk. Matrix is cream. (LEWES NODULAR CHALK FORMATION, Grade Dc)											
Borehole complete at 20.00m bgl.		20.00	-9.26	146							

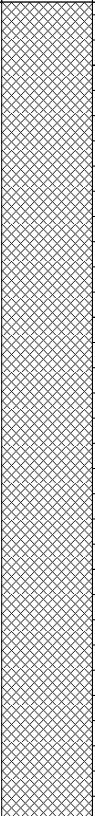
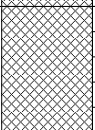
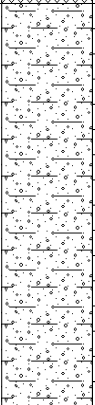
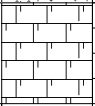
Remarks: 1. Logged in general accordance with BS5930:2015+A1:2020 and CIRIA C574 (Engineering in Chalk). 2. Borehole cleared for services prior to excavating a hand dug service inspection pit to 1.2 m bgl. 3. Elevation and location data obtained from third-party GPS survey. 4. SPT Hammer ID 2865 (Energy Ratio Er = 51%). 5. Borehole commenced as a dynamic sampler borehole to 3.0 m bgl with rotary open-hole follow-on to completion. 6. Borehole installed with a raised steel cover. 7. Clean drilling techniques utilised with a reduction and bentonite seal installed from 10 m to 11 m bgl.	Water Level Observations					Chiselling	
	Date	Time	Strike	Duration	Standing	Depth (m)	Time (h:m)

Coordinates: E469961.03 N105591.99	Elevation (mAOD): 10.74	Drilled By: Delta Drilling	Plant Used: Comacchio GEO300	Logged: LB	Checked: BB	Approved: RM	Scale (m): 1:30
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Description of Strata	Legend	Strata Depth (m)	Reduced Level (mAOD)	Casing Diameter (mm)	Water Strike	Sample Details			Test Details		Backfill
						Depth (m)	Type	Ref	Depth (m)	Results	
MADE GROUND: Cream gravelly very clayey fine to medium SAND with a low cobble content. Gravel is angular to subrounded fine to coarse of brick, concrete, sandstone, limestone and flint. Cobbles are angular to subangular of brick and concrete. (RE-ENGINEERED COVER SYSTEM)		0.50	8.50			0.10 - 0.40	ES				
MADE GROUND: Soft dark grey slightly sandy slightly gravelly CLAY with frequent rootlets and a slight organic odour. Sand is fine. Gravel is angular to rounded fine to medium of brick, sandstone, flint and coal. (RE-ENGINEERED COVER SYSTEM)		1.00	8.00								
MADE GROUND: Soft light grey slightly gravelly sandy CLAY with occasional rootlets. Sand is fine. Gravel is subangular to subrounded fine of natural lithologies. (RE-ENGINEERED COVER SYSTEM)						1.20 - 1.60	ES		1.20	SPT(S) N=5 (2,1/1,2,1,1)	
<i>From 1.5 to 2.0 m bgl: Becomes light orangish brown.</i>						1.50 - 1.60	D				
		2.00	7.00								
MADE GROUND: Firm locally stiff orangish brown slightly sandy slightly gravelly CLAY. Sand is fine to medium. Gravel is angular to subangular fine to coarse of brick, flint and limestone. (RE-ENGINEERED COVER SYSTEM)		2.30	6.70			2.00 - 2.45	U		2.00	U=8 Blows	
MADE GROUND: Firm brown slightly sandy slightly gravelly CLAY with frequent black organic staining and rare plastic fragments. Sand is fine. Gravel is angular to subrounded fine to medium of flint, chalk and dark purple clinker. (RE-ENGINEERED COVER SYSTEM)		2.90	6.10								
<i>From 2.4 to 2.6 m bgl: Frequent black wood fragments.</i>		3.00	6.00								
MADE GROUND: Landfill comprising occasional glass and paper with approximately 95% matrix of soft black slightly sandy slightly gravelly CLAY. Sand is fine. Gravel is subrounded fine to medium of chalk. (LANDFILL)		3.17	5.83			3.20 - 3.60	ES		3.00	SPT(S) N=11 (2,1/4,2,3,2)	
MADE GROUND: Soft greenish brown slightly sandy CLAY. Sand is fine. (SUSPECTED ORIGINAL RE-ENGINEERED COVER SYSTEM)											
MADE GROUND: Landfill comprising frequent wood, plastic, occasional paper and rare glass with approximately 40% matrix of soft black slightly gravelly CLAY. Gravel is angular to subangular fine to medium of brick. (LANDFILL)		4.00	5.00								
<i>At 3.8 m bgl: Railway sleeper with a slight creosote odour (approximately 200 mm thickness).</i>											
MADE GROUND: Landfill comprising frequent plastic, wood, occasional glass, rare fabric and sponge with approximately 10% matrix of grey slightly clayey fine SAND. (LANDFILL)						4.50 - 6.00	ES				

Remarks:
1. Logged in general accordance with BS5930:2015+A1:2020 and CIRIA C574 (Engineering in Chalk). 2. Borehole cleared for services prior to excavating a hand dug service inspection pit to 1.2 m bgl. 3. Elevation and location data obtained from third-party GPS survey. 4. SPT Hammer ID 2865 (Energy Ratio Er = 51%). 5. Borehole commenced as a dynamic sampler borehole to 4.5 m bgl with rotary open-hole follow-on to completion depth. 6. Borehole installed with a raised steel cover. 7. Clean drilling techniques utilised with a reduction and bentonite seal installed from 10.5 m to 11.6 m bgl.

Water Level Observations					Chiselling	
Date	Time	Strike	Duration	Standing	Depth (m)	Time (h:m)

Description of Strata	Legend	Strata Depth (m)	Reduced Level (mAOD)	Casing Diameter (mm)	Water Strike	Sample Details			Test Details		Backfill
						Depth (m)	Type	Ref	Depth (m)	Results	
MADE GROUND: Landfill comprising frequent plastic, wood, occasional glass, rare fabric and sponge with approximately 10% matrix of grey slightly clayey fine SAND. (LANDFILL)		9.00	0.00								
MADE GROUND: Light brown very clayey angular to subangular fine to medium GRAVEL of flint and occasional wood and plastic fragments. (REWORKED RIVER TERRACE DEPOSITS)		9.50	-0.50			9.00 - 10.00	B				
Yellowish brown slightly sandy slightly clayey angular to subangular fine to medium GRAVEL of flint. Sand is fine to medium. (RIVER TERRACE DEPOSITS)		11.10	-2.10	194							
Structureless CHALK composed of slightly sandy silty angular to subangular fine to medium GRAVEL. Sand is fine to medium. Clasts are very weak, low density, cream chalk. Matrix is cream.											

Remarks: 1. Logged in general accordance with BS5930:2015+A1:2020 and CIRIA C574 (Engineering in Chalk). 2. Borehole cleared for services prior to excavating a hand dug service inspection pit to 1.2 m bgl. 3. Elevation and location data obtained from third-party GPS survey. 4. SPT Hammer ID 2865 (Energy Ratio Er = 51%). 5. Borehole commenced as a dynamic sampler borehole to 4.5 m bgl with rotary open-hole follow-on to completion depth. 6. Borehole installed with a raised steel cover. 7. Clean drilling techniques utilised with a reduction and bentonite seal installed from 10.5 m to 11.6 m bgl.	Water Level Observations					Chiselling	
	Date	Time	Strike	Duration	Standing	Depth (m)	Time (h:m)

Coordinates: E470153.78 N105616.18	Elevation (mAOD): 9.00	Drilled By: Delta Drilling	Plant Used: Comacchio GEO300	Logged: LB	Checked: BB	Approved: RM	Scale (m): 1:30
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Project No: **19-2099.04** Hole ID: **RO108** Page: **3 of 4**

Project: **Brockhampton West, Havant**

Rotary Auger Borehole Log Date: **15/02/2021 - 16/02/2021** Client: **Exton Estates**

Description of Strata	Legend	Strata Depth (m)	Reduced Level (mAOD)	Casing Diameter (mm)	Water Strike	Sample Details			Test Details		Backfill
						Depth (m)	Type	Ref	Depth (m)	Results	
Structureless CHALK composed of slightly sandy silty angular to subangular fine to medium GRAVEL. Sand is fine to medium. Clasts are very weak, low density, cream chalk. Matrix is cream. (LEWES NODULAR CHALK FORMATION, Grade Dc)											

Remarks:
 1. Logged in general accordance with BS5930:2015+A1:2020 and CIRIA C574 (Engineering in Chalk). 2. Borehole cleared for services prior to excavating a hand dug service inspection pit to 1.2 m bgl. 3. Elevation and location data obtained from third-party GPS survey. 4. SPT Hammer ID 2865 (Energy Ratio Er = 51%). 5. Borehole commenced as a dynamic sampler borehole to 4.5 m bgl with rotary open-hole follow-on to completion depth. 6. Borehole installed with a raised steel cover. 7. Clean drilling techniques utilised with a reduction and bentonite seal installed from 10.5 m to 11.6 m bgl.

Water Level Observations					Chiselling	
Date	Time	Strike	Duration	Standing	Depth (m)	Time (h:m)

Coordinates: E470153.78 N105616.18	Elevation (mAOD): 9.00	Drilled By: Delta Drilling	Plant Used: Comacchio GEO300	Logged: LB	Checked: BB	Approved: RM	Scale (m): 1:30
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Project No: **19-2099.04** Hole ID: **RO108** Page: **4 of 4**

Project: **Brockhampton West, Havant**

Rotary Auger Borehole Log Date: **15/02/2021 - 16/02/2021** Client: **Exton Estates**

Description of Strata	Legend	Strata Depth (m)	Reduced Level (mAOD)	Casing Diameter (mm)	Water Strike	Sample Details			Test Details		Backfill
						Depth (m)	Type	Ref	Depth (m)	Results	
Structureless CHALK composed of slightly sandy silty angular to subangular fine to medium GRAVEL. Sand is fine to medium. Clasts are very weak, low density, cream chalk. Matrix is cream. (LEWES NODULAR CHALK FORMATION, Grade Dc)		20.00	-11.00	146							
Borehole complete at 20.00m bgl.											

Remarks:
 1. Logged in general accordance with BS5930:2015+A1:2020 and CIRIA C574 (Engineering in Chalk). 2. Borehole cleared for services prior to excavating a hand dug service inspection pit to 1.2 m bgl. 3. Elevation and location data obtained from third-party GPS survey. 4. SPT Hammer ID 2865 (Energy Ratio Er = 51%). 5. Borehole commenced as a dynamic sampler borehole to 4.5 m bgl with rotary open-hole follow-on to completion depth. 6. Borehole installed with a raised steel cover. 7. Clean drilling techniques utilised with a reduction and bentonite seal installed from 10.5 m to 11.6 m bgl.

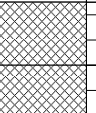
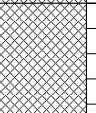
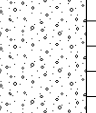
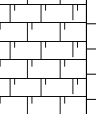
Water Level Observations					Chiselling	
Date	Time	Strike	Duration	Standing	Depth (m)	Time (h:m)

Coordinates: **E470153.78 N105616.18** Elevation (mAOD): **9.00** Drilled By: **Delta Drilling** Plant Used: **Comacchio GEO300** Logged: **LB** Checked: **BB** Approved: **RM** Scale (m): **1:30**

Description of Strata	Legend	Strata Depth (m)	Reduced Level (mAOD)	Casing Diameter (mm)	Water Strike	Sample Details			Test Details		Backfill
						Depth (m)	Type	Ref	Depth (m)	Results	
MADE GROUND: Soft brown slightly sandy CLAY with occasional rootlets. Sand is fine. (TOPSOIL)		0.15	9.64								
MADE GROUND: Light yellowish brown slightly gravelly slightly clayey fine SAND. Gravel is subangular to subrounded fine to medium of natural lithologies and rare brick. (RE-ENGINEERED COVER SYSTEM)		0.65	9.14								
MADE GROUND: Firm brown slightly gravelly CLAY with occasional black staining and rare ceramic fragments. Gravel is angular to subangular fine to coarse of natural lithologies, brick and rare clinker. (RE-ENGINEERED COVER SYSTEM)		1.90	7.89			1.20 - 1.65	U		1.20	U=47 Blows	
MADE GROUND: Light yellowish brown slightly gravelly slightly clayey fine SAND. Gravel is subangular to subrounded fine to medium of natural lithologies and rare brick. (RE-ENGINEERED COVER SYSTEM)		2.35	7.44						1.85	SPT(S) N=19 (1,2/4,5,5,5)	
MADE GROUND: Landfill recovered as frequent paper, plastic, wood, occasional metal, glass, fabric and ceramic with approximately 50% matrix of black slightly clayey fine SAND with ash (approximately 20%). (LANDFILL)		4.00	5.79			2.50 - 2.60	ES				
MADE GROUND: Landfill recovered as frequent possible animal fur, fabric, wood, occasional plastic, green sand, glass and rare brick with approximately 50% matrix of very soft dark brown slightly sandy CLAY. Sand is fine. Strong waste odour throughout. (LANDFILL)		5.00	4.79								
MADE GROUND: Landfill recovered as frequent wood, occasional plastic, glass, possible animal fur and ash (approximately 20%) with approximately 60% matrix of black fine to medium SAND. Strong waste odour. (LANDFILL)											

Remarks:
 1. Logged in general accordance with BS5930:2015+A1:2020 and CIRIA C574 (Engineering in Chalk). 2. Borehole cleared for services prior to excavating a hand dug service inspection pit to 1.2 m bgl. 3. Elevation and location data obtained from third-party GPS survey. 4. SPT Hammer ID 2865 (Energy Ratio Er = 51%). 5. Borehole commenced as a dynamic sampler borehole to 4.0 m bgl with rotary open-hole follow-on to completion depth. 6. Borehole installed with a raised steel cover. 7. Clean drilling techniques utilised with a reduction and bentonite seal installed from 14 m to 15 m bgl.

Water Level Observations					Chiselling	
Date	Time	Strike	Duration	Standing	Depth (m)	Time (h:m)

Description of Strata	Legend	Strata Depth (m)	Reduced Level (mAOD)	Casing Diameter (mm)	Water Strike	Sample Details			Test Details		Backfill
						Depth (m)	Type	Ref	Depth (m)	Results	
MADE GROUND: Landfill recovered as frequent wood, occasional plastic, glass, possible animal fur and ash (approximately 20%) with approximately 60% matrix of black fine to medium SAND. Strong waste odour. (LANDFILL)		6.00	3.79								
MADE GROUND: Landfill recovered as occasional plastic, wood and rare fabric with approximately 80% matrix of dark grey slightly clayey subangular to rounded fine to medium GRAVEL of natural lithologies including flint and brick. (LANDFILL)		7.00	2.79								
MADE GROUND: Landfill recovered as frequent wood, occasional plastic, glass and rare metal with approximately 75% matrix of very soft dark grey slightly gravelly CLAY. Gravel is subangular to subrounded fine to medium of natural lithologies and occasional brick. (LANDFILL)		8.00	1.79			7.00 - 8.00	ES				
MADE GROUND: Landfill recovered as frequent plastic and occasional wood with approximately 90% matrix of brown slightly clayey angular to subrounded fine to medium GRAVEL of brick and flint. (LANDFILL)		9.60	0.19								
Light brown slightly sandy angular to subangular fine to medium GRAVEL of flint. Sand is fine to coarse. (RIVER TERRACE DEPOSITS)		10.50	-0.71			10.00 - 10.50	B				
Structureless CHALK composed of sandy subangular to rounded fine to medium GRAVEL of chalk and flint. Clasts are cream weak, low density white of chalk. Matrix is cream. (LEWES NODULAR CHALK FORMATION, Grade Dc)											

Remarks:
 1. Logged in general accordance with BS5930:2015+A1:2020 and CIRIA C574 (Engineering in Chalk). 2. Borehole cleared for services prior to excavating a hand dug service inspection pit to 1.2 m bgl. 3. Elevation and location data obtained from third-party GPS survey. 4. SPT Hammer ID 2865 (Energy Ratio Er = 51%). 5. Borehole commenced as a dynamic sampler borehole to 4.0 m bgl with rotary open-hole follow-on to completion depth. 6. Borehole installed with a raised steel cover. 7. Clean drilling techniques utilised with a reduction and bentonite seal installed from 14 m to 15 m bgl.

Water Level Observations					Chiselling	
Date	Time	Strike	Duration	Standing	Depth (m)	Time (h:m)



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Project No: **19-2099.04** Hole ID: **RO109** Page: **3 of 4**

Project: **Brockhampton West, Havant**

Rotary Auger Borehole Log Date: **08/03/2021 - 09/03/2021** Client: **Exton Estates**

Description of Strata	Legend	Strata Depth (m)	Reduced Level (mAOD)	Casing Diameter (mm)	Water Strike	Sample Details			Test Details		Backfill
						Depth (m)	Type	Ref	Depth (m)	Results	
Structureless CHALK composed of sandy subangular to rounded fine to medium GRAVEL of chalk and flint. Clasts are cream weak, low density white of chalk. Matrix is cream. (LEWES NODULAR CHALK FORMATION, Grade Dc)		14.50	-4.71	194		12.00 - 13.00	B				
Structureless CHALK composed of white SILT. (LEWES NODULAR CHALK FORMATION, Grade Dm)											

Remarks:
 1. Logged in general accordance with BS5930:2015+A1:2020 and CIRIA C574 (Engineering in Chalk). 2. Borehole cleared for services prior to excavating a hand dug service inspection pit to 1.2 m bgl. 3. Elevation and location data obtained from third-party GPS survey. 4. SPT Hammer ID 2865 (Energy Ratio Er = 51%). 5. Borehole commenced as a dynamic sampler borehole to 4.0 m bgl with rotary open-hole follow-on to completion depth. 6. Borehole installed with a raised steel cover. 7. Clean drilling techniques utilised with a reduction and bentonite seal installed from 14 m to 15 m bgl.

Water Level Observations					Chiselling	
Date	Time	Strike	Duration	Standing	Depth (m)	Time (h:m)

Coordinates: E470299.04 N105683.47	Elevation (mAOD): 9.79	Drilled By: Delta Drilling	Plant Used: Comacchio GEO300	Logged: LB	Checked: BB	Approved: RM	Scale (m): 1:30
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Project No: **19-2099.04** Hole ID: **RO109** Page: **4 of 4**

Project: **Brockhampton West, Havant**

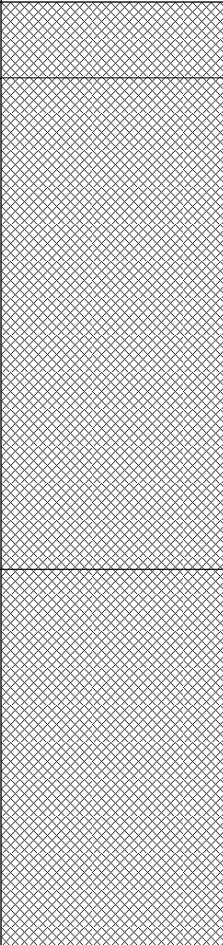
Rotary Auger Borehole Log Date: **08/03/2021 - 09/03/2021** Client: **Exton Estates**

Description of Strata	Legend	Strata Depth (m)	Reduced Level (mAOD)	Casing Diameter (mm)	Water Strike	Sample Details			Test Details		Backfill
						Depth (m)	Type	Ref	Depth (m)	Results	
Structureless CHALK composed of white SILT. (LEWES NODULAR CHALK FORMATION, Grade Dm)		20.00	-10.21	146							
Borehole complete at 20.00m bgl.											

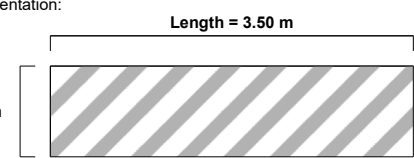
Remarks:
 1. Logged in general accordance with BS5930:2015+A1:2020 and CIRIA C574 (Engineering in Chalk). 2. Borehole cleared for services prior to excavating a hand dug service inspection pit to 1.2 m bgl. 3. Elevation and location data obtained from third-party GPS survey. 4. SPT Hammer ID 2865 (Energy Ratio Er = 51%). 5. Borehole commenced as a dynamic sampler borehole to 4.0 m bgl with rotary open-hole follow-on to completion depth. 6. Borehole installed with a raised steel cover. 7. Clean drilling techniques utilised with a reduction and bentonite seal installed from 14 m to 15 m bgl.

Water Level Observations					Chiselling	
Date	Time	Strike	Duration	Standing	Depth (m)	Time (h:m)

Coordinates: **E470299.04 N105683.47** Elevation (mAOD): **9.79** Drilled By: **Delta Drilling** Plant Used: **Comacchio GEO300** Logged: **LB** Checked: **BB** Approved: **RM** Scale (m): **1:30**

Description of Strata	Legend	Strata Depth (m)	Reduced Level (mAOD)	Water Strike (m)	Sample Details		Test Details	
					Depth (m)	Type & Ref	Depth (m)	Results
MADE GROUND: Soft brown slightly sandy CLAY with frequent rootlets and rare textile fragments. Sand is fine to medium. (TOPSOIL)		0.30	10.67		0.10 - 0.30	ES	0.10	PID=0.10ppmv
MADE GROUND: Firm orangish brown slightly sandy slightly gravelly CLAY with occasional rootlets and rare glass fragments. Sand is fine to medium. Gravel is subangular to subrounded fine to coarse of flint and brick. (RE-ENGINEERED COVER SYSTEM)					0.50 - 0.90	ES	0.50	PID=0.20ppmv
					1.00 - 1.50	B		
MADE GROUND: Landfill recovered as frequent wood, glass, plastic, occasional cardboard, carpet, asphalt, rare steel and textile with approximately 70% matrix of soft dark brown slightly sandy CLAY with a low cobble and boulder content. Sand is fine. Cobbles are angular to subangular of concrete. Boulders are angular of concrete. Strong waste odour throughout. (LANDFILL)			2.25	8.72		2.50 - 3.00 2.50 - 3.00	B ES	2.50
Trial pit complete at 3.75 m bgl.		3.75	7.22					

Dimensions and Orientation:



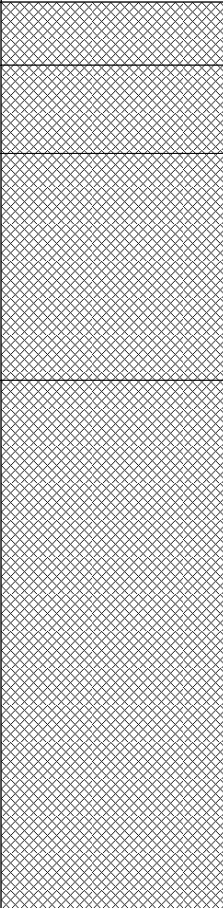
Orientation: **90°**
Inclination: **90**

Remarks:
1. Logged in general accordance with BS5930:2015+A1:2020.
2. Trial pit location cleared for services prior to breaking ground.
3. Elevation and location data obtained from GPS survey.
4. Trial pit remained stable throughout.

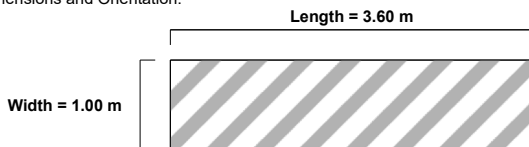
Trial Pit Log

Date: **29/03/2021**

Client: **Exton Estates**

Description of Strata	Legend	Strata Depth (m)	Reduced Level (mAOD)	Water Strike (m)	Sample Details		Test Details		
					Depth (m)	Type & Ref	Depth (m)	Results	
MADE GROUND: Soft brown slightly sandy CLAY with frequent rootlets. Sand is fine to medium. (TOPSOIL)		0.25	10.18		0.30 - 0.50	B	0.10	PID=0.60ppmv	
MADE GROUND: Firm orangish brown mottled grey slightly sandy CLAY. Sand is fine. (RE-ENGINEERED COVER SYSTEM)		0.60	9.83				0.50	PID=0.60ppmv	
MADE GROUND: Friable white slightly gravelly SILT. Gravel is subangular to subrounded fine to medium of chalk and occasional flint. (RE-ENGINEERED COVER SYSTEM)		1.50	8.93				0.70 - 0.90 0.80	B ES	
MADE GROUND: Landfill recovered as frequent wood, plastic, metal, occasional tyres, sponge, brick, textile, glass, clinker, rare steel and carpet with approximately 40% matrix of very soft dark brown slightly sandy CLAY. Sand is fine. Slight hydrocarbon odour throughout. (LANDFILL)		3.60	6.83				1.70 - 2.00 1.70 - 2.00	B ES	1.70
Trial pit complete at 3.60 m bgl.									

Dimensions and Orientation:



Orientation:

0°

Inclination:

90

Remarks:

1. Logged in general accordance with BS5930:2015+A1:2020.
2. Trial pit location cleared for services prior to breaking ground.
3. Elevation and location data obtained from GPS survey.
4. Trial pit remained stable throughout.

Coordinates:
E470000.67 N105659.72

Elevation (mAOD):
10.43

Excavated By:
BPH Plant Hire

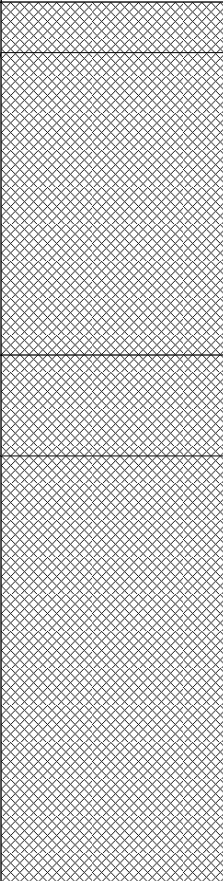
Plant Used:
JCB 3CX

Logged:
LB


Checked:
BB

Approved:
RM

Scale:
1:30

Description of Strata	Legend	Strata Depth (m)	Reduced Level (mAOD)	Water Strike (m)	Sample Details		Test Details	
					Depth (m)	Type & Ref	Depth (m)	Results
MADE GROUND: Soft brown slightly sandy slightly gravelly CLAY with frequent rootlets. Sand is fine to coarse. Gravel is subangular to subrounded of natural lithologies. (TOPSOIL)		0.20	10.38				0.10	PID=0.40ppmv
MADE GROUND: Friable white gravelly SILT. Gravel is subangular to subrounded fine to coarse of chalk, flint and occasional brick. (RE-ENGINEERED COVER SYSTEM)					0.50 - 1.00	B		
MADE GROUND: Stiff orangish brown mottled brown slightly gravelly CLAY. Gravel is subangular to rounded fine to medium of natural lithologies. (RE-ENGINEERED COVER SYSTEM)			1.40	9.18			1.50 - 1.80	PID=0.10ppmv
MADE GROUND: Landfill recovered as frequent wood, plastic, brick, occasional textile, metal, glass and rare newspaper with approximately 70% matrix of soft dark brown CLAY with a low cobble content. Cobbles are angular to subrounded if sandstone, concrete and brick. (LANDFILL)			1.80	8.78			1.50 - 1.80	
At 2.0 m bgl: Concrete kerbstone (600mm x 300mm x 120mm).							1.80 - 2.00	PID=2.20ppmv
Trial pit complete at 3.50 m bgl.		3.50	7.08					

Dimensions and Orientation:



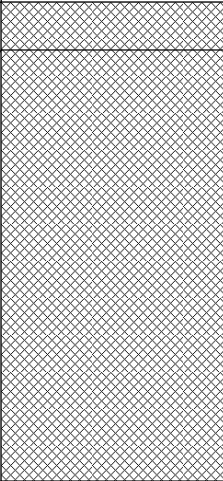
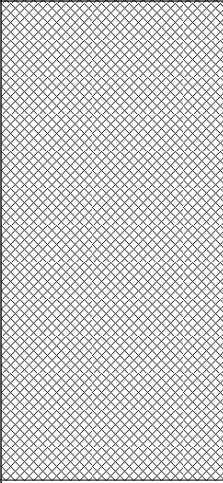
Orientation: **90°**
Inclination: **90**

Remarks:
1. Logged in general accordance with BS5930:2015+A1:2020.
2. Trial pit location cleared for services prior to breaking ground.
3. Elevation and location data obtained from GPS survey.
4. Trial pit remained stable throughout. Hole terminated due to large obstructions.

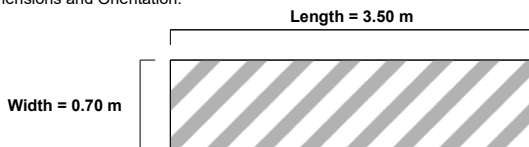
Trial Pit Log

Date: **30/03/2021**

Client: **Exton Estates**

Description of Strata	Legend	Strata Depth (m)	Reduced Level (mAOD)	Water Strike (m)	Sample Details		Test Details	
					Depth (m)	Type & Ref	Depth (m)	Results
MADE GROUND: Soft brown slightly sandy CLAY with frequent rootlets. Sand is fine to medium. (TOPSOIL)		0.19	9.80	1.80 ▼	0.00 - 0.15	ES	0.10	PID=0.00ppmv
MADE GROUND: Brown gravelly fine to coarse SAND. Gravel is subangular to rounded fine to coarse of flint and concrete. (RE-ENGINEERED COVER SYSTEM)					0.30 - 0.70	ES	0.30	PID=0.30ppmv
					0.50 - 1.00	B		
MADE GROUND: Landfill recovered as frequent plastic, wood, occasional glass, metal, sponge, concrete, rare cardboard and textile with approximately 30% matrix of soft black sandy CLAY with a low cobble content. Sand is fine. Cobbles are angular of concrete. Strong waste odour throughout. (LANDFILL)		1.90	8.09	1.80 ▼	2.00 - 2.50	ES	2.00	PID=131.70ppmv
					3.50 - 3.80	B		
Trial pit complete at 3.80 m bgl.		3.80	6.19					

Dimensions and Orientation:



Orientation: **90°**
Inclination: **90**

Remarks:

1. Logged in general accordance with BS5930:2015+A1:2020.
2. Trial pit location cleared for services prior to breaking ground.
3. Elevation and location data obtained from GPS survey.
4. Trial pit remained stable throughout.

Coordinates: **E470122.93 N105704.40**

Elevation (mAOD): **9.99**

Excavated By: **BPH Plant Hire**

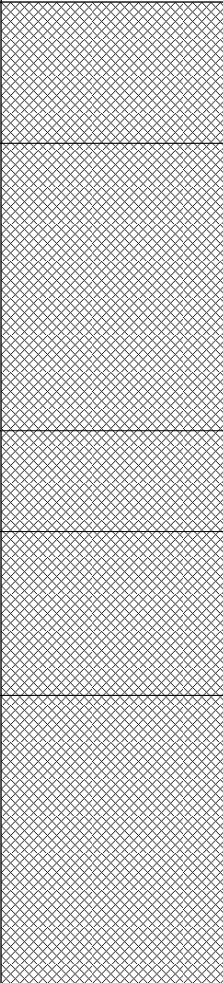
Plant Used: **JCB 3CX**

Logged: **LB**

Checked: **BB**


Approved: **RM**

Scale: **1:30**

Description of Strata	Legend	Strata Depth (m)	Reduced Level (mAOD)	Water Strike (m)	Sample Details		Test Details	
					Depth (m)	Type & Ref	Depth (m)	Results
MADE GROUND: Soft brown slightly sandy CLAY with occasional brick fragments. Sand is fine. (TOPSOIL)		0.56	10.07		0.70 - 1.00	B	0.10	PID=0.40ppmv
MADE GROUND: Soft orangish brown sandy CLAY with occasional rootlets and rare red staining. Sand is fine to medium. (RE-ENGINEERED COVER SYSTEM)		1.70	8.93				0.70	PID=0.40ppmv
MADE GROUND: White slightly sandy slightly gravelly SILT. Sand is fine to coarse. Gravel is subangular to subrounded fine to medium of chalk. (RE-ENGINEERED COVER SYSTEM)		2.10	8.53				2.20	PID=2.00ppmv
MADE GROUND: Soft dark brown slightly sandy slightly gravelly CLAY with occasional plant debris. Sand is fine to coarse. Gravel is subangular to subrounded fine of coal and flint. Moderate organic odour. (RE-ENGINEERED COVER SYSTEM)		2.75	7.88					
MADE GROUND: Landfill recovered as frequent plastic, occasional rubber, cables, sponge, wood and styrofoam with approximately 70% matrix of very soft black CLAY with ash (approximately 5%). (LANDFILL) <i>From 3.0 to 3.9 m bgl: Occasional tyres (1050mm diameter). Wooden planks (810mm x 100mm x 100mm).</i>		3.90	6.73				3.00 - 3.50 3.00 - 3.50	B ES
Trial pit complete at 3.90 m bgl.								

Dimensions and Orientation:

Length = 3.50 m



Width = 0.70 m

Orientation: **0°**

Inclination: **90**

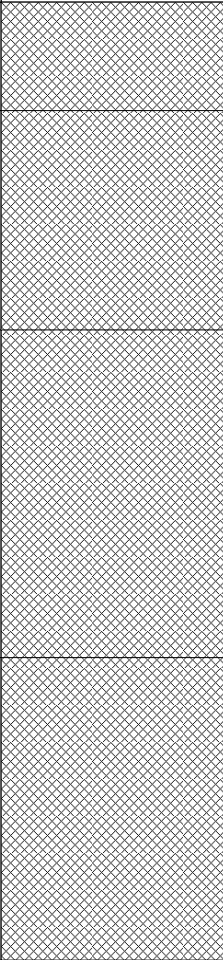
Remarks:

1. Logged in general accordance with BS5930:2015+A1:2020.
2. Trial pit location cleared for services prior to breaking ground.
3. Elevation and location data obtained from GPS survey.
4. Trial pit remained stable throughout.

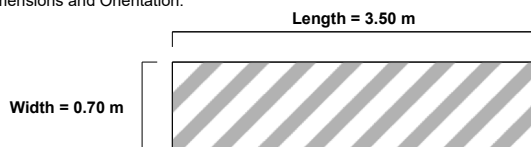
Trial Pit Log

Date: **29/03/2021**

Client: **Exton Estates**

Description of Strata	Legend	Strata Depth (m)	Reduced Level (mAOD)	Water Strike (m)	Sample Details		Test Details	
					Depth (m)	Type & Ref	Depth (m)	Results
MADE GROUND: Soft brown slightly sandy CLAY with occasional brick fragments. Sand is fine. (TOPSOIL)		0.43	8.98		0.10 - 0.30	B	0.10	PID=0.20ppmv
MADE GROUND: Soft brown gravelly CLAY with a low boulder content, occasional rootlets and wood fragments. Gravel is angular to subrounded fine to coarse of brick, concrete, flint, chalk and occasional clinker. Boulders are angular of concrete. (RE-ENGINEERED COVER SYSTEM)		1.30	8.11		0.50 - 0.70 0.50 - 0.70	B ES	0.50	PID=0.20ppmv
MADE GROUND: Soft grey slightly sandy CLAY with a moderate organic odour, occasional plastic, clinker and rare metal fragments. Sand is fine to medium. (RE-ENGINEERED COVER SYSTEM) <i>From 1.5 to 1.9 m bgl: Asphalt.</i>		2.60	6.81				1.40	PID=2.80ppmv
MADE GROUND: Landfill recovered as frequent metal, sponge, plastic, occasional wood, occasional wood, brick, rare concrete and rare glass with approximately 65% matrix of soft dark brown slightly sandy CLAY. Sand is fine to coarse. (LANDFILL) <i>At 3.0 m bgl: Frequent tyres (1100 mm diameter).</i>		3.80	5.61		3.00 - 3.50 3.00 - 3.50	B ES	3.00	PID=12.90ppmv
Trial pit complete at 3.80 m bgl.								

Dimensions and Orientation:



Orientation:

0°

Inclination:

90

Remarks:

1. Logged in general accordance with BS5930:2015+A1:2020.
2. Trial pit location cleared for services prior to breaking ground.
3. Elevation and location data obtained from GPS survey.
4. Trial pit remained stable throughout. Hole terminated due to difficult removing large tyres.

Coordinates:
E470101.06 N105596.70

Elevation (mAOD):
9.41

Excavated By:
BPH Plant Hire

Plant Used:
JCB 3CX

Logged:
LB

Checked:
BB

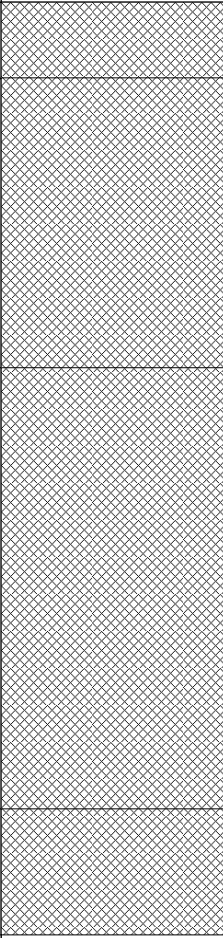
Approved:
RM

Scale:
1:30

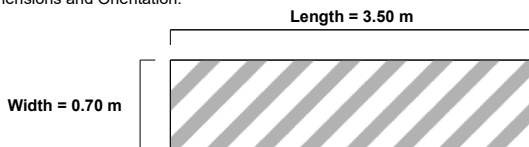
Trial Pit Log

Date: **31/03/2021**

Client: **Exton Estates**

Description of Strata	Legend	Strata Depth (m)	Reduced Level (mAOD)	Water Strike (m)	Sample Details		Test Details		
					Depth (m)	Type & Ref	Depth (m)	Results	
MADE GROUND: Soft brown slightly sandy slightly gravelly CLAY with frequent rootlets. Sand is fine to coarse. Gravel is subangular to subrounded of natural lithologies. (TOPSOIL)		0.30	11.11				0.10	PID=0.00ppmv	
MADE GROUND: Soft orangish brown slightly gravelly SILT. Gravel is subangular to subrounded fine to coarse of flint and brick. (RE-ENGINEERED COVER SYSTEM)					0.50 - 1.00 0.50 - 1.00	B ES	0.50	PID=0.00ppmv	
<i>From 0.9 m bgl: Becomes gravelly.</i>									
			1.45	9.96					
MADE GROUND: Landfill recovered as frequent wood, plastic, occasional sponge, brick, carpet, glass, rare rubber, leather, textile, cable and rare newspaper (dated 1986) with approximately 40% matrix of soft dark grey slightly sandy CLAY with ash (approximately 15%) and a low cobble content. Sand is fine to medium. Cobbles are angular of concrete. (LANDFILL)							1.70 - 2.30	ES	1.70
		3.20	8.21						
MADE GROUND: Soft orangish brown slightly gravelly SILT. Gravel is subangular to subrounded fine of flint. (SUSPECTED ORIGINAL RE-ENGINEERED COVER SYSTEM)						3.50 - 3.70	B	3.50	PID=0.50ppmv
		3.70	7.71						
Trial pit complete at 3.70 m bgl.									

Dimensions and Orientation:



Orientation:

45°

Inclination:

90

Remarks:

1. Logged in general accordance with BS5930:2015+A1:2020.
2. Trial pit location cleared for services prior to breaking ground.
3. Elevation and location data obtained from GPS survey.
4. Trial pit remained stable throughout.

Coordinates: **E470208.39 N105780.33**

Elevation (mAOD): **11.41**

Excavated By: **BPH Plant Hire**

Plant Used: **JCB 3CX**

Logged: **LB**

Checked: **BB**

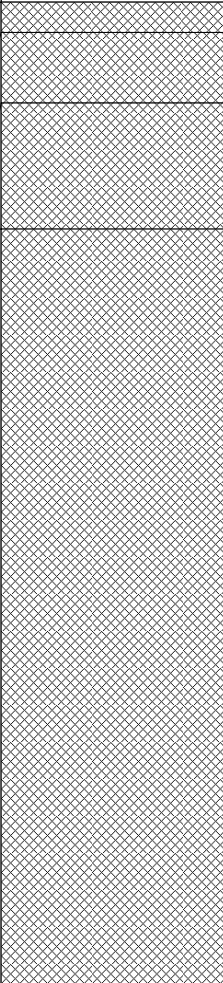
Approved: **RM**

Scale: **1:30**

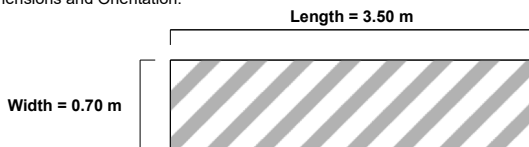
Trial Pit Log

Date: **01/04/2021**

Client: **Exton Estates**

Description of Strata	Legend	Strata Depth (m)	Reduced Level (mAOD)	Water Strike (m)	Sample Details		Test Details	
					Depth (m)	Type & Ref	Depth (m)	Results
MADE GROUND: Soft brown slightly sandy CLAY with frequent rootlets. Sand is fine. (TOPSOIL)		0.12	10.49		0.50 - 0.90	B	0.50	PID=0.70ppmv
MADE GROUND: Yellowish brown gravelly fine to coarse SAND. Gravel is subangular to subrounded fine to medium of brick, flint and limestone. (RE-ENGINEERED COVER SYSTEM)		0.40	10.21					
MADE GROUND: Grey silty fine SAND. (RE-ENGINEERED COVER SYSTEM)								
At 0.8 m bgl: Concrete block (400mm x 370mm x 100mm).		0.90	9.71					
MADE GROUND: Landfill recovered as frequent wood, plastic, occasional metal, glass, rare carpet, rare rubber, styrofoam, asphalt fragments, paper, cable, textile and cardboard with approximately 70% matrix of black fine to coarse SAND with ash (approximately 20%) and a low cobble content. Cobbles are angular of concrete. Strong solvent odour throughout. (LANDFILL)					3.00 - 3.50	B		
					3.50 - 3.90	ES	3.50	PID=13.30ppmv
		3.90	6.71					
Trial pit complete at 3.90 m bgl.								

Dimensions and Orientation:



Orientation: **45°**
Inclination: **90**

Remarks:

1. Logged in general accordance with BS5930:2015+A1:2020.
2. Trial pit location cleared for services prior to breaking ground.
3. Elevation and location data obtained from GPS survey.
4. Trial pit remained stable throughout.

Coordinates: **E470246.58 N105668.88**

Elevation (mAOD): **10.61**

Excavated By: **BPH Plant Hire**

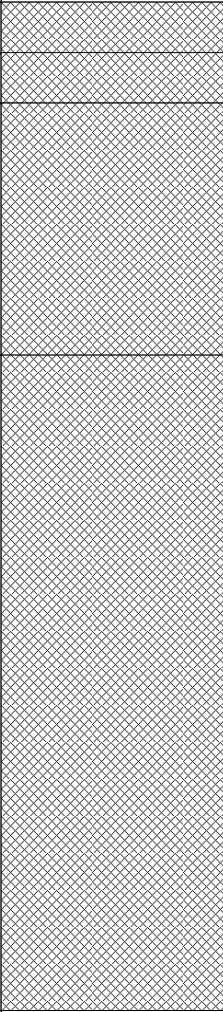
Plant Used: **JCB 3CX**

Logged: **LB**


Checked: **BB**

Approved: **RM**

Scale: **1:30**

Description of Strata	Legend	Strata Depth (m)	Reduced Level (mAOD)	Water Strike (m)	Sample Details		Test Details	
					Depth (m)	Type & Ref	Depth (m)	Results
MADE GROUND: Soft brown slightly sandy CLAY with frequent rootlets. Sand is fine. (TOPSOIL)		0.20	13.83		0.50 - 1.00	B	0.50	PID=0.80ppmv
MADE GROUND: Yellowish brown fine SAND. (RE-ENGINEERED COVER SYSTEM)		0.40	13.63					
MADE GROUND: Soft friable brown gravelly CLAY. Gravel is subangular to rounded fine to coarse of natural lithologies. (RE-ENGINEERED COVER SYSTEM)								
		1.40	12.63					
MADE GROUND: Landfill recovered as frequent wood, plastic, carpet, metal, styrofoam, cardboard, glass, textile, rare leather, wool, newspaper (dated 1986) and cable with approximately 40% matrix of black fine to coarse SAND with ash (approximately 10%). Moderate solvent odour throughout. (LANDFILL)					2.00 - 2.50	B ES	2.00	PID=5.00ppmv
		4.00	10.03					
Trial pit complete at 4.00 m bgl.								

Dimensions and Orientation:



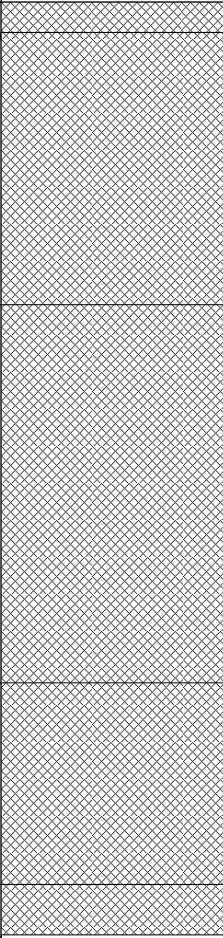
Orientation: **45°**
Inclination: **90**

Remarks:
1. Logged in general accordance with BS5930:2015+A1:2020.
2. Trial pit location cleared for services prior to breaking ground.
3. Elevation and location data obtained from GPS survey.
4. Trial pit remained stable throughout.

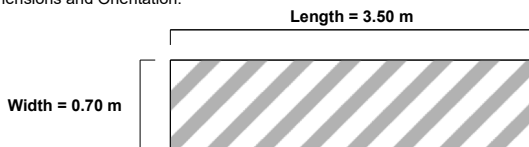
Trial Pit Log

Date: **31/03/2021**

Client: **Exton Estates**

Description of Strata	Legend	Strata Depth (m)	Reduced Level (mAOD)	Water Strike (m)	Sample Details		Test Details	
					Depth (m)	Type & Ref	Depth (m)	Results
MADE GROUND: Soft brown slightly sandy slightly gravelly CLAY with frequent rootlets. Sand is fine to coarse. Gravel is subangular to subrounded of natural lithologies. (TOPSOIL)		0.12	10.34		0.50 - 1.00	B	0.20	PID=0.30ppmv
MADE GROUND: Light orangish brown slightly gravelly fine to coarse SAND. Gravel is subrounded to rounded fine to coarse of sandstone and brick. (RE-ENGINEERED COVER SYSTEM)		1.20	9.26					
MADE GROUND: Landfill recovered as frequent plastic, wood, occasional textile, rare paper, glass and styrofoam with approximately 60% matrix of soft black sandy CLAY with ash (approximately 5%). Sand is fine to coarse. (LANDFILL)		2.70	7.76					
MADE GROUND: Firm brown slightly sandy SILT. Sand is fine. (SUSPECTED ORIGINAL RE-ENGINEERED COVER SYSTEM)		3.50	6.96					
MADE GROUND: Landfill recovered as frequent plastic, wood, occasional textile, rare paper, glass and styrofoam with approximately 60% matrix of soft black sandy CLAY with ash (approximately 5%). Sand is fine to coarse. (LANDFILL)		3.70	6.76					
Trial pit complete at 3.70 m bgl.								

Dimensions and Orientation:



Orientation:

90°

Inclination:

90

Remarks:

1. Logged in general accordance with BS5930:2015+A1:2020.
2. Trial pit location cleared for services prior to breaking ground.
3. Elevation and location data obtained from GPS survey.
4. Trial pit remained stable throughout.

Coordinates:
E470294.22 N105697.63

Elevation (mAOD):
10.46

Excavated By:
BPH Plant Hire

Plant Used:
JCB 3CX

Logged:
LB

Checked:
BB

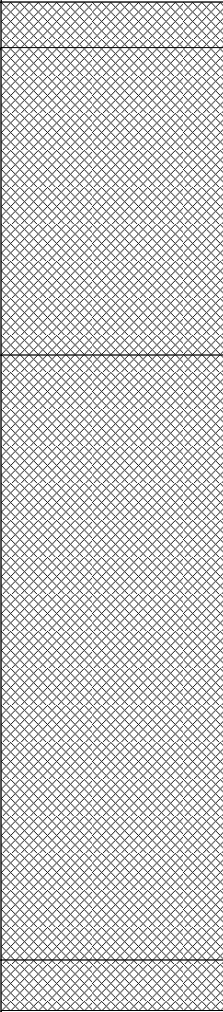
Approved:
RM

Scale:
1:30

Trial Pit Log

Date: **30/03/2021**

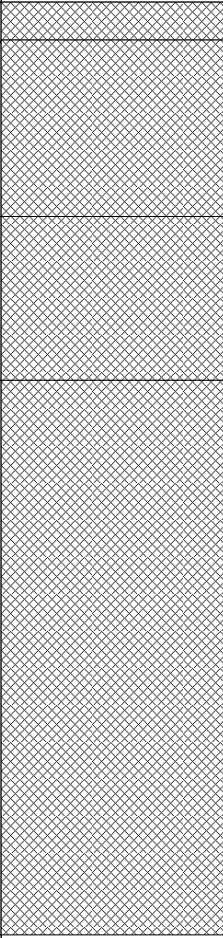
Client: **Exton Estates**


Description of Strata	Legend	Strata Depth (m)	Reduced Level (mAOD)	Water Strike (m)	Sample Details		Test Details		
					Depth (m)	Type & Ref	Depth (m)	Results	
MADE GROUND: Soft brown sandy CLAY with frequent rootlets. Sand is fine to medium. (TOPSOIL)		0.18	12.33				0.10	PID=0.60ppmv	
MADE GROUND: Soft orangish brown slightly gravelly SILT. Gravel is subangular to subrounded fine to medium of chalk, flint and brick. (RE-ENGINEERED COVER SYSTEM)					0.50 - 1.00	B	0.50	PID=0.10ppmv	
MADE GROUND: Landfill recovered as frequent wood, plastic, occasional metal, glass, rare paper, styrofoam, textile and rubber with approximately 40% matrix of black slightly clayey fine to medium SAND with ash (approximately 15%) and a low cobble content. Cobbles are angular of concrete. (LANDFILL)			1.40	11.11			2.00 - 2.50 2.00 - 2.50	B ES	2.00 PID=12.00ppmv
MADE GROUND: Stiff brown slightly gravelly SILT. Gravel is subangular to subrounded fine to medium of flint. (SUSPECTED ORIGINAL RE-ENGINEERED COVER SYSTEM)			3.80	8.71			3.80 - 4.00	B	
Trial pit complete at 4.00 m bgl.		4.00	8.51						

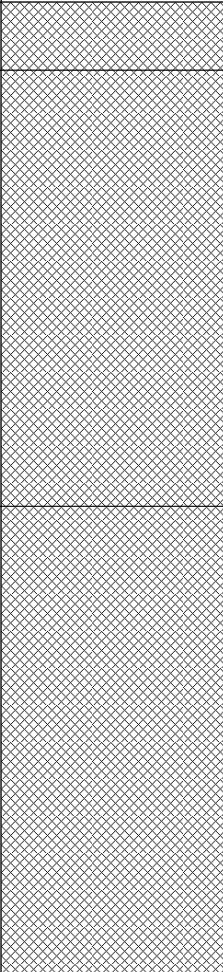


Orientation: **45°**
Inclination: **90**

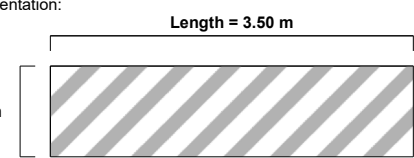
Remarks:
1. Logged in general accordance with BS5930:2015+A1:2020.
2. Trial pit location cleared for services prior to breaking ground.
3. Elevation and location data obtained from GPS survey.
4. Trial pit remained stable throughout.

Description of Strata	Legend	Strata Depth (m)	Reduced Level (mAOD)	Water Strike (m)	Sample Details		Test Details	
					Depth (m)	Type & Ref	Depth (m)	Results
MADE GROUND: Soft brown slightly gravelly CLAY with frequent rootlets. Gravel is angular to subangular of flint. (TOPSOIL)		0.15	8.79		0.90 - 1.20	B	0.10	PID=0.00ppmv
MADE GROUND: Light orangish brown slightly gravelly slightly silty fine SAND. Gravel is angular to subrounded fine to medium of flint. (RE-ENGINEERED COVER SYSTEM)		0.85	8.09				0.20	PID=0.00ppmv
MADE GROUND: Soft brown gravelly CLAY. Gravel is angular to subangular fine to coarse of flint. (RE-ENGINEERED COVER SYSTEM)		1.50	7.44					
MADE GROUND: Landfill recovered as frequent plastic, occasional rubber, plant debris, paper, wood, rare carpet, glass and metal with approximately 40% matrix of black gravelly clayey fine to coarse SAND. Gravel is angular to subangular fine to coarse of brick, concrete, flint and sandstone. (LANDFILL)								
From 3.5 to 3.7 m bgl: <i>Slight hydrocarbon odour.</i>				3.50	3.50 - 3.70	ES	3.50	PID=0.70ppmv
Trial pit complete at 3.70 m bgl.		3.70	5.24					

Dimensions and Orientation: 		Orientation: 325° Inclination: 90	Remarks: 1. Logged in general accordance with BS5930:2015+A1:2020. 2. Trial pit location cleared for services prior to breaking ground. 3. Elevation and location data obtained from GPS survey. 4. Trial pit collapsing following ingress of groundwater.
Coordinates: E470311.89 N105683.61	Elevation (mAOD): 8.94	Excavated By: BPH Plant Hire	Plant Used: JCB 3CX Logged: LB Checked: BB Approved: RM Scale: 1:30

Description of Strata	Legend	Strata Depth (m)	Reduced Level (mAOD)	Water Strike (m)	Sample Details		Test Details		
					Depth (m)	Type & Ref	Depth (m)	Results	
MADE GROUND: Soft brown slightly sandy CLAY with frequent rootlets. Sand is fine. (TOPSOIL)		0.27	9.36				0.10	PID=0.10ppmv	
MADE GROUND: Brown gravelly slightly clayey fine to coarse SAND with a low cobble and low boulder content. Gravel is angular to subrounded fine to coarse of chalk, flint, sandstone, limestone and brick. Cobbles are angular to subangular of brick and sandstone. Boulders are angular of concrete. (RE-ENGINEERED COVER SYSTEM)					1.00 - 1.50	B	1.00	PID=0.00ppmv	
At 1.5 m bgl: Concrete block (600mm x 500mm x 200mm).									
MADE GROUND: Landfill recovered as frequent wood, plastic, occasional metal, brick, rare textile, styrofoam, glass, clinker, rubber and approximately 60% matrix of black fine to coarse SAND. Slight solvent odour throughout. (LANDFILL)			2.00	7.63					
						3.00 - 3.50	ES	3.00	PID=34.00ppmv
Trial pit complete at 3.85 m bgl.		3.85	5.78						

Dimensions and Orientation:



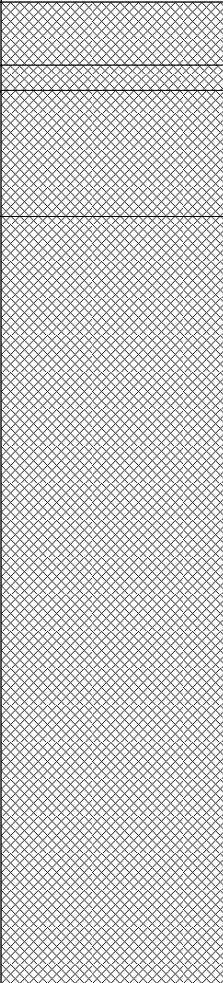
Orientation: **0°**
Inclination: **90**

Remarks:
1. Logged in general accordance with BS5930:2015+A1:2020.
2. Trial pit location cleared for services prior to breaking ground.
3. Elevation and location data obtained from GPS survey.
4. Trial pit remained stable throughout.

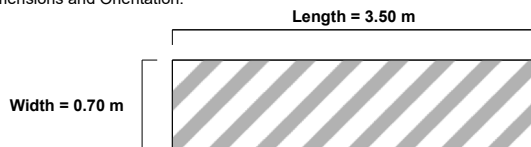
Trial Pit Log

Date: **30/03/2021**

Client: **Exton Estates**

Description of Strata	Legend	Strata Depth (m)	Reduced Level (mAOD)	Water Strike (m)	Sample Details		Test Details	
					Depth (m)	Type & Ref	Depth (m)	Results
MADE GROUND: Soft brown slightly sandy CLAY with frequent rootlets. Sand is fine. (TOPSOIL)		0.25	13.75		0.40 - 0.70	B	0.10	PID=0.00ppmv
MADE GROUND: Light greenish brown fine SAND. (RE-ENGINEERED COVER SYSTEM)		0.35	13.65				0.40	PID=0.00ppmv
MADE GROUND: Firm orangish brown slightly gravelly CLAY. Gravel is subangular to rounded fine to coarse of natural lithologies. (RE-ENGINEERED COVER SYSTEM)		0.85	13.15				1.00	PID=14.30ppmv
MADE GROUND: Landfill recovered as frequent plastic, wood, occasional brick, textile, metal, glass, rare rubber, leather, newspaper (dated 1986), carpet and styrofoam with approximately 50% matrix of black fine to coarse SAND with ash (approximately 15%) and a low cobble content. Cobbles are angular of concrete and brick. Strong waste odour throughout. (LANDFILL)		3.90	10.10				1.00 - 1.50 1.00 - 1.50	ES
Trial pit complete at 3.90 m bgl.								

Dimensions and Orientation:



Orientation: **90°**
Inclination: **90**

Remarks:

1. Logged in general accordance with BS5930:2015+A1:2020.
2. Trial pit location cleared for services prior to breaking ground.
3. Elevation and location data obtained from GPS survey.
4. Trial pit remained stable throughout.

Coordinates: **E470204.32 N105708.09**

Elevation (mAOD): **14.00**

Excavated By: **BPH Plant Hire**

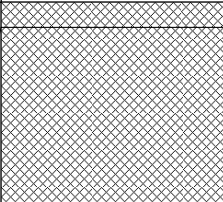
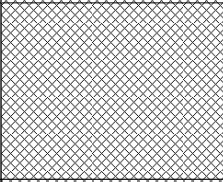
Plant Used: **JCB 3CX**


Logged: **LB**

Checked: **BB**

Approved: **RM**

Scale: **1:30**

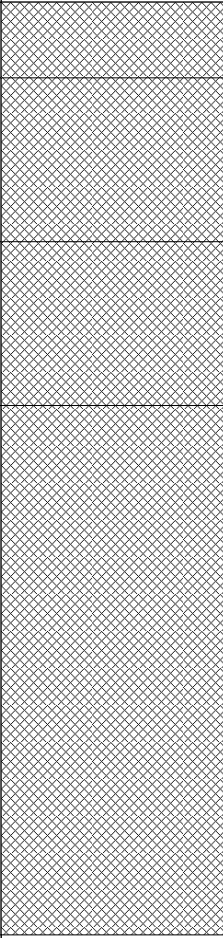
Description of Strata	Legend	Strata Depth (m)	Reduced Level (mAOD)	Water Strike (m)	Sample Details		Test Details	
					Depth (m)	Type & Ref	Depth (m)	Results
MADE GROUND: Soft brown slightly sandy CLAY with frequent rootlets. Sand is fine. (TOPSOIL)		0.10	12.17		0.20 - 0.60	B	0.20	PID=0.30ppmv
MADE GROUND: Yellowish brown gravelly fine SAND. Gravel is subangular to rounded fine to coarse of flint, sandstone and brick. (RE-ENGINEERED COVER SYSTEM)		0.80	11.47					
MADE GROUND: Firm grey slightly sandy SILT. Sand is fine to medium. (RE-ENGINEERED COVER SYSTEM)		1.50	10.77		1.00 - 1.50 1.00 - 1.50	B ES	1.00	PID=0.40ppmv
MADE GROUND: Landfill recovered as frequent wood, plastic and occasional glass with approximately 70% matrix of black fine to coarse SAND with ash (approximately 10%). (LANDFILL) At 1.8 m bgl: Concrete block (320mm x 300mm x 60mm). At 2.0 m bgl: Concrete slab (300mm x 200mm x 50mm).		3.10	9.17					
MADE GROUND: Landfill recovered as frequent plastic, aluminium, textile, occasional organic material, glass, paper, rare tin and styrofoam with approximately 10% matrix of black fine to coarse SAND. Strong waste odour throughout. (LANDFILL)	3.60	8.67						
Trial pit complete at 3.60 m bgl.								

<p>Dimensions and Orientation:</p> 		<p>Orientation: 325°</p> <p>Inclination: 90</p>	<p>Remarks:</p> <ol style="list-style-type: none"> 1. Logged in general accordance with BS5930:2015+A1:2020. 2. Trial pit location cleared for services prior to breaking ground. 3. Elevation and location data obtained from GPS survey. 4. Trial pit remained stable throughout. 				
Coordinates: E470262.29 N105718.58	Elevation (mAOD): 12.27	Excavated By: BPH Plant Hire	Plant Used: JCB 3CX	Logged: LB	Checked: BB	Approved: RM	Scale: 1:30

Trial Pit Log

Date: **30/03/2021**

Client: **Exton Estates**

Description of Strata	Legend	Strata Depth (m)	Reduced Level (mAOD)	Water Strike (m)	Sample Details		Test Details	
					Depth (m)	Type & Ref	Depth (m)	Results
MADE GROUND: Soft brown slightly sandy CLAY with frequent rootlets. Sand is fine. (TOPSOIL)		0.30	12.96		0.40 - 0.90	B	0.10	PID=0.00ppmv
MADE GROUND: Friable orangish brown slightly sandy slightly gravelly CLAY with rare plastic fragments. Sand is fine to coarse. Gravel is subangular to subrounded fine to medium of flint and brick. (RE-ENGINEERED COVER SYSTEM)		0.95	12.31					
MADE GROUND: Firm grey mottled brown slightly gravelly SILT with a low cobble content. Gravel is subangular to subrounded fine to coarse of natural lithologies. Cobbles are angular to subangular of flint. (RE-ENGINEERED COVER SYSTEM)		1.60	11.66		1.00 - 1.50	B	1.00	PID=1.80ppmv
MADE GROUND: Landfill recovered as frequent wood, plastic, occasional carpet, metal and rare rubber with approximately 60% matrix of black slightly clayey fine to medium SAND with a low cobble content. Cobbles are angular to subangular of concrete. (LANDFILL)		3.70	9.56		1.80 - 2.00	ES	1.80	PID=1.30ppmv
Trial pit complete at 3.70 m bgl.								



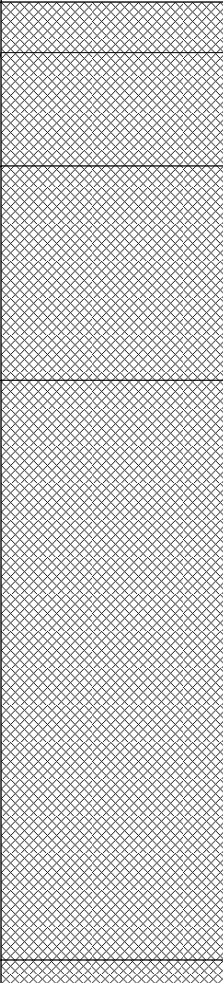
Orientation: **45°**
Inclination: **90**

Remarks:
1. Logged in general accordance with BS5930:2015+A1:2020.
2. Trial pit location cleared for services prior to breaking ground.
3. Elevation and location data obtained from GPS survey.
4. Trial pit remained stable throughout.

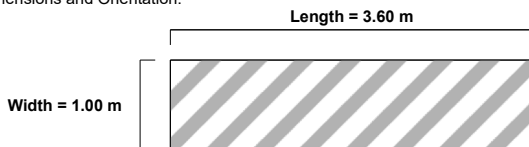
Trial Pit Log

Date: **31/03/2021**

Client: **Exton Estates**

Description of Strata	Legend	Strata Depth (m)	Reduced Level (mAOD)	Water Strike (m)	Sample Details		Test Details	
					Depth (m)	Type & Ref	Depth (m)	Results
MADE GROUND: Soft brown slightly sandy slightly gravelly CLAY with frequent rootlets. Sand is fine to coarse. Gravel is subangular to subrounded of natural lithologies. (TOPSOIL)		0.20	10.11	2.40	0.00 - 0.20	ES	0.10	PID=0.00ppmv
MADE GROUND: Yellowish brown slightly gravelly slightly silty fine SAND. Gravel is subrounded to rounded fine to coarse of flint. (RE-ENGINEERED COVER SYSTEM)		0.65	9.66		0.30 - 0.50	B	0.70	PID=1.80ppmv
MADE GROUND: Brown gravelly fine to coarse SAND with a moderate cobble content. Gravel is subangular to subrounded fine to coarse of flint, brick and clinker. Cobbles are angular to subangular of brick. (RE-ENGINEERED COVER SYSTEM)		1.50	8.81		0.70 - 1.00 0.70 - 1.00	B ES		
MADE GROUND: Landfill recovered as frequent plastic, wood, occasional metal, rare paper and newspaper (dated 1986) with approximately 70% matrix of soft slightly sandy dark grey CLAY with ash (approximately 5%) and a low cobble content. Sand is fine to coarse. Cobbles are angular to subrounded of concrete, sandstone and brick. (LANDFILL)		3.80	6.51		2.00 - 2.50	B	2.00	PID=128.40ppmv
At 2.4 m bgl: Asphalt obstruction (200 mm thickness) across entire trial pit footprint. Slight hydrocarbon sheen on groundwater.		3.90	6.41					
MADE GROUND: Very soft brown slightly sandy SILT. Sand is fine to medium. (SUSPECTED ORIGINAL RE-ENGINEERED COVER SYSTEM) Trial pit complete at 3.90 m bgl.								

Dimensions and Orientation:



Remarks:

1. Logged in general accordance with BS5930:2015+A1:2020.
2. Trial pit location cleared for services prior to breaking ground.
3. Elevation and location data obtained from GPS survey.
4. Trial pit remained stable throughout.

Coordinates: **E470258.27 N105760.33**

Elevation (mAOD): **10.31**

Excavated By: **BPH Plant Hire**

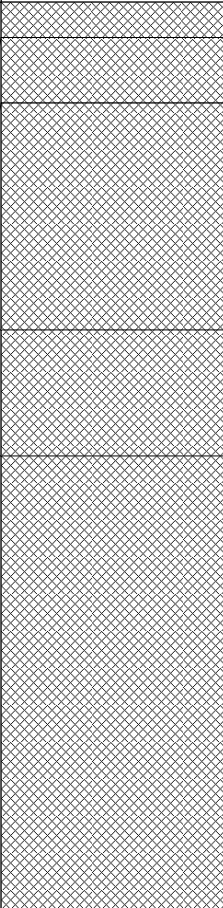
Plant Used: **JCB 3CX**


Logged: **LB**

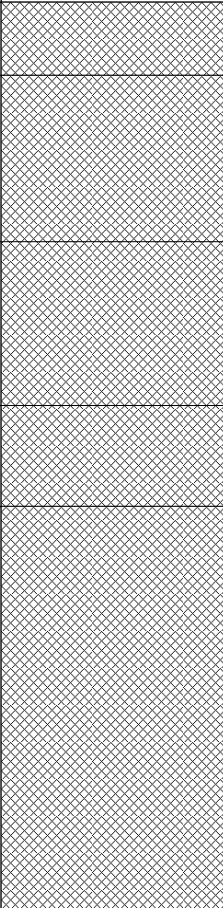
Checked: **BB**

Approved: **RM**

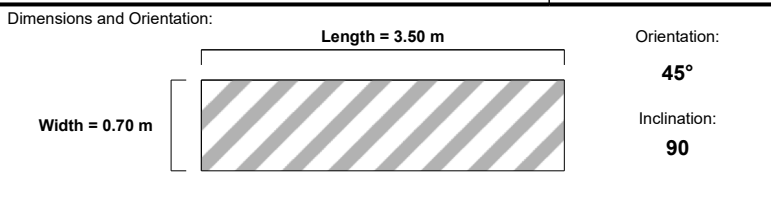
Scale: **1:30**

Description of Strata	Legend	Strata Depth (m)	Reduced Level (mAOD)	Water Strike (m)	Sample Details		Test Details	
					Depth (m)	Type & Ref	Depth (m)	Results
MADE GROUND: Soft brown slightly sandy slightly gravelly CLAY with frequent rootlets. Sand is fine to coarse. Gravel is subangular to subrounded of natural lithologies. (TOPSOIL)		0.14	11.82		1.40 - 1.60	B	0.10	PID=0.00ppmv
MADE GROUND: Soft orangish brown slightly sandy SILT. Sand is fine. (RE-ENGINEERED COVER SYSTEM)		0.40	11.56					
MADE GROUND: Brown gravelly clayey fine to coarse SAND with a moderate cobble content and rare wood fragments. Gravel is subangular to rounded fine to coarse of chalk, flint and brick. Cobbles are angular to subangular of chalk and brick. (RE-ENGINEERED COVER SYSTEM)		1.30	10.66					
MADE GROUND: Dark brown slightly gravelly clayey fine to medium SAND with a moderate cobble content. Gravel is angular to subangular fine to coarse of brick and flint. Cobbles are angular of brick. (RE-ENGINEERED COVER SYSTEM)		1.80	10.16					
MADE GROUND: Landfill recovered as frequent wood, plastic, occasional metal, glass, rare styrofoam, carpet, textile, rubber and paper with approximately 60% matrix of black gravelly fine to coarse SAND with ash (approximately 30%). Gravel is angular to subangular fine to coarse of flint, brick, chalk and clinker. (LANDFILL)								
At 1.83 m bgl: Concrete slab (570mm x 620mm x 120mm).								
Trial pit complete at 3.60 m bgl.		3.60	8.36					

Dimensions and Orientation: 		Remarks: 1. Logged in general accordance with BS5930:2015+A1:2020. 2. Trial pit location cleared for services prior to breaking ground. 3. Elevation and location data obtained from GPS survey. 4. Trial pit remained stable throughout.					
Coordinates: E470262.23 N105694.28	Elevation (mAOD): 11.96	Excavated By: BPH Plant Hire	Plant Used: JCB 3CX	Logged: LB	Checked: BB	Approved: RM	Scale: 1:30

Description of Strata	Legend	Strata Depth (m)	Reduced Level (mAOD)	Water Strike (m)	Sample Details		Test Details	
					Depth (m)	Type & Ref	Depth (m)	Results
MADE GROUND: Soft brown slightly sandy CLAY with frequent rootlets. Sand is fine. (TOPSOIL)		0.29	9.09		0.30 - 0.60 0.30 - 0.70	ES B	0.10	PID=0.10ppmv
MADE GROUND: Friable light brown slightly sandy slightly gravelly CLAY. Sand is fine to coarse. Gravel is subangular to subrounded fine to coarse of chalk and flint. (RE-ENGINEERED COVER SYSTEM)		0.95	8.43				0.30	PID=0.10ppmv
MADE GROUND: Landfill recovered as frequent plastic, metal and wood with approximately 70% matrix of black gravelly fine to coarse SAND with ash (approximately 20%). Gravel is subangular to subrounded fine to coarse of flint, brick and concrete. (LANDFILL)		1.60	7.78		1.00 - 1.50	ES	1.00	PID=12.80ppmv
MADE GROUND: Grey gravelly slightly silty fine to coarse SAND with rare plastic and metal fragments. Gravel is subangular to rounded fine to coarse of natural lithologies. (SUSPECTED ORIGINAL RE-ENGINEERED COVER SYSTEM)		2.00	7.38		1.60 - 2.00	B	1.60	PID=4.70ppmv
MADE GROUND: Landfill recovered as frequent plastic, metal, occasional textile, paper, wood and rare ceramic with approximately 15% matrix of very soft black slightly sandy CLAY. Sand is fine to coarse. (LANDFILL)		3.60	5.78					
Trial pit complete at 3.60 m bgl.								

2.75 ▼



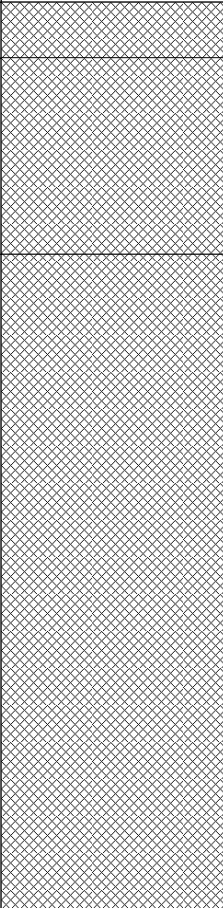
Remarks:

1. Logged in general accordance with BS5930:2015+A1:2020.
2. Trial pit location cleared for services prior to breaking ground.
3. Elevation and location data obtained from GPS survey.
4. Trial pit collapsing following ingress of groundwater.

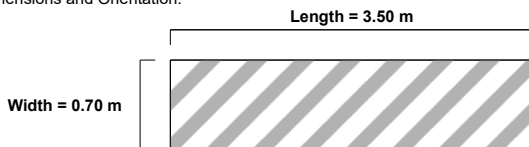
Trial Pit Log

Date: **01/04/2021**

Client: **Exton Estates**

Description of Strata	Legend	Strata Depth (m)	Reduced Level (mAOD)	Water Strike (m)	Sample Details		Test Details		
					Depth (m)	Type & Ref	Depth (m)	Results	
MADE GROUND: Soft brown slightly sandy CLAY with frequent rootlets. Sand is fine. (TOPSOIL)		0.22	10.49				0.10	PID=0.30ppmv	
MADE GROUND: Yellowish brown slightly gravelly fine SAND. Gravel is subangular to rounded fine to coarse of sandstone, flint and brick. (RE-ENGINEERED COVER SYSTEM)					0.30 - 0.60 0.30 - 0.60	B ES	0.30	PID=0.00ppmv	
MADE GROUND: Landfill recovered as frequent wood, plastic, occasional carpet, rare rubber, textile and glass with approximately 70% matrix of slightly gravelly fine to coarse SAND with ash (approximately 20%) and a low cobble and boulder content. Gravel is subangular fine to coarse of brick, concrete and flint. Cobbles are angular of concrete. Boulders are subangular of concrete. (LANDFILL)			1.00	9.71					
							1.50 - 2.00	ES	1.50
From 2.9 m bgl: Approximately 30% matrix.									
		3.60	7.11						
Trial pit complete at 3.60 m bgl.									

Dimensions and Orientation:



Orientation:

45°

Inclination:

90

Remarks:

1. Logged in general accordance with BS5930:2015+A1:2020.
2. Trial pit location cleared for services prior to breaking ground.
3. Elevation and location data obtained from GPS survey.
4. Trial pit remained stable throughout.

Coordinates:
E470226.04 N105661.20

Elevation (mAOD):
10.71

Excavated By:
BPH Plant Hire

Plant Used:
JCB 3CX

Logged:
LB

Checked:
BB

Approved:
RM

Scale:
1:30



Project: **Brockhampton West**
 Location: **Harts Farm Way**
 Client: **Havant Borough Council**

Location Details
 Easting: 470104.28 Northing: 105703.67
 Level: 10.54m AOD Depth: 35.00m
 Logger: SN Type: CP
 Inclination: 90°

Status
DRAFT

Borehole Number
CP01

Sheet 2 of 4

Method, Plant and Crew					Diameter		Casing		Drilling Progress by Time				Scale:	
From (m)	To (m)	Type	Plant Used	Crew	Depth (m)	Diam (mm)	Depth(m)	Diam (mm)	Date	Time	Depth (m)	Casing (m)	Water (m)	1:50
0.00	1.20	Inspection Pit Cable Percussion	Insulated Tools Dando 4000	RD Drilling RD Drilling	6.00	250	6.00	250						Checked By:
1.20	35.00				15.00	200	15.00	200						Approved By:
					35.00	150	35.00	150						Start Date: 02/05/2017
														Finish Date: 04/05/2017

Strata Description	Legend	Depth (m)	Reduced Level (mAOD)	Water Level (m)	Inst / Backfill	Samples and Testing		
						Depth (m)	Ref	Tests / Results
[MADE GROUND] Soft dark grey slightly gravelly CLAY. Gravel is angular to sub-rounded, fine to coarse flint. Landfill waste noted includes: paper, wood, string, material, plastic, carpet etc. Slight rotten type odour noted. (LANDFILL) [MADE GROUND] Soft light brown slightly gravelly sandy CLAY. Sand is fine to coarse. Gravel is angular to sub-rounded, fine and medium brick. (CAPPING LAYER)		10.30	0.24			10.50 10.50 - 11.00	E55 B22	SPT(C) 10.50m, N=33 (7,7/8,8,8,9) PID 10.50m, 0.4ppm
Light brown to black SAND & GRAVEL. Sand is fine to coarse. Gravel is angular to sub-rounded, fine to coarse flint. (RIVER TERRACE DEPOSIT) ... Between 12.00 and 12.50m bgl: Slightly clayey sandy GRAVEL.		11.50	-0.96			11.50 12.00 - 12.45 12.00 - 12.50	D23 D24 B25	SPT(S) 12.00m, N=24 (2,2/5,5,7,7)
Recovered as light brown / white clayey / silty sand and gravel of CHALK. Sand is fine to coarse. Gravel is angular to sub-rounded, fine to coarse flint and chalk. (UPPER CHALK FORMATION) ... From 14.00m bgl: Fewer flint gravels.		13.00	-2.46			13.00 13.50 - 13.95 13.50 - 14.00	D26 D27 B28	SPT(S) 13.50m, N=18 (2,2/3,5,6,4)
						14.50	D29	
						15.00 15.00 - 15.45 15.00 - 15.50	E56 D30 B31	SPT(S) 15.00m, N=27 (4,5/5,7,7,8)
						16.00	D32	
						16.50 - 16.95 16.50 - 17.00	D33 B34	SPT(S) 16.50m, N=34 (4,5/7,7,9,11)
						17.50	D35	
						18.00 - 18.45 18.00 - 19.00	U-NR36 B38	Ublows=145 Recovery=0%
						18.50	U-NR37	Ublows=150 Recovery=0%
						19.50 - 19.95 19.50 - 20.00	D39 B40	SPT(S) 19.50m, N=46 (7,7/9,11,13,13)

Observations / Remarks	Chiselling			Water Added		Hammer Information		
	From (m)	To (m)	Time (mins)	From (m)	To (m)	Serial No.	Energy Ratio %	
	Prior to excavation, BH location cleared of services by GPR / EM techniques. Hand excavated inspection pit from GL to 1.20m bgl. Whilst drilling beneath landfill material in chalk, UXO engineer on site. On completion BH backfilled / installed as per graphical log.						RD5	68
	Groundwater						Project Number	
	Strike (m)	Casing (m)	Sealed (m)	Time (min)	Rose To (m)	Remarks		
	11.50	11	-	20	9.70			
							A102760	



Project: **Brockhampton West**
 Location: **Harts Farm Way**
 Client: **Havant Borough Council**

Location Details
 Easting: 470104.28 Northing: 105703.67
 Level: 10.54mAOD Depth: 35.00m
 Logger: SN Type: CP
 Inclination: 90°

Status
DRAFT

Borehole Number
CP01

Sheet 3 of 4

Method, Plant and Crew						Diameter		Casing		Drilling Progress by Time					Scale:
From (m)	To (m)	Type	Plant Used	Crew	Depth (m)	Diam (mm)	Depth(m)	Diam (mm)	Date	Time	Depth (m)	Casing (m)	Water (m)	Checked By:	
0.00	1.20	Inspection Pit Cable Percussion	Insulated Tools Dando 4000	RD Drilling RD Drilling	6.00 15.00 35.00	250 200 150	6.00 15.00 35.00	250 200 150						1:50	
														Approved By:	
														Start Date: 02/05/2017	
														Finish Date: 04/05/2017	

Strata Description	Legend	Depth (m)	Reduced Level (mAOD)	Water Level (m)	Inst / Backfill	Samples and Testing		
						Depth (m)	Ref	Tests / Results
Recovered as light brown / white clayey / silty sand and gravel of CHALK. Sand is fine to coarse. Gravel is angular to sub-rounded, fine to coarse flint and chalk. (UPPER CHALK FORMATION)						20.50	D41	
						21.00	D42	SPT(S) 21.00m, N=50 (7,7/12,12,13,13)
						21.00 - 21.50	D43	
						22.00	D44	
						22.50 - 23.00	B45	SPT(S) 22.50m, N=54 (7,9/12,12,14,16)
						23.50	D46	
						24.00 - 24.50	B48	SPT(S) 24.00m, 50 (25,25/50 for 19mm)
						25.00	D49	
						25.50 - 25.95	D50	SPT(S) 25.50m, 50 (9,14/50 for 225mm)
						25.50 - 26.00	B51	
						25.80 - 29.00	B57	
						26.50	D52	
						27.00 - 27.50	B54	SPT(S) 27.00m, 50 (9,12/50 for 120mm)
					28.00	D55		
					28.50 - 28.95	D56	SPT(S) 28.50m, 50 (7,9/50 for 60mm)	
					29.50	D58		
					30.00 - 30.45	D59	SPT(S) 30.00m, 50 (10,15/50 for 60mm)	
					30.00 - 30.50	B60		

Observations / Remarks	Chiselling			Water Added		Hammer Information	
	From (m)	To (m)	Time (mins)	From (m)	To (m)	Serial No.	Energy Ratio %
						RD5	68
Groundwater						Project Number	
Strike (m)	Casing (m)	Sealed (m)	Time (min)	Rose To (m)	Remarks		
						A102760	

Prior to excavation, BH location cleared of services by GPR / EM techniques.
 Hand excavated inspection pit from GL to 1.20m bgl.
 Whilst drilling beneath landfill material in chalk, UXO engineer on site.
 On completion BH backfilled / installed as per graphical log.



Project: **Brockhampton West**
 Location: **Harts Farm Way**
 Client: **Havant Borough Council**

Location Details
 Easting: 469988.77 Northing: 105575.68
 Level: 10.79mAOD Depth: 35.00m
 Logger: SN Type: CP
 Inclination: 90°

Status
DRAFT

Borehole Number
CP02A

Sheet 1 of 4

Method, Plant and Crew					Diameter		Casing		Drilling Progress by Time					Scale: 1:50	
From (m)	To (m)	Type	Plant Used	Crew	Depth (m)	Diam (mm)	Depth(m)	Diam (mm)	Date	Time	Depth (m)	Casing (m)	Water (m)	Checked By:	Approved By:
0.00	35.00	Cable Percussion Inspection Pit	Dando 4000 Insulated Tools	RD Drilling RD Drilling	7.50 13.00 35.00	250 200 150	7.50 13.00 35.00	250 200 150							04/05/2017
														Finish Date:	08/05/2017

Strata Description	Legend	Depth (m)	Reduced Level (mAOD)	Water Level (m)	Inst / Backfill	Samples and Testing		
						Depth (m)	Ref	Tests / Results
[MADE GROUND] Grass over TOPSOIL		0.10	10.69					
[MADE GROUND] Soft brown sandy gravelly CLAY. Sand is fine to coarse. Gravel is angular to well rounded, fine to coarse asphalt, brick, concrete and flint. With occasional angular to sub-angular concrete cobbles. (CAPPING LAYER) ... At 0.20m bgl: Fragment of flat metal.		2.00	8.79			0.20 0.50 - 1.00 0.75 1.00 - 3.00	D1 B2 ES1 B3	PID 0.75m, 1.9ppm
[MADE GROUND] Soft black / dark brown sandy gravelly CLAY. Sand is fine to coarse. Gravel is angular to sub-angular fine to coarse concrete, glass, wood, plastic bags, rigid plastic, material & polystyrene. (LANDFILL)		2.00	8.79			2.10 3.50 - 4.00 4.50 4.50 - 5.00 5.50 6.00 - 6.50 7.00 7.00 7.50 - 8.00	ES2 B5 ES3 B7 B8 B10 D11 ES4 B13	PID 2.10m, 5.1ppm SPT(C) 3.50m, N=24 (4,5/5,5,7,7) SPT(C) 4.50m, N=29 (4,4/6,7,8,8) PID 4.50m, 5.1ppm SPT(C) 6.00m, N=16 (5,7/7,5,2,2) PID 7.00m, 8.4ppm SPT(C) 7.50m, 47 (7,9/47 for 225mm)
Soft orange brown slightly sandy slightly gravelly CLAY. Sand is fine to coarse. Gravel is angular to sub-rounded, fine to coarse flint. (ALLUVIUM)		9.50	1.29			8.50 9.50 - 10.00 10.00 10.00	D14 B19 D21 ES5	SPT(C) 9.00m, 0 (50 for 0mm/0 for 0mm) PID 10.00m, 5.8ppm

Observations / Remarks	Chiselling			Water Added		Hammer Information		
	From (m)	To (m)	Time (mins)	From (m)	To (m)	Serial No.	Energy Ratio %	
	Prior to excavation, BH location cleared of services by GPR / EM techniques. Hand excavated inspection pit from GL to 1.20m bgl. Whilst drilling beneath landfill material in chalk, UXO engineer on site. On completion BH backfilled / installed as per graphical log. No groundwater encountered during investigation.	5.60	6.00	72			RD5	68
Groundwater						Project Number		
Strike (m)		Casing (m)	Sealed (m)	Time (min)	Rose To (m)	Remarks	A102760	
	9.60		20	8.40				



Project: **Brockhampton West**
 Location: **Harts Farm Way**
 Client: **Havant Borough Council**

Location Details
 Easting: 469988.77 Northing: 105575.68
 Level: 10.79mAOD Depth: 35.00m
 Logger: SN Type: CP
 Inclination: 90°

Status
DRAFT

Borehole Number
CP02A

Sheet 2 of 4

Method, Plant and Crew					Diameter		Casing		Drilling Progress by Time					Scale: 1:50	
From (m)	To (m)	Type	Plant Used	Crew	Depth (m)	Diam (mm)	Depth(m)	Diam (mm)	Date	Time	Depth (m)	Casing (m)	Water (m)	Checked By:	Approved By:
0.00	35.00	Cable Percussion	Dando 4000	RD Drilling	7.50	250	7.50	250							
0.00	1.20	Inspection Pit	Insulated Tools	RD Drilling	13.00	200	13.00	200							04/05/2017
					35.00	150	35.00	150							08/05/2017

Strata Description	Legend	Depth (m)	Reduced Level (mAOD)	Water Level (m)	Inst / Backfill	Samples and Testing			
						Depth (m)	Ref	Tests / Results	
... From 10.00m bgl: becoming less gravelly and lighter in colour.						10.50 - 10.95	D20	SPT(S) 10.50m, N=20 (4,4/5,5,5)	11
						10.50 - 11.00	B22		
						12.00 - 12.50	B24	SPT(C) 12.00m, N=26 (4,5/6,6,7,7)	12
		13.00	-2.21			13.00	D25	PID 13.00m, 0.0ppm	13
Recovered as cream / white slightly clayey sand & gravel of CHALK. Sand is fine to coarse. Gravel is angular to sub-rounded, fine to coarse chalk and flint. (UPPER CHALK FORMATION)						13.50	D26	SPT(S) 13.50m, N=17 (4,4/4,4,4,5)	
						13.50 - 14.00	B27		
						13.50 - 17.00	B33		
						14.00	D29	PID 14.50m, 0.0ppm	14
						15.00	D29	SPT(S) 15.00m, N=22 (4,5/5,5,6,6)	15
						15.00 - 15.50	B30		
						16.00	D28	PID 16.00m, 0.0ppm	16
						16.00	D31		
						16.50 - 16.95	D32	SPT(S) 16.50m, N=27 (1,1/5,7,7,8)	
						16.50m, 0.0ppm		PID 17.00m, 0.0ppm	17
						17.50	D34		
						18.00	U-NR35	Ublows=150 Recovery=0%	18
						18.00 - 19.50	B37		
						19.00	U-NR36	Ublows=120 Recovery=0%	19
						19.50 - 19.95	D38	SPT(S) 19.50m, N=40 (4,7/9,9,9,13)	
						19.50 - 20.00	B39	PID 19.50m, 0.0ppm	
						20.00	ES6	PID 20.00m, 0.0ppm	20

Observations / Remarks	Chiselling			Water Added		Hammer Information	
	From (m)	To (m)	Time (mins)	From (m)	To (m)	Serial No.	Energy Ratio %
						RD5	68
Groundwater	Strike (m)	Casing (m)	Sealed (m)	Time (min)	Rose To (m)	Project Number	
						A102760	

Prior to excavation, BH location cleared of services by GPR / EM techniques.
 Hand excavated inspection pit from GL to 1.20m bgl.
 Whilst drilling beneath landfill material in chalk, UXO engineer on site.
 On completion BH backfilled / installed as per graphical log.
 No groundwater encountered during investigation.



Project: **Brockhampton West**
 Location: **Harts Farm Way**
 Client: **Havant Borough Council**

Location Details
 Easting: 469988.77 Northing: 105575.68
 Level: 10.79mAOD Depth: 35.00m
 Logger: SN Type: CP
 Inclination: 90°

Status
DRAFT

Borehole Number
CP02A

Sheet 3 of 4

Method, Plant and Crew						Diameter		Casing		Drilling Progress by Time					Scale:
From (m)	To (m)	Type	Plant Used	Crew	Depth (m)	Diam (mm)	Depth(m)	Diam (mm)	Date	Time	Depth (m)	Casing (m)	Water (m)	Checked By:	
0.00	35.00	Cable Percussion	Dando 4000	RD Drilling	7.50	250	7.50	250						Approved By:	
0.00	1.20	Inspection Pit	Insulated Tools	RD Drilling	13.00	200	13.00	200						Start Date: 04/05/2017	
					35.00	150	35.00	150						Finish Date: 08/05/2017	

Strata Description	Legend	Depth (m)	Reduced Level (mAOD)	Water Level (m)	Inst / Backfill	Samples and Testing				
						Depth (m)	Ref	Tests / Results		
Recovered as cream / white slightly clayey sand & gravel of CHALK. Sand is fine to coarse. Gravel is angular to sub-rounded, fine to coarse chalk and flint. (UPPER CHALK FORMATION)						21.00 - 21.45	D40	SPT(S) 21.00m, N=24 (3,4/6,6,6,6)	21	
						21.00 - 21.50	B41	PID 21.00m, 0.0ppm		
							22.00	D42	PID 22.00m, 0.0ppm	22
							22.50 - 22.95	U43	Ublows=150 Recovery=66%	
							23.00	D44		23
							23.50	D45		
							24.00	U-NR46	Ublows=150 Recovery=0%	24
							24.00 - 25.00	B47		
							25.00 - 25.50	B49	SPT(C) 25.00m, 50 (10,10/50 for 30mm)	25
							26.50 - 26.95	D50	SPT(S) 26.50m, 50 (9,12/50 for 150mm)	
							27.50	D58		27
							28.00 - 28.10	D59	SPT(S) 28.00m, 50 (9,12/50 for 150mm)	
						28.00 - 28.50	B60		28	
						29.00	D61			
						29.50 - 30.00	B63	SPT(C) 29.50m, 48 (9,15/48 for 156mm)	29	
									30	

Observations / Remarks	Chiselling			Water Added		Hammer Information	
	From (m)	To (m)	Time (mins)	From (m)	To (m)	Serial No.	Energy Ratio %
						RD5	68
	Groundwater						Project Number
	Strike (m)	Casing (m)	Sealed (m)	Time (min)	Rose To (m)	Remarks	A102760

Prior to excavation, BH location cleared of services by GPR / EM techniques.
 Hand excavated inspection pit from GL to 1.20m bgl.
 Whilst drilling beneath landfill material in chalk, UXO engineer on site.
 On completion BH backfilled / installed as per graphical log.
 No groundwater encountered during investigation.



Project: **Brockhampton West**
 Location: **Harts Farm Way**
 Client: **Havant Borough Council**

Location Details
 Easting: 470303.30 Northing: 105661.53
 Level: 8.67mAOD Depth: 35.00m
 Logger: AH Type: CP
 Inclination: 90°

Status
DRAFT

Borehole Number
CP03

Sheet 2 of 4

Method, Plant and Crew					Diameter		Casing		Drilling Progress by Time					Scale:
From (m)	To (m)	Type	Plant Used	Crew	Depth (m)	Diam (mm)	Depth(m)	Diam (mm)	Date	Time	Depth (m)	Casing (m)	Water (m)	1:50
0.00	1.20	Inspection Pit Cable Percussion	Insulated Tools Dando 4000	RD Drilling RD Drilling	10.00 14.00 35.00	250 200 150	10.00 14.00 35.00	250 200 150						Checked By:
														Approved By:
														Start Date: 09/05/2017
														Finish Date: 10/05/2017

Strata Description	Legend	Depth (m)	Reduced Level (mAOD)	Water Level (m)	Inst / Backfill	Samples and Testing			
						Depth (m)	Ref	Tests / Results	
... From 10.50m bgl: With comminuted putty chalk.		10.50 - 11.00				B25	SPT(C) 10.50m, N=33 (4,5/7,7,8,11)	11	
		11.50				D26			
		12.00 - 12.50				B28	SPT(C) 12.00m, N=38 (4,8/9,9,10,10)	12	
		13.00				D29			
		13.50 - 14.00				B31	SPT(C) 13.50m, N=34 (7,7/8,8,9,9)		
		14.00	-5.33						14
		14.50				D32			
		15.00 - 15.45				D33	SPT(S) 15.00m, N=20 (4,4/5,5,5,5)	15	
		15.00 - 15.50				B34			
		16.00				D35			
16.50 - 16.95				D36	SPT(S) 16.50m, N=27 (4,6/6,7,7,7)	16			
16.50 - 17.00				B37					
17.00				D38					
18.00 - 18.45				D39	SPT(S) 18.00m, N=50 (4,4/10,10,15,15)	18			
18.00 - 18.50				B40					
19.00				D41					
19.50 - 19.95				D42	SPT(S) 19.50m, N=42 (4,7/8,11,11,12)	19			
19.50 - 20.00				B43					
							20		

Observations / Remarks	Chiselling			Water Added		Hammer Information		
	From (m)	To (m)	Time (mins)	From (m)	To (m)	Serial No.	Energy Ratio %	
	Prior to excavation, BH location cleared of services by GPR / EM techniques. Hand excavated inspection pit from GL to 1.20m bgl. Whilst drilling beneath landfill material in chalk, UXO engineer on site. On completion BH backfilled / installed as per graphical log.							
	Groundwater						Project Number	
Strike (m)	Casing (m)	Sealed (m)	Time (min)	Rose To (m)	Remarks	A102760		
10.50	-	-	20	8.30				



Project: **Brockhampton West**
 Location: **Harts Farm Way**
 Client: **Havant Borough Council**

Location Details
 Easting: 470303.30 Northing: 105661.53
 Level: 8.67mAOD Depth: 35.00m
 Logger: AH Type: CP
 Inclination: 90°

Status
DRAFT

Borehole Number
CP03

Sheet 3 of 4

Method, Plant and Crew					Diameter		Casing		Drilling Progress by Time					Scale:
From (m)	To (m)	Type	Plant Used	Crew	Depth (m)	Diam (mm)	Depth(m)	Diam (mm)	Date	Time	Depth (m)	Casing (m)	Water (m)	1:50
0.00	1.20	Inspection Pit Cable Percussion	Insulated Tools Dando 4000	RD Drilling RD Drilling	10.00 14.00 35.00	250 200 150	10.00 14.00 35.00	250 200 150						Checked By: Approved By: Start Date: 09/05/2017 Finish Date: 10/05/2017

Strata Description	Legend	Depth (m)	Reduced Level (mAOD)	Water Level (m)	Inst / Backfill	Samples and Testing			
						Depth (m)	Ref	Tests / Results	
Recovered as gravelly SILT of CHALK. Gravel is sub-angular, fine to coarse flint and extremely weak to weak cream white chalk. (UPPER CHALK FORMATION)						20.50	D44		
						21.00 - 21.50	B46	SPT(C) 21.00m, N=50 (7,9,12,12,13,13)	21
						22.00	D47		22
						22.50 - 23.00	B49	SPT(C) 22.50m, N=28 (4,5/6,7,7,8)	23
						23.50	D50		
						24.00	E55	SPT(C) 24.00m, N=43 (4,5/9,9,10,15)	24
						24.00 - 24.50	B52	PID 24.00m, 0.0ppm	
						25.00	D53		25
						25.50 - 26.00	B55	SPT(C) 25.50m, N=54 (9,9/10,12,15,17)	26
						26.50	D56		
						27.00 - 27.50	B58	SPT(C) 27.00m, 50 (9,10/50 for 225mm)	27
						28.00	D59		28
28.50 - 29.00	B61	SPT(C) 28.50m, 50 (9,12/50 for 105mm)	29						
29.50	D62								
30.00 - 32.00	B65	SPT(C) 30.00m, 50 (25,50/50 for 75mm)	30						

Observations / Remarks	Chiselling			Water Added		Hammer Information		
	From (m)	To (m)	Time (mins)	From (m)	To (m)	Serial No.	Energy Ratio %	
	Prior to excavation, BH location cleared of services by GPR / EM techniques. Hand excavated inspection pit from GL to 1.20m bgl. Whilst drilling beneath landfill material in chalk, UXO engineer on site. On completion BH backfilled / installed as per graphical log.						RD5 RD	68
Groundwater						Project Number		
Strike (m)		Casing (m)	Sealed (m)	Time (min)	Rose To (m)	Remarks	A102760	



Project: **Brockhampton West**
 Location: **Harts Farm Way**
 Client: **Havant Borough Council**

Location Details
 Easting: 470303.30 Northing: 105661.53
 Level: 8.67mAOD Depth: 35.00m
 Logger: AH Type: CP
 Inclination: 90°

Status
DRAFT

Borehole Number
CP03

Sheet 4 of 4

Method, Plant and Crew					Diameter		Casing		Drilling Progress by Time				Scale:	
From (m)	To (m)	Type	Plant Used	Crew	Depth (m)	Diam (mm)	Depth(m)	Diam (mm)	Date	Time	Depth (m)	Casing (m)	Water (m)	1:50
0.00	1.20	Inspection Pit Cable Percussion	Insulated Tools Dando 4000	RD Drilling RD Drilling	10.00 14.00 35.00	250 200 150	10.00 14.00 35.00	250 200 150						Checked By: Approved By: Start Date: 09/05/2017 Finish Date: 10/05/2017

Strata Description	Legend	Depth (m)	Reduced Level (mAOD)	Water Level (m)	Inst / Backfill	Samples and Testing		
						Depth (m)	Ref	Tests / Results
Recovered as gravelly SILT of CHALK. Gravel is sub-angular, fine to coarse flint and extremely weak to weak cream white chalk. (UPPER CHALK FORMATION)		35.00	-26.33					
						33.00 - 33.50	B67	SPT(C) 33.00m, 50 (25,20/50 for 27mm)
						34.00	D68	
						34.50 - 35.00	B70	SPT(C) 34.50m, 50 (25,32/50 for 40mm)
EOH at 35.00m - Target Depth Achieved.								

Observations / Remarks	Chiselling			Water Added		Hammer Information		
	From (m)	To (m)	Time (mins)	From (m)	To (m)	Serial No.	Energy Ratio %	
	Prior to excavation, BH location cleared of services by GPR / EM techniques. Hand excavated inspection pit from GL to 1.20m bgl. Whilst drilling beneath landfill material in chalk, UXO engineer on site. On completion BH backfilled / installed as per graphical log.	34.00	35.00	75			RD5 RD	68
Groundwater						Project Number		
Strike (m)		Casing (m)	Sealed (m)	Time (min)	Rose To (m)	Remarks	A102760	



Project: **Brockhampton West**
 Location: **Harts Farm Way**
 Client: **Havant Borough Council**

Location Details
 Easting: 470021.09 Northing: 105669.84
 Level: 11.52mAOD Depth: 9.70m
 Logger: SN Type: CP
 Inclination: 90°

Status
DRAFT

Borehole Number
CP04

Sheet 1 of 1

Method, Plant and Crew					Diameter		Casing		Drilling Progress by Time				Scale: 1:50	
From (m)	To (m)	Type	Plant Used	Crew	Depth (m)	Diam (mm)	Depth(m)	Diam (mm)	Date	Time	Depth (m)	Casing (m)	Water (m)	Checked By:
0.00	1.20	Inspection Pit Cable Percussion	Insulated Tools Dando 4000	RD Drilling RD Drilling	9.70	150	9.70	150						Approved By:
														Start Date: 11/05/2017
														Finish Date: 11/05/2017

Strata Description	Legend	Depth (m)	Reduced Level (mAOD)	Water Level (m)	Inst / Backfill	Samples and Testing		
						Depth (m)	Ref	Tests / Results
[MADE GROUND] Grass over soft light brown sandy gravelly CLAY. Sand is fine to coarse. Gravel is sub-angular to well rounded, fine to coarse flint. (CAPPING LAYER)						0.20 0.20 - 1.00	D1 B2	
						0.50	ES1	PID 0.50m, 0.7ppm
						1.30 1.30 - 2.00	D3 B5	SPT(C) 1.30m, N=28 (7,7/8,8,4)
[MADE GROUND] Soft black / white / grey mottled sandy gravelly CLAY. Sand is fine to coarse. Gravel is angular brick and flint. (CAPPING LAYER)		2.50	9.02			2.50 2.50 - 3.00	ES2 B7	SPT(C) 2.50m, 0 (50 for 0mm/0 for 0mm) PID 2.50m, 2.5ppm
[MADE GROUND] Black slightly clayey SAND & GRAVEL. Sand is fine to coarse. Gravel to sub-rounded, fine to coarse metal, glass, wood and occasional flint. With paper and material. (LANDFILL)		3.50	8.02			3.50 - 4.00	B9	SPT(C) 3.50m, 50 (9,14/50 for 125mm)
						4.50 4.50 - 5.00	ES2 B11	SPT(C) 4.50m, 50 (7,9/50 for 225mm) PID 4.50m, 36.1ppm
						5.50 - 6.00	B13	SPT(C) 5.50m, N=41 (7,9/9,10,11,11)
						6.50	D14	
						7.00 7.00 - 7.50	ES4 B16	SPT(C) 7.00m, N=31 (4,5/7,7,8,9) PID 7.00m, 57.3ppm
						8.00	D17	
Soft to firm brown silty CLAY. (ALLUVIUM)		8.20	3.32			8.20 - 8.65	U18	
						9.20	D19	SPT(S) 9.20m, N=18 (3,3/4,4,5,5)
EOH at 9.70m - Target Depth Achieved.		9.70	1.82					

Observations / Remarks	Chiselling			Water Added		Hammer Information		
	From (m)	To (m)	Time (mins)	From (m)	To (m)	Serial No.	Energy Ratio %	
	Prior to excavation, BH location cleared of services by GPR / EM techniques. Hand excavated inspection pit from GL to 1.20m bgl. On completion BH backfilled / installed as per graphical log.	2.50	2.80	60			RD5	68
	Groundwater						Project Number	
	Strike (m)	Casing (m)	Sealed (m)	Time (min)	Rose To (m)	Remarks	A102760	
	6.30	-	-	20	6.15			



Project: **Brockhampton West**
 Location: **Harts Farm Way**
 Client: **Havant Borough Council**

Location Details
 Easting: 470122.58 Northing: 105594.66
 Level: 9.56mAOD Depth: 11.95m
 Logger: AH Type: CP
 Inclination: 90°

Status
DRAFT

Borehole Number
CP05

Sheet 1 of 2

Method, Plant and Crew					Diameter		Casing		Drilling Progress by Time					Scale: 1:50	
From (m)	To (m)	Type	Plant Used	Crew	Depth (m)	Diam (mm)	Depth(m)	Diam (mm)	Date	Time	Depth (m)	Casing (m)	Water (m)	Checked By:	Approved By:
0.00	1.20	Inspection Pit Cable Percussion	Insulated Tools Dando 2000	RD Drilling RD Drilling	11.95	150	11.95	150							08/05/2017
1.20	11.95														08/05/2017

Strata Description	Legend	Depth (m)	Reduced Level (mAOD)	Water Level (m)	Inst / Backfill	Samples and Testing		
						Depth (m)	Ref	Tests / Results
[MADE GROUND] Grass over TOPSOIL.		0.10	9.46			0.20 0.30	ES1 D1	PID 0.20m, 0.0ppm
[MADE GROUND] Soft to firm dark brown slightly sandy slightly gravelly CLAY. Sand is fine to coarse. Gravel is angular to sub-rounded, fine to coarse chalk, flint and brick. (CAPPING LAYER)		1.00	8.56			0.50 - 1.00	B2	
[MADE GROUND] Soft to firm greenish grey slightly sandy to sandy slightly gravelly CLAY. Sand is fine to coarse. Gravel is angular to sub-rounded, fine and medium flint and brick. (CAPPING LAYER)		1.00	8.56			1.00	D3	
						1.20 - 1.65	U4	Ublows=40 Recovery=100%
						2.00 2.00 - 2.45 2.00 - 2.50	ES2 D5 B6	SPT(S) 2.00m, N=18 (2,2/3,3,5,7) PID 2.00m, 0.0ppm
						3.00 3.00 - 3.45	D7 U8	Ublows=65 Recovery=78%
[MADE GROND] Black slightly sandy gravelly CLAY. Sand is fine to coarse. Gravel is angular to sub-rounded, fine to coarse flint, polystyrene and metal. With frequent paper and wood fragments. (LANDFILL)		4.00	5.56			4.00 - 4.45 4.00 - 4.50 4.20	D9 B10 ES3	SPT(S) 4.00m, N=27 (12,10/10,9,7,1) PID 4.20m, 2.0ppm
						5.00 5.00 - 6.50	D11 B13	SPT(C) 5.00m, N=36 (6,8/8,10,9,9)
						6.00	ES4	PID 6.00m, 1.1ppm
						7.00	D15	SPT(C) 6.50m, N=9 (2,2/3,3,2,1)
						8.00		SPT(C) 8.00m, N=17 (5,5/4,3,6,4)
						9.50 9.50 - 10.00	ES5 B18	SPT(C) 9.50m, N=14 (6,5/4,4,2,4) PID 9.50m, 0.3ppm
[MADE GROUND] Black / dark grey clayey sandy GRAVEL. Sand is fine to coarse. Gravel is very angular to sub-rounded, fine to coarse flint. With fragments of wood, metal and plastic. (LANDFILL)		9.50	0.06					

... At 5.00m bgl: 10-12mm thick rubber sheet.
 ... Between 5.00m and 6.50m bgl: Frequent / abundant wood fragments. With rare metal and plastic.

Observations / Remarks	Chiselling			Water Added		Hammer Information		
	From (m)	To (m)	Time (mins)	From (m)	To (m)	Serial No.	Energy Ratio %	
	Prior to excavation, BH location cleared of services by GPR / EM techniques. Hand excavated inspection pit from GL to 1.20m bgl. On completion BH backfilled / installed as per graphical log.	3.90	4.10	30			AR323	69
	9.40	9.50	45					
	Groundwater						Project Number	
	Strike (m)	Casing (m)	Sealed (m)	Time (min)	Rose To (m)	Remarks	A102760	
	5.90	-	-	15	5.50			



Project: **Brockhampton West**
 Location: **Harts Farm Way**
 Client: **Havant Borough Council**

Location Details
 Easting: 470206.36 Northing: 105775.84
 Level: 12.40m AOD Depth: 11.00m
 Logger: SN / AH+SN/ AH Type: CP
 Inclination: 90°

Status
DRAFT

Borehole Number
CP06

Sheet 1 of 2

Method, Plant and Crew					Diameter		Casing		Drilling Progress by Time				Scale: 1:50	
From (m)	To (m)	Type	Plant Used	Crew	Depth (m)	Diam (mm)	Depth(m)	Diam (mm)	Date	Time	Depth (m)	Casing (m)	Water (m)	Checked By:
0.00	1.20	Inspection Pit Cable Percussion	Insulated Tools Dando 4000	RD Drilling RD Drilling	11.00	150	11.00	150						Approved By:
														Start Date: 11/05/2017
														Finish Date: 11/05/2017

Strata Description	Legend	Depth (m)	Reduced Level (mAOD)	Water Level (m)	Inst / Backfill	Samples and Testing		
						Depth (m)	Ref	Tests / Results
[MADE GROUND] Grass over soft light brown sandy gravelly CLAY. Sand is fine to coarse. Gravel is angular to sub-rounded, fine to coarse flint and brick. (CAPPING LAYER)		0.00 - 1.20	9.90			0.20	D1	PID 0.50m, 0.1ppm
						0.20 - 1.00	B2	
						0.50	ES1	
						1.20	D3	
						1.20 - 1.65	U4	
[MADE GROUND] Black / multi-coloured slightly clayey SAND & GRAVEL. Sand is fine to coarse. Gravel is angular to sub-rounded, fine to coarse brick, plastic and wood. With pieces of carpet. Foul / rotten type odour noted. (LANDFILL)		2.50 - 9.30	9.90			1.70	D5	SPT(C) 2.50m, 50 (7,19/50 for 90mm) PID 2.50m, 26.3ppm
						2.50	ES2	
						2.50 - 3.00	B7	
						3.50 - 4.00	B9	
						4.50 - 6.00	D13	
						5.00	ES3	
						5.00	ES3	
						5.00	ES3	
						7.00	ES4	
						7.00 - 7.50	B14	
Recovered as cream white / brown sandy GRAVEL. Sand is fine to coarse. Gravel is very angular to sub-rounded, fine to coarse flint and occasional weak white chalk. (RIVER TERRACE DEPOSIT)		9.30 - 10.00	3.10			8.50 - 9.00	B16	SPT(C) 8.50m, 50 (25,20/50 for 47mm)
						9.50m		SPT(C) 9.50m, 50 (9,12/50 for 30mm)

Observations / Remarks	Chiselling			Water Added		Hammer Information		
	From (m)	To (m)	Time (mins)	From (m)	To (m)	Serial No.	Energy Ratio %	
	Prior to excavation, BH location cleared of services by GPR / EM techniques. Hand excavated inspection pit from GL to 1.20m bgl. On completion BH backfilled / installed as per graphical log.	4.50	4.80	60			RD5	68
Groundwater						Project Number		
Strike (m)		Casing (m)	Sealed (m)	Time (min)	Rose To (m)	Remarks	A102760	
4.30			20	4.03				



Project: **Brockhampton West**
 Location: **Harts Farm Way**
 Client: **Havant Borough Council**

Location Details
 Easting: 469964.63 Northing: 105680.10
 Level: 11.07mAOD Depth: 3.40m
 Logger: SN Type: TP

Status
DRAFT

Pit Number
TP01
 Sheet 1 of 1

Hole Information		Groundwater				Scale: 1:25
Pit Dimensions 	Orientation: °	Strike (m)	Rose To (m)	After (mins)	Remarks	Checked By:
	Shoring: None Stability: Stable Plant: 8T Tracked					Approved By: Start Date: 09/05/2017 Finish Date: 09/05/2017

Strata Description	Legend	Depth (m)	Reduced Level (mAOD)	Water Level (m)	Backfill	Samples and Testing		
						Depth (m)	Ref	Tests / Results
[MADE GROUND] Grass over firm orange / light brown slightly sandy slightly gravelly CLAY. Sand is fine to coarse. Gravel is angular to well rounded, fine to coarse flint, chalk and sandstone. (TOPSOIL)		0.30	10.77			0.30 0.30 0.30	B1 D1 ES1	PID 0.30m, 0.2ppm
[MADE GROUND] Soft dark brown slightly gravelly sandy CLAY. Sand is fine to coarse. Gravel is angular to sub-angular flint and brick. (CAPPING LAYER)		0.90	10.17			0.70 0.70 0.70	B2 D2 ES2	PID 0.70m, 0.2ppm
[MADE GROUND] Stiff white slightly gravelly CLAY. Gravel is angular to sub-angular, fine to coarse flint and brick. (CAPPING LAYER)		1.30	9.77			1.10 1.10 1.10	B3 D3 ES3	PID 1.10m, 0.2ppm
[MADE GROUND] Landfill waste. SAND & GRAVEL. Sand is fine to coarse. Gravel is angular to sub-rounded, fine to coarse glass, metal, wood. With frequent plastic sheeting, food tins, house hold cleaning products, material, plastic and wires. Slight rotten type odour noted. (LANDFILL) <i>... Between 1.30m and 3.40m bgl: Papers dated 1976.</i>		1.90	9.77			1.90 1.90 1.90	B4 D4 ES4	PID 1.90m, 31.0ppm
EOH at 3.40m - Target Depth Achieved.		3.40	7.67			3.40 3.40 3.40	B5 D5 ES5	PID 3.40m, 77.7ppm

Observations / Remarks
 Prior to excavation, trial pit location cleared of services by GPR / EM techniques.
 On completion trial pit backfilled with arisings.
 No groundwater encountered during investigation.

Project Number
A102760



Project: **Brockhampton West**
 Location: **Harts Farm Way**
 Client: **Havant Borough Council**

Location Details
 Easting: 470136.24 Northing: 105724.30
 Level: 9.51mAOD Depth: 3.60m
 Logger: SN Type: TP

Status
DRAFT

Pit Number
TP02
 Sheet 1 of 1

Hole Information		Groundwater				Scale: 1:25
Pit Dimensions 4.00m 0.60m	Orientation: °	Strike (m)	Rose To (m)	After (mins)	Remarks	Checked By:
	Shoring: None Stability: Stable Plant: 8T Tracked					Approved By: Start Date: 10/05/2017 Finish Date: 10/07/2017

Strata Description	Legend	Depth (m)	Reduced Level (mAOD)	Water Level (m)	Backfill	Samples and Testing		
						Depth (m)	Ref	Tests / Results
[MADE GROUND] Soft brown slightly sandy slightly gravelly CLAY. Sand is fine to coarse. Gravel is angular to sub-rounded, fine to coarse flit and chalk. With occasional iron pipe and concrete kerbstone. (CAPPING LAYER) ...Between 0.30m and 0.50m bgl: Light brown in colour.								
[MADE GROUND] Light grey slightly clayey slightly gravelly SAND. Sand is fine to coarse. Gravel is sub-rounded to rounded flint. Clay is observed as pockets / lenses. (CAPPING LAYER)		0.90	8.61			1.00 1.00 1.00	B1 D1 ES1	PID 1.00m, 0.5ppm
[MADE GROUND] Soft light grey / black / white mottled sandy gravelly CLAY. Sand is fine to coarse. Gravel is angular to sub-angular, fine to coarse chalk, flint and occasional brick. (CAPPING LAYER)		1.70	7.81					
[MADE GROUND] Black / grey / multi-coloured slightly clayey sandy GRAVEL. Sand is fine to coarse. Gravel is angular to sub-angular, fine to coarse glass, wood and plastic. With frequent plastic bags, glass bottles and cloth / material. (LANDFILL)		2.40	7.11			2.30 2.30 2.30	B3 D2 ES2	PID 2.30m, 0.9ppm
EOH at 3.60m - Target Depth Achieved.		3.60	5.91					PID 3.50m, 13.9ppm

Observations / Remarks Prior to excavation, trial pit location cleared of services by GPR / EM techniques. On completion trial pit backfilled with arisings. No groundwater encountered during investigation.	Project Number A102760
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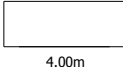


Project: **Brockhampton West**
 Location: **Harts Farm Way**
 Client: **Havant Borough Council**

Location Details
 Easting: 470085.83 Northing: 105670.83
 Level: 10.24mAOD Depth: 3.40m
 Logger: SN Type: TP

Status
DRAFT

Pit Number
TP03
 Sheet 1 of 1

Hole Information		Groundwater				Scale: 1:25
Pit Dimensions 	Orientation: °	Strike (m)	Rose To (m)	After (mins)	Remarks	Checked By:
	Shoring: None Stability: Stable Plant: 8T Tracked					Approved By: Start Date: 09/05/2017 Finish Date: 09/05/2017

Strata Description	Legend	Depth (m)	Reduced Level (mAOD)	Water Level (m)	Backfill	Samples and Testing		
						Depth (m)	Ref	Tests / Results
[MADE GROUND] Grass and topsoil over soft light brown sandy gravelly CLAY. Sand is fine to coarse. Gravel is angular to sub-angular, fine to coarse brick, concrete, sandstone, chalk and flint. Occasional fragments of 25mm pipe. (CAPPING LAYER)						0.40 0.40 0.40	B1 D1 ES1	PID 0.40m, 0.0ppm
[MADE GROUND] Soft pink / light red mottled grey sandy gravelly CLAY. Sand is fine to coarse. Gravel is angular to sub-rounded flint. (CAPPING LAYER)		0.70	9.54			1.20 1.20 1.20	B2 D2 ES2	PID 1.20m, 0.1ppm
[MADE GROUND] White firm crumbly slightly gravelly CLAY. Gravel is sub-angular to sub-rounded, fine and medium flint and chalk. (CAPPING LAYER)		1.40	8.84					
[MADE GROUND] Soft orange mottled grey sandy CLAY. Sand is fine to coarse. (CAPPING LAYER)		1.60	8.64			1.80 1.80 1.80	B3 D3 ES3	PID 1.80m, 0.0ppm
[MADE GROUND] Black clayey SAND & GRAVEL. Sand is fine to coarse. Gravel is angular to sub-angular, fine to coarse glass, plastic, metal and wood. With frequent plastic, microwave parts, plastic bags, lino, foam, whole tyres, food mixer parts (Kenwood). With moderate rotten type odour. (LANDILL)		2.10	8.14			3.00 3.00 3.00	B4 D4 ES4	PID 3.00m, 17.2ppm
EOH at 3.40m - Target Depth Achieved.		3.40	6.84					

Observations / Remarks	
Prior to excavation, trial pit location cleared of services by GPR / EM techniques. On completion trial pit backfilled with arisings. No groundwater encountered during investigation.	
	Project Number A102760



Project: **Brockhampton West**
 Location: **Harts Farm Way**
 Client: **Havant Borough Council**

Location Details
 Easting: 470107.40 Northing: 105638.54
 Level: 9.92m AOD Depth: 3.30m
 Logger: SN Type: TP

Status
DRAFT

Pit Number
TP04
 Sheet 1 of 1

Hole Information		Groundwater				Scale: 1:25
Pit Dimensions 	Orientation: °	Strike (m)	Rose To (m)	After (mins)	Remarks	Checked By:
	Shoring: None Stability: Stable Plant: 8T Tracked					Approved By: Start Date: 09/05/2017 Finish Date: 09/05/2017

Strata Description	Legend	Depth (m)	Reduced Level (m AOD)	Water Level (m)	Backfill	Samples and Testing		
						Depth (m)	Ref	Tests / Results
[MADE GROUND] Grass over light brown TOPSOIL.								
[MADE GROUND] Soft light brown sandy gravelly CLAY. Sand is fine to coarse. Gravel is angular to sub-angular, fine to coarse flint, brick and chalk, with occasional glass and breeze block. (CAPPING LAYER)		0.20	9.72					
[MADE GROUND] Soft to firm mottled grey / pink slightly sandy slightly gravelly CLAY. Sand is fine to coarse. Gravel is angular to sub-rounded, fine and medium flint and chalk, with occasional brick. (CAPPING LAYER)		0.50	9.42			0.60 0.60 0.60	B1 D1 ES1	PID 0.60m, 0.8ppm
[MADE GROUND] Very soft grey / white sandy gravelly CLAY. Sand is fine to coarse. Gravel is angular to sub-rounded, fine to coarse flint and brick. With occasional full bricks. (CAPPING LAYER)		1.20	8.72			1.30 1.30 1.30	B2 D2 ES2	PID 1.30m, 0.1ppm
[MADE GROUND] Black / grey / brown slightly clayey SAND & GRAVEL. Sand is fine to coarse. Gravel is angular to sub-rounded, fine to coarse slate, metal & brick. With plastic sheet and material. Rotten type odour noted. (LANDFILL)		3.00	6.92					
EOH at 3.30m - Target Depth Achieved.		3.30	6.62			3.30 3.30 3.30	B3 D3 ES3	PID 3.30m, 57.8ppm

Observations / Remarks
 Prior to excavation, trial pit location cleared of services by GPR / EM techniques.
 On completion trial pit backfilled with arisings.
 No groundwater encountered during investigation.

Project Number
A102760

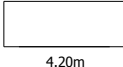


Project: **Brockhampton West**
 Location: **Harts Farm Way**
 Client: **Havant Borough Council**

Location Details
 Easting: 470213.62 Northing: 105689.69
 Level: 12.62mAOD Depth: 3.10m
 Logger: SN Type: TP

Status
DRAFT

Pit Number
TP05
 Sheet 1 of 1

Hole Information		Groundwater				Scale: 1:25
Pit Dimensions 	Orientation: °	Strike (m)	Rose To (m)	After (mins)	Remarks	Checked By:
	Shoring: None Stability: Stable Plant: 8T tracked					Approved By: Start Date: 10/05/2017 Finish Date: 10/05/2017

Strata Description	Legend	Depth (m)	Reduced Level (mAOD)	Water Level (m)	Backfill	Samples and Testing			
						Depth (m)	Ref	Tests / Results	
[MADE GROUND] Grass over light brown sandy gravelly CLAY. Sand is fine to coarse. Gravel is angular to sub-angular, fine to coarse flint, chalk and brick. With occasional cobbles of concrete paving slab and whole tyre. (LANDFILL)						1.00 1.00 1.00	B1 D1 ES1	PID 1.00m, 0.2ppm	1
[MADE GROUND] Black SAND & GRAVEL. Sand is fine to coarse. Gravel is angular to sub-angular, fine to coarse wood, glass and metal. With frequent plastic bags, carpet, material / cloth, paper, tyres, plastic bottles and rain macks. With incinerator ash / clinker. Ashy / burnt type odour noted. (LANDFILL)		1.40	11.22			2.40 2.40 2.40	B2 D2 ES2	PID 2.40m, 5.8ppm	2
EOH at 3.10m - Target Depth Achieved.		3.10	9.52			3.10 3.10 3.10	B3 D3 ES3	PID 3.10m, 4.9ppm	3
									4
									5

Observations / Remarks
 Prior to excavation, trial pit location cleared of services by GPR / EM techniques.
 On completion trial pit backfilled with arisings.
 No groundwater encountered during investigation.

Project Number
A102760

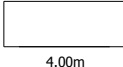


Project: **Brockhampton West**
 Location: **Harts Farm Way**
 Client: **Havant Borough Council**

Location Details
 Easting: 470237.94 Northing: 105732.12
 Level: 12.99mAOD Depth: 3.10m
 Logger: SN Type: TP

Status
DRAFT

Pit Number
TP06
 Sheet 1 of 1

Hole Information		Groundwater				Scale: 1:25
Pit Dimensions 	Orientation: °	Strike (m)	Rose To (m)	After (mins)	Remarks	Checked By:
	Shoring: None Stability: Stable Plant: 8T Tracked					Approved By: Start Date: 10/05/2017 Finish Date: 24/07/2000

Strata Description	Legend	Depth (m)	Reduced Level (mAOD)	Water Level (m)	Backfill	Samples and Testing		
						Depth (m)	Ref	Tests / Results
[MADE GROUND] Grass over soft light brown slightly sandy CLAY. Sand is fine to coarse. (TOPSOIL)								
[MADE GROUND] Orange slightly gravelly SAND with pockets of clay. Sand is fine to coarse. Gravel is angular to sub-rounded, fine to coarse flint. (CAPPING LAYER)		0.20	12.79			0.50 0.50 0.50	B1 D1 ES1	PID 0.50m, 0.0ppm
[MADE GROUND] Soft slightly sandy gravelly CLAY. Sand is fine to coarse. gravel is angular to sub-angular, fine to coarse flint, brick and chalk. (CAPPING LAYER)		0.80	12.19					
[MADE GROUND] Black / multi-coloured SAND & GRAVEL. Sand is fine to coarse. Gravel is fine to coarse of landfill waste, including; plastic bottles, carrier bags, books, wood, carpet, material, food wrappers and magazines. With foul / rotten type odour . (LANDFILL)		0.90	12.09					
EOH at 3.10m - Target Depth Achieved.		3.10	9.89			3.10 3.10 3.10	B3 D3 ES3	PID 3.10m, 5.0ppm

Observations / Remarks
 Prior to excavation, trial pit location cleared of services by GPR / EM techniques.
 On completion trial pit backfilled with arisings.
 No groundwater encountered during investigation.

Project Number
A102760



Project: **Brockhampton West**
 Location: **Harts Farm Way**
 Client: **Havant Borough Council**

Location Details
 Easting: 470129.00 Northing: 105625.04
 Level: 9.73mAOD Depth: 3.30m
 Logger: SN Type: TP

Status
DRAFT

Pit Number
TP07
 Sheet 1 of 1

Hole Information		Groundwater				Scale: 1:25
Pit Dimensions 	Orientation: °	Strike (m)	Rose To (m)	After (mins)	Remarks	Checked By:
	Shoring: None Stability: Stable Plant: 8T Tracked					Approved By: Start Date: 09/05/2017 Finish Date: 10/05/2017

Strata Description	Legend	Depth (m)	Reduced Level (mAOD)	Water Level (m)	Backfill	Samples and Testing		
						Depth (m)	Ref	Tests / Results
[MADE GROUND] Grass and topsoil over light brown slightly clayey slightly gravelly SAND. Sand is fine to coarse. Gravel is angular to sub-angular, fine to coarse chalk, flint and brick. (CAPPING LAYER)								
[MADE GROUND] Orange / light brown slightly gravelly SAND. Sand is fine to coarse. Gravel is sub-rounded, fine and medium flint. (CAPPING LAYER) ... From 1.20m bgl: Becoming grey in colour.		1.00	8.73			1.20 1.20 1.20	B1 D1 ES1	PID 1.20m, 0.0ppm
... From 2.00m bgl: Becoming clayey, darker in colour and with brick gravels.						2.50 2.50 2.50	B2 D2 ES2	PID 2.50m, 0.2ppm
[MADE GROUND] Black / dark grey slightly clayey SAND & GRAVEL. Sand is fine to coarse. Gravel is angular to sub-angular fine to coarse wood, plastic and metal. With building materials, paint tins, wooden boards, insulation, crushed petrol can, shoes, cardboard and phone books. Rotten type odour noted. (LANDFILL)		2.70	7.03					
EOH at 3.30m - Target Depth Achieved.		3.30	6.43			3.30 3.30 3.30	B3 D3 ES3	PID 3.30m, 5.5ppm

Observations / Remarks	
Prior to excavation, trial pit location cleared of services by GPR / EM techniques. On completion trial pit backfilled with arisings. No groundwater encountered during investigation.	
	Project Number A102760

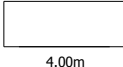


Project: **Brockhampton West**
 Location: **Harts Farm Way**
 Client: **Havant Borough Council**

Location Details
 Easting: 470242.97 Northing: 105676.06
 Level: 11.31mAOD Depth: 3.20m
 Logger: SN Type: TP

Status
DRAFT

Pit Number
TP08
 Sheet 1 of 1

Hole Information		Groundwater				Scale: 1:25
Pit Dimensions 	Orientation: °	Strike (m)	Rose To (m)	After (mins)	Remarks	Checked By:
	Shoring: None Stability: Stable Plant: 8T Tracked					Approved By: Start Date: 10/05/2017 Finish Date: 10/05/2017

Strata Description	Legend	Depth (m)	Reduced Level (mAOD)	Water Level (m)	Backfill	Samples and Testing		
						Depth (m)	Ref	Tests / Results
[MADE GROUND] Grass over soft light brown sandy gravelly CLAY. Sand is fine to coarse. Gravel is angular to sub-rounded, fine to coarse flint, brick and chalk. With large boulder of concrete (1.00m x 0.75m). (CAPPING LAYER)		1.00	10.31			0.50 0.50 0.50	B1 D1 ES1	PID 0.50m, 0.5ppm
[MADE GROUND] Black slightly clayey SAND & GRAVEL. Sand is fine to coarse. Gravel is angular to sub-angular, fine to coarse concrete, wood, metal, brick, glass and plastic. With plastic bags, cloth, foam, a bike and incinerator type ash. Slight rotten type odour noted. (LANDFILL) <i>...Between 1.00m and 3.20m bgl: More "modern" packaging on this side of the site. Letter dated 1982.</i>		1.00	10.31			2.30 2.30 2.30	B2 D2 ES2	PID 2.30m, 72.7ppm
EOH at 3.20m - Target Depth Achieved.		3.20	8.11			3.20 3.20 3.20	B3 D3 ES3	PID 3.20m, 11.5ppm

Observations / Remarks	Project Number A102760
Prior to excavation, trial pit location cleared of services by GPR / EM techniques. On completion trial pit backfilled with arisings. No groundwater encountered during investigation.	

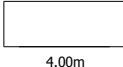


Project: **Brockhampton West**
 Location: **Harts Farm Way**
 Client: **Havant Borough Council**

Location Details
 Easting: 470205.12 Northing: 105637.00
 Level: 8.17mAOD Depth: 4.00m
 Logger: SN Type: TP

Status
DRAFT

Pit Number
TP09
 Sheet 1 of 1

Hole Information		Groundwater				Scale: 1:25
Pit Dimensions 	Orientation: °	Strike (m)	Rose To (m)	After (mins)	Remarks	Checked By:
	Shoring: None	3.90	3.70	10		Approved By:
	Stability: Stable					Finish Date: 10/05/2017
	Plant: 8T Tracked					

Strata Description	Legend	Depth (m)	Reduced Level (mAOD)	Water Level (m)	Backfill	Samples and Testing		
						Depth (m)	Ref	Tests / Results
[MADE GROUND] ASPHALT.		0.05	8.12					
[MADE GROUND] Orange / brown SAND & GRAVEL. Sand is fine to coarse. Gravel is angular to sub-angular of sandstone (TYPE I ROADSTONE SUB-BASE).		0.30	7.87					
[MADE GROUND] Very dark brown / black SAND & GRAVEL. Sand is fine to coarse. Gravel is angular to sub-rounded, fine and medium flint, brick and occasional chalk. (CAPPING LAYER)		0.50	7.67			0.40 0.40 0.40	B1 D1 ES1	PID 0.40m, 0.1ppm
[MADE GROUND] Soft to firm light brown slightly gravelly CLAY. Gravel is angular to sub-rounded, fine to coarse flint and chalk. (CAPPING LAYER)						0.60 0.60 0.60	B2 D2 ES2	PID 0.60m, 0.4ppm
... From 0.90m bgl: Becoming sandy. ... At 1.00m bgl: Paving stone.								
[MADE GROUND] Soft mottled grey brown gravelly CLAY. Gravel is angular to sub-angular, fine to coarse brick, chalk and flint. With occasional pockets of fine to coarse sand.. With black rootlets and staining. (CAPPING LAYER)		2.50	5.67			2.00 2.00 2.00	B3 D3 ES3	PID 2.00m, 0.5ppm
[MADE GROUND] Black slightly clayey SAND & GRAVEL. Sand is fine to coarse. Gravel is angular to sub-angular, fine to coarse wood, glass, plastic, metal, brick, flint and breeze block. With material. (LANDFILL)		3.50	4.67			3.80 3.80 3.80	B4 D4 ES4	PID 3.80m, 16.9ppm
EOH at 4.00m - Target Depth Achieved.		4.00	4.17					

Observations / Remarks	
Prior to excavation, trial pit location cleared of services by GPR / EM techniques. On completion trial pit backfilled with arisings.	
	Project Number A102760

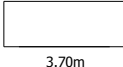


Project: **Brockhampton West**
 Location: **Harts Farm Way**
 Client: **Havant Borough Council**

Location Details
 Easting: 470155.97 Northing: 105668.17
 Level: 9.94mAOD Depth: 3.40m
 Logger: SN Type: TP

Status
DRAFT

Pit Number
TP10
 Sheet 1 of 1

Hole Information		Groundwater				Scale: 1:25
Pit Dimensions 	Orientation: °	Strike (m)	Rose To (m)	After (mins)	Remarks	Checked By:
	Shoring: None Stability: Stable Plant: 8T Tracker					Approved By: Start Date: 09/05/2017 Finish Date: 09/05/2017

Strata Description	Legend	Depth (m)	Reduced Level (mAOD)	Water Level (m)	Backfill	Samples and Testing		
						Depth (m)	Ref	Tests / Results
[MADE GROUND] Soft light brown sandy gravelly CLAY. Sand is fine to coarse. Gravel is angular to sub-rounded, fine to coarse brick, flint, concrete and occasional asphalt. (CAPPING LAYER)								
[MADE GROUND] Orange SAND & GRAVEL. Sand is fine to coarse. Gravel is angular to sub-angular, fine to coarse brick. Occasional fragments of metal and pottery. (CAPPING LAYER)		0.70	9.24			0.80 0.80 0.80	B1 D1 ES1	PID 0.80m, 0.1ppm
[MADE GROUND] Brown slightly clayey slightly gravelly SAND. Sand is fine to coarse. Gravel is angular to sub-rounded, fine to coarse flint, brick and chalk. (CAPPING LAYER)		1.00	8.94					
... From 2.50m bgl: Becoming grey in colour.								
[MADE GROUND] Dark brown / grey slightly clayey SAND & GRAVEL. Sand is fine to coarse. Gravel is angular to sub-rounded, fine to coarse glass and plastic. With plastic bags, material, cans, rope & sunglasses. (LANDFILL)		3.20	6.74					
EOH at 3.40m - Target Depth Achieved.		3.40	6.54			3.30 3.30 3.30	B2 D3 ES3	PID 3.30m, 17.6ppm

Observations / Remarks	
Prior to excavation, trial pit location cleared of services by GPR / EM techniques. On completion trial pit backfilled with arisings. No groundwater encountered during investigation.	
	Project Number A102760

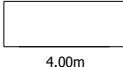


Project: **Brockhampton West**
 Location: **Harts Farm Way**
 Client: **Havant Borough Council**

Location Details
 Easting: 470002.28 Northing: 105647.45
 Level: 10.57mAOD Depth: 3.70m
 Logger: SN Type: TP

Status
DRAFT

Pit Number
TP11
 Sheet 1 of 1

Hole Information		Groundwater				Scale: 1:25
Pit Dimensions 	Orientation: °	Strike (m)	Rose To (m)	After (mins)	Remarks	Checked By:
	Shoring: None Stability: Stable Plant: 8T Tracked					Approved By: Start Date: 09/05/2017 Finish Date: 09/05/2017

Strata Description	Legend	Depth (m)	Reduced Level (mAOD)	Water Level (m)	Backfill	Samples and Testing		
						Depth (m)	Ref	Tests / Results
[MADE GROUND] Grass over TOPSOIL. Light brown slightly sandy clay.								
[MADE GROUND] Soft to firm light brown / orange slightly sandy CLAY. Sand is fine. With occasional ceramic pipe. (CAPPING LAYER)		0.20	10.37			0.50 0.50 0.50	B1 D1 ES1	PID 0.50m, 0.2ppm
[MADE GROUND] Firm white / black / grey sandy gravelly CLAY. Sand is fine to coarse. Gravel is angular to sub-angular, fine and medium flint and brick. (CAPPING LAYER)		0.70	9.87					
[MADE GROUND] Black / grey / white clayey SAND & GRAVEL. Sand is fine to coarse. Gravel is angular to sub-angular, fine to coarse wood, brick, metal and ceramic. With plastic sheet, material, paper and wire. Occasional boulders of concrete. Moderate rotten type odour noted. (LANDFILL)		1.50	9.07			1.40 1.40 1.40	B2 D2 ES2	PID 1.40m, 0.7ppm
... At 2.70m bgl: Whole lorry tyre & large metal sheet (1.50m long).						2.50 2.50 2.50	B3 D3 ES3	PID 2.50m, 21.0ppm
[MADE GROUND] Black / grey / white predominantly household waste. Including tin cans, bottles, yoghurt pots, food containers, books, washing up liquid and glass. Foul odour noted. (LANDFILL)		3.00	7.57			3.10 3.10 3.10	B4 D4 ES4	PID 3.10m, 17.0ppm
EOH at 3.70m - Target Depth Achieved.		3.70	6.87					

Observations / Remarks	Project Number A102760
Prior to excavation, trial pit location cleared of services by GPR / EM techniques. On completion trial pit backfilled with arisings. No groundwater encountered during investigation.	



Project: **Brockhampton West**
 Location: **Harts Farm Way**
 Client: **Havant Borough Council**

Location Details
 Easting: 469928.28 Northing: 105664.08
 Level: 10.57mAOD Depth: 5.00m
 Logger: AH Type: WLS
 Inclination: 90°

Status
DRAFT

Borehole Number
WS02

Sheet 1 of 1

Method, Plant and Crew					Diameter		Casing			Groundwater				Scale:
From (m)	To (m)	Type	Plant Used	Crew	Depth (m)	Diam (mm)	Depth(m)	Diam (mm)	Strike (m)	Casing (m)	Sealed (m)	Rose To (m)	Time (mins)	Remarks
0.00	1.20	Inspection Pit	Dynamic Windowless Sampling	RD Drilling	1.20	101								
1.20	5.00			RD Drilling	2.00	87								
					3.00	77								
					4.00	67								
					5.00	57								

Checked By:
 Approved By:
 Start Date: 09/05/2017
 Finish Date: 09/05/2017

Strata Description	Legend	Depth (m)	Reduced Level (mAOD)	Water Level (m)	Inst / Backfill	Samples and Testing		
						Depth (m)	Ref	Tests / Results
[MADE GROUND] Grass over TOPSOIL								
[MADE GROUND] Stiff brown slightly sandy gravelly CLAY. Sand is fine to coarse. Gravel is angular to sub-rounded, fine to coarse flint, brick and concrete. (CAPPING LAYER)		0.20	10.37					
[MADE GROUND] Dark grey / black GRAVEL. Gravel is angular to sub-rounded, fine to coarse flint, brick and concrete. With frequent wood fragments. (CAPPING LAYER)		1.40	9.17			1.20 - 1.40	D1	SPT(S) 1.20m, N=12 (2,2/2,3,4,3)
[MADE GROUND] Firm grey slightly sandy gravelly CLAY. Sand is fine to coarse. Gravel is very angular to sub-rounded, fine to coarse flint, concrete and brick. (LANDFILL)		1.80	8.77			1.40 - 1.80	B1	
						1.80 - 3.00	B2	SPT(C) 2.00m, N=14 (3,4/3,4,4,3)
... At 2.35m bgl: With occasional polystyrene fragments. ... Between 2.35m and 2.60m bgl: With frequent very angular fragments of red brick.								
NO RECOVERY		3.00	7.57					SPT(C) 3.00m, N=36 (4,5/7,8,11,10)
[MADE GROUND] Firm grey slightly sandy gravelly CLAY. Sand is fine to coarse. Gravel is very angular to sub-rounded, fine to coarse flint, concrete and brick. (LANDFILL)		4.00	6.57			4.00 - 5.00	B3	SPT(C) 4.00m, N=24 (3,3/4,7,6,7)
... Between 4.20m and 7.30m bgl: Recovered as sub-angular coarse concrete gravel.								
... At 4.60m bgl: Plastic bags.								
EOH at 5.00m - Target Depth Achieved.		5.00	5.57					SPT(C) 5.00m, N=14 (4,3/3,3,3,5)

Observations / Remarks	Sampling Runs				Hammer Information	
	From (m)	To (m)	Diam (mm)	Recovery %	Serial No.	Energy Ratio %
Prior to excavation, BH location cleared of services by GPR / EM techniques. Hand excavated inspection pit from GL to 1.20m bgl. On completion BH backfilled / installed as per graphical log. No groundwater encountered during investigation.	1.20	2.00	87	100	DART343	63
	2.00	3.00	77	80		
	3.00	4.00	67	0		
	4.00	5.00	57	50		
	Project Number					A102760



Project: **Brockhampton West**
 Location: **Harts Farm Way**
 Client: **Havant Borough Council**

Location Details
 Easting: 469945.66 Northing: 105602.33
 Level: 11.07mAOD Depth: 3.00m
 Logger: AH Type: WLS
 Inclination: 90°

Status
DRAFT

Borehole Number
WS03

Sheet 1 of 1

Method, Plant and Crew					Diameter		Casing		Groundwater				Scale:	
From (m)	To (m)	Type	Plant Used	Crew	Depth (m)	Diam (mm)	Depth(m)	Diam (mm)	Strike (m)	Casing (m)	Sealed (m)	Rose To (m)	Time (mins)	Remarks
0.00	1.20	Inspection Pit	Insulated Tools	RD Drilling	1.20	101								
1.20	3.00	Dynamic Windowless Sampling	Competitor Dart	RD Drilling	2.00	87								
					3.00	77								

Checked By:
 Approved By:
 Start Date: 09/05/2017
 Finish Date: 09/05/2017

Strata Description	Legend	Depth (m)	Reduced Level (mAOD)	Water Level (m)	Inst / Backfill	Samples and Testing		
						Depth (m)	Ref	Tests / Results
[MADE GROUND] Grass over TOPSOIL.								
[MADE GROUND] Firm orange brown slightly sandy gravelly CLAY. Sand is fine to coarse. Gravel is very angular to sub-rounded, fine to coarse flint, concrete and brick. (CAPPING LAYER)		0.20	10.87					
[MADE GROUND] Firm dark brown slightly sandy gravelly CLAY / SILT. Sand is fine to coarse. Gravel is sub-angular to sub-rounded, fine to coarse flint, chalk and brick. With rare fragments of burnt wood / charcoal. (CAPPING LAYER)		1.55	9.52			1.20 - 1.55	B1	SPT(C) 1.20m, N=8 (2,2/2,2,2,2)
[MADE GROUND] Soft to firm dark grey / brown gravelly CLAY. Gravel is very angular to sub-rounded, fine to coarse flint, with rare chalk and brick. With occasional wood fragments. (CAPPING LAYER)		2.00	9.07			1.55 - 2.00	B2	
...Between 2.65m and 2.68m bgl: Coarse gravel size pocket of fine to coarse brown sand.						2.00 - 3.00	B3	SPT(C) 2.00m, N=8 (2,3/2,2,2,2)
...Between 2.85m and 2.90m bgl: Fragment of concrete.								
EOH at 3.00m - Refusal at 3.00m bgl.		3.00	8.07					SPT(C) 3.00m, 50 (7,9/50 for 199mm)

Observations / Remarks	Sampling Runs					Hammer Information	
	From (m)	To (m)	Diam (mm)	Recovery %	Remarks	Serial No.	Energy Ratio %
	Prior to excavation, BH location cleared of services by GPR / EM techniques. Hand excavated inspection pit from GL to 1.20m bgl. On completion BH backfilled / installed as per graphical log. No groundwater encountered during investigation.	1.20	2.00	87	100		DART343
	2.00	3.00	77	100			
						Project Number A102760	



Project: **Brockhampton West**
 Location: **Harts Farm Way**
 Client: **Havant Borough Council**

Location Details
 Easting: 470020.69 Northing: 105572.03
 Level: 10.72mAOD Depth: 3.00m
 Logger: AH Type: WLS
 Inclination: 90°

Status
DRAFT

Borehole Number
WS05

Sheet 1 of 1

Method, Plant and Crew					Diameter		Casing		Groundwater					Scale:	
From (m)	To (m)	Type	Plant Used	Crew	Depth (m)	Diam (mm)	Depth(m)	Diam (mm)	Strike (m)	Casing (m)	Sealed (m)	Rose To (m)	Time (mins)	Remarks	1:25
0.00	1.20	Inspection Pit	Dynamic Windowless Sampling	RD Drilling	1.20	101									Checked By:
1.20	3.00			RD Drilling	2.00	87									Approved By:
					3.00	77									Start Date: 09/05/2017
															Finish Date: 09/05/2017

Strata Description	Legend	Depth (m)	Reduced Level (mAOD)	Water Level (m)	Inst / Backfill	Samples and Testing		
						Depth (m)	Ref	Tests / Results
[MADE GROUND] Grass over TOPSOIL.								
[MADE GROUND] Brown clayey gravelly SAND. Sand is fine to coarse. Gravel is sub-angular to sub-rounded, fine and medium flint, chalk and brick. (CAPPING LAYER)		0.20	10.52					
[MADE GROUND] Soft to firm orange brown slightly sandy slightly gravelly CLAY / SILT. Sand is fine and medium. Gravel is sub-angular to sub-rounded, fine and medium flint and brick. (CAPPING LAYER)		1.30	9.42			1.20 - 1.30	D1	SPT(C) 1.20m, N=8 (2,2/2,2,2,2)
[MADE GROUND] White gravelly SILT of chalk. Gravel is sub-angular to rounded, fine to coarse, flint and extremely weak white chalk. (CAPPING LAYER) ... Between 1.75m and 1.80m bgl: POcket of brown fine to coarse sand.		1.60	9.12			1.30 - 1.60	B1	
[MADE GROUND] Firm to stiff dark grey slightly gravelly CLAY. Gravel is angular to sub-rounded, fine and medium flint and chalk. (CAPPING LAYER)		1.90	8.82			1.60 - 1.90	B2	
[MADE GROUND] Firm to stiff dark grey slightly gravelly CLAY. Gravel is angular to sub-rounded, fine and medium flint and chalk. (CAPPING LAYER)		2.25	8.47			1.90 - 2.25	B3	SPT(C) 2.00m, N=10 (3,2/3,2,3,2)
[MADE GROUND] Fragments of 30mm thick plyboard. (LANDFILL) ... At 2.30m bgl: Refusal due to plyboard, although WS reached 3.00m		2.25	8.47			2.25 - 2.30	D2	
EOH at 3.00m - Refusal at 3.00m bgl.		3.00	7.72					SPT(C) 3.00m, 50 (25 for 21mm/50 for 17mm)

Observations / Remarks	Sampling Runs					Hammer Information	
	From (m)	To (m)	Diam (mm)	Recovery %	Remarks	Serial No.	Energy Ratio %
	Prior to excavation, BH location cleared of services by GPR / EM techniques. Hand excavated inspection pit from GL to 1.20m bgl. On completion BH backfilled / installed as per graphical log. No groundwater encountered during investigation.	1.20	2.00	87	100		DART343
	2.00	3.00	77	30			
						Project Number A102760	



Project: **Brockhampton West**
 Location: **Harts Farm Way**
 Client: **Havant Borough Council**

Location Details
 Easting: 470086.62 Northing: 105618.92
 Level: 10.12mAOD Depth: 3.00m
 Logger: AH Type: WLS
 Inclination: 90°

Status
DRAFT

Borehole Number
WS07

Sheet 1 of 1

Method, Plant and Crew					Diameter		Casing		Groundwater					Scale:	
From (m)	To (m)	Type	Plant Used	Crew	Depth (m)	Diam (mm)	Depth(m)	Diam (mm)	Strike (m)	Casing (m)	Sealed (m)	Rose To (m)	Time (mins)	Remarks	1:25
0.00	1.20	Inspection Pit	Insulated Tools	RD Drilling	1.20	101									Checked By:
1.20	3.00	Dynamic Windowless Sampling	Competitor Dart	RD Drilling	2.00	87									Approved By:
					3.00	77									Start Date: 10/05/2017
															Finish Date: 10/05/2017

Strata Description	Legend	Depth (m)	Reduced Level (mAOD)	Water Level (m)	Inst / Backfill	Samples and Testing		
						Depth (m)	Ref	Tests / Results
[MADE GROUND] Grass over TOPSOIL.								
[MADE GROUND] Soft to firm brown slightly sandy slightly gravelly CLAY. Sand is fine to coarse. Gravel is very angular to sub-rounded, fine to coarse flint, brick, concrete and ash. (CAPPING LAYER)		0.10	10.02					
[MADE GROUND] Firm to stiff greenish brown / grey slightly sandy slightly gravelly CLAY. Sand is fine to coarse. Gravel is sub-angular to sub-rounded, fine to coarse flint. (CAPPING LAYER)		1.70	8.42			1.20 - 1.70	B1	SPT(S) 1.20m, N=11 (2,3/2,3,3,3)
[MADE GROUND] Stiff grey slightly gravelly CLAY / SILT. Gravel is sub-rounded, fine to coarse chalk. (CAPPING LAYER)		2.15	7.97			1.70 - 2.15	B2	SPT(C) 2.00m, N=14 (3,2/4,3,3,4)
[MADE GROUND] Dark brown / black slightly gravelly clayey SAND. Sand is fine to coarse. Gravel is very angular to sub-rounded, fine to coarse flint, brick and concrete. With wood fragments. (LANDFILL)		2.45	7.67			2.15 - 2.45	D1	
						2.45 - 2.65	D2	
EOH at 3.00m - Refusal at 3.00m bgl.		3.00	7.12					SPT(C) 3.00m, 50 (6,9/50 for 298mm)

Observations / Remarks	Sampling Runs					Hammer Information	
	From (m)	To (m)	Diam (mm)	Recovery %	Remarks	Serial No.	Energy Ratio %
	Prior to excavation, BH location cleared of services by GPR / EM techniques. Hand excavated inspection pit from GL to 1.20m bgl. On completion BH backfilled / installed as per graphical log. No groundwater encountered during investigation.	1.20	2.00	87	100		DART343
	2.00	3.00	77	65			
						Project Number A102760	



Project: **Brockhampton West**
 Location: **Harts Farm Way**
 Client: **Havant Borough Council**

Location Details
 Easting: 470172.28 Northing: 105741.86
 Level: 14.21mAOD Depth: 4.00m
 Logger: AH Type: WLS
 Inclination: 90°

Status
DRAFT

Borehole Number
WS08

Sheet 1 of 1

Method, Plant and Crew					Diameter		Casing			Groundwater				Scale:
From (m)	To (m)	Type	Plant Used	Crew	Depth (m)	Diam (mm)	Depth(m)	Diam (mm)	Strike (m)	Casing (m)	Sealed (m)	Rose To (m)	Time (mins)	Remarks
0.00	1.20	Inspection Pit	Dynamic Windowless Sampling	RD Drilling	1.20	101								
1.20	3.00			RD Drilling	2.00	87								
				RD Drilling	3.00	77								
					4.00	67								

Scale: 1:25
 Checked By:
 Approved By:
 Start Date: 10/05/2017
 Finish Date: 10/05/2017

Strata Description	Legend	Depth (m)	Reduced Level (mAOD)	Water Level (m)	Inst / Backfill	Samples and Testing		
						Depth (m)	Ref	Tests / Results
[MADE GROUND] Grass over TOPSOIL.								
[MADE GROUND] Orange brown slightly gravelly to gravelly SILT. Gravel is angular to sub-rounded, fine to coarse flint, brick and slate. With occasional rootlets. (CAPPING LAYER)		0.10	14.11					
[MADE GROUND] Brown slightly clayey sandy GRAVEL. Sand is fine to coarse. Gravel is very angular to sub-rounded, fine to coarse flint, chalk, brick and concrete. (CAPPING LAYER)		1.55	12.66			1.20 - 1.55	B1	SPT(C) 1.20m, N=12 (3,4/3,3,3,3)
... Between 2.18m and 2.30m bgl: Full red brick.								
[MADE GROUND] Firm to stiff brown slightly sandy gravelly CLAY. Sand is fine to coarse. Gravel is sub-angular to sub-rounded, fine to coarse flint. (CAPPING LAYER)		2.30	11.91			1.55 - 2.30	B2	SPT(C) 2.00m, N=13 (3,5/4,4,3,2)
... At 3.75m bgl: Piece of plyboard.								
						2.30 - 2.50	B3	
						2.50 - 4.00	B4	SPT(C) 3.00m, N=50 (5,7/13,13,12,12)
EOH at 4.00m - Refusal at 3.00m bgl.		4.00	10.21					

Observations / Remarks	Sampling Runs					Hammer Information		
	From (m)	To (m)	Diam (mm)	Recovery %	Remarks	Serial No.	Energy Ratio %	
Prior to excavation, BH location cleared of services by GPR / EM techniques. Hand excavated inspection pit from GL to 1.20m bgl. On completion BH backfilled / installed as per graphical log. No groundwater encountered during investigation.	1.20	2.00	87	100				
	2.00	3.00	77	60		DART343	63	
	3.00	4.00	67	25				
	Project Number						A102760	



Project: **Brockhampton West**
 Location: **Harts Farm Way**
 Client: **Havant Borough Council**

Location Details
 Easting: 470177.47 Northing: 105681.74
 Level: 9.46m AOD Depth: 5.00m
 Logger: AH Type: WLS
 Inclination: 90°

Status
DRAFT

Borehole Number
WS09

Sheet 1 of 1

Method, Plant and Crew					Diameter		Casing			Groundwater				Scale:
From (m)	To (m)	Type	Plant Used	Crew	Depth (m)	Diam (mm)	Depth(m)	Diam (mm)	Strike (m)	Casing (m)	Sealed (m)	Rose To (m)	Time (mins)	Remarks
0.00	1.20	Inspection Pit	Insulated Tools	RD Drilling	1.20	101								
1.20	5.00	Dynamic Windowless Sampling	Competitor Dart	RD Drilling	2.00	87								
					3.00	77								
					4.00	67								
					5.00	57								

Scale: 1:25
 Checked By:
 Approved By:
 Start Date: 10/05/2017
 Finish Date: 10/05/2017

Strata Description	Legend	Depth (m)	Reduced Level (mAOD)	Water Level (m)	Inst / Backfill	Samples and Testing		
						Depth (m)	Ref	Tests / Results
[MADE GROUND] ASPHALT		0.05	9.40					
[MADE GROUND] Orange brown SAND & GRAVEL. Sand is fine to coarse. Gravel is angular to sub-angular fine to coarse of various lithologies. (TYPE I ROADSTONE - SUB-BASE)		0.30	9.15					
[MADE GROUND] Soft orange brown mottled bluish grey slightly clayey to clayey SILT. (CAPPING LAYER)								
					1.20 - 3.00	B1	SPT(S) 1.20m, N=11 (2,2/3,3,2,3)	1
							SPT(C) 2.00m, 4 (1,2,1,1)	2
[MADE GROUND] Grey / white slightly clayey slightly gravelly SILT. Gravel is sub-angular, fine to coarse extremely weak white chalk. (CAPPING LAYER)		3.00	6.46		3.00 - 3.75	B2	SPT(C) 3.00m, N=9 (2,2/3,2,2,2)	3
[MADE GROUND] Orange brown mottled grey slightly clayey to clayey SAND. Sand is fine to coarse. (CAPPING LAYER)		3.75	5.70		3.75 - 4.00	D1		
[MADE GROUND] Brown / white gravelly SILT / CLAY. Gravel is angular to sub-rounded, fine to coarse brick, flint, plastic, ceramic and glass. (LANDFILL)		4.00	5.46		4.00 - 4.40	D2	SPT(C) 4.00m, N=12 (2,3/4,3,3,4)	4
							SPT(C) 5.00m, N=14 (3,3/4,3,3,4)	5
EOH at 5.00m - Target Depth Achieved.		5.00	4.46					

Observations / Remarks	Sampling Runs				Hammer Information	
	From (m)	To (m)	Diam (mm)	Recovery %	Serial No.	Energy Ratio %
Prior to excavation, BH location cleared of services by GPR / EM techniques. Hand excavated inspection pit from GL to 1.20m bgl. On completion BH backfilled / installed as per graphical log. No groundwater encountered during investigation.	1.20	2.00	87	100	DART343	63
	2.00	3.00	77	85		
	3.00	4.00	67	70		
	4.00	5.00	57	40		
	Project Number					A102760



Project: **Brockhampton West**
 Location: **Harts Farm Way**
 Client: **Havant Borough Council**

Location Details
 Easting: 470249.37 Northing: 105705.34
 Level: 13.45mAOD Depth: 4.00m
 Logger: AH Type: WLS
 Inclination: 90°

Status
DRAFT

Borehole Number
WS10

Sheet 1 of 1

Method, Plant and Crew					Diameter		Casing			Groundwater				Scale:
From (m)	To (m)	Type	Plant Used	Crew	Depth (m)	Diam (mm)	Depth(m)	Diam (mm)	Strike (m)	Casing (m)	Sealed (m)	Rose To (m)	Time (mins)	Remarks
0.00	1.20	Inspection Pit	Insulated Tools	RD Drilling	1.20	101								
1.20	5.00	Dynamic Windowless Sampling	Competitor Dart	RD Drilling	2.00	87								
					3.00	77								
					4.00	67								

Scale: 1:25
 Checked By:
 Approved By:
 Start Date: 10/05/2017
 Finish Date: 10/05/2017

Strata Description	Legend	Depth (m)	Reduced Level (mAOD)	Water Level (m)	Inst / Backfill	Samples and Testing		
						Depth (m)	Ref	Tests / Results
{☐}{MADE GROUND} Grass over TOPSOIL.								
[MADE GROUND] Dark brown mottled black slightly clayey to clayey slightly sandy to sandy GRAVEL. Sand is fine to coarse. Gravel is very angular to sub-rounded, fine to coarse flint, brick and concrete. (CAPPING LAYER)		0.10	13.35					
...Between 1.45m and 1.75m bgl: Recovered as very angular fine to coarse concrete gravel.								
[MADE GROUND] Dark grey / black very clayey GRAVEL. Gravel is very angular to sub-rounded, fine to coarse flint, chalk and concrete. With frequent fragments of plastic, metal and material. (LANDFILL)		2.00	11.45			1.20 - 2.00	B1	SPT(C) 1.20m, N=11 (2,3/2,3,3,3)
... At 2.40m bgl: Carpet.								
... At 3.00m bgl: Frequent plastic bags and polystyrene.								
[MADE GROUND] Dark grey / black very clayey GRAVEL. Gravel is very angular to sub-rounded, fine to coarse flint, chalk and concrete. With frequent fragments of plastic, metal and material. (LANDFILL)		2.00	11.45			2.00 - 3.60	B2	SPT(C) 2.00m, N=12 (2,3/3,3,3,3)
EOH at 4.00m - Target Depth Achieved.		4.00	9.45					SPT(C) 3.00m, N=12 (2,3/2,3,4,3)

Observations / Remarks	Sampling Runs					Hammer Information	
	From (m)	To (m)	Diam (mm)	Recovery %	Remarks	Serial No.	Energy Ratio %
	Prior to excavation, BH location cleared of services by GPR / EM techniques. Hand excavated inspection pit from GL to 1.20m bgl. On completion BH backfilled / installed as per graphical log. No groundwater encountered during investigation.	1.20	2.00	87	100		DART343
	2.00	3.00	77	80			
	3.00	4.00	67	60			
						Project Number A102760	

Appendix C – Photographs

19-2099.04 Borehole Photographs



Photograph 1 – RO101



Photograph 2 – RO101



Photograph 3 – RO101



Photograph 4 – RO101



Photograph 5 – RO101



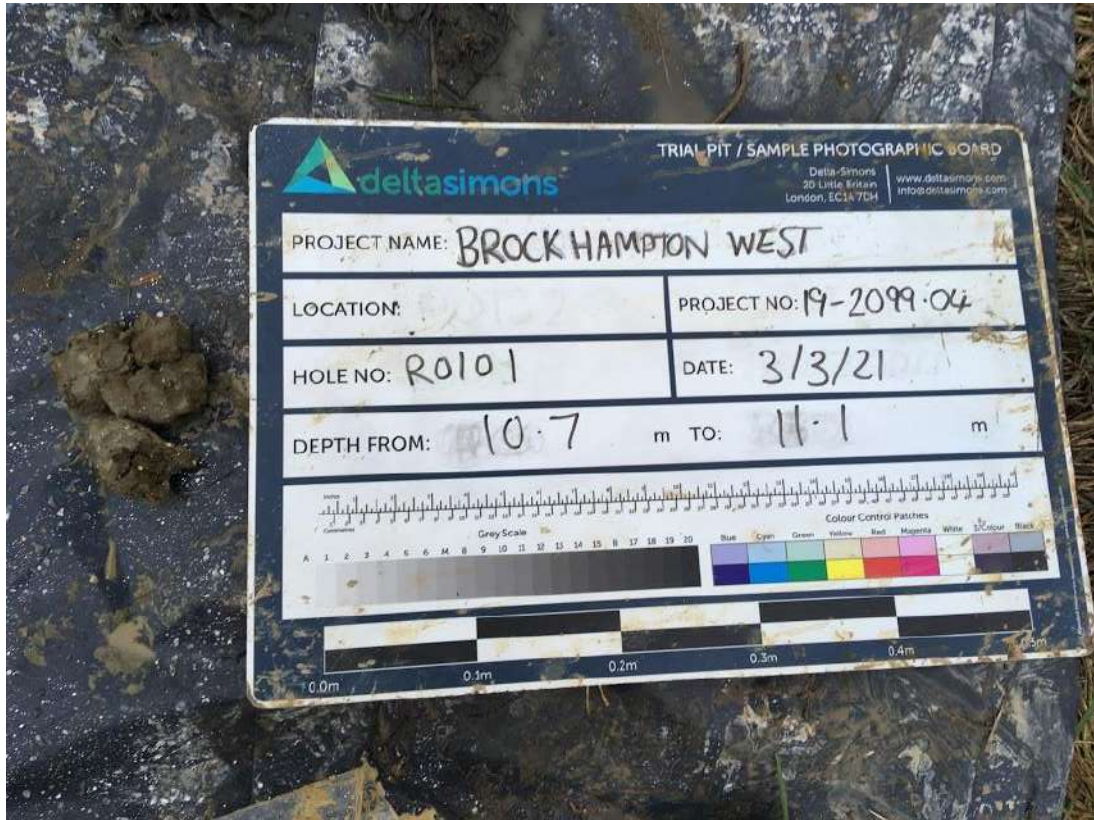
Photograph 6 – RO101



Photograph 7 – RO101



Photograph 8 – RO101



Photograph 9 – R0101



Photograph 10 – R0101



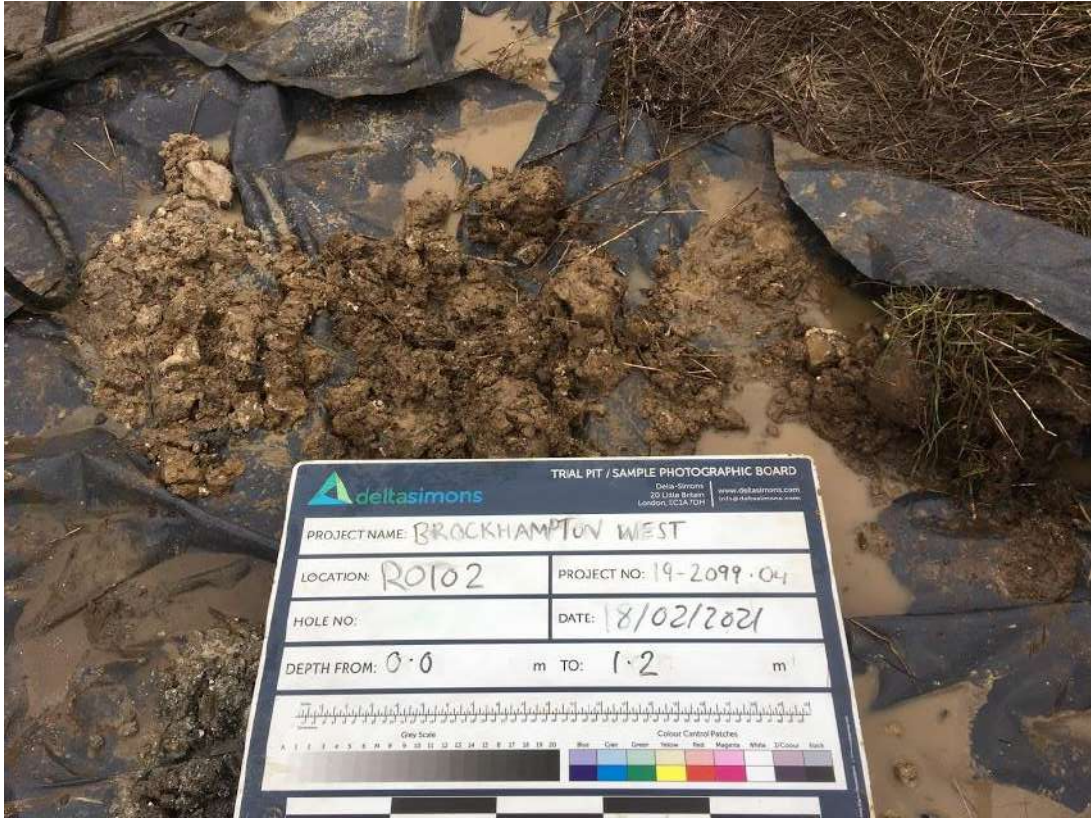
Photograph 11 – R0101



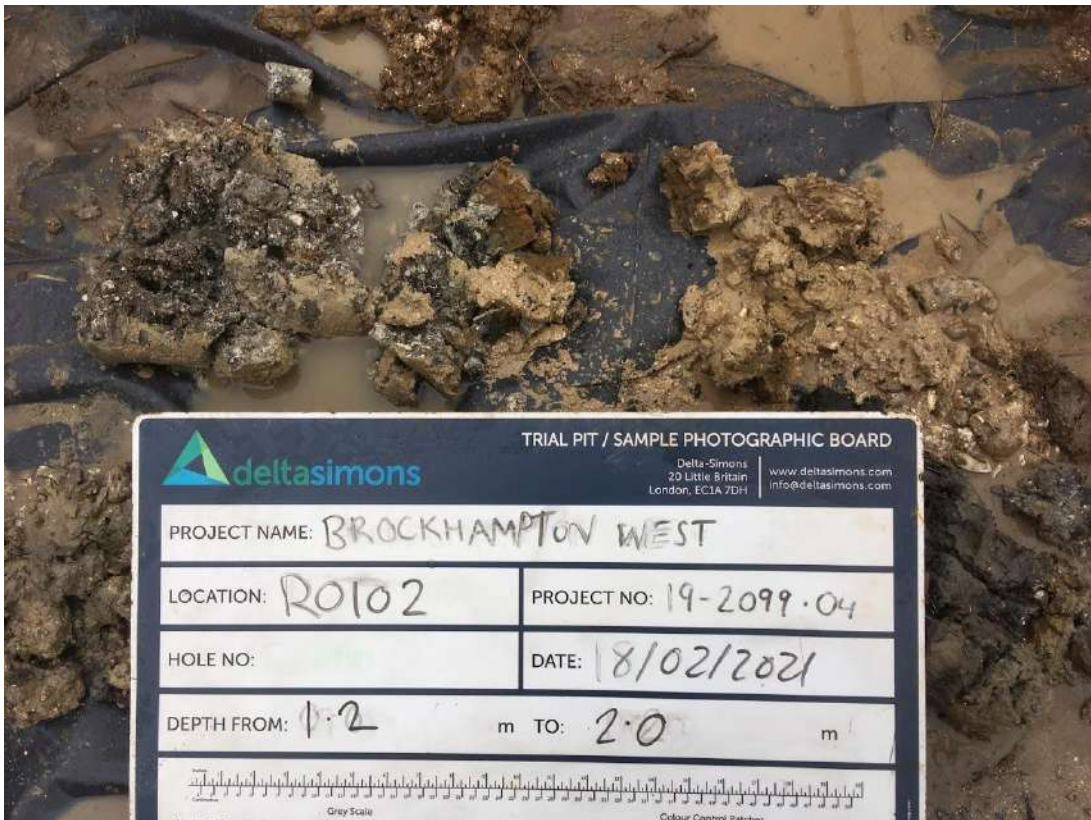
Photograph 12 – RO101



Photograph 13 – RO101



Photograph 14 – RO102



Photograph 15 – RO102



Photograph 16 – RO102



Photograph 17 – RO102



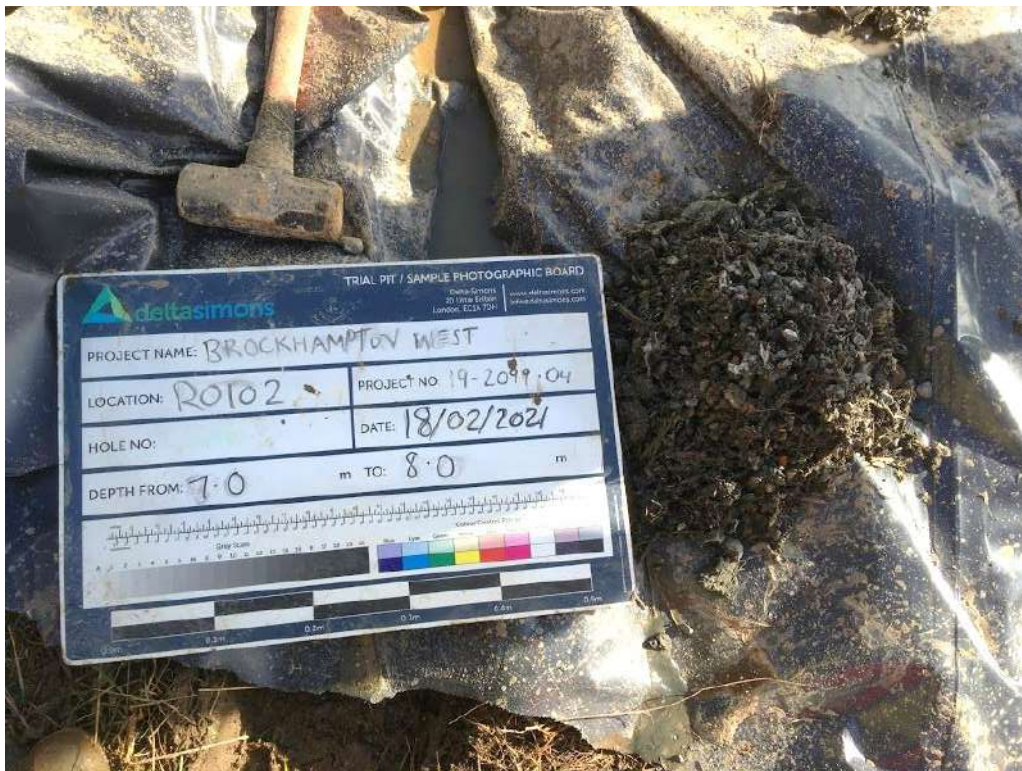
Photograph 18 – RO102



Photograph 19 – RO102



Photograph 20 – RO102



Photograph 21 – RO102



Photograph 22 – RO102



Photograph 23 – RO102



Photograph 24 – RO102



Photograph 25 – RO102



Photograph 26 – RO102



Photograph 27 – RO103



Photograph 28 – RO103



Photograph 29 – RO103



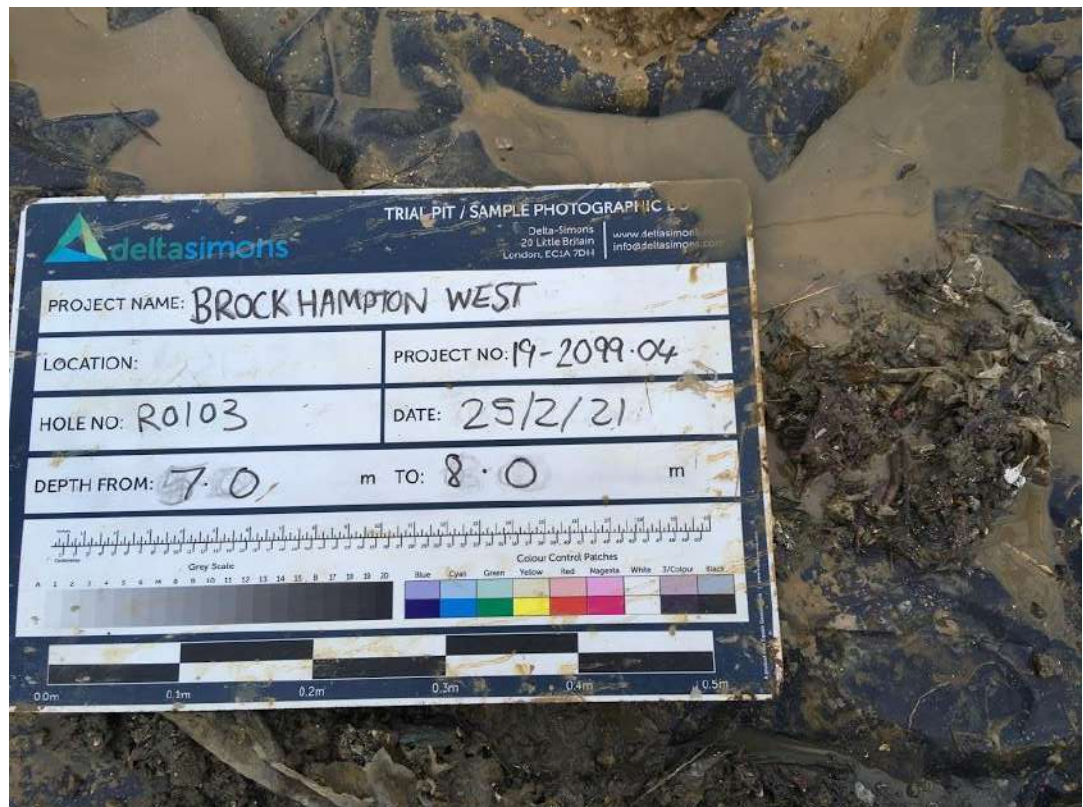
Photograph 30 – RO103



Photograph 31 – RO103



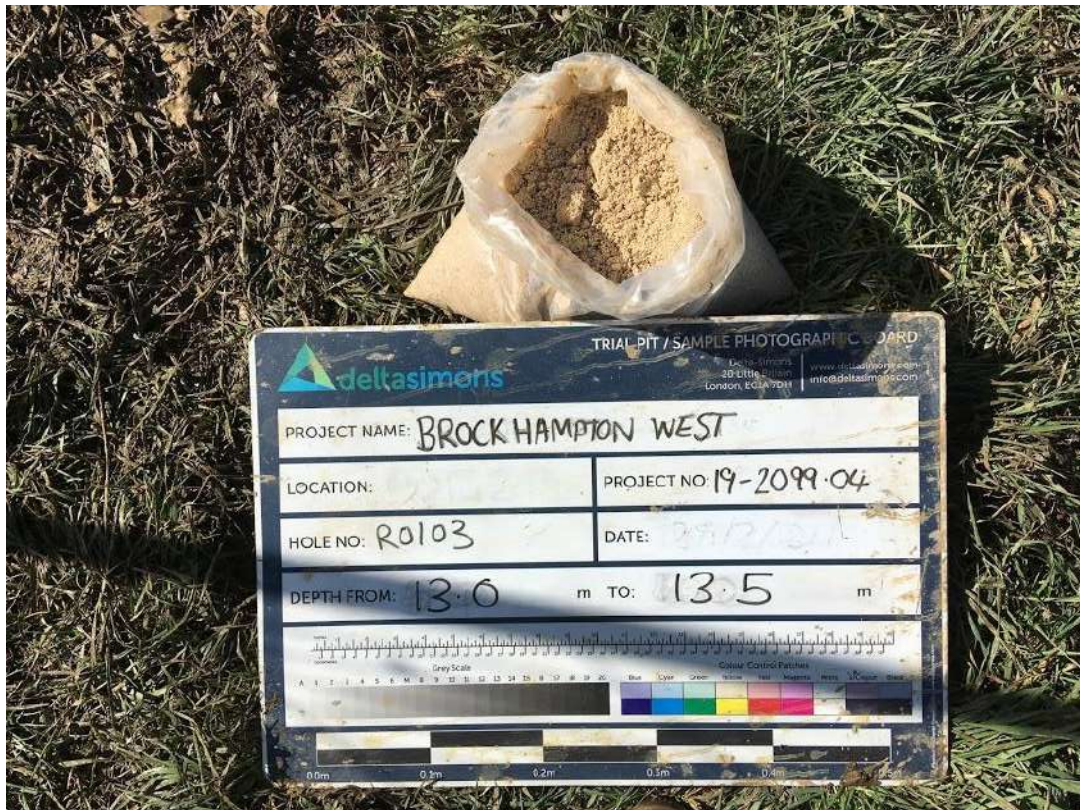
Photograph 32 – RO103



Photograph 33 – RO103



Photograph 34 – RO103



Photograph 35 – RO103



Photograph 36 – RO103



Photograph 37 – RO103



Photograph 38 – RO103



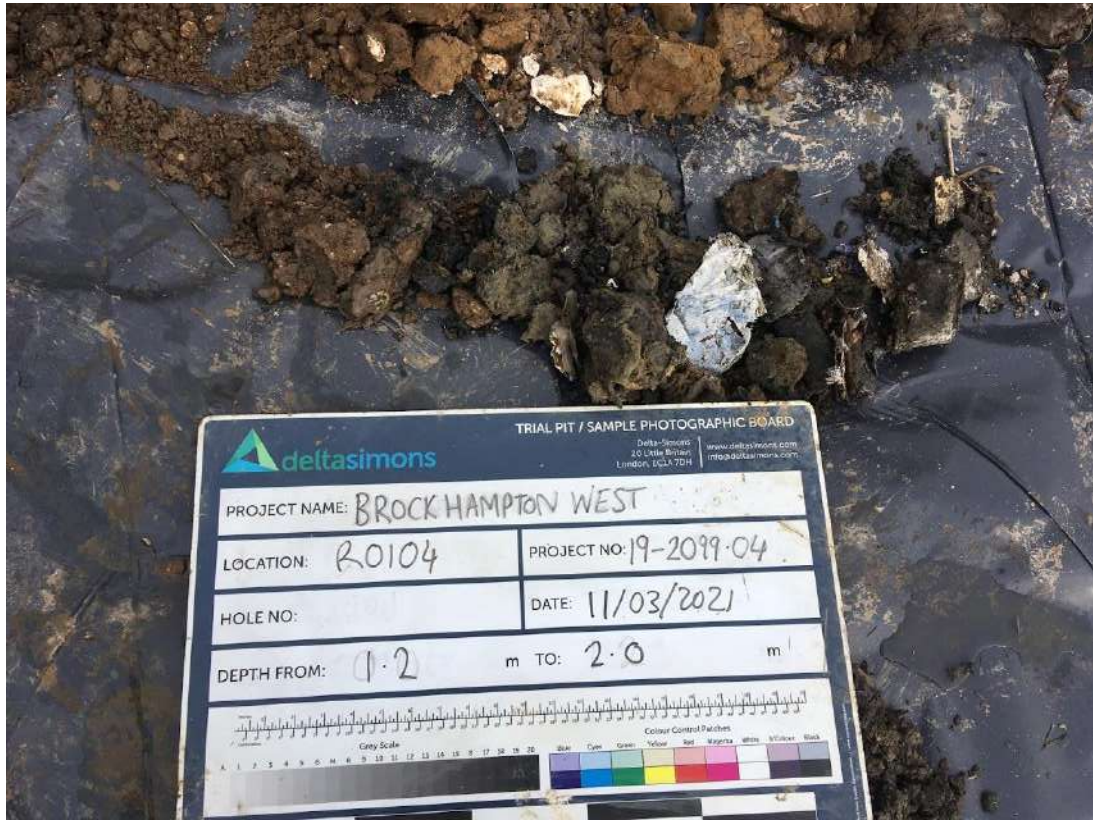
Photograph 39 – RO103



Photograph 40 – RO103



Photograph 41 – RO104



Photograph 42 – RO104



Photograph 43 – RO104



Photograph 44 – RO104



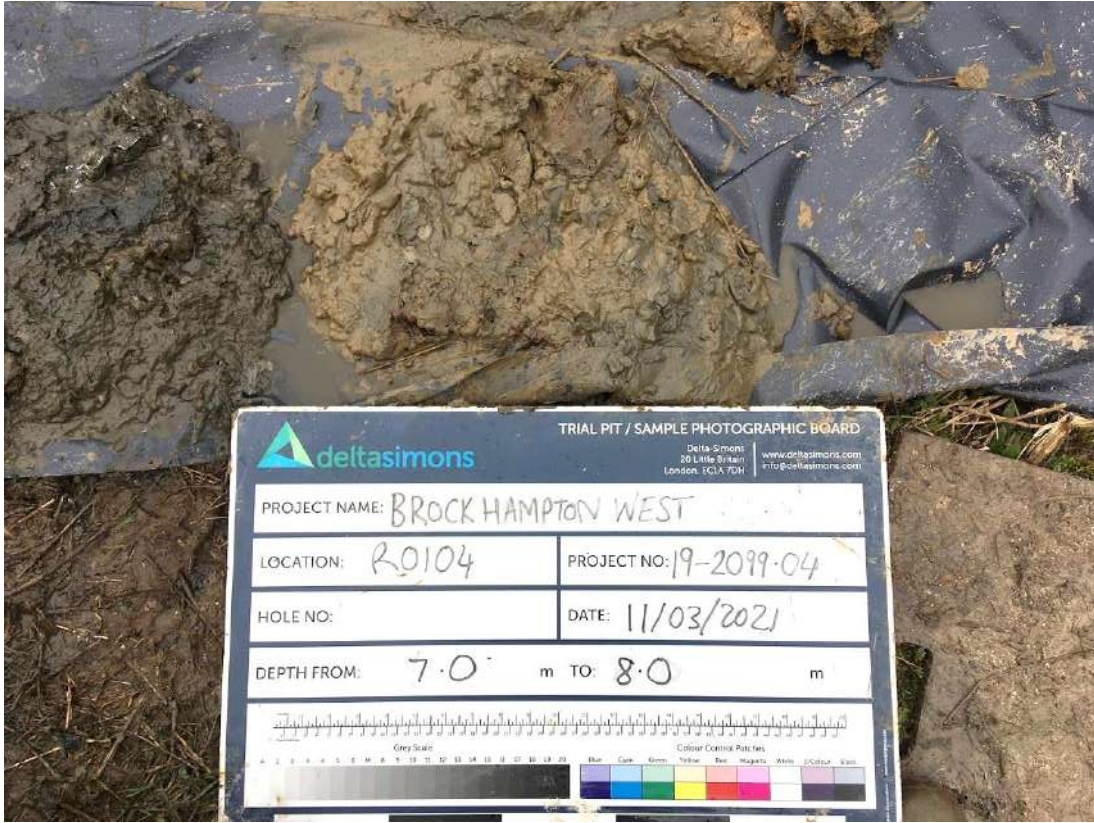
Photograph 45 – RO104



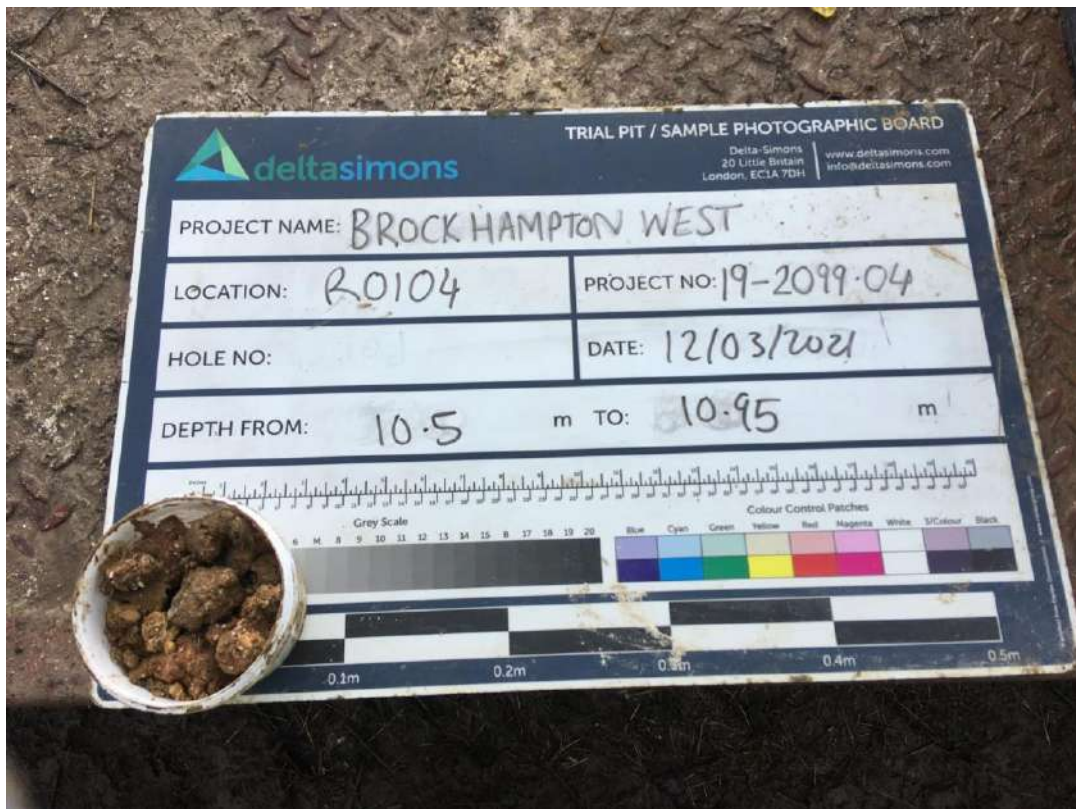
Photograph 46 – RO104



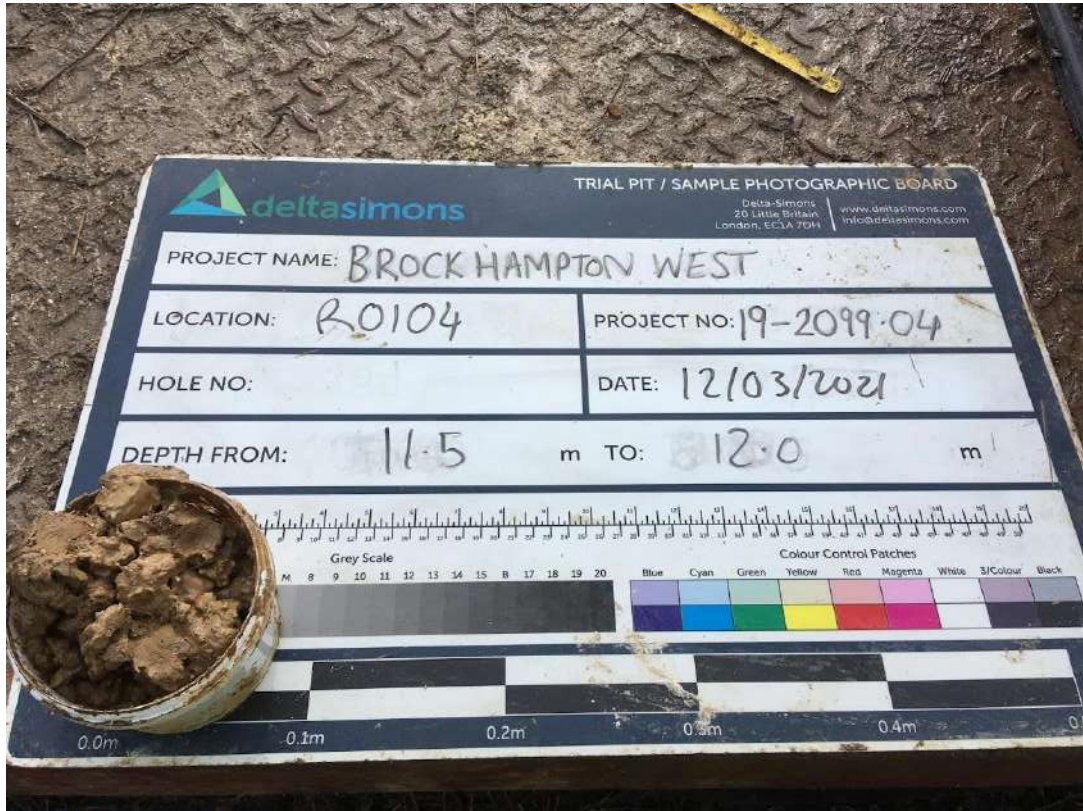
Photograph 47 – RO104



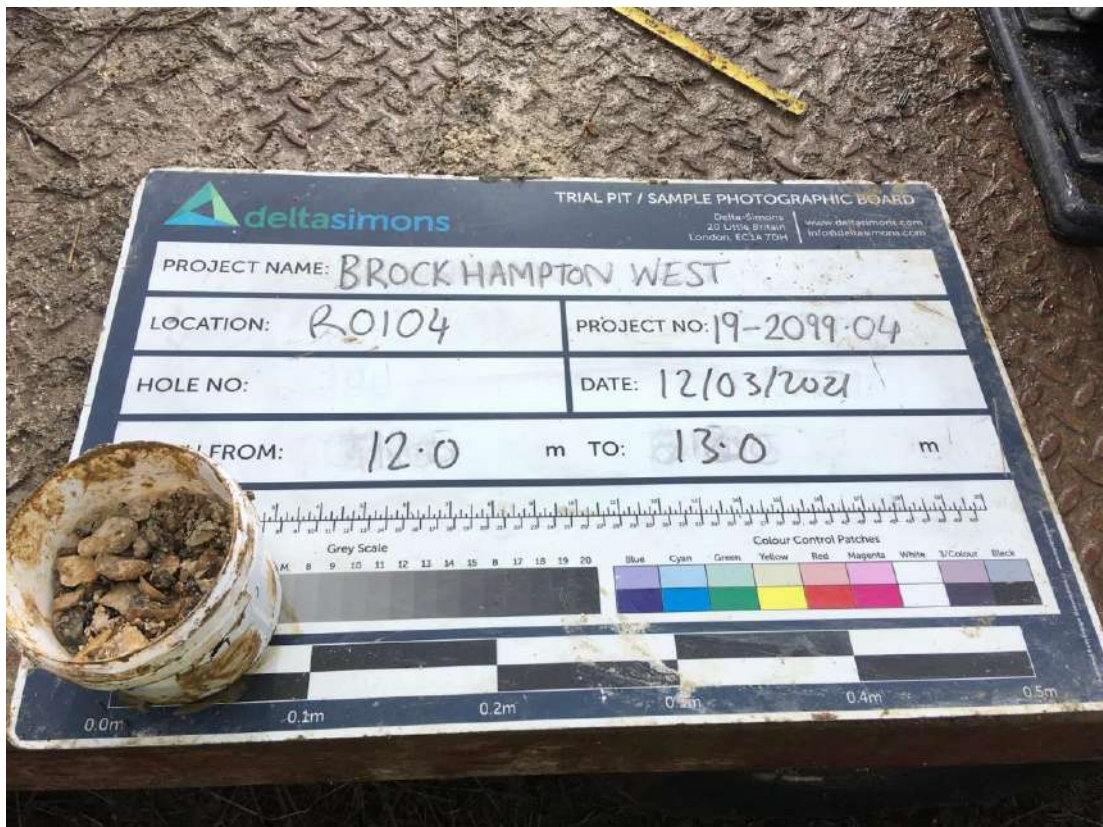
Photograph 48 – RO104



Photograph 49 – RO104



Photograph 50 – RO104



Photograph 51 – RO104



Photograph 52 – RO104



Photograph 53 – RO104



Photograph 54 – RO105



Photograph 55 – RO105



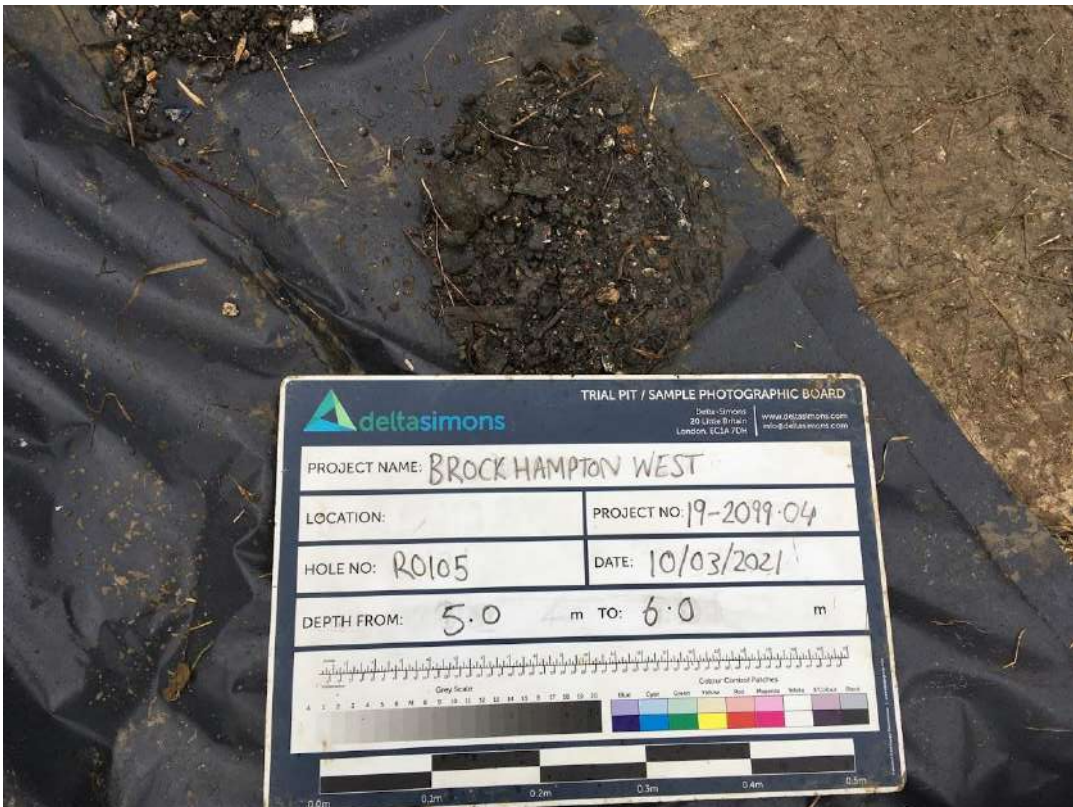
Photograph 56 – RO105



Photograph 57 – RO105



Photograph 58 – RO105



Photograph 59 – RO105



Photograph 60 – RO105



Photograph 61 – RO105



Photograph 62 – RO105



Photograph 63 – RO105



Photograph 64 – RO105



Photograph 65 – RO105



Photograph 66 – RO105



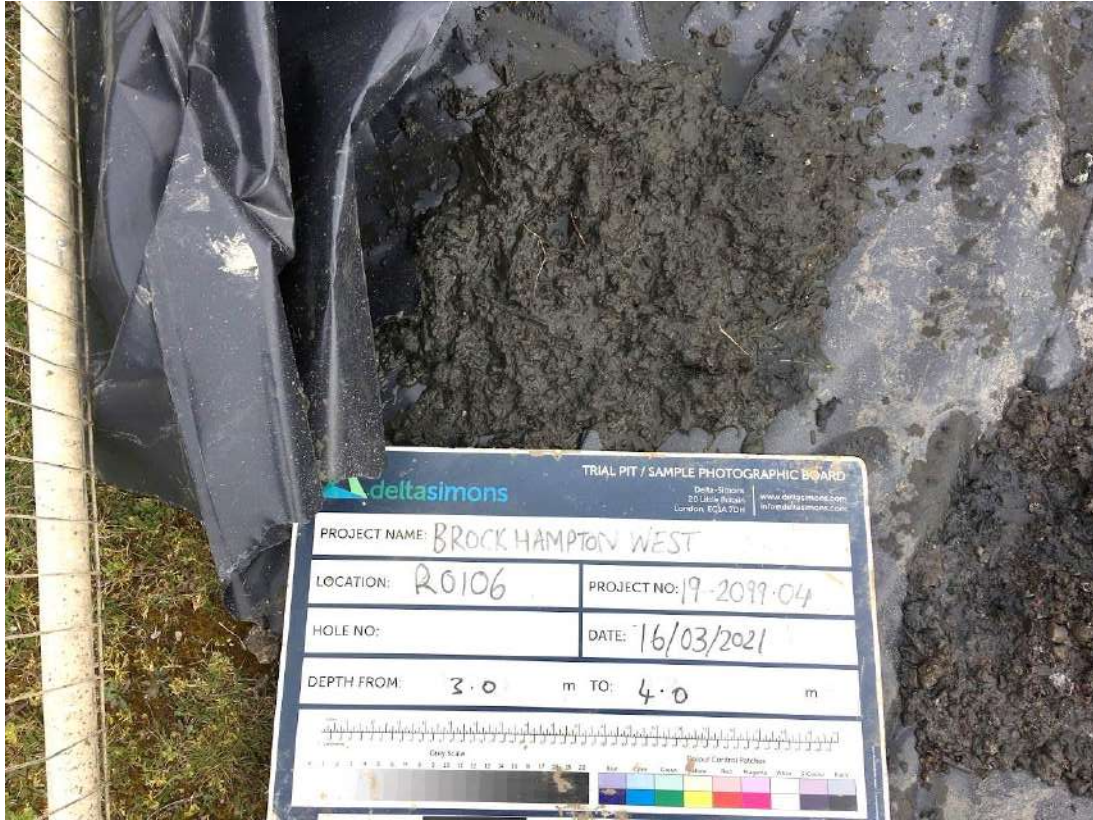
Photograph 67 – RO106



Photograph 68 – RO106



Photograph 69 – RO106



Photograph 70 – RO106



Photograph 71 – RO106



Photograph 72 – RO106



Photograph 73 – RO106



Photograph 74 – RO106



Photograph 75 – RO106



Photograph 76 – RO106



Photograph 77 – RO106



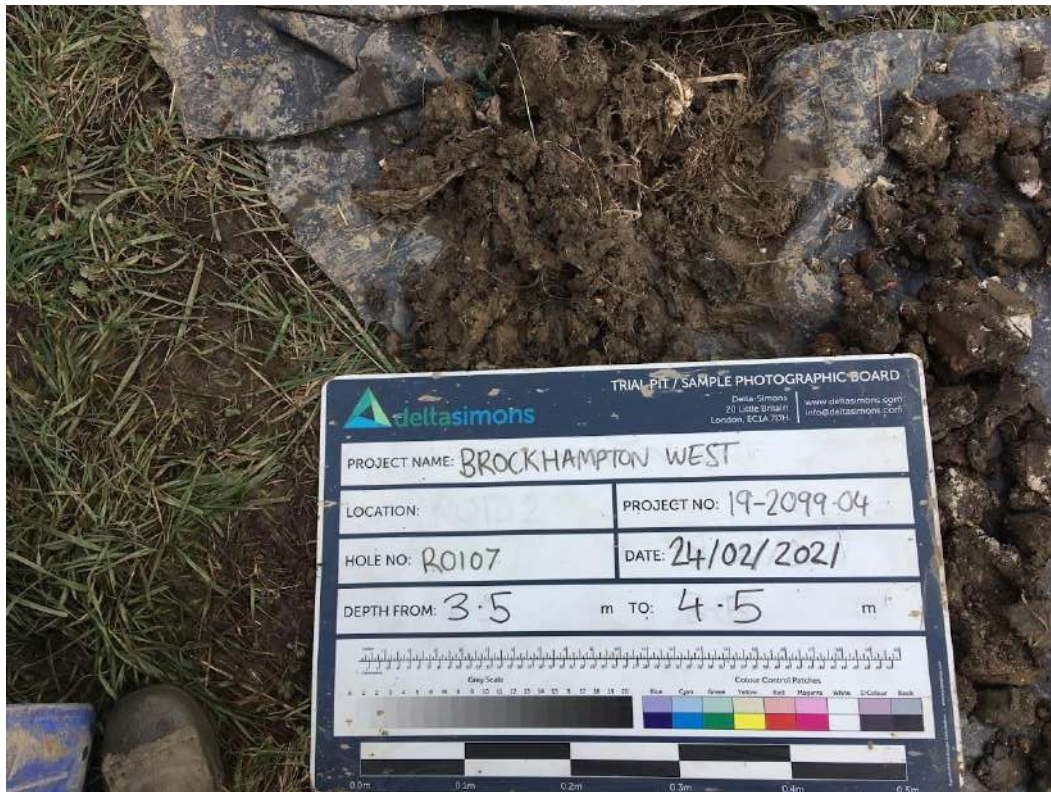
Photograph 78 – RO106



Photograph 79 – RO106



Photograph 80 – RO107



Photograph 81 – RO107



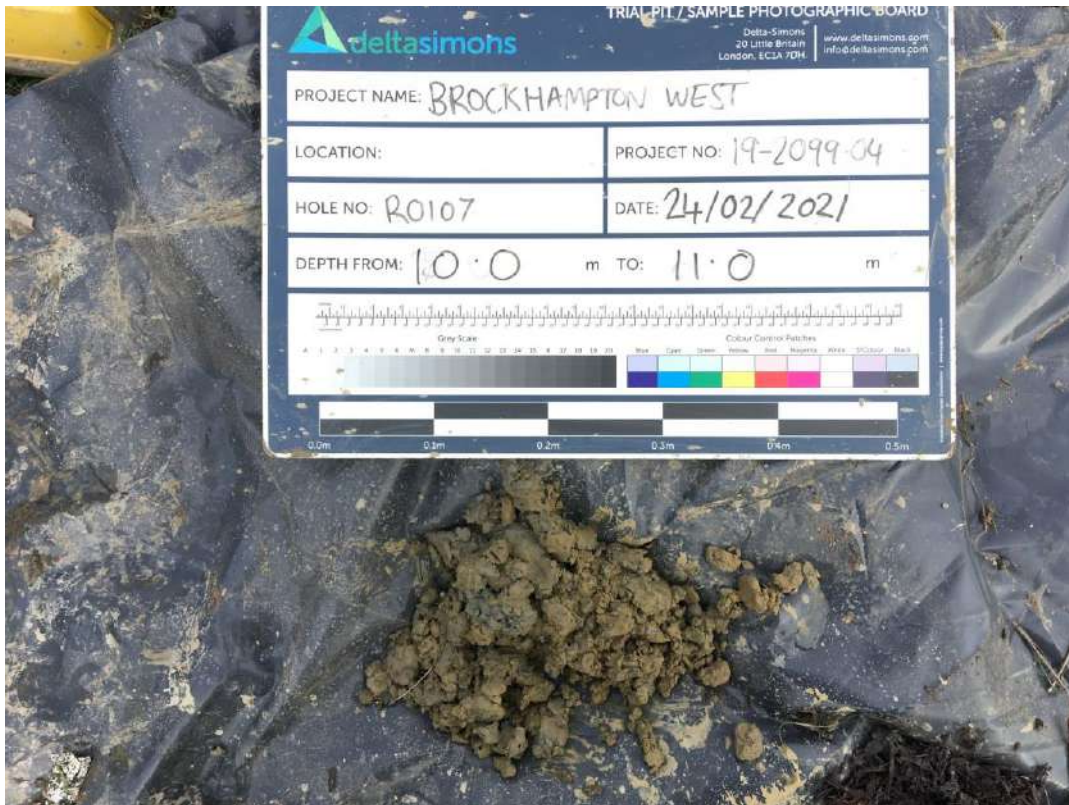
Photograph 82 – RO107



Photograph 83 – RO107



Photograph 84 – RO107



Photograph 85 – RO107



Photograph 86 – RO108



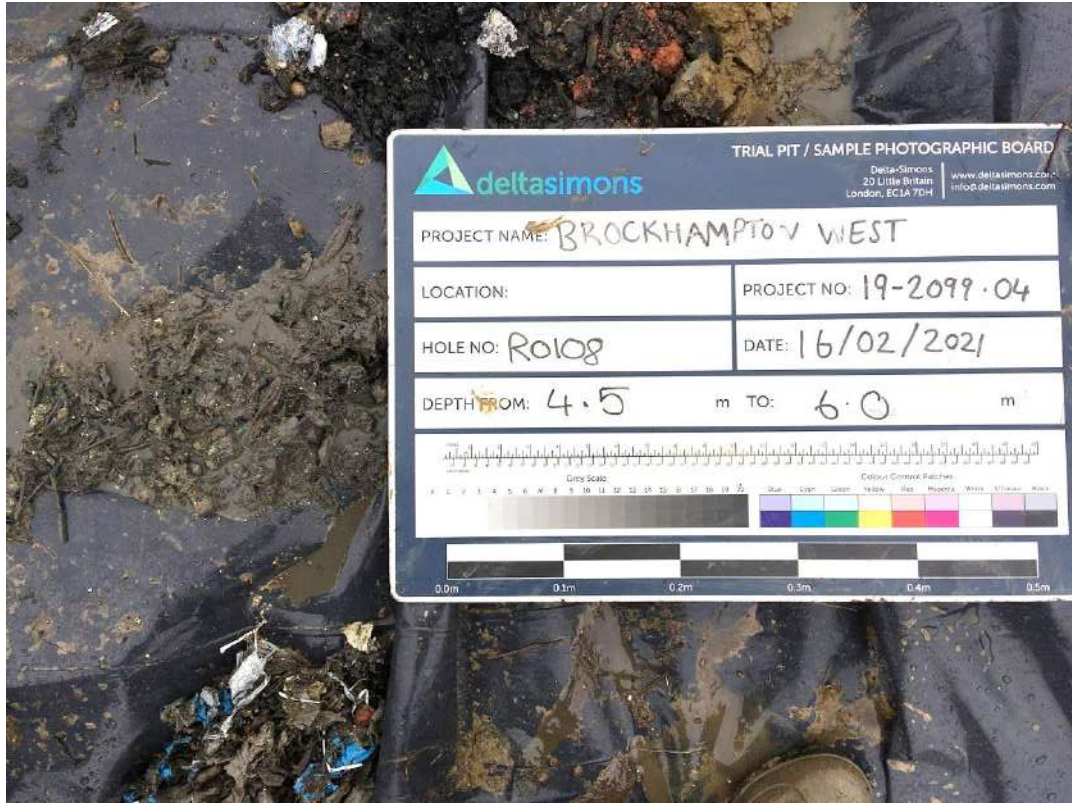
Photograph 87 – RO108



Photograph 88 – RO108



Photograph 89 – RO108



Photograph 90 – RO108



Photograph 91 – RO108



Photograph 92 – RO108



Photograph 93 – RO108



Photograph 94 – RO108



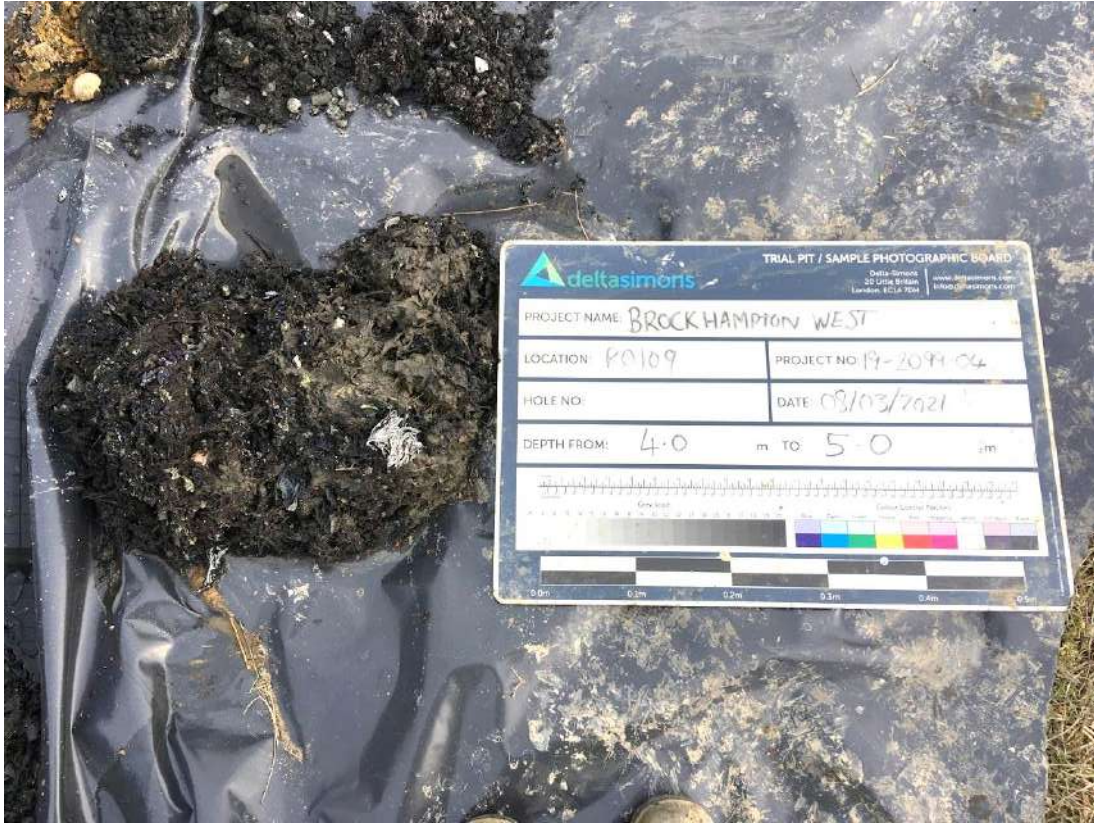
Photograph 95 – RO109



Photograph 96 – RO109



Photograph 97 – RO109



Photograph 98 – RO109



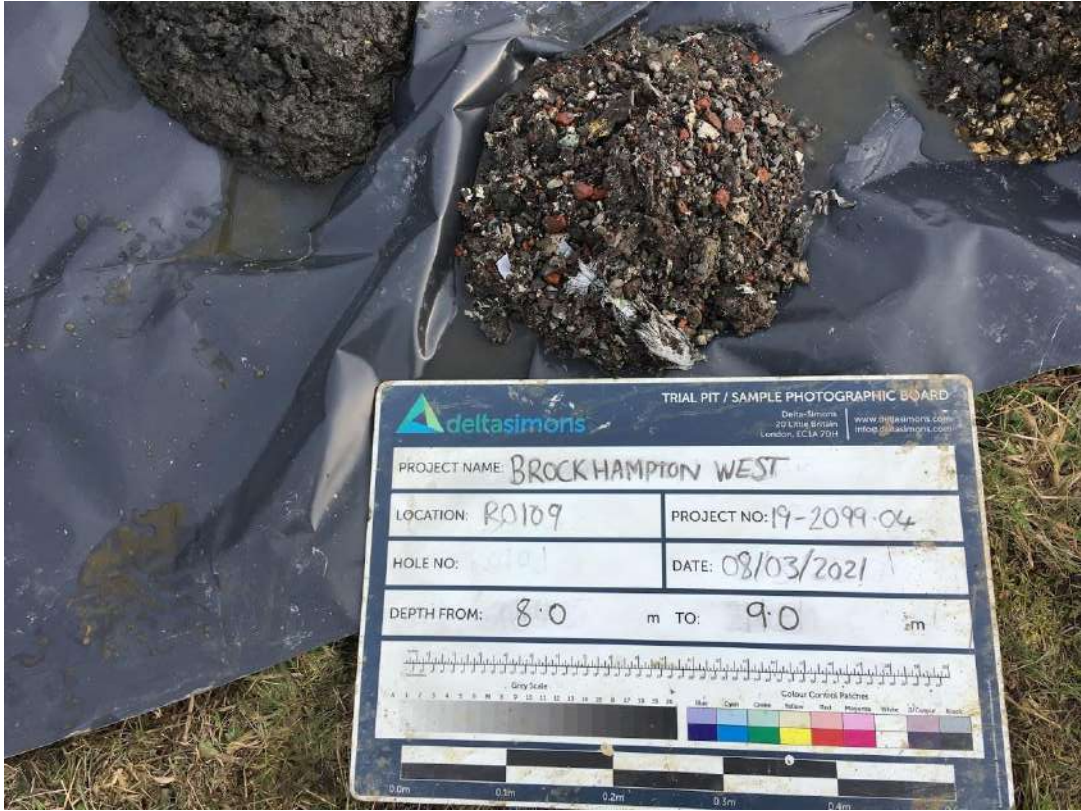
Photograph 99 – RO109



Photograph 100 – RO109



Photograph 101 – RO109



Photograph 102 – RO109



Photograph 103 – RO109



Photograph 104 – R0109



Photograph 105 – R0109



Photograph 21 – TP106 (0.0 – 3.8 m bgl)



Photograph 22 – TP106 (0.0 – 0.43 m bgl)



Photograph 23 – TP106 (0.43 – 2.6 m bgl)



Photograph 24 – TP106 (2.6 – 3.8 m bgl)



Photograph 25 – TP107 (0.0 – 1.45 m bgl)



Photograph 26 – TP107 (2.0 – 3.0 m bgl)



Photograph 27 – TP107 (newspaper dated 3rd July 1986)



Photograph 28 – TP107 (3.2 – 3.7 m bgl)



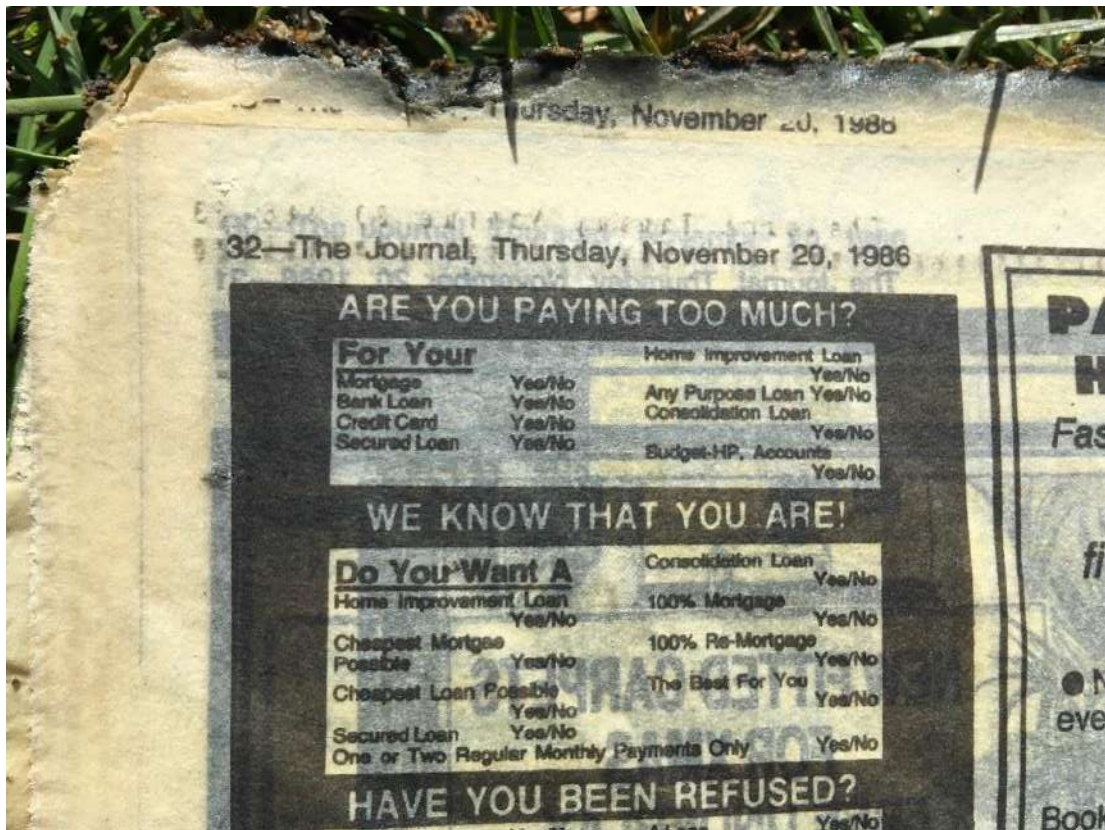
Photograph 29 – TP108 (0.0 – 4.0 m bgl)



Photograph 30 – TP108 (0.2 – 1.4 m bgl)



Photograph 31 – TP108 (2.0 – 4.0 m bgl)



Photograph 32 – TP108 (newspaper dated 20th November 1986)



Photograph 33 – TP109 (0.0 – 3.9 m bgl)



Photograph 34 – TP109 (0.0 – 3.9 m bgl)



Photograph 35 – TP110 (0.0 – 3.7 m bgl)



Photograph 36 – TP110 (0.0 – 3.7 m bgl)



Photograph 37 – TP111 (0.0 – 0.18 m bgl)



Photograph 38 – TP111 (2.5 – 3.5 m bgl)



Photograph 39 – TP112 (0.0 – 3.7 m bgl)



Photograph 40 – TP112 (0.0 – 3.7 m bgl)



Photograph 41 – TP112 (shallow landfill material)



Photograph 42 – TP112 (0.0 – 3.7 m bgl)



Photograph 43 – TP113 (0.0 – 3.85 m bgl)



Photograph 44 – TP114 (0.0 – 3.9 m bgl)



Photograph 45 – TP114 (0.0 – 0.3 m bgl)



Photograph 46 – TP114 (0.85 – 3.9 m bgl)



Photograph 47 – TP114 (newspaper dated 7th November 1986)



Photograph 48 – TP115 (0.0 – 3.6 m bgl)



Photograph 49 – TP115 (3.1 – 3.6 m bgl)



Photograph 50 – TP116 (0.0 – 3.7 m bgl)



Photograph 51 – TP116 (0.0 – 0.3 m bgl)



Photograph 52 – TP116 (1.6 – 3.7 m bgl)



Photograph 53 – TP116 (1.6 – 3.7 m bgl)



Photograph 54 – TP117 (0.0 – 3.9 m bgl)



Photograph 55 – TP117 (0.2 – 0.65 m bgl)



Photograph 56 – TP117 (0.65 – 1.5 m bgl)



Photograph 57 – TP117 (1.5 – 3.5 m bgl)



Photograph 58 – TP117 (newspaper dated 1986)



Photograph 59 – TP118 (0.0 – 3.6 m bgl)



Photograph 60 – TP118 (0.0 – 3.6 m bgl)



Photograph 61 – TP119 (0.0 – 3.6 m bgl)



Photograph 62 – TP119 (0.0 – 3.6 m bgl)



Photograph 63 – TP120 (0.0 – 3.6 m bgl)



Photograph 64 – TP120 (1.0 – 2.9 m bgl)



Photograph 65 – TP120 (2.9 – 3.6 m bgl)