## INTERPRETATIVE REPORT ON GROUND INVESTIGATION

AT

SOMERSET FARM, MURROW

FOR

**BIOCOW ENVIRONMENTAL SERVICES LTD** 





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## **APPROVAL & DISTRIBUTION SHEET**

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## FOREWORD

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## 1. INTRODUCTION

This report has been prepared upon the written instruction of Mr Chris Waters on behalf of BioCow Environmental Services Ltd, email dated 1<sup>st</sup> March 2019.

The subject site was located on the premises of Somerset Farm, Murrow and consisted of a proposed gas pipeline running in a general north west direction from the south western boundary of the farm. A ground investigation was requested by the client to ascertain the ground conditions underlying the site to assist with the preliminary engineering design.

The fieldwork comprised ten trial pits and the taking of geological and environmental samples. This report is based upon the above fieldwork and subsequent geotechnical and environmental laboratory testing programme.

Attention is drawn to the fact that whilst every effort has been made to ensure the accuracy of the data supplied and any analysis derived from it, there is a potential for variations in ground and groundwater conditions between and beyond the specific locations investigated. No liability can be accepted for any such variations. Furthermore, any recommendations are specific to the client's requirements as detailed herein and no liability will be accepted should these be used by third parties without prior consultation with CET Structures Ltd.

A Desk Study as outlined in BS5930 "Code of practice for site investigations" was not requested and therefore has not been carried out.



## 2. SITE SETTINGS

The subject site is located at Somerset Farm, Cants Drove, Murrow, Wisbech, Cambridgeshire, PE13 4HN and at the time of the investigation comprised arable farm land centred at approximate National Grid Reference TF373049 as shown on Figure 1.

Based on the Ordnance Survey 1:25000 map of the area, the route of the gas main will cross low fen land which lies just above sea level and is drained by man-made drainage ditches. The significant number of watercourses, ponds and lakes mapped in the proximity of the proposed main suggest the possibility of the water table being present at relatively shallow depths.

The area being investigated covers the route of a proposed gas pipeline which is to run in a north west direction across the western extent of the property. The investigation area is situated on arable farm land which has been segregated in readiness for the pipeline installation. The proposed pipeline route crosses a road which runs in an east west direction across the site. This road has several mature trees along its length.

Reference to the British Geological Survey 1:50,000 scale maps of the area indicate that the solid geology of the site is the Corallian Group overlain by the superficial geology of the Barroway Drove Beds and undifferentiated silt filled creeks.

The Corallian Group typically comprise medium to dark grey mudstone and silty mudstone, and pale grey, calcareous mudstone; cementstone nodules may be found in some horizons. The Barroway Drove Beds are typically soft grey clays and silty clays cut by the tidal creeks which form the undifferentiated silt filled creeks. This superficial geology is mapped as being several meters in depth. On the British Geological Map viewer, the Barroway Drove Beds are referred to as Tidal Flat Deposits.

The ground investigation has confirmed that the site is underlain by the anticipated geology of the Barroway Drove Beds/Tidal Flats Deposits and undifferentiated silt filled creeks.



## 3. GROUND INVESTIGATION

The fieldwork comprised ten trial pits excavated to depths of 2m below ground level, with the exception of TP08 which was excavated to 3m below ground level. This work was carried out on 18<sup>th</sup> March 2019 at the approximate locations shown on Figure 2.

Reference should be made to the engineer's logs included in Appendix A for detailed descriptions of the strata penetrated and the results of any in situ tests carried out. A summary only of the ground conditions encountered in the exploratory holes is presented below.

In all the trial pits a layer of possible Topsoil was observed as soft, dark brown, silty CLAY. This stratum was proved to a maximum depth of 0.6m below ground level in TP01.

Beneath the possible Topsoil in all the trial pits except TP06, a soft and firm, light brown with orange partings, slightly fine sandy clayey SILT was observed. This stratum has been described as Tidal Flat Deposits and was proved to the base of all the trial pits except TP06 and to a maximum depth of 2.2m below ground level in TP08.

Below the Tidal Flat Deposits in TP08 a grey mottled brown, slightly fine sandy clayey silt was observed which was proved to the base of this pit at 3m below ground level. This stratum has also been described as Tidal Flat Deposits.

Beneath 0.3m of possible Topsoil TP06 encountered a firm and stiff, brown mottled orange, silty CLAY that gave way to soft to stiff, brown grey mottled orange, silty CLAY to its base at 2.0m below ground level. These strata have been described as Tidal Flat Deposits.

Water seepages were observed in TP06, TP07, TP08 and TP09 at depth of between 1.9m and 2m below ground level. However, the water level in the trial pits may not have attained equilibrium with the ground water table due to the relatively short time that the trial pits were open, and the low permeability of the soils penetrated. Furthermore, the groundwater levels may vary both seasonally and in the long term and possibly in association with river level management by the Environment Agency. Further evidence for this altering water level is shown in the Environment Agency's 'Flood map for planning' as the area is classified as a Flood Zone 3 indicating a high risk of flooding.

Roots/rootlets were observed to the base of all the trial pits.

All trial pits except TP08 remained stable whilst they were open. In TP08 slumping of material occurred from the sides of the pit when the excavation was extended below 2m.



## 4. LABORATORY TESTING

A geotechnical laboratory testing programme was carried out to provide further information on the engineering properties of the subsoil. Unless stated otherwise, these tests were carried out in accordance with BS 1377 "Methods of Test for Soils for Civil Engineering Purposes." CET Structures Limited has been accredited for specific tests as indicated below, by the United Kingdom Accreditation Service (U.K.A.S.). Individual full format reports for tests are available, if required. Other tests have been carried out by UKAS accredited suppliers to CET Structures Limited. The following tests were carried out and the results are presented in Appendix B:

No.	Test	UKAS Accreditation
5	Moisture Content	CET
1	Atterberg Limits	CET
4	PSD Wet Sieving	CET
4	PSD Hydrometer	CET
1	CET Suite 3 Waste Classification – with WAC	CET Supplier
10	CET Suite 4 Waste Classification – without WAC	CET Supplier
3	Full Single Stage WAC Testing (Eluate)	CET Supplier
5	Water Soluble Sulphate and pH	CET Supplier

## 5. **DISCUSSION**

## General

A ground investigation was requested by BioCow Environmental Services Limited to identify the ground conditions underlying the site to provide parameters for the design of a proposed new gas pipeline which it is understood will be constructed at a depth of about 1.2m to 1.5m below ground level.

The fieldwork comprised ten trial pits excavated on the 18<sup>th</sup> March 2019. The investigation ascertained that the site is underlain by Topsoil to depths of up to 0.6m below ground level overlying Tidal Flat Deposits proved to a maximum depth of 3m below ground level. The Tidal Flat Deposits typically comprised, soft and firm, light brown with orange partings, slightly fine sandy, clayey SILT. TP06 differed from the other trial pits as the material observed in this trial pit was a firm and stiff, brown mottled orange, silty CLAY.

Roots and rootlets were observed to the base of each trial pit however it should be noted that the depth of observed root penetration was limited by the depth of the excavation.

Groundwater was encountered during the investigation in TP06, TP07, TP08 and TP09 from a depth of 1.9m below ground level. However, the possibility of groundwater being present at shallow depths cannot be ruled out as discussed in Section 3.

During the course of the investigation all the trial pits, except TP08 remained stable whilst open, although the pits did not extend significantly below the water table and they were only open for a short period of time. Slumping of the sides of the pit occurred in TP08 where the pit extended below the water table. In the event that the proposed trench excavation extends below the water table, should the water table be higher at the time the works are undertaken significant instability would be expected.

Atterberg limits testing carried out on samples recovered from TP06 indicate that this silty clay material is of very high (CV) plasticity as defined by BS5930 "Code of practice for site investigation".

## **Excavations**

The requirement for excavation support and dewatering will be dictated by the depth of the excavation and the ground water level at the time that the works are undertaken. All of the trial pits except TP08 remained stable during the short period of time that they were open. Providing that the excavations remain above the water table they are likely to only require nominal support unless personnel are required to enter the trench in which case the support will need to be assessed to ensure that it provides a safe working environment and to maintain the stability of the excavation.

If excavations are to extend below the water table, they will require both continuous support and dewatering. Silty and fine sandy soils such as those that typically formed the Tidal Flats Deposits are prone to both "running sand" condition and "boiling" of the base of the excavation. Dewatering of silty and fine sandy soils is difficult and advice should be sought from a specialist dewatering contractor if excavations are required to extend below the water table. Continuous interlocking sheet piling, with the piles driven to sufficient depth to increase the length of the flow path to reduce the uplift pressure and prevent boiling of the base of the excavation, in conjunction with pumping from filtered sumps within the excavation could be considered. Alternatively, consideration could be given to well pointing, used in conjunction with continuous excavation support, but the soils might de too fine for this to be effective.

#### **Concrete Below Ground**

Chemical testing was carried out on a series of soil samples recovered from the strata encountered in the exploratory holes. The ground investigation established that the underlying groundwater condition is likely to be classified as 'static' however with the comments regarding water and its varying level, a 'worst case' scenario has been utilised, hence the classification for the material is based on the underlying groundwater condition as being 'mobile'. In accordance with BRE Special Digest 1:2005 Third Edition "Concrete in Aggressive Ground", Table C1 for natural ground locations, the Design Sulphate Class and ACEC Class have been established based upon the available laboratory results.

The mean of the highest 20% of the sulphate analysis indicate a water soluble sulphate of 862mg/l with corresponding pH value of >5.5 consistent with a Design Sulphate Class of DS-2 and ACEC Class of AC-2.

#### Material re-use (Specification for Highway Works)

Reference to Series 600 of the "Specification for Highway Works" and the laboratory testing carried out on the materials recovered from the trial pits indicate that for general earthworks the excavated material will comply with Class 2A, Wet Cohesive Material or Class 2 B Dry Cohesive Material, depending on the moisture content



at the time of placement. Class 2A/2B materials also meet the requirements for Class 8 "Lower trench fill" providing that they do not include "stones or lumps of clay retained on the 40mm test sieve".

Class 2A/2B material is not considered suitable as backfill beneath roads and hardstanding because it is unlikely compacted adequately in trenches to ensure that there is no future settlement.

The silty and fine sandy soils of the Tidal Flats Deposits are likely to be moisture susceptible and if inundated with water would be expected to exhibit a significant loss of strength. If the excavated material is to be reused to backfill excavations then it should be protected from inundation by water and will not be suitable for placement below water.

## Waste Classification and Waste Acceptance Criteria (WAC)

Eleven samples were recovered and analysed for waste classification and waste acceptance criteria (WAC). The HazWaste online model was used to undertake a Hazard Assessment, the purpose of which is to establish whether the tested samples should be considered hazardous 17 05 03<sup>\*</sup> or non-hazardous 17 05 04 waste. The waste hazard assessment results can be viewed in Appendix B Laboratory Results. All samples were determined to be non-hazardous.

Composite samples which represent depths of 0.3m - 0.5m below ground level fail the inert WAC test for Fluoride at 13mg/kg with composite samples representing depths of 2.0m below ground level, failing the inert WAC test for sulphates at 2480mg/kg and so can be classed as non-hazardous waste and can be considered for a non-hazardous landfill site. Composite samples representing depths of 1.5m below ground level pass the inert WAC test and so can be classed as inert waste and can be considered for an inert landfill site. No asbestos was detected in any of the samples.

It is understood that a section of asphalt road may need to be excavated and is outside the scope of this report however, asphalt can contain coal tar and so can be hazardous. If this material is to be disposed of, then a further hazard assessment in line with current best practice and guidance should be carried out.

None of the analytical results show any elevations of contaminants that could present a significant risk to key receptors such as construction workers. Good site practice should still be adopted despite the absence of contamination.



**FIGURES** 







## **APPENDIX A**

Fieldwork





## KEY TO BOREHOLE AND TRIAL PIT LOGS

## Samples

U     Undisturbed sample, 100mm nominal diameter       UT     Undisturbed thin walled sample, 100mm nominal diameter       B     Bulk disturbed samples (bar indicates sample range)       U38     Hand driven 'undisturbed' sample, 38mm nominal diameter       P     Undisturbed piston sample (bar indicates sample range)       W     Water sample       ICBR     In-situ California Bearing Ratio sample       *     No recovery sample       T     Tub sample       V     Vial sample       J     Jar sample       T     Tests       S     Standard penetration test       C     Cone penetration tests       N     Number of blows/total penetration(mm) for SPT/CPT test       25/25SP     As above for seating drive only       *     N value obtained over 450mm penetration       U =     Blows to achieve 450mm penetration       U =     In-situ CBR test by Mexe probe       V =     In-situ field vane test in kN/m <sup>2</sup> m     In-situ field vane test in kN/m <sup>2</sup> ppm =     Parts per million of flammable gas as methane equivalents       pp =     Pocket Penetrometer in kg/cm <sup>2</sup> Observations, Backfill and Installations        Water strike – depth shown in metres below ground level.
UT Undisturbed thin walled sample, 100mm nominal diameter B Bulk disturbed samples (bar indicates sample range) U38 Hand driven 'undisturbed' sample, 38mm nominal diameter P Undisturbed piston sample (bar indicates sample range) W Water sample ICBR In-situ California Bearing Ratio sample * No recovery sample T Ub sample V Vial sample J Jar sample <u>T T Tub sample V Vial sample J Jar sample S Standard penetration test C Cone penetration test C Cone penetration tests N = SPT/CPT 'N' Value (number of blows for 300mm full penetration) 80/150 Number of blows/total penetration(mm) for SPT/CPT test 25/25SP As above for seating drive only * N value obtained over 450mm penetration U = Blows to achieve 450mm penetration for a U sample V = In-situ field vane test in kN/m<sup>2</sup> m In-situ CBR test by Mexe probe V = In-situ field vane test in kN/m<sup>2</sup> ppm = Parts per million of flammable gas as methane equivalents pp = Ocket Penetrometer in kg/cm<sup>2</sup></u>
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<ul> <li>N value obtained over 450mm penetration</li> <li>U = Blows to achieve 450mm penetration for a U sample</li> <li>Vh = In-situ hand vane test in kN/m<sup>2</sup></li> <li>m In-situ CBR test by Mexe probe</li> <li>V = In-situ field vane test in kN/m<sup>2</sup></li> <li>ppm = Parts per million of flammable gas as methane equivalents</li> <li>pp = Pocket Penetrometer in kg/cm<sup>2</sup></li> <li><u>Observations, Backfill and Installations</u></li> <li>Water strike – depth shown in metres below ground level.</li> </ul>
U =       Blows to achieve 450mm penetration for a U sample         Vh =       In-situ hand vane test in kN/m <sup>2</sup> m       In-situ CBR test by Mexe probe         V =       In-situ field vane test in kN/m <sup>2</sup> ppm =       Parts per million of flammable gas as methane equivalents         pp =       Pocket Penetrometer in kg/cm <sup>2</sup> Observations, Backfill and Installations          Water strike – depth shown in metres below ground level.
Vh =       In-situ hand vane test in kN/m <sup>2</sup> m       In-situ CBR test by Mexe probe         V =       In-situ field vane test in kN/m <sup>2</sup> ppm =       Parts per million of flammable gas as methane equivalents         pp =       Pocket Penetrometer in kg/cm <sup>2</sup> Observations, Backfill and Installations          Water strike – depth shown in metres below ground level.
m       In-situ CBR test by Mexe probe         V =       In-situ field vane test in kN/m <sup>2</sup> ppm =       Parts per million of flammable gas as methane equivalents         pp =       Pocket Penetrometer in kg/cm <sup>2</sup> Observations, Backfill and Installations
V =       In-situ field vane test in kN/m <sup>2</sup> ppm =       Parts per million of flammable gas as methane equivalents         pp =       Pocket Penetrometer in kg/cm <sup>2</sup> Observations, Backfill and Installations
ppm =       Parts per million of flammable gas as methane equivalents         pp =       Pocket Penetrometer in kg/cm <sup>2</sup> Observations, Backfill and Installations
pp = Pocket Penetrometer in kg/cm <sup>2</sup> <u>Observations, Backfill and Installations</u> 
Observations, Backfill and Installations Water strike – depth shown in metres below ground level.
.Y. Water strike - depth shown in metres below ground level.
Gravel backfill Bentonite backfill
Arisings backfill Concrete
Plain Pipe Slotted Pipe

Client: <b>Bio</b>	Cow L	.td				Depth (m) 2.00	Plant used:Kubota 2t	TRIAL PIT	
Width (m) 0.60 Length (m) 2.00						Method of Excavation :	Shoring: N/A		
Co-ordinates E Ground Lev			evel		Mechanical Excavator	Date Started :18/03/2019	Sheet 1 of 1		
Sar	nples/Ir	n Situ Test	ts	Change	of Strata				
Depth	Туре	Test/Field	Records		Depth & (Thickness)	De	escription of Strata	Legend	
0.00 - 0.50	ES B			(IIIAOD)	(m) -	Soft and firm, dark brow	vn, silty CLAY.		
0.25	D	pp = 1.1 Vh = 78			- (0.60) -	(Possib	ie lopsoii)		
-		pp = 1.6			-				
		Vh = 78			0.60 -	Soft and firm, light brow	vn with orange partings, s	ightly	
0.75		pp = 0.9			-	fine sandy clayey SILT. (Tidal F	lat Deposits)		
- 1.00	ES B	pp = 0.8 Vh = 32							
-	D	11-02			-				
-					(1.40) -				
- 1.50 -	ES D	pp = 0.7 Vh = 15			-				
-					-				
- 2.00	D				- 200 -				
-	ËS				-	End of Tr	rial Pit at 2.00 m		
-					-				
-					-				
-					-				
-					-				
-					-				
-					-				
-					-				
-					-				
-					-				
-									
-					-				
					-				
					-				
-					-				
General Re 1. Trial Pit r 2. Roots no	marks: emained ted to ba	dry and sta se of trial pi	ble through t.	out excava	tion.				
Ref:	49189	93		TF	RIAL F	PIT RECORD			
Logged:	SPI	SPD Symbols and abbreviations in accoradance with AGS Giving our all							
Check'd:	A	\$		5	Somer	set Farm, Murro	w	FIG A1	
Appi u.	V								

Client: BioCow Ltd						Depth (m) 2.00	Plant used:Kubota 2t	TRIAL PIT	
Width (m) 0.60 Length (m) 2.00						Method of Excavation :	Shoring: N/A		
Co-ordinates E Ground Level			evel		Mechanical Excavator	Date Started :18/03/2019	Sheet 1 of 1	1	
Sar	nples/Ir	n Situ Test	ts	Change	of Strata				
Depth	Туре	Test/Field	Records	Reduced Level	Depth & (Thickness)	De	escription of Strata	Lege	end
0.00 - 0.40	ES D			(IIIAOD)	(m) _	Soft and firm, dark brow	vn, silty CLAY.		
0.25		pp = 2.0			(0.40) -	(Possid	ie Topsoli)		
-		vii = <del>1</del> 0			0.40 -	Soft and firm, light brow	n with orange partings, s	ightly	
- 0.50		pp = 2.3 Vh = 85			-	fine sandy clayey SILT. (Tidal F	lat Deposits)		
-					-				
- —1.00	ES	pp = 2.4							
-	D	Vh = 48			- (1.60) -				
-					-				: <u>×</u> × <u>× ×</u> : <u>×</u> ×
- 1.50	ES D	pp = 1.5 Vh = 50			_				
-	2				-				
-					-				
2.00 -	ES D				2.00 —	End of Tr	ial Pit at 2.00 m		xx.
-					-				
-					_				
-					-				
					-				
					-				
					-				
-					-				
- -					-				
					-				
-					-				
-									
-					-				
					-				
-					-				
					-				
-					-				
General Re 1. Trial Pit r 2. Roots no	marks: emained ted to ba	dry and sta se of trial pi	ble through t.	out excavat	ion.			1	
					<u> </u>				
Ref:	49189	93		TF	KIAL F	ALL RECORD	CF	Giving our all	URE
Logged: Check'd:	SPE			Syr	nbols and abbre				_
Appr'd:	a				Joinel		VV	rig AZ	

Client: BioCow Ltd						Depth (m) 2.00	Plant used:Kubota 2t	TRIAL PIT	
Width (m) 0.60 Length (m) 2.00				m) 2.00		Method of Excavation :	Shoring: N/A		
Co-ordinates			evel		Mechanical Excavator	Date Started :18/03/2019	- IPU3 Sheet 1 of 1	1	
Samples/In Situ Tests			s	Change	of Strata				
Depth (m)	Туре	Test/Field	Records	Reduced Level (mAOD)	Depth & (Thickness)	De	escription of Strata	Lege	ənd
0.00 - 0.30	ES D				(0.30)	Soft and firm, dark brow (Possib	vn, silty CLAY. le Topsoil)		
0.25		pp = 1.7 Vh = 35			0.30 -	Soft and firm, light brow	n with orange partings, sl	ightly	
- - 0.50		pp = 3.6 Vh = 115				fine sandy clayey SILT. (Tidal F	lat Deposits)		
					-				
- 1.00	FS	pp - 15			-				
-	D	Vh = 50			(1.70)				
1.25 -		pp = 2.1 Vh = 45			-				: <u>x</u> x <u>x</u> x ; <u>x</u> x ; <u>x</u> x
- 1.50 -	ES D	pp = 1.7 Vh = 40			-				$X \times X$
-					-				
- 2.00	ES				- 2.00 -				· <u>^</u> ^ × × · × × · × ×
-	D				-	End of Tr	iai Pit at 2.00 m		
-					-				
-					-				
-					-				
-					-				
-					-				
-					-				
-					-				
-					-				
-									
					-				
					-				
-					-				
-					-				
General Re 1. Trial Pit r 2. Roots not	marks: emained ted to ba	dry and sta se of trial pit	ble through	out excavat	ion.				
Ref:	49189	93		TF	RIAL F	PIT RECORD			URE
Logged:	SPE	>		Syr	Sca nbols and abbre	ale 1:25 eviations in accoradance with AGS		e e	
Check'd: Appr'd:	a	~			Somer	set Farm, Murro	W	FIG A3	

Width (m)         0.60         Length (m)         2.00         Method of Excavation:         Shoring: N/A         DUMBER Data Statuted 18:032018         NUMBER Sheet 1 of 1           Sampledin Stu-Texts         Chango d Statuted (modp)         Chango d Statuted (modp)         Chango d Statuted (modp)         Chango d Statuted (modp)         Description of Strata         Legend           009 100         0         0         0.40         Soft and firm, dark brown, silty CLY. (Possible Topolit)         Description of Strata         Legend           0.9         0         0         0.40         Soft and firm, light brown with orange partings, slightly fire sandy clavey SLT. (Tidal Fial Dopolits)         Soft and firm, light brown with orange partings, slightly fire sandy clavey SLT. (Tidal Fial Dopolits)         Image description of Strata         Legend           2:0         E         0         0         0         End of Trial Pit at 2:00 m         Image description of Strata         Legend           1:0         E         0	Client: <b>Bio</b>	Cow L	.td				Depth (m) 2.00	Plant used:Kubota 2t	TRIAL PIT
Co-ordinates, fill         Ground Level (no.0); response of Strate (no.0); response (no.0); respo	Width (m) 0.60 Length (m) 2.00						Method of Excavation :	Shoring: N/A	
Samplesin Silu Testa         Change of Stata           Depth         Type         Test/Field Records         Description of Strata         Lagend           0.00 0.00         ES         0	Co-ordinates E Ground Le			evel		Mechanical Excavator	Date Started :18/03/2019	Sheet 1 of 1	
Dupth (m)         Type Test/Fice/ Records         Reduced (set) (mode)         Description of Strata         Legand           0.00-0.40         FS         (mode)         Soft and firm, dark brown, sity CLAY. (Possible Topsoil)         (mode)         (mode)         (mode)         (mode)         Soft and firm, dark brown, sity CLAY. (Possible Topsoil)         (mode)         (mode)         (mode)         Soft and firm, dark brown, sity CLAY. (Possible Topsoil)         (mode)         (mode)         (mode)         Soft and firm, dark brown, sity CLAY. (Possible Topsoil)         (mode)         (mode)         (mode)         Soft and firm, dark brown, sity CLAY. (Possible Topsoil)         (mode)         (mode)         (mode)         Soft and firm, light brown who range partings, slightly fire sandy clays (SLT. (Total Flat Doposite)         (mode)         (mod	Sar	nples/Ir	n Situ Test	is	Change	of Strata			
307 - 0.00       P       0       Soft and firm, dark brown, slip CLAY. (Possible Topsoli)         255       P       -0.0       Soft and firm, light brown with orange partings, slightly fire sandy claysy SlLT. (Tidal Flat Deposits)         266       P       -1.0       C       Soft and firm, light brown with orange partings, slightly fire sandy claysy SlLT. (Tidal Flat Deposits)         100       E3       P       -1.0       C       P         101       E3       P       -1.0       C       F         105       P       -1.0       C       F       C         106       P       -1.0       C       F       C         107       E3       P       -0       F       F       C         108       P       -0       C       F       F       C       F         109       E3       P       -0       F       F       F       F       F         200       E3       P       -0       F       <	Depth (m)	Туре	Test/Field	Records	Reduced Level (mAOD)	Depth & (Thickness) (m)	De	escription of Strata	Leger
2.5         Image: Base of the product of the pro	0.00 - 0.40	ES D				-	Soft and firm, dark brov (Possib	vn, silty CLAY.	
0.50         0.53         0.53         Soft and firm, light brown with orange partings, slightly fine sandy claysy light. (Total Flat Deposits)         0.53	0.25		pp = 0.8 Vh = 20			(0.40) -			
0.75       0       97-24       0       (Tidal Flat Deposits)         1.00       65       97-16       0       0         1.25       0       97-16       0       0         1.26       0       10       0       0       0         1.25       0       97-16       0       0       0         1.20       0       10       0       0       0         2.00       65       0       2.00       End of Trial Pit at 2.00 m       0         2.00       10       0       0       0       0       0         2.00       10       0       0       0       0       0         2.00       10       0       0       0       0       0         2.00       10       0       0       0       0       0         2.00       10       0       0       0       0       0       0         2.00       10       0       0       0       0       0       0       0         2.00       10       0       0       0       0       0       0       0       0       0         1.01       <	- - 0.50		pp = 0.6 Vh = 25			0.40 -	Soft and firm, light brow fine sandy clayey SILT.	n with orange partings, s	lightly
1:00         ES         IV - 10         (1.60)           1:25         IV - 10         (1.60)           1:20         ES         IV - 10           2:00         End of Trial Pit at 2:00 m         IV           IV - 10         IV - 10         IV - 10           IV - 10         IV - 10         IV - 10           IV - 10         IV - 10         IV - 10           IV - 10         IV - 10         IV - 10           IV - 10         IV - 10         IV - 10           IV - 10         IV - 10         IV - 10           IV - 10         IV - 10         IV - 10           IV - 10         IV - 10         IV - 10           IV - 10         IV - 10         IV - 10           IV - 10	0.75		pp = 2.1			-	(Tidal F	lat Deposits)	
Concertal Remarks:         Concertal Remarks:         Concertal Remarks:         Concertal Remarks:           1.5	- 1 00	FS	Vn = 48			-			
1.25       0       0       1.50       0       0       1.50       0	-	D	Vh = 50			-			
150     ES     P-20       200     ES     200       200     ES       200     End of Trial Pit at 2.00 m	1.25		pp = 1.6 Vh = 58			(1.60) -			
2.00     ES     2.00     End of Trial Pit at 2.00 m       2.00     ES     2.00     End of Trial Pit at 2.00 m       2.01     End of Trial Pit at 2.00 m     End of Trial Pit at 2.00 m	- - 1.50	ES D	pp = 2.0 Vh = 45			-			
Es	-	U				-			
2.00     ES       0     0       0     0       1     0	n.					-			
General Remarks:         In fraid the mealined dry and stable throughout excervation.         2. Foods noted to base of final pri.         Ref:       491893 Logged: SPD Checkid         TRIAL PIT RECORD Scale       1.25 Somerset Farm, Murrow         FIG A4	2.00 -	ES D				2.00 -	End of Tr	ial Pit at 2.00 m	<u>+</u> xx
General Romarks:         1         1       Trail Phr remained dry and stable throughout excavation.         2       Ref:       491833         Logged:       SPD         Check'd       Somerset Farm, Murrow         FIG A4	-					-			
Ceneral Remarks:         1         1         Ceneral Remarks:         1 <td>-</td> <td></td> <td></td> <td></td> <td></td> <td>-</td> <td></td> <td></td> <td></td>	-					-			
Ceneral Remarks:         1. Trial Ptremained dry and stable throughout excavation.         2. Ref:       491893         Logged:       Spin totas and attornations in accordance with AGS         Somerset Farm, Murrow       FIG A4	-					-			
General Remarks:         1       1         1 </td <td>-</td> <td></td> <td></td> <td></td> <td></td> <td>-</td> <td></td> <td></td> <td></td>	-					-			
General Remarks:         1	-					_			
General Remarks:	-					-			
General Remarks:       1. Trial Pit remained dry and stable throughout excavation.       2. Ref:     491893       Logged:     SpD       Somerset Farm, Murrow     FIG A4	-					-			
General Remarks:         1       Trial Pit remained dry and stable throughout excavation.         2. Roots noted to base of trial pit.         Ref:       491893         Logged:       SPD         Symbols and abbreviations in accoradance with AGS         Check'd       Somerset Farm, Murrow         Appr'd:       FIG A4	n.					-			
General Remarks:         1. Trial Pir remained dry and stable throughout excavation.         2. Roots noted to base of trial pit.         Ref:       491893         Logged:       SPD         Symbols and abbreviations in accoradance with AGS       FIG A4	-					-			
General Remarks:       1. Trial Pit remained dry and stable throughout excavation.       2. Roots noted to base of trial pit.       Ref:     491893       Logged:     SPD       Symbols and abbreviations in accorradance with AGS       Check'dt     Somerset Farm, Murrow       Appr'd:     FIG A4	-					-			
General Remarks:         1. Trial Pit remained dry and stable throughout excavation.         2. Roots noted to base of trial pit.         Ref:       491893         Logged:       SPD         Symbols and abbreviations in accoradance with AGS         Check'd       Somerset Farm, Murrow         Appr'd:       FIG A4	-					-			
General Remarks:         1. Trial Pit remained dry and stable throughout excavation.         2. Roots noted to base of trial pit.         Ref:       491893         Logged:       SPD         Symbols and abbreviations in accoradance with AGS         Check'd:       Somerset Farm, Murrow         Appr'd:       FIG A4	-					-			
General Remarks:         1. Trial Pit remained dry and stable throughout excavation.         2. Roots noted to base of trial pit.         Ref:       491893         Logged:       SPD         Symbols and abbreviations in accoradance with AGS         Check'd       Somerset Farm, Murrow         FIG A4	-					-			
General Remarks:         1. Trial Pit remained dry and stable throughout excavation.         2. Roots noted to base of trial pit.         Ref:       491893         Logged:       SPD         Symbols and abbreviations in accoradance with AGS         Check'd       Somerset Farm, Murrow         Appr'd:       M	-					-			
General Remarks:         1. Trial Pit remained dry and stable throughout excavation.         2. Roots noted to base of trial pit.         Ref:       491893         Logged:       SPD         Symbols and abbreviations in accoradance with AGS         Check'd       Somerset Farm, Murrow         Appr'd:       Omega	-					-			
Ref:       491893       TRIAL PIT RECORD Scale       I:25       INFRASTRUCTURE Giving our all         Logged:       SPD       Symbols and abbreviations in accoradance with AGS       FIG A4         Check'd:       Somerset Farm, Murrow       FIG A4	General Re 1. Trial Pit r 2. Roots not	marks: remained ted to ba	dry and sta se of trial pi	ble through t.	out excavat	tion.			I
Scale     1:25       Logged:     SPD       Check'd:     Somerset Farm, Murrow       Appr'd:     Check'd:	Ref:	49189	93		TF	RIAL F	PIT RECORD		Giving our all
Check'd:Somerset Farm, MurrowFIG A4Appr'd: $\mathcal{O}$	Logged:	SPI	2		Syr	Sca mbols and abbre	ale 1:25 eviations in accoradance with AGS		e e e e e e e e e e e e e e e e e e e
	Check'd: Appr'd:	a	<b></b>		Ş	Somer	set Farm, Murro	w	FIG A4

Client: <b>Bio</b>	Cow L	.td				Depth (m) 2.00	Plant used:Kubota 2t	TRIAL F	PIT
Width (m)	0.60		Length (r	n) 2.00		Method of Excavation :	Shoring: N/A		ER
Co-ordinate	es E N		Ground Le	evel		Mechanical Excavator	Date Started :18/03/2019	Sheet 1	<b>5</b> of 1
Sar	nples/Ir	n Situ Test	ts	Change	of Strata				
Depth (m)	Туре	Test/Field	Records	Reduced Level	Depth & ( <i>Thickness</i> )	De	escription of Strata		Legend
0.00 - 0.30	ES D			(111/02)	(0.30)	Soft and firm, dark brow (Possib	/n, silty CLAY. le Topsoil)		
0.25		pp = 1.0 Vh = 32			0.30 -	Soft and firm, light brow	n with orange partings, s	lightly	
- 0.50 -		pp = 1.7 Vh = 30			-	fine sandy clayey SILT. (Tidal F	lat Deposits)		
0.75		pp = 2.2 Vh = 50			-				
- 1.00	ES	pp = 1.2 Vb = 55			-				
1.25	D	pp = 1.4			(1.70) _				
- 1.50	ES	Vh = 50			-				
-	D	Vh = 40			-				
-					-				
2.00 -	ES D				2.00 —	End of Tr	ial Pit at 2.00 m		· × × × ×
-					-				
-					-				
-					-				
-									
-					-				
-					-				
-					-				
-					-				
					-				
-					-				
-					-				
-					-				
General Re 1. Trial Pit r 2. Roots no	marks: emained ted to ba	dry and sta se of trial pir	ble through t.	out excavat	ion.				
Ref:	49189	93		TF	RIAL			INFRAST	RUCTURE
Logged:	SPE	2		Syr	SCa nbols and abbre	are 1:25 eviations in accoradance with AGS		0	
Appr'd:	a	6		Ç	Somer	set Farm, Murro	W	FIG A5	

Client: <b>Bio</b>	Cow L	.td				Depth (m) 2.00	Plant used:Kubota 2t	TRIAL P	TI
Width (m)	0.60		Length (r	m) 2.00		Method of Excavation :	Shoring: N/A		R
Co-ordinate	E		Ground Lo	evel		Mechanical Excavator	Date Started :18/03/2019	- IPU	<b>)</b> of 1
Sar	nples/Ir	n Situ Te	ests	Change	of Strata				
Depth	Туре	Test/Fie	eld Records	Reduced Level	Depth & (Thickness)	De	escription of Strata		Legend
0.00 - 0.30	ES D				(m) (0.30)	Soft and firm, dark brow (Possib	/n, silty CLAY. le Topsoil)		
0.25		pp = 3.3 Vh = 50	3		0.30 -	Firm and stiff, brown mo	ottled orange, silty CLAY		<u>x</u>
- 0.50 -		pp = 4.2 Vh = 85	2		(0.50)	(Tidal F	lat Deposits)		× × ×
0.75		pp = 2.9 Vh = 50	5		- 0.80	Firm and stiff brown on	d arou mottled eronge a	114. /	×× ×× ××
- —1.00	ES D	pp = 1.3 Vh = 90	7		-	CLAY. (Tidal F	lat Deposits)	iity	× × ×
1.25	2	pp = 2.0	)		- (1.00)				×× ××
- - 1.50	ES	pp = 1.	5						×× ××
- - 1 75	B D	Vh = 82	2		-				×× ×× ××
-		Vh = 18	3		1.80 - (0.20) -	Soft, brown, silty CLAY.			<u> </u>
-2.00	ES				2.00 -	(Tidal F End of Tr	lat Deposits) ial Pit at 2 00 m		×^^
-	D				-				
-					-				
-					-				
-					-				
-					-				
-					-				
-					-				
-					-				
-					-				
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-					-				
					-				
-					-				
					-				
-					-				
-					-				
General Re 1. Trial Pit r 2. Water se 3. Roots no	General Remarks: 1. Trial Pit remained stable throughout excavation. 2. Water seepage at the base of the trial pit. 3. Roots noted to base of trial pit.								
Ref:	49189	93		TF				Giving our	all
Logged:	SPE			Syr	mbols and abbre	eviations in accoradance with AGS		•	
Check'd:	A	$\leq$		S	Somer	set Farm, Murro	w	FIG A6	
Appr'd:	on								

Client: <b>Bio</b>	Cow L	.td				Depth (m) 2.00	Plant used:Kubota 2t	TRIAL F	эιт
Width (m)	0.60		Length (I	m) 2.00		Method of Excavation :	Shoring: N/A		ER 7
Co-ordinate	es L		Ground L	evel		Mechanical Excavator	Date Started :18/03/2019	Sheet 1	<b>/</b> of 1
Sar	nples/Ir	n Situ Tes	(mAOD)	Change	of Strata				
Depth (m)	Туре	Test/Field	I Records	Reduced Level (mAOD)	Depth & ( <i>Thickness</i> )	De	escription of Strata		Legend
0.00 - 0.30	ES D			<u> </u>	(0.30)	Soft and firm, dark brow (Possib	vn, silty CLAY. le Topsoil)		
0.25		pp = 2.3 Vh = 58			0.30 -	Soft and firm, light brow	n with orange partings, sl	ightly	
- 0.50 -		pp = 2.2 Vh = 42			-	fine sandy clayey SILT. (Tidal F	lat Deposits)		X X X X X X X X X X X X X X X X X X X X
- 0.75		pp = 1.8 Vh = 48			-				
—1.00	ES	pp = 1.4			(1.30)				
- - 1.25	D	vn = 48 pp = 0.8			-				
-		Vh = 50			-				
- 1.50 -	ES D	pp = 0.7 Vh = 56			1.60 -	Soft, brown mottled ora	nge, slightly fine sandy cla	ayey	
-					(0.40) -	SILT. Occasional mediu ironstone concretions.	im gravel size, sub-angula	ar	
-2.00	ES				2.00 —	(Tidal F End of Tr	ial Deposits) 		x x x x x x x x x x x x x x x x x x x
-	D				-				
-					-				
-					-				
-					-				
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					-				
General Re 1. Trial Pit r 2. Water se 3. Roots no	emarks: remained epage at ted to ba	stable throu the base of se of trial pi	ughout exca the trial pit. t.	vation.					
Ref:	49189	93		TF	RIAL F	PIT RECORD		INFRAST Giving ou	RUCTURE
Logged:	SPE	2		Syr	SCa nbols and abbre	ale 1:25 eviations in accoradance with AGS			
Check'd:	M			ç	Somer	set Farm. Murro	w	FIG A7	
Appr'd:	a								

Client: BioCow Ltd						Depth (m) 3.00	Plant used:Kubota 2t	TRIAL PIT
Width (m)	0.60		Length (I	m) 2.00	I	Method of Excavation :	Shoring: N/A	
Co-ordinate	es N		Ground Lo (mAOD)	evel		Mechanical Excavator	Date Started :18/03/2019	Sheet 1 of 1
Sar	nples/Ir	n Situ Test	ts	Change	of Strata			
Depth (m)	Туре	Test/Field	Records	Level (mAOD)	Deptn & ( <i>Thickness</i> ) (m)	D	escription of Strata	Legend
0.00 - 0.50	ES D				-	Soft and firm, dark brov (Possib	vn, silty CLAY.	
0.25		pp = 2.1 Vh = 22			(0.50)	(		
- 0.50 -		pp = 4.0 Vh = 100			0.50 -	Soft and firm, light brow fine sandy clavey SILT.	vn with orange partings, s	ightly $\begin{array}{c} x \times x \times x \\ x \times x \times x \\ x \times x \times x \\ x \times x \times$
0.75		pp = 2.4 Vh = 60			-	(Tidal F	lat Deposits)	
1.00 -	ES D	pp = 1.8 Vh = 75						
1.25		pp = 1.4 Vh = 68			(1.70)			
- 1.50 -	ES D	pp = 1.1 Vh = 28			-			
-					-			
2.00 -	ES D				-			
-					2.20 -	Soft, grey mottled brow SILT.	n, slightly fine sandy claye	еу <u>х х х х х х х х х х х х х х х х х х х</u>
- 2.50 - 3.00 -	D				- (0.80)	(Tiuai F	Tat Deposits)	
-					-			
					3.00 —	End of Tr	rial Pit at 3.00 m	
-					-			
-					-			
-					-			
-					-			
-								
-					-			
-					-			
-					-			
-					-			
					-			
1. Trial Pit r 2. Water set 3. Roots not	emained epage fro ed to ba	stable to 2r om 2.0m bel se of trial pi	n below gro low ground t.	ound level th level.	nen some slu	imping occurred once the pit had b	been excavated to 3m below groun	nd level.
Ref:	49189	93		TF	RIAL <sub>-</sub> F	PIT RECORD		INFRASTRUCTURE Giving our all
Logged:	SPI	2		Syr	Sca mbols and abbre	ale 1:25 eviations in accoradance with AGS		•
Check'd: Appr'd:	P	~		S	Somer	set Farm, Murro	w	FIG A8

Client: <b>Bio</b>	Cow L	td				Depth (m) 2.00	Plant used:Kubota 2t		ЭIТ
Width (m)	0.60		Length (I	m) 2.00		Method of Excavation :	Shoring: N/A		ER
Co-ordinate	es E N		Ground Lo	evel		Mechanical Excavator	Date Started :18/03/2019	Sheet 1	<b>9</b> of 1
Sar	nples/Ir	I Situ Test	ts	Change	of Strata		I		
Depth (m)	Туре	Test/Field	l Records	Reduced Level (mAOD)	Depth & ( <i>Thickness</i> )	De	escription of Strata		Legend
0.00 - 0.30	ES D				(0.30)	Soft and firm, dark brow (Possib	vn, silty CLAY. le Topsoil)		
0.25		pp = 2.8 Vh = 87			0.30 -	Stiff, light brown mottled	d orange, slightly fine san	ıdy	
- 0.50 -		pp = 3.0 Vh = 90			-	clayey SILT. (Tidal F	lat Deposits)		
0.75		pp = 1.4 Vh = 72			-				$\begin{array}{c} \times \times$
—1.00	ES	pp = 1.2			(1.10) -				
-	D	Vh = 60			-				
1.25		pp = 1.0 Vh = 40			-				
- - 1.50	ES D	pp = 0.8 Vh = 32			1.40 -	Stiff, bluish light grey, s (Tidal F	lightly fine sandy clayey S lat Deposits)	SILT.	
-					(0.60) -				
-					-				
-2.00	ES				2.00 —				X X X X X X X X X X
-	D				-	End of Tr	ial Pit at 2.00 m		
-					-				
-					-				
-					-				
-					-				
-					-				
_									
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					-				
General Re 1. Trial Pit r 2. Water see 3. Roots not	marks: emained epage at ted to bas	stable throu 1.9m below se of trial pi	ughout exca v ground lev t.	vation. el.					
					י ואור				RUCTURE
Ref:	49189	93			iiAL f Sca	Ale 1:25		Giving ou	rall
Logged:	SPE	)		Syr	mbols and abbre	eviations in accoradance with AGS	🛀 🖣	•	
	0-			S	Somer	set Farm, Murro	W	FIG A9	
Appra:	U								

With (m)       0.60       Length (m)       2.00       Method of Excavation:       Shoring: N/A       DMBER TP10       Shoring: N/A       DMBER TP10       Shoring: N/A       DMBER TP10       Shoring: N/A       Description of Sirala       Length (n)       10       Shoring: N/A       Description of Sirala       Length (n)       10       Shoring: N/A       Description of Sirala       Length (n)       Length (n) <thlength (n)<="" th="">       Length (n)       Length (n)<th>Client: <b>Bio</b></th><th>Cow L</th><th>.td</th><th></th><th></th><th></th><th>Depth (m) 2.00</th><th>Plant used:Kubota 2t</th><th>TRIAL PIT</th></thlength>	Client: <b>Bio</b>	Cow L	.td				Depth (m) 2.00	Plant used:Kubota 2t	TRIAL PIT
Co-ordinates, E         Group Level (no.0)         Mochanical Excavator         Tate Stande (18.03.2019)         Sheet 1 of 1           Samplestin Situ Tests         Pharpot of Stata (19.00)         Pharpot of Stata (19.00)         Description of Strata         Logord           0.00         The Test/Field Records (19.00)         Pharpot of Strata (19.00)         Description of Strata         Logord           0.25         The Test/Field Records (19.00)         (0.40)         Soft and firm, dark brown, sity CLAY. (Possible Topsol)         Description of Strata         Logord           0.25         The Test/Field Records (19.00)         (0.40)         Soft and firm, dark brown, sity CLAY. (Possible Topsol)         Soft and firm, light brown with orange partings, slightly fire sandy clays (SLT. (Tidal Piat Deposits)         (1.40)           125         The Test (19.00)         The Test (19.00)         End of Trial Pit at 2.00 m         (1.40)           2.00         E5         Do - 11         End of Trial Pit at 2.00 m         (1.40)         (1.40)           2.00         E5         Do - 11         End of Trial Pit at 2.00 m         (1.40)         (1.40)           2.00         E5         Do - 11         End of Trial Pit at 2.00 m         (1.40)         (1.40)           2.00         E5         Do - 11         End of Trial Pit at 2.00 m         (1.40)         (	Width (m)	0.60		Length (I	m) 2.00		Method of Excavation :	Shoring: N/A	
Samplesin Situ Tedia         Change of Stata           Depth         Type         Test Pried Records         Depth (model)         Description of Strata         Lagend           0.00 0.00         E8         0	Co-ordinate	es E N		Ground Lo	evel		Mechanical Excavator	Date Started :18/03/2019	Sheet 1 of 1
Open in type         Type         Test Freier Records         Reduced is continued in the contin the conteoperise in thole in the conteoperise in the contined i	Sar	nples/Ir	n Situ Test	(III/(OB))	Change	of Strata		I	
306 - 0.06         P3         Soft and firm, dark thrown, sily CLAY. (Possible Topsoli)         Soft and firm, dark thrown, sily CLAY. (Possible Topsoli)           325         0.11         0.0         Soft and firm, light brown with orange partings, slightly file sandy clays slit (Tidal Flat Deposits)         Soft and firm, light brown with orange partings, slightly file sandy clays slit (Tidal Flat Deposits)           1.00         E3         0.0         Soft and firm, light brown with orange partings, slightly file sandy clays slit (Tidal Flat Deposits)         Soft and firm, light brown with orange partings, slightly file sandy clays slit (Tidal Flat Deposits)           2.00         E5         0.0         2.00         End of Trial Pit al 2.00 m           2.00         E5         2.00         End of Trial Pit al 2.00 m         End of Trial Pit al 2.00 m           2.00         E5         2.00         End of Trial Pit al 2.00 m         End of Trial Pit al 2.00 m           2.00         E5         2.00         End of Trial Pit al 2.00 m         End of Trial Pit al 2.00 m           2.00         E5         E5         E5         E5         E5         E5           2.00         E6         E7         E6         E7         E7         E7           2.00         E5         E7         E7         E7         E7         E7         E7	Depth (m)	Туре	Test/Field	Records	Reduced Level (mAOD)	Depth & ( <i>Thickness</i> ) (m)	De	escription of Strata	Legend
2.5         Image: Solution of the solution of	0.00 - 0.40	ES D				-	Soft and firm, dark brov (Possib	vn, silty CLAY. Ie Topsoil)	
0.50         0.51         0.51         Soft and firm. light brown with orange partings. slightly fine sandy claysy SLT (Tidal Flat Deposits)           0.73         0.51         0.51         0.51         0.51         0.51           1.50         0.5         0.53         0.53         0.53         0.51         0.51           1.25         0.53         0.53         0.53         0.53         0.53         0.53         0.55           1.25         0.53         0.53         0.53         0.53         0.55         0.55         0.55           200         0.55         0.53         0.53         0.55	0.25		pp = 1.2 Vh = 56			(0.40) -	(******		
0.75     0     97-10     10	- - 0.50		pp = 1.4 Vh = 68			0.40 -	Soft and firm, light brow fine sandy clayey SILT.	n with orange partings, s	lightly
-1.00         ES         PS - 0.7         (1.60)           125         PS - 0.3         (1.60)           150         ES         PS - 1.1         Image: Constraint of the set of the se	0.75		pp = 1.0			-	(Tidal F	lat Deposits)	
100         ES         0% = 32         1           125         0% = 33         (1.60)         1           126         ES         0% = 1.1         1         1           200         ES         0% = 1.1         2.00         End of Trial Pit at 2.00 m           200         ES         0         2.00         End of Trial Pit at 2.00 m           200         ES         0         1         1           200         ES         0         0         1           201         2.00         End of Trial Pit at 2.00 m         1         1           201         1         1         1         1         1           201         1         1         1         1         1         1           201         1         1         1         1         1         1         1           201         2         1         1         1         1         1         1         1         1         1	-	50	Vh = 38			-			
125       0	1.00 -	ES D	pp = 0.7 Vh = 32			-			
150     ES     pp = 1.1       2.00     ES     p       2.00     ES     p       2.00     ES     p       2.00     ES     p       2.00     End of Trial Pit at 2.00 m       End of Trial Pit at 2.00 m         Central Remarks:       1.10     1       2.00     End of Trial Pit at 2.00 m         Central Remarks:       1.10     1         Central Remarks:       1.10     1         Central Remarks:         1.10         1.10         1.10         1.10         1.10         1.10         1.10         1.10         1.10         1.10	1.25 -		pp = 0.9 Vh = 34			(1.60) -			
2:00     ES     2:00     End of Trial Pit at 2:00 m       2:00     End of Trial Pit at 2:00 m         End of Trial Pit at 2:00 m         Cheered Remarks:         Central Remarks:         Ref:     491893       Logged:     SPD         Somerset Farm, Murrow         Fig At10	- - 1.50	ES	pp = 1.1			-			
2.00       ES       2.00       End of Trial Pit at 2.00 m         End of Trial Pit at 2.00 m       End of Trial Pit at 2.00 m         End of Trial Pit at 2.00 m       End of Trial Pit at 2.00 m         End of Trial Pit at 2.00 m       End of Trial Pit at 2.00 m         End of Trial Pit at 2.00 m       End of Trial Pit at 2.00 m         General Remarks:       End of Trial Pit at 2.00 m         1 full Pit memory       End of Trial Pit at 2.00 m         Fig. 491883       End of Trial Pit at 2.00 m         Ref:       491883         Logged: SPD       Somerset Farm, Murrow         Fig. Atlo       Fig. Atlo	-	D				-			
2.00       End of Trial Pit at 2.00 m	-					-			
General Remarks:         Intel Premarks:         Intel Premarks	-2.00	ES D				2.00 —	End of Tr	rial Pit at 2.00 m	
General Remarke:         1       1         1 </td <td>-</td> <td></td> <td></td> <td></td> <td></td> <td>-</td> <td></td> <td></td> <td></td>	-					-			
General Remarks:         1	-					-			
General Remarks:         1       Trial Pt remained dry and stable throughout excavation.         2       Provide the base of that pt.         Ref:       491893         Logged:       SPD         Somerset Farm, Murrow       FIG A10	-					_			
General Remarks:         1	-					-			
General Remarks:         1       1         1 </td <td>-</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	-								
General Remarks:         1	-					-			
General Remarks:         1	-					-			
General Remarks:         1. Trial Pit remained dry and stable throughout excavation.         2. Roots noted to base of trial pit.         Ref:       491893 Logged:         SPD         Scale       1:25 Symbols and abbreviations in accordance with AGS         Check'd       Somerset Farm, Murrow         FIG A10	- -					-			
General Remarks:         1. Trial Pir remained dry and stable throughout excavation.         2. Roots noted to base of trial pit.         Ref:       491893         Logged:       SPD         Symbols and abbreviations in accordance with AGS       CECTC         Check'd       Somerset Farm, Murrow         Appr'd:       FIG A10	-					-			
General Remarks:     -       1. Trial Pit remained dry and stable throughout excavation.       2. Roots noted to base of trial pit.       Ref:     491893       Logged:     SPD       Symbols and abbreviations in accorradance with AGS       Check'dt     Somerset Farm, Murrow       Appr'd:     FIG A10	-					-			
General Remarks:         1. Trial Pit remained dry and stable throughout excavation.         2. Roots noted to base of trial pit.         Ref:       491893         Logged:       SPD         Symbols and abbreviations in accoradance with AGS         Check'd       Somerset Farm, Murrow         Appr'd:       FIG A10	-					-			
General Remarks:         1. Trial Pit remained dry and stable throughout excavation.         2. Roots noted to base of trial pit.         Ref:       491893         Logged:       SPD         Symbols and abbreviations in accoradance with AGS         Check'd:       Somerset Farm, Murrow         Appr'd:       FIG A10	-					-			
General Remarks:         1. Trial Pit remained dry and stable throughout excavation.         2. Roots noted to base of trial pit.         INFRASTRUCTURE Giving our all         Ref:       491893         Logged:       SPD         Symbols and abbreviations in accoradance with AGS       FIG A10         FIG A10	-					-			
General Remarks:         1. Trial Pit remained dry and stable throughout excavation.         2. Roots noted to base of trial pit.         Ref:       491893         Logged:       SPD         Symbols and abbreviations in accoradance with AGS         Check'd       Somerset Farm, Murrow         Appr'd:       M	-					-			
General Remarks:         1. Trial Pit remained dry and stable throughout excavation.         2. Roots noted to base of trial pit.         Ref:       491893         Logged:       SPD         Symbols and abbreviations in accoradance with AGS         Check'd       Somerset Farm, Murrow         Appr'd:       M	-					-			
Ref:       491893       TRIAL PIT RECORD Scale       I:25       INFRASTRUCTURE Giving our all         Logged:       SPD       Symbols and abbreviations in accoradance with AGS       FIG A10         Check'd:       Maintain and abbreviations in accoradance with AGS       FIG A10	General Re 1. Trial Pit r 2. Roots no	marks: remained ted to ba	dry and sta se of trial pi	ble through t.	ut excavat	tion.			
Scale     1:25       Logged:     SPD       Check'd:     Somerset Farm, Murrow       Appr'd:     Check'd:	Ref:	49189	93		TF	RIAL F	PIT RECORD		Giving our all
Check'd:Somerset Farm, MurrowFIG A10Appr'd: $\mathcal{O}$	Logged:	SPI	2		Syr	Sca mbols and abbre	ale 1:25 eviations in accoradance with AGS		e e e e e e e e e e e e e e e e e e e
	Check'd: Appr'd:	a	~		S	Somer	set Farm, Murro	w	FIG A10



## **APPENDIX B**

Laboratory Testing



	Moisture Content and Plasticity Index								
BH. No.	Depth (m bgl)	Moisture Content (%)	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)	Percentage Passing the 425µm Test Sieve	Volume change potential (N.H.B.C)	Plasticity chart classification (BS 5930:2015)	
TP01	1.0	21							
TP05	1.0	14							
TP06	1.0	38	82	27	55	100	High	CV	
TP08	1.0	22							
TP10	1.0	26							

Water Soluble Sulphate and pH							
BH	Depth	Water	рН	Design	ACEC Class		
	(m bgl)	Soluble		Sulphate Class			
		Sulphate		(BRE Special			
		(mg/l)		Digest 1:2005)			
TP01	0 - 0.5	24	7.4	DS-1	AC-1 <sup>d</sup>		
TP01	1.5	17	7.8	DS-1	AC-1 <sup>d</sup>		
TP02	1.5	30	7.8	DS-1	AC-1 <sup>d</sup>		
TP03	0-0.3	22	7.4	DS-1	AC-1 <sup>d</sup>		
TP03	1.5	22	7.8	DS-1	AC-1 <sup>d</sup>		
TP04	1.5	19	8.0	DS-1	AC-1 <sup>d</sup>		
TP05	2.0	1500	8.0	DS-2	AC-2		
TP06	1.5	718	7.6	DS-2	AC-2		
TP07	0-0.3	23	7.5	DS-1	AC-1 <sup>d</sup>		
TP08	1.5	<10	8.1	DS-1	AC-1 <sup>d</sup>		
TP08	2.0	15	8.0	DS-1	AC-1 <sup>d</sup>		
TP09	1.5	26	7.8	DS-1	AC-1 <sup>d</sup>		
TP09	2.0	49	7.8	DS-1	AC-1 <sup>d</sup>		
TP10	0-0.4	47	7.7	DS-1	AC-1 <sup>d</sup>		
TP10	1.5	261	7.7	DS-1	AC-1 <sup>d</sup>		
TP10	2.0	368	7.6	DS-1	AC-1 <sup>d</sup>		

NOTES

<sup>d</sup> For flowing water that is potentially aggressive to concrete owing to high purity or an aggressive carbon dioxide level greater than 15 mg/l, increase the ACEC class to AC-2z.



TEST REPORT:	DETERMINATION BS 1377 : Part 2 BS 1377 : Part 2	<b>ON OF THE PARTICLE SIZ</b> 2 : 1990 : clause 9.2 : Wo 2 : 1990 : clause 9.5 - Fin	E DISTRIBUTION OF SOIL M et Sieving Method e Grading by Hydrometer M	MATERIALS Method
REPORT NUMBER:	491893 / 67020	0.3.1.1	CLIENT:	Murrow AD Plant Ltd
SAMPLE NUMBER:	109532		ADDRESS:	Somerset Farm
CLIENT REFERENCE:	TP01 1.00		SITE:	Murrow
DATE RECEIVED:	22/03/2019		SUPPLIER:	Details Not Supplied
DATE SAMPLED	Unknown		MATERIAL :	Brown Silty Sandy Clay
SAMPLED BY:	Client		CLASSIFICATION:	BLANK SPEC
DATE TEST COMPLETED:	29/03/2019		LOCATION:	Stockpile
TESTED BY:	BM		PREPARATION METHOD:	BS 1377:Part 1:1990 clause 7.3 & 7.4.5
ORIENTATION OF TEST SPECIMEN			VARIATIONS:	No variations
WITHIN ORIGINAL SPECIMEN: N/A			TYPE OF SAMPLE:	Disturbed

RESULT:

		CONTRACT SPECIFICATION
BS TEST SIEVE	PERCENTAGE PASSING	GRADING LIMITS
mm	%	
125	100	
100	100	
90	100	
75	100	
63	100	
50	100	
37.5	100	
28	100	
20	100	
14	100	
10	100	
6.3	100	
5.0	100	
3.35	100	
2.00	100	
1.18	100	
0.600	100	
0.425	99	
0.300	99	
0.212	99	
0.150	99	
0.063	74	
0.020	56	
0.006	38	
0.002	30	

Remarks:

The material tested complies with the grading specification requirements stated above .

A particle density of (assumed) 2.65  $\rm Mg/m^3$  has been used in the hydrometer calculation

For and on behalf of CET

Remaining sample will be retained for a minimum of 28 days from date of report.

Page 1 of 2 Report Format: L/Rep S8a/2 Approved Signatory 03-Apr-19 Chris Davidson - Laboratory Manager Matt Oliver- Site Manager Dan Gay- Laboratory Supervisor Phil Mayhew - Operations Manager Matt Butt- Operations Supervisor



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 ☑ enquiries@cet-uk.com
 ☑ www.cet-uk.com

# Giving our all

TEST REPORT:	DETERMINATION OF THE PARTICLE SIZE DISTRIBUTION OF SOIL MATERIALS SEDIMENTATION BY THE HYDROMETER METHOD: BS 1377 : Part 2 : 1990 : clause 9.5 - Fine Grading by Hydrometer Method BS 1377 : Part 2 : 1990 : clause 9.2 - Wet Sieving Method
REPORT NUMBER:	491893 / 67020.3.1.1
ORGANIC MATTER CONTENT:	Less than 0.5%
PRETREATMENT FOR ORGANIC MATTER:	N/A



Percentage BOULDERS:	0%
Percentage COBBLES:	0%
Percentage GRAVEL:	0%
Percentage SAND:	26%
Percentage SILT:	44%
Percentage CLAY:	30%

Page 2 of 2 Report Format: L/Rep Hydro rev.2



TEST REPORT:	<b>DETERMINATION OF THE PARTICLE SI</b> BS 1377 : Part 2 : 1990 : clause 9.2 : W BS 1377 : Part 2 : 1990 : clause 9.5 - Fir	ZE DISTRIBUTION OF SOIL M et Sieving Method he Grading by Hydrometer M	<b>ATERIALS</b>	
REPORT NUMBER:	491893 / 67020.5.1.1	CLIENT:	Murrow AD Plant Ltd	
SAMPLE NUMBER:	109534	ADDRESS:	Somerset Farm	
CLIENT REFERENCE:	TP05 1.00	SITE:	Murrow	
DATE RECEIVED:	22/03/2019	SUPPLIER:	Details Not Provided	
DATE SAMPLED	Unknown	MATERIAL :	Brown Silty Sandy Clay	
SAMPLED BY:	Client	CLASSIFICATION:	BLANK SPEC	
DATE TEST COMPLETED:	29/03/2019	LOCATION:	Stockpile	
TESTED BY:	BM	PREPARATION METHOD:	BS 1377:Part 1:1990 clause 7.3 & 7.4.5	
ORIENTATION OF TEST SPE	CIMEN	VARIATIONS:	No variations	
WITHIN ORIGINAL SPECIM	EN: N/A	TYPE OF SAMPLE:	Disturbed	

**RESULT:** 

		CONTRACT SPECIFICATION
BS TEST SIEVE	PERCENTAGE PASSING	GRADING LIMITS
mm	%	
125	100	
100	100	
90	100	
75	100	
63	100	
50	100	
37.5	100	
28	100	
20	100	
14	100	
10	100	
6.3	100	
5.0	100	
3.35	100	
2.00	100	
1.18	100	
0.600	100	
0.425	100	
0.300	100	
0.212	99	
0.150	93	
0.063	29	
0.020	18	
0.006	12	
0.002	10	

Remarks:

The material tested complies with the grading specification requirements stated above .

A particle density of (assumed) 2.65  $\rm Mg/m^3$  has been used in the hydrometer calculation

For and on behalf of CET

Remaining sample will be retained for a minimum of 28 days from date of report.

Page 1 of 2 Report Format: L/Rep S8a/2 Approved Signatory 03-Apr-19 Chris Davidson - Laboratory Manager Matt Oliver- Site Manager Dan Gay- Laboratory Supervisor Phil Mayhew - Operations Manager Matt Butt- Operations Supervisor



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CONTRACT OFFICIELCATION

# **CET** INFRASTRUCTURE Giving our all

TEST REPORT:	DETERMINATION OF THE PARTICLE SIZE DISTRIBUTION OF SOIL MATERIALS SEDIMENTATION BY THE HYDROMETER METHOD: BS 1377 : Part 2 : 1990 : clause 9.5 - Fine Grading by Hydrometer Method BS 1377 : Part 2 : 1990 : clause 9.2 - Wet Sieving Method
REPORT NUMBER:	491893 / 67020.5.1.1
ORGANIC MATTER CONTENT:	Less than 0.5%
PRETREATMENT FOR ORGANIC MATTER:	N/A



Percentage BOULDERS:	0%
Percentage COBBLES:	0%
Percentage GRAVEL:	0%
Percentage SAND:	71%
Percentage SILT:	19%
Percentage CLAY:	10%

Page 2 of 2 Report Format: L/Rep Hydro rev.2



TEST REPORT:	DETERMINATION OF THE PARTICLE SIZE DISTRIBUTION OF SOIL MATERIALS BS 1377 : Part 2 : 1990 : clause 9.2 : Wet Sieving Method BS 1377 : Part 2 : 1990 : clause 9.5 - Fine Grading by Hydrometer Method				
REPORT NUMBER:	491893 / 6702	0.11.1.1	CLIENT:	Murro	w AD Plant Ltd
SAMPLE NUMBER:	109539		ADDRESS:	Some	set Farm
CLIENT REFERENCE:	TP10 1.00		SITE:	Murro	w
DATE RECEIVED:	22/03/2019		SUPPLIER:	Detail	s Not Provided
DATE SAMPLED	Unknown		MATERIAL :	Browr	Silty Sandy Clay
SAMPLED BY:	Client		CLASSIFICATION:	Class 2	2A wet cohesive material
DATE TEST COMPLETED:	29/03/2019		LOCATION:	Stockp	bile
TESTED BY:	BM		PREPARATION METHOD:	В	S 1377:Part 1:1990 clause 7.3 & 7.4.5
ORIENTATION OF TEST SPECIMEN		VARIATIONS:	No variations		
WITHIN ORIGINAL SPECIMEN: N/A TYPE O			TYPE OF SAMPLE:	Distur	bed

RESULT:

		SPECIFICATION FOR HIGHWAY WORKS			
BS TEST SIEVE	PERCENTAGE PASSING	GRADING SPECIFICATION LIMITS			
mm	%				
125	100	100	- 100		
100	100				
90	100				
75	100				
63	100				
50	100				
37.5	100				
28	100				
20	100				
14	100				
10	100				
6.3	100				
5.0	100				
3.35	100				
2.00	100	80	- 100		
1.18	100				
0.600	100				
0.425	100				
0.300	100				
0.212	99				
0.150	99				
0.063	68	15	- 100		
0.020	48				
0.006	32				
0.002	22				

Remarks:

The material tested complies with the grading specification requirements stated above .

A particle density of (assumed) 2.65  $\rm Mg/m^3$  has been used in the hydrometer calculation

For and on behalf of CET

Remaining sample will be retained for a minimum of 28 days from date of report.

Page 1 of 2 Report Format: L/Rep S8a/2 Approved Signatory 03-Apr-19 Chris Davidson - Laboratory Manager Matt Oliver- Site Manager Dan Gay- Laboratory Supervisor Phil Mayhew - Operations Manager Matt Butt- Operations Supervisor



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TEST REPORT:	DETERMINATION OF THE PARTICLE SIZE DISTRIBUTION OF SOIL MATERIALS SEDIMENTATION BY THE HYDROMETER METHOD: BS 1377 : Part 2 : 1990 : clause 9.5 - Fine Grading by Hydrometer Method BS 1377 : Part 2 : 1990 : clause 9.2 - Wet Sieving Method
REPORT NUMBER:	491893 / 67020.11.1.1
ORGANIC MATTER CONTENT:	Less than 0.5%
PRETREATMENT FOR ORGANIC MATTER	N/A



Percentage BOULDERS:	0%
Percentage COBBLES:	0%
Percentage GRAVEL:	0%
Percentage SAND:	32%
Percentage SILT:	46%
Percentage CLAY:	22%

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TEST REPORT:	DETERMINATION OF THE PARTICLE SIZE DISTRIBUTION OF SOIL MATERIALS BS 1377 : Part 2 : 1990 : clause 9.2 : Wet Sieving Method BS 1377 : Part 2 : 1990 : clause 9.5 - Fine Grading by Hydrometer Method				
REPORT NUMBER:	491893 / 6702	0.13.1.1	CLIENT:	Murro	v AD Plant Ltd
SAMPLE NUMBER:	109541		ADDRESS:	Somer	set Farm
CLIENT REFERENCE:	TP08 1.00		SITE:	Murrow	
DATE RECEIVED:	): 22/03/2019		SUPPLIER:	Details Not Supplied	
DATE SAMPLED	AMPLED Unknown		MATERIAL :	Brown Silty Sandy Clay	
SAMPLED BY:	AMPLED BY: Client		CLASSIFICATION:	Class 2A wet cohesive material	
DATE TEST COMPLETED:	29/03/2019		LOCATION:	Stockpile	
TESTED BY:	BM		PREPARATION METHOD:	BS 1377:Part 1:1990 clause 7.3 & 7.4.5	
ORIENTATION OF TEST SPECIMEN		VARIATIONS:	No variations		
WITHIN ORIGINAL SPECIMEN: N/A		N/A	TYPE OF SAMPLE:	Disturbed	

RESULT:

		SPECIFICATION FOR HIGHWAY WORKS			
BS TEST SIEVE	PERCENTAGE PASSING	GRADING SPECIFICATION LIMITS			
mm	%				
125	100	100 - 100			
100	100				
90	100				
75	100				
63	100				
50	100				
37.5	100				
28	100				
20	100				
14	100				
10	100				
6.3	100				
5.0	100				
3.35	100				
2.00	100	80 - 100			
1.18	100				
0.600	100				
0.425	100				
0.300	100				
0.212	100				
0.150	99				
0.063	44	15 - 100			
0.020	28				
0.006	19				
0.002	15				

Remarks:

The material tested complies with the grading specification requirements stated above .

A particle density of (assumed) 2.65  $\rm Mg/m^3$  has been used in the hydrometer calculation

For and on behalf of CET

Remaining sample will be retained for a minimum of 28 days from date of report.

Page 1 of 2 Report Format: L/Rep S8a/2 Approved Signatory 03-Apr-19 Chris Davidson - Laboratory Manager Matt Oliver- Site Manager Dan Gay- Laboratory Supervisor Phil Mayhew - Operations Manager Matt Butt- Operations Supervisor



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TEST REPORT:	DETERMINATION OF THE PARTICLE SIZE DISTRIBUTION OF SOIL MATERIALS SEDIMENTATION BY THE HYDROMETER METHOD: BS 1377 : Part 2 : 1990 : clause 9.5 - Fine Grading by Hydrometer Method BS 1377 : Part 2 : 1990 : clause 9.2 - Wet Sieving Method
REPORT NUMBER:	491893 / 67020.13.1.1
ORGANIC MATTER CONTENT:	Less than 0.5%
PRETREATMENT FOR ORGANIC MATTER:	N/A



Percentage BOULDERS:	0%
Percentage COBBLES:	0%
Percentage GRAVEL:	0%
Percentage SAND:	56%
Percentage SILT:	29%
Percentage CLAY:	15%

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Waste Hazard Assessment Report. DETS Report Number: 19-04025.							
Sample Ref:	European Waste Catalogue (EWC) Code	Compliant with inert WAC?	Waste Acceptance	Asbestos Present?	Comments		
TP01 0.5m	17 05 04 Non-hazardous			Not Detected			
TP03 0.3m	17 05 04 Non-hazardous	No	Non-bazardous	Not Detected	Inert WAC threshold		
TP07 0.3m	17 05 04 Non-hazardous	NO	Non-nazaruous	Not Detected	Fluoride: 13mg/kg		
TP10 0.4m	17 05 04 Non-hazardous			Not Detected			
TP02 1.5m	17 05 04 Non-hazardous			Not Detected			
TP04 1.5m	17 05 04 Non-hazardous	Yes	Inert	Not Detected	-		
TP08 1.5m	17 05 04 Non-hazardous			Not Detected			
TP06 1.5m	17 05 04 Non-hazardous	Yes	Inert	Not Detected	-		
TP05 2.0m	17 05 04 Non-hazardous			Not Detected	Inert WAC		
TP09 2.0m	17 05 04 Non-hazardous	No	Non-hazardous	Not Detected	threshold exceeded: Sulphate:		
TP10 2.0m	17 05 04 Non-hazardous			Not Detected	2840mg/kg		



Simon Donne CET UK Ltd Northdown House Ashford Road Harrietsham Maidstone Kent ME17 1QW



DETS Ltd Unit 1 Rose Lane Industrial Estate Rose Lane Lenham Heath Kent ME17 2JN t: 01622 850410

## DETS Report No: 19-04025

Site Reference: Somerset Farm

**Project / Job Ref:** 491893

Order No: None Supplied

Sample Receipt Date: 20/03/2019

Sample Scheduled Date: 22/03/2019

Report Issue Number: 1

**Reporting Date:** 28/03/2019

Authorised by:

 $\mathbb{R}$ Land

Russell Jarvis Associate Director of Client Services

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Soil Analysis Certificate

#### **DETS Ltd** Unit 1, Rose Lane Industrial Estate Rose Lane Lenham Heath Maidstone Kent ME17 2JN Tel : 01622 850410



< 42

N/a

< 42

N/a

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DETS Report No: 19-04025			Date Sampled	18/03/19	18/03/19	18/03/19	18/03/19	18/03/19
CET UK Ltd			Time Sampled	None Supplied				
Site Reference: Somerset Farm			TP / BH No	TP01	TP03	TP07	TP10	TP02
Project / Job Ref: 491893		Additional Refs		None Supplied				
Order No: None Supplied			Depth (m)	50.00	0.30	0.30	0.40	1.50
Reporting Date: 28/03/2019		D	ETS Sample No	397256	397257	397258	397259	397260
Determinand	Unit	RL	Accreditation					
Asbestos Screen (S)	N/a	N/a	ISO17025	Not Detected				
pH	pH Units	N/a	MCERTS	7.4	7.4	7.5	7.7	7.8
Free Cyanide	mg/kg	< 2	NONE	< 2	< 2	< 2	< 2	< 2
W/S Sulphate as SO <sub>4</sub> (2:1)	mg/l	< 10	MCERTS	24	22	23	47	30
W/S Sulphate as SO <sub>4</sub> (2:1)	g/l	< 0.01	MCERTS	0.02	0.02	0.02	0.05	0.03
Total Organic Carbon (TOC)	%	< 0.1	MCERTS	2.6	3	3.6	2.8	0.5
Arsenic (As)	mg/kg	< 2	MCERTS	11	14	11	11	9
W/S Boron	mg/kg	< 1	NONE	< 1	< 1	< 1	< 1	< 1
Cadmium (Cd)	mg/kg	< 0.2	MCERTS	< 0.2	0.3	< 0.2	< 0.2	< 0.2
Chromium (Cr)	mg/kg	< 2	MCERTS	15	22	16	17	9
Chromium (hexavalent)	mg/kg	< 2	NONE	< 2	< 2	< 2	< 2	< 2
Copper (Cu)	mg/kg	< 4	MCERTS	8	12	10	14	4
Lead (Pb)	mg/kg	< 3	MCERTS	10	14	13	19	5
Mercury (Hg)	mg/kg	< 1	NONE	< 1	< 1	< 1	< 1	< 1
Nickel (Ni)	mg/kg	< 3	MCERTS	13	20	16	14	9
Selenium (Se)	mg/kg	< 3	NONE	< 3	< 3	< 3	< 3	< 3
Zinc (Zn)	mg/kg	< 3	MCERTS	36	53	47	57	25
Total Phenols (monohydric)	mg/kg	< 2	NONE	< 2	< 2	< 2	< 2	< 2
TPH - Aliphatic >C35 - C40	mg/kg	< 10	MCERTS	< 10	< 10	< 10	< 10	< 10
TPH - Aromatic >C35 - C40	mg/kg	< 10	MCERTS	< 10	< 10	< 10	< 10	< 10
TPH - Aliphatic / Aromatic (C6 - C40)	ma/ka	< 42	NONE	< 42	< 42	< 42	< 42	< 42

NONE

NONE

< 42

N/a

< 42

N/a

< 42

Typical of PAH

range organics

Analytical results are expressed on a dry weight basis where samples are assisted-dried at less than  $30^{\circ}$ C Subcontracted analysis (S)

- Total

Tentative Petroleum Type

< 42

N/a

mg/kg

N/a





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Soil Analysis Certificate								
DETS Report No: 19-04025			Date Sampled	18/03/19	18/03/19	18/03/19	18/03/19	18/03/19
CET UK Ltd			Time Sampled	None Supplied				
Site Reference: Somerset Farm			TP / BH No	TP04	TP08	TP06	TP05	TP09
Project / Job Ref: 491893			Additional Refs	None Supplied				
Order No: None Supplied			Depth (m)	1.50	1.50	1.50	2.00	2.00
Reporting Date: 28/03/2019		D	ETS Sample No	397261	397262	397263	397264	397265
Determinand	Unit	RL	Accreditation					
Asbestos Screen (S)	N/a	N/a	ISO17025	Not Detected				
pH	pH Units	N/a	MCERTS	8.0	8.1	7.6	8.0	7.8
Free Cyanide	mg/kg	< 2	NONE	< 2	< 2	< 2	< 2	< 2
W/S Sulphate as SO <sub>4</sub> (2:1)	mg/l	< 10	MCERTS	19	< 10	718	1500	49
W/S Sulphate as SO <sub>4</sub> (2:1)	g/l	< 0.01	MCERTS	0.02	< 0.01	0.72	1.50	0.05
Total Organic Carbon (TOC)	%	< 0.1	MCERTS	0.3	0.2	1.1	0.4	0.5
Arsenic (As)	mg/kg	< 2	MCERTS	6	6	18	9	5
W/S Boron	mg/kg	< 1	NONE	< 1	< 1	3.4	< 1	< 1
Cadmium (Cd)	mg/kg	< 0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Chromium (Cr)	mg/kg	< 2	MCERTS	6	6	32	7	11
Chromium (hexavalent)	mg/kg	< 2	NONE	< 2	< 2	< 2	< 2	< 2
Copper (Cu)	mg/kg	< 4	MCERTS	< 4	< 4	15	< 4	6
Lead (Pb)	mg/kg	< 3	MCERTS	< 3	< 3	15	4	5
Mercury (Hg)	mg/kg	< 1	NONE	< 1	< 1	< 1	< 1	< 1
Nickel (Ni)	mg/kg	< 3	MCERTS	6	6	33	7	11
Selenium (Se)	mg/kg	< 3	NONE	< 3	< 3	< 3	< 3	< 3
Zinc (Zn)	mg/kg	< 3	MCERTS	18	17	78	20	30
Total Phenols (monohydric)	mg/kg	< 2	NONE	< 2	< 2	< 2	< 2	< 2
TPH - Aliphatic >C35 - C40	mg/kg	< 10	MCERTS	< 10	< 10	< 10	< 10	< 10
TPH - Aromatic >C35 - C40	mg/kg	< 10	MCERTS	< 10	< 10	< 10	< 10	< 10
TPH - Aliphatic / Aromatic (C6 - C40) - Total	mg/kg	< 42	NONE	< 42	< 42	< 42	< 42	< 42

NONE

N/a

N/a

N/a

N/a

N/a

Analytical results are expressed on a dry weight basis where samples are assisted-dried at less than  $30^{\circ}$ C Subcontracted analysis (S)

N/a

N/a

Tentative Petroleum Type





Soil Analysis Certificate							
DETS Report No: 19-04025			Date Sampled	18/03/19			
CET UK Ltd			Time Sampled	None Supplied			
Site Reference: Somerset Farm			TP / BH No	TP10			
Project / Job Ref: 491893		1	Additional Refs	None Supplied			
Order No: None Supplied			Depth (m)	2.00			
Reporting Date: 28/03/2019	D	ETS Sample No	397266				
Determinand	Unit	RL	Accreditation		Ĩ.		Ā
Asbestos Screen (S)	N/a	N/a	ISO17025	Not Detected			
pH	pH Units	N/a	MCERTS	7.6			
Free Cyanide	mg/kg	< 2	NONE	< 2			
W/S Sulphate as SO <sub>4</sub> (2:1)	mg/l	< 10	MCERTS	368			
W/S Sulphate as SO <sub>4</sub> (2:1)	g/l	< 0.01	MCERTS	0.37			
Total Organic Carbon (TOC)	%	< 0.1	MCERTS	0.3			
Arsenic (As)	mg/kg	< 2	MCERTS	3			
W/S Boron	mg/kg	< 1	NONE	< 1			
Cadmium (Cd)	mg/kg	< 0.2	MCERTS	< 0.2			
Chromium (Cr)	mg/kg	< 2	MCERTS	9			
Chromium (hexavalent)	mg/kg	< 2	NONE	< 2			
Copper (Cu)	mg/kg	< 4	MCERTS	< 4			
Lead (Pb)	mg/kg	< 3	MCERTS	4			
Mercury (Hg)	mg/kg	< 1	NONE	< 1			
Nickel (Ni)	mg/kg	< 3	MCERTS	8			
Selenium (Se)	mg/kg	< 3	NONE	< 3			
Zinc (Zn)	mg/kg	< 3	MCERTS	24			
Total Phenols (monohydric)	mg/kg	< 2	NONE	< 2			
TPH - Aliphatic >C35 - C40	mg/kg	< 10	MCERTS	< 10			
TPH - Aromatic >C35 - C40	mg/kg	< 10	MCERTS	< 10			
TPH - Aliphatic / Aromatic (C6 - C40) - Total	mg/kg	< 42	NONE	< 42			
Tentative Petroleum Type	N/a	N/a	NONE	N/a			

Analytical results are expressed on a dry weight basis where samples are assisted-dried at less than  $30^{\circ}$ C Subcontracted analysis (S)





Soil Analysis Certificate	- Speciated PAHs							
DETS Report No: 19-0402	25		Date Sampled	18/03/19	18/03/19	18/03/19	18/03/19	18/03/19
CET UK Ltd			Time Sampled	None Supplied				
Site Reference: Somerset	t Farm	TP / BH No		TP01	TP03	TP07	TP10	TP02
Project / Job Ref: 491893	3	Additional Refs		None Supplied				
Order No: None Supplied			Depth (m)	50.00	0.30	0.30	0.40	1.50
Reporting Date: 28/03/2	019	D	ETS Sample No	397256	397257	397258	397259	397260
Determinand	Unit	RL	Accreditation					
Naphthalene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthylene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Fluorene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Phenanthrene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	0.18	< 0.1	< 0.1
Anthracene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Fluoranthene	mg/kg	< 0.1	MCERTS	0.16	0.17	0.75	0.18	0.13
Pyrene	mg/kg	< 0.1	MCERTS	0.15	0.15	0.65	0.15	< 0.1
Benzo(a)anthracene	mg/kg	< 0.1	MCERTS	0.43	0.42	0.70	0.42	< 0.1
Chrysene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	0.20	< 0.1	< 0.1
Benzo(b)fluoranthene	mg/kg	< 0.1	MCERTS	0.35	0.35	0.63	0.36	< 0.1
Benzo(k)fluoranthene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	0.16	< 0.1	< 0.1
Benzo(a)pyrene	mg/kg	< 0.1	MCERTS	0.16	0.16	0.37	0.17	< 0.1
Indeno(1,2,3-cd)pyrene	mg/kg	< 0.1	MCERTS	0.40	0.39	0.49	< 0.1	< 0.1
Dibenz(a,h)anthracene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(ghi)perylene	mg/kg	< 0.1	MCERTS	0.21	0.21	0.30	0.20	< 0.1
Coronene	mg/kg	< 0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Total Oily Waste PAHs	mg/kg	< 1	MCERTS	1.3	1.3	2.6	< 1	< 1
Total Dutch 10 PAHs	mg/kg	< 1	MCERTS	1.4	1.4	3.2	< 1	< 1
Total EPA-16 PAHs	mg/kg	< 1.6	MCERTS	1.8	1.8	4.4	< 1.6	< 1.6
Total WAC-17 PAHs	mg/kg	< 1.7	NONE	1.8	1.8	4.4	< 1.7	< 1.7





Soil Analysis Certificate	- Speciated PAHs							
DETS Report No: 19-0402	25		Date Sampled	18/03/19	18/03/19	18/03/19	18/03/19	18/03/19
CET UK Ltd			Time Sampled	None Supplied				
Site Reference: Somerset	Farm		TP / BH No	TP04	TP08	TP06	TP05	TP09
Project / Job Ref: 491893	3	Additional Refs		None Supplied				
Order No: None Supplied			Depth (m)	1.50	1.50	1.50	2.00	2.00
Reporting Date: 28/03/2	019	D	ETS Sample No	397261	397262	397263	397264	397265
Determinand	Unit	RL	Accreditation					
Naphthalene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthylene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Fluorene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Phenanthrene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Anthracene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Fluoranthene	mg/kg	< 0.1	MCERTS	0.13	< 0.1	0.15	0.16	< 0.1
Pyrene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	0.14	< 0.1
Benzo(a)anthracene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Chrysene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(b)fluoranthene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(k)fluoranthene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(a)pyrene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Indeno(1,2,3-cd)pyrene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Dibenz(a,h)anthracene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(ghi)perylene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Coronene	mg/kg	< 0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Total Oily Waste PAHs	mg/kg	< 1	MCERTS	< 1	< 1	< 1	< 1	< 1
Total Dutch 10 PAHs	mg/kg	< 1	MCERTS	< 1	< 1	< 1	< 1	< 1
Total EPA-16 PAHs	mg/kg	< 1.6	MCERTS	< 1.6	< 1.6	< 1.6	< 1.6	< 1.6
Total WAC-17 PAHs	mg/kg	< 1.7	NONE	< 1.7	< 1.7	< 1.7	< 1.7	< 1.7





Soil Analysis Certificate	- Speciated PAHs					
DETS Report No: 19-0402	25		Date Sampled	18/03/19		
CET UK Ltd			Time Sampled	None Supplied		
Site Reference: Somerset	Farm		TP / BH No	TP10		
Project / Job Ref: 491893	3	1	Additional Refs	None Supplied		
Order No: None Supplied			Depth (m)	2.00		
Reporting Date: 28/03/2	019	D	ETS Sample No	397266		
Determinand	Unit	RL	Accreditation		 	
Naphthalene	mg/kg	< 0.1	MCERTS	< 0.1		
Acenaphthylene	mg/kg	< 0.1	MCERTS	< 0.1		
Acenaphthene	mg/kg	< 0.1	MCERTS	< 0.1		
Fluorene	mg/kg	< 0.1	MCERTS	< 0.1		
Phenanthrene	mg/kg	< 0.1	MCERTS	< 0.1		
Anthracene	mg/kg	< 0.1	MCERTS	< 0.1		
Fluoranthene	mg/kg	< 0.1	MCERTS	< 0.1		
Pyrene	mg/kg	< 0.1	MCERTS	< 0.1		
Benzo(a)anthracene	mg/kg	< 0.1	MCERTS	< 0.1		
Chrysene	mg/kg	< 0.1	MCERTS	< 0.1		
Benzo(b)fluoranthene	mg/kg	< 0.1	MCERTS	< 0.1		
Benzo(k)fluoranthene	mg/kg	< 0.1	MCERTS	< 0.1		
Benzo(a)pyrene	mg/kg	< 0.1	MCERTS	< 0.1		
Indeno(1,2,3-cd)pyrene	mg/kg	< 0.1	MCERTS	< 0.1		
Dibenz(a,h)anthracene	mg/kg	< 0.1	MCERTS	< 0.1		
Benzo(ghi)perylene	mg/kg	< 0.1	MCERTS	< 0.1		
Coronene	mg/kg	< 0.1	NONE	< 0.1		
Total Oily Waste PAHs	mg/kg	< 1	MCERTS	< 1		
Total Dutch 10 PAHs	mg/kg	< 1	MCERTS	< 1		
Total EPA-16 PAHs	mg/kg	< 1.6	MCERTS	< 1.6		
Total WAC-17 PAHs	mg/kg	< 1.7	NONE	< 1.7		





Soil Analysis Certificate	e - TPH CWG Bande	d							
DETS Report No: 19-040	25		Date Sampled	18/03/19	18/03/19	18/03/19	18/03/19	18/03/19	
CET UK Ltd			Time Sampled	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied	
Site Reference: Somerse	t Farm		TP / BH No	TP01	TP03	TP07	TP10	TP02	
Project / Job Ref: 49189	ect / Job Ref: 491893			None Supplied	None Supplied	None Supplied	None Supplied	None Supplied	
Order No: None Supplied			Depth (m)	Depth (m) 50.00 0.30 0.30 0.40				1.50	
Reporting Date: 28/03/2	2019	D	ETS Sample No	397256	397256 397257 397258 397259				
Determinand	Unit	RL	Accreditation						
Aliphatic >C5 - C6	mg/kg	< 0.01	NONE	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	
Aliphatic >C6 - C8	mg/kg	< 0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	
Aliphatic >C8 - C10	mg/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2	
Aliphatic >C10 - C12	mg/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2	
Aliphatic >C12 - C16	mg/kg	< 3	MCERTS	< 3	< 3	< 3	< 3	< 3	
Aliphatic >C16 - C21	mg/kg	< 3	MCERTS	< 3	< 3	< 3	< 3	< 3	
Aliphatic >C21 - C34	mg/kg	< 10	MCERTS	< 10	< 10	< 10	< 10	< 10	
Aliphatic (C5 - C34)	mg/kg	< 21	NONE	< 21	< 21	< 21	< 21	< 21	
Aromatic >C5 - C7	mg/kg	< 0.01	NONE	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	
Aromatic >C7 - C8	mg/kg	< 0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	
Aromatic >C8 - C10	mg/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2	
Aromatic >C10 - C12	mg/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2	
Aromatic >C12 - C16	mg/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2	
Aromatic >C16 - C21	mg/kg	< 3	MCERTS	< 3	< 3	< 3	< 3	< 3	
Aromatic >C21 - C35	mg/kg	< 10	MCERTS	< 10	< 10	< 10	< 10	< 10	
Aromatic (C5 - C35)	mg/kg	< 21	NONE	< 21	< 21	< 21	< 21	< 21	
Total >C5 - C35	mg/kg	< 42	NONE	< 42	< 42	< 42	< 42	< 42	





Soil Analysis Certificate	e - TPH CWG Bande	d							
DETS Report No: 19-040	25		Date Sampled	18/03/19	18/03/19	18/03/19	18/03/19	18/03/19	
CET UK Ltd			Time Sampled	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied	
Site Reference: Somerset	t Farm	TP / BH No		TP04	TP08	TP06	TP05	TP09	
Project / Job Ref: 49189	3		Additional Refs	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied	
Order No: None Supplied			Depth (m)	1.50 1.50 1.50 2.00				2.00	
Reporting Date: 28/03/2	2019	D	ETS Sample No	397261	261 397262 397263 397264				
Determinand	Unit	RL	Accreditation						
Aliphatic >C5 - C6	mg/kg	< 0.01	NONE	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	
Aliphatic >C6 - C8	mg/kg	< 0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	
Aliphatic >C8 - C10	mg/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2	
Aliphatic >C10 - C12	mg/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2	
Aliphatic >C12 - C16	mg/kg	< 3	MCERTS	< 3	< 3	< 3	< 3	< 3	
Aliphatic >C16 - C21	mg/kg	< 3	MCERTS	< 3	< 3	< 3	< 3	< 3	
Aliphatic >C21 - C34	mg/kg	< 10	MCERTS	< 10	< 10	< 10	< 10	< 10	
Aliphatic (C5 - C34)	mg/kg	< 21	NONE	< 21	< 21	< 21	< 21	< 21	
Aromatic >C5 - C7	mg/kg	< 0.01	NONE	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	
Aromatic >C7 - C8	mg/kg	< 0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	
Aromatic >C8 - C10	mg/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2	
Aromatic >C10 - C12	mg/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2	
Aromatic >C12 - C16	mg/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2	
Aromatic >C16 - C21	mg/kg	< 3	MCERTS	< 3	< 3	< 3	< 3	< 3	
Aromatic >C21 - C35	mg/kg	< 10	MCERTS	< 10	< 10	< 10	< 10	< 10	
Aromatic (C5 - C35)	mg/kg	< 21	NONE	< 21	< 21	< 21	< 21	< 21	
Total >C5 - C35	mg/kg	< 42	NONE	< 42	< 42	< 42	< 42	< 42	





Soil Analysis Certificate	- TPH CWG Bande	d				
DETS Report No: 19-040	25		Date Sampled	18/03/19		
CET UK Ltd			Time Sampled	None Supplied		
Site Reference: Somerset	t Farm		TP / BH No	TP10		
Project / Job Ref: 49189	3	Additional Refs		None Supplied		
Order No: None Supplied			Depth (m)	2.00		
Reporting Date: 28/03/2019			ETS Sample No	397266		
Determinand	Unit	RL	Accreditation			
Aliphatic >C5 - C6	mg/kg	< 0.01	NONE	< 0.01		
Aliphatic >C6 - C8	mg/kg	< 0.05	NONE	< 0.05		
Aliphatic >C8 - C10	mg/kg	< 2	MCERTS	< 2		
Aliphatic >C10 - C12	mg/kg	< 2	MCERTS	< 2		
Aliphatic >C12 - C16	mg/kg	< 3	MCERTS	< 3		
Aliphatic >C16 - C21	mg/kg	< 3	MCERTS	< 3		
Aliphatic >C21 - C34	mg/kg	< 10	MCERTS	< 10		
Aliphatic (C5 - C34)	mg/kg	< 21	NONE	< 21		
Aromatic >C5 - C7	mg/kg	< 0.01	NONE	< 0.01		
Aromatic >C7 - C8	mg/kg	< 0.05	NONE	< 0.05		
Aromatic >C8 - C10	mg/kg	< 2	MCERTS	< 2		
Aromatic >C10 - C12	mg/kg	< 2	MCERTS	< 2		
Aromatic >C12 - C16	mg/kg	< 2	MCERTS	< 2		
Aromatic >C16 - C21	mg/kg	< 3	MCERTS	5		
Aromatic >C21 - C35	mg/kg	< 10	MCERTS	< 10		<u> </u>
Aromatic (C5 - C35)	mg/kg	< 21	NONE	< 21		
Total >C5 - C35	mg/kg	< 42	NONE	< 42		





Soil Analysis Certificate	- BIEX / MIBE							
DETS Report No: 19-0402	25		Date Sampled	18/03/19	18/03/19	18/03/19	18/03/19	18/03/19
CET UK Ltd			Time Sampled	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Site Reference: Somerset	t Farm		TP / BH No	TP01	TP03	TP07	TP10	TP02
Project / Job Ref: 491893	3		Additional Refs	onal Refs None Supplied None Supplied None Supplied None Supplied				None Supplied
Order No: None Supplied			<b>Depth (m)</b> 50.00 0.30 0.30 0.40		1.50			
Reporting Date: 28/03/2	019	D	ETS Sample No	397256	397257	397257 397258 397259		
Determinand	Unit	RL	Accreditation					
Benzene	ug/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2
Toluene	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5
Ethylbenzene	ug/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2
p & m-xylene	ug/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2
o-xylene	ug/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2
MTBE	ua/ka	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5





Soil Analysis Certificate	- BIEX / MIBE							
DETS Report No: 19-0402	25		Date Sampled	18/03/19	18/03/19	18/03/19	18/03/19	18/03/19
CET UK Ltd			Time Sampled	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Site Reference: Somerset	t Farm		TP / BH No	TP04	TP08	TP06	TP05	TP09
Project / Job Ref: 491893	3		Additional Refs	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Order No: None Supplied			Depth (m)	1.50	.50 1.50 1.50 2.00			2.00
Reporting Date: 28/03/2	019	D	ETS Sample No	397261	397262	7262 397263 397264		
Determinand	Unit	RL	Accreditation					
Benzene	ug/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2
Toluene	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5
Ethylbenzene	ug/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2
p & m-xylene	ug/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2
o-xylene	ug/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2
MTBE	ua/ka	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5





Soil Analysis Certificate	- BTEX / MTBE					
DETS Report No: 19-0402	25		Date Sampled	18/03/19		
CET UK Ltd		Time Sampled		None Supplied		
Site Reference: Somerset	t Farm	TP / BH No		TP10		
Project / Job Ref: 491893	3		Additional Refs	None Supplied		
Order No: None Supplied			Depth (m)	2.00		
Reporting Date: 28/03/2019 D			ETS Sample No	397266		
Determinand	Unit	RL	Accreditation			
Benzene	ug/kg	< 2	MCERTS	< 2		
Toluene	ug/kg	< 5	MCERTS	< 5		
Ethylbenzene	ug/kg	< 2	MCERTS	< 2		
p & m-xylene	ug/kg	< 2	MCERTS	< 2		
o-xylene	ug/kg	< 2	MCERTS	< 2		
MTBF	ua/ka	< 5	MCERTS	< 5		



Soil Analysis Certificate	- PCB (7 Congener	s)						
DETS Report No: 19-0402	25		Date Sampled	18/03/19	18/03/19	18/03/19	18/03/19	18/03/19
CET UK Ltd			Time Sampled	None Supplied				
Site Reference: Somerset	: Farm		TP / BH No	TP01	TP03	TP07	TP10	TP02
Project / Job Ref: 491893	3		Additional Refs	None Supplied				
Order No: None Supplied			Depth (m)	50.00	0.30	0.30	0.40	1.50
Reporting Date: 28/03/2019			ETS Sample No	397256	397257	397258	397259	397260
Determinand	Unit	RL	Accreditation					
PCB Congener 28	mg/kg	0.008	NONE	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
PCB Congener 52	mg/kg	0.008	NONE	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
PCB Congener 101	mg/kg	0.008	NONE	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
PCB Congener 118	mg/kg	0.008	NONE	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
PCB Congener 138	mg/kg	0.008	NONE	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
PCB Congener 153	mg/kg	0.008	NONE	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
PCB Congener 180	mg/kg	0.008	NONE	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
Total PCB (7 Congeners)	mg/kg	< 0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1



Soil Analysis Certificate	- PCB (7 Congener	s)						
DETS Report No: 19-0402	25		Date Sampled	18/03/19	18/03/19	18/03/19	18/03/19	18/03/19
CET UK Ltd			Time Sampled	None Supplied				
Site Reference: Somerset	: Farm		TP / BH No	TP04	TP08	TP06	TP05	TP09
Project / Job Ref: 491893	3		Additional Refs	None Supplied				
Order No: None Supplied			Depth (m)	1.50	1.50	1.50	2.00	2.00
Reporting Date: 28/03/2019			ETS Sample No	397261	397262	397263	397264	397265
Determinand	Unit	RL	Accreditation					
PCB Congener 28	mg/kg	0.008	NONE	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
PCB Congener 52	mg/kg	0.008	NONE	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
PCB Congener 101	mg/kg	0.008	NONE	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
PCB Congener 118	mg/kg	0.008	NONE	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
PCB Congener 138	mg/kg	0.008	NONE	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
PCB Congener 153	mg/kg	0.008	NONE	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
PCB Congener 180	mg/kg	0.008	NONE	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
Total PCB (7 Congeners)	mg/kg	< 0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1



Soil Analysis Certificate	<ul> <li>PCB (7 Congener</li> </ul>	s)						
DETS Report No: 19-0402	25		Date Sampled	18/03/19				
CET UK Ltd			Time Sampled	None Supplied				
Site Reference: Somerset	: Farm		TP / BH No	TP10				
Project / Job Ref: 491893	3		Additional Refs	None Supplied				
Order No: None Supplied			Depth (m)	2.00	2.00			
Reporting Date: 28/03/2019			ETS Sample No	397266				
Determinand	Unit	RL	Accreditation					
PCB Congener 28	mg/kg	: 0.008	NONE	< 0.008				
PCB Congener 52	mg/kg	: 0.008	NONE	< 0.008				
PCB Congener 101	mg/kg	: 0.008	NONE	< 0.008				
PCB Congener 118	mg/kg	: 0.008	NONE	< 0.008				
PCB Congener 138	mg/kg	: 0.008	NONE	< 0.008				
PCB Congener 153	mg/kg	: 0.008	NONE	< 0.008				
PCB Congener 180	mg/kg	0.008	NONE	< 0.008				
Total DCD (7 Congonard)		0.4	NONE	< 0.1				





Waste Acceptance Criteria A	nalytical Ce	ertificate - BS EN	12457/2					
DETS Report No: 19-04025		Date Sampled	18/03/19			Landfill Wast	e Acceptance (	Criteria Limits
CET UK Ltd		Time Sampled	None Supplied					
Site Reference: Somerset Farn	Site Reference: Somerset Farm TP / BH No		TP06				Stable Non-	
Project / Job Ref: 491893		Additional Refs	None Supplied			Inert Waste	reactive HAZARDOUS	Hazardous Waste
Order No: None Supplied		Depth (m)	1.50			Landfili	hazardous	Landfill
Reporting Date: 28/03/2019		DETS Sample No	397263				Lanum	
Determinand	Unit	MDL						
TOC <sup>MU</sup>	%	< 0.1	1.1			3%	5%	6%
Loss on Ignition	%	< 0.01	4.30					10%
BTEX <sup>MU</sup>	mg/kg	< 0.05	< 0.05			6		
Sum of PCBs	mg/kg	< 0.1	< 0.1			1		
Mineral Oil <sup>MU</sup>	mg/kg	< 10	< 10			500		
	mg/kg	< 1.7	< 1.7			100		
рН <sup>ми</sup>	pH Units	N/a	7.6				>6	
Acid Neutralisation Capacity	mol/kg (+/-)	< 1	< 1		 		To be evaluated	To be evaluated
			10:1		Cumulative	Limit values	for compliance	leaching test
Eluate Analysis			10.1		10:1	using BS E	N 12457-3 at l	L/S 10 l/kg
	-		mg/l		mg/kg		(mg/kg)	-
Arsenic <sup>u</sup>	1		< 0.01	ļ	< 0.1	0.5	2	25
Barium <sup>u</sup>			< 0.02		< 0.2	20	100	300
Cadmium <sup>U</sup>	1		< 0.0005		< 0.005	0.04	1	5
Chromium <sup>U</sup>			< 0.005		< 0.05	0.5	10	70
Copper <sup>U</sup>	1		< 0.01	ļ	< 0.1	2	50	100
Mercury <sup>U</sup>			< 0.0005		< 0.01	0.01	0.2	2
Molybdenum <sup>U</sup>	]		0.005		0.05	0.5	10	30
Nickel <sup>U</sup>			< 0.007		< 0.07	0.4	10	40
Lead <sup>U</sup>			< 0.005		< 0.05	0.5	10	50
Antimony <sup>U</sup>	]		< 0.0060		 < 0.06	0.06	0.7	5
Selenium <sup>u</sup>	]		< 0.005		< 0.05	0.1	0.5	7
Zinc <sup>u</sup>	1	I	< 0.005		< 0.05	4	50	200
Chloride <sup>U</sup>	1	I	11		107	800	15000	25000
Fluoride <sup>U</sup>	1	1	0.8		8	10	150	500
Sulphate <sup>U</sup>	1	1	94		938	1000	20000	50000
TDS	1	I	189		1891	4000	60000	100000
Phenol Index	1		< 0.01		< 0.1	1	-	-
DOC	1		15.6		156	500	800	1000
Leach Test Information	<u>E</u>	I	r					
	1			1				
		1 1	l'	1				
		·	r'	l				
			1					
Sample Mass (kg)		I	0.12	1				
Drv Matter (%)		I	72.9	1				
Moisture (%)			37.2					
Stage 1			57.2					
Volume Fluate I 10 (litres)			0.87					
			0.07	╏────┤				
			/'	╏────┤				
l			/'	╏────┤	 			
			·					





Waste Acceptance Criteria A	alytical Ce	ertificate - BS EN	12457/2					
DETS Report No: 19-04025		Date Sampled	18/03/19			Landfill Wast	e Acceptance	Criteria Limits
			None					
		Time Sampled	Supplied					
Site Reference: Somerset Farm	Site Reference: Somerset Farm TP / BH		Comp TP01,				Stable Non-	
			03, 07, 10				reactive	Unmudavia
Project / Job Ref: 491893		Additional Refs	Supplied			Inert Waste Landfill	HAZARDOUS waste in non-	Hazardous Waste Landfill
Order No: None Supplied		Depth (m)	None Supplied				hazardous Landfill	
Reporting Date: 28/03/2019		DETS Sample No	397267					
Determinand	Unit	MDL						
TOC <sup>MU</sup>	%	< 0.1	2.1			3%	5%	6%
Loss on Ignition	%	< 0.01	5.20					10%
BTEX <sup>MU</sup>	mg/kg	< 0.05	< 0.05			6		
Sum of PCBs	mg/kg	< 0.1	< 0.1			1		
	mg/kg	< 10	< 10			500		
	mg/kg	< 1.7	< 1./			100		
рп		IN/d	7.0				>0 To be	To be
Acid Neutralisation Capacity	mol/kg (+/-)	< 1	< 1				evaluated	evaluated
			10:1		Cumulative	Limit values	for compliance	leaching test
Eluate Analysis			10.1		10:1	using BS E	N 12457-3 at	L/S 10 l/kg
			mg/l		mg/kg		(mg/kg)	
Arsenic	-		< 0.01		< 0.1	0.5	2	25
Barium <sup>u</sup>	-		< 0.02		< 0.2	20	100	300
Cadmium			< 0.0005		< 0.005	0.04	1	5
<u>Chromium</u>	-		< 0.005		< 0.05	0.5	10	/0
Copper <sup>o</sup>	-		< 0.01		< 0.1	2	50	100
Mercury*			< 0.0005		< 0.01	0.01	0.2	2
Nickal <sup>U</sup>	-		< 0.003		< 0.03	0.3	10	40
	-		< 0.007		< 0.07	0.4	10	50
Antimony <sup>U</sup>			< 0.0060		< 0.06	0.06	0.7	5
Selenium <sup>U</sup>	-		< 0.005		< 0.05	0.1	0.5	7
Zinc <sup>U</sup>			0.010		0.10	4	50	200
Chloride <sup>U</sup>			< 1		< 10	800	15000	25000
Fluoride <sup>U</sup>			1.3		13	10	150	500
Sulphate <sup>U</sup>			4		37	1000	20000	50000
TDS			83		830	4000	60000	100000
Phenol Index			< 0.01		< 0.1	1	-	-
DOC			19.7		197	500	800	1000
Leach Test Information								
Sample Mass (kg)			0.11	 	ł			
Dry Matter (%)			84					
Moisture (%)			19.2					
Stage 1			13.2					
Volume Eluate L10 (litres)			0.88		l			
			0.00		ł			
					1			
					1			





Waste Acceptance Criteria A	nalytical Ce	ertificate - BS EN	12457/2					
DETS Report No: 19-04025		Date Sampled	18/03/19			Landfill Wast	e Acceptance (	Criteria Limits
CET UK Ltd		Time Sampled	None Supplied					
Site Reference: Somerset Farn	n	TP / BH No	Comp TP02, 04, 08				Stable Non-	
Project / Job Ref: 491893		Additional Refs	None Supplied			Inert Waste	reactive HAZARDOUS	Hazardous Waste
Order No: None Supplied		Depth (m)	None Supplied			Lanum	hazardous	Landfill
Reporting Date: 28/03/2019		DETS Sample No	397268					
Determinand	Unit	MDL		l				
TOC <sup>MU</sup>	%	< 0.1	0.3	1		3%	5%	6%
Loss on Tanition	%	< 0.01	0.90	1				10%
RTEV <sup>MU</sup>	ma/ka	< 0.05	< 0.05	1		6		
Sum of PCRs	ma/ka	< 0.1	< 0.1	1		1		
	mg/kg	< 10	< 10	1		- -		
	mg/kg	< 10	< 10	1		500		
Total PAH"	mg/ку	< 1./	< 1./	1		100		
pH <sup>MO</sup>	pH Units	in/a	7.9	1			>6	
Acid Neutralisation Capacity	mol/kg (+/-)	< 1	< 1		 		I O DE evaluated	To be evaluated
			10:1	ſ	Cumulative	Limit values	for compliance	leaching test
Eluate Analysis				<b>I</b> !	10:1	using BS E	N 12457-3 at l	_/S 10 l/kg
			mg/l		mg/kg		(mg/kg)	
Arsenic <sup>U</sup>	Γ		< 0.01		 < 0.1	0.5	2	25
Barium <sup>U</sup>			< 0.02		< 0.2	20	100	300
Cadmium <sup>U</sup>			< 0.0005		< 0.005	0.04	1	5
Chromium <sup>U</sup>	1		< 0.005		< 0.05	0.5	10	70
Conner <sup>U</sup>			< 0.01		< 0.1	2	50	100
Moreuny	1		< 0.0005	ł +	< 0.01	0.01	0.2	2
Melikhdonum <sup>U</sup>	1		0.0000	l I	0.01	0.01	10	30
	4		< 0.002	l	< 0.02	0.5	10	40
NICKEI	4		< 0.007	<b> </b>	 < 0.07	0.7	10	40 F0
	4		< 0.005	<b> </b>	 < 0.05	0.5	10	50
Antimony	1		< 0.0060	<b> </b> !	< 0.06	0.06	0.7	5
Selenium <sup>u</sup>	1		< 0.005	<b></b>	< 0.05	0.1	0.5	7
Zinc <sup>u</sup>			< 0.005	l l	< 0.05	4	50	200
Chlor <u>ide<sup>U</sup></u>			1	l!	 10	800	15000	25000
Fluoride <sup>U</sup>			0.6		6	10	150	500
Sulphate <sup>U</sup>	1		3		29	1000	20000	50000
TDS	1		62		620	4000	60000	100000
Phenol Index	1		< 0.01		< 0.1	1	-	-
	1		9.6	ł +	96.3	500	800	1000
Leach Test Information	<u>I</u>		5.0		50.5	200	000	1000
			ł	<b>r</b>				
	Į	<b> </b> /	ł	<b> </b>				
		<u> </u>	l	<b> </b>				
				<b>i</b> !				
			ł	<b> </b>				
· · · · · · · · · · · · · · · · · · ·			<b></b>	<b> </b> !				
Sample Mass (kg)			0.11	<b></b>				
Dry Matter (%)			83.8					
Moisture (%)			19.4					
Stage 1								
Volume Eluate L10 (litres)			0.88					
			1	l – – – – – – – – – – – – – – – – – – –				
			ł	l				
			<u> </u>	1	 L			





Waste Acceptance Criteria A	Analytical Ce	rtificate - BS EN	12457/2					
DETS Report No: 19-04025		Date Sampled	18/03/19			Landfill Wast	e Acceptance (	Criteria Limits
CET UK Ltd		Time Sampled	None Supplied					
Site Reference: Somerset Farm TP		TP / BH No	Comp TP05, 09,10				Stable Non-	
Project / Job Ref: 491893		Additional Refs	None Supplied			Inert Waste	reactive HAZARDOUS	Hazardous Waste
Order No: None Supplied		Depth (m)	None Supplied			Lanuilli	hazardous	Landfill
Reporting Date: 28/03/2019		DETS Sample No	397269				Lunain	
Determinand	Unit	MDL						
TOC <sup>MU</sup>	%	< 0.1	0.5			3%	5%	6%
Loss on Ignition	%	< 0.01	1.70					10%
BTEX <sup>MU</sup>	mg/kg	< 0.05	< 0.05			6		
Sum of PCBs	mg/kg	< 0.1	< 0.1			1		
Mineral Oil <sup>MU</sup>	mg/kg	< 10	< 10			500		
	mg/kg	< 1.7	< 1.7			100		
pH <sup>™U</sup>	pH Units	N/a	7.5				>6	
Acid Neutralisation Capacity	mol/kg (+/-)	< 1	1	-			To be evaluated	To be evaluated
			10:1		Cumulative	Limit values	for compliance	leaching test
Eluate Analysis					10:1	using BS E	N 12457-3 at I	./S 10 I/kg
!!			mg/1		mg/kg	<u>م د</u>	(mg/kg)	25
Arsenic	4		< 0.01		< 0.1	0.5	2	25
Barium	4		0.03		0.3	20	100	300
Cadmium	4		< 0.0005		< 0.005	0.04	1	5
Chromium	4		< 0.005		< 0.05	0.5	10	/0
Copper	4		< 0.01		< 0.1	2	50	100
Mercury	4		< 0.0005		< 0.01	0.01	0.2	2
Molybdenum	4		< 0.001	 	< 0.01	0.5	10	30
Nickel	4		< 0.007		< 0.07	0.4	10	40
Lead <sup>u</sup>	4		< 0.005		< 0.05	0.5	10	50
Antimony	1		< 0.0060		< 0.06	0.06	0.7	5
Selenium <sup>u</sup>			< 0.005		< 0.05	0.1	0.5	7
Zinc <sup>U</sup>	]		< 0.005		< 0.05	4	50	200
Chloride <sup>u</sup>	]		4	 	39	800	15000	25000
Fluoride <sup>U</sup>	1		< 0.5	 	< 5	10	150	500
Sulphate <sup>U</sup>	]		284		2840	1000	20000	50000
TDS	]		339		3390	4000	60000	100000
Phenol Index	]		< 0.01		< 0.1	1	-	
DOC	1		4.2		41.6	500	800	1000
Leach Test Information				 				
	1							
	1							
Sample Mass (kg)			0.12					
Dry Matter (%)			78.2					
Moisture (%)			28					
Stage 1					İ			
Volume Eluate L10 (litres)			0.88		İ			
			0.00		t			
			1		İ			
			1		I			





Soil Analysis Certificate - Sample Descriptions	
DETS Report No: 19-04025	
CET UK Ltd	
Site Reference: Somerset Farm	
Project / Job Ref: 491893	
Order No: None Supplied	
Reporting Date: 28/03/2019	

DETS Sample No	TP / BH No	Additional Refs	Depth (m)	Moisture Content (%)	Sample Matrix Description
397256	TP01	None Supplied	50.00	17.8	Brown loamy sand
397257	TP03	None Supplied	0.30	18.9	Brown loamy clay
397258	TP07	None Supplied	0.30	21.2	Brown loamy sand
397259	TP10	None Supplied	0.40	15.8	Brown loamy sand
397260	TP02	None Supplied	1.50	15.2	Brown sandy clay
397261	TP04	None Supplied	1.50	16.5	Light brown loamy sand
397262	TP08	None Supplied	1.50	18.4	Brown sand
397263	TP06	None Supplied	1.50	27	Brown loamy clay
397264	TP05	None Supplied	2.00	22.8	Brown sandy clay
397265	TP09	None Supplied	2.00	24.5	Brown sandy clay
397266	TP10	None Supplied	2.00	18.2	Brown sandy clay
397267	Comp TP01, 03, 07, 10	None Supplied	None Supplied	16	Brown loamy sand with vegetation
397268	Comp TP02, 04, 08	None Supplied	None Supplied	16.2	Light brown sandy clay
397269	Comp TP05, 09,10	None Supplied	None Supplied	21.8	Brown sandy clay

Moisture content is part of procedure E003 & is not an accredited test Insufficient Sample  $^{\rm VS}$  Unsuitable Sample  $^{\rm VS}$ 





Soil Analysis Certificate - Methodology & Miscellaneous Information
DETS Report No: 19-04025
CET UK Ltd
Site Reference: Somerset Farm
Project / Job Ref: 491893
Order No: None Supplied
Reporting Date: 28/03/2019

Matrix	Analysed	Determinand	Brief Method Description	Method
Soil		Boron - Wator Solubla	Determination of water coluble boron in coil by 2/1 bet water extract followed by ICD OEC	E012
Soil		BTEY	Determination of RTEV by backpace GCMS	E012
Soil		DILA	Determination of prices in call by ague regin direction followed by ICD OES	E001
Soil		Chlorida Water Soluble (2:1)	Determination of caloris in soil by aduartegia digestion rollowed by ICP-OES	E002
5011	D	Chioride - Water Soluble (2:1)	Determination of choreceles determine in cell by contracting in where the by contracting of the second	E009
Soil	AR	Chromium - Hexavalent	1,5 diphenylcarbazide followed by colorimetry	E016
Soil	AR	Cyanide - Complex	Determination of complex cyanide by distillation followed by colorimetry	E015
Soil	AR	Cyanide - Free	Determination of free cyanide by distillation followed by colorimetry	E015
Soil	AR	Cyanide - Total	Determination of total cyanide by distillation followed by colorimetry	E015
Soil	D	Cyclohexane Extractable Matter (CEM)	Gravimetrically determined through extraction with cyclohexane	E011
Soil	AR	Diesel Range Organics (C10 - C24)	Determination of hexane/acetone extractable hydrocarbons by GC-FID	E004
Soil	AR	Electrical Conductivity	Determination of electrical conductivity by addition of saturated calcium sulphate followed by electrometric measurement	E022
Soil	AR	Electrical Conductivity	Determination of electrical conductivity by addition of water followed by electrometric measurement	E023
Soil	D	Elemental Sulphur	Determination of elemental sulphur by solvent extraction followed by GC-MS	E020
Soil	AR	EPH (C10 – C40)	Determination of acetone/hexane extractable hydrocarbons by GC-FID	E004
Soil	AR	EPH Product ID	Determination of acetone/hexane extractable hydrocarbons by GC-FID	E004
		EPH TEXAS (C6-C8, C8-C10, C10-C12,	Determination of acetone/hexane extractable hydrocarbons by GC-FID for C8 to C40, C6 to C8 by	
Soil	AR	C12-C16, C16-C21, C21-C40)	headspace GC-MS	E004
Soil	D	Fluoride - Water Soluble	Determination of Eluoride by extraction with water & analysed by ion chromatography	F009
5011	D		Determination of fraction of organic carbon water at univsed by the chromotography	2005
Soil	D	FOC (Fraction Organic Carbon)	titration with iron (II) subhate	E010
Soil	D	Loss on Ignition @ 450oC	furnace	E019
Soil	D	Magnesium - Water Soluble	Determination of water soluble magnesium by extraction with water followed by ICP-OES	E025
Soil	D	Metals	Determination of metals by aqua-regia digestion followed by ICP-OES	E002
Soil	AR	Mineral Oil (C10 - C40)	Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge	E004
Soil	AR	Moisture Content	Moisture content; determined gravimetrically	E003
Soil	D	Nitrate - Water Soluble (2:1)	Determination of nitrate by extraction with water & analysed by ion chromatography	E009
Soil	D	Organic Matter	Determination of organic matter by oxidising with potassium dichromate followed by titration with iron (II) sulphate	E010
Soil	AR	PAH - Speciated (EPA 16)	Determination of PAH compounds by extraction in acetone and hexane followed by GC-MS with the use of surrogate and internal standards	E005
Soil	AR	PCB - 7 Congeners	Determination of PCB by extraction with acetone and hexane followed by GC-MS	E008
Soil	D	Petroleum Ether Extract (PEE)	Gravimetrically determined through extraction with petroleum ether	E011
Soil	AR	pĤ	Determination of pH by addition of water followed by electrometric measurement	E007
Soil	AR	Phenols - Total (monohydric)	Determination of phenols by distillation followed by colorimetry	E021
Soil	D	Phosphate - Water Soluble (2:1)	Determination of phosphate by extraction with water & analysed by ion chromatography	E009
Soil	D	Sulphate (as SO4) - Total	Determination of total sulphate by extraction with 10% HCl followed by ICP-OES	E013
Soil	D	Sulphate (as SO4) - Water Soluble (2:1)	Determination of sulphate by extraction with water & analysed by ion chromatography	E009
Soil	D	Sulphate (as SO4) - Water Soluble (2:1)	Determination of water soluble sulphate by extraction with water followed by ICP-OES	E014
Soil	AR	Sulphide	Determination of sulphide by distillation followed by colorimetry	E018
Soil	D	Sulphur - Total	Determination of total sulphur by extraction with aqua-regia followed by ICP-OES	E024
Soil	AR	SVOC	Determination of semi-volatile organic compounds by extraction in acetone and hexane followed by GC-MS	E006
Soil	AR	Thiocyanate (as SCN)	Determination of thiocyanate by extraction in caustic soda followed by acidification followed by addition of ferric nitrate followed by colorimetry	E017
Soil	D	Toluene Extractable Matter (TEM)	Gravimetrically determined through extraction with toluene	F011
5011	D		Determination of organic matter by oxidising with potassium dichromate followed by titration with	LUII
Soil	D	Total Organic Carbon (TOC)	iron (II) sulphate	E010
Soil	AR	TPH CWG (ali: C5- C6, C6-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C34, aro: C5-C7, C7-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C35)	Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge for C8 to C35. C5 to C8 by headspace GC-MS	E004
Soil	AR	TPH LQM (ali: C5-C6, C6-C8, C8-C10, C10-C12, C12-C16, C16-C35, C35-C44, aro: C5-C7, C7-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C35, C35-C44)	Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge for C8 to C44. C5 to C8 by headspace GC-MS	E004
Soil	AR	VOCs	Determination of volatile organic compounds by headspace GC-MS	E001
Soil	AR	VPH (C6-C8 & C8-C10)	Determination of hydrocarbons C6-C8 by headspace GC-MS & C8-C10 by GC-FID	E001

D Dried