



Proposed Site for Gasification Plant, Shelton Road, Willowbrook East Industrial Estate, Corby NN17 5XH

**Clean Power Properties Ltd** 

Delta-Simons Project No. 15-0645.02

Issued: December 2015



### **EXECUTIVE SUMMARY**

### **ENVIRONMENTAL AND GEOTECHNICAL SITE ASSESSMENT**

## PROPOSED SITE FOR GASIFICATION PLANT, SHELTON ROAD, WILLOWBROOK EAST INDUSTRIAL ESTATE, CORBY NN17 5XH

**DELTA-SIMONS PROJECT NUMBER: 15-0645.02** 

Context and Purpose	Delta-Simons Environmental Consultants Limited was instructed by Clean Power Properties Limited, to undertake an Environmental and Geotechnical Assessment of a proposed site being considered for acquisition for redevelopment as a gasification plant at Shelton Road, Willowbrook East Industrial Estate, Corby NN17 5XH.
	The Site investigation has been carried out in order to provide information on the quality of the soil and groundwater beneath the Site in the context of land contamination and provide information on the ground gas regime beneath the Site. In addition, the assessment will provide geotechnical information to assist in the design of suitable foundations.
Current Site Status	The Site, comprises a flat area covered by roadways and gravel surfaced parking bays, used for open storage of cars. A landscaped strip runs along the northern and eastern edges of the Site. The Site is part of a wider area used for storage of cars, extending to the west and south, and industrial/commercial buildings associated with the Willowbrook East Industrial Estate, to the south. Further south, beyond Steel Road, are facilities owned by Tata Steel and associated with the former Corby Steelworks.
Environmental Setting	The Site is reportedly underlain by a significant thickness of Made Ground, comprising granular cover material overlying reworked glacial till, overlying steelworks/settlement lagoon waste fill. This overlies further Made Ground over remnants of the previously worked bedrock of the Northamptonshire Sand Ironstone, classified as a Secondary A Aquifer. Groundwater has been previously observed in the Made Ground and bedrock.
	The Site is not located within a groundwater Source Protection Zone (SPZ) and there are no groundwater abstraction records within 2 km. of the Site. The nearest surface water feature is the channelized Willow Brook North Arm, located approximately 8 m to the north of the Site. The nearest surface water abstraction record is 1,865 m south of the Site, for cooling purposes, now revoked.
	The environmental sensitivity of the Site setting is considered to be low to moderate given the proximity of the Willow Brook North Arm to the northern Site boundary, the significant thickness of low permeability reworked glacial till, the designation of the bedrock as a Secondary A aquifer, and the lack of proximate ground and surface water abstractions.
Site Investigation	The ground investigation undertaken by Delta-Simons comprised:
	$\Delta$ Drilling of 20 dynamic sampler boreholes (DS101 to 119 and DS107a) to a maximum depth of 3.0 m bgl;
	$\Delta$ Drilling of ten cable percussion borehole (BH101 to BH110) to a maximum depth of 20.45 m bgl;
	$\Delta$ Drilling of four rotary boreholes (BHR1 to BHR4) to a maximum depth of 30.0 m bgl;
	$\Delta$ Installation of 10 selected dynamic sampler, five cable percussive, and four rotary boreholes with 50 mm internal diameter gas and groundwater monitoring wells;
	$\Delta$ Standard penetration tests (SPTs) were undertaken every 1.00 m to 5.00 m bgl, then every 1.50 m thereafter (where undisturbed sampling was not undertaken), and at selected intervals in the rotary boreholes;
	$\Delta$ Completion of two days truck mounted Cone Penetrometer Testing (CPT) over 10 targeted locations, progressed to a maximum depth of 25.15 m bgl;
	$\Delta$ Collection of disturbed and undisturbed soil samples from selected locations for

- subsequent laboratory environmental analysis and geotechnical testing;
- Collection of groundwater samples from installed boreholes on one occasion;
   and
- $\Delta$  Four rounds of gas and groundwater level monitoring.

#### **Ground Conditions**

Encountered ground conditions comprised a thin layer of granite aggregate and topsoil, topsoil or asphalt hardstanding at each intrusive location. Made Ground (Fill) was encountered in each borehole location advanced and generally comprised a shallow layer of light greyish brown, slightly gravelly sand, underlain by greyish black/brown and greenish brown, slightly silty/sandy/gravelly clays with variable layers of pseudo-fibrous and fibrous peat. Gravels generally consisted of fine to coarse sandstone and chalk. Orangey brown, slightly clayey sand was encountered in BH101, BH102 and BH103, and is considered to represent possible fill material with a maximum depth of fill encountered being 20.5 mbgl.

The Northampton Sand Formation, consisting of strong, massive orangey brown sandstone was encountered in boreholes R1, R3 and R4 and BH109. The Northampton Sand Formation was not present in all locations drilled indicating this had been potentially extracted to its full depth in parts of the Site. Underlying the fill, possible fill or Northampton Sand Formation, were deposits of the Whitby Mudstone Formation comprising, weak, dark grey, slightly weathered, laminated mudstone and was proven to a maximum depth of 29.8 m bgl. Resting groundwater levels recorded during the return monitoring visits were between 0.10 m bgl and 20.33 m bgl.

## **Environmental** Findings

The chemical analysis undertaken on selected soil samples did not identify widespread significantly elevated concentrations of contamination in the tested locations.

A hotspot of TPH contamination was identified in DS107a, however, this is not considered to represent a risk in the context of the proposed redevelopment which it is understood will comprise hardstanding. Asbestos (amosite lagging) was identified in one sample within the Made Ground (2.2-2.5mbgl).

Groundwater chemical analysis results indicate only slightly elevated concentrations of boron and selenium, limited to the rotary borehole R4. Slightly elevated concentrations of Mercury were identified in six of the locations sampled. These exceedance are not considered significant as the Site is not located within a Source Protection Zone, and there are no groundwater abstractions within 2 km of the Site. Marginal exceedances are likely to be representative of wider groundwater quality.

Ground gas monitoring indicated low level gas flow rates and slightly elevated concentrations of methane (maximum concentration of 10.4 % v/v) and carbon dioxide (maximum concentration of 4.9% v/v) giving the Site a Characterisation Situation 2 (CS2 – Low Risk). Basic ground gas protection measures will be required for the development.

## Environmental Recommendations

Based on the information obtained to date the following information can be concluded:

- Δ Significantly elevated concentrations of targeted contaminants above the respective assessment criteria which are considered to represent a risk in the context of the redevelopment have not been identified in soils and a specific remediation exercise is not considered to be required;
- Δ If landscaping is incorporated into the design, a minimum 300 mm of certified suitable for use topsoil/subsoil should be allowed for in such locations;
- Although good site coverage has been achieved, unidentified localised areas of contamination may exist at the Site and an appropriate 'hotspot' protocol should be in place should such contamination be identified during construction;
- $\Delta$  Based on the ground gas monitoring conducted to date, basic gas protection measures would be required to be incorporated into the development for the proposed works:
- For materials removed from site to achieve cut and fill / for pile caps etc. shallow soils likely to be encountered should generally be considered as non-

- hazardous for disposal. Additional waste classification testing as part of the development process (including WAC testing) may be required to facilitate off-Site disposal of Made Ground materials once the specific materials to be removed are identified;
- As with all brownfield development sites, groundworkers who are required to perform sub-surface work at the Site should be made aware of the known contaminants in soil and groundwater and the possibility of encountering additional localised low levels of contamination. This should include information on the potential to encounter Asbestos Containing Materials (ACM). Safe working procedures should be implemented, including damping down of excavations and stockpiles in line with general dust generation mitigation and appropriate levels of PPE provided and utilised. This recommendation should be captured in Site health and safety documentation and in maintenance plans Suitable dust suppression techniques will need to be implemented during the redevelopment; and
- Δ Given the history of the Site, it should be assumed that upgraded water pipe material will be required, albeit, confirmation should be sought from the Local Water Authority.

## Geotechnical Recommendations

Based on the information obtained to date the following information can be concluded:

- $\Delta$  The Made Ground Fill material is considered to be too soft, variable, compressible and unpredictable in its existing condition for conventional shallow foundations at the Site given the expected large design loads;
- A piled foundation solution using bored piles transferring loads to competent bedrock geology encountered at depth is likely to be suitable for the expected design loads. It is recommended that, once pile positioned have been confirmed, each location is predrilled to confirm depth to bedrock and ensure locations are clear of obstructions:
- $\Delta$  It is considered that ground improvement techniques would not be appropriate for the expected design loads given the depth of Made Ground Fill encountered beneath the Site:
- $\Delta$  Due to significant thickness of Made Ground, soils are considered too variable and unpredictable in its existing state for ground bearing floor slabs;
- $\Delta$  In the absence of In-situ DCP CBR tests, it is recommended that a conservative value of 2% be adopted for preliminary pavement design;
- Δ The use of soakaways as a form of drainage is not recommended for the Site given the depth of Made Ground encountered;
- △ All shallow foundation or services excavations at the Site should be considered unstable, therefore, temporary support of all excavations should be considered when excavating on-Site; and
- $\Delta$  The conditions of the soils at the Site would be classified as Design Sulphate Class DS-4 and ACEC Class AC-4 for soils and groundwater. Piling is not generally considered to result in disturbed ground, therefore, any pyrite is unlikely to be oxidised. As such, consideration can be given to water soluble sulphate content of the clay, which in this case would result in a DS-2 classification based on the results obtained.

## Overall Statement of Risk

On the basis of available information, Delta-Simons considers that with regard to potential soil and groundwater contamination issues and associated environmental liabilities, the Site represents an investment opportunity with a **Low** overall risk status.

In the context of a commercial redevelopment remediation would be limited to basic engineering measures and a specific remediation programme will not be needed.

This Environmental Assessment Executive Summary is intended as a summary of the Assessment of the Site based on information received by Delta-Simons at the time of production.

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#### **ENVIRONMENTAL AND GEOTECHNICAL ASSESSMENT**

## PROPOSED SITE FOR GASIFICATION PLANT, SHELTON ROAD, WILLOWBROOK EAST INDUSTRIAL ESTATE, CORBY NN17 5XH

### **CLEAN POWER PROPERTIES LTD**

**DELTA-SIMONS PROJECT NUMBER: 15-0645.02** 

### 1.0 INTRODUCTION

### 1.1 Authorisation

Delta-Simons Environmental Consultants ('Delta-Simons') was instructed by Clean Power Properties Limited (the 'Client'), to undertake an Environmental and Geotechnical Assessment of a proposed site being considered for acquisition for redevelopment as a gasification plant at Shelton Road, Willowbrook East Industrial Estate, Corby NN17 5XH (hereafter referred to as the 'Site').

### 1.2 Context and Purpose

It is understood that the Client is seeking to establish the potential in-ground geotechnical and environmental risks and liabilities as part of due diligence for the proposed purchase and development of the Site. This Environmental and Geotechnical Assessment was prepared following completion of Delta-Simons' report 'Phase I Environmental Assessment, Proposed site for gasification plant at Shelton Road, Willowbrook East Industrial Estate, Corby NN17 5XH' (ref. 15-0645.01), dated July 2015. It is assumed that the reader is familiar with the contents and findings of this report, although a summary of the information is provided.

The Site, comprising 2.53Ha of a previously restored quarry, is currently utilised for open storage of vehicles. The Site has previously been subject to a planning application for redevelopment of the Site as an Advanced Conversion Technology (ACT) and Anaerobic Digestion (AD) facility comprising an 8-12 MWe pyrolysis plant and a 2-3 MWe digestion facility, together with ancillary and support facilities. It is understood the Client is considering an alternative gasification facility for the Site.

Specific geotechnical elements of the investigation were specified by Bouygues E&S Contracting Limited following discussions with the Client to support the preparation of a design by Bouygues.

The purpose of completing the Environmental Assessment is to provide information on the quality of the soil and groundwater beneath the Site in the context of land contamination and provide information on the ground gas regime beneath the Site.

The purpose of completing the Geotechnical Assessment is to provide information regarding the strength and chemical characteristics of the underlying geological deposits in order to aid foundation design of the proposed redevelopment of the Site.

This investigation has been completed in general accordance with BS5930:2015, Code of Practice for Ground Investigations.

This Report has been produced in accordance with the current relevant guidance and best practice as set out within British Standard BS10175, Contaminated Land Report 11 and the National Planning Policy Framework (NPPF).

This Report satisfies 'BREEAM New Construction 2011: LE01 – Site Selection: Criterion 2' by detailing the results of site-investigation works; identifying the degree and sources of contamination; assessing risks to human and environmental health; and providing recommendations for remediation.

### 1.3 Limitations

Although reference may be made to archaeological and ecological issues, or the potential presence of asbestos containing materials (ACMs) and invasive weeds, this Assessment does not constitute an archaeological or ecological assessment, nor does it constitute an asbestos inspection or invasive weeds survey.

This document provides an assessment of the potential and actual contamination of the ground below the Site based upon the available information and in the context of the scope of works undertaken during this investigation. It does not provide a flood risk assessment, as such, any comments relating to such matters are for information only.

During the preparation of this Assessment, Delta-Simons reviewed and evaluated information provided by the Client, Groundsure, Chemtest Ltd and others. Delta-Simons' conclusions, opinions and recommendations are based upon this information. 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.

The recommendations contained in this assessment represent our professional opinions. These opinions were arrived at in accordance with currently accepted industry practices and hydrological and engineering practices at this time and location and, as such, are not a guarantee that the Site is free of hazardous or potentially hazardous materials or conditions.

This assessment was prepared by Delta-Simons for our Client and parties as detailed in the appointment. Any third party using this assessment without reliance does so entirely at their own risk. Delta-Simons makes no warranty or representation whatsoever, express or implied, with respect to the use by a third party of any information contained in this assessment or its suitability for any purpose. Delta-Simons assumes no responsibility for any costs, claims, damages or expenses (including any consequential damages) resulting from the use of this assessment or any information contained in this assessment by a third party.

The Report has not considered the adjacent slope in detail following discussions with the D&B Contractor, this has been considered by others as detailed in the Phase 1 Report prepared for the Site.

### 2.0 SITE STATUS, HISTORY AND ENVIRONMENTAL SETTING

### 2.1 Phase I Desk Study and Walkover Summary

A summary of the current Site status, Site history and environmental setting of the Site from the Delta Simons Phase I Environmental Assessment Report, is presented in Table 1. This review includes information sourced from an Envirocheck Report and historical maps; Environment Agency (EA) and British Geological Survey (BGS) Data; previous third party reports; and observations made during a Site walkover in July 2015.

Table 1 - Summary of Site Status, History and Environmental Setting

# Current Site & Surrounding Area

The Site is located to the west of Shelton Road in the Willowbrook East Industrial Estate, 3 km north-east of Corby town centre, with an area of approximately 2.53 Ha. The Site comprises a flat area covered by roadways and gravel surfaced parking bays, used for open storage of cars. A landscaped strip runs along the northern and eastern edges of the Site.

The Site is proposed to be developed as a waste gasification plant, comprising a large industrial building containing process plant, a number of external fire water tanks, a surface water flow balancing pond, hard surfaced roadways, parking and vehicle delivery areas and landscaping, and is considered to be a low sensitivity development with a commercial end-use.

The Site is part of a wider area used for storage of cars, extending to the west and south, and industrial/commercial buildings associated with the Willowbrook East Industrial Estate, to the south. Further south, beyond Steel Road, are facilities owned by Tata Steel and associated with the former Corby Steelworks.

## Environmental Setting

The Site is reportedly underlain by a significant thickness of Made Ground, comprising granular cover material overlying around 8 m of reworked glacial till, overlying a further 2 m to 9 m of steelworks/lagoon waste fill. This overlies further Made Ground over remnants of the previously worked bedrock of the Northamptonshire Sand Ironstone, classified as a Secondary A Aquifer. Groundwater has been observed at between 8 m and 20 m below ground level (bgl) in the bedrock or Made Ground.

The Site is not located within a groundwater Source Protection Zone (SPZ) and there are no groundwater abstraction records within 2 km. of the Site. The nearest surface water feature is the channelized Willow Brook North Arm, located approximately 8 m to the north of the Site. The nearest surface water abstraction record is 1,865 m south of the Site, for cooling purposes, now revoked.

The environmental sensitivity of the Site setting is considered to be low to moderate given the proximity of the Willow Brook North Arm watercourse to the northern Site boundary, the significant thickness of low permeability reworked glacial till, the designation of the bedrock as a Secondary A aquifer, and the lack of proximate ground and surface water abstractions.

## Historical Land Use

Historically the Site has been associated with opencast ironstone mining and backfilling with steelworks wastes and reworked overburden materials, prior to surface remediation works carried out in 2001-2002 for construction of the current vehicle storage area.

### 3.0 SITE INVESTIGATION

### 3.1 Walkover Survey

A representative of Delta-Simons carried out a walkover survey on the 1<sup>st</sup> September 2015 in order to confirm the location of the proposed exploratory holes.

### 3.2 Intrusive Investigation

The fieldwork was undertaken between the 1<sup>st</sup> September and the 8<sup>th</sup> September 2015, and comprised the following items.

- Δ Supervision of all works by a Delta-Simons Geo-Environmental engineer. All boreholes were logged to BS5930:2015, Code of Practice for Ground Investigations;
- Δ Service avoidance exercise;
- $\Delta$  Drilling of 20 dynamic sampler boreholes (DS101 to 119 and DS107a) to a maximum depth of 3.0 m bgl;
- $\Delta$  Drilling of ten cable percussion borehole (BH101 to BH110) to a maximum depth of 20.0 m bgl;
- Δ Drilling of four rotary boreholes (BHR1 to BHR4) to a maximum depth of 30.0 m bgl;
- $\Delta$  Installation of 10 selected dynamic sampler, five cable percussive, and four rotary boreholes with 50 mm internal diameter gas and groundwater monitoring wells;
- Δ Standard penetration tests (SPTs) were undertaken every 1.00 m to 5.00 m bgl, then every 1.50 m thereafter (where undisturbed sampling was not undertaken), and at selected intervals in the rotary boreholes.;
- Δ Completion of two days truck mounted Cone Penetrometer Testing (CPT) over 10 targeted locations, progressed to a maximum depth of 25.15 m bgl;
- Δ Collection of disturbed and undisturbed soil samples from selected locations for subsequent laboratory environmental analysis and geotechnical testing;
- Δ Collection of groundwater samples from installed boreholes on one occasion; and
- Δ Four rounds of gas and groundwater level monitoring.

### 3.3 Ground Investigation Factual Data

An intrusive location plan is presented as Figure 2.

Delta-Simons engineer verified borehole logs are presented as Appendix I, 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 presented as Appendix II.

The gas and groundwater monitoring results are presented as Appendix III.

### 3.4 In-situ Testing and Sampling

SPT tests were undertaken in all boreholes at 1.00 m intervals until 5.00 m bgl, then every 1.5 m bgl thereafter (where undisturbed sampling was not undertaken). The results of these tests are presented in the borehole logs included as Appendix I.

Sampling comprised disturbed tub and jar samples generally taken at 1.00 m intervals as detailed on the borehole logs.

The results of the truck mounted CPT testing (including assumed material type and geotechnical properties) are included in Appendix IV.

### 3.5 Laboratory Investigation

Following the ground investigations, a schedule of environmental and geotechnical and chemical laboratory testing was prepared by Delta-Simons.

### 3.5.1 Environmental Soil Analysis

The location, depth and suite of analyses selected for each environmental soil sample is presented in Table 2.

Table 2 - Soil Sample Environmental Analyses

Borehole Location	Depth (mbgl)	Strata/Sample ID	Standard Suite *	sTPH + Fuel Type	svoc	WAC Testing (Inert)
DS104	0.2-0.3	SAND	✓	✓		
DS104	1.0-1.4	CLAY	✓	✓		
DS102	0.3-0.5	CLAY	<b>✓</b>			
DS105	0.2-0.3	SAND	✓	✓		
DS105	2.0-2.4	CLAY			✓	
DS103	0.2-0.3	SAND	✓	✓		
DS103	0.6-0.9	CLAY			✓	
DS106	0.2-0.3	SAND	✓	✓		
DS106	1.5-1.8	CLAY	✓			
DS107a	0.08-0.11	GRAVEL			<b>✓</b>	
DS107a	0.9-1	CLAY	✓	✓		
DS107a	2.3-2.7	CLAY		✓		✓
DS111	0.08-0.1	GRAVEL	✓			
DS111	1.3-1.5	CLAY			✓	
DS109	0.1-0.2	SAND	✓	✓		
DS109	2.2-2.5	CLAY	<b>✓</b>			
DS110	1.6-1.8	CLAY	✓			✓
DS110	1.8-2.1	GRAVEL			✓	

DS112	0.4-0.5	SAND	✓			
DS107	0.2-0.3	SAND	✓			
DS107	1.3-1.7	CLAY			✓	
DS101	0.1-0.25	SAND			<b>√</b>	
DS101	0.5-0.8	CLAY	✓			
DS108	0.1-0.2	SAND			✓	
DS108	0.7-1	CLAY	✓			
DS113	0.2-0.3	SAND	✓	✓		
DS113	1.8-2	CLAY			<b>√</b>	
DS114	0.7-1	CLAY	✓			
DS116	0.2-0.3	SAND	✓	✓		
DS116	0.3-0.7	CLAY			<b>√</b>	
DS115	0.05-0.1	GRAVEL	<b>√</b>	✓		
DS115	1.5-1.8	CLAY			✓	
DS119	1.8-2	CLAY	✓	✓		
DS117	1.3-1.5	CLAY			✓	✓
DS117	0.1-0.3	SAND	✓	✓		
DS118	0.8-1	CLAY	✓			
DS118	0.2-0.3	SAND			✓	
BH108	2.5-3	CLAY	✓	✓		
BH108	8-8.45	ES2	✓			
BH110	2.5-3	ES	✓			
BH101	11-11.5	ES3	✓	✓		
BH101	4.2	ES	✓			
BH102	11	ES4	✓	✓		
BH102	3	ES	✓			
BH103	0.5	ES2				✓
BH103	7.5-8.0	ES3	✓	✓		
BH103	16	ES5	✓			
BH105	4	ES1			✓	
BH105	11	ES3	✓	✓		
BH105	19	ES5	✓			
BH109	3.5-4.0	ES1	✓	✓		✓
BH109	6.5	ES2			✓	
BH109	14	ES4	✓			
BH104	4.1	ES1	✓			
BH104	10.5-11	ES3	✓	✓		
BH106	4.5	ES1	✓		<u> </u>	
BH106	11	ES3	✓			
BH107	4.2	ES1	✓			
BH107	12.5	ES3	✓			
Total	- Made Ground		42	20	15	5

Made Ground

Project Specific Suite

Made Ground
Arsenic, boron, cadmium, chromium (III & VI), copper, lead, mercury, nickel, selenium, zinc, Speciated Polycyclic Aromatic
Hydrocarbons (sPAH), pH, phenol and cyanides, Volatile Organic Compounds (VOC), asbestos screening, total sulphur,
water soluble sulphate and acid soluble sulphate.
Total and speciated total petroleum hydrocarbons
Semi-volatile organic compounds
Waste Acceptance Criteria Testing

SVOC WAC Testing

### 3.5.2 Environmental Groundwater Analysis

The suite of analyses selected for each environmental groundwater sample is presented in Table 3.

 Location
 Project Specific Suite

 R1
 ✓

 R2
 ✓

 R3
 ✓

 R4
 ✓

 BH101
 ✓

 BH102
 ✓

 BH104
 ✓

 DS107
 ✓

 DS116
 ✓

 Total
 9

Table 3 - Groundwater Sample Analysis Summary

Project Specific Suite Arsenic, boron, cadmium, chromium (III & VI), copper, lead, mercury, nickel, selenium, zinc); Speciated Polycyclic aromatic
hydrocarbons (sPAH); phenols and cyanide; pH and hardness, Speciated Total Petroleum Hydrocarbons (sTPH); Semi Volatile
Organic Compounds (SVOC); Volatile Organic Compounds (VOC); water soluble sulphate.

### 3.5.3 Geotechnical Testing

The geotechnical testing was carried out by a UKAS accredited laboratory (PSL), in accordance with BS 1377 - Parts 2 to 9:1990 Methods of test for soils for civil engineering purposes. A summary of the location, depth, strata and selected analysis for each sample is presented in Table 4. Copies of the geotechnical laboratory test results are presented in Appendix V.

Table 4 - Geotechnical Soil and Rock Sample Analyses Summary

Location	Depth (m bgl)	Strata	Atterberg Limits and Moisture Content	Particle Size Distribution	Triaxial Test (kPa)	Unconfined Compressive Strength	ID Consolidation	Determination of Organic Matter
R3	21.1-21.3	Mudstone				✓		
R3	21.75-22	Mudstone				✓		
R3	22-22.15	Mudstone				✓		
BH101	1-1.5	Granular		✓				
BH106	1-1.5	Granular		✓				
BH107	1-1.5	Granular		✓				
BH103	1.0	Granular		✓				
BH103	3.5-4	Clay		✓				
BH106	4.5-5	Clay		✓				
BH109	3.5-4	Clay		<b>✓</b>				
BH108	4.5-5	Clay		✓				
BH102	2.2	Clay	✓					
BH104	3	Clay	✓					
BH106	3	Clay	✓					
BH108	4	Clay	✓					
BH107	3	Clay	✓					
BH106	10	Peaty Clay	✓					
BH106	11.5	Peaty Clay		<b>✓</b>				
BH102	11.5	Peaty Clay	✓					
BH102	12-12.5	Peaty Clay		<b>✓</b>				
BH101	11-11.5	Clay		✓				

Location	Depth (m bgl)	Strata	Atterberg Limits and Moisture Content	Particle Size Distribution	Triaxial Test (kPa)	Unconfined Compressive Strength	ID Consolidation	Determination of Organic Matter
BH104	10.5-11	Clay		✓				
BH107	12.5-13	Clay		✓				
BH108	8-8.5	Clay		✓				
BH102	14.5	Clay	✓					
BH109	9	Clay	✓					
BH110	9	Clay	✓					
BH107	11.5	Clay	✓					
BH108	8	Clay	✓					
R1	29	Mudstone	✓					
R2	20.8	Mudstone	✓					
R3	23.5	Mudstone	✓					
R4	25	Mudstone	✓					
BH101	8	Peaty Clay						✓
BH102	13	Peaty Clay						✓
BH107	6.7	Peaty Clay						✓
BH106	8	Peaty Clay						✓
BH101	2.5	Clay			✓			
BH101	13.5	Clay			✓			
BH103	4.5	Clay			✓			
BH103	16.5	Clay			✓			
BH108	2.5	Clay			✓			
BH108	13.5	Clay			✓			
BH107	4.5	Clay			✓			
BH107	16.5	Clay			✓			
BH105	3.5-3.95	Clay					✓	
BH105	12-12.45	Clay					✓	
BH106	7.5-7.95	Clay					✓	
BH106	13.5-13.95	Clay					✓	
Total			16	14	8	3	4	4

### 4.0 GROUND AND GROUNDWATER CONDITIONS

### **4.1 Ground Conditions**

A summary of the observed ground conditions at the Site are provided in Table 5. Geological section is presented as Figures 3a to 3c. The depth to rock head contour plot is presented as Figure 4a, and a 3D representation as Figure 4b.

Table 5 - Summary of Observed Ground Conditions

Strata	Description of Strata	Depth Range of Strata Base (m bgl)
Topsoil/ Hardstand	Granite aggregate and topsoil, topsoil or asphalt hardstanding was present at each borehole location.	0.1 m bgl
Made Ground (Fill)	Made Ground was encountered in each borehole location advanced and generally comprised a shallow layer of light greyish brown, slightly gravelly sand, underlain by greyish black/brown and greenish brown, slightly silty/sandy/gravelly clays with variable layers of pseudo-fibrous and fibrous peat. Gravels generally consisted of fine to coarse sandstone and chalk.	13.80 m bgl (BH103) to 20.50 m bgl (R3)
Made Ground (Possible Fill)	Orangey brown, slightly clayey sand was encountered in BH101, BH102 and BH103, and is considered to represent possible fill material.	18.5 m bgl (BH102)to 16.9 m bgl (BH103)
Northampton Sand Formation	Strong, massive orangey brown sandstone. Encountered in Rotary boreholes BH109, R1, R3 and R4.	18.30 m bgl (BH109) to 22.75 m bgl (R3)
Whitby Mudstone Formation	Weak, dark grey, slightly weathered, laminated mudstone.	Proven to a maximum depth of 29.8 m bgl (R3).

Staining and a strong hydrocarbon odour was encountered between 0.9-1.0 m bgl in the clay of DS107a. No other visual or olfactory evidence of significant contamination was encountered during the intrusive works.

### 4.2 Groundwater

Resting groundwater levels recorded during the return monitoring visits were between 0.10 m bgl and 20.33 m bgl.

A summary of the maximum and minimum groundwater depths measured in each of the boreholes from the monitoring events between the 07<sup>th</sup> and 29<sup>th</sup> of September 2015 are summarised in Table 6.

Table 6 – Summary of Groundwater Depths (m bgl)

Borehole			Ground Level	Groundwate (m A	
ID	Groundwater (m bgl)	Groundwater (m bgl)	(m AOD)	Minimum	Maximum
R1	14.80	15.96	105.834	91.034	89.874
R2	18.48	20.33	105.503	87.023	85.173
R3	18.39	18.66	104.568	86.178	85.908
R4	16.57	18.71	106.257	87.216	87.547
BH101	14.35	15.63	107.198	92.848	91.568
BH102	14.37	14.68	106.544	92.174	91.864
BH104	18.44	18.91	105.656	87.216	86.746
BH106	N/A	N/A	105.671	N/A	N/A
BH107	N/A	N/A	104.426	N/A	N/A
DS101	0.46	1.14	104.232	103.772	103.092
DS104	0.40	0.44	104.955	104.555	104.515
DS105	0.13	0.31	104.489	104.359	104.179
DS107	0.16	0.71	105.780	105.620	105.070
DS107a	0.33	0.8	105.551	105.221	104.751
DS109	0.91	2.25	105.321	104.411	103.071
DS113	0.12	0.36	106.550	106.430	106.190
DS114	0.13	0.72	105.758	105.628	105.038
DS116	0.12	0.73	105.545	105.425	104.815
DS117	0.10	1.82	106.397	106.297	104.577
DS118	0.29	0.96	106.898	106.608	105.938

It is considered likely that the shallow waters encountered in the dynamic sample boreholes are resultant from perched water and therefore considered separately to the deeper consistent groundwater body.

Based on the measured groundwater levels from the surface and the measured surface elevation (m AOD) at each location, the groundwater elevation (m AOD) has been inferred. An interpolated contour plot for the shallowed perched groundwater is presented as Figure 5a (indicated to flow in a south-easterly direction), and a plot for the deeper resting groundwater is presented as Figure 5b (also indicated to flow in a south-easterly direction).

### 5.0 GROUND CONDITIONS AND MATERIAL PROPERTIES

### 5.1 Summary of Geotechnical Parameters

A plot of corrected SPT 'N' values against depth for all strata is presented as Figure 6 and a plasticity chart is presented as Figure 7. A summary of geotechnical parameters for each strata are summarised in Table 7.

**Table 7: Summary of Geotechnical Parameters** 

	Made Ground Fill	Whitby Mudstone Formation	Northampton Sand Formation
Moisture Content - w	16 - 64%	13 - 19%	9.7 – 16%
Liquid Limit - w∟	31 - 100%	48 - 60%	-
Plastic Limit - w <sub>P</sub>	17 - 46%	23 - 28%	-
Plasticity Index - I <sub>P</sub>	14 - 54%	25 - 32%	-
Uncorrected SPT N	2 – 50*	50*	50*
Corrected SPT 'N'1	2.1 – 63.6	62.5	62.5
Bulk Density - ρ <sub>b</sub>	1.75 – 2.13	-	2.35 – 2.45
Bulk Unit Weight <sup>3 -</sup> γ <sub>b</sub>	17.2 - 20.9 kN/m³	-	23.1 – 24.0 kN/m <sup>3</sup>
Undrained Shear Strength - C <sub>u</sub> <sup>4</sup>	31 - 105 kPa	-	-
Coefficient of Volume Compressibility - m <sub>v</sub> <sup>4</sup>	0.087 - 0.171 m²/MN	-	-
Coefficient of Consolidation - c <sub>v</sub> <sup>4</sup>	0.877 - 4.2 m²/yr	-	-
Uniaxial Compressive Strength	-	-	4.7 - 14.4 MPa
Organic Matter	1.9 - 9.1%	-	-

<sup>1.</sup> SPT N values corrected for energy delivered to drive rods utilising the determined energy ratio ( $E_r$ ):  $N_{60} = (E_r \times N) / 60$  after BS EN ISO 22476-3:2005 [Ref. 4]

### 5.2 Geochemical Testing

Geochemical analysis was undertaken on 44 soil samples and nine groundwater samples, tested for selective contaminants (BRE Special Digest 1:2005 (3<sup>rd</sup> Edition), Concrete in Aggressive Ground, the results of which are summarised in Table 8.

<sup>2. \*</sup>Note – An SPT 'N' value of 50 is considered to be a refusal, although original results may be higher, a maximum SPT 'N' value of 50 has been used.

<sup>3.</sup> Bulk unit weight (kN/m3) = 9.81 x bulk density (Mg/m3 - as determined by laboratory testing)

<sup>4.</sup> From laboratory test results.

### Table 8: BRE SD1 Test Result Summary

	No. of Tests	Minimum	Maximum
Soil - pH	44	7.3	10.2
Soil - Total Sulphur	44	0.05%	3.6%
Soil – Acid Soluble Sulphate	30	0.12%	5.7%
Soil - Water Soluble Sulphate	44	0.10 g/l	1.6 g/l
Groundwater - pH	9	7.0	9.3
Groundwater - Sulphate	9	120 mg/l	1400 mg/l

### **6.0 GEOTECHNICAL ASSESSMENT**

### **6.1 Summary of Development Proposals**

The Site comprises 2.53Ha of restored quarry, and it is understood the Client is considering to develop the Site for a gasification facility. At this stage, detailed design loads are not known, however, structural loadings are expected to be moderate to high.

### **6.2 Foundations**

### 6.2.1 Shallow Foundations

Given the depth of Made Ground Fill material (up to circa 20 m bgl), which is considered to be too soft, variable, compressible and unpredictable in its existing condition for conventional shallow foundations at the Site given the expected large design loads.

### **6.2.2 Ground Improvement Techniques**

It is not considered that ground improvement techniques would be appropriate for the expected design loads given the depth of Made Ground Fill encountered beneath the Site.

#### 6.2.3 Piled Foundation

A piled foundation solution using bored piles transferring loads to competent bedrock geology encountered at depth is likely to be suitable for the expected design loads, predominantly utilising end bearing capacity due to the depth of Made Ground Fill, the ongoing settlement of which may induce negative skin friction. Furthermore, consideration should be given to the variable depth to bedrock (Figures 4a and 4b), and the potential presence of in-ground obstructions. As such it is recommended, once pile positioned have been confirmed, that each location is predrilled to confirm depth to bedrock and ensure locations are clear of obstructions.

The precise method of pile installation and applicability of proprietary systems, diameters and depths required would need to be informed based on the results of this investigation, by discussions with a suitably experienced piling contractor.

For preliminary design purposes, the following allowable continuous flight auger (CFA) loads have been assessed based on commonly accepted methods for determining pile base resistance and skin friction/adhesion (utilising a bulk Factor of Safety of 2.5); any negative skin friction effects associated with Made Ground Fill

strata have been ignored. Commercial pile designers may use different parameters, design factors or safety factors than published methods.

**Table 9: Estimated Likely Allowable Pile Capacities (CFA Piles)** 

Typical Pile Size		Allowable Pile Capacity on a Single Pile
0.45 m diameter	25 m	460 kN
0.60 m diameter	25 m	690 kN
0.75 m diameter	25 m	960 kN

Individual pile/ pile group loads will be a function of the surface area of the piles to be employed at the Site and their method of construction.

Normal static and dynamic load testing (including uplift tests) should be considered to achieve satisfactory quality control/assurance in accordance with good practice.

There will be a requirement for the placement of a suitably engineered piling mat, which should be designed and validated by a suitably qualified and experienced engineer.

### 6.2.4 Floor Slabs

Due to significant thickness of Made Ground, soils are considered too variable and unpredictable in its existing state for ground bearing floor slabs.

At this stage given the likely floor loads expected, it is recommended that a suspended floor slab could be adopted, transferring loads to piles through concrete ground beams/concrete frame.

### 6.3 Roads and Pavements

In-situ DCP CBR test have not been undertaken within the scope of this investigation. In the absence of such tests, it is recommended that a conservative value of 2% be adopted for preliminary pavement design.

Consideration should be given to potential differential settlements between proposed hard stand areas and pile structures. The use of a geotextile and/or stabilisation is recommended where variable ground conditions are encountered to minimise potential differential settlement.

It is recommended that plate load CBR tests are undertaken at formation level prior to finalising pavement design.

### 6.4 Drainage

The use of soakaways as a form of drainage is not recommended for the Site given the thickness and variability of Made Ground encountered.

### 6.5 Excavations

It is expected that conventional mechanical excavators will readily remove the Made Ground fill likely to be encountered in shallow excavations.

All shallow foundation or services excavations at the Site should be considered unstable, therefore, temporary support of all excavations should be considered when excavating on-Site.

### 6.6 Groundwater

Resting groundwater levels recorded during the return monitoring visits were between 0.10 m bgl and 20.33 m bgl. It is considered likely that the shallow waters encountered in the dynamic sample boreholes associated with a localised perched water table. The deeper, consistent groundwater body ranged between 14.35 m bgl and 20.33 m bgl.

Groundwater is likely to be encountered in shallow excavations and trenches, and open excavations may collect surface waters. It is considered that the formation of sumps from which the water could be pumped may provide an adequate means of groundwater control.

### 6.7 Chemical Attack on Buried Concrete

In accordance with the recommendations of BRE Special Digest 1, 'Concrete in Aggressive Ground' 2005, the conditions of the soils at the Site would therefore, be classified as Design Sulphate Class DS-4 and ACEC Class AC-4 for soils and groundwater, when considering the most appropriate type of concrete to be used at the Site in order to resist chemical attack from elevated sulphate present in the soils for both shallow foundations and deeper piles (assuming mobile groundwater in potentially pyritic soils).

Piling is not generally considered to result in disturbed ground (BRE SD1 – Appendix A), therefore, any pyrite is unlikely to be oxidised. As such, consideration can be given to water soluble sulphate content of the clay (BRE SD1 – Box C8), which in this case would result in a DS-2 classification based on the results obtained.

### 7.0 ENVIRONMENTAL ASSESSMENT

### 7.1 Introduction

The soil and groundwater analysis results from the Delta-Simons Site Investigation have been assessed against the current Generic Assessment Criteria (GAC) in the context of a future commercial end-use.

### 7.2 Guidance for Analytical Results: Generic Assessment Criteria

A risk assessment approach has been used for the assessment of the results. This process is defined as a tiered assessment considering the 'pollutant linkages' on the basis of a 'source-pathway-receptor' relationship. Analytical results have been assessed against Generic Assessment Criteria considered protective of Human Health and/or controlled waters in the context of the proposed redevelopment of the Site and the environmental setting of the Site.

#### 7.2.1 Human Health Soil Generic Assessment

In the absence of a statutory set of GAC values, Delta-Simons will refer to the following derived using the Contaminated Land Exposure Assessment (CLEA) Framework:

- Δ Soil Guidance Values (SGVs) published by the EA;
- ∆ Category 4 Screening Levels (C4SLs) published by Defra;
- Δ Suitable for Use Levels for Human Health Risk Assessment (S4ULs) published by Land Quality Management (LQM)/Chartered Institute of Environmental Health (CIEH);
- Δ The GAC produced by the Environmental Industries Commission (EIC), the Association of Geotechnical and Geo-Environmental Specialists (AGS) and Contaminated Land: Application in Real Environments (CL:AIRE) in December 2009; and;
- Δ In house Generic Assessment Criteria (HH-GSVs) derived by Delta-Simons and other non UK values where considered relevant.

Delta-Simons Adopted Human Health Generic Assessment Criteria for a commercial end-use are presented in Appendix VI.

#### 7.2.2 Groundwater Generic Assessment

The groundwater analysis results have been assessed against GAC based on the Freshwater Environmental Quality Standards (EQS) or UK Drinking Water Quality Standards (DWQS). In terms of the risks to controlled waters, groundwater contaminant concentrations that exceed the above water quality standards need to

be considered in the context of the Site's environmental setting as to whether further qualitative or quantitative assessment is required.

### 7.3 Soil Analytical Results

A summary of the soil analytical results compared to a commercial end-use is provided in Table 10 and copies of the soil analysis results are included as Appendix VII.

Table 10 -Soil Sample Analysis Summary (mg/kg unless stated otherwise)

Downwater	Maximum	Screening Value	Source	Samples Which Excee Elevated	
Parameter	Concentration	(Saturation limit)		Location (Depth m bgl) = Concentration	Area of Site
Heavy Metals	•				
Arsenic	230	640	SGV/LQM	-	•
Barium	300	22000	EIC	-	-
Beryllium	4.3	12	LQM	-	-
Boron	5.6	240000	LQM	-	-
Cadmium	2.3	190	SGV/LQM	-	-
Chromium (Trivalent)	86	8600	LQM	-	-
Chromium (Hexavalent)	0	33	LQM	-	-
Copper	52	68000	LQM	-	-
Lead	220	2300	C4SL	-	-
Mercury	0.35	73	DS-GAC	-	-
Nickel	150	980	LQM	-	-
Selenium	0.50	12000	LQM	-	-
Vanadium	640	9000	LQM	-	-
Zinc	4900	730000	LQM	-	-
	carbons (Only co	ncentrations ide	entified abov	e laboratory detections lin	nits included in table)
Aliphatic TPH >C8-C10	2700	2000 (78)	LQM	DS107a (0.9-1)=2700	North-east
Aliphatic TPH >C10-C12	2600	9700 (48)	LQM	DS107a (0.9-1)=2600	North-east
Aliphatic TPH >C12-C16	56	59000 (24)	LQM	DS106 (0.2-0.3)=36 DS107a (0.9-1)=56	East North-east
Aliphatic TPH >C16-C21	170	1600000 (8.48)	LQM	DS106 (0.2-0.3)=17 DS107a (0.9-1)=170	East North-east
Aliphatic TPH >C21-C35	1200	1600000 (8.48)	LQM	DS107a (0.9-1)=1200	North-east
Aliphatic TPH >C35-C44	58	1600000 (8.48)	LQM	DS107a (0.9-1)=58	North-east
Aromatic TPH >C8-C10	8.7	3500 (613)	LQM	DS107a (0.9-1)=8.7	North-east
Aromatic TPH >C10-C12	750	16000 (364)	LQM	DS107a (0.9-1)=750	North-east
Aromatic TPH >C12-C16	79	36000 (169)	LQM	DS107a (0.9-1)=79	North-east
Aromatic TPH >C16-C21	390	28000	LQM	DS107a (0.9-1)=390	North-east
Aromatic TPH>C21-C35	2000	28000	LQM	DS107a (0.9-1)=2000	North-east
Aromatic TPH >C35-C44	280	28000	LQM	DS107a (0.9-1)=280	North-east
Total Petroleum Hydrocarbons	10000	N/A	N/A	DS107a (0.9-1)=10000 DS104 (0.2-0.3)=18 DS106 (0.2-0.3)=70	North-east, east

PAH, including PAH compounds within the SVOC suite   Naphthalene   2   190 (76.4)   LQM   -   -	Maxim	
Naphthalene		
Acenaphthylene	PAH compo	
Acenaphthene		
Fluorene   3		
Phenanthrene		
Anthracene		
Fluoranthene	9.3	
Pyrene		
Benzo[a]anthrac ene		
Senzo b fluorant hene		
Benzo[b]fluorant hene	C 1.4	
Nene   Nene	2.2	
Neme   Neme	1.9	
Indeno(1,2,3-c,d)Pyrene	1.2	
Indeno(1,2,3-c,d)Pyrene	0.82	
Dibenz(a,h)Anth racene		
Benzo[g,h,i]pery   1.2   3900   LQM   -   -   -	n 0.65	
Asbestos Screen         N/A         N/A         Amosite fibres were identified in DS109 (2.2-2.5m bgl)         Cent 2.5m bgl)           pH         7.3-10.2         N/A         N/A         -         -           Sulphate (acid soluble %)         5.7         N/A         N/A         -         -           Sulphate (water soluble g/l)         1.6         N/A         N/A         -         -           Total Sulphur (%)         3.6         N/A         N/A         -         -           Cyanide (free mg/kg)         <0.50	y 1.2	
N/A   N/A   N/A   identified in DS109 (2.2-   2.5m bgl)   PH   7.3-10.2   N/A   N/A   N/A		
Sulphate (acid soluble %)         5.7         N/A         N/A         - <t< td=""><td>N/A</td></t<>	N/A	
soluble %)         5.7         N/A         N/A         -	7.3-10	
Soluble g/l)   1.6   N/A   N/A   -   -   -   -   -   -   -   -   -	5.7	
Total Sulphur (%)         3.6         N/A         N/A         -         -           Cyanide (free mg/kg)         <0.50	r 1.6	
Cyanide (free mg/kg) <0.50 N/A N/A	3.6	
	<0.5	
Cyanide (total mg/kg)  16  N/A  N/A  N/A  BH102(11.0)=16  BH106 (11.0)=7.4  BH108 (8.0-8.45)=2.3  BH101(11.0-11.5)=0.6  BH103(7.5-8)=0.5	16	
Total Phenols <0.5 440 LQM	<0 I	

Note: N/A = Generic screening value not available
Shaded = Concentrations exceed screening criteria or are considered significantly elevated

Shaded = Concentrations exceed saturation limit

SGV = DEFRA/EA Soil Guideline Value

LQM = LQM/CIEH Generic Assessment Criteria

DS-GAC = Delta-Simons' Generic Assessment Criteria

As shown in Table 10 the soil analysis results from the site investigation indicate that very limited contamination of the soils has been identified at the Site.

One sample from DS107 (0.9 to 0.1 m bgl) exceeded the GAC for Aliphatic >C8-C10 and the saturation limits for Aliphatic >C8-C10, >C10-C12, >C12-C16, >C16-C21, >C21-C35, >C35-C44 and Aromatic >C10-C12. Staining of the soil, a strong hydrocarbon odour and an elevated PID reading (631 ppm) was noted during the Site investigation at this location. The laboratory analytical results and field observations indicate potential separated phase contamination present at this location. Furthermore low concentrations of VOCs were encountered above detection in this location, primarily associated with BTEX benzene compounds.

One sample from DS106 (0.2 to 0.3 m bgl) exceeded the saturation limits for Aliphatic >C12-C16 and >C16-C21. Theoretically this could indicate potential separated phase contamination present at this location, however, on-Site olfactory and visual observations did not corroborate this within the underlying geology and it is considered likely the concentrations represent a solid phase material within the Made Ground.

One sample from BH106 (11 m bgl) marginally exceeded the saturation limit for Anthracene, however it was significantly below the GAC.

Asbestos (amosite lagging) was identified in one sample within the Made Ground at DS109 (2.2 to 2.5 m bgl).

The risk associated with the detectable concentrations of contaminants in soils to the identified receptors is further discussed in Section 8.2.

### 7.4 Groundwater Analytical Results

A total of nine groundwater samples were collected from the newly installed monitoring wells during one monitoring event. A summary of the groundwater analytical results is presented in Table 11 and copies of the groundwater analytical results are included in Appendix VIII.

Table 11 – Groundwater Sample Analysis Summary (µg/l unless stated otherwise)

Parameter	Maximum Concentration	Screening Value µg/l	Samples Which Exc Value Elevated R	e/
	μg/I (Source		Location (Concentration)	Area of Site
Heavy Metals (only those above laboratory detection)				
Arsenic	4.5	10 <sup>DWQS</sup>	-	-
Boron	1200	1000 <sup>DWQS</sup>	R4	Central/Northern (deeper groundwater)

Parameter	Maximum Concentration	Screening Value µg/I	Samples Which Exceed Screening Value/ Elevated Results			
	μg/l		Location (Concentration)	Area of Site		
Heavy Metals (only the	ose above laborato	ory detection)				
Cadmium (dissolved)	1.2	5 <sup>DWQS</sup>	-	-		
Chromium	9.9	44.7 <sup>DWQS</sup>	-	-		
Copper	1.5	2000 <sup>DWQS</sup>	-	-		
Mercury	2	1 <sup>DWQS</sup>	R3, R4, R2, BH101, DS107, DS116	Across Site (both the shallow perched and deeper groundwater)		
Nickel	6.3	20 <sup>DWQS</sup>	-	-		
Lead	1.2	10 <sup>DWQS</sup>				
Selenium	16	10 <sup>DWQS</sup>	R4	Central/Northern (deeper groundwater)		
Zinc	40	50 <sup>DWQS</sup>	-	-		
Speciated Total Petroleum Hydrocarbons						
		low Level of Det	ection			
sPAH	sPAH					
All Below Level of Detection						
SVOC & VOC						
All Below Level of Detection						
Phenols & Cyanide						
All Below Level of Detection						
Others						
pН	7.0-9.3	6 – 9 <sup>EQS</sup>	BH102 (pH 9.3)	West		

Note:

EQS = Freshwater Environmental Quality Standard
DWQS = UK Drinking Water Quality Standards
Shaded = Concentrations exceeding screening values

As shown in Table 11, groundwater results indicate only slightly elevated concentrations of boron and selenium, limited to the rotary borehole R4, situated in the central northern area of the Site. Slightly elevated concentrations of mercury were identified in six of the boreholes sampled.

These exceedance are not considered significant as the Site is not located within a Source Protection Zone, and there are no groundwater abstractions within 2 km of the Site. Marginal exceedances are likely to be representative of wider groundwater quality.

The risk associated with the detectable concentrations of contaminants in the groundwater to the identified receptors is further discussed in Section 8.2.

### 7.5 Ground Gas Monitoring

Four rounds of ground gas monitoring were undertaken following the Site investigation. A collated summary of the results from the ground gas monitoring

exercise is presented in Table 12. A complete set of ground gas monitoring results are presented in Appendix III.

Table 12 - Summary of Ground Gas Monitoring Data

Monitoring Location	Methane (%v/v)	Carbon Dioxide (%v/v)	Flow Rate (I/hr)	GSV/CS
	Max	Max	Max	
R1	<0.1	2.7	0.2	
R2	<0.1	4.9	0.2	
R3	<0.1	0.1	<0.1	
R4	<0.1	<0.1	<0.1	
BH101	<0.1	0.1	<0.1	
BH102	10.4	0.1	<0.1	
BH104	<0.1	0.1	<0.1	
BH106	<0.1	0.1	<0.1	
BH107	0.9	1.6	<0.1	
DS101	<0.1	0.3	<0.1	0.052/CS2
DS104	<0.1	0.1	<0.1	0.052/032
DS105	<0.1	0.4	<0.1	
DS107	<0.1	1.6	0.50	
DS107a	<0.1	0.6	0.2	
DS109	<0.1	0.8	0.1	
DS113	<0.1	0.7	<0.1	
DS114	<0.1	0.6	<0.1	
DS116	<0.1	0.5	0.2	
DS117	<0.1	1.0	<0.1	
DS118	<0.1	1.0	<0.1	

Note: GSV = Gas Screening Value

CS = Characteristic Situation (Range: 1 = Very low risk to 6 = Very high risk)

Low ground gas flow rates were recorded in the following boreholes: R1, R2, DS107, DS107a, DS109 and DS116. Methane was identified in BH102 and BH107, with peak concentrations of 10.4% v/v and 0.9% v/v respectively. Carbon Dioxide peak concentrations ranged from <0.1% v/v to 4.9% v/v (R2).

The monitoring undertaken to date indicates that the Site should be classified as a CS2 –Low Risk. Therefore based on the monitoring conducted to date, basic gas protection measures would be required to be incorporated into the development for the proposed works.

The ground gas monitoring results are considered further within Section 8.2 of this Report.

### 7.6 Waste Classification

### 7.6.1 Regulatory Guidance

The Waste Framework Directive (2008/98/EC) (WFD) sets out what waste is and how it should be managed. The WFD considers some wastes to be hazardous which is based upon one or more of the fifteen specified properties listed in Annex III to the WFD and the application of this is determined by the List of Wastes Decision (2000/532/EC) (LoWD). This LoWD provides:

- $\Delta$  A list of wastes (often still called the European Waste Catalogue);
- $\Delta$  Rules for using the list; and
- $\Delta$  Criteria used to assess if a waste on the list is hazardous.

The WFD and LoWD use the classification of product chemicals as the basis for the assessment of hazardous waste and are implemented in England, Northern Ireland, Scotland and Wales using different domestic regulations. There are two chemical directives that apply to hazardous waste assessment: the Dangerous Substances Directive (67/548/EC) DSD and the Dangerous Preparations Directive (1999/45/EC) (DPD) which are implemented in the UK by the Chemical (Hazard Information and Packaging for Supply) Regulations (CHIP). These are being replaced in stages by the Classification, Labelling and Packaging of Substances and Mixtures Regulation (CLP).

The key guidance document in relation to hazardous waste is: Technical Guidance WM3, Hazardous Waste: Interpretation of the definition and classification of hazardous waste (1st edition 2015). This document provides a common technical basis for applying the definition and classification of hazardous waste in the UK and with respect to oil related wastes supersedes and replaces SEPA's SWAN 04 guidance.

Hazardous waste classification presents certain challenges within the context of contaminated soils because classification relies upon the detailed knowledge of toxicological properties of specific substances as described in the Health and Safety Executive (HSE) document 'Approved Classification and Labelling Guide' (6th Edition) which refers to Table 3.2 Part 3 of Annex VI to the CLP Regulation Supply List' which defines a substance's specific properties. These are required to be displayed on product supply labels, Transport Emergency (TREM) cards and Material Safety Data Sheets (MSDS). Therefore, to completely profile waste soils the

advanced categorisation of specific substances would be required. However, this level of testing is not practicable and, for example, typical laboratory testing only provides cation concentrations for heavy metals rather than concentrations of specific heavy metal compounds. Therefore, a conservative approach is usually adopted utilising a suitable worst-case surrogate substance from Table 3.2 Part 3 of Annex VI to the CLP Regulation Supply List as a benchmark against the hazardous waste property threshold.

HazWasteOnline (HAZWOL) is a web-based tool for classifying hazardous waste. The software follows the latest EA guidance and European regulations and maintains a conservative approach for surrogate compounds (although it can be adapted to reflect additional knowledge/data). The HAZWOL tool will classify sample results as either hazardous or non-hazardous based upon the concentrations of contaminations present and the threshold levels for various hazardous properties.

Since the Landfill Directive was implemented into UK law, landfill sites have been divided into those accepting inert, non-hazardous and hazardous waste. Landfills may only accept waste of the same classification as the landfill, although some non-hazardous landfills with specially prepared engineered cells, can accept certain types of hazardous waste such as Stable Non-reactive Hazardous Waste (SNRHW).

Waste Acceptance Criteria (WAC) testing is used to determine the acceptance of waste at landfills, the tests do not provide waste classification to determine whether the waste is hazardous, non-hazardous or inert. There are specific WAC tests for inert and hazardous landfills. Materials classified as hazardous must meet the hazardous WAC before they are accepted in a hazardous landfill. If materials classified as non-hazardous meet the inert WAC they may accepted in an inert landfill, if not, they may be accepted at a non-hazardous landfill. There are currently no non-hazardous WAC.

Landfill facilities may also have their own individual permit restrictions dictating the wastes acceptable at their premises. These permit restrictions are often only available following direct consultation with the landfill facility.

### 7.6.2 Analytical Review

Analytical data from Made Ground soil samples collected from intrusive locations have been entered into the HWOL spreadsheets (a copy of which is included as

Appendix IX). In general the Made Ground Fill would likely be classified as Non-Hazardous for disposal purposes, with localised 'hotspots' of potentially hazardous soils associated with metals and cyanide, and a confirmed location of hazardous soils associated with hydrocarbons.

Consultation with landfill operators should be undertaken at an early stage to confirm their requirements with copies of the HWOL, solid chemical and WAC results submitted to them for their own classification purposes.

### 8.0 ASSESSMENT OF RISK AND CONCEPTUAL MODEL

### 8.1 Risk Assessment

The risk assessment procedure which identifies sources, pathways, receptors and pollutant linkages is, therefore, recognised as an appropriate approach to determining the extent and significance of contamination either within the context of Part 2A of the Environmental Protection Act 1990 (when assessing current Site status or when considering the acquisition of an existing development), or as part of the planning process (for the redevelopment of an existing Site, or when considering the acquisition of a Site for redevelopment purposes). In either context the 'suitable for use' approach is adopted in assessing the risks. As such, the source-pathway-receptor assessment defines a conceptual model for the Site under consideration.

### **8.2 Identified Sources of Contamination**

A CSM is presented overleaf and has been formulated taking into account all of the available data from the Delta-Simons intrusive investigation suitable for a Site with a proposed commercial end-use (gasification plant).

Table 12 - Conceptual Site Model

Source	Pathway	Receptor	Matrix Assessment	Justification / Additional Assessment
Identified concentrations	Direct contact/ ingestion and	Future Site users (occupiers and visitors)	Low Risk	Widespread elevated concentrations of contaminants have not been identified in soils across the Site (a hotspot of TPH contamination was identified in DS107a). The majority of the redevelopment will consist of hardstand surfacing, however, in any areas of soft landscaping proposed, a clean layer of imported topsoil will be required to break the pollutant linkage.
	inhalation of dust	Groundworkers during redevelopment and any future sub-surface works	Low Risk	Groundworkers and sub-surface maintenance workers should be made aware of the possibility of encountering contaminated soils through toolbox talks. Safe working procedures should be implemented, good standards of personal hygiene should be observed and appropriate levels of PPE provided and utilised. This recommendation should be captured in Site health and safety documentation and in maintenance plans.
of heavy metals within shallow Made Ground  Previously unidentified hotspots of contamination	Windblown contaminated dust	Off-Site receptors	Low Risk	The potential for the generation of contaminated dust and the risk to off-Site receptors is considered to be low. However, in accordance with general good practice, the groundworks contractor will need to implement dust suppression techniques at the Site to limit the potential for the generation of dust.
	Leaching and migration through groundwater present beneath the Site	Controlled waters - Secondary A Aquifer	Low Risk	Elevated concentrations of boron, mercury and selenium have been identified within the groundwater, but are considered representative of wider groundwater quality, and as such not considered to represent a risk to the end Site use or its users.
	Direct infiltration in water supply pipes.	Drinking water supply pipes	Low Risk	Hydrocarbons, especially aromatics and chlorinated solvents, are known to permeate plastic pipes. Assessment of the risk to water pipes for any new supply will have to be undertaken as a requirement of the statutory undertakers who should be provided with a copy of this Site investigation Report and provide recommendations for upgrading of potable water supply pipes, if considered necessary.
Asbestos containing materials	Groundworkers and construction workers during redevelopment and future sub-surface maintenance and occupiers of adjacent properties during redevelopment	Inhalation of asbestos fibres	Low Risk	Asbestos fibres have been identified in one location (DS109).  Groundworkers should be made aware of the possibility of encountering potential Asbestos Containing Materials (ACM) within the Made Ground across the Site and an appropriate protocol should be in place. Safe working procedures should be implemented, including damping down of excavations and stockpiles in line with general dust generation mitigation and appropriate levels of PPE provided and utilised. This recommendation should be captured in Site health and safety documentation and in maintenance plans.

Potentially hazardous ground gas	Vertical & lateral migration and accumulation of gas in enclosed spaces and sub-floor voids	Construction / maintenance workers and Site users / visitors	Low Risk	Elevated concentrations of methane and carbon dioxide have been identified across the Site, however, flows are low and therefore it is considered that the ground gas regime at the Site is Characteristic Situation 2 – low risk, under which only basic ground gas protection measures are required.
Potentially unidentified 'hotspots' of contamination, which may be present in areas of the Site that have not been directly investigated	All receptors	All pathways	Possible	As with all redevelopment works, a 'hotspot' protocol should be in place for groundworkers to act upon during any future redevelopment of the Site.

### 9.0 ASSESSMENT OF RISKS AND LIABILITIES

This assessment considers both perceived and actual risks using the source-pathway-receptor concept, with the principal measure of risk being whether significant harm (to people, animals, property (including buildings, etc.), or ecosystems) or pollution of controlled waters (surface water bodies, aquifers, coastal waters, or territorial waters) is being caused, or whether there is a significant possibility of such harm being caused with respect to statuary liability.

Risks and liabilities have been assessed both in terms of investment and development impacts.

The overall risk classification, based on the Source-pathway-receptor principle, adopted for this preliminary assessment, is defined as follows:

- △ Low risk issue unlikely to present a liability or cost;
- $\Delta$  Moderate risk issue may present a liability or cost, but these may be limited; and
- △ High risk likely that significant liabilities and/or costs exist.

### 9.1 Statement of Risk

Based on the available information following the Phase II Investigation, Delta-Simons considers that in the context of a continuing commercial use of the Site, the following risk and liability statements can be made.

**Table 13 - Liability Assessment** 

Regulatory Body	There is considered to be a <b>Low</b> risk of enforcement action under Part
Enforcement	2A or WRA.
(Part 2A or WRA)	
Third Party	Potential for legal action by surrounding landowners based on the
Liability	potential for contamination to migrate off-Site is considered to be <b>Low</b> .
Investment	Delta-Simons considers there to be a Low risk of impact on the
Impact	commercial value of the Site in terms of investment from significant contamination issues.
Development Impact	Delta-Simons considers there to be a <b>Low</b> risk of impact associated with redevelopment of the Site with respect to significant contamination issues.
Overall Statement of Risk	On the basis of available information, Delta-Simons considers that with regard to potential soil and groundwater contamination issues and associated environmental liabilities, the Site represents an investment opportunity with a <b>Low</b> overall risk status.
	In the context of a commercial redevelopment remediation would be limited to basic engineering measures and a specific remediation programme will not be needed.

### 10.0 CONCLUSIONS AND RECOMMENDATIONS

### 10.1 General

The Site investigation has been carried out in order to assess the contamination status of the soil and groundwater beneath the Site, and the geotechnical characteristics of the soil and rock. The assessment is being completed prior to the redevelopment of the Site for a commercial end use.

The chemical analysis undertaken on selected soil samples did not identify significantly elevated concentrations of contamination in the tested locations. A hotspot of TPH contamination was identified in DS107a, however, this is not considered to represent a material risk as the majority of the proposed redevelopment is understood to consist of hardstand surfacing. Asbestos (amosite lagging) was identified in one sample within the Made Ground at DS109 at depth. Groundwater chemical analysis results indicate only slightly elevated concentrations of boron and selenium, limited to the rotary borehole R4. Slightly elevated concentrations of mercury were identified in six of the boreholes sampled. Theses exceedance are not considered significant as the Site is not located within a Source Protection Zone, and there are no active groundwater abstractions within 2km of the Site. Marginal exceedances are likely to be representative of wider groundwater quality. Ground gas monitoring indicated low gas flow rates and slightly elevated concentrations of methane (maximum concentration of 10.4% v/v) and carbon dioxide (maximum concentration of 4.9% v/v) giving the Site a Characterisation Situation 2 (CS2 -Low Risk).

### 10.2 Environmental Recommendations

Based on the information obtained to date the following information can be concluded:

- Δ Significantly elevated concentrations of targeted contaminants above the respective assessment criteria which are considered to represent a risk in the context of the redevelopment have not been identified in soils and a specific remediation exercise is not considered to be required;
- Δ It is recommended that a minimum 300 mm of certified suitable for use topsoil/subsoil should be incorporated into all new landscaped areas;

- Although good site coverage has been achieved, unidentified localised areas of contamination may exist at the Site and an appropriate 'hotspot' protocol should be in place should such contamination be identified during construction;
- Δ Based on the ground gas monitoring conducted to date, basic gas protection measures would be required to be incorporated into the development for the proposed works;
- A For materials removed from site to achieve cut and fill / for pile caps etc. shallow soils likely to be encountered should generally be considered as non-hazardous for disposal, with localised areas of potentially hazardous soils. Additional waste classification testing as part of the development process (including WAC testing) may be required to facilitate off-Site disposal of Made Ground materials once the specific materials to be removed are identified;
- As with all brownfield development sites, groundworkers who are required to perform sub-surface work at the Site should be made aware of the known contaminants in soil and groundwater and the possibility of encountering additional localised low levels of contamination. This should include information on the potential to encounter Asbestos Containing Materials (ACM). Safe working procedures should be implemented, including damping down of excavations and stockpiles in line with general dust generation mitigation and appropriate levels of PPE provided and utilised. This recommendation should be captured in Site health and safety documentation and in maintenance plans Suitable dust suppression techniques will need to be implemented during the redevelopment; and
- Δ Given the history of the Site, it should be assumed that upgraded water pipe material will be required, albeit, confirmation should be sought from the Local Water Authority.

# 10.3 Summary of Geotechnical Recommendations

On the basis of the information obtained and reviewed as part of this Assessment and the conclusions drawn above, Delta-Simons makes the following geotechnical recommendations:

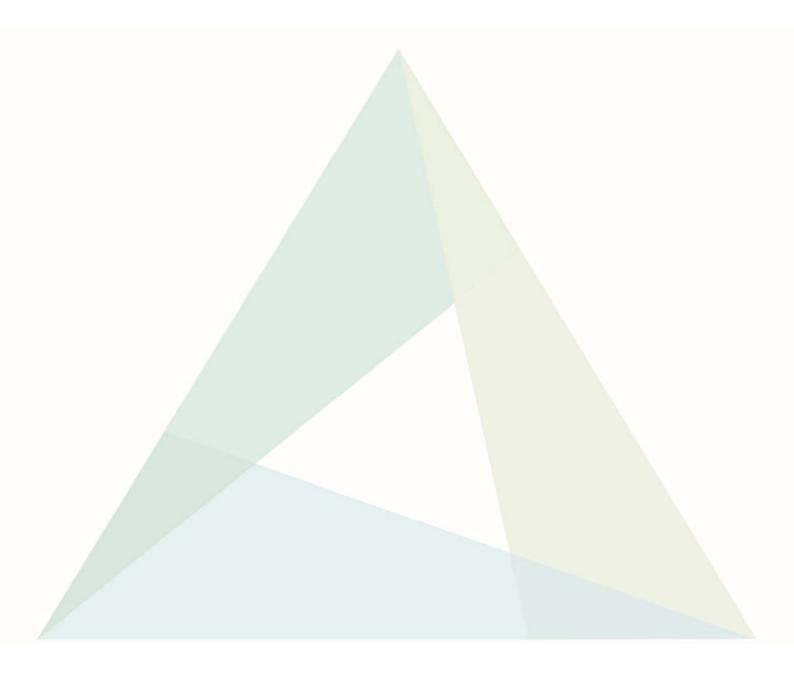
Δ The Made Ground Fill material is considered to be too soft, variable, compressible and unpredictable in its existing condition for conventional shallow foundations at the Site given the expected large design loads;

- A piled foundation solution using bored piles transferring loads to competent bedrock geology encountered at depth is likely to be suitable for the expected design loads, predominantly utilising end bearing capacity due to the depth of Made Ground Fill, the ongoing settlement of which may induce negative skin friction. It would be recommended, once pile positioned have been confirmed, that each location is predrilled to confirm depth to bedrock and ensure locations are clear of obstructions;
- Δ It is not considered that ground improvement techniques would be appropriate for the expected design loads given the depth of Made Ground Fill encountered beneath the Site;
- Δ Due to significant thickness of Made Ground, soils are considered too variable and unpredictable in its existing state for ground bearing floor slabs;
- Δ In-situ DCP CBR test have not been included within the scope of this investigation. In the absence of such tests, it is recommended that a conservative value of 2% be adopted for preliminary pavement design;
- Δ The use of soakaways as a form of drainage is not recommended for the Site given the thickness and nature of the Made Ground encountered;
- Δ All shallow foundation or services excavations at the Site should be considered unstable, therefore, temporary support of all excavations should be considered when excavating on-Site;
- The conditions of the soils at the Site would be classified as Design Sulphate Class DS-4 and ACEC Class AC-4 for soils and groundwater, when considering the most appropriate type of concrete to be used at the Site in order to resist chemical attack from elevated sulphate present in the soils for both shallow foundations and deeper piles. Piling is not generally considered to result in disturbed ground, therefore, any pyrite is unlikely to be oxidised. As such, consideration can be given to water soluble sulphate content of the clay, which in this case would result in a DS-2 classification based on the results obtained.

## 10.4 Statement of Risk

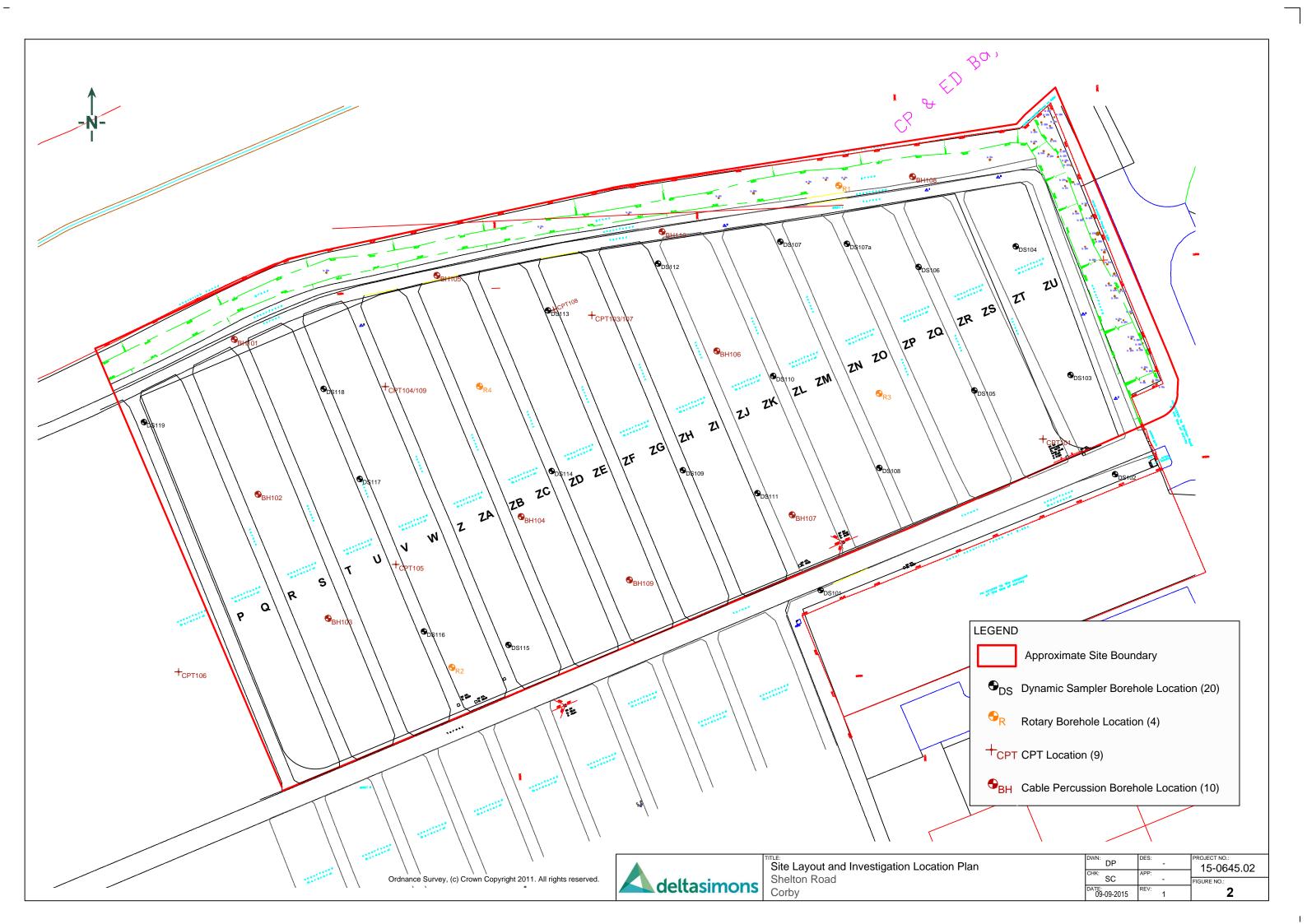
Based on the available information, Delta-Simons considers that in the context of a continuing commercial use of the Site, the risk and liabilities associated with third party, investment and development impacts to be low.

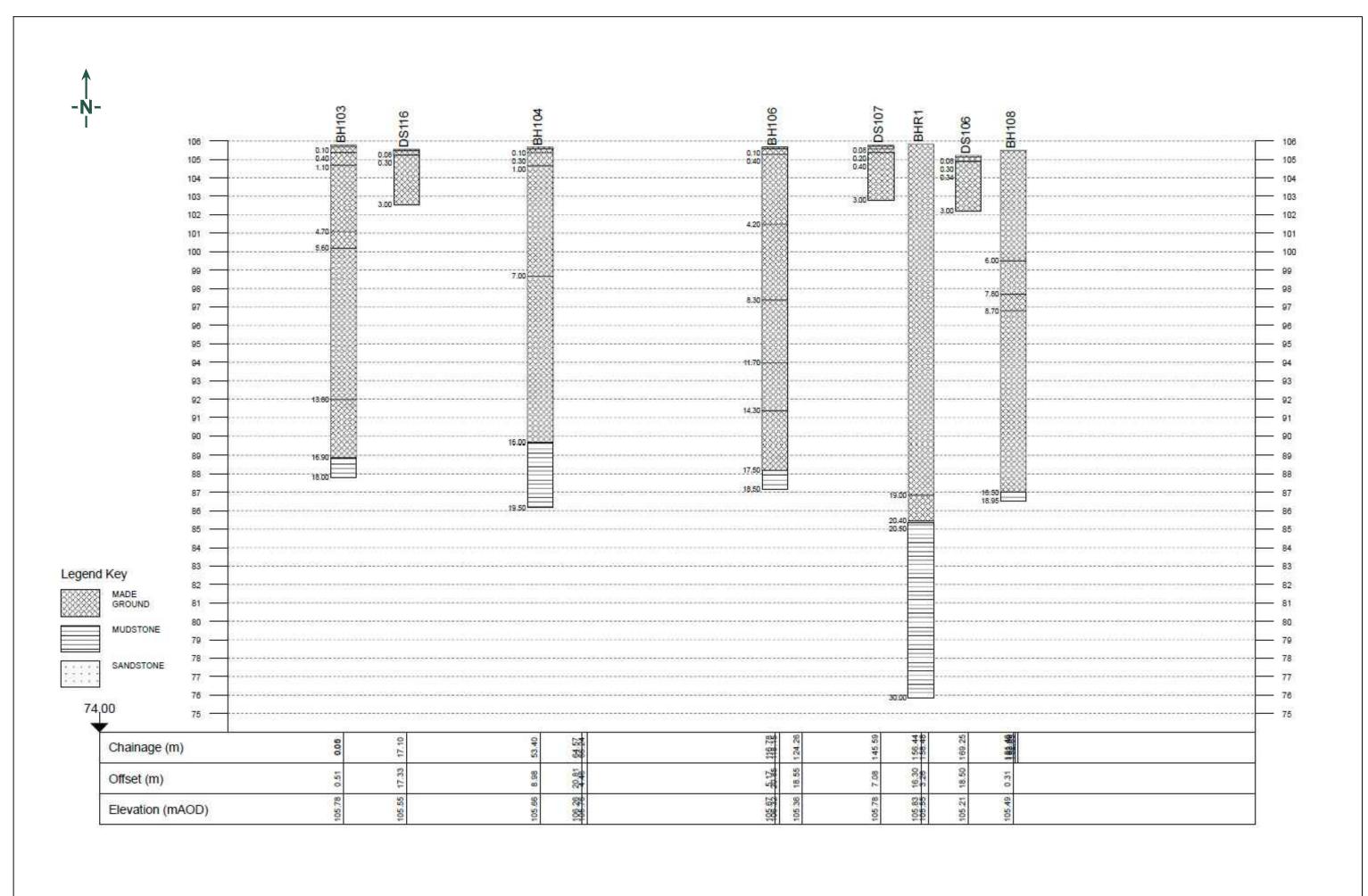
This Report was prepared by:		
Stacey Ragsdale Environmental Scientist	Date	9 <sup>th</sup> December 2015
Environmental Scientist		
This Report was reviewed by:		
Simon Steele	Date	9 <sup>th</sup> December 2015
Projects Manager		
This Report was authorised by:		
£		
Simon Brown	Date	9 <sup>th</sup> December 2015
Commercial Director		

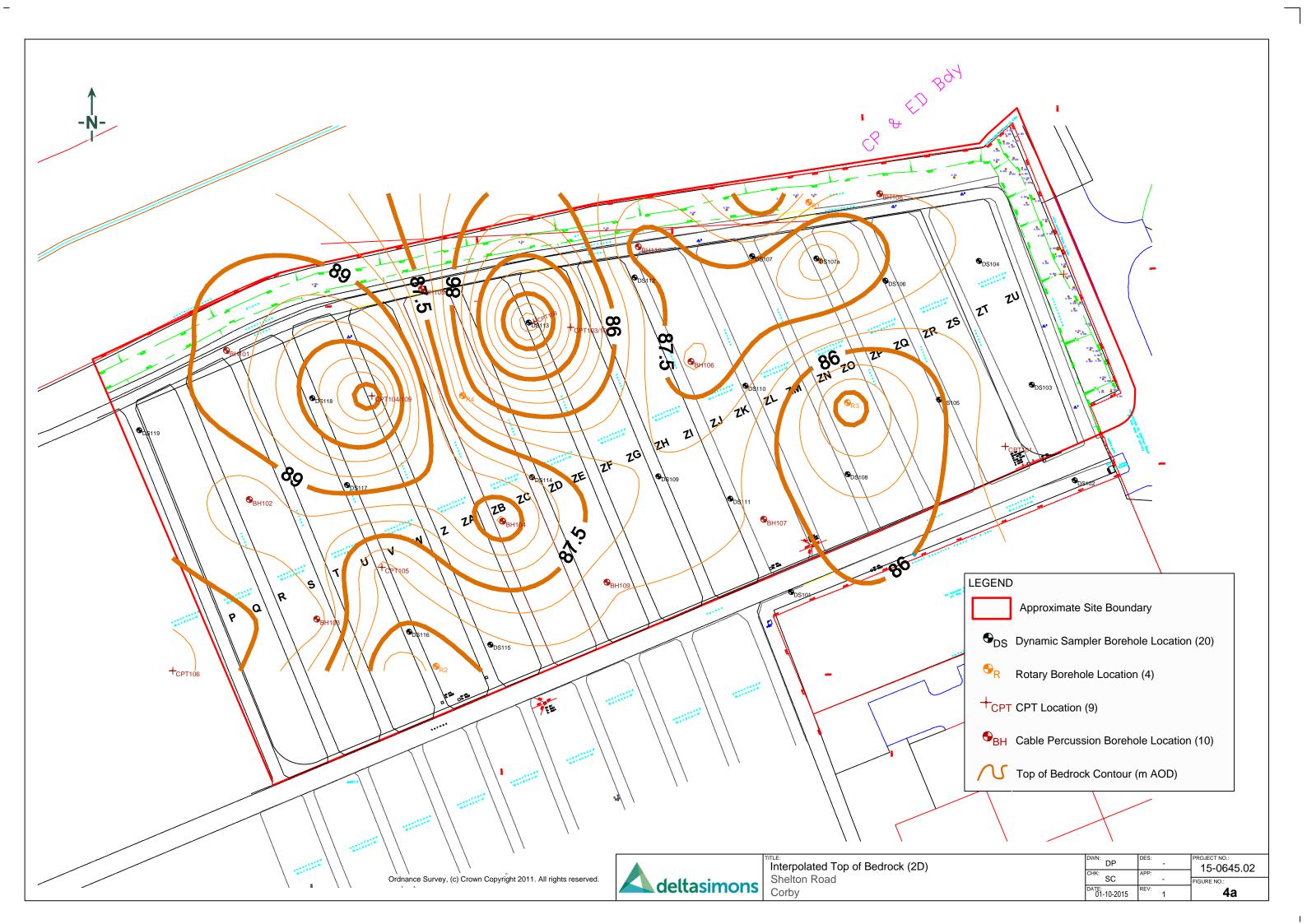


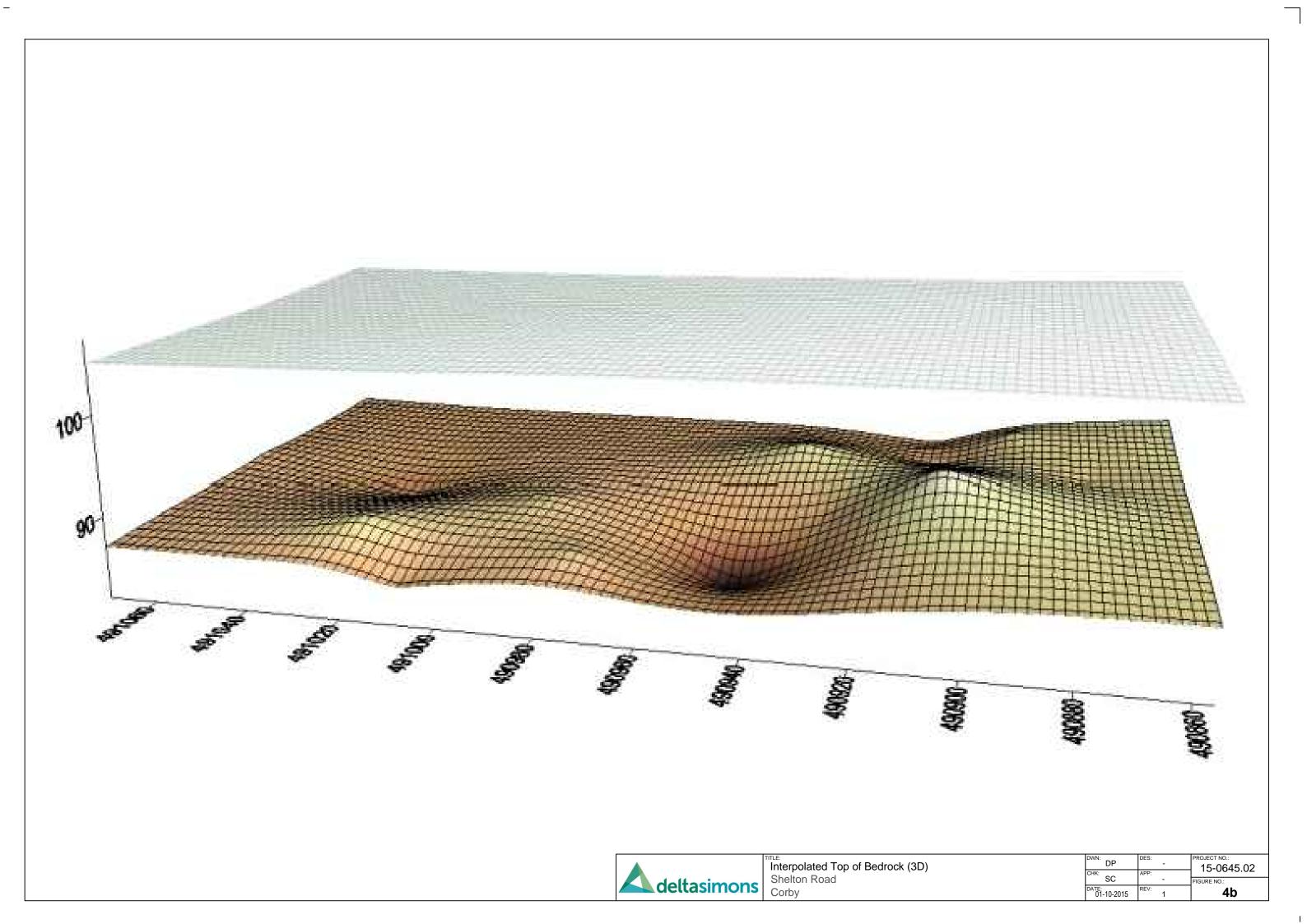


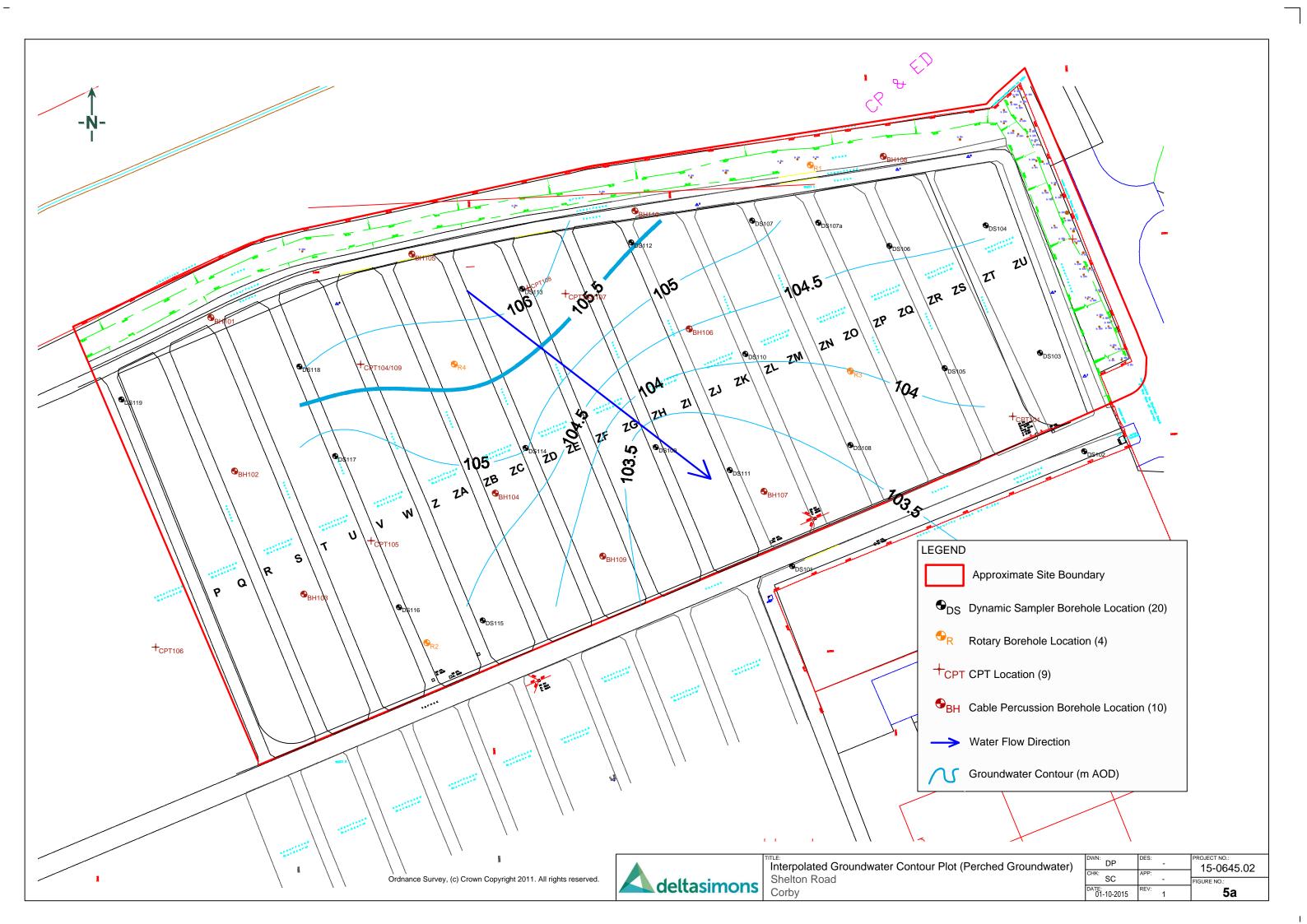


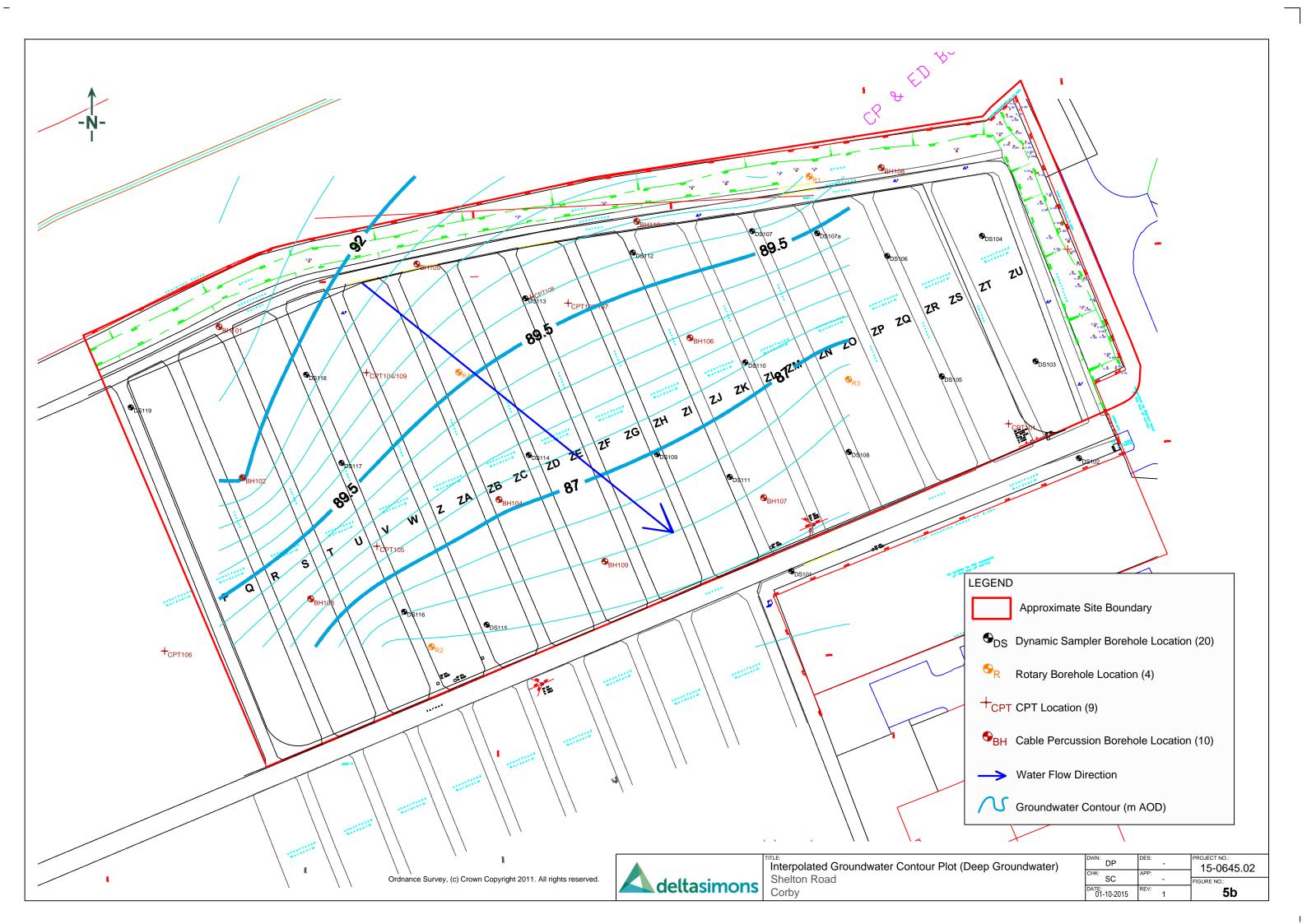


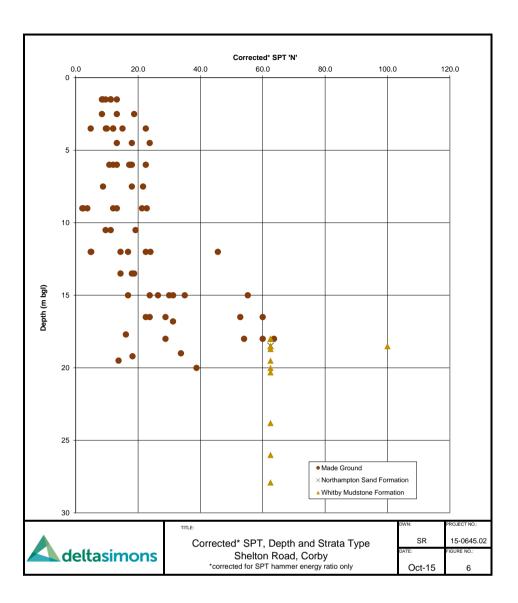


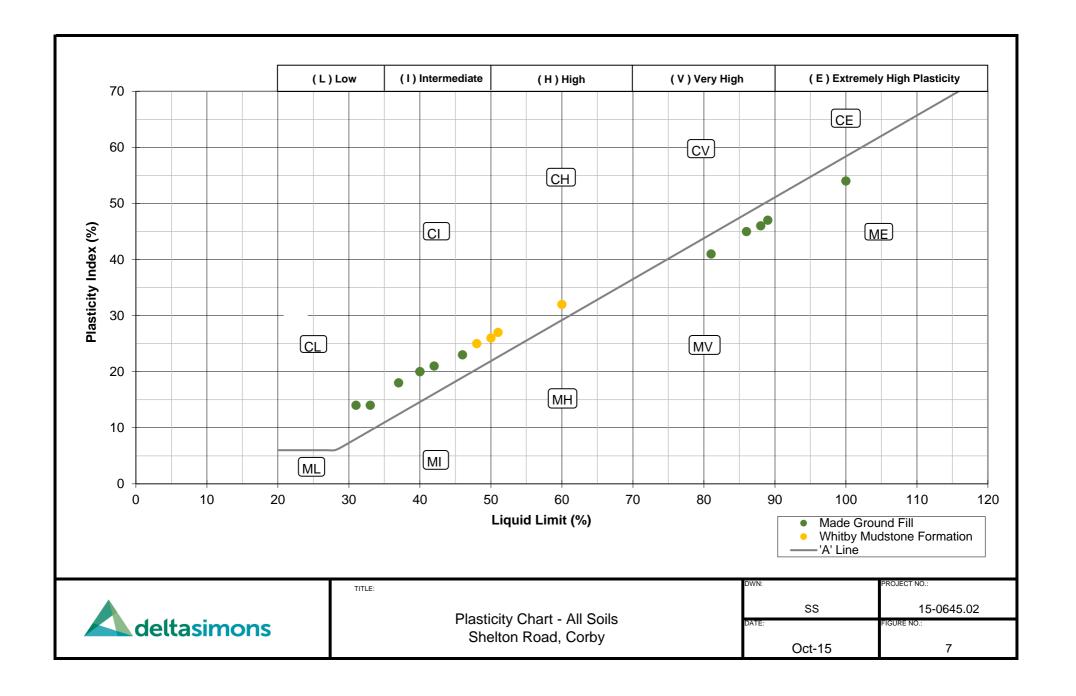












# Appendix I





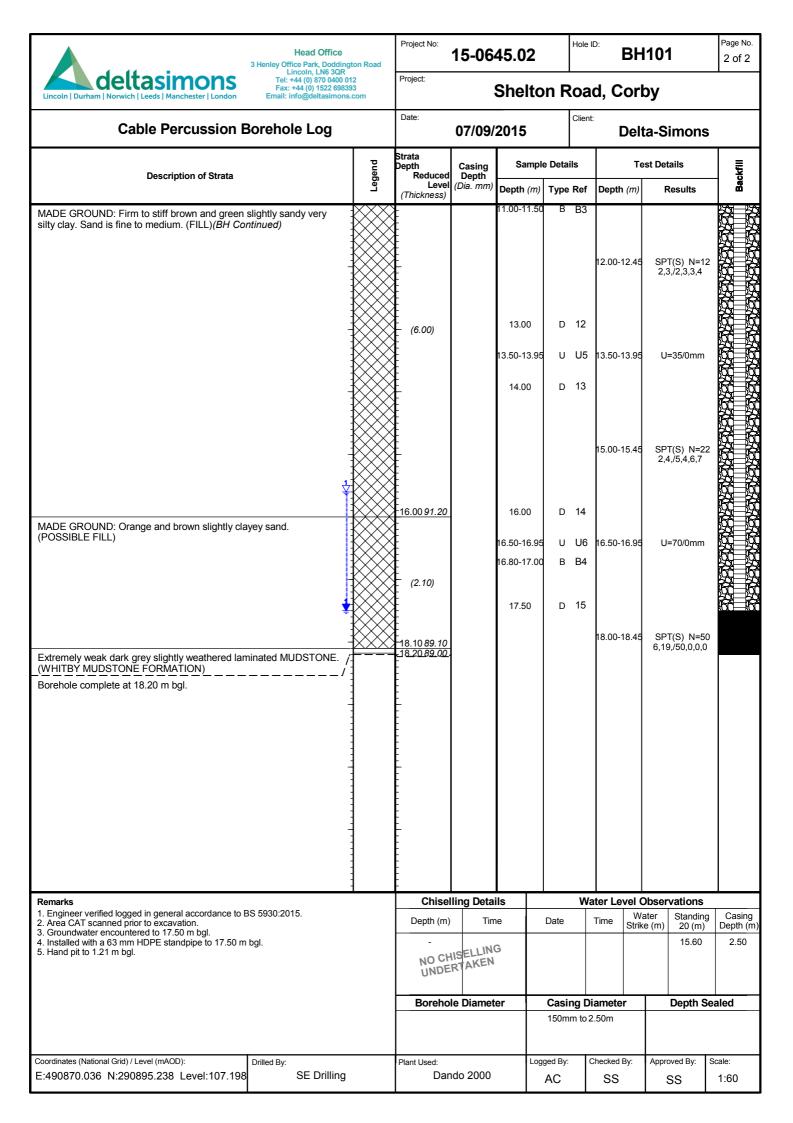


3 Henley Office Park, Doddington Road Lincoln, LN6 3QR

Project No: 15-0645.02 Hole ID:

**BH101** 

deltasimons Lincoln   Durham   Norwich   Leeds   Manchester   London	Lincoln, LN6 3QR Tel: +44 (0) 870 0400 0 Fax: +44 (0) 1522 6983 Email: info@deltasimons	93	Project:	,	Shelt	nelton Road, Corby								
Cable Percussion B	orehole Log		Date:	07/09/	2015		Client		ta-Simons	<b>,</b>				
		pue	Strata Depth	Casing	Samı	ole Deta	ils	T	est Details					
Description of Strata		Puegend	Reduced Level (Thickness)		Depth (m	) Type	Ref	Depth (m)	Results	Backfill				
MADE GROUND: Asphalt.  MADE GROUND: Light brown slightly gravelly sa subangular to subrounded fine to medium sands  MADE GROUND: Soft dark grey and black, slight gravelly silty clay with occasional plant material. (  MADE GROUND: Soft to firm greenish brown and	tone.  tly sandy slightly  FILL)		C0.10 107.10/ -0.30 106.90 - (0.50) -0.80 106.40	(150)	0.10 0.80 1.00-1.50	D	1 2 B1							
sandy slightly gravelly silty clay. Gravel is subang to medium chalk. (FILL)	ular to rounded, fine				2.20	D	3	1.50-1.95	SPT(S) N=8 1,1,/2,1,2,3					
	-			2.50	2.50-2.95 3.00		U1 4	2.50-2.95	U=25/450mm					
	-				4.20	D	5	3.50-3.95	SPT(S) N=9 1,2,/2,2,3,2					
	-		(7.20)		4.50-4.95 5.00		U2 6	4.50-4.95	U=12/135mm					
					5.50	D	7	6.00-6.45	SPT(S) N=16 2,2,/3,4,5,4					
MADE ODGUND Vers out deal areas and blocks			-8.00 99.20		7.00 7.50-7.98 8.00 8.00-8.50	5 U	8 U3 9 B2	7.50-7.95	U=36/450mm					
MADE GROUND: Very soft dark grey and black soccasional pockets of peat. (FILL)	sity clay, with		- (2.00)					9.00-9.45	SPT(S) N=2 1,0,/0,0,1,1					
MADE GROUND: Firm to stiff brown and green s silty clay. Sand is fine to medium. (FILL)	lightly sandy very		-10.00 97.20		10.00 10.50-10.9	95 U	10 U4	10.50-10.95						
Remarks		1	Chisel	lling Deta	11.00 ils	I D	11 <b>W</b> a	11.00 Iter Level	PID=0.2ppm  Observations	<b>₽√!</b>				
Engineer verified logged in general accordance to BS 2. Area CAT scanned prior to excavation.     Groundwater encountered to 17.50 m bgl.     Installed with a 63 mm HDPE standpipe to 17.50 m bs.     Hand pit to 1.21 m bgl.			Depth (m)	T	ne G	Date		Time W	Vater Standing 20 (m) 15.60	Casing Depth (m)				
				Borehole Diameter			nc D	ameter	Donth S	naled				
		boreno	ie Diamet	el	150m		ameter :.50m	Depth S	ealeu					
Coordinates (National Grid) / Level (mAOD): E:490870.036 N:290895.238 Level:107.198	Drilled By: SE Drilling		Plant Used: Dar	ndo 2000	Lo	ogged By:	(	Checked By:	Approved By:	Scale: 1:60				





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deltasimons Lincoln   Durham   Norwich   Leeds   Manchester   London	Tel: +44 (0) 870 0400 01 Fax: +44 (0) 1522 69839 Email: info@deltasimons.	93	Project:		Shelte	on R	oa	d, Corl	ру	
Cable Percussion Bo	rehole Log		Date From / To <b>04/09</b>		07/09/	2015	Client		ta-Simons	}
Description of Strata			Strata Depth Reduced			le Detai		Te	est Details	Backfill
		L P	Level (Thickness)	(Dia. mm)	Depth (m)			Depth (m)	Results	Ä
MADE GROUND: Aggregate  MADE GROUND: Light brown slightly gravelly san	A Cravalia		0.10 106.44 0.20 106.34		0.20	D	1			
subangular to subrounded fine to medium sandsto			- (0.90)							
MADE GROUND: Firm to stiff greenish brown and sandy slightly gravelly silty clay. Gravel is subangul	dark grey slightly I lar to rounded, fine		_ _1.10 <i>105.44</i>		1.00 1.10	D D	2			
to medium chalk. (FILL)  MADE GROUND: Very soft dark grey and black sil	ty clay with		-	(150)	1.10-1.50		B1	1.50-1.95	SPT(C) N=8	
occasional pockets of peat. (FILL)	ity clay, with								SPT(C) N=8 1,1,/2,1,2,3	
	- -		-		2.20	D	4			
				2.50	2.50-2.95	U	U1	2.50-2.95	U=6/225mm	
	-				2.00		_			
	_		-		3.00	D	Э			
	<u>-</u>		-					3.50-3.95	SPT(C) N=10 2,2,/3,2,2,3	
	-								2,2,73,2,2,3	
	-		-		4.20	D	6			
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	<u> </u>		_							
			-							
	-				5.50	D	7			
	-		_					6.00-6.45	SPT(S) N=1	
	-								2,2,/4,3,4,4	
	-		_							
	-				7.00	D	8			
	:		-		7.50-7.95	U	U3	7.50-7.95	U=20/180mm	R7   R
	-									
MADE GROUND: Firm to stiff brown and green slig	ahtly sandy very		-8.00 <i>98.54</i> -		8.00	D	9			
silty clay. Sand is fine to medium. (FILL)	gridy carray very				8.50	D	10			
	=							0 00 0 45	0DT(0) N 0	
	<u>-</u>		_					9.00-9.45	SPT(S) N=2 0,1,/0,0,1,1	
	<u> </u>									
	-				10.00	D	11			
	-		-		10.00					
	-		-		10.50-11.0 10.50-10.9		12 U4	10.50-10.95	U=10/0mm	
	-				<u> </u>					
Remarks 1. Engineer verified logged in general accordance to BS	5930:2015.			ling Deta				10/	Observations ater Standing	Casing
Area CAT scanned prior to excavation.     Groundwater encountered to 17.50 m bgl.			Depth (m)			Date		1 Ime Strik	e (m) (m)	Depth (m
4. Installed with a 63 mm HDPE standpipe to 17.50 m bg 5. Hand pit to 1.21 m bgl.	JI.		18.50 - 18.7	00:0	00			EP F	NCOUNTER	EΦ
							NC	WATER		
					er	Casir	ng Di	g Diameter Depth Sea		ealed
						150mi	m to 2	2.50m		
Coordinates (National Grid) / Level (mAOD): D1 E:490875.945 N:290856.916 Level:106.544	rilled By: SE Drilling		Plant Used: Dar	ndo 2000	Lo	gged By:	C	Checked By:	Approved By:	Scale:
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Cable Percussion Borehole Log		Date From / To		07/09/2	2015 Clien		ta-Simons	3
Description of Strata		Strata Depth Reduced	Casing Depth	Samp	le Details	Te	est Details	Backfill
Description of Strata	Leg	Level (Thickness)		Depth (m)	Type Ref	Depth (m)	Results	Bac
MADE GROUND: Firm to stiff brown and green slightly sandy very silty clay. Sand is fine to medium. (FILL)(BH Continued)		(7.20)		11.50 12.00-12.50	D 13	12.00-12.45	SPT(S) N=4 1,0,/1,1,1,1	
				13.00 13.50-14.0 13.50-13.9		13.50-13.95	U=7/450mm	
		- - - - - -15.20 91.34		14.50 15.20	D 15	15.00-15.45	SPT(S) N=46 4,10,/11,21,9,5	
MADE GROUND: Orange and brown slightly clayey sand, becoming gravelly from 18.00 m . (POSSIBLE FILL)				16.00-16.50 16.50-17.00		16.50-16.95	SPT(C) N=4: 5,9,/9,11,12,12	
		- - - - - - - - - - - - - - - - - - -		17.50 18.00-18.50 18.50	D 17 D B B7 D 18	18.00-18.45	SPT(C) N=5: 6,5,/8,10,15,20	
Extremely weak dark grey slightly weathered laminated MUDSTONE. (WHITBY MUDSTONE FORMATION)  Borehole complete at 18.70 m bgl.		-18.70.87.84				18.70-19.15 (25/40)	SPT(C) N=50/225mm mm,0/0mm/50,0,	
Remarks	1	Chisel	ling Deta	ils	W	ter Level (	Observations	
Engineer verified logged in general accordance to BS 5930:2015.     Area CAT scanned prior to excavation.     Groundwater encountered to 17.50 m bgl.     Installed with a 63 mm HDPE standpipe to 17.50 m bgl.     Hand pit to 1.21 m bgl.		Depth (m)			Date	1 Ime Strik	ater Standing (e (m) (m)	Depth (m)
		Boreho	le Diamet	er	Casing D		Depth S	ealed
Coordinates (National Grid) / Level (mAOD): Drilled By: E:490875.945 N:290856.916 Level:106.544 SE Drilling		Plant Used: Dar	ido 2000	Log	gged By:	Checked By:	Approved By:	Scale: 1:60



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Page No. 1 of 2

deltasimons Lincoln   Durham   Norwich   Leeds   Manchester   London	393 is.com			Shelto	on R	oa	d, Co	orby		
Cable Percussion Borehole Log		Date:	07/09/	2015		Client		elta-S	Simons	
Description of Strata	Legend	Strata Depth Reduced	Casing Depth	Samp	le Detail	s		Test De	etails	Backfill
Booshpash si cada	l Leg	Level (Thickness)	(Dia. mm)	Depth (m)	Туре	Ref	Depth (	(m)	Results	Bac
MADE GROUND: Aggregate		<u>0.10 105.68</u> 0.40 105.38		0.30	D					
MADE GROUND: Light brown slightly gravelly sand. Gravel is subangular to subrounded fine to medium sandstone.	/ <b>***</b>	-		0.50-1.00	В	B1				
MADE GROUND: Firm to stiff greenish brown and dark grey slightly sandy slightly gravelly silty clay. Gravel is subangular to rounded, fine	<b>1</b>	. (0.70) -1.10 104.68		1.00	D	2				
o medium chalk. (FILL)		1.10 704.00 - -								
MADE GROUND: Firm to stiff orange brown and dark grey slightly andy slightly gravelly silty clay. Gravel is subangular to rounded, fine		<u> </u>					1.50-1.	95   S   1	PT(S) N=7 ,0,/1,2,2,2	
o coarse sandstone. (FILL)	<b>1</b>	E		2.00	D	3				
		ļ.		0.50		DO	0.50.0		1 40/0	
		Ē		2.50 2.50-2.95		B2 U1	2.50-2.	95	J=40/0mm	
	****	(3.60)		3.00	D	4				
		ŧ ŧ		3.50-4.00	В	ВЗ	3.50-3.5	0.5	PT(S) N=10	
		<del>}</del>	(150)	3.50-4.00	B	ы	3.50-3.	95 31	,1,/2,2,3,3	
	$\Longrightarrow$	-		4.00	D	5				
	$\mathbb{K} \times \mathbb{K}$	E		4.50-4.95		U2	4.50-4.	05 1	J=35/0mm	
		- -4.70 101.08		4.50-4.55		02	4.50-4.	95	J-33/0111111	
MADE GROUND: Soft dark grey and black silty clay, with occasional pockets of peat. (FILL)	<b>****</b>	<u> </u>		5.00	D	6				
		(0.90)								
# #ADE GROUND: Firm to stiff brown and green slightly sandy very		-5.60 <i>100.18</i> -								
ilty clay. Sand is fine to medium. (FILL)	$\longrightarrow\!$	-		6.00	D	7	6.00-6.	45 S	PT(S) N=9 ,2,/1,2,3,3	
		Ė								
	$\mathbb{K} \times \mathbb{K}$	Ē.								
	+	<u>-</u>		7.00	D	8				
		Ē Ē	7.50	7.50-8.00		B4	7.50-21	.00	U=/0mm	
		ţ		7.50-21.00		U3				
	+	-		8.00	D	9				
	$\mathbb{K} \times \mathbb{K}$	Ē								
		ţ								
	$+\!$	<u>.</u>		9.00	D	10	9.00-9.		PT(S) N=11 :,2,/2,2,4,3	
	$\ggg$	Ę								
		(8.20)				44				
	****	<u>-</u>		10.00	D	11				
				10.50-11.00 10.50-10.9	В	B5 U4	10.50-10	).95 L	J=100/0mm	
		E		11.00	D					
emarks	V V V V	Chisel	ling Deta				ter Lev	el Obse	rvations	
Engineer verified logged in general accordance to BS 5930:2015.  Area CAT scanned prior to excavation.		Depth (m)	Tim	ne	Date		Time	Water Strike (m	Standing (m)	Cas Depth
. Groundwater encountered to 17.50 m bgl. . Installed with a 63 mm HDPE standpipe to 17.50 m bgl. . Hand pit to 1.21 m bgl.		-	IOELLIN	G						2.5
. Traine pir to 1.2 i i i byt.		NO CH	IISELLING RTAKEN							
		0112								
		Boreho	le Diamet	ter		_	ameter		Depth S	ealed
					150mn	n to 7	.sum			
T						,				
ordinates (National Grid) / Level (mAOD): Drilled By: 5:490893-272 N:290826-17 Level:105-782 SF Drilling		Plant Used:	ido 2000		gged By:	C	hecked By	y: App	roved By:	Scale:

SE Drilling

E:490893.272 N:290826.17 Level:105.782

Dando 2000

AC

SS

1:60

SS

3 Henley Office Park, Doddington Road Lincoln, LN6 3QR

Project No: 15-0645.02 Hole ID: **BH103** 

deltasimons Lincoln   Durham   Norwich   Leeds   Manchester   London	Tel: +44 (0) 870 0400 0 Fax: +44 (0) 1522 6983 Email: info@deltasimons	93 s.com	Project:	Shelton Road, Corby								
Cable Percussion E	Borehole Log		Date:	07/09/	2015		Client:		lta-Simons			
Description of Strata		Legend	Strata Depth Reduced	Casing Depth	Samp	le Detai	ls	т	est Details	Backfill		
Description of Strata		Leg	Level (Thickness)	(Dia. mm)	Depth (m	Туре	Ref	Depth (m)	Results	Bac		
MADE GROUND: Firm to stiff brown and green silty clay. Sand is fine to medium. (FILL)( <i>BH Cor</i>	slightly sandy very ntinued)				12.00	D	13	12.00-12.4	SPT(S) N=20 3,3,/4,4,5,7			
					13.00 13.50-13.9		14 U5	13.50-13.9	5 U=/0mm			
MADE GROUND: Orange and brown slightly cla (POSSIBLE FILL)	yey sand.		-13.80 <i>91.98</i> - - - -		14.00	D	15					
			(3.10)		15.00	D	16	15.00-15.4	SPT(S) N=19 3,4,/4,5,5,5			
					16.00 16.50-16.9		17 U6	16.50-16.9	5 U=100/0mm			
Extremely weak dark grey slightly weathered lam (WHITBY MUDSTONE FORMATION)	ninated MUDSTONE.		-16.90 88.88 - - - (1.10)		17.00	D	18					
Borehole complete at 18.00 m bgl.			- -18.00 87.78		18.00	D	19	18.00-18.4	SPT(C) N=50 7,10,/14,20,16,0			
		-										
		-	-									
Remarks	00.5000.0045	I	Chisel	ling Deta	ils		Wa		Observations			
. Engineer verified logged in general accordance to BS 5930:2015 Area CAT scanned prior to excavation Groundwater encountered to 17.50 m bgl Installed with a 63 mm HDPE standpipe to 17.50 m bgl Hand pit to 1.21 m bgl.			Depth (m)  -  NO CH UNDE	Tin IISELLIN RTAKEN		Date			Vater Standing ke (m)	Casi Depth 2.5		
		Boreho	le Diamet	er	Casii	ng Di	ameter	Depth Se	ealed			
				150m			.50m					
coordinates (National Grid) / Level (mAOD):	Drilled By:		Plant Used:		Lo	gged By:	С	hecked By:	Approved By:	Scale:		



3 Henley Office Park, Doddington Road

Project No: 15-0645.02 Hole ID:

Page No. **BH104** 1 of 2

Lincoln, LN6 3QR Tel: +44 (0) 870 0400 07 Fax: +44 (0) 1822 69838 Email: info@deltasimons.	93	Project:	,	Shelto	n Ro	oac	d, Corl	эу	
Cable Percussion Borehole Log		Date:	03/09/	2015	C	Client:	Delt	ta-Simons	3
Description of Strata	Legend	Strata Depth Reduced	Casing Depth	Samp	le Details	s	Te	est Details	Backfill
2000 paositro Cada	l eg	Level (Thickness)	(Dia. mm)	Depth (m)	Type F	Ref	Depth (m)	Results	Ba
MADE GROUND: Aggregate  MADE GROUND: Light brown slightly gravelly sand. Gravel is subangular to subrounded fine to medium sandstone. (FILL)		0.10 105.56 0.30 105.36 (0.70)		0.30	D	1			
MADE GROUND: Firm to stiff greenish brown and dark grey slightly sandy slightly gravelly silty clay. Gravel is subangular to rounded, fine to medium chalk. (FILL)  MADE GROUND: Soft dark grey and black silty clay, with occasional		-1.00 <i>104.66</i> - -	(150)	1.00 1.00-1.50		2 B1	1.50-1.95	SPT(S) N=9	
pockets of peat. (FILL)				2.20	D	3		1,2,/2,2,3,2	
			2.50	2.50-2.95 3.00	U D		2.50-2.95	U=16/225mm	n
		- - - - - - -		3.00		4	3.50-3.95	SPT(S) N=8 2,2,/1,2,3,2	
<u>-</u>		- - (6.00)		4.20		5			
-				4.50-4.95 5.00	D D				
				5.50	D	7			
		-					6.00-6.45	SPT(S) N=14 2,2,/3,4,3,4	
MADE GROUND: Firm to stiff brown and green slightly sandy very silty clay. Sand is fine to medium. (FILL)		-7.00 98.66 - -		7.00 7.50-7.95	D i		7.50-7.95	U=/135mm	
				8.00	D	9			
_		-		8.50	D	10	9.00-9.45	SPT(S) N=17 2,2,/4,4,3,6	
				10.00 10.50-11.0 10.50-10.9	D B 5 U	B2	10.50-10.95	U=15/0mm	
Remarks	<u>1X X X X</u>	Chisel	ling Deta	ils		Wa	ter Level C	Observations	
Engineer verified logged in general accordance to BS 5930:2015.     Area CAT scanned prior to excavation.     Groundwater encountered to 17.50 m bgl.		Depth (m)	Tim	ne	Date	-		ater Standing (m)	Casing Depth (m
4. Installed with a 63 mm HDPE standpipe to 17.50 m bgl. 5. Hand pit to 1.21 m bgl.		NO CH UNDE	IISELLING RTAKEN	G		ИО	WATERE	ENCOUNTER	ĒΦ
		Boreho	ter Casing I			g Diameter Depth Sea to 2.50m			
Coordinates (National Grid) / Level (mAOD):  E:490941.061 N:290851.362 Level:105.656 SE Drilling		Plant Used: Dar	ndo 2000	Log	gged By:	С	hecked By:	Approved By:	Scale: 1:60



Project No: 15-0645.02 Hole ID:

Page No. BH104 2 of 2

Project:

Lincoln   Durham   Norwich   Leeds   Manchester   London	393	Shelton Road, Corby						
Cable Percussion Borehole Log		Date:	03/09/	2015	Clie	ent: <b>Del</b>	ta-Simons	6
Description of Charte	Legend	Strata Depth Reduced	Casing	Sampl	e Details	Те	est Details	Backfill
Description of Strata	Leg	Level (Thickness)	Depth (Dia. mm)	Depth (m)	Type Re	f Depth (m)	Results	Bac
MADE GROUND: Firm to stiff brown and green slightly sandy very silty clay. Sand is fine to medium. (FILL)(BH Continued)		(9.00) - -		11.50	D 12	12.00-12.45	SPT(S) N=1 1,2,/4,4,5,5	8 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6
				13.00 13.50-13.95		5 13.50-13.95	U=20/450mr	
				14.00 14.50	D 14	5	ODT/OV N. O	
				16.00	D 16	15.00-15.45	SPT(S) N=2 5,4,/5,6,6,8	
Extremely weak dark grey slightly weathered laminated MUDSTONE. (WHITBY MUDSTONE FORMATION)				16.50-16.95 17.00 17.00-17.50	U U	6 16.50-16.95	U=100/180mr	
		(3.50)		19.00-19.50		18.00-18.45 (11	SPT(S) N=50/295mm 11/12,12,14,12/	70 MO 10
Borehole complete at 19.50 m bgl.		-19.50 <i>86.16</i> -19.50 86.16				19.50-19.95 (12,1	SPT(C) N=50/225mm 3/20mm/31,19,0	n ,0/ <b>0</b> mm)
Remarks 1. Engineer verified logged in general accordance to BS 5930:2015.		Chisel	ling Deta	ils			Observations	Cooin-
1. Engineer vehicle logged in general accordance to BS 5930.2015. 2. Area CAT scanned prior to excavation. 3. Groundwater encountered to 17.50 m bgl. 4. Installed with a 63 mm HDPE standpipe to 17.50 m bgl. 5. Hand pit to 1.21 m bgl.		Depth (m) - NO CH UNDE	Tim IISELLING RTAKEN		Date	Strik	ater Standing (m)  ENCOUNTER	Depth (m
		Boreho	le Diamet	er		Diameter	Depth S	Sealed
					150mm t	o 2.50m		
Coordinates (National Grid) / Level (mAOD): Drilled By: E:490941.061 N:290851.362 Level:105.656 SE Drilling	]	Plant Used: Dando 2000			ged By:	Checked By:	Approved By:	Scale: 1:60



3 Henley Office Park, Doddington Road

Project No: 15-0645.02 Hole ID:

**BH105** 

deltasimons Lincoln   Durham   Norwich   Leeds   Manchester   London	93 com	Project:	;	Shelto	on R	oa	d, Corl	оy	
Cable Percussion Borehole Log		Date:	08/09/	2015		Client		a-Simons	
Description of Strata		Strata Depth Reduced	Casing Depth	Samp	le Detai	ls	Те	st Details	Backfill
bescription of Strata	Leg	Level (Thickness)	(Dia. mm)	Depth (m)	Туре	Ref	Depth (m)	Results	Bac
MADE GROUND: Asphalt.		-0.20 106.72 -0.40 106.52		0.20	D				
IADE GROUND: Light brown slightly gravelly sand. Gravel is ubangular to subrounded fine to medium sandstone.		-		0.50-1.00	В	B1			
MADE GROUND: Firm to stiff greenish brown and dark grey slightly andy slightly gravelly silty clay. Gravel is subangular to rounded, fine		-		1.00	D	2			
o medium chalk. (FILL)		-	(150)						
		-		1.50-1.95		U1	1.50-1.95	U=45/450mm	
-		-		2.00	D	3			
			2.50				2.50-2.95	SPT(S) N=11	
	$\swarrow\!$	-					2.55 2.55	1,2,/3,3,2,3	
-	$\swarrow\!$	(5.10)		3.00	D	4			
				3.50-3.95	U	U2	3.50-3.95	U=30/450mm	
		- - -				_			
-		_		4.00	D	5			
		-					4.50-4.95	SPT(S) N=11	
	$\swarrow\!$	-		5.00	D	6		2,2,/3,2,3,3	
-	1	<del>-</del> -		3.00		U			
AADE ODOLIND: Ooft dade was and black all to day with a seed in a		5.50 101.42							
IADE GROUND: Soft dark grey and black silty clay, with occasional ockets of peat. (FILL)		- - -		6.00	D	7	6.00-6.45	U=60/450mm	
-				6.00-6.45	U	Ù3			
		- - -		6.50	D	8			
_				7.00	D	9			
	$ \rangle\rangle\rangle\rangle$	- - -							
		-					7.50-7.95	SPT(S) N=18 3,4,/4,4,5,5	
		-		8.00	D	10			
		-							
		(6.20)							
-				9.00 9.00-9.50	D B	11 B2	9.00-9.45	U=33/0mm	
		-		9.00-9.45	Ū	U4			
		-							
-	+	<del>-</del> -		10.00	D	12			
		-					10.50-10.95	SPT(S) N=8	
		- - -		44.00		10		2,2,/2,1,2,3	
emarks	1\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	Chisel	ling Detai	11.00 i <b>ls</b>	ΙD	13 <b>W</b> a	ater Level C	bservations	19/3
Engineer verified logged in general accordance to BS 5930:2015.  Area CAT scanned prior to excavation.		Depth (m)	Tim	ne	Date			ater Standing e (m) (m)	Casi Depth
. Groundwater encountered to 17.50 m bgl. . Installed with a 63 mm HDPE standpipe to 17.50 m bgl. . Hand pit to 1.21 m bgl.		-	OELLING	3				` ' \ '	
. France pre to 1.2 FIII byt.		NO CH	ISELLING RTAKEN			NC	WATERE	NCOUNTERE	
		Boreho	e Diamet	er	Casii 150mi		iameter	Depth S	ealed
					IOUIN	11 10 2			
oordinates (National Grid) / Level (mAOD): Drilled By:		Plant Used:		Ιn	gged By:	- 1	Checked By:	Approved By:	Scale:

#### Project No: Hole ID: Page No. 15-0645.02 **BH105** 2 of 2 3 Henley Office Park, Doddingto Lincoln, LN6 3QR Tel: +44 (0) 870 0400 012 deltasimons Project: Fax: +44 (0) 1522 698393 Email: info@deltasimons.com Shelton Road, Corby Client: Date **Cable Percussion Borehole Log** 08/09/2015 **Delta-Simons** Strata Casing Depth Sample Details **Test Details** Legend Backfill **Description of Strata** Leve (Dia. mm Depth (m) Type Ref Depth (m) Results (Thickness) MADE GROUND: Soft dark grey and black silty clay, with occasional pockets of peat. (FILL)(BH Continued) 11.70 95.22 MADE GROUND: Firm to stiff greenish brown and dark grey slightly 2.00-12.45 U=55/450mm sandy slightly gravelly silty clay. Gravel is subangular to rounded, fine 2.00-12.45 U U5 to medium chalk. (FILL) D 15 13.00 D 16 13.50-13.95 SPT(S) N=15 3,2,/3,4,4,4 (4.30)14.00 D 17 15.00 18 5.00-15.25 U=100/125mm 5.00-15.25 U U6 15.30 Ď 19 16.00 90.92 16.00 D 20 MADE GROUND: Orange brown slightly silty sandy gravel. Gravel is sub angular to rounded fine to coarse sandstone. (FILL) SPT(C) 16.50-16.95 N=50/155mm 16.80-17.2**5**10,14/18,27,5/5mn SPT(C) N=26 5.7./6.5.6.9 (3.40)18.00 18.00-18.45 SPT(C) N=45 D 21 6,8,/9,9,11,16 SPT(C) N=27 4,5,/5,6,8,8 19.00 22 19.00-19.45 19.40 87.52 Extremely weak dark grey slightly weathered laminated MUDSTONE. (WHITBY MUDSTONE FORMATION) (0.60)20.00 20.00-20.45 SPT(S) <u>0.00 86.92</u> D 23 N=50/275mm Borehole complete at 20.00 m bgl. (7,7/8,13,17,12/50mm) **Chiselling Details** Water Level Observations 1. Engineer verified logged in general accordance to BS 5930:2015. Water Strike (m) Standing Casing Depth (m Depth (m) Area CAT scanned prior to excavation. Groundwater encountered to 17.50 m bgl. (m) 4. Installed with a 63 mm HDPE standpipe to 17.50 m bgl. NO WATER ENCOUNTERED NO CHISELLING 5. Hand pit to 1.21 m bgl. UNDERTAKEN

**Borehole Diameter** 

Dando 2000

Plant Used:

Coordinates (National Grid) / Level (mAOD):

E:490920.21 N:290911.094 Level:106.924

Drilled By:

SE Drilling

**Casing Diameter** 

Checked By:

SS

150mm to 2.50m

Logged By:

AC

**Depth Sealed** 

Scale:

1:60

Approved By:

SS



3 Henley Office Park, Doddington Road

Project No: 15-0645.02 Hole ID:

**BH106** 

deltasimons Lincoln   Durham   Norwich   Leeds   Manchester   London	Tel: +44 (0) 870 0400 0 Fax: +44 (0) 1522 6983 Email: info@deltasimons	93	Project:		Shelto	on R	Roa	d, Corl	oy .	
Cable Percussion Bo	orehole Log		Date:	02/09/	2015		Client		a-Simons	
Description of Strata			Strata Depth Reduced	Casing Depth	Samp	le Deta	ils	Te	st Details	Backfill
bescription of ottata		Leg	Level (Thickness)		Depth (m)	Туре	Ref	Depth (m)	Results	Bac
MADE GROUND: Asphalt.	ad Cravalia		<u>0.10 105.57</u> 0.40 105.27		0.10		1			
MADE GROUND: Light brown slightly gravelly sar subangular to subrounded fine to medium sandsto	one.		-		0.50		2			
MADE GROUND: Firm to stiff greenish brown and sandy slightly gravelly silty clay. Gravel is subangu	l dark grey slightly llar to rounded, fine		- - -	(150)	1.00 1.00-1.50	D B	3 B1			
to medium chalk. (FILL)			-	(150)	1.50-2.00	В	B2	1.50-1.95	SPT(C) N=9	
			-						1,1,/2,2,2,3	
	-		- - - (3.80)		2.20	D	4			
			(3.00)	2.50	2.50-2.95	U	U1	2.50-2.95	U=17/270mm	
	-		- -		3.00	D	5			) <u>'</u>
			-					3.50-3.95	SPT(S) N=12	
			-						2,1,/2,3,3,4	
	-		_ -4.20 <i>101.47</i>		4.20	D	6			
MADE GROUND: Firm to stiff orange brown and c sandy slightly gravelly silty clay. Gravel is subangu	lark grey slightly llar to rounded, fine		-		4.50-5.00 4.50-4.95	B	B3 U2	4.50-4.95	U=27/0mm	
to coarse sandstone. (FILL)	_		-				02			
			-		5.50		-			
			-		5.50	0	7			
	-		- - -					6.00-6.45	SPT(S) N=18 2,3,/3,4,5,6	
			(4.10)							
			-		7.00	_ n	8			
	-		-		7.00		Ü			
					7.50-7.95	U	U3	7.50-7.95	U=40/450mm	
	-		-		8.00	D	9			
MADE GROUND: Soft dark grey and black silty cla	av with occasional		-8.30 <i>97.37</i>		8.30 8.50	D B	10 B4			
pockets of peat. (FILL)	ay, with occasional									
	-		-					9.00-9.45	SPT(S) N=3 1,0,/1,0,1,1	
			-							
	_		- - - (3.40)		10.00	D	11			
			(3.40) - -		40.50.40.0	]	114	40.50.40.05	11 7/450	
			-		10.50-10.9	5 U	U4	10.50-10.95	U=7/450mm	
Remarks		$\longrightarrow$	Chical	ling Deta	11.00	D	12 W:	ator Lovel C	Observations	
Engineer verified logged in general accordance to BS     Area CAT scanned prior to excavation.	5930:2015.		Depth (m)	Ť		Date		Time Wa	ater Standing e (m) (m)	Casing Depth (m
<ul><li>3. Groundwater encountered to 17.50 m bgl.</li><li>4. Installed with a 63 mm HDPE standpipe to 17.50 m bg</li></ul>	gl.				G		$\dashv$		` ' ' '	<del>+ ` `</del>
5. Hand pit to 1.21 m bgl.			NO CH UNDE	IISELLIN RTAKEN			NC	WATERE	NCOUNTERE	
			Boreho	le Diamet	er	Casi		iameter	Depth S	
				,				2.50m	2500	
Coordinates (National Grid) / Level (mAOD): E:490989.514 N:290892.399 Level:105.671	Orilled By: SE Drilling	_	Plant Used: Dan	ido 2000	Lo	gged By:		Checked By:	Approved By:	Scale: 1:60
	· ·		l		I	, 10			ı 33	



3 Henley Office Park, Doddington Road Lincoln, LN6 3QR

Project No: 15-0645.02 Hole ID: **BH106** 

deltasimons Lincoln   Durham   Norwich   Leeds   Manchester   London	Tel: +44 (0) 870 0400 0 Fax: +44 (0) 1522 6983 Email: info@deltasimons	393	Project:		Shelte	on R	Roa	d, Corl	by	
Cable Percussion B	orehole Log		Date:	02/09/	2015		Client		ta-Simons	<b>;</b>
Department of Charles			Strata Depth Reduced	Casing	Samp	le Deta	ils	Te	est Details	Backfill
Description of Strata		Leg	Level (Thickness)		Depth (m	Туре	Ref	Depth (m)	Results	Bac
MADE GROUND: Soft dark grey and black silty opockets of peat. (FILL)(BH Continued)  MADE GROUND: Dark grey black slightly clayey	·		- -11.70 93.97 - -		11.50	D	13	12.00-12.45	SPT(S) N=4 1,1,/1,1,1,1	
			(2.60)		13.00 13.50-13.9	D 5 U	14 U5	13.50-13.95	U=7/450mm	
MADE GROUND: Soft dark grey and brown sligh	ntly sandy slightly		- - -14.30 91.37		14.00 14.50	D D	15 16			
gravelly silty clay with occasional cobbles. Gravel rounded, fine to medium chalk and sandstone. (F	i is subangular to FILL)		- - - - - - - (3.20)					15.00-15.45	SPT(S) N=28 6,6,/6,7,7,8	
			- - - - - - - - - - - - - - - - - - -		17.50	D	17	16.50-16.95	SPT(S) N=18 3,4,/3,4,5,6	
Extremely weak dark grey slightly weathered lam WHITBY MUDSTONE FORMATION)	inated MUDSTONE.		- (1.00) - 18.50 87.17		18.00 18.30	B D	B5 18	18.00-18.45 (5 18.50-18.95	N=50/235mm ,8/11,15,20,4/10	
								(20	N=50/120mm ,5/14mm/31,19/4	
Remarks . Engineer verified logged in general accordance to Barrian Carriance to Barrian CAT scanned prior to excavation.	S 5930:2015.		Depth (m)	Iling Deta		Date	Wa	Time W	ote (m) Standing	Casing Depth (n
. Groundwater encountered to 17.50 m bgl Installed with a 63 mm HDPE standpipe to 17.50 m l . Hand pit to 1.21 m bgl.	bgl.		NO CH UNDE	IISELLIN RTAKEN	G		NC		ENCOUNTER	
			Boreho	le Diamet	ter		ng Di	iameter	Depth S	ealed
						. 50111				
Coordinates (National Grid) / Level (mAOD): E:490989.514 N:290892.399 Level:105.671	Drilled By: SE Drilling		Plant Used: Dar	ndo 2000	Lo	gged By:	C	Checked By:	Approved By:	Scale: 1:60



3 Henley Office Park, Doddington Road Lincoln, LN6 3QR Tel: +44 (0) 870 0400 012

Project No: 15-0645.02 Hole ID: **BH107** 

deltasimons Lincoln   Durham   Norwich   Leeds   Manchester   London	Lincoln, LN6 3QR Tel: +44 (0) 870 0400 01 Fax: +44 (0) 1522 69839 Email: info@deltasimons.	93	Shelton Road, Corby									
Cable Percussion B	Sorehole Log	-	Date From / To <b>02/09</b> /		03/09/2	2015 Clie		Ita-Simons				
Description of Olympia			Strata Depth	Casing	Samp	le Details	Т	est Details	kfill			
Description of Strata		Legi	Reduced Level (Thickness)	<b>Depth</b> (Dia. mm)	Depth (m)	Type Re	Depth (m)	Results	Backfill			
MADE GROUND: Aggregate			<u>-0.10 <i>104</i>.33</u> -0.40 <i>104.0</i> 3		0.30	D 1						
MADE GROUND: Light brown slightly gravelly s subangular to subrounded fine to medium sands	and. Gravel is stone. (FILL)		-									
MADE GROUND: Soft to firm greenish brown ar sandy slightly gravelly silty clay. Gravel is subant to medium chalk. (FILL)	nd dark grey slightly gular to rounded, fine			(150)	0.90 1.00-1.50	D 2 B B						
( )			- (1.80) - -				1.50-1.95	SPT(S) N=9 1,1,/2,2,2,3				
	- -		_ -2.20 102.23		2.20	D 3						
MADE GROUND: Firm to stiff orange brown and	I dark grey slightly			2.50	2.50-2.95	U U	2.50-2.95	U=26/450mm				
sandy slightly gravelly silty clay. Gravel is suband to coarse sandstone. (FILL)	guiar to rounded, fine				3.00	D 4						
			-				. 50 0 05	ODT(0) N. 400				
							3.50-3.95	SPT(S) N=18 3,3,/4,3,5,6				
	- -		<del>-</del> - -		4.20	D 5						
			(4.50)		4.50-5.00 4.50-4.95			U=20/0mm				
			- - -									
			- - -		5.50	D 6						
	_		-				6.00-6.45					
			-					2,3,/2,4,3,2				
			- -6.70 <i>97.7</i> 3		6.70	D 7						
MADE GROUND: Soft dark grey and black silty pockets of peat. (FILLL)	clay, with occasional		7.10 <i>97.3</i> 3		7.10	D 8						
MADE GROUND: Orange slightly clayey sand. S medium. (FILL)	Sand is fine to		- - -		7.50-7.95	U U:	7.50-7.95	U=30/135mm				
			(1.40)		8.00	D 9						
	-		-		8.00							
MADE GROUND: Firm to stiff brown and green s	slightly sandy silty		-8.50 95.93 -		8.50-9.00	в в	3					
clay. Sand is fine to medium. (FILL)	-		-				9.00-9.45					
			-					3,3,/3,4,5,7				
			-									
	<u>.</u> -		- - -		10.00	D 10						
			- - -		10.50-10.9	5 U U4	10.50-10.9	5 U=38/450mm				
	:		-		11.00	D 11						
Remarks 1. Engineer verified logged in general accordance to B	\$\$ 5030·2015		Chisel	ling Deta	ils	V		Observations				
Area CAT scanned prior to excavation.     Groundwater encountered to 17.50 m bgl.	3 3930.2013.		Depth (m)	Tim	ne	Date		Vater Standing ike (m) (m)	Casing Depth (m)			
<ol> <li>Installed with a 63 mm HDPE standpipe to 17.50 m</li> <li>Hand pit to 1.21 m bgl.</li> </ol>	bgl.		NO CH	IISELLING RTAKEN	G		OWATER	ENCOUNTERE	ED .			
			UNDE	141.		N	0 444.					
			Boreho	le Diamet	er		Diameter	Depth Se	ealed			
						150mm to	2.50m					
Coordinates (National Grid) / Level (mAOD):	Drilled By:		Plant Used:		Lo	gged By:	Checked By:	Approved By:	Scale:			
E:491008.194 N:290851.84 Level:104.426	SE Drilling		Dar	do 2000		AC	SS	ss	1:60			



3 Henley Office Park, Doddington Road

Project No: 15-0645.02 Hole ID: **BH107** 

deltasimons	3 Henley Office Park, Dodding Lincoln, LN6 3QR Tel: +44 (0) 870 0400 0 Fax: +44 (0) 1522 6983		Project:		01 14						12 01 2	
Lincoln   Durham   Norwich   Leeds   Manchester   London	s.com	Shelton Road, Corby										
Cable Percussion E		Date From / To: 02/09/2015 - 03/09/2015				Delta-Simons						
Description of Strata	Description of Strata			Casing Depth	Samp	le Detai	ils T		Test Details		Backfill	
		Leç	Level (Thickness)		Depth (m)	Туре	Ref	Depth (m)	R	Results	Ř	
MADE GROUND: Firm to stiff brown and green clay. Sand is fine to medium. (FILL)(BH Continu	slightly sandy silty ed)				11.50	D B	12 B4	12.00-12.4	5 SP1 4,5,/	Γ(S) N=38 /5,9,12,12		
			(9.50)		13.50-13.99 14.00	5 U	U5 13	13.50-13.9	5 U=3	35/270mm		
								15.00-15.4	SP1 3,4	Γ(S) N=25 ⊦,/6,6,6,7		
	-				16.00	D	14					
					16.50-16.99 17.00		U6 15	16.50-16.9	U=0	30/360mm		
Extremely weak dark grey slightly weathered lam (WHITBY MUDSTONE FORMATION)	ninated MUDSTONE.		-18.00 86.43 - - - (0.50) -18.50 85.93		18.00	D	16	18.00-18.45 18.50-18.95	N=5 (9,6/10,	SPT(S) :0/220mm 21,19/70m SPT(C)		
Borehole complete at 18.50 m bgl.			Chical	ling Deta			Market	(1	2,13/15	50/8òmm mm/41,9/5	mm)	
Engineer verified logged in general accordance to E     Area CAT scanned prior to excavation.	S 5930:2015.		Depth (m)			Date	772	N	/ater ke (m)	Standing (m)	Casing Depth (m)	
Groundwater encountered to 17.50 m bgl.     Installed with a 63 mm HDPE standpipe to 17.50 m     Hand pit to 1.21 m bgl.				IISELLIN RTAKEN				WATER	ENCO	UNTERE	D	
			Boreho	le Diamet	er	Casir 150mr		ameter :.50m	-	Depth Se	aled	
Coordinates (National Grid) / Level (mAOD):	Drilled By:		Plant Lloc d			gged By:	17	Checked By:	Appro	oved By:	Scale:	
E:491008.194 N:290851.84 Level:104.426	Drilled By: SE Drilling		Plant Used: Dar	ido 2000	LOÓ	AC		SS	1	SS S	1:60	



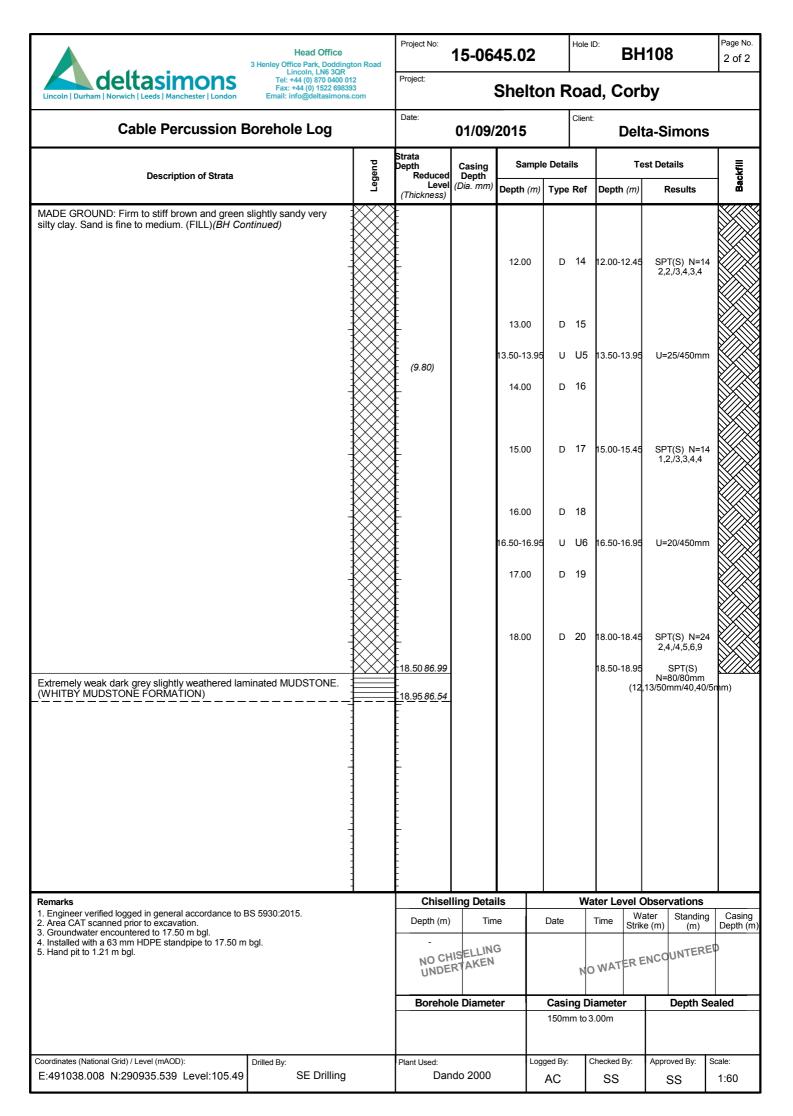
Project No: 15-0645.02 Hole ID:

**BH108** 

Page No. 1 of 2

Project:

Lincoln   Durham   Norwich   Leeds   Manchester   London   Email: info@deltasimon:	393 s.com	Shelton Road, Corby									
Cable Percussion Borehole Log		Date:	01/09/	2015		Client		ta-Simons	Simons		
		Strata Depth	Casing	Sampl	Sample Details		Test Details		- ■		
Description of Strata	Legend	Reduced Level (Thickness)	Depth (Dia. mm)	Depth (m)	Туре	Ref	Depth (m)	Results	Backfill		
MADE GROUND: Grass over firm to stiff greenish brown and dark grey slightly sandy slightly gravelly silty clay. Gravel is subangular to rounded, fine to medium chalk. (FILL)		- - - - - - -		0.20 0.40 0.50-1.00	D D B	1 2 B1					
			(150)	1.00	D	3	1.50-1.95	SPT(S) N=1: 1,1,/3,2,3,3	1		
		{ - - - - - - -		2.00 2.50	D B	B2	2.50-2.95	U=25/0mm			
		(6.00)	3.00	2.50-2.95 3.00	D	U1					
		Z- 		4.00	D	6	3.50-3.95	SPT(S) N=4 1,0,/1,0,1,2			
		- - - - - - -		4.50 4.50-4.95 5.00	B U D	B3 U2	4.50-4.95	U=13/0mm			
		- - - - -6.00 99.49		6.00	D		6.00-6.45	SPT(S) N=10			
MADE GROUND: Firm to stiff brown and dark grey slightly sandy gravelly silty clay. Gravel is subangular to rounded, fine to medium chalk. (FILL)		(4.00)		6.50-7.00		B4		2,1,/2,2,3,3			
		(1.80) - - - - - -7.80 97.69		7.00 7.50-7.95	U	y U3	7.50-7.95	U=45/450mm			
MADE GROUND: Firm to stiff orange brown and dark grey slightly sandy slightly gravelly silty clay. Gravel is subangular to rounded, fine to coarse sandstone. (FILL)		(0.90) - - - - 8.70 96.79		8.00 8.00-8.50	D B	10 B5					
MADE GROUND: Firm to stiff brown and green slightly sandy very silty clay. Sand is fine to medium. (FILL)				9.00	D	11	9.00-9.45	SPT(S) N=10 2,2,/3,2,3,2			
		\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\		10.00 10.50-10.98		12 U4	10.50-10.95	U=15/450mm			
	<b>***</b>	-		11.00	D	13					
Remarks 1. Engineer verified logged in general accordance to BS 5930:2015.			Iling Deta		Dat-		١٨/٠	Observations ater Standing	Casing		
<ol> <li>Area CAT scanned prior to excavation.</li> <li>Groundwater encountered to 17.50 m bgl.</li> <li>Installed with a 63 mm HDPE standpipe to 17.50 m bgl.</li> <li>Hand pit to 1.21 m bgl.</li> </ol>		Depth (m) - NO CH UNDE	Tim HISELLING RTAKEN	G	Date		1 Ime Strik	e (m) (m)	Depth (m)		
		Boreho	le Diamet	er	Casi	na Di	iameter	Depth S	Sealed		
		Boreiro	ie Dialliel		150m			Dehii 3	-caicu		
Coordinates (National Grid) / Level (mAOD): E:491038.008 N:290935.539 Level:105.49 Drilled By: SE Drilling		Plant Used: Dar	ndo 2000	Log	gged By:	C	Checked By:	Approved By:	Scale: 1:60		





Project No: 15-0645.02 Hole ID: **BH109** 

Page No. 1 of 2

3 Henley Office Park, Dodding Lincoln, LN6 3QR	ton Road	13-0043.02							
Celtasimons Lincoln   Durham   Norwich   Leeds   Manchester   London	Shelton Road, Corby								
Cable Percussion Borehole Log	Date From / To: 02/09/2015 - 04/09/2015			Delt					
Description of Strata		Strata Depth Casing Reduced Depth			ample Details		Те	Backfill	
	Le	Level (Thickness)	(Dia. mm)	Depth (m	) Type I	Ref	Depth (m)	Results	, a
MADE GROUND: Asphalt.  MADE GROUND: Light brown slightly gravelly sand. Gravel is subangular to subrounded fine to medium sandstone.		0.10 <i>104.78)</i> - -0.50 <i>104</i> .38		0.30 0.50	D B				
MADE GROUND: Firm to stiff greenish brown and dark grey slightly sandy slightly gravelly silty clay. Gravel is subangular to rounded, fine to medium chalk. (FILL)			(150)	1.00 1.50	D B U		1.50-1.95	U=45/0mm	
<u>-</u>				1.50-1.95 2.00	D D				
		-	2.50				2.50-2.95	SPT(S) N=7 1,1,/2,1,2,2	
-				3.00 3.50-4.00		4 B3	3.50-3.95	U=18/0mm	
_		(5.90)		3.50-4.00 3.50-3.95 4.00		U2	3.50-3.95	0-16/011111	
				5.00	D	6	4.50-4.95	SPT(S) N=15 2,2,/3,3,4,5	
-		- -6.40 98.48		6.00 6.00-6.45 6.50			6.00-6.45	U=45/450mm	
MADE GROUND: Soft dark grey and black silty clay, with occasional pockets of peat. (FILL)  MADE GROUND: Firm to stiff orange brown and dark grey slightly		- (0.60) -7.00 97.88		7.00	D	9			
sandy slightly gravelly silty clay. Gravel is subangular to rounded, fine to coarse sandstone. (FILL)		-		8.00	D	10	7.50-7.95	SPT(S) N=15 3,2,/3,4,4,4	
				9.00	D	11	9.00-9.45	U=85/450mm	
_				9.00-9.45 9.50	5 U D				
-		- - - - -		10.00	D	13			
				11.00	D	14	10.50-10.95	SPT(S) N=16 2,3,/3,4,4,5	
Remarks 1. Engineer verified logged in general accordance to BS 5930:2015.		Chisel	ling Deta	ils		Wa		Observations	Casin
2. Area CAT scanned prior to excavation. 3. Groundwater encountered to 17.50 m bgl. 4. Installed with a 63 mm HDPE standpipe to 17.50 m bgl. 5. Hand pit to 1.21 m bgl.		Depth (m)  -  NO CH	Tim IISELLING RTAKEN		Date	_	Strik	Standing (m)  Standing (m)	Casing Depth (m)
		Boreho	le Diamet	er		_	ameter	Depth Se	aled
					150mn	n to 2	.5Um		
Coordinates (National Grid) / Level (mAOD): Drilled By:		Plant Used:	do 2000	Lo	gged By:	С	hecked By:	Approved By: S	icale:

SE Drilling

E:490967.894 N:290835.691 Level:104.878

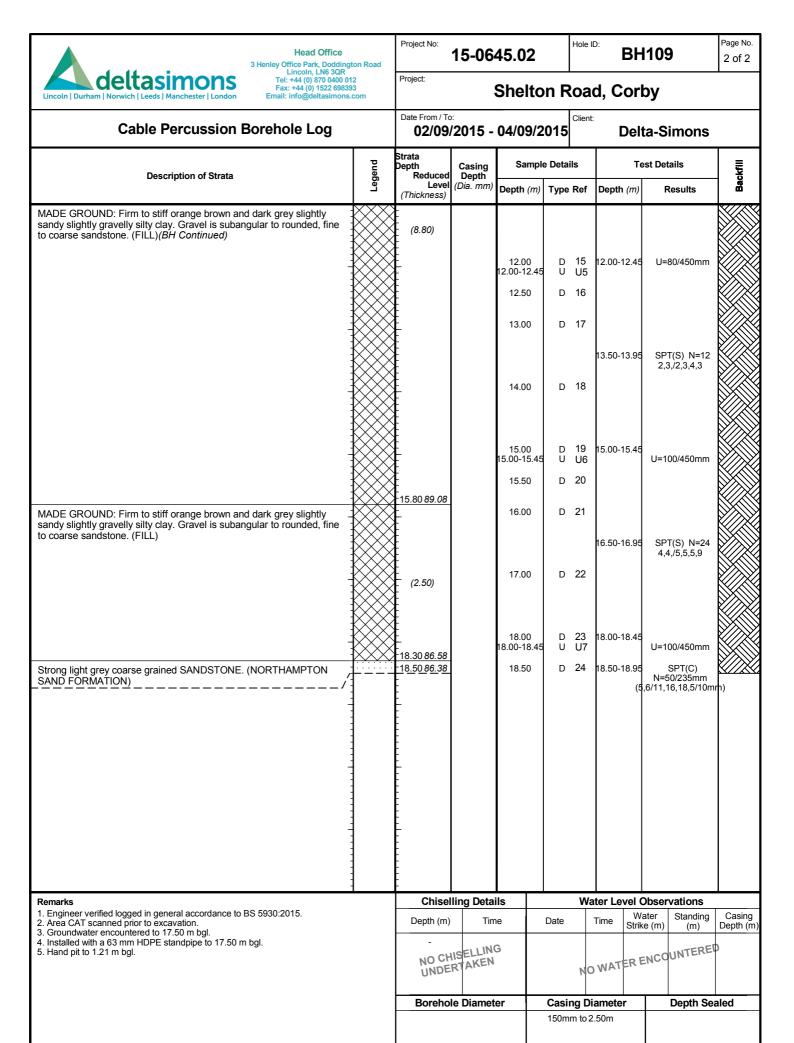
Dando 2000

AC

SS

1:60

SS



Plant Used:

Dando 2000

Checked By:

SS

Logged By:

AC

Approved By:

SS

Scale:

1:60

Coordinates (National Grid) / Level (mAOD):

E:490967.894 N:290835.691 Level:104.878

Drilled By:

SE Drilling



Project No: 15-0645.02 Hole ID: **BH110** 

3 Henley Office Park, Doddir Lincoln, LN6 3QR							1 of 2			
deltasimons Lincoln   Durham   Norwich   Leeds   Manchester   London	012 393	Project:		Shelto	n Roa	oad, Corby				
Cable Percussion Borehole Log		Date: 02/09/2015 Client: Delta					ta-Simons	a-Simons		
Description of Strata	Legend	Strata Depth Reduced	Casing Depth	Sampl	e Details	Te	est Details	Backfill		
Description of Strata	Leg	Level (Thickness)	(Dia. mm)	Depth (m)	Type Ref	Depth (m)	Results	Bac		
MADE GROUND: Asphalt.  MADE GROUND: Light brown slightly gravelly sand. Gravel is		<u>0.10 106.30</u> -0.40 106.00		0.30	D 1					
subangular to subrounded fine to medium sandstone.  MADE GROUND: Soft to firm brown and dark grey slightly sandy	/ <b> </b>									
gravelly silty clay with occasional cobbles. Gravel is subangular to rounded, fine to medium chalk and sandstone. (FILL)		-		1.00	D 2					
				1.50-2.00	в В1	1.50-1.95	SPT(S) N=7 1,1,/1,2,2,2			
		-		2.00	D 3					
				2.40 2.50-3.00	D 4 B B2	2.50-2.95	SPT(S) N=15 5,7,/7,4,3,1			
		_		3.00	D 5		5,7,77,4,5,1			
		- - - (6.10)		3.50-4.00	В В3	3.50-3.95	U=35/0mm			
		(0.70) -		3.50-3.95	U U1					
		-		4.00	0 6					
						4.50-4.95	SPT(S) N=19 1,2,/2,4,6,7			
		<u>-</u>		5.00	D 7					
		-								
				6.00-6.50 6.00-6.45	B B4 U U2	6.00-6.45	U=7/0mm			
		- -6.50 99.90		6.00-6.45	0 02					
MADE GROUND: Soft dark grey and black silty clay, with occasional pockets of peat. (FILL)		-		7.00	D 8					
		-		7.00						
		Ē				7.50-7.95	SPT(S) N=7 2,2,/1,2,2,2			
		_		8.00	D 9					
		<u>-</u>		9.00 9.00-9.45	D 10		U=50/450mm			
		- - (6.00)		9.50	D 11					
				10.00	D 12					
						10.50-10.95	SPT(S) N=9			
							2,2,/2,1,2,4			
Remarks	<u> </u>	Chisel	ling Deta	11.00 ils	D 13	ater Level (	Observations	10/2//		
Engineer verified logged in general accordance to BS 5930:2015.     Area CAT scanned prior to excavation.     Groundwater encountered to 17.50 m bgl.		Depth (m)			Date	Strik	ater Standing (m)	Casing Depth (m		
<ol> <li>Installed with a 63 mm HDPE standpipe to 17.50 m bgl.</li> <li>Hand pit to 1.21 m bgl.</li> </ol>		NO CH	IISELLIN RTAKEN	G		MATERE	ENCOUNTERE	Þ		
		UNDE	KIAIL		N	OWAIL				
		Boreho	le Diamet	er	Casing I	Diameter	Depth Se	aled		
Coordinates (National Grid) / Level (mAOD):  Drilled By:  SE Drilling		Plant Used:	udo 2000	Log	ged By:	Checked By:	I I	Scale:		
E:490975.974 N:290921.914 Level:106.395 SE Drilling	]	Dar	ido 2000		AC	SS	SS	1:60		

#### Project No: Hole ID: Page No. **BH110** 15-0645.02 2 of 2 3 Henley Office Park, Doddington F Lincoln, LN6 3QR Tel: +44 (0) 870 0400 012 Fax: +44 (0) 1522 698393 Email: info@deltasimons.com deltasimons Project: Shelton Road, Corby Client: Date **Cable Percussion Borehole Log** 02/09/2015 **Delta-Simons** Strata Casing Depth Sample Details **Test Details** Legend Backfill **Description of Strata** Level (Dia. mm Depth (m) Type Ref Depth (m) Results (Thickness) MADE GROUND: Soft dark grey and black silty clay, with occasional pockets of peat. (FILL)(BH Continued) 2.00-12.45 U=40/450mm 12.00-12.45 U U4 . 12.50 93.90 D 15 MADE GROUND: Firm to stiff orange brown and dark grey slightly sandy slightly gravelly silty clay. Gravel is subangular to rounded, fine 13.00 D 16 to coarse sandstone. (FILL) 13.50-13.95 SPT(S) N=15 4,3,/3,4,3,5 (2.50)14.00 D 17 15.00 91.40 15.00 18 5.00-15.45 U=20/0mm 15.00-15.50 В B5 MADE GROUND: Firm grey brown slightly sandy silty clay. Sand is 15.00-15.48 Ū U5 fine to medium. (FILL) 16.00 D 19 16.50-16.95 SPT(C) N=19 4,4,/4,5,5,5 (3.50)17.00 D 20 18.00 8.00-18.45 U=100/0mm 18.00-18.50 18.00-18.45 B U В6 U6 18.50 87.90 MADE GROUND: Firm grey brown slightly sandy gravelly silty clay. Gravel is fine to coarse, subangular to rounded sandstone. Sand is 19.00 D 22

. Engineer verified logged in general accordance to BS 5930:2015. . Area CAT scanned prior to excavation.
. Groundwater encountered to 17.50 m bgl.

Borehole complete at 20.45 m bgl.

fine to medium. (FILL)

ı	Installed with a 63 mm HDPE standpipe to 17.50 m bgl.	
	Hand pit to 1.21 m bgl.	

Chisellin	ng Details	Water Level Observations						
Depth (m)	Time	Date	Time	Water Strike (m)	Standing (m)	Casing Depth (m)		
NO CHIS	ELLING AKEN	N	O WAT	ER ENCO	UNTERE			

D 23

	Borehole	Diameter	Casing	Diameter	•	Depth Sealed			
							·		
Pla	ant Used:		Logged By:	Checked B	y: Appr	oved By:	Scale:		
1	D 1 -	0000							

Coordinates (National Grid) / Level (mAOD): E:490975.974 N:290921.914 Level:106.395

Drilled By:

SE Drilling

(1.95)

20.45 85.95

Dando 2000 AC

20.00

SS

SS

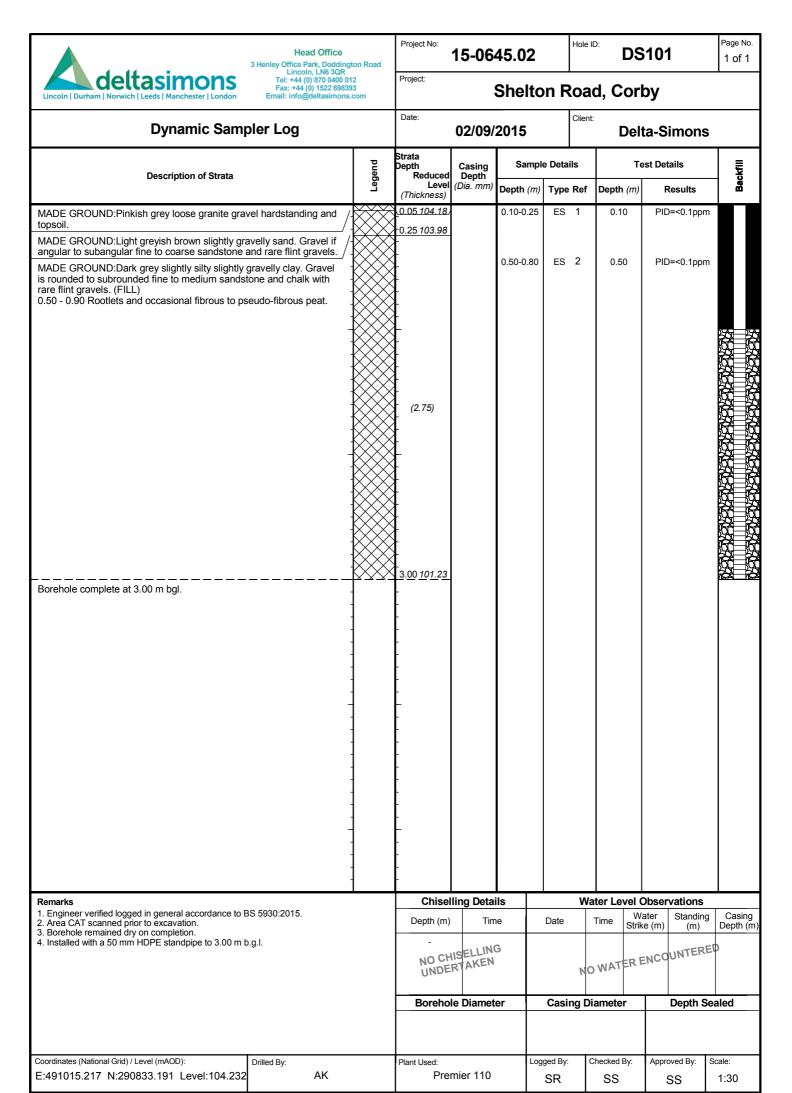
SPT(C) N=11 18,4,/3,2,2,4

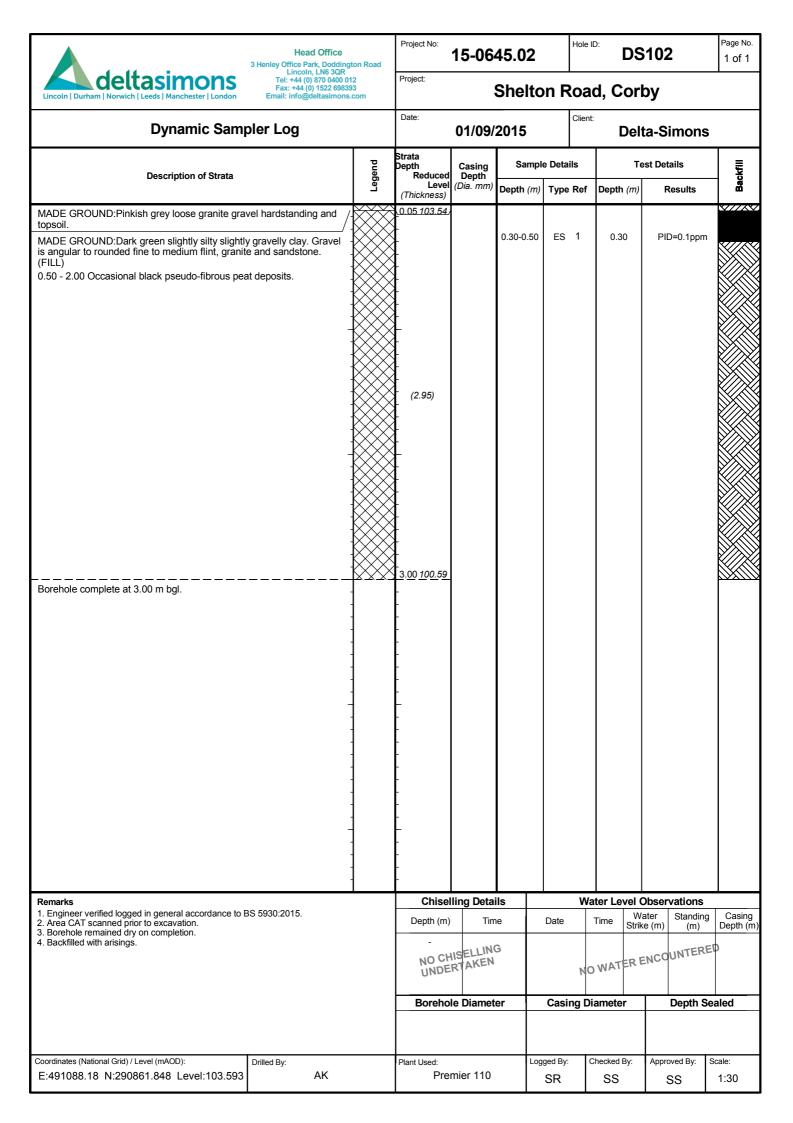
SPT(C) N=31 5,7,/7,8,7,9

19.50-19.95

20.00-20.45

1:60





# Project No: Hole ID: Page No. **Head Office DS103** 15-0645.02 1 of 1 3 Henley Office Park, Doddington Road Lincoln, LN6 3QR Tel: +44 (0) 870 0400 012 Fax: +44 (0) 1522 698393 Email: info@deltasimons.com deltasimons Project: **Shelton Road, Corby** Date: Client: **Dynamic Sampler Log** 01/09/2015 **Delta-Simons** Strata Casing Depth Sample Details **Test Details** \_egend **Description of Strata** Level (Dia. mm Depth (m) Depth (m) Type Ref Results (Thickness) 0.05 104.39 MADE GROUND: Pinkish grey loose granite hardstanding and topsoil. 0.20-0.30 ES 1 0.20 PID=0.7ppm (0.25)MADE GROUND:Light greyish brown slightly gravelly sand. Sand is 0.30 104.14 medium to coarse. Gravel is angular to subangular fine to coarse with occasional concrete gravels. MADE GROUND:Dark grey slightly silty slightly gravelly clay. Gravel PID=0.3ppm 0.60-0.90 ES 2 0.60 is subangular to rounded flint and occasional chalk with organic odour. (FILL) 1.00 - 1.80 Occasional layers of peat and rootlets. (2.70)3.00 <u>101.44</u> Borehole completed at 3.00 m bgl. Water Level Observations **Chiselling Details** . Engineer verified logged in general accordance to BS 5930:2015. Water Strike (m) Standing Casing Depth (m Depth (m) Area CAT scanned prior to excavation. Borehole remained dry on completion. (m) 4. Backfilled with arisings NO CHISELLING UNDERTAKEN NO WATER ENCOUNTERED **Borehole Diameter Casing Diameter Depth Sealed**

Checked By:

SS

Approved By:

SS

Scale:

1:30

Logged By:

SR

Plant Used:

Premier 110

Coordinates (National Grid) / Level (mAOD):

E:491077.137 N:290886.438 Level:104.441

Drilled By:

ΑK

### **Head Office**

Project No: 15-0645.02 Hole ID: **DS104** 

1 of 1

3 Henley Office Park, Dodding	Desirate Des									
Lincoln, LN6 3QR Tel: +44 (0) 870 0-400 c Email: info@deltasimons Lincoln   Durham   Norwich   Leeds   Manchester   London	Shelton Road, Corby									
Dynamic Sampler Log			01/09/	2015	Clier		ta-Simons	1		
Description of Strata		Strata Depth	Casing	Samp	le Details	Te	est Details			
Description of Strata	Legend	Reduced Level (Thickness)		Depth (m)	Type Ref	Depth (m)	Results	Backfill		
MADE GROUND:Pinkish grey loose granite gravel hardstanding and topsoil.	/	0.05 104.91) (0.37)		0.20-0.30	ES 1	0.20	PID=1.2ppm			
MADE GROUND:Light greyish brown slightly gravelly sand. Gravel is angular to subangular fine to coarse sandstone.	-	0.37)	-							
MADE GROUND:Dark grey slightly slightly gravelly clay. Gravel is subangular to rounded fine to medium chalk, flint and sandstone with organic odour. (FILL)		_ _ _ _ _ _		1.00-1.40	ES 1	1.00	PID=2.1ppm			
1.00 - 3.00 Occasional layers of black fibrous peat.		(2.58)								
Borehole complete at 3.00 m bgl.		3.00 101.96								
Remarks 1. Engineer verified logged in general accordance to BS 5930:2015.			Iling Deta		Date W	Time W	Observations Tater Standing	Casing Depth (m)		
<ol> <li>Area CAT scanned prior to excavation.</li> <li>Borehole remained dry on completion.</li> <li>Installed with a 50 mm HDPE standpipe to 3.00 m b.g.l.</li> </ol>			Depth (m) Time  - NO CHISELLING UNDERTAKEN			Suir	WATER ENCOUNTERED			
	Boreho	Borehole Diameter			ameter Depth Se		ealed			
Coordinates (National Grid) / Level (mAOD): Drilled By: E:491063.56 N:290918.261 Level:104.955 AK		Plant Used: Logged By: Checked By: Premier 110 SR SS					Approved By:	Scale: 1:30		

# Project No: Hole ID: Page No. **Head Office DS105** 15-0645.02 1 of 1 3 Henley Office Park, Doddington Road Lincoln, LN6 3QR Tel: +44 (0) 870 0400 012 Fax: +44 (0) 1522 698393 Email: info@deltasimons.com deltasimons Project: **Shelton Road, Corby** Date: Client: **Dynamic Sampler Log** 01/09/2015 **Delta-Simons** Strata Depth Casing Depth Sample Details **Test Details** Legend **Description of Strata** Level (Dia. mm Depth (m) Depth (m) Type Ref Results (Thickness) 0.08 104.41 MADE GROUND: Tarmac hardstanding 0.20-0.30 ES 1 0.20 PID=0.7ppm MADE GROUND:Light greyish brown slightly gravelly sand. Gravel is 0.30 104.19 angular to subangular fine to medium sandstone with rare red sandstone gravels. MADE GROUND:Dark grey mottled brown slightly silty slightly sandy slightly gravelly clay. Gravels are subangular to rounded fine to coarse flint and sandstone. (FILL) 0.60 - 0.90 Occasional rootlets and pseudo-fibrous peat. (2.70)2.00-2.40 ES 2 2.00 PID=0.3ppm 3.00 101.49 Borehole complete at 3.00 m bgl. Water Level Observations **Chiselling Details** . Engineer verified logged in general accordance to BS 5930:2015. Water Strike (m) Standing Casing Depth (m Depth (m) Area CAT scanned prior to excavation. Borehole remained dry on completion. (m) 4. Installed with a 50 mm HDPE standpipe to 3.00 m b.g.l. NO CHISELLING NO WATER ENCOUNTERED UNDERTAKEN **Borehole Diameter Casing Diameter Depth Sealed**

Checked By:

SS

Approved By:

SS

Scale:

1:30

Logged By:

SR

Plant Used:

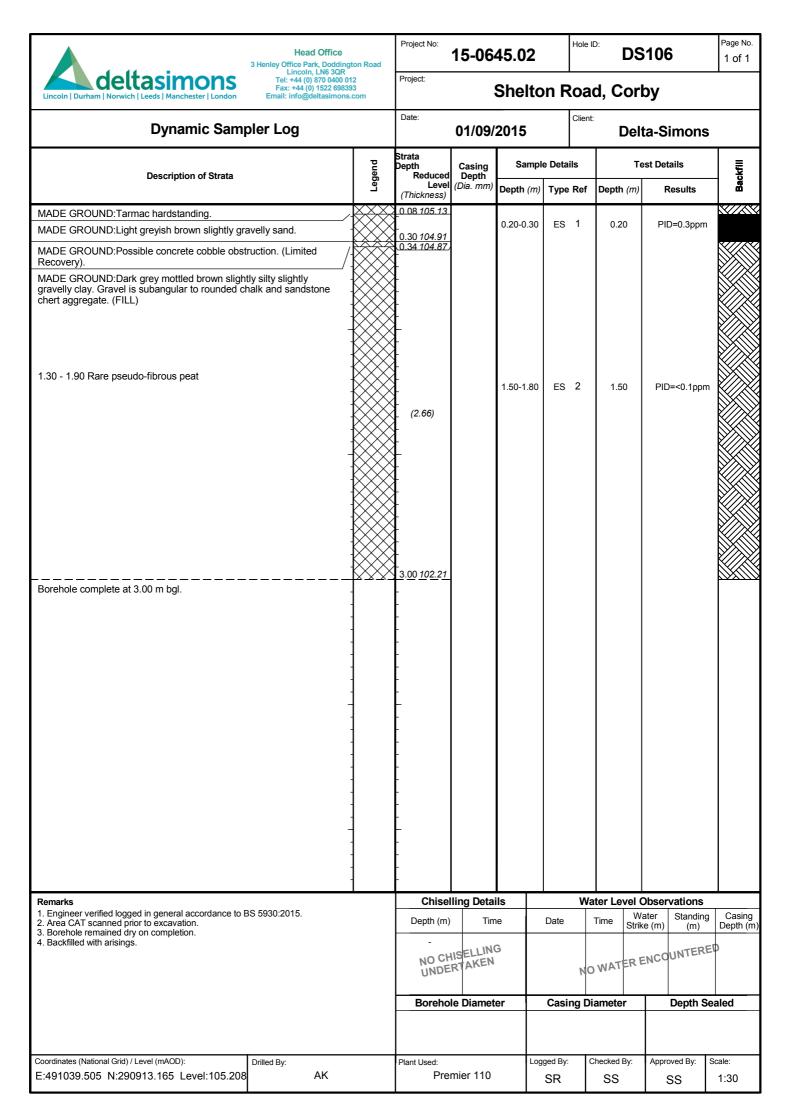
Premier 110

Coordinates (National Grid) / Level (mAOD):

E:491053.337 N:290882.616 Level:104.489

Drilled By:

ΑK



# Project No: Hole ID: Page No. **Head Office DS107** 15-0645.02 1 of 1 3 Henley Office Park, Doddington Road Lincoln, LN6 3QR Tel: +44 (0) 1870 0400 012 Fax: +44 (0) 1822 698393 Email: info@deltasimons.com deltasimons Project: **Shelton Road, Corby** Date: Client: **Dynamic Sampler Log** 02/09/2015 **Delta-Simons** Strata Casing Depth Sample Details **Test Details** Legend **Description of Strata** Level (Dia. mm Depth (m) Depth (m) Type Ref Results (Thickness) 0.08 105.70 MADE GROUND: Tarmac hardstanding 0.20 105.58 0.20-0.30 ES 1 0.20 PID=0.1ppm MADE GROUND:Light brownish red slightly sandy gravel;. Gravel is angular to subangular fine to medium sandstone. 0.40 105.38 MADE GROUND:Light brown slightly gravelly sand. Sand is fine to coarse. Gravel is angular fine to medium sandstone with rare flint. MADE GROUND:Dark grey slightly silty slightly gravelly clay. Gravel is angular to rounded fine to medium chalk and sandstone with organic odour. (FILL) 0.40 - 0.70 Pseudo-fibrous peat. PID=<0.1ppm 1 30-0 70 FS 2 1.30 (2.60)3.00 <u>102.78</u> Borehole complete at 3.00 m bgl. **Chiselling Details** Water Level Observations . Engineer verified logged in general accordance to BS 5930:2015. Water Strike (m) Standing Casing Depth (m Depth (m) Area CAT scanned prior to excavation. Borehole remained dry on completion. (m) 4. Installed with a 50 mm HDPE standpipe to 3.00 m b.g.l. NO CHISELLING NO WATER ENCOUNTERED UNDERTAKEN

**Borehole Diameter** 

Premier 110

Plant Used:

Coordinates (National Grid) / Level (mAOD):

E:491005.239 N:290919.471 Level:105.78

Drilled By:

ΑK

**Casing Diameter** 

Checked By:

SS

Logged By:

SR

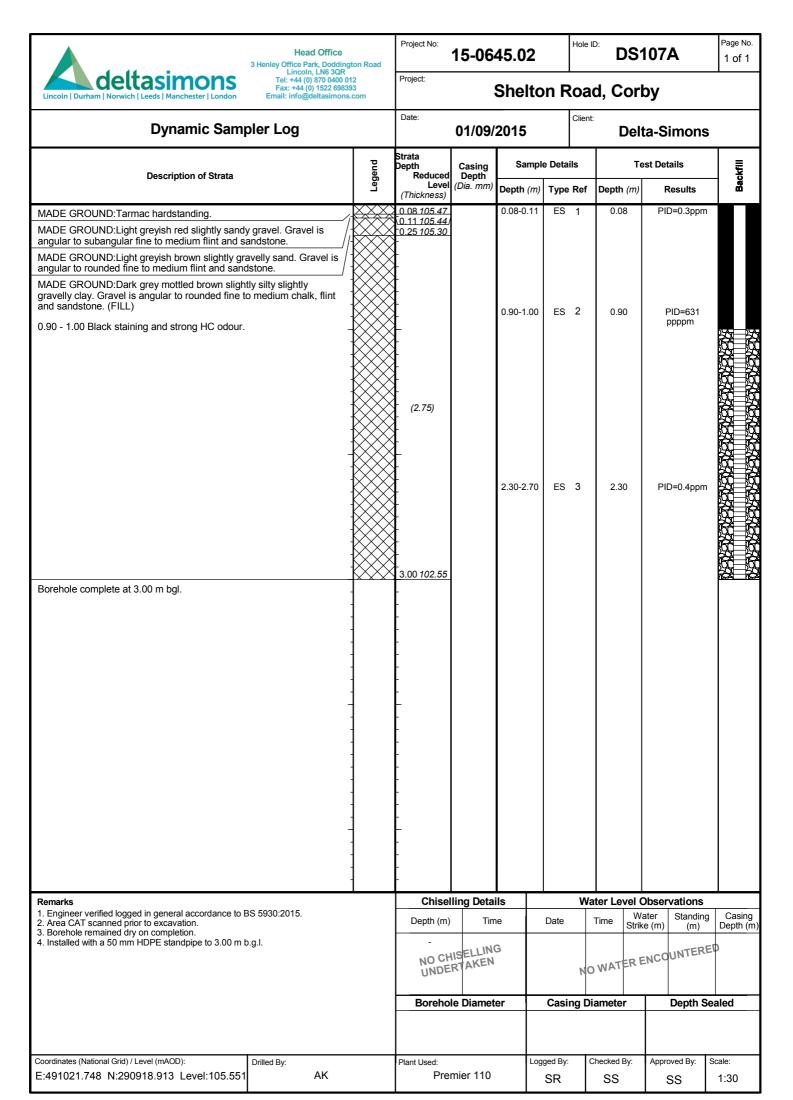
**Depth Sealed** 

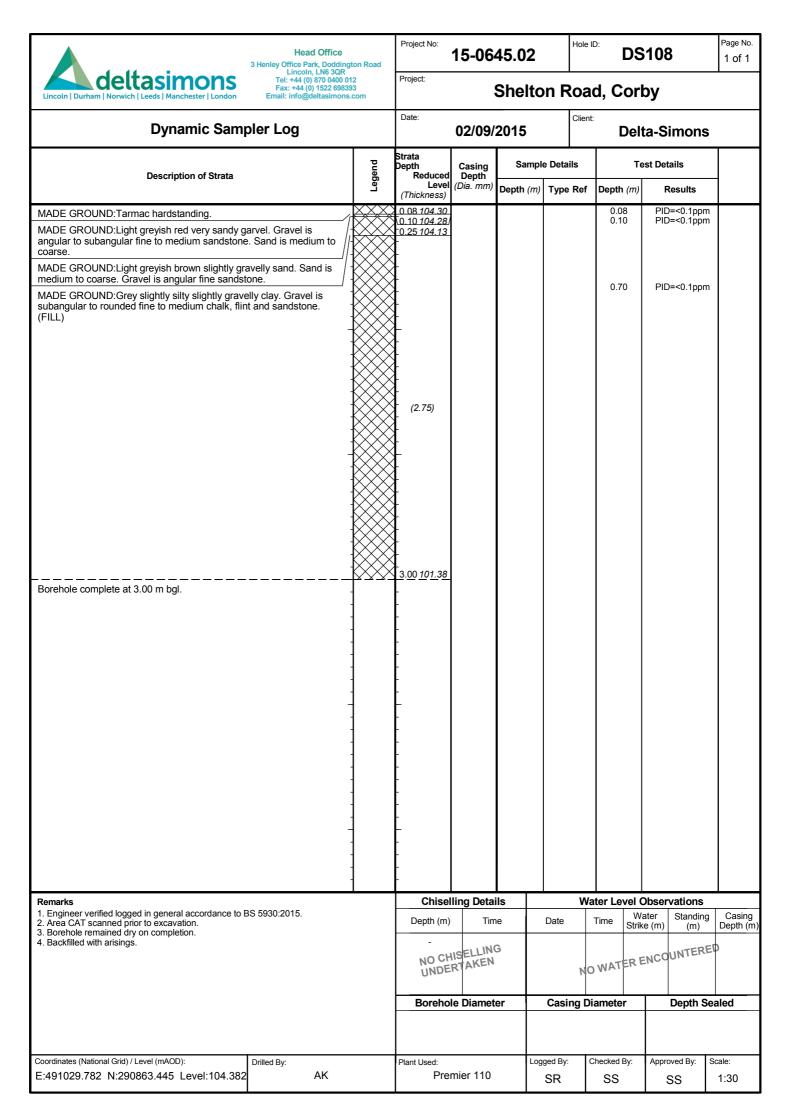
Scale:

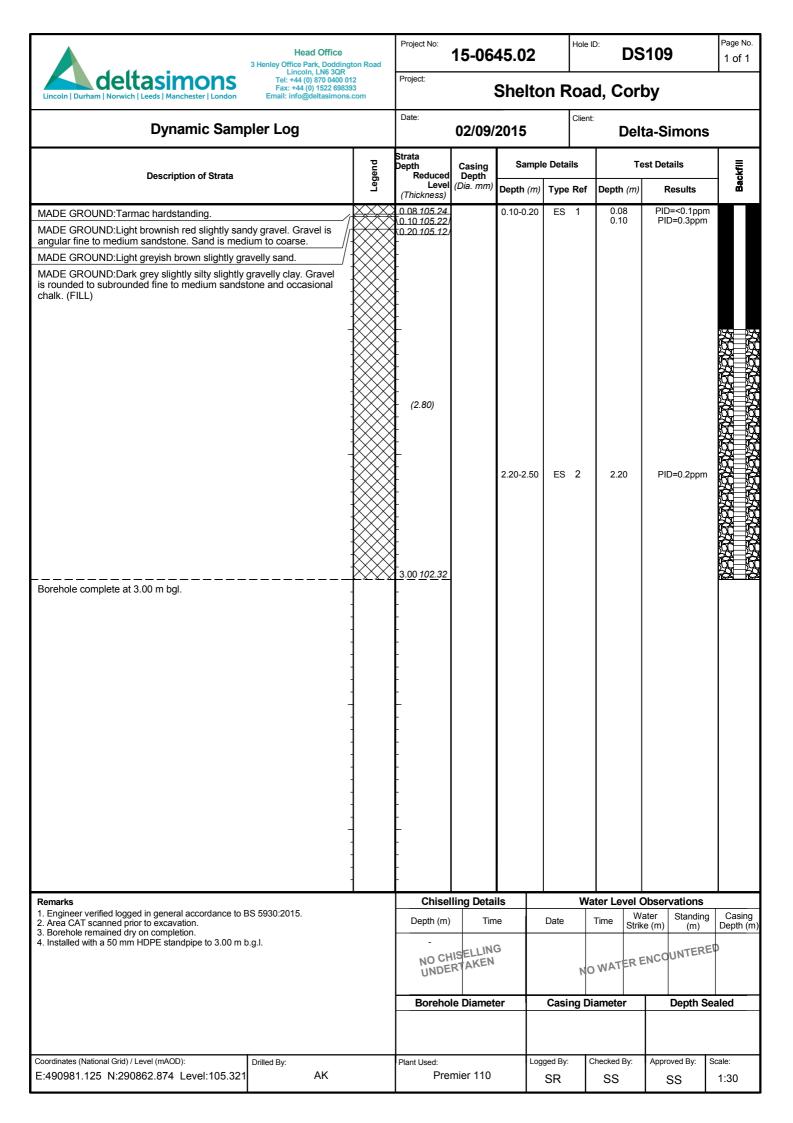
1:30

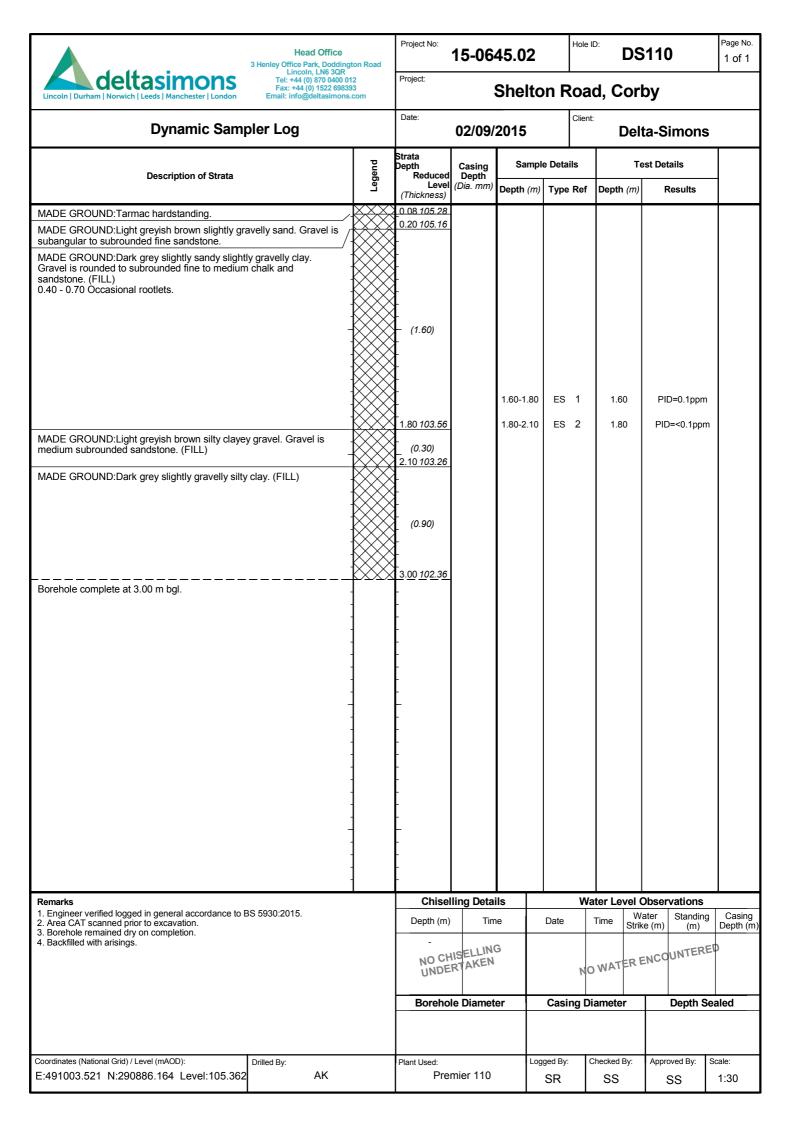
Approved By:

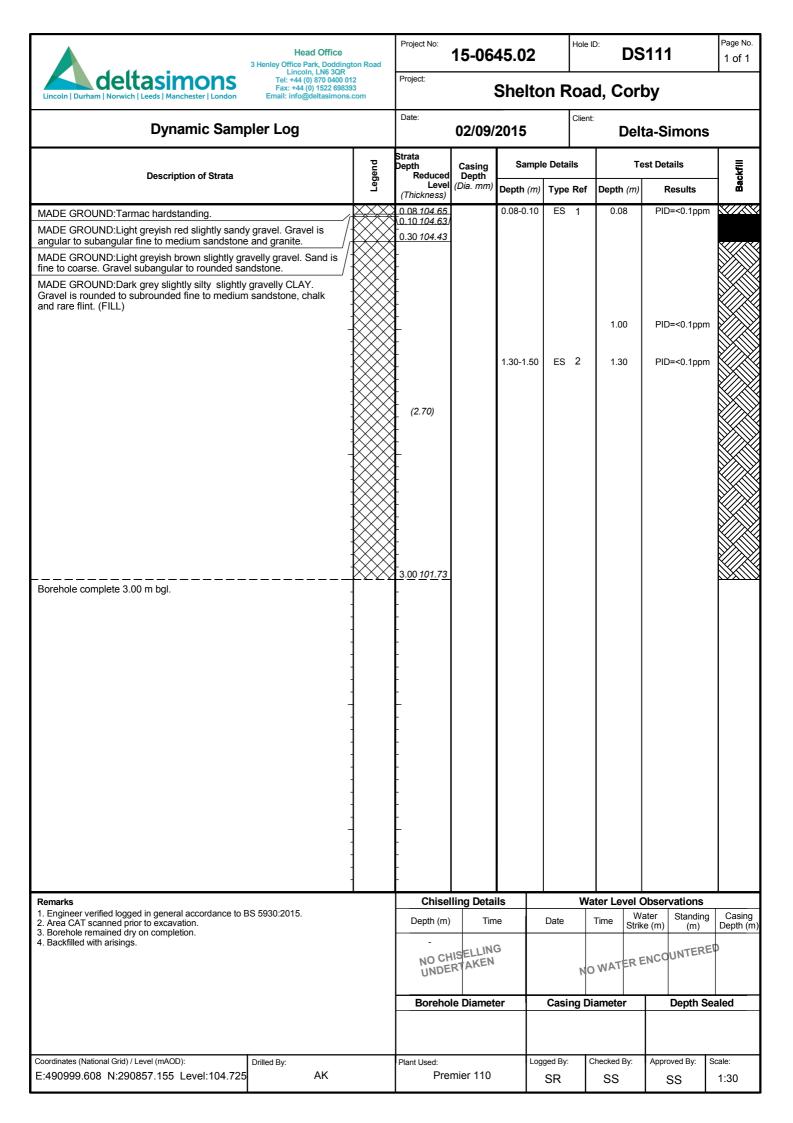
SS



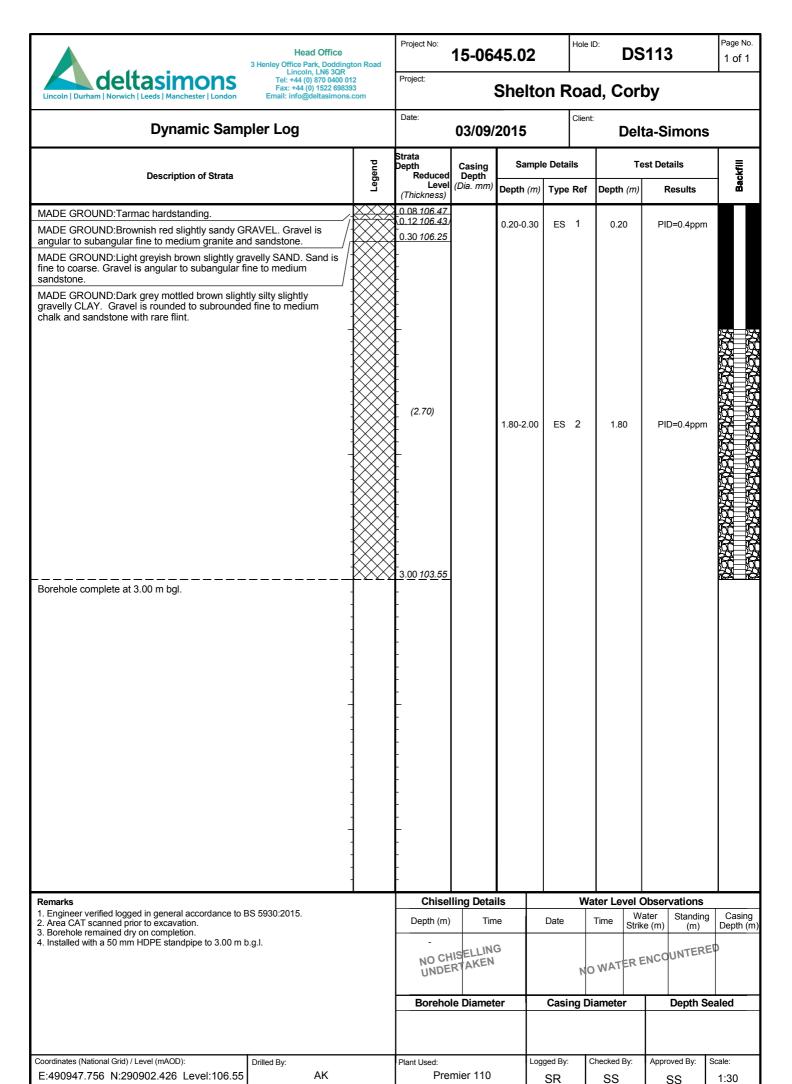








# Project No: Hole ID: Page No. **Head Office DS112** 15-0645.02 1 of 1 3 Henley Office Park, Doddington Road Lincoln, LN6 3QR Tel: +44 (0) 1870 0400 012 Fax: +44 (0) 1822 698393 Email: info@deltasimons.com deltasimons Project: **Shelton Road, Corby** Date: Client: **Dynamic Sampler Log** 02/09/2015 **Delta-Simons** Strata Depth Casing Depth Sample Details **Test Details** Legend **Description of Strata** Leve (Dia. mm Depth (m) Depth (m) Type Ref Results (Thickness) 0.08 106.24 MADE GROUND: Tarmac hardstanding MADE GROUND:Light greyish brown slightly gravelly sand. Sand is medium to coarse. Gravel is subangular fine to medium sandstone. (0.42)0.40 0.40-0.50 ES 1 PID=<0.1ppm 0.50 105.82 MADE GROUND: Dark grey slightly silty slightly gravelly clay. Gravel is rounded to subrounded fine to medium chalk and sandstone. (FILL) (2.50)3.00 <u>103.32</u> Borehole complete at 3.00 m bgl. **Chiselling Details** Water Level Observations . Engineer verified logged in general accordance to BS 5930:2015. Standing (m) Water Strike (m) Casing Depth (m) Depth (m) Area CAT scanned prior to excavation. Borehole remained dry on completion. 4. Backfilled with arisings NO CHISELLING UNDERTAKEN NO WATER ENCOUNTERED **Borehole Diameter Casing Diameter Depth Sealed** Coordinates (National Grid) / Level (mAOD): Checked By: Drilled By: Logged By: Approved By: Plant Used: Scale: E:490975.013 N:290914.048 Level:106.324 ΑK Premier 110 1:30 SR SS SS



# Project No: Hole ID: Page No. **Head Office DS114** 15-0645.02 1 of 1 3 Henley Office Park, Doddington Road Lincoln, LN6 3QR Tel: +44 (0) 870 0400 012 Fax: +44 (0) 1522 698393 Email: info@deltasimons.com deltasimons Project: Shelton Road, Corby Date: Client: **Dynamic Sampler Log** 03/09/2015 **Delta-Simons** Strata Casing Depth Sample Details **Test Details** Legend **Description of Strata** Level (Dia. mm Depth (m) Type Ref Depth (m) Results (Thickness) 0.08 105.68 MADE GROUND: Tarmac hardstanding. 0.15-0.20 ES 1 0.15 PID=<0.1ppm 0.10 105.66 MADE GROUND:Brownish red slightly sandy garvel. Gravel is 0.25 105.51 angular to subangular fine to medium sandstone and occasional MADE GROUND:Light greyish brown slightly gravelly sand. Sand is fine to coarse. Gravel is angular fine to medium sandstone. 0.70-1.00 ES 2 0.70 PID=0.1ppm MADE GROUND: Dark grey mottled brown slightly silty slightly gravelly clay. Gravel is subangular to rounded fine to medium sandstone chalk and flint. (FILL) 0.25 - 0.35 Occasional rootlets (2.75)3.00 102.76 Borehole complete 3.00 m bgl. **Chiselling Details** Water Level Observations . Engineer verified logged in general accordance to BS 5930:2015. Water Strike (m) Standing Casing Depth (m Depth (m) Area CAT scanned prior to excavation. Borehole remained dry on completion. (m) 4. Installed with a 50 mm HDPE standpipe to 3.00 m b.g.l. NO CHISELLING NO WATER ENCOUNTERED UNDERTAKEN

**Borehole Diameter** 

Premier 110

Plant Used:

Coordinates (National Grid) / Level (mAOD):

E:490948.631 N:290862.675 Level:105.758

Drilled By:

ΑK

**Casing Diameter** 

Checked By:

SS

Logged By:

SR

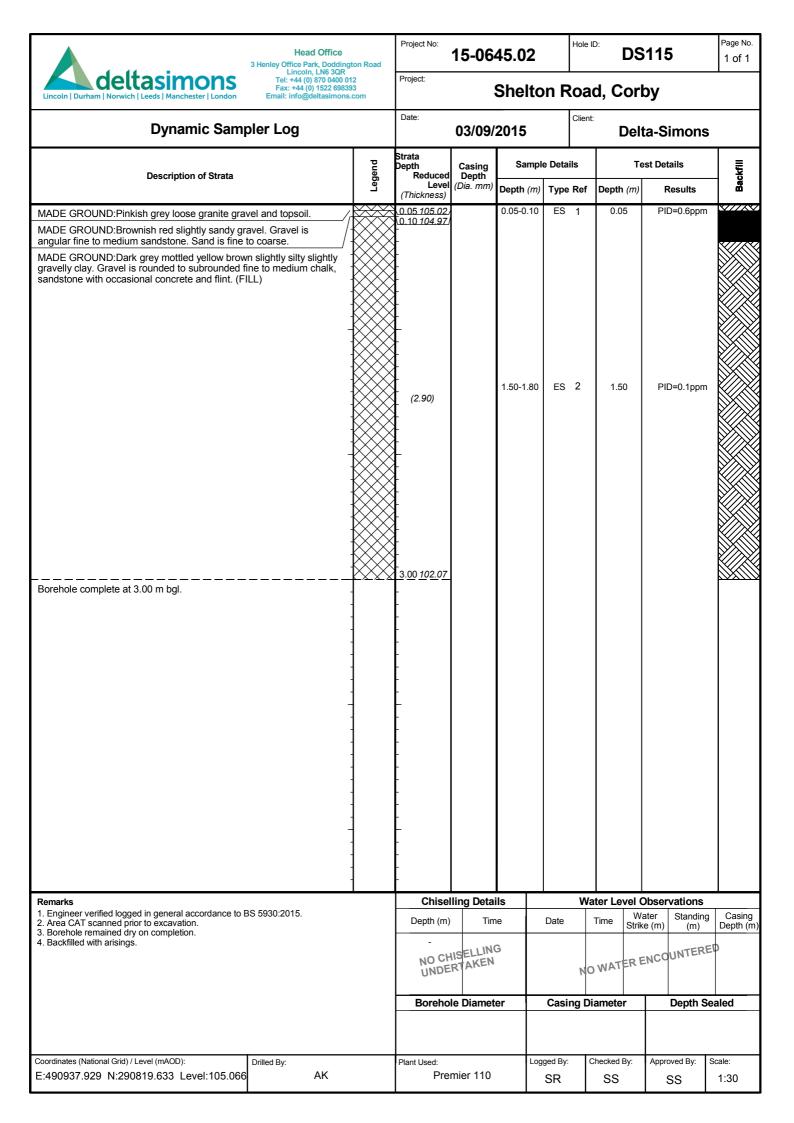
**Depth Sealed** 

Scale:

1:30

Approved By:

SS



# Project No: Hole ID: Page No. **Head Office DS116** 15-0645.02 1 of 1 3 Henley Office Park, Doddington Road Lincoln, LN6 3QR Tel: +44 (0) 870 0400 012 Fax: +44 (0) 1522 698393 Email: info@deltasimons.com deltasimons Project: **Shelton Road, Corby** Date: Client: **Dynamic Sampler Log** 03/09/2015 **Delta-Simons** Strata Depth Casing Depth Sample Details **Test Details** Legend Backfill **Description of Strata** Level (Dia. mm Depth (m) Depth (m) Type Ref Results (Thickness) 0.08 105.47 MADE GROUND: Tarmac hardstanding 0.20-0.30 ES 0.20 PID=0.2ppm MADE GROUND:Light greyish brown slightly gravelly sand. Sand is 0.30 105.25 medium to coarse. Gravel is angular fine to medium sandstone and 0.50-0.70 ES 2 0.50 PID=0.2ppm MADE GROUND: Dark grey mottled browny orange slightly silty slightly gravelly clay. Gravel is subangular to rounded fine to medium sandstone and chalk with rare granite and flint gravel. (FILL) 0.40 - 0.60 Pseudo-fibrous peat. (2.70)2.80-3.00 ES 3 2.80 PID=<0.1ppm 3.<u>00</u> <u>102.55</u> Borehole complete at 3.00 m bgl.

**Chiselling Details** 

NO CHISELLING

UNDERTAKEN

**Borehole Diameter** 

Premier 110

Depth (m)

Plant Used:

. Engineer verified logged in general accordance to BS 5930:2015.

Drilled By:

ΑK

4. Installed with a 50 mm HDPE standpipe to 3.00 m b.g.l.

Area CAT scanned prior to excavation.
 Borehole remained dry on completion.

Coordinates (National Grid) / Level (mAOD):

E:490917.006 N:290822.927 Level:105.545

Water Level Observations

Water Strike (m)

NO WATER ENCOUNTERED

**Casing Diameter** 

Logged By:

SR

Checked By:

SS

Standing

(m)

**Depth Sealed** 

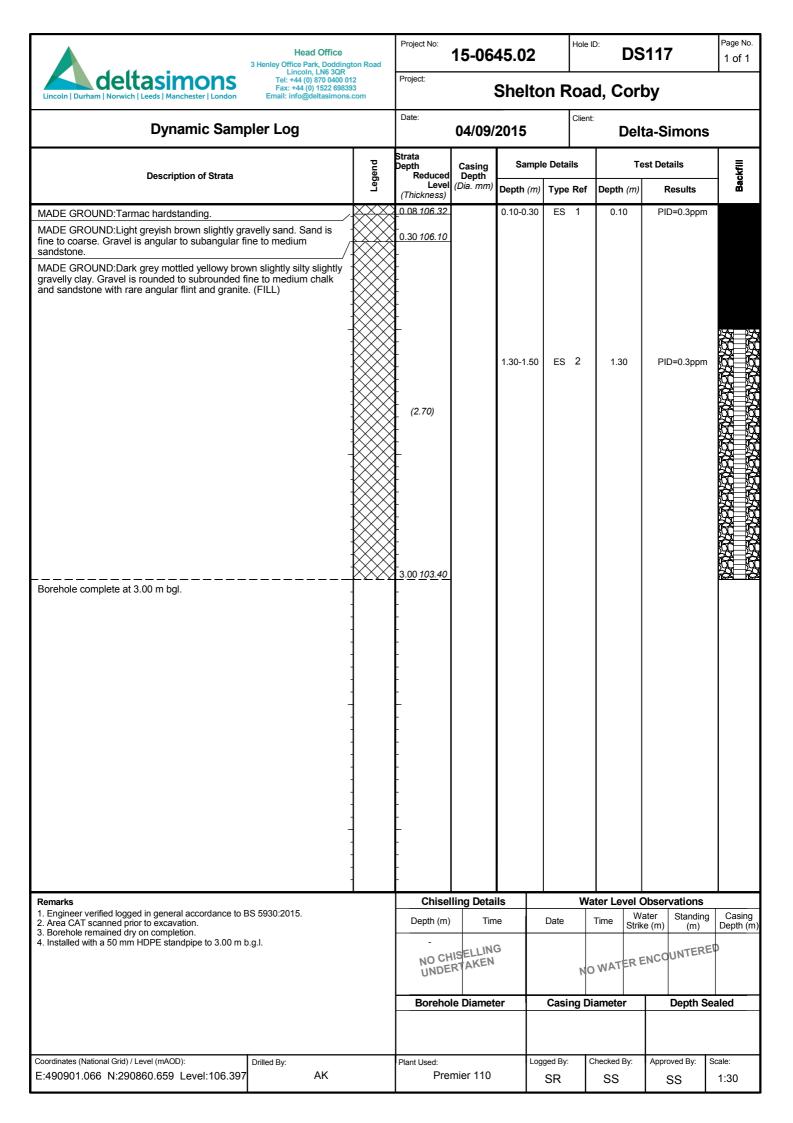
Scale:

1:30

Approved By:

SS

Casing Depth (m)



### **Head Office**

3 Henley Office Park, Doddington Road Lincoln, LN6 3QR

Project No: 15-0645.02 Hole ID: **DS118** 

Page No. 1 of 1

deltasimons Lincoln   Durham   Norwich   Leeds   Manchester   London			Shelton Road, Corby										
Dynamic Sampler Log	Date: O4/09/2015 Client: Delta-Simo							<b>5</b>					
Department of Strate		Strata Depth	Casing	Sample Deta		ls	Te	Test Details					
Description of Strata	Legend	Reduced Level (Thickness)	<b>Depth</b> (Dia. mm)	Depth (m	Туре	Ref	Depth (m)	Results	Backfill				
MADE GROUND:Light brownish red sandy gravel. Gravel is angular to subangular fine medium sandstone and occasional granite. Sand is fine to coarse.  MADE GROUND:Light greyish brown slightly gravelly sand. Sand is fine to coarse. Gravel is angular fine to medium sandstone.  MADE GROUND:Dark grey mottled brown slightly silty slightly gravelly clay. Gravel is rounded to subrounded fine to medium chalk and sandstone with rare flint. (FILL)		_0.08.106.82 _0.12.106.78) - (0.23) -0.35.106.55 - - - - - - - - - - - - - - - - - -		0.20-0.30			0.20	PID=<0.1ppn					
Borehole complete at 3.00 m bgl.		3.00 103.90											
Remarks  1. Engineer verified logged in general accordance to BS 5930:2015.  2. Area CAT scanned prior to excavation.  3. Borehole remained dry on completion.  4. Installed with a 50 mm HDPE standpipe to 3.00 m b.g.l.		Depth (m)	Iling Detai		Date		Time W	ater Standing (m)	g Casing Depth (m)				
		NO CHISELLING UNDERTAKEN			Casir		WATER ENCOUNTERE		ED				
	2070110	Borehole Diameter			-g -J1	осы рериг		<u>Jealeu</u>					
Coordinates (National Grid) / Level (mAOD): Drilled By: E:490892.122 N:290883.022 Level:106.898 AK		Dramier 440						Approved By:	Scale: 1:30				

### Project No: Hole ID: Page No. **DS119** 15-0645.02 1 of 1 3 Henley Office Park, Doddington Road Lincoln, LN6 3QR Tel: +44 (0) 1870 0400 012 Fax: +44 (0) 1822 698393 Email: info@deltasimons.com deltasimons Project: Shelton Road, Corby Date: Client: **Dynamic Sampler Log** 03/09/2015 **Delta-Simons** Strata Casing Depth Sample Details **Test Details** Legend **Description of Strata** Level (Dia. mm Depth (m) Type Ref Depth (m) Results (Thickness) 0.08 107.20 0.10-0.20 ES MADE GROUND: Tarmac hardstanding. 0.10 107.18 0.20 PID=0.1ppm MADE GROUND:Brownish red sandy gravel. Gravel is angular fine to 0.30 106.98 0.35 106.93 medium granite and sandstone. Sand is medium to coarse. MADE GROUND:Light greyish brown slightly gravelly sand. MADE GROUND: Possible concrete cobble obstruction. (Limited Recovery) 0.70-1.00 ES 2 MADE GROUND:Dark grey mottled brown slightly silty slightly gravelly clay. Gravel is rounded to subrounded fine to medium chalk and occasional sandstone and flint. (FILL) 0.40 - 0.60 Roofless encountered. 1.20 PID=0.2ppm (2.65)2.20 - 2.60 Pseudo-fibrous black peat. 3.00 <u>104.28</u> Borehole complete at 3.00 m bgl. **Chiselling Details** Water Level Observations . Engineer verified logged in general accordance to BS 5930:2015. Water Strike (m) Standing Casing Depth (m Depth (m) Area CAT scanned prior to excavation. Borehole remained dry on completion. (m) 4. Backfilled with arisings NO CHISELLING NO WATER ENCOUNTERED UNDERTAKEN **Borehole Diameter Casing Diameter Depth Sealed** Coordinates (National Grid) / Level (mAOD): Logged By: Checked By: Approved By:

Plant Used:

Premier 110

SR

SS

Scale:

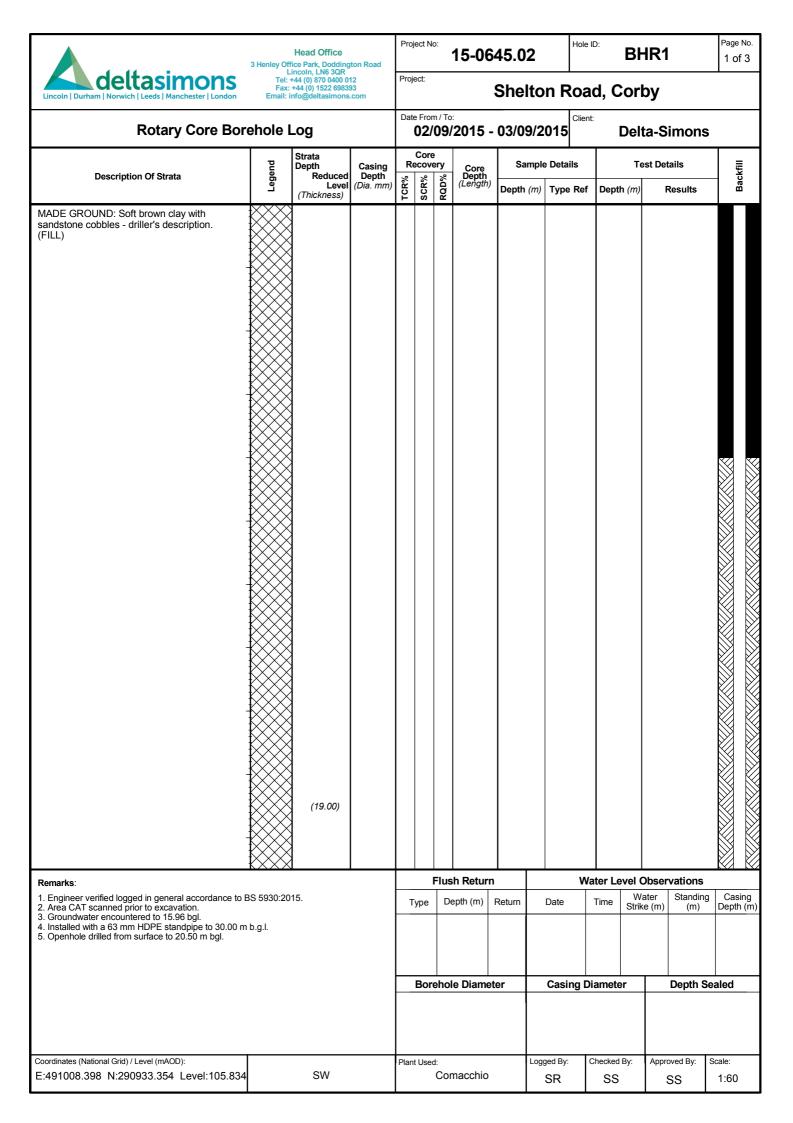
SS

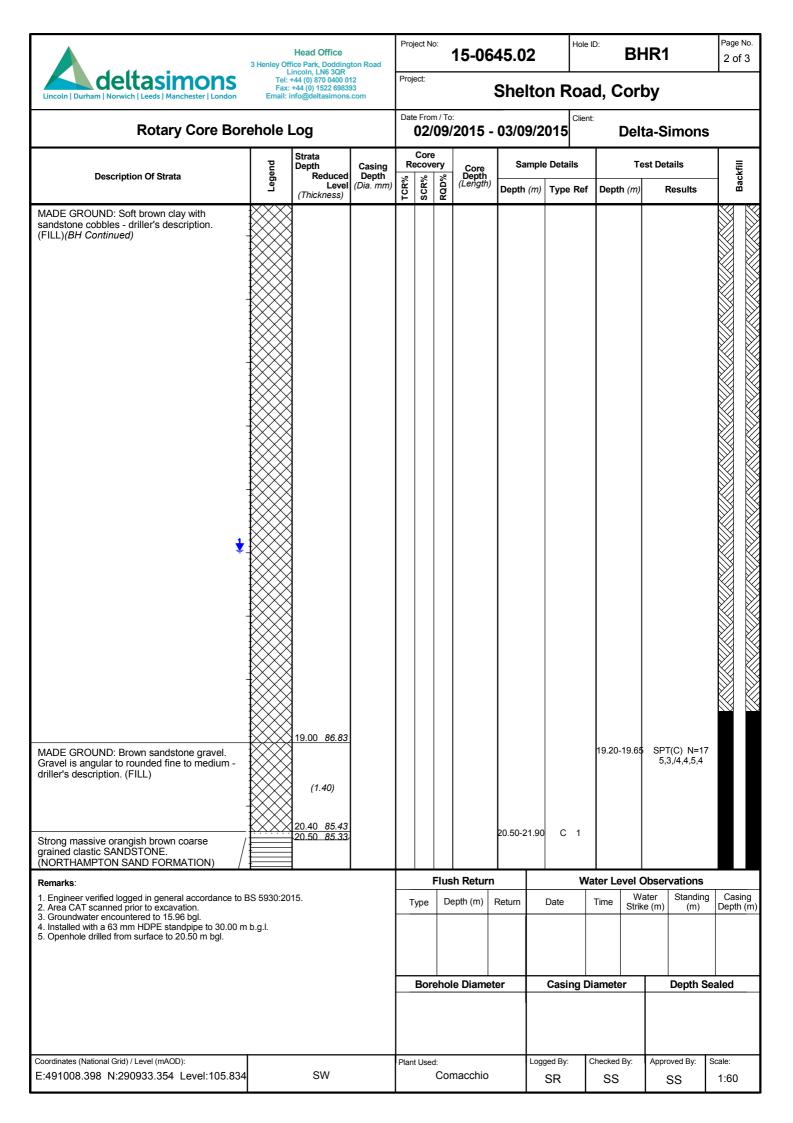
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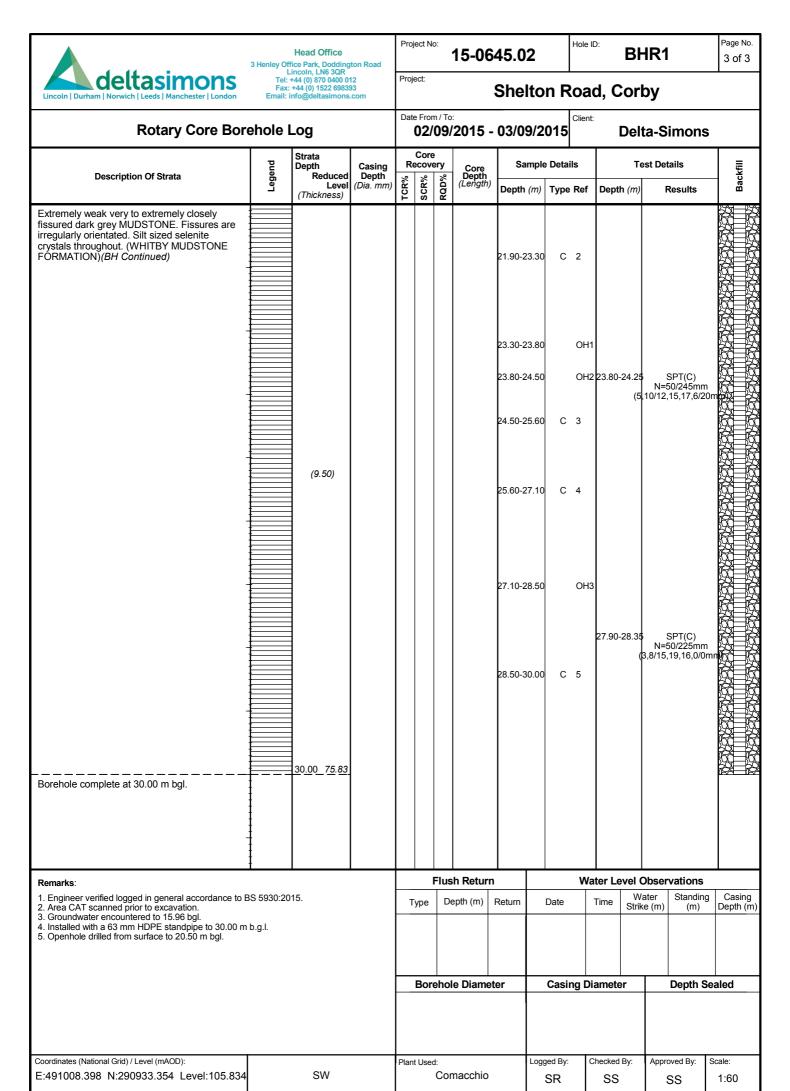
Drilled By:

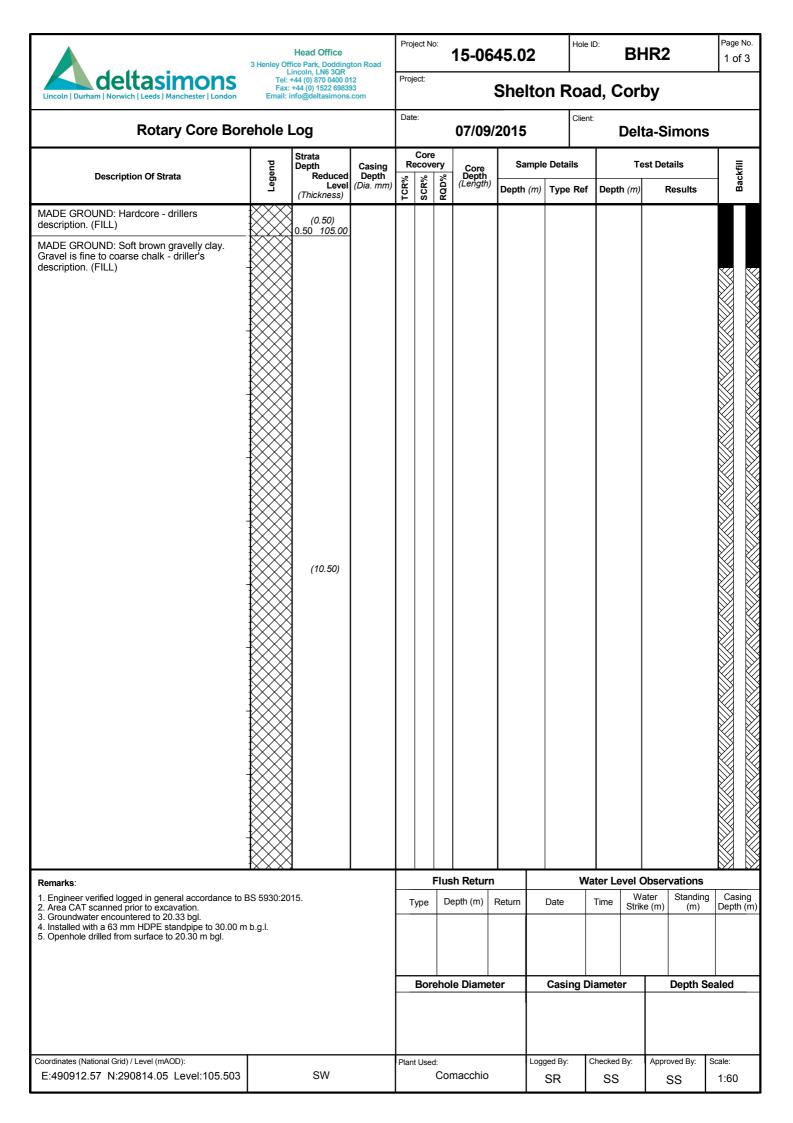
ΑK

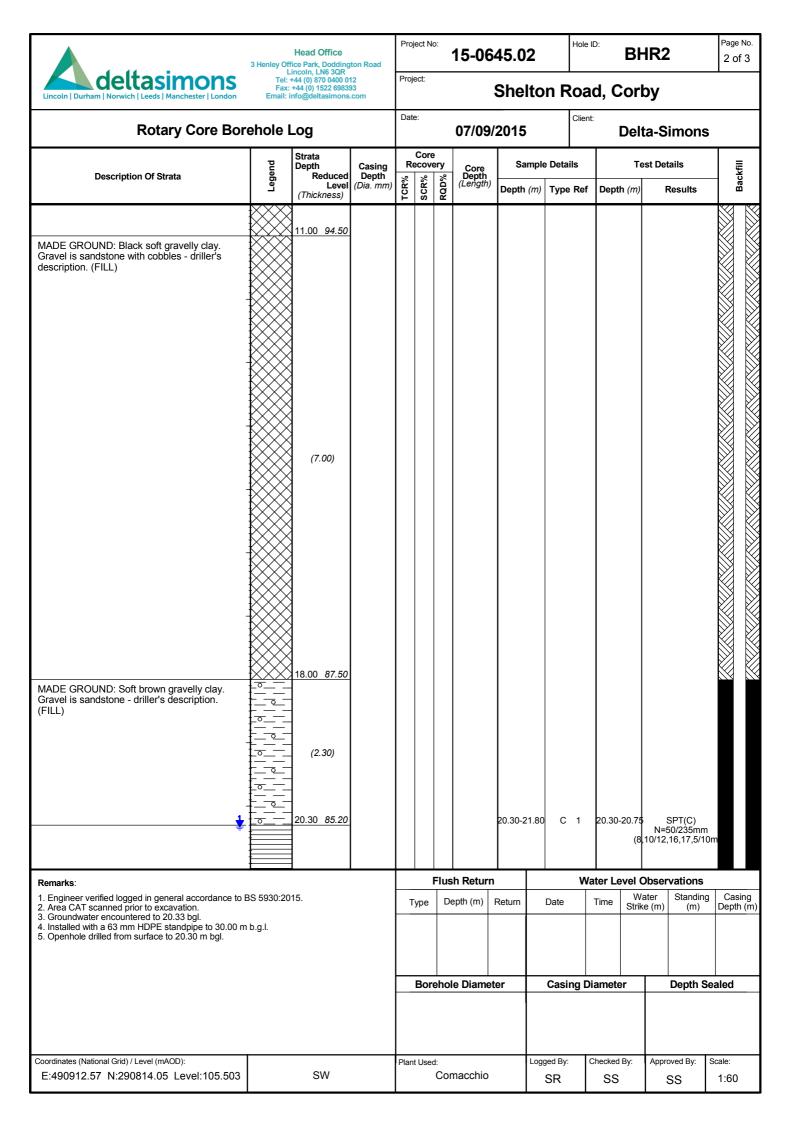
E:490847.639 N:290874.765 Level:107.278

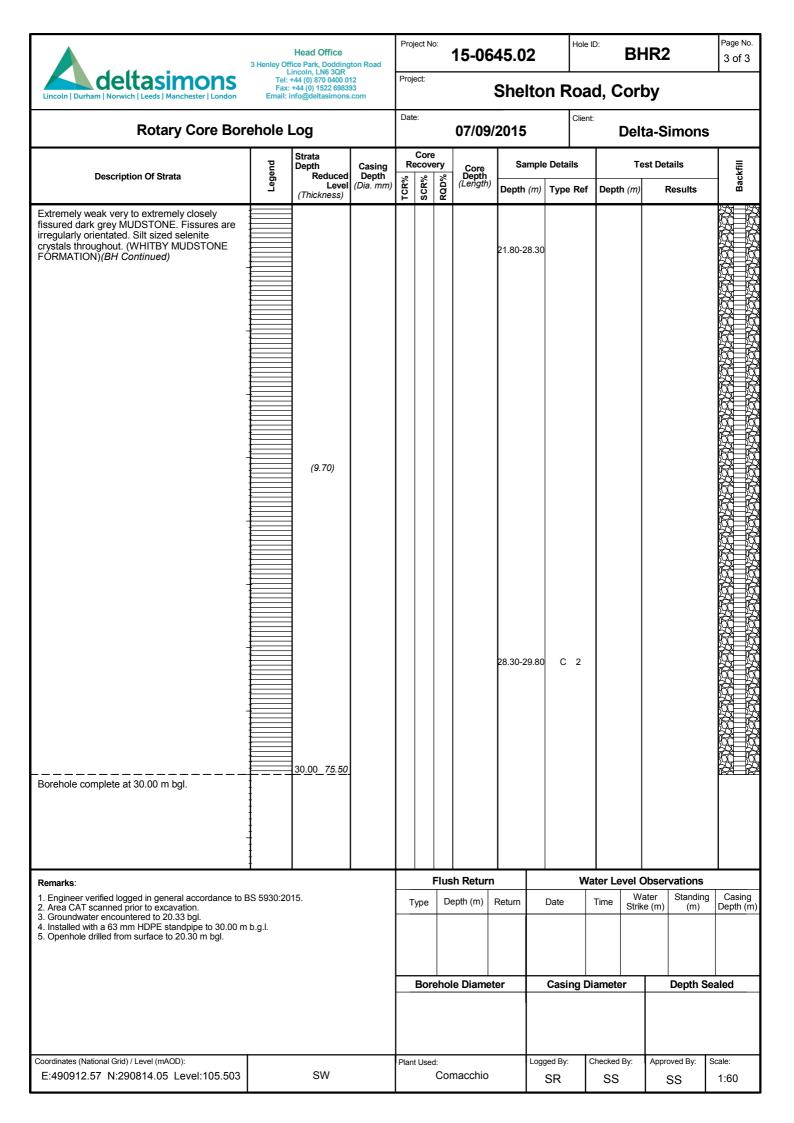


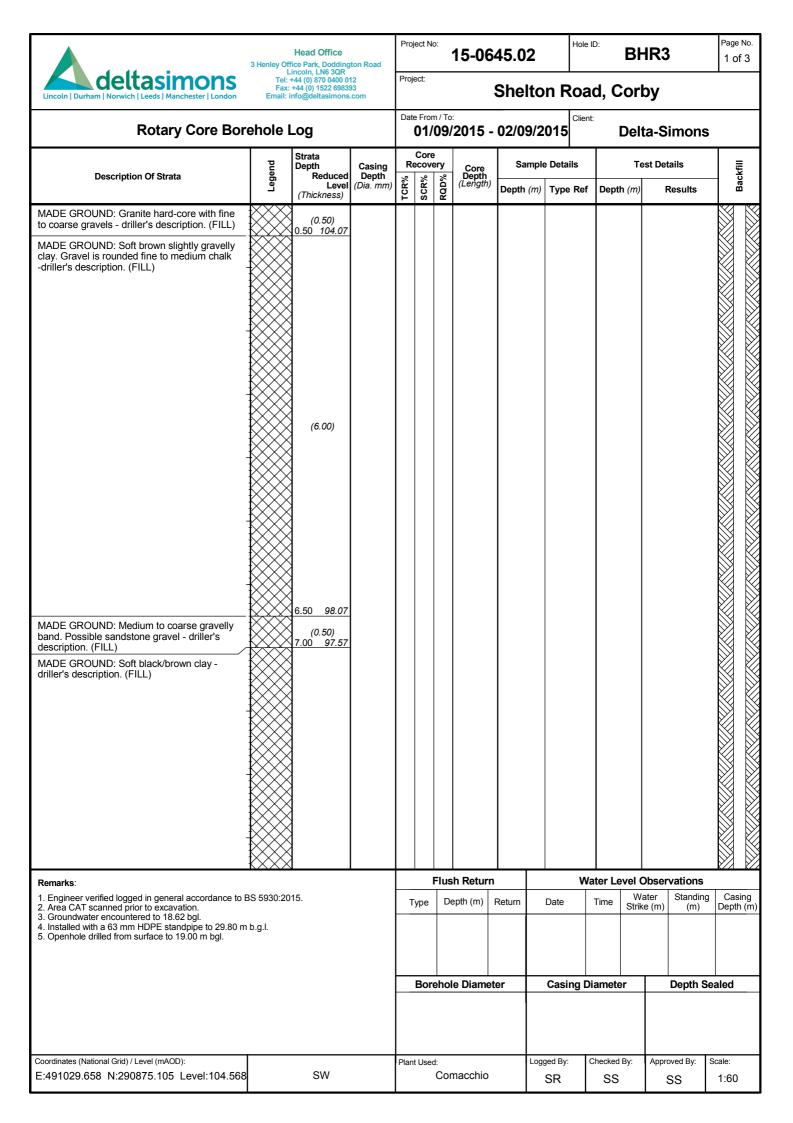


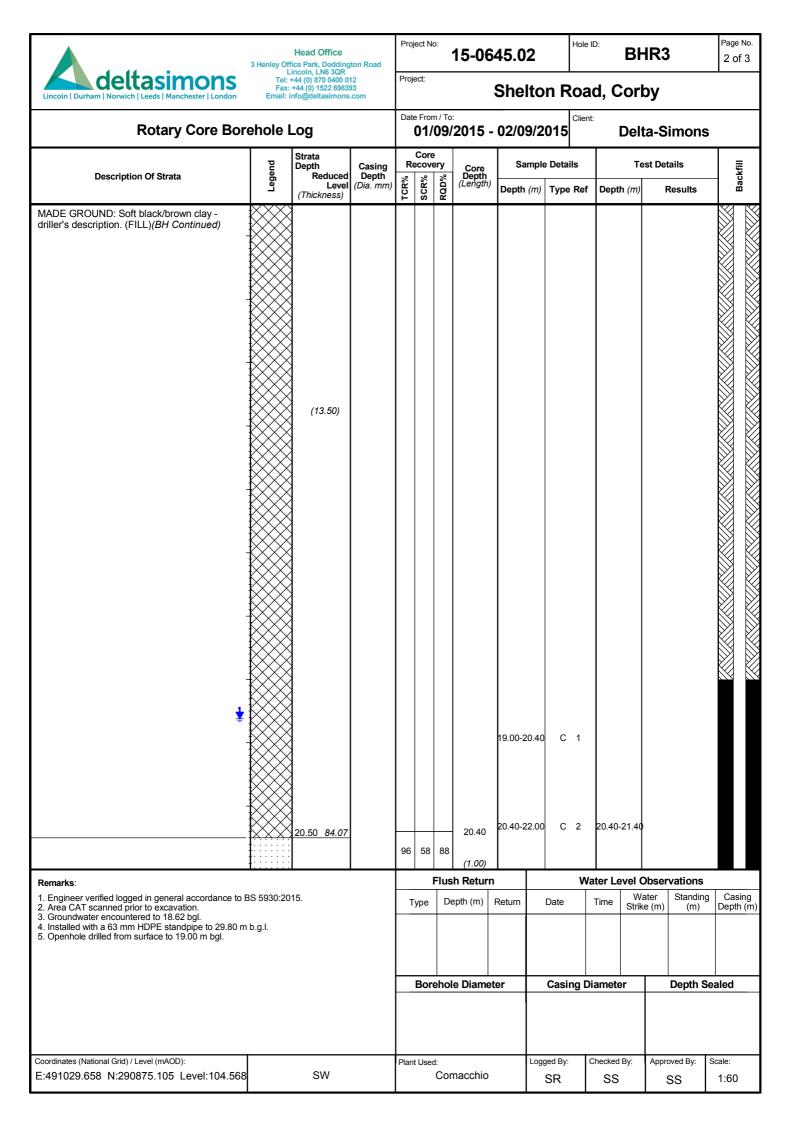












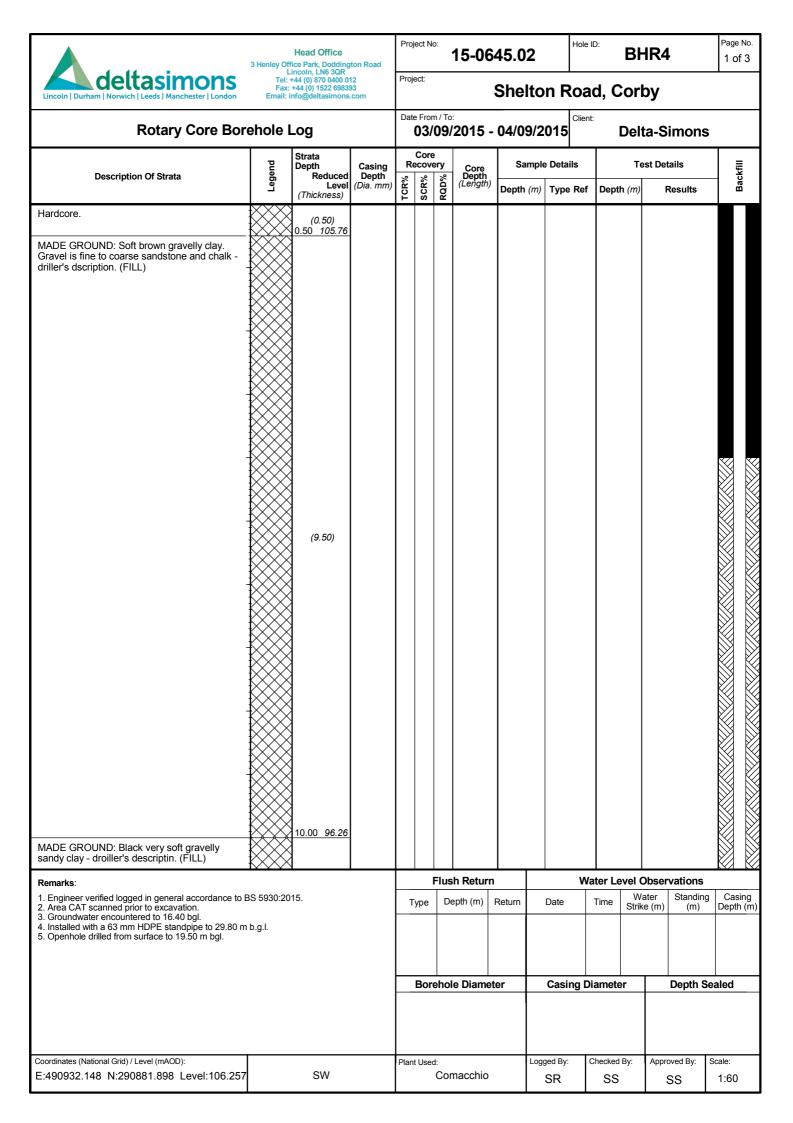


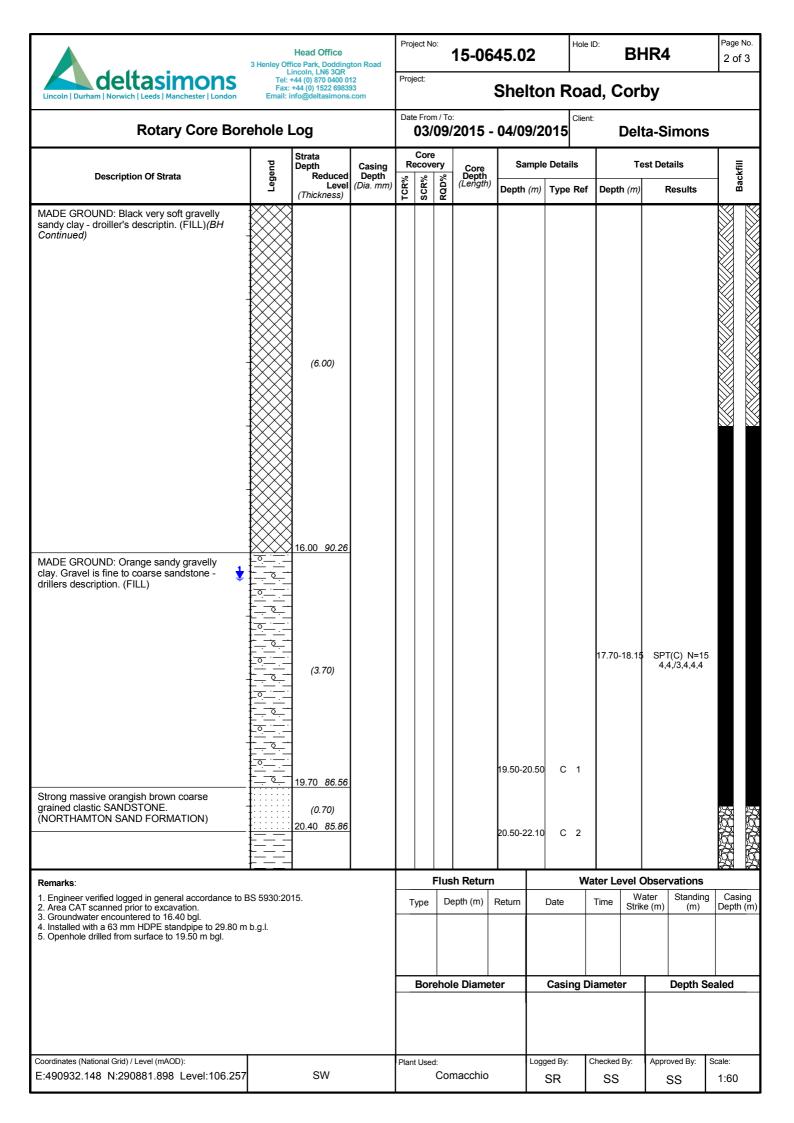
### **Head Office**

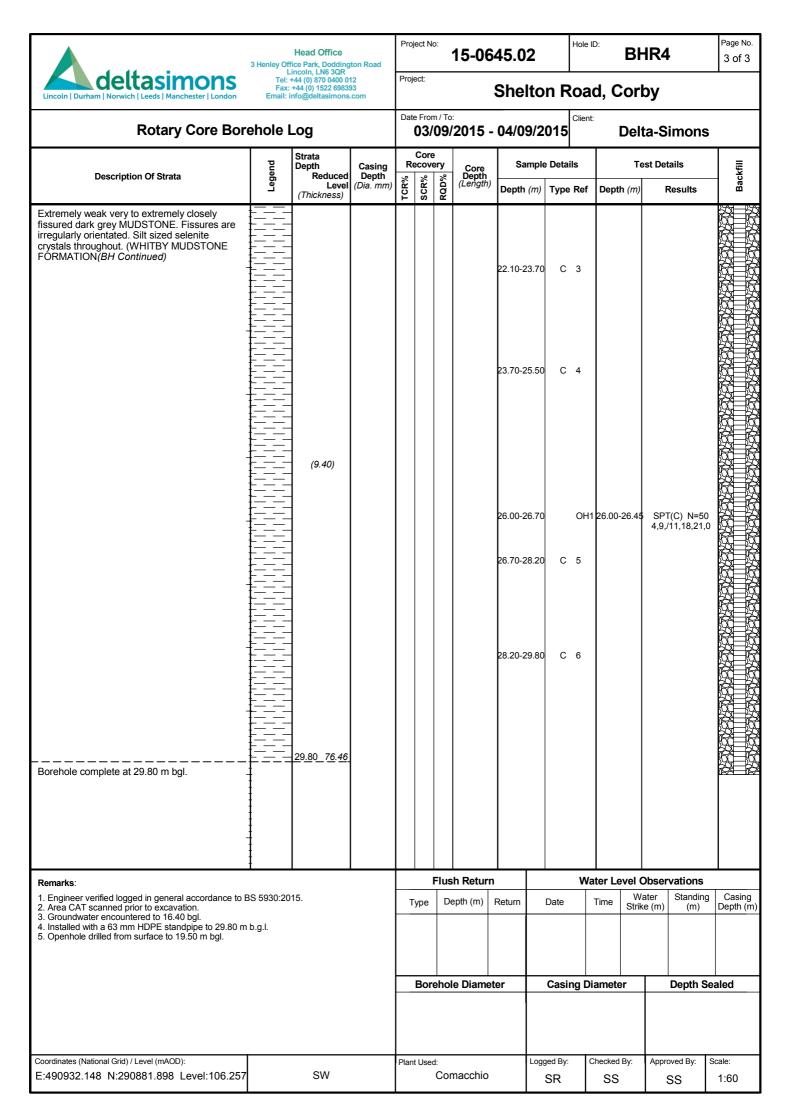
3 Henley Office Park, Doddington Road Lincoln, LN6 3QR

Project No: 15-0645.02 Hole ID: BHR3 Page No. 3 of 3

deltasimons Lincoln   Durham   Norwich   Leeds   Manchester   London	Tel: Fax:	Lincoln, LN6 3QR +44 (0) 870 0400 0 +44 (0) 1522 6983 info@deltasimons	93	Shelton Road, Corby									
Rotary Core Borehole Log				Date From / To: 01/09/2015 - 02/09/2015 Delta-Simons									
Description Of Strata	Legend	Strata Depth Reduced	Casing Depth		Core	ery	Core Depth (Length)	Sam	ple Details		Test [	Details	Backfill
Description of Strata	Leg	Level (Thickness)		TCR%	SCR%	RQD%	(Length)	Depth (r	Type Re	f Depth	n (m)	Results	Вас
Strong massive orangish brown coarse grained clastic SANDSTONE. (NORTHAMPTON SAND FORMATION)(BH Continued)		(2.25)		96		92	21.40	22.00-23.	30 C 3	21.40-	22.40		
		22.75 81.82					22.40			22.40-	23.30		
Extremely weak very to extremely closely fissured dark grey MUDSTONE. Fissures are irregularly orientated. Silt sized selenite crystals throughout. (WHITBY MUDSTONE FORMATION)				92	92	50	(0.90)	23.30-24.	90 C 4				
								24.90-26.	40 C 5				
		(7.05)						26.40-27. 27.20-28.					
		29 <u>.80</u> 74.77						28.30-29.	80 C 8				
Borehole complete at 29.80 m bgl.		25.00 74.77											SLX L—SLX
Remarks:  1. Engineer verified logged in general accordance to BS 5930:2015.		<u> </u>	Turne Donth (m) Detrum Dete Time					Water					
Area CAT scanned prior to excavation.     Groundwater encountered to 18.62 bgl.     Installed with a 63 mm HDPE standpipe to 29.80 m     Openhole drilled from surface to 19.00 m bgl.					Гуре	De	epth (m)	Return	Date	Time	Strike (n		Depth (m)
Coordinates (National Grid) / Level (mAOD):			Plan	Borehole Diameter				Casing Dia				ealed  Scale:	
E:491029.658 N:290875.105 Level:104.568		SW		rian	n ose		nacchio		SR	SS	کی.	oproved By:	1:60







# Appendix II







SEDS1.spt

in accordance with BSEN ISO 22476-3:2005

Southern Testing Laboratories

Keeble House Stuart Way East Grinstead West Sussex

West Sussex File Name:
RH19 4QA Test Opera

SPT Hammer Ref: SEDS1

Test Date: 10/05/2015

Report Date: 10/05/2015

Test Operator: NPB

### **Instrumented Rod Data**

Diameter  $d_r$  (mm): 54

Wall Thickness  $t_r$  (mm): 6.0

Assumed Modulus  $E_a$  (GPa): 200

Accelerometer No.1: 9607

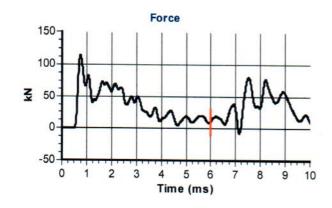
Accelerometer No.2: 6458

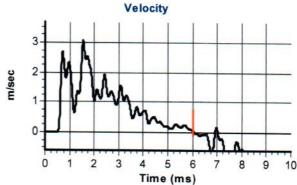
### **SPT Hammer Information**

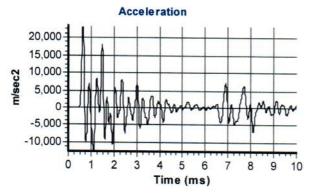
Hammer Mass m (kg): 63.5 Falling Height h (mm): 760 SPT String Length L (m): 14.5

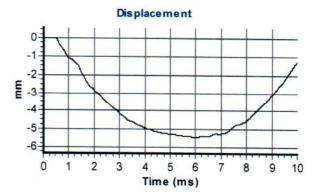
# Comments / Location

**CHARLWOODS** 









## Calculations

Area of Rod A (mm2): 905 Theoretical Energy  $E_{theor}$  (J): 473 Measured Energy  $E_{meas}$  (J): 341

Energy Ratio  $E_r$  (%):

72

Signed: N P Burrows

Title: Field Operations Manager



in accordance with BSEN ISO 22476-3:2005

**Southern Testing Laboratories** 

Keeble House Stuart Way East Grinstead West Sussex

**RH19 4QA** 

SPT Hammer Ref: SEDS02

Test Date: 10/05/2015

Report Date: 10/05/2015

File Name: SEDS02.spt
Test Operator: NPB

**Instrumented Rod Data** 

Diameter  $d_r$  (mm): 54

Wall Thickness  $t_r$  (mm): 6.0

Assumed Modulus  $E_a$  (GPa): 200

Accelerometer No.1: 9607

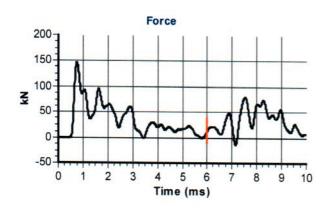
Accelerometer No.2: 6458

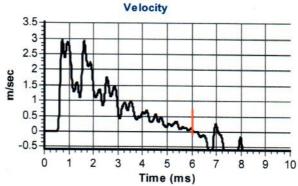
### **SPT Hammer Information**

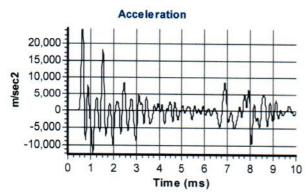
Hammer Mass m (kg): 63.5 Falling Height h (mm): 760 SPT String Length L (m): 14.5

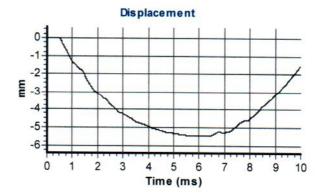
# Comments / Location

**CHARLWOODS** 









# Calculations

Area of Rod A (mm2): 905 Theoretical Energy  $E_{theor}$  (J): 473 Measured Energy  $E_{meas}$  (J): 344

Signed: N P Burrows

Title: Field Operations Manager

Energy Ratio  $E_r$  (%):

73



in accordance with BSEN ISO 22476-3:2005

**Southern Testing Laboratories** 

Keeble House Stuart Way East Grinstead West Sussex

West Sussex RH19 4QA SPT Hammer Ref: SEDS3

Test Date: 10/05/2015

Report Date: 10/05/2015

File Name: SEDS3.spt

Test Operator: NPB

# **Instrumented Rod Data**

Diameter  $d_r$  (mm): 54

Wall Thickness  $t_r$  (mm): 6.0

Assumed Modulus  $E_a$  (GPa): 200

Accelerometer No.1: 9607

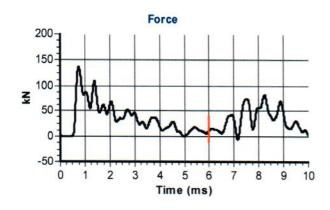
Accelerometer No.2: 6458

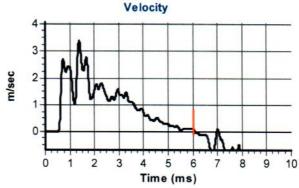
### **SPT Hammer Information**

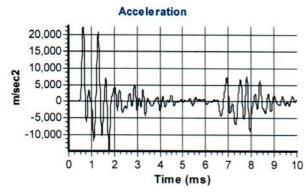
Hammer Mass m (kg): 63.5 Falling Height h (mm): 760 SPT String Length L (m): 14.5

# **Comments / Location**

**CHARLWOODS** 









#### Calculations

Area of Rod A (mm2): 905 Theoretical Energy  $E_{theor}$  (J): 473 Measured Energy  $E_{meas}$  (J): 361

Signed: N P Burrows

Title: Field Operations Manager

Energy Ratio  $E_r$  (%):

76



SEDS4.spt

in accordance with BSEN ISO 22476-3:2005

**Southern Testing Laboratories** 

**Keeble House Stuart Way East Grinstead West Sussex** 

**RH19 4QA** 

SPT Hammer Ref: SEDS4

Test Date: 10/05/2015

Report Date: 10/05/2015 File Name:

Test Operator: **NPB** 

#### **Instrumented Rod Data**

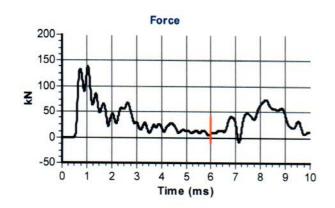
Diameter d<sub>r</sub> (mm): 54 Wall Thickness t<sub>r</sub> (mm): 6.0 Assumed Modulus Ea (GPa): 200 Accelerometer No.1: 9607 Accelerometer No.2: 6458

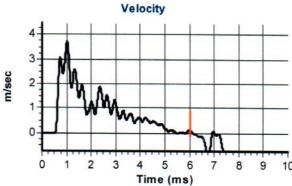
# **SPT Hammer Information**

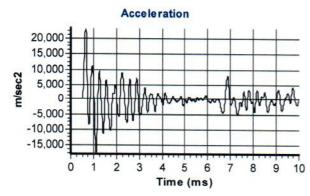
Hammer Mass m (kg): Falling Height h (mm): 760 SPT String Length L (m): 14.5

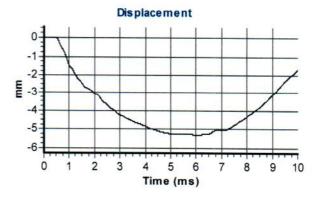
# Comments / Location

**CHARLWOODS** 









### Calculations

Area of Rod A (mm2): 905 Theoretical Energy  $E_{theor}$  (J): 473 Measured Energy E<sub>meas</sub> (J): 367

Energy Ratio  $E_r$  (%):

78

N P Burrows Signed:

Title: Field Operations Manager



in accordance with BSEN ISO 22476-3:2005

**Southern Testing Laboratories** 

Keeble House Stuart Way East Grinstead West Sussex

**RH19 4QA** 

SPT Hammer Ref: SEDS5

Test Date:

10/05/2015

Report Date:

10/05/2015

File Name:

SEDS5.spt

Test Operator:

NPB

#### **Instrumented Rod Data**

Diameter  $d_r$  (mm): 54

Wall Thickness  $t_r$  (mm): 6.0

Assumed Modulus  $E_a$  (GPa): 200

Accelerometer No.1: 9607

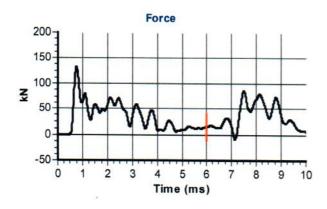
Accelerometer No.2: 6458

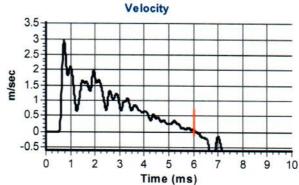
### **SPT Hammer Information**

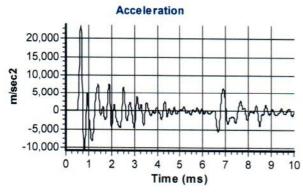
Hammer Mass m (kg): 63.5 Falling Height h (mm): 760 SPT String Length L (m): 14.5

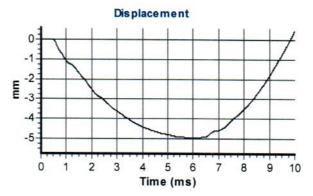
# Comments / Location

**CHARLWOODS** 









# Calculations

Area of Rod A (mm2): 905 Theoretical Energy  $E_{theor}$  (J): 473 Measured Energy  $E_{meas}$  (J): 284

Signed: N P Burrows

Title: Field Operations Manager

Energy Ratio  $E_r$  (%):

60



## **SPT Hammer Energy Test Report**

in accordance with BSEN ISO 22476-3:2005

**Southern Testing Laboratories** 

**Keeble House Stuart Way East Grinstead West Sussex** 

**RH19 4QA** 

SPT Hammer Ref: SEDS6

Test Date: 10/05/2015

Report Date: 10/05/2015

File Name: SEDS6.spt

Test Operator: **NPB** 

#### Instrumented Rod Data

Diameter d<sub>r</sub> (mm): 54 Wall Thickness t<sub>r</sub> (mm): 6.0 Assumed Modulus Ea (GPa): 200 Accelerometer No.1: 9607

Accelerometer No.2:

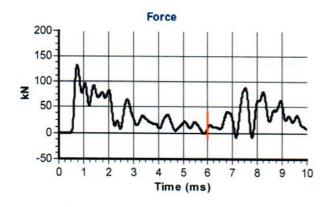
6458

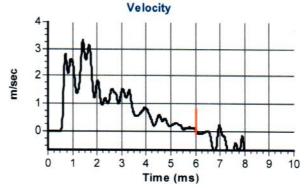
#### **SPT Hammer Information**

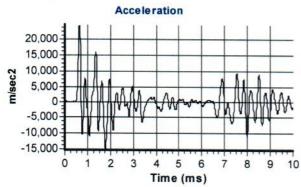
Hammer Mass m (kg): 63.5 Falling Height h (mm): 760 SPT String Length L (m): 14.5

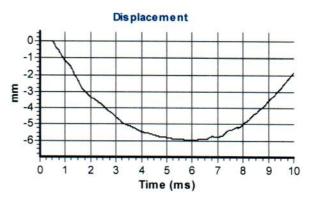
#### Comments / Location

CHARLWOODS









#### **Calculations**

Area of Rod A (mm2): 905 Theoretical Energy  $E_{theor}$  (J): 473 Measured Energy E<sub>meas</sub> (J): 354

Energy Ratio  $E_r$  (%):

75

Signed: N P Burrows

Title: Field Operations Manager

The recommended calibration interval is 12 months

## **SPT Calibration Report**

#### **Hammer Energy Measurement Report**

SPT HAMMER Type of Hammer **DELTA SIMONS** Client

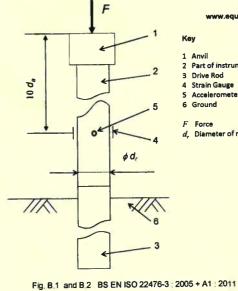
EQU1240 **Test No** 6.70 Test Depth (m)

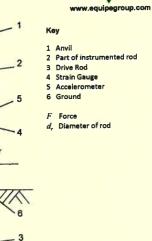
02 April 2015 Date of Test

01 April 2016 Valid until

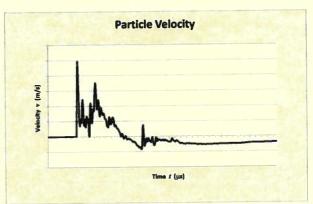
**DS001** Hammer ID

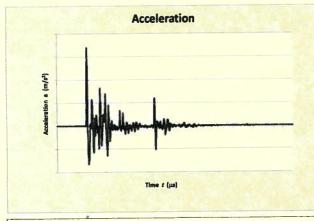
63.5kg Mass of the hammer m = 0.76m Falling height h = 473J  $m \times g \times h =$ E theor = Characteristics of the instrumented rod 0.052 m 0.558 m Length of the instrumented rod 11.61 cm<sup>2</sup> Area A = 206843 MPa Modulus

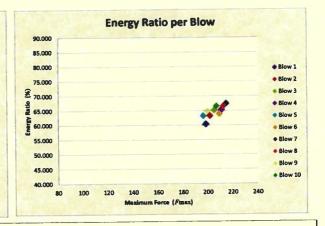












Observations:

 $E_{\text{meas}} =$ 0.304 kN-m

 $E_{\text{theor}} =$ 0.473 kN-m

64.36% Energy Ratio =

**Equipe SPT Analyzer Operators:** 

KS

Prepared by:

Checked by:

Date

08/04/2015

## Appendix III





A delt	deltasimons			GROUNDWATER AND GROUND GAS MONITORING RECORD SHEET														Sheet:				
delt	asım	ons	5		Gr	KOON	DVVA	IER A	IND GRO	JUND	GAS	IVIOIN	HOKI	NG KI	ECOR	חכ ע.	CCI	1		of	1	
Project Name:	Corby									Weather	Conditi	ons:					at 5 m/s. 08/09 Overcast, wind at 3 m/s.				Date:	
Project Number:	15-0645	5.02								Gas Kit N	∕lodel:		GA2000	)							07/00/0045 00/00/0045	
Personnel:	Stacey F	Ragsdale	)							Gas Kit S	Serial No	0:								(	07/09/2015 - 08/09/2015	
LOCATION	Flow Peak	Flow Steady	CH₄ Peak	CH <sub>4</sub> Steady	CO <sub>2</sub> Peak	CO <sub>2</sub> Steady	O <sub>2</sub> Min.	O <sub>2</sub> Steady	Atmospheric Pressure	PID	Well I.D.	Depth to Product (DTP)	Product Thickness	Depth to Water (DTW)	Depth to Base (DTB)	Height of Water Column				NOT	res	
DS104	(L/hr) <0.1	(L/hr) <0.1	(%v/v) <0.1	(%v/v) <0.1	(%v/v) 0.1	(%v/v) 0.1	(%v/v) 20.2	(%v/v) 20.2	(mb) 1020	(ppm) 1.5	(mm)	(m)	(m)	(m) 0.410	(m)	(m)	Very silty water					
DS105	<0.1	<0.1	<0.1	<0.1	0.4	0.4	19.2	19.2	1021	4.2				0.290	3.000	2.710	Very silty water					
DS107	<0.1	<0.1	0.5	0.5	1.6	1.6	17.2	17.2	1021	12.5				0.710	3.000	2.290						
DS107a	0.2	<0.1	<0.1	<0.1	0.6	0.6	18.1	18.1	1020	5.5				0.780	3.080	2.300						
DS101	<0.1	<0.1	<0.1	<0.1	0.3	0.3	18.8	18.8	1021	5.1				1.040	3.070	2.030	)					
DS109	0.1	<0.1	<0.1	<0.1	0.8	0.8	14.2	14.2	1021	9.3				2.200	3.020	0.820	Very silty water					
DS113	<0.1	<0.1	<0.1	<0.1	0.7	0.7	14.3	14.3	1021	0.4				0.320	3.040	2.720						
DS114	<0.1	<0.1	<0.1	<0.1	0.6	0.6	15.7	15.7	1022	3.1				0.680	3.030	2.350	)					
DS116	0.2	<0.1	<0.1	<0.1	0.5	0.5	17.1	17.1	1022	0.5				0.710	3.020	2.310						
DS117	<0.1	<0.1	<0.1	<0.1	1.0	1.0	8.1	8.1	1022	13.4				1.820	2.930	1.110						
DS118	<0.1	<0.1	<0.1	<0.1	1.0	1.0	18.3	18.3	1021	4.8				0.960	3.020	2.060						
R3	<0.1	<0.1	<0.1	<0.1	0.1	0.1	19.9	19.9	1020	2.6				18.620	29.970	11.350	Very silty water					
R1	0.2	<0.1	<0.1	<0.1	2.7	2.7	11.4	11.4	1020	1.5				15.960	30.030	14.070	Very silty water					
BH106	<0.1	<0.1	<0.1	<0.1	0.1	0.1	3.7	3.7	1020	5.3				Dry	17.980	N/A	A .					
BH107	<0.1	<0.1	0.9	0.9	1.6	1.6	5.8	5.8	1020	1.1				Dry	18.240	N/A						
BH104	<0.1	<0.1	<0.1	<0.1	0.1	0.1	19.6	19.6	1019	2.3				18.610	19.100	0.490	Very silty water					
R4	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	20.0	20.0	1020	1.8				16.710	29.960	13.250	Very silty water					
R2	0.2	0.2	<0.1	<0.1	4.9	4.9	4.0	4.0	1019	3.2				20.330	30.310	9.980	Very silty water					
BH102	<0.1	<0.1	5.1	5.1	0.1	0.1	3.3	3.3	1019	2.7				14.620	15.320	0.700	Very silty water					
BH101	<0.1	<0.1	<0.1	<0.1	0.1	0.1	18.1	18.1	1018	1.9				14.500	16.240	1.740	Very silty water				-	-
	1			1									VOLUM			•	1					
To calculate the numb																		_	0	75		100
the water column). Us m in length.	se the formul	la πr²h t	o calcula	ite the vol	ume of a	bailer. F	ease no	te that th	e standard b	oailers De	Ita-Simo	ons use a	are typica	lly 0.95	No. bail	er of Baile s per m	er (mm) 18 19 19 4 12 22		6	38 13		38 23
Document No. C101	Version:	: 4.0		Issue Da	ate: 13/01	/12	Author:	C Ramsb	ottom				Authoris	ed By: R		-						
© Delta-Simons Envi	ronmental C	Consulta	nts Limi	ited. No	oart of th	is docu	ment ma	y be repi	roduced un	less prio	r writte	n permis	sion has	been gr	anted.							

A					0		DIA/A:	TED A	ND OD			MON	ITODI	NO D	<b>-</b> 005	D 011					Sheet:
delt	asim	ons			G	KOUN	DWA	IEK A	ND GR	JUND	GAS	WON	HORI	NG R	ECOR	(D 2H		1	of		1
Project Name:	Corby									Weathe	r Conditio	ons:	16/09 -	Sunny, 1	4 degree	es, wind a	at 8 m/s.				Date:
Project Number:	15-0645	5.02								Gas Kit Model: GA2000											
Personnel:	Stacey F	Ragsdale	)							Gas Kit	Serial No	):									16/09/2015
LOCATION	Flow Peak	Flow Steady	CH₄ Peak	CH <sub>4</sub> Steady	CO <sub>2</sub> Peak	CO <sub>2</sub> Steady	O <sub>2</sub> Min.	O <sub>2</sub> Steady	Atmospheric Pressure	PID	Well I.D.	Depth to Product (DTP)	Product Thickness	Depth to Water (DTW)	Depth to Base (DTB)	Height of Water Column			NO	TES	
DS104	(L/hr) <0.1	(L/hr) <0.1	(%v/v) <0.1	(%v/v) <0.1	(%v/v) <0.1	(%v/v) <0.1	(%v/v) 20.4	(%v/v) 20.4	(mb) 1018	(ppm)	(mm)	(m)	(m)	(m) 0.420	(m) 2.910	(m) 2.490	Very silty water				
DS105	<0.1	<0.1	<0.1	<0.1	0.2	0.2	19.6	19.6	1018					0.310	3.000		Very silty water				
DS107	<0.1	<0.1	0.4	0.4	1.2	1.2	18.3	18.3	1018					0.570	3.000	2.430					
DS107a	<0.1	<0.1	<0.1	<0.1	0.4	0.4	18.6	18.6	1018					0.800	3.080	2.280					
DS101	<0.1	<0.1	<0.1	<0.1	0.1	0.1	19.2	19.2	1018					1.140	3.070	1.930					
DS109	<0.1	<0.1	<0.1	<0.1	0.7	0.7	15.1	15.1	1019					2.250	3.020	0.770	Very silty water				
DS113	<0.1	<0.1	<0.1	<0.1	0.5	0.5	15.2	15.2	1019					0.360	3.040	2.680					
DS114	<0.1	<0.1	<0.1	<0.1	0.6	0.6	15.9	15.9	1019					0.720	3.030	2.310					
DS116	<0.1	<0.1	<0.1	<0.1	0.3	0.3	17.9	17.9	1019					0.730	3.020	2.290					-
DS117	<0.1	<0.1	<0.1	<0.1	0.8	0.8	9.9	9.9	1019					1.790	2.930	1.140					
DS118	<0.1	<0.1	<0.1	<0.1	1.1	1.1	18.3	18.3	1018					0.850	3.020	2.170					
R3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	20.3	20.3	1018					18.390	29.970	11.580	Very silty water				
R1	<0.1	<0.1	<0.1	<0.1	2.6	2.6	12.1	12.1	1018					14.800	30.030	15.230	Very silty water				
BH106	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	5.3	5.3	1018					Dry	17.980	N/A					
BH107	<0.1	<0.1	0.5	0.5	0.8	0.8	6.3	6.3	1018					Dry	18.240	N/A					
BH104	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	20.5	20.5	1018					18.440	19.100	0.660	Very silty water				
R4	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	20.1	20.1	1018					16.570	29.960	13.390	Very silty water				
R2	<0.1	<0.1	<0.1	<0.1	4.4	4.4	5.2	5.2	1018					20.120	30.310	10.190	Very silty water				
BH102	<0.1	<0.1	4.7	4.7	<0.1	<0.1	3.8	3.8	1018					14.480	15.320	0.840	Very silty water				
BH101	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	19.3	19.3	1018					14.350	16.240	1.890	Very silty water				
							•		- 0				VOLUM		lo:- ·			<b>5</b> 0			
To calculate the numb the water column). Us m in length.																er of Cas er of Baile s per m	• .	50 38 6	75 38 13		
Document No. C101 © Delta-Simons Envi	Version:		nts Limi		ate: 13/0 <sup>-</sup>			C Ramsbo		less pri	or writter	n permis			Griffiths						

<b>A</b>			CROUNDWATER AND CRO			OUND GAS MONITORING RECORD SHEET									Sheet:								
delt	asım	ons			GF	KOUN	DWA	IER A	ND GRO	טאטכ	GAS	MON	HORI	NG RI	ECOR	(D 2H	EEI	1		of	1		
Project Name:	Corby									Weather	Conditi	ons:	19*C O	vercast, S	Slight Bre	eeze					Date:		
Project Number:	15-0645	5.02								Gas Kit N	Model:		GAS KI	T 4									
Personnel:	Alex Cu	tts								Gas Kit S	Serial N	D:	11030								24/09/2015		
LOCATION	Flow Peak	Flow Steady	CH₄ Peak	CH₄ Steady	CO <sub>2</sub> Peak	CO <sub>2</sub> Steady	$O_2$ Min.	O <sub>2</sub> Steady	Atmospheric Pressure	PID	Well I.D.	Depth to Product (DTP)	Product Thickness	Depth to Water (DTW)	Depth to Base (DTB)	Height of Water Column				NO <sup>-</sup>	TES		
DS104	(L/hr)	(L/hr)	(%v/v)	(%v/v)	(%v/v)	(%v/v)	(%v/v)	(%v/v)	(mb)	(ppm)	(mm)	(m)	(m)	(m) 0.400	(m) 2.910	(m)	Groundwater above standn	ina II	Inak	ole to	undertake gas monitoring due to		
D3104														0.400	2.910	2.510	groundwater height.	ipe. u	mak	ne to	undertake gas monitoring due to		
DS105														0.130	3.000	2.870	Groundwater above standp groundwater height.	ipe. U	Inab	ole to	undertake gas monitoring due to		
DS107	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	20.4	20.4	1025	<0.1				0.160	3.000	2.840							
DS107a	<0.1	<0.1	<0.1	<0.1	0.1	0.1	18.6	18.6	1025	1.2				0.530	3.080	2.550							
DS101	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	20.3	20.3	1025	1.6				0.700	3.070	2.370							
DS109	<0.1	<0.1	<0.1	<0.1	0.3	0.3	15.0	15.0	1025	0.3				0.920	3.020	2.100							
DS113														0.120	3.040	2.920	Groundwater above standp groundwater height.	ipe. U	Jnab	ole to	undertake gas monitoring due to		
DS114														0.160	3.030	2.870	Groundwater above standp	ipe. U	Jnak	ole to	undertake gas monitoring due to		
DS116														0.120	3.020	2.900	-	ipe. U	Jnak	ole to	undertake gas monitoring due to		
DS117														0.100	2.930	2.830	-	ipe. U	Jnab	ole to	undertake gas monitoring due to		
DS118	<0.1	<0.1	<0.1	<0.1	0.7	0.7	19.5	19.5	1025	<0.1				0.290	3.020	2.730	groundwater height.						
R3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	15.0	15.0	1025	3.7				18.630	29.970	11.340	1						
R1	<0.1	<0.1	<0.1	<0.1	1.5	1.5	11.0	11.0	1025	<0.1				15.740	30.030	14.290	1						
BH106	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	20.0	20.0	1025	<0.1				DRY	17.980	N/A							
BH107	<0.1	<0.1	0.7	0.7	1.2	1.2	3.4	3.4	1025	2.4				DRY	18.240	N/A							
BH104	<0.1	<0.1	<0.1	<0.1	0.1	0.1	17.5	17.5	1025	<0.1				18.910	19.100	N/A	Very silty water						
R4	<0.1	<0.1	0.8	0.8	<0.1	<0.1	11.4	11.4	1025	1.5				18.610	29.960	11.350							
R2	<0.1	<0.1	<0.1	<0.1	0.5	0.5	18.2	18.2	1025	1.1				18.480	30.310	11.830							
BH102	<0.1	<0.1	10.4	10.4	<0.1	<0.1	8.7	8.7	1025	0.2				14.680	15.320	0.640							
BH101	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	20.6	20.7	1025	0.1				14.650	16.240	1.590							
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Project Name:	Corby									Weather	Conditi	ons:	15*C S	ınny, slig	ht breeze	e.					Date:
Project Number:	15-0645	5.02								Gas Kit N	/lodel:		GAS KI	T 4							
Personnel:	Alex Cu	tts								Gas Kit S	Serial N	o:	11030								29/09/2015
LOCATION	Flow Peak	Flow Steady	CH₄ Peak	CH₄ Steady	CO <sub>2</sub> Peak	CO <sub>2</sub> Steady	O <sub>2</sub> Min.	O <sub>2</sub> Steady	Atmospheric Pressure	PID	Well I.D.	Depth to Product (DTP)	Product Thickness	Depth to Water (DTW)	Depth to Base (DTB)	Height of Water Column		-		NO <sup>-</sup>	TES
DS104	(L/hr) <0.1	(L/hr) <0.1	(%v/v) <0.1	(%v/v) <0.1	(%v/v) <0.1	(%v/v) <0.1	(%v/v) 20.7	(%v/v) 20.7	(mb) 1024	(ppm) <0.1	(mm)	(m)	(m)	(m) 0.440	(m) 2.910	(m) 2.470					
DS105	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	19.9	19.9	1024	<0.1				0.200	3.000	2.800					
DS107	<0.1	<0.1	0.2		0.3	0.3	20.1	20.1	1024	2.1				0.440	3.000						
	<0.1	<0.1	<0.1	<0.1	0.6		19.7	19.7	1024					0.330	3.080						
DS107a						0.6															
DS101	<0.1	<0.1	<0.1	<0.1	0.2	0.2	20.1	20.1	1024	1.3				0.460	3.070	2.610					
DS109	<0.1	<0.1	<0.1	<0.1	0.5	0.5	14.0	14.0	1024	0.4				0.910	3.020	2.110					
DS113														0.190	3.040	2.850	Groundwater above standp	ipe. U	Jnak	le to	undertake gas monitoring due to
DS114														0.130	3.030	2.900		ipe. U	Jnak	le to	undertake gas monitoring due to
DS116														0.190	3.020	2.830	Groundwater above standp	ipe. U	Inak	le to	undertake gas monitoring due to
DS117														0.200	2.930	2.730	-	ipe. U	Jnak	le to	undertake gas monitoring due to
DS118	<0.1	<0.1	<0.1	<0.1	0.4	0.4	19.4	19.4	1024	1.0				0.290	3.020	2.730	groundwater height.				
R3	<0.1	<0.1	<0.1	<0.1	0.1	0.1	14.0	14.0	1024	3.6				18.660	29.970	11.310					
R1	<0.1	<0.1	<0.1	<0.1	1.4	1.4	11.4	11.4	1024	<0.1				15.960	30.030	14.070					
BH106	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	20.0	20.0	1024	<0.1				DRY	17.980	N/A					
BH107	<0.1	<0.1	0.7	0.7	1.0	1.0	11.5	11.5	1024	2.4				DAMP	18.240	N/A					
BH104	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	20.8	20.8	1024	0.3				DAMP	19.100	N/A					
R4	<0.1	<0.1	0.8	0.8	<0.1	<0.1	9.5	9.5	1024	1.6				18.710	29.960	11.250					
R2	<0.1	<0.1	<0.1	<0.1	3.4	3.4	10.5	10.5	1024	1.2				19.350	30.310	10.960					
BH102	<0.1		6.9		<0.1	<0.1	6.7	6.7	1024						15.320						
	<0.1								1024												
BH101	ζ0.1	ζ0.1	<0.1	<0.1	<0.1	<0.1	20.6	20.7	1024					15.630	10.240	0.010					
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**PROJECT: CORBY** 

## STATIC CONE PENETRATION TESTING FACTUAL REPORT

**CLIENT: DELTA SIMONS** 

CONTRACT No.: DS25869









Issue	Date	Description	Prepared	Checked	Approved
02	13/10/15	Final	RW	CD	DW



Date: 13 October 2015

Our Ref: 1150281

**Delta Simons** 

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VAT No.: 922 3561 41

Attention: Mr Simon Steele

Dear Mr Steele

## STATIC CONE PENETRATION TESTING AT CORBY

We have pleasure in providing a digital copy of our report and data in AGS format for the above project.

We hope that you are satisfied with the performance of our staff, equipment and reporting on this project. If you should have any queries about any aspect of the works carried out, please do not hesitate to contact us. We look forward to being of service to you in the future.

Yours faithfully,

Rhold

In Situ Site Investigation Limited

Darren Ward

Director

Report No.: 1150281R001RW Contents Page 2 of 113



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#### 1.0 INTRODUCTION

At the request of Delta Simons (The Client), In Situ Site Investigation Limited (In Situ S.I.) carried out a soils investigation at Corby.

The investigation consisted of performing Static Cone Penetration Tests (CPTs). All tests were performed at locations set out by the Client.

The fieldwork details are shown below in figure 1.1 and figure 1.2.

Fieldwork Summary									
CPT Rig Used	15 Tonne wheel mounted CPT rig CPT 008								
Operators	Darren Ward and Tom Brodie								
Date Started	02/09/2015								
Date Finished	03/09/2015								
In Situ S.I. Project Manager	Darren Ward								
Main Contractor's Site Manager	Stacey Ragsdale								

Figure 1.1: Table showing the fieldwork summary details.

#### **Completed Fieldwork Summary**

10 Static Cone Penetration Tests (CPTs) to a maximum depth of 25.15m or refusal. Each test measured Cone Resistance ( $q_c$ ), Sleeve fiction ( $f_s$ ), Measured Pore Pressure in the shoulder position ( $u_2$ ), inclination in X and Y planes.

Provision of factual report with estimated soil type, geotechnical parameters and AGS data.

Figure 1.2: Table showing the completed fieldwork summary details.



#### 2.0 FIELDWORK

#### 2.1 CPT RIG

All works were performed with a 15 tonne CPT wheel mounted Rig. A full data sheet for this rig is presented in Appendix A.

#### 2.2 CPTU CONE

A single electric CPTU cone was used S15CFIP.1093 of a type conforming to the requirements of Application Class 2 of ISO/ FDIS 22476-1 (2012). The cones measured parameters are shown in figure 1.2. The cone had a cross-sectional area of  $10 \text{cm}^2$ . The piezo filter was mounted in the shoulder ( $u_2$ ) position (see figure 3.2). A full datasheet of the cone used is shown in Appendix A.

#### 2.3 TEST PROCEDURE

The tests are carried out in accordance with the International Standard for electrical cone and piezocone penetration test (ISO/FDIS 22476-1 2012).

The final depths of the tests were determined by either completion to the specified test depth or when the maximum safe capacity of the equipment was reached. A schedule of the tests performed is shown in Appendix A which has been compiled from the operator's daily progress reports.

The data is transmitted from the digital CPTU through an umbilical cable that runs through the push rods to the data acquisition system.

The rate of penetration is kept constant at 2cm/s ±10% except when penetrating very dense or hard strata. A copy of the depth encoder calibration certificate is shown in Appendix A. Results are displayed instantaneously on the computer logging screen. The results are recorded on the computer hard disc.

Before each test is carried out zero values are taken of the cone to check to see if it is within calibration. At the end of each test, zero values are taken again to see if there has been any drift during the test. These values are inspected during the post processing stage. This is a quality check on the data and the testing procedure. Individual test zero values are shown on their corresponding test results on form CPT0001 in Appendix B.

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#### 2.4 POSITIONING

All positions were set out by the Client on site.



#### 3.0 CONE PENETRATION TEST RESULTS

All tests carried with the CPTU cone are shown in Appendix B and displays all results as described in section 3.1 and 3.2. Two graphs are shown for each test. The first graph (form CPT0001 Estimated Soil Behaviour Type Plot) shows the measured readings from the cone and the estimated soil description, these are plotted at a 0-20MPa scale for the cone resistance. The second graph (form CPT0002 Measured Pore Pressure Plot) shows derived and corrected values along with the pore pressure results; these are plotted at a 0-80MPa scale for the cone resistance.

#### 3.1 ESTIMATED SOIL BEHAVIOUR TYPE PLOT (FORM CPT0001)

The estimated soil behaviour type plot presented in Appendix B details the following:

- Measured cone end resistance (q<sub>c</sub>) and sleeve friction (f<sub>s</sub>);
- Friction ratio (*R<sub>f</sub>*);
- Inclination, X and Y axis;
- Estimated behaviour soil type log (Robertson *et.al* 1986, friction ratio chart)
- Legend indicating soil log (BS5930:1999 legend)

#### 3.1.1 Estimated Soil Behaviour Type

The estimation of soil behaviour type using measurements of cone and friction is based upon the variation of the friction ratio in respect to the cone resistance. The friction ratio varies depending upon whether the soil is cohesive or granular. The cone resistance varies depending on the strength and densities of the soil.

The interpretation is based on Robertson *et. al.* (1986) (Friction ratio chart) which is shown below (figure 3.1).

The density and stiffness values descriptions are based on derived N60 (Robertson *et. al.* (1986)) and  $S_u$  (Lunne and Kleven (1981)) values from the cone resistance in accordance to BS5930:1999. A list of these values are presented in Appendix A.



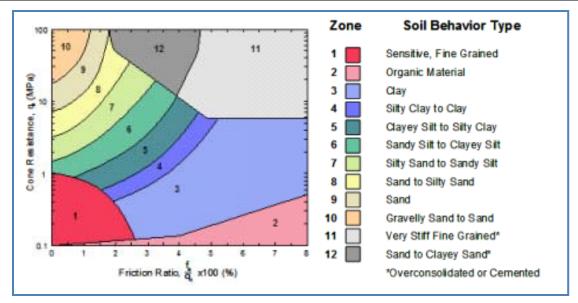


Figure 3.1: Robertson et al., 1986 soil behaviour type chart.

#### 3.1.2 Friction Ratio $(R_f)$

The friction ratio ( $R_f$ ) is the ratio between the sleeve friction and the cone resistance. This is a very useful parameter for carrying out soil interpretation

Fricton Ratio 
$$(R_f) = \left(\frac{Sleeve\ Friction\ (f_s)}{Tip\ Resistance\ (q_c)}\right) \times 100$$
 (Lunne et al., 1997)

#### 3.1.3 Depth Correction

All tests in the report have been corrected for depth difference caused by inclination. This has been calculated using the method described in the International Reference Test Procedure (2001).

To calculate the corrected depth the following formula is used:

$$z = \int_{0}^{l} C_h \cdot dl$$

where:

z = penetration depth, in m;

*I* = penetration length, in m;

 $C_h$  = correction factor for the effect of the inclination of the CPTU relative to the vertical axis.

The equation for calculating the correction factor for the influence of the inclination for a biaxial inclinometer is:

$$C_h = (1 + tan^2 \propto + tan^2 \beta)^{-1/2}$$



#### 3.2 MEASURED PORE PRESSURE PLOT (CPT0002)

Behind each estimated soil type plots in Appendix B is a second plot showing the pore pressure results as well as corrected and derived parameters. These logs detail the following:

- Measured Pore pressure (u<sub>2</sub>),
- Corrected cone resistance (q<sub>t</sub>);
- Pore pressure ratio (*B*<sub>a</sub>)
- Sleeve friction (f<sub>s</sub>)

#### 3.2.1 Pore Pressure Results $(u_2)$

The CPTU measured the pore pressure during penetration. If the material is free draining and saturation is maintained it will normally measure hydrostatic pore pressure. In material that is not free draining it will record the total pore pressure (hydrostatic plus any excess pore pressures generated) created by the cone penetrating through this material

The filter element can be mounted in one of three positions. For the tests carried out in this report the filter was mounted in the  $u_2$ , or shoulder position (see figure 3.2)

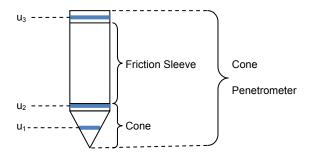


Figure 3.2: Diagram showing pore pressure filter locations (after Lunne et al., 1997)

#### 3.2.2 Corrected Cone Resistance $(q_t)$

For each penetration test, the measured Cone Resistance,  $q_c$ , can be corrected for the 'unequal area effect' due to the influence of the ambient pore water pressure acting on the cone.

The corrections have been applied using the following equation:

$$q_t = q_c + [u_2.(1 - \alpha)]$$
 (Lunne et al., 1997)

Where  $\alpha$  is the cone area ratio, which is **0.869** for the cone used on this project (This value is geometrically measured).



#### 3.2.3 Pore Pressure Ratio $(B_a)$

Pore pressure ratio is the ratio between the measured pore pressure generated during penetration and the corrected cone resistance minus the total overburden stress.

Pore pressure ratio as defined by Senneset and Janbu (1985) is defined as:

$$B_q = \frac{u_2 - u_0}{q_t - \sigma_{vo}}$$

where:

 $u_2$  = pore pressure measured between the cone and the friction sleeve

 $u_0$  = equilibrium pore pressure

 $\sigma_{vo}$  = total overburden stress

 $q_t$  = cone resistance corrected for unequal end area effects

#### 3.2.4 Soil Unit Weight

For calculations involving the total overburden stress, an estimate of the soil unit weight has to be made. For all calculations in this report, an approximate unit weight is assigned to each soil classification zone from the Robertson *et al.*, 1986 chart.

Figure 3.3 below lists the approximate unit weight for each zone from Lunne et al., 1997.

Zone	Approximate unit weight (kN/m³)
1	17.5
2	12.5
3	17.5
4	18
5	18
6	18
7	18.5
8	19
9	19.5
10	20
11	20.5
12	19

**Figure 3.3:** Estimate of unit weights based on the Robertson *et al.*,(1986) friction ratio chart (Lunne *et al.*, 1997).

#### **Delta Simons**

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#### 3.2.5 In Situ Pore Pressure

On the pore pressure plot is a second line (in red) showing the inferred in situ or hydrostatic pore pressure,  $u_0$ . This is calculated from a known or estimated water table level.

In the report, the water table has been inferred at 2m below ground level.



#### 4.0 GEOTECHNICAL PARAMETERS

A number of empirical correlations can be carried out to derive geotechnical parameters from CPT data. This report includes a number of these parameters which are described in this section. For the CPT data only soil behaviour type, SPT values, shear strength and relative density are derived and are shown in Appendix C. For the CPTU data all the derived parameters described in the section are derived and displayed in Appendix C.

Please note that a number of the correlations are derived for a certain type of soil, and may not be appropriate for all the soil types encountered on this project.

#### 4.1 SOIL BEHAVIOUR TYPE INDEX

The soil behaviour type index was derived by Jefferies and Davies (1991). It was created to allow a continuous variation of  $(q_o/p_a)/N_{60}$  with soil type, which was an improvement on the discontinuous nature of an earlier conversion by Robertson *et al.* (1986).

This approach has been modified for use with the Robertson (1990) normalised CPT soil classification chart. The boundaries between soil behaviour type zones (2 to 7) can be approximated as concentric circles, and the radius of each circle can be used as a soil behaviour type index (Lunne *et al.*, 1997).

The soil behaviour type index,  $I_c$ , can then be defined as:

$$I_c = ((3.47 - logQ_t)^2 + (logF_r + 1.22)^2)^{0.5}$$

The boundaries of soil behaviour type are then given in terms of the index,  $I_c$ . See figure 4.1 for the table of soil behaviour types.



Soil Behaviour Type Index, $I_c$	Zone (from Robertson 1990 normalised chart)	Soil Behaviour Type
<i>I<sub>c</sub></i> < 1.31	7	Gravelly sand to dense sand
1.31 < <i>l<sub>c</sub></i> < 2.05	6	Sands – clean sand to silty sand
2.05 < <i>I<sub>c</sub></i> < 2.60	5	Sand mixtures – silty sand to sandy silts
2.60 < <i>I<sub>c</sub></i> < 2.95	4	Silt mixtures – clayey silt to silty clay
2.95 < I <sub>c</sub> < 3.60	3	Clays: silty clay to clay
<i>I<sub>c</sub></i> > 3.60	2	Organic soils - peats

Figure 4.1: Boundaries of soil behaviour type index, Ic.

## 4.2 STANDARD PENETRATION TEST (SPT) N VALUE

The SPT N value can be derived using differing ratios of the relationship between  $q_c$  and  $N_{60}$ . These ratios were suggested by Robertson *et al.* (1986) and are shown in figure 4.2.

Zone	Soil Behaviour Type	$(q_c/p_a)/N_{60}$
1	Sensitive fine grained	2
2	Organic material	1
3	CLAY	1
4	Silty CLAY to CLAY	1.5
5	Clayey SILT to silty CLAY	2
6	Sandy SILT to clayey SILT	2.5
7	Silty SAND to sandy SILT	3
8	SAND to silty SAND	4
9	SAND	5
10	Gravely SAND to SAND	6
11	Very stiff fine grained	1
12	SAND to clayey SAND	2

Figure 4.2: SPT N value ratios from Robertson et al., 1986.

For the best results for the calculation of  $N_{60}$  it is recommended to use the soil behaviour type index,  $I_c$ . This is the method used in this report.



The relationship between  $N_{60}$  and  $I_c$  is defined as:

$$\frac{\binom{q_c}{p_a}}{N_{60}} = 8.5(1 - \frac{I_c}{4.6})$$
 (Lunne *et al.*, 1997)

It is suggested (Jefferies and Davies, 1991) that this method provides a better estimate of the SPT N values than the actual SPT test due to poor repeatability of the SPT.

#### 4.3 SHEAR STRENGTH

Estimation of  $s_u$  from CPTUs using corrected cone resistance is made from the following equation:

$$s_u = \frac{(q_t - \sigma_{vo})}{N_{kt}}$$
 (Lunne *et al.*, 1981)

where:

 $N_{kt}$  = empirical cone factor  $\sigma_{vo}$  = total overburden stress.

Research has shown that the cone factor  $N_{kt}$  varies between 11 and 30 with an average value of 15. We present an upper bound  $s_u$  value with an  $N_{kt}$  value of 15 and a lower bound  $s_u$  value with an  $N_{kt}$  value of 20. This report only presents this data on soils with a soil behaviour type index ( $I_c$ ) of greater than 2.60.

#### 4.4 RELATIVE DENSITY (D<sub>r</sub>)

Relative density has been derived using a method by Jamiolkowski *et al.*, 1985 (see figure 4.3). This correlation was derived from five predominantly silica sands under controlled laboratory conditions. The sands were normally consolidated, un-cemented, un-aged and predominantly quartz. It is noted that field cases are likely to show more variability than that demonstrated in figure 4.3.

The correlation in this report is calculated on soil with a soil behaviour type index ( $I_r$ ) of less than 2.60. The formula for calculating relative density ( $D_r$ ) is:

$$D_r = -98 + 66 \log_{10} \frac{q_c}{[\sigma'_{vo}]^{0.5}}$$



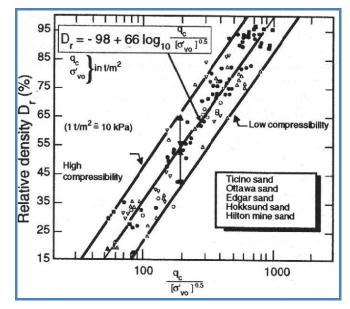


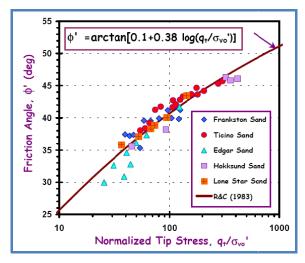
Figure 4.3: Correlation between q<sub>c</sub> and relative density (after Jamiolkowski et al., 1985)

#### 4.5 FRICTION ANGLE

Friction angle is derived using the Robertson and Campanella (1983) method from their work looking at calibration test data (see figure 4.6). The correlation is based on un-aged uncemented quartz sand. The formula for peak  $\Phi$ ' from CPTU is:

$$\Phi' = arctan \left[ 0.1 + 0.38 \log(\frac{q_t}{\sigma_{no}}) \right]$$

The correlation in this report is calculated on soil with a soil behaviour type index ( $I_c$ ) of less than 2.60.



**Figure 4.6:** Peak friction angle of clean quartz sands from CPTU (after Robertson & Campanella, 1983).



#### 4.6 FINES CONTENT (FC)

It is possible to estimate fines content from the friction ratio of sandy soils. Suzuki *et al.*, (1995) demonstrated how friction ratio ( $R_f$ ) varies with fines content (FC) (see figure 4.7)

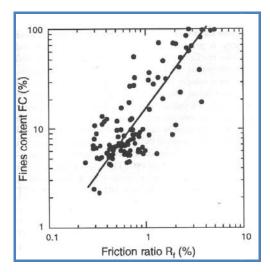


Figure 4.7: Variation of fines content with friction ratio (Suzuki et al., 1995)

Robertson and Fear (1995) used this relationship and integrated it with the soil behaviour type index ( $I_c$ ), this was later updated in 1998. This relationship is shown below:

if 
$$I_c < 1.26$$
 apparent fines content FC (%) =  $\mathbf{0}$ 

if 
$$1.26 \le I_c \le 3.5$$
 apparent fines content FC (%) =  $1.75 I_c^3 - 3.7$ 

if 
$$I_c > 3.5$$
 apparent fines content FC (%) = 100



#### 5.0 REFERENCES

- British Standard BS5930:1999, "Code of practice for site investigations". BSI, 1999.

  International Standard. Geotechnical Investigation and testing- field testing part 1: electrical cone and piezocone penetration test. ISO/ FDIS 22476-1.
- Jefferies, M.G. and Davies, M.P. (1991) "Soil classification by the cone penetration test": Discussion. Canadian Geotechnical Journal, 28(1), 173-6.
- Jones, G.A. and Rust, E. (1995) "Piezocone settlement prediction parameters for embankments on alluvium". Proceedings of the International Symposium on Cone Penetration Testing, CPT '95, Linköping, Sweden, 2, 501-8, Swedish Geotechnical Society
- Kulhawy, F.H. and Mayne, P.H. (1990) "Manual on estimating soil properties for foundation design". Electric Power Research Institute, EPRI, August, 1990.
- Lord, J.A., Clayton, C.R.I., and Mortimore, R.N. (2002) "Engineering in chalk". Ciria Guide C574.
- Lunne, T. And Kleven, A. (1981) "Role of CPT in North Sea foundation engineering". Session at the ASCE National Convention: Cone Penetration Testing and Materials, St. Louis, 76-107, American Society of Engineers (ASCE).
- Lunne, T. And Christophersen, H.P. (1983) "Interpretation of cone penetrometer data for offshore sands". Proceedings of the Offshore Technology conference, Richardson, Texas, Paper No. 4464.
- Lunne, T., Robertson, P. K. And Powell, J. J. M. (1997) "Cone Penetration testing in Geotechnical Practice". Blackie.
- Mitchell, J.K. and Gardner, W.S. (1975) "In situ measurement of volume change characteristics". Proceedings of the ASCE Specialty Conference on In Situ Measurements os Soil Properties, Raleigh, North Carolina, 2, 279-345, American Society of Engineers (ASCE).
- Robertson, P.K. (1990) "Soil classification using the cone penetration test". Canadian Geotechnical Journal, 27(1), 151.
- Robertson, P.K. and Campanella, R.G. (1983) "Interpretation of cone penetrometer test: Part 1: Sand". Canadian Geotechnical Journal, 20(4), 718-33.



- Robertson, P.K. and Fear, C.E. (1995) "Liquefaction of sands and its evaluation. IS TOKYO '95". First International Conference on Earthquake Geotechnical Engineering, Keynote Lecture, November, 1995.
- Robertson, P.K. and Wride (Fear), C.E. (1998) "Evaluating cyclic liquefaction potential using the cone penetration test". Can. Geotech. J. Vol. 35.
- Robertson, P.K., Campanella, R.G., Gillespie, D. And Greig, J (1986) "Use of piezometer cone data". Proceedings of the ASCE Specialty Conference In Situ '86: Use of In Situ Tests in Geotechnical Engineering, Blacksburg, 1263-80, American Society of Engineers (ACE).
- Senneset K. And Janbu, N. (1985) "Shear strength parameters obtained from static cone penetration tests. Strength Testing of Marine Sediments; Laboratory and In Situ Measurements". Symposium, San Diego, 1984, ASTM Special technical publication, STP 883, 41-54.
- Senneset, K., Sandven, R. And Janbu, N. (1989) "The evaluation of soil parameters from piezocone tests". Transportation Research Record, No. 1235, 24-37.
- Suzuki, Y., Tokimatsu, K., Taya, Y. And Kubota, Y. (1995) "Correlation between CPT data and dynamic properties of in situ frozen samples". Proceedings of the Third International Conference on Recent Advances in Geotechnical Earthquake Engineering and Soil Dynamics, St. Louis, 1, 249-52, University of Missouri Rolla.
- Topp, G.C., Davis, J.L. and Anna, A.P. (1980). "Electromagnetic determination of soil water content: Measurements in coaxial transmission lines". Water Resiur. Res., 16, 574-582.
- Waltham, A.C., 2002. "Foundations of Engineering Geology". Blackie Academic and Professional, 2002.
- Houlsby, G.T. and Teh, C. I. (1998). "Analysis of the piezocone in clay". Proceedings of the International Symposium on Penetration Testing, ISOPT-1, Orlando, 2, 777-83, Balkema Pub., Rotterdam.
- Power P.T. (1982) "The use of electronic cone penetrometer in the determination of the engineering properties of chalk". Proceedings of the 2<sup>nd</sup> European Symposium on Penetration testing, ESOPT-II, Amsterdam, 2, 769-74, Balkema Pub., Rotterdam



#### **APPENDIX A**

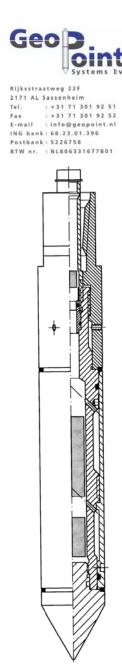
#### **GENERAL INFORMATION**

#### **LIST OF FIGURES**

Description	Pages Included
Cone Datasheet	1
Cone Calibration Certificate S15CFIP.1093	1
CPT Project Summary Sheet	1
15 Tonne Wheel Mounted Rig Datasheet	1
CPT Soil Description Table	1
Explanation of Symbols	1



#### **CONE DATASHEET**



# SPECIFICATIONS S15 SERIES ELECTRICAL CONES

The electronic subtraction cones have been developed to address the durability problems inherent in other cone designs. The unit consists of a single element temperature compensated strain gauge transducer for measuring both cone resistance and local sleeve friction. This design is therefore more robust than a compression type cone. The cone support electronics package is located directly behind the transducer. The precision strain gauge amplifiers and power supply eliminate the effects of cable resistance on the measurements. A standard subtraction cone is capable of measuring simultaneously the following channels: Tip, Local friction, Pore pressure, Temperature and Inclination.

#### **GENERAL SPECIFICATIONS**

Cone Tip Section Area
Friction Sleeve Surface
Total Length
Weight

1,500 mm2
22,500 mm2
325 mm
4200 g

 Power Supply
 ± 15 VDC, 100 mA.

 Output
 0 - 10 VDC\*

 Working Temperature
 0 - 60°C

 Storage Temperature
 - 40 to + 85°C

Connector Lemo 10 pins (others on request)

#### TIP RESISTANCE

Range 100/150\* kN
Accuracy 0.25 % FS
Maximum Load 150 % of range
Cone Area Ratio 0.75

#### PORE PRESSURE

Range 1/2/5/10\* MPa Accuracy 0.5 % FS Maximum Load 150 % of range

#### LOCAL SLEEVE FRICTION

Range 100/150\* kN Accuracy 0.50 % FS Maximum Load 150 % Sleeve Area Ratio 1.0 (EA)

#### INCLINATION

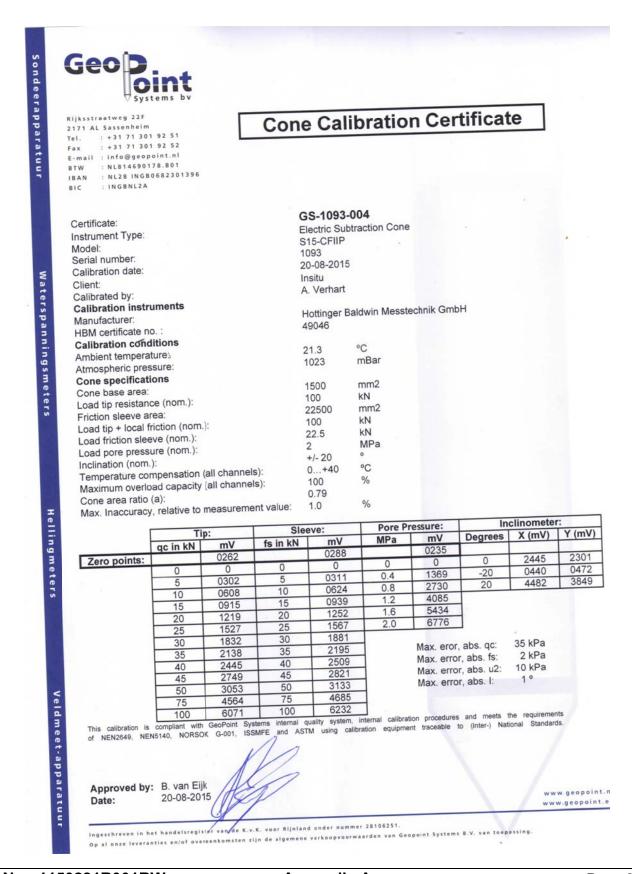
Range 25 ° (biaxial) Accuracy < 2 °

All our equipment complies with the ISSMGE, ASTM, DIN and NEN Standards.

\*Other output and voltage ranges available on request. Loadcells may be calibrated for lower ranges.



#### **CONE CALIBRATION CERTIFICATE S15CFIP.1093**





#### **CPT PROJECT SUMMARY SHEET**

HOLE	Final Depth of Test (m)	Date of Test	Cone Used	Test Remarks
CPT 101	17.08	02/09/2015	S15CFIP.1093	Test Refused on Total Pressure
CPT 102	16.41	02/09/2015	S15CFIP.1093	Test Refused on Total Pressure
			S15CFIP.1093	Test Reached maximum
CPT 103	22.16	02/09/2015		equipment depth. (22m of rods)
CPT 104	14.19	02/09/2015	S15CFIP.1093	Test Refused on Total Pressure
CPT 105	19.68	02/09/2015	\$15CFIP.1093	Test Refused on Total Pressure
CPT 106	16.72	02/09/2015	S15CFIP.1093	Test Refused on Total Pressure
CPT 107	1.00	03/09/2015	S15CFIP.1093	Test Refused on Total Pressure
CPT 107A	15.95	03/09/2015	S15CFIP.1093	Test Refused on Total Pressure
CPT 108	25.15	03/09/2015	S15CFIP.1093	Test Refused on Total Pressure
CPT 109	14.16	03/09/2015	S15CFIP.1093	Test Refused on Total Pressure



#### 15 TONNE WHEEL MOUNTED CPT RIG DATA SHEET

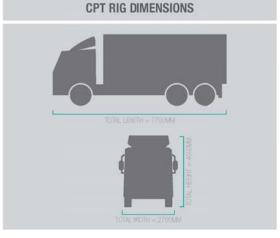


#### 15 TONNE CPT WHEEL MOUNTED RIG (CPT 008)

In Situ has a wide range of rigs which meet the clients varied CPT requirements often in difficult terrains. Projects may require CPT testing in areas which range from motorways to rugged mountainous terrain, to offshore work; the access to the projects may often be restricted for manoeuvring.

In Situ has rigs to meet all clients needs and situations .











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#### **SOIL DESCRIPTION TABLES**

#### **GRANULAR SOILS (Sands and Gravels)**

Description	Cone Resistance (qc) (MPa)	
Very Loose	0 – 2	
Loose	2 – 4	
Medium Dense	4 – 12	
Dense	12 – 20	
Very Dense	>20	

#### **COHESIVE SOILS (Clays)**

Description	Cone Resistance ( $q_c$ ) (MPa)	Equivalent S <sub>u</sub> value from <i>q<sub>c</sub></i> (kPa)
Very Soft	0 – 0.3	0 –20
Soft	0.3 – 0.5	20 – 40
Firm	0.5 – 1.0	40 – 75
Stiff	1.0 – 2.0	75 – 150
Very stiff	2.0-4.0	150-300
Hard	>4.0	>300

(from Waltham, 2002)



#### **EXPLANATION OF SYMBOLS**

 $a(\alpha)$  = area ratio of the cone  $(=A_n/A_c)$ 

 $A_c$  = projected area of the cone

 $A_n$  = cross-sectional area of shaft

 $B_q$  = pore pressure parameter (=( $u_2$ - $u_0$ )/( $q_t$ - $\sigma_{vo}$ ))

 $c_h$  = horizontal coefficient of consolidation

 $Dr = \frac{e_{max} - e}{\text{relative density}} \left( D_r = \frac{e_{max} - e}{e_{max} - e_{\min}} \times 100\% \right)$ 

e = void ratio

 $e_o$  = initial void ratio

 $e_{max}$  = maximum void ratio

 $e_{min}$  = minimum void ratio

 $f_s$  = unit sleeve friction

FC = fines content

 $I_c$  = soil behaviour type index

 $I_r$  = rigidity index =  $G/s_u$ 

 $m_v$  = coefficient of volume change

M = constrained deformation modulus

N = no. Of blows in the SPT

 $N_k$  or  $N_{kt}$  cone factor

 $N_{60}$  = SPT energy ratio

 $q_c$  = measured cone resistance

 $q_e$  = effective cone resistance =  $(q_t - u_2)$ 

 $q_n$  = net cone resistance =  $(q_t - \sigma_{vo})$ 

 $q_t$  = corrected cone resistance =  $q_c$ +(1-a) $u_2$ 

 $Q_t$  = normalised cone resistance =  $(q_t - \sigma_{vo})/\sigma'_{vo}$ 

 $R_f$  = friction ratio (=( $f_s/q_c$ )×100%)

 $s_u$  = undrained shear strength

 $t_{50}$  = time for 50% dissipation of measured pore pressure

 $u_0$  = in situ pore pressure

 $u_1$  = pore pressure measured on the cone

 $u_2$  = pore pressure measured behind the cone

 $\Delta u$  = measured pore water pressure

 $\varphi$  = total friction ratio

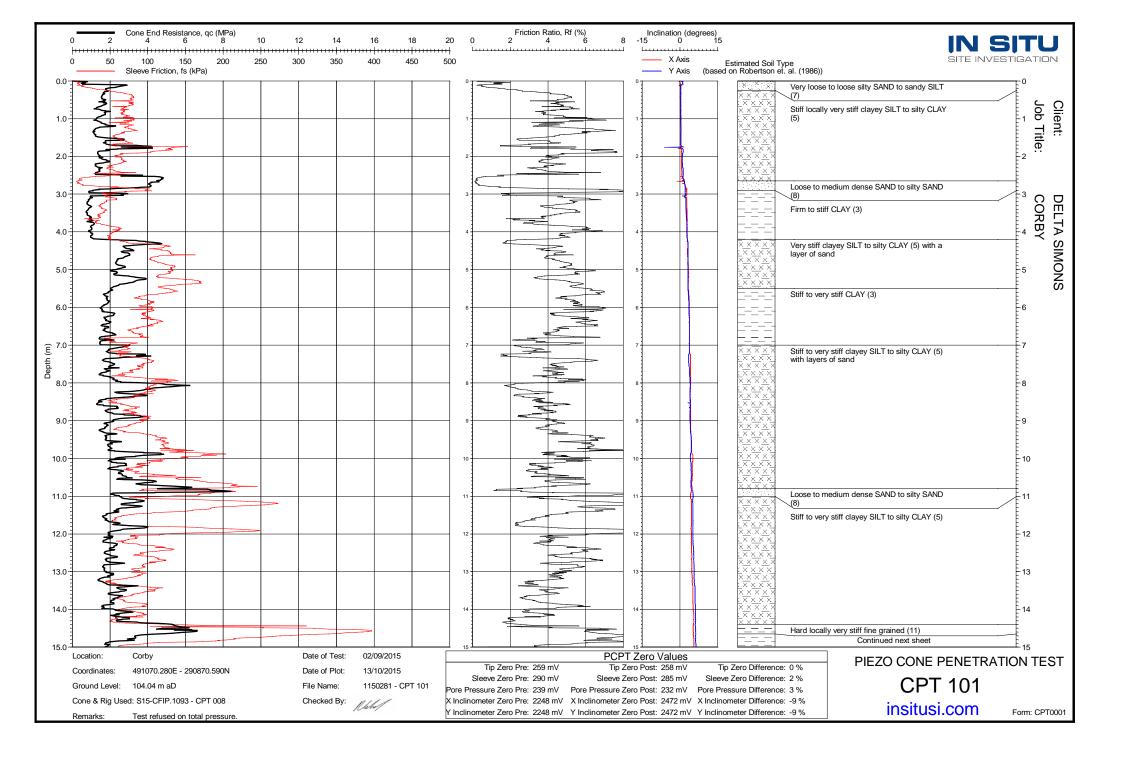


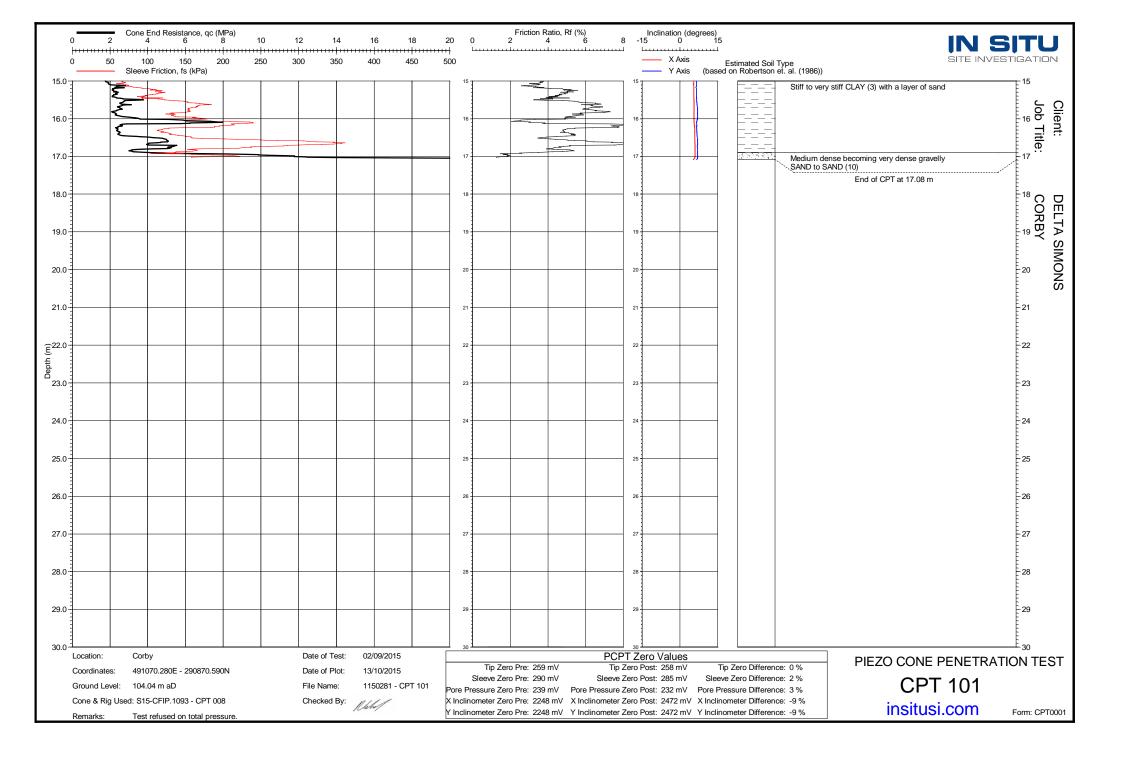
#### **APPENDIX B**

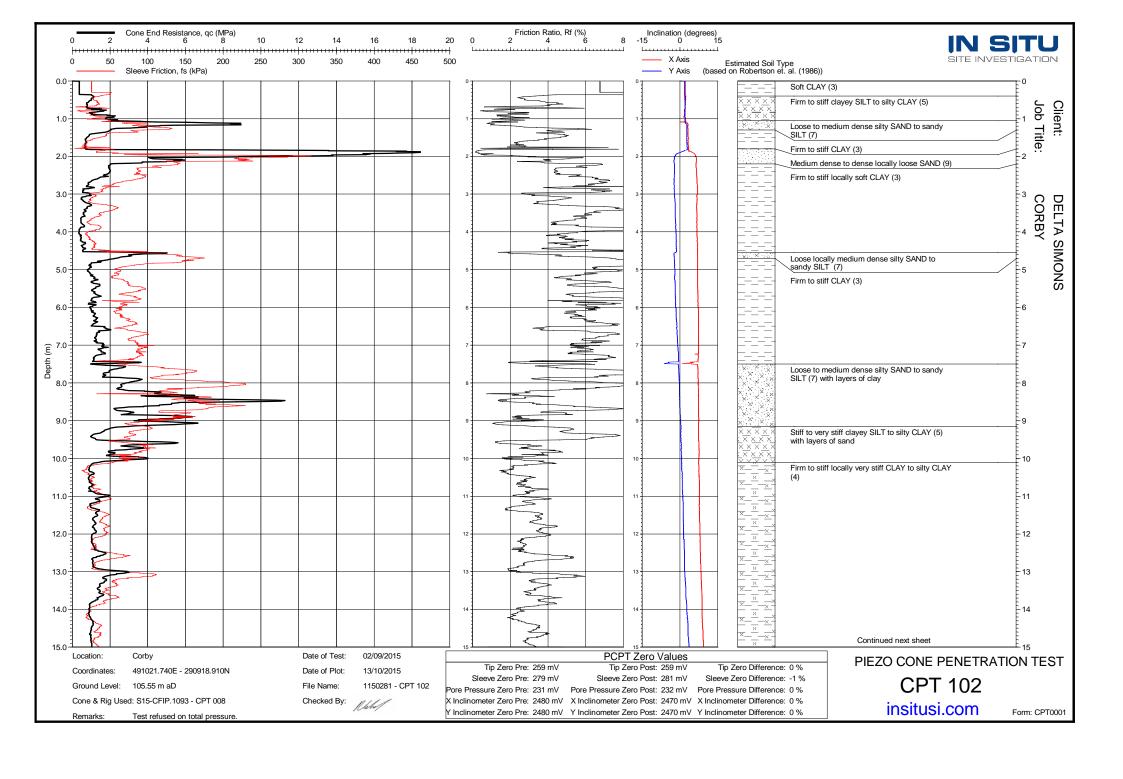
#### **CPT RESULTS**

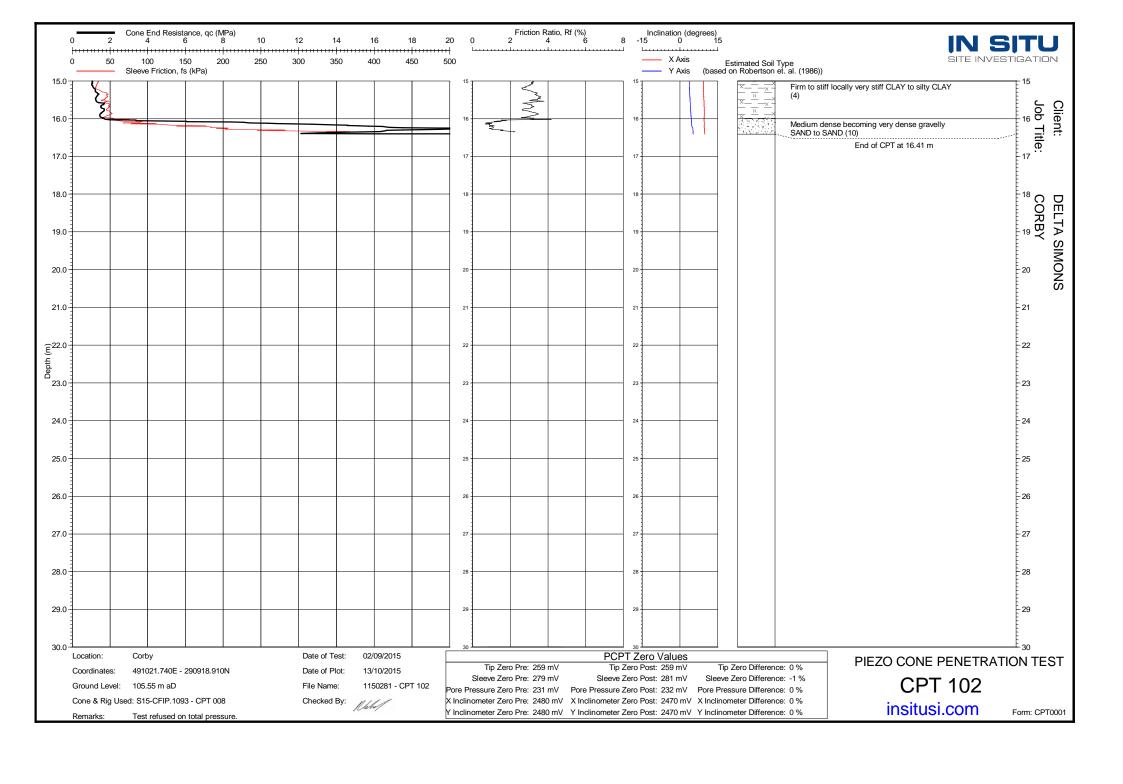
#### **LIST OF FIGURES**

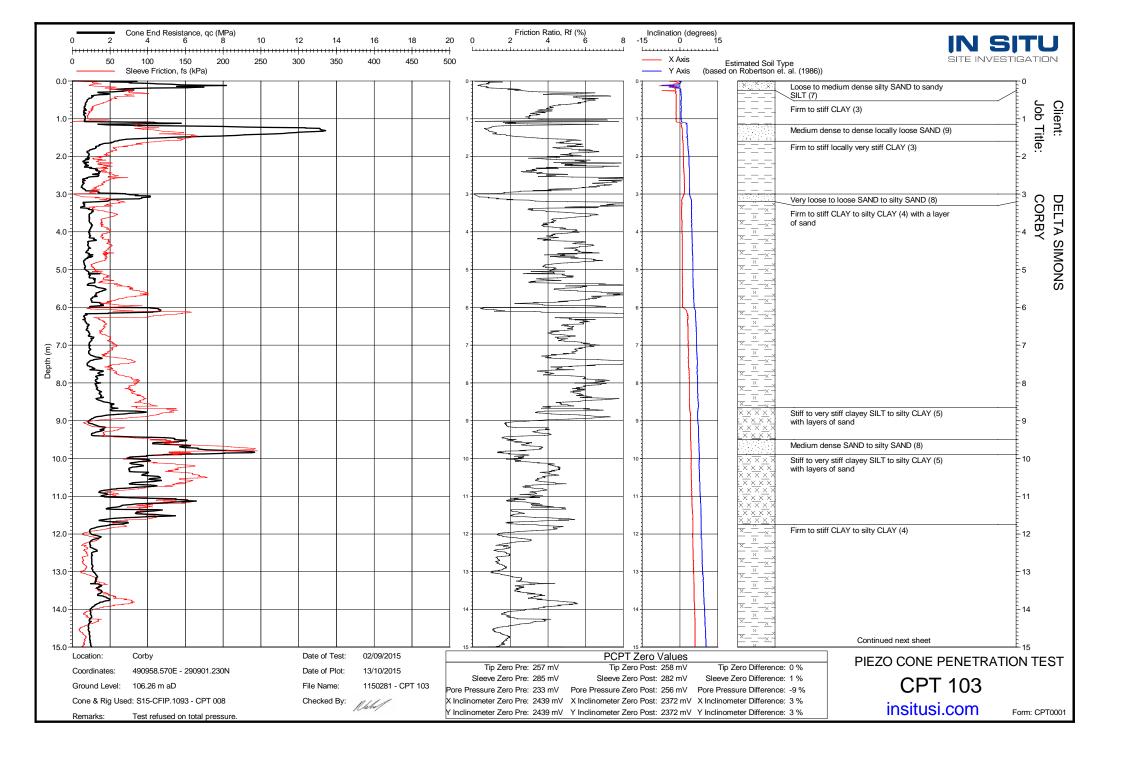
Description	Pages Included
CPT 101 – CPT 109 (Printed on Form CPT0001) Estimated Soil Behaviour Type Plot	17
CPT 101 – CPT 109 (Printed on Form CPT0002) Measured Pore Pressure Plot	17

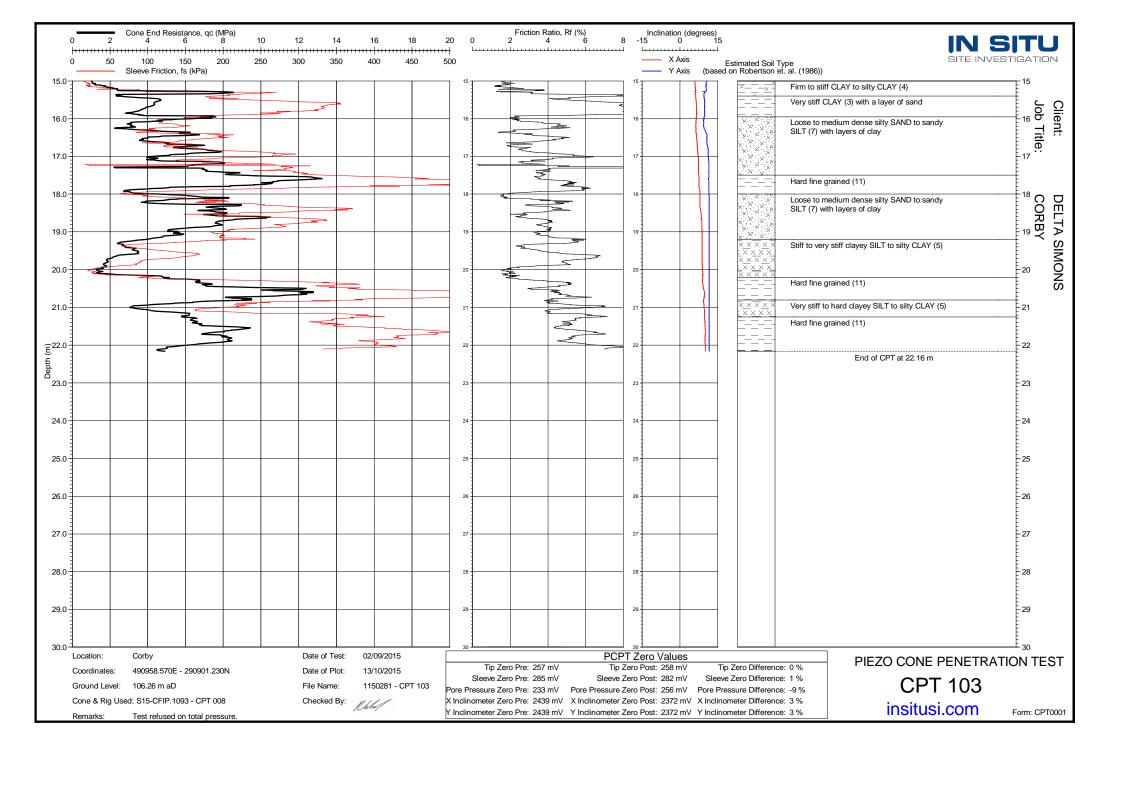


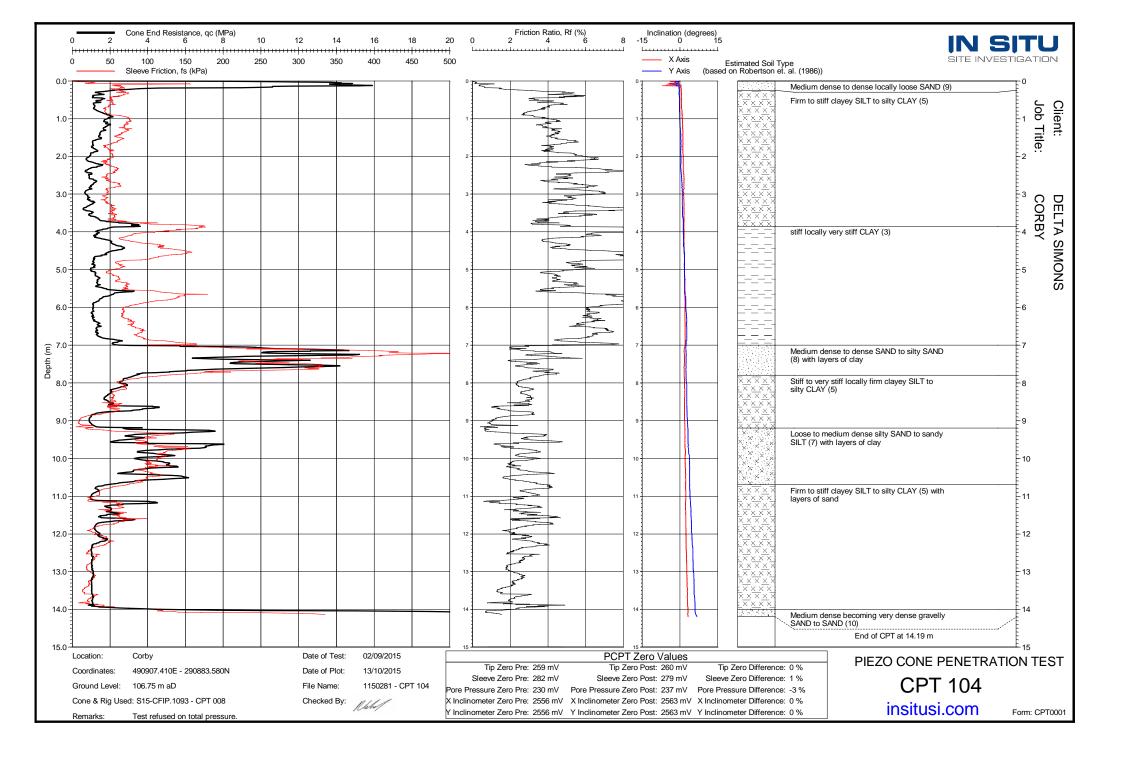


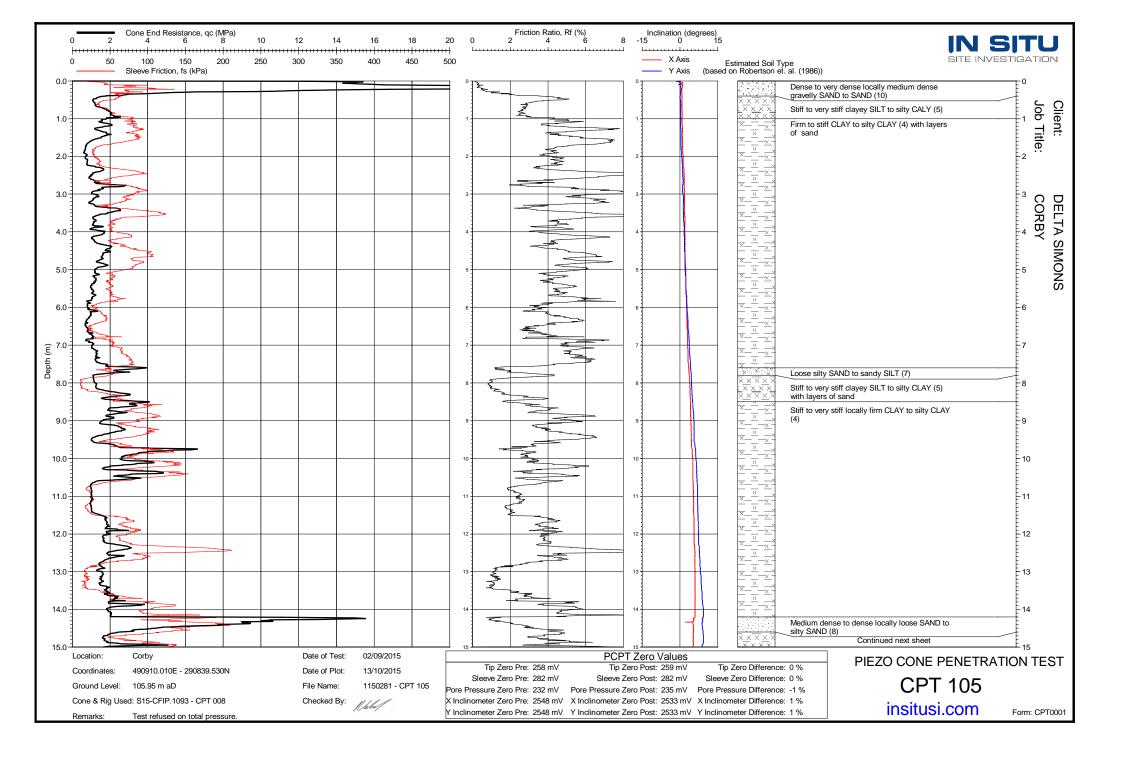


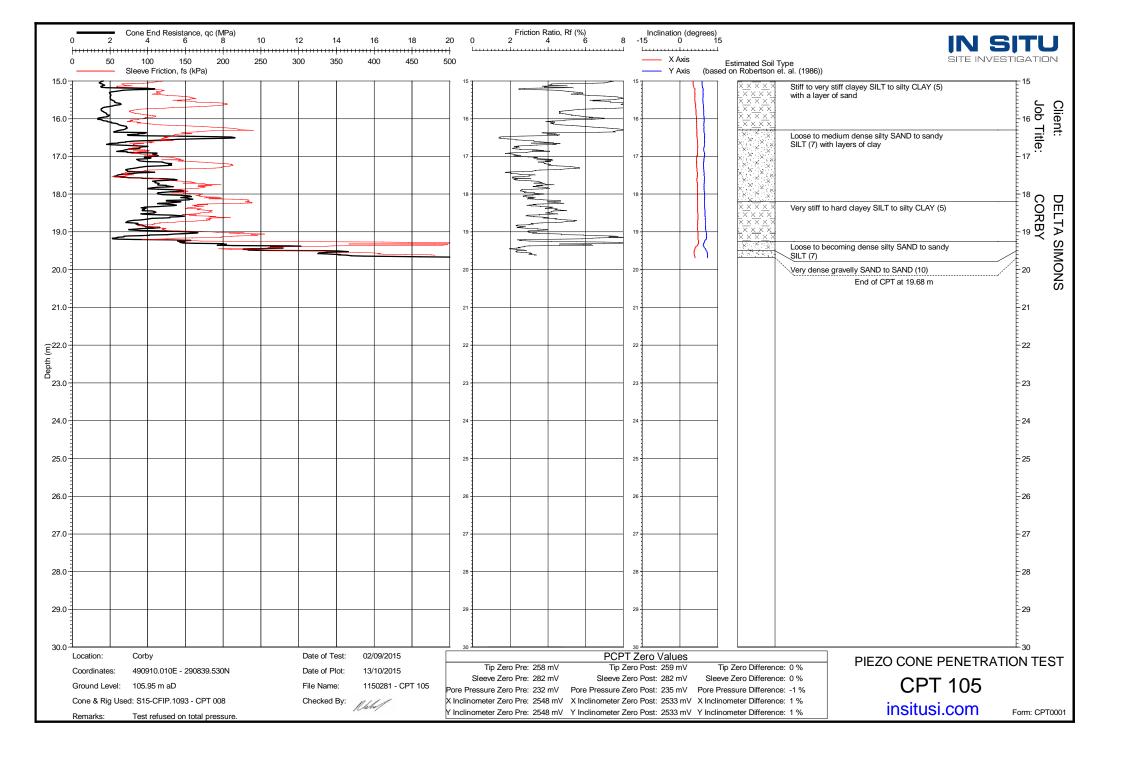


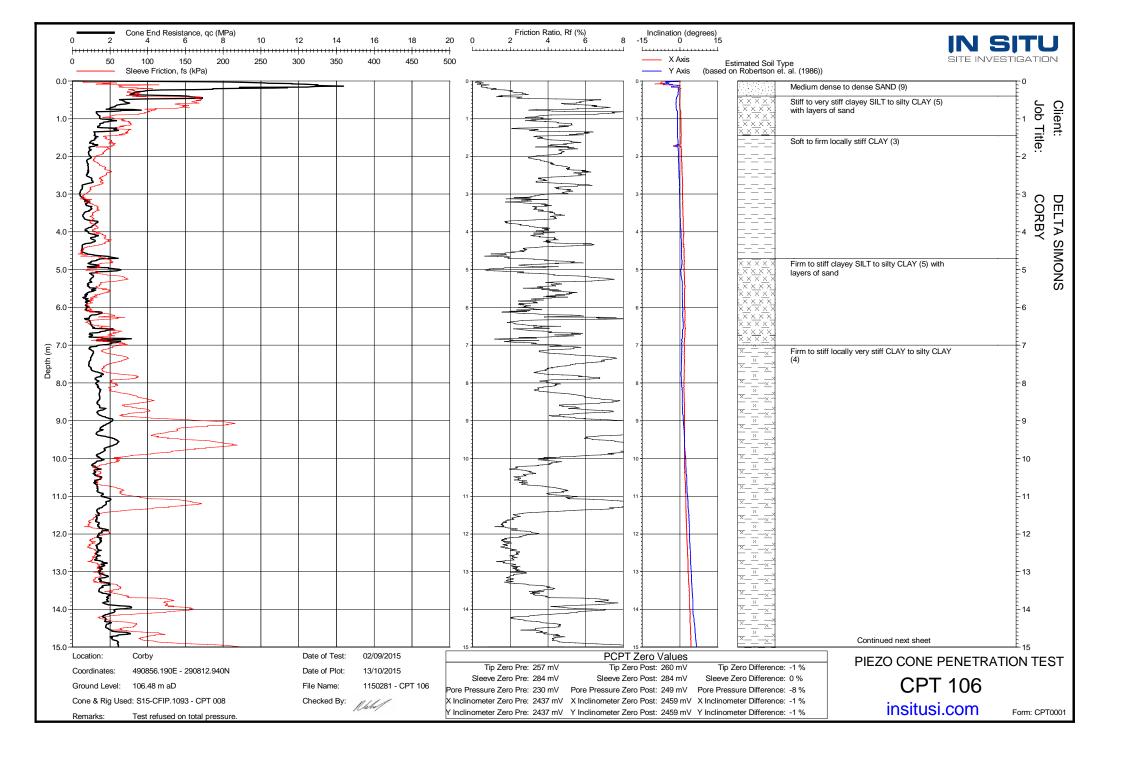


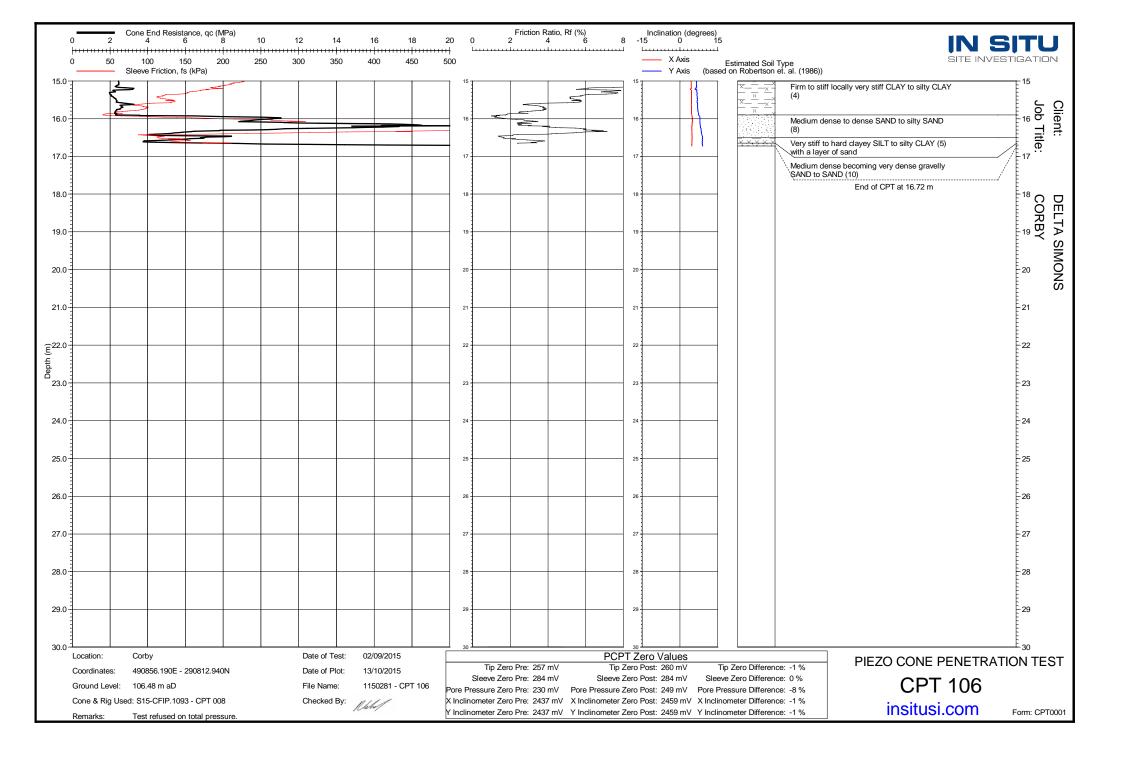


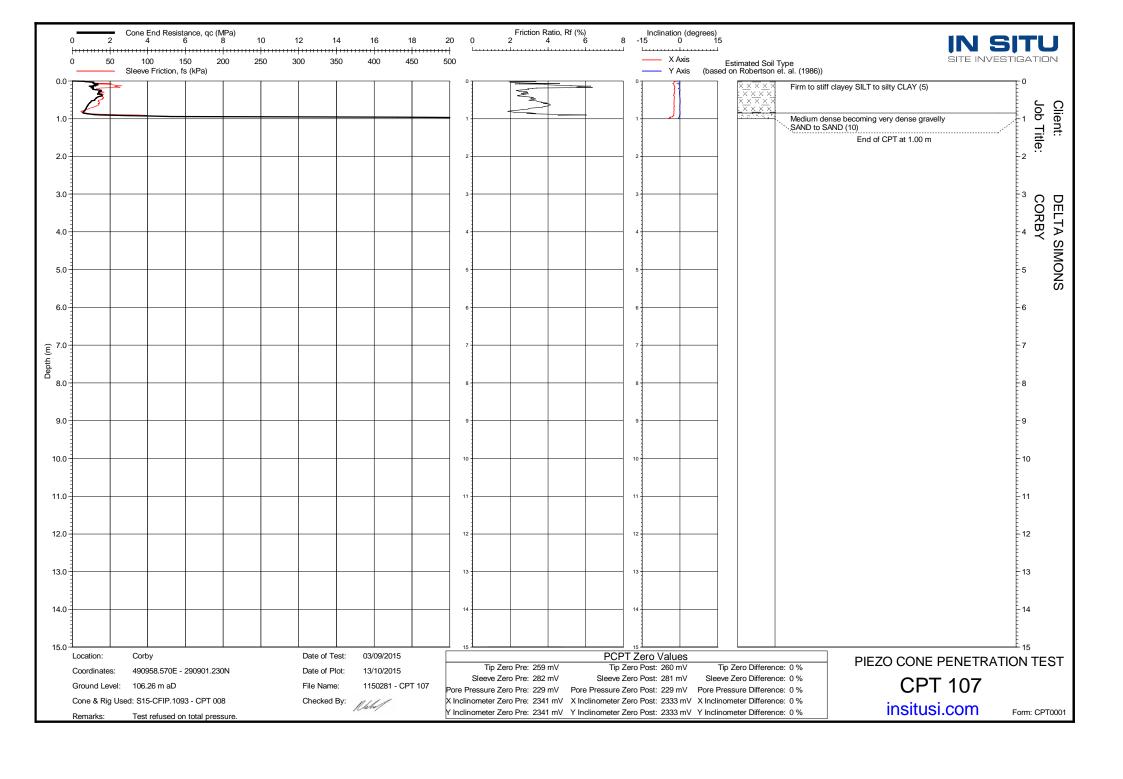


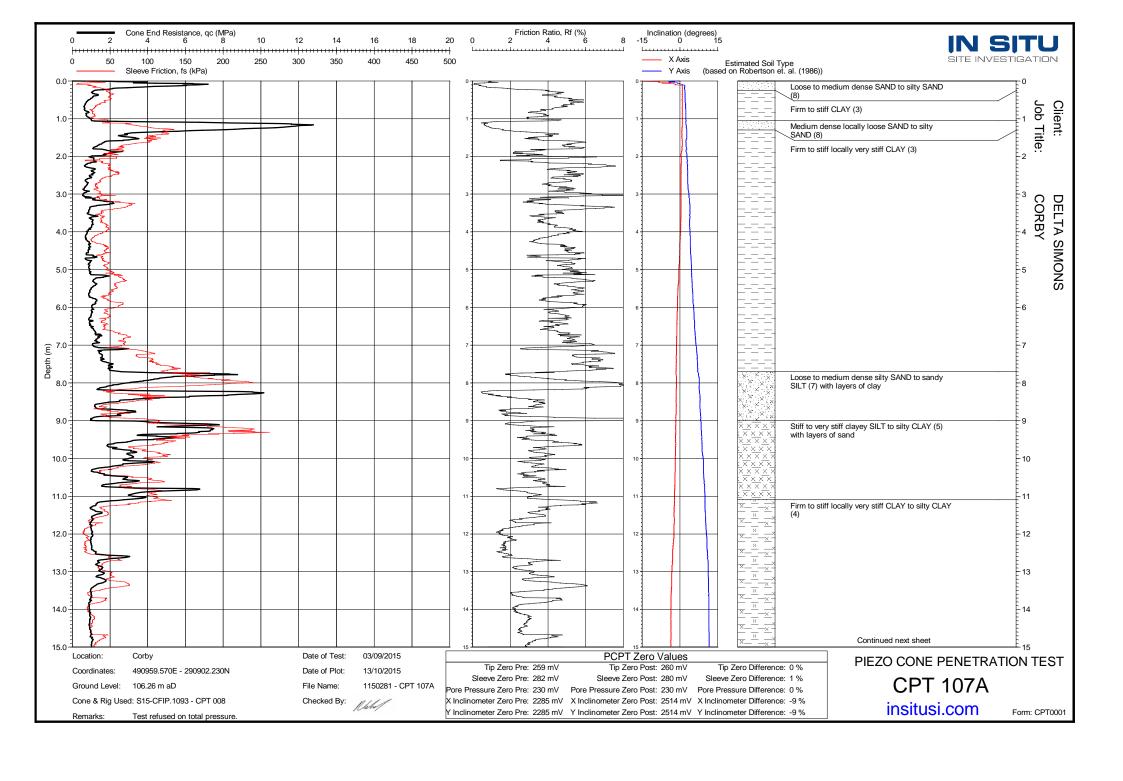


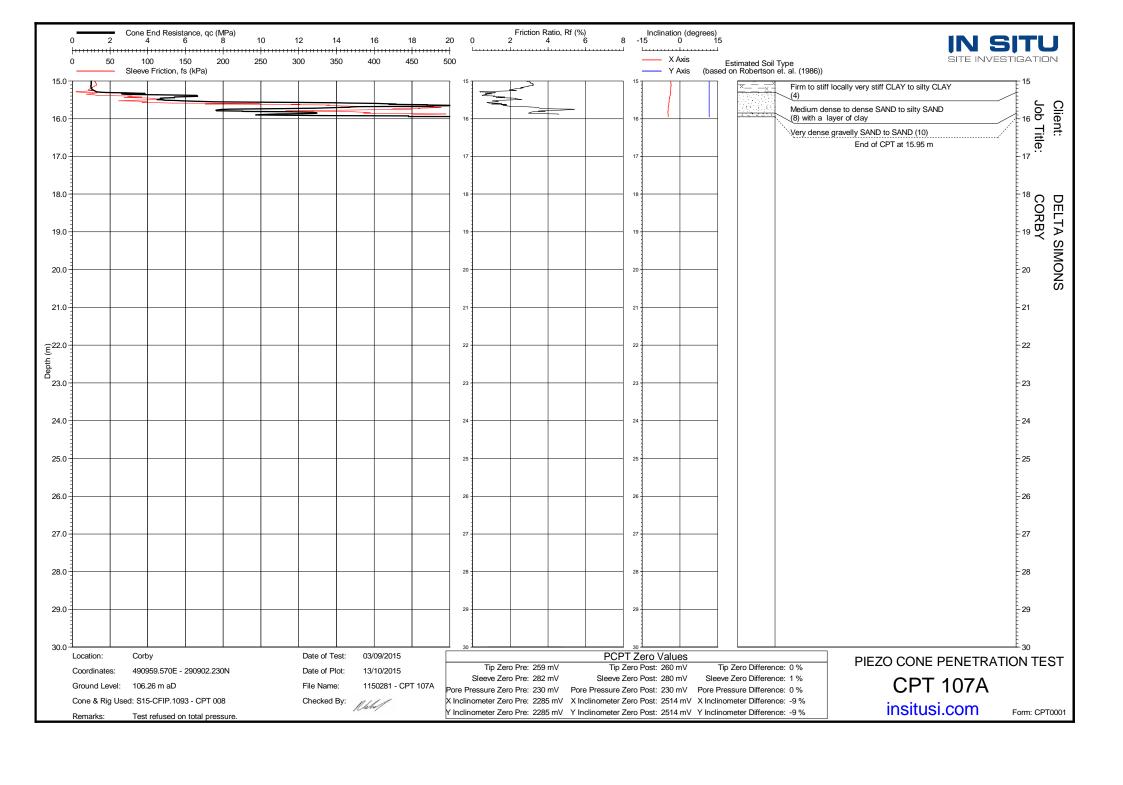


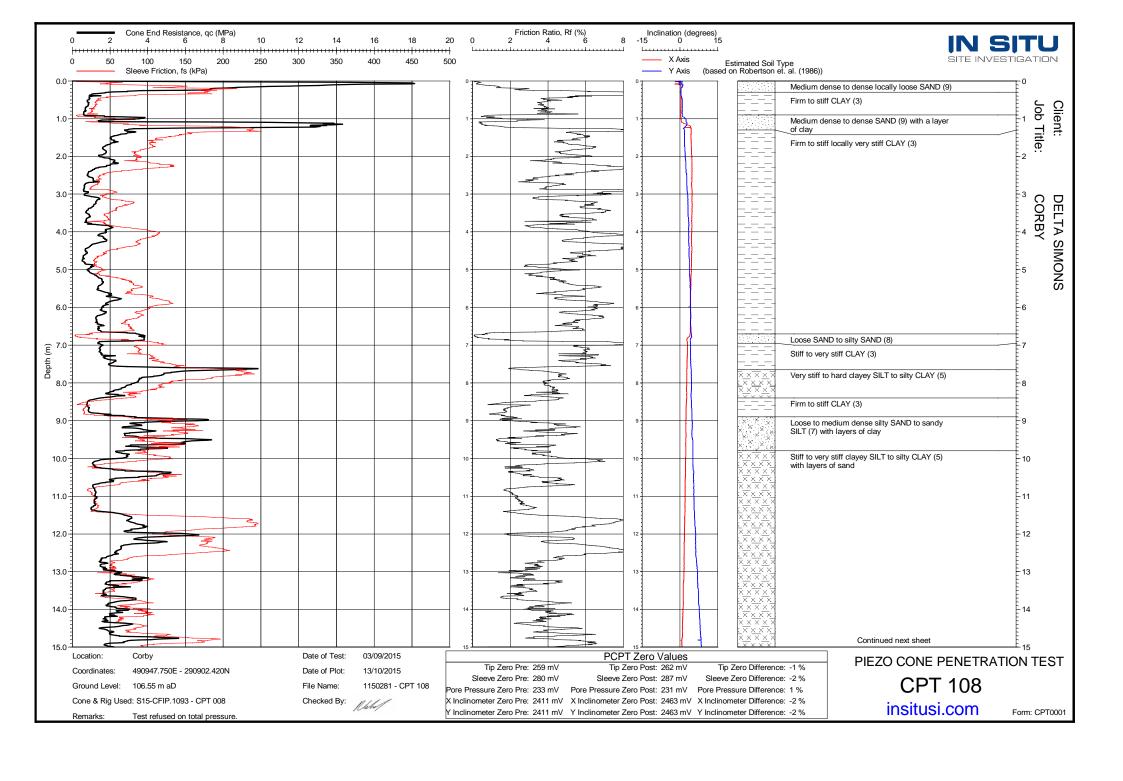


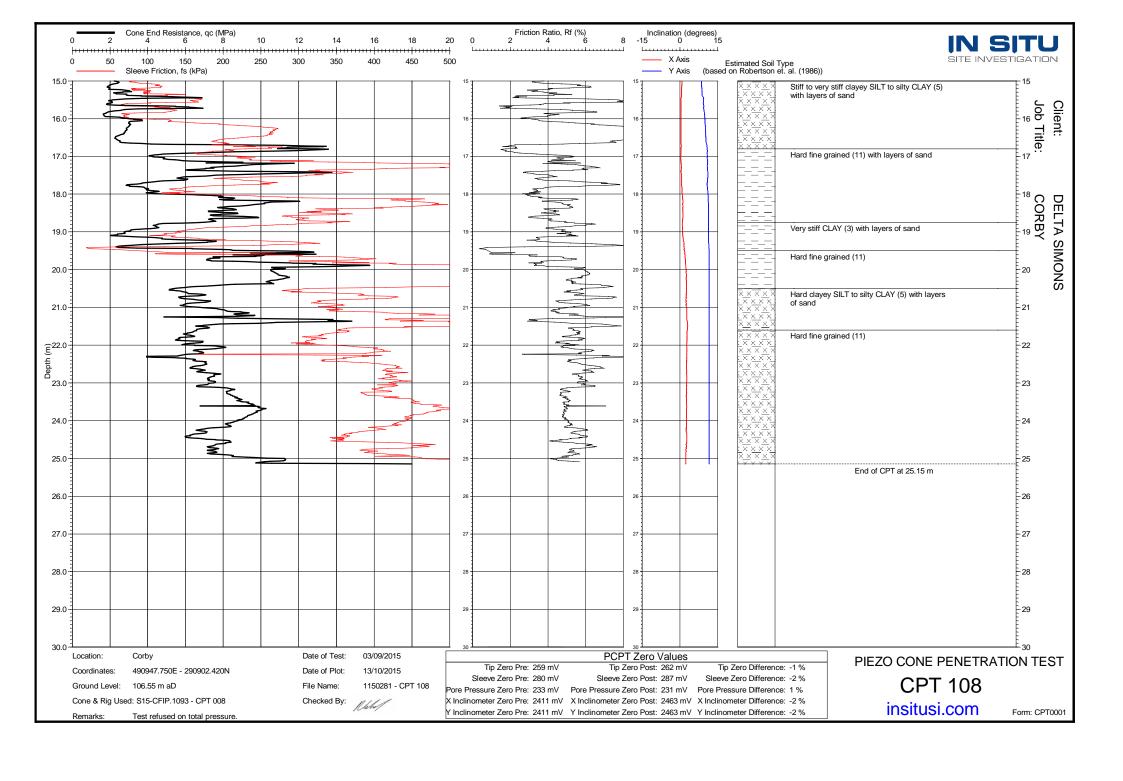


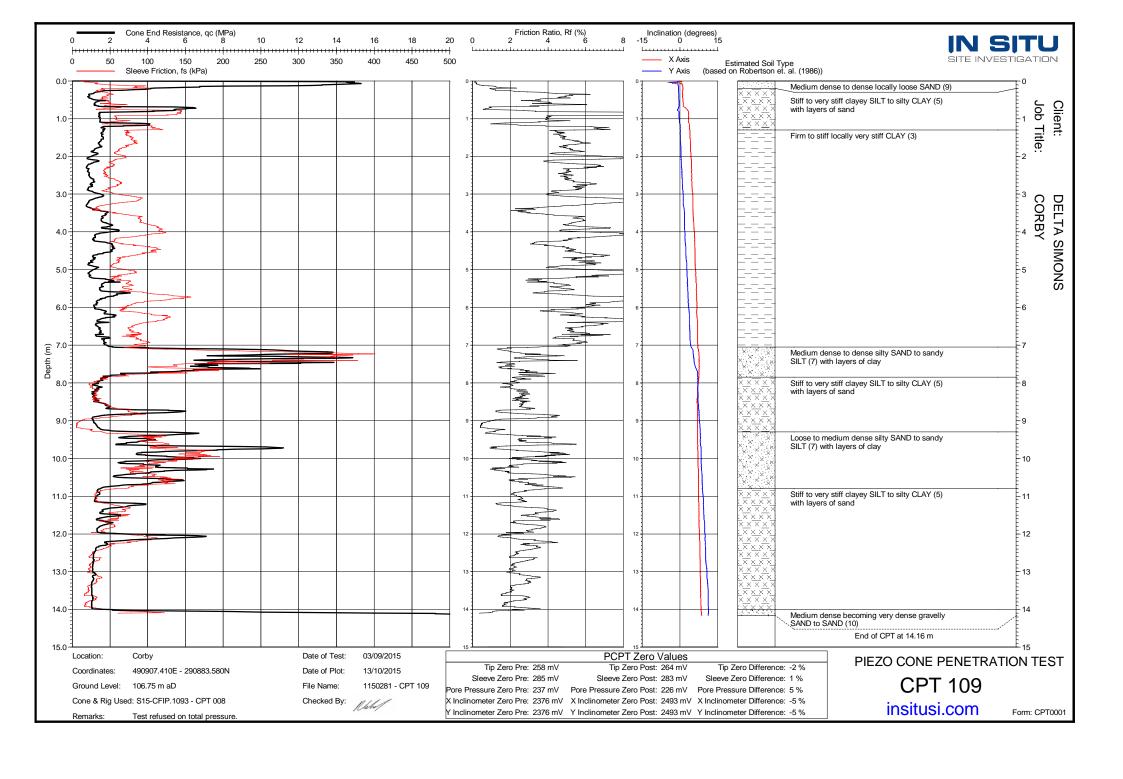


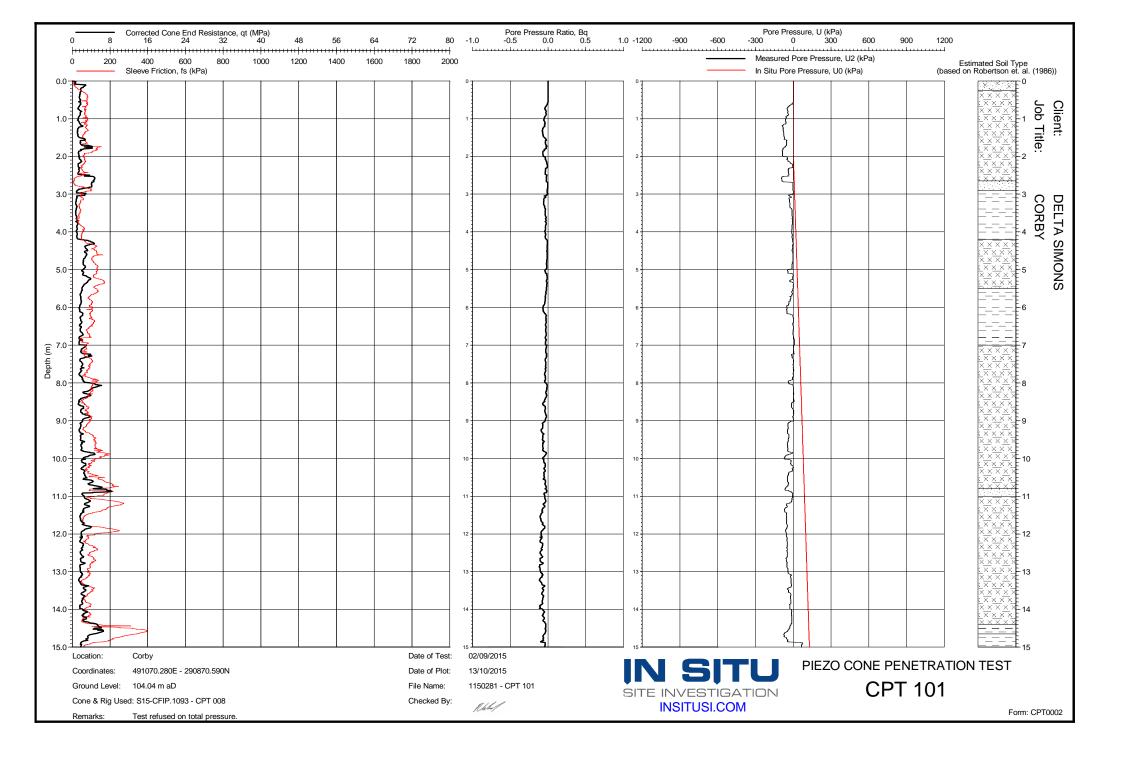


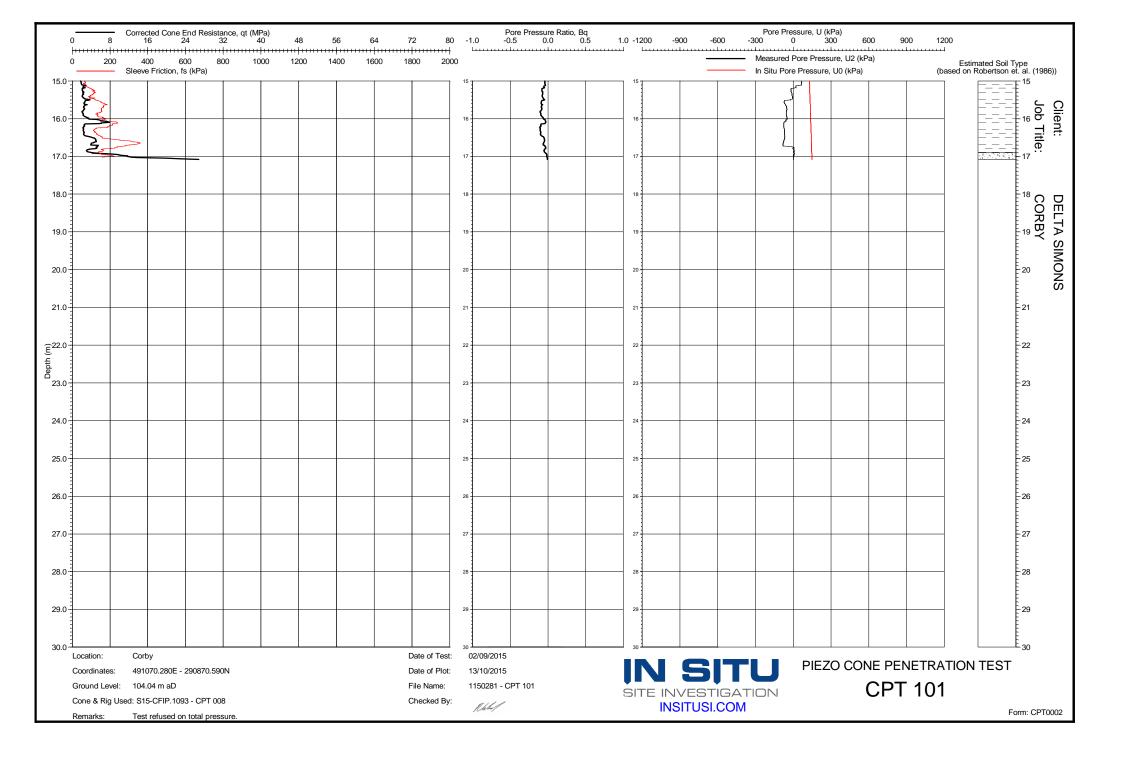


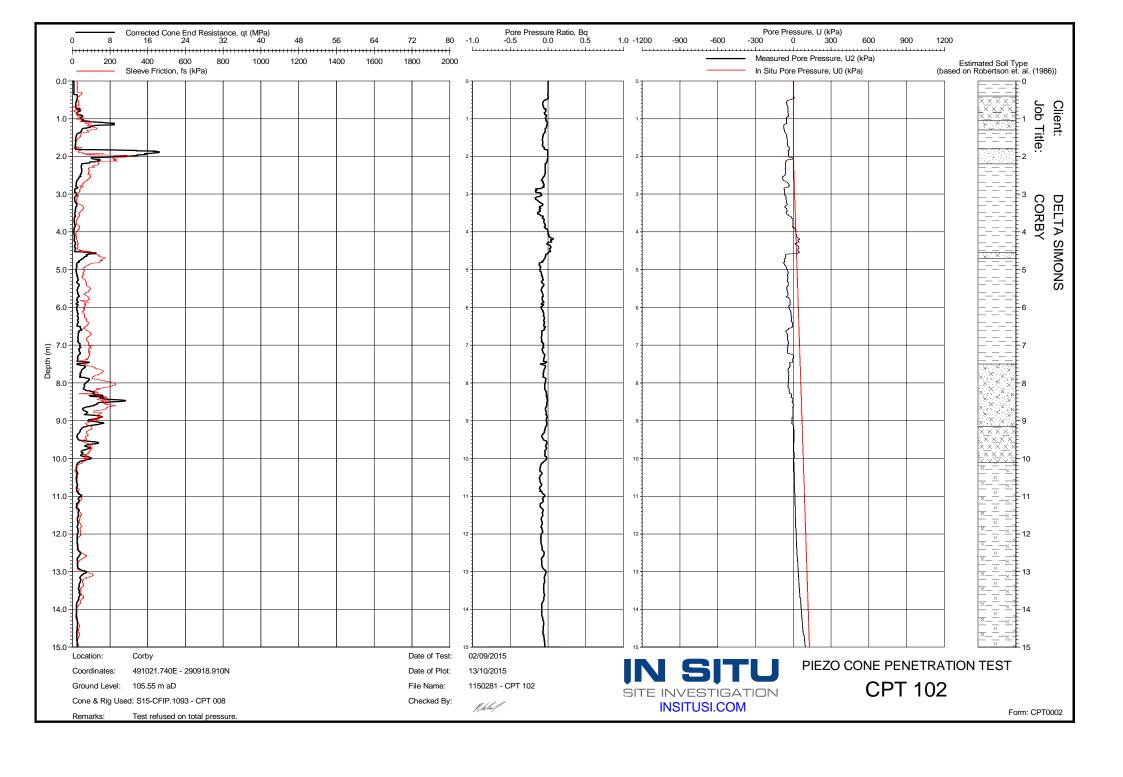


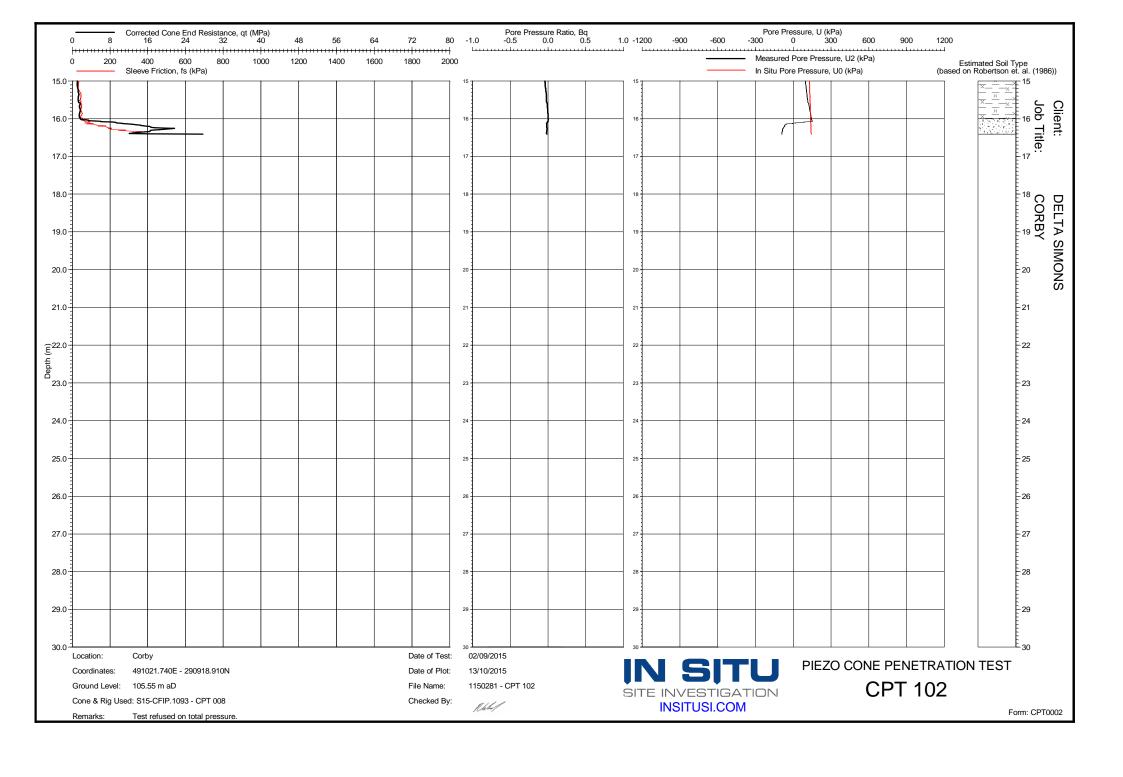


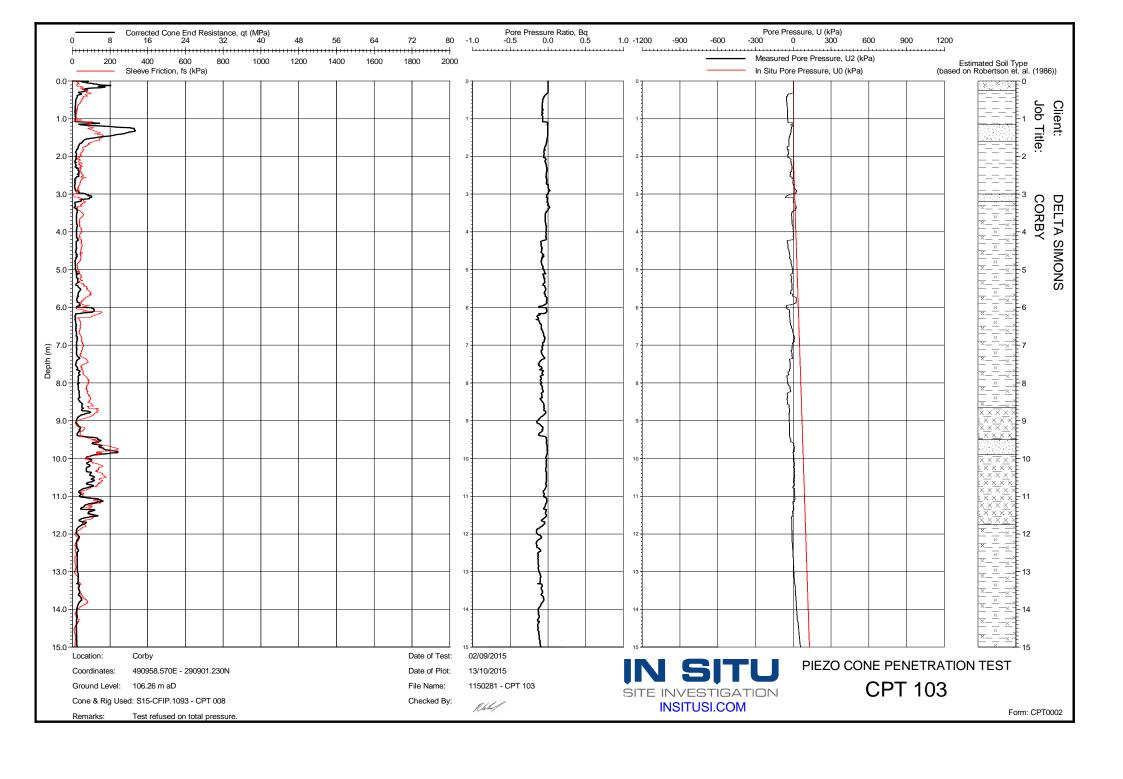


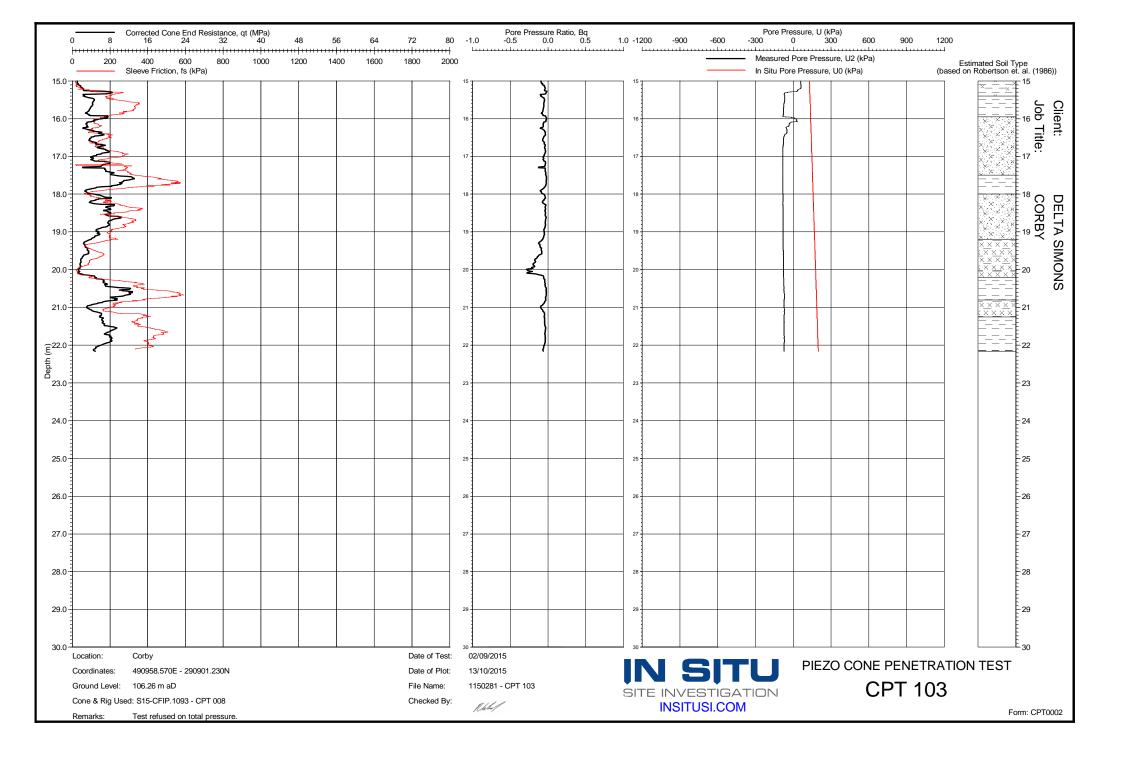


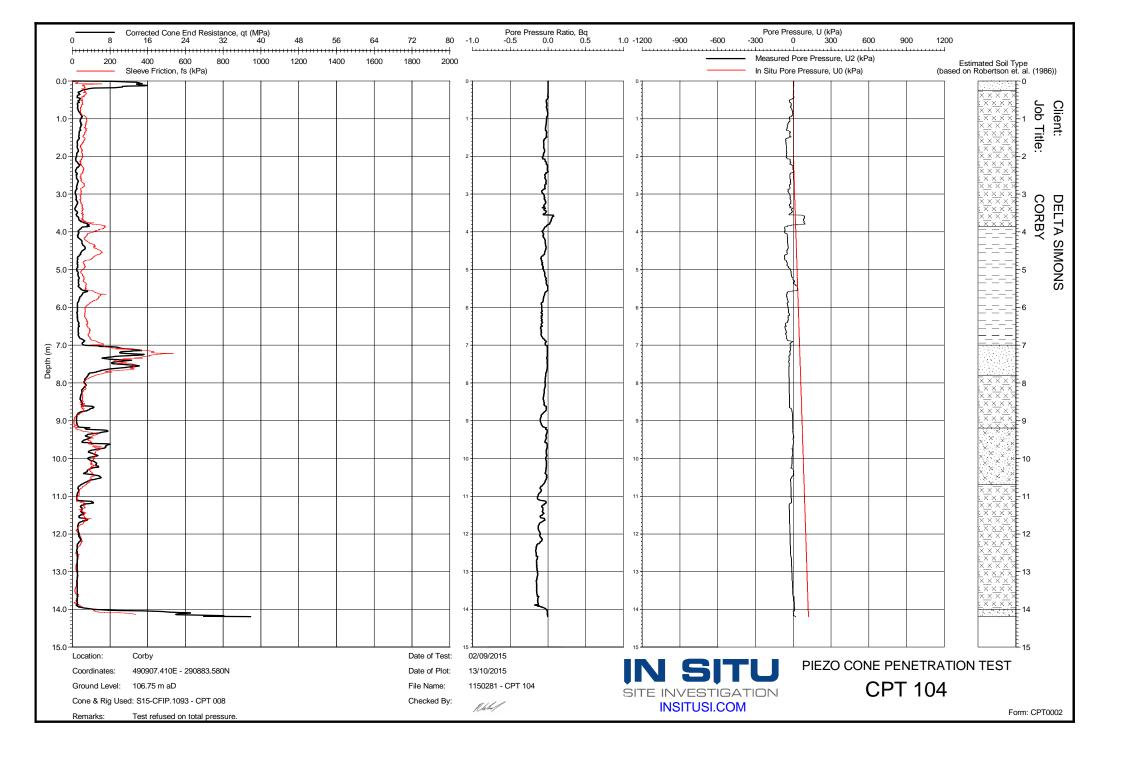


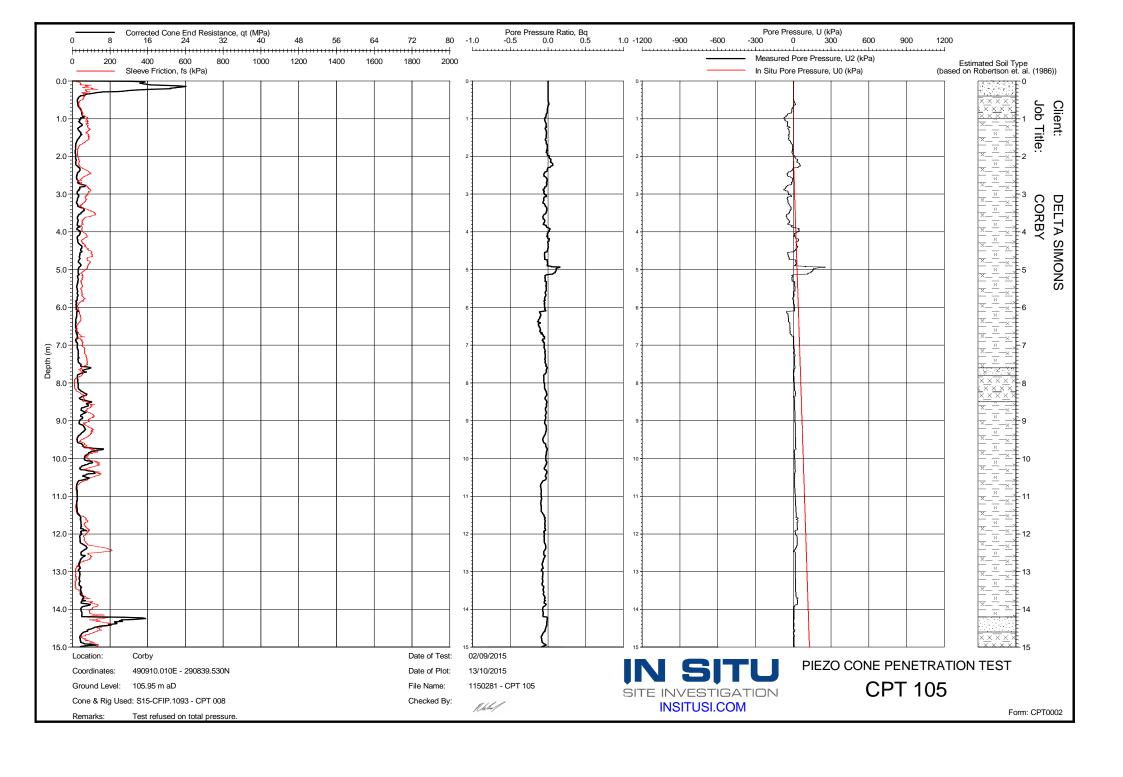


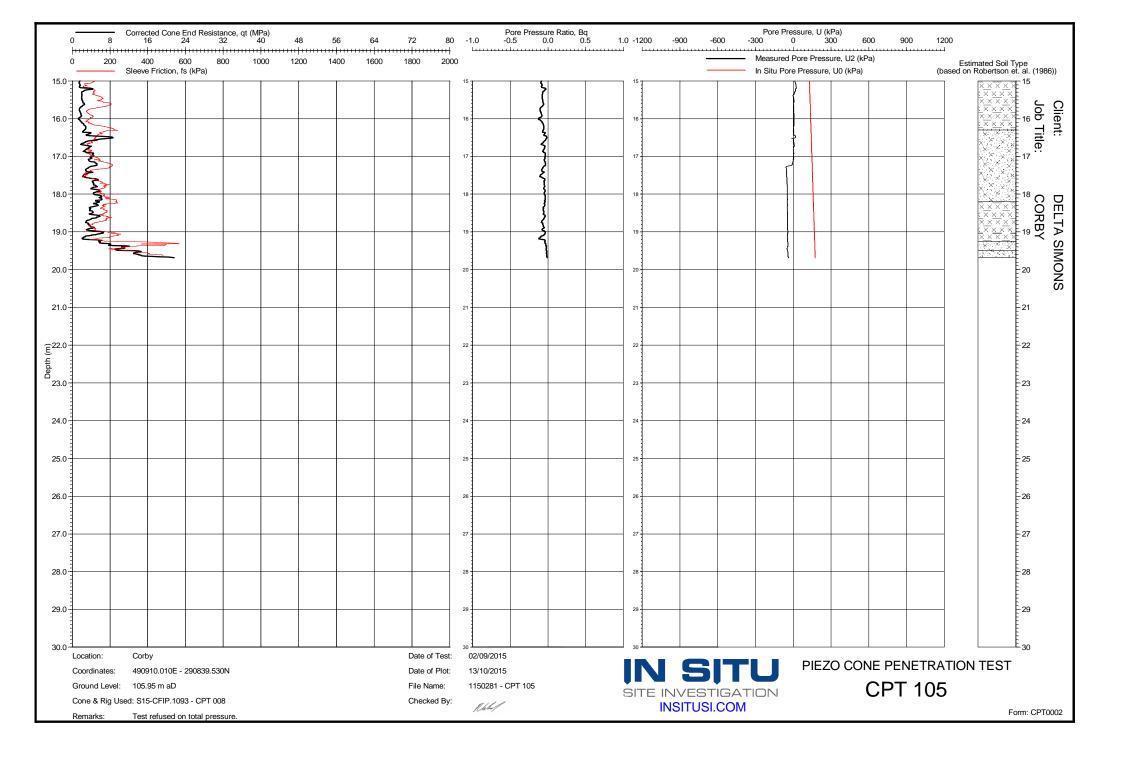


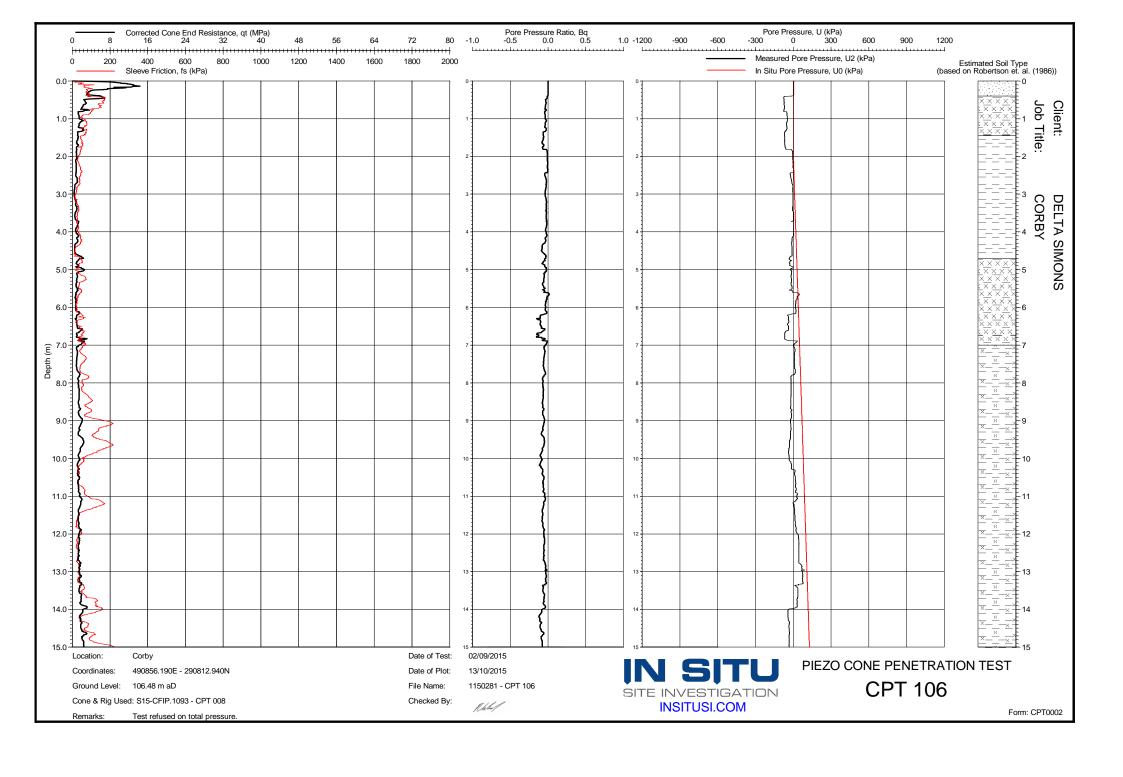


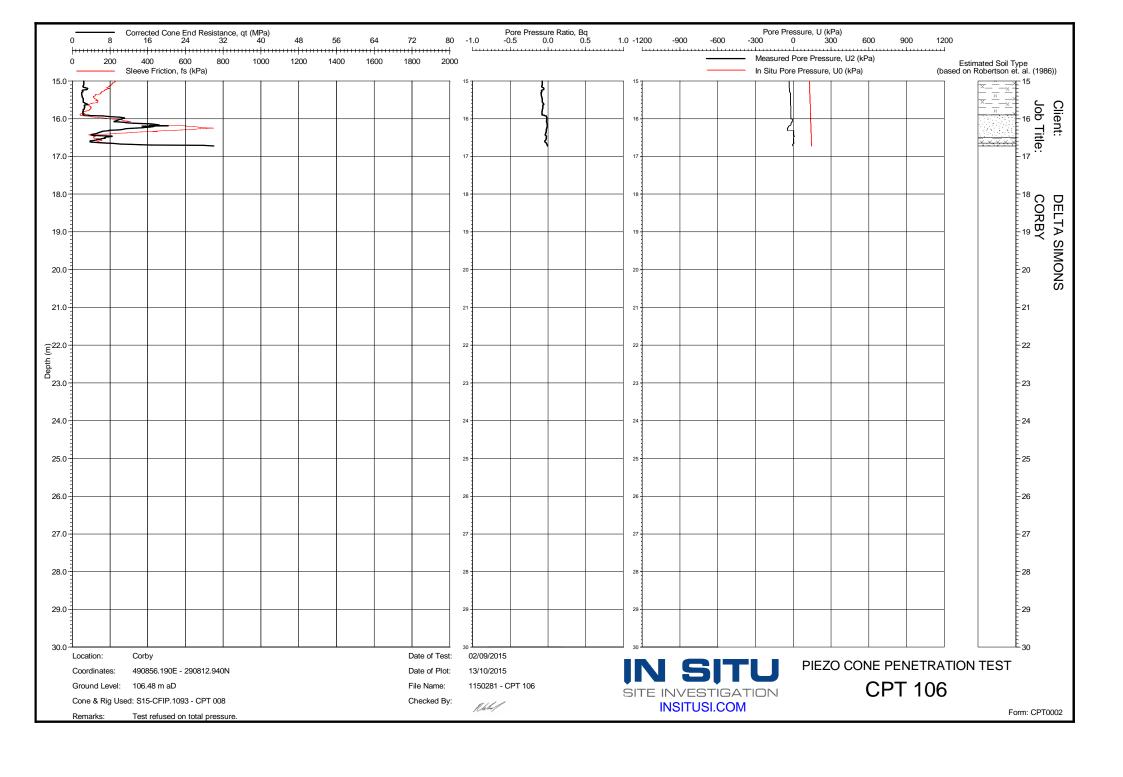


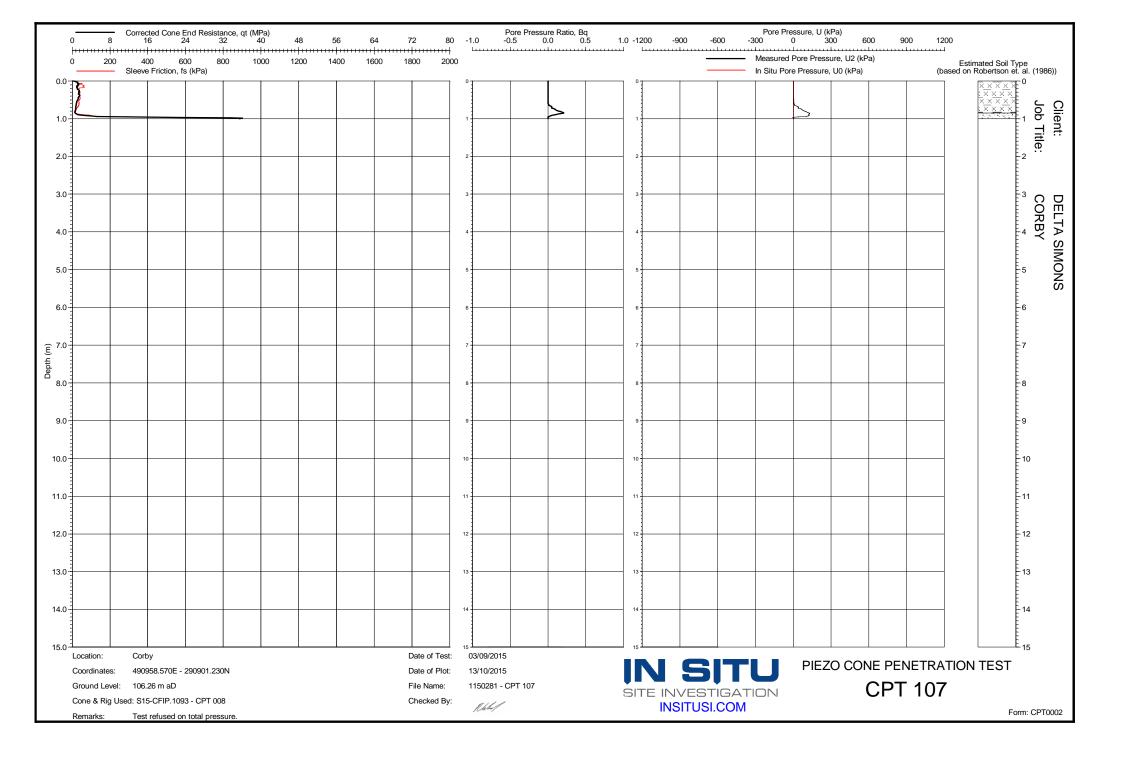


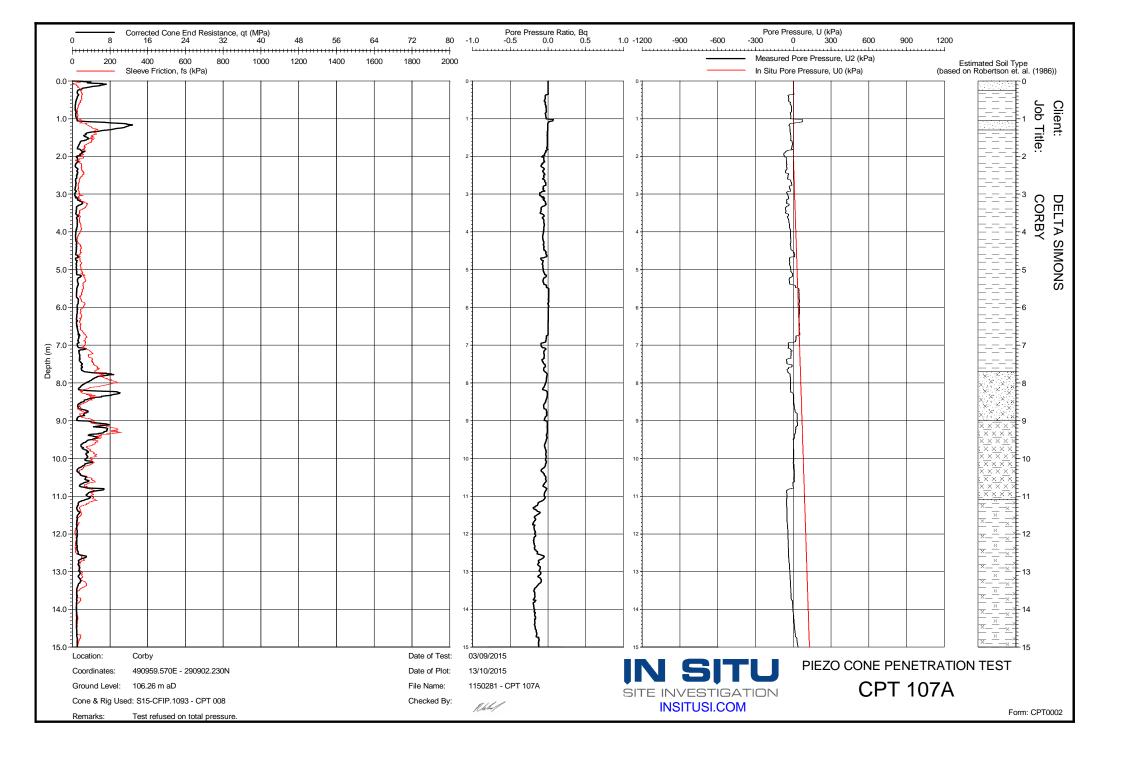


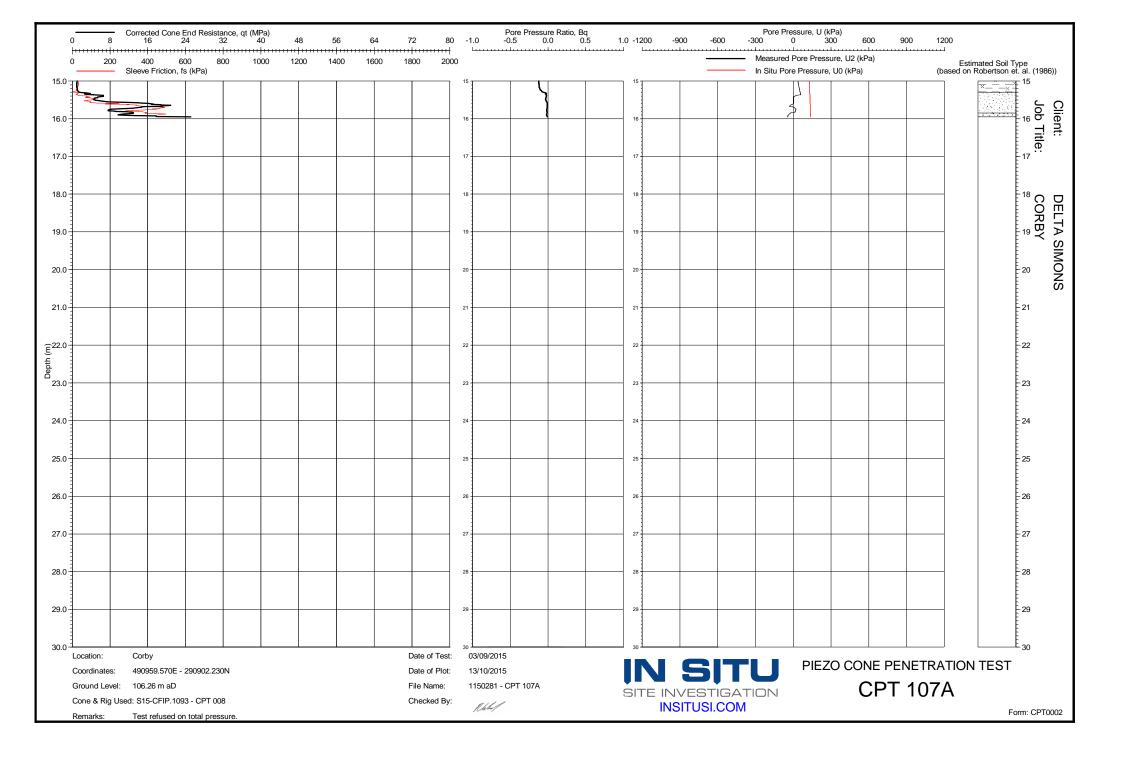


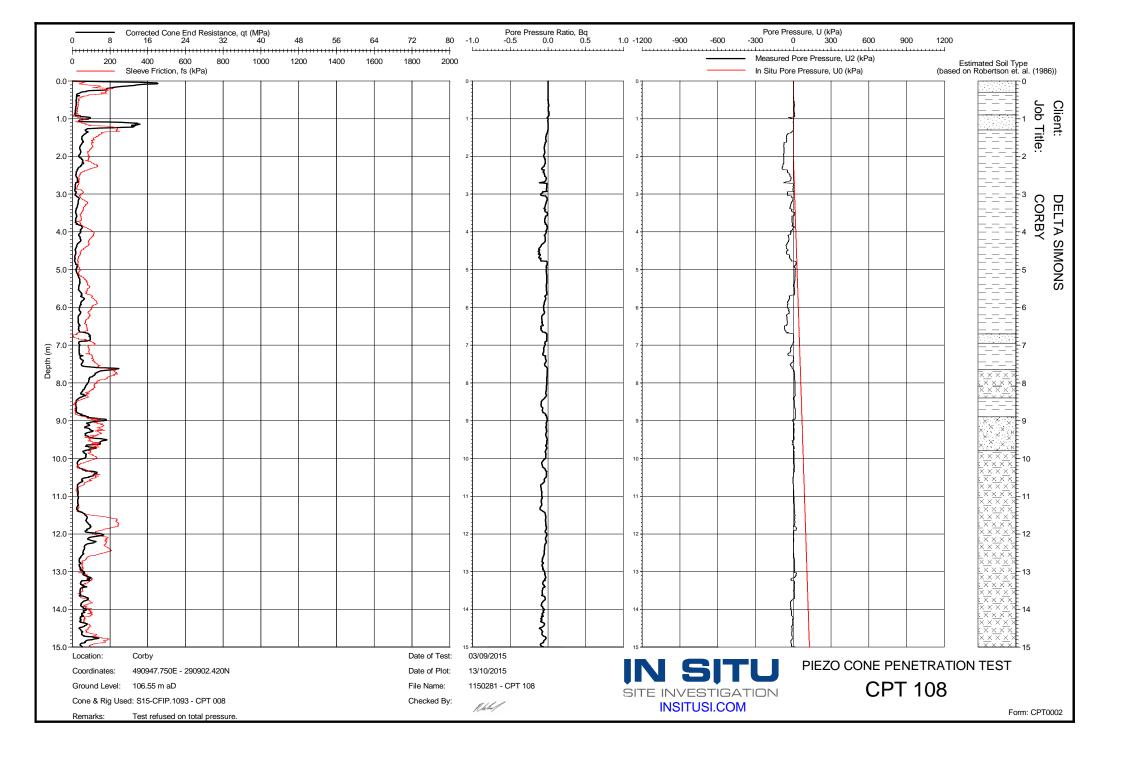


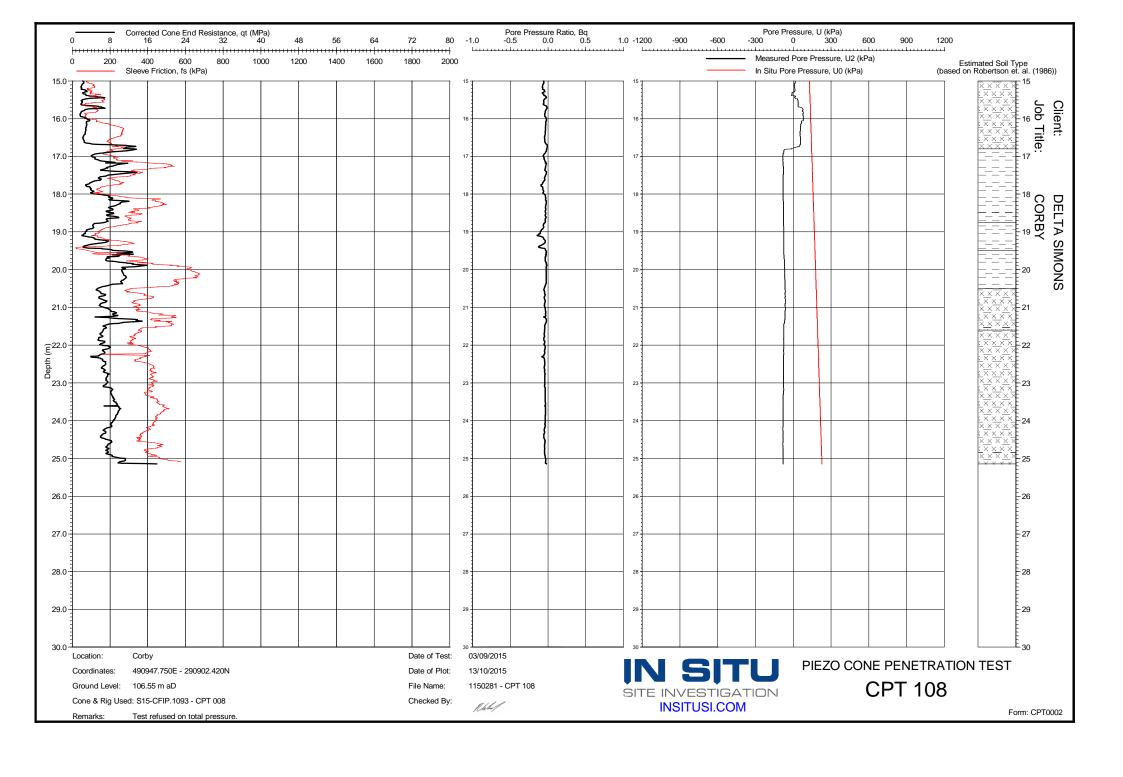


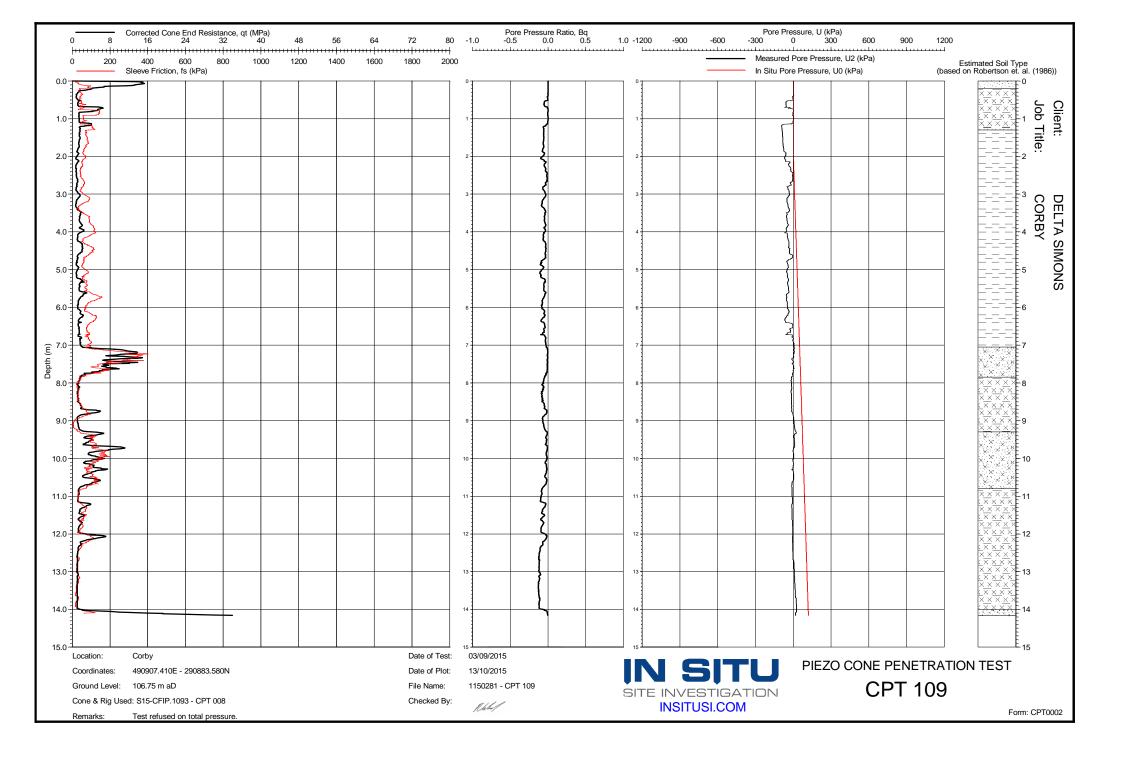












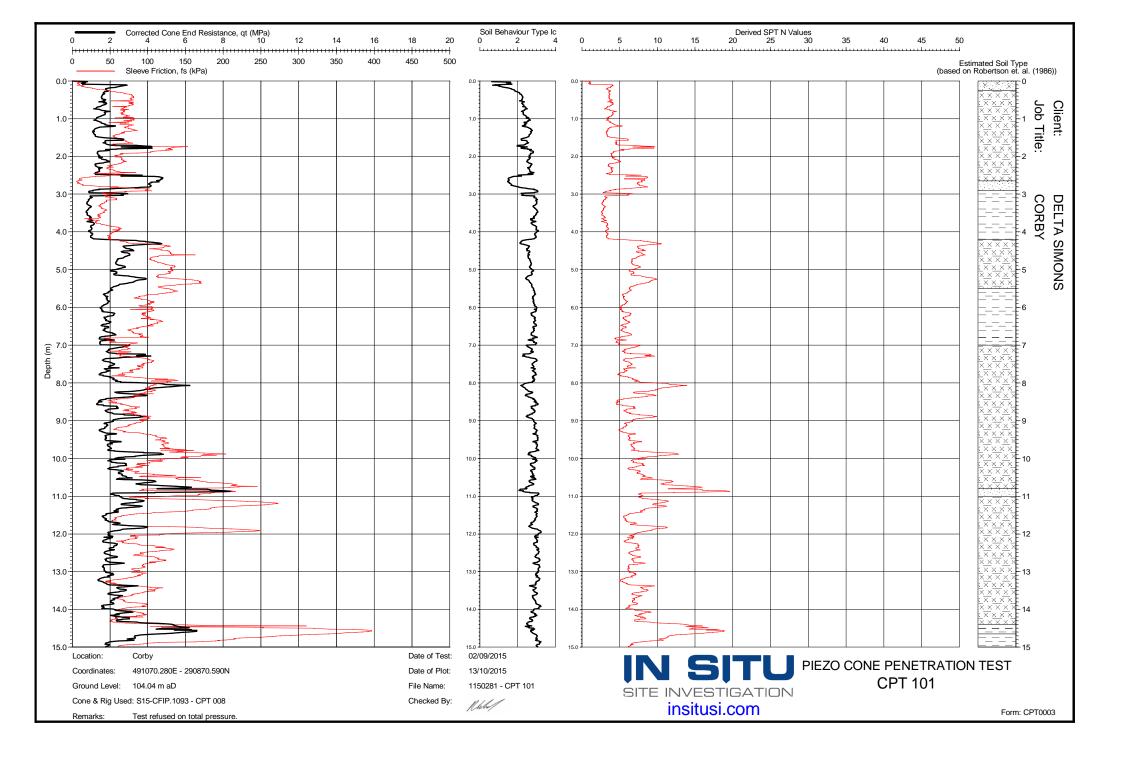


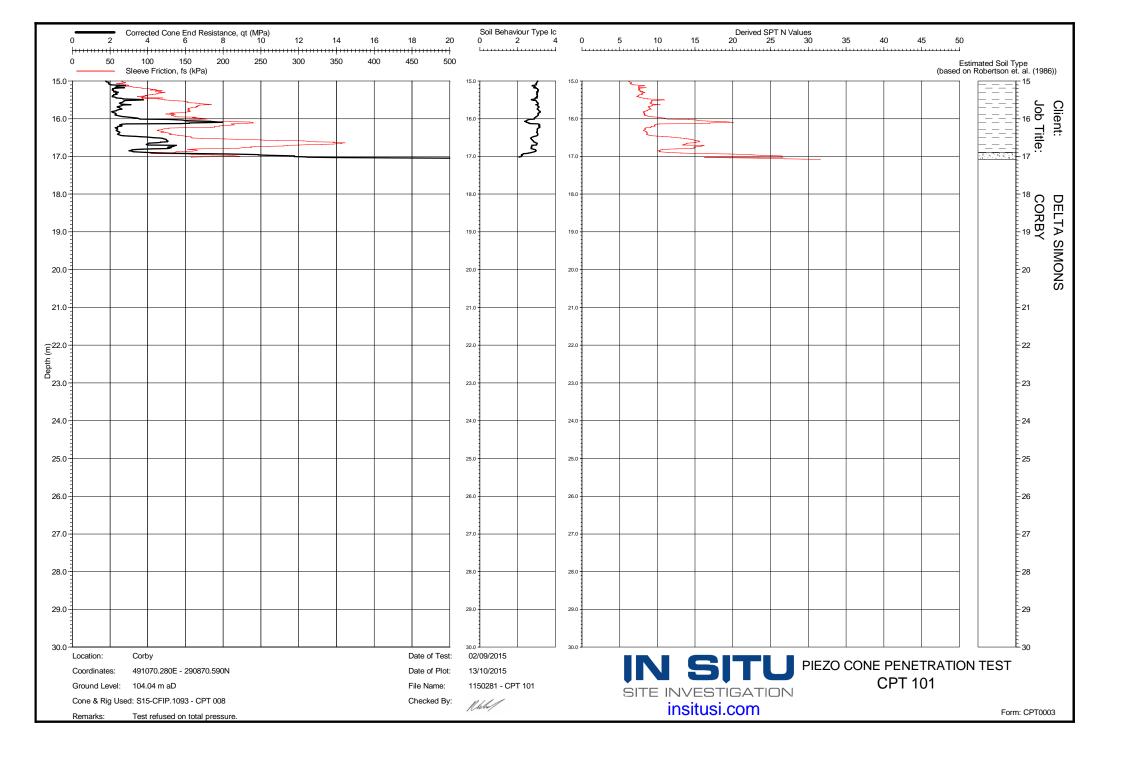
## **APPENDIX C**

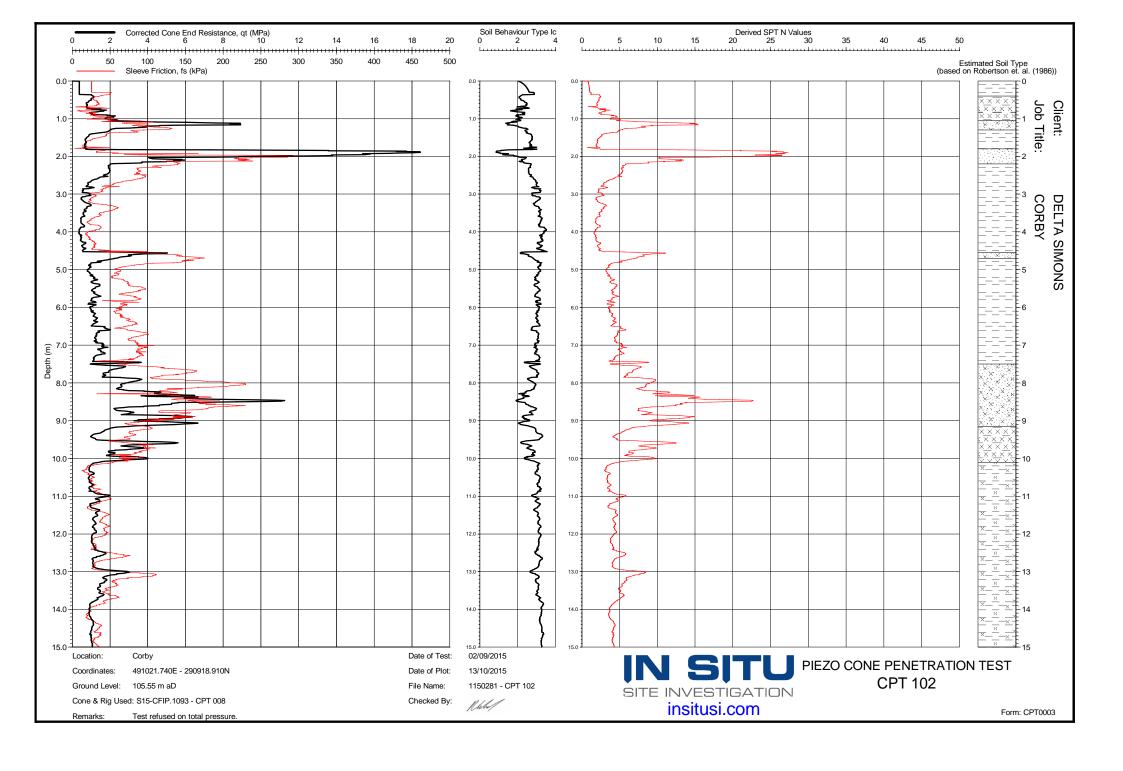
## **CPT DERIVED GEOTECHNICAL PARAMETERS**

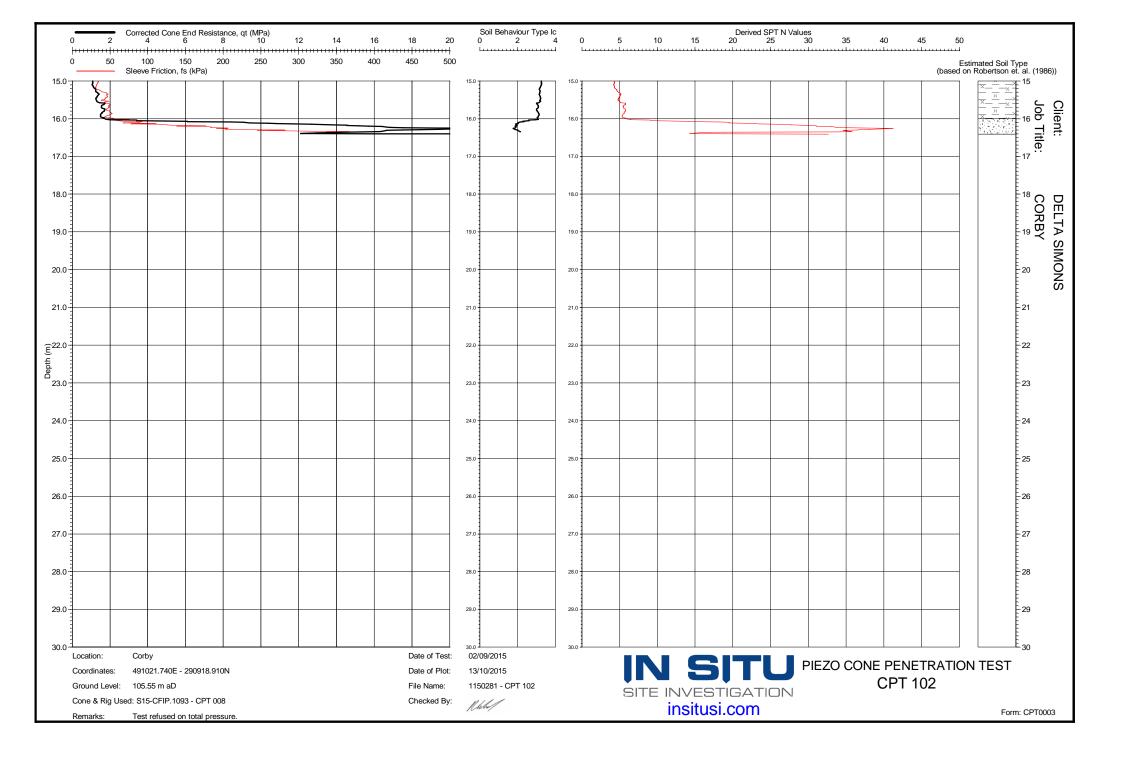
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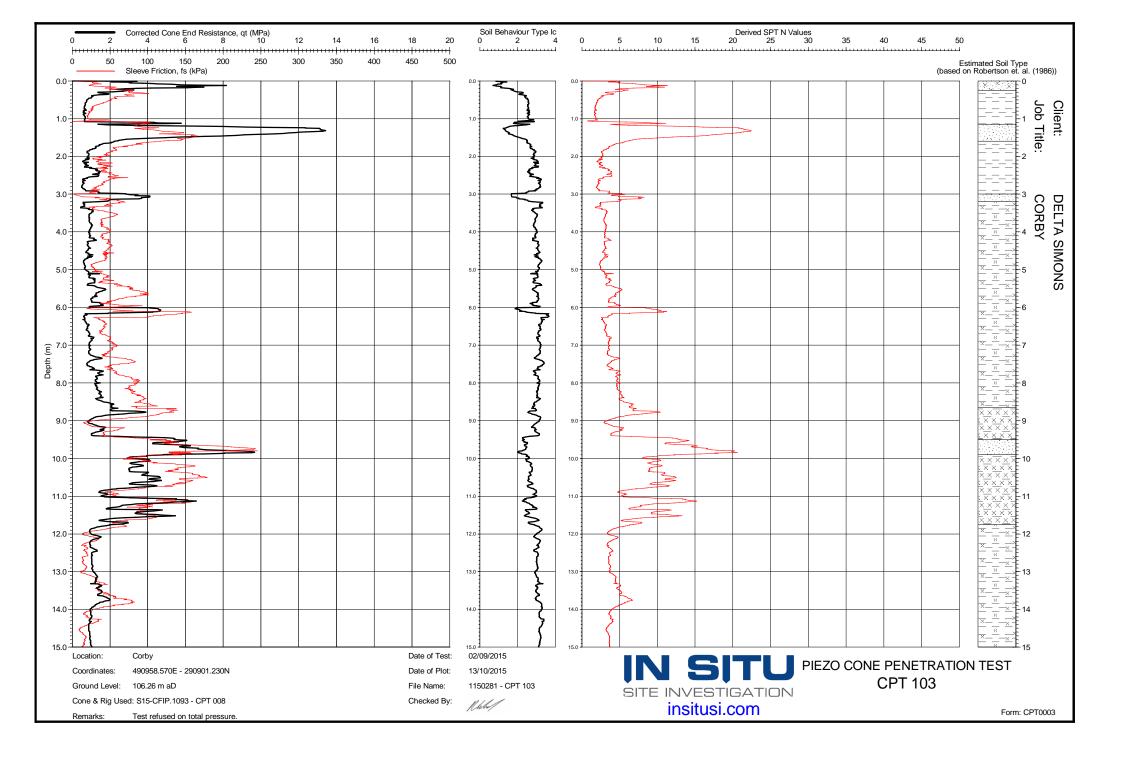
Description	Pages Included
CPT 101 – CPT 109 (Printed on Form CPT0003) Soil Behaviour Type and N Value	17
CPT 101 – CPT 109 (Printed on Form CPT0004) Relative Density and Shear Strength	17
CPT 101 – CPT 109 (Printed on Form CPT0005) Fines Content and Friction Angle	17

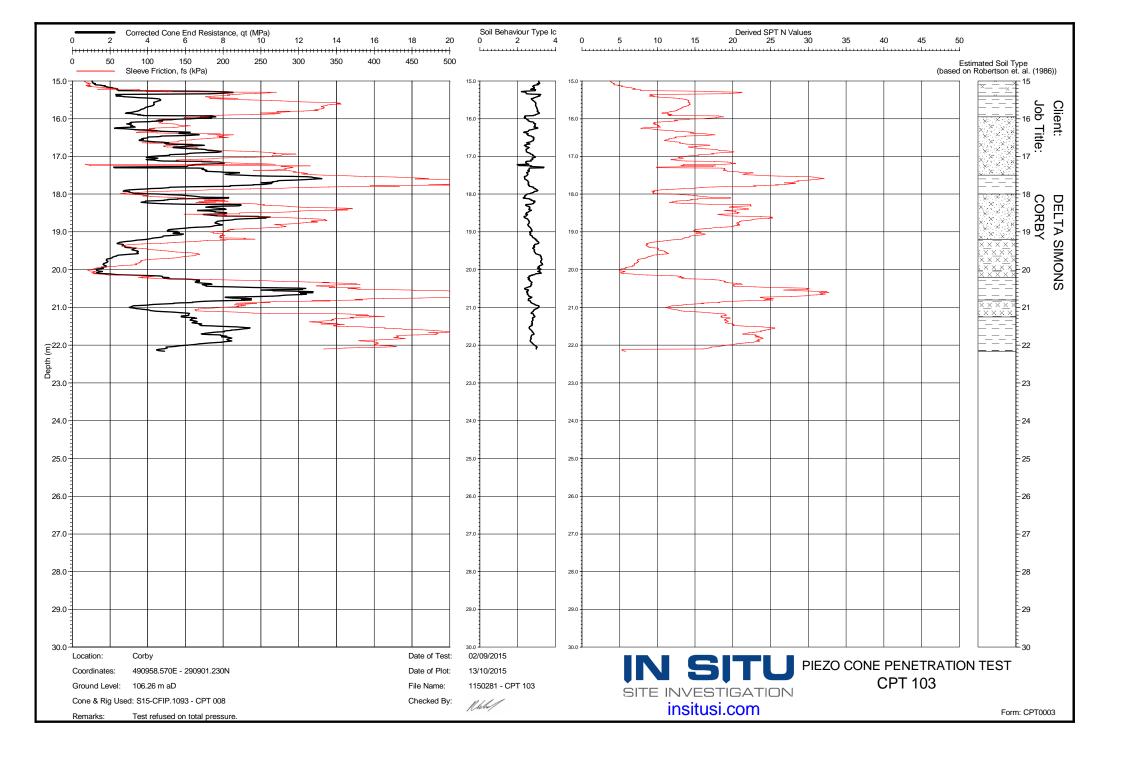


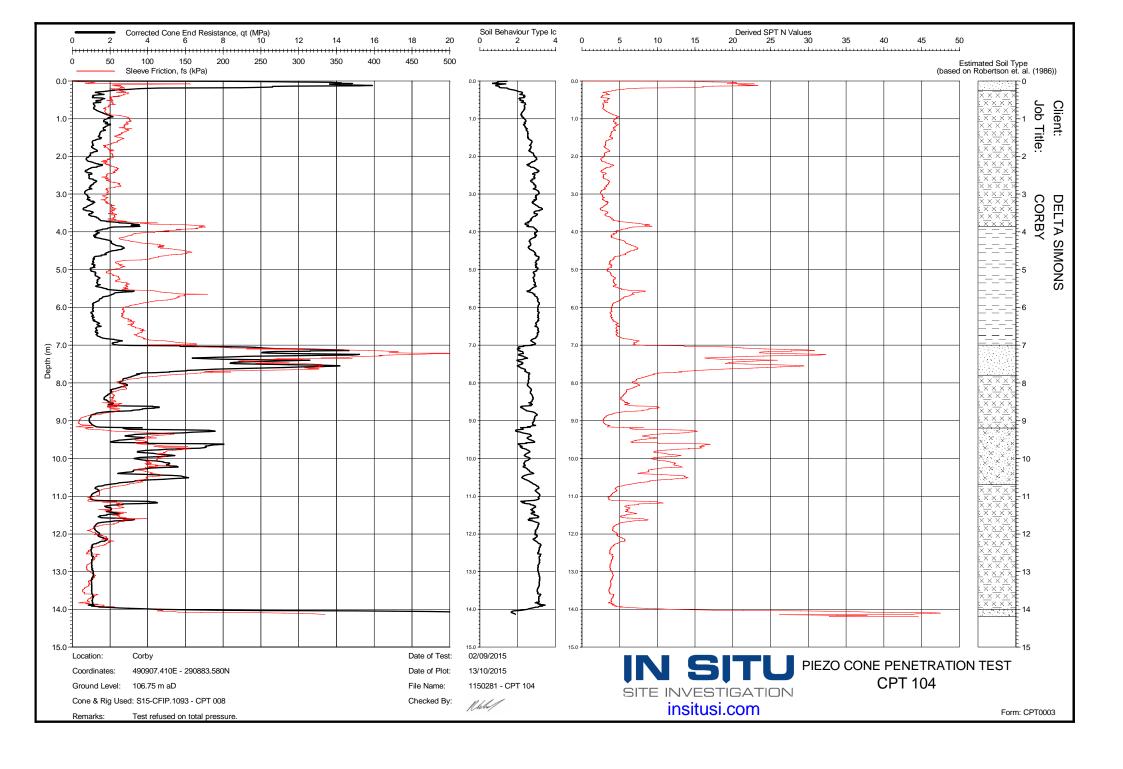


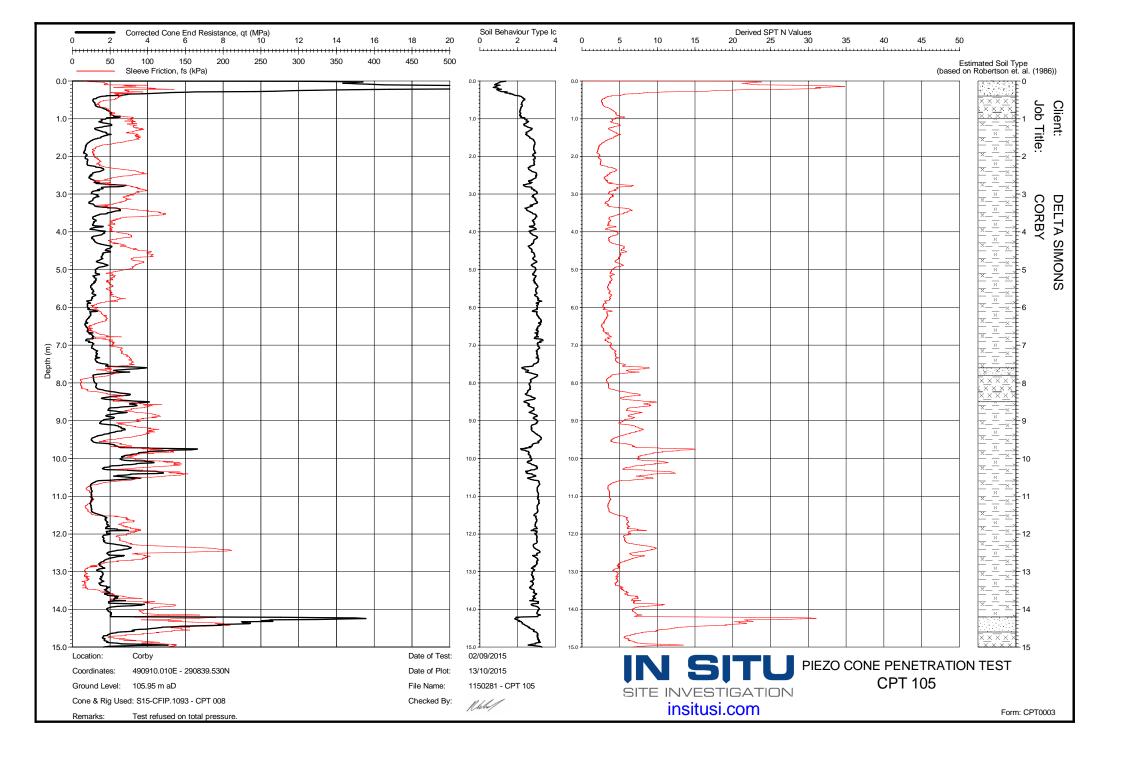


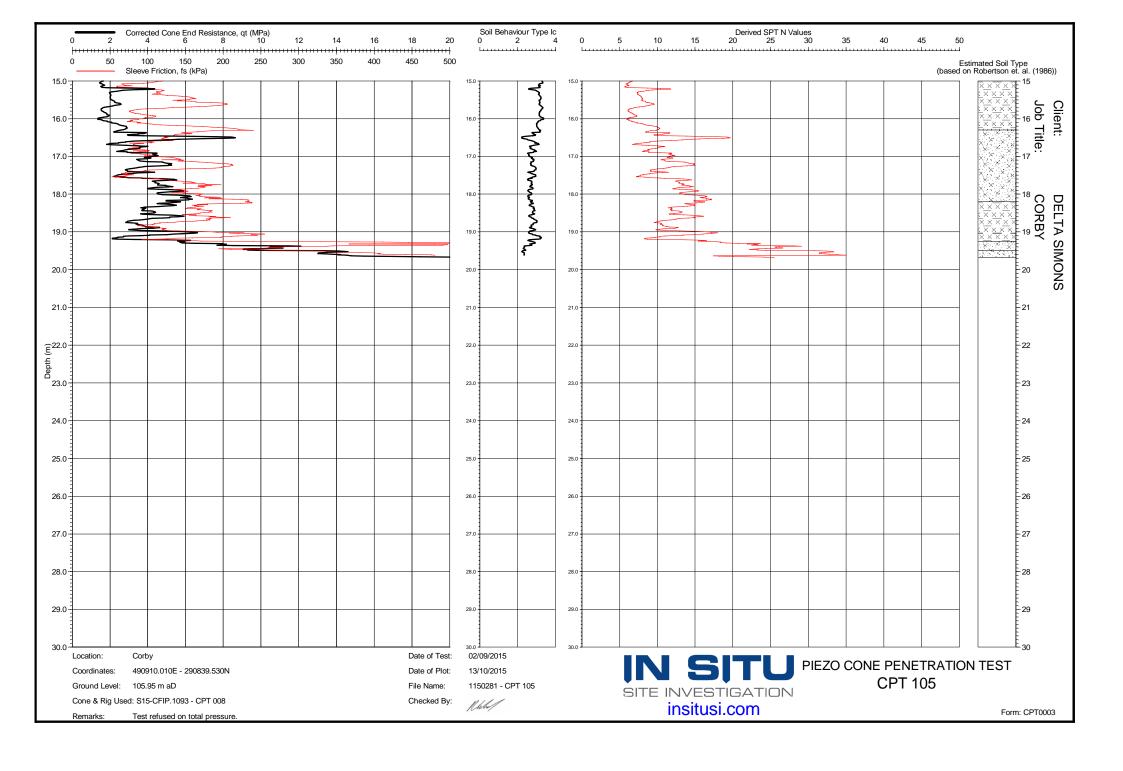


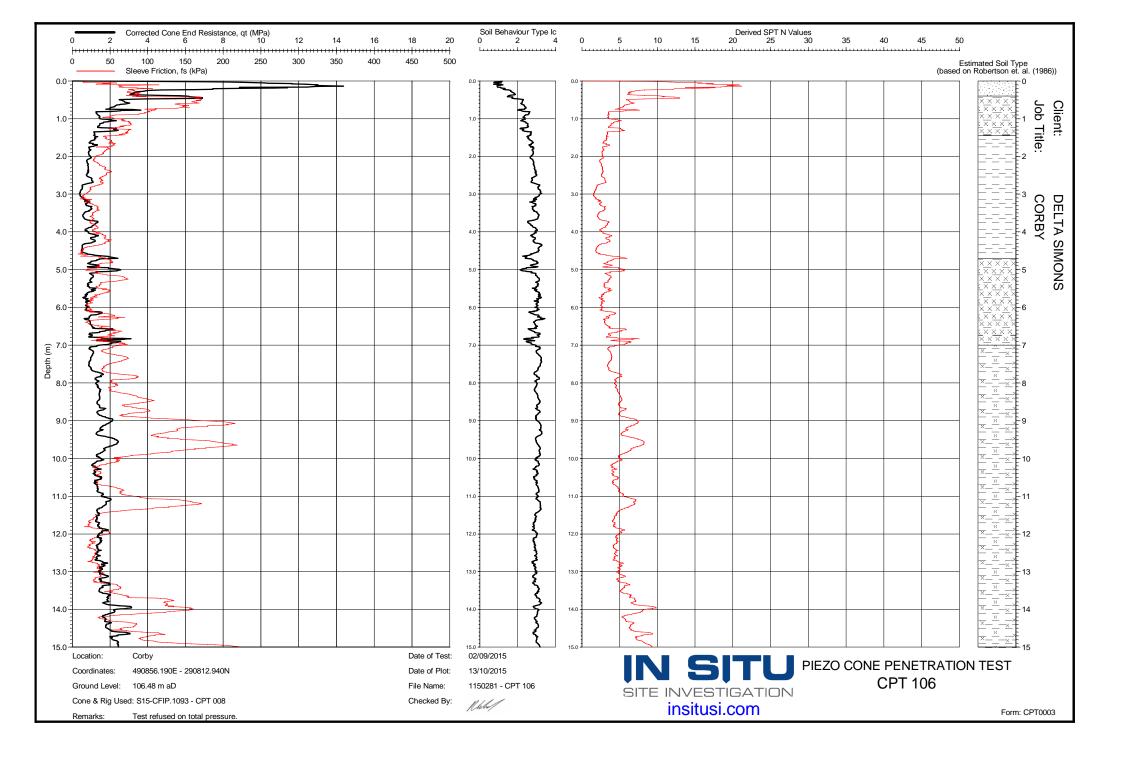


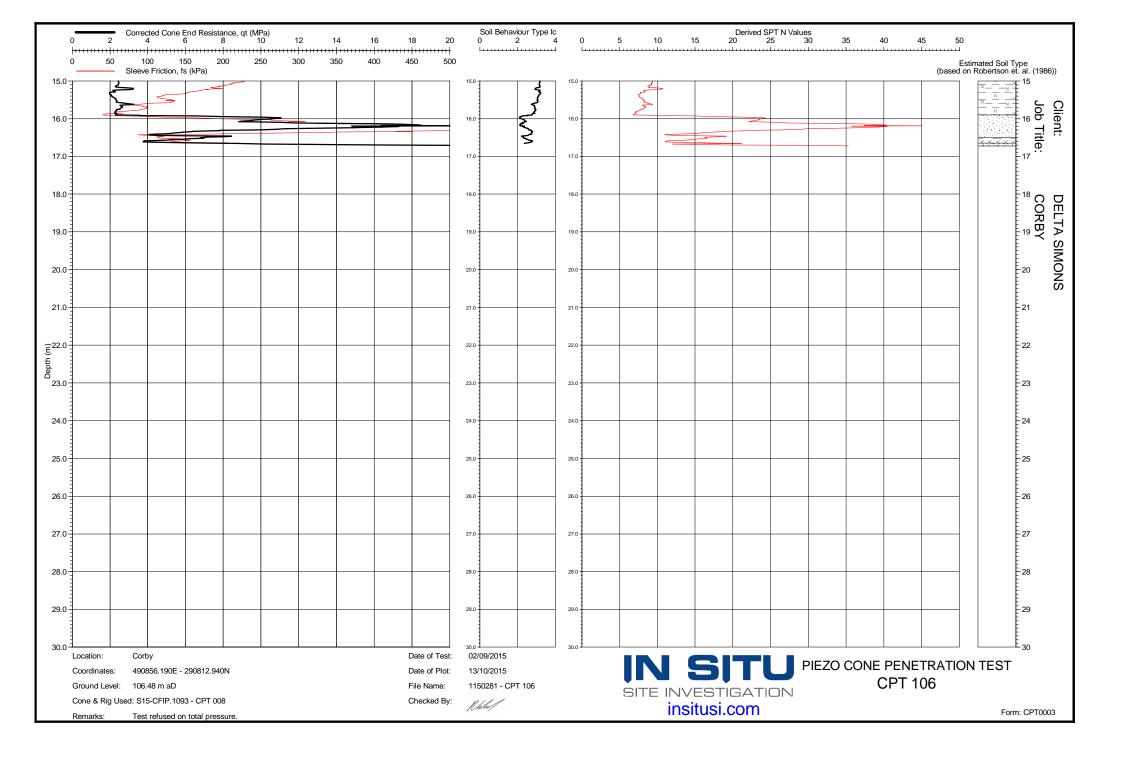


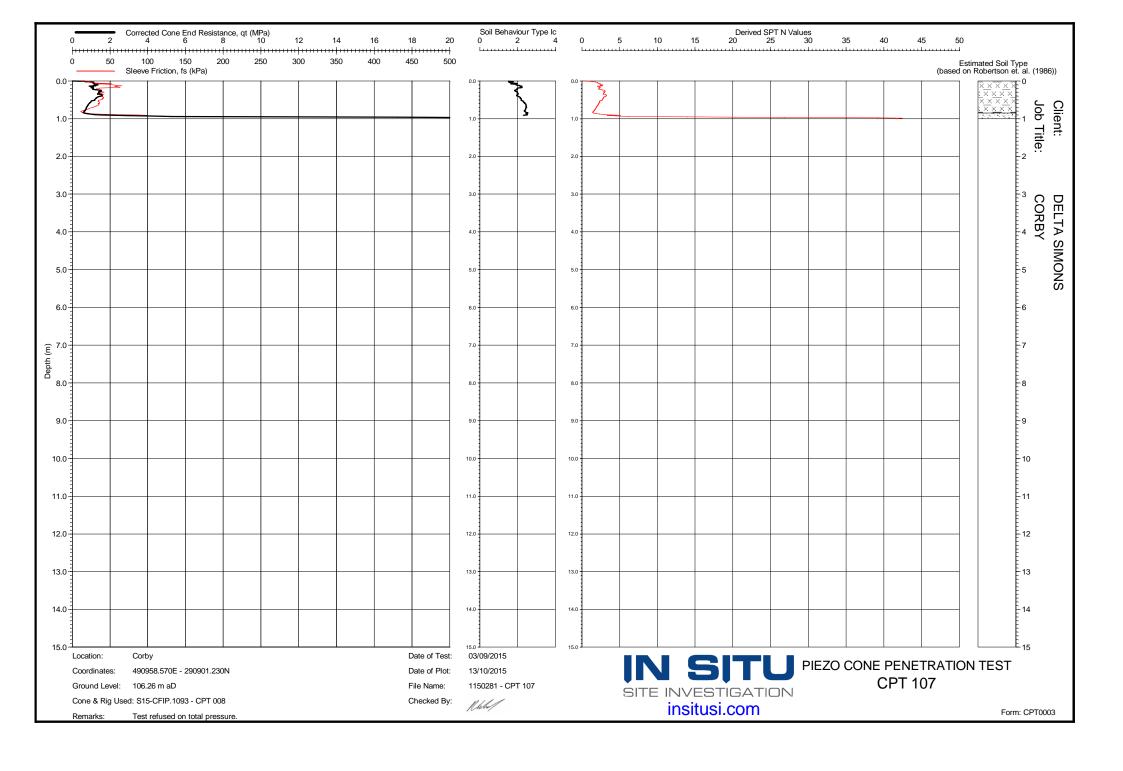


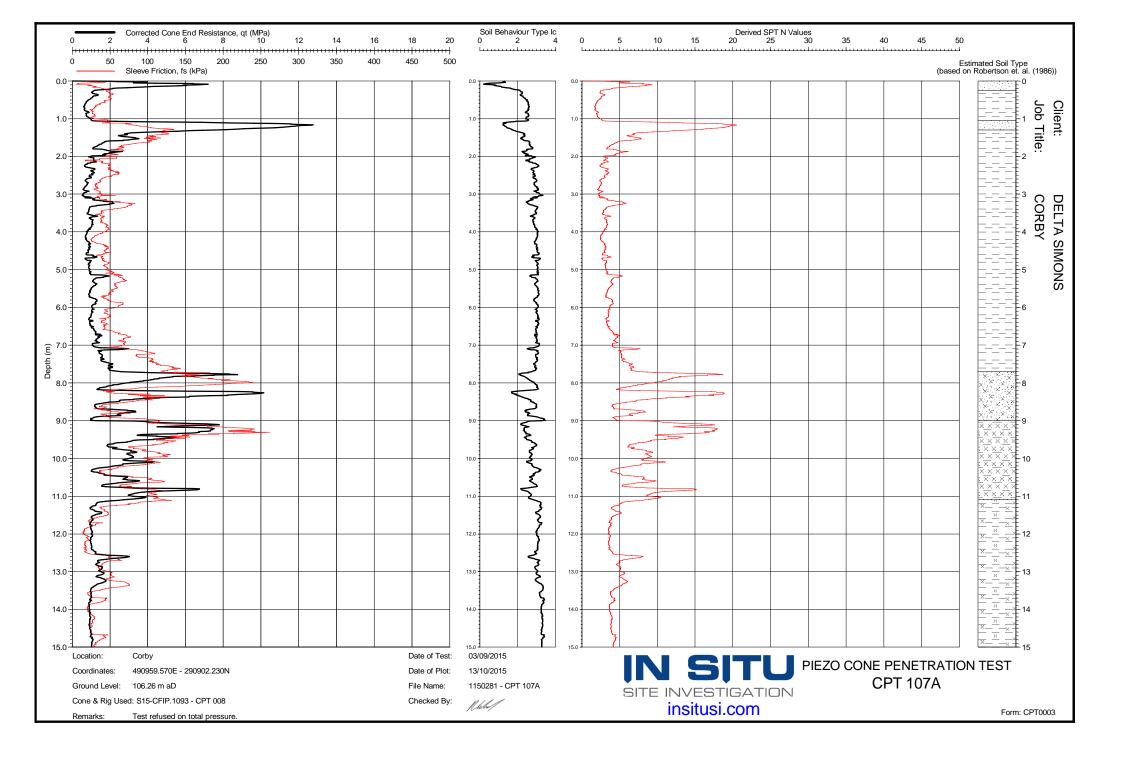


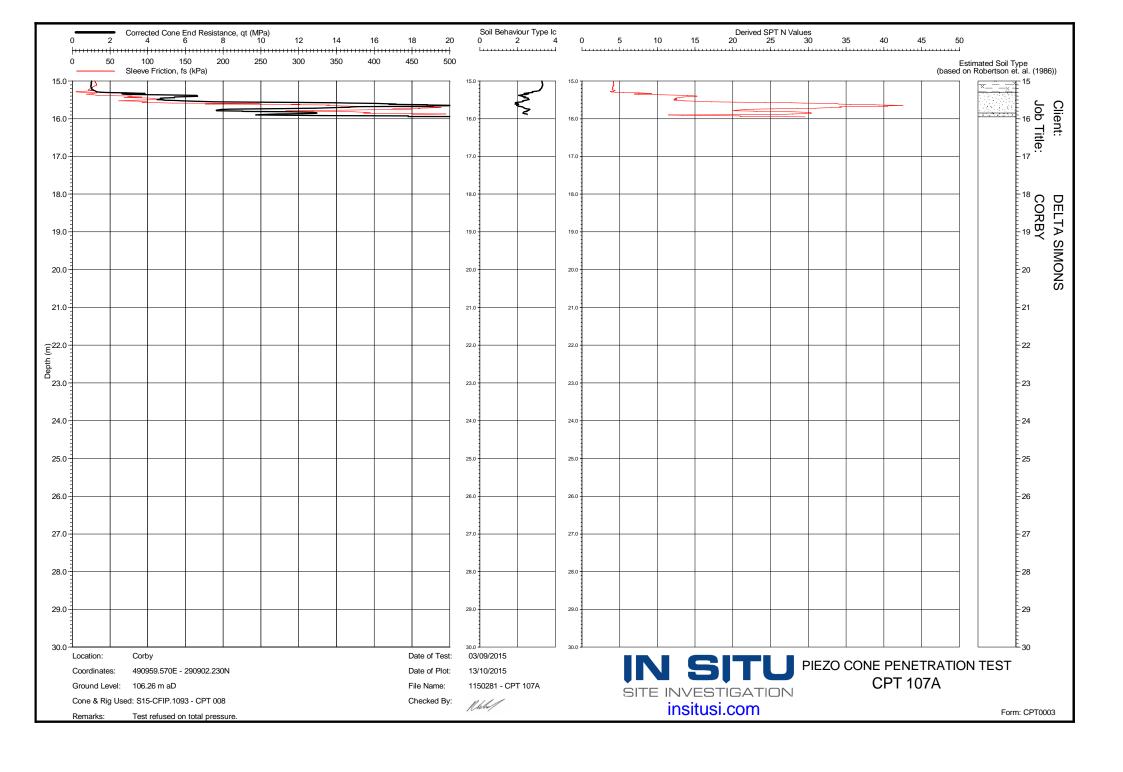


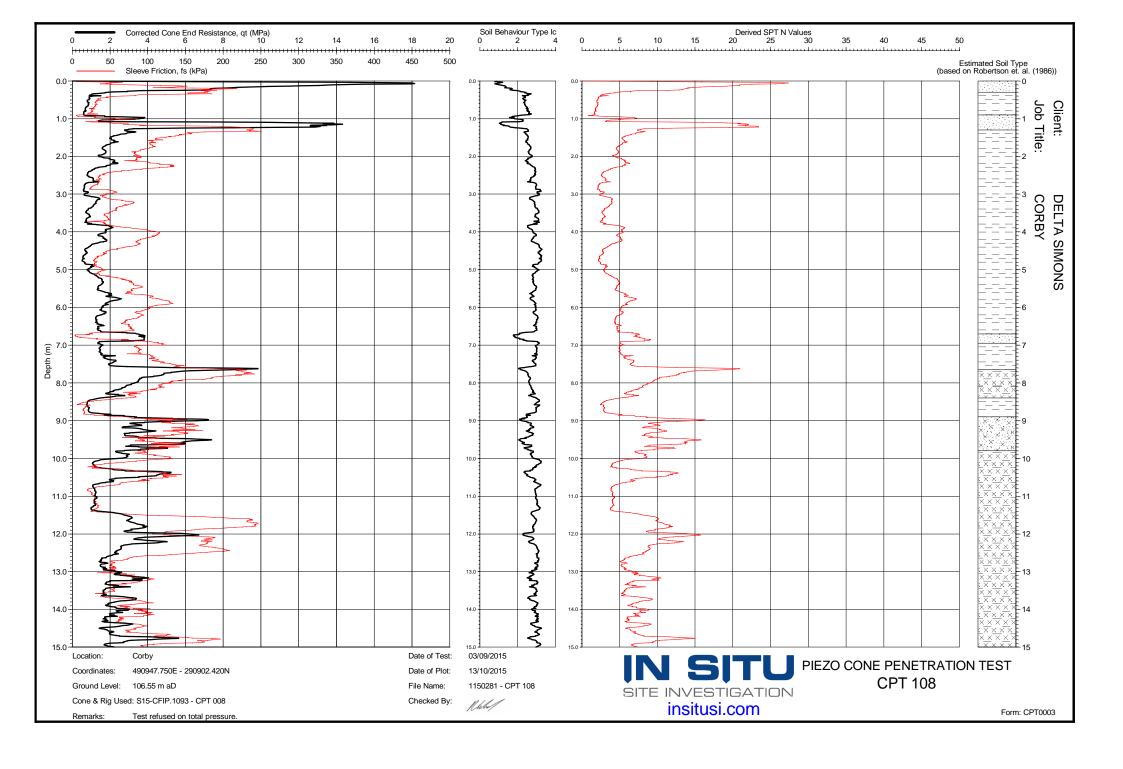


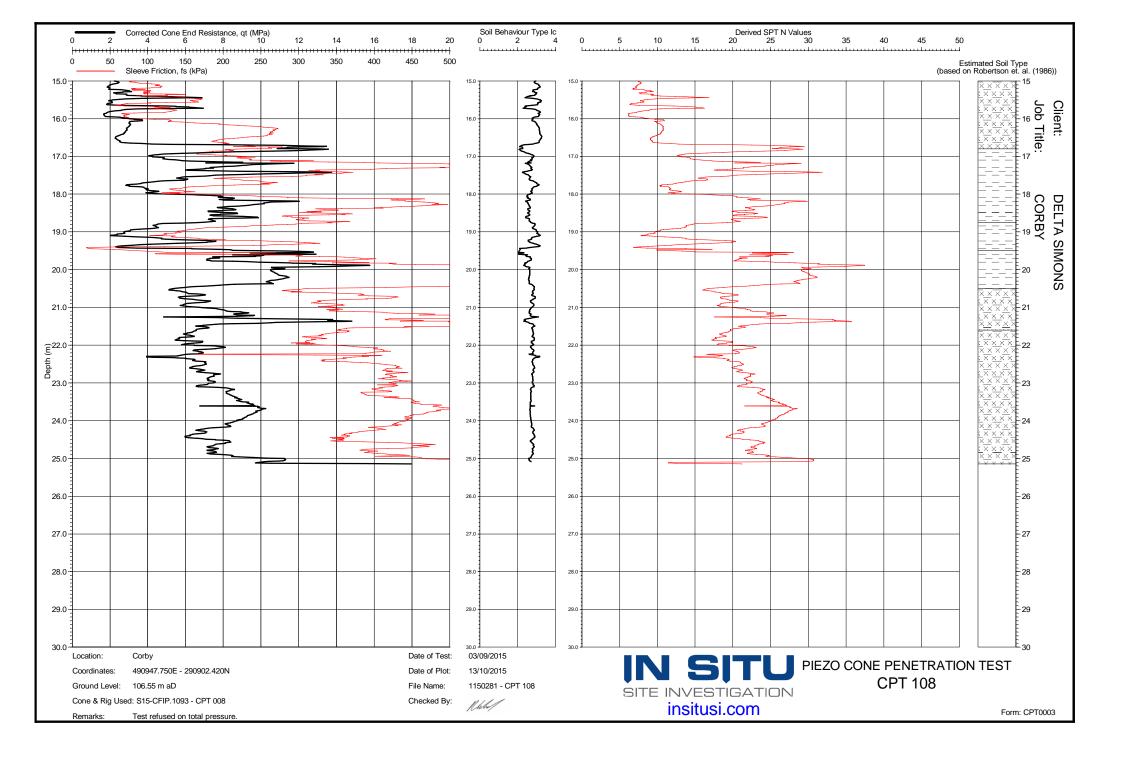


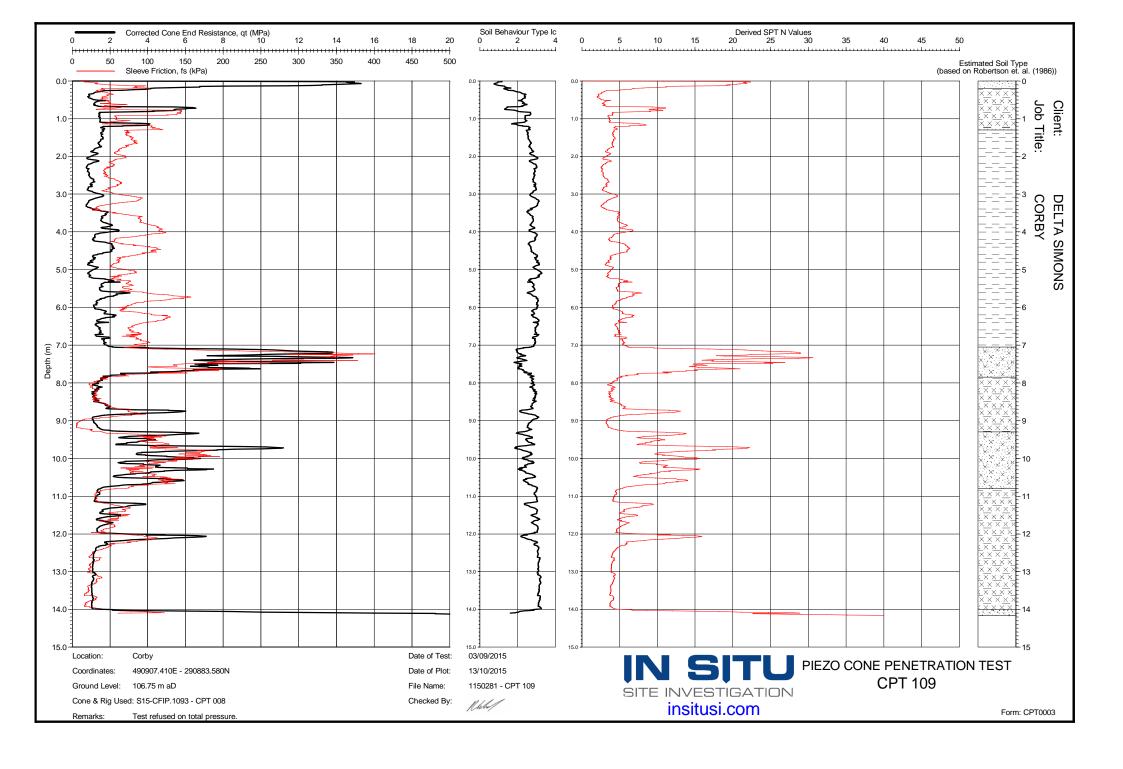


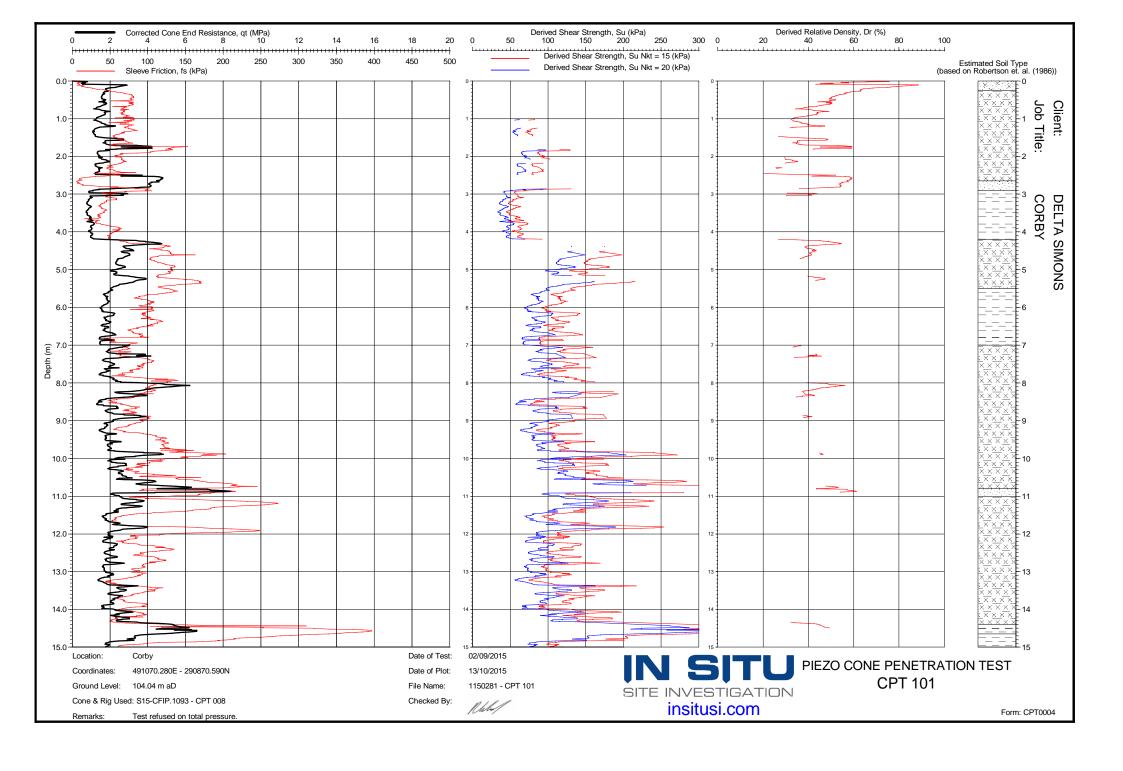


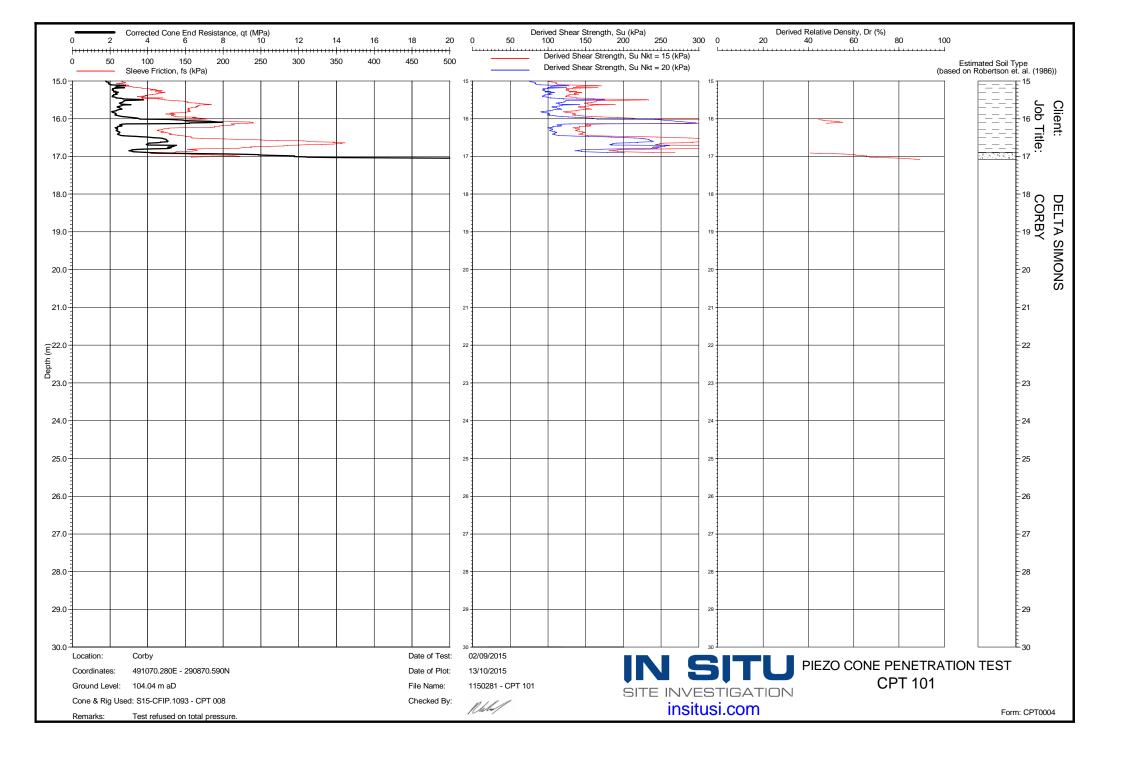


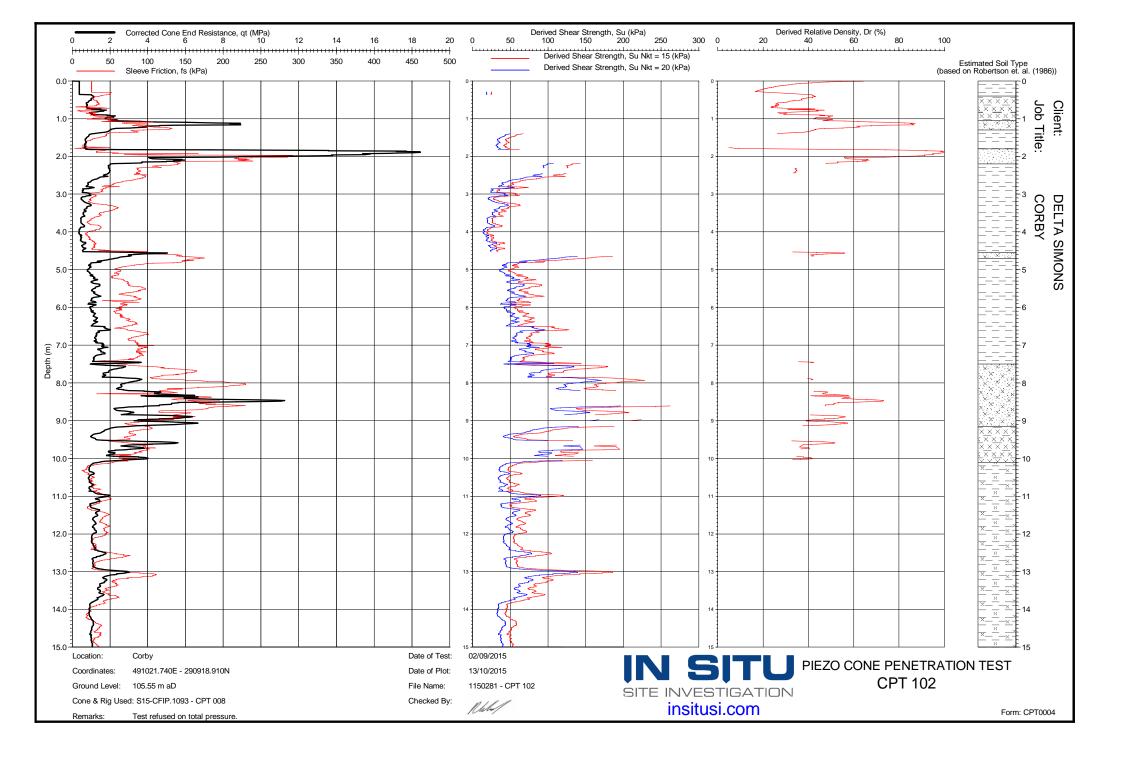


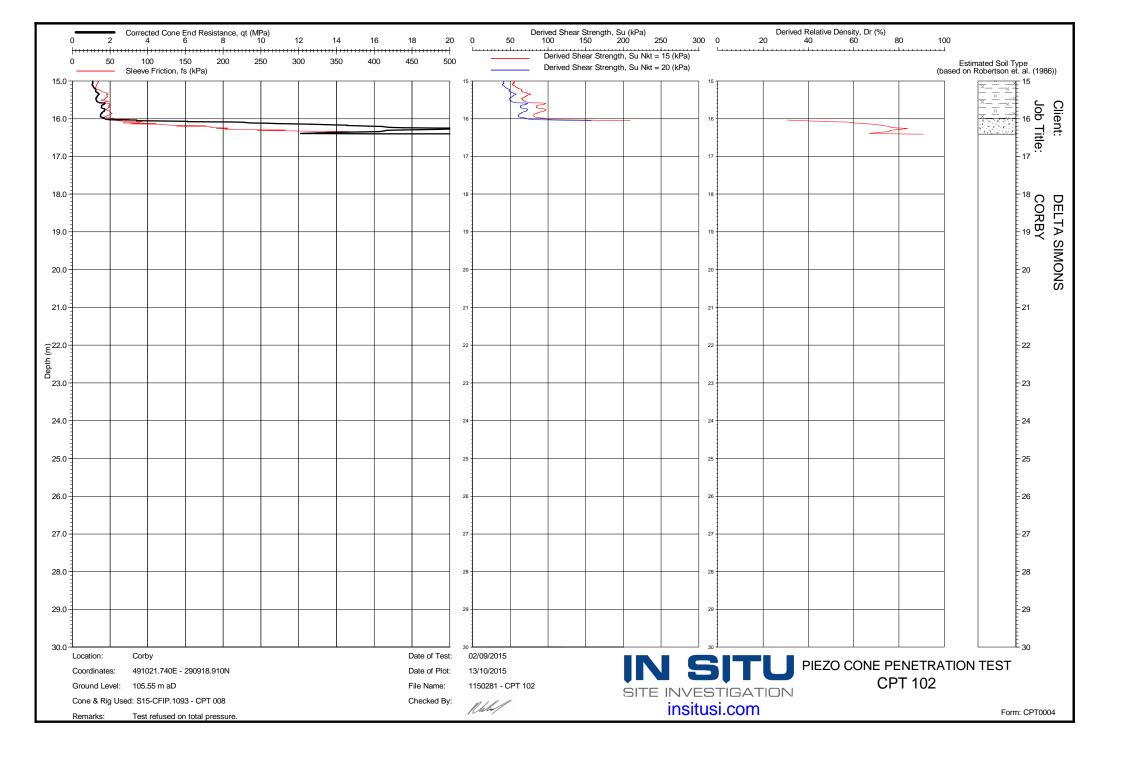


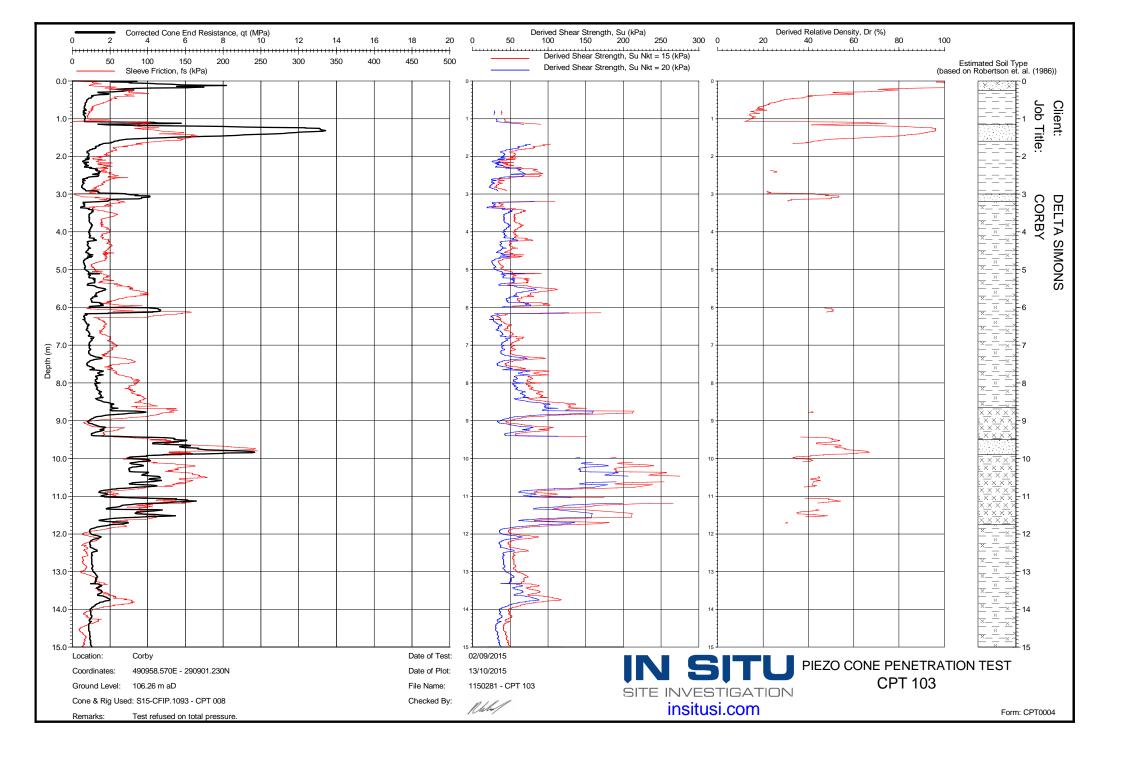


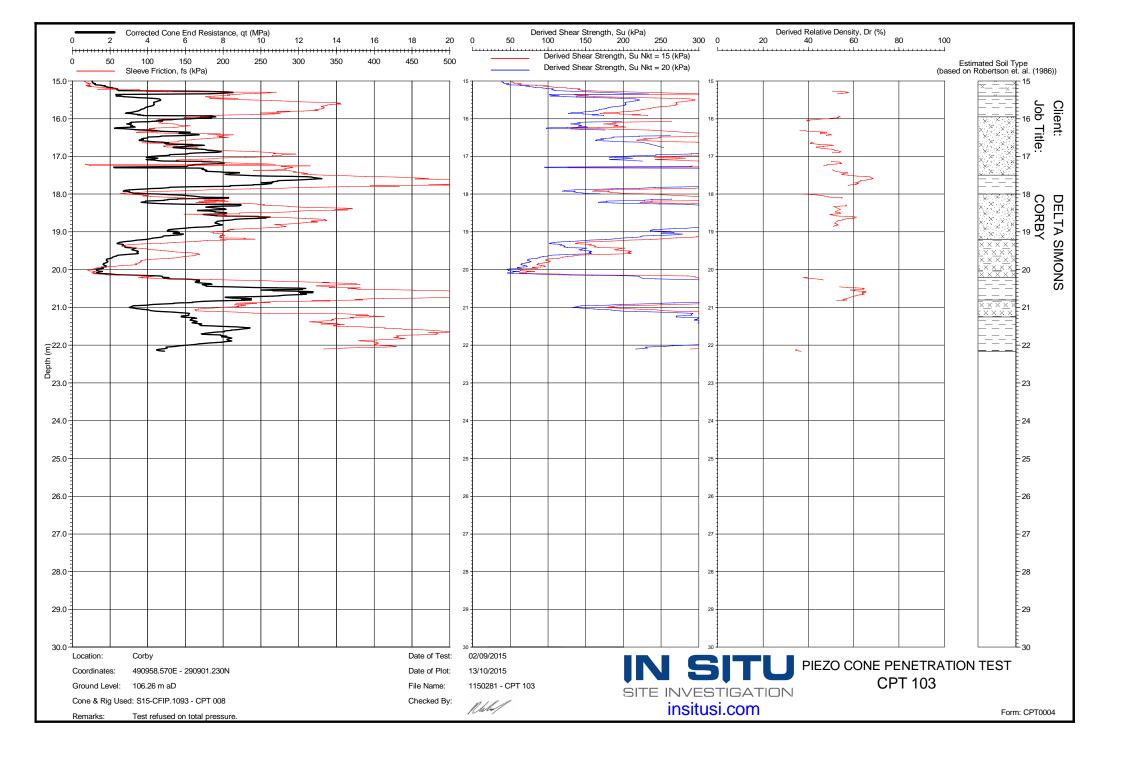


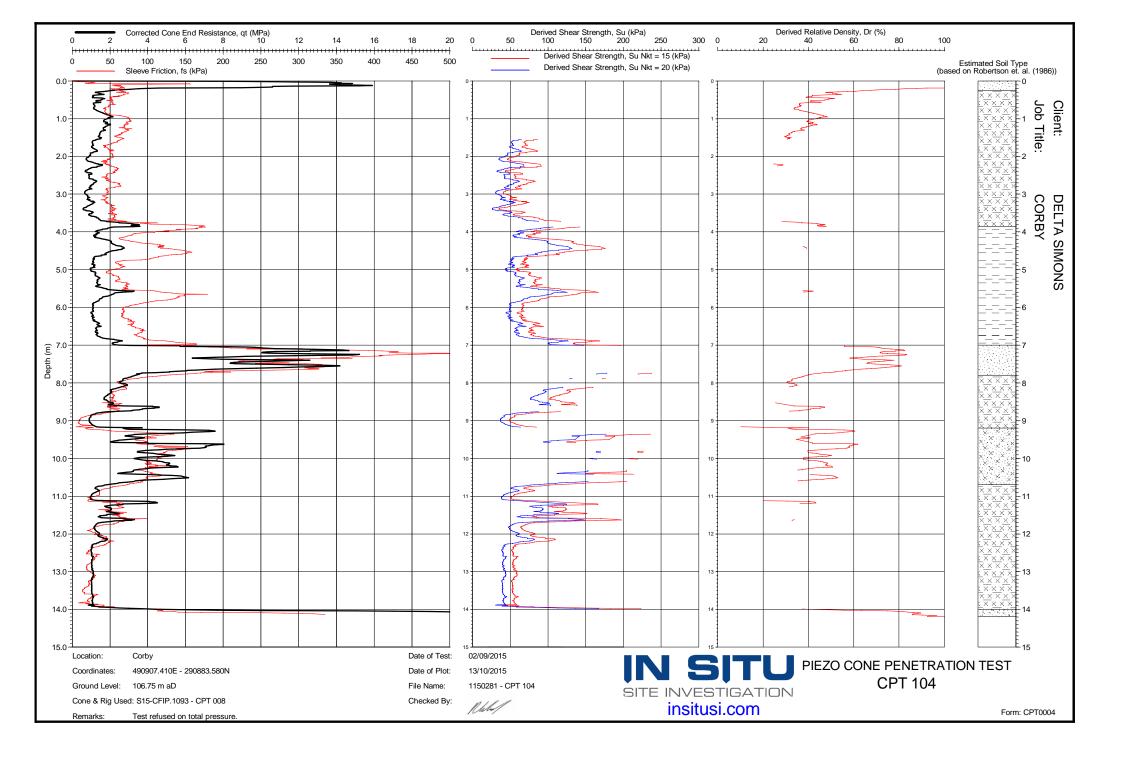


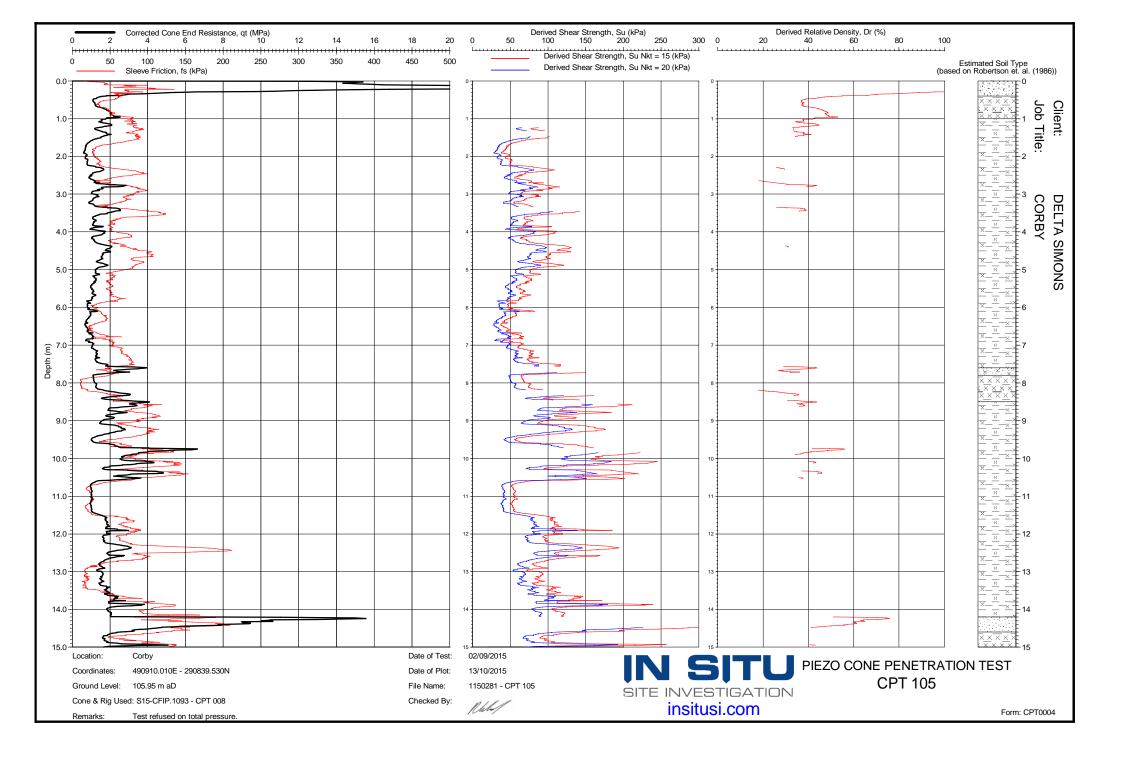


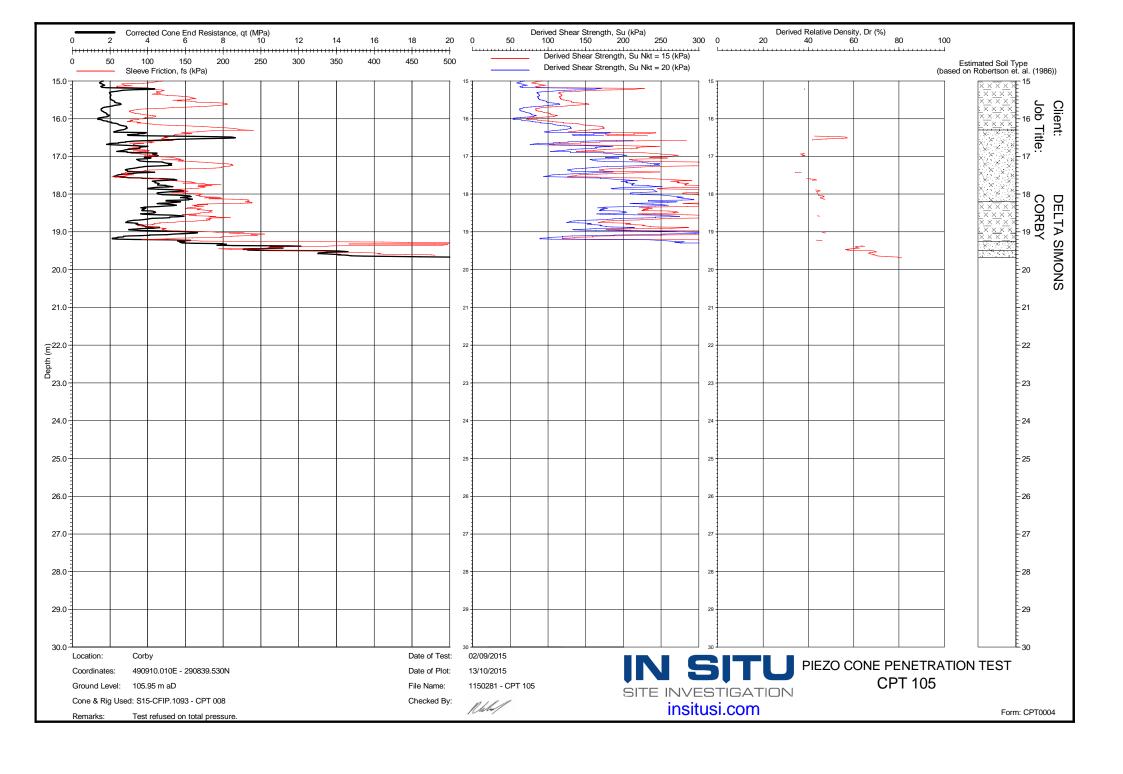


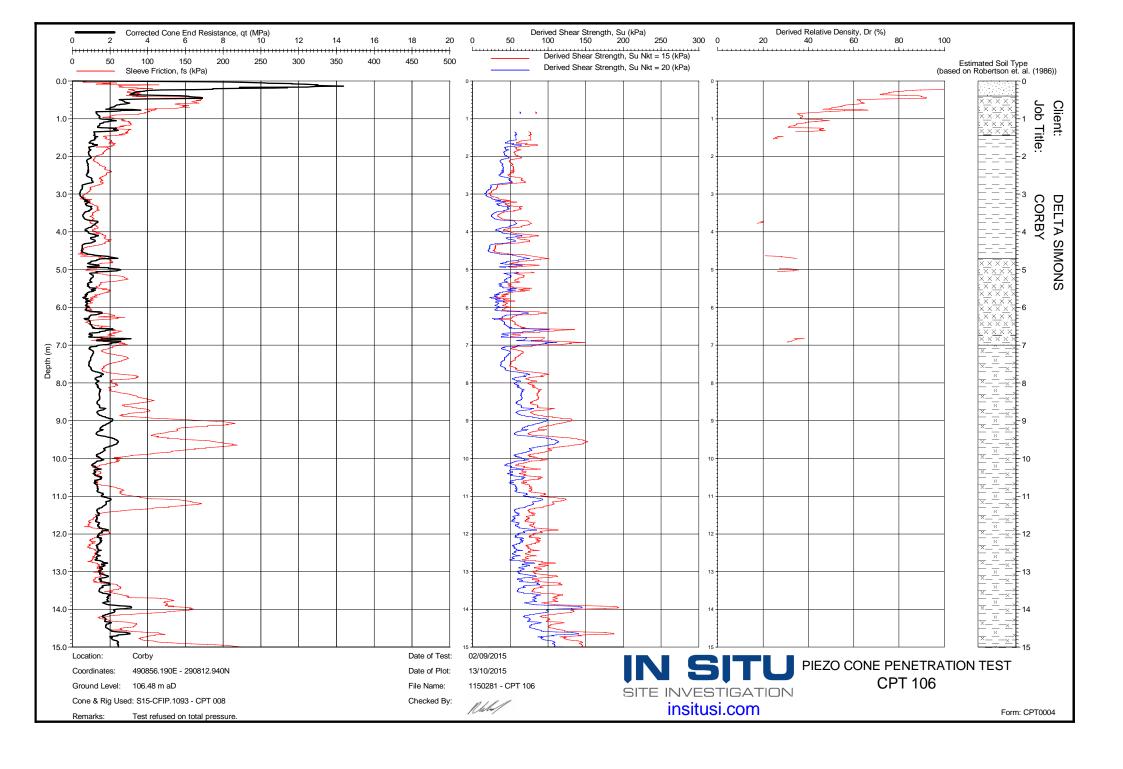


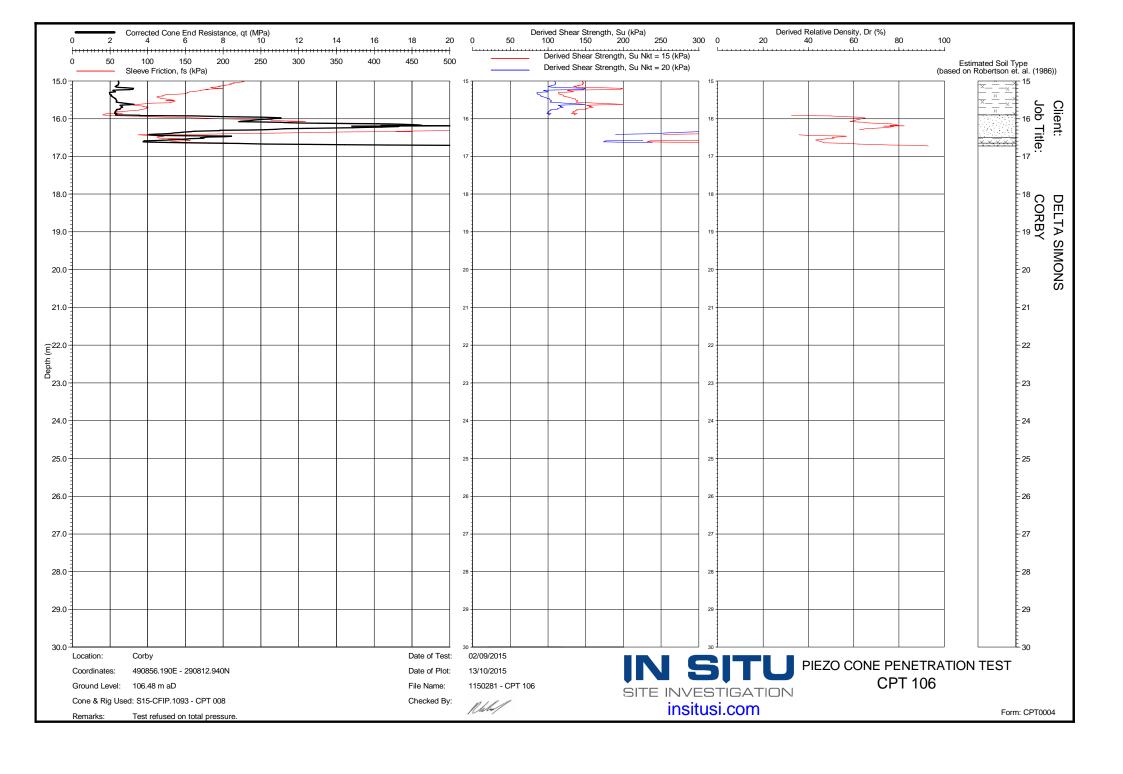


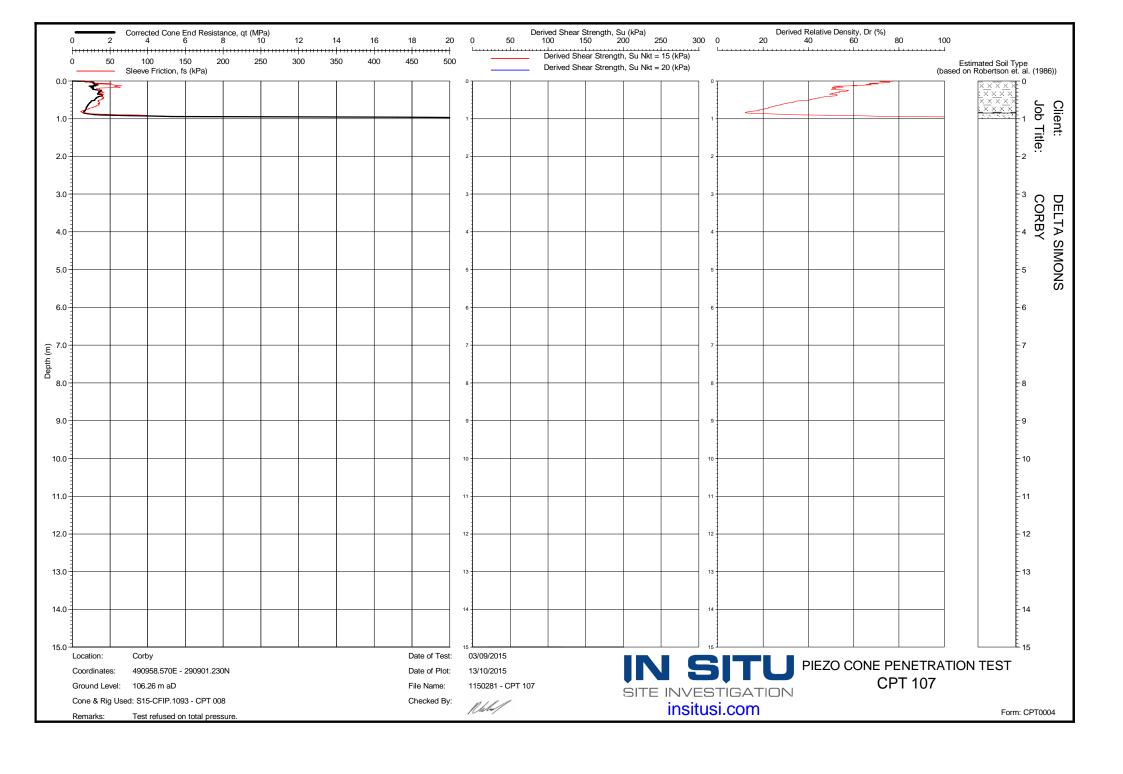


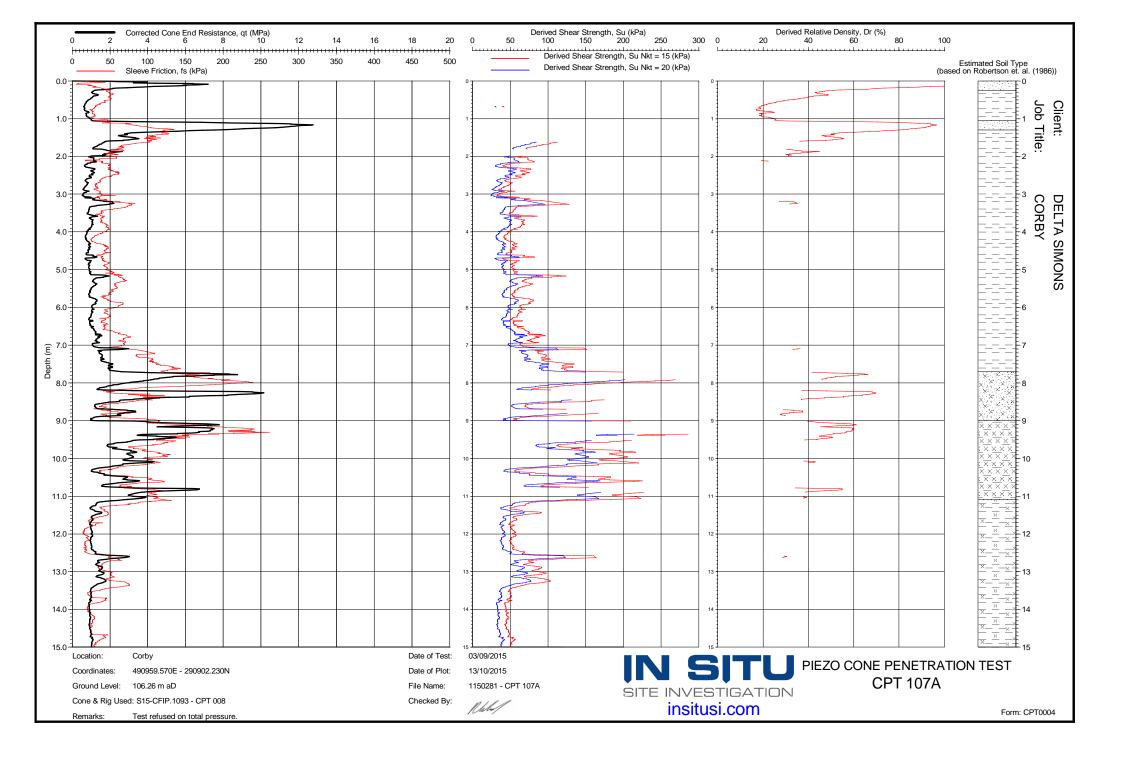


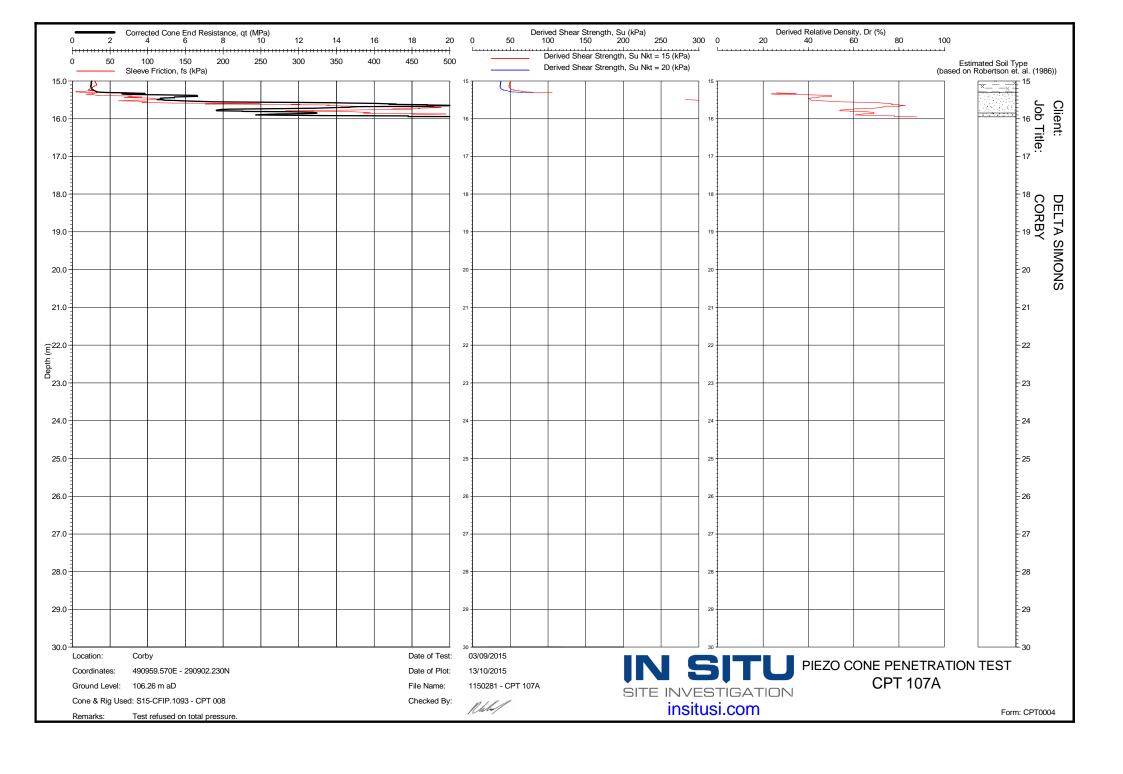


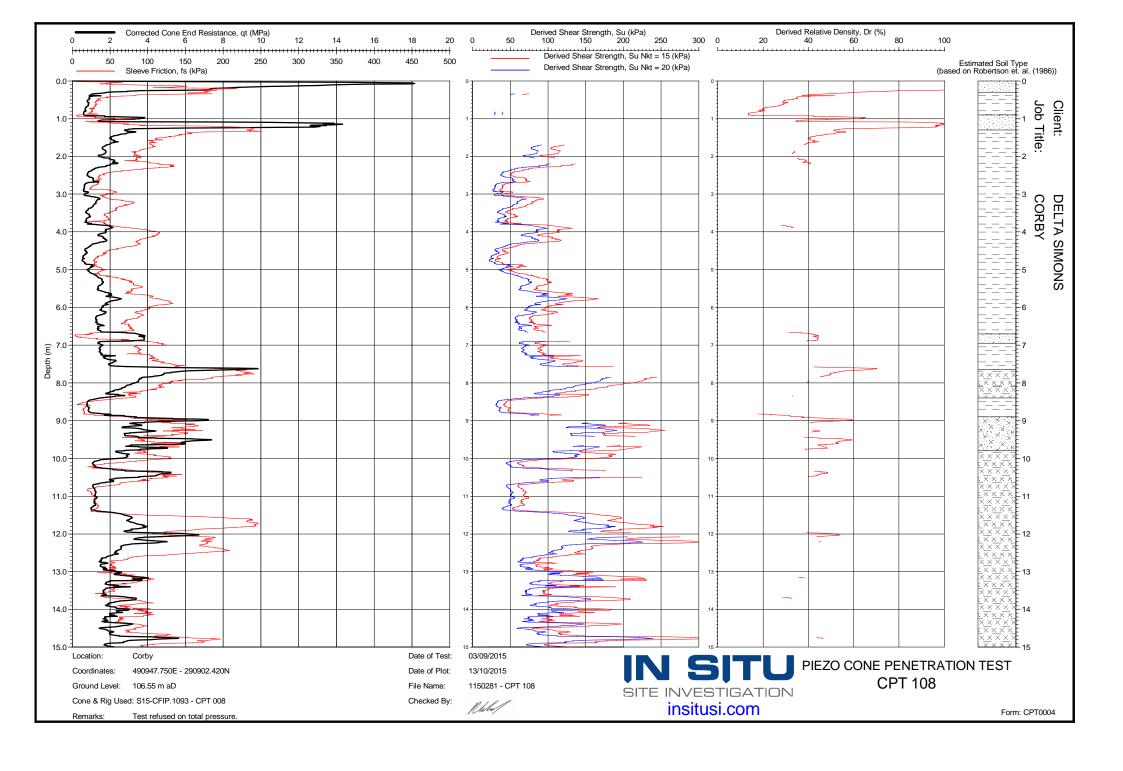


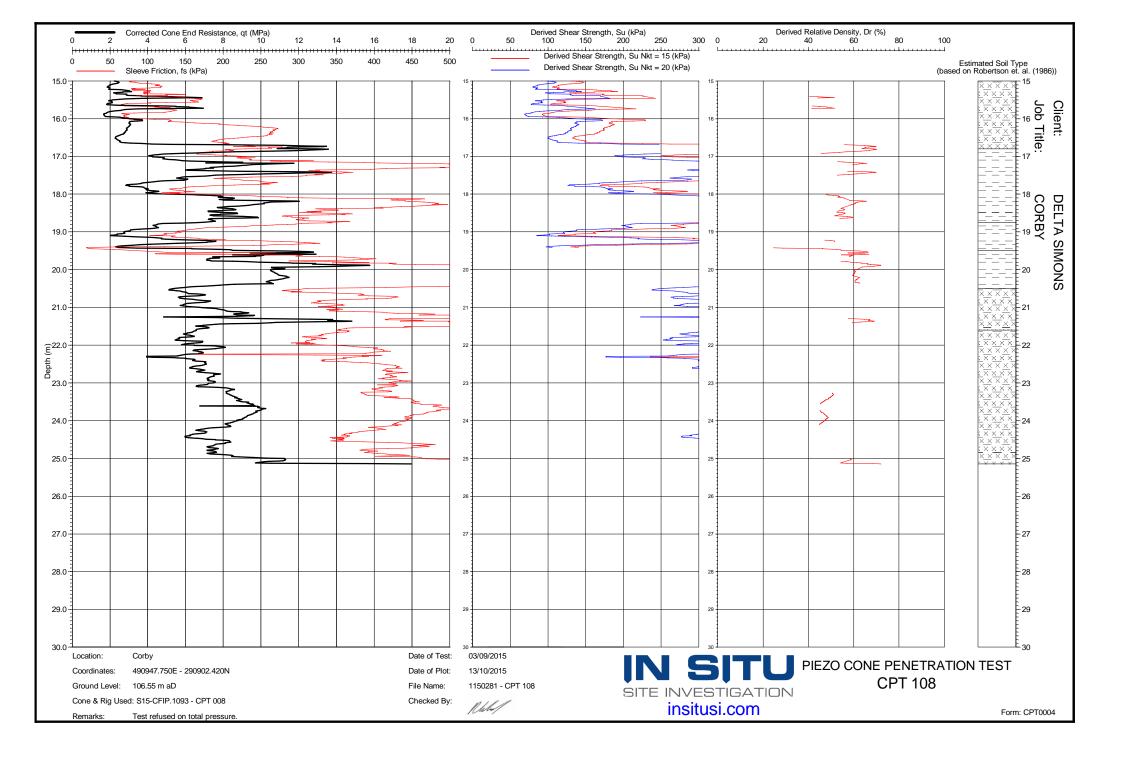


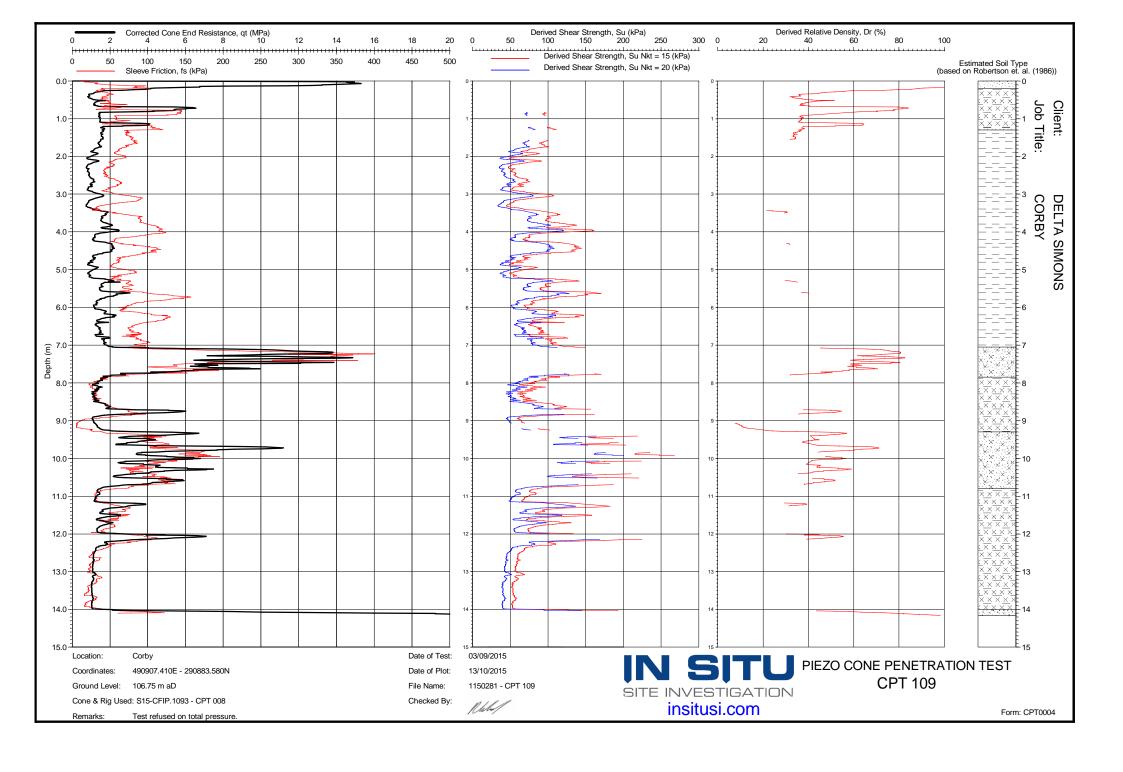


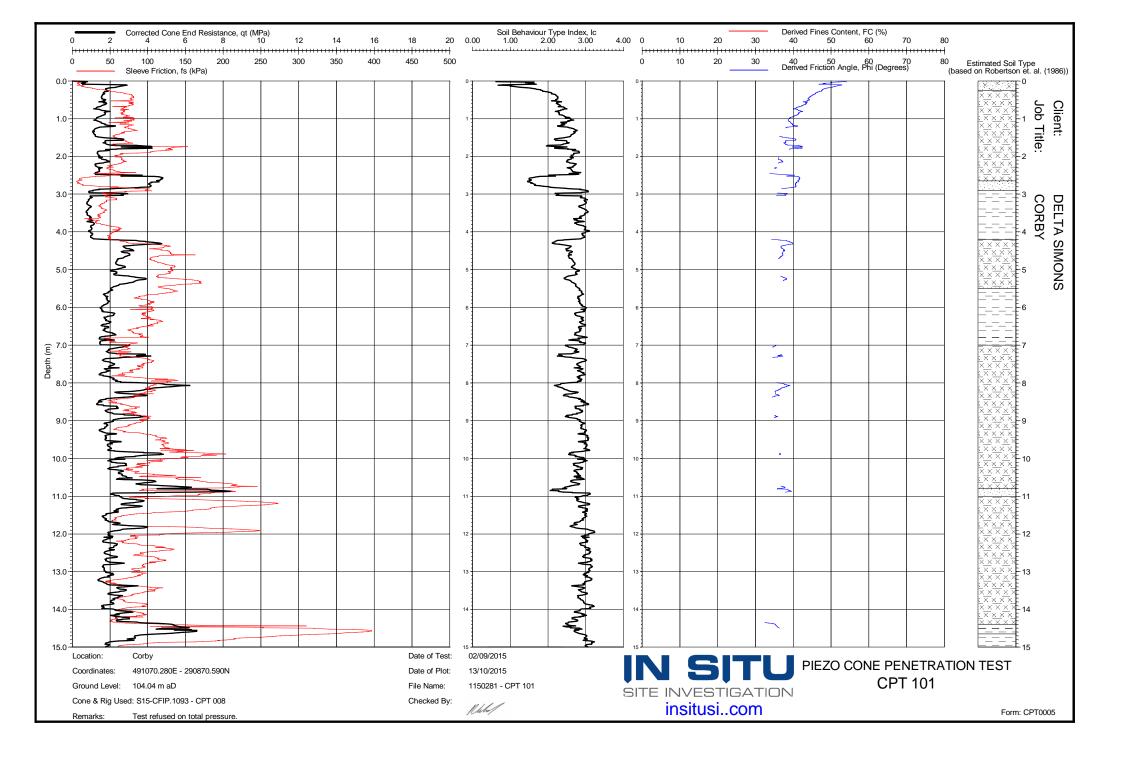


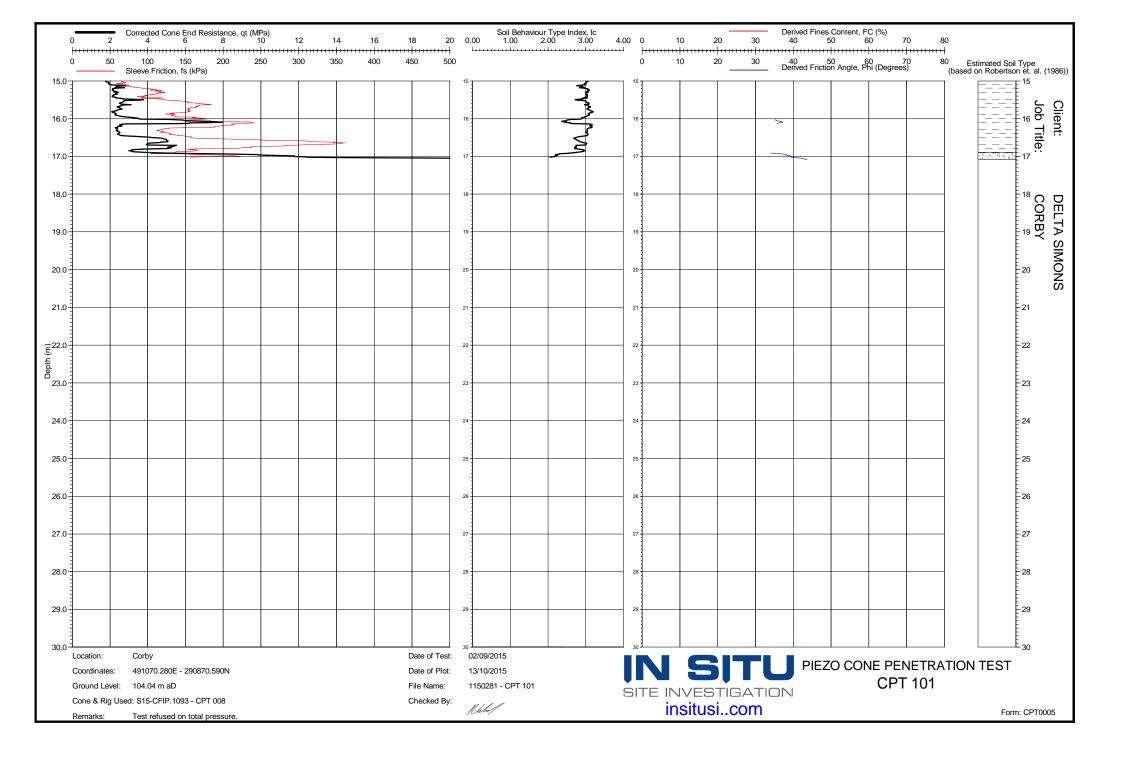


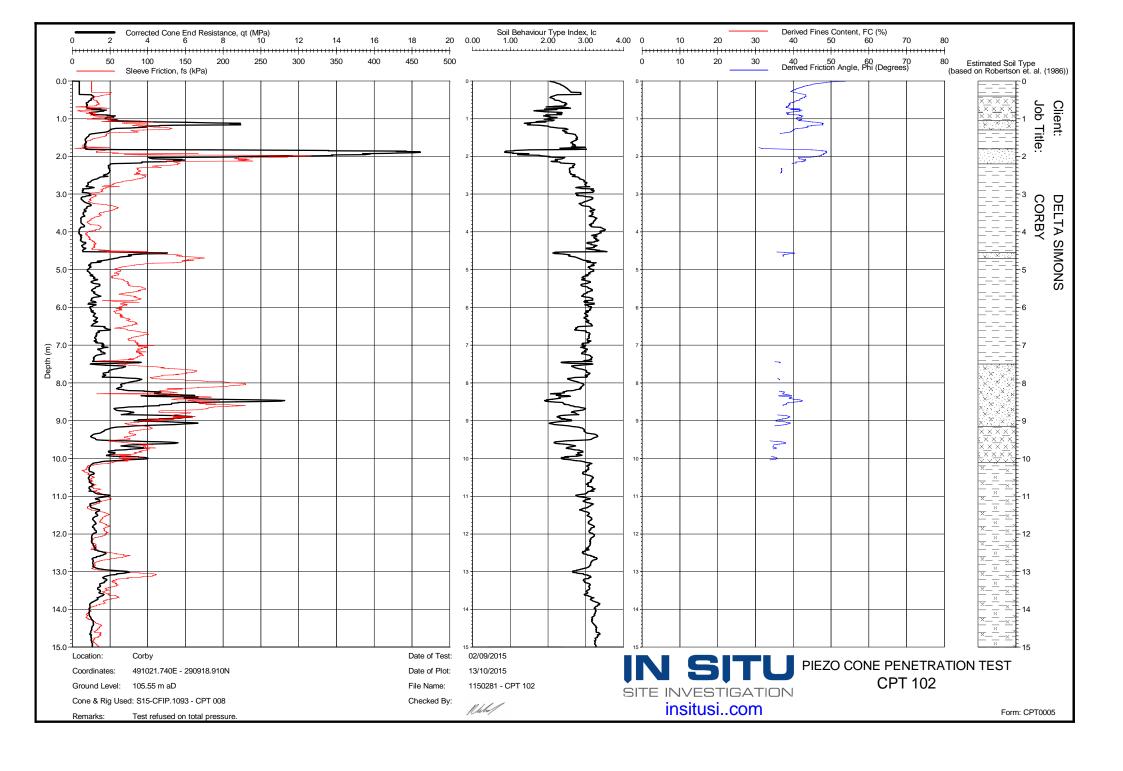


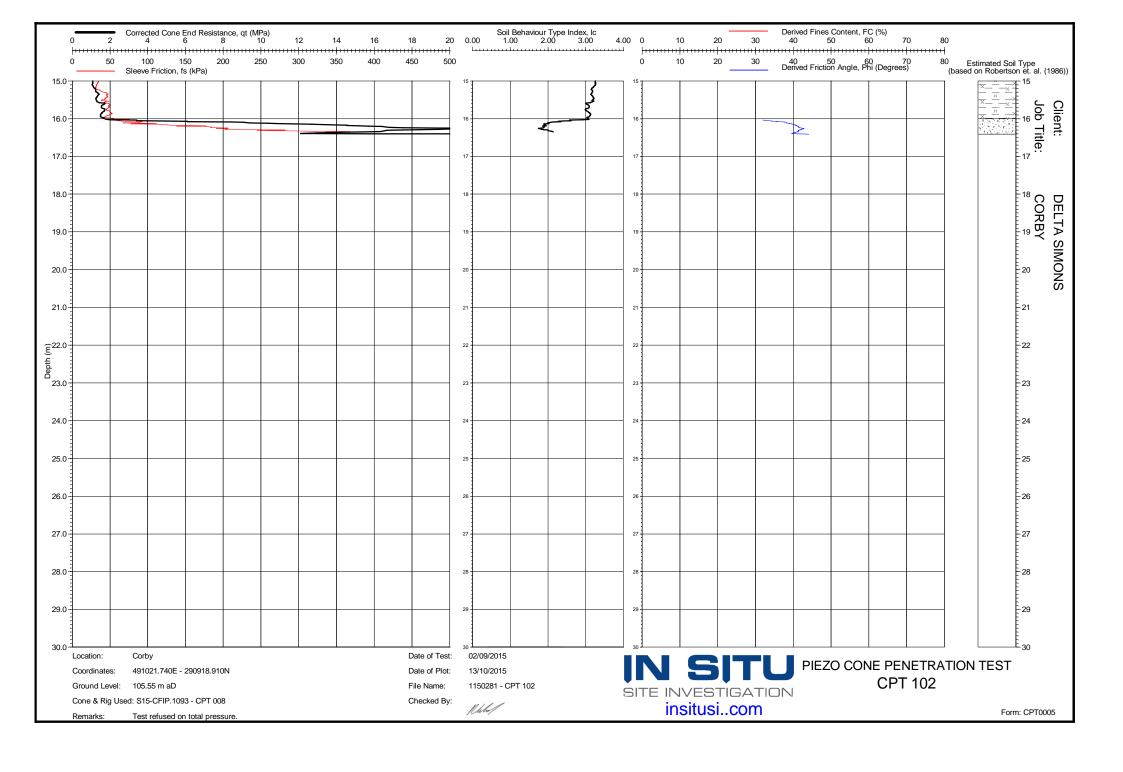


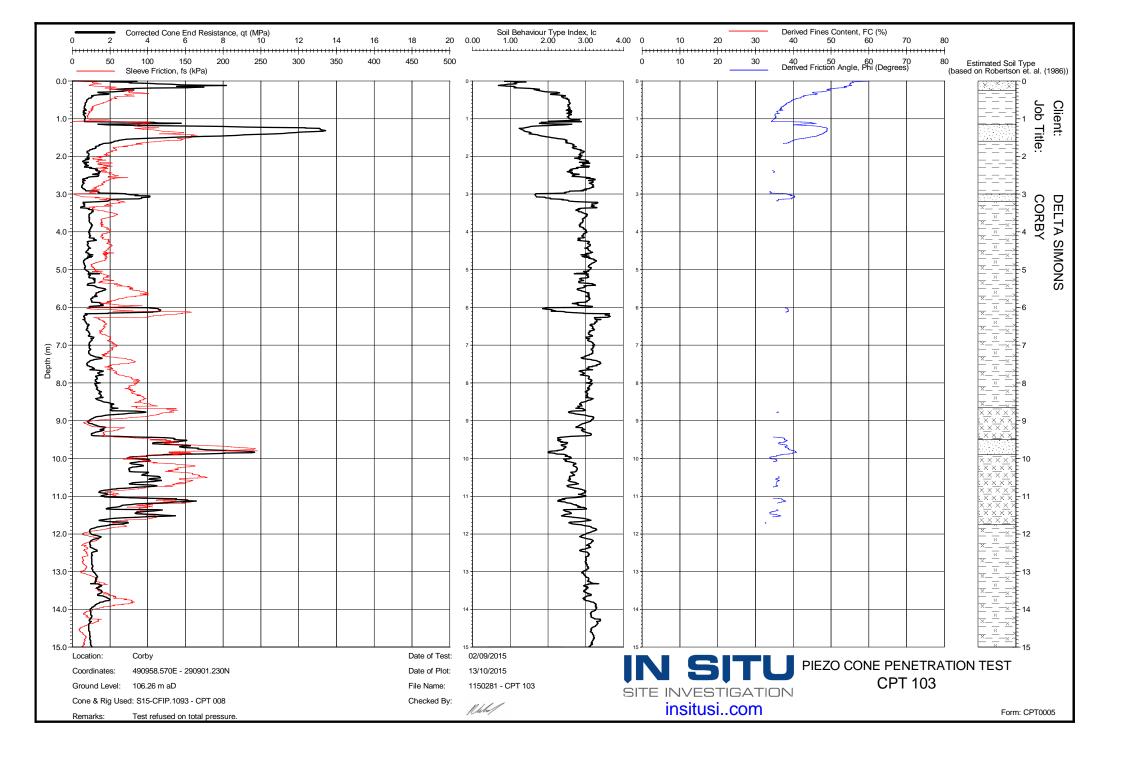


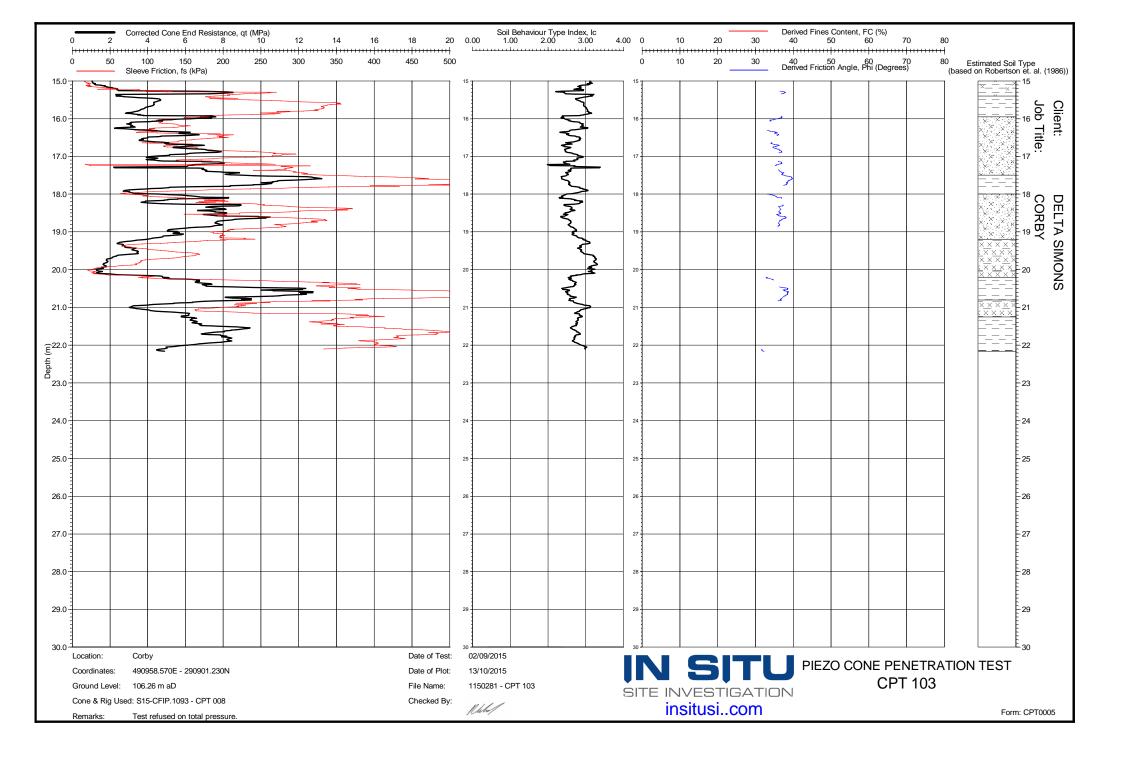


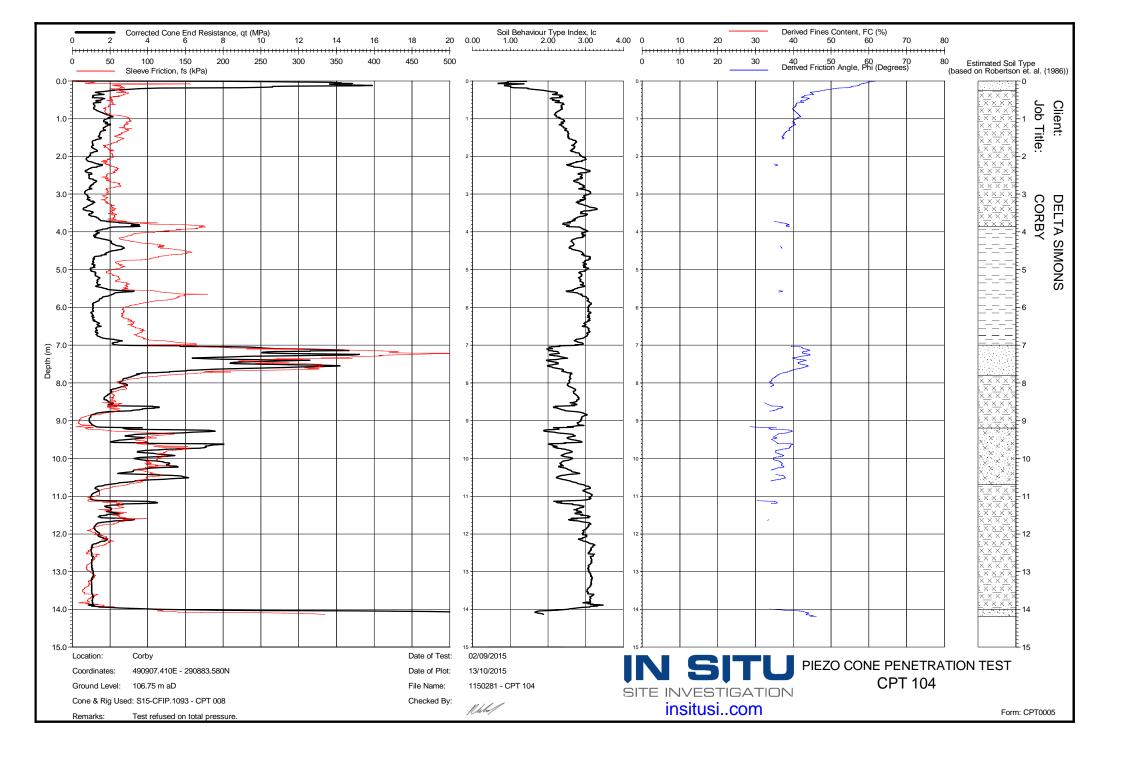


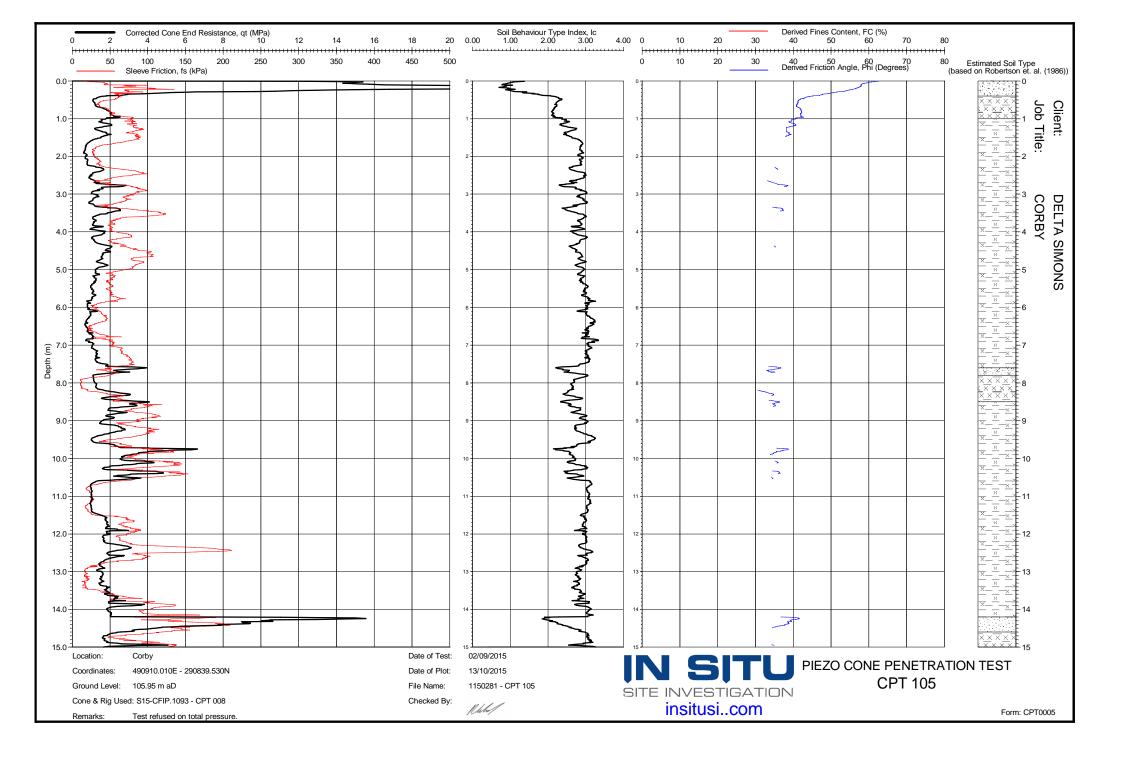


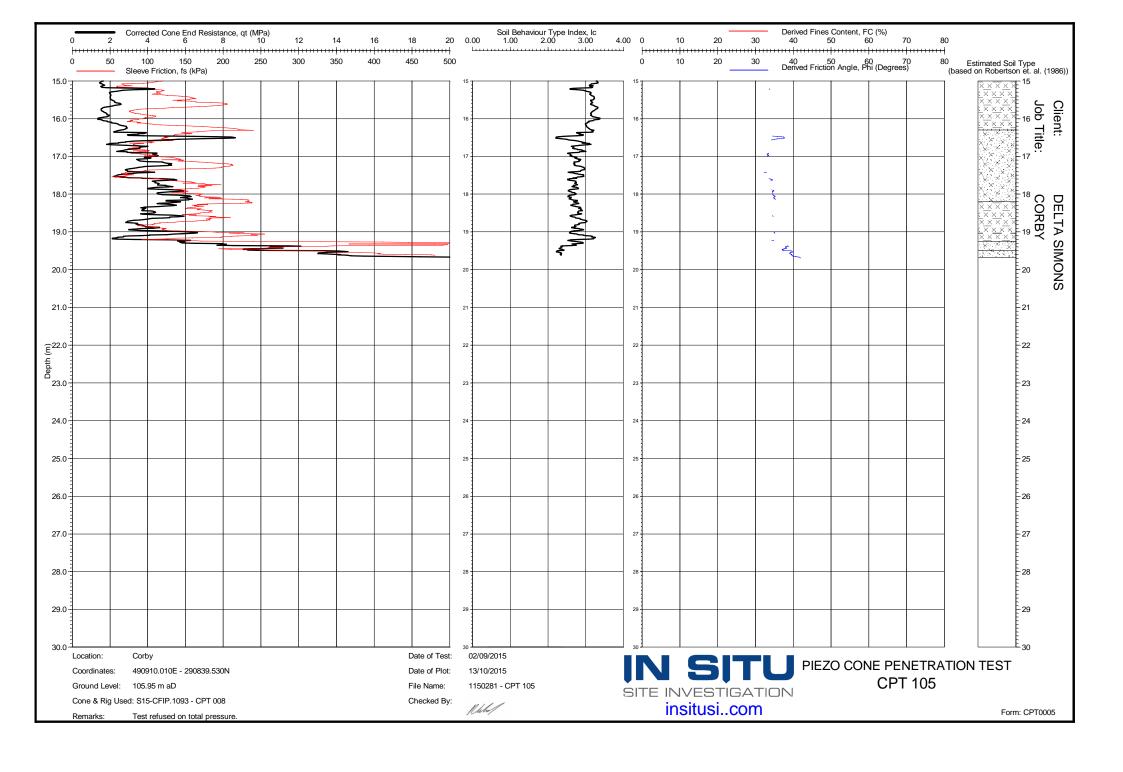


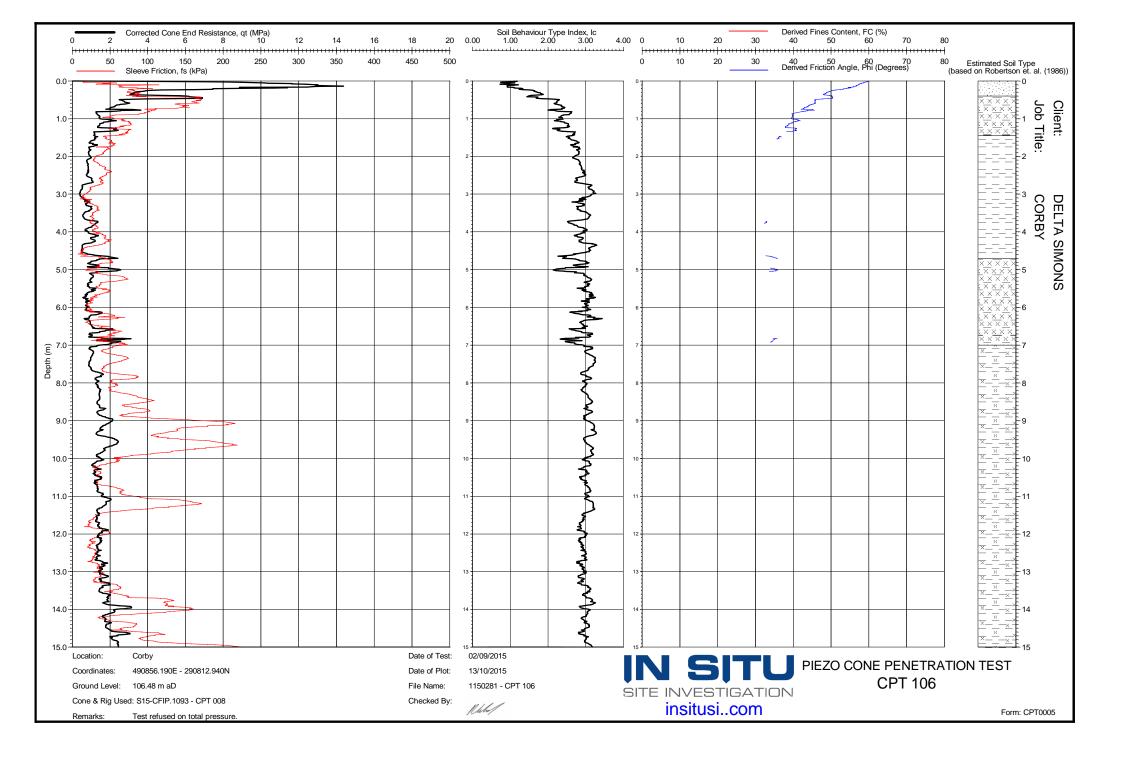


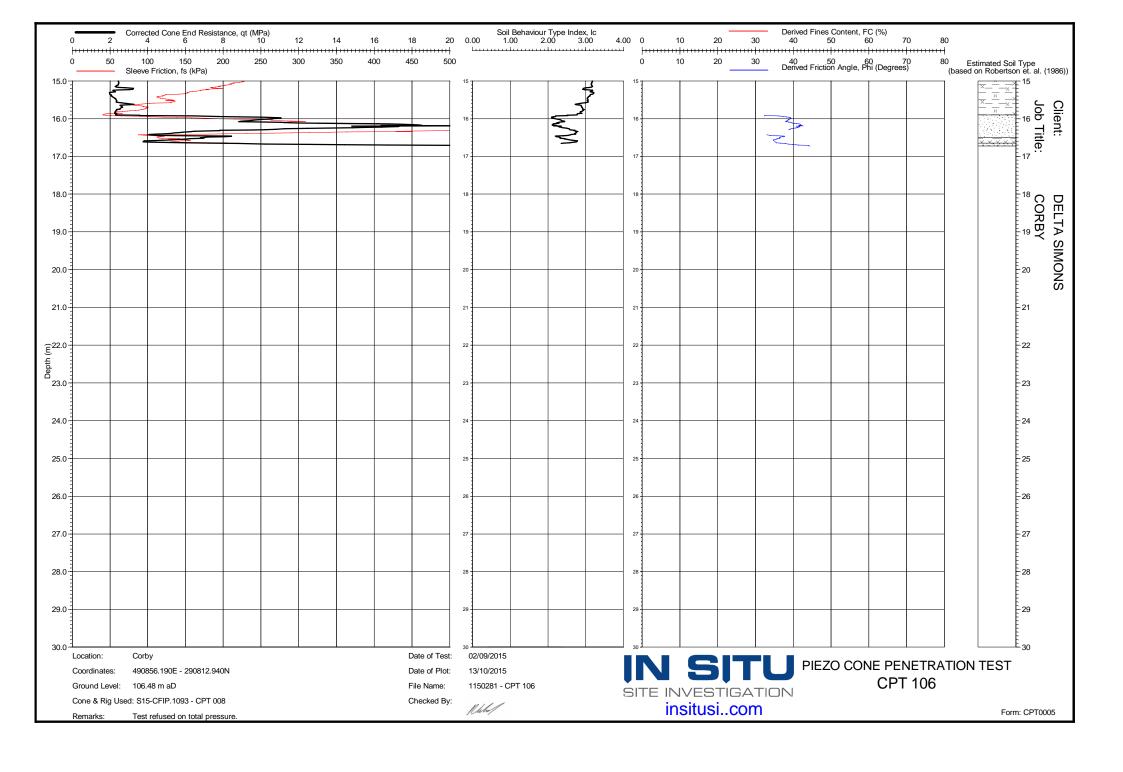


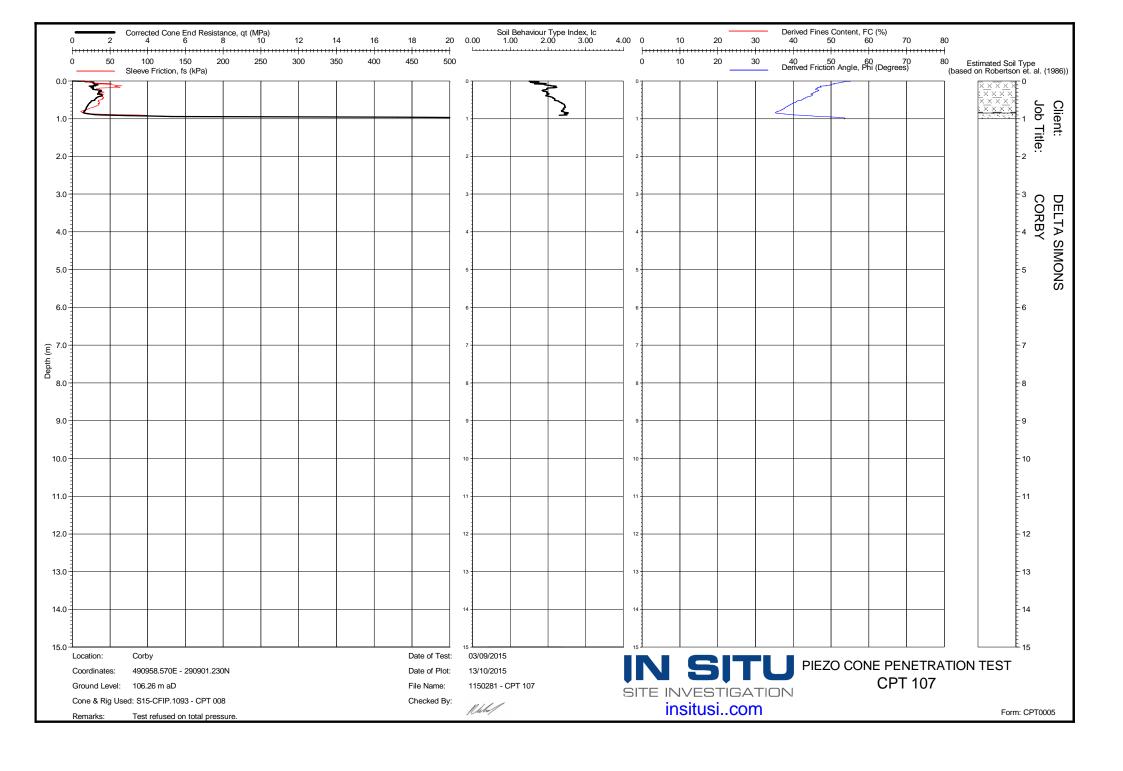


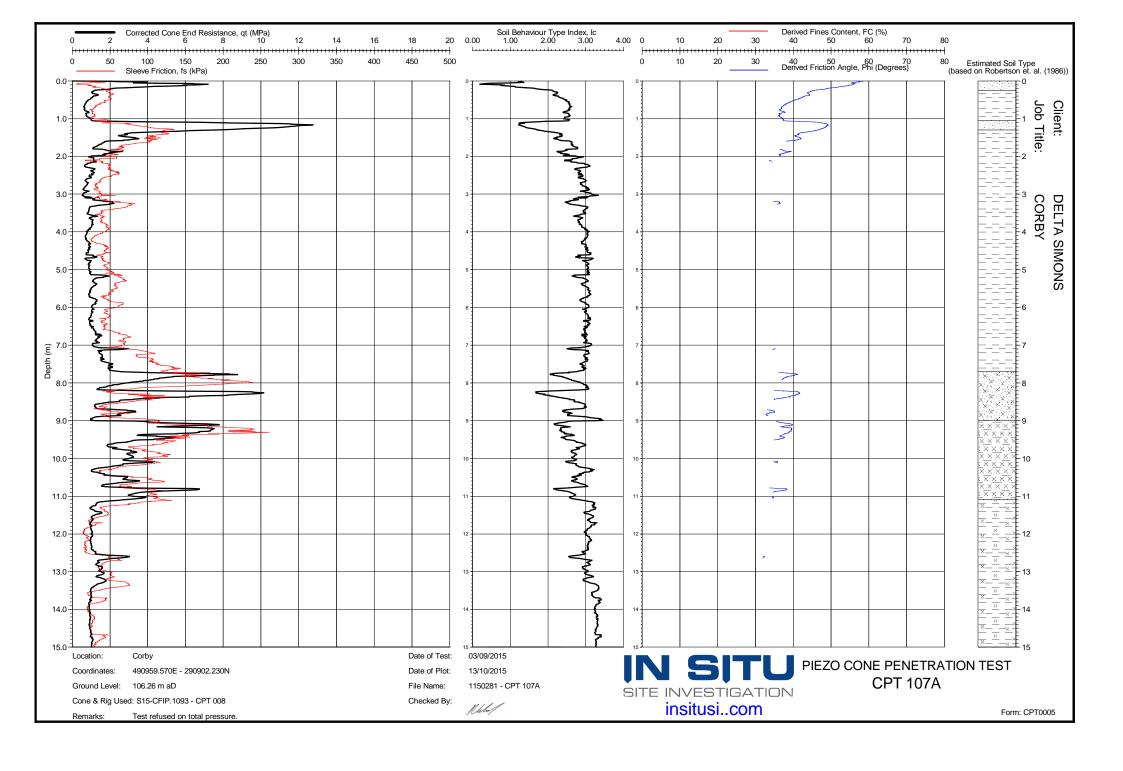


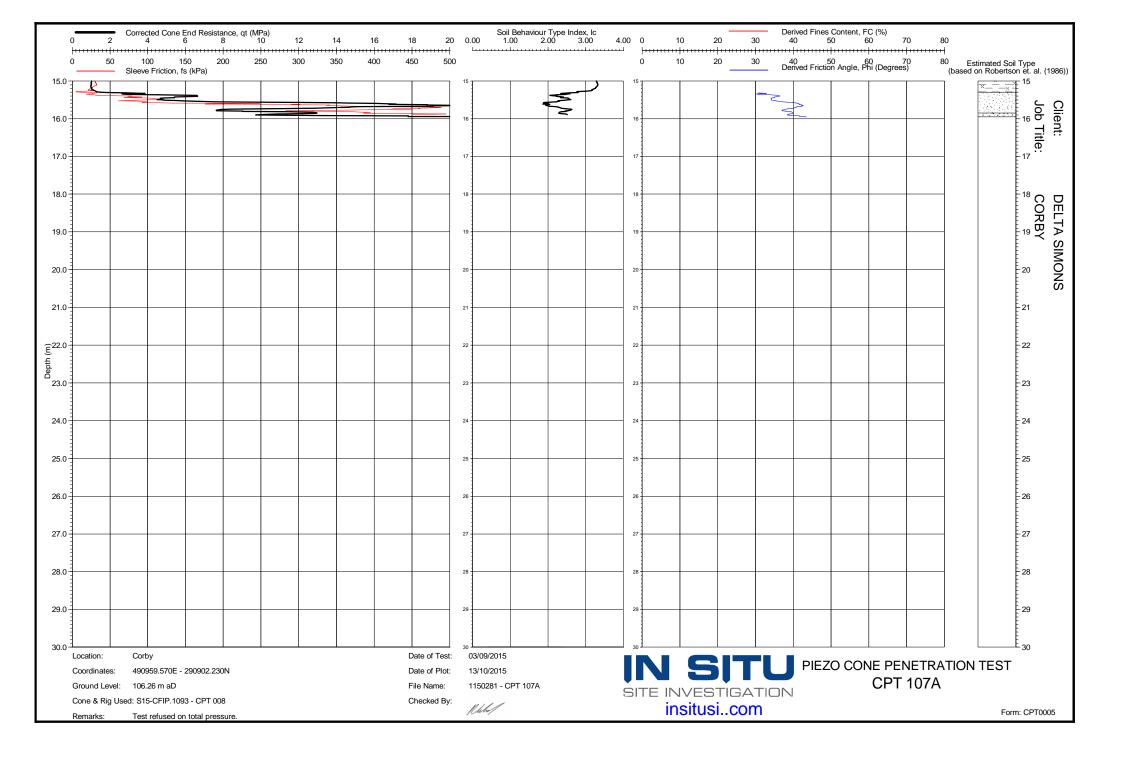


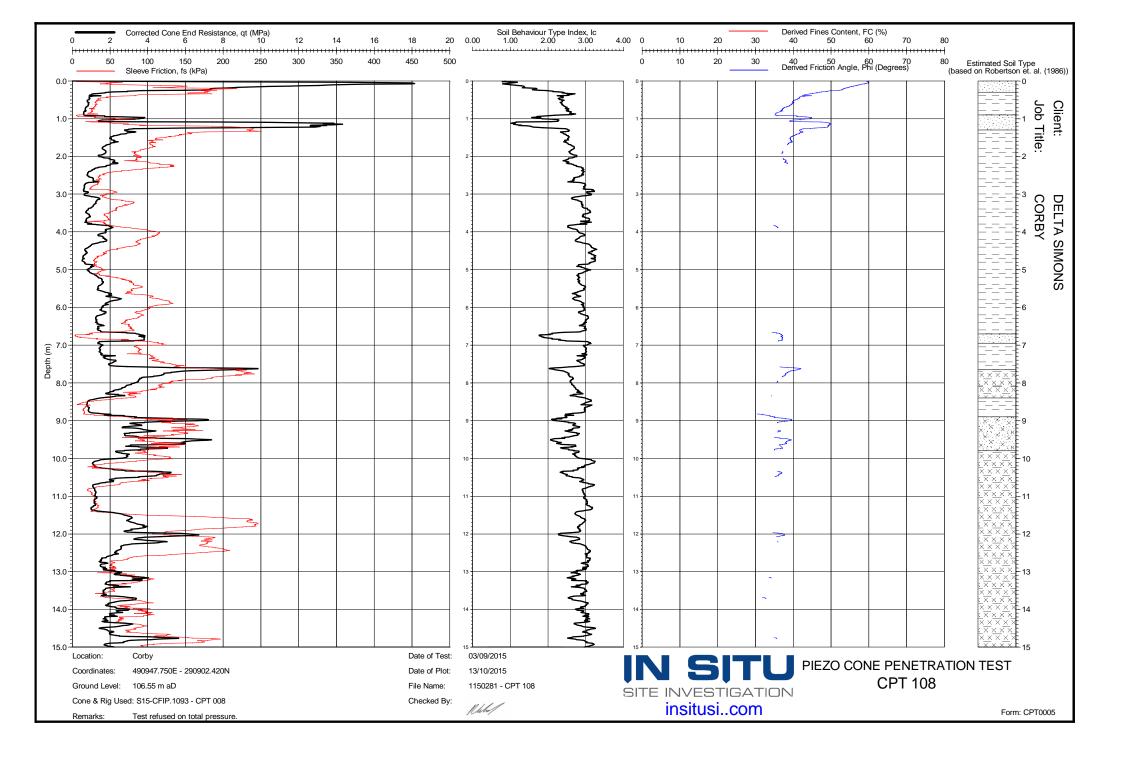


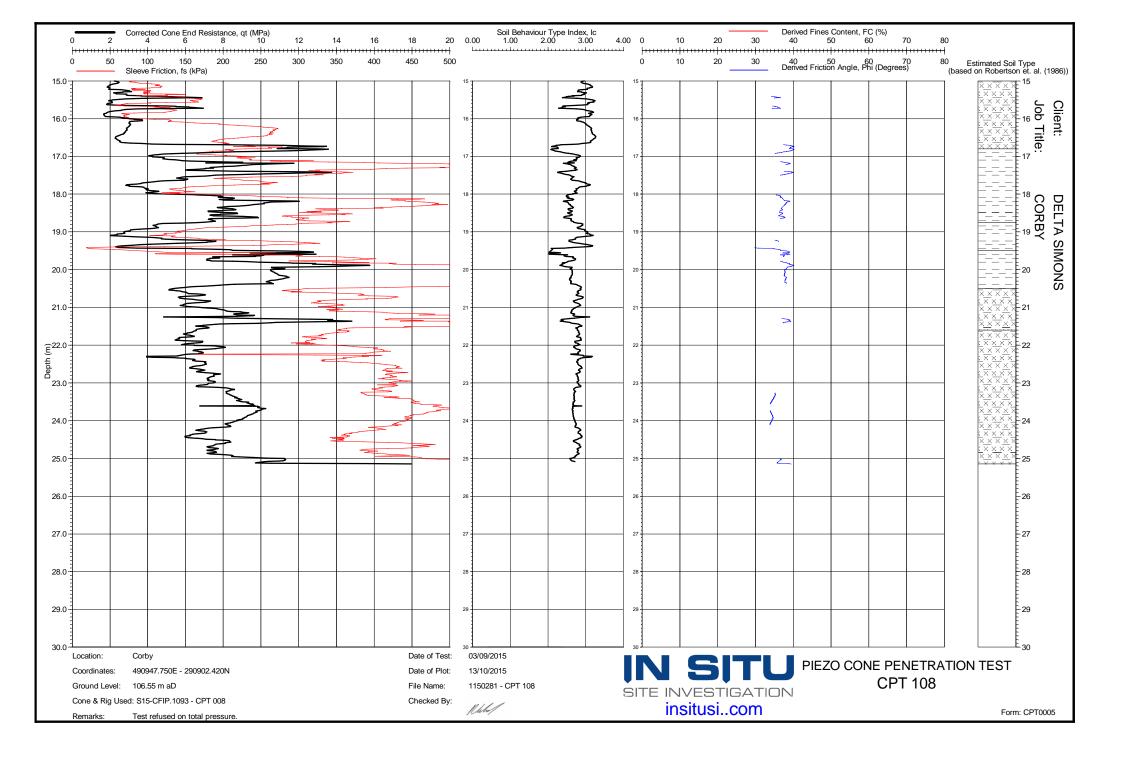


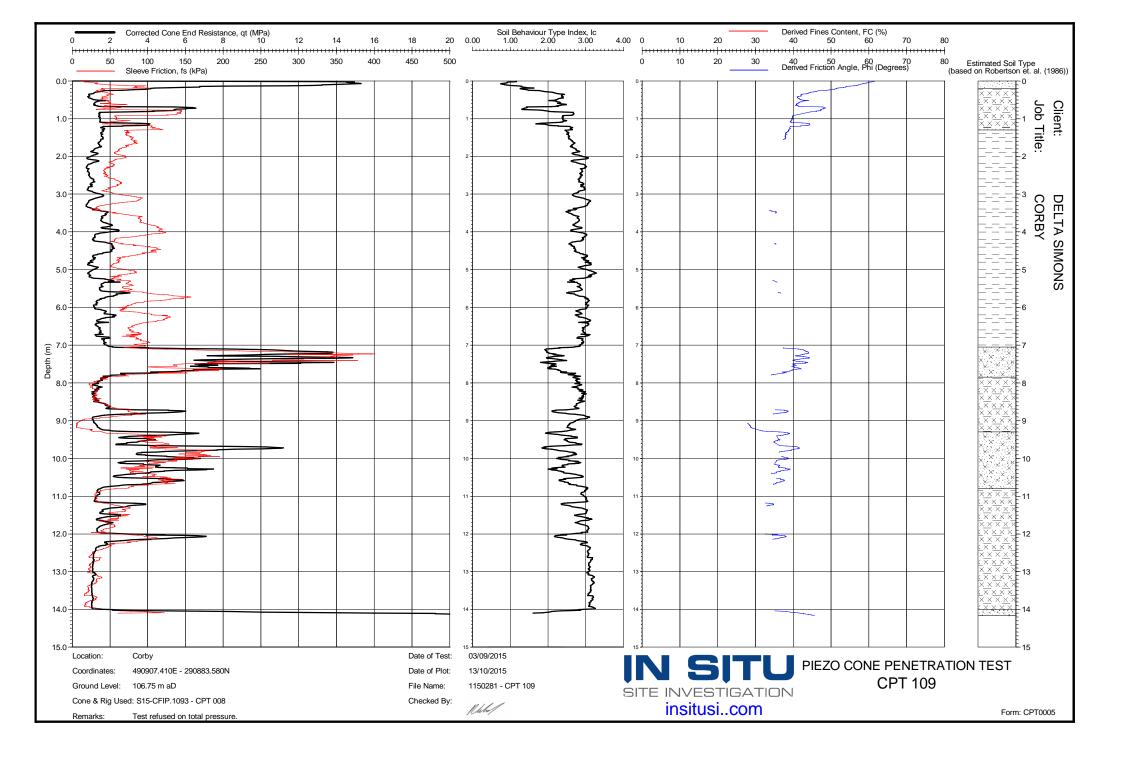


















#### LABORATORY REPORT



4043

Contract Number: PSL15/4533

Client's Reference: 15-0645.02 Report Date: 29 September 2015

Client Name: Delta Simons

3 Henley Office Park Doddington Road

Lincoln LN6 3QR

For the attention of: Stacey Ragsdale

Contract Title: Shelton Road, Corby

Date Received: 15/09/2015
Date Commenced: 15/09/2015
Date Completed: 29/09/2015

Notes: Opinions and Interpretations are outside the UKAS Accreditation

A copy of the Laboratory Schedule of accredited tests as issued by UKAS is attached to this report. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced in full, without the prior written approval of the laboratory.

#### Checked and Approved Signatories:

R Gunson A Watkins M Beastall (Director) (Director) (Laboratory Manager)

Du

D Lambe S Royle

(Senior Technician) (Senior Technician)

5 – 7 Hexthorpe Road, Hexthorpe,

Doncaster DN4 0AR

tel: +44 (0)844 815 6641 fax: +44 (0)844 815 6642

e-mail: rgunson@prosoils.co.uk awatkins@prosoils.co.uk Page 1 of

### SUMMARY OF LABORATORY SOIL DESCRIPTIONS

Hole Number	Sample Number	Sample Type	Depth m	Description of Sample
BH101		В	1.00-1.50	Brown gravelly very sandy silty CLAY.
BH101		U	2.50	Stiff brown gravelly sandy silty CLAY.
BH101		В	11.00-11.50	Brown mottled grey slightly gravelly very sandy silty CLAY.
BH101		U	13.50	Firm brown slightly gravelly sandy silty CLAY.
BH102		D	2.20	Dark brown slightly gravelly very sandy silty CLAY.
BH102		D	11.50	Dark brown silty CLAY with some organic material.
BH102		В	12.00-12.50	Dark grey slightly gravelly very sandy silty CLAY.
BH102		D	14.50	Dark brown silty CLAY with some organic material.
BH103		В	0.50-1.00	Brown very sandy very clayey silty GRAVEL.
BH103		В	3.50-4.00	Brown mottled grey gravelly sandy silty CLAY.
BH103		U	4.50	Firm brown very gravelly very sandy silty CLAY.
BH103		U	16.50	Soft brown slightly gravelly sandy silty CLAY.
BH104		D	3.00	Dark brown slightly gravelly sandy silty CLAY.
BH104		В	10.50-11.00	Brown mottled grey gravelly sandy silty CLAY.
BH105		U	3.50-3.95	Brown slightly gravelly sandy silty CLAY.
BH105		U	12.00-12.45	Brown gravelly sandy silty CLAY.
BH106		В	1.00-1.50	Brown gravelly very sandy silty CLAY.
BH106		D	3.00	Brown slightly gravelly sandy silty CLAY.
BH106		В	4.50-5.00	Brown gravelly very sandy silty CLAY.



Compiled by Date		Checked by	Date	e Approved by	
29/09/15		Bu	29/09/15	Du	29/09/15
CIII	ELTON RO	Contract No:	PSL15/4533		
SIII	ELION K	Client Ref:	15-0645.02		

### SUMMARY OF LABORATORY SOIL DESCRIPTIONS

Hole Number	Sample Number	Sample Type	Depth m	Description of Sample			
BH106		U	7.50-7.95	Brown gravelly very sandy silty CLAY.			
BH106		D	10.00	Dark brown silty CLAY with some organic material.			
BH106		D	11.50	Dark grey gravelly sandy silty CLAY.			
BH106		U	13.50-13.95	Dark brown slightly sandy CLAY with some organic material.			
BH107		В	1.00-1.50	Grey gravelly very sandy silty CLAY.			
BH107		D	3.00	Brown gravelly sandy silty CLAY.			
BH107		D	11.50	Grey slightly gravelly very sandy silty CLAY.			
BH107		В	12.50-13.00	Frey slightly gravelly very sandy silty CLAY.			
BH107		U	16.50	Stiff brown slightly gravelly sandy silty CLAY.			
BH108		D	4.00	Brown slightly gravelly sandy silty CLAY.			
BH108		В	4.50-5.00	Brown gravelly sandy silty CLAY.			
BH108		D	8.00	Dark brown silty CLAY with some organic material.			
BH108		В	8.00-8.50	Grey slightly gravelly very sandy silty CLAY.			
BH108		U	13.50	Soft brown slightly very sandy silty CLAY.			
BH109		В	3.50-4.00	Brown gravelly very sandy silty CLAY.			
BH109		D	9.00	Dark brown mottled grey slightly gravelly sandy silty CLAY.			
BH110		D	9.00	Dark brown silty CLAY with some organic material.			
R1		D	29.00	Dark grey slightly sandy silty CLAY.			
R2		D	20.80	Dark grey slightly sandy silty CLAY.			



Compiled by	Date	Checked by	Date	Approved by	Date
000	29/09/15	Bus	29/09/15	Du	29/09/15
CIII	ELTON RO	Contract No:	PSL15/4533		
SIII	ELION NO		Client Ref:	15-0645.02	

## SUMMARY OF LABORATORY SOIL DESCRIPTIONS

Hole Number	Sample Number	Sample Type	Depth m	Description of Sample
R3		D	23.50	Dark grey slightly sandy silty CLAY.
R4		D		Dark grey slightly sandy silty CLAY.

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Compiled by Date		Checked by Date		Approved by	Date
600	29/09/15	Du	29/09/15	Du	29/09/15
CIII	ELTON RO	Contract No:	PSL15/4533		
SHI	LLION KU		Client Ref:	15-0645.02	

# **SUMMARY OF SOIL CLASSIFICATION TESTS**

(B.S. 1377 : PART 2 : 1990)

	G 1	G 1	D 41	Moisture	Bulk	Dry	Particle	Liquid	Plastic	Plasticity	%	<i>p</i> ,
Hole	_	Sample	Depth	Content	Density	<b>Density</b>	Density 3	Limit	Limit	Index	Passing	Remarks
Number	Number	Type	m	%	Mg/m <sup>3</sup>	Mg/m <sup>3</sup>	Mg/m <sup>3</sup>	%	%	%	.425mm	
				Clause 3.2	Clause 7.2	Clause 7.2	Clause 8.2	Clause 4.3/4.4	Clause 5.3	Clause 5.4		
BH102		D	2.20	24				33	19	14	97	Low plasticity CL.
BH102		D	11.50	61				88	42	46	100	Very high plasticity MV.
BH102		D	14.50	64				86	41	45	100	Very high plasticity MV.
BH104		D	3.00	22				40	20	20	98	Intermediate plasticity CI.
BH106		D	3.00	20				37	19	18	95	Intermediate plasticity CI.
BH106		D	10.00	61				100	46	54	100	Extremely high plasticity ME.
BH107		D	3.00	16				40	20	20	90	Intermediate plasticity CI.
BH107		D	11.50	17				31	17	14	95	Low plasticity CL.
BH108		D	4.00	24				46	23	23	98	Intermediate plasticity CI.
BH108		D	8.00	50				81	40	41	100	Very high plasticity MV.
BH109		D	9.00	24				42	21	21	95	Intermediate plasticity CI.
BH110		D	9.00	61				89	42	47	100	Very high plasticity MV.
R1		D	29.00	13				48	23	25	100	Intermediate plasticity CI.
R2		D	20.80	15				50	24	26	100	Intermediate plasticity CI.
R3		D	23.50	19				51	24	27	100	High plasticity CH.
R4		D	25.00	18				60	28	32	100	High plasticity CH.

**SYMBOLS:** NP: Non Plastic

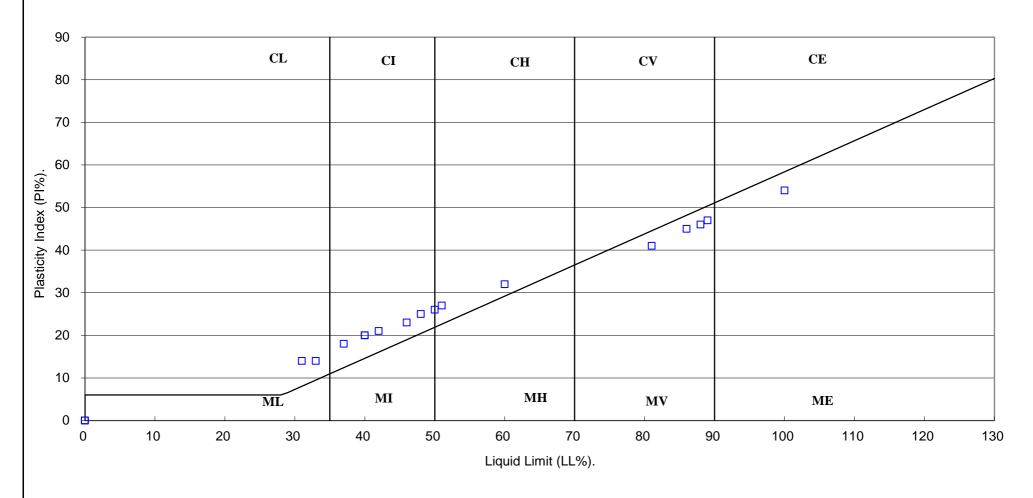
<sup>\*:</sup> Liquid Limit and Plastic Limit Wet Sieved.



Compiled by	Date	Checked by	Date	Approved by	Date
000	29/09/15	Bu	29/09/15	Du	29/09/15
CHE	T TON DO		Contract No:	PSL15/4533	
SHE	CLTON RO		Client Ref:	15-0645.02	

#### PLASTICITY CHART FOR CASAGRANDE CLASSIFICATION.

(B.S.5930:1999)





Compiled by	Date	Checked by	Date	Approved by	Date
000	29/09/15	Du	29/09/15	de	29/09/15

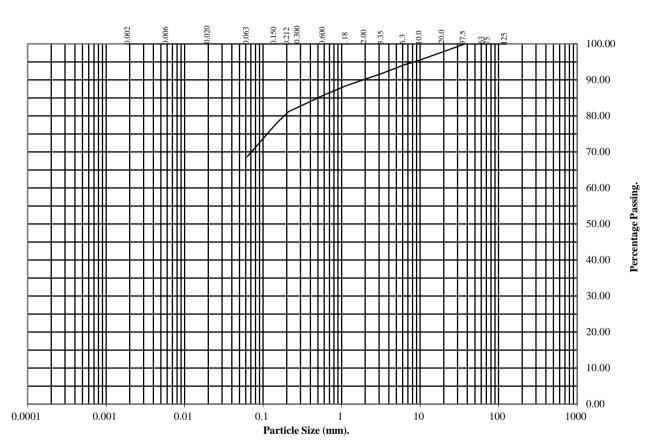
SHELTON ROAD, CORBY.

Contract No: PSL15/4533
Client Ref: 15-0645.02

**BS1377 : Part 2 : 1990** Wet Sieve, Clause 9.2

Hole Number: BH101 Depth (m): 1.00-1.50

Sample Number: Sample Type: B



BS Test	Percentage
Sieve	Passing
125	100
75	100
63	100
37.5	100
20	98
10	96
6.3	94
3.35	92
2	90
1.18	88
0.6	86
0.3	83
0.212	81
0.15	78
0.063	69

Soil	Total
Fraction	Percentage
Cobbles Gravel Sand Silt / Clay	0 10 21 69

**Remarks**:

See summary of soil descriptions.

Checked By	Date	Approved By	Date
Bus	29/09/15	Bu	29/09/15

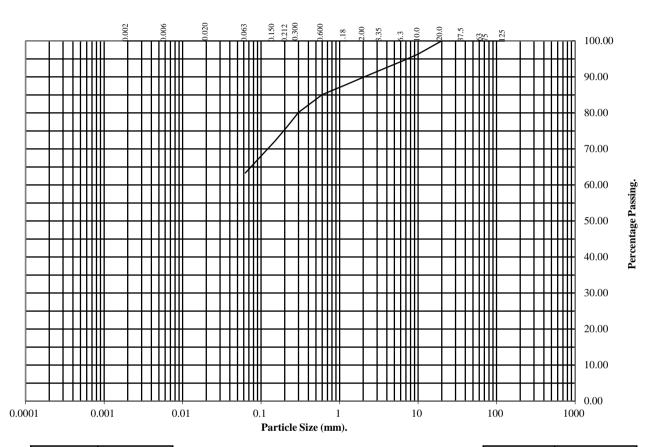
**PSL**Professional Soils Laboratory

SHELTON ROAD, CORBY.

**BS1377 : Part 2 : 1990** Wet Sieve, Clause 9.2

Hole Number: BH101 Depth (m): 11.00-11.50

Sample Number: Sample Type: B



BS Test	Percentage
Sieve	Passing
125	100
75	100
63	100
37.5	100
20	100
10	96
6.3	94
3.35	92
2	90
1.18	88
0.6	85
0.3	80
0.212	76
0.15	72
0.063	63

Soil	Total
Fraction	Percentage
Cobbles Gravel Sand Silt / Clay	0 10 27 63

**Remarks:** 

See summary of soil descriptions.

Checked By	Date	Approved By	Date
Bus	29/09/15	Bu	29/09/15

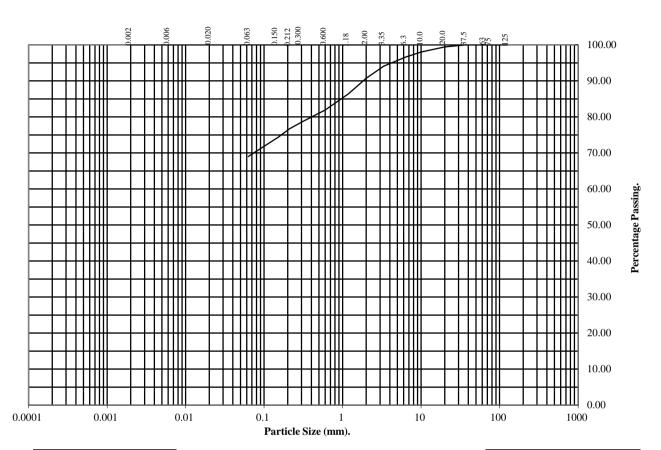
**PSL**Professional Soils Laboratory

SHELTON ROAD, CORBY.

**BS1377 : Part 2 : 1990** Wet Sieve, Clause 9.2

Hole Number: BH102 Depth (m): 12.00-12.50

Sample Number: Sample Type: B



BS Test	Percentage
Sieve	Passing
125	100
75	100
63	100
37.5	100
20	99
10	98
6.3	97
3.35	94
2	91
1.18	86
0.6	82
0.3	79
0.212	77
0.15	74
0.063	69
E-	-

Soil	Total
Fraction	Percentage
Cobbles Gravel Sand Silt / Clay	0 9 22 69

**Remarks**:

See summary of soil descriptions.

Checked By	Date	Approved By	Date
Bu	29/09/15	Bu	29/09/15

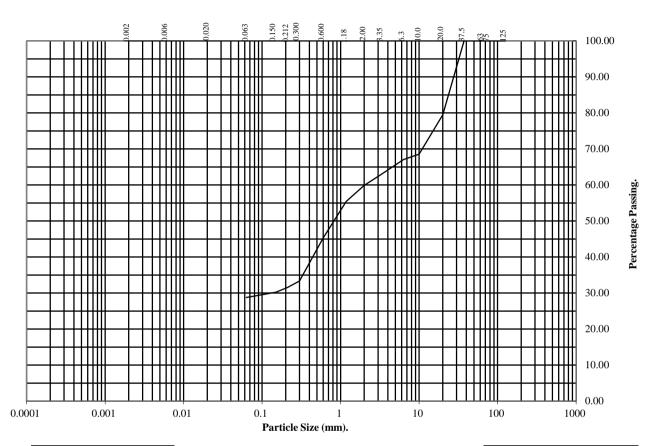
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**BS1377 : Part 2 : 1990** Wet Sieve, Clause 9.2

Hole Number: BH103 Depth (m): 0.50-1.00

Sample Number: Sample Type: B



BS Test	Percentage
Sieve	Passing
125	100
75	100
63	100
37.5	100
20	79
10	69
6.3	67
3.35	63
2	60
1.18	55
0.6	45
0.3	33
0.212	32
0.15	30
0.063	29
-	-

Soil	Total
Fraction	Percentage
Cobbles Gravel Sand Silt / Clay	0 40 31 29

<u> Kemarks:</u>

See summary of soil descriptions.

Checked By	Date	Approved By	Date
Bu	29/09/15	Bu	29/09/15

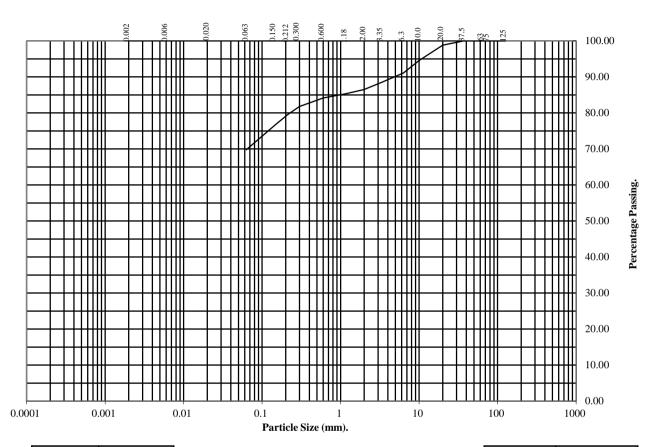
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**BS1377 : Part 2 : 1990** Wet Sieve, Clause 9.2

Hole Number: BH103 Depth (m): 3.50-4.00

Sample Number: Sample Type: B



BS Test	Percentage
Sieve	Passing
125	100
75	100
63	100
37.5	100
20	99
10	95
6.3	91
3.35	89
2	87
1.18	85
0.6	84
0.3	82
0.212	80
0.15	77
0.063	70
	9

	Soil	Total
F	raction	Percentage
Gr Sa	obbles avel nd t / Clay	0 13 17 70

<u> Remarks:</u>

See summary of soil descriptions.

Checked By	Date	Approved By	Date
Bu	29/09/15	Bu	29/09/15

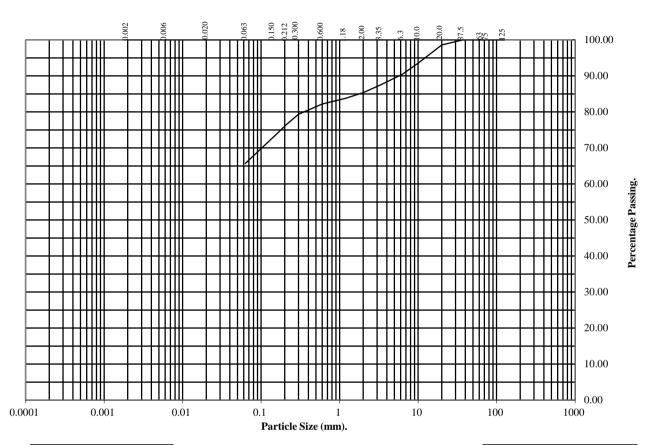
**PSL**Professional Soils Laboratory

SHELTON ROAD, CORBY.

**BS1377 : Part 2 : 1990** Wet Sieve, Clause 9.2

Hole Number: BH104 Depth (m): 10.50-11.00

Sample Number: Sample Type: B



BS Test	Percentage
Sieve	Passing
125	100
75	100
63	100
37.5	100
20	99
10	94
6.3	90
3.35	88
2	85
1.18	84
0.6	82
0.3	79
0.212	77
0.15	73
0.063	66

Soil	Total
Fraction	Percentage
Cobbles Gravel Sand Silt / Clay	0 15 19 66

Kemarks:

See summary of soil descriptions.

Checked By	Date	Approved By	Date
Bus	29/09/15	Bu	29/09/15

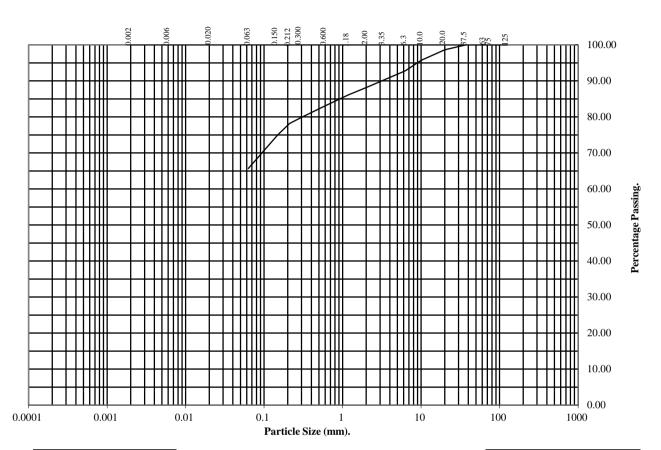
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**BS1377 : Part 2 : 1990** Wet Sieve, Clause 9.2

Hole Number: BH106 Depth (m): 1.00-1.50

Sample Number: Sample Type: B



BS Test	Percentage
Sieve	Passing
125	100
75	100
63	100
37.5	100
20	99
10	96
6.3	93
3.35	90
2	88
1.18	86
0.6	83
0.3	80
0.212	78
0.15	75
0.063	66

Soil	Total
Fraction	Percentage
Cobbles Gravel Sand Silt / Clay	0 12 22 66

<u> Remarks:</u>

See summary of soil descriptions.

Checked By	Date	Approved By	Date
Bu	29/09/15	Bu	29/09/15

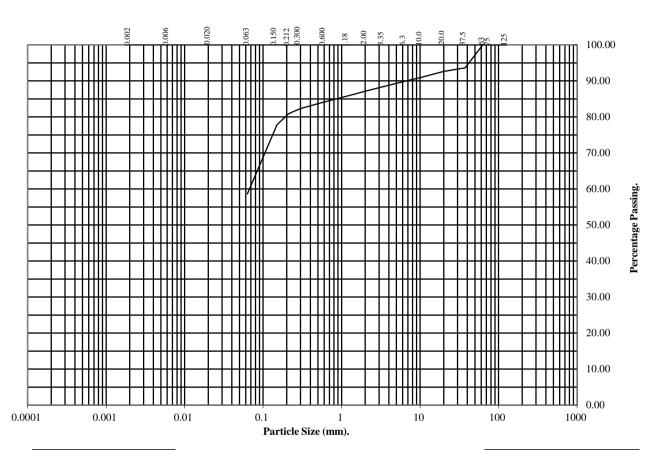
**PSL**Professional Soils Laboratory

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**BS1377 : Part 2 : 1990** Wet Sieve, Clause 9.2

Hole Number: BH106 Depth (m): 4.50-5.00

Sample Number: Sample Type: B



BS Test	Percentage
Sieve	Passing
125	100
75	100
63	100
37.5	94
20	93
10	91
6.3	90
3.35	88
2	87
1.18	86
0.6	84
0.3	82
0.212	81
0.15	78
0.063	59
-	-

Soil	Total
Fraction	Percentage
Cobbles Gravel Sand Silt / Clay	0 13 28 59

**Remarks**:

See summary of soil descriptions.

Checked By	Date	Approved By	Date
Bu	29/09/15	Bu	29/09/15

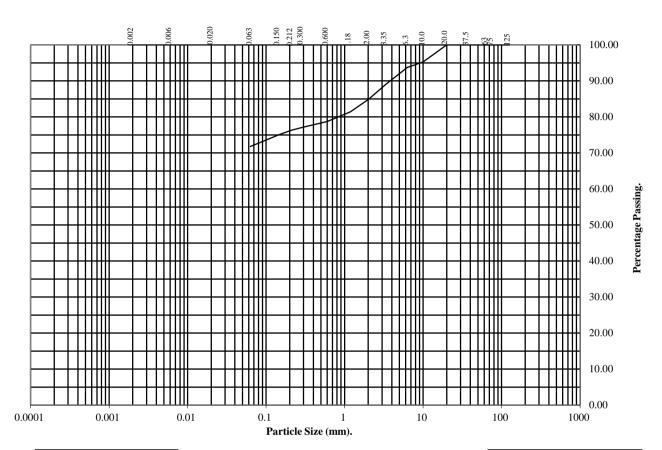
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**BS1377 : Part 2 : 1990** Wet Sieve, Clause 9.2

**Hole Number: BH106 Depth (m): 11.50** 

Sample Number: Sample Type: D



BS Test	Percentage
Sieve	Passing
125	100
75	100
63	100
37.5	100
20	100
10	95
6.3	94
3.35	89
2	85
1.18	81
0.6	79
0.3	77
0.212	76
0.15	75
0.063	72
	•

Soil	Total
Fraction	Percentage
Cobbles Gravel Sand Silt / Clay	0 15 13 72

<u> Remarks:</u>

See summary of soil descriptions.

Checked By	Date	Approved By	Date
Bu	29/09/15	Bu	29/09/15

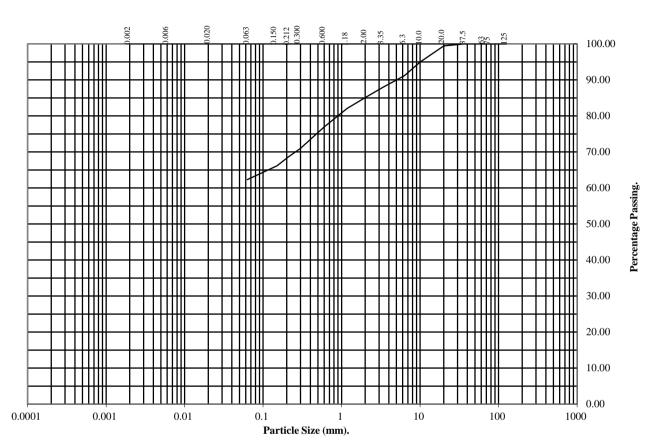
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SHELTON ROAD, CORBY.

**BS1377 : Part 2 : 1990** Wet Sieve, Clause 9.2

Hole Number: BH107 Depth (m): 1.00-1.50

Sample Number: Sample Type: B



BS Test	Percentage
Sieve	Passing
125	100
75	100
63	100
37.5	100
20	99
10	95
6.3	91
3.35	88
2	85
1.18	82
0.6	77
0.3	71
0.212	69
0.15	66
0.063	62

Soil	Total
Fraction	Percentage
Cobbles Gravel Sand Silt / Clay	0 15 23 62

**Remarks**:

See summary of soil descriptions.

Checked By	Date	Approved By	Date
Bu	29/09/15	Bu	29/09/15

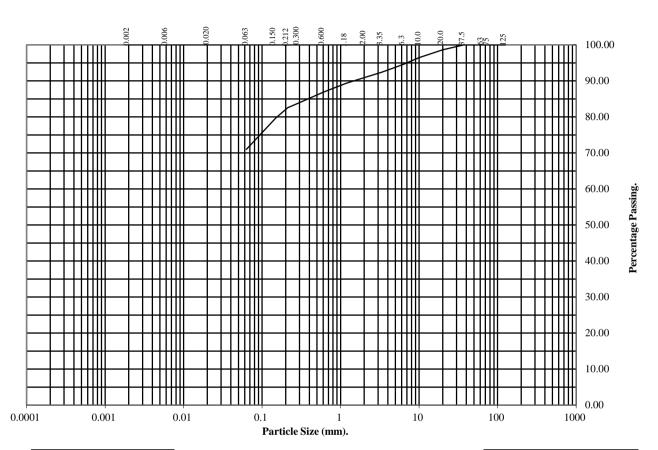
**PSL**Professional Soils Laboratory

SHELTON ROAD, CORBY.

**BS1377 : Part 2 : 1990** Wet Sieve, Clause 9.2

Hole Number: BH107 Depth (m): 12.50-13.00

Sample Number: Sample Type: B



BS Test	Percentage
Sieve	Passing
125	100
75	100
63	100
37.5	100
20	99
10	96
6.3	95
3.35	92
2	91
1.18	89
0.6	87
0.3	84
0.212	83
0.15	80
0.063	71

Soil	Total
Fraction	Percentage
Cobbles Gravel Sand Silt / Clay	0 9 20 71

<u> Remarks:</u>

See summary of soil descriptions.

Checked By	Date	Approved By	Date
Bu	29/09/15	Bu	29/09/15

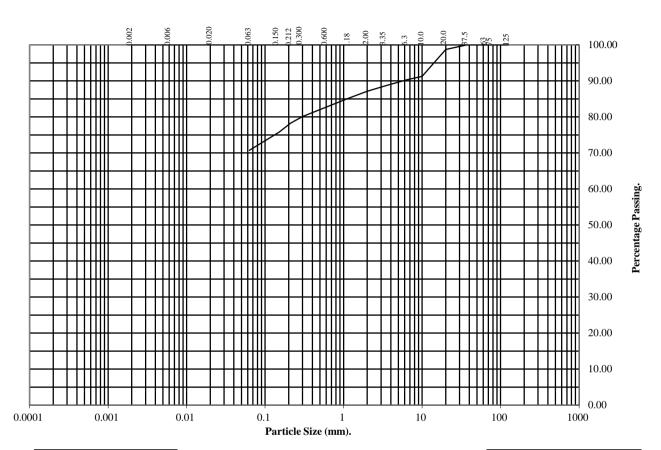
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SHELTON ROAD, CORBY.

**BS1377 : Part 2 : 1990** Wet Sieve, Clause 9.2

Hole Number: BH108 Depth (m): 4.50-5.00

Sample Number: Sample Type: B



BS Test	Percentage
Sieve	Passing
125	100
75	100
63	100
37.5	100
20	99
10	91
6.3	90
3.35	89
2	87
1.18	85
0.6	83
0.3	80
0.212	78
0.15	76
0.063	71
E-	-

Soil	Total
Fraction	Percentage
Cobbles Gravel Sand Silt / Clay	0 13 16 71

**Remarks**:

See summary of soil descriptions.

Checked By	Date	Approved By	Date
de la	29/09/15	de la	29/09/15

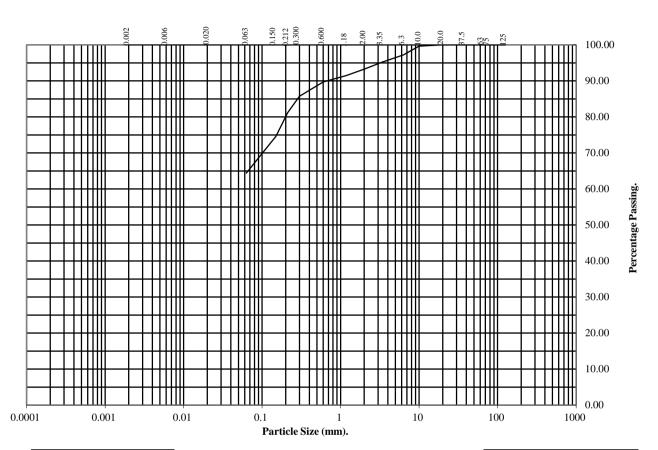
**PSL**Professional Soils Laboratory

SHELTON ROAD, CORBY.

**BS1377 : Part 2 : 1990** Wet Sieve, Clause 9.2

Hole Number: BH108 Depth (m): 8.00-8.50

Sample Number: Sample Type: B



BS Test	Percentage
Sieve	Passing
125	100
75	100
63	100
37.5	100
20	100
10	100
6.3	97
3.35	95
2	93
1.18	91
0.6	90
0.3	86
0.212	81
0.15	75
0.063	64
•	

Soil	Total
Fraction	Percentage
Cobbles Gravel Sand Silt / Clay	0 7 29 64

**Remarks**:

See summary of soil descriptions.

Checked By	Date	Approved By	Date
Bus	29/09/15	Bus	29/09/15

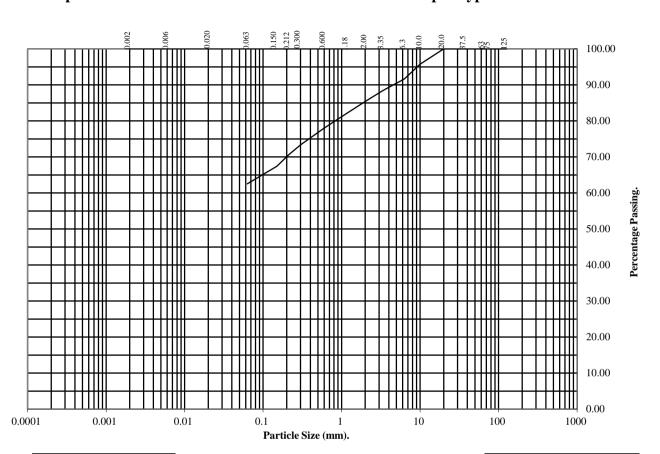
**PSL**Professional Soils Laboratory

SHELTON ROAD, CORBY.

**BS1377 : Part 2 : 1990** Wet Sieve, Clause 9.2

Hole Number: BH109 Depth (m): 3.50-4.00

Sample Number: Sample Type: B



BS Test	Percentage
Sieve	Passing
125	100
75	100
63	100
37.5	100
20	100
10	96
6.3	92
3.35	88
2	85
1.18	82
0.6	78
0.3	73
0.212	71
0.15	67
0.063	63
-	-

Soil	Total
Fraction	Percentage
Cobbles Gravel Sand Silt / Clay	0 15 22 63

**Remarks:** 

See summary of soil descriptions.

Checked By	Date	Approved By	Date
Bus	29/09/15	Bu	29/09/15

**PSL**Professional Soils Laboratory

SHELTON ROAD, CORBY.

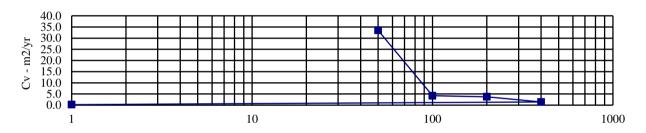
# One Dimensional Consolidation Properties

BS 1377: Part 5: 1990

Hole Number: BH105 Depth (m): 3.50-3.95

Sample Number: Sample Type: U

Initial Conditions		Pressure Range		Mv	Cv	Specimen location		
Moisture Content (%):	20	kPa m2/MN m2/yr within tube:		within tube:	Top			
Bulk Density (Mg/m3):	2.09	0	-	50	0.561	33.480	Method used to	
Dry Density (Mg/m3):	1.75	50	-	100	0.087	4.202	determine CV:	t90
Voids Ratio:	0.518	100	-	200	0.122	3.748	Nominal temperature	
Degree of saturation:	99.9	200	-	400	0.097	1.399	during test 'C: 2	
Height (mm):	20.13	400	-	1	0.128	0.245	Remarks:	
Diameter (mm)	75.08						See summary of soil descriptions	
Particle Density (Mg/m3):	2.65							
Assumed								



Pressure -kPa

1 10 100 1000

0.500
0.490
0.480
0.460
0.450
0.440
0.430
0.420

		Checked by	Date	Approved by	Date	
		Bu	29/09/15	Bu	29/09/15	
PSL	CHEL TON DO				Contract No.	
Professional Soils Laboratory	SHELTON RO	AD, CORBY	Υ.	PSL15/4	4533	
				Page	of	

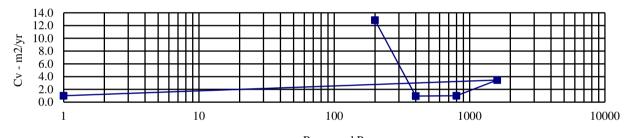
# One Dimensional Consolidation Properties

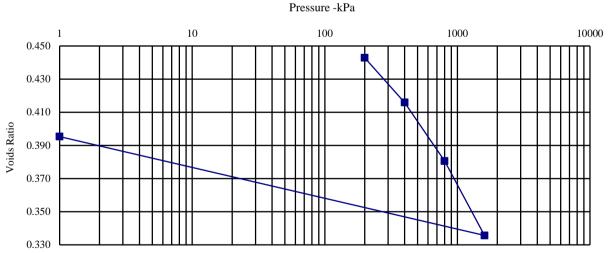
BS 1377: Part 5: 1990

Hole Number: BH105 Depth (m): 12.00-12.45

Sample Number: Sample Type: U

Initial Conditions		Pressure Range		Mv	Cv	Specimen location		
Moisture Content (%):	22		kPa		m2/MN	m2/yr	within tube:	Top
Bulk Density (Mg/m3):	2.04	0	-	200	0.466	12.833	Method used to	
Dry Density (Mg/m3):	1.67	200	-	400	0.093	0.952	determine CV:	t90
Voids Ratio:	0.591	400	-	800	0.062	0.997	Nominal temperature	
Degree of saturation:	99.8	800	-	1600	0.041	3.452	during test 'C:	
Height (mm):	20.19	1600	-	1	0.028	0.992	Remarks:	
Diameter (mm)	75.02						See summary of soil description	
Particle Density (Mg/m3):	2.65							
Assumed								





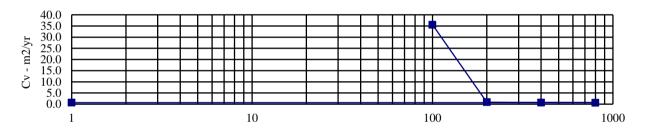
		Checked by	Date	Approved by	Date	
		Bus	29/09/15	Bus	29/09/15	
PSL	CHEL TON DO	GANDA TONADO A DA GODDANA			Contract No.	
Professional Soils Laboratory	SHELTON RO	AD, CORB	Υ.	PSL15/4	<b>4533</b>	
-				Page	of	

# One Dimensional Consolidation Properties

BS 1377: Part 5: 1990

Hole Number: BH106 Depth (m): 7.50-7.95

Initial Conditions		Pres	sure Ra	nge	Mv	Cv	Specimen location		
Moisture Content (%):	17		kPa		m2/MN	m2/yr	within tube:	Top	
Bulk Density (Mg/m3):	2.13	0 - 100		0.708	35.538	Method used to			
Dry Density (Mg/m3):	1.82	100 - 200			0.144	0.877	determine CV:	t90	
Voids Ratio:	0.459	200	-	400	0.125	0.693	Nominal temperature		
Degree of saturation:	100.2	400	-	800	0.069	0.641	during test 'C:	20	
Height (mm):	20.09	800	-	1	0.090	0.674	Remarks:		
Diameter (mm)	75.08						See summary of soil descriptions.		
Particle Density (Mg/m3):	2.65								
Assumed									



Pressure -kPa 100 1000 10 0.370 0.360 0.350 0.340 0.330 Voids Ratio 0.320 0.310 0.300 0.290 0.280 0.270 0.260

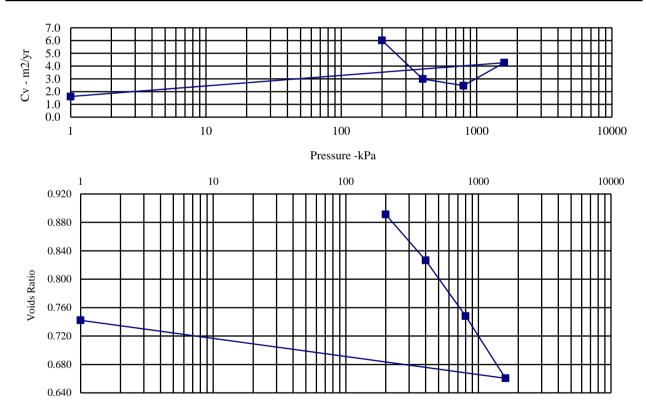
		Checked by	Date 29/09/15	Approved by	Date 29/09/15
PSL Professional Soils Laboratory	SHELTON RO	AD, CORBY	Υ.	Contract PSL15/4 Page	

# One Dimensional Consolidation Properties

BS 1377: Part 5: 1990

Hole Number: BH106 Depth (m): 13.50-13.95

Initial Conditions		Pres	sure Ra	inge	Mv	Cv	Specimen location	
Moisture Content (%):	56		kPa		m2/MN	m2/yr	within tube:	Top
Bulk Density (Mg/m3):	1.75	0	-	200	0.824	6.015	Method used to	
Dry Density (Mg/m3):	1.13	200	-	400	0.171	2.992	determine CV:	t90
Voids Ratio:	1.264	400	-	800	0.107	2.466	Nominal temperature	
Degree of saturation:	112.1	800	-	1600	0.063	4.268	during test 'C:	20
Height (mm):	20.13	1600	-	1	0.031	1.618	Remarks:	
Diameter (mm)	75.08						See summary of soil descrip	tions.
Particle Density (Mg/m3):	2.55							
Assumed								

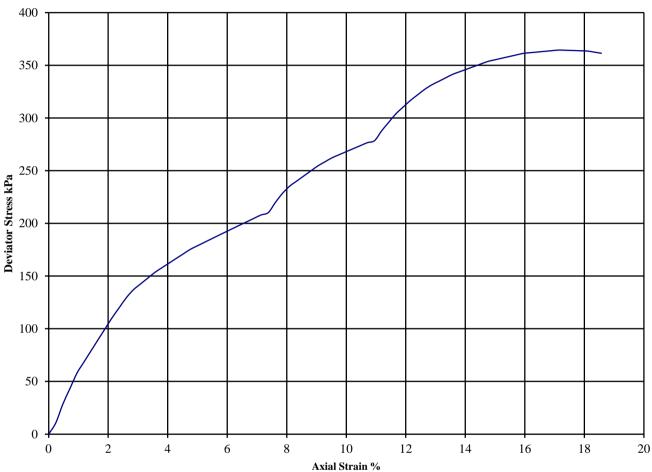


		Checked by	Date	Approved by	Date
		Du	29/09/15	Bu	29/09/15
PSL		. D. GODDI	7	Contrac	t No.
Professional Soils Laboratory	SHELTON RO	AD, CORBY	Υ.	PSL15/4	4533
				Page	of

without measurement of Pore Pressure B.S. 1377: Part7: Clause 9: 1990

**Hole Number: BH101** Depth (m): 2.50



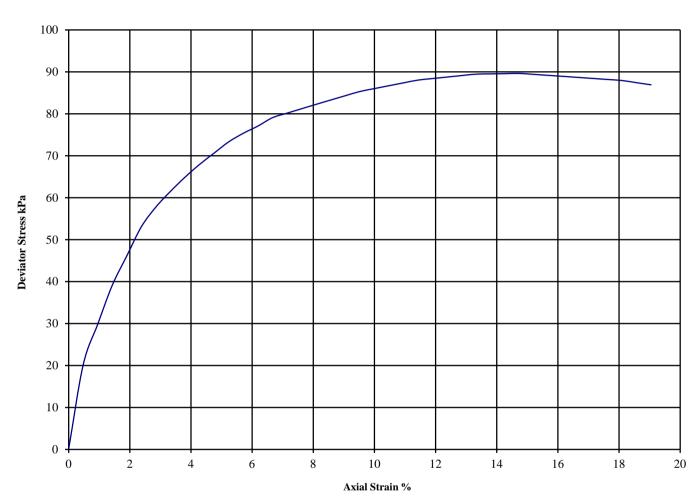


Diamete	er (mm):	102	Height (	mm):	210	Test:	1001	nm Multis	tage	age		
	Moisture	Bulk	Dry	Cell	Corr. Max.	Shear	Failure	Mode		Remarks		
Specimen	Content	Density	Density	Pressure	Deviator	Strength	Strain	of	Sample tak	en from to	op of tube	
	(%)	(Mg/m3)	(Mg/m3)	(kPa)	Stress	Cu	(%)	Failure	Rate of stra	Rate of strain = 2 %/min		
					(kPa)	(kPa)			Latex Membrane used 0.2 mm thickness			hickness
				$\theta_3$	$(\theta_1 - \theta_3)_f$	$^1/_2(\theta_1-\theta_3)_f$			Membrane	Correction	on applied (	kPa)
A	21	2.08	1.72	25	210	105	7.4		0.36	0.35	0.34	
				50	279	139	11.0		See summa	ary of soil	description	ıs.
				100	365	182	17.1	Plastic	Checked	Date	Approved	Date
									Du	29/09/15	Du	29/09/15

		-	27/07/10	-	27/07/10
<b>PSL</b> Professional Soils Laboratory	SHELTON ROAD, CORBY.			act No: 5/4533	

without measurement of Pore Pressure B.S. 1377: Part7: Clause 8: 1990

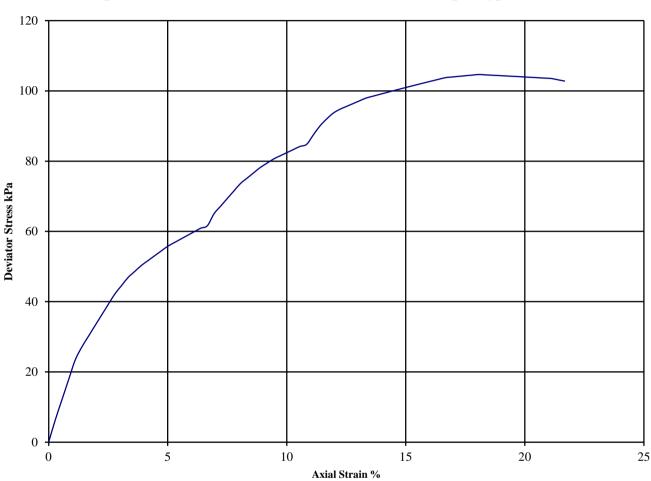
Hole Number: BH101 Depth (m): 13.50



Diamete	er (mm):	102.0	Height (	mm):	210.0	Test:	100 m	ım Single	Stage.	Undistu	rbed		
Specimen	Moisture	Bulk	Dry	Cell	Corr. Max.	Shear	Failure	Mode		Remarks			
	Content	Density	Density	Pressure	Deviator	Strength	Strain	of	Sample tak	Sample taken from top of tube			
	(%)	(Mg/m3)	(Mg/m3)	(kPa)	Stress	Cu	(%)	Failure	Rate of str	ain = 2 %	/min		
					(kPa)	(kPa)			Latex Men	Latex Membrane used 0.2 mm thicknes			
				$\theta_3$	$(\theta_1 - \theta_3)_f$	$^{1}/_{2}(\theta_{1}-\theta_{3})_{f}$			Correction applied 0.34 kPa				
A	23	2.09	1.70	270	90	45	14.8	Plastic	See summary of soil descriptions.				
									Checked	Date	Approved	Date	
									Du	29/09/15	Du	29/09/15	
Profes	Ps	<b>SL</b> Soils Lab	oratory	SHELTON ROAD, CORBY.							act No: 5/4533		

without measurement of Pore Pressure B.S. 1377: Part7: Clause 9: 1990

Hole Number: BH103 Depth (m): 4.50

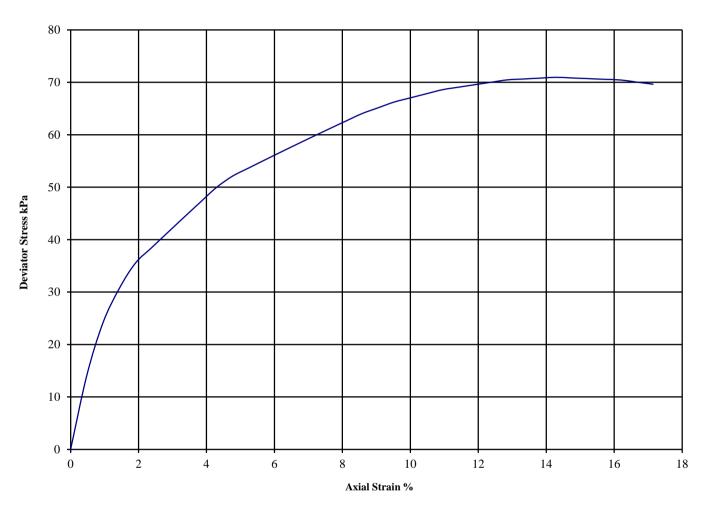


Diamete	er (mm):	102	Height (	mm):	180	Test:	1001	mm Multis	tage			
	Moisture	Bulk	Dry	Cell	Corr. Max.	Shear	Failure	Mode		Ren	narks	
Specimen	Content	Density	Density	Pressure	Deviator	Strength	Strain	of	Sample tal	ken from t	op of tube	
	(%)	(Mg/m3)	(Mg/m3)	(kPa)	Stress	Cu	(%)	Failure	Rate of str	Rate of strain = 2 %/min		
					(kPa)	(kPa)			Latex Mer	Latex Membrane used 0.2 mm thickness		
				$\theta_3$	$(\theta_1 - \theta_3)_f$	$^{1}/_{2}(\theta_{1}-\theta_{3})_{f}$			Membrane	Membrane Correction applied (kPa)		
A	16	2.13	1.83	45	62	31	6.7		0.36	0.35	0.34	
				90	85	42	10.8		See summ	ary of soil	description	ıs.
				180	105	52	18.1	Plastic	Checked	Date	Approved	Date
									Bus	29/09/15	Bus	29/09/15

Professional Soils Laboratory  SHELTON ROAD, CORBY.	Contract No: PSL15/4533
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without measurement of Pore Pressure B.S. 1377: Part7: Clause 8: 1990

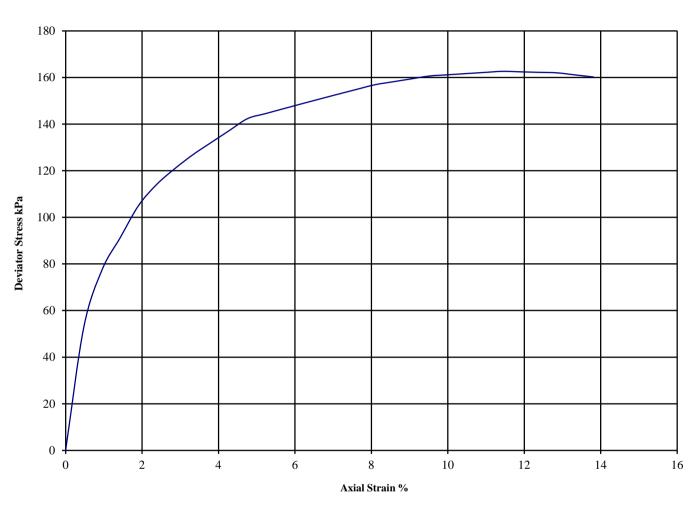
Hole Number: BH103 Depth (m): 16.50



Diamete	er (mm):	102.0	Height (	(mm):	210.0	Test:	100 m	ım Single	Stage.	Undistu	rbed		
Specimen	Moisture	Bulk	Dry	Cell	Corr. Max.	Shear	Failure	Mode		Remarks			
	Content	Density	Density	Pressure	Deviator	Strength	Strain	of	Sample tal	Sample taken from top of tube			
	(%)	(Mg/m3)	(Mg/m3)	(kPa)	Stress	Cu	(%)	Failure	Rate of str	ain = 2 %/	/min		
					(kPa)	(kPa)			Latex Mer	Latex Membrane used 0.2 mm thicknes			
				$\theta_3$	$(\theta_1 - \theta_3)_f$	$^{1}/_{2}(\theta_{1}-\theta_{3})_{f}$			Correction applied 0.34 kPa				
A	25	2.00	1.60	330	71	35	14.3	Plastic	See summary of soil descriptions.				
									Checked	Date	Approved	Date	
									Du	29/09/15	Du	29/09/15	
Profes	Ps	<b>SL</b> Soils Lab	oratory	SHELTON ROAD, CORBY.							act No: 5/4533		

without measurement of Pore Pressure B.S. 1377: Part7: Clause 8: 1990

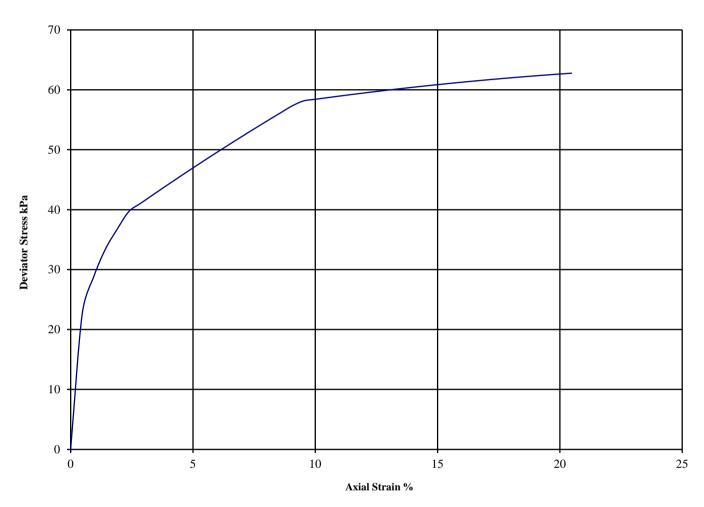
Hole Number: BH107 Depth (m): 16.50



Diamete	er (mm):	102.0	Height (	mm):	210.0	Test:	100 m	ım Single	Stage.	Undistu	rbed		
Specimen	Moisture	Bulk	Dry	Cell	Corr. Max.	Shear	Failure	Mode		Remarks			
	Content	Density	Density	Pressure	Deviator	Strength	Strain	of	Sample tak	Sample taken from top of tube			
	(%)	(Mg/m3)	(Mg/m3)	(kPa)	Stress	Cu	(%)	Failure	Rate of str	ain = 2 %	/min		
					(kPa)	(kPa)			Latex Men	Latex Membrane used 0.2 mm thicknes			
				$\theta_3$	$(\theta_1 - \theta_3)_f$	$^1/_2(\theta_1-\theta_3)_f$			Correction applied 0.35 kPa				
A	17	1.98	1.68	330	163	81	11.4	Plastic	See summary of soil descriptions.				
									Checked	Date	Approved	Date	
									Du	29/09/15	Du	29/09/15	
Profes	<b>PSL</b> Professional Soils Laboratory				SHELTON ROAD, CORBY.						act No: 5/4533		

without measurement of Pore Pressure B.S. 1377: Part7: Clause 8: 1990

Hole Number: BH108 Depth (m): 13.50



Diamete	er (mm):	102.0	Height (	mm):	210.0	Test:	100 m	nm Single	Stage.	Undistu	rbed			
Specimen	Moisture	Bulk	Dry	Cell	Corr. Max.	Shear	Failure	Mode		Remarks				
	Content	Density	Density	Pressure	Deviator	Strength	Strain	of	Sample tal	Sample taken from top of tube				
	(%)	(Mg/m3)	(Mg/m3)	(kPa)	Stress	Cu	(%)	Failure	Rate of str	ain = 2 %	/min			
					(kPa)	(kPa)			Latex Mer	Latex Membrane used 0.2 mm thickness				
				$\theta_3$	$(\theta_1 - \theta_3)_f$	$^1/_2(\theta_1-\theta_3)_f$			Correction applied 0.33 kPa					
A	21	2.09	1.72	270	63	31	20.5	Plastic	See summary of soil descriptions.					
									Checked	Date	Approved	Date		
									Du	29/09/15	Du	29/09/15		
Profes	Ps	<b>SL</b> Soils Labo	oratory	SHELTON ROAD, CORBY.							act No: 5/4533			



Date: 22-Sep-15 Contract Number: PSL15/4533

Location: SHELTON ROAD, CORBY.

Sample Type: Core

Sample Preparation: Cutting & Grinding

Operator: A.Fry

## **Determination of Unconfined Compressive Strength.**

ISRM Suggested Methods, pp 111 –116, 1981.

Depth Top (m)	Depth Bottom (m)	Diameter (mm)	Length (mm)	Height: ratio	Initial mass a	Bulk Density Ma/m3	MC %	Dry Density Ma/m3		UCS(MPA)	Mode OF FAILURE	Date Tested	Remarks
						_							
22.00	22.15	85.00	142.00	1.7	1894	2.35	13.0	2.08	26.9	4.7	Brittle	21-Sep-15	
										•			
	Top (m) 21.10 21.75	Top (m)         Bottom (m)           21.10         21.30           21.75         22.00	Top (m)         Bottom (m)         (mm)           21.10         21.30         85.00           21.75         22.00         85.00	Top (m)         Bottom (m)         (mm)         (mm)           21.10         21.30         85.00         134.00           21.75         22.00         85.00         177.00	Top (m)         Bottom (m)         (mm)         (mm)         ratio           21.10         21.30         85.00         134.00         1.6           21.75         22.00         85.00         177.00         2.1	Top (m)         Bottom (m)         (mm)         (mm)         ratio         mass g           21.10         21.30         85.00         134.00         1.6         1834           21.75         22.00         85.00         177.00         2.1         2554	Top (m)         Bottom (m)         (mm)         (mm)         ratio         mass g         Mg/m3           21.10         21.30         85.00         134.00         1.6         1834         2.41           21.75         22.00         85.00         177.00         2.1         2554         2.54	Top (m)         Bottom (m)         (mm)         (mm)         ratio         mass g         Mg/m3         %           21.10         21.30         85.00         134.00         1.6         1834         2.41         16.0           21.75         22.00         85.00         177.00         2.1         2554         2.54         9.7	Top (m)         Bottom (m)         (mm)         (mm)         ratio         mass g         Mg/m3         %         Mg/m3           21.10         21.30         85.00         134.00         1.6         1834         2.41         16.0         2.08           21.75         22.00         85.00         177.00         2.1         2554         2.54         9.7         2.32	Top (m)         Bottom (m)         (mm)         (mm)         ratio         mass g         Mg/m3         %         Mg/m3         Load Failure           21.10         21.30         85.00         134.00         1.6         1834         2.41         16.0         2.08         28.5           21.75         22.00         85.00         177.00         2.1         2554         2.54         9.7         2.32         81.5	Top (m)         Bottom (m)         (mm)         ratio         mass g         Mg/m3         %         Mg/m3         Load Failure         UCS(MPA)           21.10         21.30         85.00         134.00         1.6         1834         2.41         16.0         2.08         28.5         5.0           21.75         22.00         85.00         177.00         2.1         2554         2.54         9.7         2.32         81.5         14.4	Top (m)         Bottom (m)         (mm)         ratio         mass g         Mg/m3         %         Mg/m3         Load Failure         UCS(MPA)         OF FAILURE           21.10         21.30         85.00         134.00         1.6         1834         2.41         16.0         2.08         28.5         5.0         Brittle           21.75         22.00         85.00         177.00         2.1         2554         2.54         9.7         2.32         81.5         14.4         Brittle	Top (m)         Bottom (m)         (mm)         ratio         mass g         Mg/m3         %         Mg/m3         Load Failure         UCS(MPA)         OF FAILURE         Tested           21.10         21.30         85.00         134.00         1.6         1834         2.41         16.0         2.08         28.5         5.0         Brittle         21-Sep-15           21.75         22.00         85.00         177.00         2.1         2554         2.54         9.7         2.32         81.5         14.4         Brittle         21-Sep-15

Checked by:		Date	22/09/2015
	Steel		
Approved by:		Date	22/09/2015

She

5/7 Hexthorpe Road Hexthorpe, Doncaster, DN4 0AR tel: +44 (0)844 8156641 fax: +44 (0)844 8156642 e-mail: awatkins@prosoils.co.uk



# Chemtest The right chemistry to deliver results

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Tel: 01638 606070 Email: info@chemtest.co.uk

# **Final Report**

Report Number: 15-21671 Issue-1

Initial Date of Issue: 23-Sep-2015

Client: Professional Soils Laboratory

5/7 Hexthorpe Road

Client Address:

Doncaster
South Yorkshire

DN4 0AR

**Anthony Watkins** 

Contact(s): Mark Beastall

Russell Gunson

Sean Royle

**Project:** PSL15/4533 - Shelton Road, Corby

Quotation No.: Date Received: 18-Sep-2015

Order No.: Date Instructed: 17-Sep-2015

No. of Samples: 4

Turnaround: (Wkdays) 5 Results Due Date: 23-Sep-2015

Date Approved: 23-Sep-2015

Approved By:

**Details:** Phil Hellier, Project Director



## Project: PSL15/4533 - Shelton Road, Corby

Client: Professional Soils Laboratory		Chen	ntest Jo	b No.:	15-21671	15-21671	15-21671	15-21671
Quotation No.:	С	hemtes	st Samp	le ID.:	193547	193548	193549	193550
Order No.:		Clien	t Sampl	e Ref.:	BH101	BH102	BH107	BH106
		Client Sample ID.:			D	D	D	D
	Sample Type: Top Depth (m):			SOIL	SOIL	SOIL	SOIL	
				8.00	13.00	6.70	8.00	
		Bottom Depth(m):						
		Date Sampled:						
Determinand	Accred.	SOP	Units	LOD				
Moisture	N	2030	%	0.02	29	34	28	14
Organic Matter	U	2625	%	0.4	9.1	7.2	6.7	1.9



#### **Report Information**

#### Key

- U UKAS accredited
- M MCERTS and UKAS accredited
- N Unaccredited
- S This analysis has been subcontracted to a UKAS accredited laboratory that is accredited for this analysis
- SN This analysis has been subcontracted to a UKAS accredited laboratory that is not accredited for this analysis
- T This analysis has been subcontracted to an unaccredited laboratory
- I/S Insufficient Sample
- U/S Unsuitable Sample
- N/E not evaluated
  - < "less than"
  - > "greater than"

Comments or interpretations are beyond the scope of UKAS accreditation

The results relate only to the items tested

Uncertainty of measurement for the determinands tested are available upon request

None of the results in this report have been recovery corrected

All results are expressed on a dry weight basis

The following tests were analysed on samples as received and the results subsequently corrected to a dry weight basis TPH, BTEX, VOCs, SVCOs, PCBs, Phenols

For all other tests the samples were dried at < 37°C prior to analysis

All Asbestos testing is performed at our Coventry laboratory

Issue numbers are sequential starting with 1 all subsequent reports are incremented by 1

#### **Sample Deviation Codes**

- A Date of sampling not supplied
- B Sample age exceeds stability time (sampling to extraction)
- C Sample not received in appropriate containers
- D Broken Container

#### Sample Retention and Disposal

All soil samples will be retained for a period of 60 days from the date of receipt

All water samples will be retained for 14 days from the date of receipt

Charges may apply to extended sample storage

If you require extended retention of samples, please email your requirements to: <u>customerservices@chemtest.co.uk</u>







## **Delta-Simons Adopted Human Health Generic Assessment Criteria**

For

**Commercial End Use** 

**Version 4.1 – September 2015** 

· .....

#### **Guidance Notes - Using Human Health Soil Screening Values**

A tiered risk assessment approach is used for the assessment of soil analysis results considering the 'pollutant linkages' on the basis of a 'source-pathway-receptor' relationship.

The following tables present conservative Tier 1 generic screening assessment criteria (GAC) used by Delta-Simons to provide an initial assessment of risk to Human Health in the context of the proposed redevelopment of the Site.

#### GACs are intended to assess:

- $\Delta$  Chronic (long-term) on-site exposure risk to contaminants in the soil to future users and occupiers of the Site.
- Δ Concentrations below the GAC considered tolerable or to pose a minimal risk to human health, or low risk in relation to the Category 4 Screening Levels (C4SLs).

#### GACs are not relevant for assessing:

- Δ Acute (short-term) exposure risks (e.g. construction workers during development);
- $\Delta$  Non-human receptors such as controlled waters, ecosystems, buildings and services, animals, domestic pets or plants;
- Δ Aesthetic issues which may render a soil unsuitable for use such as odour or colour;
- Δ GACs do not take account of other non-soil based sources of contamination such as contamination in groundwater or surface waters; and
- $\Delta$  GACs are not suitable for assessing whether a soil provides a suitable growing medium for crops or plants.

#### **Exceedences of Generic Assessment Criteria**

An exceedence of a GAC:

- $\Delta$  Is not an indicator of a significant risk to human health;
- ∆ Is an indication that the contaminant may pose a possibility harm to human health and, therefore, further consideration is required.

In assessing the significance of an exceedence consideration should be given to:

- $\Delta$  The *nature* of the contaminant (e.g. volatile or non-volatile contaminants)
- Δ Site design and potential exposure *pathways* (e.g. hard cover, buildings, landscaping)
- Δ The *distribution* of exceedences (widespread or localised, numerous or few exceedences *NB: Consider data limitations site coverage and gaps in data.*
- $\Delta$  The *margin* of the exceedence(s):
- $\Delta$  The duration and frequency of exposure; and
- $\Delta$  Any other site specific factors.

#### **Generic Assessment Criteria used by Delta-Simons**

In the absence of a complete regulatory set of screening values derived using the CLEA Framework, Delta-Simons screening values are based on the following:

- $\Delta$  The current Soil Guidance Values (SGVs) published by the EA;
- △ Category 4 Screening Levels (C4SLs) published by DEFRA:
- Δ The 2014 Land Quality Management (LQM) / Chartered Institute of Environmental Health (CIEH) Suitable for Use Levels for Human Health Risk Assessment (S4ULs);
- ∆ The guidance values produced by the Environmental Industries Commission (EIC), the Association of Geotechnical and Geoenvironmental Specialists (AGS) and Contaminated Land: Application in Real Environments (CL:AIRE) in December 2009; and
- $\Delta$  In house Generic Screening Values (DS-GACs) derived by Delta-Simons.

#### Contaminants for which Generic Assessment Criteria are Unavailable

Insufficient toxicological data is available to derive GAC for a number of potential contaminants of concern and GAC cannot be derived for derived for mixtures of compounds (e.g. total petroleum hydrocarbons). In such cases Delta-Simons will endeavour to use conservative

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3 ....

surrogate GAC values to provide an initial screening assessment based on the known chemical and physical properties of the contaminant.

#### Notes and References used in the Tables

Generic Ass	sessment Criteria Source			
SGV	Soil Guidance Values published by the EA			
DS-GAC	Delta-Simons Generic Assessment Criteria derived using CLEA V.1.06.			
C4SL	Category 4 Screening Levels, DEFRA December 2014			
SGV v.1.05	Environment Agency Soil Guideline Values for dioxins, furans and dioxin-like PCBs calculated within CLEA V.1.05.			
LQM/CIEH Suitable for Use Levels for Human Health Risk Assessm (S4UL), November 2014.  (Copyright Land Quality Management Limited, reduced with permiss Publication Number S4UL3087. All rights reserved).				
EIC	EIC/AGS/CL:AIRE Soil Generic Assessment Criteria for Human Health Risk Assessment derived using CLEA V.1.06.			
Abbreviatio	ns			
Units	All values mg/kg unless otherwise stated.			
	Soil Organic Matter – GAC have been derived for a range of soil organic matter content – 1%, 2.5 or 3% and 6%.			
SOM	In the absence of site specific data or robust soil characterisation the most conservative value of 1% soil organic matter should be used as the initial screening value.			
(##)	GAC exceed saturation/vapour concentration (given in brackets). Soil concentrations above the soil saturation may indicate that non-aqueous phase liquid (NAPL) is present. Risks from NAPL may need to be considered separately. Reference should always be made to the site investigation observations and soil logs were available.			

#### Use of C4SLs as Screening Criteria

Only the lead C4SL should be used as an initial screening level, as there is no 'minimal risk' screening value available. Though primarily designed for assessing the risk of land being determined as 'contaminated' under Part 2A, Defra have confirmed¹ that the C4SL could be used under the planning regime. Where applicable, the 'minimal risk' level should be used as the initial screening level and where exceedances are identified reference to, and consideration of the C4SL levels may be made in the risk assessment process.

<sup>1</sup> Defra/Lord de Mauley letter to all Local Authorities dated 3<sup>rd</sup> September 2014.

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#### Metals

Compound	1% SOM	Source	2.5 - 3% SOM	Source	6% SOM	Source
Antimony	7500	EIC	7500	EIC	7500	EIC
Arsenic	640	SGV	640	SGV	640	SGV
Arsenic	640	LQM	640	LQM	640	LQM
Arsenic	640	C4SL	640	C4SL	640	C4SL
Barium	22000	EIC	22000	EIC	22000	EIC
Beryllium	12	LQM	12	LQM	12	LQM
Boron	240000	LQM	240000	LQM	240000	LQM
Cadmium	230	SGV	230	SGV	230	SGV
Cadmium	190	LQM	190	LQM	190	LQM
Cadmium	410	C4SL	410	C4SL	410	C4SL
Chromium III	8600	LQM	8600	LQM	8600	LQM
Chromium VI	33	LQM	33	LQM	33	LQM
Chromium (VI)	49	C4SL	49	C4SL	49	C4SL
Copper	68000	LQM	68000	LQM	68000	LQM
Lead	2300	C4SL	2300	C4SL	2300	C4SL
Mercury (elemental)	(4.3)	DS-GAC	(13)	DS-GAC	(26)	SGV
Mercury (elemental)	-	-	-	-	58 (25.8)	LQM
Mercury (inorganic)	3600	DS-GAC	3600	DS-GAC	3600	SGV
Mercury (inorganic)	1100	LQM	1100	LQM	1100	LQM
Mercury (methyl)	(73)	DS-GAC	400	DS-GAC	410	SGV
Mercury (methyl)	-	-	-	-	320	LQM
Molybdenum	17000	EIC	17000	EIC	17000	EIC
Nickel	980	LQM	980	LQM	980	LQM
Selenium	13000	SGV	13,000	SGV	13000	SGV
Selenium	12000	LQM	12000	LQM	12000	LQM
Vanadium	9000	LQM	9000	LQM	9000	LQM
Zinc	730000	LQM	730000	LQM	730000	LQM

Italics— These values were derived based on a 6% SOM, however, the supporting documentation indicates that SOM has a negligible influence for these metals.

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### **Petroleum Hydrocarbons**

Compound	1% SOM	Source	2.5 - 3% SOM	Source	6% SOM	Source
Aliphatic EC5-EC6	3200 (304)	LQM	5900 (558)	LQM	12000 (1150)	LQM
Aliphatic >EC6-EC8	7800 (144)	LQM	17000 (322)	LQM	40000 (736)	LQM
Aliphatic >EC8-EC10	2000 (78)	LQM	4800 (190)	LQM	11000 (451)	LQM
Aliphatic >EC10-EC12	9700 (48)	LQM	23000 (118)	LQM	47000 (283)	LQM
Aliphatic >EC12-EC16	59000 (24)	LQM	82000 (59)	LQM	90000 (142)	LQM
Aliphatic >EC16-EC35	1600000	LQM	1700000	LQM	1800000	LQM
Aliphatic >EC35-EC44	1600000	LQM	1700000	LQM	1800000	LQM
Aromatic >EC5-EC7	26000 (1220)	LQM	46000 (2260)	LQM	86000 (4710)	LQM
Aromatic >EC7-EC8	56000 (869)	LQM	110000 (1920)	LQM	180000 (4360)	LQM
Aromatic >EC8-EC10	3500 (613)	LQM	8100 (1500)	LQM	17000 (3580)	LQM
Aromatic >EC10-EC12	16000 (364)	LQM	28000 s(899)	LQM	34000 (2150)	LQM
Aromatic >EC12-EC16	36000 (169)	LQM	37000	LQM	38000	LQM
Aromatic >EC16-EC21	28000	LQM	28000	LQM	28000	LQM
Aromatic >EC21-EC35	28000	LQM	28000	LQM	28000	LQM
Aromatic >EC35-EC44	28000	LQM	28000	LQM	28000	LQM
Aromatic and Aliphatic >EC44-EC70	28000	LQM	28000	LQM	28000	LQM

### **Polycyclic Aromatic Hydrocarbons (PAH)**

Compound	1% SOM	Source	2.5 - 3% SOM	Source	6% SOM	Source
Naphthalene	190 (76.4)	LQM	460 (183)	LQM	1100 (432)	LQM
Acenaphthylene	83000 (86.1)	LQM	97000 (212)	LQM	100000	LQM
Acenaphthene	84000 (57)	LQM	97000 (141)	LQM	100000	LQM
Fluorene	63000 (30.9)	LQM	68000	LQM	71000	LQM
Phenanthrene	22000	LQM	22000	LQM	23000	LQM
Anthracene	520000	LQM	540000	LQM	540000	LQM
Fluoranthene	23000	LQM	23000	LQM	23000	LQM
Pyrene	54000	LQM	54000	LQM	54000	LQM
Benzo[a]anthracene	170	LQM	170	LQM	180	LQM
Chrysene	350	LQM	350	LQM	350	LQM
Benzo[b]fluoranthene	44	LQM	44	LQM	45	LQM
Benzo[k]fluoranthene	1200	LQM	1200	LQM	1200	LQM
Benzo[a]pyrene	35	LQM	35	LQM	36	LQM
Benzo[a]pyrene	77	C4SL	77	C4SL	77	C4SL
Indeno[123-cd]pyrene	500	LQM	510	LQM	510	LQM
Dibenz[ah]anthracene	3.5	LQM	3.6	LQM	3.6	LQM
Benzo[ghi]perylene	3900	LQM	4000	LQM	4000	LQM

C4SL for benzo(a)pyrene is based on 6% SOM only, however, the published C4SL Final Project Report indicates that SOM has a negligible influence for this compound.

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## **Volatile Organic Compounds (VOC)**

Compound	1% SOM	Source	2.5 - 3% SOM	Source	6% SOM	Source
BTEX/MTBE						
Benzene					95	SGV
Benzene	27	LQM	47	LQM	90	LQM
Benzene	27	C4SL	-	-	98	C4SL
Toluene					(4400)	SGV
Toluene	56000 (869)	LQM	110000 (1920)	LQM	180000 (4360)	LQM
Ethylbenzene					(2,800)	SGV
Ethylbenzene	5700 (518)	LQM	13000 (1220)	LQM	27000 (2840)	LQM
Xylene – m					(3500)	SGV
Xylene – m	6200 (625)	LQM	14000 (1470)	LQM	31000 (3460)	LQM
Xylene – o					(2,600)	SGV
Xylene – o	6600 (478)	LQM	15000 (1120)	LQM	33000 (2620)	6600 (478)
Xylene – p					(3,200)	SGV
Xylene – p	5900 (576)	LQM	14000 (1350)	LQM	30000 (3170)	LQM
Methyl tert-butyl ether	7900	EIC	13000	EIC	24000	EIC
Chlorinated Solvents						
Vinyl Chloride (Chloroethene)	0.059	LQM	0.077	LQM	0.12	LQM
Trichloromethane (Chloroform)	99	LQM	170	LQM	350	LQM
1,2-Dichloroethane (1,2-DCA)	0.67	LQM	0.97	LQM	1.7	LQM
Trichloroethene (TCE)	1.2	LQM	2.6	LQM	5.7	LQM
1,1,1-Trichloroethane	660	LQM	1300	LQM	3000	LQM
Tetrachloroethene (PCE)	19	LQM	42	LQM	95	LQM
1,1,1,2- Tetrachlroroethanes	110	LQM	250	LQM	560	LQM
1,1,2,2- Tetrachlroroethane	270	LQM	550	LQM	1100	LQM
Tetrachloromethane	2.9	LQM	6.3	LQM	14	LQM
1,1,2 Trichloroethane	94	EIC	190	EIC	400	EIC
1,1-Dichloroethane	280	EIC	450	EIC	850	EIC
1,1-Dichloroethene	26	EIC	46	EIC	92	EIC
Cis 1,2-Dichloroethene	14	EIC	24	EIC	47	EIC
Trans 1,2- dichloroethene	22	EIC	40	EIC	81	EIC
Benzenes						
Chlorobenzene	56	LQM	130	LQM	290	LQM
1,2,4- Trimethylbenzene	42	EIC	99	EIC	220	EIC
Iso-propylbenzene	1400 (390)	EIC	3300 (950)	EIC	7700 (2250)	EIC
Propylbenzene	4100 (402)	EIC	9700 (981)	EIC	21000 (2330)	EIC
Other						

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### Collation of Human Health SGVs and Soil Screening Values - Commercial

Compound	1% SOM	Source	2.5 - 3% SOM	Source	6% SOM	Source
Bromobenzene	97	EIC	220	EIC	520	EIC
Bromodichloromethane	2.1	EIC	3.7	EIC	7.6	EIC
Carbon Disulphide	11	LQM	22	LQM	47	LQM
Chloroethane	960	EIC	1300	EIC	2100	EIC
Chloromethane	1	EIC	1.2	EIC	1.6	EIC
Dichloromethane	270	EIC	360	EIC	560	EIC
1,2-Dichloropropane	3.3	EIC	5.9	EIC	12	EIC
Hexachlorobutadiene	31	LQM	66	LQM	120	LQM
Styrene	3300 (626)	EIC	6500 (1440)	EIC	11000 (3350)	EIC

## Semi-Volatile Organic Compounds (SVOC) and Other Organic Compounds

Compound	1% SOM	Source	2.5 - 3% SOM	Source	6% SOM	Source
Chlorobenzenes						
1,2-Dichlorobenzene	2000 (571)	LQM	4800 (1370)	LQM	11000 (3240)	LQM
1,3-Dichlorobenzene	30	LQM	73	LQM	170	LQM
1,4-Dichlorobenzene	4400 (224)	LQM	10000 (540)	LQM	25000 (1280)	LQM
1,2,3-Trichlorobenzene	102	LQM	250	LQM	590	LQM
1,2,4-Trichlorobenzene	220	LQM	530	LQM	1300	LQM
1,3,5-Trichlorobenzene	23	LQM	55	LQM	130	LQM
1,2,3,4- Tetrachlorobenzene	1700 (122)	LQM	3080 (304)	LQM	4400 (728)	LQM
1,2,3,5-	49	LQM	120	LQM	240	LQM
Tetrachlorobenzene	(39.4)	Law	(98.1)	Law	(235)	LGIVI
1,2,4,5- Tetrachlorobenzene	42 (19.7)	LQM	72	LQM	96	LQM
	640	1011	(49.1) 770	1011		1014
Pentachlorobenzene	(43)	LQM	(107)	LQM	830	LQM
Hexachlorobenzene	110 (0.2)	LQM	120	LQM	120	LQM
Pthtalates						
Bis (2- ethylhexyl)phthalate	85,000 (8.68)	EIC	86,000 (21.6)	EIC	86,000 (51.7)	EIC
Diethyl phthalate	150,000 (13.7)	EIC	220,000 (29.1)	EIC	290,000 (65)	EIC
Di-n-butyl phthalate	15,000 (4.65)	EIC	15,000 (11.4)	EIC	15,000 (27.3)	EIC
Di-n-octyl phthalate	89,000 (32.6)	EIC	89,000 (81.5)	EIC	89,000 (196)	EIC
Butyl benzyl phthalate	940,000 (26.3)	EIC	940,000 (64.7)	EIC	950,000 (154)	EIC
Phenols						
Phenol	440	LQM	690	LQM	1200	LQM
2,4-Dimethylphenol	16000 (1380)	EIC	24000 (3140)	EIC	30000 (7240)	EIC
Total Cresols (2-, 3- and 4-methylphenol)	160000 (15000)	EIC	180000 (32500)	EIC	180000 (73300)	EIC
Chlorophenols	,					
Chlorophenols (except Pentachlorophenol)	3500	LQM	4000	LQM	4300	LQM
Pentachlorophenol	400	LQM	400	LQM	400	LQM
Other						
Biphenyl	18000 (34.4)	EIC	33000 (84.3)	EIC	48000 (201)	EIC
Bromoform	760	EIC	1500	EIC	3100	EIC
2-Chloronaphthalene	390 (114)	EIC	960 (280)	EIC	2,200 (669)	EIC
2,4-Dinitrotoluene	3,700 (141)	EIC	3,700 (299)	EIC	3,800 (669)	EIC
2,6-Dinitrotoluene	1,900 (287)	EIC	1,900 (622)	EIC	1,900 (1400)	EIC
Hexachloroethane	22 (8.17)	EIC	53 (20.1)	EIC	120 (48.1)	EIC
Tributyl tin oxide	130 (41.3)	EIC	180 (101)	EIC	200 (241)	EIC

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## **PCBs, Furans and Dioxins**

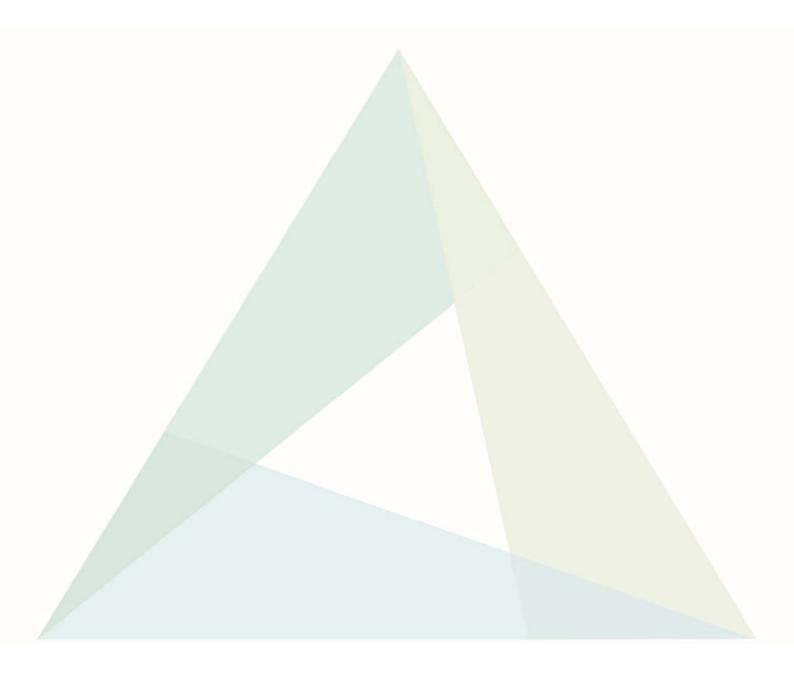
Compound	1% SOM	Source	2.5 - 3% SOM	Source	6% SOM	Source
Sum of PCDDs, PCDFs and dioxin-like PCBs	-	-	-	-	0.24	SGV v.1.05

### **Pesticides and Herbicides**

Compound	1% SOM	Source	2.5 - 3% SOM	Source	6% SOM	Source
Aldrin	170	LQM	170	LQM	170	LQM
Dieldrin	170	LQM	170	LQM	170	LQM
Atrazine	9300	LQM	9400	LQM	9400	LQM
Dichlorvos	140	LQM	140	LQM	140	LQM
Endosulfan (alpha)	5600 (0.003)	LQM	7400 (0.007)	LQM	8400 (0.016)	LQM
Endosulfan (beta)	6300 (0.00007)	LQM	7800 (0.0002)	LQM	8700	LQM
alpha- Hexachlorocyclohexanes	170	LQM	180	LQM	180	LQM
beta- Hexachlorocyclohexanes	65	LQM	65	LQM	65	LQM
gamma- Hexachlorocyclohexanes (inc. Lindane)	67	LQM	69	LQM	70	LQM

## **Explosives**

Compound	1% SOM	Source	2.5 - 3% SOM	Source	6% SOM	Source
2,4,6 Trinitrotoluene (TNT)	1000	LQM	1000	LQM	1000	LQM
RDX	210000	LQM	210000	LQM	210000	LQM
НМХ	110000	LQM	110000	LQM	110000	LQM









# Chemtest The right chemistry to deliver results

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## **Final Report**

Report Number: 15-20519 Issue-1

Initial Date of Issue: 22-Sep-2015

Client: Delta Simons

3 Henley Office Park

**Doddington Road** 

Client Address: Lincoln

Lincolnshire LN6 3QR

Simon Steele

Contact(s): Alex Cutts

Stacey Ragsdale

**Project:** 15-0645.02 - Corby

Quotation No.: Q15-04536 Date Received: 07-Sep-2015

Order No.: DS26055 Date Instructed: 15-Sep-2015

No. of Samples: 33

Turnaround: (Wkdays) 5 Results Due Date: 21-Sep-2015

Date Approved: 22-Sep-2015

Approved By:

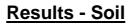
**Details:** Darrell Hall, Laboratory Director

Keith Jones, Technical Manager



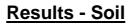


Project: 15-0645.02 - Corby													
Client: Delta Simons		Chen	ntest Jo	b No.:	15-20519	15-20519	15-20519	15-20519	15-20519	15-20519	15-20519	15-20519	15-20519
Quotation No.: Q15-04536	С	hemte	st Samp	le ID.:	187834	187835	187836	187837	187838	187839	187840	187841	187842
Order No.: DS26055			t Sampl		Sand	Clay	Clay	Sand	Clay	Sand	Clay	Sand	Clay
		Clie	nt Samp	le ID.:	DS104	DS104	DS102	DS105	DS105	DS103	DS103	DS106	DS106
			Sample		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
		_	Гор Dep	th (m):	0.2	1.0	0.3	0.2	2.0	0.2	0.6	0.2	1.5
		Bot	tom Dep	oth(m):	0.3	1.4	0.5	0.3	2.4	0.3	0.9	0.3	1.8
			Date Sa		01-Sep-15	01-Sep-15	01-Sep-15	01-Sep-15	01-Sep-15	01-Sep-15	01-Sep-15	01-Sep-15	01-Sep-15
Determinand	Accred.	SOP	Units	LOD									
ACM Type	U	2192			-	-	-	-		-		-	-
Asbestos Identification	U	2192			No Asbestos	No Asbestos	No Asbestos	No Asbestos		No Asbestos		No Asbestos	No Asbestos
Aspesios identification	U	2192			Detected	Detected	Detected	Detected		Detected		Detected	Detected
Moisture	N	2030	%	0.02	7.1	17	20	5.6	16	5.5	15	11	16
Soil Colour	N				Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown
Other Material	N				Stones	Stones	Stones	Stones	NONE	Stones	NONE	Stones	Stones
Soil Texture	N				Sand	Loam	Clay	Sand	Clay	Sand	Loam	Sand	Loam
рН	М	2010			8.1	7.8	7.9	8.4		8.1		10.2	7.7
Boron (Hot Water Soluble)	М	2120	mg/kg	0.4	< 0.40	0.97	0.97	< 0.40		< 0.40		0.46	0.65
Sulphate (2:1 Water Soluble) as SO4	М	2120	g/l	0.01	0.83	0.86	0.62	0.17		1.1		1.1	1.5
Total Sulphur	М	2175	%	0.01	0.18	0.50	0.55	0.12		0.23		0.17	0.49
Cyanide (Free)	М	2300	mg/kg	0.5	< 0.50	< 0.50	< 0.50	< 0.50		< 0.50		< 0.50	< 0.50
Cyanide (Total)	М	2300	mg/kg	0.5	< 0.50	< 0.50	< 0.50	< 0.50		< 0.50		< 0.50	< 0.50
Sulphate (Acid Soluble)	М	2430	%	0.01	0.35	0.82	0.65	0.12		0.39		0.33	0.91
Arsenic	M	2450	mg/kg	1	44	39	33	33		42		29	33
Cadmium	М	2450	mg/kg	0.1	0.31	0.36	0.19	0.21		0.27		0.21	0.18
Chromium	М	2450	mg/kg	1	13	48	40	9.5		11		12	41
Copper	М	2450	mg/kg	0.5	2.2	52	23	2.8		3.2		2.5	20
Mercury	М	2450	mg/kg	0.1	< 0.10	< 0.10	< 0.10	< 0.10		< 0.10		< 0.10	< 0.10
Nickel	M	2450	mg/kg	0.5	6.0	43	38	4.8		5.6		6.2	31
Lead	М	2450	mg/kg	0.5	2.2	87	23	1.8		1.7		2.1	26
Selenium	М	2450	mg/kg	0.2	< 0.20	< 0.20	< 0.20	< 0.20		< 0.20		< 0.20	< 0.20
Zinc	М	2450	mg/kg	0.5	17	400	89	14		15		15	97
Chromium (Trivalent)	N	2490	mg/kg	5	13	48	40	9.5		11		12	41
Chromium (Hexavalent)	N	2490	mg/kg	0.5	< 0.50	< 0.50	< 0.50	< 0.50		< 0.50		< 0.50	< 0.50
Fuel Type	N	2670			W.Diesel	N/A		N/A		N/A		W.Diesel	
Aliphatic TPH >C5-C6	N	2680	mg/kg	1	< 1.0	< 1.0		< 1.0		< 1.0		< 1.0	
Aliphatic TPH >C6-C8	N	2680	mg/kg	1	< 1.0	< 1.0		< 1.0		< 1.0		< 1.0	
Aliphatic TPH >C8-C10	М	2680	mg/kg	1	< 1.0	< 1.0		< 1.0		< 1.0		< 1.0	
Aliphatic TPH >C10-C12	М	2680	mg/kg		< 1.0	< 1.0		< 1.0		< 1.0		< 1.0	
Aliphatic TPH >C12-C16	М	2680	mg/kg		6.8	< 1.0		< 1.0		< 1.0		36	
Aliphatic TPH >C16-C21	М	2680	mg/kg		5.0	< 1.0		< 1.0		< 1.0		17	
Aliphatic TPH >C21-C35	М	2680	mg/kg		< 1.0	< 1.0		< 1.0		< 1.0		1.2	





Officers Date Officers		Oh r ::	-44 !-	L Na	45.00540	45.00540	45.00540	45.00540	45.00540	45.00540	45.00540	45.00540	45.00540
Client: Delta Simons			ntest Jo		15-20519	15-20519	15-20519	15-20519	15-20519	15-20519	15-20519	15-20519	15-20519
Quotation No.: Q15-04536	С		st Samp		187834	187835	187836	187837	187838	187839	187840	187841	187842
Order No.: DS26055			t Sample		Sand	Clay	Clay	Sand	Clay	Sand	Clay	Sand	Clay
			nt Samp		DS104	DS104	DS102	DS105	DS105	DS103	DS103	DS106	DS106
			Sample		SOIL								
			Top Dep		0.2	1.0	0.3	0.2	2.0	0.2	0.6	0.2	1.5
			tom Dep		0.3	1.4	0.5	0.3	2.4	0.3	0.9	0.3	1.8
			Date Sar		01-Sep-15								
Determinand	Accred.	SOP	Units	LOD									
Aliphatic TPH >C35-C44	N	2680	mg/kg	1	< 1.0	< 1.0		< 1.0		< 1.0		< 1.0	
Total Aliphatic Hydrocarbons	M	2680	mg/kg	5	12	< 5.0		< 5.0		< 5.0		54	
Aromatic TPH >C5-C7	N	2680	mg/kg	1	< 1.0	< 1.0		< 1.0		< 1.0		< 1.0	
Aromatic TPH >C7-C8	N	2680	mg/kg	1	< 1.0	< 1.0		< 1.0		< 1.0		< 1.0	
Aromatic TPH >C8-C10	М	2680	mg/kg	1	< 1.0	< 1.0		< 1.0		< 1.0		< 1.0	
Aromatic TPH >C10-C12	M	2680	mg/kg	1	< 1.0	< 1.0		< 1.0		< 1.0		< 1.0	
Aromatic TPH >C12-C16	M	2680	mg/kg	1	2.6	< 1.0		< 1.0		< 1.0		11	
Aromatic TPH >C16-C21	М	2680	mg/kg	1	2.1	< 1.0		< 1.0		< 1.0		4.3	
Aromatic TPH >C21-C35	M	2680	mg/kg	1	< 1.0	< 1.0		< 1.0		< 1.0		< 1.0	
Aromatic TPH >C35-C44	N	2680	mg/kg	1	< 1.0	< 1.0		< 1.0		< 1.0		< 1.0	
Total Aromatic Hydrocarbons	М	2680	mg/kg	5	5.2	< 5.0		< 5.0		< 5.0		16	
Total Petroleum Hydrocarbons	М	2680	mg/kg	10	18	< 10		< 10		< 10		70	
Naphthalene	М	2700	mg/kg	0.1	< 0.10	2.0	1.1	< 0.10		< 0.10		< 0.10	< 0.10
Acenaphthylene	М	2700	mg/kg	0.1	< 0.10	0.16	0.27	< 0.10		< 0.10		< 0.10	< 0.10
Acenaphthene	М	2700	mg/kg	0.1	< 0.10	0.44	0.26	< 0.10		< 0.10		< 0.10	< 0.10
Fluorene	М	2700	mg/kg	0.1	< 0.10	0.43	0.40	< 0.10		< 0.10		< 0.10	< 0.10
Phenanthrene	М	2700	mg/kg	0.1	< 0.10	1.6	0.88	< 0.10		< 0.10		< 0.10	< 0.10
Anthracene	М	2700	mg/kg	0.1	< 0.10	0.21	0.12	< 0.10		< 0.10		< 0.10	< 0.10
Fluoranthene	М	2700	mg/kg	0.1	< 0.10	1.3	0.91	< 0.10		< 0.10		< 0.10	< 0.10
Pyrene	М	2700	mg/kg	0.1	< 0.10	1.2	0.69	< 0.10		< 0.10		0.23	< 0.10
Benzo[a]anthracene	М	2700	mg/kg	0.1	< 0.10	0.47	< 0.10	< 0.10		< 0.10		< 0.10	< 0.10
Chrysene	М	2700	mg/kg	0.1	< 0.10	0.41	< 0.10	< 0.10		< 0.10		< 0.10	< 0.10
Benzo[b]fluoranthene	М	2700	mg/kg	0.1	< 0.10	0.38	< 0.10	< 0.10		< 0.10		< 0.10	< 0.10
Benzo[k]fluoranthene	М	2700	mg/kg	0.1	< 0.10	0.21	< 0.10	< 0.10		< 0.10		< 0.10	< 0.10
Benzo[a]pyrene	М	2700	mg/kg	0.1	< 0.10	0.21	< 0.10	< 0.10		< 0.10		< 0.10	< 0.10
Indeno(1,2,3-c,d)Pyrene	М	2700	mg/kg	0.1	< 0.10	< 0.10	< 0.10	< 0.10		< 0.10		< 0.10	< 0.10
Dibenz(a,h)Anthracene	М	2700	mg/kg	0.1	< 0.10	< 0.10	< 0.10	< 0.10		< 0.10		< 0.10	< 0.10
Benzo[g,h,i]perylene	М	2700	mg/kg	0.1	< 0.10	< 0.10	< 0.10	< 0.10		< 0.10		< 0.10	< 0.10
Total Of 16 PAH's	М	2700	mg/kg	2	< 2.0	9.0	4.6	< 2.0		< 2.0		< 2.0	< 2.0
Dichlorodifluoromethane	U	2760	μg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0		< 1.0		< 1.0	< 1.0
Chloromethane	М	2760	μg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0		< 1.0		< 1.0	< 1.0
Vinyl Chloride	М	2760	μg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0		< 1.0		< 1.0	< 1.0
Bromomethane	М	2760		20	< 20	< 20	< 20	< 20		< 20		< 20	< 20
		•											





Client: Delta Simons		Chem	test Jo	b No.:	15-20519	15-20519	15-20519	15-20519	15-20519	15-20519	15-20519	15-20519	15-20519
Quotation No.: Q15-04536	С	hemtes	t Samp	le ID.:	187834	187835	187836	187837	187838	187839	187840	187841	187842
Order No.: DS26055			t Sample		Sand	Clay	Clay	Sand	Clay	Sand	Clay	Sand	Clay
		Clien	t Samp	le ID.:	DS104	DS104	DS102	DS105	DS105	DS103	DS103	DS106	DS106
			Sample	Type:	SOIL								
		Т	op Dep	th (m):	0.2	1.0	0.3	0.2	2.0	0.2	0.6	0.2	1.5
		Bott	om Dep	th(m):	0.3	1.4	0.5	0.3	2.4	0.3	0.9	0.3	1.8
			Date Sar	npled:	01-Sep-15								
Determinand	Accred.	SOP	Units	LOD									
Chloroethane	U	2760	μg/kg	2	< 2.0	< 2.0	< 2.0	< 2.0		< 2.0		< 2.0	< 2.0
Trichlorofluoromethane	M	2760	μg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0		< 1.0		< 1.0	< 1.0
1,1-Dichloroethene	M	2760	μg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0		< 1.0		< 1.0	< 1.0
Trans 1,2-Dichloroethene	M	2760	μg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0		< 1.0		< 1.0	< 1.0
1,1-Dichloroethane	М	2760	μg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0		< 1.0		< 1.0	< 1.0
cis 1,2-Dichloroethene	M	2760	μg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0		< 1.0		< 1.0	< 1.0
Bromochloromethane	U	2760	μg/kg	5	< 5.0	< 5.0	< 5.0	< 5.0		< 5.0		< 5.0	< 5.0
Trichloromethane	M	2760	μg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0		< 1.0		< 1.0	< 1.0
1,1,1-Trichloroethane	M	2760	μg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0		< 1.0		< 1.0	< 1.0
Tetrachloromethane	M	2760	μg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0		< 1.0		< 1.0	< 1.0
1,1-Dichloropropene	U	2760	μg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0		< 1.0		< 1.0	< 1.0
Benzene	M	2760	μg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0		< 1.0		< 1.0	< 1.0
1,2-Dichloroethane	M	2760	μg/kg	2	< 2.0	< 2.0	< 2.0	< 2.0		< 2.0		< 2.0	< 2.0
Trichloroethene	M	2760	μg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0		< 1.0		< 1.0	< 1.0
1,2-Dichloropropane	M	2760	μg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0		< 1.0		< 1.0	< 1.0
Dibromomethane	M	2760	μg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0		< 1.0		< 1.0	< 1.0
Bromodichloromethane	M	2760	μg/kg	5	< 5.0	< 5.0	< 5.0	< 5.0		< 5.0		< 5.0	< 5.0
cis-1,3-Dichloropropene	N	2760	μg/kg	10	< 10	< 10	< 10	< 10		< 10		< 10	< 10
Toluene	M	2760	μg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0		< 1.0		< 1.0	< 1.0
Trans-1,3-Dichloropropene	N	2760	μg/kg	10	< 10	< 10	< 10	< 10		< 10		< 10	< 10
1,1,2-Trichloroethane	M	2760	μg/kg	10	< 10	< 10	< 10	< 10		< 10		< 10	< 10
Tetrachloroethene	M	2760	μg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0		< 1.0		< 1.0	< 1.0
1,3-Dichloropropane	U	2760	μg/kg	2	< 2.0	< 2.0	< 2.0	< 2.0		< 2.0		< 2.0	< 2.0
Dibromochloromethane	U	2760	μg/kg	10	< 10	< 10	< 10	< 10		< 10		< 10	< 10
1,2-Dibromoethane	М	2760	μg/kg	5	< 5.0	< 5.0	< 5.0	< 5.0		< 5.0		< 5.0	< 5.0
Chlorobenzene	М	2760	μg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0		< 1.0		< 1.0	< 1.0
1,1,1,2-Tetrachloroethane	М	2760	μg/kg	2	< 2.0	< 2.0	< 2.0	< 2.0		< 2.0		< 2.0	< 2.0
Ethylbenzene	М	2760	μg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0		< 1.0		< 1.0	< 1.0
m & p-Xylene	М	2760	μg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0		< 1.0		< 1.0	< 1.0
o-Xylene	М	2760	μg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0		< 1.0		< 1.0	< 1.0
Styrene	М	2760	μg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0		< 1.0		< 1.0	< 1.0
Tribromomethane	U	2760	μg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0		< 1.0		< 1.0	< 1.0
Isopropylbenzene	М	2760	μg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0		< 1.0		< 1.0	< 1.0





Client: Delta Simons		Chem	test Jo	b No.:	15-20519	15-20519	15-20519	15-20519	15-20519	15-20519	15-20519	15-20519	15-20519
Quotation No.: Q15-04536	С	hemtes	t Samp	le ID.:	187834	187835	187836	187837	187838	187839	187840	187841	187842
Order No.: DS26055		Client	t Sample	e Ref.:	Sand	Clay	Clay	Sand	Clay	Sand	Clay	Sand	Clay
		Clien	t Samp	le ID.:	DS104	DS104	DS102	DS105	DS105	DS103	DS103	DS106	DS106
			Sample	Type:	SOIL								
		Т	op Dep	th (m):	0.2	1.0	0.3	0.2	2.0	0.2	0.6	0.2	1.5
		Bott	om Dep	th(m):	0.3	1.4	0.5	0.3	2.4	0.3	0.9	0.3	1.8
			Date Sar	npled:	01-Sep-15								
Determinand	Accred.	SOP	Units	LOD									
Bromobenzene	M	2760	μg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0		< 1.0		< 1.0	< 1.0
1,2,3-Trichloropropane	N	2760	μg/kg	50	< 50	< 50	< 50	< 50		< 50		< 50	< 50
N-Propylbenzene	U	2760	μg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0		< 1.0		< 1.0	< 1.0
2-Chlorotoluene	M	2760	μg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0		< 1.0		< 1.0	< 1.0
1,3,5-Trimethylbenzene	М	2760	μg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0		< 1.0		< 1.0	< 1.0
4-Chlorotoluene	U	2760	μg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0		< 1.0		< 1.0	< 1.0
Tert-Butylbenzene	U	2760	μg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0		< 1.0		< 1.0	< 1.0
1,2,4-Trimethylbenzene	M	2760	μg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0		< 1.0		< 1.0	< 1.0
Sec-Butylbenzene	U	2760	μg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0		< 1.0		< 1.0	< 1.0
1,3-Dichlorobenzene	M	2760	μg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0		< 1.0		< 1.0	< 1.0
4-Isopropyltoluene	U	2760	μg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0		< 1.0		< 1.0	< 1.0
1,4-Dichlorobenzene	M	2760	μg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0		< 1.0		< 1.0	< 1.0
N-Butylbenzene	U	2760	μg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0		< 1.0		< 1.0	< 1.0
1,2-Dichlorobenzene	M	2760	μg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0		< 1.0		< 1.0	< 1.0
1,2-Dibromo-3-Chloropropane	U	2760	μg/kg	50	< 50	< 50	< 50	< 50		< 50		< 50	< 50
1,2,4-Trichlorobenzene	M	2760	μg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0		< 1.0		< 1.0	< 1.0
Hexachlorobutadiene	U	2760	μg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0		< 1.0		< 1.0	< 1.0
1,2,3-Trichlorobenzene	U	2760	μg/kg	2	< 2.0	< 2.0	< 2.0	< 2.0		< 2.0		< 2.0	< 2.0
Methyl Tert-Butyl Ether	M	2760	μg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0		< 1.0		< 1.0	< 1.0
N-Nitrosodimethylamine	N	2790	mg/kg	0.5					< 0.50		< 0.50		
Phenol	N	2790	mg/kg	0.5					< 0.50		< 0.50		
2-Chlorophenol	N	2790	mg/kg	0.5					< 0.50		< 0.50		
Bis-(2-Chloroethyl)Ether	N	2790	mg/kg	0.5					< 0.50		< 0.50		
1,3-Dichlorobenzene	N	2790	mg/kg	0.5					< 0.50		< 0.50		
1,4-Dichlorobenzene	N	2790	mg/kg	0.5					< 0.50		< 0.50		
1,2-Dichlorobenzene	N	2790	mg/kg	0.5					< 0.50		< 0.50		
2-Methylphenol	N	2790	mg/kg	0.5					< 0.50		< 0.50		
Bis(2-Chloroisopropyl)Ether	N	2790	mg/kg	0.5					< 0.50		< 0.50		
Hexachloroethane	N	2790	mg/kg	0.5					< 0.50		< 0.50		
N-Nitrosodi-n-propylamine	N	2790	mg/kg	0.5					< 0.50		< 0.50		
4-Methylphenol	N	2790	mg/kg	0.5					< 0.50		< 0.50		
Nitrobenzene	N	2790	mg/kg	0.5					< 0.50		< 0.50		
Isophorone	N	2790	mg/kg	0.5					< 0.50		< 0.50		





Client: Delta Simons		Chen	ntest Jo	b No.:	15-20519	15-20519	15-20519	15-20519	15-20519	15-20519	15-20519	15-20519	15-20519
Quotation No.: Q15-04536	С		st Samp		187834	187835	187836	187837	187838	187839	187840	187841	187842
Order No.: DS26055	<u> </u>		t Sampl		Sand	Clay	Clay	Sand	Clay	Sand	Clay	Sand	Clay
			nt Samp		DS104	DS104	DS102	DS105	DS105	DS103	DS103	DS106	DS106
			Sample		SOIL								
		-	Гор Dер		0.2	1.0	0.3	0.2	2.0	0.2	0.6	0.2	1.5
			tom Dep		0.3	1.4	0.5	0.3	2.4	0.3	0.9	0.3	1.8
		Date Sampled:			01-Sep-15								
Determinand	Accred.	SOP	Units	LOD			·	·	·	·		·	·
2-Nitrophenol	N	2790	mg/kg	0.5					< 0.50		< 0.50		
2,4-Dimethylphenol	N	2790	mg/kg	0.5					< 0.50		< 0.50		
Bis(2-Chloroethoxy)Methane	N	2790	mg/kg	0.5					< 0.50		< 0.50		
2,4-Dichlorophenol	N	2790	mg/kg	0.5					< 0.50		< 0.50		
1,2,4-Trichlorobenzene	N	2790	mg/kg	0.5					< 0.50		< 0.50		
Naphthalene	N	2790	mg/kg	0.5					< 0.50		< 0.50		
4-Chloroaniline	N	2790	mg/kg	0.5					< 0.50		< 0.50		
Hexachlorobutadiene	N	2790	mg/kg	0.5					< 0.50		< 0.50		
4-Chloro-3-Methylphenol	N	2790	mg/kg	0.5					< 0.50		< 0.50		
2-Methylnaphthalene	N	2790	mg/kg	0.5					< 0.50		< 0.50		
4-Nitrophenol	N	2790	mg/kg	0.5					< 0.50		< 0.50		
Hexachlorocyclopentadiene	N	2790	mg/kg	0.5					< 0.50		< 0.50		
2,4,6-Trichlorophenol	N	2790	mg/kg	0.5					< 0.50		< 0.50		
2,4,5-Trichlorophenol	N	2790	mg/kg	0.5					< 0.50		< 0.50		
2-Chloronaphthalene	N	2790	mg/kg	0.5					< 0.50		< 0.50		
2-Nitroaniline	N	2790	mg/kg	0.5					< 0.50		< 0.50		
Acenaphthylene	N	2790	mg/kg	0.5					< 0.50		< 0.50		
Dimethylphthalate	N	2790	mg/kg	0.5					< 0.50		< 0.50		
2,6-Dinitrotoluene	N	2790	mg/kg	0.5					< 0.50		< 0.50		
Acenaphthene	N	2790	mg/kg	0.5					< 0.50		< 0.50		
3-Nitroaniline	N	2790	mg/kg	0.5					< 0.50		< 0.50		
Dibenzofuran	N	2790	mg/kg	0.5					< 0.50		< 0.50		
4-Chlorophenylphenylether	N	2790	mg/kg	0.5					< 0.50		< 0.50		
2,4-Dinitrotoluene	N	2790	mg/kg	0.5					< 0.50		< 0.50		
Fluorene	N	2790	mg/kg	0.5					< 0.50		< 0.50		
Diethyl Phthalate	N	2790	mg/kg	0.5					< 0.50		< 0.50		
4-Nitroaniline	N	2790	mg/kg	0.5					< 0.50		< 0.50		
2-Methyl-4,6-Dinitrophenol	N	2790	mg/kg	0.5					< 0.50		< 0.50		
Azobenzene	N	2790	mg/kg	0.5					< 0.50		< 0.50		
4-Bromophenylphenyl Ether	N	2790	mg/kg	0.5					< 0.50		< 0.50		
Hexachlorobenzene	N	2790	mg/kg	0.5					< 0.50		< 0.50		
Pentachlorophenol	N	2790	mg/kg	0.5					< 0.50		< 0.50		
Phenanthrene	N	2790		0.5					< 0.50		< 0.50		



## **Results - Soil**

Client: Delta Simons			ntest Jo		15-20519	15-20519	15-20519	15-20519	15-20519	15-20519	15-20519	15-20519	15-20519
Quotation No.: Q15-04536	С		st Samp		187834	187835	187836	187837	187838	187839	187840	187841	187842
Order No.: DS26055		Clien	t Sampl	e Ref.:	Sand	Clay	Clay	Sand	Clay	Sand	Clay	Sand	Clay
		Clier	nt Samp	le ID.:	DS104	DS104	DS102	DS105	DS105	DS103	DS103	DS106	DS106
		Sample Type: Top Depth (m):				SOIL							
						1.0	0.3	0.2	2.0	0.2	0.6	0.2	1.5
		Bot	tom Dep	oth(m):	0.3	1.4	0.5	0.3	2.4	0.3	0.9	0.3	1.8
			Date Sa	mpled:	01-Sep-15								
Determinand	Accred.	SOP	Units	LOD									
Anthracene	N	2790	mg/kg	0.5					< 0.50		< 0.50		
Carbazole	N	2790	mg/kg	0.5					< 0.50		< 0.50		
Di-N-Butyl Phthalate	N	2790	mg/kg	0.5					< 0.50		< 0.50		
Fluoranthene	N	2790	mg/kg	0.5					< 0.50		< 0.50		
Pyrene	N	2790	mg/kg	0.5					< 0.50		< 0.50		
Butylbenzyl Phthalate	N	2790	mg/kg	0.5					< 0.50		< 0.50		
Benzo[a]anthracene	N	2790	mg/kg	0.5					< 0.50		< 0.50		
Chrysene	N	2790	mg/kg	0.5					< 0.50		< 0.50		
Bis(2-Ethylhexyl)Phthalate	N	2790	mg/kg	0.5					< 0.50		< 0.50		
Di-N-Octyl Phthalate	N	2790	mg/kg	0.5					< 0.50		< 0.50		
Benzo[b]fluoranthene	N	2790	mg/kg	0.5					< 0.50		< 0.50		
Benzo[k]fluoranthene	N	2790	mg/kg	0.5					< 0.50		< 0.50		
Benzo[a]pyrene	N	2790	mg/kg	0.5					< 0.50		< 0.50		
Indeno(1,2,3-c,d)Pyrene	N	2790	mg/kg	0.5					< 0.50		< 0.50		
Dibenz(a,h)Anthracene	N	2790	mg/kg						< 0.50		< 0.50		
Benzo[g,h,i]perylene	N	2790	mg/kg						< 0.50		< 0.50		
Total Phenols	М	2920	mg/kg	0.3	< 0.30	< 0.30	< 0.30	< 0.30		< 0.30		< 0.30	< 0.30





F10ject. 13-0043.02 - Colby														
Client: Delta Simons			ntest Jo		15-20519	15-20519	15-20519	15-20519	15-20519	15-20519	15-20519	15-20519	15-20519	15-20519
Quotation No.: Q15-04536	С		st Samp		187843	187844	187845	187846	187847	187848	187849	187850	187851	187852
Order No.: DS26055			t Sampl		Gravel	Clay	Clay	Gravel	Clay	Sand	Clay	Clay	Gravel	Sand
			nt Samp		DS107a	DS107a	DS107a	DS111	DS111	DS109	DS109	DS110	DS110	DS112
			Sample		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
			op Dep		0.08	0.9	2.3	0.08	1.3	0.1	2.2	1.6	1.8	0.4
			tom Dep	. ,	0.11	1.0	2.7	0.1	1.5	0.2	2.5	1.8	2.1	0.5
		Date Sampled: 0				01-Sep-15	01-Sep-15	02-Sep-15	02-Sep-15	02-Sep-15	02-Sep-15	02-Sep-15	02-Sep-15	02-Sep-15
Determinand	Accred.		Units	LOD										
ACM Type	U	2192				i		-		-	Lagging	i		-
Asbestos Identification	U	2192				No Asbestos		No Asbestos		No Asbestos	Amosite	No Asbestos Detected		No Asbestos Detected
Maiatura	N	2030	0/	0.02	3.2	Detected 18	17	Detected 1.3	14	Detected 8.1	16	15	12	6.8
Moisture Soil Colour	N	2030	%	0.02	Red	Brown	Brown	Brown	Brown	o. i Brown	Brown	Brown	13 Yellow	Brown
Other Material	N				Stones	Roots	Stones		Stones	Stones	Stones	Stones	Stones	Stones
Soil Texture	N				Sand			Stones Sand		Sand	Loam	Sand	Sand	Sand
pH	M	2010			Sand	Clay 7.5	Loam	8.3	Loam	8.1	10.0	8.1	Sano	8.2
Boron (Hot Water Soluble)	M	2120	mg/kg	0.4		0.80		< 0.40		< 0.40	0.81	0.43		< 0.40
,														
Sulphate (2:1 Water Soluble) as SO4	M M	2120 2175	g/l	0.01		1.3		0.31 0.070		1.2 0.20	1.2	1.6		1.1 0.17
Total Sulphur Cyanide (Free)	M	2300	%	0.01		1.1 < 0.50		< 0.50		< 0.50	1.0 < 0.50	1.0 < 0.50		< 0.50
Cyanide (Free) Cyanide (Total)	M	2300	mg/kg	0.5		< 0.50		< 0.50		< 0.50	< 0.50	< 0.50		< 0.50
Sulphate (Acid Soluble)	M	2430	mg/kg %	0.01		0.44		0.18		0.29	0.76	1.5		0.31
· · · · · · · · · · · · · · · · · · ·	M	2450		1		28		8.6		42	32	39		32
Arsenic Cadmium	M	2450	mg/kg	0.1		0.38		< 0.10		0.29	0.20	< 0.10		0.10
Chromium	M	2450	mg/kg mg/kg	1		34		11		11	86	25		8.0
	M	2450	_	0.5		29		20		1.5	44	15		1.2
Copper	M	2450	mg/kg			0.35				< 0.10	< 0.10			< 0.10
Mercury Nickel	M	2450	mg/kg	0.1		28		< 0.10 13		4.0	38	< 0.10 26		3.4
Lead	M	2450	mg/kg	0.5		49		4.9		1.1	17	8.8		0.99
	M	2450	mg/kg mg/kg	0.5				< 0.20				< 0.20		< 0.20
Selenium	M	2450		0.2		< 0.20 190		39		< 0.20 13	< 0.20 120	53		< 0.20
Zinc Chromium (Trivalent)	N	2490	mg/kg mg/kg	5		34		11		11	86	25		8.0
Chromium (Hexavalent)	N	2490				< 0.50		< 0.50		< 0.50	< 0.50	< 0.50		< 0.50
· · · · · · · · · · · · · · · · · · ·	N	2670	mg/kg	0.5			NI/A	< 0.50		< 0.50 N/A	< 0.50	< 0.50		< 0.50
Fuel Type				4		W.Kerosene	N/A							
Aliphatic TPH > C5-C6	N	2680	mg/kg	1		< 1.0	< 1.0			< 1.0				
Aliphatic TPH > C6-C8	N	2680	mg/kg			< 1.0	< 1.0			< 1.0				<del>                                     </del>
Aliphatic TPH > C8-C10	M	2680	mg/kg	1		2700	< 1.0			< 1.0				1
Aliphatic TPH >C10-C12	M	2680	mg/kg			2600	< 1.0			< 1.0				<del>                                     </del>
Aliphatic TPH > C12-C16	M	2680	mg/kg	1		56	< 1.0			< 1.0				
Aliphatic TPH >C16-C21	M	2680	mg/kg			170	< 1.0			< 1.0	<u> </u>			<del>                                     </del>
Aliphatic TPH >C21-C35	М	2680	mg/kg	1		1200	< 1.0			< 1.0				





Project: 15-0645.02 - Corby														
Client: Delta Simons		Chen	ntest Jo	b No.:	15-20519	15-20519	15-20519	15-20519	15-20519	15-20519	15-20519	15-20519	15-20519	15-20519
Quotation No.: Q15-04536	С	hemte	st Samp	le ID.:	187843	187844	187845	187846	187847	187848	187849	187850	187851	187852
Order No.: DS26055			ıt Sampl		Gravel	Clay	Clay	Gravel	Clay	Sand	Clay	Clay	Gravel	Sand
		Clie	nt Samp	le ID.:	DS107a	DS107a	DS107a	DS111	DS111	DS109	DS109	DS110	DS110	DS112
			Sample	Туре:	SOIL									
			Top Dep	th (m):	0.08	0.9	2.3	0.08	1.3	0.1	2.2	1.6	1.8	0.4
			tom Dep		0.11	1.0	2.7	0.1	1.5	0.2	2.5	1.8	2.1	0.5
	Date Sampled: 0				01-Sep-15	01-Sep-15	01-Sep-15	02-Sep-15						
Determinand	Accred.	SOP												
Aliphatic TPH >C35-C44	N	2680	mg/kg			58	< 1.0			< 1.0				1
Total Aliphatic Hydrocarbons	М	2680				6900	< 5.0			< 5.0				1
Aromatic TPH >C5-C7	N	2680	mg/kg	1		< 1.0	< 1.0			< 1.0				i
Aromatic TPH >C7-C8	N	2680	mg/kg	1		< 1.0	< 1.0			< 1.0				1
Aromatic TPH >C8-C10	M	2680	mg/kg	1		8.7	< 1.0			< 1.0				1
Aromatic TPH >C10-C12	М	2680	mg/kg	1		750	< 1.0			< 1.0				i
Aromatic TPH >C12-C16	М	2680	mg/kg	1		79	< 1.0			< 1.0				1
Aromatic TPH >C16-C21	М	2680	mg/kg	1		390	< 1.0			2.0				1
Aromatic TPH >C21-C35	М	2680	mg/kg	1		2000	< 1.0			< 1.0				1
Aromatic TPH >C35-C44	N	2680	mg/kg	1		280	< 1.0			< 1.0				1
Total Aromatic Hydrocarbons	М	2680	mg/kg	5		3500	< 5.0			< 5.0				
Total Petroleum Hydrocarbons	М	2680	mg/kg	10		10000	< 10			< 10				
Naphthalene	M	2700	mg/kg	0.1		0.62		< 0.10		< 0.10	0.71	< 0.10		< 0.10
Acenaphthylene	М	2700	mg/kg	0.1		0.10		< 0.10		< 0.10	0.18	< 0.10		< 0.10
Acenaphthene	М	2700	mg/kg	0.1		0.82		< 0.10		< 0.10	0.19	< 0.10		< 0.10
Fluorene	М	2700	mg/kg	0.1		0.24		< 0.10		< 0.10	< 0.10	< 0.10		< 0.10
Phenanthrene	М	2700	mg/kg	0.1		2.6		< 0.10		< 0.10	1.9	< 0.10		< 0.10
Anthracene	М	2700	mg/kg	0.1		0.27		< 0.10		< 0.10	0.22	< 0.10		< 0.10
Fluoranthene	М	2700	mg/kg	0.1		4.9		< 0.10		< 0.10	3.5	< 0.10		< 0.10
Pyrene	М	2700	mg/kg	0.1		2.9		< 0.10		< 0.10	1.4	< 0.10		< 0.10
Benzo[a]anthracene	M	2700	mg/kg	0.1		1.4		< 0.10		< 0.10	0.80	< 0.10		< 0.10
Chrysene	М	2700	mg/kg			2.2		< 0.10		< 0.10	1.4	< 0.10		< 0.10
Benzo[b]fluoranthene	М	2700	mg/kg	0.1		1.9		< 0.10		< 0.10	0.15	< 0.10		< 0.10
Benzo[k]fluoranthene	М	2700	mg/kg	0.1		1.1		< 0.10		< 0.10	1.2	< 0.10		< 0.10
Benzo[a]pyrene	М	2700	mg/kg	0.1		0.66		< 0.10		< 0.10	0.82	< 0.10		< 0.10
Indeno(1,2,3-c,d)Pyrene	М	2700	mg/kg	0.1		0.91		< 0.10		< 0.10	< 0.10	< 0.10		< 0.10
Dibenz(a,h)Anthracene	М	2700	mg/kg	0.1		0.65		< 0.10		< 0.10	< 0.10	< 0.10		< 0.10
Benzo[g,h,i]perylene	М	2700	mg/kg	0.1		1.2		< 0.10		< 0.10	< 0.10	< 0.10		< 0.10
Total Of 16 PAH's	М	2700	mg/kg	2		23		< 2.0		< 2.0	13	< 2.0		< 2.0
Dichlorodifluoromethane	U	2760	μg/kg	1		< 1.0		< 1.0		< 1.0	< 1.0	< 1.0		< 1.0
Chloromethane	М	2760	μg/kg	1		< 1.0		< 1.0		< 1.0	< 1.0	< 1.0		< 1.0
Vinyl Chloride	М	2760	μg/kg	1		< 1.0		< 1.0		< 1.0	< 1.0	< 1.0		< 1.0
Bromomethane	M	2760	μg/kg	20		< 20		< 20		< 20	< 20	< 20		< 20





<u>Project: 15-0645.02 - Corby</u>														
Client: Delta Simons		Chem	ntest Jo	b No.:	15-20519	15-20519	15-20519	15-20519	15-20519	15-20519	15-20519	15-20519	15-20519	15-20519
Quotation No.: Q15-04536	С	hemtes	st Samp	le ID.:	187843	187844	187845	187846	187847	187848	187849	187850	187851	187852
Order No.: DS26055		Client	t Sampl	e Ref.:	Gravel	Clay	Clay	Gravel	Clay	Sand	Clay	Clay	Gravel	Sand
		Clien	nt Samp	le ID.:	DS107a	DS107a	DS107a	DS111	DS111	DS109	DS109	DS110	DS110	DS112
			Sample	Type:	SOIL									
		Т	op Dep	th (m):	0.08	0.9	2.3	0.08	1.3	0.1	2.2	1.6	1.8	0.4
		Bottom Depth(m):				1.0	2.7	0.1	1.5	0.2	2.5	1.8	2.1	0.5
					01-Sep-15	01-Sep-15	01-Sep-15	02-Sep-15						
Determinand	Accred.	SOP	Units	LOD										
Chloroethane	U	2760	μg/kg	2		< 2.0		< 2.0		< 2.0	< 2.0	< 2.0		< 2.0
Trichlorofluoromethane	M	2760	μg/kg	1		< 1.0		< 1.0		< 1.0	< 1.0	< 1.0		< 1.0
1,1-Dichloroethene	M	2760	μg/kg	1		< 1.0		< 1.0		< 1.0	< 1.0	< 1.0		< 1.0
Trans 1,2-Dichloroethene	M	2760	μg/kg	1		< 1.0		< 1.0		< 1.0	< 1.0	< 1.0		< 1.0
1,1-Dichloroethane	M	2760	μg/kg	1		< 1.0		< 1.0		< 1.0	< 1.0	< 1.0		< 1.0
cis 1,2-Dichloroethene	M	2760	μg/kg	1		< 1.0		< 1.0		< 1.0	< 1.0	< 1.0		< 1.0
Bromochloromethane	U	2760	μg/kg	5		< 5.0		< 5.0		< 5.0	< 5.0	< 5.0		< 5.0
Trichloromethane	M	2760	μg/kg	1		< 1.0		< 1.0		< 1.0	< 1.0	< 1.0		< 1.0
1,1,1-Trichloroethane	M	2760	μg/kg	1		< 1.0		< 1.0		< 1.0	< 1.0	< 1.0		< 1.0
Tetrachloromethane	M	2760	μg/kg	1		< 1.0		< 1.0		< 1.0	< 1.0	< 1.0		< 1.0
1,1-Dichloropropene	U	2760	μg/kg	1		< 1.0		< 1.0		< 1.0	< 1.0	< 1.0		< 1.0
Benzene	M	2760	μg/kg	1		< 1.0		< 1.0		< 1.0	< 1.0	< 1.0		< 1.0
1,2-Dichloroethane	M	2760	μg/kg	2		< 2.0		< 2.0		< 2.0	< 2.0	< 2.0		< 2.0
Trichloroethene	M	2760	μg/kg	1		< 1.0		< 1.0		< 1.0	< 1.0	< 1.0		< 1.0
1,2-Dichloropropane	M	2760	μg/kg	1		< 1.0		< 1.0		< 1.0	< 1.0	< 1.0		< 1.0
Dibromomethane	M	2760	μg/kg	1		< 1.0		< 1.0		< 1.0	< 1.0	< 1.0		< 1.0
Bromodichloromethane	M	2760	μg/kg	5		< 5.0		< 5.0		< 5.0	< 5.0	< 5.0		< 5.0
cis-1,3-Dichloropropene	N	2760	μg/kg	10		< 10		< 10		< 10	< 10	< 10		< 10
Toluene	M	2760	μg/kg	1		< 1.0		< 1.0		< 1.0	< 1.0	< 1.0		< 1.0
Trans-1,3-Dichloropropene	N	2760	μg/kg	10		< 10		< 10		< 10	< 10	< 10		< 10
1,1,2-Trichloroethane	M	2760	μg/kg	10		< 10		< 10		< 10	< 10	< 10		< 10
Tetrachloroethene	M	2760	μg/kg	1		< 1.0		< 1.0		< 1.0	< 1.0	< 1.0		< 1.0
1,3-Dichloropropane	U	2760	μg/kg	2		< 2.0		< 2.0		< 2.0	< 2.0	< 2.0		< 2.0
Dibromochloromethane	U	2760	μg/kg	10		< 10		< 10		< 10	< 10	< 10		< 10
1,2-Dibromoethane	M	2760	μg/kg	5		< 5.0		< 5.0		< 5.0	< 5.0	< 5.0		< 5.0
Chlorobenzene	M	2760	μg/kg	1		< 1.0		< 1.0		< 1.0	< 1.0	< 1.0		< 1.0
1,1,1,2-Tetrachloroethane	M	2760	μg/kg	2		< 2.0		< 2.0		< 2.0	< 2.0	< 2.0		< 2.0
Ethylbenzene	M	2760	μg/kg	1		12		< 1.0		< 1.0	< 1.0	< 1.0		< 1.0
m & p-Xylene	M	2760	μg/kg	1		2.0		< 1.0		< 1.0	< 1.0	< 1.0		< 1.0
o-Xylene	M	2760	μg/kg	1		< 1.0		< 1.0		< 1.0	< 1.0	< 1.0		< 1.0
Styrene	M	2760	μg/kg	1		< 1.0		< 1.0		< 1.0	< 1.0	< 1.0		< 1.0
Tribromomethane	U	2760	μg/kg	1		< 1.0		< 1.0		< 1.0	< 1.0	< 1.0		< 1.0
Isopropylbenzene	M	2760	μg/kg	1		18		< 1.0		< 1.0	< 1.0	< 1.0		< 1.0





<u>Project: 15-0645.02 - Corby</u>														
Client: Delta Simons		Chem	ntest Jo	b No.:	15-20519	15-20519	15-20519	15-20519	15-20519	15-20519	15-20519	15-20519	15-20519	15-20519
Quotation No.: Q15-04536	С	hemtes	st Samp	le ID.:	187843	187844	187845	187846	187847	187848	187849	187850	187851	187852
Order No.: DS26055		Clien	t Sampl	e Ref.:	Gravel	Clay	Clay	Gravel	Clay	Sand	Clay	Clay	Gravel	Sand
		Clier	nt Samp	le ID.:	DS107a	DS107a	DS107a	DS111	DS111	DS109	DS109	DS110	DS110	DS112
			Sample	Туре:	SOIL									
		T	op Dep	th (m):	0.08	0.9	2.3	0.08	1.3	0.1	2.2	1.6	1.8	0.4
			tom Dep		0.11	1.0	2.7	0.1	1.5	0.2	2.5	1.8	2.1	0.5
		[	Date Sa	mpled:	01-Sep-15	01-Sep-15	01-Sep-15	02-Sep-15						
Determinand	Accred.	SOP	Units	LOD										
Bromobenzene	M	2760	μg/kg	1		< 1.0		< 1.0		< 1.0	< 1.0	< 1.0		< 1.0
1,2,3-Trichloropropane	N	2760	μg/kg	50		< 50		< 50		< 50	< 50	< 50		< 50
N-Propylbenzene	U	2760	μg/kg	1		29		< 1.0		< 1.0	< 1.0	< 1.0		< 1.0
2-Chlorotoluene	M	2760	μg/kg	1		< 1.0		< 1.0		< 1.0	< 1.0	< 1.0		< 1.0
1,3,5-Trimethylbenzene	M	2760	μg/kg	1		79		< 1.0		< 1.0	< 1.0	< 1.0		< 1.0
4-Chlorotoluene	U	2760	μg/kg	1		< 1.0		< 1.0		< 1.0	< 1.0	< 1.0		< 1.0
Tert-Butylbenzene	U	2760	μg/kg	1		10		< 1.0		< 1.0	< 1.0	< 1.0		< 1.0
1,2,4-Trimethylbenzene	M	2760	μg/kg	1		32		< 1.0		< 1.0	< 1.0	< 1.0		< 1.0
Sec-Butylbenzene	U	2760	μg/kg	1		21		< 1.0		< 1.0	< 1.0	< 1.0		< 1.0
1,3-Dichlorobenzene	M	2760	μg/kg	1		< 1.0		< 1.0		< 1.0	< 1.0	< 1.0		< 1.0
4-Isopropyltoluene	U	2760	μg/kg	1		53		< 1.0		< 1.0	< 1.0	< 1.0		< 1.0
1,4-Dichlorobenzene	M	2760	μg/kg	1		< 1.0		< 1.0		< 1.0	< 1.0	< 1.0		< 1.0
N-Butylbenzene	U	2760	μg/kg	1		< 1.0		< 1.0		< 1.0	< 1.0	< 1.0		< 1.0
1,2-Dichlorobenzene	M	2760	μg/kg	1		< 1.0		< 1.0		< 1.0	< 1.0	< 1.0		< 1.0
1,2-Dibromo-3-Chloropropane	U	2760	μg/kg	50		< 50		< 50		< 50	< 50	< 50		< 50
1,2,4-Trichlorobenzene	M	2760	μg/kg	1		< 1.0		< 1.0		< 1.0	< 1.0	< 1.0		< 1.0
Hexachlorobutadiene	U	2760	μg/kg	1		< 1.0		< 1.0		< 1.0	< 1.0	< 1.0		< 1.0
1,2,3-Trichlorobenzene	U	2760	μg/kg	2		< 2.0		< 2.0		< 2.0	< 2.0	< 2.0		< 2.0
Methyl Tert-Butyl Ether	M	2760	μg/kg	1		< 1.0		< 1.0		< 1.0	< 1.0	< 1.0		< 1.0
N-Nitrosodimethylamine	N	2790	mg/kg		< 0.50				< 0.50				< 0.50	1
Phenol	N	2790	mg/kg	0.5	< 0.50				< 0.50				< 0.50	i
2-Chlorophenol	N	2790	mg/kg	0.5	< 0.50				< 0.50				< 0.50	1
Bis-(2-Chloroethyl)Ether	N	2790	mg/kg	0.5	< 0.50				< 0.50				< 0.50	i
1,3-Dichlorobenzene	N	2790	mg/kg	0.5	< 0.50				< 0.50				< 0.50	i
1,4-Dichlorobenzene	N	2790	mg/kg	0.5	< 0.50				< 0.50				< 0.50	1
1,2-Dichlorobenzene	N	2790	mg/kg	0.5	< 0.50				< 0.50				< 0.50	1
2-Methylphenol	N	2790	mg/kg		< 0.50	·			< 0.50				< 0.50	<u> </u>
Bis(2-Chloroisopropyl)Ether	N	2790	mg/kg	0.5	< 0.50				< 0.50				< 0.50	
Hexachloroethane	N	2790	mg/kg	0.5	< 0.50				< 0.50				< 0.50	
N-Nitrosodi-n-propylamine	N	2790	mg/kg	0.5	< 0.50				< 0.50				< 0.50	
4-Methylphenol	N	2790	mg/kg	0.5	< 0.50				< 0.50				< 0.50	1
Nitrobenzene	N	2790	mg/kg	0.5	< 0.50				< 0.50				< 0.50	
Isophorone	N	2790	mg/kg	0.5	< 0.50				< 0.50				< 0.50	





Project: 15-0645.02 - Corby														
Client: Delta Simons			ntest Jo		15-20519	15-20519	15-20519	15-20519	15-20519	15-20519	15-20519	15-20519	15-20519	15-20519
Quotation No.: Q15-04536	С		st Samp		187843	187844	187845	187846	187847	187848	187849	187850	187851	187852
Order No.: DS26055			nt Sampl		Gravel	Clay	Clay	Gravel	Clay	Sand	Clay	Clay	Gravel	Sand
		Clie	nt Samp		DS107a	DS107a	DS107a	DS111	DS111	DS109	DS109	DS110	DS110	DS112
			Sample	71	SOIL									
			Top Dep		0.08	0.9	2.3	0.08	1.3	0.1	2.2	1.6	1.8	0.4
			ttom Dep		0.11	1.0	2.7	0.1	1.5	0.2	2.5	1.8	2.1	0.5
			Date Sa		01-Sep-15	01-Sep-15	01-Sep-15	02-Sep-15						
Determinand	Accred.	SOP												
2-Nitrophenol	N	2790			< 0.50				< 0.50				< 0.50	
2,4-Dimethylphenol	N	2790			< 0.50				< 0.50				< 0.50	
Bis(2-Chloroethoxy)Methane	N	2790			< 0.50				< 0.50				< 0.50	
2,4-Dichlorophenol	N	2790			< 0.50				< 0.50				< 0.50	
1,2,4-Trichlorobenzene	N	2790	0 0	0.5	< 0.50				< 0.50				< 0.50	
Naphthalene	N	2790	mg/kg		< 0.50				< 0.50				< 0.50	
4-Chloroaniline	N	2790		0.5	< 0.50				< 0.50				< 0.50	
Hexachlorobutadiene	N	2790		0.5	< 0.50				< 0.50				< 0.50	
4-Chloro-3-Methylphenol	N	2790	mg/kg	0.5	< 0.50				< 0.50				< 0.50	
2-Methylnaphthalene	N	2790		0.5	< 0.50				< 0.50				< 0.50	
4-Nitrophenol	N	2790	mg/kg	0.5	< 0.50				< 0.50				< 0.50	
Hexachlorocyclopentadiene	N	2790	mg/kg	0.5	< 0.50				< 0.50				< 0.50	
2,4,6-Trichlorophenol	N	2790	mg/kg	0.5	< 0.50				< 0.50				< 0.50	
2,4,5-Trichlorophenol	N	2790	mg/kg	0.5	< 0.50				< 0.50				< 0.50	
2-Chloronaphthalene	N	2790	mg/kg	0.5	< 0.50				< 0.50				< 0.50	
2-Nitroaniline	N	2790	mg/kg	0.5	< 0.50				< 0.50				< 0.50	
Acenaphthylene	N	2790	mg/kg	0.5	< 0.50				< 0.50				< 0.50	
Dimethylphthalate	N	2790	mg/kg	0.5	< 0.50				< 0.50				< 0.50	
2,6-Dinitrotoluene	N	2790	mg/kg	0.5	< 0.50				< 0.50				< 0.50	
Acenaphthene	N	2790	mg/kg	0.5	< 0.50				< 0.50				< 0.50	
3-Nitroaniline	N	2790	mg/kg	0.5	< 0.50				< 0.50				< 0.50	
Dibenzofuran	N	2790	mg/kg	0.5	< 0.50				< 0.50				< 0.50	
4-Chlorophenylphenylether	N	2790	mg/kg	0.5	< 0.50				< 0.50				< 0.50	
2,4-Dinitrotoluene	N	2790	mg/kg	0.5	< 0.50				< 0.50				< 0.50	
Fluorene	N	2790	mg/kg	0.5	< 0.50				< 0.50				< 0.50	
Diethyl Phthalate	N	2790	mg/kg	0.5	< 0.50				< 0.50				< 0.50	
4-Nitroaniline	N	2790	mg/kg	0.5	< 0.50				< 0.50				< 0.50	
2-Methyl-4,6-Dinitrophenol	N	2790	mg/kg	0.5	< 0.50				< 0.50				< 0.50	
Azobenzene	N	2790		0.5	< 0.50				< 0.50				< 0.50	
4-Bromophenylphenyl Ether	N	2790		0.5	< 0.50				< 0.50				< 0.50	
Hexachlorobenzene	N	2790			< 0.50				< 0.50				< 0.50	
Pentachlorophenol	N	2790	mg/kg	0.5	< 0.50				< 0.50				< 0.50	
Phenanthrene	N	2790			< 0.50				< 0.50				< 0.50	



### **Results - Soil**

Client: Delta Simons		Chen	ntest Jo	b No.:	15-20519	15-20519	15-20519	15-20519	15-20519	15-20519	15-20519	15-20519	15-20519	15-20519
Quotation No.: Q15-04536	C	hemte	st Samp	le ID.:	187843	187844	187845	187846	187847	187848	187849	187850	187851	187852
Order No.: DS26055		Clien	t Sample	e Ref.:	Gravel	Clay	Clay	Gravel	Clay	Sand	Clay	Clay	Gravel	Sand
		Clie	nt Samp	le ID.:	DS107a	DS107a	DS107a	DS111	DS111	DS109	DS109	DS110	DS110	DS112
			Sample	Туре:	SOIL									
		-	Top Dep	th (m):	0.08	0.9	2.3	0.08	1.3	0.1	2.2	1.6	1.8	0.4
		Bot	tom Dep	oth(m):	0.11	1.0	2.7	0.1	1.5	0.2	2.5	1.8	2.1	0.5
			Date Sai	mpled:	01-Sep-15	01-Sep-15	01-Sep-15	02-Sep-15						
Determinand	Accred.	SOP	Units	LOD										
Anthracene	N	2790	mg/kg	0.5	< 0.50				< 0.50				< 0.50	
Carbazole	N	2790	mg/kg	0.5	< 0.50				< 0.50				< 0.50	
Di-N-Butyl Phthalate	N	2790	mg/kg	0.5	< 0.50				< 0.50				< 0.50	
Fluoranthene	N	2790	mg/kg	0.5	< 0.50				< 0.50				< 0.50	
Pyrene	N	2790	mg/kg	0.5	< 0.50				< 0.50				< 0.50	
Butylbenzyl Phthalate	N	2790	mg/kg	0.5	< 0.50				< 0.50				< 0.50	
Benzo[a]anthracene	Ν	2790	mg/kg	0.5	< 0.50				< 0.50				< 0.50	
Chrysene	N	2790			< 0.50				< 0.50				< 0.50	
Bis(2-Ethylhexyl)Phthalate	N	2790	mg/kg	0.5	< 0.50				< 0.50				< 0.50	
Di-N-Octyl Phthalate	N	2790	mg/kg	0.5	< 0.50				< 0.50				< 0.50	
Benzo[b]fluoranthene	N	2790	mg/kg	0.5	< 0.50				< 0.50				< 0.50	
Benzo[k]fluoranthene	Ν	2790	mg/kg	0.5	< 0.50	-			< 0.50	_			< 0.50	
Benzo[a]pyrene	Ν		mg/kg		< 0.50				< 0.50				< 0.50	
Indeno(1,2,3-c,d)Pyrene	N				< 0.50				< 0.50				< 0.50	
Dibenz(a,h)Anthracene	Ν	2790	mg/kg	0.5	< 0.50				< 0.50				< 0.50	
Benzo[g,h,i]perylene	Ν	2790			< 0.50				< 0.50				< 0.50	
Total Phenols	М	2920	mg/kg	0.3		< 0.30		< 0.30		< 0.30	< 0.30	< 0.30		< 0.30





Client: Delta Simons		Chen	ntest Jo	b No.:	15-20519	15-20519	15-20519	15-20519	15-20519	15-20519	15-20519	15-20519	15-20519
Quotation No.: Q15-04536	С	hemtes	st Samp	le ID.:	187853	187854	187855	187856	187857	187858	187859	187860	187862
Order No.: DS26055		Clien	t Sampl	e Ref.:	Sand	Clay	Sand	Clay	Sand	Clay	Sand	Clay	Clay
		Clier	nt Samp	le ID.:	DS107	DS107	DS101	DS101	DS108	DS108	DS113	DS113	DS114
			Sample	Туре:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
		7	Гор Dер	th (m):	0.2	1.3	0.1	0.5	0.1	0.7	0.2	1.8	0.7
		Bot	tom Dep	oth(m):	0.3	1.7	0.25	0.8	0.2	1.0	0.3	2.0	1.0
			Date Sa		02-Sep-15	02-Sep-15	02-Sep-15	02-Sep-15	02-Sep-15	02-Sep-15	03-Sep-15	03-Sep-15	03-Sep-15
Determinand	Accred.	SOP	Units	LOD									
ACM Type	U	2192			-			-		-	-		-
Asbestos Identification	U	2192			No Asbestos Detected			No Asbestos Detected		No Asbestos Detected	No Asbestos Detected		No Asbestos Detected
Moisture	N	2030	%	0.02	8.2	14	7.6	16	9.5	15	8.7	14	17
Soil Colour	N				Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown
Other Material	N				Stones	NONE	Stones	Stones	Stones	Stones	Stones	Stones	Stones
Soil Texture	N				Sand	Loam	Sand	Loam	Sand	Loam	Sand	Loam	Loam
pH	М	2010			8.0			7.4		7.8	8.0		7.7
Boron (Hot Water Soluble)	М	2120	mg/kg	0.4	< 0.40			0.55		0.51	< 0.40		0.65
Sulphate (2:1 Water Soluble) as SO4	М	2120	g/l	0.01	1.5			1.1		0.68	1.1		1.2
Total Sulphur	М	2175	%	0.01	0.32			1.1		0.81	0.24		1.1
Cyanide (Free)	М	2300	mg/kg	0.5	< 0.50			< 0.50		< 0.50	< 0.50		< 0.50
Cyanide (Total)	М	2300	mg/kg	0.5	< 0.50			< 0.50		< 0.50	< 0.50		< 0.50
Sulphate (Acid Soluble)	М	2430	%	0.01	0.53			0.36		0.73	0.32		0.67
Arsenic	М	2450	mg/kg	1	28			31		29	36		32
Cadmium	M	2450	mg/kg	0.1	0.15			0.14		0.17	0.25		0.13
Chromium	М	2450	mg/kg	1	7.8			46		35	9.6		36
Copper	M	2450	mg/kg	0.5	1.3			24		23	1.1		24
Mercury	М	2450	mg/kg	0.1	< 0.10			< 0.10		< 0.10	< 0.10		< 0.10
Nickel	M	2450	mg/kg	0.5	3.5			40		35	3.6		38
Lead	M	2450	mg/kg	0.5	1.1			14		13	1.2		13
Selenium	М	2450	mg/kg	0.2	< 0.20			< 0.20		< 0.20	< 0.20		< 0.20
Zinc	M	2450	mg/kg	0.5	11			69		64	11		65
Chromium (Trivalent)	N	2490	mg/kg	5	7.8			46		35	9.6		36
Chromium (Hexavalent)	N	2490	mg/kg	0.5	< 0.50			< 0.50		< 0.50	< 0.50		< 0.50
Fuel Type	N	2670									N/A		
Aliphatic TPH >C5-C6	N	2680	mg/kg	1							< 1.0		
Aliphatic TPH >C6-C8	N	2680	mg/kg	1							< 1.0		
Aliphatic TPH >C8-C10	М	2680	mg/kg	1							< 1.0		
Aliphatic TPH >C10-C12	М	2680	mg/kg	1							< 1.0		
Aliphatic TPH >C12-C16	М	2680		1							< 1.0		
Aliphatic TPH >C16-C21	М	2680	mg/kg	1							< 1.0		
Aliphatic TPH >C21-C35	М	2680	mg/kg	1							< 1.0		



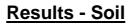


Client: Delta Simons		Chen	ntest Jo	b No.:	15-20519	15-20519	15-20519	15-20519	15-20519	15-20519	15-20519	15-20519	15-20519
Quotation No.: Q15-04536	С	hemte	st Samp	le ID.:	187853	187854	187855	187856	187857	187858	187859	187860	187862
Order No.: DS26055			t Sampl		Sand	Clay	Sand	Clay	Sand	Clay	Sand	Clay	Clay
			nt Samp		DS107	DS107	DS101	DS101	DS108	DS108	DS113	DS113	DS114
			Sample		SOIL								
		-	Top Dep		0.2	1.3	0.1	0.5	0.1	0.7	0.2	1.8	0.7
			tom Der	. ,	0.3	1.7	0.25	0.8	0.2	1.0	0.3	2.0	1.0
			Date Sa	mpled:	02-Sep-15	02-Sep-15	02-Sep-15	02-Sep-15	02-Sep-15	02-Sep-15	03-Sep-15	03-Sep-15	03-Sep-15
Determinand	Accred.	SOP	Units	LOD		·	·	·		·			
Aliphatic TPH >C35-C44	N	2680	mg/kg	1							< 1.0		
Total Aliphatic Hydrocarbons	M	2680	mg/kg	5							< 5.0		
Aromatic TPH >C5-C7	N	2680	mg/kg	1							< 1.0		
Aromatic TPH >C7-C8	N	2680	mg/kg	1							< 1.0		
Aromatic TPH >C8-C10	М	2680		1							< 1.0		
Aromatic TPH >C10-C12	М	2680	mg/kg	1							< 1.0		
Aromatic TPH >C12-C16	М	2680	mg/kg	1							< 1.0		
Aromatic TPH >C16-C21	М	2680	mg/kg	1							< 1.0		
Aromatic TPH >C21-C35	М	2680	mg/kg	1							< 1.0		
Aromatic TPH >C35-C44	N	2680	mg/kg	1							< 1.0		
Total Aromatic Hydrocarbons	М	2680	mg/kg	5							< 5.0		
Total Petroleum Hydrocarbons	М	2680	mg/kg	10							< 10		
Naphthalene	М	2700	mg/kg	0.1	< 0.10			< 0.10		< 0.10	< 0.10		< 0.10
Acenaphthylene	М	2700	mg/kg	0.1	< 0.10			< 0.10		< 0.10	< 0.10		< 0.10
Acenaphthene	M	2700	mg/kg	0.1	< 0.10			< 0.10		< 0.10	< 0.10		< 0.10
Fluorene	M	2700	mg/kg	0.1	< 0.10			< 0.10		< 0.10	< 0.10		< 0.10
Phenanthrene	M	2700	mg/kg	0.1	< 0.10			< 0.10		< 0.10	< 0.10		< 0.10
Anthracene	М	2700	mg/kg	0.1	< 0.10			< 0.10		< 0.10	< 0.10		< 0.10
Fluoranthene	M	2700	mg/kg	0.1	< 0.10			< 0.10		< 0.10	< 0.10		< 0.10
Pyrene	M	2700	mg/kg	0.1	< 0.10			< 0.10		< 0.10	< 0.10		< 0.10
Benzo[a]anthracene	M	2700	mg/kg	0.1	< 0.10			< 0.10		< 0.10	< 0.10		< 0.10
Chrysene	М	2700	mg/kg	0.1	< 0.10			< 0.10		< 0.10	< 0.10		< 0.10
Benzo[b]fluoranthene	M	2700	mg/kg	0.1	< 0.10			< 0.10		< 0.10	< 0.10		< 0.10
Benzo[k]fluoranthene	M	2700	mg/kg	0.1	< 0.10			< 0.10		< 0.10	< 0.10		< 0.10
Benzo[a]pyrene	M	2700	mg/kg	0.1	< 0.10			< 0.10		< 0.10	< 0.10		< 0.10
Indeno(1,2,3-c,d)Pyrene	M	2700	mg/kg	0.1	< 0.10			< 0.10		< 0.10	< 0.10		< 0.10
Dibenz(a,h)Anthracene	M	2700	mg/kg	0.1	< 0.10			< 0.10		< 0.10	< 0.10		< 0.10
Benzo[g,h,i]perylene	M	2700	mg/kg	0.1	< 0.10			< 0.10		< 0.10	< 0.10		< 0.10
Total Of 16 PAH's	M	2700	mg/kg	2	< 2.0			< 2.0		< 2.0	< 2.0		< 2.0
Dichlorodifluoromethane	U	2760	μg/kg	1	< 1.0			< 1.0		< 1.0	< 1.0		< 1.0
Chloromethane	M	2760		1	< 1.0			< 1.0		< 1.0	< 1.0		< 1.0
Vinyl Chloride	M	2760	μg/kg	1	< 1.0			< 1.0		< 1.0	< 1.0		< 1.0
Bromomethane	М	2760	μg/kg	20	< 20			< 20		< 20	< 20		< 20





Client: Delta Simons		Chem	ntest Jo	b No.:	15-20519	15-20519	15-20519	15-20519	15-20519	15-20519	15-20519	15-20519	15-20519
Quotation No.: Q15-04536	С	hemtes	st Samp	le ID.:	187853	187854	187855	187856	187857	187858	187859	187860	187862
Order No.: DS26055			t Sample		Sand	Clay	Sand	Clay	Sand	Clay	Sand	Clay	Clay
		Clier	nt Samp	le ID.:	DS107	DS107	DS101	DS101	DS108	DS108	DS113	DS113	DS114
			Sample	Туре:	SOIL								
		Т	Top Dep	th (m):	0.2	1.3	0.1	0.5	0.1	0.7	0.2	1.8	0.7
		Bot	tom Dep	oth(m):	0.3	1.7	0.25	0.8	0.2	1.0	0.3	2.0	1.0
		[	Date Sai	mpled:	02-Sep-15	02-Sep-15	02-Sep-15	02-Sep-15	02-Sep-15	02-Sep-15	03-Sep-15	03-Sep-15	03-Sep-15
Determinand	Accred.	SOP	Units	LOD									
Chloroethane	U	2760	μg/kg	2	< 2.0			< 2.0		< 2.0	< 2.0		< 2.0
Trichlorofluoromethane	M	2760	μg/kg	1	< 1.0			< 1.0		< 1.0	< 1.0		< 1.0
1,1-Dichloroethene	M	2760	μg/kg	1	< 1.0			< 1.0		< 1.0	< 1.0		< 1.0
Trans 1,2-Dichloroethene	М	2760	μg/kg	1	< 1.0			< 1.0		< 1.0	< 1.0		< 1.0
1,1-Dichloroethane	М	2760	μg/kg	1	< 1.0			< 1.0		< 1.0	< 1.0		< 1.0
cis 1,2-Dichloroethene	М	2760	μg/kg	1	< 1.0			< 1.0		< 1.0	< 1.0		< 1.0
Bromochloromethane	U	2760	μg/kg	5	< 5.0			< 5.0		< 5.0	< 5.0		< 5.0
Trichloromethane	М	2760	μg/kg	1	< 1.0			< 1.0		< 1.0	< 1.0		< 1.0
1,1,1-Trichloroethane	М	2760	μg/kg	1	< 1.0			< 1.0		< 1.0	< 1.0		< 1.0
Tetrachloromethane	М	2760	μg/kg	1	< 1.0			< 1.0		< 1.0	< 1.0		< 1.0
1,1-Dichloropropene	U	2760	μg/kg	1	< 1.0			< 1.0		< 1.0	< 1.0		< 1.0
Benzene	М	2760	μg/kg	1	< 1.0			< 1.0		< 1.0	< 1.0		< 1.0
1,2-Dichloroethane	М	2760	μg/kg	2	< 2.0			< 2.0		< 2.0	< 2.0		< 2.0
Trichloroethene	М	2760	μg/kg	1	< 1.0			< 1.0		< 1.0	< 1.0		< 1.0
1,2-Dichloropropane	М	2760	μg/kg	1	< 1.0			< 1.0		< 1.0	< 1.0		< 1.0
Dibromomethane	М	2760	μg/kg	1	< 1.0			< 1.0		< 1.0	< 1.0		< 1.0
Bromodichloromethane	М	2760	μg/kg	5	< 5.0			< 5.0		< 5.0	< 5.0		< 5.0
cis-1,3-Dichloropropene	N	2760	μg/kg	10	< 10			< 10		< 10	< 10		< 10
Toluene	М	2760	μg/kg	1	< 1.0			< 1.0		< 1.0	< 1.0		< 1.0
Trans-1,3-Dichloropropene	N	2760	μg/kg	10	< 10			< 10		< 10	< 10		< 10
1,1,2-Trichloroethane	М	2760	μg/kg	10	< 10			< 10		< 10	< 10		< 10
Tetrachloroethene	M	2760	μg/kg	1	< 1.0			< 1.0		< 1.0	< 1.0		< 1.0
1,3-Dichloropropane	U	2760	μg/kg	2	< 2.0			< 2.0		< 2.0	< 2.0		< 2.0
Dibromochloromethane	U	2760	μg/kg	10	< 10			< 10		< 10	< 10		< 10
1,2-Dibromoethane	M	2760	μg/kg	5	< 5.0			< 5.0		< 5.0	< 5.0		< 5.0
Chlorobenzene	M	2760	μg/kg	1	< 1.0			< 1.0		< 1.0	< 1.0		< 1.0
1,1,1,2-Tetrachloroethane	M	2760	μg/kg	2	< 2.0			< 2.0		< 2.0	< 2.0		< 2.0
Ethylbenzene	M	2760	μg/kg	1	< 1.0			< 1.0		< 1.0	< 1.0		< 1.0
m & p-Xylene	M	2760	μg/kg	1	< 1.0			< 1.0		< 1.0	< 1.0		< 1.0
o-Xylene	M	2760	μg/kg	1	< 1.0			< 1.0		< 1.0	< 1.0		< 1.0
Styrene	М	2760	μg/kg	1	< 1.0			< 1.0		< 1.0	< 1.0		< 1.0
Tribromomethane	U	2760	μg/kg	1	< 1.0			< 1.0		< 1.0	< 1.0		< 1.0
Isopropylbenzene	М	2760	μg/kg	1	< 1.0			< 1.0		< 1.0	< 1.0		< 1.0





Client: Delta Simons		Chen	ntest Jo	b No.:	15-20519	15-20519	15-20519	15-20519	15-20519	15-20519	15-20519	15-20519	15-20519
Quotation No.: Q15-04536	С	hemtes	st Samp	le ID.:	187853	187854	187855	187856	187857	187858	187859	187860	187862
Order No.: DS26055		Clien	t Sample	e Ref.:	Sand	Clay	Sand	Clay	Sand	Clay	Sand	Clay	Clay
		Clier	nt Samp	le ID.:	DS107	DS107	DS101	DS101	DS108	DS108	DS113	DS113	DS114
			Sample	Туре:	SOIL								
		7	Гор Dер	th (m):	0.2	1.3	0.1	0.5	0.1	0.7	0.2	1.8	0.7
		Bot	tom Dep	oth(m):	0.3	1.7	0.25	0.8	0.2	1.0	0.3	2.0	1.0
			Date Sai		02-Sep-15	02-Sep-15	02-Sep-15	02-Sep-15	02-Sep-15	02-Sep-15	03-Sep-15	03-Sep-15	03-Sep-15
Determinand	Accred.	SOP		LOD									
Bromobenzene	М	2760	μg/kg	1	< 1.0			< 1.0		< 1.0	< 1.0		< 1.0
1,2,3-Trichloropropane	N	2760	μg/kg	50	< 50			< 50		< 50	< 50		< 50
N-Propylbenzene	U	2760	μg/kg	1	< 1.0			< 1.0		< 1.0	< 1.0		< 1.0
2-Chlorotoluene	M	2760	μg/kg	1	< 1.0			< 1.0		< 1.0	< 1.0		< 1.0
1,3,5-Trimethylbenzene	M	2760	μg/kg	1	< 1.0			< 1.0		< 1.0	< 1.0		< 1.0
4-Chlorotoluene	U	2760	μg/kg	1	< 1.0			< 1.0		< 1.0	< 1.0		< 1.0
Tert-Butylbenzene	U	2760	μg/kg	1	< 1.0			< 1.0		< 1.0	< 1.0		< 1.0
1,2,4-Trimethylbenzene	М	2760	μg/kg	1	< 1.0			< 1.0		< 1.0	< 1.0		< 1.0
Sec-Butylbenzene	U	2760	μg/kg	1	< 1.0			< 1.0		< 1.0	< 1.0		< 1.0
1,3-Dichlorobenzene	М	2760	μg/kg	1	< 1.0			< 1.0		< 1.0	< 1.0		< 1.0
4-Isopropyltoluene	U	2760	μg/kg	1	< 1.0			< 1.0		< 1.0	< 1.0		< 1.0
1,4-Dichlorobenzene	М	2760	μg/kg	1	< 1.0			< 1.0		< 1.0	< 1.0		< 1.0
N-Butylbenzene	U	2760	μg/kg	1	< 1.0			< 1.0		< 1.0	< 1.0		< 1.0
1,2-Dichlorobenzene	М	2760	μg/kg	1	< 1.0			< 1.0		< 1.0	< 1.0		< 1.0
1,2-Dibromo-3-Chloropropane	U	2760	μg/kg	50	< 50			< 50		< 50	< 50		< 50
1,2,4-Trichlorobenzene	М	2760	μg/kg	1	< 1.0			< 1.0		< 1.0	< 1.0		< 1.0
Hexachlorobutadiene	U	2760	μg/kg	1	< 1.0			< 1.0		< 1.0	< 1.0		< 1.0
1,2,3-Trichlorobenzene	U	2760	μg/kg	2	< 2.0			< 2.0		< 2.0	< 2.0		< 2.0
Methyl Tert-Butyl Ether	М	2760	μg/kg	1	< 1.0			< 1.0		< 1.0	< 1.0		< 1.0
N-Nitrosodimethylamine	N	2790	mg/kg	0.5		< 0.50	< 0.50		< 0.50			< 0.50	
Phenol	N	2790	mg/kg	0.5		< 0.50	< 0.50		< 0.50			< 0.50	
2-Chlorophenol	N	2790	mg/kg	0.5		< 0.50	< 0.50		< 0.50			< 0.50	
Bis-(2-Chloroethyl)Ether	N	2790	mg/kg	0.5		< 0.50	< 0.50		< 0.50			< 0.50	
1,3-Dichlorobenzene	N	2790	mg/kg	0.5		< 0.50	< 0.50		< 0.50			< 0.50	
1,4-Dichlorobenzene	N	2790	mg/kg	0.5		< 0.50	< 0.50		< 0.50			< 0.50	
1,2-Dichlorobenzene	N	2790	mg/kg	0.5		< 0.50	< 0.50		< 0.50			< 0.50	
2-Methylphenol	N	2790	mg/kg	0.5		< 0.50	< 0.50		< 0.50			< 0.50	
Bis(2-Chloroisopropyl)Ether	N	2790	mg/kg	0.5		< 0.50	< 0.50		< 0.50			< 0.50	
Hexachloroethane	N	2790	mg/kg	0.5		< 0.50	< 0.50		< 0.50			< 0.50	
N-Nitrosodi-n-propylamine	N	2790	mg/kg	0.5		< 0.50	< 0.50		< 0.50			< 0.50	
4-Methylphenol	N	2790	mg/kg	0.5		< 0.50	< 0.50		< 0.50			< 0.50	
Nitrobenzene	N	2790	mg/kg	0.5		< 0.50	< 0.50		< 0.50			< 0.50	
Isophorone	N	2790	mg/kg	0.5		< 0.50	< 0.50		< 0.50			< 0.50	





Client: Delta Simons		Chen	ntest Jo	b No.:	15-20519	15-20519	15-20519	15-20519	15-20519	15-20519	15-20519	15-20519	15-20519
Quotation No.: Q15-04536	С	hemte	st Samp	le ID.:	187853	187854	187855	187856	187857	187858	187859	187860	187862
Order No.: DS26055		Clier	ıt Sampl	e Ref.:	Sand	Clay	Sand	Clay	Sand	Clay	Sand	Clay	Clay
		Clie	nt Samp	le ID.:	DS107	DS107	DS101	DS101	DS108	DS108	DS113	DS113	DS114
			Sample	Туре:	SOIL	SOIL							
		-	Гор Dер	th (m):	0.2	1.3	0.1	0.5	0.1	0.7	0.2	1.8	0.7
		Bot	tom Dep	oth(m):	0.3	1.7	0.25	0.8	0.2	1.0	0.3	2.0	1.0
				02-Sep-15	02-Sep-15	02-Sep-15	02-Sep-15	02-Sep-15	02-Sep-15	03-Sep-15	03-Sep-15	03-Sep-15	
Determinand	Accred.	SOP											
2-Nitrophenol	N	2790	mg/kg	0.5		< 0.50	< 0.50		< 0.50			< 0.50	
2,4-Dimethylphenol	N	2790	mg/kg	0.5		< 0.50	< 0.50		< 0.50			< 0.50	
Bis(2-Chloroethoxy)Methane	N	2790	mg/kg	0.5		< 0.50	< 0.50		< 0.50			< 0.50	
2,4-Dichlorophenol	N	2790	mg/kg	0.5		< 0.50	< 0.50		< 0.50			< 0.50	
1,2,4-Trichlorobenzene	N	2790	mg/kg	0.5		< 0.50	< 0.50		< 0.50			< 0.50	
Naphthalene	N	2790	mg/kg	0.5		< 0.50	< 0.50		< 0.50			< 0.50	
4-Chloroaniline	N	2790	mg/kg	0.5		< 0.50	< 0.50		< 0.50			< 0.50	
Hexachlorobutadiene	N	2790	mg/kg	0.5		< 0.50	< 0.50		< 0.50			< 0.50	
4-Chloro-3-Methylphenol	N	2790	mg/kg	0.5		< 0.50	< 0.50		< 0.50			< 0.50	
2-Methylnaphthalene	N	2790	mg/kg	0.5		< 0.50	< 0.50		< 0.50			< 0.50	
4-Nitrophenol	N	2790	mg/kg	0.5		< 0.50	< 0.50		< 0.50			< 0.50	
Hexachlorocyclopentadiene	N	2790	mg/kg	0.5		< 0.50	< 0.50		< 0.50			< 0.50	
2,4,6-Trichlorophenol	N	2790	mg/kg	0.5		< 0.50	< 0.50		< 0.50			< 0.50	
2,4,5-Trichlorophenol	N	2790	mg/kg	0.5		< 0.50	< 0.50		< 0.50			< 0.50	
2-Chloronaphthalene	N	2790	mg/kg	0.5		< 0.50	< 0.50		< 0.50			< 0.50	
2-Nitroaniline	N	2790	mg/kg	0.5		< 0.50	< 0.50		< 0.50			< 0.50	
Acenaphthylene	N	2790	mg/kg	0.5		< 0.50	< 0.50		< 0.50			< 0.50	
Dimethylphthalate	N	2790	mg/kg	0.5		< 0.50	< 0.50		< 0.50			< 0.50	
2,6-Dinitrotoluene	N	2790	mg/kg	0.5		< 0.50	< 0.50		< 0.50			< 0.50	
Acenaphthene	N	2790	mg/kg	0.5		< 0.50	< 0.50		< 0.50			< 0.50	
3-Nitroaniline	N	2790	mg/kg	0.5		< 0.50	< 0.50		< 0.50			< 0.50	
Dibenzofuran	N	2790	mg/kg	0.5		< 0.50	< 0.50		< 0.50			< 0.50	
4-Chlorophenylphenylether	N	2790	mg/kg	0.5		< 0.50	< 0.50		< 0.50			< 0.50	
2,4-Dinitrotoluene	N	2790	mg/kg	0.5		< 0.50	< 0.50		< 0.50			< 0.50	
Fluorene	N	2790	mg/kg	0.5		< 0.50	< 0.50		< 0.50			< 0.50	
Diethyl Phthalate	N	2790	mg/kg	0.5		< 0.50	< 0.50		< 0.50			< 0.50	
4-Nitroaniline	N	2790	mg/kg	0.5		< 0.50	< 0.50		< 0.50			< 0.50	
2-Methyl-4,6-Dinitrophenol	N	2790	mg/kg	0.5		< 0.50	< 0.50		< 0.50			< 0.50	
Azobenzene	N	2790	mg/kg	0.5		< 0.50	< 0.50		< 0.50			< 0.50	
4-Bromophenylphenyl Ether	N	2790	mg/kg	0.5		< 0.50	< 0.50		< 0.50			< 0.50	
Hexachlorobenzene	N	2790	mg/kg	0.5		< 0.50	< 0.50		< 0.50			< 0.50	
Pentachlorophenol	N	2790	mg/kg	0.5		< 0.50	< 0.50		< 0.50			< 0.50	
Phenanthrene	N	2790	mg/kg	0.5		< 0.50	< 0.50		< 0.50			< 0.50	



### **Results - Soil**

		01				1= 00=10			1= 00=10		1		
Client: Delta Simons			ntest Jo		15-20519	15-20519	15-20519	15-20519	15-20519	15-20519	15-20519	15-20519	15-20519
Quotation No.: Q15-04536	С		st Samp		187853	187854	187855	187856	187857	187858	187859	187860	187862
Order No.: DS26055			t Sample		Sand	Clay	Sand	Clay	Sand	Clay	Sand	Clay	Clay
		Clier	nt Samp	le ID.:	DS107	DS107	DS101	DS101	DS108	DS108	DS113	DS113	DS114
			Sample		SOIL								
		Top Depth (m):		0.2	1.3	0.1	0.5	0.1	0.7	0.2	1.8	0.7	
		Bottom Depth(m):		0.3	1.7	0.25	0.8	0.2	1.0	0.3	2.0	1.0	
			Date Sar	npled:	02-Sep-15	02-Sep-15	02-Sep-15	02-Sep-15	02-Sep-15	02-Sep-15	03-Sep-15	03-Sep-15	03-Sep-15
Determinand	Accred.	SOP	Units	LOD									
Anthracene	N	2790	mg/kg	0.5		< 0.50	< 0.50		< 0.50			< 0.50	
Carbazole	N	2790	mg/kg	0.5		< 0.50	< 0.50		< 0.50			< 0.50	
Di-N-Butyl Phthalate	N	2790	mg/kg	0.5		< 0.50	< 0.50		< 0.50			< 0.50	
Fluoranthene	N	2790	mg/kg	0.5		< 0.50	< 0.50		< 0.50			< 0.50	
Pyrene	N	2790	mg/kg	0.5		< 0.50	< 0.50		< 0.50			< 0.50	
Butylbenzyl Phthalate	N	2790	mg/kg	0.5		< 0.50	< 0.50		< 0.50			< 0.50	
Benzo[a]anthracene	N	2790	mg/kg	0.5		< 0.50	< 0.50		< 0.50			< 0.50	
Chrysene	N	2790	mg/kg	0.5		< 0.50	< 0.50		< 0.50			< 0.50	
Bis(2-Ethylhexyl)Phthalate	N	2790	mg/kg	0.5		< 0.50	< 0.50		< 0.50			< 0.50	
Di-N-Octyl Phthalate	N	2790	mg/kg	0.5		< 0.50	< 0.50		< 0.50			< 0.50	
Benzo[b]fluoranthene	N	2790	mg/kg	0.5		< 0.50	< 0.50		< 0.50			< 0.50	
Benzo[k]fluoranthene	N	2790	mg/kg	0.5		< 0.50	< 0.50		< 0.50			< 0.50	
Benzo[a]pyrene	N	2790	mg/kg	0.5		< 0.50	< 0.50		< 0.50			< 0.50	
Indeno(1,2,3-c,d)Pyrene	N	2790	mg/kg	0.5		< 0.50	< 0.50		< 0.50			< 0.50	
Dibenz(a,h)Anthracene	N	2790	mg/kg	0.5		< 0.50	< 0.50		< 0.50			< 0.50	
Benzo[g,h,i]perylene	N	2790	mg/kg	0.5		< 0.50	< 0.50		< 0.50			< 0.50	
Total Phenols	М	2920	mg/kg		< 0.30		ĺ	< 0.30		< 0.30	< 0.30		< 0.30



Client: Delta Simons		Chen	ntest Jo	b No.:	15-20519	15-20519	15-20519	15-20519	15-20519
Quotation No.: Q15-04536	С		st Samp		187864	187865	187866	187869	187877
Order No.: DS26055		Clien	t Sample	e Ref.:	Clay	Sand	Clay	BH108	BH110
		Clier	nt Samp	le ID.:	BH108	DS116	DS116	ES2	ES
			Sample	Туре:	SOIL	SOIL	SOIL	SOIL	SOIL
		Т	Гор Dер	th (m):	2.5	0.2	0.3	8.0	2.5
		Bot	tom Dep	oth(m):	3.0	0.3	0.7	8.45	3.0
		[	Date Sai	mpled:	03-Sep-15	03-Sep-15	03-Sep-15	01-Sep-15	03-Sep-15
Determinand	Accred.	SOP	Units	LOD					
ACM Type	U	2192			-	-		-	-
Asbestos Identification	U	2192			No Asbestos	No Asbestos		No Asbestos	No Asbestos
					Detected	Detected		Detected	Detected
Moisture	N	2030	%	0.02	15	7.9	15	20	9.9
Soil Colour	N				Brown	Brown	Brown	Brown	Brown
Other Material	N				Stones	Stones	Stones	NONE	Stones
Soil Texture	N				Loam	Sand	Loam	Clay	Sand
рН	M	2010			7.7	8.1		7.9	7.9
Boron (Hot Water Soluble)	M	2120	mg/kg	0.4	0.55	< 0.40		2.0	< 0.40
Sulphate (2:1 Water Soluble) as SO4	M	2120	g/l	0.01	0.91	0.93		0.66	1.1
Total Sulphur	M	2175	%	0.01	1.0	0.22		0.24	0.25
Cyanide (Free)	M	2300	mg/kg	0.5	< 0.50	< 0.50		< 0.50	< 0.50
Cyanide (Total)	M	2300	mg/kg	0.5	< 0.50	< 0.50		2.3	< 0.50
Sulphate (Acid Soluble)	M	2430	%	0.01	0.97	0.34		0.21	0.40
Arsenic	M	2450	mg/kg	1	31	18		49	37
Cadmium	M	2450	mg/kg	0.1	0.22	0.15		0.49	0.11
Chromium	M	2450	mg/kg	1	37	5.2		59	20
Copper	M	2450	mg/kg	0.5	23	< 0.50		15	9.7
Mercury	M	2450	mg/kg	0.1	0.19	< 0.10		< 0.10	< 0.10
Nickel	M	2450	mg/kg	0.5	38	1.6		29	18
Lead	M	2450	mg/kg	0.5	22	< 0.50		220	17
Selenium	M	2450	mg/kg	0.2	< 0.20	< 0.20		0.50	< 0.20
Zinc	M	2450	mg/kg	0.5	77	4.1		830	60
Chromium (Trivalent)	N	2490	mg/kg	5	37	5.2		59	20
Chromium (Hexavalent)	N	2490	mg/kg	0.5	< 0.50	< 0.50		< 0.50	< 0.50
Fuel Type	N	2670			N/A	N/A			
Aliphatic TPH >C5-C6	N	2680	mg/kg	1	< 1.0	< 1.0			
Aliphatic TPH >C6-C8	N	2680	mg/kg	1	< 1.0	< 1.0			
Aliphatic TPH >C8-C10	М	2680	mg/kg	1	< 1.0	< 1.0			
Aliphatic TPH >C10-C12	М	2680	mg/kg	1	< 1.0	< 1.0			
Aliphatic TPH >C12-C16	М	2680	mg/kg	1	< 1.0	< 1.0			
Aliphatic TPH >C16-C21	М	2680	mg/kg	1	< 1.0	< 1.0			
Aliphatic TPH >C21-C35	M	2680	mg/kg	1	< 1.0	< 1.0			



Client: Delta Simons		Chen	ntest Jo	b No.:	15-20519	15-20519	15-20519	15-20519	15-20519
Quotation No.: Q15-04536	С	hemtes	st Samp	le ID.:	187864	187865	187866	187869	187877
Order No.: DS26055		Clien	t Sampl	e Ref.:	Clay	Sand	Clay	BH108	BH110
		Clier	nt Samp	le ID.:	BH108	DS116	DS116	ES2	ES
			Sample	Type:	SOIL	SOIL	SOIL	SOIL	SOIL
		7	Top Dep	th (m):	2.5	0.2	0.3	8.0	2.5
			tom Dep		3.0	0.3	0.7	8.45	3.0
		[	Date Sai	mpled:	03-Sep-15	03-Sep-15	03-Sep-15	01-Sep-15	03-Sep-15
Determinand	Accred.	SOP	Units	LOD					
Aliphatic TPH >C35-C44	N	2680	mg/kg	1	< 1.0	< 1.0			
Total Aliphatic Hydrocarbons	М	2680	mg/kg	5	< 5.0	< 5.0			
Aromatic TPH >C5-C7	N	2680	mg/kg	1	< 1.0	< 1.0			
Aromatic TPH >C7-C8	N	2680	mg/kg	1	< 1.0	< 1.0			
Aromatic TPH >C8-C10	М	2680	mg/kg	1	< 1.0	< 1.0			
Aromatic TPH >C10-C12	М	2680	mg/kg	1	< 1.0	< 1.0			
Aromatic TPH >C12-C16	М	2680	mg/kg	1	< 1.0	< 1.0			
Aromatic TPH >C16-C21	М	2680	mg/kg	1	< 1.0	< 1.0			
Aromatic TPH >C21-C35	М	2680	mg/kg	1	< 1.0	< 1.0			
Aromatic TPH >C35-C44	N	2680	mg/kg	1	< 1.0	< 1.0			
Total Aromatic Hydrocarbons	M	2680	mg/kg	5	< 5.0	< 5.0			
Total Petroleum Hydrocarbons	М	2680	mg/kg	10	< 10	< 10			
Naphthalene	М	2700	mg/kg	0.1	< 0.10	< 0.10		< 0.10	< 0.10
Acenaphthylene	M	2700	mg/kg	0.1	< 0.10	< 0.10		< 0.10	< 0.10
Acenaphthene	М	2700	mg/kg	0.1	< 0.10	< 0.10		< 0.10	< 0.10
Fluorene	М	2700	mg/kg	0.1	< 0.10	< 0.10		< 0.10	< 0.10
Phenanthrene	М	2700	mg/kg	0.1	< 0.10	< 0.10		< 0.10	< 0.10
Anthracene	M	2700	mg/kg	0.1	< 0.10	< 0.10		< 0.10	< 0.10
Fluoranthene	M	2700	mg/kg	0.1	0.59	< 0.10		< 0.10	< 0.10
Pyrene	М	2700	mg/kg	0.1	0.54	< 0.10		< 0.10	< 0.10
Benzo[a]anthracene	М	2700	mg/kg	0.1	0.29	< 0.10		< 0.10	< 0.10
Chrysene	М	2700	mg/kg	0.1	0.47	< 0.10		< 0.10	< 0.10
Benzo[b]fluoranthene	M	2700	mg/kg	0.1	< 0.10	< 0.10		< 0.10	< 0.10
Benzo[k]fluoranthene	М	2700	mg/kg	0.1	< 0.10	< 0.10		< 0.10	< 0.10
Benzo[a]pyrene	М	2700	mg/kg	0.1	< 0.10	< 0.10		< 0.10	< 0.10
Indeno(1,2,3-c,d)Pyrene	М	2700	mg/kg	0.1	< 0.10	< 0.10		< 0.10	< 0.10
Dibenz(a,h)Anthracene	М	2700	mg/kg	0.1	< 0.10	< 0.10		< 0.10	< 0.10
Benzo[g,h,i]perylene	М	2700	mg/kg	0.1	< 0.10	< 0.10		< 0.10	< 0.10
Total Of 16 PAH's	М	2700	mg/kg	2	< 2.0	< 2.0		< 2.0	< 2.0
Dichlorodifluoromethane	U	2760	μg/kg	1	< 1.0	< 1.0		< 1.0	< 1.0
Chloromethane	M	2760	μg/kg	1	< 1.0	< 1.0		< 1.0	< 1.0
Vinyl Chloride	М	2760	μg/kg	1	< 1.0	< 1.0		< 1.0	< 1.0
Bromomethane	М	2760	μg/kg	20	< 20	< 20		< 20	< 20



Client: Delta Simons		Chen	ntest Jo	b No.:	15-20519	15-20519	15-20519	15-20519	15-20519
Quotation No.: Q15-04536	С		st Samp		187864	187865	187866	187869	187877
Order No.: DS26055		Clien	t Sampl	e Ref.:	Clay	Sand	Clay	BH108	BH110
		Clier	nt Samp	le ID.:	BH108	DS116	DS116	ES2	ES
			Sample		SOIL	SOIL	SOIL	SOIL	SOIL
			op Dep		2.5	0.2	0.3	8.0	2.5
			tom Dep		3.0	0.3	0.7	8.45	3.0
			Date Sai	mpled:	03-Sep-15	03-Sep-15	03-Sep-15	01-Sep-15	03-Sep-15
Determinand	Accred.	SOP	Units	LOD					
Chloroethane	U	2760	μg/kg	2	< 2.0	< 2.0		< 2.0	< 2.0
Trichlorofluoromethane	M	2760	μg/kg	1	< 1.0	< 1.0		< 1.0	< 1.0
1,1-Dichloroethene	M	2760	μg/kg	1	< 1.0	< 1.0		< 1.0	< 1.0
Trans 1,2-Dichloroethene	M	2760	μg/kg	1	< 1.0	< 1.0		< 1.0	< 1.0
1,1-Dichloroethane	M	2760	μg/kg	1	< 1.0	< 1.0		< 1.0	< 1.0
cis 1,2-Dichloroethene	M	2760	μg/kg	1	< 1.0	< 1.0		< 1.0	< 1.0
Bromochloromethane	U	2760	μg/kg	5	< 5.0	< 5.0		< 5.0	< 5.0
Trichloromethane	M	2760	μg/kg	1	< 1.0	< 1.0		< 1.0	< 1.0
1,1,1-Trichloroethane	M	2760	μg/kg	1	< 1.0	< 1.0		< 1.0	< 1.0
Tetrachloromethane	M	2760	μg/kg	1	< 1.0	< 1.0		< 1.0	< 1.0
1,1-Dichloropropene	U	2760	μg/kg	1	< 1.0	< 1.0		< 1.0	< 1.0
Benzene	M	2760	μg/kg	1	< 1.0	< 1.0		< 1.0	< 1.0
1,2-Dichloroethane	M	2760	μg/kg	2	< 2.0	< 2.0		< 2.0	< 2.0
Trichloroethene	M	2760	μg/kg	1	< 1.0	< 1.0		< 1.0	< 1.0
1,2-Dichloropropane	M	2760	μg/kg	1	< 1.0	< 1.0		< 1.0	< 1.0
Dibromomethane	M	2760	μg/kg	1	< 1.0	< 1.0		< 1.0	< 1.0
Bromodichloromethane	M	2760	μg/kg	5	< 5.0	< 5.0		< 5.0	< 5.0
cis-1,3-Dichloropropene	N	2760	μg/kg	10	< 10	< 10		< 10	< 10
Toluene	M	2760	μg/kg	1	< 1.0	< 1.0		< 1.0	< 1.0
Trans-1,3-Dichloropropene	N	2760	μg/kg	10	< 10	< 10		< 10	< 10
1,1,2-Trichloroethane	M	2760	μg/kg	10	< 10	< 10		< 10	< 10
Tetrachloroethene	M	2760	μg/kg	1	< 1.0	< 1.0		< 1.0	< 1.0
1,3-Dichloropropane	U	2760	μg/kg	2	< 2.0	< 2.0		< 2.0	< 2.0
Dibromochloromethane	U	2760	μg/kg	10	< 10	< 10		< 10	< 10
1,2-Dibromoethane	M	2760	μg/kg	5	< 5.0	< 5.0		< 5.0	< 5.0
Chlorobenzene	М	2760	μg/kg	1	< 1.0	< 1.0		< 1.0	< 1.0
1,1,1,2-Tetrachloroethane	M	2760	μg/kg	2	< 2.0	< 2.0		< 2.0	< 2.0
Ethylbenzene	М	2760	μg/kg	1	< 1.0	< 1.0		< 1.0	< 1.0
m & p-Xylene	M	2760	μg/kg	1	< 1.0	< 1.0		< 1.0	< 1.0
o-Xylene	М	2760	μg/kg	1	< 1.0	< 1.0		< 1.0	< 1.0
Styrene	М	2760	μg/kg	1	< 1.0	< 1.0		< 1.0	< 1.0
Tribromomethane	U	2760	μg/kg	1	< 1.0	< 1.0		< 1.0	< 1.0
Isopropylbenzene	M	2760	μg/kg	1	< 1.0	< 1.0		< 1.0	< 1.0



Client: Delta Simons		Chen	ntest Jo	b No.:	15-20519	15-20519	15-20519	15-20519	15-20519
Quotation No.: Q15-04536	С	hemtes	st Samp	le ID.:	187864	187865	187866	187869	187877
Order No.: DS26055		Clien	t Sample	e Ref.:	Clay	Sand	Clay	BH108	BH110
		Clier	nt Samp	le ID.:	BH108	DS116	DS116	ES2	ES
			Sample	Type:	SOIL	SOIL	SOIL	SOIL	SOIL
		Т	op Dep	th (m):	2.5	0.2	0.3	8.0	2.5
		Bot	tom Dep	oth(m):	3.0	0.3	0.7	8.45	3.0
		[	Date Sar	mpled:	03-Sep-15	03-Sep-15	03-Sep-15	01-Sep-15	03-Sep-15
Determinand	Accred.	SOP	Units	LOD					
Bromobenzene	M	2760	μg/kg	1	< 1.0	< 1.0		< 1.0	< 1.0
1,2,3-Trichloropropane	N	2760	μg/kg	50	< 50	< 50		< 50	< 50
N-Propylbenzene	U	2760	μg/kg	1	< 1.0	< 1.0		< 1.0	< 1.0
2-Chlorotoluene	M	2760	μg/kg	1	< 1.0	< 1.0		< 1.0	< 1.0
1,3,5-Trimethylbenzene	M	2760	μg/kg	1	< 1.0	< 1.0		< 1.0	< 1.0
4-Chlorotoluene	U	2760	μg/kg	1	< 1.0	< 1.0		< 1.0	< 1.0
Tert-Butylbenzene	U	2760	μg/kg	1	< 1.0	< 1.0		< 1.0	< 1.0
1,2,4-Trimethylbenzene	М	2760	μg/kg	1	< 1.0	< 1.0		< 1.0	< 1.0
Sec-Butylbenzene	U	2760	μg/kg	1	< 1.0	< 1.0		< 1.0	< 1.0
1,3-Dichlorobenzene	М	2760	μg/kg	1	< 1.0	< 1.0		< 1.0	< 1.0
4-Isopropyltoluene	U	2760	μg/kg	1	< 1.0	< 1.0		< 1.0	< 1.0
1,4-Dichlorobenzene	М	2760	μg/kg	1	< 1.0	< 1.0		< 1.0	< 1.0
N-Butylbenzene	U	2760	μg/kg	1	< 1.0	< 1.0		< 1.0	< 1.0
1,2-Dichlorobenzene	М	2760	μg/kg	1	< 1.0	< 1.0		< 1.0	< 1.0
1,2-Dibromo-3-Chloropropane	U	2760	μg/kg	50	< 50	< 50		< 50	< 50
1,2,4-Trichlorobenzene	М	2760	μg/kg	1	< 1.0	< 1.0		< 1.0	< 1.0
Hexachlorobutadiene	U	2760	μg/kg	1	< 1.0	< 1.0		< 1.0	< 1.0
1,2,3-Trichlorobenzene	U	2760	μg/kg	2	< 2.0	< 2.0		< 2.0	< 2.0
Methyl Tert-Butyl Ether	М	2760	μg/kg	1	< 1.0	< 1.0		< 1.0	< 1.0
N-Nitrosodimethylamine	N	2790	mg/kg	0.5			< 0.50		
Phenol	N	2790	mg/kg	0.5			< 0.50		
2-Chlorophenol	N	2790	mg/kg	0.5			< 0.50		
Bis-(2-Chloroethyl)Ether	N	2790	mg/kg	0.5			< 0.50		
1,3-Dichlorobenzene	N	2790	mg/kg	0.5			< 0.50		
1,4-Dichlorobenzene	N	2790	mg/kg	0.5			< 0.50		
1,2-Dichlorobenzene	N	2790	mg/kg	0.5			< 0.50		
2-Methylphenol	N	2790	mg/kg	0.5			< 0.50		Ī
Bis(2-Chloroisopropyl)Ether	N	2790	mg/kg	0.5			< 0.50		
Hexachloroethane	N	2790	mg/kg	0.5			< 0.50		
N-Nitrosodi-n-propylamine	N	2790	mg/kg	0.5			< 0.50		
4-Methylphenol	N	2790	mg/kg	0.5			< 0.50		
Nitrobenzene	N	2790	mg/kg	0.5			< 0.50		
Isophorone	N		mg/kg	0.5			< 0.50		



Client: Delta Simons		Chen	ntest Jo	b No.:	15-20519	15-20519	15-20519	15-20519	15-20519
Quotation No.: Q15-04536	С		st Samp		187864	187865	187866	187869	187877
Order No.: DS26055		Clien	t Sample	e Ref.:	Clay	Sand	Clay	BH108	BH110
		Clier	nt Samp	_	BH108	DS116	DS116	ES2	ES
			Sample		SOIL	SOIL	SOIL	SOIL	SOIL
			Top Dep		2.5	0.2	0.3	8.0	2.5
			tom Dep		3.0	0.3	0.7	8.45	3.0
			Date Sai		03-Sep-15	03-Sep-15	03-Sep-15	01-Sep-15	03-Sep-15
Determinand	Accred.	SOP	Units						
2-Nitrophenol	N	2790	mg/kg	0.5			< 0.50		
2,4-Dimethylphenol	N	2790	mg/kg				< 0.50		
Bis(2-Chloroethoxy)Methane	N	2790	mg/kg	0.5			< 0.50		
2,4-Dichlorophenol	N	2790	mg/kg	0.5			< 0.50		
1,2,4-Trichlorobenzene	N	2790	mg/kg	0.5			< 0.50		
Naphthalene	N	2790	mg/kg	0.5			< 0.50		
4-Chloroaniline	N	2790	mg/kg	0.5			< 0.50		
Hexachlorobutadiene	N	2790	mg/kg	0.5			< 0.50		
4-Chloro-3-Methylphenol	N	2790	mg/kg	0.5			< 0.50		
2-Methylnaphthalene	N	2790	mg/kg	0.5			< 0.50		
4-Nitrophenol	N	2790	mg/kg	0.5			< 0.50		
Hexachlorocyclopentadiene	N	2790	mg/kg	0.5			< 0.50		
2,4,6-Trichlorophenol	N	2790	mg/kg	0.5			< 0.50		
2,4,5-Trichlorophenol	N	2790	mg/kg	0.5			< 0.50		
2-Chloronaphthalene	N	2790	mg/kg	0.5			< 0.50		
2-Nitroaniline	N	2790	mg/kg	0.5			< 0.50		
Acenaphthylene	N	2790	mg/kg	0.5			< 0.50		
Dimethylphthalate	N	2790	mg/kg	0.5			< 0.50		
2,6-Dinitrotoluene	N	2790	mg/kg	0.5			< 0.50		
Acenaphthene	N	2790	mg/kg	0.5			< 0.50		
3-Nitroaniline	N	2790	mg/kg	0.5			< 0.50		
Dibenzofuran	N	2790	mg/kg	0.5			< 0.50		
4-Chlorophenylphenylether	N	2790	mg/kg	0.5			< 0.50		
2,4-Dinitrotoluene	N	2790	mg/kg	0.5			< 0.50		
Fluorene	N	2790	mg/kg	0.5			< 0.50		
Diethyl Phthalate	N	2790	mg/kg	0.5			< 0.50		
4-Nitroaniline	N	2790	mg/kg	0.5			< 0.50		
2-Methyl-4,6-Dinitrophenol	N	2790	mg/kg	0.5			< 0.50		
Azobenzene	N	2790	mg/kg	0.5			< 0.50		
4-Bromophenylphenyl Ether	N	2790	mg/kg	0.5			< 0.50		
Hexachlorobenzene	N	2790	mg/kg	0.5			< 0.50		
Pentachlorophenol	N	2790	mg/kg	0.5			< 0.50		
Phenanthrene	N	2790	mg/kg	0.5			< 0.50		



### Results - Soil

Client: Delta Simons		Chen	ntest Jo	b No.:	15-20519	15-20519	15-20519	15-20519	15-20519
Quotation No.: Q15-04536	С	hemtes	st Samp	le ID.:	187864	187865	187866	187869	187877
Order No.: DS26055		Clien	t Sample	e Ref.:	Clay	Sand	Clay	BH108	BH110
		Clier	nt Samp	le ID.:	BH108	DS116	DS116	ES2	ES
			Sample	Туре:	SOIL	SOIL	SOIL	SOIL	SOIL
		Т	op Dep	th (m):	2.5	0.2	0.3	8.0	2.5
			tom Dep		3.0	0.3	0.7	8.45	3.0
		[	Date Sai	mpled:	03-Sep-15	03-Sep-15	03-Sep-15	01-Sep-15	03-Sep-15
Determinand	Accred.	SOP	Units	LOD					
Anthracene	N	2790	mg/kg	0.5			< 0.50		
Carbazole	N	2790	mg/kg	0.5			< 0.50		
Di-N-Butyl Phthalate	N	2790	mg/kg	0.5			< 0.50		
Fluoranthene	N						< 0.50		
Pyrene	N	2790	mg/kg	0.5			< 0.50		
Butylbenzyl Phthalate	N	2790	mg/kg	0.5			< 0.50		
Benzo[a]anthracene	N	2790	mg/kg	0.5			< 0.50		
Chrysene	N	2790	mg/kg	0.5			< 0.50		
Bis(2-Ethylhexyl)Phthalate	N	2790	mg/kg	0.5			< 0.50		
Di-N-Octyl Phthalate	N	2790	mg/kg	0.5			< 0.50		
Benzo[b]fluoranthene	N	2790	mg/kg	0.5			< 0.50		
Benzo[k]fluoranthene	N	2790	mg/kg	0.5			< 0.50		
Benzo[a]pyrene	N	2790	mg/kg	0.5	•		< 0.50		·
Indeno(1,2,3-c,d)Pyrene	N	2790	mg/kg	0.5			< 0.50		
Dibenz(a,h)Anthracene	N	2790	mg/kg	0.5			< 0.50		
Benzo[g,h,i]perylene	N	2790	mg/kg	0.5			< 0.50		
Total Phenols	М	2920	mg/kg	0.3	< 0.30	< 0.30		< 0.30	< 0.30



### **Report Information**

#### Key

- U UKAS accredited
- M MCERTS and UKAS accredited
- N Unaccredited
- S This analysis has been subcontracted to a UKAS accredited laboratory that is accredited for this analysis
- SN This analysis has been subcontracted to a UKAS accredited laboratory that is not accredited for this analysis
- T This analysis has been subcontracted to an unaccredited laboratory
- I/S Insufficient Sample
- U/S Unsuitable Sample
- N/E not evaluated
  - < "less than"
  - > "greater than"

Comments or interpretations are beyond the scope of UKAS accreditation

The results relate only to the items tested

Uncertainty of measurement for the determinands tested are available upon request

None of the results in this report have been recovery corrected

All results are expressed on a dry weight basis

The following tests were analysed on samples as received and the results subsequently corrected to a dry weight basis TPH, BTEX, VOCs, SVCOs, PCBs, Phenols

For all other tests the samples were dried at < 37°C prior to analysis

All Asbestos testing is performed at our Coventry laboratory

Issue numbers are sequential starting with 1 all subsequent reports are incremented by 1

#### **Sample Deviation Codes**

- A Date of sampling not supplied
- B Sample age exceeds stability time (sampling to extraction)
- C Sample not received in appropriate containers
- D Broken Container

### Sample Retention and Disposal

All soil samples will be retained for a period of 60 days from the date of receipt

All water samples will be retained for 14 days from the date of receipt

Charges may apply to extended sample storage

If you require extended retention of samples, please email your requirements to: <u>customerservices@chemtest.co.uk</u>





Chemtest Ltd. **Depot Road** Newmarket CB8 0AL Tel: 01638 606070

Email: info@chemtest.co.uk

16-Sep-2015

### **Final Report**

**Report Number:** 15-21045 Issue-1

**Initial Date of Issue:** 22-Sep-2015

Client: **Delta Simons** 

3 Henley Office Park

**Doddington Road** 

**Client Address:** Lincoln

> Lincolnshire LN6 3QR

Contact(s):

Simon Steele

Stacey Ragsdale

Project:

15-0645.02 Corby

**Quotation No.:** Q15-04536

11-Sep-2015

**Date Received:** 

**Date Instructed:** 

Order No.: DS26055

7 No. of Samples:

**Turnaround: (Wkdays) Results Due Date:** 5 22-Sep-2015

**Date Approved:** 22-Sep-2015

Approved By:

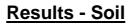
**Details:** Robert Monk, Technical Development

Chemist



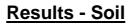


Client: Delta Simons		Chen	ntest Jo	b No.:	15-21045	15-21045	15-21045	15-21045	15-21045	15-21045	15-21045
Quotation No.: Q15-04536	С	hemtes	st Samp	le ID.:	190673	190674	190676	190677	190678	190679	190680
Order No.: DS26055		Clien	t Sample	e Ref.:	DS115	DS115	DS119	DS117	DS117	DS118	DS118
		Clier	nt Samp	le ID.:	GRAVEL	CLAY	CLAY	CLAY	SAND	CLAY	SAND
			Sample	Туре:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
			op Dep	th (m):	0.05	1.5	1.8	1.3	0.1	0.8	0.2
		Bot	tom Dep	oth(m):	0.1	1.8	2	1.5	0.3	1	0.3
		[	Date Sai	mpled:	03-Sep-15	03-Sep-15	03-Sep-15	04-Sep-15	04-Sep-15	04-Sep-15	04-Sep-15
Determinand	Accred.	SOP	Units	LOD							
ACM Type	U	2192			-		-		-	-	
Asbestos Identification	U	2192			No Asbestos Detected		No Asbestos Detected		No Asbestos Detected	No Asbestos Detected	
Moisture	N	2030	%	0.02	3.3	14	15	11	7.1	15	7.9
Soil Colour	N				Brown	Brown	Brown	Brown	Brown	Brown	Brown
Other Material	N				Stones	Stones	Stones	Stones	Stones	Stones	Stones
Soil Texture	N	ì			Sand	Clay	Clay	Clay	Sand	Clay	Sand
рН	М	2010			8.5		7.7		8.1	7.8	
Boron (Hot Water Soluble)	М	2120	mg/kg	0.4	0.51		0.70		< 0.40	0.64	
Sulphate (2:1 Water Soluble) as SO4	М	2120	g/l	0.01	0.37		1.1		1.2	1.1	
Total Sulphur	М	2175	%	0.01	0.080		1.1		0.26	1.4	
Cyanide (Free)	М	2300	mg/kg	0.5	< 0.50		< 0.50		< 0.50	< 0.50	
Cyanide (Total)	М	2300	mg/kg	0.5	< 0.50		< 0.50		< 0.50	< 0.50	
Sulphate (Acid Soluble)	М	2430	%	0.01	0.20		1.0		0.41	1.1	
Arsenic	М	2450	mg/kg	1	9.5		22		11	22	
Cadmium	М	2450	mg/kg	0.1	< 0.10		0.13		0.13	0.11	
Chromium	M	2450	mg/kg	1	16		32		4.9	33	
Copper	М	2450	mg/kg	0.5	17		21		1.3	19	
Mercury	М	2450	mg/kg	0.1	< 0.10		< 0.10		< 0.10	< 0.10	
Nickel	М	2450	mg/kg	0.5	15		32		1.9	32	
Lead	М	2450	mg/kg	0.5	12		15		0.78	14	
Selenium	М	2450	mg/kg	0.2	< 0.20		< 0.20		< 0.20	< 0.20	
Zinc	М	2450	mg/kg	0.5	43		49		5.2	51	
Chromium (Trivalent)	N	2490	mg/kg	5	16		32		< 5.0	33	
Chromium (Hexavalent)	N	2490	mg/kg	0.5	< 0.50		< 0.50		< 0.50	< 0.50	
Fuel Type	N	2670			N/A		N/A		N/A		
Aliphatic TPH >C5-C6	N	2680	mg/kg	1	< 1.0		< 1.0		< 1.0		
Aliphatic TPH >C6-C8	N	2680	mg/kg	1	< 1.0		< 1.0		< 1.0		
Aliphatic TPH >C8-C10	М	2680	mg/kg	1	< 1.0		< 1.0		< 1.0		
Aliphatic TPH >C10-C12	М	2680	mg/kg	1	< 1.0		< 1.0		< 1.0		
Aliphatic TPH >C12-C16	М	2680	mg/kg	1	< 1.0		< 1.0		< 1.0		
Aliphatic TPH >C16-C21	М	2680	mg/kg	1	< 1.0		< 1.0		< 1.0		
Aliphatic TPH >C21-C35	М	2680	mg/kg	1	< 1.0		< 1.0		< 1.0		



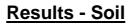


Client: Delta Simons		Chen	ntest Jo	b No.:	15-21045	15-21045	15-21045	15-21045	15-21045	15-21045	15-21045
Quotation No.: Q15-04536	С	hemtes	st Samp	le ID.:	190673	190674	190676	190677	190678	190679	190680
Order No.: DS26055		Clien	t Sample	e Ref.:	DS115	DS115	DS119	DS117	DS117	DS118	DS118
		Clier	nt Samp	le ID.:	GRAVEL	CLAY	CLAY	CLAY	SAND	CLAY	SAND
			Sample	Туре:	SOIL						
			Гор Dер		0.05	1.5	1.8	1.3	0.1	0.8	0.2
		Bot	tom Dep	oth(m):	0.1	1.8	2	1.5	0.3	1	0.3
			Date Sai	mpled:	03-Sep-15	03-Sep-15	03-Sep-15	04-Sep-15	04-Sep-15	04-Sep-15	04-Sep-15
Determinand	Accred.	SOP	Units	LOD							
Aliphatic TPH >C35-C44	N	2680	mg/kg	1	< 1.0		< 1.0		< 1.0		
Total Aliphatic Hydrocarbons	М	2680	mg/kg	5	< 5.0		< 5.0		< 5.0		
Aromatic TPH >C5-C7	N	2680	mg/kg	1	< 1.0		< 1.0		< 1.0		
Aromatic TPH >C7-C8	N	2680	mg/kg	1	< 1.0		< 1.0		< 1.0		
Aromatic TPH >C8-C10	М	2680	mg/kg	1	< 1.0		< 1.0		< 1.0		
Aromatic TPH >C10-C12	М	2680	mg/kg	1	< 1.0		< 1.0		< 1.0		
Aromatic TPH >C12-C16	М	2680	mg/kg	1	< 1.0		< 1.0		< 1.0		
Aromatic TPH >C16-C21	М	2680	mg/kg	1	< 1.0		< 1.0		< 1.0		
Aromatic TPH >C21-C35	М	2680	mg/kg	1	< 1.0		< 1.0		< 1.0		
Aromatic TPH >C35-C44	N	2680	mg/kg	1	< 1.0		< 1.0		< 1.0		
Total Aromatic Hydrocarbons	М	2680	mg/kg	5	< 5.0		< 5.0		< 5.0		
Total Petroleum Hydrocarbons	М	2680	mg/kg	10	< 10		< 10		< 10		
Naphthalene	М	2700	mg/kg	0.1	< 0.10		< 0.10		< 0.10	< 0.10	
Acenaphthylene	М	2700	mg/kg	0.1	< 0.10		< 0.10		< 0.10	< 0.10	
Acenaphthene	М	2700	mg/kg	0.1	< 0.10		< 0.10		< 0.10	< 0.10	
Fluorene	М	2700	mg/kg	0.1	< 0.10		< 0.10		< 0.10	< 0.10	
Phenanthrene	М	2700	mg/kg	0.1	0.88		< 0.10		< 0.10	< 0.10	
Anthracene	М	2700	mg/kg	0.1	0.30		< 0.10		< 0.10	< 0.10	
Fluoranthene	М	2700	mg/kg	0.1	1.1		< 0.10		< 0.10	< 0.10	
Pyrene	М	2700	mg/kg	0.1	1.4		< 0.10		< 0.10	< 0.10	
Benzo[a]anthracene	М	2700	mg/kg	0.1	0.48		< 0.10		< 0.10	< 0.10	
Chrysene	М	2700	mg/kg	0.1	0.71		< 0.10		< 0.10	< 0.10	
Benzo[b]fluoranthene	М	2700	mg/kg	0.1	0.47		< 0.10		< 0.10	< 0.10	
Benzo[k]fluoranthene	М	2700	mg/kg	0.1	0.21		< 0.10		< 0.10	< 0.10	
Benzo[a]pyrene	М	2700	mg/kg	0.1	0.42		< 0.10		< 0.10	< 0.10	
Indeno(1,2,3-c,d)Pyrene	М	2700	mg/kg	0.1	< 0.10		< 0.10		< 0.10	< 0.10	
Dibenz(a,h)Anthracene	М	2700	mg/kg	0.1	< 0.10		< 0.10		< 0.10	< 0.10	
Benzo[g,h,i]perylene	М	2700	mg/kg	0.1	< 0.10		< 0.10		< 0.10	< 0.10	
Total Of 16 PAH's	М	2700	mg/kg	2	6.0		< 2.0		< 2.0	< 2.0	
Dichlorodifluoromethane	U	2760	μg/kg	1	< 1.0		< 1.0		< 1.0	< 1.0	
Chloromethane	М	2760	μg/kg	1	< 1.0		< 1.0		< 1.0	< 1.0	
Vinyl Chloride	М	2760	μg/kg	1	< 1.0		< 1.0		< 1.0	< 1.0	
Bromomethane	М	2760		20	< 20		< 20		< 20	< 20	



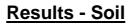


Client: Delta Simons		Chen	ntest Jo	b No.:	15-21045	15-21045	15-21045	15-21045	15-21045	15-21045	15-21045
Quotation No.: Q15-04536	С		st Samp		190673	190674	190676	190677	190678	190679	190680
Order No.: DS26055		Clien	t Sampl	e Ref.:	DS115	DS115	DS119	DS117	DS117	DS118	DS118
		Clier	nt Samp		GRAVEL	CLAY	CLAY	CLAY	SAND	CLAY	SAND
			Sample		SOIL						
			Гор Dер		0.05	1.5	1.8	1.3	0.1	0.8	0.2
		Bot	tom Dep	oth(m):	0.1	1.8	2	1.5	0.3	1	0.3
			Date Sai	mpled:	03-Sep-15	03-Sep-15	03-Sep-15	04-Sep-15	04-Sep-15	04-Sep-15	04-Sep-15
Determinand	Accred.	SOP	Units	LOD							
Chloroethane	U	2760	μg/kg	2	< 2.0		< 2.0		< 2.0	< 2.0	
Trichlorofluoromethane	М	2760	μg/kg	1	< 1.0		< 1.0		< 1.0	< 1.0	
1,1-Dichloroethene	М	2760	μg/kg	1	< 1.0		< 1.0		< 1.0	< 1.0	
Trans 1,2-Dichloroethene	М	2760	μg/kg	1	< 1.0		< 1.0		< 1.0	< 1.0	
1,1-Dichloroethane	M	2760	μg/kg	1	< 1.0		< 1.0		< 1.0	< 1.0	
cis 1,2-Dichloroethene	M	2760	μg/kg	1	< 1.0		< 1.0		< 1.0	< 1.0	
Bromochloromethane	U	2760	μg/kg	5	< 5.0		< 5.0		< 5.0	< 5.0	
Trichloromethane	М	2760	μg/kg	1	< 1.0		< 1.0		< 1.0	< 1.0	
1,1,1-Trichloroethane	М	2760	μg/kg	1	< 1.0		< 1.0		< 1.0	< 1.0	
Tetrachloromethane	М	2760	μg/kg	1	< 1.0		< 1.0		< 1.0	< 1.0	
1,1-Dichloropropene	U	2760	μg/kg	1	< 1.0		< 1.0		< 1.0	< 1.0	
Benzene	М	2760	μg/kg	1	< 1.0		< 1.0		< 1.0	< 1.0	
1,2-Dichloroethane	М	2760	μg/kg	2	< 2.0		< 2.0		< 2.0	< 2.0	
Trichloroethene	М	2760	μg/kg	1	< 1.0		< 1.0		< 1.0	< 1.0	
1,2-Dichloropropane	М	2760	μg/kg	1	< 1.0		< 1.0		< 1.0	< 1.0	
Dibromomethane	М	2760	μg/kg	1	< 1.0		< 1.0		< 1.0	< 1.0	
Bromodichloromethane	М	2760	μg/kg	5	< 5.0		< 5.0		< 5.0	< 5.0	
cis-1,3-Dichloropropene	N	2760	μg/kg	10	< 10		< 10		< 10	< 10	
Toluene	М	2760	μg/kg	1	< 1.0		< 1.0		< 1.0	< 1.0	
Trans-1,3-Dichloropropene	N	2760	μg/kg	10	< 10		< 10		< 10	< 10	
1,1,2-Trichloroethane	М	2760	μg/kg	10	< 10		< 10		< 10	< 10	
Tetrachloroethene	М	2760	μg/kg	1	< 1.0		< 1.0		< 1.0	< 1.0	
1,3-Dichloropropane	U	2760	μg/kg	2	< 2.0		< 2.0		< 2.0	< 2.0	
Dibromochloromethane	U	2760	μg/kg	10	< 10		< 10		< 10	< 10	
1,2-Dibromoethane	М	2760	μg/kg	5	< 5.0		< 5.0		< 5.0	< 5.0	
Chlorobenzene	M	2760	μg/kg	1	< 1.0		< 1.0		< 1.0	< 1.0	
1,1,1,2-Tetrachloroethane	М	2760	μg/kg	2	< 2.0		< 2.0		< 2.0	< 2.0	
Ethylbenzene	M	2760	μg/kg	1	< 1.0		< 1.0		< 1.0	< 1.0	
m & p-Xylene	М	2760	μg/kg	1	< 1.0		< 1.0		< 1.0	< 1.0	
o-Xylene	М	2760	μg/kg	1	< 1.0		< 1.0		< 1.0	< 1.0	
Styrene	М	2760	μg/kg	1	< 1.0		< 1.0		< 1.0	< 1.0	
Tribromomethane	U	2760	μg/kg	1	< 1.0		< 1.0		< 1.0	< 1.0	
Isopropylbenzene	М	2760		1	< 1.0		< 1.0		< 1.0	< 1.0	1





Client: Delta Simons		Chen	ntest Jo	b No.:	15-21045	15-21045	15-21045	15-21045	15-21045	15-21045	15-21045
Quotation No.: Q15-04536	С		st Samp		190673	190674	190676	190677	190678	190679	190680
Order No.: DS26055			t Sample		DS115	DS115	DS119	DS117	DS117	DS118	DS118
		Clier	nt Samp	le ID.:	GRAVEL	CLAY	CLAY	CLAY	SAND	CLAY	SAND
			Sample		SOIL						
			Top Dep		0.05	1.5	1.8	1.3	0.1	0.8	0.2
			tom Dep		0.1	1.8	2	1.5	0.3	1	0.3
			Date Sai	mpled:	03-Sep-15	03-Sep-15	03-Sep-15	04-Sep-15	04-Sep-15	04-Sep-15	04-Sep-15
Determinand	Accred.	SOP		LOD							
Bromobenzene	M	2760		1	< 1.0		< 1.0		< 1.0	< 1.0	
1,2,3-Trichloropropane	N	2760	μg/kg	50	< 50		< 50		< 50	< 50	
N-Propylbenzene	U	2760	μg/kg	1	< 1.0		< 1.0		< 1.0	< 1.0	
2-Chlorotoluene	M	2760	μg/kg	1	< 1.0		< 1.0		< 1.0	< 1.0	
1,3,5-Trimethylbenzene	M	2760	μg/kg	1	< 1.0		< 1.0		< 1.0	< 1.0	
4-Chlorotoluene	U	2760	μg/kg	1	< 1.0		< 1.0		< 1.0	< 1.0	
Tert-Butylbenzene	U	2760	μg/kg	1	< 1.0		< 1.0		< 1.0	< 1.0	
1,2,4-Trimethylbenzene	M	2760	μg/kg	1	< 1.0		< 1.0		< 1.0	< 1.0	
Sec-Butylbenzene	U	2760	μg/kg	1	< 1.0		< 1.0		< 1.0	< 1.0	
1,3-Dichlorobenzene	M	2760	μg/kg	1	< 1.0		< 1.0		< 1.0	< 1.0	
4-Isopropyltoluene	U	2760	μg/kg	1	< 1.0		< 1.0		< 1.0	< 1.0	
1,4-Dichlorobenzene	М	2760	μg/kg	1	< 1.0		< 1.0		< 1.0	< 1.0	
N-Butylbenzene	U	2760	μg/kg	1	< 1.0		< 1.0		< 1.0	< 1.0	
1,2-Dichlorobenzene	M	2760	μg/kg	1	< 1.0		< 1.0		< 1.0	< 1.0	
1,2-Dibromo-3-Chloropropane	U	2760	μg/kg	50	< 50		< 50		< 50	< 50	
1,2,4-Trichlorobenzene	M	2760	μg/kg	1	< 1.0		< 1.0		< 1.0	< 1.0	
Hexachlorobutadiene	U	2760	μg/kg	1	< 1.0		< 1.0		< 1.0	< 1.0	
1,2,3-Trichlorobenzene	U	2760	μg/kg	2	< 2.0		< 2.0		< 2.0	< 2.0	
Methyl Tert-Butyl Ether	M	2760	μg/kg	1	< 1.0		< 1.0		< 1.0	< 1.0	
N-Nitrosodimethylamine	N	2790	mg/kg	0.5		< 0.50		< 0.50			< 0.50
Phenol	N	2790	mg/kg	0.5		< 0.50		< 0.50			< 0.50
2-Chlorophenol	N	2790	mg/kg	0.5		< 0.50		< 0.50			< 0.50
Bis-(2-Chloroethyl)Ether	N	2790	mg/kg	0.5		< 0.50		< 0.50			< 0.50
1,3-Dichlorobenzene	N	2790	mg/kg	0.5		< 0.50		< 0.50			< 0.50
1,4-Dichlorobenzene	N	2790	mg/kg	0.5		< 0.50		< 0.50			< 0.50
1,2-Dichlorobenzene	N	2790	mg/kg	0.5		< 0.50		< 0.50			< 0.50
2-Methylphenol	N	2790	mg/kg	0.5		< 0.50		< 0.50			< 0.50
Bis(2-Chloroisopropyl)Ether	N	2790	mg/kg	0.5		< 0.50		< 0.50			< 0.50
Hexachloroethane	N	2790	mg/kg	0.5		< 0.50		< 0.50			< 0.50
N-Nitrosodi-n-propylamine	N	2790		0.5		< 0.50		< 0.50			< 0.50
4-Methylphenol	N	2790		0.5		< 0.50		< 0.50			< 0.50
Nitrobenzene	N	2790	mg/kg	0.5		< 0.50		< 0.50			< 0.50
Isophorone	N		mg/kg	0.5		< 0.50		< 0.50			< 0.50





Client: Delta Simons		Chen	ntest Jo	b No.:	15-21045	15-21045	15-21045	15-21045	15-21045	15-21045	15-21045
Quotation No.: Q15-04536	С		st Samp		190673	190674	190676	190677	190678	190679	190680
Order No.: DS26055			t Sampl		DS115	DS115	DS119	DS117	DS117	DS118	DS118
		Clier	nt Samp	le ID.:	GRAVEL	CLAY	CLAY	CLAY	SAND	CLAY	SAND
			Sample		SOIL						
			Гор Dер		0.05	1.5	1.8	1.3	0.1	0.8	0.2
		Bot	tom Dep	oth(m):	0.1	1.8	2	1.5	0.3	1	0.3
			Date Sa	mpled:	03-Sep-15	03-Sep-15	03-Sep-15	04-Sep-15	04-Sep-15	04-Sep-15	04-Sep-15
Determinand	Accred.	SOP									
2-Nitrophenol	N		mg/kg	0.5		< 0.50		< 0.50			< 0.50
2,4-Dimethylphenol	N	2790	mg/kg	0.5		< 0.50		< 0.50			< 0.50
Bis(2-Chloroethoxy)Methane	N	2790	mg/kg	0.5		< 0.50		< 0.50			< 0.50
2,4-Dichlorophenol	N	2790	mg/kg	0.5		< 0.50		< 0.50			< 0.50
1,2,4-Trichlorobenzene	N	2790	mg/kg	0.5		< 0.50		< 0.50			< 0.50
Naphthalene	N	2790	mg/kg	0.5		< 0.50		< 0.50			< 0.50
4-Chloroaniline	N	2790	mg/kg	0.5		< 0.50		< 0.50			< 0.50
Hexachlorobutadiene	N	2790	mg/kg	0.5		< 0.50		< 0.50			< 0.50
4-Chloro-3-Methylphenol	N	2790	mg/kg	0.5		< 0.50		< 0.50			< 0.50
2-Methylnaphthalene	N	2790	mg/kg	0.5		< 0.50		< 0.50			< 0.50
4-Nitrophenol	N	2790	mg/kg	0.5		< 0.50		< 0.50			< 0.50
Hexachlorocyclopentadiene	N	2790	mg/kg	0.5		< 0.50		< 0.50			< 0.50
2,4,6-Trichlorophenol	N	2790	mg/kg	0.5		< 0.50		< 0.50			< 0.50
2,4,5-Trichlorophenol	N	2790	mg/kg	0.5		< 0.50		< 0.50			< 0.50
2-Chloronaphthalene	N	2790	mg/kg	0.5		< 0.50		< 0.50			< 0.50
2-Nitroaniline	N	2790	mg/kg	0.5		< 0.50		< 0.50			< 0.50
Acenaphthylene	N	2790	mg/kg	0.5		< 0.50		< 0.50			< 0.50
Dimethylphthalate	N	2790	mg/kg	0.5		< 0.50		< 0.50			< 0.50
2,6-Dinitrotoluene	N	2790	mg/kg	0.5		< 0.50		< 0.50			< 0.50
Acenaphthene	N	2790	mg/kg	0.5		< 0.50		< 0.50			< 0.50
3-Nitroaniline	N	2790	mg/kg	0.5		< 0.50		< 0.50			< 0.50
Dibenzofuran	N	2790	mg/kg	0.5		< 0.50		< 0.50			< 0.50
4-Chlorophenylphenylether	N	2790	mg/kg	0.5		< 0.50		< 0.50			< 0.50
2,4-Dinitrotoluene	N	2790	mg/kg	0.5		< 0.50		< 0.50			< 0.50
Fluorene	N	2790	mg/kg	0.5		< 0.50		< 0.50			< 0.50
Diethyl Phthalate	N	2790	mg/kg	0.5		< 0.50		< 0.50			< 0.50
4-Nitroaniline	N	2790	mg/kg	0.5		< 0.50		< 0.50			< 0.50
2-Methyl-4,6-Dinitrophenol	N	2790	mg/kg	0.5		< 0.50		< 0.50			< 0.50
Azobenzene	N	2790	mg/kg	0.5		< 0.50		< 0.50			< 0.50
4-Bromophenylphenyl Ether	N	2790		0.5		< 0.50		< 0.50			< 0.50
Hexachlorobenzene	N	2790		0.5		< 0.50		< 0.50			< 0.50
Pentachlorophenol	N	2790	mg/kg	0.5		< 0.50		< 0.50			< 0.50
Phenanthrene	N		mg/kg	0.5		< 0.50		< 0.50			< 0.50



### Results - Soil

Client: Delta Simons		Char	ntest Jo	h Na i	15-21045	15-21045	15-21045	15-21045	15-21045	15-21045	15-21045
	0										
Quotation No.: Q15-04536	U		t Samp		190673	190674	190676	190677	190678	190679	190680
Order No.: DS26055			t Sample		DS115	DS115	DS119	DS117	DS117	DS118	DS118
			t Samp		GRAVEL	CLAY	CLAY	CLAY	SAND	CLAY	SAND
			Sample		SOIL						
			op Dep	` '	0.05	1.5	1.8	1.3	0.1	0.8	0.2
		Bot	tom Dep	th(m):	0.1	1.8	2	1.5	0.3	1	0.3
			Date Sar	npled:	03-Sep-15	03-Sep-15	03-Sep-15	04-Sep-15	04-Sep-15	04-Sep-15	04-Sep-15
Determinand	Accred.	SOP	Units	LOD							
Anthracene	N	2790	mg/kg	0.5		< 0.50		< 0.50			< 0.50
Carbazole	N	2790	mg/kg	0.5		< 0.50		< 0.50			< 0.50
Di-N-Butyl Phthalate	N	2790	mg/kg	0.5		< 0.50		< 0.50			< 0.50
Fluoranthene	N	2790	mg/kg	0.5		< 0.50		< 0.50			< 0.50
Pyrene	N	2790	mg/kg	0.5		< 0.50		< 0.50			< 0.50
Butylbenzyl Phthalate	N	2790	mg/kg	0.5		< 0.50		< 0.50			< 0.50
Benzo[a]anthracene	N		mg/kg	0.5		< 0.50		< 0.50			< 0.50
Chrysene	N	2790	mg/kg	0.5		< 0.50		< 0.50			< 0.50
Bis(2-Ethylhexyl)Phthalate	N	2790	mg/kg	0.5		< 0.50		< 0.50			< 0.50
Di-N-Octyl Phthalate	N	2790	mg/kg	0.5		< 0.50		< 0.50			< 0.50
Benzo[b]fluoranthene	N	2790	mg/kg	0.5		< 0.50		< 0.50			< 0.50
Benzo[k]fluoranthene	N	2790	mg/kg	0.5		< 0.50		< 0.50			< 0.50
Benzo[a]pyrene	N	2790	mg/kg	0.5		< 0.50		< 0.50			< 0.50
Indeno(1,2,3-c,d)Pyrene	N	2790	mg/kg	0.5		< 0.50		< 0.50			< 0.50
Dibenz(a,h)Anthracene	N		mg/kg	0.5		< 0.50		< 0.50			< 0.50
Benzo[g,h,i]perylene	N		mg/kg	0.5		< 0.50		< 0.50			< 0.50
Total Phenols	М		mg/kg	0.3	< 0.30		< 0.30		< 0.30	< 0.30	



### **Report Information**

#### Key

- U UKAS accredited
- M MCERTS and UKAS accredited
- N Unaccredited
- S This analysis has been subcontracted to a UKAS accredited laboratory that is accredited for this analysis
- SN This analysis has been subcontracted to a UKAS accredited laboratory that is not accredited for this analysis
- T This analysis has been subcontracted to an unaccredited laboratory
- I/S Insufficient Sample
- U/S Unsuitable Sample
- N/E not evaluated
  - < "less than"
  - > "greater than"

Comments or interpretations are beyond the scope of UKAS accreditation

The results relate only to the items tested

Uncertainty of measurement for the determinands tested are available upon request

None of the results in this report have been recovery corrected

All results are expressed on a dry weight basis

The following tests were analysed on samples as received and the results subsequently corrected to a dry weight basis TPH, BTEX, VOCs, SVCOs, PCBs, Phenols

For all other tests the samples were dried at < 37°C prior to analysis

All Asbestos testing is performed at our Coventry laboratory

Issue numbers are sequential starting with 1 all subsequent reports are incremented by 1

#### **Sample Deviation Codes**

- A Date of sampling not supplied
- B Sample age exceeds stability time (sampling to extraction)
- C Sample not received in appropriate containers
- D Broken Container

### Sample Retention and Disposal

All soil samples will be retained for a period of 60 days from the date of receipt

All water samples will be retained for 14 days from the date of receipt

Charges may apply to extended sample storage

If you require extended retention of samples, please email your requirements to: <u>customerservices@chemtest.co.uk</u>

## **Appendix VIII**







# Chemtest The right chemistry to deliver results

Chemtest Ltd.
Depot Road
Newmarket
CB8 0AL

Tel: 01638 606070 Email: info@chemtest.co.uk

### **Amended Report**

Report Number: 15-21023 Issue-2

Initial Date of Issue: 17-Sep-2015

Client: Delta Simons

3 Henley Office Park

**Doddington Road** 

Client Address: Lincoln

Lincolnshire LN6 3QR

Contact(s): Simon Steele

**Project:** 15-0645.02 - Corby

Quotation No.: Q15-04536 Date Received: 11-Sep-2015

Order No.: DS26055 Date Instructed: 11-Sep-2015

No. of Samples: 9

Turnaround: (Wkdays) 5 Results Due Date: 17-Sep-2015

Date Approved: 17-Sep-2015

Approved By:

**Details:** Robert Monk, Technical Development

Chemist



Client: Delta Simons		Chen	ntest Jo	b No.:	15-21023	15-21023	15-21023	15-21023	15-21023	15-21023	15-21023	15-21023	15-21023
Quotation No.: Q15-04536	С	hemtes	st Samp	le ID.:	190621	190622	190623	190624	190625	190626	190627	190628	190654
Order No.: DS26055		Clien	t Sample	e Ref.:									
		Clier	nt Samp	le ID.:	R3	R1	BH104	R4	R2	BH101	DS107	DS116	BH102
			Sample	Type:	WATER								
		7	op Dept	th (m):									
		Bot	tom Dep	th(m):									
		[	Date Sar	npled:	08-Sep-15								
Determinand	Accred.	SOP	Units	LOD									
рН	U	1010			7.5	7	7.2	7.6	7.5	7.4	7	7	9.3
Sulphate	U	1220	mg/l	1	530	510	120	440	900	550	1400	1400	170
Cyanide (Total)	U	1300	mg/l	0.05	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Hardness	U	1415	mg/l	15	570	650	470	470	930	760	1500	1700	230
Arsenic (Dissolved)	U	1450	μg/l	1	4	2.9	1.1	1.8	4.2	3.5	3	< 1.0	4.5
Boron (Dissolved)	U	1450	μg/l	20	310	250	120	1200	320	460	230	140	740
Cadmium (Dissolved)	U	1450	μg/l	0.08	0.59	< 0.080	< 0.080	< 0.080	< 0.080	< 0.080	0.74	0.2	1.2
Chromium (Dissolved)	U	1450	μg/l	1	5.2	6.3	6.8	8.7	8	12	5.7	9.9	3.6
Copper (Dissolved)	U	1450	μg/l	1	1.5	1.3	1.3	1.2	< 1.0	1.3	< 1.0	< 1.0	1.5
Mercury (Dissolved)	U	1450	μg/l	0.5	1.5	0.98	0.73	1.4	1.5	2	1.3	1.3	0.61
Nickel (Dissolved)	U	1450	μg/l	1	3.9	5.9	4.2	2.2	6.3	6.3	2.3	4.5	6.3
Lead (Dissolved)	U	1450	μg/l	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	1.2
Selenium (Dissolved)	U	1450	μg/l	1	8.4	5.5	1.6	16	8.7	9.4	3.8	4.1	9.2
Zinc (Dissolved)	U	1450	μg/l	1	12	15	38	15	20	36	9.5	40	6.8
Chromium (Trivalent)	N	1490	μg/l	20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20
Chromium (Hexavalent)	U	1490	μg/l	20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20
Aliphatic TPH >C5-C6	N	1675	μg/l	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	C < 0.10
Aliphatic TPH >C6-C8	N	1675	μg/l	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	C < 0.10
Aliphatic TPH >C8-C10	N	1675	μg/l	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	C < 0.10
Aliphatic TPH >C10-C12	N	1675	μg/l	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	C < 0.10
Aliphatic TPH >C12-C16	N	1675	μg/l	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	C < 0.10
Aliphatic TPH >C16-C21	N	1675	μg/l	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	C < 0.10
Aliphatic TPH >C21-C35	N	1675	μg/l	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	C < 0.10
Aliphatic TPH >C35-C44	N	1675	μg/l	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	C < 0.10
Total Aliphatic Hydrocarbons	N	1675	μg/l	5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	C < 5.0
Aromatic TPH >C5-C7	N	1675	μg/l	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	C < 0.10
Aromatic TPH >C7-C8	N	1675	μg/l	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	C < 0.10
Aromatic TPH >C8-C10	N	1675	μg/l	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	C < 0.10
Aromatic TPH >C10-C12	N	1675	μg/l	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	C < 0.10
Aromatic TPH >C12-C16	N	1675	μg/l	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	C < 0.10
Aromatic TPH >C16-C21	N	1675	μg/l	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	C < 0.10
Aromatic TPH >C21-C35	N	1675	μg/l	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	C < 0.10
Aromatic TPH >C35-C44	N	1675	μg/l	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	C < 0.10



Client: Delta Simons		Chem	ntest Jo	b No.:	15-21023	15-21023	15-21023	15-21023	15-21023	15-21023	15-21023	15-21023	15-21023
Quotation No.: Q15-04536	С		t Samp		190621	190622	190623	190624	190625	190626	190627	190628	190654
Order No.: DS26055			t Sample						1000=0				
			t Samp		R3	R1	BH104	R4	R2	BH101	DS107	DS116	BH102
			Sample		WATER								
		7	op Dept	h (m):									
			tom Dep										
			Date Sar		08-Sep-15								
Determinand	Accred.	SOP	Units	LOD	·	,	·	,	·	,	·	,	·
Total Aromatic Hydrocarbons	N	1675	μg/l	5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	C < 5.0
Total Petroleum Hydrocarbons	U	1675	μg/l	10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	C < 10
Naphthalene	U	1700	μg/l	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthylene	U	1700	μg/l	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthene	U	1700	μg/l	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Fluorene	U	1700	μg/l	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Phenanthrene	U	1700	μg/l	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Anthracene	U	1700	μg/l	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Fluoranthene	U	1700	μg/l	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Pyrene	U	1700	μg/l	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[a]anthracene	U	1700	μg/l	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Chrysene	U	1700	μg/l	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[b]fluoranthene	U	1700	μg/l	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[k]fluoranthene	U	1700	μg/l	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[a]pyrene	U	1700	μg/l	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Indeno(1,2,3-c,d)Pyrene	U	1700	μg/l	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Dibenz(a,h)Anthracene	U	1700	μg/l	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[g,h,i]perylene	U	1700	μg/l	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Total Of 16 PAH's	U	1700	μg/l	2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Dichlorodifluoromethane	U	1760	μg/l	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloromethane	U	1760	μg/l	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Vinyl Chloride	N	1760	μg/l	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromomethane	U	1760	μg/l	5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Chloroethane	U	1760	μg/l	2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Trichlorofluoromethane	U	1760	μg/l	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethene	U	1760	μg/l	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trans 1,2-Dichloroethene	U	1760	μg/l	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethane	U	1760	μg/l	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
cis 1,2-Dichloroethene	U	1760	μg/l	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromochloromethane	U	1760	μg/l	5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Trichloromethane	U	1760	μg/l	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,1-Trichloroethane	U	1760	μg/l	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tetrachloromethane	U	1760	μg/l	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0



Client: Delta Simons		Chen	ntest Jo	b No.:	15-21023	15-21023	15-21023	15-21023	15-21023	15-21023	15-21023	15-21023	15-21023
Quotation No.: Q15-04536	С	hemtes	st Samp	le ID.:	190621	190622	190623	190624	190625	190626	190627	190628	190654
Order No.: DS26055		Clien	t Sample	e Ref.:									
		Clier	nt Samp	le ID.:	R3	R1	BH104	R4	R2	BH101	DS107	DS116	BH102
			Sample	Type:	WATER								
		7	Top Dept	th (m):									
		Bot	tom Dep	th(m):									
		[	Date Sar	npled:	08-Sep-15								
Determinand	Accred.	SOP	Units	LOD									
1,1-Dichloropropene	U	1760	μg/l	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Benzene	U	1760	μg/l	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloroethane	U	1760	μg/l	2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Trichloroethene	N	1760	μg/l	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloropropane	U	1760	μg/l	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Dibromomethane	U	1760	μg/l	10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Bromodichloromethane	U	1760	μg/l	5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
cis-1,3-Dichloropropene	N	1760	μg/l	10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Toluene	U	1760	μg/l	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trans-1,3-Dichloropropene	N	1760	μg/l	10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
1,1,2-Trichloroethane	U	1760	μg/l	10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Tetrachloroethene	U	1760	μg/l	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3-Dichloropropane	U	1760	μg/l	2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Dibromochloromethane	U	1760	μg/l	10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
1,2-Dibromoethane	U	1760	μg/l	5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Chlorobenzene	N	1760	μg/l	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,1,2-Tetrachloroethane	U	1760	μg/l	2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Ethylbenzene	U	1760	μg/l	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
m & p-Xylene	U	1760	μg/l	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-Xylene	U	1760	μg/l	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Styrene	U	1760	μg/l	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tribromomethane	U	1760	μg/l	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Isopropylbenzene	U	1760	μg/l	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromobenzene	U	1760	μg/l	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,3-Trichloropropane	N	1760	μg/l	50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50
N-Propylbenzene	U	1760	μg/l	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2-Chlorotoluene	U	1760	μg/l	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3,5-Trimethylbenzene	U	1760	μg/l	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
4-Chlorotoluene	U	1760	μg/l	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tert-Butylbenzene	U	1760	μg/l	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,4-Trimethylbenzene	U	1760	μg/l	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Sec-Butylbenzene	U	1760	μg/l	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3-Dichlorobenzene	N	1760	μg/l	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0



Client: Delta Simons		Chem	ntest Jo	b No.:	15-21023	15-21023	15-21023	15-21023	15-21023	15-21023	15-21023	15-21023	15-21023
Quotation No.: Q15-04536	С	hemtes	st Samp	le ID.:	190621	190622	190623	190624	190625	190626	190627	190628	190654
Order No.: DS26055		Clien	t Sample	e Ref.:									
		Clier	nt Samp	le ID.:	R3	R1	BH104	R4	R2	BH101	DS107	DS116	BH102
			Sample	Type:	WATER								
		7	op Dept	th (m):									
		Bot	tom Dep	th(m):									
		[	Date Sar	npled:	08-Sep-15								
Determinand	Accred.	SOP	Units	LOD	·		·				·	·	
4-Isopropyltoluene	U	1760	μg/l	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,4-Dichlorobenzene	U	1760	μg/l	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
N-Butylbenzene	U	1760	μg/l	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichlorobenzene	U	1760	μg/l	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dibromo-3-Chloropropane	U	1760	μg/l	50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50
1,2,4-Trichlorobenzene	U	1760	μg/l	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Hexachlorobutadiene	U	1760	μg/l	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,3-Trichlorobenzene	U	1760	μg/l	2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Methyl Tert-Butyl Ether	N	1760	μg/l	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
N-Nitrosodimethylamine	N	1790	μg/l	0.5	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Phenol	N	1790	μg/l	0.5	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
2-Chlorophenol	N	1790	μg/l	0.5	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Bis-(2-Chloroethyl)Ether	N	1790	μg/l	0.5	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
1,3-Dichlorobenzene	N	1790	μg/l	0.5	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
1,4-Dichlorobenzene	N	1790	μg/l	0.5	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
1,2-Dichlorobenzene	N	1790	μg/l	0.5	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
2-Methylphenol (o-Cresol)	N	1790	μg/l	0.5	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Bis(2-Chloroisopropyl)Ether	N	1790	μg/l	0.5	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Hexachloroethane	N	1790	μg/l	0.5	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
N-Nitrosodi-n-propylamine	N	1790	μg/l	0.5	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
4-Methylphenol	N	1790	μg/l	0.5	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Nitrobenzene	N	1790	μg/l	0.5	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Isophorone	N	1790	μg/l	0.5	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
2-Nitrophenol	N	1790	μg/l	0.5	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
2,4-Dimethylphenol	N	1790	μg/l	0.5	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Bis(2-Chloroethoxy)Methane	N	1790	μg/l	0.5	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
2,4-Dichlorophenol	N	1790	μg/l	0.5	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
1,2,4-Trichlorobenzene	N	1790	μg/l	0.5	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Naphthalene	N	1790	μg/l	0.5	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
4-Chloroaniline	N	1790	μg/l	0.5	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Hexachlorobutadiene	N	1790	μg/l	0.5	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
4-Chloro-3-Methylphenol	N	1790	μg/l	0.5	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
2-Methylnaphthalene	N	1790	μg/l	0.5	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50



Client: Delta Simons		Chen	ntest Jo	b No.:	15-21023	15-21023	15-21023	15-21023	15-21023	15-21023	15-21023	15-21023	15-21023
Quotation No.: Q15-04536	С	hemtes	st Samp	le ID.:	190621	190622	190623	190624	190625	190626	190627	190628	190654
Order No.: DS26055		Clien	t Sample	e Ref.:									
		Clier	nt Samp	le ID.:	R3	R1	BH104	R4	R2	BH101	DS107	DS116	BH102
			Sample	Type:	WATER								
		Т	op Dept	th (m):									
		Bot	tom Dep	th(m):									
		[	Date Sar	npled:	08-Sep-15								
Determinand	Accred.	SOP	Units	LOD									
Hexachlorocyclopentadiene	N	1790	μg/l	0.5	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
2,4,6-Trichlorophenol	N	1790	μg/l	0.5	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
2,4,5-Trichlorophenol	N	1790	μg/l	0.5	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
2-Chloronaphthalene	N	1790	μg/l	0.5	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
2-Nitroaniline	N	1790	μg/l	0.5	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Acenaphthylene	N	1790	μg/l	0.5	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Dimethylphthalate	N	1790	μg/l	0.5	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
2,6-Dinitrotoluene	N	1790	μg/l	0.5	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Acenaphthene	N	1790	μg/l	0.5	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
3-Nitroaniline	N	1790	μg/l	0.5	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Dibenzofuran	N	1790	μg/l	0.5	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
4-Chlorophenylphenylether	N	1790	μg/l	0.5	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
2,4-Dinitrotoluene	N	1790	μg/l	0.5	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Fluorene	N	1790	μg/l	0.5	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Diethyl Phthalate	N	1790	μg/l	0.5	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
4-Nitroaniline	N	1790	μg/l	0.5	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
2-Methyl-4,6-Dinitrophenol	N	1790	μg/l	0.5	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Azobenzene	N	1790	μg/l	0.5	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
4-Bromophenylphenyl Ether	N	1790	μg/l	0.5	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Hexachlorobenzene	N	1790	μg/l	0.5	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Pentachlorophenol	N	1790	μg/l	0.5	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Phenanthrene	N	1790	μg/l	0.5	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Anthracene	N	1790	μg/l	0.5	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Carbazole	N	1790	μg/l	0.5	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Di-N-Butyl Phthalate	N	1790	μg/l	0.5	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Fluoranthene	N	1790	μg/l	0.5	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Pyrene	N	1790	μg/l	0.5	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Butylbenzyl Phthalate	N	1790	μg/l	0.5	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Benzo[a]anthracene	N	1790	μg/l	0.5	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Chrysene	N	1790	μg/l	0.5	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Bis(2-Ethylhexyl)Phthalate	N	1790	μg/l	0.5	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Di-N-Octyl Phthalate	N	1790	μg/l	0.5	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Benzo[b]fluoranthene	N	1790	μg/l	0.5	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50



	_												
Client: Delta Simons		Chen	ntest Jo	b No.:	15-21023	15-21023	15-21023	15-21023	15-21023	15-21023	15-21023	15-21023	15-21023
Quotation No.: Q15-04536	С	hemtes	st Samp	le ID.:	190621	190622	190623	190624	190625	190626	190627	190628	190654
Order No.: DS26055		Clien	t Sampl	e Ref.:									
		Clier	nt Samp	le ID.:	R3	R1	BH104	R4	R2	BH101	DS107	DS116	BH102
			Sample	Туре:	WATER								
		1	Гор Dер	th (m):									
		Bot	tom Dep	oth(m):									
			Date Sa	mpled:	08-Sep-15								
Determinand	Accred.	SOP	Units	LOD									
Benzo[k]fluoranthene	N	1790	μg/l	0.5	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Benzo[a]pyrene	N	1790	μg/l	0.5	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Indeno(1,2,3-c,d)Pyrene	N	1790	μg/l	0.5	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Dibenz(a,h)Anthracene	N	1790	μg/l	0.5	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Benzo[g,h,i]perylene	N	1790	μg/l	0.5	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
4-Nitrophenol	N	1790	μg/l	0.5	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Total Phenols	U	1920	mg/l	0.03	< 0.030	< 0.030	3.9	< 0.030	< 0.030	< 0.030	< 0.030	< 0.030	0.69



### **Deviations**

In accordance with UKAS Policy on Deviating Samples TPS 63. Chemtest have a procedure to ensure 'upon receipt of each sample a competent laboratory shall assess whether the sample is suitable with regard to the requested test(s)'. This policy and the respective holding times applied, can be supplied upon request. The reason a sample is declared as deviating is detailed below. Where applicable the analysis remains UKAS/MCERTs accredited but the results may be compromised.

Chemtest Sample ID:	Sample Ref:	Sample ID:	Sampled Date:	Deviation Code(s):	Containers Received:
190654		BH102	08-Sep-2015	С	EPA Vial 40ml
190654		BH102	08-Sep-2015	С	Plastic Bottle 1000ml



### **Report Information**

### Key

- U UKAS accredited
- M MCERTS and UKAS accredited
- N Unaccredited
- S This analysis has been subcontracted to a UKAS accredited laboratory that is accredited for this analysis
- SN This analysis has been subcontracted to a UKAS accredited laboratory that is not accredited for this analysis
- T This analysis has been subcontracted to an unaccredited laboratory
- I/S Insufficient Sample
- U/S Unsuitable Sample
- N/E not evaluated
  - < "less than"
  - > "greater than"

Comments or interpretations are beyond the scope of UKAS accreditation

The results relate only to the items tested

Uncertainty of measurement for the determinands tested are available upon request

None of the results in this report have been recovery corrected

All results are expressed on a dry weight basis

The following tests were analysed on samples as received and the results subsequently corrected to a dry weight basis TPH, BTEX, VOCs, SVCOs, PCBs, Phenols

For all other tests the samples were dried at < 37°C prior to analysis

All Asbestos testing is performed at our Coventry laboratory

Issue numbers are sequential starting with 1 all subsequent reports are incremented by 1

### **Sample Deviation Codes**

- A Date of sampling not supplied
- B Sample age exceeds stability time (sampling to extraction)
- C Sample not received in appropriate containers
- D Broken Container

### **Sample Retention and Disposal**

All soil samples will be retained for a period of 60 days from the date of receipt

All water samples will be retained for 14 days from the date of receipt

Charges may apply to extended sample storage

If you require extended retention of samples, please email your requirements to: <u>customerservices@chemtest.co.uk</u>









### Waste Classification Report



- 1		h	n	1	m	_
u	U	u		а		C

Shelton Road, Corby

#### **Waste Stream**

**Default Contaminated Land** 

#### Comments

#### **Project**

15-0645.02

#### Site

Shelton Road, Corby

### Classified by

Rhoades, John
Date:
09/10/2015 09:00 UTC

Telephone: **01522 823337** 

Company:
Delta-Simons
3 Henley Office Park
Doddington Road

Lincoln LN6 3QR

### Report

Created by: Rhoades, John

Created date: 09/10/2015 09:00 UTC

#### Job summary

#	Sample Name	Depth [m]	Classification Result	Hazardous properties	Page
1	DS104	0.2	Potentially Hazardous	HP 3(i)	3
2	DS104[1]	1	Non Hazardous		5
3	DS102	0.3	Non Hazardous		7
4	DS105	0.2	Non Hazardous		9
5	DS105[1]	2	Non Hazardous		11
6	DS103	0.2	Non Hazardous		12
7	DS103[1]	0.6	Non Hazardous		14
8	DS106	0.2	Potentially Hazardous	HP 3(i)	15
9	DS106[1]	1.5	Non Hazardous		17
10	DS107a	0.08	Non Hazardous		19
11	DS107a[1]	0.9	Hazardous	HP 3(i), HP 7, HP 11	20
12	DS107a[2]	2.3	Non Hazardous		23
13	DS111	0.08	Non Hazardous		24
14	DS111[1]	1.3	Non Hazardous		26
15	DS109	0.1	Non Hazardous		27
16	DS109[1]	2.2	Non Hazardous		29
17	DS110	1.6	Non Hazardous		31





Page	Hazardous properties	Classification Result	Depth [m]	Sample Name	
33		Non Hazardous	1.8	DS110[1]	
34		Non Hazardous	0.4	DS112	
36		Non Hazardous	0.2	DS107	
38		Non Hazardous	1.3	DS107[1]	
39		Non Hazardous	0.1	DS101	
40		Non Hazardous	0.5	DS101[1]	
42		Non Hazardous	0.1	DS108	
43		Non Hazardous	0.7	DS108[1]	
45		Non Hazardous	0.2	DS113	
47		Non Hazardous	1.8	DS113[1]	
48		Non Hazardous	0.7	DS114	
50		Non Hazardous	2.5	BH108	
52		Non Hazardous	0.2	DS116	
54		Non Hazardous	0.3	DS116[1]	31
55	HP 12	Potentially Hazardous	8	BH108[1]	32
58		Non Hazardous	2.5	BH110	
60		Non Hazardous	0.05	DS115	34
62		Non Hazardous	1.5	DS115[1]	
63		Non Hazardous	1.8	DS119	36
65		Non Hazardous	1.3	DS117	
66		Non Hazardous	0.1	DS117[1]	
68		Non Hazardous	8.0	DS118	39
70		Non Hazardous	0.2	DS118[1]	40
71	HP 12	Potentially Hazardous	11	BH101	41
73	HP 12, HP 14	Hazardous	11	BH102	
75	HP 12	Potentially Hazardous	7.5	BH103	43
77		Non Hazardous	16	BH103[1]	44
79		Non Hazardous	4	BH105	45
80		Non Hazardous	11	BH105[1]	46
82	HP 14	Hazardous	19	BH105[2]	
84		Non Hazardous	4.5	BH106	48
86	HP 12, HP 14	Hazardous	11	BH106[1]	
88		Non Hazardous	4.2	BH107	50
90		Non Hazardous	12.5	BH107[1]	51
92		Non Hazardous	3.5	BH109	52
94		Non Hazardous	6.5	BH109[1]	53
95		Non Hazardous	14	BH109[2]	
97		Non Hazardous	4.1	BH104	55
99		Non Hazardous	10.5	BH104[1]	56

Appendices	Page
Appendix A: Classifier defined and non CLP determinands	101
Appendix B: Notes	103
Appendix C: Version	104

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Classification of sample: DS104

Potentially Hazardous Waste

..........

Classified as **17 05 04** or **17 05 03** \* in the List of Waste

#### Sample details

Sample Name:

DS104

Sample Depth:

**0.2 m**Moisture content: **7.1%** 

(no correction)

LoW Code:

Entry:

Chapter: 17: Construction and Demolition Wastes (including

excavated soil from contaminated sites)

17 05 04 or 17 05 03 \* (Soil and stones other than those

mentioned in 17 05 03 or Soil and stones containing

hazardous substances)

#### Hazard properties (substances considered hazardous until shown otherwise)

<u>HP 3(i): Flammable</u> "flammable liquid waste: liquid waste having a flash point below 60°C or waste gas oil, diesel and light heating oils having a flash point > 55°C and <= 75°C"

Hazard Statements hit:

Flam. Liq. 3; H226 "Flammable liquid and vapour."

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.0018%)

#### **Determinands** (Moisture content: 7.1%, no correction)

acenaphthene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" acenaphthylene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" anthracene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" arsenic trioxide: (Cation conc. entered: 44 mg/kg, converted to compound conc.:58.094 mg/kg or 0.00581%) benzene: (Whole conc. entered as: <0.001 mg/kg or <0.000001%) IGNORED Because: "<LOD" benzo[a]anthracene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" benzo[a]pyrene; benzo[def]chrysene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" benzo[b]fluoranthene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" benzo[ghi]perylene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" benzo[k]fluoranthene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

boron tribromide/trichloride/trifluoride (combined): (Cation conc. entered: <0.4 mg/kg, converted to compound conc.:<5.372 mg/kg or <0.000537%) IGNORED Because: "<LOD"

cadmium sulfide: (Cation conc. entered: 0.31 mg/kg, converted to compound conc.:0.398 mg/kg or 0.0000398%, Note 1 conc.: 0.000031%)

chromium(III) oxide: (Cation conc. entered: 13 mg/kg, converted to compound conc.:19 mg/kg or 0.0019%) chromium(VI) oxide: (Cation conc. entered: <0.5 mg/kg, converted to compound conc.:<0.962 mg/kg or <0.0000962%) IGNORED Because: "<LOD"

chrysene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" copper (I) oxide: (Cation conc. entered: 2.2 mg/kg, converted to compound conc.:2.477 mg/kg or 0.000248%) cyanides (with the exception of complex cyanides): (Cation conc. entered: <0.5 mg/kg, converted to compound conc.:<0.5 mg/kg or <0.00005%) IGNORED Because: "<LOD"

dibenz[a,h]anthracene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" ethylbenzene: (Whole conc. entered as: <0.001 mg/kg or <0.0000001%) IGNORED Because: "<LOD" fluoranthene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" fluorene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" indeno[123-cd]pyrene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" lead compounds (with the exception of those listed separately in this Annex): (Cation conc. entered: 2.2 mg/kg, converted to compound conc.:3.322 mg/kg or 0.000332%, Note 1 conc.: 0.00022%)





mercury dichloride: (Cation conc. entered: <0.1 mg/kg, converted to compound conc.:<0.135 mg/kg or <0.0000135%) IGNORED Because: "<LOD"

naphthalene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" nickel dihydroxide: (Cation conc. entered: 6 mg/kg, converted to compound conc.:9.477 mg/kg or 0.000948%) pH: (Whole conc. entered as: 8.1 pH, converted to conc.:8.1 pH or 8.1 pH) phenanthrene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

pyrene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

selenium compounds (with the exception of cadmium sulfoselenide and sodium selenite); (Cation conc. entered: <0.2

mg/kg, converted to compound conc.:<0.3 mg/kg or <0.00003%) IGNORED Because: "<LOD"

tetrachloroethene (PCE): (Whole conc. entered as: <0.001 mg/kg or <0.0000001%) IGNORED Because: "<LOD" tetrachloromethane (carbon tetrachloride): (Whole conc. entered as: <0.001 mg/kg or <0.0000001%) IGNORED

Because: "<LOD"

toluene: (Whole conc. entered as: <0.001 mg/kg or <0.0000001%) IGNORED Because: "<LOD" TPH (C6 to C40) petroleum group: (Whole conc. entered as: 18 mg/kg or 0.0018%) trichloroethene (TCE): (Whole conc. entered as: <0.001 mg/kg or <0.0000001%) IGNORED Because: "<LOD" vinyl chloride: (Whole conc. entered as: <0.001 mg/kg or <0.0000001%) IGNORED Because: "<LOD" xylene: (Whole conc. entered as: <0.001 mg/kg or <0.0000001%) IGNORED Because: "<LOD" zinc sulphate: (Cation conc. entered: 17 mg/kg, converted to compound conc.:41.978 mg/kg or 0.0042%)

#### Notes utilised in assessment

### C14: Step 5

"identify whether any individual ecotoxic substance is present at or above a cut-off value ..." . used on:

Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "cadmium sulfide" Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "arsenic trioxide" Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "chromium(III) oxide" Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "copper (I) oxide"

Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "lead compounds (with the exception of those listed separately in this Annex)"

Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "nickel dihydroxide" Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "zinc sulphate"

Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "TPH (C6 to C40) petroleum group"

## **Determinand notes**

### Note 1, used on:

determinand: "cadmium sulfide"

determinand: "lead compounds (with the exception of those listed separately in this Annex)"

## Note A, used on:

determinand: "lead compounds (with the exception of those listed separately in this Annex)"

## WM3: Unknown oil, used on:

determinand: "TPH (C6 to C40) petroleum group"

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**Non Hazardous Waste** Classified as 17 05 04 in the List of Waste

Sample details

Sample Name: DS104[1]

Sample Depth:

Moisture content: 17% (no correction)

LoW Code:

Entry:

Chapter: 17: Construction and Demolition Wastes (including

excavated soil from contaminated sites)

17 05 04 (Soil and stones other than those mentioned in

17 05 03)

## **Hazard properties**

None identified

### **Determinands** (Moisture content: 17%, no correction)

acenaphthene: (Whole conc. entered as: 0.16 mg/kg or 0.000016%)

acenaphthylene: (Whole conc. entered as: 0.44 mg/kg or 0.000044%)

anthracene: (Whole conc. entered as: 0.21 mg/kg or 0.000021%)

arsenic trioxide: (Cation conc. entered: 39 mg/kg, converted to compound conc.:51.493 mg/kg or 0.00515%)

benzene: (Whole conc. entered as: <0.001 mg/kg or <0.0000001%) IGNORED Because: "<LOD"

benzo[a]anthracene: (Whole conc. entered as: 0.47 mg/kg or 0.000047%)

benzo[a]pyrene; benzo[def]chrysene: (Whole conc. entered as: 0.21 mg/kg or 0.000021%)

benzo[b]fluoranthene: (Whole conc. entered as: 0.38 mg/kg or 0.000038%)

benzo[ghi]perylene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

benzo[k]fluoranthene: (Whole conc. entered as: 0.21 mg/kg or 0.000021%)

boron tribromide/trichloride/trifluoride (combined): (Cation conc. entered: 0.97 mg/kg, converted to compound conc.:13.027 mg/kg or 0.0013%)

cadmium sulfide: (Cation conc. entered: 0.36 mg/kg, converted to compound conc.:0.463 mg/kg or 0.0000463%, Note 1 conc.: 0.000036%)

chromium(III) oxide: (Cation conc. entered: 48 mg/kg, converted to compound conc.:70.155 mg/kg or 0.00702%)

chromium(VI) oxide: (Cation conc. entered: <0.5 mg/kg, converted to compound conc.:<0.962 mg/kg or <0.0000962%) IGNORED Because: "<LOD"

chrysene: (Whole conc. entered as: 0.41 mg/kg or 0.000041%)

copper (I) oxide: (Cation conc. entered: 52 mg/kg, converted to compound conc.:58.546 mg/kg or 0.00585%)

cyanides (with the exception of complex cyanides): (Cation conc. entered: <0.5 mg/kg, converted to compound

conc.:<0.5 mg/kg or <0.00005%) IGNORED Because: "<LOD"

dibenz[a,h]anthracene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

ethylbenzene: (Whole conc. entered as: <0.001 mg/kg or <0.0000001%) IGNORED Because: "<LOD"

fluoranthene: (Whole conc. entered as: 1.3 mg/kg or 0.00013%)

fluorene: (Whole conc. entered as: 0.43 mg/kg or 0.000043%)

indeno[123-cd]pyrene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

lead compounds (with the exception of those listed separately in this Annex): (Cation conc. entered: 87 mg/kg, converted to compound conc.:131.37 mg/kg or 0.0131%, Note 1 conc.: 0.0087%)

mercury dichloride: (Cation conc. entered: <0.1 mg/kg, converted to compound conc.:<0.135 mg/kg or <0.0000135%) IGNORED Because: "<LOD"

naphthalene: (Whole conc. entered as: 2 mg/kg or 0.0002%)

nickel dihydroxide: (Cation conc. entered: 43 mg/kg, converted to compound conc.:67.918 mg/kg or 0.00679%)

pH: (Whole conc. entered as: 7.8 pH, converted to conc.:7.8 pH or 7.8 pH)

phenanthrene: (Whole conc. entered as: 1.6 mg/kg or 0.00016%)

pyrene: (Whole conc. entered as: 1.2 mg/kg or 0.00012%)





toluene: (Whole conc. entered as: <0.001 mg/kg or <0.0000001%) IGNORED Because: "<LOD" TPH (C6 to C40) petroleum group: (Whole conc. entered as: <10 mg/kg or <0.001%) IGNORED Because: "<LOD" trichloroethene (TCE): (Whole conc. entered as: <0.001 mg/kg or <0.0000001%) IGNORED Because: "<LOD" vinyl chloride: (Whole conc. entered as: <0.001 mg/kg or <0.0000001%) IGNORED Because: "<LOD" xylene: (Whole conc. entered as: <0.001 mg/kg or <0.0000001%) IGNORED Because: "<LOD" zinc sulphate: (Cation conc. entered: 400 mg/kg, converted to compound conc.:987.719 mg/kg or 0.0988%)

#### Notes utilised in assessment

#### C14: Step 5

"identify whether any individual ecotoxic substance is present at or above a cut-off value ...", used on:

```
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "cadmium sulfide"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "fluorene"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "acenaphthene"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "anthracene"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "arsenic trioxide"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "benzo[a]anthracene"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "benzo[a]pyrene; benzo[def]chrysene"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "benzo[b]fluoranthene"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "benzo[k]fluoranthene"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "chromium(III) oxide"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "chrysene"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "copper (I) oxide"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "fluoranthene"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "lead compounds (with the exception of
those listed separately in this Annex)"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "naphthalene"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "nickel dihydroxide"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "phenanthrene"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "pyrene"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "zinc sulphate"
```

#### **Determinand notes**

# Note 1, used on:

determinand: "cadmium sulfide"

determinand: "lead compounds (with the exception of those listed separately in this Annex)"

#### Note A, used on:

determinand: "lead compounds (with the exception of those listed separately in this Annex)"





Non Hazardous Waste Classified as 17 05 04 in the List of Waste

Sample details

Sample Name:

**DS102** Sample Depth:

0.3 m

Moisture content: 20%

(no correction)

LoW Code:

Entry:

Chapter: 17: Construction and Demolition Wastes (including

excavated soil from contaminated sites)

17 05 04 (Soil and stones other than those mentioned in

17 05 03)

## **Hazard properties**

None identified

## Determinands (Moisture content: 20%, no correction)

acenaphthene: (Whole conc. entered as: 0.27 mg/kg or 0.000027%)

acenaphthylene: (Whole conc. entered as: 0.26 mg/kg or 0.000026%)

anthracene: (Whole conc. entered as: 0.12 mg/kg or 0.000012%)

arsenic trioxide: (Cation conc. entered: 33 mg/kg, converted to compound conc.:43.571 mg/kg or 0.00436%)

benzene: (Whole conc. entered as: <0.001 mg/kg or <0.0000001%) IGNORED Because: "<LOD"

benzo[a]anthracene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

benzo[a]pyrene; benzo[def]chrysene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

benzo[b]fluoranthene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

benzo[ghi]perylene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

benzo[k]fluoranthene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

boron tribromide/trichloride/trifluoride (combined): (Cation conc. entered: 0.97 mg/kg, converted to compound

conc.:13.027 mg/kg or 0.0013%)

cadmium sulfide: (Cation conc. entered: 0.19 mg/kg, converted to compound conc.:0.244 mg/kg or 0.0000244%, Note 1

conc.: 0.000019%)

chromium(III) oxide: (Cation conc. entered: 40 mg/kg, converted to compound conc.:58.462 mg/kg or 0.00585%)

chromium(VI) oxide: (Cation conc. entered: <0.5 mg/kg, converted to compound conc.:<0.962 mg/kg or <0.0000962%) IGNORED Because: "<LOD"

chrysene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

copper (I) oxide: (Cation conc. entered: 23 mg/kg, converted to compound conc.:25.895 mg/kg or 0.00259%)

cyanides (with the exception of complex cyanides): (Cation conc. entered: <0.5 mg/kg, converted to compound conc.:<0.5 mg/kg or <0.00005%) IGNORED Because: "<LOD"

dibenz[a,h]anthracene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

ethylbenzene: (Whole conc. entered as: <0.001 mg/kg or <0.0000001%) IGNORED Because: "<LOD"

fluoranthene: (Whole conc. entered as: 0.91 mg/kg or 0.000091%)

fluorene: (Whole conc. entered as: 0.4 mg/kg or 0.00004%)

indeno[123-cd]pyrene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

lead compounds (with the exception of those listed separately in this Annex): (Cation conc. entered: 23 mg/kg, converted to compound conc.:34.73 mg/kg or 0.00347%, Note 1 conc.: 0.0023%)

mercury dichloride: (Cation conc. entered: <0.1 mg/kg, converted to compound conc.:<0.135 mg/kg or <0.0000135%) IGNORED Because: "<LOD"

naphthalene: (Whole conc. entered as: 1.1 mg/kg or 0.00011%)

nickel dihydroxide: (Cation conc. entered: 38 mg/kg, converted to compound conc.:60.021 mg/kg or 0.006%)

pH: (Whole conc. entered as: 7.9 pH, converted to conc.:7.9 pH or 7.9 pH)

phenanthrene: (Whole conc. entered as: 0.88 mg/kg or 0.000088%)

pyrene: (Whole conc. entered as: 0.69 mg/kg or 0.000069%)





toluene: (Whole conc. entered as: <0.001 mg/kg or <0.0000001%) IGNORED Because: "<LOD" trichloroethene (TCE): (Whole conc. entered as: <0.001 mg/kg or <0.0000001%) IGNORED Because: "<LOD" vinyl chloride: (Whole conc. entered as: <0.001 mg/kg or <0.0000001%) IGNORED Because: "<LOD" xylene: (Whole conc. entered as: <0.001 mg/kg or <0.0000001%) IGNORED Because: "<LOD" zinc sulphate: (Cation conc. entered: 89 mg/kg, converted to compound conc.:219.767 mg/kg or 0.022%)

#### Notes utilised in assessment

#### C14: Step 5

"identify whether any individual ecotoxic substance is present at or above a cut-off value ...", used on:

```
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "cadmium sulfide"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "fluorene"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "acenaphthene"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "anthracene"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "arsenic trioxide"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "chromium(III) oxide"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "copper (I) oxide"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "fluoranthene"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "lead compounds (with the exception of those listed separately in this Annex)"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "naphthalene"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "nickel dihydroxide"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "phenanthrene"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "phenanthrene"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "phenanthrene"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "phenanthrene"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "phenanthrene"
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "pyrene"
```

### Note 1, used on:

```
Test: "HP 5 on STOT SE 1; H370, STOT RE 1; H372" for determinand: "cadmium sulfide" Test: "HP 5 on STOT SE 2; H371, STOT RE 2; H373" for determinand: "cadmium sulfide"
```

Test: "HP 6 on Acute Tox. 4; H302" for determinand: "cadmium sulfide"

Test: "HP 6 on Acute Tox. 4; H332" for determinand: "lead compounds (with the exception of those listed separately in this Annex)"

Test: "HP 7 on Carc. 1B; H350, Carc. 1A; H350, Carc. 1B; H350i, Carc. 1A; H350i" for determinand: "cadmium sulfide" Test: "HP 7 on Carc. 2; H351" for determinand: "lead compounds (with the exception of those listed separately in this Annex)"

Test: "HP 10 on Repr. 1A; H360, Repr. 1B; H360, Repr. 1B; H360F, Repr. 1A; H360F, Repr. 1A; H360D, Repr. 1B; H360D, Repr. 1B; H360FD, Repr. 1A; H360FD, Repr. 1A; H360FD, Repr. 1A; H360Df, Repr. 1B; H360Df, Repr. 1B; H360Df, Repr. 1A; H360Df" for determinand: "lead compounds (with the exception of those listed separately in this Annex)"

Test: "HP 10 on Repr. 2; H361, Repr. 2; H361f, Repr. 2; H361d, Repr. 2; H361fd" for determinand: "lead compounds (with the exception of those listed separately in this Annex)"

Test: "HP 11 on Muta. 2; H341" for determinand: "cadmium sulfide"

Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "cadmium sulfide"

#### **Determinand notes**

### Note 1, used on:

determinand: "cadmium sulfide"

determinand: "lead compounds (with the exception of those listed separately in this Annex)"

# Note A, used on:

determinand: "lead compounds (with the exception of those listed separately in this Annex)"

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Non Hazardous Waste Classified as 17 05 04 in the List of Waste

### Sample details

Sample Name:

DS105

Sample Depth: **0.2 m** 

Moisture content: 5.6%

(no correction)

LoW Code:

Entry:

Chapter: 17: Construction and Demolition Wastes (including

excavated soil from contaminated sites)

17 05 04 (Soil and stones other than those mentioned in

17 05 03)

## **Hazard properties**

None identified

### **Determinands** (Moisture content: 5.6%, no correction)

acenaphthene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" acenaphthylene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" anthracene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" arsenic trioxide: (Cation conc. entered: 33 mg/kg, converted to compound conc.:43.571 mg/kg or 0.00436%) benzene: (Whole conc. entered as: <0.001 mg/kg or <0.000001%) IGNORED Because: "<LOD" benzo[a]anthracene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" benzo[a]pyrene; benzo[def]chrysene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" benzo[b]fluoranthene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" benzo[ghi]perylene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" benzo[k]fluoranthene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" boron tribromide/trichloride/trifluoride (combined): (Cation conc. entered: <0.4 mg/kg, converted to compound conc.:<5.372 mg/kg or <0.000537%) IGNORED Because: "<LOD"

cadmium sulfide: (Cation conc. entered: 0.21 mg/kg, converted to compound conc.:0.27 mg/kg or 0.000027%, Note 1 conc.: 0.000021%)

chromium(III) oxide: (Cation conc. entered: 9.5 mg/kg, converted to compound conc.:13.885 mg/kg or 0.00139%) chromium(VI) oxide: (Cation conc. entered: <0.5 mg/kg, converted to compound conc.:<0.962 mg/kg or <0.0000962%) IGNORED Because: "<LOD"

chrysene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" copper (I) oxide: (Cation conc. entered: 2.8 mg/kg, converted to compound conc.:3.152 mg/kg or 0.000315%) cyanides (with the exception of complex cyanides): (Cation conc. entered: <0.5 mg/kg, converted to compound conc.:<0.5 mg/kg or <0.00005%) IGNORED Because: "<LOD"

dibenz[a,h]anthracene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" ethylbenzene: (Whole conc. entered as: <0.001 mg/kg or <0.0000001%) IGNORED Because: "<LOD" fluoranthene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

fluorene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

indeno[123-cd]pyrene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

lead compounds (with the exception of those listed separately in this Annex): (Cation conc. entered: 1.8 mg/kg,

converted to compound conc.:2.718 mg/kg or 0.000272%, Note 1 conc.: 0.00018%)

mercury dichloride: (Cation conc. entered: <0.1 mg/kg, converted to compound conc.:<0.135 mg/kg or <0.0000135%) IGNORED Because: "<LOD"

naphthalene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" nickel dihydroxide: (Cation conc. entered: 4.8 mg/kg, converted to compound conc.:7.582 mg/kg or 0.000758%) pH: (Whole conc. entered as: 8.4 pH, converted to conc.:8.4 pH or 8.4 pH) phenanthrene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" pyrene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"





toluene: (Whole conc. entered as: <0.001 mg/kg or <0.0000001%) IGNORED Because: "<LOD" TPH (C6 to C40) petroleum group: (Whole conc. entered as: <10 mg/kg or <0.001%) IGNORED Because: "<LOD" trichloroethene (TCE): (Whole conc. entered as: <0.001 mg/kg or <0.0000001%) IGNORED Because: "<LOD" vinyl chloride: (Whole conc. entered as: <0.001 mg/kg or <0.0000001%) IGNORED Because: "<LOD" xylene: (Whole conc. entered as: <0.001 mg/kg or <0.0000001%) IGNORED Because: "<LOD" zinc sulphate: (Cation conc. entered: 14 mg/kg, converted to compound conc.:34.57 mg/kg or 0.00346%)

#### Notes utilised in assessment

#### C14: Step 5

"identify whether any individual ecotoxic substance is present at or above a cut-off value ...", used on:

Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "cadmium sulfide" Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "arsenic trioxide" Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "chromium(III) oxide" Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "copper (I) oxide"

Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "lead compounds (with the exception of those listed separately in this Annex)"

Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "nickel dihydroxide" Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "zinc sulphate"

#### **Determinand notes**

# Note 1 , used on:

determinand: "cadmium sulfide"

determinand: "lead compounds (with the exception of those listed separately in this Annex)"

## Note A, used on:

determinand: "lead compounds (with the exception of those listed separately in this Annex)"

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Non Hazardous Waste Classified as 17 05 04 in the List of Waste

Sample details

Sample Name: DS105[1]

Sample Depth:

2 m

Moisture content: 16%

(no correction)

LoW Code:

Chapter: 17: Construction and Demolition Wastes (including

excavated soil from contaminated sites)

Entry: 17 05 04 (Soil and stones other than those mentioned in

17 05 03)

**Hazard properties** 

None identified

**Determinands** (Moisture content: 16%, no correction)

phenol: (Whole conc. entered as: <0.5 mg/kg or <0.00005%) IGNORED Because: "<LOD"

Notes utilised in assessment





**Non Hazardous Waste** Classified as 17 05 04 in the List of Waste

Sample details

Sample Name:

**DS103** Sample Depth:

0.2 m

Moisture content: 5.5%

(no correction)

LoW Code:

Entry:

Chapter: 17: Construction and Demolition Wastes (including

excavated soil from contaminated sites)

17 05 04 (Soil and stones other than those mentioned in

17 05 03)

## **Hazard properties**

None identified

## **Determinands** (Moisture content: 5.5%, no correction)

acenaphthene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" acenaphthylene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" anthracene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" arsenic trioxide: (Cation conc. entered: 42 mg/kg, converted to compound conc.:55.454 mg/kg or 0.00555%) benzene: (Whole conc. entered as: <0.001 mg/kg or <0.0000001%) IGNORED Because: "<LOD" benzo[a]anthracene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" benzo[a]pyrene; benzo[def]chrysene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" benzo[b]fluoranthene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" benzo[ghi]perylene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" benzo[k]fluoranthene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" boron tribromide/trichloride/trifluoride (combined): (Cation conc. entered: <0.4 mg/kg, converted to compound conc.:<5.372 mg/kg or <0.000537%) IGNORED Because: "<LOD"

cadmium sulfide: (Cation conc. entered: 0.27 mg/kg, converted to compound conc.:0.347 mg/kg or 0.0000347%, Note 1 conc.: 0.000027%)

chromium(III) oxide: (Cation conc. entered: 11 mg/kg, converted to compound conc.:16.077 mg/kg or 0.00161%) chromium(VI) oxide: (Cation conc. entered: <0.5 mg/kg, converted to compound conc.:<0.962 mg/kg or <0.0000962%) IGNORED Because: "<LOD"

chrysene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" copper (I) oxide: (Cation conc. entered: 3.2 mg/kg, converted to compound conc.:3.603 mg/kg or 0.00036%) cyanides (with the exception of complex cyanides): (Cation conc. entered: <0.5 mg/kg, converted to compound conc.:<0.5 mg/kg or <0.00005%) IGNORED Because: "<LOD"

dibenz[a,h]anthracene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" ethylbenzene: (Whole conc. entered as: <0.001 mg/kg or <0.0000001%) IGNORED Because: "<LOD" fluoranthene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

fluorene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

indeno[123-cd]pyrene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

lead compounds (with the exception of those listed separately in this Annex): (Cation conc. entered: 1.7 mg/kg,

converted to compound conc.:2.567 mg/kg or 0.000257%, Note 1 conc.: 0.00017%)

mercury dichloride: (Cation conc. entered: <0.1 mg/kg, converted to compound conc.:<0.135 mg/kg or <0.0000135%) IGNORED Because: "<LOD"

naphthalene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" nickel dihydroxide: (Cation conc. entered: 5.6 mg/kg, converted to compound conc.:8.845 mg/kg or 0.000885%) pH: (Whole conc. entered as: 8.1 pH, converted to conc.:8.1 pH or 8.1 pH) phenanthrene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" pyrene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"





toluene: (Whole conc. entered as: <0.001 mg/kg or <0.0000001%) IGNORED Because: "<LOD" TPH (C6 to C40) petroleum group: (Whole conc. entered as: <10 mg/kg or <0.001%) IGNORED Because: "<LOD" trichloroethene (TCE): (Whole conc. entered as: <0.001 mg/kg or <0.0000001%) IGNORED Because: "<LOD" vinyl chloride: (Whole conc. entered as: <0.001 mg/kg or <0.0000001%) IGNORED Because: "<LOD" xylene: (Whole conc. entered as: <0.001 mg/kg or <0.0000001%) IGNORED Because: "<LOD" zinc sulphate: (Cation conc. entered: 15 mg/kg, converted to compound conc.:37.039 mg/kg or 0.0037%)

#### Notes utilised in assessment

#### C14: Step 5

"identify whether any individual ecotoxic substance is present at or above a cut-off value ...", used on:

Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "cadmium sulfide" Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "arsenic trioxide" Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "chromium(III) oxide" Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "copper (I) oxide"

Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "lead compounds (with the exception of those listed separately in this Annex)"

Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "nickel dihydroxide" Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "zinc sulphate"

#### **Determinand notes**

## Note 1, used on:

determinand: "cadmium sulfide"

determinand: "lead compounds (with the exception of those listed separately in this Annex)"

## Note A, used on:

determinand: "lead compounds (with the exception of those listed separately in this Annex)"

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Non Hazardous Waste Classified as 17 05 04 in the List of Waste

Sample details

Sample Name: DS103[1]

Sample Depth: 0.6 m

Moisture content: 15%

(no correction)

LoW Code:

Entry:

Chapter: 17: Construction and Demolition Wastes (including

excavated soil from contaminated sites)

17 05 04 (Soil and stones other than those mentioned in

17 05 03)

**Hazard properties** 

None identified

Determinands (Moisture content: 15%, no correction)

phenol: (Whole conc. entered as: <0.5 mg/kg or <0.00005%) IGNORED Because: "<LOD"

Notes utilised in assessment





Potentially Hazardous Waste

..........

Classified as **17 05 04** or **17 05 03** \* in the List of Waste

# Sample details

Sample Name:

DS106

Sample Depth:

**0.2 m**Moisture content: **11%** 

(no correction)

LoW Code:

Entry:

Chapter: 17: Construction and Demolition Wastes (including

excavated soil from contaminated sites)

17 05 04 or 17 05 03 \* (Soil and stones other than those

mentioned in 17 05 03 or Soil and stones containing

hazardous substances)

# Hazard properties (substances considered hazardous until shown otherwise)

<u>HP 3(i): Flammable</u> "flammable liquid waste: liquid waste having a flash point below 60°C or waste gas oil, diesel and light heating oils having a flash point > 55°C and <= 75°C"

Hazard Statements hit:

Flam. Liq. 3; H226 "Flammable liquid and vapour."

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.007%)

## **Determinands** (Moisture content: 11%, no correction)

acenaphthene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" acenaphthylene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" anthracene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" arsenic trioxide: (Cation conc. entered: 29 mg/kg, converted to compound conc.:38.289 mg/kg or 0.00383%) benzene: (Whole conc. entered as: <0.001 mg/kg or <0.000001%) IGNORED Because: "<LOD" benzo[a]anthracene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" benzo[a]pyrene; benzo[def]chrysene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" benzo[b]fluoranthene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" benzo[ghi]perylene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" benzo[k]fluoranthene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

boron tribromide/trichloride/trifluoride (combined): (Cation conc. entered: 0.46 mg/kg, converted to compound conc.:6.178 mg/kg or 0.000618%)

cadmium sulfide: (Cation conc. entered: 0.21 mg/kg, converted to compound conc.:0.27 mg/kg or 0.000027%, Note 1 conc.: 0.000021%)

chromium(III) oxide: (Cation conc. entered: 12 mg/kg, converted to compound conc.:17.539 mg/kg or 0.00175%) chromium(VI) oxide: (Cation conc. entered: <0.5 mg/kg, converted to compound conc.:<0.962 mg/kg or <0.0000962%) IGNORED Because: "<LOD"

chrysene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" copper (I) oxide: (Cation conc. entered: 2.5 mg/kg, converted to compound conc.:2.815 mg/kg or 0.000281%) cyanides (with the exception of complex cyanides): (Cation conc. entered: <0.5 mg/kg, converted to compound conc.:<0.5 mg/kg or <0.00005%) IGNORED Because: "<LOD"

dibenz[a,h]anthracene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" ethylbenzene: (Whole conc. entered as: <0.001 mg/kg or <0.0000001%) IGNORED Because: "<LOD" fluoranthene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" fluorene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" indeno[123-cd]pyrene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" lead compounds (with the exception of those listed separately in this Annex): (Cation conc. entered: 2.1 mg/kg, converted to compound conc.:3.171 mg/kg or 0.000317%, Note 1 conc.: 0.00021%)

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mercury dichloride: (Cation conc. entered: <0.1 mg/kg, converted to compound conc.:<0.135 mg/kg or <0.0000135%) IGNORED Because: "<LOD"

naphthalene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

nickel dihydroxide: (Cation conc. entered: 6.2 mg/kg, converted to compound conc.:9.793 mg/kg or 0.000979%)

pH: (Whole conc. entered as: 10.2 pH, converted to conc.:10.2 pH or 10.2 pH)

phenanthrene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

pyrene: (Whole conc. entered as: 0.23 mg/kg or 0.000023%)

 $selenium\ compounds\ (with\ the\ exception\ of\ cadmium\ sulfoselenide\ and\ sodium\ selenite):\ (Cation\ conc.\ entered:\ <0.2)$ 

mg/kg, converted to compound conc.:<0.3 mg/kg or <0.00003%) IGNORED Because: "<LOD"

tetrachloroethene (PCE): (Whole conc. entered as: <0.001 mg/kg or <0.0000001%) IGNORED Because: "<LOD"

tetrachloromethane (carbon tetrachloride): (Whole conc. entered as: <0.001 mg/kg or <0.0000001%) IGNORED

Because: "<LOD"

toluene: (Whole conc. entered as: <0.001 mg/kg or <0.0000001%) IGNORED Because: "<LOD"

TPH (C6 to C40) petroleum group: (Whole conc. entered as: 70 mg/kg or 0.007%)

trichloroethene (TCE): (Whole conc. entered as: <0.001 mg/kg or <0.0000001%) IGNORED Because: "<LOD"

vinyl chloride: (Whole conc. entered as: <0.001 mg/kg or <0.0000001%) IGNORED Because: "<LOD"

xylene: (Whole conc. entered as: <0.001 mg/kg or <0.0000001%) IGNORED Because: "<LOD"

zinc sulphate: (Cation conc. entered: 15 mg/kg, converted to compound conc.:37.039 mg/kg or 0.0037%)

#### Notes utilised in assessment

### C14: Step 5

"identify whether any individual ecotoxic substance is present at or above a cut-off value ..." . used on:

Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "cadmium sulfide"

Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "arsenic trioxide"

Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "chromium(III) oxide"

Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "copper (I) oxide"

Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "lead compounds (with the exception of those listed separately in this Annex)"

Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "nickel dihydroxide"

Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "pyrene"

Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "zinc sulphate"

Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "TPH (C6 to C40) petroleum group"

### **Determinand notes**

## Note 1, used on:

determinand: "cadmium sulfide"

determinand: "lead compounds (with the exception of those listed separately in this Annex)"

## Note A, used on:

determinand: "lead compounds (with the exception of those listed separately in this Annex)"

## WM3: Unknown oil, used on:

determinand: "TPH (C6 to C40) petroleum group"





**Non Hazardous Waste** Classified as 17 05 04 in the List of Waste

## Sample details

Sample Name: DS106[1]

Sample Depth:

1.5 m

Moisture content: 16%

(no correction)

LoW Code:

Entry:

Chapter: 17: Construction and Demolition Wastes (including

excavated soil from contaminated sites)

17 05 04 (Soil and stones other than those mentioned in

17 05 03)

## **Hazard properties**

None identified

### **Determinands** (Moisture content: 16%, no correction)

acenaphthene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" acenaphthylene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" anthracene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" arsenic trioxide: (Cation conc. entered: 33 mg/kg, converted to compound conc.:43.571 mg/kg or 0.00436%) benzene: (Whole conc. entered as: <0.001 mg/kg or <0.0000001%) IGNORED Because: "<LOD" benzo[a]anthracene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" benzo[a]pyrene; benzo[def]chrysene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" benzo[b]fluoranthene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

benzo[ghi]perylene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" benzo[k]fluoranthene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

boron tribromide/trichloride/trifluoride (combined): (Cation conc. entered: 0.65 mg/kg, converted to compound conc.:8.73 mg/kg or 0.000873%)

cadmium sulfide: (Cation conc. entered: 0.18 mg/kg, converted to compound conc.:0.231 mg/kg or 0.0000231%, Note 1 conc.: 0.000018%)

chromium(III) oxide: (Cation conc. entered: 41 mg/kg, converted to compound conc.:59.924 mg/kg or 0.00599%) chromium(VI) oxide: (Cation conc. entered: <0.5 mg/kg, converted to compound conc.:<0.962 mg/kg or <0.0000962%) IGNORED Because: "<LOD"

chrysene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

copper (I) oxide: (Cation conc. entered: 20 mg/kg, converted to compound conc.:22.518 mg/kg or 0.00225%) cyanides (with the exception of complex cyanides): (Cation conc. entered: <0.5 mg/kg, converted to compound

conc.:<0.5 mg/kg or <0.00005%) IGNORED Because: "<LOD"

dibenz[a,h]anthracene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

ethylbenzene: (Whole conc. entered as: <0.001 mg/kg or <0.0000001%) IGNORED Because: "<LOD"

fluoranthene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

fluorene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

indeno[123-cd]pyrene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

lead compounds (with the exception of those listed separately in this Annex): (Cation conc. entered: 26 mg/kg, converted to compound conc.:39.26 mg/kg or 0.00393%, Note 1 conc.: 0.0026%)

mercury dichloride: (Cation conc. entered: <0.1 mg/kg, converted to compound conc.:<0.135 mg/kg or <0.0000135%) IGNORED Because: "<LOD"

naphthalene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

nickel dihydroxide: (Cation conc. entered: 31 mg/kg, converted to compound conc.:48.964 mg/kg or 0.0049%)

pH: (Whole conc. entered as: 7.7 pH, converted to conc.:7.7 pH or 7.7 pH)

phenanthrene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

pyrene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"





toluene: (Whole conc. entered as: <0.001 mg/kg or <0.0000001%) IGNORED Because: "<LOD" trichloroethene (TCE): (Whole conc. entered as: <0.001 mg/kg or <0.0000001%) IGNORED Because: "<LOD" vinyl chloride: (Whole conc. entered as: <0.001 mg/kg or <0.0000001%) IGNORED Because: "<LOD" xylene: (Whole conc. entered as: <0.001 mg/kg or <0.0000001%) IGNORED Because: "<LOD" zinc sulphate: (Cation conc. entered: 97 mg/kg, converted to compound conc.:239.522 mg/kg or 0.024%)

### Notes utilised in assessment

#### C14: Step 5

"identify whether any individual ecotoxic substance is present at or above a cut-off value ...", used on:

Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "cadmium sulfide" Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "arsenic trioxide" Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "chromium(III) oxide" Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "copper (I) oxide"

Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "lead compounds (with the exception of those listed separately in this Annex)"

Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "nickel dihydroxide" Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "zinc sulphate"

#### **Determinand notes**

## Note 1, used on:

determinand: "cadmium sulfide"

determinand: "lead compounds (with the exception of those listed separately in this Annex)"

#### Note A, used on:

determinand: "lead compounds (with the exception of those listed separately in this Annex)"

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Non Hazardous Waste Classified as 17 05 04 in the List of Waste

Sample details

Sample Name:

**DS107a**Sample Depth:

0.08 m

Moisture content: 3.2%

(no correction)

LoW Code:

Chapter: 17: Construction and Demolition Wastes (including

excavated soil from contaminated sites)

Entry: 17 05 04 (Soil and stones other than those mentioned in

17 05 03)

**Hazard properties** 

None identified

Determinands (Moisture content: 3.2%, no correction)

phenol: (Whole conc. entered as: <0.5 mg/kg or <0.00005%) IGNORED Because: "<LOD"

Notes utilised in assessment





Classification of sample: DS107a[1]

🛆 Hazardous Waste

Classified as 17 05 03 \*

in the List of Waste

## Sample details

Sample Name: DS107a[1]

Sample Depth:

0.9 m Moisture content: 18%

(no correction)

LoW Code:

Chapter: 17: Construction and Demolition Wastes (including

excavated soil from contaminated sites)

Entry: 17 05 03 \* (Soil and stones containing hazardous

substances)

## **Hazard properties**

HP 7: Carcinogenic "waste which induces cancer or increases its incidence"

Hazard Statements hit:

Carc. 1B; H350 "May cause cancer [state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard]."

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 1%)

HP 11: Mutagenic "waste which may cause a mutation, that is a permanent change in the amount or structure of the genetic material in a cell"

Hazard Statements hit:

Muta. 1B; H340 "May cause genetic defects [state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard]."

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 1%)

## Hazard properties (substances considered hazardous until shown otherwise)

HP 3(i): Flammable "flammable liquid waste: liquid waste having a flash point below 60°C or waste gas oil, diesel and light heating oils having a flash point > 55°C and <= 75°C"

Hazard Statements hit:

Flam. Lig. 2; H225 "Highly flammable liquid and vapour."

Because of determinand:

ethylbenzene: (conc.: 0.0000012%)

Flam. Liq. 3; H226 "Flammable liquid and vapour."

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 1%)

# **Determinands** (Moisture content: 18%, no correction)

acenaphthene: (Whole conc. entered as: 0.1 mg/kg or 0.00001%) acenaphthylene: (Whole conc. entered as: 0.82 mg/kg or 0.000082%) anthracene: (Whole conc. entered as: 0.27 mg/kg or 0.000027%)

arsenic trioxide: (Cation conc. entered: 28 mg/kg, converted to compound conc.:36.969 mg/kg or 0.0037%)

benzene: (Whole conc. entered as: <0.001 mg/kg or <0.0000001%) IGNORED Because: "<LOD"

benzo[a]anthracene: (Whole conc. entered as: 1.4 mg/kg or 0.00014%)





```
benzo[a]pyrene; benzo[def]chrysene: (Whole conc. entered as: 0.66 mg/kg or 0.000066%)
benzo[b]fluoranthene: (Whole conc. entered as: 1.9 mg/kg or 0.00019%)
benzo[ghi]perylene: (Whole conc. entered as: 1.2 mg/kg or 0.00012%)
benzo[k]fluoranthene: (Whole conc. entered as: 1.1 mg/kg or 0.00011%)
boron tribromide/trichloride/trifluoride (combined): (Cation conc. entered: 0.8 mg/kg, converted to compound
conc.:10.744 mg/kg or 0.00107%)
cadmium sulfide: (Cation conc. entered: 0.38 mg/kg, converted to compound conc.:0.488 mg/kg or 0.0000488%, Note 1
conc.: 0.000038%)
chromium(III) oxide: (Cation conc. entered: 34 mg/kg, converted to compound conc.:49.693 mg/kg or 0.00497%)
chromium(VI) oxide: (Cation conc. entered: <0.5 mg/kg, converted to compound conc.:<0.962 mg/kg or <0.0000962%)
IGNORED Because: "<LOD"
chrysene: (Whole conc. entered as: 2.2 mg/kg or 0.00022%)
copper (I) oxide: (Cation conc. entered: 29 mg/kg, converted to compound conc.:32.651 mg/kg or 0.00327%)
cyanides (with the exception of complex cyanides): (Cation conc. entered: <0.5 mg/kg, converted to compound
conc.:<0.5 mg/kg or <0.00005%) IGNORED Because: "<LOD"
dibenz[a,h]anthracene: (Whole conc. entered as: 0.65 mg/kg or 0.000065%)
ethylbenzene: (Whole conc. entered as: 0.012 mg/kg or 0.0000012%)
fluoranthene: (Whole conc. entered as: 4.9 mg/kg or 0.00049%)
fluorene: (Whole conc. entered as: 0.24 mg/kg or 0.000024%)
indeno[123-cd]pyrene: (Whole conc. entered as: 0.91 mg/kg or 0.000091%)
lead compounds (with the exception of those listed separately in this Annex): (Cation conc. entered: 49 mg/kg, converted
to compound conc.:73.99 ma/kg or 0.0074%. Note 1 conc.: 0.0049%)
mercury dichloride: (Cation conc. entered: 0.35 mg/kg, converted to compound conc.:0.474 mg/kg or 0.0000474%)
naphthalene: (Whole conc. entered as: 0.62 mg/kg or 0.000062%)
nickel dihydroxide: (Cation conc. entered: 28 mg/kg, converted to compound conc.:44.226 mg/kg or 0.00442%)
pH: (Whole conc. entered as: 7.5 pH, converted to conc.:7.5 pH or 7.5 pH)
phenanthrene: (Whole conc. entered as: 2.6 mg/kg or 0.00026%)
pyrene: (Whole conc. entered as: 2.9 mg/kg or 0.00029%)
selenium compounds (with the exception of cadmium sulfoselenide and sodium selenite): (Cation conc. entered: <0.2
mg/kg, converted to compound conc.:<0.3 mg/kg or <0.00003%) IGNORED Because: "<LOD"
tetrachloroethene (PCE): (Whole conc. entered as: <0.001 mg/kg or <0.0000001%) IGNORED Because: "<LOD"
tetrachloromethane (carbon tetrachloride): (Whole conc. entered as: <0.001 mg/kg or <0.0000001%) IGNORED
Because: "<LOD"
toluene: (Whole conc. entered as: <0.001 mg/kg or <0.0000001%) IGNORED Because: "<LOD"
TPH (C6 to C40) petroleum group: (Whole conc. entered as: 10000 mg/kg or 1%)
trichloroethene (TCE): (Whole conc. entered as: <0.001 mg/kg or <0.0000001%) IGNORED Because: "<LOD"
vinyl chloride: (Whole conc. entered as: <0.001 mg/kg or <0.0000001%) IGNORED Because: "<LOD"
xylene: (Whole conc. entered as: <0.001 mg/kg or <0.0000001%) IGNORED Because: "<LOD"
zinc sulphate: (Cation conc. entered: 190 mg/kg, converted to compound conc.:469.166 mg/kg or 0.0469%)
```

## Notes utilised in assessment

## C14: Step 5

"identify whether any individual ecotoxic substance is present at or above a cut-off value ...", used on:

```
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "acenaphthene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "anthracene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "arsenic trioxide"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "benzo[a]anthracene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "benzo[a]pyrene; benzo[def]chrysene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "benzo[b]fluoranthene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "benzo[ghi]perylene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "benzo[k]fluoranthene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "chromium(III) oxide"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "chrysene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "copper (I) oxide"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "dibenz[a,h]anthracene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "fluoranthene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "fluorene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "lead compounds (with the exception of
those listed separately in this Annex)"
```





Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "mercury dichloride" Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "naphthalene" Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "nickel dihydroxide" Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "phenanthrene" Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "pyrene" Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "zinc sulphate" Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "cadmium sulfide"

#### **Determinand notes**

## Note 1, used on:

determinand: "cadmium sulfide"

determinand: "lead compounds (with the exception of those listed separately in this Annex)"

### Note A, used on:

determinand: "lead compounds (with the exception of those listed separately in this Annex)"

### WM3: Unknown oil, used on:

determinand: "TPH (C6 to C40) petroleum group"

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Classification of sample: DS107a[2]

Non Hazardous Waste Classified as 17 05 04 in the List of Waste

Sample details

Sample Name: DS107a[2]

Sample Depth:

2.3 m

(no correction)

Moisture content: 17%

LoW Code:

Chapter: 17: Construction and Demolition Wastes (including

excavated soil from contaminated sites)

Entry: 17 05 04 (Soil and stones other than those mentioned in

17 05 03)

**Hazard properties** 

None identified

**Determinands** (Moisture content: 17%, no correction)

TPH (C6 to C40) petroleum group: (Whole conc. entered as: <10 mg/kg or <0.001%) IGNORED Because: "<LOD"

Notes utilised in assessment





**Non Hazardous Waste** Classified as 17 05 04 in the List of Waste

### Sample details

Sample Name:

**DS111** 

Sample Depth:

0.08 m

Moisture content: 1.3%

(no correction)

LoW Code:

Entry:

Chapter:

17: Construction and Demolition Wastes (including

excavated soil from contaminated sites)

17 05 04 (Soil and stones other than those mentioned in

17 05 03)

## **Hazard properties**

None identified

## **Determinands** (Moisture content: 1.3%, no correction)

acenaphthene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" acenaphthylene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" anthracene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" arsenic trioxide: (Cation conc. entered: 8.6 mg/kg, converted to compound conc.:11.355 mg/kg or 0.00114%) benzene: (Whole conc. entered as: <0.001 mg/kg or <0.0000001%) IGNORED Because: "<LOD" benzo[a]anthracene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" benzo[a]pyrene; benzo[def]chrysene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" benzo[b]fluoranthene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" benzo[ghi]perylene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" benzo[k]fluoranthene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" boron tribromide/trichloride/trifluoride (combined): (Cation conc. entered: <0.4 mg/kg, converted to compound conc.:<5.372 mg/kg or <0.000537%) IGNORED Because: "<LOD"

cadmium sulfide: (Cation conc. entered: <0.1 mg/kg, converted to compound conc.:<0.129 mg/kg or <0.0000129%, Note 1 conc.: <0.00001%) IGNORED Because: "<LOD"

chromium(III) oxide: (Cation conc. entered: 11 mg/kg, converted to compound conc.:16.077 mg/kg or 0.00161%) chromium(VI) oxide: (Cation conc. entered: <0.5 mg/kg, converted to compound conc.:<0.962 mg/kg or <0.0000962%) IGNORED Because: "<LOD"

chrysene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" copper (I) oxide: (Cation conc. entered: 20 mg/kg, converted to compound conc.:22.518 mg/kg or 0.00225%)

cyanides (with the exception of complex cyanides): (Cation conc. entered: <0.5 mg/kg, converted to compound conc.:<0.5 mg/kg or <0.00005%) IGNORED Because: "<LOD"

dibenz[a,h]anthracene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" ethylbenzene: (Whole conc. entered as: <0.001 mg/kg or <0.0000001%) IGNORED Because: "<LOD"

fluoranthene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

fluorene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

indeno[123-cd]pyrene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

lead compounds (with the exception of those listed separately in this Annex): (Cation conc. entered: 4.9 mg/kg,

converted to compound conc.:7.399 mg/kg or 0.00074%, Note 1 conc.: 0.00049%)

mercury dichloride: (Cation conc. entered: <0.1 mg/kg, converted to compound conc.:<0.135 mg/kg or <0.0000135%) IGNORED Because: "<LOD"

naphthalene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

nickel dihydroxide: (Cation conc. entered: 13 mg/kg, converted to compound conc.:20.533 mg/kg or 0.00205%)

pH: (Whole conc. entered as: 8.3 pH, converted to conc.:8.3 pH or 8.3 pH)

phenanthrene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

pyrene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"





toluene: (Whole conc. entered as: <0.001 mg/kg or <0.0000001%) IGNORED Because: "<LOD" trichloroethene (TCE): (Whole conc. entered as: <0.001 mg/kg or <0.0000001%) IGNORED Because: "<LOD" vinyl chloride: (Whole conc. entered as: <0.001 mg/kg or <0.0000001%) IGNORED Because: "<LOD" xylene: (Whole conc. entered as: <0.001 mg/kg or <0.0000001%) IGNORED Because: "<LOD" zinc sulphate: (Cation conc. entered: 39 mg/kg, converted to compound conc.:96.303 mg/kg or 0.00963%)

### Notes utilised in assessment

## C14: Step 5

"identify whether any individual ecotoxic substance is present at or above a cut-off value ...", used on:

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "arsenic trioxide"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "chromium(III) oxide"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "copper (I) oxide"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "lead compounds (with the exception of those listed separately in this Annex)"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "nickel dihydroxide" Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "zinc sulphate"

#### **Determinand notes**

### Note 1, used on:

determinand: "lead compounds (with the exception of those listed separately in this Annex)"

### Note A, used on:

determinand: "lead compounds (with the exception of those listed separately in this Annex)"





Non Hazardous Waste Classified as 17 05 04 in the List of Waste

Sample details

Sample Name: **D\$111[1]** Sample Depth:

1.3 m

Moisture content: **14%** (no correction)

LoW Code:

Chapter: 17: Construction and Demolition Wastes (including

excavated soil from contaminated sites)

Entry: 17 05 04 (Soil and stones other than those mentioned in

17 05 03)

**Hazard properties** 

None identified

Determinands (Moisture content: 14%, no correction)

phenol: (Whole conc. entered as: <0.5 mg/kg or <0.00005%) IGNORED Because: "<LOD"

Notes utilised in assessment





Non Hazardous Waste Classified as 17 05 04 in the List of Waste

Sample details

Sample Name:

**DS109** Sample Depth:

0.1 m

Moisture content: 8.1%

(no correction)

LoW Code:

Entry:

Chapter: 17: Construction and Demolition Wastes (including

excavated soil from contaminated sites)

17 05 04 (Soil and stones other than those mentioned in

17 05 03)

## **Hazard properties**

None identified

## **Determinands** (Moisture content: 8.1%, no correction)

acenaphthene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" acenaphthylene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" anthracene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" arsenic trioxide: (Cation conc. entered: 42 mg/kg, converted to compound conc.:55.454 mg/kg or 0.00555%) benzene: (Whole conc. entered as: <0.001 mg/kg or <0.0000001%) IGNORED Because: "<LOD" benzo[a]anthracene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" benzo[a]pyrene; benzo[def]chrysene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" benzo[b]fluoranthene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" benzo[ghi]perylene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" benzo[k]fluoranthene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" boron tribromide/trichloride/trifluoride (combined): (Cation conc. entered: <0.4 mg/kg, converted to compound conc.:<5.372 mg/kg or <0.000537%) IGNORED Because: "<LOD"

cadmium sulfide: (Cation conc. entered: 0.29 mg/kg, converted to compound conc.:0.373 mg/kg or 0.0000373%, Note 1 conc.: 0.000029%)

chromium(III) oxide: (Cation conc. entered: 11 mg/kg, converted to compound conc.:16.077 mg/kg or 0.00161%) chromium(VI) oxide: (Cation conc. entered: <0.5 mg/kg, converted to compound conc.:<0.962 mg/kg or <0.0000962%) IGNORED Because: "<LOD"

chrysene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" copper (I) oxide: (Cation conc. entered: 1.5 mg/kg, converted to compound conc.:1.689 mg/kg or 0.000169%)

cyanides (with the exception of complex cyanides): (Cation conc. entered: <0.5 mg/kg, converted to compound

conc.:<0.5 mg/kg or <0.00005%) IGNORED Because: "<LOD"

dibenz[a,h]anthracene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

ethylbenzene: (Whole conc. entered as: <0.001 mg/kg or <0.0000001%) IGNORED Because: "<LOD"

fluoranthene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

fluorene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

indeno[123-cd]pyrene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

lead compounds (with the exception of those listed separately in this Annex): (Cation conc. entered: 1.1 mg/kg,

converted to compound conc.:1.661 mg/kg or 0.000166%, Note 1 conc.: 0.00011%)

mercury dichloride: (Cation conc. entered: <0.1 mg/kg, converted to compound conc.:<0.135 mg/kg or <0.0000135%) IGNORED Because: "<LOD"

naphthalene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" nickel dihydroxide: (Cation conc. entered: 4 mg/kg, converted to compound conc.:6.318 mg/kg or 0.000632%) pH: (Whole conc. entered as: 8.1 pH, converted to conc.:8.1 pH or 8.1 pH)

phenanthrene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

pyrene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"





toluene: (Whole conc. entered as: <0.001 mg/kg or <0.0000001%) IGNORED Because: "<LOD" TPH (C6 to C40) petroleum group: (Whole conc. entered as: <10 mg/kg or <0.001%) IGNORED Because: "<LOD" trichloroethene (TCE): (Whole conc. entered as: <0.001 mg/kg or <0.0000001%) IGNORED Because: "<LOD" vinyl chloride: (Whole conc. entered as: <0.001 mg/kg or <0.0000001%) IGNORED Because: "<LOD" xylene: (Whole conc. entered as: <0.001 mg/kg or <0.0000001%) IGNORED Because: "<LOD" zinc sulphate: (Cation conc. entered: 13 mg/kg, converted to compound conc.:32.101 mg/kg or 0.00321%)

#### Notes utilised in assessment

#### C14: Step 5

"identify whether any individual ecotoxic substance is present at or above a cut-off value ...", used on:

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "arsenic trioxide" Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "chromium(III) oxide" Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "copper (I) oxide"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "lead compounds (with the exception of those listed separately in this Annex)"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "nickel dihydroxide" Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "zinc sulphate" Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "cadmium sulfide"

#### **Determinand notes**

# Note 1 , used on:

determinand: "cadmium sulfide"

determinand: "lead compounds (with the exception of those listed separately in this Annex)"

## Note A, used on:

determinand: "lead compounds (with the exception of those listed separately in this Annex)"

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Non Hazardous Waste Classified as 17 05 04 in the List of Waste

Sample details

Sample Name: **DS109[1]** 

Sample Depth:

2.2 m

Moisture content: **16%** (no correction)

LoW Code:

Chapter: 17: Construction and Demolition Wastes (including

excavated soil from contaminated sites)

Entry: 17 05 04 (Soil and stones other than those mentioned in

17 05 03)

## **Hazard properties**

None identified

## **Determinands** (Moisture content: 16%, no correction)

acenaphthene: (Whole conc. entered as: 0.18 mg/kg or 0.000018%)

acenaphthylene: (Whole conc. entered as: 0.19 mg/kg or 0.000019%)

anthracene: (Whole conc. entered as: 0.22 mg/kg or 0.000022%)

arsenic trioxide: (Cation conc. entered: 32 mg/kg, converted to compound conc.:42.25 mg/kg or 0.00423%)

benzene: (Whole conc. entered as: <0.001 mg/kg or <0.0000001%) IGNORED Because: "<LOD"

benzo[a]anthracene: (Whole conc. entered as: 0.8 mg/kg or 0.00008%)

benzo[a]pyrene; benzo[def]chrysene: (Whole conc. entered as: 0.82 mg/kg or 0.000082%)

benzo[b]fluoranthene: (Whole conc. entered as: 0.15 mg/kg or 0.000015%)

benzo[ghi]perylene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

benzo[k]fluoranthene: (Whole conc. entered as: 1.2 mg/kg or 0.00012%)

boron tribromide/trichloride/trifluoride (combined): (Cation conc. entered: 0.81 mg/kg, converted to compound

conc.:10.878 mg/kg or 0.00109%)

cadmium sulfide: (Cation conc. entered: 0.2 mg/kg, converted to compound conc.:0.257 mg/kg or 0.0000257%, Note 1

conc.: 0.00002%)

chromium(III) oxide: (Cation conc. entered: 86 mg/kg, converted to compound conc.:125.694 mg/kg or 0.0126%)

chromium(VI) oxide: (Cation conc. entered: <0.5 mg/kg, converted to compound conc.:<0.962 mg/kg or <0.0000962%) IGNORED Because: "<LOD"

chrysene: (Whole conc. entered as: 1.4 mg/kg or 0.00014%)

copper (I) oxide: (Cation conc. entered: 44 mg/kg, converted to compound conc.:49.539 mg/kg or 0.00495%)

cyanides (with the exception of complex cyanides): (Cation conc. entered: <0.5 mg/kg, converted to compound conc.:<0.5 mg/kg or <0.00005%) IGNORED Because: "<LOD"

dibenz[a,h]anthracene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

ethylbenzene: (Whole conc. entered as: <0.001 mg/kg or <0.0000001%) IGNORED Because: "<LOD"

fluoranthene: (Whole conc. entered as: 3.5 mg/kg or 0.00035%)

fluorene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

indeno[123-cd]pyrene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

lead compounds (with the exception of those listed separately in this Annex): (Cation conc. entered: 17 mg/kg, converted to compound conc.:25.67 mg/kg or 0.00257%, Note 1 conc.: 0.0017%)

mercury dichloride: (Cation conc. entered: <0.1 mg/kg, converted to compound conc.:<0.135 mg/kg or <0.0000135%) IGNORED Because: "<LOD"

naphthalene: (Whole conc. entered as: 0.71 mg/kg or 0.000071%)

nickel dihydroxide: (Cation conc. entered: 38 mg/kg, converted to compound conc.:60.021 mg/kg or 0.006%)

pH: (Whole conc. entered as: 10 pH, converted to conc.:10 pH or 10 pH)

phenanthrene: (Whole conc. entered as: 1.9 mg/kg or 0.00019%)

pyrene: (Whole conc. entered as: 1.4 mg/kg or 0.00014%)





toluene: (Whole conc. entered as: <0.001 mg/kg or <0.0000001%) IGNORED Because: "<LOD" trichloroethene (TCE): (Whole conc. entered as: <0.001 mg/kg or <0.0000001%) IGNORED Because: "<LOD" vinyl chloride: (Whole conc. entered as: <0.001 mg/kg or <0.0000001%) IGNORED Because: "<LOD" xylene: (Whole conc. entered as: <0.001 mg/kg or <0.0000001%) IGNORED Because: "<LOD" zinc sulphate: (Cation conc. entered: 120 mg/kg, converted to compound conc.:296.316 mg/kg or 0.0296%)

#### Notes utilised in assessment

#### C14: Step 5

"identify whether any individual ecotoxic substance is present at or above a cut-off value ...", used on:

```
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "acenaphthene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "anthracene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "arsenic trioxide"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "benzo[a]anthracene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "benzo[a]pyrene; benzo[def]chrysene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "benzo[b]fluoranthene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "benzo[k]fluoranthene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "chromium(III) oxide"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "chrysene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "copper (I) oxide"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "fluoranthene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "lead compounds (with the exception of
those listed separately in this Annex)"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "naphthalene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "nickel dihydroxide"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "phenanthrene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "pyrene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "zinc sulphate"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "cadmium sulfide"
```

#### **Determinand notes**

## Note 1, used on:

determinand: "cadmium sulfide"

determinand: "lead compounds (with the exception of those listed separately in this Annex)"

#### Note A, used on:

determinand: "lead compounds (with the exception of those listed separately in this Annex)"





Non Hazardous Waste Classified as 17 05 04 in the List of Waste

## Sample details

Sample Name:

**DS110**Sample Depth:

1.6 m

Moisture content: 15%

(no correction)

LoW Code:

Entry:

Chapter: 17: Construction and Demolition Wastes (including

excavated soil from contaminated sites)

17 05 04 (Soil and stones other than those mentioned in

17 05 03)

## **Hazard properties**

None identified

### **Determinands** (Moisture content: 15%, no correction)

acenaphthene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" acenaphthylene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" anthracene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" arsenic trioxide: (Cation conc. entered: 39 mg/kg, converted to compound conc.:51.493 mg/kg or 0.00515%) benzene: (Whole conc. entered as: <0.001 mg/kg or <0.0000001%) IGNORED Because: "<LOD" benzo[a]anthracene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" benzo[a]pyrene; benzo[def]chrysene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" benzo[b]fluoranthene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" benzo[ghi]perylene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" benzo[k]fluoranthene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" benzo[k]fluoranthene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" boron tribromide/trichloride/trifluoride (combined): (Cation conc. entered: 0.43 mg/kg, converted to compound conc.:5.775 mg/kg or 0.000577%)

cadmium sulfide: (Cation conc. entered: <0.1 mg/kg, converted to compound conc.:<0.129 mg/kg or <0.0000129%, Note 1 conc.: <0.00001%) IGNORED Because: "<LOD"

chromium(III) oxide: (Cation conc. entered: 25 mg/kg, converted to compound conc.:36.539 mg/kg or 0.00365%) chromium(VI) oxide: (Cation conc. entered: <0.5 mg/kg, converted to compound conc.:<0.962 mg/kg or <0.0000962%) IGNORED Because: "<LOD"

chrysene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

copper (I) oxide: (Cation conc. entered: 15 mg/kg, converted to compound conc.:16.888 mg/kg or 0.00169%) cyanides (with the exception of complex cyanides): (Cation conc. entered: <0.5 mg/kg, converted to compound conc.:<0.5 mg/kg or <0.00005%) IGNORED Because: "<LOD"

dibenz[a,h]anthracene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

ethylbenzene: (Whole conc. entered as: <0.001 mg/kg or <0.0000001%) IGNORED Because: "<LOD" fluoranthene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

fluorene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

indeno[123-cd]pyrene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

lead compounds (with the exception of those listed separately in this Annex): (Cation conc. entered: 8.8 mg/kg,

converted to compound conc.:13.288 mg/kg or 0.00133%, Note 1 conc.: 0.00088%)

mercury dichloride: (Cation conc. entered: <0.1 mg/kg, converted to compound conc.:<0.135 mg/kg or <0.0000135%) IGNORED Because: "<LOD"

naphthalene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

nickel dihydroxide: (Cation conc. entered: 26 mg/kg, converted to compound conc.:41.067 mg/kg or 0.00411%)

pH: (Whole conc. entered as: 8.1 pH, converted to conc.:8.1 pH or 8.1 pH)

phenanthrene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

pyrene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"





toluene: (Whole conc. entered as: <0.001 mg/kg or <0.0000001%) IGNORED Because: "<LOD" trichloroethene (TCE): (Whole conc. entered as: <0.001 mg/kg or <0.0000001%) IGNORED Because: "<LOD" vinvl chloride: (Whole conc. entered as: <0.001 mg/kg or <0.0000001%) IGNORED Because: "<LOD" xylene: (Whole conc. entered as: <0.001 mg/kg or <0.0000001%) IGNORED Because: "<LOD" zinc sulphate: (Cation conc. entered: 53 mg/kg, converted to compound conc.:130.873 mg/kg or 0.0131%)

### Notes utilised in assessment

## C14: Step 5

"identify whether any individual ecotoxic substance is present at or above a cut-off value ...", used on:

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "arsenic trioxide" Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "chromium(III) oxide" Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "copper (I) oxide"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "lead compounds (with the exception of

those listed separately in this Annex)"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "nickel dihydroxide" Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "zinc sulphate"

#### **Determinand notes**

# Note 1, used on:

determinand: "lead compounds (with the exception of those listed separately in this Annex)"

## Note A, used on:

determinand: "lead compounds (with the exception of those listed separately in this Annex)"

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Non Hazardous Waste Classified as 17 05 04 in the List of Waste

Sample details

Sample Name: DS110[1]

Sample Depth:

1.8 m

Moisture content: 13%

(no correction)

LoW Code:

Chapter: 17: Construction and Demolition Wastes (including

excavated soil from contaminated sites)

Entry: 17 05 04 (Soil and stones other than those mentioned in

17 05 03)

**Hazard properties** 

None identified

**Determinands** (Moisture content: 13%, no correction)

phenol: (Whole conc. entered as: <0.5 mg/kg or <0.00005%) IGNORED Because: "<LOD"

Notes utilised in assessment





**Non Hazardous Waste** Classified as 17 05 04 in the List of Waste

Sample details

Sample Name:

**DS112** Sample Depth:

0.4 m

Moisture content: 6.8%

(no correction)

LoW Code:

Entry:

Chapter: 17: Construction and Demolition Wastes (including

excavated soil from contaminated sites)

17 05 04 (Soil and stones other than those mentioned in

17 05 03)

## **Hazard properties**

None identified

## **Determinands** (Moisture content: 6.8%, no correction)

acenaphthene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" acenaphthylene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" anthracene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" arsenic trioxide: (Cation conc. entered: 32 mg/kg, converted to compound conc.:42.25 mg/kg or 0.00423%) benzene: (Whole conc. entered as: <0.001 mg/kg or <0.0000001%) IGNORED Because: "<LOD" benzo[a]anthracene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" benzo[a]pyrene; benzo[def]chrysene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" benzo[b]fluoranthene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" benzo[ghi]perylene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" benzo[k]fluoranthene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" boron tribromide/trichloride/trifluoride (combined): (Cation conc. entered: <0.4 mg/kg, converted to compound conc.:<5.372 mg/kg or <0.000537%) IGNORED Because: "<LOD"

cadmium sulfide: (Cation conc. entered: 0.1 mg/kg, converted to compound conc.:0.129 mg/kg or 0.0000129%, Note 1 conc.: 0.00001%)

chromium(III) oxide: (Cation conc. entered: 8 mg/kg, converted to compound conc.:11.692 mg/kg or 0.00117%) chromium(VI) oxide: (Cation conc. entered: <0.5 mg/kg, converted to compound conc.:<0.962 mg/kg or <0.0000962%) IGNORED Because: "<LOD"

chrysene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" copper (I) oxide: (Cation conc. entered: 1.2 mg/kg, converted to compound conc.:1.351 mg/kg or 0.000135%) cyanides (with the exception of complex cyanides): (Cation conc. entered: <0.5 mg/kg, converted to compound

conc.:<0.5 mg/kg or <0.00005%) IGNORED Because: "<LOD"

dibenz[a,h]anthracene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" ethylbenzene: (Whole conc. entered as: <0.001 mg/kg or <0.0000001%) IGNORED Because: "<LOD"

fluoranthene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

fluorene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

indeno[123-cd]pyrene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

lead compounds (with the exception of those listed separately in this Annex): (Cation conc. entered: 0.99 mg/kg,

converted to compound conc.:1.495 mg/kg or 0.000149%, Note 1 conc.: 0.000099%)

mercury dichloride: (Cation conc. entered: <0.1 mg/kg, converted to compound conc.:<0.135 mg/kg or <0.0000135%) IGNORED Because: "<LOD"

naphthalene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

nickel dihydroxide: (Cation conc. entered: 3.4 mg/kg, converted to compound conc.:5.37 mg/kg or 0.000537%)

pH: (Whole conc. entered as: 8.2 pH, converted to conc.:8.2 pH or 8.2 pH)

phenanthrene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

pyrene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"





toluene: (Whole conc. entered as: <0.001 mg/kg or <0.0000001%) IGNORED Because: "<LOD" trichloroethene (TCE): (Whole conc. entered as: <0.001 mg/kg or <0.0000001%) IGNORED Because: "<LOD" vinyl chloride: (Whole conc. entered as: <0.001 mg/kg or <0.0000001%) IGNORED Because: "<LOD" xylene: (Whole conc. entered as: <0.001 mg/kg or <0.0000001%) IGNORED Because: "<LOD" zinc sulphate: (Cation conc. entered: 11 mg/kg, converted to compound conc.:27.162 mg/kg or 0.00272%)

#### Notes utilised in assessment

#### C14: Step 5

"identify whether any individual ecotoxic substance is present at or above a cut-off value ...", used on:

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "arsenic trioxide" Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "chromium(III) oxide" Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "copper (I) oxide"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "lead compounds (with the exception of those listed separately in this Annex)"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "nickel dihydroxide" Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "zinc sulphate" Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "cadmium sulfide"

#### **Determinand notes**

## Note 1, used on:

determinand: "cadmium sulfide"

determinand: "lead compounds (with the exception of those listed separately in this Annex)"

#### Note A, used on:

determinand: "lead compounds (with the exception of those listed separately in this Annex)"

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**Non Hazardous Waste** Classified as 17 05 04

in the List of Waste

## Sample details

Sample Name:

**DS107** 

Sample Depth:

0.2 m

Moisture content: 8.2%

(no correction)

LoW Code:

Entry:

Chapter: 17: Construction and Demolition Wastes (including

excavated soil from contaminated sites)

17 05 04 (Soil and stones other than those mentioned in

17 05 03)

## **Hazard properties**

None identified

## **Determinands** (Moisture content: 8.2%, no correction)

acenaphthene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" acenaphthylene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" anthracene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" arsenic trioxide: (Cation conc. entered: 28 mg/kg, converted to compound conc.:36.969 mg/kg or 0.0037%) benzene: (Whole conc. entered as: <0.001 mg/kg or <0.0000001%) IGNORED Because: "<LOD" benzo[a]anthracene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" benzo[a]pyrene; benzo[def]chrysene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" benzo[b]fluoranthene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" benzo[ghi]perylene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" benzo[k]fluoranthene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" boron tribromide/trichloride/trifluoride (combined): (Cation conc. entered: <0.4 mg/kg, converted to compound conc.:<5.372 mg/kg or <0.000537%) IGNORED Because: "<LOD"

cadmium sulfide: (Cation conc. entered: 0.15 mg/kg, converted to compound conc.:0.193 mg/kg or 0.0000193%, Note 1 conc.: 0.000015%)

chromium(III) oxide: (Cation conc. entered: 7.8 mg/kg, converted to compound conc.:11.4 mg/kg or 0.00114%) chromium(VI) oxide: (Cation conc. entered: <0.5 mg/kg, converted to compound conc.:<0.962 mg/kg or <0.0000962%) IGNORED Because: "<LOD"

chrysene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" copper (I) oxide: (Cation conc. entered: 1.3 mg/kg, converted to compound conc.:1.464 mg/kg or 0.000146%) cyanides (with the exception of complex cyanides): (Cation conc. entered: <0.5 mg/kg, converted to compound conc.:<0.5 mg/kg or <0.00005%) IGNORED Because: "<LOD"

dibenz[a,h]anthracene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" ethylbenzene: (Whole conc. entered as: <0.001 mg/kg or <0.0000001%) IGNORED Because: "<LOD" fluoranthene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" fluorene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

indeno[123-cd]pyrene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

lead compounds (with the exception of those listed separately in this Annex): (Cation conc. entered: 1.1 mg/kg, converted to compound conc.:1.661 mg/kg or 0.000166%, Note 1 conc.: 0.00011%)

mercury dichloride: (Cation conc. entered: <0.1 mg/kg, converted to compound conc.:<0.135 mg/kg or <0.0000135%) IGNORED Because: "<LOD"

naphthalene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" nickel dihydroxide: (Cation conc. entered: 3.5 mg/kg, converted to compound conc.:5.528 mg/kg or 0.000553%) pH: (Whole conc. entered as: 8 pH, converted to conc.:8 pH or 8 pH) phenanthrene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

pyrene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"





toluene: (Whole conc. entered as: <0.001 mg/kg or <0.0000001%) IGNORED Because: "<LOD" trichloroethene (TCE): (Whole conc. entered as: <0.001 mg/kg or <0.0000001%) IGNORED Because: "<LOD" vinyl chloride: (Whole conc. entered as: <0.001 mg/kg or <0.0000001%) IGNORED Because: "<LOD" xylene: (Whole conc. entered as: <0.001 mg/kg or <0.0000001%) IGNORED Because: "<LOD" zinc sulphate: (Cation conc. entered: 11 mg/kg, converted to compound conc.:27.162 mg/kg or 0.00272%)

### Notes utilised in assessment

#### C14: Step 5

"identify whether any individual ecotoxic substance is present at or above a cut-off value ...", used on:

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "arsenic trioxide"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "chromium(III) oxide"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "copper (I) oxide"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "lead compounds (with the exception of those listed separately in this Annex)"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "nickel dihydroxide"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "zinc sulphate"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "cadmium sulfide"

#### Note 1, used on:

Test: "HP 5 on STOT SE 1; H370, STOT RE 1; H372" for determinand: "cadmium sulfide"

Test: "HP 5 on STOT SE 2; H371, STOT RE 2; H373" for determinand: "cadmium sulfide"

Test: "HP 6 on Acute Tox. 4; H302" for determinand: "cadmium sulfide"

Test: "HP 6 on Acute Tox. 4; H332" for determinand: "lead compounds (with the exception of those listed separately in this Annex)"

Test: "HP 7 on Carc. 1A; H350, Carc. 1A; H350i, Carc. 1B; H350, Carc. 1B; H350i" for determinand: "cadmium sulfide" Test: "HP 7 on Carc. 2; H351" for determinand: "lead compounds (with the exception of those listed separately in this Annex)"

Test: "HP 10 on Repr. 1A; H360, Repr. 1A; H360F, Repr. 1A; H360D, Repr. 1A; H360FD, Repr. 1A; H360Fd, Repr. 1A; H360Df, Repr. 1B; H360, Repr. 1B; H360Fd, Repr. 1B; H360Fd, Repr. 1B; H360Df" for determinand: "lead compounds (with the exception of those listed separately in this Annex)"

Test: "HP 10 on Repr. 2; H361, Repr. 2; H361f, Repr. 2; H361d, Repr. 2; H361fd" for determinand: "lead compounds (with the exception of those listed separately in this Annex)"

Test: "HP 11 on Muta. 2; H341" for determinand: "cadmium sulfide"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "lead compounds (with the exception of those listed separately in this Annex)"

### **Determinand notes**

#### Note 1, used on:

determinand: "cadmium sulfide"

determinand: "lead compounds (with the exception of those listed separately in this Annex)"

#### Note A, used on:

determinand: "lead compounds (with the exception of those listed separately in this Annex)"





Non Hazardous Waste Classified as 17 05 04 in the List of Waste

Sample details

Sample Name: DS107[1] Sample Depth:

1.3 m

Moisture content: 14%

(no correction)

LoW Code:

Chapter: 17: Construction and Demolition Wastes (including

excavated soil from contaminated sites)

Entry: 17 05 04 (Soil and stones other than those mentioned in

17 05 03)

**Hazard properties** 

None identified

Determinands (Moisture content: 14%, no correction)

phenol: (Whole conc. entered as: <0.5 mg/kg or <0.00005%) IGNORED Because: "<LOD"

Notes utilised in assessment





Non Hazardous Waste Classified as 17 05 04 in the List of Waste

Sample details

Sample Name:

DS101 Sample Depth:

0.1 m

Moisture content: 7.6%

(no correction)

LoW Code:

Entry:

Chapter: 17: Construction and Demolition Wastes (including

excavated soil from contaminated sites)

17 05 04 (Soil and stones other than those mentioned in

17 05 03)

**Hazard properties** 

None identified

**Determinands** (Moisture content: 7.6%, no correction)

phenol: (Whole conc. entered as: <0.5 mg/kg or <0.00005%) IGNORED Because: "<LOD"

Notes utilised in assessment





Non Hazardous Waste Classified as 17 05 04 in the List of Waste

### Sample details

Sample Name: LoW Code:

**DS101[1]** Chapter: 17: Construction and Demolition Wastes (including

Sample Depth: excavated soil from contaminated sites)

**0.5 m** Entry: 17 05 04 (Soil and stones other than those mentioned in

Moisture content: **16%** 17 05 03) (no correction)

## **Hazard properties**

None identified

## **Determinands** (Moisture content: 16%, no correction)

acenaphthene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" acenaphthylene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

anthracene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

arsenic trioxide: (Cation conc. entered: 31 mg/kg, converted to compound conc.:40.93 mg/kg or 0.00409%)

benzene: (Whole conc. entered as: <0.001 mg/kg or <0.0000001%) IGNORED Because: "<LOD" benzo[a]anthracene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

benzo[a]pyrene; benzo[def]chrysene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

benzo[b]fluoranthene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

benzo[ghi]perylene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

benzo[k]fluoranthene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

boron tribromide/trichloride/trifluoride (combined): (Cation conc. entered: 0.55 mg/kg, converted to compound conc.:7.387 mg/kg or 0.000739%)

cadmium sulfide: (Cation conc. entered: 0.14 mg/kg, converted to compound conc.:0.18 mg/kg or 0.000018%, Note 1 conc.: 0.000014%)

chromium(III) oxide: (Cation conc. entered: 46 mg/kg, converted to compound conc.:67.232 mg/kg or 0.00672%) chromium(VI) oxide: (Cation conc. entered: <0.5 mg/kg, converted to compound conc.:<0.962 mg/kg or <0.0000962%) IGNORED Because: "<LOD"

chrysene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

copper (I) oxide: (Cation conc. entered: 24 mg/kg, converted to compound conc.:27.021 mg/kg or 0.0027%)

cyanides (with the exception of complex cyanides): (Cation conc. entered: <0.5 mg/kg, converted to compound conc.:<0.5 mg/kg or <0.00005%) IGNORED Because: "<LOD"

dibenz[a,h]anthracene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

ethylbenzene: (Whole conc. entered as: <0.001 mg/kg or <0.0000001%) IGNORED Because: "<LOD"

fluoranthene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

fluorene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

indeno[123-cd]pyrene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

lead compounds (with the exception of those listed separately in this Annex): (Cation conc. entered: 14 mg/kg, converted to compound conc.:21.14 mg/kg or 0.00211%, Note 1 conc.: 0.0014%)

mercury dichloride: (Cation conc. entered: <0.1 mg/kg, converted to compound conc.:<0.135 mg/kg or <0.0000135%) IGNORED Because: "<LOD"

naphthalene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

nickel dihydroxide: (Cation conc. entered: 40 mg/kg, converted to compound conc.:63.18 mg/kg or 0.00632%)

pH: (Whole conc. entered as: 7.4 pH, converted to conc.:7.4 pH or 7.4 pH)

phenanthrene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"





toluene: (Whole conc. entered as: <0.001 mg/kg or <0.0000001%) IGNORED Because: "<LOD" trichloroethene (TCE): (Whole conc. entered as: <0.001 mg/kg or <0.0000001%) IGNORED Because: "<LOD" vinyl chloride: (Whole conc. entered as: <0.001 mg/kg or <0.0000001%) IGNORED Because: "<LOD" xylene: (Whole conc. entered as: <0.001 mg/kg or <0.0000001%) IGNORED Because: "<LOD" zinc sulphate: (Cation conc. entered: 69 mg/kg, converted to compound conc.:170.381 mg/kg or 0.017%)

#### Notes utilised in assessment

## C14: Step 5

"identify whether any individual ecotoxic substance is present at or above a cut-off value ...", used on:

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "arsenic trioxide" Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "chromium(III) oxide" Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "copper (I) oxide"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "lead compounds (with the exception of those listed separately in this Annex)"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "nickel dihydroxide" Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "zinc sulphate" Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "cadmium sulfide"

#### **Determinand notes**

### Note 1, used on:

determinand: "cadmium sulfide"

determinand: "lead compounds (with the exception of those listed separately in this Annex)"

#### Note A, used on:

determinand: "lead compounds (with the exception of those listed separately in this Annex)"

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Non Hazardous Waste Classified as 17 05 04 in the List of Waste

Sample details

Sample Name:

DS108 Sample Depth:

**0.1 m** 

Moisture content: 9.5%

(no correction)

LoW Code:

Entry:

Chapter: 17: Construction and Demolition Wastes (including

excavated soil from contaminated sites)

17 05 04 (Soil and stones other than those mentioned in

17 05 03)

**Hazard properties** 

None identified

Determinands (Moisture content: 9.5%, no correction)

phenol: (Whole conc. entered as: <0.5 mg/kg or <0.00005%) IGNORED Because: "<LOD"

Notes utilised in assessment

None





Non Hazardous Waste Classified as 17 05 04 in the List of Waste

Sample details

Sample Name: **DS108[1]** 

Sample Depth:

0.7 m

Moisture content: 15%

(no correction)

LoW Code:

Entry:

Chapter: 17: Construction and Demolition Wastes (including

excavated soil from contaminated sites)

17 05 04 (Soil and stones other than those mentioned in

17 05 03)

## **Hazard properties**

None identified

### **Determinands** (Moisture content: 15%, no correction)

acenaphthene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" acenaphthylene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" anthracene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" arsenic trioxide: (Cation conc. entered: 29 mg/kg, converted to compound conc.:38.289 mg/kg or 0.00383%) benzene: (Whole conc. entered as: <0.001 mg/kg or <0.0000001%) IGNORED Because: "<LOD" benzo[a]anthracene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" benzo[a]pyrene; benzo[def]chrysene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" benzo[b]fluoranthene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" benzo[ghi]perylene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" benzo[k]fluoranthene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" benzo[k]fluoranthene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" boron tribromide/trichloride/trifluoride (combined): (Cation conc. entered: 0.51 mg/kg, converted to compound conc.:6.849 mg/kg or 0.000685%)

cadmium sulfide: (Cation conc. entered: 0.17 mg/kg, converted to compound conc.:0.218 mg/kg or 0.0000218%, Note 1 conc.: 0.000017%)

chromium(III) oxide: (Cation conc. entered: 35 mg/kg, converted to compound conc.:51.154 mg/kg or 0.00512%) chromium(VI) oxide: (Cation conc. entered: <0.5 mg/kg, converted to compound conc.:<0.962 mg/kg or <0.0000962%) IGNORED Because: "<LOD"

chrysene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

copper (I) oxide: (Cation conc. entered: 23 mg/kg, converted to compound conc.:25.895 mg/kg or 0.00259%) cyanides (with the exception of complex cyanides): (Cation conc. entered: <0.5 mg/kg, converted to compound

conc.:<0.5 mg/kg or <0.00005%) IGNORED Because: "<LOD"

dibenz[a,h]anthracene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

ethylbenzene: (Whole conc. entered as: <0.001 mg/kg or <0.0000001%) IGNORED Because: "<LOD"

fluoranthene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

fluorene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

indeno[123-cd]pyrene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

lead compounds (with the exception of those listed separately in this Annex): (Cation conc. entered: 13 mg/kg, converted to compound conc.:19.63 mg/kg or 0.00196%, Note 1 conc.: 0.0013%)

mercury dichloride: (Cation conc. entered: <0.1 mg/kg, converted to compound conc.:<0.135 mg/kg or <0.0000135%) IGNORED Because: "<LOD"

naphthalene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

nickel dihydroxide: (Cation conc. entered: 35 mg/kg, converted to compound conc.:55.282 mg/kg or 0.00553%)

pH: (Whole conc. entered as: 7.8 pH, converted to conc.:7.8 pH or 7.8 pH)

phenanthrene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"





toluene: (Whole conc. entered as: <0.001 mg/kg or <0.0000001%) IGNORED Because: "<LOD" trichloroethene (TCE): (Whole conc. entered as: <0.001 mg/kg or <0.0000001%) IGNORED Because: "<LOD" vinyl chloride: (Whole conc. entered as: <0.001 mg/kg or <0.0000001%) IGNORED Because: "<LOD" xylene: (Whole conc. entered as: <0.001 mg/kg or <0.0000001%) IGNORED Because: "<LOD" zinc sulphate: (Cation conc. entered: 64 mg/kg, converted to compound conc.:158.035 mg/kg or 0.0158%)

#### Notes utilised in assessment

## C14: Step 5

"identify whether any individual ecotoxic substance is present at or above a cut-off value ...", used on:

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "arsenic trioxide" Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "chromium(III) oxide" Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "copper (I) oxide"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "lead compounds (with the exception of those listed separately in this Annex)"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "nickel dihydroxide" Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "zinc sulphate" Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "cadmium sulfide"

#### **Determinand notes**

### Note 1, used on:

determinand: "cadmium sulfide"

determinand: "lead compounds (with the exception of those listed separately in this Annex)"

#### Note A, used on:

determinand: "lead compounds (with the exception of those listed separately in this Annex)"

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Non Hazardous Waste Classified as 17 05 04 in the List of Waste

Sample details

Sample Name:

**DS113** Sample Depth:

0.2 m

Moisture content: 8.7%

(no correction)

LoW Code:

Entry:

Chapter: 17: Construction and Demolition Wastes (including

excavated soil from contaminated sites)

17 05 04 (Soil and stones other than those mentioned in

17 05 03)

### **Hazard properties**

None identified

### **Determinands** (Moisture content: 8.7%, no correction)

acenaphthene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" acenaphthylene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" anthracene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" arsenic trioxide: (Cation conc. entered: 36 mg/kg, converted to compound conc.:47.532 mg/kg or 0.00475%) benzene: (Whole conc. entered as: <0.001 mg/kg or <0.0000001%) IGNORED Because: "<LOD" benzo[a]anthracene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" benzo[a]pyrene; benzo[def]chrysene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" benzo[b]fluoranthene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" benzo[ghi]perylene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" benzo[k]fluoranthene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" boron tribromide/trichloride/trifluoride (combined): (Cation conc. entered: <0.4 mg/kg, converted to compound conc.:<5.372 mg/kg or <0.000537%) IGNORED Because: "<LOD"

cadmium sulfide: (Cation conc. entered: 0.25 mg/kg, converted to compound conc.:0.321 mg/kg or 0.0000321%, Note 1 conc.: 0.000025%)

chromium(III) oxide: (Cation conc. entered: 9.6 mg/kg, converted to compound conc.:14.031 mg/kg or 0.0014%) chromium(VI) oxide: (Cation conc. entered: <0.5 mg/kg, converted to compound conc.:<0.962 mg/kg or <0.0000962%) IGNORED Because: "<LOD"

chrysene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" copper (I) oxide: (Cation conc. entered: 1.1 mg/kg, converted to compound conc.:1.238 mg/kg or 0.000124%)

cyanides (with the exception of complex cyanides): (Cation conc. entered: <0.5 mg/kg, converted to compound conc.:<0.5 mg/kg or <0.00005%) IGNORED Because: "<LOD"

dibenz[a,h]anthracene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

ethylbenzene: (Whole conc. entered as: <0.001 mg/kg or <0.0000001%) IGNORED Because: "<LOD"

fluoranthene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

fluorene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

indeno[123-cd]pyrene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

lead compounds (with the exception of those listed separately in this Annex): (Cation conc. entered: 1.2 mg/kg,

converted to compound conc.:1.812 mg/kg or 0.000181%, Note 1 conc.: 0.00012%)

mercury dichloride: (Cation conc. entered: <0.1 mg/kg, converted to compound conc.:<0.135 mg/kg or <0.0000135%) IGNORED Because: "<LOD"

naphthalene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

nickel dihydroxide: (Cation conc. entered: 3.6 mg/kg, converted to compound conc.: 5.686 mg/kg or 0.000569%)

pH: (Whole conc. entered as: 8 pH, converted to conc.:8 pH or 8 pH)

phenanthrene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"





toluene: (Whole conc. entered as: <0.001 mg/kg or <0.0000001%) IGNORED Because: "<LOD" TPH (C6 to C40) petroleum group: (Whole conc. entered as: <10 mg/kg or <0.001%) IGNORED Because: "<LOD" trichloroethene (TCE): (Whole conc. entered as: <0.001 mg/kg or <0.0000001%) IGNORED Because: "<LOD" vinyl chloride: (Whole conc. entered as: <0.001 mg/kg or <0.0000001%) IGNORED Because: "<LOD" xylene: (Whole conc. entered as: <0.001 mg/kg or <0.0000001%) IGNORED Because: "<LOD" zinc sulphate: (Cation conc. entered: 11 mg/kg, converted to compound conc.:27.162 mg/kg or 0.00272%)

#### Notes utilised in assessment

#### C14: Step 5

"identify whether any individual ecotoxic substance is present at or above a cut-off value ...", used on:

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "arsenic trioxide" Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "chromium(III) oxide" Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "copper (I) oxide"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "lead compounds (with the exception of those listed separately in this Annex)"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "nickel dihydroxide" Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "zinc sulphate" Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "cadmium sulfide"

#### **Determinand notes**

# Note 1 , used on:

determinand: "cadmium sulfide"

determinand: "lead compounds (with the exception of those listed separately in this Annex)"

## Note A, used on:

determinand: "lead compounds (with the exception of those listed separately in this Annex)"

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Non Hazardous Waste Classified as 17 05 04 in the List of Waste

Sample details

Sample Name: DS113[1]

Sample Depth:

1.8 m

Moisture content: 14%

(no correction)

LoW Code:

Chapter:

17: Construction and Demolition Wastes (including

excavated soil from contaminated sites)

Entry: 17 05 04 (Soil and stones other than those mentioned in

17 05 03)

**Hazard properties** 

None identified

**Determinands** (Moisture content: 14%, no correction)

phenol: (Whole conc. entered as: <0.5 mg/kg or <0.00005%) IGNORED Because: "<LOD"

Notes utilised in assessment

None





Non Hazardous Waste
Classified as 17 05 04
in the List of Waste

Sample details

Sample Name:

**DS114**Sample Depth:

0.7 m

Moisture content: 17%

(no correction)

LoW Code:

Chapter: 17: Construction and Demolition Wastes (including

excavated soil from contaminated sites)

Entry: 17 05 04 (Soil and stones other than those mentioned in

17 05 03)

## **Hazard properties**

None identified

## **Determinands** (Moisture content: 17%, no correction)

acenaphthene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" acenaphthylene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

anthracene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

arsenic trioxide: (Cation conc. entered: 32 mg/kg, converted to compound conc.:42.25 mg/kg or 0.00423%)

benzene: (Whole conc. entered as: <0.001 mg/kg or <0.0000001%) IGNORED Because: "<LOD"

benzo[a]anthracene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

benzo[a]pyrene; benzo[def]chrysene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

benzo[b]fluoranthene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

benzo[ghi]perylene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

benzo[k]fluoranthene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

boron tribromide/trichloride/trifluoride (combined): (Cation conc. entered: 0.65 mg/kg, converted to compound conc.:8.73 mg/kg or 0.000873%)

cadmium sulfide: (Cation conc. entered: 0.13 mg/kg, converted to compound conc.:0.167 mg/kg or 0.0000167%, Note 1 conc.: 0.000013%)

chromium(III) oxide: (Cation conc. entered: 36 mg/kg, converted to compound conc.:52.616 mg/kg or 0.00526%) chromium(VI) oxide: (Cation conc. entered: <0.5 mg/kg, converted to compound conc.:<0.962 mg/kg or <0.0000962%) IGNORED Because: "<LOD"

chrysene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

copper (I) oxide: (Cation conc. entered: 24 mg/kg, converted to compound conc.:27.021 mg/kg or 0.0027%)

cyanides (with the exception of complex cyanides): (Cation conc. entered: <0.5 mg/kg, converted to compound conc.:<0.5 mg/kg or <0.00005%) IGNORED Because: "<LOD"

dibenz[a,h]anthracene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

ethylbenzene: (Whole conc. entered as: <0.001 mg/kg or <0.0000001%) IGNORED Because: "<LOD"

fluoranthene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

fluorene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

indeno[123-cd]pyrene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

lead compounds (with the exception of those listed separately in this Annex): (Cation conc. entered: 13 mg/kg, converted to compound conc.:19.63 mg/kg or 0.00196%, Note 1 conc.: 0.0013%)

mercury dichloride: (Cation conc. entered: <0.1 mg/kg, converted to compound conc.:<0.135 mg/kg or <0.0000135%) IGNORED Because: "<LOD"

naphthalene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

nickel dihydroxide: (Cation conc. entered: 38 mg/kg, converted to compound conc.:60.021 mg/kg or 0.006%)

pH: (Whole conc. entered as: 7.7 pH, converted to conc.:7.7 pH or 7.7 pH)

phenanthrene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"





toluene: (Whole conc. entered as: <0.001 mg/kg or <0.0000001%) IGNORED Because: "<LOD" trichloroethene (TCE): (Whole conc. entered as: <0.001 mg/kg or <0.0000001%) IGNORED Because: "<LOD" vinyl chloride: (Whole conc. entered as: <0.001 mg/kg or <0.0000001%) IGNORED Because: "<LOD" xylene: (Whole conc. entered as: <0.001 mg/kg or <0.0000001%) IGNORED Because: "<LOD" zinc sulphate: (Cation conc. entered: 65 mg/kg, converted to compound conc.:160.504 mg/kg or 0.0161%)

#### Notes utilised in assessment

#### C14: Step 5

"identify whether any individual ecotoxic substance is present at or above a cut-off value ...", used on:

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "arsenic trioxide" Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "chromium(III) oxide" Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "copper (I) oxide"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "lead compounds (with the exception of those listed separately in this Annex)"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "nickel dihydroxide" Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "zinc sulphate" Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "cadmium sulfide"

#### **Determinand notes**

### Note 1, used on:

determinand: "cadmium sulfide"

determinand: "lead compounds (with the exception of those listed separately in this Annex)"

#### Note A, used on:

determinand: "lead compounds (with the exception of those listed separately in this Annex)"

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**Non Hazardous Waste** Classified as 17 05 04 in the List of Waste

Sample details

Sample Name: LoW Code:

**BH108** Chapter: 17: Construction and Demolition Wastes (including Sample Depth:

excavated soil from contaminated sites)

2.5 m Entry: 17 05 04 (Soil and stones other than those mentioned in

17 05 03)

Moisture content: 15% (no correction)

## **Hazard properties**

None identified

## Determinands (Moisture content: 15%, no correction)

acenaphthene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

acenaphthylene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

anthracene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

arsenic trioxide: (Cation conc. entered: 31 mg/kg, converted to compound conc.:40.93 mg/kg or 0.00409%)

benzene: (Whole conc. entered as: <0.001 mg/kg or <0.0000001%) IGNORED Because: "<LOD"

benzo[a]anthracene: (Whole conc. entered as: 0.29 mg/kg or 0.000029%)

benzo[a]pyrene; benzo[def]chrysene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

benzo[b]fluoranthene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

benzo[ghi]perylene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

benzo[k]fluoranthene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

boron tribromide/trichloride/trifluoride (combined): (Cation conc. entered: 0.55 mg/kg, converted to compound conc.:7.387 mg/kg or 0.000739%)

cadmium sulfide: (Cation conc. entered: 0.22 mg/kg, converted to compound conc.:0.283 mg/kg or 0.0000283%, Note 1 conc.: 0.000022%)

chromium(III) oxide: (Cation conc. entered: 37 mg/kg, converted to compound conc.:54.078 mg/kg or 0.00541%)

chromium(VI) oxide: (Cation conc. entered: <0.5 mg/kg, converted to compound conc.:<0.962 mg/kg or <0.0000962%) IGNORED Because: "<LOD"

chrysene: (Whole conc. entered as: 0.47 mg/kg or 0.000047%)

copper (I) oxide: (Cation conc. entered: 23 mg/kg, converted to compound conc.:25.895 mg/kg or 0.00259%)

cyanides (with the exception of complex cyanides): (Cation conc. entered: <0.5 mg/kg, converted to compound conc.:<0.5 mg/kg or <0.00005%) IGNORED Because: "<LOD"

dibenz[a,h]anthracene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

ethylbenzene: (Whole conc. entered as: <0.001 mg/kg or <0.0000001%) IGNORED Because: "<LOD"

fluoranthene: (Whole conc. entered as: 0.59 mg/kg or 0.000059%)

fluorene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

indeno[123-cd]pyrene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

lead compounds (with the exception of those listed separately in this Annex): (Cation conc. entered: 22 mg/kg, converted to compound conc.:33.22 mg/kg or 0.00332%, Note 1 conc.: 0.0022%)

mercury dichloride: (Cation conc. entered: 0.19 mg/kg, converted to compound conc.:0.257 mg/kg or 0.0000257%)

naphthalene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

nickel dihydroxide: (Cation conc. entered: 38 mg/kg, converted to compound conc.:60.021 mg/kg or 0.006%)

pH: (Whole conc. entered as: 7.7 pH, converted to conc.:7.7 pH or 7.7 pH)

phenanthrene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

pyrene: (Whole conc. entered as: 0.54 mg/kg or 0.000054%)

selenium compounds (with the exception of cadmium sulfoselenide and sodium selenite): (Cation conc. entered: <0.2 mg/kg, converted to compound conc.:<0.3 mg/kg or <0.00003%) IGNORED Because: "<LOD"

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tetrachloroethene (PCE): (Whole conc. entered as: <0.001 mg/kg or <0.0000001%) IGNORED Because: "<LOD" tetrachloromethane (carbon tetrachloride): (Whole conc. entered as: <0.001 mg/kg or <0.0000001%) IGNORED Because: "<LOD"

toluene: (Whole conc. entered as: <0.001 mg/kg or <0.0000001%) IGNORED Because: "<LOD" TPH (C6 to C40) petroleum group: (Whole conc. entered as: <10 mg/kg or <0.001%) IGNORED Because: "<LOD" trichloroethene (TCE): (Whole conc. entered as: <0.001 mg/kg or <0.0000001%) IGNORED Because: "<LOD" vinyl chloride: (Whole conc. entered as: <0.001 mg/kg or <0.0000001%) IGNORED Because: "<LOD" xylene: (Whole conc. entered as: <0.001 mg/kg or <0.0000001%) IGNORED Because: "<LOD" zinc sulphate: (Cation conc. entered: 77 mg/kg, converted to compound conc.:190.136 mg/kg or 0.019%)

#### Notes utilised in assessment

#### C14: Step 5

"identify whether any individual ecotoxic substance is present at or above a cut-off value ...", used on:

```
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "arsenic trioxide"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "benzo[a]anthracene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "chromium(III) oxide"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "chrysene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "copper (I) oxide"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "fluoranthene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "lead compounds (with the exception of those listed separately in this Annex)"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "mercury dichloride"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "nickel dihydroxide"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "pyrene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "zinc sulphate"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "zinc sulphate"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "cadmium sulfide"
```

#### Note 1, used on:

Test: "HP 5 on STOT SE 1; H370, STOT RE 1; H372" for determinand: "cadmium sulfide" Test: "HP 5 on STOT SE 2; H371, STOT RE 2; H373" for determinand: "cadmium sulfide"

Test: "HP 6 on Acute Tox. 4; H302" for determinand: "cadmium sulfide"

Test: "HP 6 on Acute Tox. 4; H332" for determinand: "lead compounds (with the exception of those listed separately in this Annex)"

Test: "HP 7 on Carc. 1A; H350, Carc. 1A; H350i, Carc. 1B; H350, Carc. 1B; H350i" for determinand: "cadmium sulfide" Test: "HP 7 on Carc. 2; H351" for determinand: "lead compounds (with the exception of those listed separately in this Annex)"

Test: "HP 10 on Repr. 1A; H360, Repr. 1A; H360F, Repr. 1A; H360D, Repr. 1A; H360FD, Repr. 1A; H360Fd, Repr. 1A; H360Df, Repr. 1B; H360Df, Repr. 1B; H360FD, Repr. 1B; H360Fd, Repr. 1B; H360Df" for determinand: "lead compounds (with the exception of those listed separately in this Annex)"

Test: "HP 10 on Repr. 2; H361f, Repr. 2; H361f, Repr. 2; H361d, Repr. 2; H361fd" for determinand: "lead compounds (with the exception of those listed separately in this Annex)"

Test: "HP 11 on Muta. 2; H341" for determinand: "cadmium sulfide"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "lead compounds (with the exception of those listed separately in this Annex)"

#### **Determinand notes**

#### Note 1, used on:

determinand: "cadmium sulfide"

determinand: "lead compounds (with the exception of those listed separately in this Annex)"

#### Note A, used on:

determinand: "lead compounds (with the exception of those listed separately in this Annex)"

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**Non Hazardous Waste** Classified as 17 05 04 in the List of Waste

### Sample details

Sample Name:

**DS116** 

Sample Depth:

0.2 m

Moisture content: 7.9%

(no correction)

LoW Code:

Entry:

Chapter:

17: Construction and Demolition Wastes (including

excavated soil from contaminated sites)

17 05 04 (Soil and stones other than those mentioned in

17 05 03)

## **Hazard properties**

None identified

## **Determinands** (Moisture content: 7.9%, no correction)

acenaphthene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" acenaphthylene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" anthracene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" arsenic trioxide: (Cation conc. entered: 18 mg/kg, converted to compound conc.:23.766 mg/kg or 0.00238%) benzene: (Whole conc. entered as: <0.001 mg/kg or <0.0000001%) IGNORED Because: "<LOD" benzo[a]anthracene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" benzo[a]pyrene; benzo[def]chrysene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" benzo[b]fluoranthene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" benzo[ghi]perylene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" benzo[k]fluoranthene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" boron tribromide/trichloride/trifluoride (combined): (Cation conc. entered: <0.4 mg/kg, converted to compound conc.:<5.372 mg/kg or <0.000537%) IGNORED Because: "<LOD"

cadmium sulfide: (Cation conc. entered: 0.15 mg/kg, converted to compound conc.:0.193 mg/kg or 0.0000193%, Note 1 conc.: 0.000015%)

chromium(III) oxide: (Cation conc. entered: 5.2 mg/kg, converted to compound conc.:7.6 mg/kg or 0.00076%) chromium(VI) oxide: (Cation conc. entered: <0.5 mg/kg, converted to compound conc.:<0.962 mg/kg or <0.0000962%) IGNORED Because: "<LOD"

chrysene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" copper (I) oxide: (Cation conc. entered: <0.5 mg/kg, converted to compound conc.:<0.563 mg/kg or <0.0000563%) IGNORED Because: "<LOD"

cyanides (with the exception of complex cyanides): (Cation conc. entered: <0.5 mg/kg, converted to compound conc.:<0.5 mg/kg or <0.00005%) IGNORED Because: "<LOD"

dibenz[a,h]anthracene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" ethylbenzene: (Whole conc. entered as: <0.001 mg/kg or <0.0000001%) IGNORED Because: "<LOD"

fluoranthene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

fluorene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

indeno[123-cd]pyrene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

lead compounds (with the exception of those listed separately in this Annex): (Cation conc. entered: <0.5 mg/kg, converted to compound conc.:<0.755 mg/kg or <0.0000755%, Note 1 conc.: <0.00005%) IGNORED Because: "<LOD" mercury dichloride: (Cation conc. entered: <0.1 mg/kg, converted to compound conc.:<0.135 mg/kg or <0.0000135%)

IGNORED Because: "<LOD"

naphthalene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" nickel dihydroxide: (Cation conc. entered: 1.6 mg/kg, converted to compound conc.: 2.527 mg/kg or 0.000253%) pH: (Whole conc. entered as: 8.1 pH, converted to conc.:8.1 pH or 8.1 pH) phenanthrene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" pyrene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"





toluene: (Whole conc. entered as: <0.001 mg/kg or <0.0000001%) IGNORED Because: "<LOD" TPH (C6 to C40) petroleum group: (Whole conc. entered as: <10 mg/kg or <0.001%) IGNORED Because: "<LOD" trichloroethene (TCE): (Whole conc. entered as: <0.001 mg/kg or <0.0000001%) IGNORED Because: "<LOD" vinyl chloride: (Whole conc. entered as: <0.001 mg/kg or <0.0000001%) IGNORED Because: "<LOD" xylene: (Whole conc. entered as: <0.001 mg/kg or <0.0000001%) IGNORED Because: "<LOD" zinc sulphate: (Cation conc. entered: 4.1 mg/kg, converted to compound conc.:10.124 mg/kg or 0.00101%)

### Notes utilised in assessment

#### C14: Step 5

"identify whether any individual ecotoxic substance is present at or above a cut-off value ...", used on:

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "arsenic trioxide" Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "chromium(III) oxide" Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "nickel dihydroxide" Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "zinc sulphate" Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "cadmium sulfide"

#### **Determinand notes**

### Note 1, used on:

determinand: "cadmium sulfide"





Non Hazardous Waste Classified as 17 05 04 in the List of Waste

Sample details

Sample Name: **DS116[1]** 

Sample Depth:

0.3 m

Moisture content: 15%

(no correction)

LoW Code:

Entry:

Chapter: 17: Construction and Demolition Wastes (including

excavated soil from contaminated sites)

17 05 04 (Soil and stones other than those mentioned in

17 05 03)

**Hazard properties** 

None identified

Determinands (Moisture content: 15%, no correction)

phenol: (Whole conc. entered as: <0.5 mg/kg or <0.00005%) IGNORED Because: "<LOD"

Notes utilised in assessment

None





Classification of sample: BH108[1]

🔭 Potentially Hazardous Waste

Classified as 17 05 04 or 17 05 03 \* in the List of Waste

## Sample details

Sample Name:

BH108[1]

Sample Depth:

8 m

Moisture content: 20% (no correction)

LoW Code:

Entry:

Chapter: 17: Construction and Demolition Wastes (including

excavated soil from contaminated sites)

17 05 04 or 17 05 03 \* (Soil and stones other than those

mentioned in 17 05 03 or Soil and stones containing

hazardous substances)

..........

## Hazard properties (substances considered hazardous until shown otherwise)

HP 12: Release of an acute toxic gas "waste which releases acute toxic gases (Acute Tox. 1, 2 or 3) in contact with water or an acid"

Hazard Statements hit:

EUH032 "Contact with acids liberates very toxic gas"

Because of determinand:

cyanides (with the exception of complex cyanides): (conc.: 0.00023%)

### **Determinands** (Moisture content: 20%, no correction)

acenaphthene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" acenaphthylene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" anthracene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" arsenic trioxide: (Cation conc. entered: 49 mg/kg, converted to compound conc.:64.696 mg/kg or 0.00647%) benzene: (Whole conc. entered as: <0.001 mg/kg or <0.0000001%) IGNORED Because: "<LOD" benzo[a]anthracene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" benzo[a]pyrene; benzo[def]chrysene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" benzo[b]fluoranthene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" benzo[qhi]perylene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

boron tribromide/trichloride/trifluoride (combined): (Cation conc. entered: 2 mg/kg, converted to compound conc.:26.86 mg/kg or 0.00269%)

cadmium sulfide: (Cation conc. entered: 0.49 mg/kg, converted to compound conc.:0.63 mg/kg or 0.000063%, Note 1 conc.: 0.000049%)

chromium(III) oxide: (Cation conc. entered: 59 mg/kg, converted to compound conc.:86.232 mg/kg or 0.00862%) chromium(VI) oxide: (Cation conc. entered: <0.5 mg/kg, converted to compound conc.:<0.962 mg/kg or <0.0000962%) IGNORED Because: "<LOD"

chrysene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

copper (I) oxide: (Cation conc. entered: 15 mg/kg, converted to compound conc.:16.888 mg/kg or 0.00169%)

benzo[k]fluoranthene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

cyanides (with the exception of complex cyanides): (Cation conc. entered: 2.3 mg/kg, converted to compound conc.:2.3 mg/kg or 0.00023%)

dibenz[a,h]anthracene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" ethylbenzene: (Whole conc. entered as: <0.001 mg/kg or <0.000001%) IGNORED Because: "<LOD" fluoranthene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" fluorene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" indeno[123-cd]pyrene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" lead compounds (with the exception of those listed separately in this Annex): (Cation conc. entered: 220 mg/kg,

converted to compound conc.:332.2 mg/kg or 0.0332%, Note 1 conc.: 0.022%)





mercury dichloride: (Cation conc. entered: <0.1 mg/kg, converted to compound conc.:<0.135 mg/kg or <0.0000135%) IGNORED Because: "<LOD"

naphthalene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

nickel dihydroxide: (Cation conc. entered: 29 mg/kg, converted to compound conc.:45.805 mg/kg or 0.00458%)

pH: (Whole conc. entered as: 7.9 pH, converted to conc.:7.9 pH or 7.9 pH)

phenanthrene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

pyrene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

selenium compounds (with the exception of cadmium sulfoselenide and sodium selenite): (Cation conc. entered: 0.5 mg/kg, converted to compound conc.:0.75 mg/kg or 0.000075%)

tetrachloroethene (PCE): (Whole conc. entered as: <0.001 mg/kg or <0.0000001%) IGNORED Because: "<LOD" tetrachloromethane (carbon tetrachloride): (Whole conc. entered as: <0.001 mg/kg or <0.0000001%) IGNORED Because: "<LOD"

toluene: (Whole conc. entered as: <0.001 mg/kg or <0.0000001%) IGNORED Because: "<LOD" trichloroethene (TCE): (Whole conc. entered as: <0.001 mg/kg or <0.0000001%) IGNORED Because: "<LOD" vinyl chloride: (Whole conc. entered as: <0.001 mg/kg or <0.0000001%) IGNORED Because: "<LOD" xylene: (Whole conc. entered as: <0.001 mg/kg or <0.0000001%) IGNORED Because: "<LOD"

zinc sulphate: (Cation conc. entered: 830 mg/kg, converted to compound conc.:2049.516 mg/kg or 0.205%)

#### Notes utilised in assessment

### C14: Step 5

"identify whether any individual ecotoxic substance is present at or above a cut-off value ...", used on:

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "arsenic trioxide"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "chromium(III) oxide"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "copper (I) oxide"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "cyanides (with the exception of complex cyanides)"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "lead compounds (with the exception of those listed separately in this Annex)"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "nickel dihydroxide"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "selenium compounds (with the exception of cadmium sulfoselenide and sodium selenite)"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "cadmium sulfide"

### Note 1, used on:

Test: "HP 5 on STOT SE 1; H370, STOT RE 1; H372" for determinand: "cadmium sulfide"

Test: "HP 5 on STOT SE 2; H371, STOT RE 2; H373" for determinand: "cadmium sulfide"

Test: "HP 6 on Acute Tox. 4; H302" for determinand: "cadmium sulfide"

Test: "HP 6 on Acute Tox. 4; H332" for determinand: "lead compounds (with the exception of those listed separately in this Annex)"

Test: "HP 7 on Carc. 1A; H350, Carc. 1A; H350i, Carc. 1B; H350, Carc. 1B; H350i" for determinand: "cadmium sulfide" Test: "HP 7 on Carc. 2; H351" for determinand: "lead compounds (with the exception of those listed separately in this Annex)"

Test: "HP 10 on Repr. 1A; H360, Repr. 1A; H360F, Repr. 1A; H360D, Repr. 1A; H360FD, Repr. 1A; H360Fd, Repr. 1A; H360Df, Repr. 1B; H360, Repr. 1B; H360F, Repr. 1B; H360Fd, Repr. 1B; H360Df" for determinand: "lead compounds (with the exception of those listed separately in this Annex)"

Test: "HP 10 on Repr. 2; H361, Repr. 2; H361f, Repr. 2; H361d, Repr. 2; H361fd" for determinand: "lead compounds (with the exception of those listed separately in this Annex)"

Test: "HP 11 on Muta. 2; H341" for determinand: "cadmium sulfide"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "lead compounds (with the exception of those listed separately in this Annex)"

## **Determinand notes**

## Note 1, used on:

determinand: "cadmium sulfide"

determinand: "lead compounds (with the exception of those listed separately in this Annex)"

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## Note A , used on:

determinand: "cyanides (with the exception of complex cyanides)"

determinand: "lead compounds (with the exception of those listed separately in this Annex)"

determinand: "selenium compounds (with the exception of cadmium sulfoselenide and sodium selenite)"

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Non Hazardous Waste
Classified as 17 05 04

in the List of Waste

### Sample details

Sample Name:

BH110 Sample Depth:

2.5 m

Moisture content: 9.9%

(no correction)

LoW Code:

Entry:

Chapter: 17: Construction and Demolition Wastes (including

excavated soil from contaminated sites)

17 05 04 (Soil and stones other than those mentioned in

17 05 03)

## **Hazard properties**

None identified

## **Determinands** (Moisture content: 9.9%, no correction)

acenaphthene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" acenaphthylene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

anthracene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

arsenic trioxide: (Cation conc. entered: 37 mg/kg, converted to compound conc.:48.852 mg/kg or 0.00489%)

benzene: (Whole conc. entered as: <0.001 mg/kg or <0.0000001%) IGNORED Because: "<LOD"

benzo[a]anthracene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

benzo[a]pyrene; benzo[def]chrysene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

benzo[b]fluoranthene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

benzo[ghi]perylene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

benzo[k]fluoranthene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

boron tribromide/trichloride/trifluoride (combined): (Cation conc. entered: <0.4 mg/kg, converted to compound conc.:<5.372 mg/kg or <0.000537%) IGNORED Because: "<LOD"

cadmium sulfide: (Cation conc. entered: 0.11 mg/kg, converted to compound conc.:0.141 mg/kg or 0.0000141%, Note 1 conc.: 0.000011%)

chromium(III) oxide: (Cation conc. entered: 20 mg/kg, converted to compound conc.:29.231 mg/kg or 0.00292%) chromium(VI) oxide: (Cation conc. entered: <0.5 mg/kg, converted to compound conc.:<0.962 mg/kg or <0.0000962%)

IGNORED Because: "<LOD"

chrysene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

 $copper \ (I) \ oxide: (Cation \ conc. \ entered: 9.7 \ mg/kg, \ converted \ to \ compound \ conc.: 10.921 \ mg/kg \ or \ 0.00109\%)$ 

cyanides (with the exception of complex cyanides): (Cation conc. entered: <0.5 mg/kg, converted to compound conc.:<0.5 mg/kg or <0.00005%) IGNORED Because: "<LOD"

dibenz[a,h]anthracene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

ethylbenzene: (Whole conc. entered as: <0.001 mg/kg or <0.0000001%) IGNORED Because: "<LOD"

fluoranthene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

fluorene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

indeno[123-cd]pyrene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

lead compounds (with the exception of those listed separately in this Annex): (Cation conc. entered: 17 mg/kg, converted to compound conc.:25.67 mg/kg or 0.00257%, Note 1 conc.: 0.0017%)

mercury dichloride: (Cation conc. entered: <0.1 mg/kg, converted to compound conc.:<0.135 mg/kg or <0.0000135%) IGNORED Because: "<LOD"

naphthalene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

nickel dihydroxide: (Cation conc. entered: 18 mg/kg, converted to compound conc.:28.431 mg/kg or 0.00284%)

pH: (Whole conc. entered as: 7.9 pH, converted to conc.:7.9 pH or 7.9 pH)

phenanthrene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"





toluene: (Whole conc. entered as: <0.001 mg/kg or <0.0000001%) IGNORED Because: "<LOD" trichloroethene (TCE): (Whole conc. entered as: <0.001 mg/kg or <0.0000001%) IGNORED Because: "<LOD" vinyl chloride: (Whole conc. entered as: <0.001 mg/kg or <0.0000001%) IGNORED Because: "<LOD" xylene: (Whole conc. entered as: <0.001 mg/kg or <0.0000001%) IGNORED Because: "<LOD" zinc sulphate: (Cation conc. entered: 60 mg/kg, converted to compound conc.:148.158 mg/kg or 0.0148%)

#### Notes utilised in assessment

#### C14: Step 5

"identify whether any individual ecotoxic substance is present at or above a cut-off value ...", used on:

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "arsenic trioxide" Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "chromium(III) oxide" Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "copper (I) oxide"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "lead compounds (with the exception of those listed separately in this Annex)"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "nickel dihydroxide" Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "zinc sulphate" Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "cadmium sulfide"

#### **Determinand notes**

### Note 1, used on:

determinand: "cadmium sulfide"

determinand: "lead compounds (with the exception of those listed separately in this Annex)"

#### Note A, used on:

determinand: "lead compounds (with the exception of those listed separately in this Annex)"

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**Non Hazardous Waste** Classified as 17 05 04

in the List of Waste

### Sample details

Sample Name:

**DS115** 

Sample Depth:

0.05 m

Moisture content: 3.3%

(no correction)

LoW Code:

Entry:

Chapter: 17: Construction and Demolition Wastes (including

excavated soil from contaminated sites)

17 05 04 (Soil and stones other than those mentioned in

17 05 03)

## **Hazard properties**

None identified

## **Determinands** (Moisture content: 3.3%, no correction)

acenaphthene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

acenaphthylene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

anthracene: (Whole conc. entered as: 0.3 mg/kg or 0.00003%)

arsenic trioxide: (Cation conc. entered: 9.5 mg/kg, converted to compound conc.:12.543 mg/kg or 0.00125%)

benzene: (Whole conc. entered as: <0.001 mg/kg or <0.0000001%) IGNORED Because: "<LOD"

benzo[a]anthracene: (Whole conc. entered as: 0.48 mg/kg or 0.000048%)

benzo[a]pyrene; benzo[def]chrysene: (Whole conc. entered as: 0.42 mg/kg or 0.000042%)

benzo[b]fluoranthene: (Whole conc. entered as: 0.47 mg/kg or 0.000047%)

benzo[ghi]perylene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

benzo[k]fluoranthene: (Whole conc. entered as: 0.21 mg/kg or 0.000021%)

boron tribromide/trichloride/trifluoride (combined): (Cation conc. entered: 0.51 mg/kg, converted to compound conc.:6.849 mg/kg or 0.000685%)

cadmium sulfide: (Cation conc. entered: <0.1 mg/kg, converted to compound conc.:<0.129 mg/kg or <0.0000129%, Note 1 conc.: <0.00001%) IGNORED Because: "<LOD"

chromium(III) oxide: (Cation conc. entered: 16 mg/kg, converted to compound conc.:23.385 mg/kg or 0.00234%)

chromium(VI) oxide: (Cation conc. entered: <0.5 mg/kg, converted to compound conc.:<0.962 mg/kg or <0.0000962%) IGNORED Because: "<LOD"

chrysene: (Whole conc. entered as: 0.71 mg/kg or 0.000071%)

copper (I) oxide: (Cation conc. entered: 17 mg/kg, converted to compound conc.:19.14 mg/kg or 0.00191%)

cyanides (with the exception of complex cyanides): (Cation conc. entered: <0.5 mg/kg, converted to compound

conc.:<0.5 mg/kg or <0.00005%) IGNORED Because: "<LOD"

dibenz[a,h]anthracene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

ethylbenzene: (Whole conc. entered as: <0.001 mg/kg or <0.0000001%) IGNORED Because: "<LOD"

fluoranthene: (Whole conc. entered as: 1.1 mg/kg or 0.00011%)

fluorene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

indeno[123-cd]pyrene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

lead compounds (with the exception of those listed separately in this Annex): (Cation conc. entered: 12 mg/kg, converted to compound conc.:18.12 mg/kg or 0.00181%, Note 1 conc.: 0.0012%)

mercury dichloride: (Cation conc. entered: <0.1 mg/kg, converted to compound conc.:<0.135 mg/kg or <0.0000135%) IGNORED Because: "<LOD"

naphthalene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

nickel dihydroxide: (Cation conc. entered: 15 mg/kg, converted to compound conc.:23.692 mg/kg or 0.00237%)

pH: (Whole conc. entered as: 8.5 pH, converted to conc.:8.5 pH or 8.5 pH)

phenanthrene: (Whole conc. entered as: 0.88 mg/kg or 0.000088%)

pyrene: (Whole conc. entered as: 1.4 mg/kg or 0.00014%)

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toluene: (Whole conc. entered as: <0.001 mg/kg or <0.0000001%) IGNORED Because: "<LOD" TPH (C6 to C40) petroleum group: (Whole conc. entered as: <10 mg/kg or <0.001%) IGNORED Because: "<LOD" trichloroethene (TCE): (Whole conc. entered as: <0.001 mg/kg or <0.0000001%) IGNORED Because: "<LOD" vinyl chloride: (Whole conc. entered as: <0.001 mg/kg or <0.0000001%) IGNORED Because: "<LOD" xylene: (Whole conc. entered as: <0.001 mg/kg or <0.0000001%) IGNORED Because: "<LOD" zinc sulphate: (Cation conc. entered: 43 mg/kg, converted to compound conc.:106.18 mg/kg or 0.0106%)

#### Notes utilised in assessment

#### C14: Step 5

"identify whether any individual ecotoxic substance is present at or above a cut-off value ...", used on:

```
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "anthracene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "arsenic trioxide"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "benzo[a]anthracene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "benzo[a]pyrene; benzo[def|chrysene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "benzo[b]fluoranthene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "benzo[k]fluoranthene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "chromium(III) oxide"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "chrysene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "copper (I) oxide"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "fluoranthene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "lead compounds (with the exception of
those listed separately in this Annex)"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "nickel dihydroxide"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "phenanthrene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "pyrene"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "zinc sulphate"
```

### **Determinand notes**

## Note 1, used on:

determinand: "lead compounds (with the exception of those listed separately in this Annex)"

## Note A, used on:

determinand: "lead compounds (with the exception of those listed separately in this Annex)"

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Non Hazardous Waste Classified as 17 05 04 in the List of Waste

# Sample details

Sample Name: DS115[1]

Sample Depth: 1.5 m

Moisture content: 14%

(no correction)

LoW Code:

Chapter:

17: Construction and Demolition Wastes (including

excavated soil from contaminated sites)

Entry: 17 05 04 (Soil and stones other than those mentioned in

17 05 03)

# **Hazard properties**

None identified

Determinands (Moisture content: 14%, no correction)

phenol: (Whole conc. entered as: <0.5 mg/kg or <0.00005%) IGNORED Because: "<LOD"

## Notes utilised in assessment

None





Non Hazardous Waste Classified as 17 05 04 in the List of Waste

Sample details

Sample Name:

**DS119** Sample Depth:

1.8 m

Moisture content: 15%

(no correction)

LoW Code:

Entry:

Chapter: 17: Construction and Demolition Wastes (including

excavated soil from contaminated sites)

17 05 04 (Soil and stones other than those mentioned in

17 05 03)

## **Hazard properties**

None identified

### **Determinands** (Moisture content: 15%, no correction)

acenaphthene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" acenaphthylene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" anthracene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" arsenic trioxide: (Cation conc. entered: 22 mg/kg, converted to compound conc.:29.047 mg/kg or 0.0029%) benzene: (Whole conc. entered as: <0.001 mg/kg or <0.0000001%) IGNORED Because: "<LOD" benzo[a]anthracene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" benzo[a]pyrene; benzo[def]chrysene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" benzo[b]fluoranthene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" benzo[ghi]perylene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

benzo[k]fluoranthene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" boron tribromide/trichloride/trifluoride (combined): (Cation conc. entered: 0.7 mg/kg, converted to compound conc.:9.401 mg/kg or 0.00094%)

cadmium sulfide: (Cation conc. entered: 0.13 mg/kg, converted to compound conc.:0.167 mg/kg or 0.0000167%, Note 1 conc.: 0.000013%)

chromium(III) oxide: (Cation conc. entered: 32 mg/kg, converted to compound conc.:46.77 mg/kg or 0.00468%) chromium(VI) oxide: (Cation conc. entered: <0.5 mg/kg, converted to compound conc.:<0.962 mg/kg or <0.0000962%) IGNORED Because: "<LOD"

chrysene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

copper (I) oxide: (Cation conc. entered: 21 mg/kg, converted to compound conc.:23.644 mg/kg or 0.00236%) cyanides (with the exception of complex cyanides): (Cation conc. entered: <0.5 mg/kg, converted to compound

conc.:<0.5 mg/kg or <0.00005%) IGNORED Because: "<LOD"

dibenz[a,h]anthracene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

ethylbenzene: (Whole conc. entered as: <0.001 mg/kg or <0.0000001%) IGNORED Because: "<LOD"

fluoranthene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

fluorene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

indeno[123-cd]pyrene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

lead compounds (with the exception of those listed separately in this Annex): (Cation conc. entered: 15 mg/kg, converted to compound conc.:22.65 mg/kg or 0.00226%, Note 1 conc.: 0.0015%)

mercury dichloride: (Cation conc. entered: <0.1 mg/kg, converted to compound conc.:<0.135 mg/kg or <0.0000135%) IGNORED Because: "<LOD"

naphthalene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

nickel dihydroxide: (Cation conc. entered: 32 mg/kg, converted to compound conc.:50.544 mg/kg or 0.00505%)

pH: (Whole conc. entered as: 7.7 pH, converted to conc.:7.7 pH or 7.7 pH)

phenanthrene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"





toluene: (Whole conc. entered as: <0.001 mg/kg or <0.0000001%) IGNORED Because: "<LOD" TPH (C6 to C40) petroleum group: (Whole conc. entered as: <10 mg/kg or <0.001%) IGNORED Because: "<LOD" trichloroethene (TCE): (Whole conc. entered as: <0.001 mg/kg or <0.0000001%) IGNORED Because: "<LOD" vinyl chloride: (Whole conc. entered as: <0.001 mg/kg or <0.0000001%) IGNORED Because: "<LOD" xylene: (Whole conc. entered as: <0.001 mg/kg or <0.0000001%) IGNORED Because: "<LOD" zinc sulphate: (Cation conc. entered: 49 mg/kg, converted to compound conc.:120.996 mg/kg or 0.0121%)

#### Notes utilised in assessment

#### C14: Step 5

"identify whether any individual ecotoxic substance is present at or above a cut-off value ...", used on:

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "arsenic trioxide" Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "chromium(III) oxide" Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "copper (I) oxide"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "lead compounds (with the exception of those listed separately in this Annex)"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "nickel dihydroxide" Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "zinc sulphate" Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "cadmium sulfide"

#### **Determinand notes**

# Note 1 , used on:

determinand: "cadmium sulfide"

determinand: "lead compounds (with the exception of those listed separately in this Annex)"

## Note A, used on:

determinand: "lead compounds (with the exception of those listed separately in this Annex)"

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Non Hazardous Waste Classified as 17 05 04 in the List of Waste

Sample details

Sample Name:

DS117 Sample Depth:

**1.3 m** 

Moisture content: 11%

(no correction)

LoW Code:

Chapter: 17: Construction and Demolition Wastes (including

excavated soil from contaminated sites)

Entry: 17 05 04 (Soil and stones other than those mentioned in

17 05 03)

**Hazard properties** 

None identified

**Determinands** (Moisture content: 11%, no correction)

phenol: (Whole conc. entered as: <0.5 mg/kg or <0.00005%) IGNORED Because: "<LOD"

Notes utilised in assessment

None





Non Hazardous Waste Classified as 17 05 04 in the List of Waste

Sample details

Sample Name:

**DS117[1]**Sample Depth:

0.1 m

Moisture content: 7.1%

(no correction)

LoW Code:

Entry:

Chapter: 17: Construction and Demolition Wastes (including

excavated soil from contaminated sites)

17 05 04 (Soil and stones other than those mentioned in

17 05 03)

## **Hazard properties**

None identified

## **Determinands** (Moisture content: 7.1%, no correction)

acenaphthene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" acenaphthylene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" anthracene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" arsenic trioxide: (Cation conc. entered: 11 mg/kg, converted to compound conc.:14.524 mg/kg or 0.00145%) benzene: (Whole conc. entered as: <0.001 mg/kg or <0.0000001%) IGNORED Because: "<LOD" benzo[a]anthracene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" benzo[a]pyrene; benzo[def]chrysene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" benzo[b]fluoranthene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" benzo[ghi]perylene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" benzo[k]fluoranthene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" boron tribromide/trichloride/trifluoride (combined): (Cation conc. entered: <0.4 mg/kg, converted to compound conc.:<5.372 mg/kg or <0.000537%) IGNORED Because: "<LOD"

cadmium sulfide: (Cation conc. entered: 0.13 mg/kg, converted to compound conc.:0.167 mg/kg or 0.0000167%, Note 1 conc.: 0.000013%)

chromium(III) oxide: (Cation conc. entered: <5 mg/kg, converted to compound conc.:<7.308 mg/kg or <0.000731%) IGNORED Because: "<LOD"

chromium(VI) oxide: (Cation conc. entered: <0.5 mg/kg, converted to compound conc.:<0.962 mg/kg or <0.0000962%) IGNORED Because: "<LOD"

chrysene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

copper (I) oxide: (Cation conc. entered: 1.3 mg/kg, converted to compound conc.:1.464 mg/kg or 0.000146%) cyanides (with the exception of complex cyanides): (Cation conc. entered: <0.5 mg/kg, converted to compound conc.:<0.5 mg/kg or <0.00005%) IGNORED Because: "<LOD"

dibenz[a,h]anthracene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" ethylbenzene: (Whole conc. entered as: <0.001 mg/kg or <0.0000001%) IGNORED Because: "<LOD"

fluoranthene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

fluorene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

indeno[123-cd]pyrene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

lead compounds (with the exception of those listed separately in this Annex): (Cation conc. entered: 0.78 mg/kg,

converted to compound conc.:1.178 mg/kg or 0.000118%, Note 1 conc.: 0.000078%)

mercury dichloride: (Cation conc. entered: <0.1 mg/kg, converted to compound conc.:<0.135 mg/kg or <0.0000135%) IGNORED Because: "<LOD"

naphthalene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

nickel dihydroxide: (Cation conc. entered: 1.9 mg/kg, converted to compound conc.:3.001 mg/kg or 0.0003%)

pH: (Whole conc. entered as: 8.1 pH, converted to conc.:8.1 pH or 8.1 pH)

phenanthrene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"





toluene: (Whole conc. entered as: <0.001 mg/kg or <0.0000001%) IGNORED Because: "<LOD" TPH (C6 to C40) petroleum group: (Whole conc. entered as: <10 mg/kg or <0.001%) IGNORED Because: "<LOD" trichloroethene (TCE): (Whole conc. entered as: <0.001 mg/kg or <0.0000001%) IGNORED Because: "<LOD" vinyl chloride: (Whole conc. entered as: <0.001 mg/kg or <0.0000001%) IGNORED Because: "<LOD" xylene: (Whole conc. entered as: <0.001 mg/kg or <0.0000001%) IGNORED Because: "<LOD" zinc sulphate: (Cation conc. entered: 5.2 mg/kg, converted to compound conc.:12.84 mg/kg or 0.00128%)

### Notes utilised in assessment

### C14: Step 5

"identify whether any individual ecotoxic substance is present at or above a cut-off value ...", used on:

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "arsenic trioxide" Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "copper (I) oxide"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "lead compounds (with the exception of those listed separately in this Annex)"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "nickel dihydroxide" Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "zinc sulphate" Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "cadmium sulfide"

#### **Determinand notes**

### Note 1, used on:

determinand: "cadmium sulfide"

determinand: "lead compounds (with the exception of those listed separately in this Annex)"

### Note A, used on:

determinand: "lead compounds (with the exception of those listed separately in this Annex)"

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Non Hazardous Waste
Classified as 17 05 04
in the List of Waste

### Sample details

Sample Name:

DS118

Sample Depth:

0.8 m

Moisture content: 15%

(no correction)

LoW Code:

Entry:

Chapter: 17: Construction and Demolition Wastes (including

excavated soil from contaminated sites)

17 05 04 (Soil and stones other than those mentioned in

17 05 03)

## **Hazard properties**

None identified

## **Determinands** (Moisture content: 15%, no correction)

acenaphthene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" acenaphthylene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" anthracene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" arsenic trioxide: (Cation conc. entered: 22 mg/kg, converted to compound conc.:29.047 mg/kg or 0.0029%) benzene: (Whole conc. entered as: <0.001 mg/kg or <0.000001%) IGNORED Because: "<LOD" benzo[a]anthracene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" benzo[a]pyrene; benzo[def]chrysene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" benzo[b]fluoranthene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" benzo[ghi]perylene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" benzo[k]fluoranthene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

boron tribromide/trichloride/trifluoride (combined): (Cation conc. entered: 0.64 mg/kg, converted to compound conc.:8.595 mg/kg or 0.00086%)

cadmium sulfide: (Cation conc. entered: 0.11 mg/kg, converted to compound conc.:0.141 mg/kg or 0.0000141%, Note 1 conc.: 0.000011%)

chromium(III) oxide: (Cation conc. entered: 33 mg/kg, converted to compound conc.:48.231 mg/kg or 0.00482%) chromium(VI) oxide: (Cation conc. entered: <0.5 mg/kg, converted to compound conc.:<0.962 mg/kg or <0.0000962%) IGNORED Because: "<LOD"

chrysene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

copper (I) oxide: (Cation conc. entered: 19 mg/kg, converted to compound conc.:21.392 mg/kg or 0.00214%)

cyanides (with the exception of complex cyanides): (Cation conc. entered: <0.5 mg/kg, converted to compound conc.:<0.5 mg/kg or <0.00005%) IGNORED Because: "<LOD"

dibenz[a,h]anthracene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

ethylbenzene: (Whole conc. entered as: <0.001 mg/kg or <0.000001%) IGNORED Because: "<LOD" fluoranthene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

fluorene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

indeno[123-cd]pyrene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

lead compounds (with the exception of those listed separately in this Annex): (Cation conc. entered: 14 mg/kg, converted to compound conc.:21.14 mg/kg or 0.00211%, Note 1 conc.: 0.0014%)

mercury dichloride: (Cation conc. entered: <0.1 mg/kg, converted to compound conc.:<0.135 mg/kg or <0.0000135%) IGNORED Because: "<LOD"

naphthalene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

nickel dihydroxide: (Cation conc. entered: 32 mg/kg, converted to compound conc.:50.544 mg/kg or 0.00505%)

pH: (Whole conc. entered as: 7.8 pH, converted to conc.:7.8 pH or 7.8 pH)

phenanthrene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"





toluene: (Whole conc. entered as: <0.001 mg/kg or <0.0000001%) IGNORED Because: "<LOD" trichloroethene (TCE): (Whole conc. entered as: <0.001 mg/kg or <0.0000001%) IGNORED Because: "<LOD" vinyl chloride: (Whole conc. entered as: <0.001 mg/kg or <0.0000001%) IGNORED Because: "<LOD" xylene: (Whole conc. entered as: <0.001 mg/kg or <0.0000001%) IGNORED Because: "<LOD" zinc sulphate: (Cation conc. entered: 51 mg/kg, converted to compound conc.:125.934 mg/kg or 0.0126%)

#### Notes utilised in assessment

#### C14: Step 5

"identify whether any individual ecotoxic substance is present at or above a cut-off value ...", used on:

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "arsenic trioxide" Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "chromium(III) oxide" Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "copper (I) oxide"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "lead compounds (with the exception of those listed separately in this Annex)"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "nickel dihydroxide" Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "zinc sulphate" Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "cadmium sulfide"

#### **Determinand notes**

### Note 1, used on:

determinand: "cadmium sulfide"

determinand: "lead compounds (with the exception of those listed separately in this Annex)"

#### Note A, used on:

determinand: "lead compounds (with the exception of those listed separately in this Annex)"

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Non Hazardous Waste Classified as 17 05 04 in the List of Waste

Sample details

Sample Name: **DS118[1]** 

Sample Depth: **0.2 m** 

Moisture content: 7.9%

(no correction)

LoW Code:

Chapter: 17: Construction and Demolition Wastes (including

excavated soil from contaminated sites)

Entry: 17 05 04 (Soil and stones other than those mentioned in

17 05 03)

**Hazard properties** 

None identified

Determinands (Moisture content: 7.9%, no correction)

phenol: (Whole conc. entered as: <0.5 mg/kg or <0.00005%) IGNORED Because: "<LOD"

Notes utilised in assessment

None





Potentially Hazardous Waste

..........

Classified as **17 05 04** or **17 05 03** \* in the List of Waste

## Sample details

Sample Name:

BH101

Sample Depth:

11 m

Moisture content: **0%** (no correction)

LoW Code:

Entry:

Chapter: 17: Construction and Demolition Wastes (including

excavated soil from contaminated sites)

17 05 04 or 17 05 03 \* (Soil and stones other than those

mentioned in 17 05 03 or Soil and stones containing

hazardous substances)

## Hazard properties (substances considered hazardous until shown otherwise)

<u>HP 12: Release of an acute toxic gas</u> "waste which releases acute toxic gases (Acute Tox. 1, 2 or 3) in contact with water or an acid"

Hazard Statements hit:

EUH032 "Contact with acids liberates very toxic gas"

Because of determinand:

cyanides (with the exception of complex cyanides): (conc.: 0.00006%)

### **Determinands** (Moisture content: 0%, no correction)

acenaphthene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" acenaphthylene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" anthracene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" arsenic trioxide: (Cation conc. entered: 120 mg/kg, converted to compound conc.:158.439 mg/kg or 0.0158%) benzo[a]anthracene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" benzo[a]pyrene; benzo[def]chrysene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" benzo[b]fluoranthene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" benzo[ghi]perylene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" benzo[k]fluoranthene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" beryllium oxide: (Cation conc. entered: 2.3 mg/kg, converted to compound conc.:6.383 mg/kg or 0.000638%) boron tribromide/trichloride/trifluoride (combined): (Cation conc. entered: 1.5 mg/kg, converted to compound

conc.:20.145 mg/kg or 0.00201%) cadmium sulfide: (Cation conc. entered: 0.21 mg/kg, converted to compound conc.:0.27 mg/kg or 0.000027%, Note 1 conc.: 0.000021%)

chrysene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

copper (I) oxide: (Cation conc. entered: 17 mg/kg, converted to compound conc.:19.14 mg/kg or 0.00191%)

cyanides (with the exception of complex cyanides): (Cation conc. entered: 0.6 mg/kg, converted to compound conc.:0.6 mg/kg or 0.00006%)

dibenz[a,h]anthracene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

fluoranthene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

fluorene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

indeno[123-cd]pyrene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

lead compounds (with the exception of those listed separately in this Annex): (Cation conc. entered: 63 mg/kg, converted to compound conc.:95.13 mg/kg or 0.00951%, Note 1 conc.: 0.0063%)

mercury dichloride: (Cation conc. entered: <0.1 mg/kg, converted to compound conc.:<0.135 mg/kg or <0.0000135%) IGNORED Because: "<LOD"

naphthalene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" nickel dihydroxide: (Cation conc. entered: 47 mg/kg, converted to compound conc.:74.236 mg/kg or 0.00742%) pH: (Whole conc. entered as: 8.3 pH, converted to conc.:8.3 pH or 8.3 pH)





phenanthrene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

pyrene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

selenium compounds (with the exception of cadmium sulfoselenide and sodium selenite): (Cation conc. entered: 0.23 mg/kg, converted to compound conc.:0.345 mg/kg or 0.0000345%)

TPH (C6 to C40) petroleum group: (Whole conc. entered as: <10 mg/kg or <0.001%) IGNORED Because: "<LOD" zinc sulphate: (Cation conc. entered: 220 mg/kg, converted to compound conc.:543.245 mg/kg or 0.0543%)

### Notes utilised in assessment

#### C14: Step 5

"identify whether any individual ecotoxic substance is present at or above a cut-off value ...", used on:

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "arsenic trioxide"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "copper (I) oxide"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "cyanides (with the exception of complex cyanides)"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "lead compounds (with the exception of those listed separately in this Annex)"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "nickel dihydroxide"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "selenium compounds (with the exception of cadmium sulfoselenide and sodium selenite)"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "zinc sulphate" Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "cadmium sulfide"

#### Note 1, used on:

Test: "HP 5 on STOT SE 1; H370, STOT RE 1; H372" for determinand: "cadmium sulfide"

Test: "HP 5 on STOT SE 2; H371, STOT RE 2; H373" for determinand: "cadmium sulfide"

Test: "HP 6 on Acute Tox. 4; H302" for determinand: "cadmium sulfide"

Test: "HP 6 on Acute Tox. 4; H332" for determinand: "lead compounds (with the exception of those listed separately in this Annex)"

Test: "HP 7 on Carc. 1A; H350, Carc. 1A; H350i, Carc. 1B; H350i, Carc. 1B; H350i" for determinand: "cadmium sulfide" Test: "HP 7 on Carc. 2; H351" for determinand: "lead compounds (with the exception of those listed separately in this Annex)"

Test: "HP 10 on Repr. 1A; H360, Repr. 1A; H360F, Repr. 1A; H360D, Repr. 1A; H360FD, Repr. 1A; H360Fd, Repr. 1A; H360Df, Repr. 1B; H360, Repr. 1B; H360F, Repr. 1B; H360Fd, Repr. 1B; H360Df" for determinand: "lead compounds (with the exception of those listed separately in this Annex)"

Test: "HP 10 on Repr. 2; H361, Repr. 2; H361f, Repr. 2; H361d, Repr. 2; H361fd" for determinand: "lead compounds (with the exception of those listed separately in this Annex)"

Test: "HP 11 on Muta. 2; H341" for determinand: "cadmium sulfide"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "lead compounds (with the exception of those listed separately in this Annex)"

## **Determinand notes**

## Note 1, used on:

determinand: "cadmium sulfide"

determinand: "lead compounds (with the exception of those listed separately in this Annex)"

### Note A, used on:

determinand: "cyanides (with the exception of complex cyanides)"

determinand: "lead compounds (with the exception of those listed separately in this Annex)"

determinand: "selenium compounds (with the exception of cadmium sulfoselenide and sodium selenite)"

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A Hazardous Waste

Classified as 17 05 03 \* in the List of Waste

## Sample details

Sample Name:

BH102

Sample Depth:

11 m

Moisture content: **0%** (no correction)

LoW Code:

Chapter: 17: Construction and Demolition Wastes (including

excavated soil from contaminated sites)

Entry: 17 05 03 \* (Soil and stones containing hazardous

substances)

## **Hazard properties**

HP 14: Ecotoxic "waste which presents or may present immediate or delayed risks for one or more sectors of the environment"

Risk phrases hit:

R50/53 "Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment"

Because of determinands:

lead compounds (with the exception of those listed separately in this Annex): (Note 1 conc.: 0.1%) zinc sulphate: (compound conc.: 1.012%)

# Hazard properties (substances considered hazardous until shown otherwise)

<u>HP 12: Release of an acute toxic gas</u> "waste which releases acute toxic gases (Acute Tox. 1, 2 or 3) in contact with water or an acid"

Hazard Statements hit:

EUH032 "Contact with acids liberates very toxic gas"

Because of determinand:

cyanides (with the exception of complex cyanides): (conc.: 0.0016%)

# Determinands (Moisture content: 0%, no correction)

acenaphthene: (Whole conc. entered as: 0.32 mg/kg or 0.000032%)

acenaphthylene: (Whole conc. entered as: 0.74 mg/kg or 0.000074%)

anthracene: (Whole conc. entered as: 1.1 mg/kg or 0.00011%)

arsenic trioxide: (Cation conc. entered: 120 mg/kg, converted to compound conc.:158.439 mg/kg or 0.0158%)

benzo[a]anthracene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

benzo[a]pyrene; benzo[def]chrysene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

benzo[b]fluoranthene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

benzo[ghi]perylene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

benzo[k]fluoranthene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

beryllium oxide: (Cation conc. entered: 3.8 mg/kg, converted to compound conc.:10.546 mg/kg or 0.00105%)

 $boron\ tribromide/trichloride/trifluoride\ (combined):\ (Cation\ conc.\ entered:\ 5.5\ mg/kg,\ converted\ to\ compound$ 

conc.:73.865 mg/kg or 0.00739%)

cadmium sulfide: (Cation conc. entered: 1.7 mg/kg, converted to compound conc.:2.185 mg/kg or 0.000218%, Note 1 conc.: 0.00017%)

chrysene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

copper (I) oxide: (Cation conc. entered: 24 mg/kg, converted to compound conc.:27.021 mg/kg or 0.0027%)

cyanides (with the exception of complex cyanides): (Cation conc. entered: 16 mg/kg, converted to compound conc.:16 mg/kg or 0.0016%)

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dibenz[a,h]anthracene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

fluoranthene: (Whole conc. entered as: 1.9 mg/kg or 0.00019%)

fluorene: (Whole conc. entered as: 2.1 mg/kg or 0.00021%)

indeno[123-cd]pyrene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

lead compounds (with the exception of those listed separately in this Annex): (Cation conc. entered: 1000 mg/kg,

converted to compound conc.:1510 mg/kg or 0.151%, Note 1 conc.: 0.1%)

mercury dichloride: (Cation conc. entered: <0.1 mg/kg, converted to compound conc.:<0.135 mg/kg or <0.0000135%)

IGNORED Because: "<LOD"

naphthalene: (Whole conc. entered as: 1.4 mg/kg or 0.00014%)

nickel dihydroxide: (Cation conc. entered: 88 mg/kg, converted to compound conc.:138.996 mg/kg or 0.0139%)

pH: (Whole conc. entered as: 8.4 pH, converted to conc.:8.4 pH or 8.4 pH)

phenanthrene: (Whole conc. entered as: 5.2 mg/kg or 0.00052%)

pyrene: (Whole conc. entered as: 2 mg/kg or 0.0002%)

selenium compounds (with the exception of cadmium sulfoselenide and sodium selenite): (Cation conc. entered: <0.2 mg/kg, converted to compound conc.:<0.3 mg/kg or <0.00003%) IGNORED Because: "<LOD"

TPH (C6 to C40) petroleum group: (Whole conc. entered as: <10 mg/kg or <0.001%) IGNORED Because: "<LOD" zinc sulphate: (Cation conc. entered: 4100 mg/kg, converted to compound conc.:10124.115 mg/kg or 1.012%)

#### Notes utilised in assessment

### C14: Step 5

"identify whether any individual ecotoxic substance is present at or above a cut-off value ...", used on:

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "acenaphthene"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "anthracene"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "arsenic trioxide" Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "copper (I) oxide"

Test: "HP~14~on~R50,~R52,~R50/53,~R51/53,~R53,~R52/53" for~determinand: "cyanides~(with~the~exception~of~complex~100) and the support of th

cyanides)"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "fluoranthene"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "fluorene"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "naphthalene"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "nickel dihydroxide"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "phenanthrene" Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "pyrene"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "cadmium sulfide"

### C14: Step 6, Equation 1

"use the equations given in Table C14.3 to decide if the waste is hazardous by HP 14", used on:

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "lead compounds (with the exception of those listed separately in this Annex)"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "zinc sulphate"

# **Determinand notes**

## Note 1, used on:

determinand: "cadmium sulfide"

determinand: "lead compounds (with the exception of those listed separately in this Annex)"

### Note A, used on:

determinand: "cvanides (with the exception of complex cvanides)"

determinand: "lead compounds (with the exception of those listed separately in this Annex)"

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Potentially Hazardous Waste

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Classified as 17 05 04 or 17 05 03 \* in the List of Waste

## Sample details

Sample Name:

**BH103** 

Sample Depth:

7.5 m

Moisture content: 0% (no correction)

LoW Code:

Entry:

Chapter: 17: Construction and Demolition Wastes (including

excavated soil from contaminated sites)

17 05 04 or 17 05 03 \* (Soil and stones other than those

mentioned in 17 05 03 or Soil and stones containing

hazardous substances)

## Hazard properties (substances considered hazardous until shown otherwise)

HP 12: Release of an acute toxic gas "waste which releases acute toxic gases (Acute Tox. 1, 2 or 3) in contact with water or an acid"

Hazard Statements hit:

EUH032 "Contact with acids liberates very toxic gas"

Because of determinand:

cyanides (with the exception of complex cyanides): (conc.: 0.00005%)

### **Determinands** (Moisture content: 0%, no correction)

acenaphthene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" acenaphthylene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" anthracene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" arsenic trioxide: (Cation conc. entered: 79 mg/kg, converted to compound conc.:104.306 mg/kg or 0.0104%) benzo[a]anthracene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" benzo[a]pyrene; benzo[def]chrysene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" benzo[b]fluoranthene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" benzo[ghi]perylene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" benzo[k]fluoranthene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

beryllium oxide: (Cation conc. entered: 1.6 mg/kg, converted to compound conc.:4.441 mg/kg or 0.000444%) boron tribromide/trichloride/trifluoride (combined): (Cation conc. entered: 1.4 mg/kg, converted to compound

conc.:18.802 mg/kg or 0.00188%)

cadmium sulfide: (Cation conc. entered: 0.11 mg/kg, converted to compound conc.:0.141 mg/kg or 0.0000141%, Note 1 conc.: 0.000011%)

chrysene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

copper (I) oxide: (Cation conc. entered: 20 mg/kg, converted to compound conc.:22.518 mg/kg or 0.00225%)

cyanides (with the exception of complex cyanides): (Cation conc. entered: 0.5 mg/kg, converted to compound conc.:0.5 mg/kg or 0.00005%)

dibenz[a,h]anthracene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

fluoranthene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

fluorene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

indeno[123-cd]pyrene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

lead compounds (with the exception of those listed separately in this Annex): (Cation conc. entered: 70 mg/kg, converted to compound conc.:105.7 mg/kg or 0.0106%, Note 1 conc.: 0.007%)

mercury dichloride: (Cation conc. entered: <0.1 mg/kg, converted to compound conc.:<0.135 mg/kg or <0.0000135%) IGNORED Because: "<LOD"

naphthalene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" nickel dihydroxide: (Cation conc. entered: 37 mg/kg, converted to compound conc.:58.441 mg/kg or 0.00584%) pH: (Whole conc. entered as: 7.9 pH, converted to conc.:7.9 pH or 7.9 pH)





phenanthrene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" pyrene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" selenium compounds (with the exception of cadmium sulfoselenide and sodium selenite): (Cation conc. entered: <0.2 mg/kg, converted to compound conc.:<0.3 mg/kg or <0.00003%) IGNORED Because: "<LOD" TPH (C6 to C40) petroleum group: (Whole conc. entered as: <10 mg/kg or <0.001%) IGNORED Because: "<LOD" zinc sulphate: (Cation conc. entered: 200 mg/kg, converted to compound conc.:493.859 mg/kg or 0.0494%)

### Notes utilised in assessment

#### C14: Step 5

"identify whether any individual ecotoxic substance is present at or above a cut-off value ...", used on:

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "arsenic trioxide" Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "copper (I) oxide"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "cyanides (with the exception of complex cyanides)"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "lead compounds (with the exception of those listed separately in this Annex)"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "nickel dihydroxide" Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "zinc sulphate" Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "cadmium sulfide"

#### **Determinand notes**

#### Note 1, used on:

determinand: "cadmium sulfide"

determinand: "lead compounds (with the exception of those listed separately in this Annex)"

#### Note A, used on:

determinand: "cyanides (with the exception of complex cyanides)"

determinand: "lead compounds (with the exception of those listed separately in this Annex)"

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Classification of sample: BH103[1]

Non Hazardous Waste Classified as 17 05 04 in the List of Waste

Sample details

Sample Name: BH103[1]

Sample Depth:

16 m

Moisture content: **0%** (no correction)

LoW Code:

Entry:

Chapter: 17: Construction and Demolition Wastes (including

excavated soil from contaminated sites)

17 05 04 (Soil and stones other than those mentioned in

17 05 03)

# **Hazard properties**

None identified

### **Determinands** (Moisture content: 0%, no correction)

acenaphthene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" acenaphthylene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" anthracene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" arsenic trioxide: (Cation conc. entered: 27 mg/kg, converted to compound conc.:35.649 mg/kg or 0.00356%) benzo[a]anthracene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" benzo[a]pyrene; benzo[def]chrysene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" benzo[b]fluoranthene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" benzo[ghi]perylene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" benzo[k]fluoranthene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" benzo[k]fluoranthene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" beryllium oxide: (Cation conc. entered: 1.1 mg/kg, converted to compound conc.:3.053 mg/kg or 0.000305%) boron tribromide/trichloride/trifluoride (combined): (Cation conc. entered: 1.1 mg/kg, converted to compound conc.:14.773 mg/kg or 0.00148%)

cadmium sulfide: (Cation conc. entered: <0.1 mg/kg, converted to compound conc.:<0.129 mg/kg or <0.0000129%, Note 1 conc.: <0.00001%) IGNORED Because: "<LOD"

chrysene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

copper (I) oxide: (Cation conc. entered: 22 mg/kg, converted to compound conc.:24.77 mg/kg or 0.00248%)

cyanides (with the exception of complex cyanides): (Cation conc. entered: <0.5 mg/kg, converted to compound conc.:<0.5 mg/kg or <0.00005%) IGNORED Because: "<LOD"

dibenz[a,h]anthracene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

fluoranthene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

fluorene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

indeno[123-cd]pyrene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

lead compounds (with the exception of those listed separately in this Annex): (Cation conc. entered: 26 mg/kg, converted to compound conc.:39.26 mg/kg or 0.00393%, Note 1 conc.: 0.0026%)

mercury dichloride: (Cation conc. entered: <0.1 mg/kg, converted to compound conc.:<0.135 mg/kg or <0.0000135%) IGNORED Because: "<LOD"

naphthalene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

nickel dihydroxide: (Cation conc. entered: 25 mg/kg, converted to compound conc.:39.487 mg/kg or 0.00395%)

pH: (Whole conc. entered as: 8 pH, converted to conc.:8 pH or 8 pH)

phenanthrene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

pyrene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

selenium compounds (with the exception of cadmium sulfoselenide and sodium selenite): (Cation conc. entered: <0.2 mg/kg, converted to compound conc.:<0.3 mg/kg or <0.00003%) IGNORED Because: "<LOD"

zinc sulphate: (Cation conc. entered: 39 mg/kg, converted to compound conc.:96.303 mg/kg or 0.00963%)





### C14: Step 5

"identify whether any individual ecotoxic substance is present at or above a cut-off value ...", used on:

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "arsenic trioxide" Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "copper (I) oxide"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "lead compounds (with the exception of

those listed separately in this Annex)"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "nickel dihydroxide" Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "zinc sulphate"

### **Determinand notes**

### Note 1, used on:

determinand: "lead compounds (with the exception of those listed separately in this Annex)"

### Note A, used on:

determinand: "lead compounds (with the exception of those listed separately in this Annex)"

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Classification of sample: BH105

Non Hazardous Waste Classified as 17 05 04 in the List of Waste

Sample details

Sample Name:

BH105 Sample Depth:

4 m

Moisture content: 0% (no correction)

LoW Code:

Entry:

Chapter: 17: Construction and Demolition Wastes (including

excavated soil from contaminated sites)

17 05 04 (Soil and stones other than those mentioned in

17 05 03)

**Hazard properties** 

None identified

**Determinands** (Moisture content: 0%, no correction)

phenol: (Whole conc. entered as: <0.5 mg/kg or <0.00005%) IGNORED Because: "<LOD"

Notes utilised in assessment

None





Classification of sample: BH105[1]

**Non Hazardous Waste** Classified as 17 05 04

in the List of Waste

### Sample details

Sample Name: LoW Code:

BH105[1] Chapter: 17: Construction and Demolition Wastes (including Sample Depth:

excavated soil from contaminated sites)

11 m Entry: 17 05 04 (Soil and stones other than those mentioned in

17 05 03)

Moisture content: 0% (no correction)

### **Hazard properties**

None identified

### **Determinands** (Moisture content: 0%, no correction)

acenaphthene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" acenaphthylene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" anthracene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" arsenic trioxide: (Cation conc. entered: 85 mg/kg, converted to compound conc.:112.228 mg/kg or 0.0112%) benzo[a]anthracene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" benzo[a]pyrene; benzo[def]chrysene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" benzo[b]fluoranthene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" benzo[ghi]perylene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" benzo[k]fluoranthene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" beryllium oxide: (Cation conc. entered: 1.9 mg/kg, converted to compound conc.:5.273 mg/kg or 0.000527%) boron tribromide/trichloride/trifluoride (combined): (Cation conc. entered: 0.9 mg/kg, converted to compound

conc.:12.087 mg/kg or 0.00121%)

cadmium sulfide: (Cation conc. entered: 0.22 mg/kg, converted to compound conc.:0.283 mg/kg or 0.0000283%, Note 1 conc.: 0.000022%)

chrysene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

copper (I) oxide: (Cation conc. entered: 15 mg/kg, converted to compound conc.:16.888 mg/kg or 0.00169%)

cyanides (with the exception of complex cyanides): (Cation conc. entered: <0.5 mg/kg, converted to compound conc.:<0.5 mg/kg or <0.00005%) IGNORED Because: "<LOD"

dibenz[a,h]anthracene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

fluoranthene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

fluorene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

indeno[123-cd]pyrene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

lead compounds (with the exception of those listed separately in this Annex): (Cation conc. entered: 36 mg/kg, converted to compound conc.:54.36 mg/kg or 0.00544%, Note 1 conc.: 0.0036%)

mercury dichloride: (Cation conc. entered: <0.1 mg/kg, converted to compound conc.:<0.135 mg/kg or <0.0000135%) IGNORED Because: "<LOD"

naphthalene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

nickel dihydroxide: (Cation conc. entered: 48 mg/kg, converted to compound conc.:75.816 mg/kg or 0.00758%)

pH: (Whole conc. entered as: 8 pH, converted to conc.:8 pH or 8 pH)

phenanthrene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

pyrene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

selenium compounds (with the exception of cadmium sulfoselenide and sodium selenite): (Cation conc. entered: <0.2 mg/kg, converted to compound conc.:<0.3 mg/kg or <0.00003%) IGNORED Because: "<LOD"

TPH (C6 to C40) petroleum group: (Whole conc. entered as: <10 mg/kg or <0.001%) IGNORED Because: "<LOD" zinc sulphate: (Cation conc. entered: 140 mg/kg, converted to compound conc.:345.701 mg/kg or 0.0346%)

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### C14: Step 5

"identify whether any individual ecotoxic substance is present at or above a cut-off value ...", used on:

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "arsenic trioxide" Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "copper (I) oxide"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "lead compounds (with the exception of

those listed separately in this Annex)"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "nickel dihydroxide" Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "zinc sulphate" Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "cadmium sulfide"

### **Determinand notes**

### Note 1, used on:

determinand: "cadmium sulfide"

determinand: "lead compounds (with the exception of those listed separately in this Annex)"

### Note A, used on:





Classification of sample: BH105[2]

📤 Hazardous Waste

Classified as 17 05 03 \*

in the List of Waste

### Sample details

Sample Name: **BH105[2]** 

Sample Depth:

19 m

Moisture content: **0%** (no correction)

LoW Code:

Chapter: 17: Construction and Demolition Wastes (including

excavated soil from contaminated sites)

Entry: 17 05 03 \* (Soil and stones containing hazardous

substances)

### **Hazard properties**

HP 14: Ecotoxic "waste which presents or may present immediate or delayed risks for one or more sectors of the environment"

Risk phrases hit:

R50/53 "Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment"

Because of determinand:

zinc sulphate: (compound conc.: 0.519%)

#### **Determinands** (Moisture content: 0%, no correction)

acenaphthene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" acenaphthylene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" anthracene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" arsenic trioxide: (Cation conc. entered: 230 mg/kg, converted to compound conc.:303.675 mg/kg or 0.0304%)

benzo[a]anthracene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" benzo[a]pyrene: benzo[def]chrysene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

benzo[b]fluoranthene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" benzo[ghi]perylene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

benzo[k]fluoranthene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

beryllium oxide: (Cation conc. entered: 2.5 mg/kg, converted to compound conc.:6.938 mg/kg or 0.000694%)

boron tribromide/trichloride/trifluoride (combined): (Cation conc. entered: 1.8 mg/kg, converted to compound conc.:24.174 mg/kg or 0.00242%)

cadmium sulfide: (Cation conc. entered: 0.54 mg/kg, converted to compound conc.:0.694 mg/kg or 0.0000694%, Note 1 conc.: 0.000054%)

chrysene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

copper (I) oxide: (Cation conc. entered: 8.9 mg/kg, converted to compound conc.:10.02 mg/kg or 0.001%)

cyanides (with the exception of complex cyanides): (Cation conc. entered: <0.5 mg/kg, converted to compound conc.:<0.5 mg/kg or <0.00005%) IGNORED Because: "<LOD"

dibenz[a,h]anthracene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

fluoranthene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

fluorene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

indeno[123-cd]pyrene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" lead compounds (with the exception of those listed separately in this Annex): (Cation conc. entered: 47 mg/kg, converted

to compound conc.:70.97 mg/kg or 0.0071%, Note 1 conc.: 0.0047%) mercury dichloride: (Cation conc. entered: <0.1 mg/kg, converted to compound conc.:<0.135 mg/kg or <0.0000135%) IGNORED Because: "<LOD"

naphthalene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

nickel dihydroxide: (Cation conc. entered: 150 mg/kg, converted to compound conc.:236.925 mg/kg or 0.0237%)

pH: (Whole conc. entered as: 8.3 pH, converted to conc.:8.3 pH or 8.3 pH)

phenanthrene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"





pyrene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" selenium compounds (with the exception of cadmium sulfoselenide and sodium selenite): (Cation conc. entered: <0.2 mg/kg, converted to compound conc.:<0.3 mg/kg or <0.00003%) IGNORED Because: "<LOD" zinc sulphate: (Cation conc. entered: 2100 mg/kg, converted to compound conc.:5185.522 mg/kg or 0.519%)

### Notes utilised in assessment

#### C14: Step 5

"identify whether any individual ecotoxic substance is present at or above a cut-off value ...", used on:

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "arsenic trioxide"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "copper (I) oxide"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "lead compounds (with the exception of those listed separately in this Annex)"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "nickel dihydroxide" Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "cadmium sulfide"

### C14: Step 6, Equation 1

"use the equations given in Table C14.3 to decide if the waste is hazardous by HP 14", used on:

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "zinc sulphate"

#### **Determinand notes**

### Note 1, used on:

determinand: "cadmium sulfide"

determinand: "lead compounds (with the exception of those listed separately in this Annex)"

### Note A, used on:

determinand: "lead compounds (with the exception of those listed separately in this Annex)"

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Classification of sample: BH106

Non Hazardous Waste
Classified as 17 05 04
in the List of Waste

### Sample details

Sample Name:

BH106

Sample Depth:

4.5 m

Moisture content: **0%** (no correction)

LoW Code:

Entry:

Chapter: 17: Construction and Demolition Wastes (including

excavated soil from contaminated sites)

17 05 04 (Soil and stones other than those mentioned in

17 05 03)

### **Hazard properties**

None identified

### **Determinands** (Moisture content: 0%, no correction)

acenaphthene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" acenaphthylene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" anthracene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" arsenic trioxide: (Cation conc. entered: 27 mg/kg, converted to compound conc.:35.649 mg/kg or 0.00356%) benzo[a]anthracene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" benzo[a]pyrene; benzo[def]chrysene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" benzo[b]fluoranthene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" benzo[ghi]perylene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" benzo[k]fluoranthene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" beryllium oxide: (Cation conc. entered: 1.1 mg/kg, converted to compound conc.:3.053 mg/kg or 0.000305%) boron tribromide/trichloride/trifluoride (combined): (Cation conc. entered: 0.91 mg/kg, converted to compound conc.:12.221 mg/kg or 0.00122%)

cadmium sulfide: (Cation conc. entered: 0.13 mg/kg, converted to compound conc.:0.167 mg/kg or 0.0000167%, Note 1 conc.: 0.000013%)

chrysene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

copper (I) oxide: (Cation conc. entered: 19 mg/kg, converted to compound conc.:21.392 mg/kg or 0.00214%)

cyanides (with the exception of complex cyanides): (Cation conc. entered: <0.5 mg/kg, converted to compound

conc.:<0.5 mg/kg or <0.00005%) IGNORED Because: "<LOD"

dibenz[a,h]anthracene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

fluoranthene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

fluorene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

indeno[123-cd]pyrene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

lead compounds (with the exception of those listed separately in this Annex): (Cation conc. entered: 16 mg/kg, converted to compound conc.:24.16 mg/kg or 0.00242%, Note 1 conc.: 0.0016%)

mercury dichloride: (Cation conc. entered: 0.14 mg/kg, converted to compound conc.:0.189 mg/kg or 0.0000189%)

naphthalene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

nickel dihydroxide: (Cation conc. entered: 35 mg/kg, converted to compound conc.:55.282 mg/kg or 0.00553%)

pH: (Whole conc. entered as: 8.1 pH, converted to conc.:8.1 pH or 8.1 pH)

phenanthrene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

pyrene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

selenium compounds (with the exception of cadmium sulfoselenide and sodium selenite): (Cation conc. entered: <0.2

mg/kg, converted to compound conc.:<0.3 mg/kg or <0.00003%) IGNORED Because: "<LOD"

zinc sulphate: (Cation conc. entered: 75 mg/kg, converted to compound conc.:185.197 mg/kg or 0.0185%)





# C14: Step 5

"identify whether any individual ecotoxic substance is present at or above a cut-off value ...", used on:

```
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "arsenic trioxide" Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "copper (I) oxide"
```

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "lead compounds (with the exception of those listed separately in this Annex)"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "mercury dichloride" Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "nickel dihydroxide" Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "zinc sulphate" Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "cadmium sulfide"

### **Determinand notes**

### Note 1, used on:

determinand: "cadmium sulfide"

determinand: "lead compounds (with the exception of those listed separately in this Annex)"

### Note A, used on:





Classification of sample: BH106[1]

A Hazardous Waste

Classified as 17 05 03 \*

in the List of Waste

### Sample details

Sample Name: **BH106[1]** 

Sample Depth:

11 m

Moisture content: **0%** (no correction)

LoW Code:

Chapter: 17: Construction and Demolition Wastes (including

excavated soil from contaminated sites)

Entry: 17 05 03 \* (Soil and stones containing hazardous

substances)

### **Hazard properties**

HP 14: Ecotoxic "waste which presents or may present immediate or delayed risks for one or more sectors of the environment"

Risk phrases hit:

R50/53 "Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment"

Because of determinands:

lead compounds (with the exception of those listed separately in this Annex): (Note 1 conc.: 0.14%) zinc sulphate: (compound conc.: 1.21%)

# Hazard properties (substances considered hazardous until shown otherwise)

<u>HP 12: Release of an acute toxic gas</u> "waste which releases acute toxic gases (Acute Tox. 1, 2 or 3) in contact with water or an acid"

Hazard Statements hit:

EUH032 "Contact with acids liberates very toxic gas"

Because of determinand:

cyanides (with the exception of complex cyanides): (conc.: 0.00074%)

### **Determinands** (Moisture content: 0%, no correction)

acenaphthene: (Whole conc. entered as: 0.45 mg/kg or 0.000045%)

acenaphthylene: (Whole conc. entered as: 1.1 mg/kg or 0.00011%)

anthracene: (Whole conc. entered as: 1.9 mg/kg or 0.00019%)

arsenic trioxide: (Cation conc. entered: 120 mg/kg, converted to compound conc.:158.439 mg/kg or 0.0158%)

benzo[a]anthracene: (Whole conc. entered as: 0.38 mg/kg or 0.000038%)

benzo[a]pyrene; benzo[def]chrysene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

benzo[b]fluoranthene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

benzo[ghi]perylene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

benzo[k]fluoranthene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

beryllium oxide: (Cation conc. entered: 4.3 mg/kg, converted to compound conc.:11.934 mg/kg or 0.00119%)

boron tribromide/trichloride/trifluoride (combined): (Cation conc. entered: 5.6 mg/kg, converted to compound conc.:75.208 mg/kg or 0.00752%)

cadmium sulfide: (Cation conc. entered: 2.3 mg/kg, converted to compound conc.:2.956 mg/kg or 0.000296%, Note 1 conc.: 0.00023%)

chrysene: (Whole conc. entered as: 0.15 mg/kg or 0.000015%)

copper (I) oxide: (Cation conc. entered: 23 mg/kg, converted to compound conc.:25.895 mg/kg or 0.00259%)

cyanides (with the exception of complex cyanides): (Cation conc. entered: 7.4 mg/kg, converted to compound conc.:7.4 mg/kg or 0.00074%)

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dibenz[a,h]anthracene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

fluoranthene: (Whole conc. entered as: 3.1 mg/kg or 0.00031%)

fluorene: (Whole conc. entered as: 3 mg/kg or 0.0003%)

indeno[123-cd]pyrene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

lead compounds (with the exception of those listed separately in this Annex): (Cation conc. entered: 1400 mg/kg,

converted to compound conc.:2114 mg/kg or 0.211%, Note 1 conc.: 0.14%)

mercury dichloride: (Cation conc. entered: <0.1 mg/kg, converted to compound conc.:<0.135 mg/kg or <0.0000135%)

IGNORED Because: "<LOD"

naphthalene: (Whole conc. entered as: 1.7 mg/kg or 0.00017%)

nickel dihydroxide: (Cation conc. entered: 83 mg/kg, converted to compound conc.:131.098 mg/kg or 0.0131%)

pH: (Whole conc. entered as: 8.3 pH, converted to conc.:8.3 pH or 8.3 pH)

phenanthrene: (Whole conc. entered as: 9.3 mg/kg or 0.00093%)

pyrene: (Whole conc. entered as: 3.2 mg/kg or 0.00032%)

selenium compounds (with the exception of cadmium sulfoselenide and sodium selenite): (Cation conc. entered: <0.2

mg/kg, converted to compound conc.:<0.3 mg/kg or <0.00003%) IGNORED Because: "<LOD"

zinc sulphate: (Cation conc. entered: 4900 mg/kg, converted to compound conc.:12099.552 mg/kg or 1.21%)

#### Notes utilised in assessment

#### C14: Step 5

"identify whether any individual ecotoxic substance is present at or above a cut-off value ...", used on:

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "acenaphthene"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "anthracene"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "arsenic trioxide"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "benzo[a]anthracene"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "chrysene"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "copper (I) oxide"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "cyanides (with the exception of complex cyanides)"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "fluoranthene"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "fluorene"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "naphthalene"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "nickel dihydroxide"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "phenanthrene"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "pyrene"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "cadmium sulfide"

### C14: Step 6, Equation 1

"use the equations given in Table C14.3 to decide if the waste is hazardous by HP 14", used on:

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "lead compounds (with the exception of those listed separately in this Annex)"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "zinc sulphate"

#### **Determinand notes**

### Note 1, used on:

determinand: "cadmium sulfide"

determinand: "lead compounds (with the exception of those listed separately in this Annex)"

# Note A, used on:

determinand: "cyanides (with the exception of complex cyanides)"





Classification of sample: BH107

**Non Hazardous Waste** Classified as 17 05 04 in the List of Waste

### Sample details

Sample Name:

**BH107** 

Sample Depth:

4.2 m

Moisture content: 0% (no correction)

LoW Code:

Entry:

Chapter: 17: Construction and Demolition Wastes (including

excavated soil from contaminated sites)

17 05 04 (Soil and stones other than those mentioned in

17 05 03)

# **Hazard properties**

None identified

### **Determinands** (Moisture content: 0%, no correction)

acenaphthene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" acenaphthylene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" anthracene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" arsenic trioxide: (Cation conc. entered: 26 mg/kg, converted to compound conc.:34.328 mg/kg or 0.00343%) benzo[a]anthracene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" benzo[a]pyrene; benzo[def]chrysene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" benzo[b]fluoranthene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" benzo[ghi]perylene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" benzo[k]fluoranthene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" beryllium oxide: (Cation conc. entered: 1 mg/kg, converted to compound conc.:2.775 mg/kg or 0.000278%)

boron tribromide/trichloride/trifluoride (combined): (Cation conc. entered: 1.3 mg/kg, converted to compound

conc.:17.459 mg/kg or 0.00175%)

cadmium sulfide: (Cation conc. entered: 0.16 mg/kg, converted to compound conc.:0.206 mg/kg or 0.0000206%, Note 1 conc.: 0.000016%)

chrysene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

copper (I) oxide: (Cation conc. entered: 18 mg/kg, converted to compound conc.:20.266 mg/kg or 0.00203%)

cyanides (with the exception of complex cyanides): (Cation conc. entered: <0.5 mg/kg, converted to compound conc.:<0.5 mg/kg or <0.00005%) IGNORED Because: "<LOD"

dibenz[a,h]anthracene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

fluoranthene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

fluorene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

indeno[123-cd]pyrene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

lead compounds (with the exception of those listed separately in this Annex): (Cation conc. entered: 68 mg/kg, converted to compound conc.:102.68 mg/kg or 0.0103%, Note 1 conc.: 0.0068%)

mercury dichloride: (Cation conc. entered: <0.1 mg/kg, converted to compound conc.:<0.135 mg/kg or <0.0000135%) IGNORED Because: "<LOD"

naphthalene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

nickel dihydroxide: (Cation conc. entered: 32 mg/kg, converted to compound conc.:50.544 mg/kg or 0.00505%)

pH: (Whole conc. entered as: 8.1 pH, converted to conc.:8.1 pH or 8.1 pH)

phenanthrene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

pyrene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

selenium compounds (with the exception of cadmium sulfoselenide and sodium selenite): (Cation conc. entered: <0.2

mg/kg, converted to compound conc.:<0.3 mg/kg or <0.00003%) IGNORED Because: "<LOD"

zinc sulphate: (Cation conc. entered: 220 mg/kg, converted to compound conc.:543.245 mg/kg or 0.0543%)





# C14: Step 5

"identify whether any individual ecotoxic substance is present at or above a cut-off value ...", used on:

```
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "arsenic trioxide"
Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "copper (I) oxide"
```

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "lead compounds (with the exception of

those listed separately in this Annex)"

Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "nickel dihydroxide" Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "zinc sulphate" Test: "HP 14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "cadmium sulfide"

### **Determinand notes**

### Note 1, used on:

determinand: "cadmium sulfide"

determinand: "lead compounds (with the exception of those listed separately in this Annex)"

### Note A, used on:





Classification of sample: BH107[1]

Non Hazardous Waste Classified as 17 05 04 in the List of Waste

Sample details

Sample Name: LoW Code:

BH107[1] Chapter: 17: Construction and Demolition Wastes (including

Sample Depth: excavated soil from contaminated sites)

**12.5 m** Entry: 17 05 04 (Soil and stones other than those mentioned in Moisture content: **0**% Entry: 17 05 03)

Moisture content: **0%** 17 05 (no correction)

# **Hazard properties**

None identified

### **Determinands** (Moisture content: 0%, no correction)

acenaphthene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" acenaphthylene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" anthracene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" arsenic trioxide: (Cation conc. entered: 21 mg/kg, converted to compound conc.:27.727 mg/kg or 0.00277%) benzo[a]anthracene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" benzo[a]pyrene; benzo[def]chrysene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" benzo[b]fluoranthene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" benzo[ghi]perylene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" benzo[k]fluoranthene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" beryllium oxide: (Cation conc. entered: 1.2 mg/kg, converted to compound conc.:3.33 mg/kg or 0.000333%) boron tribromide/trichloride/trifluoride (combined): (Cation conc. entered: 1.5 mg/kg, converted to compound conc.:20.145 mg/kg or 0.00201%)

cadmium sulfide: (Cation conc. entered: <0.1 mg/kg, converted to compound conc.:<0.129 mg/kg or <0.0000129%, Note 1 conc.: <0.00001%) IGNORED Because: "<LOD"

chrysene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

copper (I) oxide: (Cation conc. entered: 18 mg/kg, converted to compound conc.:20.266 mg/kg or 0.00203%)

cyanides (with the exception of complex cyanides): (Cation conc. entered: <0.5 mg/kg, converted to compound

conc.:<0.5 mg/kg or <0.00005%) IGNORED Because: "<LOD"

dibenz[a,h]anthracene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

fluoranthene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

fluorene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

indeno[123-cd]pyrene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

lead compounds (with the exception of those listed separately in this Annex): (Cation conc. entered: 24 mg/kg, converted to compound conc.:36.24 mg/kg or 0.00362%, Note 1 conc.: 0.0024%)

mercury dichloride: (Cation conc. entered: <0.1 mg/kg, converted to compound conc.:<0.135 mg/kg or <0.0000135%) IGNORED Because: "<LOD"

naphthalene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

nickel dihydroxide: (Cation conc. entered: 26 mg/kg, converted to compound conc.:41.067 mg/kg or 0.00411%)

pH: (Whole conc. entered as: 8 pH, converted to conc.:8 pH or 8 pH)

phenanthrene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

pyrene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

 $selenium\ compounds\ (with\ the\ exception\ of\ cadmium\ sulfoselenide\ and\ sodium\ selenite):\ (Cation\ conc.\ entered:\ <0.2)$ 

mg/kg, converted to compound conc.:<0.3 mg/kg or <0.00003%) IGNORED Because: "<LOD"

zinc sulphate: (Cation conc. entered: 77 mg/kg, converted to compound conc.:190.136 mg/kg or 0.019%)





### C14: Step 5

"identify whether any individual ecotoxic substance is present at or above a cut-off value ...", used on:

Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "arsenic trioxide"

Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "copper (I) oxide"

Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "lead compounds (with the exception of

those listed separately in this Annex)"

Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "nickel dihydroxide" Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "zinc sulphate"

### **Determinand notes**

### Note 1, used on:

determinand: "lead compounds (with the exception of those listed separately in this Annex)"

### Note A, used on:

determinand: "lead compounds (with the exception of those listed separately in this Annex)"

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Classification of sample: BH109

**Non Hazardous Waste** Classified as 17 05 04 in the List of Waste

Sample details

Sample Name:

**BH109** Sample Depth:

3.5 m

Moisture content: 0%

(no correction)

LoW Code:

Entry:

Chapter: 17: Construction and Demolition Wastes (including

excavated soil from contaminated sites)

17 05 04 (Soil and stones other than those mentioned in

17 05 03)

# **Hazard properties**

None identified

### **Determinands** (Moisture content: 0%, no correction)

acenaphthene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" acenaphthylene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" anthracene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" arsenic trioxide: (Cation conc. entered: 40 mg/kg, converted to compound conc.:52.813 mg/kg or 0.00528%) benzo[a]anthracene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" benzo[a]pyrene; benzo[def]chrysene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

benzo[b]fluoranthene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

benzo[ghi]perylene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

benzo[k]fluoranthene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

beryllium oxide: (Cation conc. entered: 1.1 mg/kg, converted to compound conc.:3.053 mg/kg or 0.000305%)

boron tribromide/trichloride/trifluoride (combined): (Cation conc. entered: 1 mg/kg, converted to compound conc.:13.43 mg/kg or 0.00134%)

cadmium sulfide: (Cation conc. entered: 0.57 mg/kg, converted to compound conc.:0.733 mg/kg or 0.0000733%, Note 1 conc.: 0.000057%)

chrysene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

copper (I) oxide: (Cation conc. entered: 21 mg/kg, converted to compound conc.:23.644 mg/kg or 0.00236%)

cyanides (with the exception of complex cyanides): (Cation conc. entered: <0.5 mg/kg, converted to compound conc.:<0.5 mg/kg or <0.00005%) IGNORED Because: "<LOD"

dibenz[a,h]anthracene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

fluoranthene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

fluorene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

indeno[123-cd]pyrene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

lead compounds (with the exception of those listed separately in this Annex): (Cation conc. entered: 24 mg/kg, converted to compound conc.:36.24 mg/kg or 0.00362%, Note 1 conc.: 0.0024%)

mercury dichloride: (Cation conc. entered: <0.1 mg/kg, converted to compound conc.:<0.135 mg/kg or <0.0000135%) IGNORED Because: "<LOD"

naphthalene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

nickel dihydroxide: (Cation conc. entered: 36 mg/kg, converted to compound conc.:56.862 mg/kg or 0.00569%)

pH: (Whole conc. entered as: 8 pH, converted to conc.:8 pH or 8 pH)

phenanthrene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

pyrene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

selenium compounds (with the exception of cadmium sulfoselenide and sodium selenite): (Cation conc. entered: <0.2 mg/kg, converted to compound conc.:<0.3 mg/kg or <0.00003%) IGNORED Because: "<LOD"

TPH (C6 to C40) petroleum group: (Whole conc. entered as: <10 mg/kg or <0.001%) IGNORED Because: "<LOD"

zinc sulphate: (Cation conc. entered: 92 mg/kg, converted to compound conc.:227.175 mg/kg or 0.0227%)





### C14: Step 5

"identify whether any individual ecotoxic substance is present at or above a cut-off value ...", used on:

```
Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "cadmium sulfide" Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "arsenic trioxide" Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "copper (I) oxide"
```

Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "lead compounds (with the exception of those listed separately in this Annex)"

Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "nickel dihydroxide" Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "zinc sulphate"

### **Determinand notes**

### Note 1, used on:

determinand: "cadmium sulfide"

determinand: "lead compounds (with the exception of those listed separately in this Annex)"

### Note A, used on:





Classification of sample: BH109[1]

Non Hazardous Waste Classified as 17 05 04 in the List of Waste

# Sample details

Sample Name: BH109[1]

Sample Depth:

6.5 m

Moisture content: 0% (no correction)

LoW Code:

Entry:

Chapter: 17: Construction and Demolition Wastes (including

excavated soil from contaminated sites)

17 05 04 (Soil and stones other than those mentioned in

17 05 03)

# **Hazard properties**

None identified

Determinands (Moisture content: 0%, no correction)

phenol: (Whole conc. entered as: <0.5 mg/kg or <0.00005%) IGNORED Because: "<LOD"

### Notes utilised in assessment

None

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Classification of sample: BH109[2]

Non Hazardous Waste Classified as 17 05 04 in the List of Waste

Sample details

Sample Name: BH109[2]

Sample Depth:

14 m

Moisture content: **0%** (no correction)

LoW Code:

Entry:

Chapter: 17: Construction and Demolition Wastes (including

excavated soil from contaminated sites)

17 05 04 (Soil and stones other than those mentioned in

17 05 03)

# **Hazard properties**

None identified

### **Determinands** (Moisture content: 0%, no correction)

acenaphthene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" acenaphthylene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" anthracene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" arsenic trioxide: (Cation conc. entered: 25 mg/kg, converted to compound conc.:33.008 mg/kg or 0.0033%) benzo[a]anthracene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" benzo[a]pyrene; benzo[def]chrysene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" benzo[b]fluoranthene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" benzo[ghi]perylene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" benzo[k]fluoranthene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" beryllium oxide: (Cation conc. entered: <1 mg/kg, converted to compound conc.:<2.775 mg/kg or <0.000278%) IGNORED Because: "<LOD"

boron tribromide/trichloride/trifluoride (combined): (Cation conc. entered: 1.7 mg/kg, converted to compound conc.:22.831 mg/kg or 0.00228%)

cadmium sulfide: (Cation conc. entered: 0.1 mg/kg, converted to compound conc.:0.129 mg/kg or 0.0000129%, Note 1 conc.: 0.00001%)

chrysene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

copper (I) oxide: (Cation conc. entered: 14 mg/kg, converted to compound conc.:15.762 mg/kg or 0.00158%)

cyanides (with the exception of complex cyanides): (Cation conc. entered: <0.5 mg/kg, converted to compound conc.:<0.5 mg/kg or <0.00005%) IGNORED Because: "<LOD"

dibenz[a,h]anthracene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

fluoranthene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

fluorene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

indeno[123-cd]pyrene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

lead compounds (with the exception of those listed separately in this Annex): (Cation conc. entered: 49 mg/kg, converted to compound conc.:73.99 mg/kg or 0.0074%, Note 1 conc.: 0.0049%)

mercury dichloride: (Cation conc. entered: <0.1 mg/kg, converted to compound conc.:<0.135 mg/kg or <0.0000135%) IGNORED Because: "<LOD"

naphthalene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

nickel dihydroxide: (Cation conc. entered: 20 mg/kg, converted to compound conc.:31.59 mg/kg or 0.00316%)

pH: (Whole conc. entered as: 8.1 pH, converted to conc.:8.1 pH or 8.1 pH)

phenanthrene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

pyrene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

selenium compounds (with the exception of cadmium sulfoselenide and sodium selenite): (Cation conc. entered: <0.2 mg/kg, converted to compound conc.:<0.3 mg/kg or <0.00003%) IGNORED Because: "<LOD"

zinc sulphate: (Cation conc. entered: 180 mg/kg, converted to compound conc.:444.473 mg/kg or 0.0444%)





### C14: Step 5

"identify whether any individual ecotoxic substance is present at or above a cut-off value ...", used on:

Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "cadmium sulfide" Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "arsenic trioxide" Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "copper (I) oxide"

Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "lead compounds (with the exception of

those listed separately in this Annex)"

Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "nickel dihydroxide" Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "zinc sulphate"

### **Determinand notes**

### Note 1, used on:

determinand: "cadmium sulfide"

determinand: "lead compounds (with the exception of those listed separately in this Annex)"

### Note A, used on:





Classification of sample: BH104

Non Hazardous Waste Classified as 17 05 04 in the List of Waste

### Sample details

Sample Name:

BH104

Sample Depth: 4.1 m

Moisture content: 0% (no correction)

LoW Code:

Entry:

Chapter: 17: Construction and Demolition Wastes (including

excavated soil from contaminated sites)

17 05 04 (Soil and stones other than those mentioned in

17 05 03)

# **Hazard properties**

None identified

### **Determinands** (Moisture content: 0%, no correction)

acenaphthene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" acenaphthylene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" anthracene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" arsenic trioxide: (Cation conc. entered: 25 mg/kg, converted to compound conc.:33.008 mg/kg or 0.0033%) benzo[a]anthracene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" benzo[a]pyrene; benzo[def]chrysene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" benzo[b]fluoranthene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" benzo[ghi]perylene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" benzo[k]fluoranthene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" beryllium oxide: (Cation conc. entered: 1.1 mg/kg, converted to compound conc.:3.053 mg/kg or 0.000305%) boron tribromide/trichloride/trifluoride (combined): (Cation conc. entered: 0.98 mg/kg, converted to compound conc.:13.161 mg/kg or 0.00132%)

cadmium sulfide: (Cation conc. entered: 0.11 mg/kg, converted to compound conc.:0.141 mg/kg or 0.0000141%, Note 1 conc.: 0.000011%)

chrysene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

copper (I) oxide: (Cation conc. entered: 20 mg/kg, converted to compound conc.:22.518 mg/kg or 0.00225%)

cyanides (with the exception of complex cyanides): (Cation conc. entered: <0.5 mg/kg, converted to compound conc.:<0.5 mg/kg or <0.00005%) IGNORED Because: "<LOD"

dibenz[a,h]anthracene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" fluoranthene: (Whole conc. entered as: 0.41 mg/kg or 0.000041%)

fluorene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

indeno[123-cd]pyrene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

lead compounds (with the exception of those listed separately in this Annex): (Cation conc. entered: 27 mg/kg, converted to compound conc.:40.77 mg/kg or 0.00408%, Note 1 conc.: 0.0027%)

mercury dichloride: (Cation conc. entered: <0.1 mg/kg, converted to compound conc.:<0.135 mg/kg or <0.0000135%) IGNORED Because: "<LOD"

naphthalene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

nickel dihydroxide: (Cation conc. entered: 35 mg/kg, converted to compound conc.:55.282 mg/kg or 0.00553%)

pH: (Whole conc. entered as: 8 pH, converted to conc.:8 pH or 8 pH)

phenanthrene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

pyrene: (Whole conc. entered as: 0.31 mg/kg or 0.000031%)

selenium compounds (with the exception of cadmium sulfoselenide and sodium selenite): (Cation conc. entered: <0.2 mg/kg, converted to compound conc.:<0.3 mg/kg or <0.00003%) IGNORED Because: "<LOD"

zinc sulphate: (Cation conc. entered: 92 mg/kg, converted to compound conc.:227.175 mg/kg or 0.0227%)





# C14: Step 5

"identify whether any individual ecotoxic substance is present at or above a cut-off value ...", used on:

Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "cadmium sulfide" Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "arsenic trioxide" Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "copper (I) oxide" Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "fluoranthene"

Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "lead compounds (with the exception of those listed separately in this Annex)"

Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "nickel dihydroxide"

Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "pyrene"

Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "zinc sulphate"

#### Note 1, used on:

Test: "HP 5 on STOT SE 1; H370, STOT RE 1; H372" for determinand: "cadmium sulfide"

Test: "HP 5 on STOT SE 2; H371, STOT RE 2; H373" for determinand: "cadmium sulfide"

Test: "HP 6 on Acute Tox. 4; H302" for determinand: "cadmium sulfide"

Test: "HP 6 on Acute Tox. 4; H332" for determinand: "lead compounds (with the exception of those listed separately in this Annex)"

Test: "HP 7 on Carc. 1B; H350, Carc. 1A; H350, Carc. 1B; H350i, Carc. 1A; H350i" for determinand: "cadmium sulfide" Test: "HP 7 on Carc. 2; H351" for determinand: "lead compounds (with the exception of those listed separately in this Annex)"

Test: "HP 10 on Repr. 1A; H360, Repr. 1B; H360, Repr. 1B; H360F, Repr. 1A; H360F, Repr. 1A; H360F, Repr. 1A; H360F, Repr. 1B; H360FD, Repr. 1A; H360FD, Repr. 1A; H360FD, Repr. 1A; H360Fd, Repr. 1B; H360Fd, Repr. 1B; H360Df, Repr. 1A; H360Df" for determinand: "lead compounds (with the exception of those listed separately in this Annex)"

Test: "HP 10 on Repr. 2; H361, Repr. 2; H361f, Repr. 2; H361d, Repr. 2; H361fd" for determinand: "lead compounds (with the exception of those listed separately in this Annex)"

Test: "HP 11 on Muta. 2; H341" for determinand: "cadmium sulfide"

Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "cadmium sulfide"

# Determinand notes

# Note 1, used on:

determinand: "cadmium sulfide"

determinand: "lead compounds (with the exception of those listed separately in this Annex)"

### Note A, used on:





Classification of sample: BH104[1]

**Non Hazardous Waste** Classified as 17 05 04 in the List of Waste

### Sample details

Sample Name: BH104[1]

Sample Depth:

10.5 m

Moisture content: 0% (no correction)

LoW Code:

Entry:

Chapter: 17: Construction and Demolition Wastes (including

excavated soil from contaminated sites)

17 05 04 (Soil and stones other than those mentioned in

17 05 03)

# **Hazard properties**

None identified

### **Determinands** (Moisture content: 0%, no correction)

acenaphthene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" acenaphthylene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" anthracene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" arsenic trioxide: (Cation conc. entered: 50 mg/kg, converted to compound conc.:66.016 mg/kg or 0.0066%) benzo[a]anthracene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" benzo[a]pyrene; benzo[def]chrysene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" benzo[b]fluoranthene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" benzo[ghi]perylene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" benzo[k]fluoranthene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD" beryllium oxide: (Cation conc. entered: 1.4 mg/kg, converted to compound conc.:3.885 mg/kg or 0.000389%) boron tribromide/trichloride/trifluoride (combined): (Cation conc. entered: 1.3 mg/kg, converted to compound conc.:17.459 mg/kg or 0.00175%)

cadmium sulfide: (Cation conc. entered: <0.1 mg/kg, converted to compound conc.:<0.129 mg/kg or <0.0000129%, Note 1 conc.: <0.00001%) IGNORED Because: "<LOD"

chrysene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

copper (I) oxide: (Cation conc. entered: 19 mg/kg, converted to compound conc.:21.392 mg/kg or 0.00214%)

cyanides (with the exception of complex cyanides): (Cation conc. entered: <0.5 mg/kg, converted to compound conc.:<0.5 mg/kg or <0.00005%) IGNORED Because: "<LOD"

dibenz[a,h]anthracene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

fluoranthene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

fluorene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

indeno[123-cd]pyrene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

lead compounds (with the exception of those listed separately in this Annex): (Cation conc. entered: 36 mg/kg, converted to compound conc.:54.36 mg/kg or 0.00544%, Note 1 conc.: 0.0036%)

mercury dichloride: (Cation conc. entered: <0.1 mg/kg, converted to compound conc.:<0.135 mg/kg or <0.0000135%) IGNORED Because: "<LOD"

naphthalene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

nickel dihydroxide: (Cation conc. entered: 28 mg/kg, converted to compound conc.:44.226 mg/kg or 0.00442%)

pH: (Whole conc. entered as: 7.8 pH, converted to conc.:7.8 pH or 7.8 pH)

phenanthrene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

pyrene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) IGNORED Because: "<LOD"

selenium compounds (with the exception of cadmium sulfoselenide and sodium selenite): (Cation conc. entered: <0.2 mg/kg, converted to compound conc.:<0.3 mg/kg or <0.00003%) IGNORED Because: "<LOD"

TPH (C6 to C40) petroleum group: (Whole conc. entered as: <10 mg/kg or <0.001%) IGNORED Because: "<LOD" zinc sulphate: (Cation conc. entered: 73 mg/kg, converted to compound conc.:180.259 mg/kg or 0.018%)

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### C14: Step 5

"identify whether any individual ecotoxic substance is present at or above a cut-off value ...", used on:

Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "arsenic trioxide" Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "copper (I) oxide"

Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "lead compounds (with the exception of

those listed separately in this Annex)"

Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "nickel dihydroxide" Test: "HP 14 on R50, R52, R53, R50/53, R51/53, R52/53" for determinand: "zinc sulphate"

### **Determinand notes**

### Note 1, used on:

determinand: "lead compounds (with the exception of those listed separately in this Annex)"

### Note A, used on:

determinand: "lead compounds (with the exception of those listed separately in this Annex)"

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### Appendix A: Classifier defined and non CLP determinands

acenaphthene (CAS Number: 83-32-9)

Comments: Risk phrase data taken from European Chemicals Agency's Classification & Labelling Inventory

Data source:

http://clp-inventory.echa.europa.eu/SummaryOfClassAndLabelling.aspx?SubstanceID=133563&HarmOnly=no

Data source date: 16/07/2012

Risk Phrases: R36, R37, R38, N; R50/53, N; R51/53

Hazard Statements: Eye Irrit. 2; H319, STOT SE 3; H335, Skin Irrit. 2; H315, Aquatic Acute 1; H400, Aquatic Chronic 1;

H410, Aquatic Chronic 2; H411

acenaphthylene (CAS Number: 208-96-8)

Comments: Risk phrase data taken from European Chemicals Agency's Classification & Labelling Inventory

Data source:

http://clp-inventory.echa.europa.eu/SummaryOfClassAndLabelling.aspx?SubstanceID=59285&HarmOnly=no

Data source date: 16/07/2012

Risk Phrases: R22, R26, R27, R36, R37, R38

Hazard Statements: Acute Tox. 4; H302, Acute Tox. 1; H330, Acute Tox. 1; H310, Eye Irrit. 2; H319, STOT SE 3; H335,

Skin Irrit. 2; H315

anthracene (CAS Number: 120-12-7)

Comments: Risk phrase data taken from European Chemicals Agency's Classification & Labelling Inventory

Data source:

http://clp-inventory.echa.europa.eu/SummaryOfClassAndLabelling.aspx?SubstanceID=101102&HarmOnly=no

Data source date: 08/03/2013

Risk Phrases: R36, R37, R38, R43, N; R50/53

Hazard Statements: Eye Irrit. 2; H319, STOT SE 3; H335, Skin Irrit. 2; H315, Skin Sens. 1; H317, Aquatic Acute 1; H400,

Aquatic Chronic 1; H410

benzo[ghi]perylene (CAS Number: 191-24-2)

Comments: Risk phrase data taken from European Chemicals Agency's Classification & Labelling Inventory

Data source:

http://clp-inventory.echa.europa.eu/SummaryOfClassAndLabelling.aspx?SubstanceID=15793&HarmOnly=no

Data source date: 16/07/2012 Risk Phrases: N; R50/53

Hazard Statements: Aquatic Acute 1; H400, Aquatic Chronic 1; H410

### boron tribromide/trichloride/trifluoride (combined)

Conversion factor: 13.43

Comments: Combines the risk phrases and the average of the conversion factors for Boron tribromide, Boron trichloride

and Boron trifluoride Data source: N/A

Data source date: 10/01/2011

Risk Phrases: R14, T+; R26/28, C; R34, C; R35

Hazard Statements: EUH014, Acute Tox. 2; H330, Acute Tox. 2; H300, Skin Corr. 1A; H314, Skin Corr. 1B; H314

fluoranthene (CAS Number: 206-44-0)

Comments: Risk phrase data taken from European Chemicals Agency's Classification & Labelling Inventory

Data source:

http://clp-inventory.echa.europa.eu/SummaryOfClassAndLabelling.aspx? SubstanceID=56375& HarmOnly=nounceID=56375 & HarmOn

Data source date: 16/07/2012

Risk Phrases: R20, R22, R36, N; R50/53

Hazard Statements: Acute Tox. 4; H302, Acute Tox. 4; H332, Eye Irrit. 2; H319, Aquatic Acute 1; H400, Aquatic Chronic

1; H410

fluorene (CAS Number: 86-73-7)

Comments: Risk phrase data taken from European Chemicals Agency's Classification & Labelling Inventory

Data source:

http://clp-inventory.echa.europa.eu/SummaryOfClassAndLabelling.aspx?SubstanceID=81845&HarmOnly=no

Data source date: 16/07/2012 Risk Phrases: N; R50/53, R53

Hazard Statements: Aquatic Acute 1; H400, Aquatic Chronic 1; H410, Aquatic Chronic 4; H413





indeno[123-cd]pyrene (CAS Number: 193-39-5)

Comments: Risk phrase data taken from European Chemicals Agency's Classification & Labelling Inventory

Data source:

http://clp-inventory.echa.europa.eu/SummaryOfClassAndLabelling.aspx?SubstanceID=128806&HarmOnly=no

Data source date: 08/03/2013

Risk Phrases: R40

Hazard Statements: Carc. 2; H351

# lead compounds (with the exception of those listed separately in this Annex)

CLP index number: 082-001-00-6

Data source: Regulation 1272/2008/EC - Classification, labelling and packaging of substances and mixtures. (CLP)

Additional Risk Phrases: None.

Additional Hazard Statements: Carc. 2; H351

Reason:

03/06/2015 - Carc. 2; H351 hazard statement sourced from: Larsen et al., 2014; Survey of lead and lead compounds, Environmental Project No. 1539, The Danish Environmental Protection Agency

### рΗ

Comments: Appendix C, C4.5

Data source: WM2 - Interpretation of the definition and classification of hazardous waste (Second Edition, version2.2),

**Environment Agency** 

Data source date: 30/05/2008

Risk Phrases: None. Hazard Statements: None.

### phenanthrene (CAS Number: 85-01-8)

Comments: Risk phrase data taken from European Chemicals Agency's Classification & Labelling Inventory

Data source:

http://clp-inventory.echa.europa.eu/SummaryOfClassAndLabelling.aspx?SubstanceID=109754&HarmOnly=no

Data source date: 16/07/2012

Risk Phrases: R22, R36, R37, R38, R40, R43, N; R50/53

Hazard Statements: Acute Tox. 4; H302, Eye Irrit. 2; H319, STOT SE 3; H335, Carc. 2; H351, Skin Sens. 1; H317,

Aquatic Acute 1; H400, Aquatic Chronic 1; H410, Skin Irrit. 2; H315

pyrene (CAS Number: 129-00-0)

Comments: Risk phrase data taken from European Chemicals Agency's Classification & Labelling Inventory

Data source:

Data source date: 16/07/2012 Risk Phrases: R23, N; R50/53

Hazard Statements: Acute Tox. 3; H331, Aquatic Acute 1; H400, Aquatic Chronic 1; H410

#### TPH (C6 to C40) petroleum group

Comments: Risk phrase data given on page A41

Data source: WM2 3rd edition, 2013 Data source date: 01/08/2013

Risk Phrases: R10, R45, R46, R51/53, R63, R65

Hazard Statements: Flam. Liq. 3; H226, Asp. Tox. 1; H304, STOT RE 2; H373, Muta. 1B; H340, Carc. 1B; H350, Repr. 2;

H361d, Aquatic Chronic 2; H411

# chromium(III) oxide (CAS Number: 1308-38-9)

Conversion factor: 1.462

Comments: Risk phrase data taken from European Chemicals Agency's Classification & Labelling Inventory

Data source: http://clp-

inventory. echa. europa. eu/Summary Of Class And Labelling. as px? Substance ID=33806 & Harm Only=no? fc=true & lang=ender and labelling. as px? Substance ID=33806 & Harm Only=no? fc=true & lang=ender and labelling. as px? Substance ID=33806 & Harm Only=no? fc=true & lang=ender and labelling. as px? Substance ID=33806 & Harm Only=no? fc=true & lang=ender and labelling. as px? Substance ID=33806 & Harm Only=no? fc=true & lang=ender and labelling. as px? Substance ID=33806 & Harm Only=no? fc=true & lang=ender and labelling. as px. and labelling

Data source date: 26/11/2012

Risk Phrases: R20, R22, R36, R37, R38, R42, R43, R50/53, R60, R61

Hazard Statements: Acute Tox. 4; H332, Acute Tox. 4; H302, Eye Irrit. 2; H319, STOT SE 3; H335, Skin Irrit. 2; H315,

Resp. Sens. 1; H334, Skin Sens. 1; H317, Repr. 1B; H360FD, Aquatic Acute 1; H400, Aquatic Chronic 1; H410

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ethylbenzene (CAS Number: 100-41-4)

CLP index number: 601-023-00-4

Data source: Commission Regulation (EU) No 605/2014 - 6th Adaptation to Technical Progress for Regulation (EC) No

1272/2008. (ATP6)

Additional Risk Phrases: None.

Additional Hazard Statements: Carc. 2; H351

Reason:

03/06/2015 - Carc. 2; H351 hazard statement sourced from: IARC Group 2B (77) 2000

### **Appendix B: Notes**

#### C14: Step 5

from section: WM3: C14 in the document: "WM3 - Waste Classification"

"identify whether any individual ecotoxic substance is present at or above a cut-off value ..."

#### C14: Step 6, Equation 1

from section: WM3: C14 in the document: "WM3 - Waste Classification"

"use the equations given in Table C14.3 to decide if the waste is hazardous by HP 14"

#### Note 1

from section: 1.1.3.2, Annex VI in the document: "CLP Regulations"

"The concentration stated or, in the absence of such concentrations, the generic concentrations of this Regulation (Table 3.1) or the generic concentrations of Directive 1999/45/EC (Table 3.2), are the percentages by weight of the metallic element calculated with reference to the total weight of the mixture."

#### Note A

from section: 1.1.3.1, Annex VI in the document: "CLP Regulations"

"Without prejudice to Article 17(2), the name of the substance must appear on the label in the form of one of the designations given in Part 3. In Part 3, use is sometimes made of a general description such as '... compounds' or '... salts'. In this case, the supplier is required to state on the label the correct name, due account being taken of section 1.1.1.4."

#### WM3: Unknown oil

from section: Chapter 3: 4. Waste oils and other wastes containing or contaminated with oil in the document: "WM3 - Waste Classification"

"If the identity of the oil is unknown, and the petroleum group cannot be established, then the oil contaminating the waste can be classified as non-carcinogenic due to the presence of oil if all three of the following criteria are met:

- the waste contains **benzo[a]pyrene** (**BaP**) at a concentration of less than 0.01% (1/10,000th) of the TPH concentration (This is the carcinogenic limit specified in table 3.2 of the CLP for BaP)
- this has been determined by an appropriate and representative sampling approach in accordance with the principles set out in Appendix D, and
- the analysis clearly demonstrates, for example by carbon bands or chromatograph, and the laboratory has reasonably concluded that the hydrocarbons present have not arisen from petrol or diesel

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# **Appendix C: Version**

### Classification utilises the following:

- CLP Regulations Regulation 1272/2008/EC of 16 December 2008
- 1st ATP Regulation 790/2009/EC of 10 August 2009
- 2nd ATP Regulation 286/2011/EC of 10 March 2011
- 3rd ATP Regulation 618/2012/EU of 10 July 2012
- 4th ATP Regulation 487/2013/EU of 8 May 2013
- Correction to 1st ATP Regulation 758/2013/EU of 7 August 2013
- 5th ATP Regulation 944/2013/EU of 2 October 2013
- 6th ATP Regulation 605/2014/EU of 5 June 2014
- WFD Annex III replacement Regulation 1357/2014/EU of 18 December 2014
- Revised List of Wastes 2014 Decision 2014/955/EU of 18 December 2014
- WM3 Waste Classification May 2015
- 7th ATP Regulation 2015/1221/EU of 24 July 2015
- POPs Regulation 2004 Regulation 850/2004/EC of 29 April 2004
- 1st ATP to POPs Regulation Regulation 756/2010/EU of 24 August 2010
- 2nd ATP to POPs Regulation Regulation 757/2010/EU of 24 August 2010

HazWasteOnline Engine: WM3 1st Edition, May 2015

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