



Factual Geo-Environmental Investigation Report

Former Brockhampton West Landfill, North of Harts Farm Way, Havant

Presented to Clowes Developments (UK) Ltd

Issued: July 2021

Delta-Simons Project No. 19-2099.04



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Report Details

Client	Clowes Developments (UK) Ltd
Report Title	Factual Geo-Environmental Investigation Report
Site Address	Former Brockhampton West Landfill, North of Harts Farm Way, Havant, PO9 1HS
Project No.	19-2099.04
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Quality Assurance

Issue No.	Status	Issue Date	Note	Author	Technical Review	Authorised
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About us

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Specialising in Environment, Health & Safety and Sustainability, Delta-Simons provide support and advice within the property development, asset management, corporate and industrial markets. Operating from across the UK we employ over 120 environmental professionals, bringing experience from across the private consultancy and public sector markets.

Delta-Simons is proud to be a founder member of the Inogen Environmental Alliance, enabling us to efficiently deliver customer projects worldwide by calling upon over 5000 resources in our global network of consultants, each committed to providing superior EH&S and sustainability consulting expertise to our customers. Inogen Environmental Alliance offers its clients more consultants, with more services in more countries than the traditional multinational consultancy.



Delta-Simons is a '**Beyond Net-Zero**' company. We have set a Science-Based Target to reduce our Scope 1 and Scope 2 carbon emissions in line with the Paris Agreement and are committed to reducing Scope 3 emissions from our supply chain. Every year we offset our residual emissions by 150% through verified carbon removal projects linked to the UN Sustainable Development Goals.

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1.0 Introduction

1.1 Appointment

Delta-Simons Environmental Consultants Limited ("Delta-Simons") was instructed by Exton Estates Ltd on behalf of Clowes Developments (UK) Ltd (the "Client") to undertake an Intrusive Ground Investigation and prepare a Factual Geo-Environmental Investigation Report for the Site known as Former Brockhampton West Landfill, North of Harts Farm Way, Havant, PO9 1HS (the "Site").

1.2 Context & Purpose

The report will present factual information regarding ground conditions, from which risks to end-users, the environment and structures will be assessed by Delta-Simons as per the proposed scope of works, dated February 2021 (reference: 19-2099.04). The investigation will provide geo-environmental and geotechnical information required to facilitate the design of any land remediation works required alongside preliminary ground-related design parameters to support the construction of the proposed development.

It is understood that the Site is to be redeveloped with two warehouse buildings, hardstanding for car parking HGV docking bays, road and soft landscaping.

1.3 Scope of Works

The scope of the investigation was set out in the Geo-Environmental Site Investigation Proposal (V2) by Delta-Simons, reference: 19-2099.04, dated 9th February 2021.

1.4 Limitations

The assessment is limited to the scope agreed within the proposal for the works. General limitations associated with this report are provided in Appendix A. In addition, there are the following specific limitations that apply to this assessment:

- ▲ Due to the presence of slow worms on-Site and the drilling works commencing during their hibernation period, the drilling locations were limited to the pre-existing dog walking tracks where the grass was already short. This, as well as the proposed exploratory hole location plan was agreed with the project ecologist Applied Ecology. Whilst this constraint was present, Delta-Simons do not consider the placement of the exploratory holes to have impacted the overall aims and objectives of the ground investigation;
- ▲ Dense vegetation around the perimeter of the Site limited access to these areas;
- ▲ Steep slopes on-Site limited the placement of the borehole locations due to the requirement for a level, stable platform for the drilling rig;
- ▲ Up to 13 cone penetration test (CPT) locations were proposed but, due to refusals on obstructions within the waste mass, only nine locations reached the required depths. Additional locations were attempted within the vicinity of the refused CPT locations where obstructions had been encountered. In total 16 CPT attempts were made across the Site;
- ▲ The Chalk bedrock was weaker than previously recorded on-Site so, in order to provide sufficient information for the structural engineer, the rotary boreholes were progressed deeper than initially proposed. As such, in order to keep within the programme of works, the three locations proposed for dynamic sampling were advanced by rotary open hole methods;
- ▲ The Chalk recovered during the drilling works was logged as structureless and so, the proposed geotechnical testing schedule had to be amended to suit the geology *i.e.* very limited rock core was recovered and so predominantly soil based testing was undertaken;
- ▲ The proposed exploratory hole location plan for the borehole, trial pit and CPT locations was approved by the structural engineer at the time of the investigation;
- ▲ The overhead power line on-Site, adjacent to the southern boundary, required a 15 metre standoff zone for all plant and vehicles. As such, no exploratory locations were undertaken within this standoff zone; and,

- ▲ Delta-Simons could not access borehole locations RO101 to RO106, installed within the waste mass, during round three of the ground gas and groundwater monitoring programme. This was due to continuous monitoring equipment being installed in those locations, that prevented access to the standpipe and could not be removed.

2.0 Site Details

2.1 Site Setting

The Site setting at the time of the ground investigation is described below.

Site Location	The Site is located off Harts Farm Way, to the south of the Havant Bypass (A27) towards the western outskirts of Havant, approximately 7.0 km northeast of Portsmouth. A Site location map is provided as Figure 1.
Current Site Use	The Site is currently an unoccupied parcel of grassland that is understood to have previously been part of a wider landfill. The Site comprises a small access road branching from Harts Farm Way, that leads to a small area of hardstanding in the southern central area of the Site. The Site is generally covered with amenity grassland but there are also mature and semi-mature trees and shrubs along the perimeters of the Site.
Proposed Development Description	The proposed use for the Site is the development of new employment units to provide up to 29,000 m² (gross internal area) for flexible use across use Classes E (Light Industrial), B2 (General Industrial) and B8 (Distribution and Storage) with ancillary offices, car parking, service yards, drainage works, landscaping and associated works to prepare the Site for development. Whilst the final proposed developed design is intended to be agreed under Reserved Matters planning consent the Client has confirmed that the two-unit scheme will likely be progressed. Hardstanding areas to facilitate carparking are proposed to be situated around the buildings with areas of soft landscaping/bunds towards the perimeter of the Site. Entrance to the Site will be via Harts Farm Way with ease of access to the heavy goods vehicle (HGV) docking stations. A cut and fill operation may be required to facilitate the proposed units. The latest development proposal is presented as Drawing 1.

3.0 Site Investigation

3.1 Intrusive Investigation

Delta-Simons carried out intrusive investigation from 15th February to 1st April 2021 to obtain information regarding ground conditions, from which risks to end-users, the environment and structures can be assessed. The investigation has also gathered geotechnical information to inform comment on the preliminary design of foundations and infrastructure.

3.1.1 Health & Safety Considerations

Service plans for the Site were provided by the Client; and a utilities clearance specialist attended the Site on 15th February 2021 to clear proposed intrusive locations prior to excavation/drilling works.

Overhead power lines and pylons were present on-Site; adjacent to the southern boundary. As such, a 15-metre standoff zone was required for all Site plant and vehicles. The utilities clearance specialist demarked the standoff zone and any proposed exploratory locations were moved as appropriate. Specific precautions regarding movement of plant and vehicles beneath the powerlines, when entering or exiting the Site, were taken and regularly communicated to Site staff via toolbox talks.

An initial assessment of the Site identified a Moderate risk in relation to Unexploded Ordnance (UXO) however, given the Site had undergone significant earthworks post 1970 associated with the former landfill; the risk was considered to be low.

Future Contractors should undertake their own assessment of UXO risk in relation to their specific proposed scope of works.

3.1.2 Clean Drilling Techniques and Monitoring Well Construction

In order to prevent the formation of a preferential pathway for contamination within the landfill to the Chalk, Delta-Simons undertook precautionary measures during the drilling works. This included a reduction of casing size (193.6 mm to 146 mm) from the superficial deposits into the Chalk as well as the installation of a one metre bentonite seal at the top of the Chalk. Whilst Delta-Simons endeavoured to protect the Chalk aquifer during the intrusive investigation, it should be noted that the majority of the Site was found to be underlain by granular superficial deposits with no evidence of an impermeable lining at the base of the landfill. As such, it is likely a pathway from the landfill to the Chalk already exists.

Six of the nine boreholes installed with ground gas and groundwater monitoring wells (RO101 to RO106) were done so with dual installs (detailed below in Table 1) i.e. two standpipes installed within the same exploratory hole, each targeting either the landfill waste or the Chalk. In order to ensure the collection of reliable data from each standpipe and to minimise and risk of cross contamination, Delta-Simons constructed the shallow monitoring wells (targeting the landfill waste) with a 200 mm gravel pack, underlying the base of the standpipe. Bentonite pellets were then used to backfill between the base of the gravel pack and the top of the second standpipe installed within the Chalk. Installation details for each monitoring well is included within the exploratory hole logs (within Appendix B).

3.2 Scope of Ground Investigation and Rationale

3.2.1 Scope

The ground investigation comprised the following items:

- ▲ Initial utilities avoidance exercise;
- ▲ Surveying of all exploratory hole positions (Northing / Easting) and levels in metres above ordnance datum (m AOD); and
- ▲ Supervision of all works by a Delta-Simons Geo-Environmental engineer. All intrusive locations were logged in general accordance with BS 5930:2015+A1:2020 Code of Practice for Site Investigations;
- ▲ 12 no. boreholes (RO101 to RO109 and DS101 to DS103) drilled using multifunction rotary rigs to a maximum depth of 29 m bgl;

- ▲ 20 no. mechanically excavated trial pits (TP101 to TP120) to a maximum depth of 4.0 m bgl;
- ▲ 9 no. cone penetration testing (CPT) locations completed to refusal on suspected bedrock (CPT101, CPT104, CPT105, CPT107C, CPT108A, CPT109, CPT111, CPT112 and CPT113) to a maximum depth of 30.91 m bgl;
- ▲ 7 no. CPT locations partially completed to refusal on obstructions within the waste material (CPT103, CPT106, CPT107, CPT107A, CPT107B, CPT108, CPT110) to a maximum depth of 14.4 m bgl;
- ▲ 4 no. rounds of groundwater sampling over a period of 8 weeks (RO101 to RO109, DS101 to DS103, CP02A, CP03 and CP05);
- ▲ 2 no. rounds of surface water sampling from the adjacent Hermitage Stream (Up, mid and downstream);
- ▲ 4 no. rounds of conventional ground gas monitoring over a period of 8 weeks by Delta-Simons (RO101 to RO109, DS101 to DS103, CP02A, CP03 and CP05);
- ▲ 8 no. weeks of continuous ground gas and groundwater level monitoring by Ground Gas Solutions Limited (GGs Ltd) specifically targeting monitoring wells installed within the landfill waste. This comprised four weeks of continuous monitoring for boreholes RO101 to RO103 and then four weeks of continuous monitoring for boreholes RO104 to RO106;
- ▲ 8 weeks of continuous automated water level logging by Delta-Simons in various boreholes installed within the superficial deposits and the Chalk (RO101 and RO109 for 8 weeks, RO105, RO108, DS101 and DS103 for four weeks);
- ▲ 4 no. purge and recovery tests for ground gas recharge by GGS Ltd on boreholes installed within the landfill waste (RO101, RO103, RO104 and RO106); and
- ▲ The collection of soil samples for Waste Acceptance Criteria testing and forensic waste analysis.

A schedule of exploratory holes is presented in Table 1.

Table 1: Schedule of Completed Exploratory Holes

Exploratory Hole ID	Depth Achieved (m bgl)	Exploratory Hole Type	Remarks
RO101	26.45	Dynamic Sampler with Rotary Follow On	Terminated beyond target depth in order to reach competent bedrock. Installed with dual monitoring well in the Chalk (35 mm standpipe) and the waste (50 mm standpipe).
RO102	26.34	Dynamic Sampler with Rotary Follow On	Terminated beyond target depth in order to reach competent bedrock. Installed with dual monitoring well in the Chalk (35 mm standpipe) and the waste (50 mm standpipe).
RO103	29.30	Dynamic Sampler with Rotary Follow On	Terminated beyond target depth in order to reach competent bedrock. Installed with dual monitoring well in the Chalk (35 mm standpipe) and the waste (50 mm standpipe).
RO104	24.5	Dynamic Sampler with Rotary Follow On	Terminated beyond target depth in order to reach competent bedrock.

			Installed with dual monitoring well in the Chalk (35 mm standpipe) and the waste (50 mm standpipe).
RO105	21.95	Dynamic Sampler with Rotary Follow On	Terminated beyond target depth in order to reach competent bedrock. Installed with dual monitoring well in the Chalk (35 mm standpipe) and the waste (50 mm standpipe).
RO106	29.45	Dynamic Sampler with Rotary Follow On	Terminated beyond target depth in order to reach competent bedrock. Installed with dual monitoring well in the Chalk (35 mm standpipe) and the waste (50 mm standpipe).
RO107	20	Dynamic Sampler with Rotary Open Hole Follow On	Terminated at target depth. Installed with a single monitoring well targeting the Chalk (50 mm standpipe).
RO108	20	Dynamic Sampler with Rotary Open Hole Follow On	Terminated at target depth. Installed with a single monitoring well targeting the Chalk (50 mm standpipe).
RO109	20	Dynamic Sampler with Rotary Open Hole Follow On	Terminated at target depth. Installed with a single monitoring well targeting the Chalk (50 mm standpipe).
DS101	10.7	Rotary Open Hole	Terminated at target depth. Installed with a single monitoring well targeting the River Terrace Deposits (RTD) (50 mm standpipe).
DS102	12.5	Rotary Open Hole	Terminated at target depth. Installed with a single monitoring well targeting the RTD (50 mm standpipe).
DS103	13.5	Rotary Open Hole	Terminated at target depth. Installed with a single monitoring well targeting the RTD (50 mm standpipe).
TP101 to TP120	< 4	Trial Pit Mechanical Excavator	Terminated at target depth. Provided general Site coverage of the cover material and waste mass. Allow the collection of large bulk samples for waste analysis and forensic waste analysis.
CPT101 to CPT113	< 30.91	20 Tonne Track Mounted CPT Rig	To provide geotechnical data across the Site.

3.3 Ground Investigation Factual Data

The investigation locations were surveyed in by the appointed surveying contractor to an accuracy of approximately +/- 0.1m. An Exploratory Hole Location Plan is presented as Figure 2.

Delta-Simons engineer verified exploratory hole logs and third-party exploratory hole logs included as part of the Draft Phase II Environmental Audit by WYG dated August 2017 (ref: A102760) reviewed by Delta-Simons are presented as Appendix B, rotary borehole core and trial pit photographs are presented as Appendix C and the SPT Calibration Certificates, in accordance with *BS EN ISO 22476-3:2005 (incorporating corrigendum No. 1 2007)*, *Geotechnical investigation and testing - Field testing - Part 3: Standard penetration test for SPT trip hammers* are provided in Appendix D.

The schematic cross section for the dual install wells is included within Appendix K.

3.4 In situ Testing and Sampling

Standard Penetration Tests (SPTs) were undertaken in the re-engineered cover layer and the Chalk in boreholes RO101 to RO109, within the re-engineered cover layer in RO107 to RO109 and within the superficial deposits in DS103. The results of these tests are presented in the borehole logs included as Appendix B.

Environmental soil sampling comprised disturbed tub, and jar samples as detailed on the borehole logs. Environmental water sampling comprised glass bottles, glass vials and sterile plastic bottles. Geotechnical sampling comprised disturbed tub, bulk samples, UT100 samples and Chalk samples.

3.5 Environmental Sampling and Laboratory Analysis

3.5.1 Soil

Representative soil samples collected for subsequent laboratory analysis were placed in a variety of containers appropriate for the requirements of the testing suites. Samples were stored in accordance with Delta-Simons' quality procedures to maintain sample integrity and preservation and to minimise the chance of cross contamination.

Records of the samples taken as part of the Site investigation works, including their depths and location, are included within the exploratory hole records in Appendix B. The results are included in Appendix E & F.

The environmental soil analysis scheduled by Delta-Simons is summarised in Table 2.

Analysis was undertaken at a UKAS accredited laboratory- i2 Analytical Limited.

Table 2: Environmental Analysis - Soils

Environmental Soil Analytes	No. of Samples Tested
Asbestos Screen and ID	44
pH, Metals (As, Cd, Cu, Cr, Hg, Pb, Ni, Zn)	47
Total Petroleum Hydrocarbons Criteria Working Group Method (TPH CWG), Benzene, Toluene, Ethylbenzene and Xylene (BTEX)	49
Speciated Polycyclic Aromatic Hydrocarbons (PAH)	35
Volatile Organic Compounds (VOC) and Semi Volatile Organic Compounds (SVOC)	15
Concrete suite including pH and sulphate	39

Environmental Soil Analytes	No. of Samples Tested
Soil Organic Matter (SOM)	17
Speciated Phenols	15
Waste Acceptance Criteria (WAC) Testing	7
Forensic Waste Analysis	10

WAC and forensic waste analysis was undertaken to assist with and inform future potential materials management options.

3.5.2 Groundwater

Four rounds of groundwater sampling were undertaken over a period of eight weeks, dated 22nd to 23rd March 2021 (Round 1), 20th to 21st April 2021 (Round 2), 4th to 5th May 2021 (Round 3) and 18th to 19th May 2021 (Round 4).

The groundwater samples were collected with a dedicated disposable HydraSleeve, after appropriate well development.

Development of the wells installed with 50 mm standpipe was undertaken using a water submersible pump to remove either six times the well volume of water or until the well became dry. For the wells installed with 35 mm standpipe, a foot valve and an inertial pump used to remove either six times the well volume of water or until the well became dry.

HydraSleeves were selected for the groundwater sampling as they are a no-purge (passive) grab sampling device causing no drawdown in the well (until the sample is withdrawn from the water column) and only minimal disturbance of the water column, because it has a very thin cross section and it displaces very little water (<100 ml) during deployment in the well. The HydraSleeve collects a sample from within the screen only. It excludes water from any other part of the water column in the well through the use of a self-sealing check valve at the top of the sampler.

The midpoint of each groundwater column was calculated during the sampling event, and the sampling screen for the HydraSleeve was situated half a metre below and above this. As such, every groundwater sample collected by Delta-Simons was specifically from the middle one metre section of each groundwater column within the monitoring wells.

The environmental groundwater analysis scheduled by Delta-Simons is summarised in Table 3.

Table 3: Environmental Laboratory Analysis – Groundwater

Environmental Groundwater Analytes	No. of Samples Tested
Metals (As, Cd, Cu, Cr, Hg, Pb, Ni, Zn), Speciated PAH, TPH CWG, BTEX, Sulphate, pH	77
VOC and SVOC	14
Nitrate, Nitrite, Ammonia and Chloride	76
Phenol	10
pH, Sulphate, Total Sulphur, Nitrate, Chloride & Ammonium	22

Environmental Groundwater Analytes	No. of Samples Tested
Orthophosphate	18
Dissolved Methane	6

3.5.3 Surface Water

Surface water sampling of the adjacent Hermitage Stream was undertaken on two occasions; during a period of dry weather and following a moderate rainfall event on the dates below. Each surface water sampling event included the collection of one sample from up, mid and downstream; both at high tide and low tide.

Details of each sampling event are as follows:

- ▲ Round 1: Undertaken following a period of dry weather (20/04/21 – 21/04/21)
- ▲ Round 2: Undertaken following a moderate rainfall event (04/05/21 – 05/05/21)

The samples were collected with a dedicated container attached to a telescopic pole.

A summary of the scheduled testing is provided in Table 4.

Table 4: Environmental Laboratory Analysis – Surface Water

Environmental Surface Water Analytes	No. of Samples Tested
Metals (As, Cd, Cu, Cr, Hg, Pb, Ni, Zn), Speciated PAH, TPH CWG, BTEX, Sulphate, pH	12
Phenol	12
Nitrate, Nitrite, Ammonia and Chloride	12
Orthophosphate	12
Biochemical Oxygen Demand (BOD) and Chemical Oxygen Demand (COD)	12
<i>E. Coli</i> ¹	12
Intestinal Enterococci	12

3.6 Geotechnical Laboratory Testing

A selection of soil samples were submitted to the UKAS accredited laboratory for a range of geotechnical testing, the results of which are included in Appendix G.

The programme of geotechnical testing undertaken on samples obtained from the soils encountered is presented within Table 5.

¹ E. Coli and Intestinal Enterococci were requested by the Client in order to pursue a permit for discharge of treated foul water into the stream. No further commentary on these results will be made by Delta-Simons.

Table 5: Laboratory Geotechnical Analysis

Analysis	No. Tested
Moisture content	24
Liquid Limit, Plastic Limit and Plasticity Index (4 Point)	4
Particle Size Distribution	28
Moisture Condition Value Test (at as received Moisture Content)	6
Saturation Moisture Content for Chalk Samples	1
Point Load Strength Index Tests	5
Loss on Ignition	6
Total Organic Carbon Forensic Waste Inspection	10
Total Organic Carbon	9
Dry Density / Moisture Content Relationship Light Compaction (OMC/MDD Relationship)	13
Quick Undrained Triaxial	2
Triaxial Permeability Test	3

3.7 Monitoring Programme

3.7.1 Conventional Gas and Groundwater Monitoring

Four rounds of groundwater level and ground gas monitoring were undertaken by Delta-Simons on installed monitoring wells (for their respective purposes) following the intrusive investigation. Various wells could not be accessed over the eight week period due to the installation of continuous ground gas monitoring equipment.

The details for each monitoring round are summarised in Table 6.

Table 6: Borehole monitoring programme

Borehole	Response Zone Strata	Round 1	Round 2	Round 3	Round 4
		22/03/21 – 23/03/21	20/04/21	04/05/21	18/05/21 – 20/05/21
RO101 (S)	Waste	Yes	Yes	No Continuous monitoring	Yes
RO102 (S)		Yes	Yes		Yes
RO103 (S)		Yes	Yes		Yes

RO104 (S)		Yes	Yes	equipment installed on wells.	Yes
RO105 (S)		Yes	Yes		Yes
RO106 (S)		Yes	Yes		Yes
RO107 (D)	Chalk	Yes	Yes	Yes	Yes
RO108 (D)		Yes	Yes	Yes	Yes
RO109 (D)		Yes	Yes	Yes	Yes
DS101	Superficial	Yes	Yes	Yes	Yes
DS102		Yes	Yes	Yes	Yes
DS103		Yes	Yes	Yes	Yes
CP02A (S)	Waste	Yes	Yes	Yes	Yes
CP02A (D)	Chalk	Yes	Yes	Yes	Yes
CP03 (S)	Waste	Yes	Yes	Yes	Yes
CP03 (D)	Chalk	Yes	Yes	Yes	Yes
CP05 (S)	Waste	Yes	Yes	Yes	Yes

Measurements of the depth to groundwater within the monitoring wells were taken using an electronic dip meter. The groundwater levels within all accessible boreholes were measured at the end of each visit within a one hour time frame to limit the effect of any tidal influence.

The groundwater level monitoring sheets are included as Appendix H.

To characterise the ground gas regime at the Site an infrared gas meter was used to measure gas flow, concentrations of carbon dioxide (CO₂), methane (CH₄), oxygen (O₂) and hydrogen sulphide (H₂S) in percentage by volume or ppm, Atmospheric Pressure and Differential Pressure. A Photoionization detector (PID) was also used to measure total VOC concentration on one occasion.

The atmospheric pressure and relative borehole pressure were also recorded, together with the weather conditions before monitoring. All monitoring results with the temporal conditions are presented within Appendix H.

3.7.2 Low Flow Groundwater Parameter Test

Groundwater parameters were recorded during the final groundwater monitoring visit including pH, temperature, specific conductivity, dissolved oxygen (RDO) concentration and oxidation-reduction potential ORP. Reports of groundwater parameter stability readings are presented in Appendix I.

3.7.3 Continuous Water Level Monitoring

Continuous water level monitoring was undertaken on six boreholes across the Site, for either four weeks or eight weeks. The level loggers were placed in a selection of wells installed in either the Chalk or the River Terrace Deposits (RTD). The data was collected in order to further characterise the groundwater on-Site and also assess the impact of any tidal influence on the groundwater levels. The time series graph for each borehole is included as Appendix J.

It should be noted that five of the six time series graphs (RO101, RO108, RO109, DS101 and DS103) display minor anomalies that comprise a rapid decrease in groundwater level below 0 metres above ordnance datum. This is as a result of the level loggers being briefly removed during the ground gas and groundwater monitoring events and should be discounted.

3.7.4 Continuous Ground Gas Monitoring

Gas Sentinels® and / or GasClams® were installed by Ground Gas Solutions Limited (GGS) on six wells targeting the landfill waste for a period of eight weeks between 23rd March and 19th May 2021.

GasClam/Sentinel® instrumentation was configured to record at an hourly monitoring frequency. All GasClam® instruments recorded atmospheric pressure, temperature and gas concentrations; methane (CH₄), carbon dioxide (CO₂), oxygen (O₂), carbon monoxide (CO) and hydrogen sulphide (H₂S). Continuous gas flow was also recorded.

The GGS DataPacks for both periods of monitoring are contained within Appendix K.

3.8 Cone Penetration Testing

In Situ Site Investigation attended the Site on 29th and 30th March 2021 to undertake cone penetration testing (CPT) with a track mounted CPT rig. Only nine locations reached the required depth due to several refusals within the landfill waste mass.

The test was considered to have reached the required depth once the CPT probe had progressed through the landfill waste and refused on total pressure. Total pressure is defined as when the maximal safe capacity of the equipment was reached.

The Static Cone Penetration Test Factual Report is included as Appendix L.

3.9 Purge and Recovery Test

Delta-Simons instructed GGS to undertake four purge and recovery tests on wells installed within the landfill waste mass across the Site. The test involved displacing gases within the monitoring wells with nitrogen and recording the recovery in gas concentration immediately after nitrogen introduction.

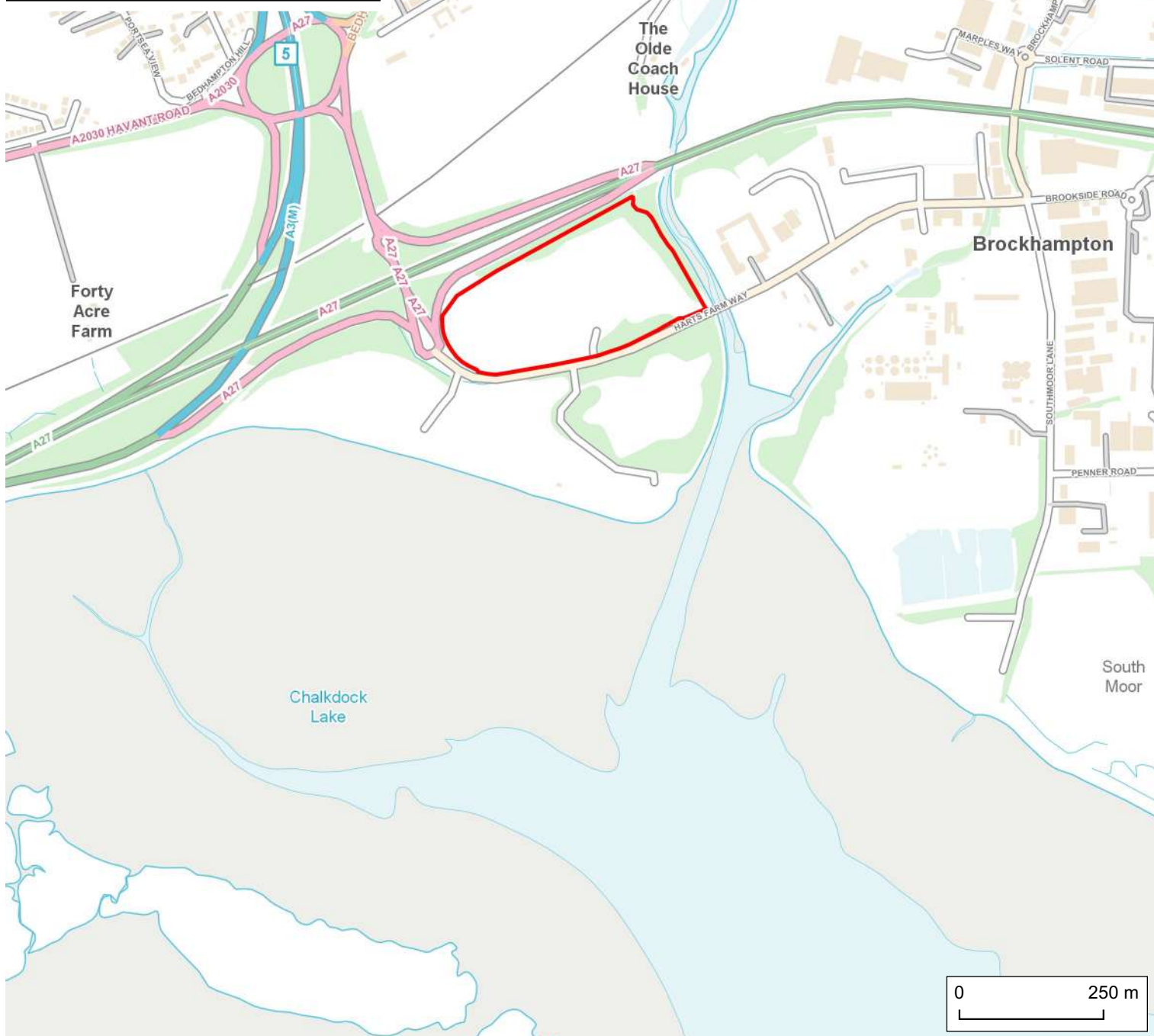
The results of the testing are included as Appendix K.

Figure 1 – Site Location Map



LEGEND

 Site Boundary



Scale: 1:10000 @ A4

Service Layer Credits: Contains OS data @ Crown Copyright and Database Right 2019

Figure 2 – Exploratory Hole Location Plan

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

PROJECT NO:

19-2099.04

CHECKED BY:

LB

REVISION:

1

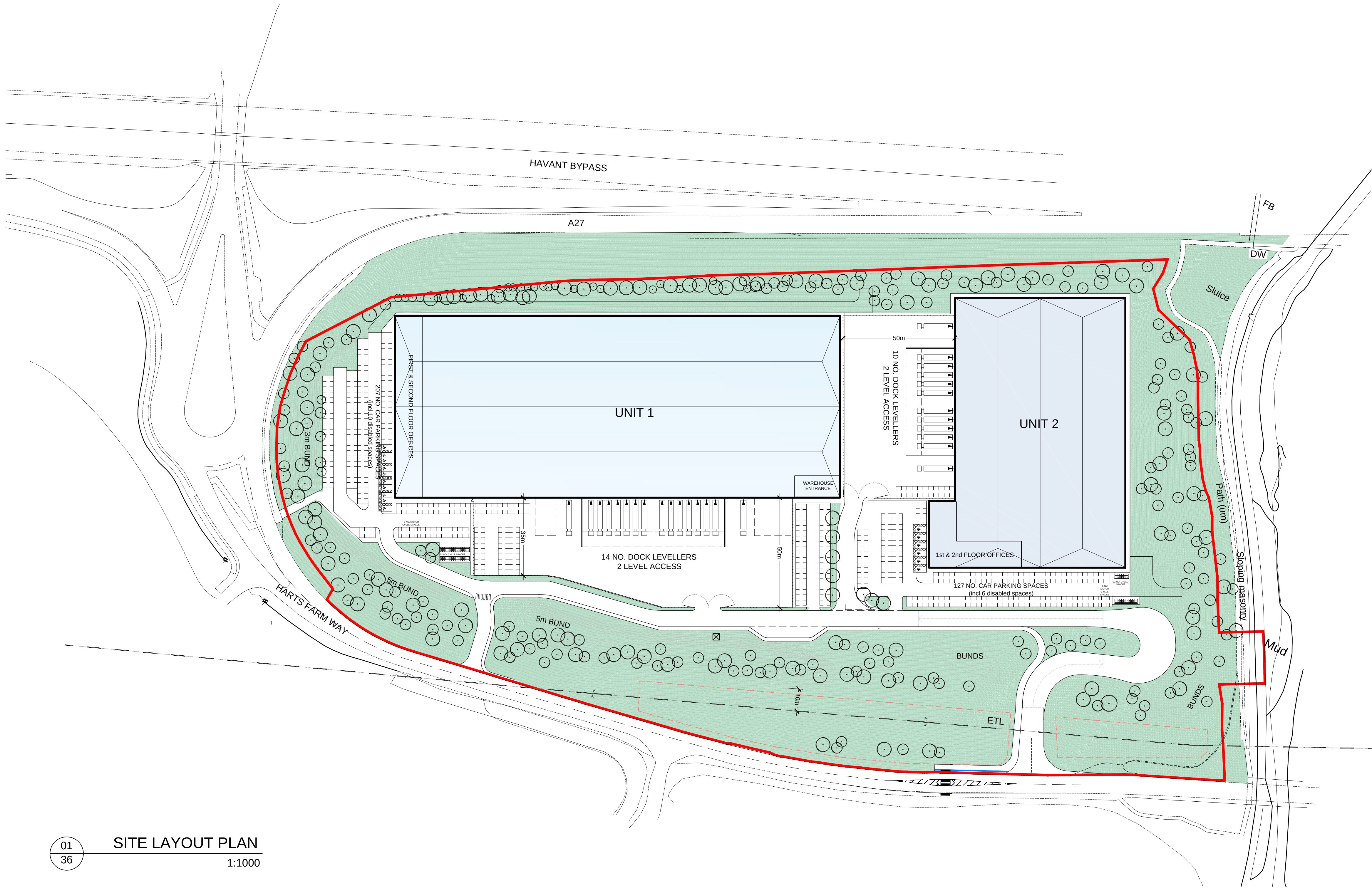
FIGURE NO:

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DATE:

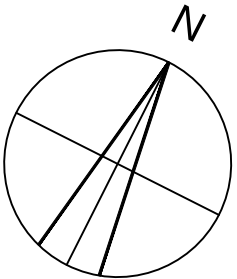
02 June 2021

Drawing 1 – Proposed Development Plan



NOTES:

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AREA SCHEDULE		
GIA		
1	sgm	sqft
Unit	16,169	174,045
2 Storey Offices	1,803	19,405
Subtotal	17,972	193,450
2	sgm	sqft
Unit	9,426	101,460
2 Storey Offices	1,296	13,950
Subtotal	10,722	115,410
TOTAL	28,694	308,860
SITE AREA (APPROX.)	Ha	acres
	8.357	20.649

FEASIBILITY

-	13/05/2021	First Issue	PB	AC
REV	DATE	NOTE	DRAW	CHK



CHARTERED ARCHITECTS
11 PLATO PLACE
ST DIONIS ROAD
LONDON SW6 4TU
TELEPHONE 020 7736 6162
www.mso-architects.co.uk

TITLE
HARTS FARM WAY, HAVANT
DRAWING
SITE LAYOUT PLAN

CLIENT
EXTON ESTATES

DATE	SCALE	DRAWN
MAY 2021	1:1000 @ A1	PB
	STATUS	CHECKED
	FEASIBILITY	AC

DRAWING NUMBER
31383 / FE / 37

01
36

SITE LAYOUT PLAN
1:1000

Appendix A – Limitations

Limitations

Delta-Simons does not warrant the accuracy of the information provided to it and will not be responsible for any opinions which Delta-Simons has expressed, or conclusions which it has reached in reliance upon information which is subsequently proven to be inaccurate.

This Report was prepared by Delta-Simons for the sole and exclusive use of the Client and for the specific purpose for which Delta-Simons was instructed. Nothing contained in this Report shall be construed to give any rights or benefits to anyone other than the Client and Delta-Simons, and all duties and responsibilities undertaken are for the sole and exclusive benefit of the Client and not for the benefit of any other party. In particular, Delta-Simons does not intend, without its written consent, for this Report to be disseminated to anyone other than the Client or to be used or relied upon by anyone other than the Client. Use of the Report by any other person is unauthorised and such use is at the sole risk of the user. Anyone using or relying upon this Report, other than the Client, agrees by virtue of its use to indemnify and hold harmless Delta-Simons from and against all claims, losses and damages (of whatsoever nature and howsoever or whensoever arising), arising out of or resulting from the performance of the work by the Consultant.

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

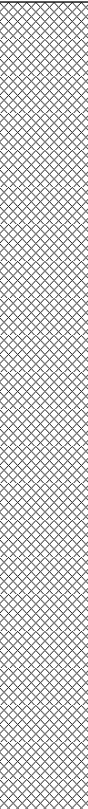
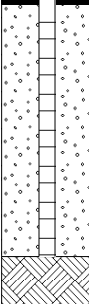
CORE DETAILS

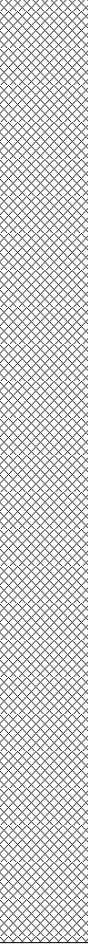
If	Fracture Spacing (mm) – Minimum, Average, Maximum
NI	Non-Intact where >25 fracture spacings per metre
TCR	Total Core Recovery (%)
SCR	Solid Core Recovery (%)
RQD	Rock Quality Designation (%)
AF	Air Flush Return (%)
WF	Water Flush Return (%)

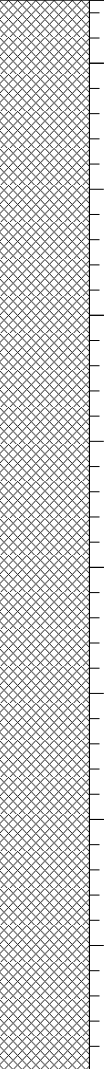
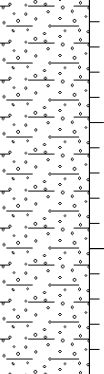
WATER COLUMN DETAILS

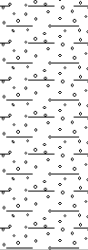
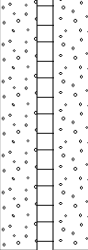
	Water Strike
	Water Level

 Head Office 3 Henley Way, Doddington Road Lincoln, LN6 3QR Tel: +44 (0) 1522 882555 Email: info@deltasimons.com				Project No: 19-2099.04		Hole ID: DS101		Page: 1 of 2				
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	
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	

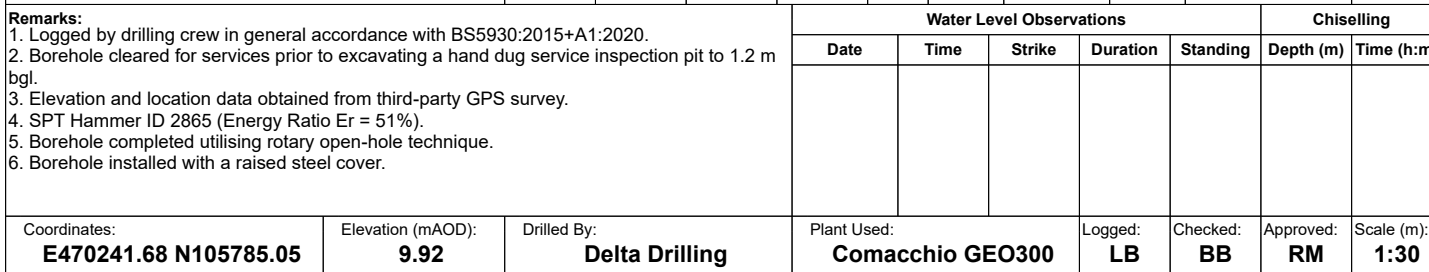
 Head Office 3 Henley Way, Doddington Road Lincoln, LN6 3QR Tel: +44 (0) 1522 882555 Email: info@deltasimons.com				Project No: 19-2099.04		Hole ID: DS101		Page: 2 of 2			
Rotary Auger Borehole Log				Date: 17/03/2021		Client: Exton Estates					
Description of Strata		Legend	Strata Depth (m)	Reduced Level (mAOD)	Casing Diameter (mm)	Water Strike	Sample Details		Test Details		Backfill
MADE GROUND: Landfill. (LANDFILL)			9.00	0.42							
Brown GRAVEL. (RIVER TERRACE DEPOSITS)											
Borehole complete at 10.70m bgl.			10.70	-1.28							
											
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

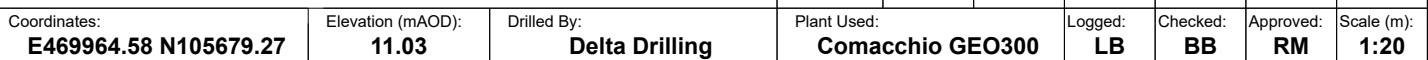
 Head Office 3 Henley Way, Doddington Road Lincoln, LN6 3QR Tel: +44 (0) 1522 882555 Email: info@deltasimons.com				Project No: 19-2099.04		Hole ID: DS102		Page: 1 of 3					
				Project: Brockhampton West, Havant									
Rotary Auger Borehole Log				Date: 17/03/2021		Client: Exton Estates							
Description of Strata		Legend	Strata Depth (m)	Reduced Level (mAOD)	Casing Diameter (mm)	Water Strike	Sample Details			Test Details		Backfill	
MADE GROUND: Soft brown slightly sandy CLAY with frequent rootlets. Sand is fine. (TOPSOIL)			0.25	10.60			Depth (m)	Type	Ref	Depth (m)	Results		
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			

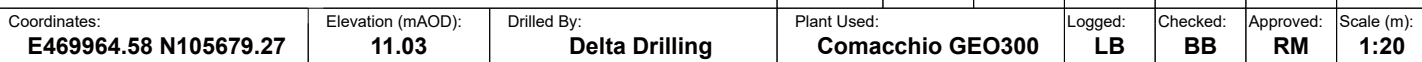
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				Project: Brockhampton West, Havant							
Rotary Auger Borehole Log				Date: 17/03/2021		Client: Exton Estates					
Description of Strata	Legend	Strata Depth (m)	Reduced Level (mAOD)	Casing Diameter (mm)	Water Strike	Sample Details			Test Details		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

 Head Office 3 Henley Way, Doddington Road Lincoln, LN6 3QR Tel: +44 (0) 1522 882555 Email: info@deltasimons.com					Project No: 19-2099.04		Hole ID: DS102		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	
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		

 Head Office 3 Henley Way, Doddington Road Lincoln, LN6 3QR Tel: +44 (0) 1522 882555 Email: info@deltasimons.com				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)													
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		

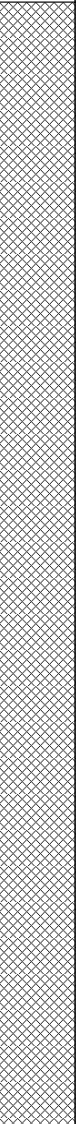
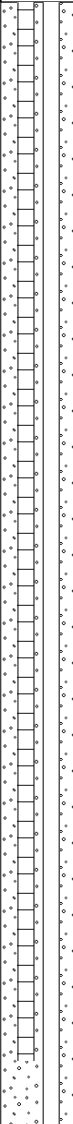






Rotary Core Borehole Log

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)											
		10.70		0.33						10.70	D			
Soft brown slightly gravelly SILT. Gravel is subangular to rounded fine to medium of chalk. (ALLUVIUM)			(0.40)							11.00				
		11.10		-0.07										
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	B			
						11.50				13.90				

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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Rotary Core Borehole Log

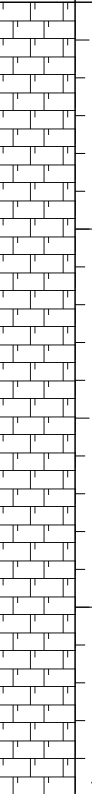
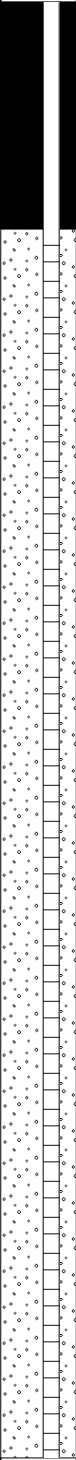
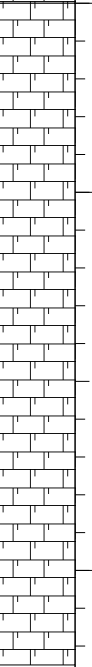
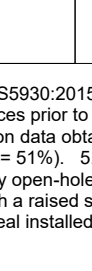
Date: **01/03/2021 - 03/03/2021** Client: **Exton Estates**

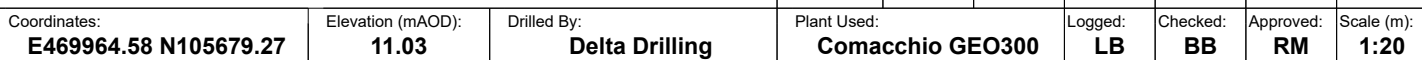
Description of Strata	Legend	Strata Depth (m)	Strata Thickness (m)	Reduced Level (mAOD)	Casing Diameter (mm)	Water	Core Recovery			Sample Details		Test Details		Backfill
							Run (m)	TCR% SCR% RQD%	Min. Fl Av. Fl Max. Fl	Depth (m)	Type Ref	Depth (m)	Results	
Structureless CHALK composed of sandy angular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

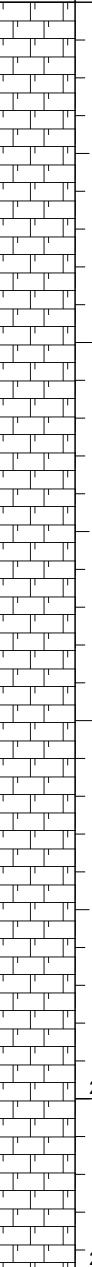
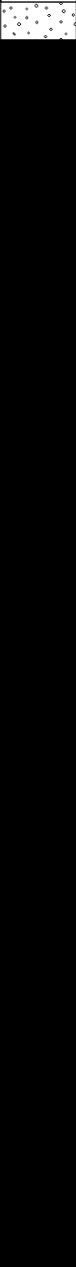
Remarks:
1. Logged in general accordance with BS5930:2015+A1:2020 and CIRIA C574 (Engineering in Chalk). 2. Borehole cleared for services prior to excavating a hand dug service inspection pit to 1.2 m bgl. 3. Elevation and location data obtained from third-party GPS survey. 4. SPT Hammer ID 2865 (Energy 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				

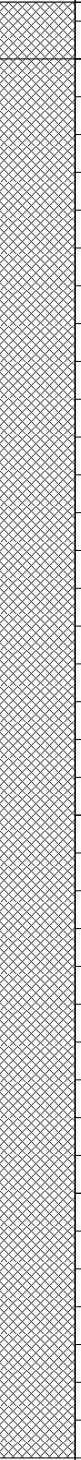
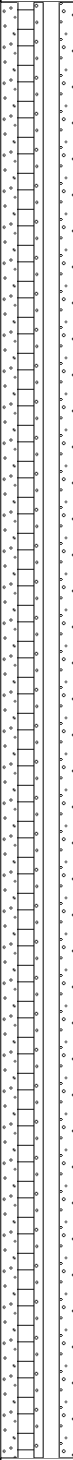
Coordinates: E469964.58 N105679.27	Elevation (mAOD): 11.03	Drilled By: Delta Drilling	Plant Used: Comacchio GEO300	Logged: LB	Checked: BB	Approved: RM	Scale (m): 1:20
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 Head Office 3 Henley Way, Doddington Road Lincoln, LN6 3QR Tel: +44 (0) 1522 882555 Email: info@deltasimons.com							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)			
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	93 0 0				17.00	SPT(S) N=11 (2,3/2,3,3,3)			
							1.5	87 0 0				18.50	SPT(S) N=15 (2,3/4,4,3,4)			
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

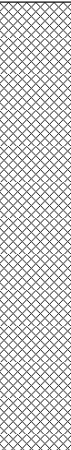


 Head Office 3 Henley Way, Doddington Road Lincoln, LN6 3QR Tel: +44 (0) 1522 882555 Email: info@deltasimons.com							Project No: 19-2099.04			Hole ID: RO101		Page: 7 of 7				
							Project: Brockhampton West, Havant									
Rotary Core Borehole Log							Date: 01/03/2021 - 03/03/2021			Client: Exton 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 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)							1.5	86 0 0								
												24.50	SPT(S) N=39 (4,8/9,12,9,9)			
					(5.45)				1.5	100 0 0						
		26.00		-14.97	146							26.00	SPT(S) N=45 (8,9/9,12,12,12)			
		26.45		-15.42												
Borehole complete at 26.45 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 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

 Environment - Health & Safety - Sustainability Head Office 3 Henley Way, Doddington Road Lincoln, LN6 3QR Tel: +44 (0) 1522 882555 Email: info@deltasimons.com						Project No: 19-2099.04			Hole ID: RO102		Page: 1 of 7				
Rotary Core Borehole Log						Project: Brockhampton West, Havant									
						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		
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)												
		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)												
		2.05		7.99								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											
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)			(0.50)												
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)															
		3.00	(1.00)	7.04											
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				

 Head Office 3 Henley Way, Doddington Road Lincoln, LN6 3QR Tel: +44 (0) 1522 882555 Email: info@deltasimons.com							Project No: 19-2099.04			Hole ID: RO102		Page: 2 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			
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) 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) From 5.0 to 8.9 m bgl: Matrix approximately 20%.		4.00		6.04						4.00 - 5.00	ES					
			(4.90)													
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

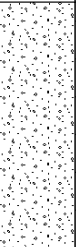
Rotary Core Borehole Log

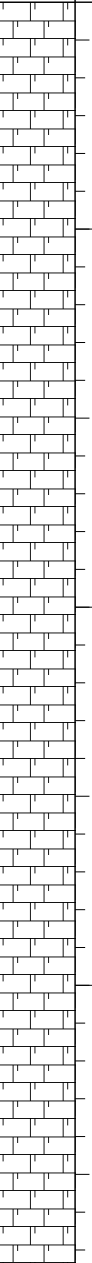
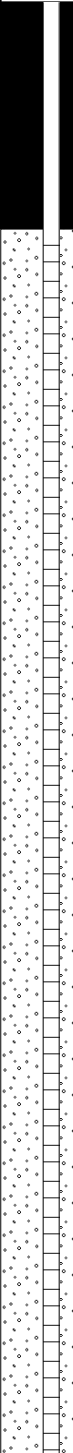
Description of Strata	Legend	Strata Depth (m)	Strata Thickness (m)	Reduced Level (mAOD)	Casing Diameter (mm)	Water	Core Recovery			Sample Details		Test Details		Backfill
							Run (m)	TCR% SCR% RQD%	Min. Fl Av. Fl Max. Fl	Depth (m)	Type Ref	Depth (m)	Results	
MADE GROUND: Landfill recovered as frequent 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)		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)	

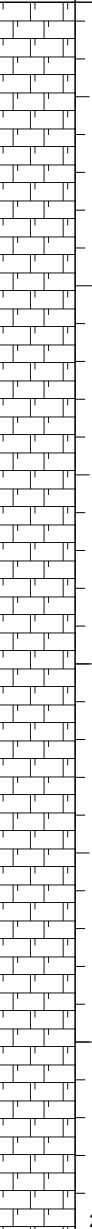
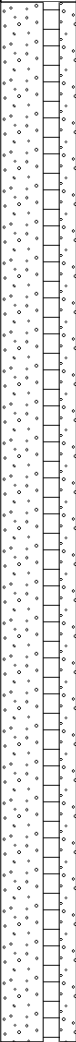
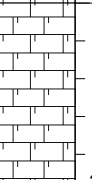
Remarks:
1. Logged in general accordance with BS5930:2015+A1:2020 and CIRIA C574 (Engineering in Chalk). 2. Borehole cleared for services prior to excavating a hand dug service inspection pit to 1.2 m bgl. 3. Elevation and location data obtained from third-party GPS survey. 4. SPT Hammer ID 2865 (Energy 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
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 Head Office 3 Henley Way, Doddington Road Lincoln, LN6 3QR Tel: +44 (0) 1522 882555 Email: info@deltasimons.com							Project No: 19-2099.04			Hole ID: RO102		Page: 4 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			
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

 Head Office 3 Henley Way, Doddington Road Lincoln, LN6 3QR Tel: +44 (0) 1522 882555 Email: info@deltasimons.com							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)										15.50	D					
												15.80	SPT(S) N=24 (3,4/5,6,7,6)			
													17.30		SPT(S) N=15 (2,3/3,4,4,4)	
			(6.60)				1.5	100 0 0								
							1.5	13 0 0								
		18.80		-8.76												
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												
							Water Level Observations					Flush				
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.							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

 Head Office 3 Henley Way, Doddington Road Lincoln, LN6 3QR Tel: +44 (0) 1522 882555 Email: info@deltasimons.com							Project No: 19-2099.04			Hole ID: RO102		Page: 6 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 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)		22.50	(3.50)	-12.46			1.5	66 0 0			21.80 - 22.25	D	21.80	SPT(S) N=19 (2,4/4,5,5,5)		
							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)		23.00	(0.50)	-12.96												
Structureless CHALK composed of																
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

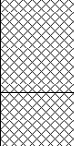
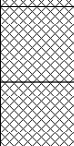
Description of Strata	Legend	Strata Depth (m)	Strata Thickness (m)	Reduced Level (mAOD)	Casing Diameter (mm)	Water	Core Recovery			Sample Details		Test Details		Backfill
							Run (m)	TCR% SCR% RQD%	Min. Fl Av. Fl Max. Fl	Depth (m)	Type Ref	Depth (m)	Results	
Structureless CHALK composed of white slightly gravelly SILT. Gravel is very weak, low density subrounded fine to medium chalk. (LEWES NODULAR CHALK FORMATION, Grade Dm)		24.50	(1.50)	-14.46			1.5	87 0 0		24.50 - 26.00	D	24.50	SPT(S) N=50 (9,9/14,13,13,10)	
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)			(1.84)		146		1.5	100 0 0				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.

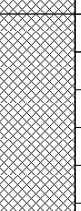
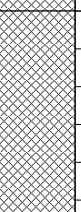
Water Level Observations

Flush

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

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							Project: 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. FI Av. FI Max. FI	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						1.20 - 1.65	D	1.20	SPT(S) N=6 (1,1/6 for 225mm)	
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						1.50 - 1.80	ES			
From 1.9 to 2.0 m bgl: Occasional plastic and wood.												2.00	SPT(S) 50 (3,4/50 for 135mm)	
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	(1.00)	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						3.10 - 3.20	ES			
From 3.0 to 3.1 m bgl: Slight hydrocarbon sheen.			(0.60)											
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		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

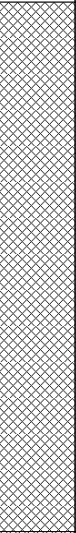
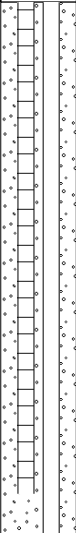
Description of Strata	Legend	Strata Depth (m)	Strata Thickness (m)	Reduced Level (mAOD)	Casing Diameter (mm)	Water	Core Recovery			Sample Details		Test Details		Backfill
							Run (m)	TCR% SCR% RQD%	Min. Fl Av. Fl Max. Fl	Depth (m)	Type Ref	Depth (m)	Results	
MADE GROUND: Landfill recovered as frequent 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		6.55										
MADE GROUND: Firm grey mottled yellowish brown slightly sandy CLAY. Sand is fine. (SUSPECTED ORIGINAL RE-ENGINEERED COVER SYSTEM)			(1.10)											
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)		5.00		5.45						5.00 - 6.00	ES			
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)			(4.10)											
						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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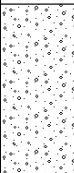
Rotary Core Borehole Log

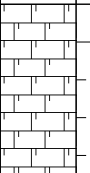
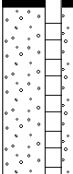
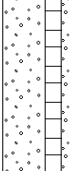
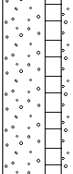
Description of Strata	Legend	Strata Depth (m)	Strata Thickness (m)	Reduced Level (mAOD)	Casing Diameter (mm)	Water	Core Recovery			Sample Details		Test Details		Backfill
							Run (m)	TCR% SCR% RQD%	Min. Fl Av. Fl Max. Fl	Depth (m)	Type Ref	Depth (m)	Results	
MADE GROUND: Landfill recovered as frequent 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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 Environment - Health & Safety - Sustainability Head Office 3 Henley Way, Doddington Road Lincoln, LN6 3QR Tel: +44 (0) 1522 882555 Email: info@deltasimons.com							Project No: 19-2099.04			Hole ID: RO103		Page: 4 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				
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						13.00 - 13.50	B						
Structureless CHALK composed of cream coarse SAND. Slight hydrocarbon odour. (LEWES NODULAR CHALK FORMATION, Grade Dc)		13.50	(0.50)	-3.05	194					13.50 - 14.00	ES						
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								14.00	SPT(S) N=26 (4,5/6,6,7,7)				
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)																	
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

 Environment - Health & Safety - Sustainability Head Office 3 Henley Way, Doddington Road Lincoln, LN6 3QR Tel: +44 (0) 1522 882555 Email: info@deltasimons.com							Project No: 19-2099.04			Hole ID: RO103		Page: 5 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	
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)			(4.30)				1.5	27 0 0		17.00 - 17.45	D	17.00	SPT(S) N=16 (5,4/3,4,4,5)	
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			1.5	100 0 0		17.50 - 18.00	D	18.50	SPT(S) N=20 (4,4/5,6,5,4)	
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)		18.70	(0.20)	-8.25			1.5	66 0 0						
	18.90	(0.20)	-8.45											
			(0.50)											
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	
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)		19.40		-8.95										
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)		19.65	(0.25)	-9.20								20.00	SPT(S) N=14 (2,3/4,3,4,3)	
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)							1.5	33 0 0						
			(3.35)									21.50	SPT(S) N=16 (2,4/4,4,4,4)	
							1.5	33 0 0						
		23.00		-12.55								23.00	SPT(S) N=35 (10,8/7,8,8,12)	
Structureless CHALK composed of														

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	
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>							1.5	66 0 0				24.50	SPT(S) N=37 (8,9/10,8,9,10)	
		24.95	(1.95)	-14.50			1.5	100 0 0		25.10 - 25.30	D			
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)			(2.55)				1.5	100 0 0				26.00	SPT(S) N=24 (7,4/7,7,5,5)	

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 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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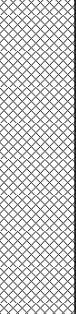
Rotary Core Borehole Log

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	
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								27.50	SPT(S) N=49 (8,8/11,8,10,20)	
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			
												29.00	SPT(S) 50 (3,8/50 for 155mm)	
Borehole complete at 29.30 m bgl.		29.30		-18.85										

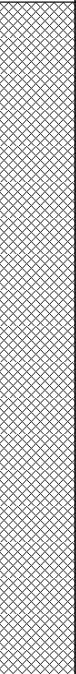
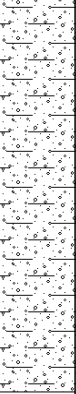
Remarks:
1. Logged in general accordance with BS5930:2015+A1:2020 and CIRIA C574 (Engineering in Chalk). 2. Borehole cleared for services prior to excavating a hand dug service inspection pit to 1.2 m bgl. 3. Elevation and location data obtained from third-party GPS survey. 4. SPT Hammer ID 2865 (Energy 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				

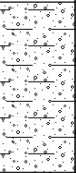
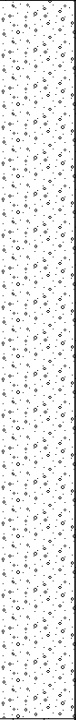
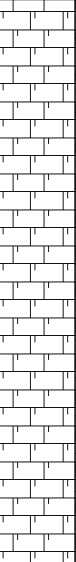
Coordinates: E470052.79 N105649.11	Elevation (mAOD): 10.45	Drilled By: Delta Drilling	Plant Used: Comacchio GEO300	Logged: LB	Checked: BB	Approved: RM	Scale (m): 1:20
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 Head Office 3 Henley Way, Doddington Road Lincoln, LN6 3QR Tel: +44 (0) 1522 882555 Email: info@deltasimons.com							Project No: 19-2099.04			Hole ID: RO104		Page: 1 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: 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)		3.00	(2.10)	7.88							3.00 - 4.00	ES			
From 2.0 to 3.0 m bgl: Frequent black sponge.															
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				

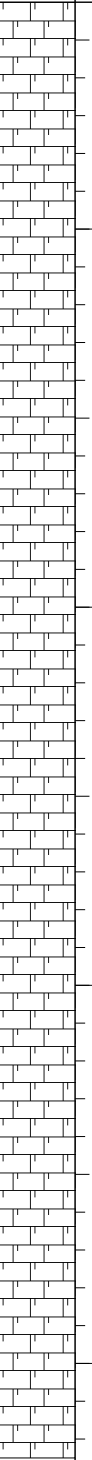
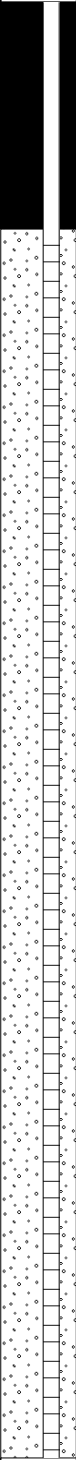
 Head Office 3 Henley Way, Doddington Road Lincoln, LN6 3QR Tel: +44 (0) 1522 882555 Email: info@deltasimons.com							Project No: 19-2099.04			Hole ID: RO104		Page: 2 of 7		
							Project: Brockhampton West, Havant							
Rotary Core Borehole Log							Date: 11/03/2021 - 16/03/2021			Client: Exton Estates				
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)			(2.00)											
From 6.0 to 7.0 m bgl: Hydrocarbon odour becomes slight. No visible sheen.		7.00		3.88										
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	

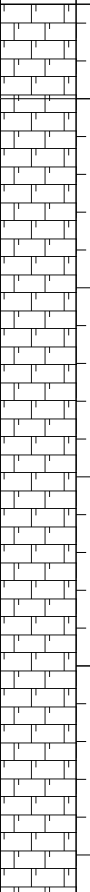
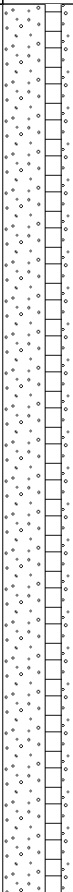
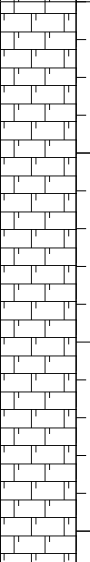
 Head Office 3 Henley Way, Doddington Road Lincoln, LN6 3QR Tel: +44 (0) 1522 882555 Email: info@deltasimons.com							Project No: 19-2099.04			Hole ID: RO104		Page: 3 of 7		
							Project: Brockhampton West, Havant							
Rotary Core Borehole Log							Date: 11/03/2021 - 16/03/2021			Client: Exton Estates				
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 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	
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	

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	
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								12.00	SPT(C) N=14 (4,4/3,3,3,5)	
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)									12.50	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.

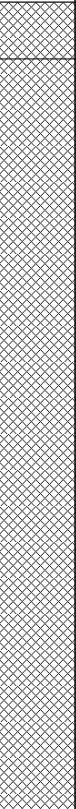
 Head Office 3 Henley Way, Doddington Road Lincoln, LN6 3QR Tel: +44 (0) 1522 882555 Email: info@deltasimons.com							Project No: 19-2099.04			Hole ID: RO104		Page: 5 of 7				
							Project: Brockhampton West, Havant									
Rotary Core Borehole Log							Date: 11/03/2021 - 16/03/2021			Client: Exton 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								
							1.5	66 0 0				18.50	SPT(S) N=6 (2,2/2,1,1,2)			
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

deltasimons Environment - Health & Safety - Sustainability Head Office 3 Henley Way, Doddington Road Lincoln, LN6 3QR Tel: +44 (0) 1522 882555 Email: info@deltasimons.com							Project No: 19-2099.04		Hole ID: RO104		Page: 6 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) 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)		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 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)		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)	
												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	
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			

 Head Office 3 Henley Way, Doddington Road Lincoln, LN6 3QR Tel: +44 (0) 1522 882555 Email: info@deltasimons.com						Project No: 19-2099.04		Hole ID: RO104		Page: 7 of 7					
Rotary Core Borehole Log						Project: Brockhampton West, Havant									
						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 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)							1.5	66 0 0							
Borehole complete at 24.50 m bgl.		24.50		-13.62	146							24.50	SPT(S) N=50 (9 for 0mm/50 for 0mm)		
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	

 Environment - Health & Safety - Sustainability Head Office 3 Henley Way, Doddington Road Lincoln, LN6 3QR Tel: +44 (0) 1522 882555 Email: info@deltasimons.com						Project No: 19-2099.04			Hole ID: RO105		Page: 1 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: Soft brown slightly sandy CLAY with frequent rootlets. Sand is fine. (TOPSOIL) MADE GROUND: Orangish brown gravelly fine to coarse SAND. Gravel is subangular to rounded fine to medium of flint. (RE-ENGINEERED COVER SYSTEM) 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)		0.15		10.24						0.00 - 0.15	ES				
			(0.35)								0.20 - 0.40	ES			
		0.50		9.89											
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)		1.50		8.89								1.20	SPT(S) 50 (4,4/50 for 125mm)		
			(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				

Rotary Core Borehole Log

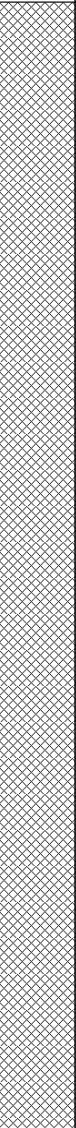
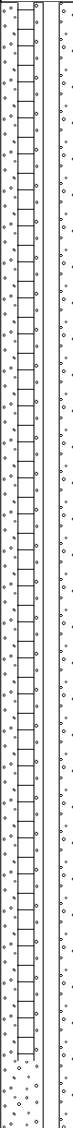
Description of Strata	Legend	Strata Depth (m)	Strata Thickness (m)	Reduced Level (mAOD)	Casing Diameter (mm)	Water	Core Recovery			Sample Details		Test Details		Backfill
							Run (m)	TCR% SCR% RQD%	Min. Fl Av. Fl Max. Fl	Depth (m)	Type Ref	Depth (m)	Results	
MADE GROUND: Landfill recovered as frequent wood, 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				

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			
														

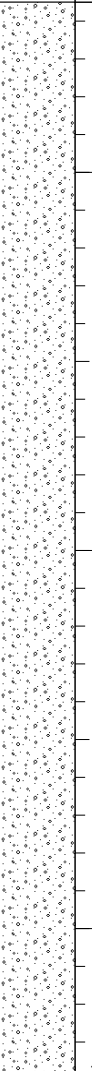
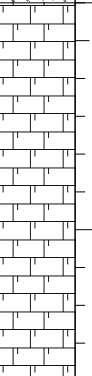
Remarks:
1. Logged in general accordance with BS5930:2015+A1:2020 and CIRIA C574 (Engineering in Chalk). 2. Borehole cleared for services prior to excavating a hand dug service inspection pit to 1.2 m bgl. 3. Elevation and location data obtained from third-party GPS survey. 4. SPT Hammer ID 2865 (Energy 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.

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

Rotary Core Borehole Log

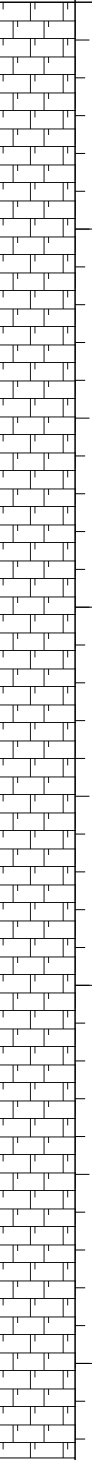
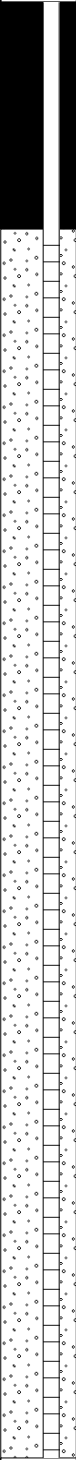
Date: **09/03/2021 - 12/03/2021** Client: **Exton Estates**

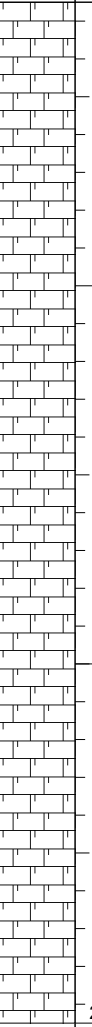
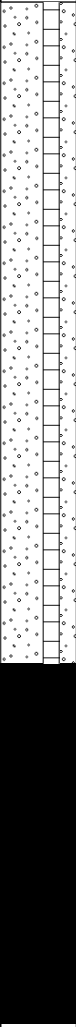
Description of Strata	Legend	Strata Depth (m)	Strata Thickness (m)	Reduced Level (mAOD)	Casing Diameter (mm)	Water	Core Recovery			Sample Details		Test Details		Backfill
							Run (m)	TCR% SCR% RQD%	Min. Fl Av. Fl Max. Fl	Depth (m)	Type Ref	Depth (m)	Results	
Light orange and cream slightly sandy angular 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						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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 Head Office 3 Henley Way, Doddington Road Lincoln, LN6 3QR Tel: +44 (0) 1522 882555 Email: info@deltasimons.com							Project No: 19-2099.04			Hole ID: RO105		Page: 5 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			
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)						17.00	1.4	42 0 0		16.00 - 16.25	D	15.60	SPT(S) N=12 (3,3/3,2,4,3)			
			(7.55)				1.5	66 0 0		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						
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

 Head Office 3 Henley Way, Doddington Road Lincoln, LN6 3QR Tel: +44 (0) 1522 882555 Email: info@deltasimons.com							Project No: 19-2099.04			Hole ID: RO105		Page: 6 of 6								
Rotary Core Borehole Log							Project: Brockhampton West, Havant			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							
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				19.70 - 19.80	D	20.00	SPT(S) N=25 (5,5/6,7,7,5)								
						1.5	66 0 0		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	

Rotary Core Borehole Log

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

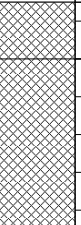
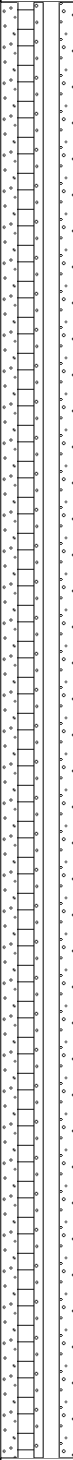
Description of Strata	Legend	Strata Depth (m)	Strata Thickness (m)	Reduced Level (mAOD)	Casing Diameter (mm)	Water	Core Recovery			Sample Details		Test Details		Backfill
							Run (m)	TCR% SCR% RQD%	Min. Fl Av. Fl Max. Fl	Depth (m)	Type Ref	Depth (m)	Results	
MADE GROUND: Soft dark brown slightly sandy 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)			(1.00)							0.50 - 0.90	ES			
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)		1.20		11.48								1.20	SPT(S) N=15 (3,4/4,4,3,4)	
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)		1.50	(0.30)	11.18						2.00 - 3.00	ES			
			(2.50)											

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	

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.

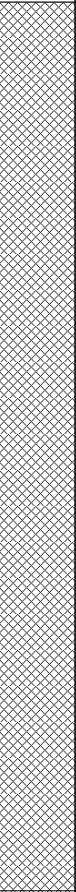
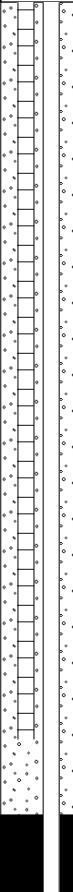
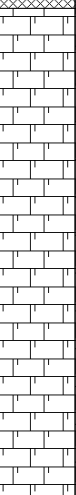
Water Level Observations					Flush		
Date	Time	Strike	Duration	Standing	Depth (m)	Return	

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**

Scale (m):
1:20

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, 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 (4,5/5,5,8,7)	
												12.10	SPT(C) N=50 (6,6/50 for 275mm)	
At 12.5 m bgl: Wooden sleeper (approximately 400 mm thickness).			(2.40)							12.50 - 13.00	ES			
		13.90		-1.22										
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)		14.10	(0.20)	-1.42										
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)					194									
										15.00 - 15.45	U ES	15.00	U=45 Blows	
										15.00 - 15.50				

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.

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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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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Rotary Core Borehole Log

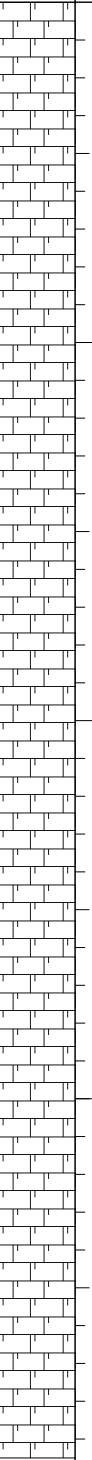
Date: **16/03/2021 - 18/03/2021** Client: **Exton Estates**

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)														
							1.5	66 0 0				20.00	SPT(S) N=16 (2,3/4,4,4,4)	
		21.50		-8.82								21.50	SPT(S) N=7 (2,1/2,2,1,2)	
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)			(1.50)				1.5	100 0 0						
		23.00		-10.32										
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.

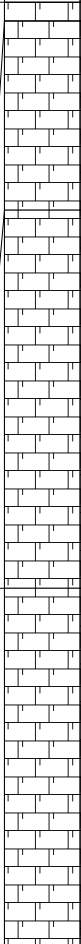
Coordinates: E470226.12 N105689.00	Elevation (mAOD): 12.68	Drilled By: Delta Drilling	Plant Used: Comacchio GEO300	Logged: LB	Checked: BB	Approved: RM	Scale (m): 1:20
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Water Level Observations					Flush	
Date	Time	Strike	Duration	Standing	Depth (m)	Return

 Head Office 3 Henley Way, Doddington Road Lincoln, LN6 3QR Tel: +44 (0) 1522 882555 Email: info@deltasimons.com							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)							1.5	66 0 0									
			(4.00)				1.5	100 0 0				24.20 - 24.50	D	24.50	SPT(S) N=15 (2,3/4,4,3,4)		
												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	

Rotary Core Borehole Log

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

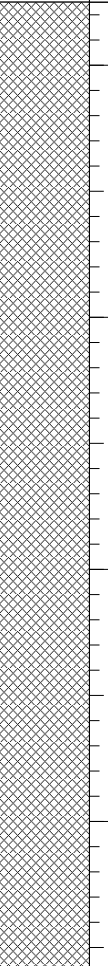
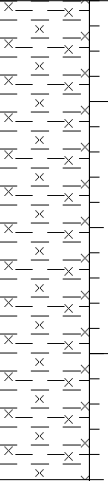
Description of Strata	Legend	Strata Depth (m)	Strata Thickness (m)	Reduced Level (mAOD)	Casing Diameter (mm)	Water	Core Recovery			Sample Details		Test Details		Backfill
							Run (m)	TCR% SCR% RQD%	Min. Fl Av. Fl Max. Fl	Depth (m)	Type Ref	Depth (m)	Results	
Structureless CHALK composed of cream gravelly 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)		27.00		-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	(0.50)	-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.

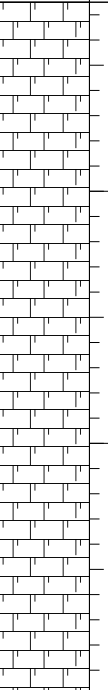
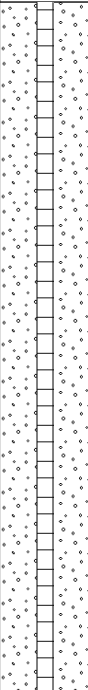
Coordinates: E470226.12 N105689.00	Elevation (mAOD): 12.68	Drilled By: Delta Drilling	Plant Used: Comacchio GEO300	Logged: LB	Checked: BB	Approved: RM	Scale (m): 1:20
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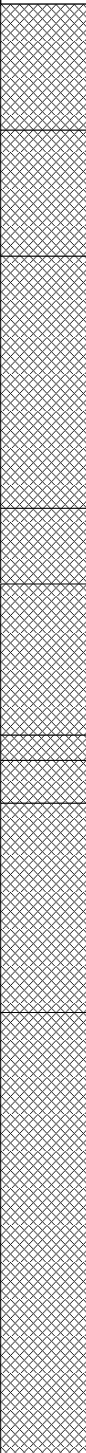
Water Level Observations					Flush	
Date	Time	Strike	Duration	Standing	Depth (m)	Return

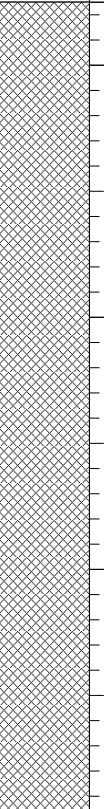
Coordinates: E469961.03 N105591.99	Elevation (mAOD): 10.74	Drilled By: Delta Drilling	Plant Used: Comacchio GEO300	Logged: LB	Checked: BB	Approved: RM	Scale (m): 1:30
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 Head Office 3 Henley Way, Doddington Road Lincoln, LN6 3QR Tel: +44 (0) 1522 882555 Email: info@deltasimons.com				Project No: 19-2099.04		Hole ID: RO107		Page: 2 of 4						
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			
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	194									
Very soft brown mottled grey silty CLAY. (ALLUVIUM)														
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

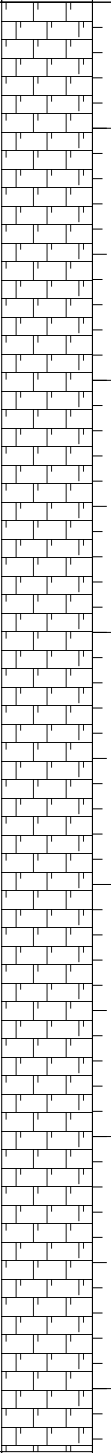
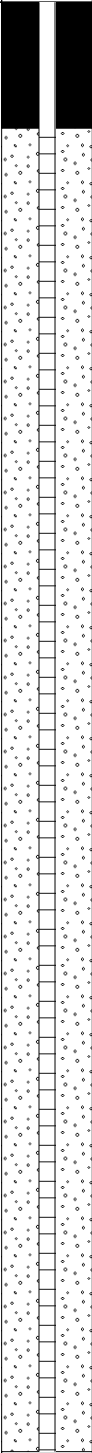
 Head Office 3 Henley Way, Doddington Road Lincoln, LN6 3QR Tel: +44 (0) 1522 882555 Email: info@deltasimons.com				Project No: 19-2099.04		Hole ID: RO107		Page: 3 of 4					
Rotary Auger Borehole Log				Date: 23/02/2021 - 24/02/2021		Client: Exton Estates							
				Project: Brockhampton West, Havant									
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

 Head Office 3 Henley Way, Doddington Road Lincoln, LN6 3QR Tel: +44 (0) 1522 882555 Email: info@deltasimons.com				Project No: 19-2099.04		Hole ID: RO107		Page: 4 of 4				
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	
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	-9.26	146		Depth (m)	Type	Ref	Depth (m)	Results	
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 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

 Environment - Health & Safety - Sustainability Head Office 3 Henley Way, Doddington Road Lincoln, LN6 3QR Tel: +44 (0) 1522 882555 Email: info@deltasimons.com				Project No: 19-2099.04		Hole ID: RO108		Page: 1 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			
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)			
From 1.5 to 2.0 m bgl: Becomes light orangish brown.						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									
From 2.4 to 2.6 m bgl: Frequent black wood fragments.			3.00	6.00						3.00	SPT(S) N=11 (2,1/4,2,3,2)		
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					
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									
At 3.8 m bgl: Railway sleeper with a slight creosote odour (approximately 200 mm thickness).													
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)			
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		

 Head Office 3 Henley Way, Doddington Road Lincoln, LN6 3QR Tel: +44 (0) 1522 882555 Email: info@deltasimons.com				Project No: 19-2099.04		Hole ID: RO108		Page: 2 of 4																								
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																					
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			9.00 - 10.00	B																								
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																												
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																												
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.			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 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. <table border="1"> <tr> <th colspan="5">Water Level Observations</th> <th colspan="2">Chiselling</th> </tr> <tr> <th>Date</th> <th>Time</th> <th>Strike</th> <th>Duration</th> <th>Standing</th> <th>Depth (m)</th> <th>Time (h:m)</th> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </table>												Water Level Observations					Chiselling		Date	Time	Strike	Duration	Standing	Depth (m)	Time (h:m)							
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																					

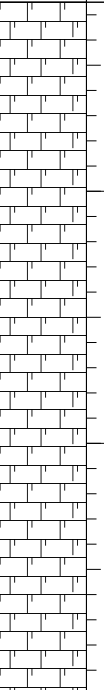
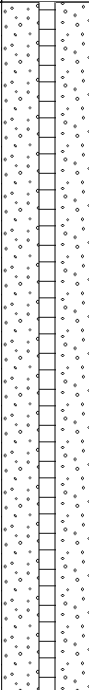
Rotary Auger Borehole Log Date: **15/02/2021 - 16/02/2021** Client: **Exton Estates**

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)											

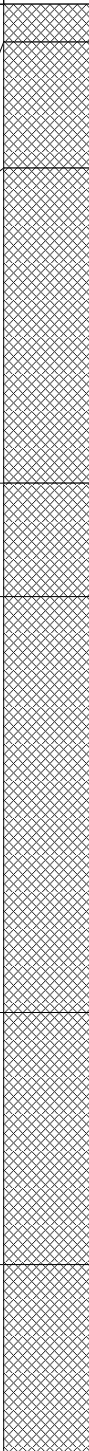
Remarks: 1. Logged in general accordance with BS5930:2015+A1:2020 and CIRIA C574 (Engineering in Chalk). 2. Borehole cleared for services prior to excavating a hand dug service inspection pit to 1.2 m bgl. 3. Elevation and location data obtained from third-party GPS survey. 4. SPT Hammer ID 2865 (Energy 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

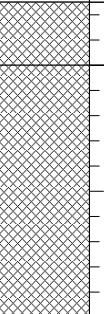
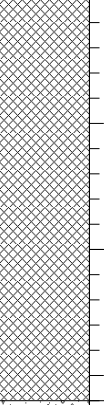
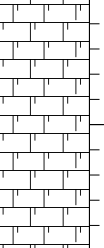
Rotary Auger Borehole Log

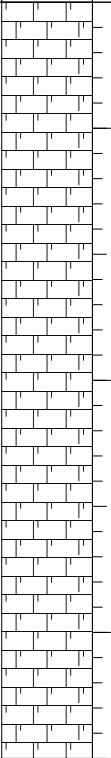
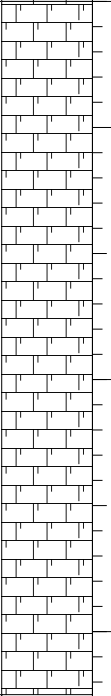
Date: **15/02/2021 - 16/02/2021** Client: **Exton Estates**

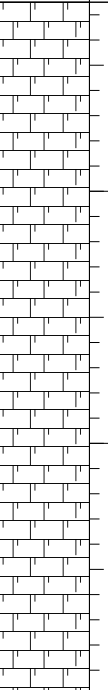
Description of Strata	Legend	Strata Depth (m)	Reduced Level (mAOD)	Casing Diameter (mm)	Water Strike	Sample Details			Test Details		Backfill
						Depth (m)	Type	Ref	Depth (m)	Results	
Structureless CHALK composed of slightly sandy silty angular to subangular fine to medium GRAVEL. Sand is fine to medium.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

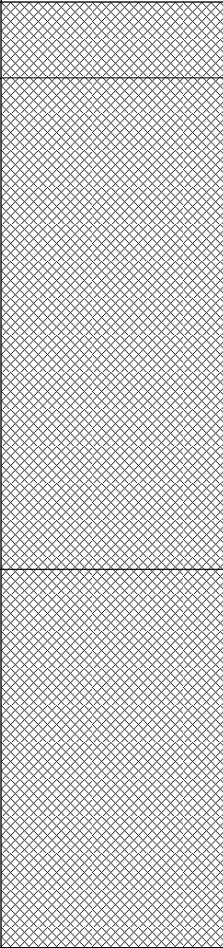
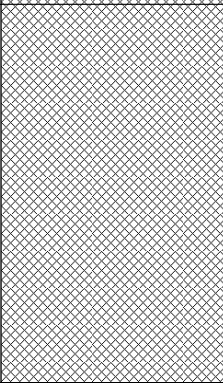
Remarks: 1. Logged in general accordance with BS5930:2015+A1:2020 and CIRIA C574 (Engineering in Chalk). 2. Borehole cleared for services prior to excavating a hand dug service inspection pit to 1.2 m bgl. 3. Elevation and location data obtained from third-party GPS survey. 4. SPT Hammer ID 2865 (Energy Ratio Er = 51%). 5. Borehole commenced as a dynamic sampler borehole to 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

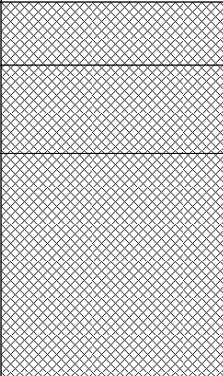
 Environment - Health & Safety - Sustainability				Head Office 3 Henley Way, Doddington Road Lincoln, LN6 3QR Tel: +44 (0) 1522 882555 Email: info@deltasimons.com				Project No: 19-2099.04			Hole ID: RO109			Page: 1 of 4	
Rotary Auger Borehole Log								Project: Brockhampton West, Havant							
								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					
MADE GROUND: Soft brown slightly sandy CLAY with occasional rootlets. Sand is fine. (TOPSOIL)		0.15	9.64			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)		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												
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												
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												
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)					
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				

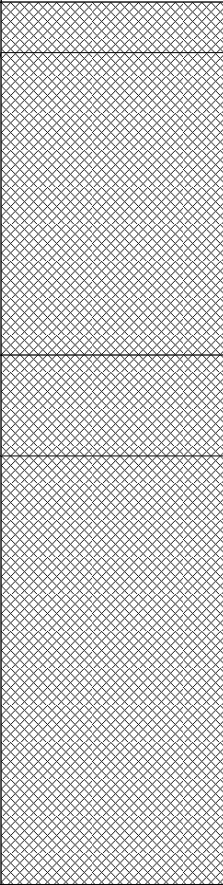
 Head Office 3 Henley Way, Doddington Road Lincoln, LN6 3QR Tel: +44 (0) 1522 882555 Email: info@deltasimons.com				Project No: 19-2099.04		Hole ID: RO109		Page: 2 of 4			
				Project: Brockhampton West, Havant							
Rotary Auger Borehole Log				Date: 08/03/2021 - 09/03/2021		Client: Exton Estates					
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	
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			7.00 - 8.00	ES				
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								
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			10.00 - 10.50	B				
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								
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)	
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

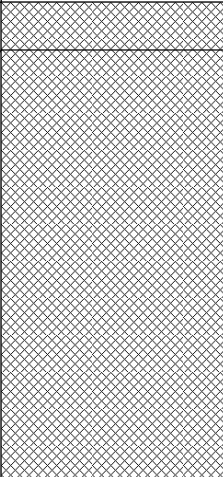
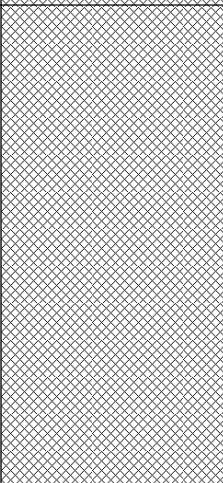
 Head Office 3 Henley Way, Doddington Road Lincoln, LN6 3QR Tel: +44 (0) 1522 882555 Email: info@deltasimons.com				Project No: 19-2099.04		Hole ID: RO109		Page: 3 of 4			
				Project: Brockhampton West, Havant							
Rotary Auger Borehole Log				Date: 08/03/2021 - 09/03/2021		Client: Exton Estates					
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

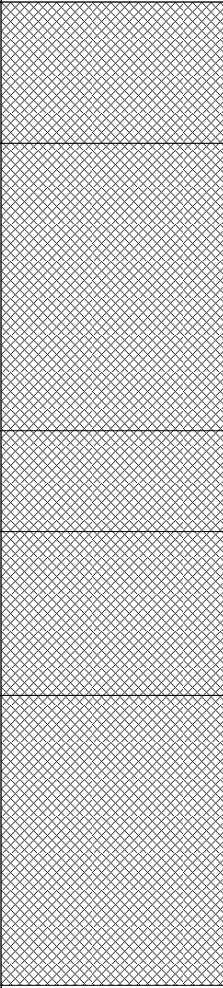
 Head Office 3 Henley Way, Doddington Road Lincoln, LN6 3QR Tel: +44 (0) 1522 882555 Email: info@deltasimons.com				Project No: 19-2099.04		Hole ID: RO109		Page: 4 of 4				
Rotary Auger Borehole Log				Date: 08/03/2021 - 09/03/2021		Client: Exton Estates						
Description of Strata		Legend	Strata Depth (m)	Reduced Level (mAOD)	Casing Diameter (mm)	Water Strike	Sample Details		Test Details		Backfill	
Structureless CHALK composed of white SILT. (LEWES NODULAR CHALK FORMATION, Grade Dm)			20.00	-10.21	146		Depth (m)	Type	Ref	Depth (m)	Results	
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

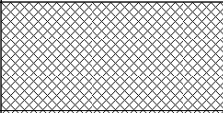
 Head Office 3 Henley Way, Doddington Road Lincoln, LN6 3QR Tel: +44 (0) 1522 882555 Email: info@deltasimons.com		Project No: 19-2099.04		Hole ID: TP101		Page: 1 of 1		
		Project: Brockhampton West, Havant						
Trial Pit Log		Date: 29/03/2021		Client: Exton Estates				
Description of Strata	Legend	Strata 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 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		
		2.25	8.72					
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)					2.50 - 3.00	B	2.50	PID=29.50ppmv
					2.50 - 3.00	ES		
Trial pit complete at 3.75 m bgl.		3.75	7.22					
Dimensions and Orientation: Length = 3.50 m Width = 0.70 m 		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: E469945.86 N105622.46	Elevation (mAOD): 10.97	Excavated By: BPH Plant Hire		Plant Used: JCB 3CX	Logged: LB	Checked: BB	Approved: RM	Scale: 1:30

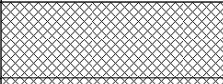
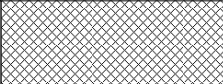
 Head Office 3 Henley Way, Doddington Road Lincoln, LN6 3QR Tel: +44 (0) 1522 882555 Email: info@deltasimons.com		Project No: 19-2099.04		Hole ID: TP102		Page: 1 of 1		
		Project: Brockhampton West, Havant						
Trial Pit Log		Date: 29/03/2021		Client: Exton Estates				
Description of Strata	Legend	Strata 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				1.70	PID=1.80ppmv
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	PID=1.80ppmv
Trial pit complete at 3.60 m bgl.								
Dimensions and Orientation: Length = 3.60 m Width = 1.00 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.				
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

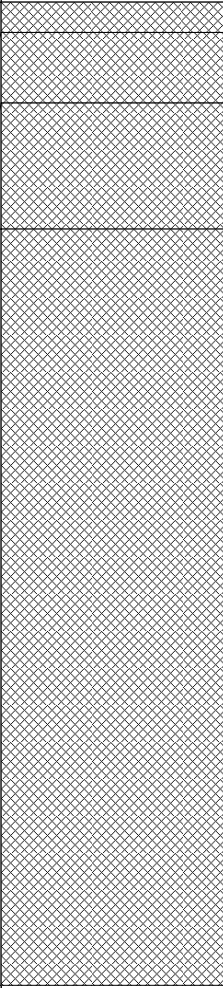
 Head Office 3 Henley Way, Doddington Road Lincoln, LN6 3QR Tel: +44 (0) 1522 882555 Email: info@deltasimons.com		Project No: 19-2099.04		Hole ID: TP103		Page: 1 of 1						
		Project: Brockhampton West, Havant										
Trial Pit Log		Date: 30/03/2021		Client: Exton Estates								
Description of Strata	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 slightly gravelly CLAY with frequent rootlets. Sand is fine to coarse. Gravel is subangular to subrounded of natural lithologies. (TOPSOIL)		0.20	10.38		0.50 - 1.00	B	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)												
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 1.50 - 1.80	B ES	1.50	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) At 2.0 m bgl: Concrete kerbstone (600mm x 300mm x 120mm).		1.80	8.78						1.80 - 2.00	ES	1.80	PID=2.20ppmv
Trial pit complete at 3.50 m bgl.		3.50	7.08									
Dimensions and Orientation: Length = 3.50 m Width = 0.70 m 		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.								
Coordinates: E470056.77 N105714.43	Elevation (mAOD): 10.58	Excavated By: BPH Plant Hire		Plant Used: JCB 3CX	Logged: LB	Checked: BB	Approved: RM	Scale: 1:30				

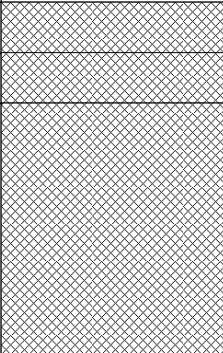
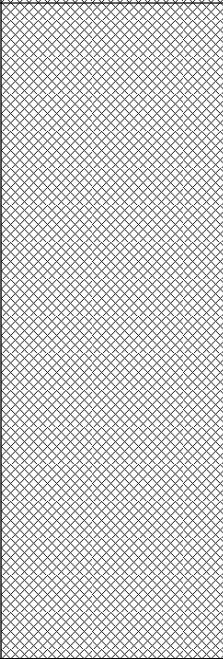
 Head Office 3 Henley Way, Doddington Road Lincoln, LN6 3QR Tel: +44 (0) 1522 882555 Email: info@deltasimons.com		Project No: 19-2099.04		Hole ID: TP104		Page: 1 of 1			
		Project: Brockhampton West, Havant							
Trial Pit Log		Date: 30/03/2021		Client: Exton Estates					
Description of Strata	Legend	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) MADE GROUND: Brown gravelly fine to coarse SAND. Gravel is subangular to rounded fine to coarse of flint and concrete. (RE-ENGINEERED COVER SYSTEM)		0.19	9.80		0.00 - 0.15	ES	0.10	PID=0.00ppmv	
					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: Length = 3.50 m Width = 0.70 m 		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	

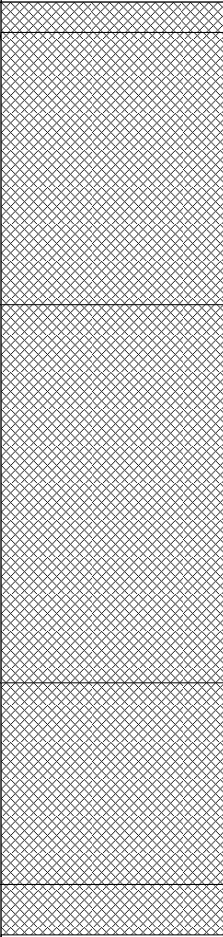
 Head Office 3 Henley Way, Doddington Road Lincoln, LN6 3QR Tel: +44 (0) 1522 882555 Email: info@deltasimons.com		Project No: 19-2099.04		Hole ID: TP105		Page: 1 of 1		
		Project: Brockhampton West, Havant						
Trial Pit Log		Date: 29/03/2021		Client: Exton Estates				
Description of Strata	Legend	Strata 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)		0.56	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) From 3.0 to 3.9 m bgl: Occasional tyres (1050mm diameter). Wooden planks (810mm x 100mm x 100mm).		3.90	6.73					
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.				
Coordinates: E469994.41 N105615.59	Elevation (mAOD): 10.63	Excavated By: BPH Plant Hire		Plant Used: JCB 3CX	Logged: LB	Checked: BB	Approved: RM	Scale: 1:30

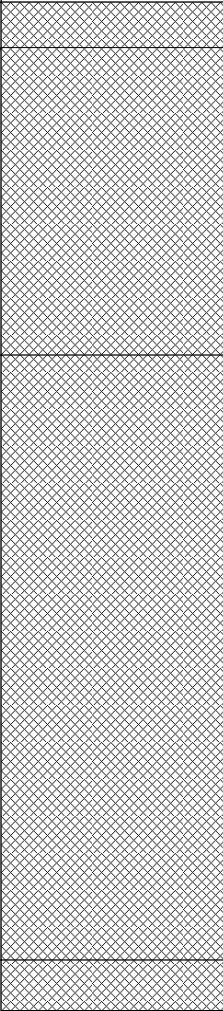
 Head Office 3 Henley Way, Doddington Road Lincoln, LN6 3QR Tel: +44 (0) 1522 882555 Email: info@deltasimons.com		Project No: 19-2099.04		Hole ID: TP106		Page: 1 of 1		
		Project: Brockhampton West, Havant						
Trial Pit Log		Date: 29/03/2021		Client: Exton Estates				
Description of Strata	Legend	Strata 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)					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>		1.30	8.11				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>	2.60	6.81	3.00 - 3.50 3.00 - 3.50		B ES	3.00	PID=12.90ppmv	
Trial pit complete at 3.80 m bgl.	3.80	5.61						
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. 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

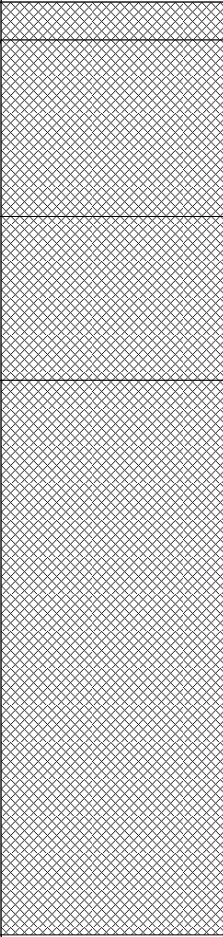
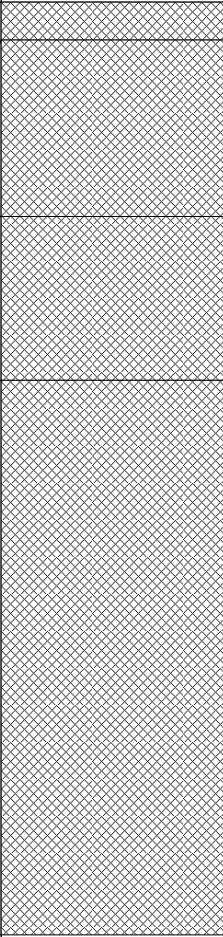
 Head Office 3 Henley Way, Doddington Road Lincoln, LN6 3QR Tel: +44 (0) 1522 882555 Email: info@deltasimons.com		Project No: 19-2099.04		Hole ID: TP107		Page: 1 of 1		
		Project: Brockhampton West, Havant						
Trial Pit Log		Date: 31/03/2021		Client: Exton Estates				
Description of Strata	Legend	Strata 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		0.50 - 1.00 0.50 - 1.00	B ES	0.10 0.50	PID=0.00ppmv 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)								
From 0.9 m bgl: Becomes gravelly.								
		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)								
		3.20	8.21		1.70 - 2.30	ES	1.70	PID=3.20ppmv
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
Trial pit complete at 3.70 m bgl.		3.70	7.71					
Dimensions and Orientation: Length = 3.50 m Width = 0.70 m 		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

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		Project: Brockhampton West, Havant						
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)		0.90	9.71					
At 0.8 m bgl: Concrete block (400mm x 370mm x 100mm).								
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)								
Trial pit complete at 3.90 m bgl.		3.90	6.71					
Dimensions and Orientation: Length = 3.50 m Width = 0.70 m 		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

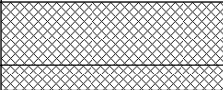
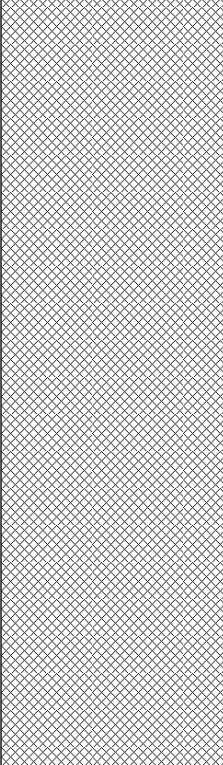
 Head Office 3 Henley Way, Doddington Road Lincoln, LN6 3QR Tel: +44 (0) 1522 882555 Email: info@deltasimons.com		Project No: 19-2099.04		Hole ID: TP108		Page: 1 of 1		
		Project: Brockhampton West, Havant						
Trial Pit Log		Date: 30/03/2021		Client: Exton Estates				
Description of Strata	Legend	Strata 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)		0.20	13.83		0.50 - 1.00	B	0.20	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 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: Length = 3.50 m Width = 0.70 m 		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: E470219.19 N105730.30	Elevation (mAOD): 14.03	Excavated By: BPH Plant Hire		Plant Used: JCB 3CX	Logged: LB	Checked: BB	Approved: RM	Scale: 1:30

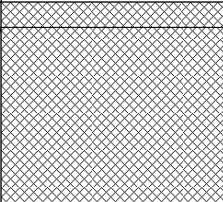
 Head Office 3 Henley Way, Doddington Road Lincoln, LN6 3QR Tel: +44 (0) 1522 882555 Email: info@deltasimons.com		Project No: 19-2099.04		Hole ID: TP110		Page: 1 of 1						
		Project: Brockhampton West, Havant										
Trial Pit Log		Date: 31/03/2021		Client: Exton Estates								
Description of Strata	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						1.50 - 2.00	ES	1.20	PID=5.80ppmv
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				

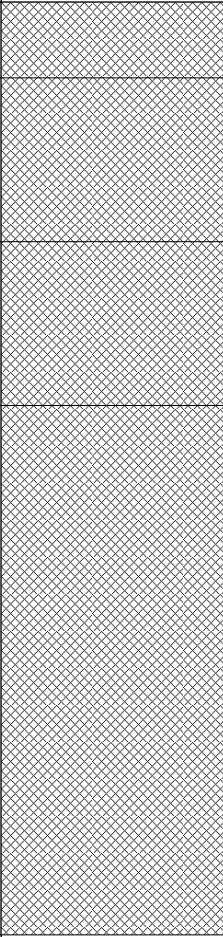
 Head Office 3 Henley Way, Doddington Road Lincoln, LN6 3QR Tel: +44 (0) 1522 882555 Email: info@deltasimons.com		Project No: 19-2099.04		Hole ID: TP111		Page: 1 of 1		
		Project: Brockhampton West, Havant						
Trial Pit Log		Date: 30/03/2021		Client: Exton Estates				
Description of Strata	Legend	Strata 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		0.50 - 1.00	B	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	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	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					
Dimensions and Orientation: Length = 3.50 m Width = 0.70 m 		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: E470157.44 N105761.46	Elevation (mAOD): 12.51	Excavated By: BPH Plant Hire		Plant Used: JCB 3CX	Logged: LB	Checked: BB	Approved: RM	Scale: 1:30

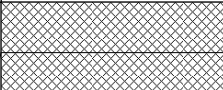
 Head Office 3 Henley Way, Doddington Road Lincoln, LN6 3QR Tel: +44 (0) 1522 882555 Email: info@deltasimons.com		Project No: 19-2099.04		Hole ID: TP112		Page: 1 of 1		
		Project: Brockhampton West, Havant						
Trial Pit Log		Date: 31/03/2021		Client: Exton Estates				
Description of Strata	Legend	Strata Depth (m)	Reduced Level (mAOD)	Water Strike (m)	Sample Details		Test Details	
					Depth (m)	Type & Ref	Depth (m)	Results
MADE GROUND: Soft brown slightly 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 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)							0.20	
MADE GROUND: Soft brown gravelly CLAY. Gravel is angular to subangular fine to coarse of flint. (RE-ENGINEERED COVER SYSTEM)		0.85	8.09					
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)		1.50	7.44					
From 3.5 to 3.7 m bgl: Slight hydrocarbon odour.					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



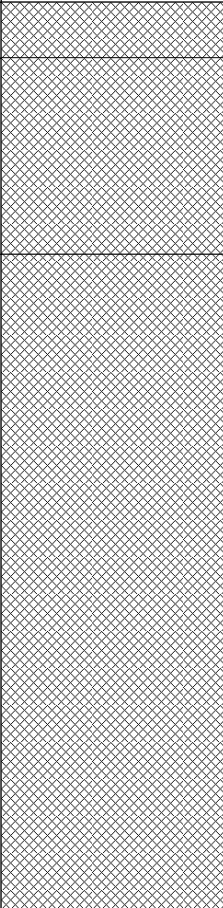
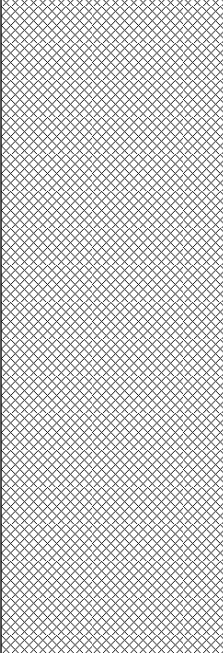
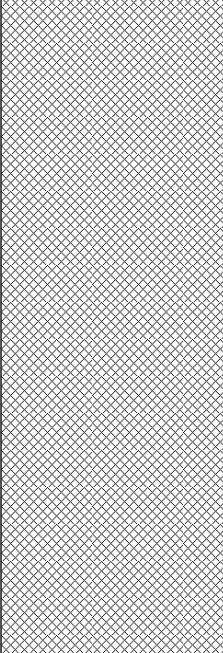
 Head Office 3 Henley Way, Doddington Road Lincoln, LN6 3QR Tel: +44 (0) 1522 882555 Email: info@deltasimons.com		Project No: 19-2099.04		Hole ID: TP114		Page: 1 of 1		
		Project: Brockhampton West, Havant						
Trial Pit Log		Date: 30/03/2021		Client: Exton Estates				
Description of Strata	Legend	Strata 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					
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
				ES				
Trial pit complete at 3.90 m bgl.								
Dimensions and Orientation: Length = 3.50 m Width = 0.70 m 				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

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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 CLAY with frequent rootlets. Sand is fine. (TOPSOIL) MADE GROUND: Yellowish brown gravelly fine SAND. Gravel is subangular to rounded fine to coarse of flint, sandstone and brick. (RE-ENGINEERED COVER SYSTEM)		0.10	12.17		0.20 - 0.60	B	0.20	PID=0.30ppmv			
		0.80	11.47		1.00 - 1.50 1.00 - 1.50	B ES	1.00	PID=0.40ppmv			
MADE GROUND: Firm grey slightly sandy SILT. Sand is fine to medium. (RE-ENGINEERED COVER SYSTEM)			1.50		10.77						
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).						2.00 - 2.50	ES	2.00	PID=11.80ppmv		
			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.											
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 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

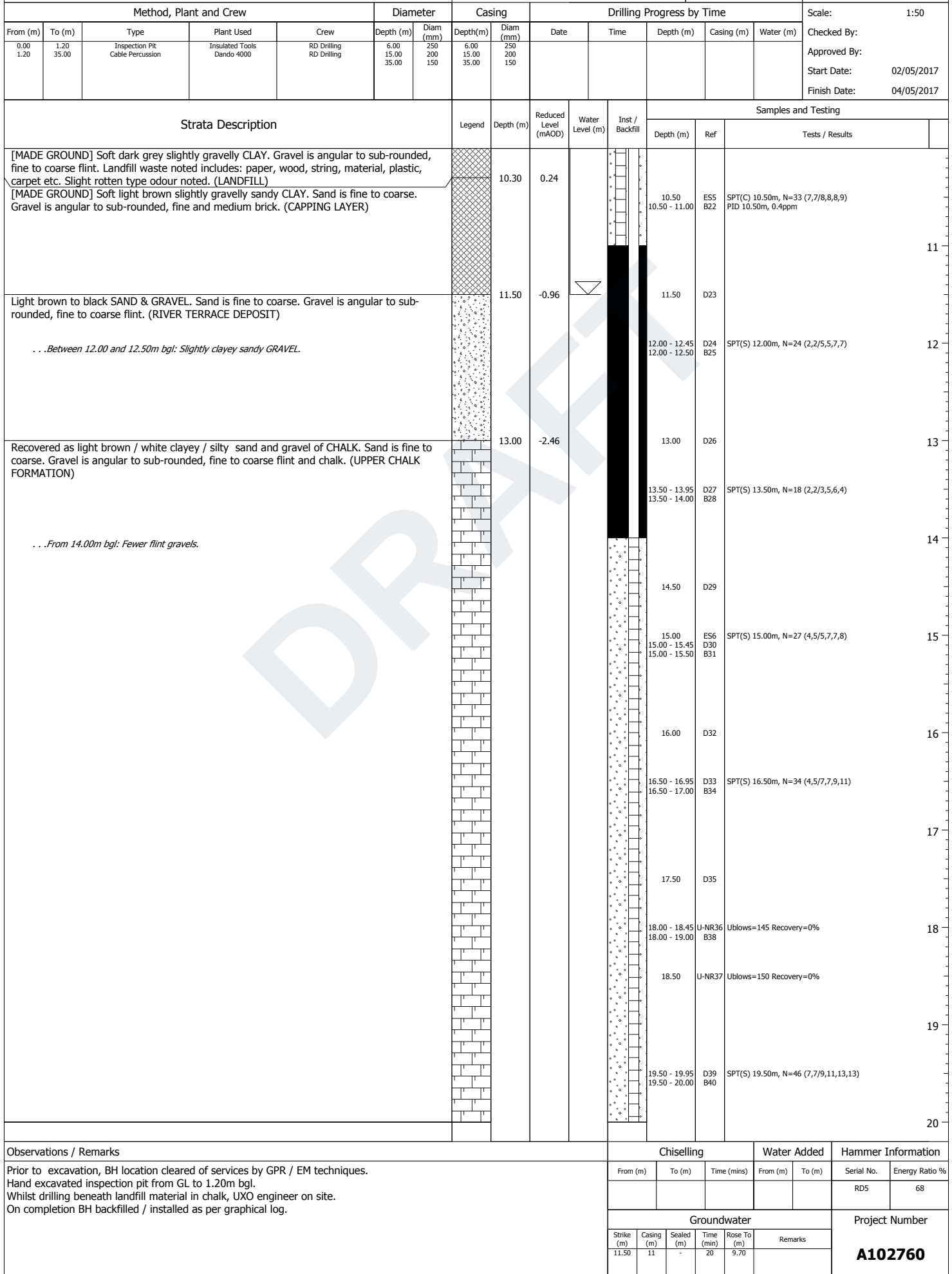
 Head Office 3 Henley Way, Doddington Road Lincoln, LN6 3QR Tel: +44 (0) 1522 882555 Email: info@deltasimons.com		Project No: 19-2099.04		Hole ID: TP116		Page: 1 of 1		
		Project: Brockhampton West, Havant						
Trial Pit Log		Date: 30/03/2021		Client: Exton Estates				
Description of Strata	Legend	Strata 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		1.80 - 2.00	ES	1.80	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					
Trial pit complete at 3.70 m bgl.								
Dimensions and Orientation: Length = 3.50 m Width = 0.70 m 				Orientation: 45° Inclination: 90				
Coordinates: E470160.29 N105741.16 Elevation (mAOD): 13.26 Excavated By: BPH Plant Hire				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.				
Plant Used: JCB 3CX		Logged: LB		Checked: BB		Approved: RM		Scale: 1:30

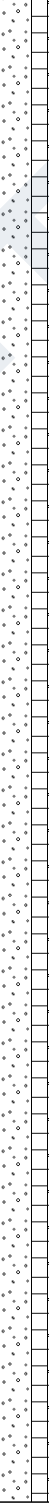
 Head Office 3 Henley Way, Doddington Road Lincoln, LN6 3QR Tel: +44 (0) 1522 882555 Email: info@deltasimons.com		Project No: 19-2099.04		Hole ID: TP117		Page: 1 of 1		
Trial Pit Log		Date: 31/03/2021		Client: Exton Estates				
Description of Strata	Legend	Strata Depth (m)	Reduced Level (mAOD)	Water Strike (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		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		
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	0.70	PID=1.80ppmv
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: 		Orientation: 135° 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: 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

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		Project: Brockhampton West, Havant						
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 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: Length = 3.50 m Width = 0.70 m  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: 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

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		Project: Brockhampton West, Havant						
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					
From 2.9 m bgl: Approximately 30% matrix.					1.50 - 2.00	ES	1.50	PID=5.00ppmv
Trial pit complete at 3.60 m bgl.		3.60	7.11					
Dimensions and Orientation: Length = 3.50 m Width = 0.70 m 		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 Details				Status		Borehole Number								
		Location: Harts Farm Way		Easting: 470104.28 Northing: 105703.67 Level: 10.54mAOD Depth: 35.00m Logger: SN Type: CP Inclination: 90°				DRAFT		CP01								
		Client: Havant Borough Council		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:				
0.00 1.20	1.20 35.00	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						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				
[MADE GROUND] Grass over TOPSOIL Soft light grey / light brown / white slightly sandy gravelly CLAY. Sand is fine to coarse. Gravel is angular to sub-angular flint.								0.30	10.24			0.00 - 0.40	B2					
[MADE GROUND] Soft orange / white slightly sandy CLAY. Sand is fine to coarse. With occasional angular to sub-angular fine to coarse brick and flint gravel. (CAPPING LAYER)												0.20	D1					
												0.45	D3					
[MADE GROUND] Soft orange / black / brown sandy gravelly CLAY. Sand is fine to coarse. Gravel is angular to sub-rounded, fine to coarse brick and flint. (CAPPING LAYER)								1.40	9.14			0.95	ES1	PID 0.95m, 0.0ppm				
												1.20 - 1.65	D4	SPT(S) 1.20m, N=21 (3,4/4,5,6,6)				
												1.20 - 1.70	B5					
[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)								3.00	7.54			2.50 - 2.95	D6	SPT(S) 2.50m, 50 (7,11/50 for 150mm)				
												2.50 - 3.00	B7	PID 2.70m, 0.0ppm				
												2.70	ES2					
												3.50 - 3.95	D8	SPT(S) 3.50m, 50 (25,20/50 for 17mm)				
												3.50 - 4.00	B9					
												4.20	D10					
												4.50	ES3	SPT(S) 4.50m, 50 (25,35/50 for 36mm)				
												4.50 - 4.95	D11	PID 4.50m, 29.0ppm				
												4.50 - 5.00	B12					
												5.50	D13					
												6.00 - 8.00	B16	SPT(C) 6.00m, 0 (75 for 0mm/0 for 0mm)				
												7.00	ES4	PID 7.00m, 5.3ppm				
														SPT(C) 7.50m, 0 (50 for 0mm/0 for 0mm)				
												8.50	D17					
												9.00 - 9.50	B19	SPT(C) 9.00m, N=54 (7,7/12,12,15,15)				
												10.00	D20					
Observations / Remarks												Chiselling		Water Added		Hammer Information		
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.												From (m)	To (m)	Time (mins)	From (m)	To (m)	Serial No.	Energy Ratio %
												6.00	6.60	90			RD5	68
												Project Number						
A102760																		



		Project: Brockhampton West				Location Details				Status		Borehole Number																
		Location: Harts Farm Way				Easting: 470104.28 Northing: 105703.67				DRAFT		CP01																
		Client: Havant Borough Council				Level: 10.54mAOD Depth: 35.00m																						
								Logger: SN Type: CP																				
								Inclination: 90°																				
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	Insulated Tools	RD Drilling	6.00	250	6.00	250						Approved By:														
1.20	35.00	Cable Percussion	Dando 4000	RD Drilling	15.00	200	15.00	200						Start Date: 02/05/2017														
					35.00	150	35.00	150						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	SPT(S) 21.00m, N=50 (7,7/12,12,13,13)		21												
												21.00	D42															
												21.00 - 21.50	D43															
																								22.00	D44	SPT(S) 22.50m, N=54 (7,9/12,12,14,16)		22
																								22.50 - 23.00	B45			
																								23.50	D46			
																								24.00 - 24.50	B48	SPT(S) 24.00m, 50 (25,25/50 for 19mm)		24
																								25.00	D49	SPT(S) 25.50m, 50 (9,14/50 for 225mm)		25
																								25.50 - 25.95	D50			
																								25.50 - 26.00	B51			
																								25.80 - 29.00	B57	SPT(S) 27.00m, 50 (9,12/50 for 120mm)		26
																								26.50	D52			
												27.00 - 27.50	B54															
												28.00	D55	SPT(S) 28.50m, 50 (7,9/50 for 60mm)		27												
												28.50 - 28.95	D56															
												29.50	D58															
												30.00 - 30.45	D59	SPT(S) 30.00m, 50 (10,15/50 for 60mm)		28												
												30.00 - 30.50	B60			29												
																30												
Observations / Remarks										Chiselling		Water Added		Hammer Information														
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.										From (m)	To (m)	Time (mins)	From (m)	To (m)	Serial No.	Energy Ratio %												
															RD5	68												
																Project Number												
						A102760																						

		Project: Brockhampton West		Location Details				Status		Borehole Number						
		Location: Harts Farm Way		Easting: 470104.28 Northing: 105703.67 Level: 10.54mAOD Depth: 35.00m Logger: SN Type: CP Inclination: 90°				DRAFT		CP01						
		Client: Havant Borough Council		Sheet 4 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:		
0.00 1.20	1.20 35.00	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						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				
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)												Depth (m)	Ref	Tests / Results		
												31.00	D61		31	
												31.50 - 31.95 31.50 - 32.00	D62 B63	SPT(S) 31.50m, 50 (25,20/50 for 45mm)		
												32.50	D64		32	
												33.00 - 33.50	B67	SPT(C) 33.00m, 50 (25,20/50 for 23mm)		
												34.50 - 35.00	B69	SPT(S) 34.50m, 50 (25,35/50 for 42mm)		
															33	
EOH at 35.00m - Target Depth Achieved.								35.00	-24.46							34
																35
																36
																37
																38
																39
																40
Observations / Remarks										Chiselling		Water Added		Hammer Information		
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.										From (m)	To (m)	Time (mins)	From (m)	To (m)	Serial No.	Energy Ratio %
										34.00	35.00	120			RD5	68
										Groundwater						
Strike (m)	Casing (m)	Sealed (m)	Time (min)	Rose To (m)	Remarks		A102760									

		Project: Brockhampton West		Location Details				Status		Borehole Number					
		Location: Harts Farm Way		Easting:		Northing:		DRAFT		CP02					
		Client: Havant Borough Council		Level:		Depth: 3.00m									
				Logger: SN		Type: CP		Inclination: 90°		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	1.20 3.00	Inspection Pit Cable Percussion	Insuloated Tools Dando 4000	RD Drilling RD Drilling	2.00	250	3.00	250	04/05	00:00	2.00	0.00		Approved By:	
														Start Date: 04/05/2017	
														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] Grass over TOPSOIL.								0.05							
[MADE GROUND] ASPHALT								0.20							
[MADE GROUND] Metal, Asphalt, Rubble															
EOH at 3.00m - Obstruction at 2.00m bgl. Unable to progress BH beyond 3.00m															
Observations / Remarks							Chiselling			Water Added		Hammer Information			
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 with arisings.							From (m)	To (m)	Time (mins)	From (m)	To (m)	Serial No.	Energy Ratio %		
							2.00	2.30	75						
							Groundwater						Project Number		
							Strike (m)	Casing (m)	Sealed (m)	Time (min)	Rose To (m)	Remarks	A102760		

		Project: Brockhampton West		Location Details				Status		Borehole Number											
		Location: Harts Farm Way		Easting: 469988.77 Northing: 105575.68 Level: 10.79mAOD Depth: 35.00m Logger: SN Type: CP Inclination: 90°				DRAFT		CP02A											
		Client: Havant Borough Council		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:							
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							
[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	D1	PID 0.75m, 1.9ppm						
												0.50 - 1.00	B2								
												0.75	ES1								
												1.00 - 3.00	B3								
[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)															1						
																					2
																					3
																					4
																					5
																					6
																					7
																					8
																					9
																					10
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				9.50 - 10.00	B19	PID 10.00m, 5.8ppm						
													10.00	D21							
														10.00	ES5						
Observations / Remarks										Chiselling		Water Added		Hammer Information							
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.										From (m)	To (m)	Time (mins)	From (m)	To (m)	Serial No.	Energy Ratio %					
										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																	

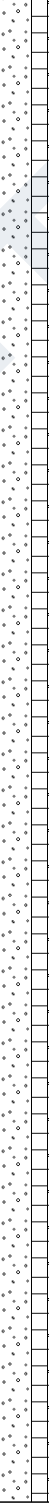
		Project: Brockhampton West		Location Details				Status		Borehole Number												
		Location: Harts Farm Way		Easting: 469988.77 Northing: 105575.68 Level: 10.79mAOD Depth: 35.00m Logger: SN Type: CP Inclination: 90°				DRAFT		CP02A												
		Client: Havant Borough Council		Sheet 2 of 4																		
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:								
0.00 0.00	35.00 1.20	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						Approved By: Start Date: 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								
...From 10.00m bgl: becoming less gravelly and lighter in colour.																						
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)								13.00	-2.21			10.50 - 10.95 10.50 - 11.00	D20 B22	SPT(S) 10.50m, N=20 (4,4/5,5,5,5)		11						
																	12.00 - 12.50	B24	SPT(C) 12.00m, N=26 (4,5/6,6,7,7)		12	
																	13.00	D25	PID 13.00m, 0.0ppm		13	
																	13.50 13.50 - 14.00 13.50 - 17.00	D26 B27 B33	SPT(S) 13.50m, N=17 (4,4/4,4,4,5)			
																	14.00	D29	PID 14.50m, 0.0ppm		14	
																	15.00 15.00 - 15.50	D29 B30	SPT(S) 15.00m, N=22 (4,5/5,5,6,6)		15	
										16.00 16.00	D28 D31	PID 16.00m, 0.0ppm		16								
										16.50 - 16.95	D32	SPT(S) 16.50m, N=27 (1,1/5,7,7,8) PID 16.50m, 0.0ppm										
										17.00	D34	PID 17.00m, 0.0ppm		17								
										18.00 18.00 - 19.50	U-NR35 B37	Ublows=150 Recovery=0%		18								
										19.00	U-NR36	Ublows=120 Recovery=0%		19								
										19.50 - 19.95 19.50 - 20.00	D38 B39	SPT(S) 19.50m, N=40 (4,7/9,9,9,13) PID 19.50m, 0.0ppm										
										20.00	ES6	PID 20.00m, 0.0ppm		20								
Observations / Remarks											Chiselling		Water Added		Hammer Information							
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.											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																

		Project: Brockhampton West		Location Details				Status		Borehole Number						
		Location: Harts Farm Way		Easting: 469988.77 Northing: 105575.68 Level: 10.79mAOD Depth: 35.00m Logger: SN Type: CP Inclination: 90°				DRAFT		CP02A						
		Client: Havant Borough Council								Sheet 3 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:		
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		
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.										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										

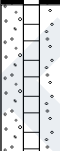
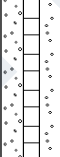
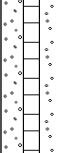
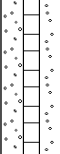
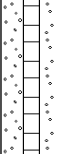
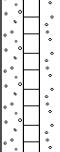
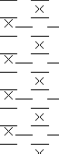
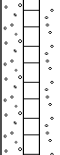
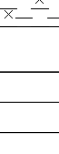
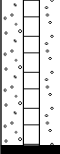
		Project: Brockhampton West				Location Details				Status		Borehole Number							
		Location: Harts Farm Way				Easting: 469988.77 Northing: 105575.68				DRAFT		CP02A							
		Client: Havant Borough Council				Level: 10.79mAOD Depth: 35.00m													
				Logger: SN Type: CP				Inclination: 90°				Sheet 4 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:					
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)								35.00	-24.21		35.00	D73							
																30.50	D64		
																31.00 - 31.50	B66	SPT(C) 31.00m, 50 (10,14/50 for 120mm)	
																32.00	D67		
																32.50 - 33.00	B69	SPT(C) 32.50m, 50 (25,20/50 for 14mm)	
EOH at 35.00m - Target Depth Achieved.																			
															33.50	D70			
															34.50	D72			
															35.00	D73			

 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																															
Method, Plant and Crew <table><tr><td>From (m)</td><td>To (m)</td><td>Type</td><td>Plant Used</td><td>Crew</td></tr><tr><td>0.00 1.20</td><td>1.20 35.00</td><td>Inspection Pit Cable Percussion</td><td>Insulated Tools Dando 4000</td><td>RD Drilling RD Drilling</td></tr></table>						From (m)	To (m)	Type	Plant Used	Crew	0.00 1.20	1.20 35.00	Inspection Pit Cable Percussion	Insulated Tools Dando 4000	RD Drilling RD Drilling	Diameter <table><tr><td>Depth (m)</td><td>Diam (mm)</td></tr><tr><td>10.00 14.00 35.00</td><td>250 200 150</td></tr></table>		Depth (m)	Diam (mm)	10.00 14.00 35.00	250 200 150	Casing <table><tr><td>Depth(m)</td><td>Diam (mm)</td></tr><tr><td>10.00 14.00 35.00</td><td>250 200 150</td></tr></table>		Depth(m)	Diam (mm)	10.00 14.00 35.00	250 200 150	Drilling Progress by Time <table><tr><td>Date</td><td>Time</td><td>Depth (m)</td><td>Casing (m)</td><td>Water (m)</td></tr><tr><td></td><td></td><td></td><td></td><td></td></tr></table>						Date	Time	Depth (m)	Casing (m)	Water (m)						Scale: 1:50 Checked By: Approved By: Start Date: 09/05/2017 Finish Date: 10/05/2017	
From (m)	To (m)	Type	Plant Used	Crew																																									
0.00 1.20	1.20 35.00	Inspection Pit Cable Percussion	Insulated Tools Dando 4000	RD Drilling RD Drilling																																									
Depth (m)	Diam (mm)																																												
10.00 14.00 35.00	250 200 150																																												
Depth(m)	Diam (mm)																																												
10.00 14.00 35.00	250 200 150																																												
Date	Time	Depth (m)	Casing (m)	Water (m)																																									
Strata Description						Legend		Depth (m)		Reduced Level (mAOD)		Water Level (m)		Inst / Backfill		Samples and Testing <table><tr><td>Depth (m)</td><td>Ref</td><td>Tests / Results</td></tr></table>				Depth (m)	Ref	Tests / Results																							
Depth (m)	Ref	Tests / Results																																											
[MADE GROUND] Grass over brown slightly clayey gravelly SAND. Sand is fine to coarse. Gravel is angular to sub-rounded, fine to coarse flint and brick. With frequent roots and rootlets. (TOPSOIL)								0.60		8.07						0.20 0.20 - 0.60		D1 B2																											
[MADE GROUND] Orange brown and grey slightly sandy CLAY / SILT. Sad is fine and medium. With rare to occasional angular to sub-rounded fine and medium chalk and flint gravel (CAPPING LAYER)								1.10		7.57						0.60 - 1.10		B3																											
[MADE GROUND] Black clayey gravelly SAND. Sand is fine to coarse. Gravel is very angular to sub-rounded, fine to coarse flint, brick, concrete and glass. With frequent fragments of metal, plastic and material. (LANDFILL)																1.00 1.20 1.20 - 1.70 1.40		ES1 D4 B6 ES2		PID 1.00m, 0.3ppm SPT(C) 1.20m, N=38 (7,7/8,8,11,11) PID 1.40m, 0.7ppm																									
[MADE GROUND] Firm to stiff grey / brown slightly sandy gravelly CLAY. Sand is fine to coarse. Gravel is very angular to sub-rounded, fine to coarse flint, brick, concrete and chalk. (CAPPING LAYER)								3.20		5.47						2.50 - 3.00		B8		SPT(C) 2.50m, 50 (7,9/50 for 225mm)																									
[MADE GROUND] Firm to stiff grey / brown slightly sandy gravelly CLAY. Sand is fine to coarse. Gravel is very angular to sub-rounded, fine to coarse flint, brick, concrete and chalk. (CAPPING LAYER)								4.50		4.17						3.20 3.50 - 4.00 3.70		D9 B11 ES3		SPT(C) 3.50m, N=54 (7,9/10,11,16,17) PID 3.70m, 0.5ppm																									
[MADE GROUND] Black / grey slightly clayey gravelly SAND. Sand is fine to coarse. Gravel is very angular to sub-rounded, fine to coarse flint, brick, concrete and chalk. (CAPPING LAYER)								5.50		3.17						4.50 - 5.00 4.80		B13 ES4		SPT(C) 4.50m, N=46 (5,9/10,11,11,14) PID 4.80m, 1.0ppm																									
[MADE GROUND] Firm grey / brown slightly sandy to sandy slightly gravelly CLAY. Sand is fine to coarse. Gravel is very angular to sub-rounded, fine to coarse flint, brick, concrete and chalk. With frequent fragments of metal, glass , plastic and fabric. (LANDFILL)																5.50 6.00 - 6.50 7.00 7.50 - 8.00		D14 B16 D17 B19		SPT(C) 6.00m, 0 (50 for 0mm/0 for 0mm) SPT(C) 7.50m, N=40 (7,3/7,9,10,14)																									
... From 7.80m bgl: With rare metal, glass, plastic and fabric.								8.20		0.47						8.20 - 8.50		B20																											
Grey/ brown slightly clayey slightly sandy GRAVEL. Sand is fine to coarse. Gravel is sub-angular to well rounded, fine to coarse flint. (RIVER TERRACE DEPOSIT)																9.00 - 9.50		B22		SPT(C) 9.00m, N=34 (5,7/8,8,9,9)																									
																10.00		D23																											
Observations / Remarks 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.										Chiselling <table><tr><td>From (m)</td><td>To (m)</td><td>Time (mins)</td></tr><tr><td>5.60</td><td>6.30</td><td>120</td></tr></table>				From (m)	To (m)	Time (mins)	5.60	6.30	120	Water Added <table><tr><td>From (m)</td><td>To (m)</td></tr><tr><td></td><td></td></tr></table>		From (m)	To (m)			Hammer Information <table><tr><td>Serial No.</td><td>Energy Ratio %</td></tr><tr><td>RD5 RD</td><td>68</td></tr></table>		Serial No.	Energy Ratio %	RD5 RD	68														
From (m)	To (m)	Time (mins)																																											
5.60	6.30	120																																											
From (m)	To (m)																																												
Serial No.	Energy Ratio %																																												
RD5 RD	68																																												
										Groundwater <table><tr><td>Strike (m)</td><td>Casing (m)</td><td>Sealed (m)</td><td>Time (min)</td><td>Rose To (m)</td><td>Remarks</td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td></tr></table>				Strike (m)	Casing (m)	Sealed (m)	Time (min)	Rose To (m)	Remarks							Project Number A102760																			
Strike (m)	Casing (m)	Sealed (m)	Time (min)	Rose To (m)	Remarks																																								

		Project: Brockhampton West		Location Details				Status		Borehole Number						
		Location: Harts Farm Way		Easting: 470303.30 Northing: 105661.53 Level: 8.67mAOD Depth: 35.00m Logger: AH Type: CP Inclination: 90°				DRAFT		CP03						
		Client: Havant Borough Council								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:		
0.00 1.20	1.20 35.00	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						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.								14.00	-5.33			10.50 - 11.00	B25	SPT(C) 10.50m, N=33 (4,5/7,7,8,11)		
												11.50	D26			
												12.00 - 12.50	B28	SPT(C) 12.00m, N=38 (4,8/9,9,10,10)		
												13.00	D29			
												13.50 - 14.00	B31	SPT(C) 13.50m, N=34 (7,7/8,8,9,9)		
												14.50	D32			
												15.00 - 15.45	D33	SPT(S) 15.00m, N=20 (4,4/5,5,5,5)		
												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)		
												16.50 - 17.00	B37			
17.00	D38															
18.00 - 18.45	D39	SPT(S) 18.00m, N=50 (4,4/10,10,15,15)														
18.00 - 18.50	B40															
19.00	D41															
19.50 - 19.95	D42	SPT(S) 19.50m, N=42 (4,7/8,11,11,12)														
19.50 - 20.00	B43															
Observations / Remarks										Chiselling		Water Added		Hammer Information		
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.										From (m)	To (m)	Time (mins)	From (m)	To (m)	Serial No.	Energy Ratio %
															RD5 RD	68
										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 Details				Status		Borehole Number								
		Location: Harts Farm Way		Easting: 470303.30 Northing: 105661.53 Level: 8.67mAOD Depth: 35.00m Logger: AH Type: CP Inclination: 90°				DRAFT		CP03								
		Client: Havant Borough Council								Sheet 3 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:				
0.00 1.20	1.20 35.00	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						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 24.00 - 24.50	E55 B52	SPT(C) 24.00m, N=43 (4,5/9,9,10,15) PID 24.00m, 0.0ppm	24			
												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		
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.												From (m)	To (m)	Time (mins)	From (m)	To (m)	Serial No.	Energy Ratio %
																	RD5 RD	68
												Groundwater						Project Number
Strike (m)	Casing (m)	Sealed (m)	Time (min)	Rose To (m)	Remarks	A102760												

A102760

 Project: Brockhampton West Location: Harts Farm Way Client: Havant Borough Council						Location Details						Status		Borehole Number													
						Easting: 470021.09 Northing: 105669.84 Level: 11.52mAOD Depth: 9.70m Logger: SN Type: CP Inclination: 90°						DRAFT		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	1.20 9.70	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	PID 0.50m, 0.7ppm													
												0.50	ES1														
												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	SPT(C) 7.00m, N=31 (4,5/7,7,8,9) PID 7.00m, 57.3ppm													
												7.00 7.00 - 7.50	ES4 B16														
												8.00	D17														
												8.00 - 8.65	U18														
Soft to firm brown silty CLAY. (ALLUVIUM)								8.20	3.32			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											
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.											From (m)	To (m)	Time (mins)	From (m)	To (m)	Serial No.	Energy Ratio %										
											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												

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	1.20 11.95	Inspection Pit Cable Percussion	Insulated Tools Dando 2000	RD Drilling RD Drilling	11.95	150	11.95	150						Approved By:		
														Start Date: 08/05/2017		
														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	9.46							
[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)											0.20 0.30	ES1 D1	PID 0.20m, 0.0ppm			
											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		
											1.20 - 1.65	U4	Ublows=40 Recovery=100%			
											2.00 2.00 - 2.45 2.00 - 2.50	ES2 D5 B6	2			
											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	4		
...At 5.00m bgl: 10-12mm thick rubber sheet.												5.00	D11 B13	5		
...Between 5.00m and 6.50m bgl: Frequent / abundant wood fragments. With rare metal and plastic.												5.00 - 6.50				
												6.00	ES4	6		
														SPT(C) 6.50m, N=9 (2,2/3,3,2,1)		
												7.00	D15	7		
														SPT(C) 8.00m, N=17 (5,5/4,3,6,4)		
														8		
														9		
[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			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		
														10		
Observations / Remarks										Chiselling			Water Added		Hammer Information	
Prior to excavation, BH location cleared of services by GPR / EM techniques.										From (m)			To (m)		Serial No.	
Hand excavated inspection pit from GL to 1.20m bgl.										3.90 9.40			4.10 9.50		AR323	
On completion BH backfilled / installed as per graphical log.															Energy Ratio %	
															69	
										Groundwater					Project Number	
										Strike (m)			Casing (m)		Remarks	
										5.90			-		A102760	

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 2 of 2

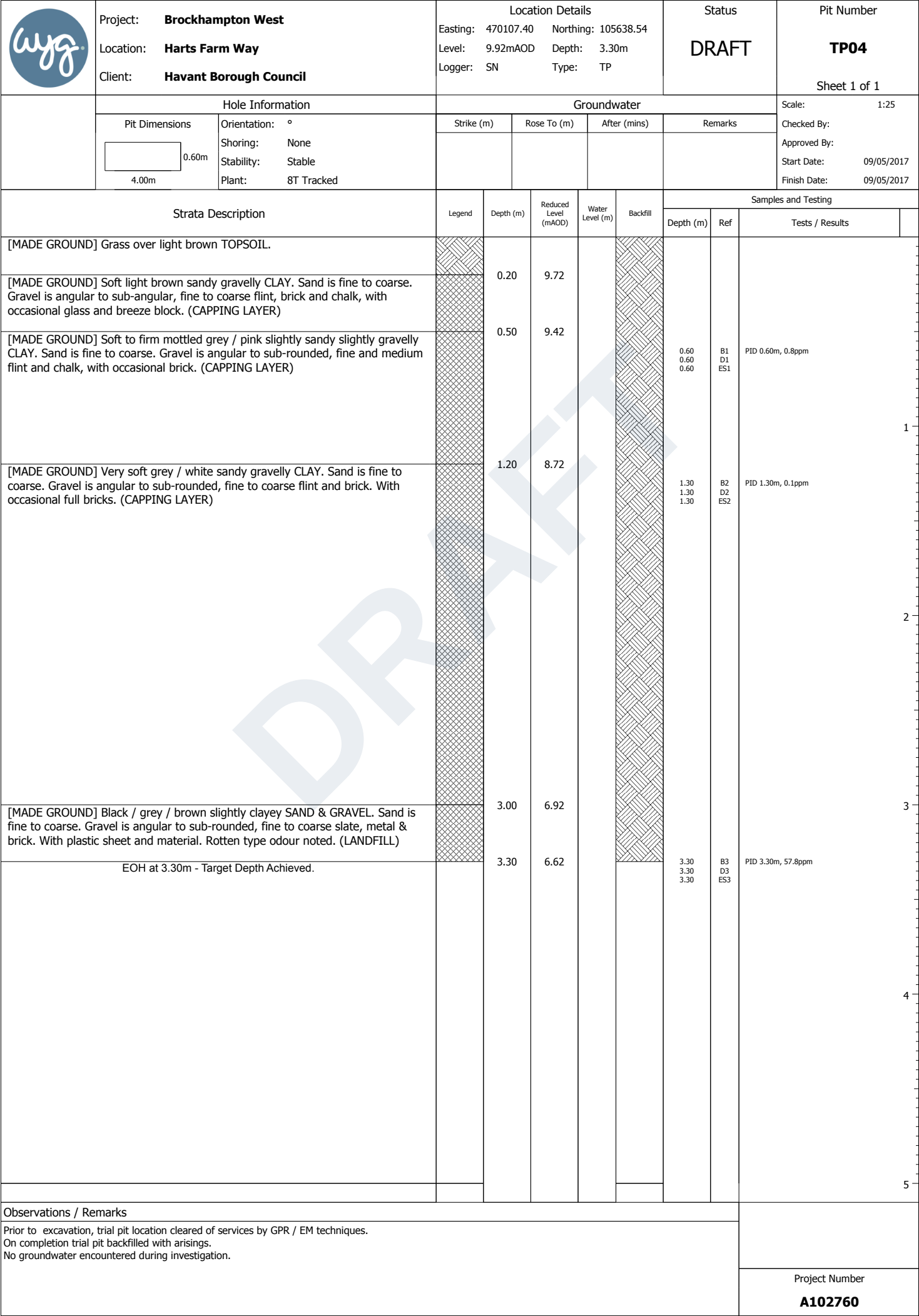
[illegible]

		Project: Brockhampton West				Location Details				Status		Borehole Number			
		Location: Harts Farm Way				Easting: 470206.36 Northing: 105775.84				DRAFT		CP06			
		Client: Havant Borough Council				Level: 12.40mAOD Depth: 11.00m Logger: SN / AH+SN/ AH Type: CP Inclination: 90°									
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	1.20 11.00	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)															
[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	9.90						
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	3.10						
Observations / Remarks															
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.															
										Chiselling		Water Added		Hammer Information	
From (m)		To (m)		Time (mins)		From (m)		To (m)		Serial No.		Energy Ratio %			
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 Details				Status		Pit Number			
	Location: Harts Farm Way		Easting: 469964.63 Northing: 105680.10				DRAFT		TP01			
	Client: Havant Borough Council		Level: 11.07mAOD Depth: 3.40m Logger: SN Type: TP									
	Hole Information		Groundwater						Scale: 1:25			
	Pit Dimensions 0.60m 3.00m	Orientation: ° Shoring: None Stability: Stable Plant: 8T Tracked	Strike (m)	Rose To (m)	After (mins)	Remarks		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)	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	B1	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)								0.30	D1			
				0.30	ES1							
				0.70	B2			PID 0.70m, 0.2ppm				
			0.70	D2								
			0.70	ES2								
[MADE GROUND] Stiff white slightly gravelly CLAY. Gravel is angular to sub-angular, fine to coarse flint and brick. (CAPPING LAYER)			0.90	10.17			1.10	B3	PID 1.10m, 0.2ppm			
							1.10	D3				
			1.10	ES3								
			1.30	9.77								
[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) ...Between 1.30m and 3.40m bgl: Papers dated 1976.				1.30	9.77			1.90	B4	PID 1.90m, 31.0ppm		
								1.90	D4			
				1.90	ES4							
				1.90								
EOH at 3.40m - Target Depth Achieved.				3.40	7.67			3.40	B5	PID 3.40m, 77.7ppm		
								3.40	D5			
								3.40	ES5			
								3.40				
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									

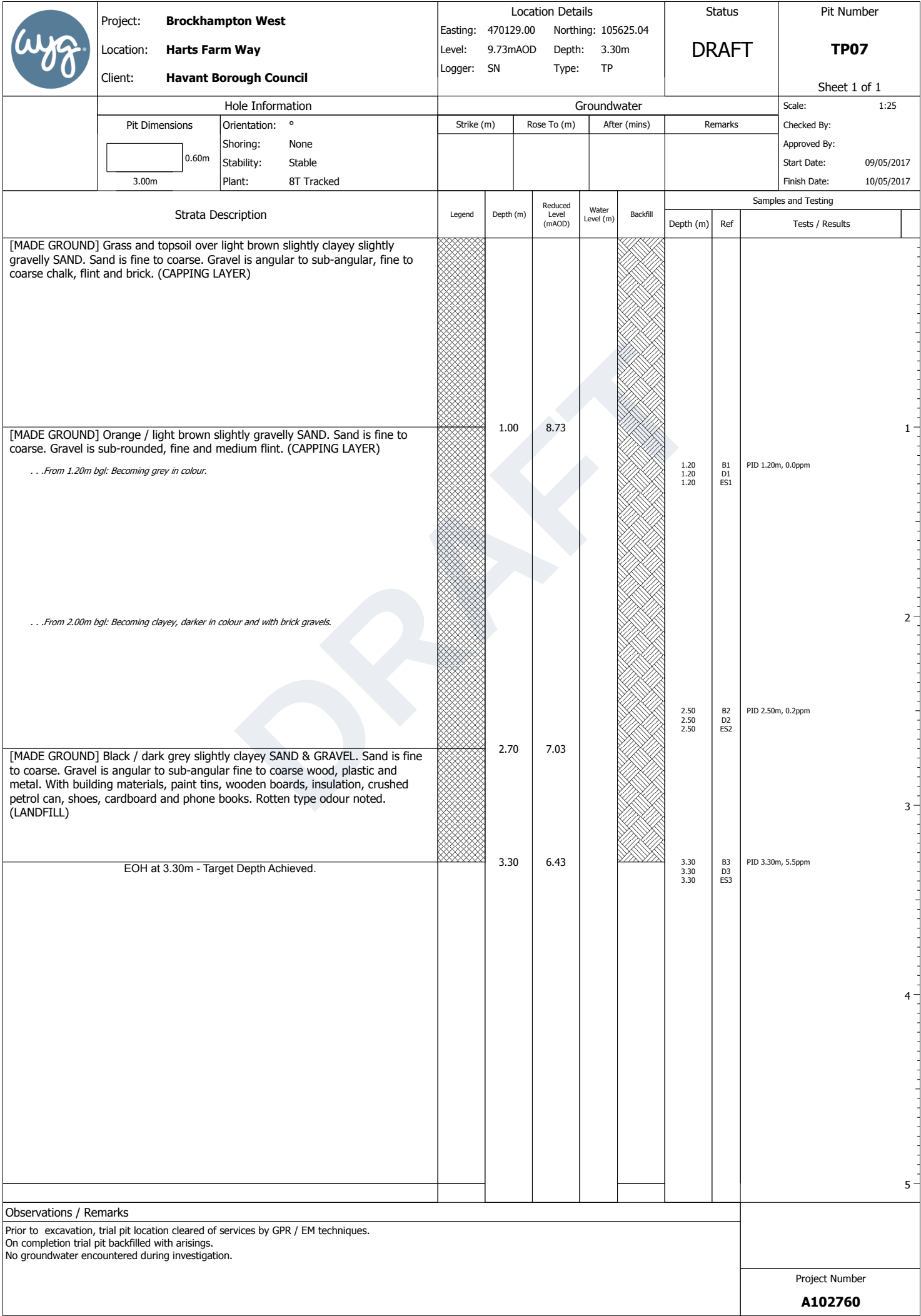
	Project: Brockhampton West		Location Details				Status		Pit Number		
	Location: Harts Farm Way		Easting: 470136.24 Northing: 105724.30				DRAFT		TP02		
	Client: Havant Borough Council		Level: 9.51mAOD Depth: 3.60m Logger: SN Type: TP								
			Groundwater				Scale: 1:25				
Hole Information							Checked By:				
Pit Dimensions		Orientation: °	Strike (m)	Rose To (m)	After (mins)	Remarks	Approved By:				
4.00m 0.60m		Shoring: None					Start Date: 10/05/2017				
		Stability: Stable					Finish Date: 10/07/2017				
		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] 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								

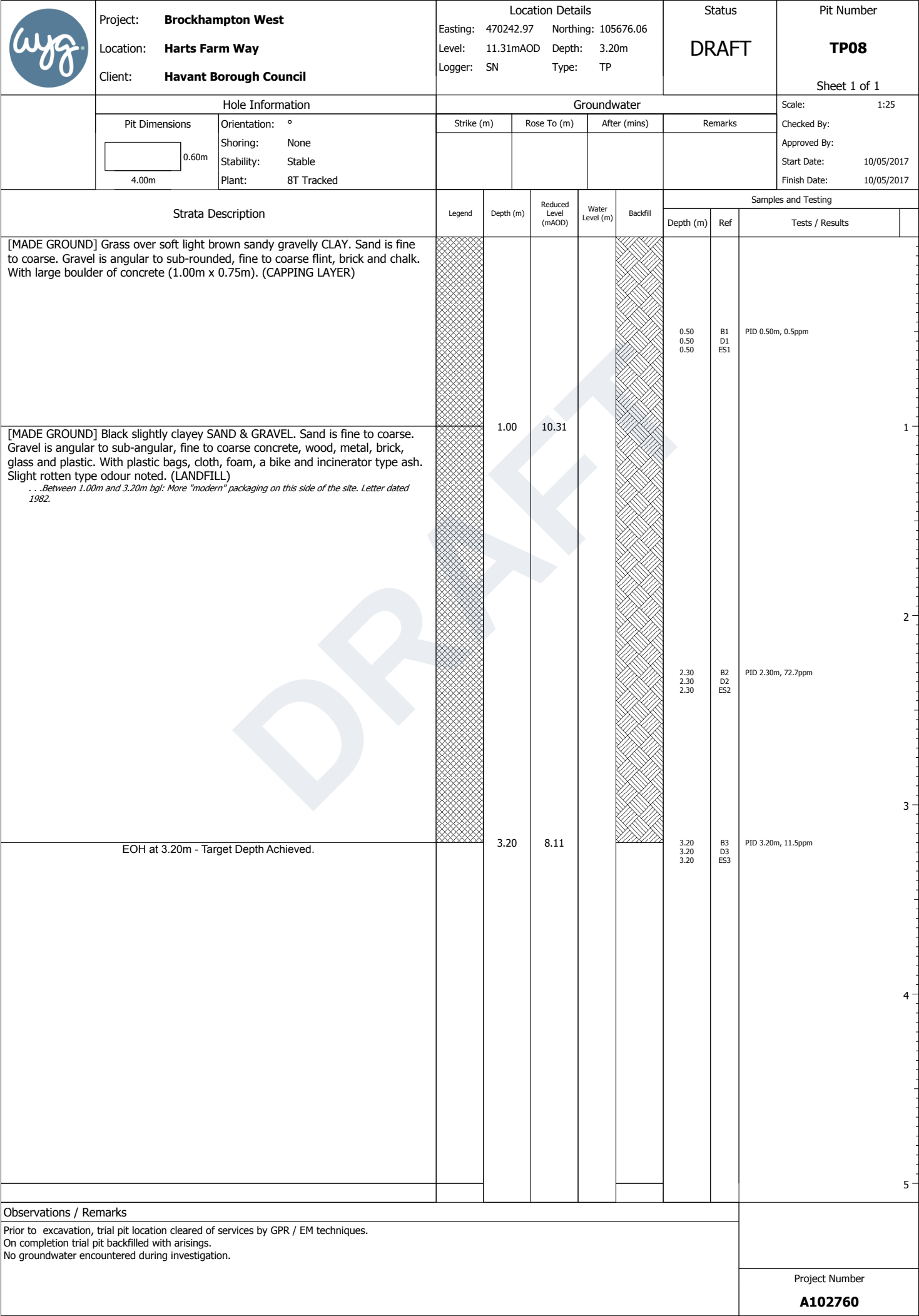
	Project: Brockhampton West		Location Details			Status		Pit Number		
	Location: Harts Farm Way		Easting: 470085.83 Northing: 105670.83			DRAFT		TP03		
	Client: Havant Borough Council		Level: 10.24mAOD Depth: 3.40m Logger: SN Type: TP							
		Sheet 1 of 1								
		Hole Information			Groundwater				Scale: 1:25	
Pit Dimensions		Orientation: °		Strike (m)	Rose To (m)	After (mins)	Remarks		Checked By:	
0.60m 4.00m		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
[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				PID 0.40m, 0.0ppm
[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			1.20 1.20 1.20	B2 D2 ES2
[MADE GROUND] Soft orange mottled grey sandy CLAY. Sand is fine to coarse. (CAPPING LAYER)					1.60	8.64				PID 1.20m, 0.1ppm
[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			1.80 1.80 1.80	B3 D3 ES3
EOH at 3.40m - Target Depth Achieved.					3.40	6.84			3.00 3.00 3.00	B4 D4 ES4
										PID 1.80m, 0.0ppm
										PID 3.00m, 17.2ppm

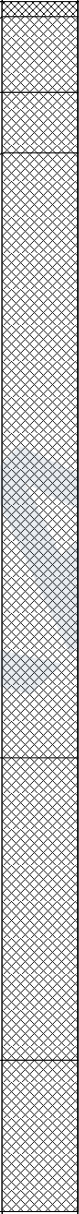
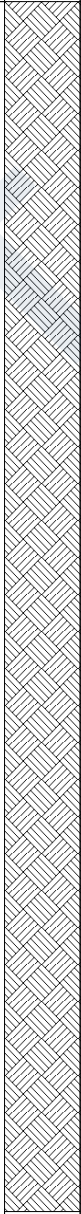


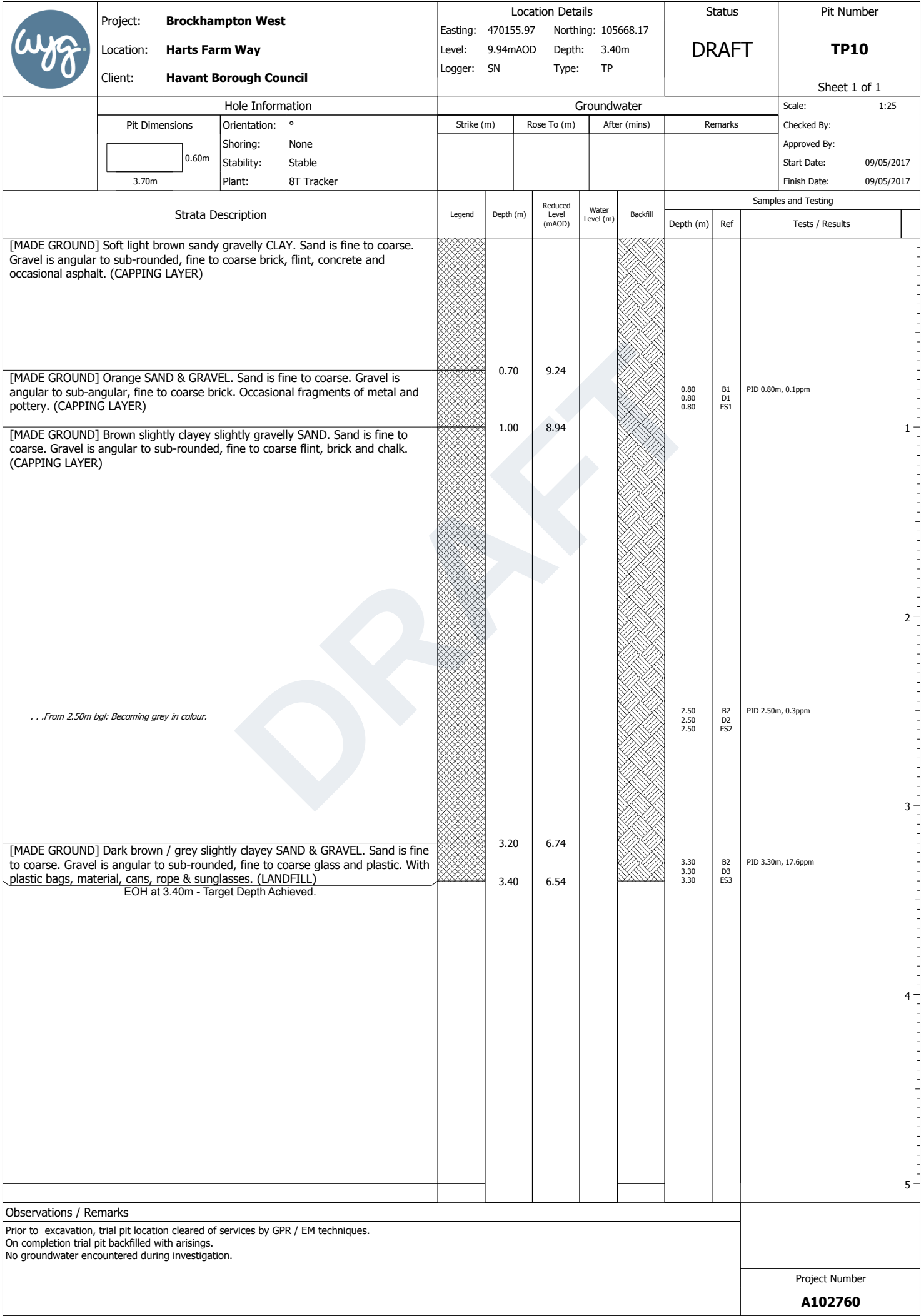


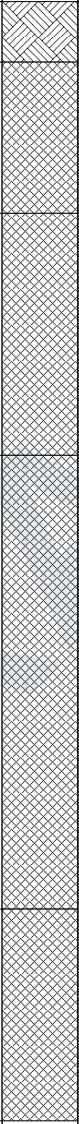
	Project: Brockhampton West		Location Details				Status		Pit Number		
	Location: Harts Farm Way		Easting: 470237.94 Northing: 105732.12 Level: 12.99mAOD Depth: 3.10m Logger: SN Type: TP				DRAFT		TP06		
Client: Havant Borough Council								Sheet 1 of 1			
Pit Dimensions 0.60m 4.00m	Hole Information		Groundwater				Scale: 1:25				
	Orientation: ° Shoring: None Stability: Stable Plant: 8T Tracked		Strike (m)	Rose To (m)	After (mins)	Remarks	Checked By: 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			
[MADE GROUND] Grass over soft light brown slightly sandy CLAY. Sand is fine to coarse. (TOPSOIL)				0.20	12.79			0.50 0.50 0.50	B1 D1 ES1	PID 0.50m, 0.0ppm	1
[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)											
[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)											
[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)											
[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)											
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	3
											4
											5
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.											

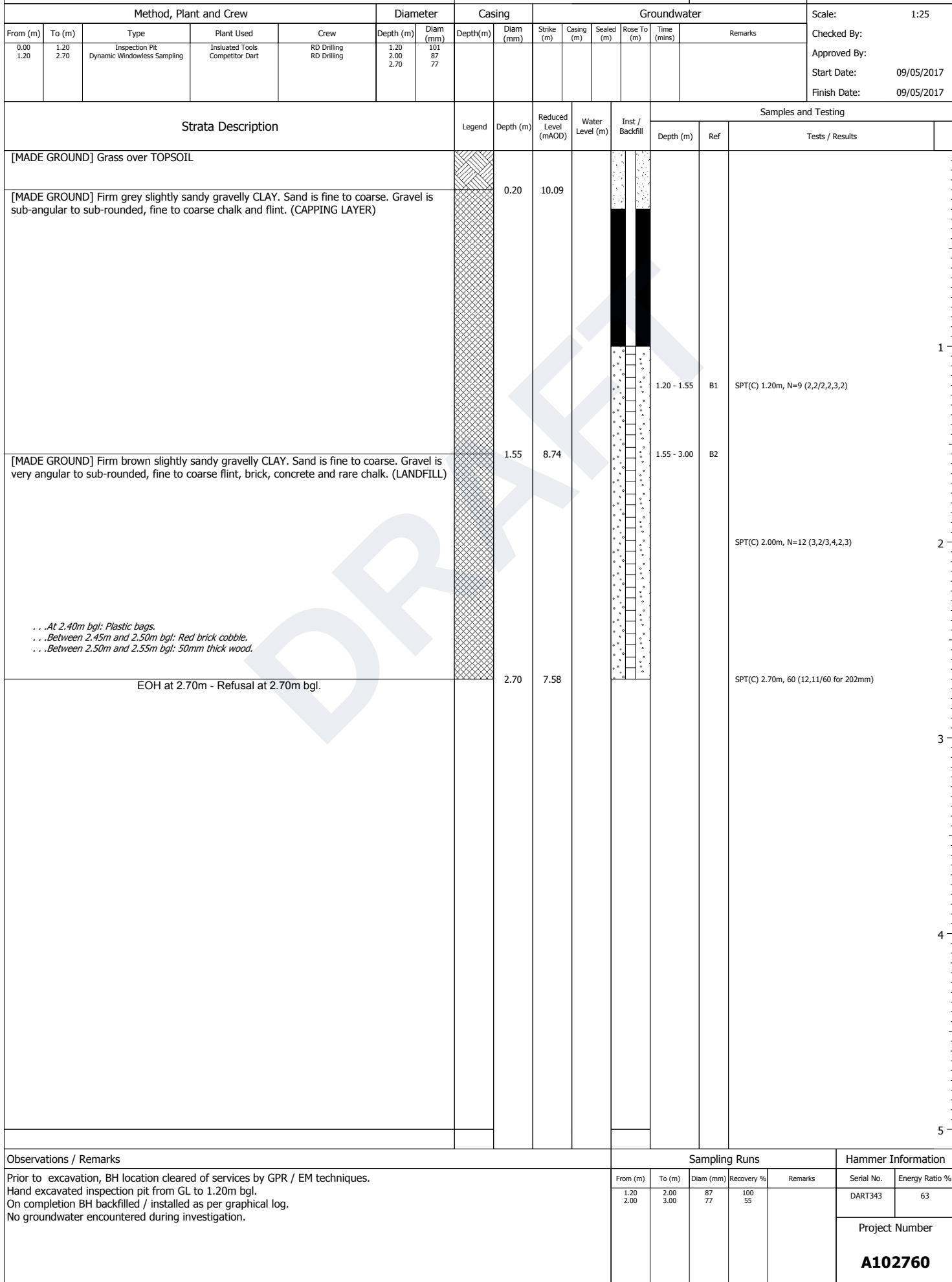


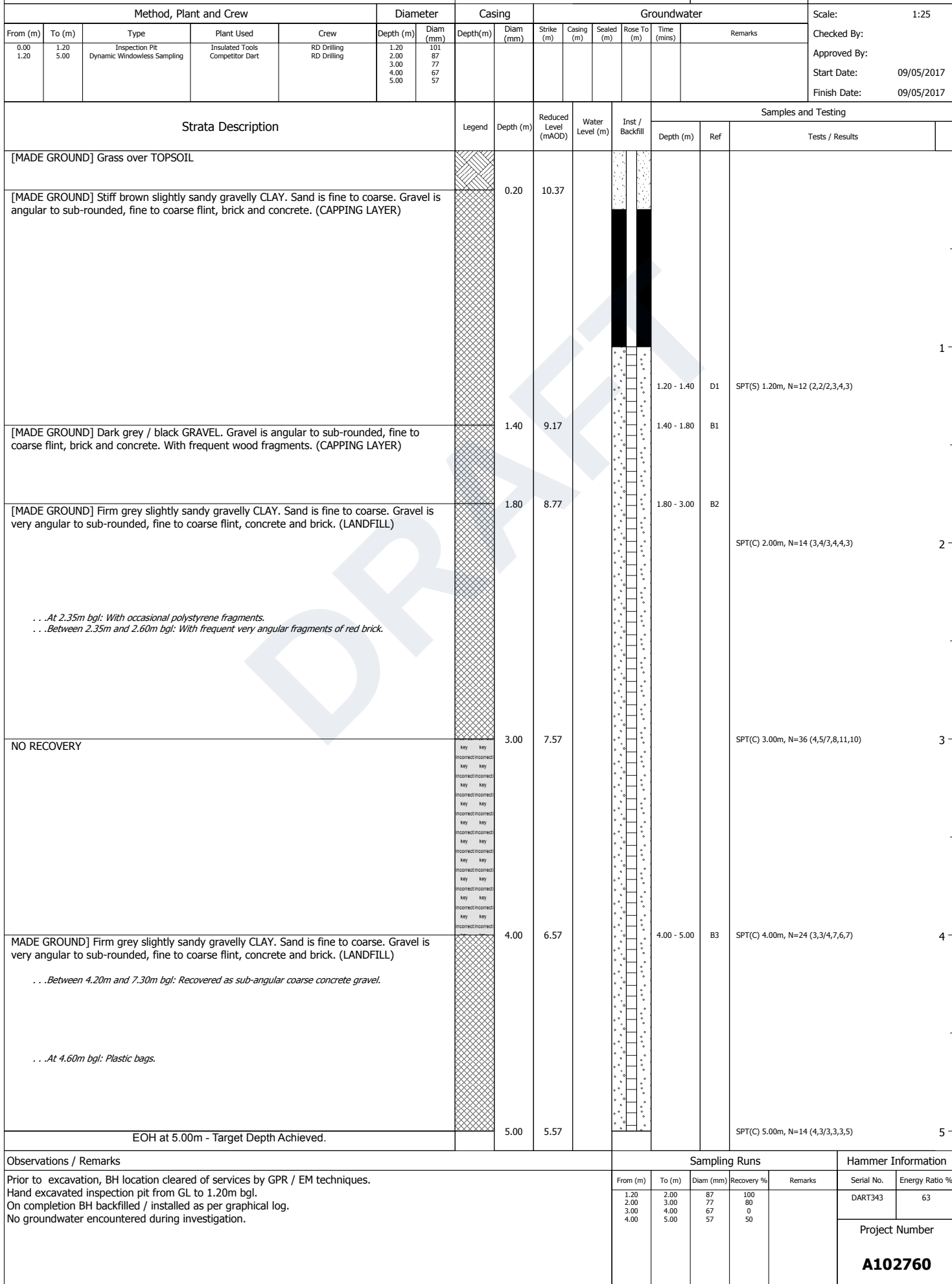


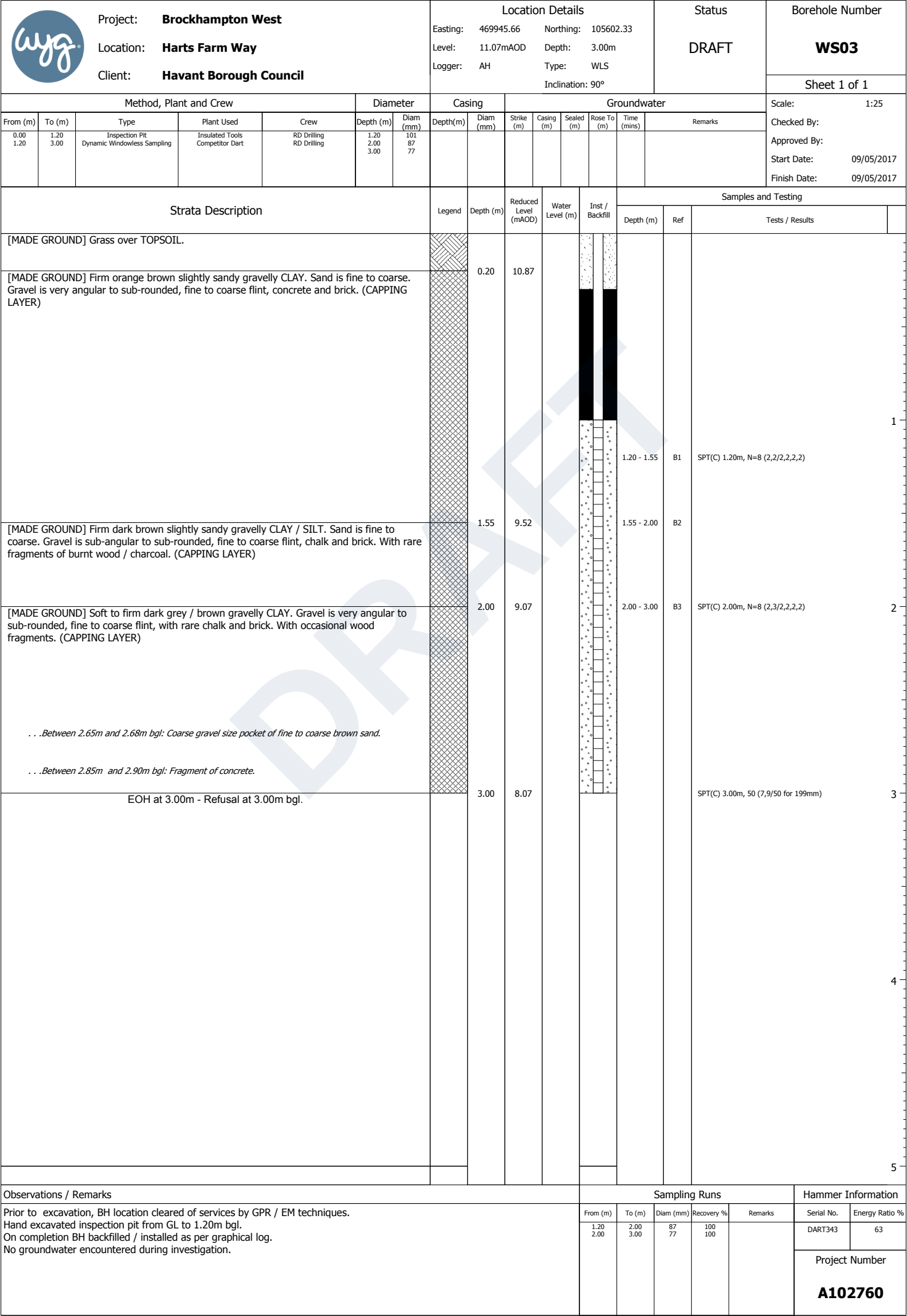
	Project: Brockhampton West		Location Details				Status		Pit Number		
	Location: Harts Farm Way		Easting: 470205.12 Northing: 105637.00 Level: 8.17mAOD Depth: 4.00m Logger: SN Type: TP				DRAFT		TP09		
Client: Havant Borough Council								Sheet 1 of 1			
Pit Dimensions 0.60m 4.00m		Hole Information		Groundwater				Scale: 1:25			
		Orientation: ° Shoring: None Stability: Stable Plant: 8T Tracked		Strike (m)	Rose To (m)	After (mins)	Remarks	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)	Backfill	Samples and Testing				
							Depth (m)	Ref	Tests / Results		
[MADE GROUND] ASPHALT.			0.05	8.12			0.40 0.40 0.40	B1 D1 ES1	PID 0.40m, 0.1ppm		
[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							
[MADE GROUND] Soft to firm light brown slightly gravelly CLAY. Gravel is angular to sub-rounded, fine to coarse flint and chalk. (CAPPING LAYER)											
... 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 Details				Status		Pit Number	
	Location: Harts Farm Way		Easting: 470002.28 Northing: 105647.45 Level: 10.57mAOD Depth: 3.70m Logger: SN Type: TP				DRAFT		TP11	
Client: Havant Borough Council								Sheet 1 of 1		
Pit Dimensions 0.60m 4.00m	Hole Information		Groundwater				Scale: 1:25			
	Orientation: °		Strike (m)	Rose To (m)	After (mins)	Remarks	Checked By:			
	Shoring: None						Approved By:			
Stability: Stable						Start Date: 09/05/2017				
Plant: 8T Tracked						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.			0.20	10.37			0.50 0.50 0.50	B1 D1 ES1	PID 0.50m, 0.2ppm	
[MADE GROUND] Soft to firm light brown / orange slightly sandy CLAY. Sand is fine. With occasional ceramic pipe. (CAPPING LAYER)			0.70	9.87						
[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)			1.50	9.07			1.40 1.40 1.40	B2 D2 ES2	PID 1.40m, 0.7ppm	
[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)			3.00	7.57			2.50 2.50 2.50	B3 D3 ES3	PID 2.50m, 21.0ppm	
. . . At 2.70m bgl: Whole lorry tyre & large metal sheet (1.50m long).			3.70	6.87			3.10 3.10 3.10	B4 D4 ES4	PID 3.10m, 17.0ppm	
EOH at 3.70m - Target Depth Achieved.										
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								

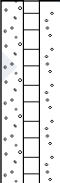
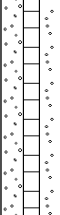
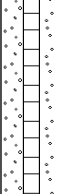
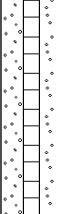
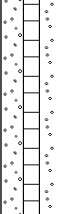
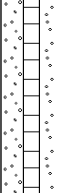
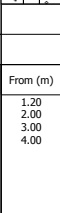


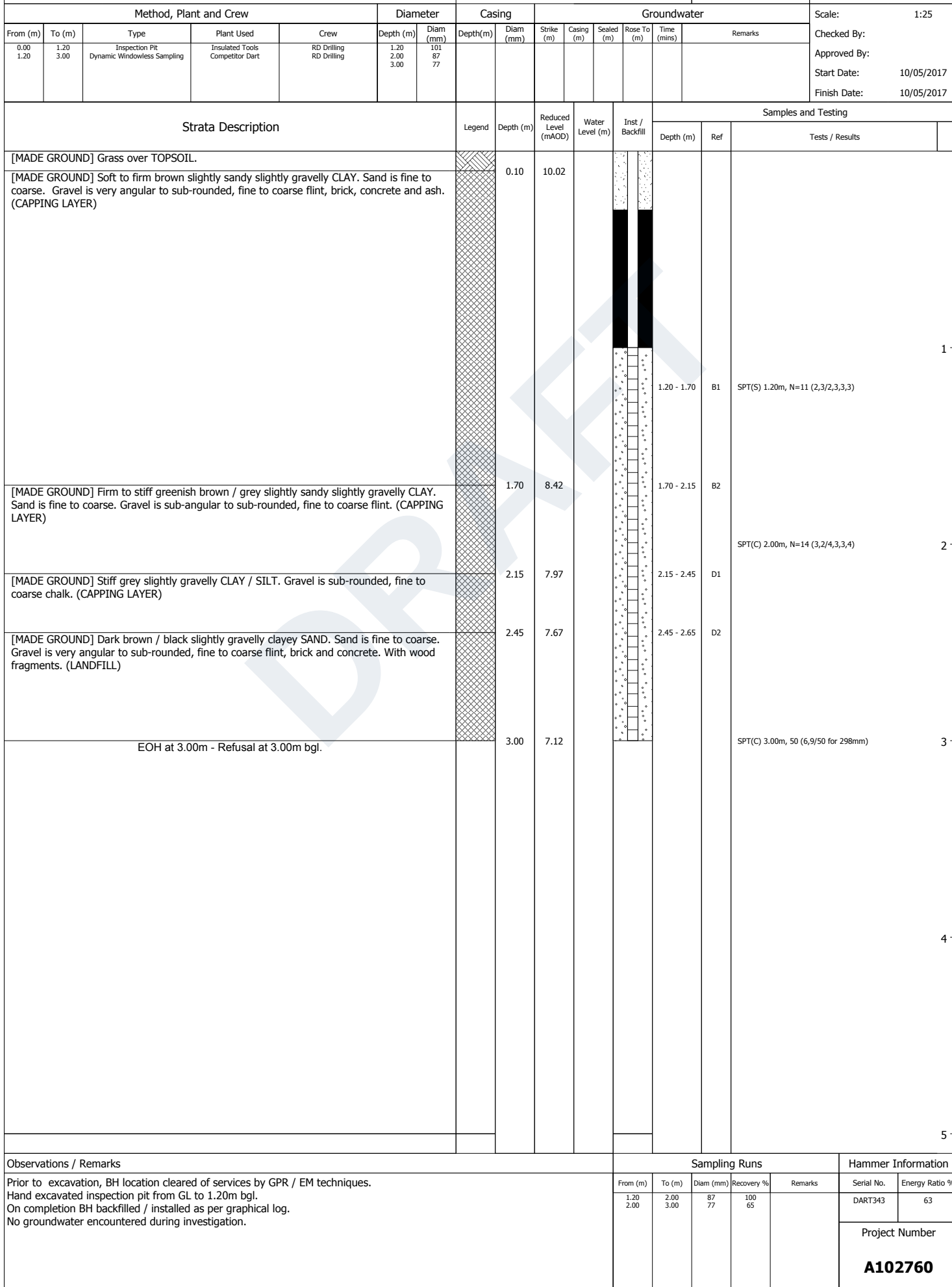




 Project: Brockhampton West Location: Harts Farm Way Client: Havant Borough Council						Location Details						Status		Borehole Number	
						Easting: 470062.26 Northing: 105692.65 Level: 11.01mAOD Depth: 4.00m Logger: AH Type: WLS Inclination: 90°						DRAFT		WS04	
														Sheet 1 of 1	
Method, Plant and Crew					Diameter		Casing		Groundwater					Scale: 1:25	
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	Checked By:
0.00 1.20	1.20 4.00	Dynamic Windowless Sampling Dynamic Windowless Sampling	Insulated Tools Competitor Dart	RD Drilling RD Drilling	1.20 2.00 3.00 4.00	101 87 77 67									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.								0.30	10.71						
[MADE GROUND] Soft to firm orange brown slightly sandy slightly gravelly CLAY. Sand is fine to coarse. Gravel is sub-angular to sub-rounded, fine to coarse flint and brick. (CAPPING LAYER)								0.80	10.21						
[MADE GROUND] Orange brown mottled orange fine and medium SAND. (CAPPING LAYER)								1.30	9.71			1.20 - 1.30 1.30 - 2.00	D1 B2	SPT(C) 1.20m, N=21 (3,4/4,5,6,6)	
[MADE GROUND] Soft to firm grey mottled brown slightly sandy gravelly CLAY. Sand is fine to coarse. Gravel is very angular to sub-rounded, fine to coarse flint, chalk and burnt ash type material. (LANDFILL)								2.00	9.01					SPT(C) 2.00m, N=15 (3,4/3,4,5,3)	
NO RECOVERY							incorrect key incorrect key								

Method, Plant and Crew						Diameter		Casing		Groundwater						
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	Scale:	1:25
0.00 1.20	1.20 3.00	Inspection Pit Dynamic Windowless Sampling	Insulated Tools Cometitor Dart	RD Drilling RD Drilling	1.20 2.00 3.00	101 87 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] 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 1.30 - 1.60	D1 B1	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			1.60 - 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)								1.90	8.82			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		
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.										From (m)	To (m)	Diam (mm)	Recovery %	Remarks	Serial No.	Energy Ratio %
										1.20 2.00	2.00 3.00	87 77	100 30		DART343	63
										Project Number						
										A102760						

 Project: Brockhampton West Location: Harts Farm Way Client: Havant Borough Council						Location Details						Status DRAFT		Borehole Number		
						Easting: 470051.70 Northing: 105635.00 Level: 10.98mAOD Depth: 5.00m Logger: AH Type: WLS Inclination: 90°								WS06		
						Sheet 1 of 1										
Method, Plant and Crew					Diameter		Casing		Groundwater						Scale: 1:25	
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	Checked By:	
0.00 1.20	1.20 5.00	Inspection Pit Dynamic Windowless Sampling	Insulated Tools Competitor Dart	RD Drilling RD Drilling	1.20 2.00 3.00 4.00 5.00	101 87 77 67 57									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] Orange brown slightly gravelly fine to coarse SAND. Sand is fine to coarse. Gravel is very angular to sub-rounded, fine to coarse flint. (CAPPING LAYER)								0.15	10.83							
[MADE GROUND] White and brown slightly clayey slightly gravelly SILT. Gravel is angular to sub-rounded, fine to coarse flint and brick. Silt is comminuted putty chalk. (CAPPING LAYER)								1.65	9.33				B2		SPT(C) 1.20m, N=15 (3,3/4,3,4,4)	
[MADE GROUND] Brown slightly sandy clayey GRAVEL. Sand is fine to coarse. Gravel is very angular to sub-rounded, fine to coarse flint, concrete and brick. (CAPPING LAYER)								2.30	8.68				B3		SPT(C) 2.00m, N=11 (2,3/3,3,2,3)	
...Between 2.60m and 2.70m bgl: Full red brick.																
[MADE GROUND] Black clayey GRAVEL. Gravel is angular to sub-rounded, fine to coarse flint, brick and concrete. With frequent wood and plastic. (LANDFILL)								3.00	7.98				B4		SPT(C) 3.00m, N=9 (3,3/2,2,3,2)	
																
																
																
EOH at 5.00m - Target Depth Achieved.								5.00	5.98						SPT(C) 4.00m, N=13 (2,3/3,4,3,3)	
Observations / Remarks																
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.							Sampling Runs						Hammer Information			
							From (m)	To (m)	Diam (mm)	Recovery %	Remarks	Serial No.	Energy Ratio %			
							1.20	2.00	87	100		DART343	63			
							2.00	3.00	77	80						
							3.00	4.00	67	40						
													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: 1:25	
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	Checked By:
0.00 1.20	1.20 3.00	Inspection Pit Dynamic Windowless Sampling	Insulated Tools Competitor Dart	RD Drilling RD Drilling	1.20 2.00 3.00 4.00	101 87 77 67									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.								0.10	14.11			1.20 - 1.55	B1	SPT(C) 1.20m, N=12 (3,4/3,3,3,3)	
[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. (CAPING LAYER)															
[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. (CAPING LAYER)								1.55	12.66			1.55 - 2.30	B2	SPT(C) 2.00m, N=13 (3,5/4,4,3,2)	
...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. (CAPING LAYER)								2.30	11.91			2.30 - 2.50	B3	SPT(C) 3.00m, N=50 (5,7/13,13,12,12)	
...At 3.75m bgl: Piece of plywood.												2.50 - 4.00	B4		
EOH at 4.00m - Refusal at 3.00m bgl.								4.00	10.21						
Observations / Remarks							Sampling Runs							Hammer Information	
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.							From (m)	To (m)	Diam (mm)	Recovery %	Remarks	Serial No.	Energy Ratio %		
							1.20	2.00	87	100		DART343	63		
							2.00	3.00	77	60					
							3.00	4.00	67	25					
														Project Number	
														A102760	

		Project: Brockhampton West				Location Details				Status		Borehole Number			
		Location: Harts Farm Way				Easting: 470177.47 Northing: 105681.74				DRAFT		WS09			
		Client: Havant Borough Council				Level: 9.46mAOD Depth: 5.00m									
						Logger: AH Type: WLS									
						Inclination: 90°						Sheet 1 of 1			
Method, Plant and Crew					Diameter		Casing		Groundwater					Scale: 1:25	
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	Checked By:
0.00	1.20	Inspection Pit Dynamic Windowless Sampling	Insulated Tools Competitor Dart	RD Drilling RD Drilling	1.20	101									Approved By: Start Date: 10/05/2017 Finish Date: 10/05/2017
1.20	5.00				2.00	87									
					3.00	77									
					4.00	67									
					5.00	57									
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)															

Method, Plant and Crew					Diameter		Casing		Groundwater					Scale: 1:25		
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	Checked By:	
0.00 1.20	1.20 5.00	Inspection Pit Dynamic Windowless Sampling	Insulated Tools Competitor Dart	RD Drilling RD Drilling	1.20 2.00 3.00 4.00	101 87 77 67									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				
{☐}{MADE GROUND} Grass over TOPSOIL.												Depth (m)	Ref	Tests / Results		
[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							
. . .At 2.40m bgl: Carpet.																
. . .At 3.00m bgl: Frequent plastic bags and polystyrene.																
EOH at 4.00m - Target Depth Achieved.								4.00	9.45							
Observations / Remarks							Sampling Runs							Hammer Information		
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.							From (m)	To (m)	Diam (mm)	Recovery %	Remarks	Serial No.	Energy Ratio %			
							1.20	2.00	87	100		DART343	63			
							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 – R0101



Photograph 2 – R0101



Photograph 3 – RO101



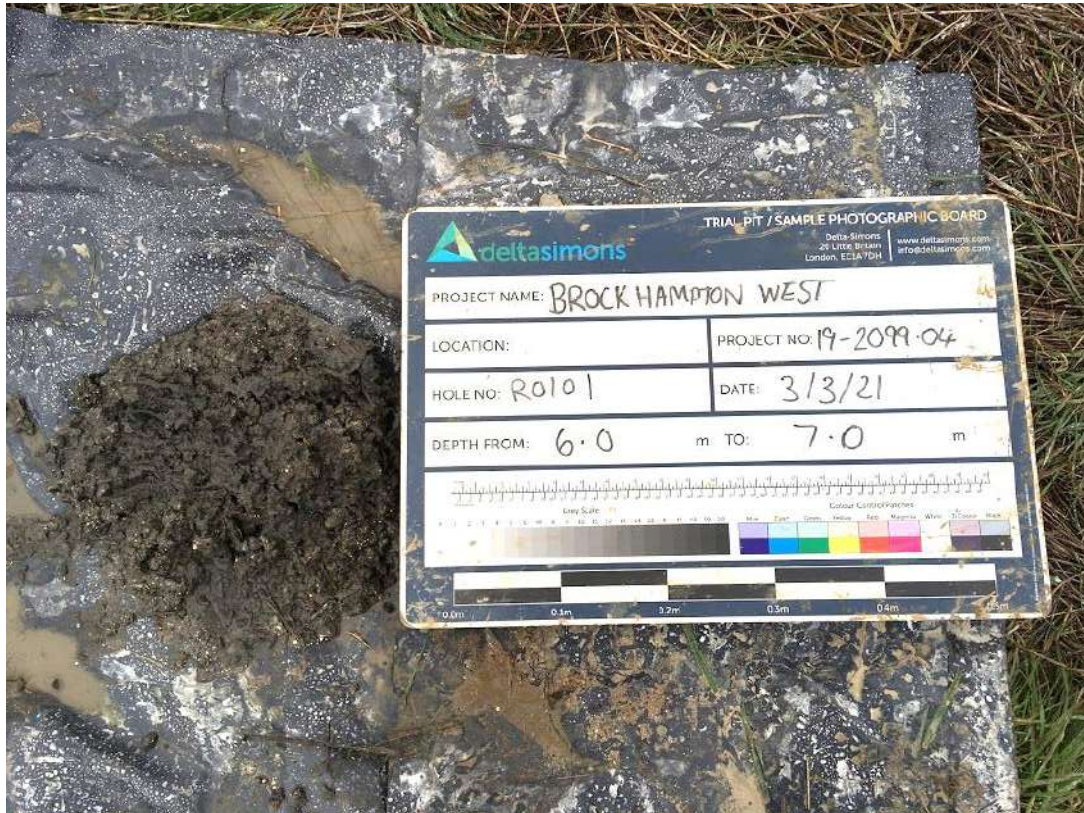
Photograph 4 – RO101



Photograph 5 – RO101



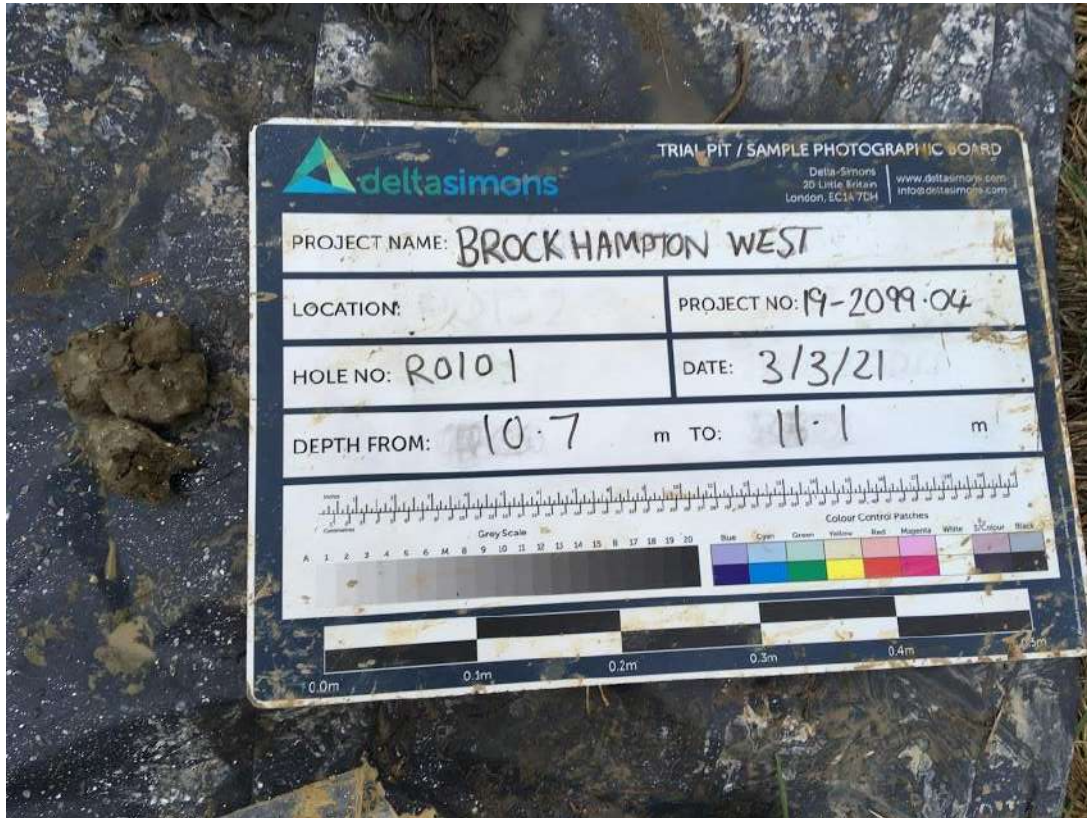
Photograph 6 – RO101



Photograph 7 – RO101



Photograph 8 – RO101



Photograph 9 – R0101



Photograph 10 – RO101



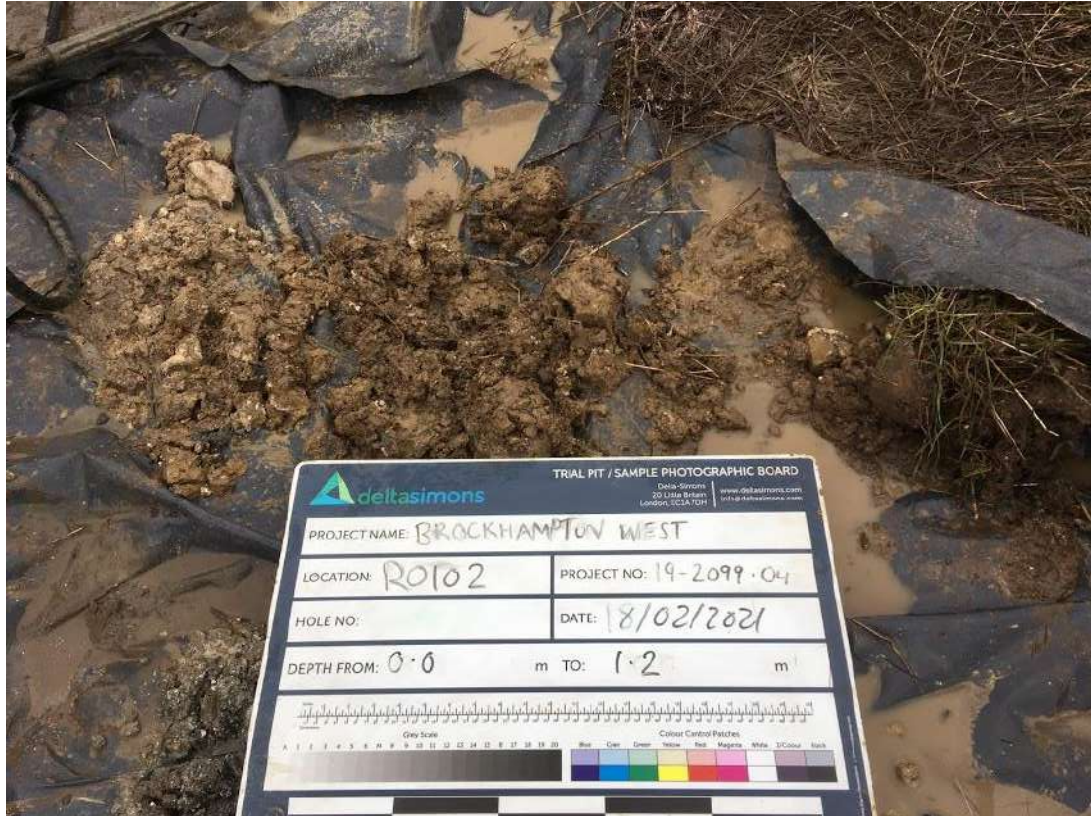
Photograph 11 – RO101



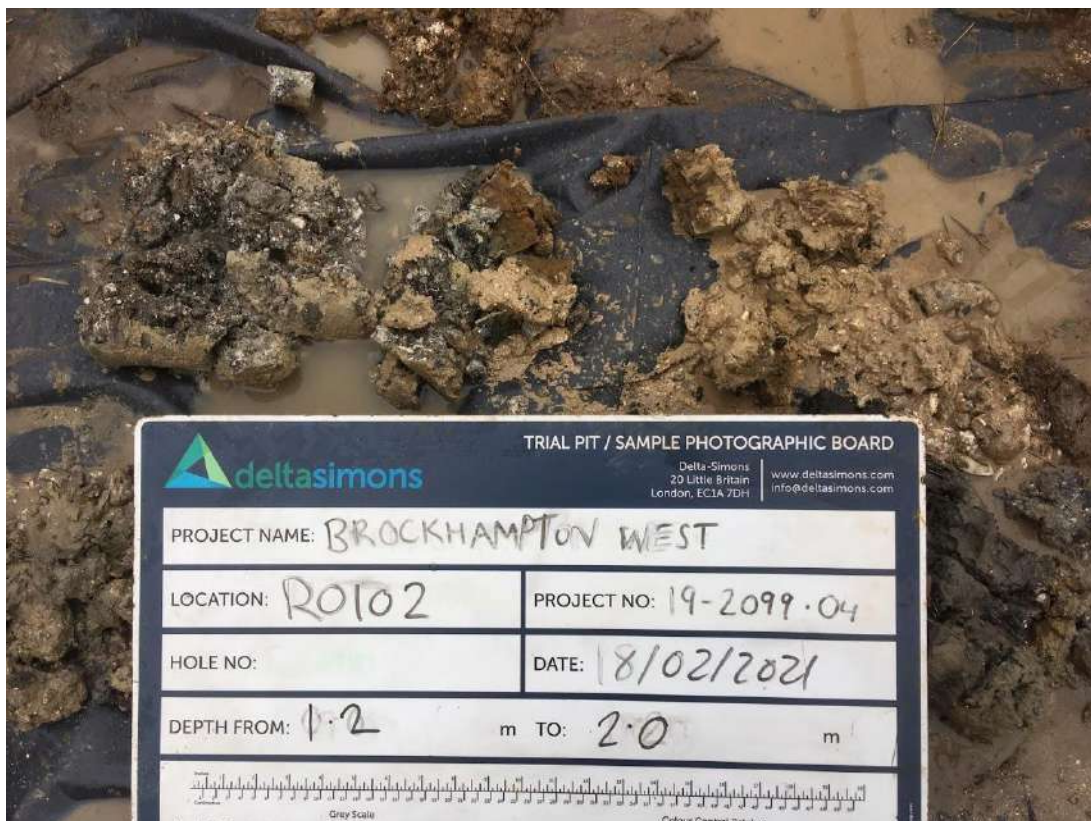
Photograph 12 – RO101



Photograph 13 – RO101



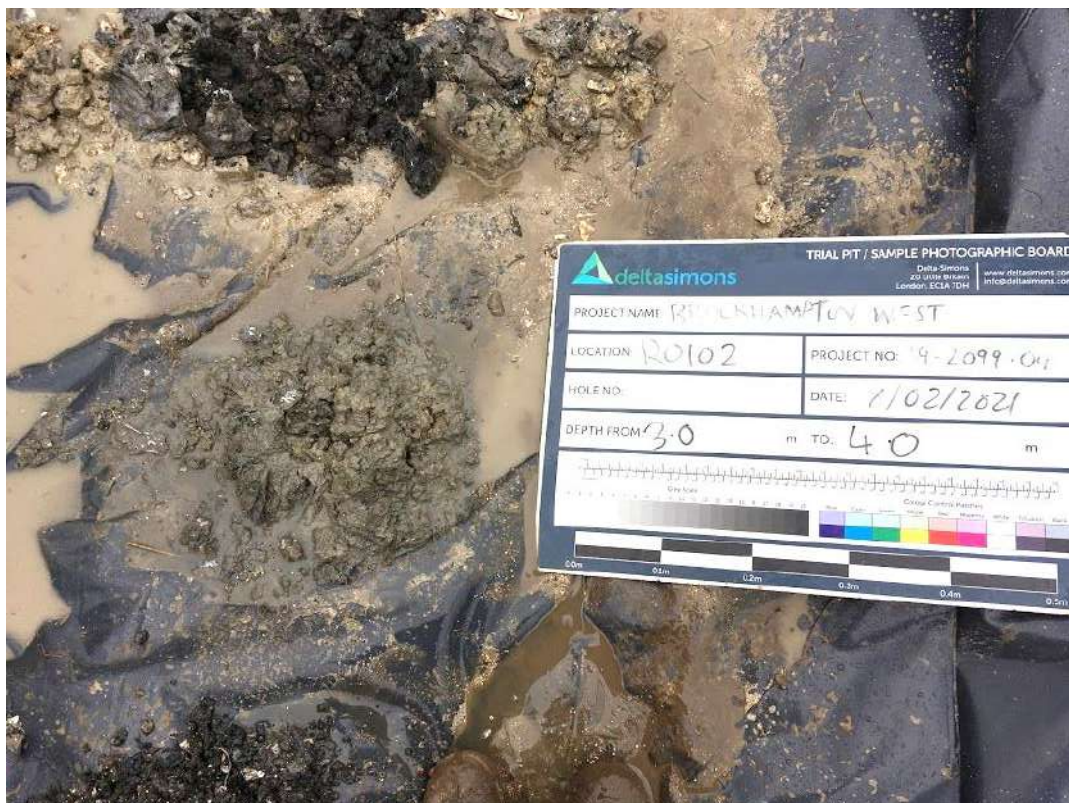
Photograph 14 – RO102



Photograph 15 – RO102



Photograph 16 – RO102



Photograph 17 – RO102



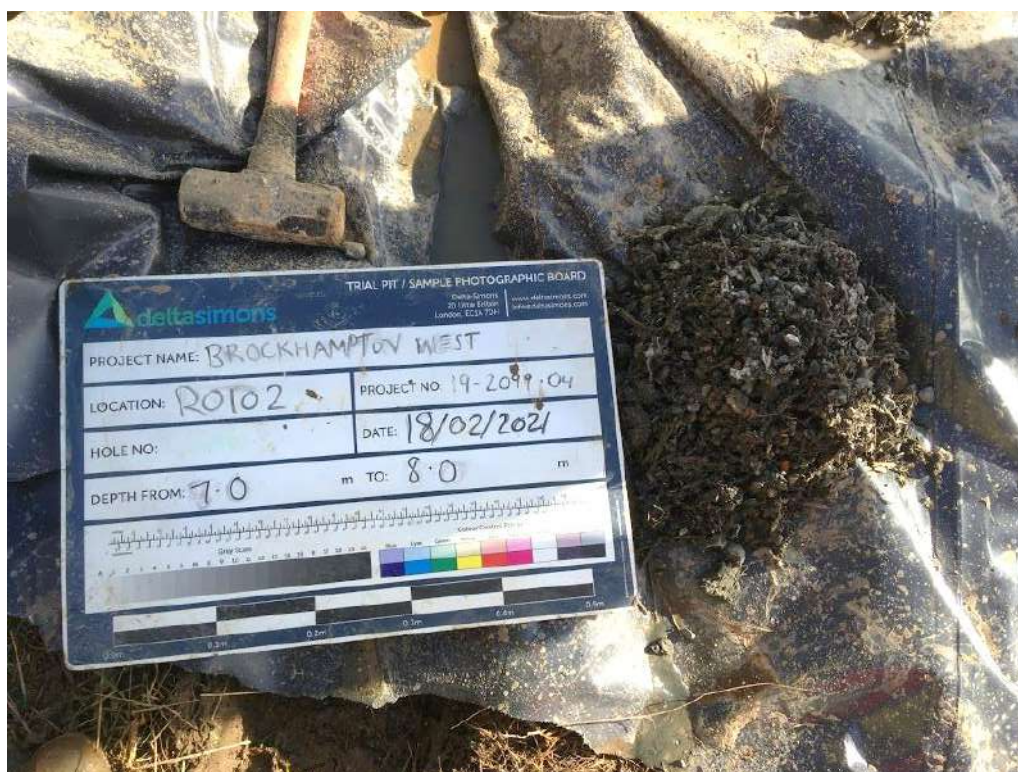
Photograph 18 – RO102



Photograph 19 – RO102



Photograph 20 – RO102



Photograph 21 – RO102



Photograph 22 – RO102



Photograph 23 – RO102



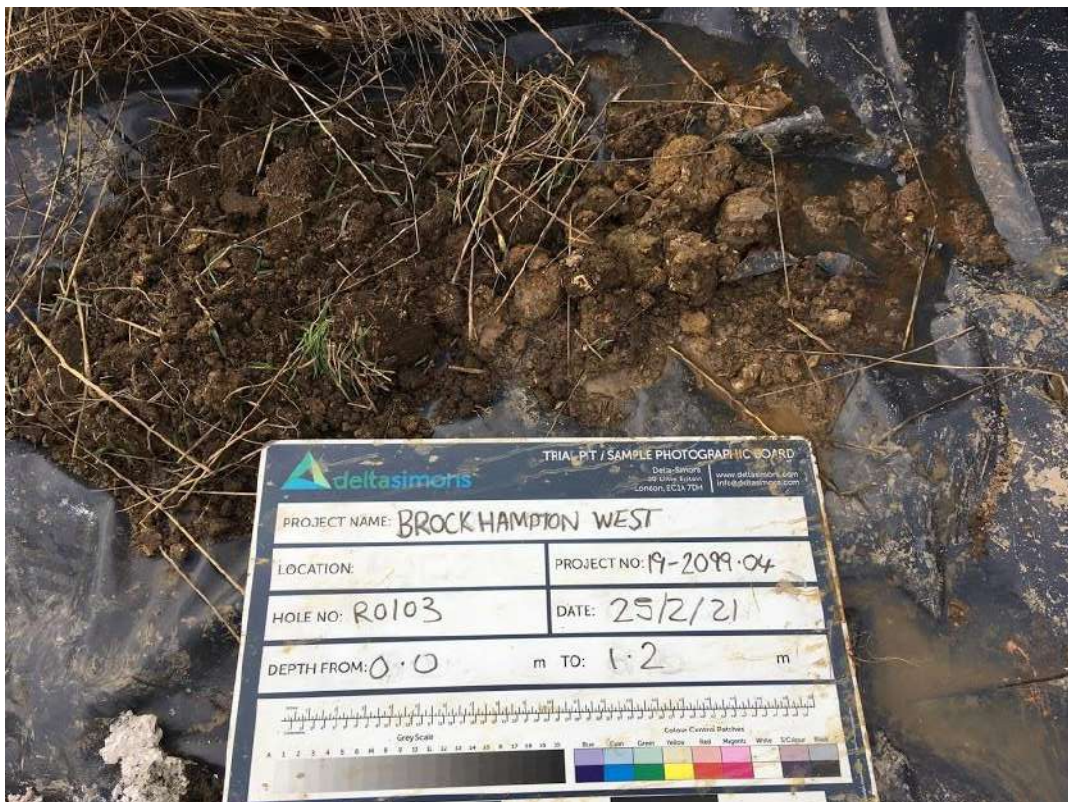
Photograph 24 – RO102



Photograph 25 – RO102



Photograph 26 – RO102



Photograph 27 – RO103



Photograph 28 – RO103



Photograph 29 – RO103



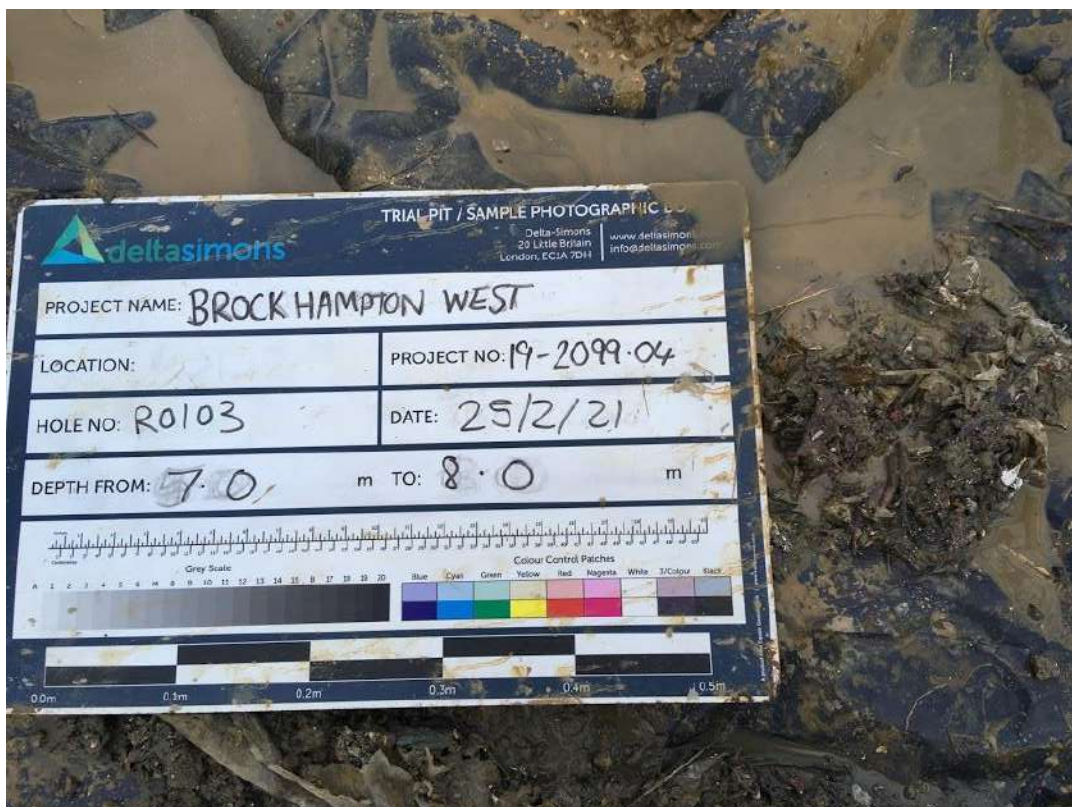
Photograph 30 – RO103



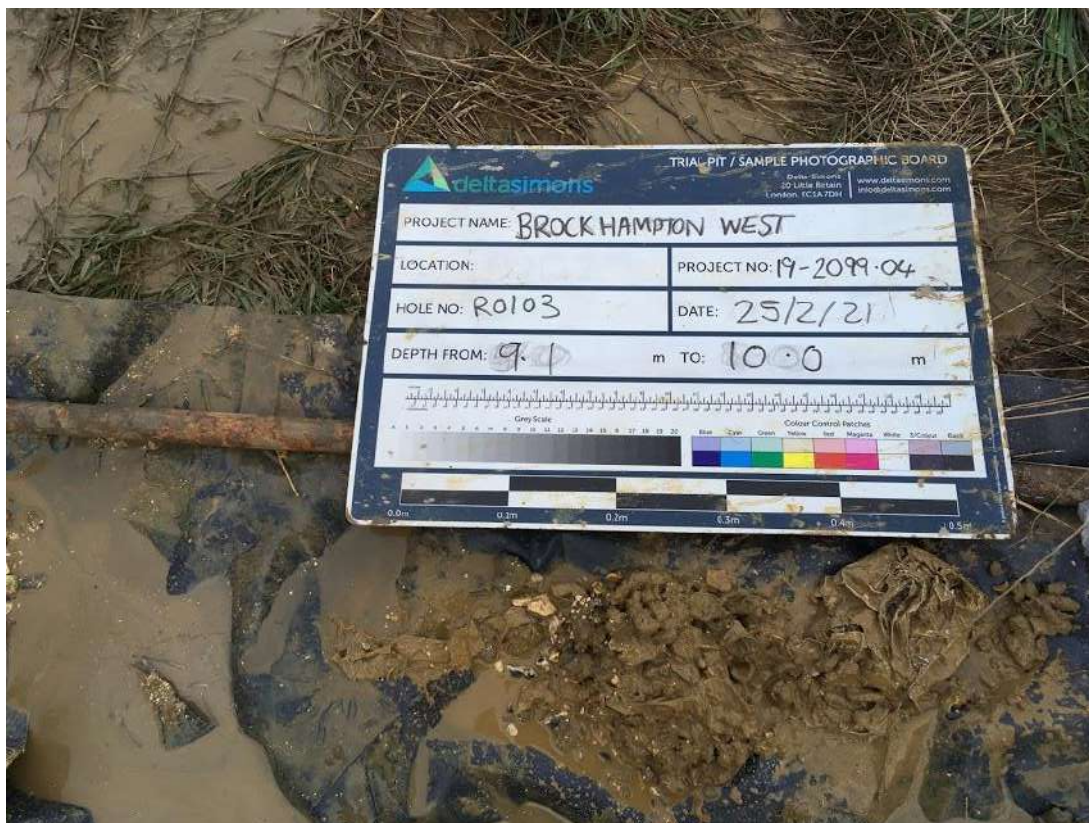
Photograph 31 – RO103



Photograph 32 – RO103



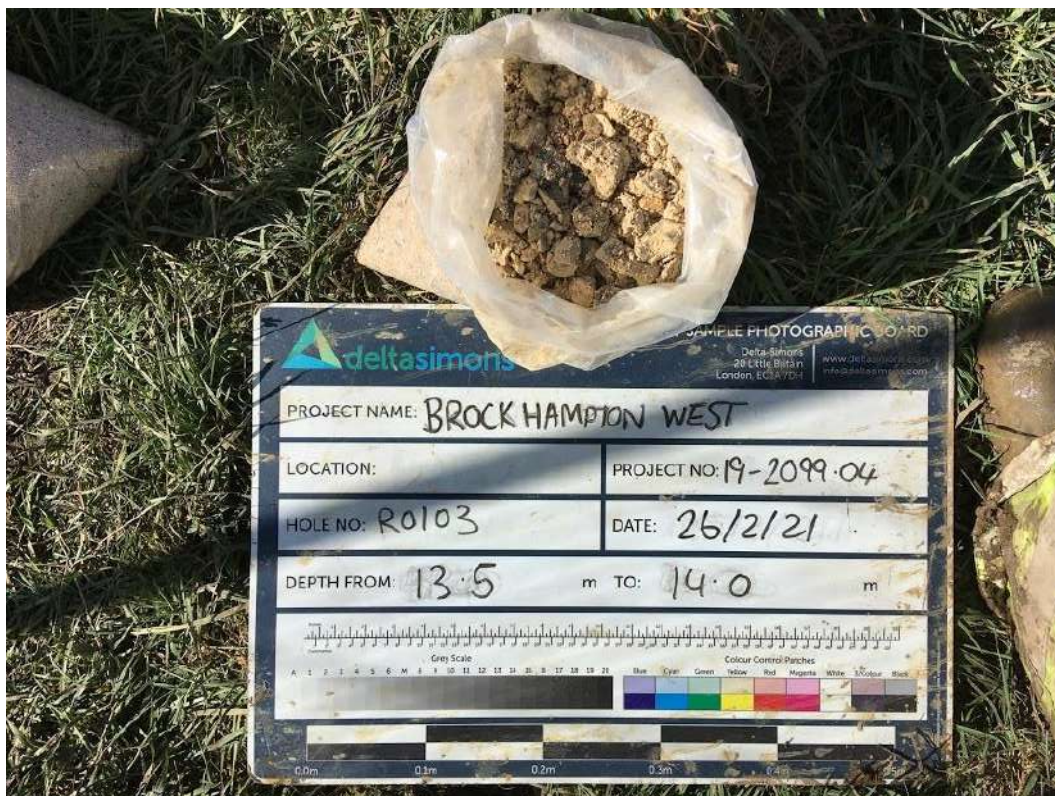
Photograph 33 – RO103



Photograph 34 – RO103



Photograph 35 – RO103



Photograph 36 – RO103



Photograph 37 – RO103



Photograph 38 – RO103



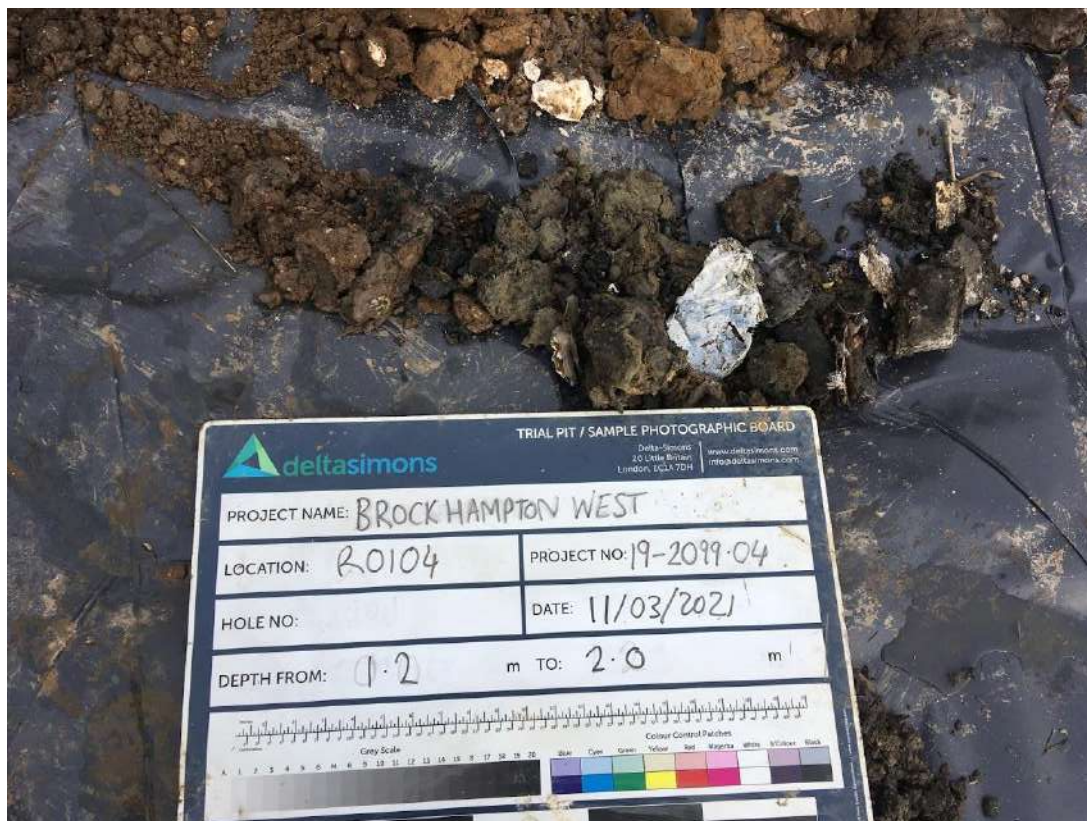
Photograph 39 – RO103



Photograph 40 – RO103



Photograph 41 – RO104



Photograph 42 – RO104



Photograph 43 – RO104



Photograph 44 – RO104



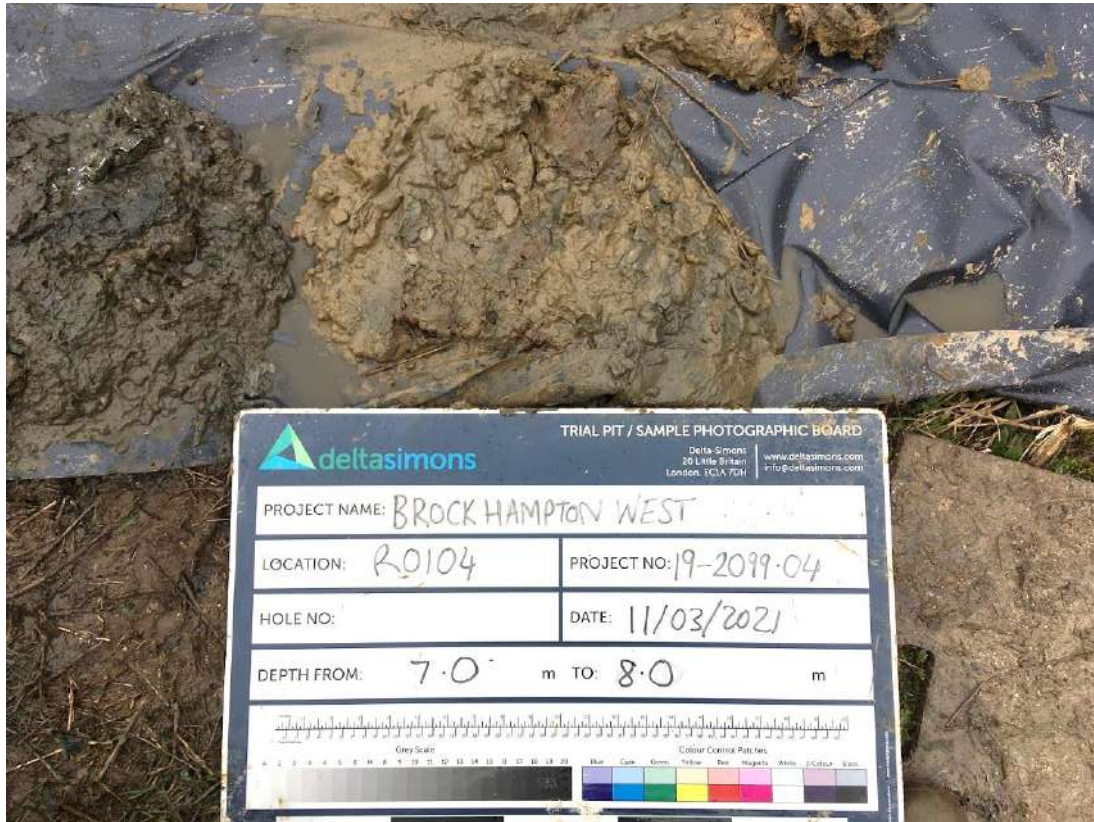
Photograph 45 – RO104



Photograph 46 – RO104



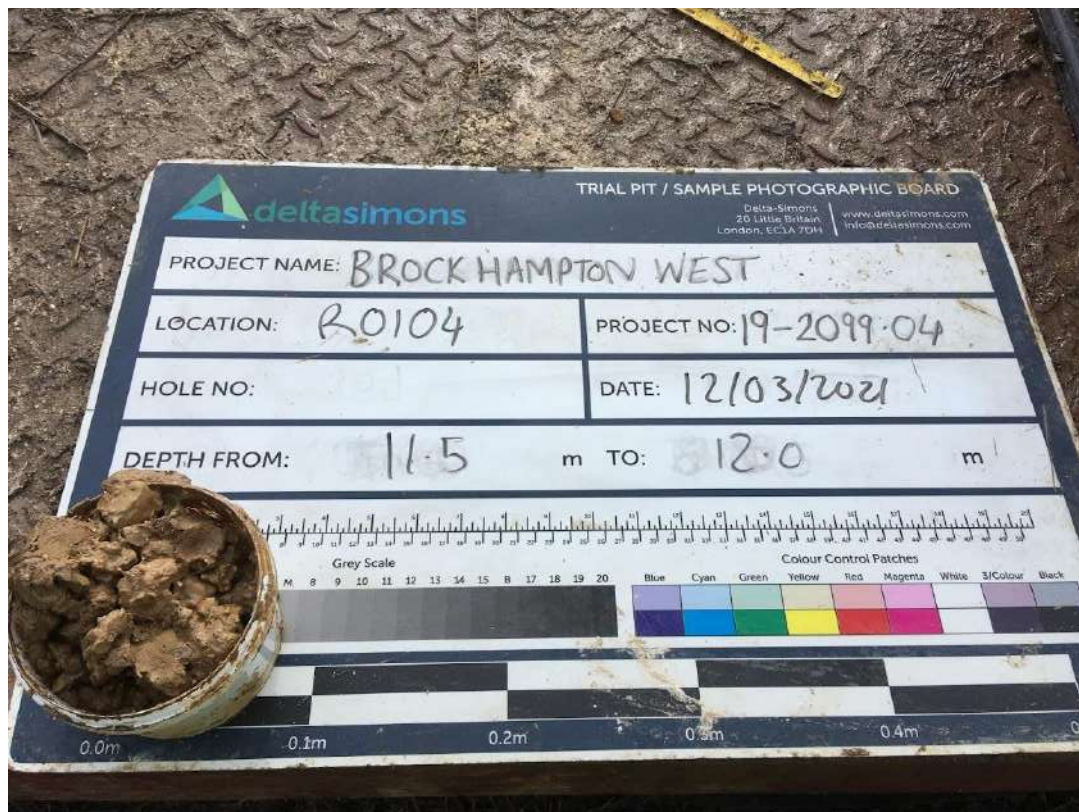
Photograph 47 – RO104



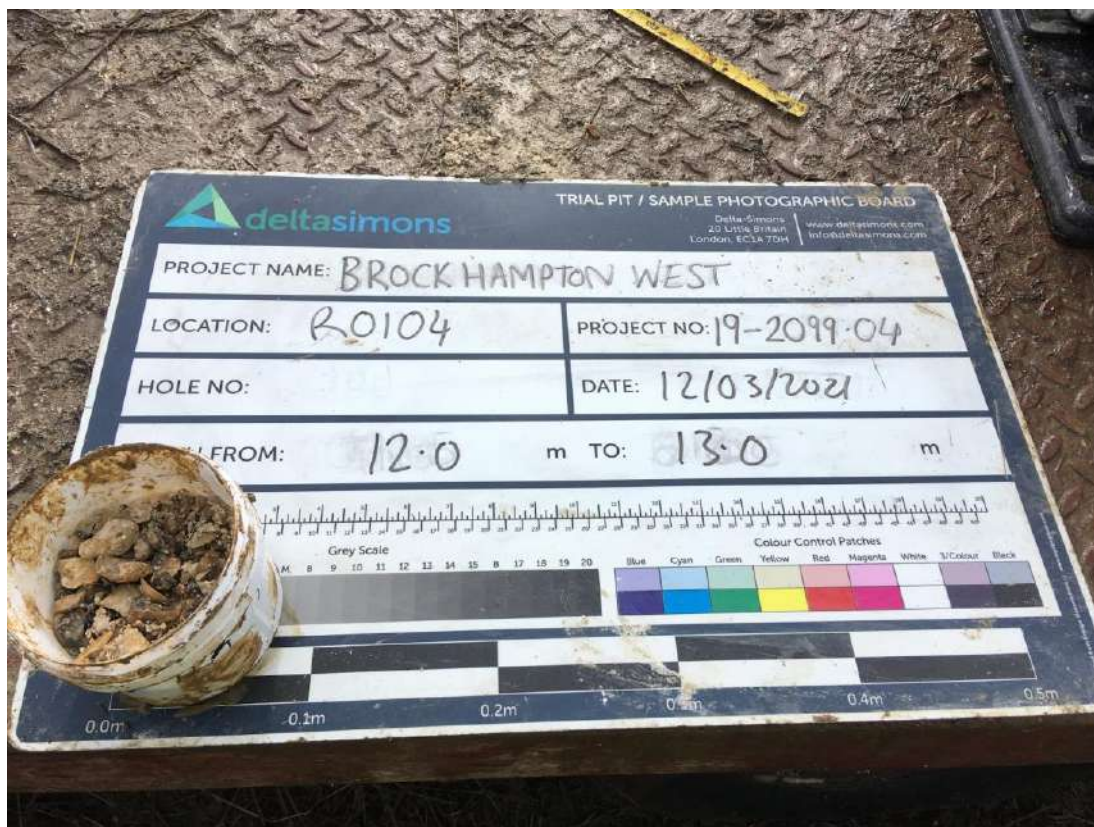
Photograph 48 – RO104



Photograph 49 – RO104



Photograph 50 – RO104



Photograph 51 – RO104



Photograph 52 – RO104



Photograph 53 – RO104



Photograph 54 – RO105



Photograph 55 – RO105

