

TAMESIDE MBC

ASHTON MOSS

**FACTUAL REPORT ON
GROUND INVESTIGATION**

Contract: 42171

Date: November 2018

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**FACTUAL REPORT ON
GROUND INVESTIGATION**

carried out at

ASHTON MOSS

Prepared for

TAMESIDE MBC
Ashton Market Hall
Market Street
Ashton-under-Lyne
OL6 7JU

Contract No: 42171

Date: November 2018

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1.0 INTRODUCTION

- 1.1 On the instructions of Tameside MBC with Arup acting as Consulting Engineers, a ground investigation was undertaken to determine ground and groundwater conditions at the site.
- 1.2 This report has been prepared for the sole use of the Client for the purpose described and no extended duty of care to any third party is implied or offered. Third parties using any information contained within this report do so at their own risk.
- 1.3 Any comments given in this report and the opinions expressed herein are based on the information received, the conditions encountered during site works, and on the results of tests made in the field and laboratory. However, there may be conditions prevailing at the site which have not been disclosed by the investigation and which have not been taken into account in the report.
- 1.4 Groundwater observations may be made at the time the site work was carried out or during subsequent monitoring. It should be noted that groundwater levels may vary outside the limits of these observations due to seasonal or other effects.

2.0 THE SITE

2.1 Site Location

- 2.1.1 The site is situated off Lord Sheldon Way in Ashton-under-Lyne.
- 2.1.2 The site may be located by National Grid Reference SJ 919 988.
- 2.1.3 A site location plan is included in Appendix 1, Figure A1.1.

2.2 Site Description

- 2.2.1 At the time of the investigation the site was an area of raised/mounded wasteland covered by overgrown grass and shrub. Areas of standing water were located across the site along with several informal footpaths. Drains followed part of the north and northwest boundaries of the site and across the western part of the site, running northwest to southeast.
- 2.2.2 The site was bound to the north by a railway line, to the east by M60 Motorway, to the south by Lord Sheldon Way and to the northwest, west and southwest by residential properties.
- 2.2.3 A site plan is included in Appendix 1 as Figure A1.2.

3.0 SITE WORK

- 3.1 Before commencement of the site works an ecology study was carried out by Ecology Services Limited in relation to the presence of great crested newt on site. The results of the ecological report are presented in Appendix 2.
- 3.2 The site work was carried out between the 9th and 27th April 2018. The locations of exploratory holes were indicated by the Engineer.
- 3.3 The site works were carried out on the basis of the practices set out in and BS 5930:2015 (ref. 5.1), BS EN ISO 14688-1:2002+A1:2013 (ref. 5.2) and BS 10175:2011, (ref. 5.3).
- 3.4 Exploratory holes were undertaken as follows:
- ARP-BH101 to ARP-BH106 and ARP-BH108 to ARP-BH112: Cable percussion boreholes
 - ARP-WS101, ARP-WS101A, ARP-WS102, ARP-WS103 and ARP-BH107: Windowless sample boreholes
- 3.5 Site plans showing the positions of the exploratory holes are presented in Appendix 1 as Figure A1.2 and A1.3.
- 3.6 The depths of exploratory holes, descriptions of strata encountered and comments on groundwater conditions are presented on the records in Appendix 3.
- 3.7 A Cable Avoidance Tool (CAT) survey was undertaken at each exploratory hole location prior to excavation. At the location of boreholes an inspection pit was excavated by hand to a depth of 1.20m below ground level to check for buried services.
- 3.8 Representative disturbed and undisturbed samples were taken at the depths shown on the exploratory hole records. Samples for environmental purposes were collected in appropriate containers and kept in cool boxes for daily despatch to the analytical laboratory.
- 3.9 Standard penetration tests (SPT) (ref. 5.3) were carried out in boreholes in the various strata to assess the relative density or consistency. The values of penetration resistance are presented on the borehole records. Energy ratio calibration certification for SPT hammers used on site are presented in Appendix 3.
- 3.10 Perforated standpipes, surrounded by pea shingle were installed in boreholes ARP-BH101, ARP-BH102, ARP-BH104 to ARP-BH112, ARP-WS102 and ARP-WS03. The standpipes were protected at surface by cylindrical stand up covers. The details of the installations are presented on the borehole records in Appendix 3.
- 3.11 Gas and groundwater monitoring was carried out after completion of the site works and the results are presented in Appendix 6. Gas taps were left open on the instruction of the Engineer on visits after 6th July 2018.

- 3.12 The ground levels and co-ordinates reported on the records were determined by survey to OS datum and National Grid by GPS methods.

4.0 LABORATORY TESTS

4.1 Geotechnical Testing

- 4.1.1 Schedules for geotechnical testing were prepared by Arup.
- 4.1.2 Soil samples for testing were prepared in accordance with BS1377: Part One: 1990 (ref. 5.5) and representative sub-samples were taken for testing. The following tests were carried out:
- Moisture content
 - Plasticity indices
 - Particle size distribution by wet sieving
 - Particle size distribution by pipette analysis
 - Particle density by pycnometer
 - Particle density by gas jar
 - Oedometer consolidation
 - BRE SD1 suite C
- 4.1.3 The results of the soil tests are presented in Appendix 4, Test Reports 42171/2 and GEO/27518.
- 4.1.4 The results of the BRE SD1 suite C tests are presented in Appendix 4, Test Report 18/04259.

4.2 Chemical Testing

- 4.2.1 Schedules for chemical testing were prepared by Arup.
- 4.2.2 Chemical analysis was carried out on samples of soil. The nature of the analysis is detailed below:
- 4.2.3 **Suite E** - arsenic, cadmium, chromium (total and hexavalent), copper, lead, mercury, nickel, selenium, zinc, antimony, beryllium, vanadium, cyanide (total), pH, boron (water soluble), phenols (total) and total organic carbon
- 4.2.4 **Additional** – asbestos (presence and quantification), total petroleum hydrocarbons (TPHCWG), BTEX, polyaromatic hydrocarbons (PAH) – USEPA 16 suite, volatile organic compounds (VOC), semi-volatile organic compounds (SVOC) and waste acceptance criteria testing (WAC)
- 4.2.5 The results of chemical analysis on soil samples are presented in Appendix 5, Test Reports 18/02990, 18/03064, 18/03153 and 18/03369.

5.0 REFERENCES

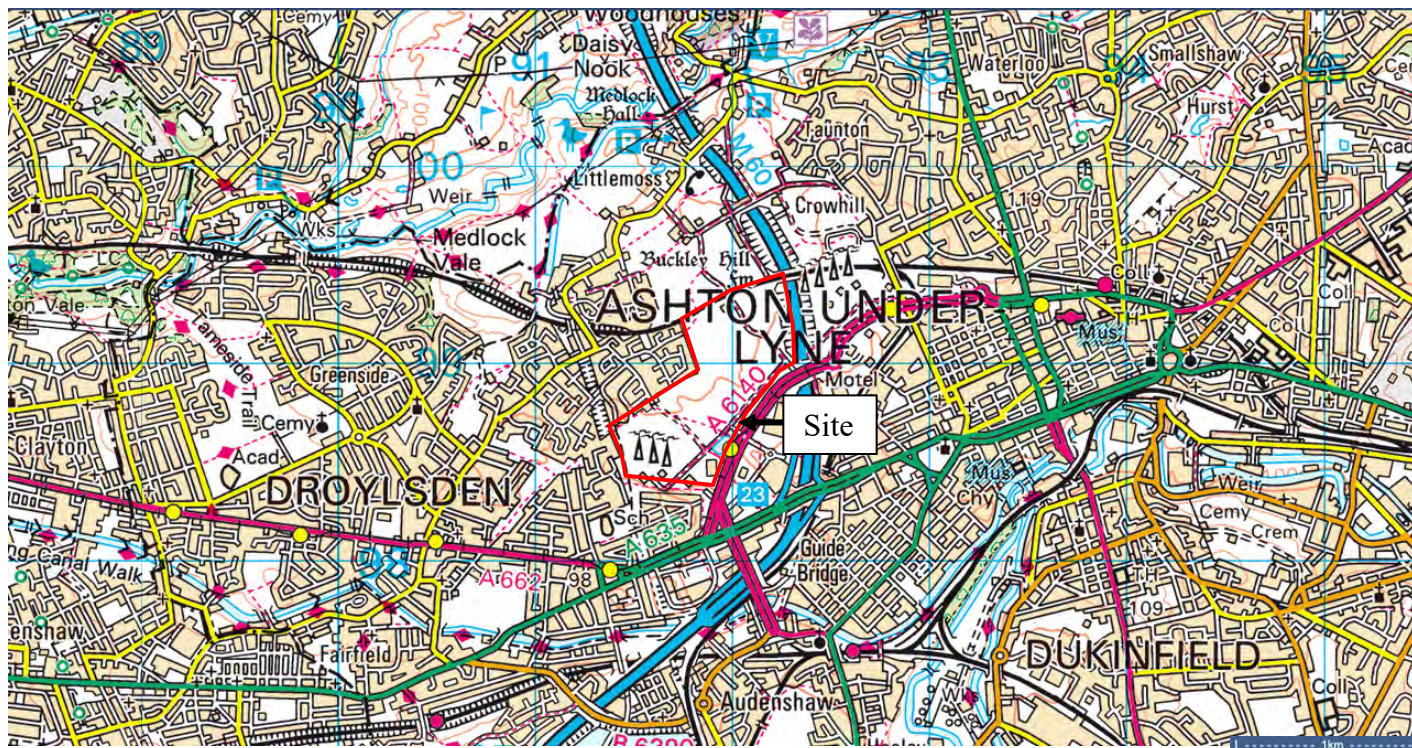
- 5.1 British Standards Institution: BS 5930:2015 'Code of practice for ground investigations.' BSI 2015.
- 5.2 British Standards Institution: BS EN ISO 14688-1:2002+A1:2013. 'Geotechnical investigation and testing – Identification and Classification of Soil – Part 1 Identification and description.' BSI 2013.
- 5.3 British Standards Institute: BS 10175 'The investigation of potentially contaminated sites. Code of practice', BSI:2011+A2:2017.
- 5.4 British Standards Institute: BS EN ISO 22476-3: 2005 + A1: 2011. 'Geotechnical investigation and testing. Field testing. Standard penetration test.'
- 5.5 British Standard 1377:1990, Part 1-9, 'Methods of Test for Soils for Civil Engineering Purposes'.

For and on behalf of Ian Farmer Associates (1998) Limited


BSc FGS
Senior Engineering Geologist


BSc (Hons) FGS
Director

APPENDIX 1
DRAWINGS



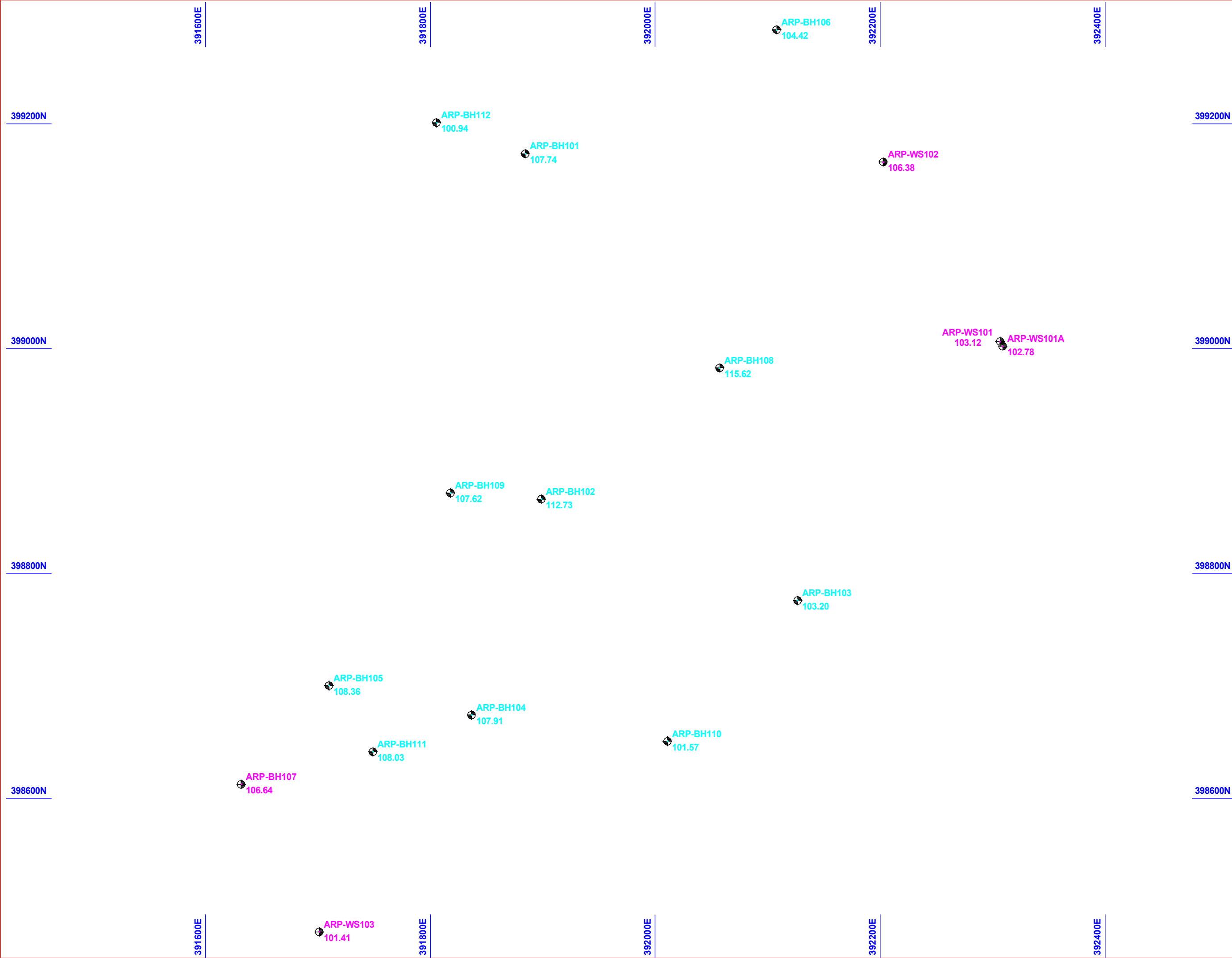
PROJECT: Ashton Moss

FIGURE No. A1.1.

SCALE: As Indicated

TITLE: Site Location Plan





Key: heights refer to code with same colour

WS(Window sample)

CBH
CP
(Cable Percussive)



Site Surveying Services - A.M.I.C.E.S.

Scale 1:7

Grindleton Business Centre

Grindleton, BB7 4DH

Tel: 01209 438320

Paul7082376328

www.ifsurvey.co.uk

Level Engineering, Surveys

Client: Ian Farmer Associates

PROJECT: 44449

Setting Out & Control Surveys

Topographer/ Volumetric Surveys

GPS Specialists using also

GPS Post Process to tie any site

to OS without trig point or BM

Construction Line Registered

TSA member

FIGURE No. A1.2

TITLE: Exploratory Hole Location Plan

Additional Comments:
To use this figure it is essential that you contact us for details

Drawn By: [Signature]

Checked By: [Signature]

Date: 28/04/2018

Revision: A

Scale 1:3000, A3

Project Id: 42171
Project Title: Ashton Moss
Location:
Client: Tameside Metropolitan Council

Title: A1.3 Site Plan
Scale: 1:5000
Engineer: MHW
Contractor: Tameside Metropolitan Council



- Legend Key
- Locations By Type - Empty
 - ▼ Locations By Type - WLS
 - ⊕ Locations By Type - CP



APPENDIX 2
ECOLOGICAL REPORT



Ian Farmer Associates

Non-licensed Avoidance Measures for the protection of great crested newt (*Triturus cristatus*) at Ashton Moss, Manchester.

Date:	29 th March 2018
Project Ref:	18026
Written by:	[REDACTED] - Senior Consultant Ecologist
Checked by:	[REDACTED] - Consultant Ecologist
Approved by:	[REDACTED] - Senior Consultant Ecologist

Introduction

Ecology Services Limited was commissioned by Ian Farmer Associated in March 2018, to consider whether reasonable avoidance measures can be utilised for the protection of great crested newt in relation to 14 locations requiring ground investigation (GI) works at Ashton Moss, Ashton-under-Lyne, Manchester, OL6 7UB; National Grid Reference; (NGR) 391924, 398835;

An extended Phase 1 habitat survey of the site was carried out on the 20th of February 2018 to provide an up to date ecological assessment of the site to review areas where the proposed GI works are to be undertaken, to identify any potential ecological constraints relating to these and great crested newt.

The survey found a number of ponds and drainage ditches with aquatic vegetation which could provide suitable breeding habitat for great crested newts. The survey also concluded that many of the proposed GI works locations support suitable terrestrial habitat for great crested newts including rough grassland, marginal vegetation and scattered scrub.

The desk study identified 6 records of great crested newt within approximately 1km of the site. The closest of these records pertains to a pond located approximately 260m north of the site. A single record pertains to a location to the south of the site, approximately 830m to the south-west. It must be noted amphibian surveys of the ponds or ditches have not been undertaken and as such, the status of great crested newt at the site is currently unknown.

In view of the presence of suitable aquatic and terrestrial habitat within the site and records of great crested newts in the vicinity of the site, it is considered possible that great crested newts could be using the site during aquatic and terrestrial phases, and furthermore, could be encountered during the GI works.

Following a further site visit to discuss the locations in more detail, it has been agreed that it may be possible to move some or all of the GI locations to less sensitive areas so they can be classified as low risk; i.e. located in sub-optimal great crested newt habitat. By ensuring that the GI works are carefully located in a low risk environment, it is considered that additional non-licensed avoidance measures can be adopted resulting in a negligible risk of an offence being committed. Any GI locations that are considered to be high risk that cannot be re-located into less favourable habitats will be delayed until the presence or absence of great crested newt can be determined by undertaking amphibian surveys of all suitable aquatic habitats within 250m of those works.

The Rapid Risk Assessment below is based upon a worst case scenario with the assumption that all works will be undertaken within suitable terrestrial habitats within 100m of a breeding pond and with the GI working areas affecting a total of no less than 0.07ha of suitable terrestrial habitat.

Table 1: Natural England's Rapid Risk Assessment (RRA) prior to the introduction of non-licensed avoidance measures.

Component	Likely effect (select one for each component; select the most harmful option if more than one is likely; lists are in order of harm, top to bottom)	Notional offence probability score
Great crested newt breeding pond(s)	No effect	0
Land within 100m of any breeding pond(s)	0.01 - 0.1 ha lost or damaged	0.3
Land 100-250m from any breeding pond(s)	No effect	0
Land >250m from any breeding pond(s)	No effect	0
Individual great crested newts	Killing or injuring newts	0.8
Maximum:		0.8
Rapid risk assessment result:	RED: OFFENCE HIGHLY LIKELY	

"Red: offence highly likely" indicates that the development activities are of such a type, scale and location that an offence is highly likely. In this case, you should attempt to re-design the development location, layout, timing, methods or duration in order to avoid impacts (see **Non-licensed avoidance measures tool**), and re-run the risk assessment. You may also wish to run a site-specific risk assessment to check that this is a valid conclusion. If you cannot avoid the offences, then a licence should be applied for.

In the absence of implementation of any non-licensed avoidance measures, it is considered that the works would result in temporary destruction of habitat and that individual great crested newts could be killed or injured within terrestrial habitats. On this basis the Rapid Risk Assessment resulted in a Red level indicating that an offence was highly likely.

The rapid risk assessment tool has been developed as a general guide only, and it is inevitably rather simplistic. It has been generated by examining where impacts occurred in past mitigation projects, alongside recent research on newt ecology.

In particular, the following risk factors are not included for sake of simplicity, though they will often have an important role in determining whether an offence would occur: population size, terrestrial habitat quality, presence of dispersal barriers, timing and duration of works, detailed layout of development in relation to preferred newt resting, scale of development, construction methods, and dispersal habitats.

Non-licensed Avoidance Measures

The following non-licensed avoidance measures have been designed to reduce the risk of an offence. The following shall be strictly adhered to at all times and incorporated into the contractors working Method Statement:

- All works to be carried out during the breeding season when great crested newts are less likely to be encountered within terrestrial habitats, March – July inclusive.
- All site personnel shall be subject to a toolbox talk prior to any works, so that they are fully aware of great crested newt, the legal protection afforded to them, identification and the proposed non-licensed avoidance measures.
- All GI locations will be located either on areas of hard standing, bare ground or within grassland with minimal tussock or thatch. These will be agreed with the Ecological Clerk of Works (ECoW) in advance of the works commencing each day.
- The routes taken to access the GI locations shall follow existing tracks or pathways through the site. The routes shall be identified and checked by the ECoW prior to works commencing each day.

- Access to the site should be on foot whenever this is reasonably possible and follow the designated routes.
- Any welfare units and non-essential vehicles required to be left overnight shall be located on areas of hard standing as agreed with the ECoW.
- Any compound areas are to be located on hard standing as agreed with the ECoW.
- For GI locations in grassland habitats with minimal tussock or thatch, once they are deemed to be free of great crested newts by the ECoW, shall be strimmed to a height of six inches prior to any works starting to reduce the habitat suitability further. All arisings shall be raked off and placed in areas where no further work is proposed. They shall be checked each day prior to works commencing.
- No earth piles will be left on the ground overnight.
- Storage of any materials, if required, is to be on pallets and on areas of hard standing or removed at the end of the day. No materials will be stored within areas of suitable great crested newt terrestrial habitat.
- All open pits are to be covered with boards overnight and tightly sealed with sand around the edges to prevent the chance of amphibians becoming trapped. These will be checked the following day prior to works commencing.
- Personnel shall stay within the agreed working areas and when leaving site, shall follow the designated route as searched by the ECoW on that day.
- If at any time a great crested newt is found or suspected, all works shall stop immediately and advice sought from the ECoW.

These avoidance measures have been designed to ensure that individual newts are not affected and has been based on the works being undertaken when great crested newt are less likely to be encountered within terrestrial habitats, March – July inclusive.

The Rapid Risk Assessment below is given after the above non-licensed avoidance measures have been implemented. This also includes moving GI locations to areas where the terrestrial habitat is considered to be sub-optimal for great crested newt, i.e. located on bare ground or to within grassland with minimal tussock or thatch and where possible, located over 100m from aquatic habitats.

Table 2: Natural England's Rapid Risk Assessment (RRA) following the Introduction of non-licensed avoidance measures and whilst working in grassland with minimal tussock or thatch structure.

Component	Likely effect (select one for each component; select the most harmful option if more than one is likely; lists are in order of harm, top to bottom)	Notional offence probability score
Great crested newt breeding pond(s)	No effect	0
Land within 100m of any breeding pond(s)	0.001 - 0.01 ha lost or damaged	0.05
Land 100-250m from any breeding pond(s)	0.001 - 0.01 ha lost or damaged	0.005
Land >250m from any breeding pond(s)	No effect	0
Individual great crested newts	Minor disturbance of newts	0.5
		Maximum:
		0.5
Rapid risk assessment result:	AMBER: OFFENCE LIKELY	

"Amber: offence likely" indicates that the development activities are of such a type, scale and location that an offence is likely. In this case, the best option is to redesign the development (location, layout, methods, duration or timing; see **Non-licensed avoidance measures tool**) so that the effects are minimised. You can do this and then re-run the risk assessment to test whether the result changes, or preferably run your own detailed site-specific assessment. Bear in mind that this generic risk assessment will over- or under-estimate some risks because it cannot take into account site-specific details, as mentioned in caveats above. In particular, the exact location of the

development in relation to resting places, dispersal areas and barriers should be critically examined. Once you have amended the scheme you will need to decide if a licence is required; this should be done if on balance you believe an offence is reasonably likely.

Implementation non-licensed avoidance measures found the Rapid Risk Assessment to result in Amber: indicating that an offence was likely. This is down to a single factor, potential minor disturbance of newts during strimming vegetation to a height of 6 inch.

Natural England produced guidance for land managers in 2007, see attached. The guidance stated that “common activities that are very unlikely to result in offences include – mowing grassland that has minimal tussock or thatch structure and mowing most grass swards to a height of c15cm (6 inch)”. We have contacted Natural England who confirmed that the 2007 advice still stands.

Taking this into account the ‘Minor disturbance of newts’ can be reduced to ‘No effect’, please see the revised rapid risk assessment below, which results in a Green: Offence Highly Unlikely.

Rapid Risk Assessment (RRA) following the Introduction of non-licensed avoidance measures.

Table 3: Natural England’s Rapid Risk Assessment

Component	Likely effect (select one for each component; select the most harmful option if more than one is likely; lists are in order of harm, top to bottom)	Notional offence probability score
Great crested newt breeding pond(s)	No effect	0
Land within 100m of any breeding pond(s)	0.001 - 0.01 ha lost or damaged	0.05
Land 100-250m from any breeding pond(s)	0.001 - 0.01 ha lost or damaged	0.005
Land >250m from any breeding pond(s)	No effect	0
Individual great crested newts	No effect	0
Maximum:		0.05
Rapid risk assessment result:	GREEN: OFFENCE HIGHLY UNLIKELY	

"Green: offence highly unlikely" indicates that the development activities are of such a type, scale and location that it is highly unlikely any offence would be committed should the development proceed. Therefore, no licence would be required. However, bearing in mind that this is a generic assessment, you should carefully examine your specific plans to ensure this is a sound conclusion, and take precautions (**see Non-licensed avoidance measures tool**) to avoid offences if appropriate. It is likely that any residual offences would have negligible impact on conservation status, and enforcement of such breaches is unlikely to be in the public interest.

It is therefore considered that with adherence to the non-licensed avoidance measures that the proposed development can proceed, avoiding impacts to great crested newt.

If during the works a great crested newt is suspected or found at any time, all works must stop immediately and Ecology Services Ltd must be contacted for advice. If a great crested newt is found then all works would be delayed until surveys and a Natural site specific Low Impact Class Licence (LICL) is obtained, to permit derogation from the protection afforded to great crested newt.

These avoidance measures have been designed based on the development being undertaken during the months of March to July, when amphibians are active and generally within aquatic habitats. If works are likely to overrun this period or change in any way, then the avoidance measures will need to be reviewed. If it is not possible to adopt all of the aforementioned non-licensed avoidance measures, then up to date amphibian surveys will be required to fully evaluate the potential effects upon great crested newt.

The above comments represent the professional opinion of an ecologist and do not constitute

professional legal advice. You may wish to seek professional legal interpretation of the relevant wildlife legislation.

This report has been produced by Senior Consultant Ecologist [REDACTED] on behalf of Ecology Services Ltd.

Should you require any further information on any of our services, or have any queries, please do not hesitate to contact me.

APPENDIX 3

SITE WORK

APPENDIX 3

GENERAL NOTES ON SITE WORKS

A3.1 SITE WORK

A3.1.1 Light Cable Percussion Boring

For routine soil exploration to depths in excess of 3m, the light cable percussion rig is generally employed for boring through soils and weak rocks. It consists of a powered winch and tripod frame, with running wheels that are permanently attached so that the rig may be towed behind a suitable vehicle. The rig is towed into position and set up using its own winching system.

The locations of services are checked to make sure the borehole is not situated unacceptably near any services. Regardless of the proximity of services, a CAT scan is undertaken at the borehole location and a trial hole dug to 1.20m by hand.

Boreholes are advanced in soil by the percussive action of the cable tool. The force of the cylindrical tool as it is dropped a short distance cuts a plug of cohesive soil that is removed by the tool.

In non-cohesive soils, the borehole is advanced by a 'shell', otherwise known as a 'bailer' or 'sand pump', which incorporates a clack valve. Material is transferred into the shell and retained by the clack valve. The water level in a borehole is maintained above that in the surrounding granular soil to allow for temporary reductions in the head of water as the shell is withdrawn from the borehole. Water should flow from the borehole into the surrounding soil at all times to prevent 'piping' and loosening the soil at the base of the hole. The casing is always advanced with the borehole in granular soil so that material is drawn from the base rather than the borehole sides.

Obstructions to boring are overcome by fitting a serrated chiselling ring to the base of the percussion tool. For large obstructions, a heavy chisel with a hardened cutting edge may have to be used.

Disturbed samples are taken in polythene bags, jars or tubs that are sealed against air or water loss.

Undisturbed samples are generally taken in cohesive materials at changes in strata and at one metre intervals to 5 metres then at 1.5 metre intervals to the full depths of the borehole. The general purpose open-tube sampler is suitable for firm to stiff clays, but is often used to retrieve disturbed samples of weak rocks, soft or hard clay and also clayey sand or silts. This has been adopted for routine use, and usually consists of a 100mm internal diameter tube (U100), which is capable of taking soil samples up to 450mm in length. The undisturbed samples are sealed at each end using micro-crystalline wax to prevent drying.

Standard penetration tests are generally carried out in non-cohesive soils but also in stiff clays and soft rocks at frequencies similar to that of undisturbed sampling.

A3.1.2 Drive-in Window Sampler

The drive-in window sampler consists of a series of cylindrical sample tubes, generally varying in diameter from 80mm to 35mm. A cutting shoe is fitted to the bottom of each tube, while a window, representing about a quarter of the circumference, is cut along the length of the tube.

The largest diameter tube is driven into the ground using a small vibrating breaker. The sample tube is extracted by means of a ratchet or hydraulic extraction system.

The borehole is extended by using progressively smaller diameter tubes.

Soil samples are extracted through the window of the tube.

A3.2 IN-SITU TESTS

A3.2.1 Standard Penetration Test

The Standard Penetration Test is carried out in accordance with the proposals recommended in ref 5.3.

The standard penetration test, **SPT**, covers the determination of the resistance of soils to the penetration of a split barrel sampler. A 50mm diameter split barrel sampler is driven 450mm into the soil using a 65kg hammer with a 760mm drop. The penetration resistance is expressed as the number of blows required to obtain 300mm penetration below an initial seating drive of 150mm through any disturbed ground at the bottom of the borehole. The number of blows to achieve the standard penetration of 300mm is reported as the 'N' value.

The test is generally carried out in fine soils, however, it may also be carried out in coarse granular soils, weak rocks and glacial tills using the same procedure as for the SPT but with a 50mm diameter, 60° apex solid cone replacing the split spoon sampler, **CPT**.

When attempting the standard penetration test in very dense material or weathered rocks it may be necessary to terminate the test before completion to prevent damage to the equipment. In these circumstances it is important to distinguish how the blow count relates to the penetration of the sampler. This may be achieved in the following manner:

- Where the seating drive has been completed, the test drive is terminated if 50 blows are reached before the full penetration of 300mm is achieved. The penetration for 50 blows is recorded and an approximate N value obtained by linear extrapolation of the number of blows for the partial test drive.
- If the seating drive of 150mm is not achieved within the first 25 blows, the penetration after 25 blows is recorded and the test drive then commenced.
- For tests in soft rocks, the test drive should be terminated after 100 blows where the penetration of 300mm has not been achieved.

The N-value obtained from the Standard Penetration Test may be used to assess the relative density of sands and gravels as follows:

Term	SPT N-Value : Blows/300mm Penetration
Very Loose	0 - 4
Loose	4 - 10
Medium Dense	10 - 30
Dense	30 - 50
Very Dense	Over 50

A3.3 SAMPLES

U(x)	represents undisturbed 100mm diameter sample with (x) being the number of blows required to obtain sample.
U NR	indicates undisturbed sample not recovered
HV	represents Hand Vane test with equivalent undrained shear strength
B	represents large bulk disturbed samples
D	represents small disturbed sample
ES	represents environmental sample
W	represents water sample
<u>∇</u>	represents water strike
▼	represents level to which water rose

A3.4 DESCRIPTION OF SOILS

A3.4.1 General

The procedures and principles given in BS EN ISO 14688-1:2002+A1:2013 (ref. 5.2) and BS 5930:2015 (ref. 5.1) have been used in the soil descriptions contained within this report.

SPT Hammer Energy Test Report

in accordance with BSEN ISO 22476-3:2005

ARCHWAY ENGINEERING
AINLEYS INDUSTRIAL ESTATE
ELLAND
WEST YORKSHIRE
HX5 9JP

SPT Hammer Ref: AR1806
Test Date: 14/03/2018
Report Date: 14/03/2018
File Name: AR1806.spt
Test Operator: RM

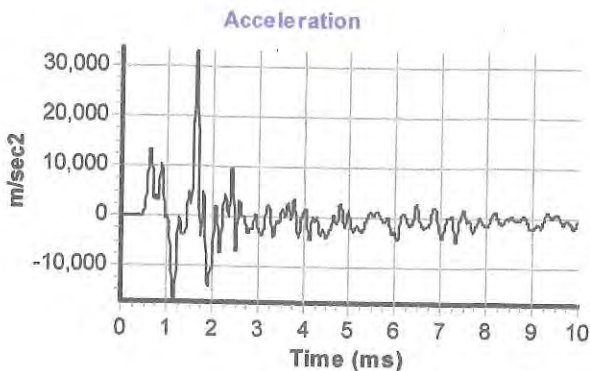
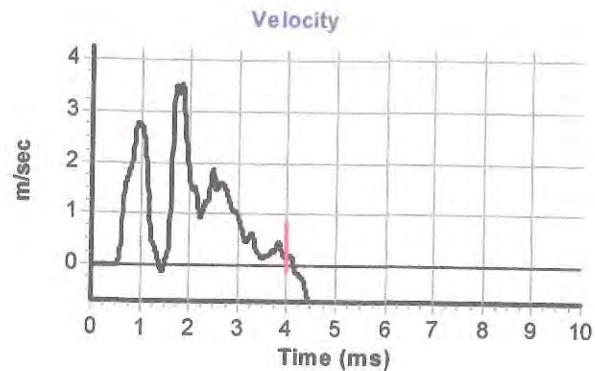
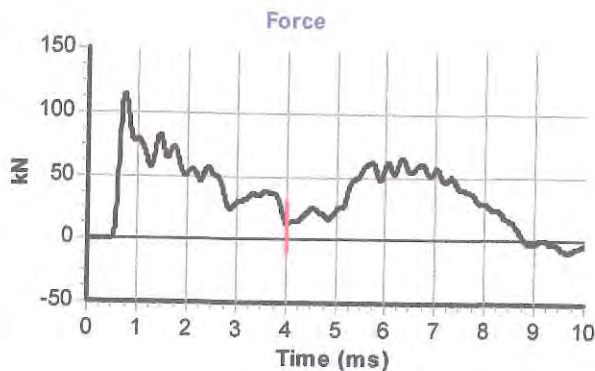
Instrumented Rod Data

Diameter d_r (mm): 54
Wall Thickness t_r (mm): 6.3
Assumed Modulus E_a (GPa): 200
Accelerometer No.1: 7080
Accelerometer No.2: 11609

SPT Hammer Information

Hammer Mass m (kg): 63.5
Falling Height h (mm): 760
SPT String Length L (m): 10.0

Comments / Location



Calculations

Area of Rod A (mm^2): 944
Theoretical Energy E_{theor} (J): 473
Measured Energy E_{meas} (J): 267

Energy Ratio E_r (%): **56**

Signed: [Redacted]
Title: FITTER

The recommended calibration interval is 12 months

SPT Hammer Energy Test Report

in accordance with BSEN ISO 22476-3:2005

ARCHWAY ENGINEERING
AINLEYS INDUSTRIAL ESTATE
ELLAND
WEST YORKSHIRE
HX5 9JP

SPT Hammer Ref: AR1559
Test Date: 14/03/2018
Report Date: 14/03/2018
File Name: AR1559.spt
Test Operator: RM

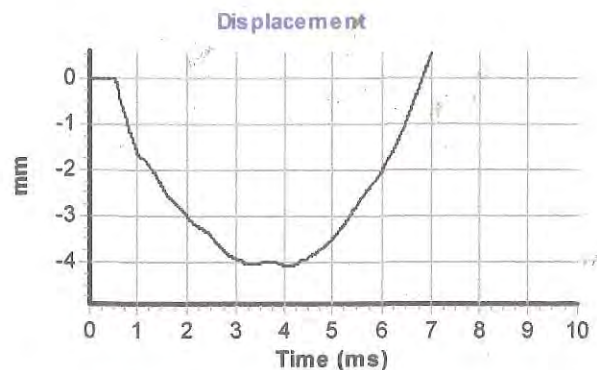
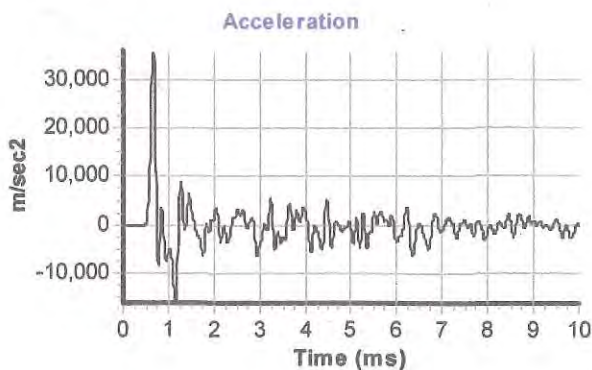
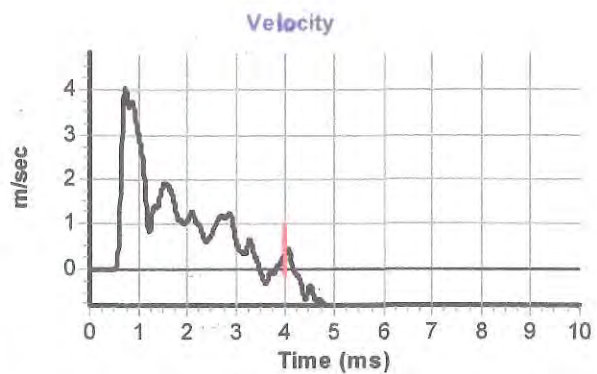
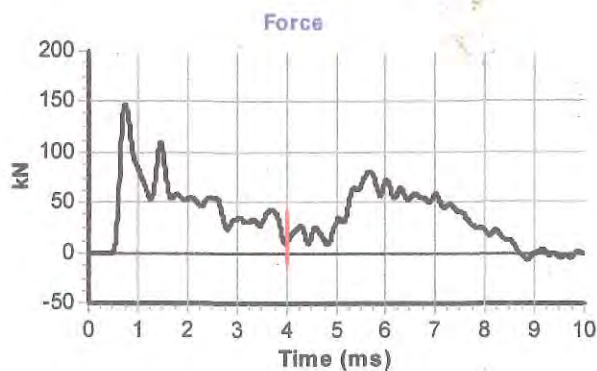
Instrumented Rod Data

Diameter d_r (mm): 54
Wall Thickness t_r (mm): 6.3
Assumed Modulus E_a (GPa): 200
Accelerometer No.1: 7080
Accelerometer No.2: 11609

SPT Hammer Information

Hammer Mass m (kg): 63.5
Falling Height h (mm): 760
SPT String Length L (m): 10.0

Comments / Location



Calculations

Area of Rod A (mm²): 944
Theoretical Energy E_{theor} (J): 473
Measured Energy E_{meas} (J): 287

Energy Ratio E_r (%): **61**

Signed: [Redacted]
Title: FITTER

The recommended calibration interval is 12 months



Hammer Energy Test Report

in accordance with BSEN ISO 22476-3:2005

Dynamic sampling uk ltd
6-8 victory parkway
victory road
Derby
DE24 8ZF

Hammer Ref: 110.45
Test Date: 26/06/2017
Report Date: 26/06/2017
File Name: 110.45.spt
Test Operator: TP

Instrumented Rod Data

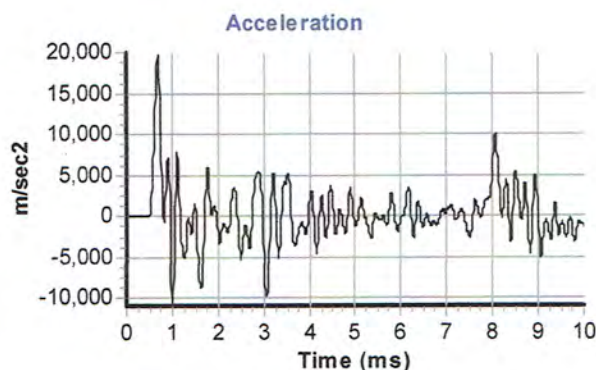
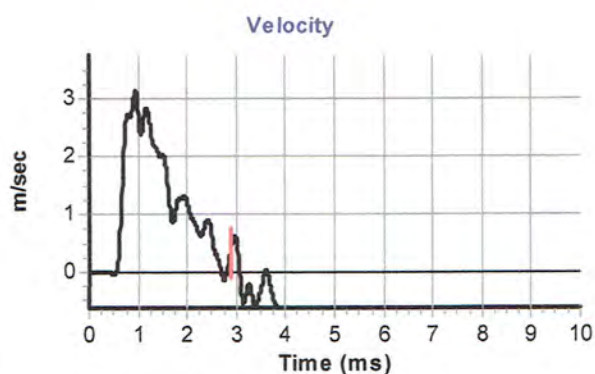
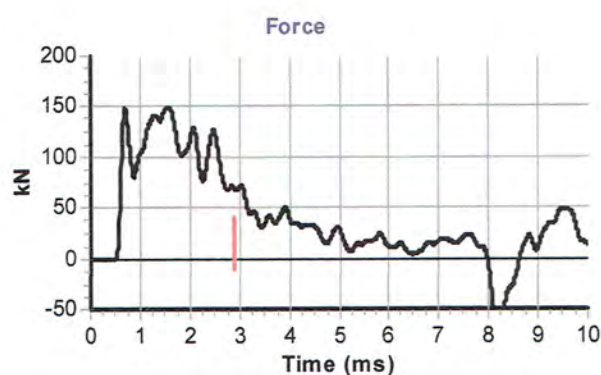
Diameter d_r (mm): 54
Wall Thickness t_r (mm): 6.9
Assumed Modulus E_a (GPa): 208
Accelerometer No.1: 6455
Accelerometer No.2: 6457

Hammer Information

Hammer Mass m (kg): 63.5
Falling Height h (mm): 760
String Length L (m): 15.0

Comments / Location

Hammer tested at Dynamic samplings yard.



Calculations

Area of Rod A (mm²): 1021
Theoretical Energy E_{theor} (J): 473
Measured Energy E_{meas} (J): 399

Energy Ratio E_r (%): **84**

Title: Associate Director.

The recommended calibration interval is 12 months

SPT Hammer Energy Test Report

in accordance with BSEN ISO 22476-3:2005

ARCHWAY ENGINEERING
AINLEYS INDUSTRIAL ESTATE
ELLAND
WEST YORKSHIRE
HX5 9JP

SPT Hammer Ref: DART416
Test Date: 30/08/2017
Report Date: 30/08/2017
File Name: DART416.spt
Test Operator: SH

Instrumented Rod Data

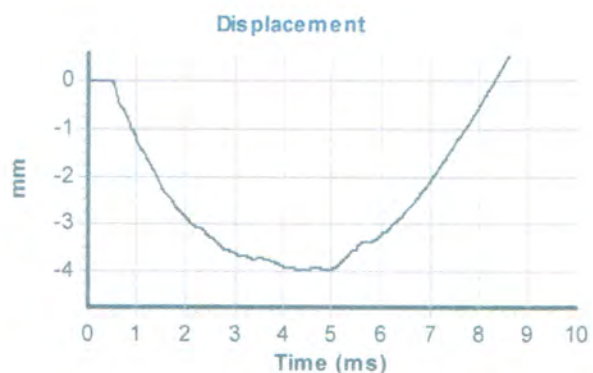
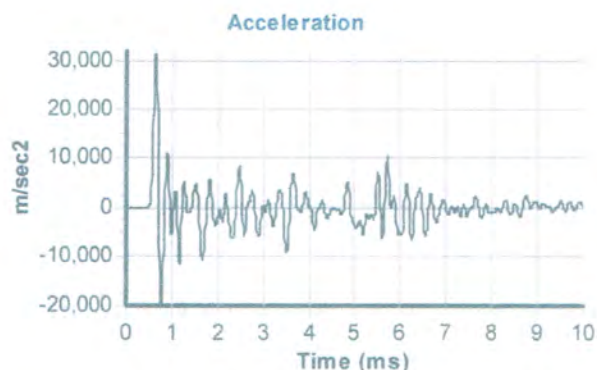
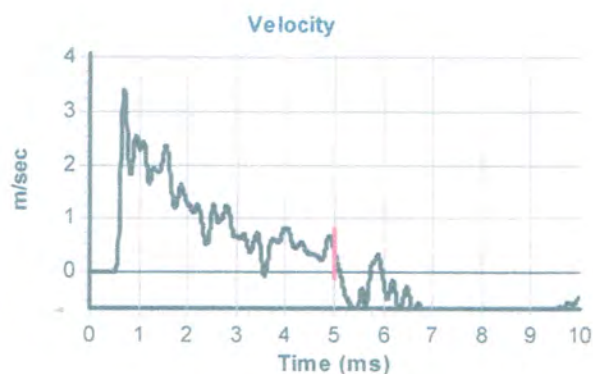
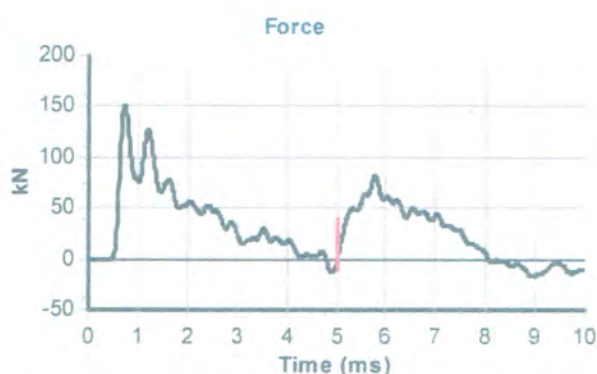
Diameter d_r (mm): 54
Wall Thickness t_r (mm): 6.0
Assumed Modulus E_a (GPa): 208
Accelerometer No.1: 7080
Accelerometer No.2: 11609

SPT Hammer Information

Hammer Mass m (kg): 63.5
Falling Height h (mm): 760
SPT String Length L (m): 10.0

Comments / Location

CALIBRATION



Calculations

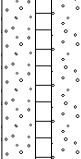
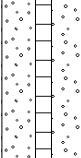
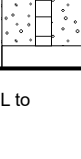
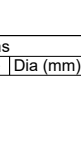
Area of Rod A (mm^2): 905
Theoretical Energy E_{theor} (J): 473
Measured Energy E_{meas} (J): 336

Energy Ratio E_r (%): **71**

Signed: [Redacted]
Title: FITTER

The recommended calibration interval is 12 months

		Plant used: Cable percussion rig		Project: Ashton Moss			Location ID: ARP-BH101	
		Dates: 23/04/2018		Client: Tameside Metropolitan Council			Sheet 1 of 3	
Cable Percussion Borehole Log		Location: 391884.24E 399173.30N		Ground level: 107.74mOD		Logged by: 		Vertical scale: 1:50
								Project ID: 42171

Samples & In Situ Testing			Strata Details				Groundwater	
Depth	Sample ID	Test Result	Level (mAOD)	Depth (m) (Thickness)	Strata Description	Legend	Water Strike	Backfill/ Installation
0.00 - 1.20 0.00	B1	PID=0.0ppm			MADE GROUND: Medium dense, brown, mottled orange, clayey, very sandy GRAVEL with high cobble content, low boulder content and occasional pockets of clay. Gravel is angular to subrounded, fine to coarse including concrete and rare brick. Cobbles are angular to subangular including concrete and brick. Boulders are subangular of concrete.			
1.00	ES2	SPT(C) N=18 (2,3/3,4,3,8)		(1.65)				
1.20 - 1.65 1.20	B3	PID=0.0ppm	106.09	1.65	MADE GROUND: Loose, brown and black mottled, clayey, very gravelly, fine to coarse SAND with high cobble content, occasional fragments of wood and with some fine fibres. Gravel is angular to subangular, fine to coarse including sandstone, concrete, brick and occasional slag. Cobbles are angular to subangular including sandstone, concrete and brick.			
2.00	ES5	SPT(C) N=7 (2,1/2,1,2,2)		(1.35)				
2.00 - 2.45 2.00	B6	PID=2.2ppm			MADE GROUND: Firm, grey mottled black, sandy, gravelly CLAY with frequent pockets of black moderately decomposed amorphous peat, probably H5, B2, F2, R0, W0, N0, A0 and P1. Gravel is angular to subrounded, fine to coarse including sandstone, brick and concrete.			
3.00	ES7	SPT(S) N=4 (1,1/0,1,1,2)	104.74	3.00				
3.00 - 3.45 3.00	B8 D9	PID=0.0ppm	104.24	3.50	MADE GROUND: Dark brown, oxidising to black, very slightly decomposed, mainly coarse fibrous PEAT with some fine fibres and amorphous material. H3, B2, F1, R3, W2, A0 and P0.			
4.00	ES10	SPT(S) N=3 (1,0/1,0,1,1)		(1.00)				
4.00 - 4.45 4.00 - 4.45 4.00	B11 D12	PID=0.4ppm	103.24	4.50	MADE GROUND: Firm, stiff in places, brown mottled grey, slightly sandy, slightly gravelly CLAY with some pockets of black, very slightly to slightly decomposed fibrous and amorphous peat, probably H3-4, B2, F2, R0, W0, N0, A0 and P1. Gravel is angular to subrounded, fine to coarse including sandstone, mudstone and rare brick.			
5.00	ES13	SPT(S) N=7 (1,1/2,2,1,2)		(1.00)				
5.00 - 5.45 5.00 - 5.45 5.00	B14 D15	PID=0.0ppm	102.24	5.50	MADE GROUND: Firm, dark grey, slightly sandy, slightly gravelly, clayey SILT with low cobble content. Gravel is angular to subrounded, fine to coarse including sandstone, mudstone and rare brick.			
6.00	ES16	SPT(C) N=10 (2,2/3,2,3,2)		(2.50)				
6.00 - 6.45 6.00 6.50	B17	PID=2.1ppm PID=0.2ppm						
7.00	D19	PID=1.6ppm						
7.00	ES18	SPT(C) N=7 (5,4/3,2,1,1)						
7.50	B20	PID=0.7ppm						
7.50 - 7.95								
8.00	ES21		99.74	8.00				
8.50	D22	PID=1.1ppm						
8.50								
9.00	B23	SPT(C) N=17 (3,5/4,4,6,3)		(2.50)				
9.00 - 9.45 9.00		PID=0.7ppm						
10.00	D25				Continued next sheet			

Chiselling				Borehole Diameter		Boring Progress				Remarks:	
From (m)	To (m)	Time (mins)	Remarks	Depth (m)	Dia (mm)	Date	Time	Depth (m)	Cased (m)	Water (m)	Service inspection pit hand excavated from GL to 1.20m.
				12.00	200	23/04	16:30	22.00	22.00	Dry	Weather: 12 degrees celsius, dry, 1012mb.
				22.00	150						SPT Hammer: AR1806 Energy Ratio: 56%
				Casing Diameter		Water Strikes				Monitoring Installations	
				Depth (m)	Dia (mm)	Strike (m)	Cased (m)	Sealed (m)	Time (mins)	Rose to (m)	Remarks
				12.00	200	6.00	6.00		0	6.00	Slight seepage
				22.00	150						
								Top (m)	Base (m)	Pipe Type	Dia (mm)
								0.00	4.00	Plain	
								4.00	12.00	Slotted	
Checked by:		MHW	IFA CP								
Log status:		DRAFT	v01.01								

		Plant used: Cable percussion rig		Project: Ashton Moss			Location ID: ARP-BH101	
		Dates: 23/04/2018		Client: Tameside Metropolitan Council			Sheet 2 of 3	
Cable Percussion Borehole Log		Location: 391884.24E 399173.30N		Ground level: 107.74mOD		Logged by: 		Vertical scale: 1:50
								Project ID: 42171

Samples & In Situ Testing			Strata Details				Groundwater	
Depth	Sample ID	Test Result	Level (mAOD)	Depth (m) (Thickness)	Strata Description	Legend	Water Strike	Backfill/Installation
10.00	ES24				MADE GROUND: Firm, stiff in places, dark grey mottled orange, sandy, gravelly CLAY with some pockets of black moderately decomposed mainly fine fibrous peat with some amorphous material and some coarse fibres, H5, B2, F1, R1, W0, N0, A0 and P1. Gravel is angular to subrounded, fine to coarse including sandstone, mudstone and rare brick. Dark brown, oxidising to black, slightly clayey, slightly sandy, very strongly decomposed, mainly amorphous PEAT with rare fine fibrous peat and low wood content. H7, B2, F1, R2, W1, N2, A2 and P1.			
10.50	B26	SPT(S) N=5 (1,2/1,1,1,2)	97.24	10.50				
10.50 - 10.95	D27							
10.50 - 10.95		PID=1.2ppm		(1.50)				
10.50 - 11.50	ES28 D29							
12.00	D32		95.74	12.00	Stiff, brown mottled grey, slightly sandy, slightly gravelly CLAY with rare very strongly decomposed mainly fine fibrous peat. Gravel is angular to subrounded, fine to coarse including sandstone, mudstone and quartzite.			
12.00	ES31							
12.00 - 12.45	UT30	110 blows. 75% recovery						
12.45		HVP=155, HVR=34kPa						
12.00		PID=0.0ppm						
12.45		HVP=197, HVR=45kPa						
12.50		SPT(S) N=26 (3,4/5,6,7,8)						
12.50	D33							
12.50 - 12.95	D34							
12.50		PID=3.2ppm						
13.00	D36							
13.00	ES35							
13.00		PID=7.3ppm						
13.50 - 13.95	UT37	115 blows. 90% recovery						
14.00	D38							
14.00		PID=5.4ppm						
14.50		SPT(S) N=36 (5,6/8,8,9,11)						
14.50 - 14.95	D39							
15.00 - 15.45	UT40	120 blows. 85% recovery						
15.00		HVP=185, HVR=38kPa						
15.46		HVP=189, HVR=45kPa						
15.50	D41							
15.50		PID=5.8ppm		(7.50)				
16.50		SPT(S) N=24 (2,3/4,5,7,8)						
16.50 - 16.95	B42							
16.50 - 16.95	D43							
16.95		PID=6.8ppm						
16.50								
18.00		SPT(S) N=28 (3,3/5,7,8,8)						
18.00 - 18.45	B44							
18.00 - 18.45	D45							
18.00		PID=1.0ppm						
19.00		SPT(S) N=26 (3,3/5,6,7,8)						
19.50 - 19.95	B46		88.24	19.50				
19.50 - 19.95	D47							
19.95		PID=0.1ppm						
19.50								
19.50								
19.50								
19.50								

Continued next sheet

Chiselling				Borehole Diameter		Boring Progress				Remarks:	
From (m)	To (m)	Time (mins)	Remarks	Depth (m)	Dia (mm)	Date	Time	Depth (m)	Cased (m)	Water (m)	
										SPT Hammer: AR1806 Energy Ratio: 56%	
				Casing Diameter		Water Strikes				Monitoring Installations	
				Depth (m)	Dia (mm)	Strike (m)	Cased (m)	Sealed (m)	Time (mins)	Rose to (m)	Remarks
Checked by:		MHW	IFA CP								
Log status:		DRAFT	v01.01								



Plant used: Cable percussion rig	Project: Ashton Moss		Location ID: ARP-BH101		
Dates: 23/04/2018	Client: Tameside Metropolitan Council				
Cable Percussion Borehole Log	Location: 391884.24E 399173.30N	Ground level: 107.74mOD	Logged by: [Redacted]	Vertical scale: 1:50	Sheet 3 of 3 Project ID: 42171

Samples & In Situ Testing			Strata Details				Groundwater	
Depth	Sample ID	Test Result	Level (mAOD)	Depth (m) (Thickness)	Strata Description	Legend	Water Strike	Backfill/ Installation
21.00 21.00 - 21.45 21.00 - 21.45 21.00	B48 D49	SPT(S) N=28 (2,4/6,6,8,8) PID=0.0ppm		(2.50)	Stiff, thinly laminated, brown, slightly sandy, silty CLAY.		21	
			85.74	22.00	End of Borehole at 22.00m		22	
							23	
							24	
							25	
							26	
							27	
							28	
							29	
							30	

Chiselling				Borehole Diameter		Boring Progress				Remarks: SPT Hammer: AR1806 Energy Ratio: 56%					
From (m)	To (m)	Time (mins)	Remarks	Depth (m)	Dia (mm)	Date	Time	Depth (m)	Cased (m)			Water (m)			
				Casing Diameter		Water Strikes				Monitoring Installations					
				Depth (m)	Dia (mm)	Strike (m)	Cased (m)	Sealed (m)	Time (mins)	Rose to (m)	Remarks	Top (m)	Base (m)	Pipe Type	Dia (mm)
Checked by:		MHW	IFA CP												
Log status:		DRAFT	v01.01												

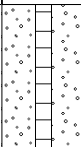
		Plant used:		Project:				Location ID:	
		Cable percussion rig		Ashton Moss				ARP-BH102	
		Dates:		Client:				Sheet 1 of 3	
		18/04/2018		Tameside Metropolitan Council				Project ID:	
Cable Percussion Borehole Log		Location:		Ground level:	Logged by:	Vertical scale:	Project ID:		
		391898.53E 398865.88N		112.73mOD		1:50	42171		

Samples & In Situ Testing				Strata Details				Groundwater	
Depth	Sample ID	Test Result	Level (mAOD)	Depth (m) (Thickness)	Strata Description	Legend	Water Strike	Backfill/ Installation	
0.00 - 1.00 0.00	B1	PID=0.0ppm		(1.20)	MADE GROUND: Brown COBBLES with much slightly clayey gravel. Gravel is angular to subangular, medium and coarse including tarmacadam and brick. Driller also notes ash and wood fill.				
1.00	ES2	SPT(C) N=20 (3,4/4,4,6,6)	111.53	1.20	MADE GROUND: Firm, greyish brown, sandy, gravelly CLAY with low cobble content. Gravel is angular to subrounded, fine to coarse including sandstone, mudstone and brick. Cobbles are subrounded of brick.		1		
1.20 - 1.70 1.20	B3	PID=0.0ppm							
1.90	ES4	SPT(C) N=20 (4,4/4,5,5,6)		(1.80)			2		
2.00 - 2.50 2.00	B5	PID=0.0ppm							
2.90	ES6	SPT(C) N=27 (4,6/7,7,8,5)	109.73	3.00	MADE GROUND: Stiff, firm in places, brown mottled black, sandy, gravelly CLAY with medium cobble content. Gravel is angular to subrounded, fine to coarse including sandstone, mudstone, brick and tarmacadam. Cobbles are subangular of brick.		3		
3.00 - 3.50	B7			(0.50)					
			109.23	3.50	MADE GROUND: Soft, blueish grey mottled orange, slightly gravelly, sandy, silty CLAY with frequent pockets of black moderately decomposed amorphous peat, H5, B2, F0, R0, W0, N0, A0 and P1. Gravel is angular to subangular, fine to coarse of brick.		4		
4.00	B8	SPT(S) N=11 (2,2/2,3,3,3)							
4.00 - 4.50 4.00	D9	PID=0.6ppm							
4.90	ES10	SPT(S) N=6 (1,0/1,1,2,2)		(3.50)			5		
5.00 - 5.50 5.00 - 5.50 5.00	B11 D12	PID=0.2ppm							
5.90	ES13						6		
6.50	B14	SPT(S) N=12 (2,2/2,3,3,4)							
6.50 - 7.00 6.50 - 7.00 6.50	D15	PID=0.2ppm	105.73	7.00	Between 6.50m and 7.00m: with low cobble content. Cobbles are subrounded of concrete and brick.		7		
7.00	ES16				MADE GROUND: Soft, dark grey, sandy, gravelly CLAY with low cobble content and occasional pockets of black moderately decomposed, mainly amorphous peat with many fine fibres, H5, B2, F3, R0, W0, N0, A0 and P1. Gravel is angular to subrounded, fine to coarse including sandstone, mudstone and brick. Cobbles are angular to subrounded of concrete.		8		
7.90	ES17	SPT(S) N=3 (1,0/1,0,1,1)		(3.00)			9		
8.00 - 8.50 8.00 - 8.50 8.00	B18 D19	PID=0.1ppm							
8.90	ES20								
9.00 - 9.50 9.00	B21	PID=0.0ppm					9		
9.50 - 10.00	U	28 blows. No recovery							
10.00		SPT(S) N=5 (1,0/1,1,1,2)	102.73	10.00	Continued next sheet		10		

Chiselling				Borehole Diameter		Boring Progress					Remarks:				
From (m)	To (m)	Time (mins)	Remarks	Depth (m)	Dia (mm)	Date	Time	Depth (m)	Cased (m)	Water (m)					
1.75	1.90	30		15.00	200	18/04	16:30	3.50	3.50	Dry	Service inspection pit hand excavated from GL to 1.20m.				
9.70	9.80	30		25.00	150	19/04	08:00	3.50	3.50	Dry	Weather: 17-18 degrees celsius, dry, 1023-1024mb.				
						19/04	16:30	15.30	15.00	Dry	SPT Hammer: AR1559 Energy Ratio: 61%				
						20/04	08:00	15.30	15.00	Dry					
				Casing Diameter		Water Strikes					Monitoring Installations				
				Depth (m)	Dia (mm)	Strike (m)	Cased (m)	Sealed (m)	Time (mins)	Rose to (m)	Remarks	Top (m)	Base (m)	Pipe Type	Dia (mm)
				15.00	200							0.00	1.00	Plain	
				25.00	150							1.00	14.00	Slotted	

Checked by:	MHW	IFA CP v01.01
Log status:	DRAFT	

		Plant used: Cable percussion rig		Project: Ashton Moss			Location ID: ARP-BH102	
		Dates: 18/04/2018		Client: Tameside Metropolitan Council			Sheet 2 of 3	
Cable Percussion Borehole Log		Location: 391898.53E 398865.88N		Ground level: 112.73mOD		Logged by: 		Vertical scale: 1:50
Project ID: 42171								

Samples & In Situ Testing				Strata Details				Groundwater	
Depth	Sample ID	Test Result	Level (mAOD)	Depth (m) (Thickness)	Strata Description	Legend	Water Strike	Backfill/ Installation	
10.00 - 10.50	B22	PID=0.0ppm			MADE GROUND: Firm, greyish brown, sandy, gravelly CLAY with frequent pockets of black strongly decomposed mainly amorphous peat with some fine fibres, H7, B2, F2, R0, W0, N0, A0 and P1. Gravel is angular to subrounded, fine of siltstone, quartzite and occasional brick.				
10.50 - 10.00	D23								
10.50 - 10.00									
10.00 - 10.50	ES24								
10.60 - 10.90	D25								
10.90 - 11.00	B26	PID=0.0ppm							
11.00 - 11.50	D27								
11.00 - 11.50									
11.60	ES28			(3.00)					
12.40	ES29	SPT(C) N=21 (4,4/5,5,5,6)							
12.50 - 13.00	D30								
13.00 - 13.00									
13.00 - 13.50	B31	PID=0.0ppm	99.73	13.00	MADE GROUND: Soft, blueish grey, slightly sandy, slightly gravelly, silty CLAY with some pockets of black strongly decomposed mainly amorphous peat with rare fine fibres, H7, B2, F1, R0, W0, N0, A0 and P1. Gravel is angular to subrounded, fine including brick.				
13.50 - 13.60	ES32								
13.60				(1.10)					
14.10 - 14.20	D33	PID=0.0ppm	98.63	14.10	Black, slightly clayey, very strongly decomposed, mainly amorphous PEAT with very rare fine fibrous peat and some pockets of soft, blueish grey clay. Moderately organic, moderate odour. H8, B2, F1, R0, W0, N2, A2 and P1.				
14.20 - 14.40	ES34								
14.40 - 14.50	B35	SPT(S) N=9 (2,2/2,3,2,2)							
14.50 - 15.00	D36								
15.00 - 15.20	D37	PID=0.0ppm	97.53	15.20	Stiff, grey and yellow mottled, slightly sandy, slightly gravelly CLAY with occasional pockets of black strongly decomposed mainly amorphous peat pockets, indistinct, probably H7. Gravel is angular to subrounded, fine including sandstone, mudstone and quartzite.				
15.20 - 15.30									
15.30 - 15.20									
16.50 - 16.90	UT38	28 blows. 100% recovery	95.13	17.60					
16.90 - 16.50		HVP=104, HVR=11kPa							
16.50 - 16.90	D39								
16.90 - 17.00		HVP=79, HVR=15kPa							
17.00 - 17.00	B40	SPT(S) N=22 (4,4/5,5,6,6)							
17.00 - 17.50	D41	PID=0.0ppm							
17.50 - 17.00	ES42								
18.50 - 19.00	UT43	30 blows. 100% recovery							
18.50 - 18.95	D44	HVP=23, HVR=4kPa							
18.95 - 19.00									
19.00 - 19.50	B45	HVP=72, HVR=8kPa							
19.50 - 19.00	D46								
19.00 - 19.50		SPT(S) N=26 (4,4/6,6,7,7)							
19.50 - 19.00									
19.00 - 19.50		PID=0.0ppm							
19.50 - 19.00									
19.00									

Continued next sheet

Chiselling				Borehole Diameter		Boring Progress				Remarks:	
From (m)	To (m)	Time (mins)	Remarks	Depth (m)	Dia (mm)	Date	Time	Depth (m)	Cased (m)		
						20/04	16:30	25.00	25.00	Dry	
						SPT Hammer: AR1559 Energy Ratio: 61%					
				Casing Diameter		Water Strikes				Monitoring Installations	
				Depth (m)	Dia (mm)	Strike (m)	Cased (m)	Sealed (m)	Time (mins)	Rose to (m)	Remarks
Checked by:		MHW	IFA CP								
Log status:		DRAFT	v01.01								



Plant used: Cable percussion rig	Project: Ashton Moss		Location ID: ARP-BH102 Sheet 3 of 3		
Dates: 18/04/2018	Client: Tameside Metropolitan Council				
Cable Percussion Borehole Log	Location: 391898.53E 398865.88N	Ground level: 112.73mOD	Logged by: [REDACTED]	Vertical scale: 1:50	Project ID: 42171

Samples & In Situ Testing			Strata Details				Groundwater	
Depth	Sample ID	Test Result	Level (mAOD)	Depth (m) (Thickness)	Strata Description	Legend	Water Strike	Backfill/ Installation
20.50 - 20.95 20.50 20.50 20.95 - 21.00 20.95	UT47 D48	38 blows. 100% recovery HVP=208, HVR=34kPa PID=0.0ppm HVP=204, HVR=38kPa	88.23	(6.90) <				

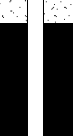
Chiselling				Borehole Diameter		Boring Progress				Remarks:											
From (m)	To (m)	Time (mins)	Remarks	Depth (m)	Dia (mm)	Date	Time	Depth (m)	Cased (m)			Water (m)									
										SPT Hammer: AR1559 Energy Ratio: 61%											
										Casing Diameter		Water Strikes		Monitoring Installations							
										Depth (m)	Dia (mm)	Strike (m)	Cased (m)	Sealed (m)	Time (mins)	Rose to (m)	Remarks	Top (m)	Base (m)	Pipe Type	Dia (mm)
Checked by:		MHW	IFA CP																		
Log status:		DRAFT	v01.01																		

		Plant used: Cable percussion rig		Project: Ashton Moss			Location ID: ARP-BH103	
		Dates: 17/04/2018 - 18/04/2018		Client: Tameside Metropolitan Council			Sheet 1 of 1	
Cable Percussion Borehole Log		Location: 392126.79E 398775.81N		Ground level: 103.20mOD		Logged by: 		Vertical scale: 1:50
								Project ID: 42171

Samples & In Situ Testing				Strata Details				Groundwater	
Depth	Sample ID	Test Result	Level (mAOD)	Depth (m) (Thickness)	Strata Description	Legend	Water Strike	Backfill/ Installation	
0.00 - 0.80 0.00	B1	PID=0.0ppm		(0.80)	MADE GROUND: Light grey, very sandy angular to subrounded, fine to coarse GRAVEL of limestone. With low cobble content.				
0.80 - 1.20 0.80	B2	PID=0.0ppm	102.40	0.80	MADE GROUND: Dark brown, slightly clayey, very gravelly, fine to coarse SAND with low cobble content. Gravel is angular to subrounded, fine to coarse including limestone, concrete and brick. Cobbles are angular to subrounded including limestone, concrete and brick.				1
1.00 1.20	ES3	SPT(C) N=18 (2,5/7,4,3,4)	102.00	1.20	MADE GROUND: Medium dense, dark grey mottled dark brown, clayey, very gravelly, fine to coarse SAND with low to medium cobble content. Gravel is angular to subrounded, fine to coarse including sandstone, brick, slag, concrete and rare limestone. Cobbles are subangular of sandstone and concrete.				2
1.20 - 1.65 1.20	B4	PID=0.0ppm		(1.80)					
2.00 2.00	ES5	SPT(C) N=19 (3,4/5,4,6,4)							
2.00 - 2.45 2.00	B6	PID=0.0ppm							
3.00 3.00	ES7	SPT(C) N=8 (2,2/2,3,2,1)	100.20	3.00	MADE GROUND: Firm, grey mottled black, sandy, gravelly CLAY with frequent pockets of black slightly decomposed fine fibrous peat with some coarse fibres and amorphous material, probably H4, B2, F3, R1, W0, N0, A0 and P1. Gravel is angular to subrounded, fine to coarse including sandstone, slag, limestone and rare brick.				
3.00 - 3.45 3.00	B8	PID=0.0ppm							
4.00 4.00	ES9	SPT(S) N=6 (2,1/2,1,2,1)		(2.00)					
4.00 - 4.45 4.00 - 4.45	B10								
4.00 - 4.45 4.00	D11	PID=0.8ppm							
5.00 5.00	ES12	SPT(S) N=8 (1,2/2,2,2,2)	98.20	5.00	MADE GROUND: Firm, fissured, dark brown, slightly sandy, slightly gravelly CLAY with occasional lenses of fine sand. Gravel is angular to subrounded, fine to coarse including sandstone, mudstone and rare brick.				
5.00 - 5.45 5.00 - 5.45	B13								
5.00 - 5.45 5.00	D14	PID=0.8ppm							
6.00 6.00	ES15	SPT(S) N=9 (2,2/3,2,3,1)		(2.50)					
6.00 - 6.45 6.00 - 6.45	B16								
6.00 - 6.45 6.00	D17	PID=0.7ppm							
7.00 7.00	D19								
7.00 - 7.50 7.50	ES18								
7.50 7.50	D20	SPT(S) N=12 (1,2/2,5,2,3)	95.70	7.50	Medium dense, dark brown speckled black, fine and medium SAND.				
7.50 - 7.95 7.50	D21	PID=0.3ppm	95.20	8.00	Stiff, thinly laminated, dark brown, slightly sandy, slightly gravelly CLAY. Gravel is angular to subrounded, fine to coarse including sandstone, mudstone and quartzite.				
8.50 8.50	D22	PID=0.2ppm							
9.00 - 9.45 9.00	UT23	100 blows. 100% recovery HVP=102, HVR=15kPa		(2.00)					
9.45 9.50		HVP=114, HVR=8kPa							
9.50 9.50	D24	SPT(S) N=26 (3,4/5,6,7,8)							
9.50 - 9.95 9.50	D25	PID=0.2ppm	93.20	10.00	End of Borehole at 10.00m				

Chiselling				Borehole Diameter		Boring Progress				Remarks:	
From (m)	To (m)	Time (mins)	Remarks	Depth (m)	Dia (mm)	Date	Time	Depth (m)	Cased (m)	Water (m)	
				10.00	150	17/04	16:30	4.50	4.50	Dry	Service inspection pit hand excavated from GL to 1.20m. Weather: 12 degrees celsius, dry, 1014mb. SPT Hammer: AR1806 Energy Ratio: 56%
						18/04	08:00	4.50	4.50	Dry	
						18/04	16:30	10.00	10.00	Dry	
				Casing Diameter		Water Strikes				Monitoring Installations	
				Depth (m)	Dia (mm)	Strike (m)	Cased (m)	Sealed (m)	Time (mins)	Rose to (m)	Remarks
				10.00	150	7.50	7.00	9.00	20	5.00	
Checked by:		MHW	IFA CP v01.01								
Log status:		DRAFT									

		Plant used: Cable percussion rig		Project: Ashton Moss			Location ID: ARP-BH104	
		Dates: 13/04/2018 - 16/04/2018		Client: Tameside Metropolitan Council			Sheet 1 of 2	
Cable Percussion Borehole Log		Location: 391836.54E 398673.99N		Ground level: 107.91mOD		Logged by: 		Vertical scale: 1:50
Project ID: 42171								

Samples & In Situ Testing			Strata Details				Groundwater	
Depth	Sample ID	Test Result	Level (mAOD)	Depth (m) (Thickness)	Strata Description	Legend	Water Strike	Backfill/ Installation
0.00 - 1.00 0.00	B1	PID=0.0ppm			MADE GROUND: Soft, brown, sandy, gravelly CLAY. Gravel is angular to subrounded, fine to coarse including brick, limestone, mudstone, sandstone and rare glass.			
1.00	ES2	SPT(C) N=18 (3,4/4,4,5,5)			Below 1.20m: soft (probably stiff).			
1.20 - 1.65 1.20	B3	PID=6.8ppm		(3.00)				
1.90	ES4	SPT(C) N=22 (4,4/5,7,5,5)						
2.00 - 2.45 2.00	B5	PID=9.9ppm			Below 2.00m: rare man-made fragments of fabric <200 x 100m.			
2.90	ES6	SPT(C) N=11 (2,2/2,3,3,3)	104.91	3.00				
3.00 - 3.45 3.00	B7	PID=4.1ppm						
3.90	ES8	SPT(C) N=18 (3,4/4,4,5,5)		(1.90)	MADE GROUND: Soft (probably firm), dark brown, slightly sandy, slightly gravelly, organic CLAY. Gravel is angular to subrounded, fine to coarse including limestone and mudstone.			
4.00 - 4.50 4.00	B9	PID=5.4ppm						
4.90 - 5.00 5.00	D10	SPT(S) N=5 (1,0/1,0,2,2)	103.01	4.90				
5.00 - 5.45 5.00 - 5.45 5.00	B11 D12	PID=3.1ppm			MADE GROUND: Blackish brown, slightly clayey, slightly sandy, slightly gravelly, strongly decomposed, highly amorphous PEAT with some fine fibres and occasional pockets of very soft, greyish brown, silty clay. Slight organic odour. H7, B2 (probably), F2, R0, W0, N0, A1 and P1.			
5.80	ES13			(1.60)				
6.50	B14	SPT(S) N=7 (2,1/1,2,2,2)	101.41	6.50				
6.50 - 6.95 6.50 - 6.95 6.50	D15	PID=4.1ppm			MADE GROUND: Dark brown, slightly gravelly, slightly decomposed, mainly amorphous PEAT with many fine fibres, some coarse fibres and rare wood fragments <10mm. Gravel is angular to subrounded, fine to coarse including coal and mudstone. H4, B2 (probably), F3, R1, W1, N0, A0 and P1.			
6.80	ES16			(1.40)				
7.90	ES17		100.01	7.90				
7.90 - 8.00 8.00 - 8.45 8.00	D18 U19	28 blows. 80% recovery HVP=114, HVR=10kPa			MADE GROUND: Firm, grey, slightly sandy, gravelly CLAY. Gravel is angular to subangular, fine to coarse including mudstone.			
8.45 - 8.50	D20			(1.40)				
9.30 - 9.40	D21		98.61	9.30				
9.50 - 9.95	U22	27 blows. 100% recovery			Dark brown, very slightly decomposed, mainly fine fibrous PEAT with rare amorphous material and some coarse fibres. H3, B2 (probably), F3, R2, W0, N0, A0 and P0.			
9.95 - 10.00	D23							

Continued next sheet

Chiselling				Borehole Diameter		Boring Progress				Remarks:	
From (m)	To (m)	Time (mins)	Remarks	Depth (m)	Dia (mm)	Date	Time	Depth (m)	Cased (m)	Water (m)	
				15.00	150	13/04	16:30	5.00	4.50	Dry	Service inspection pit hand excavated from GL to 1.20m. Weather: 8-14 degrees celsius, dry, 1006-1009mb. SPT Hammer: AR1559 Energy Ratio: 61%
						16/04	08:00	5.00	4.50	Dry	
						16/04	16:30	15.00	14.50	Dry	
				Casing Diameter		Water Strikes				Monitoring Installations	
				Depth (m)	Dia (mm)	Strike (m)	Cased (m)	Sealed (m)	Time (mins)	Rose to (m)	Remarks
				14.50	150						
								Top (m)	Base (m)	Pipe Type	Dia (mm)
								0.00	1.00	Plain	
								1.00	11.00	Slotted	
Checked by:		MHW	IFA CP v01.01								
Log status:		DRAFT									

	Plant used: Cable percussion rig		Project: Ashton Moss			Location ID: ARP-BH104																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
	Dates: 13/04/2018 - 16/04/2018		Client: Tameside Metropolitan Council			Sheet 2 of 2																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
Cable Percussion Borehole Log		Location: 391836.54E 398673.99N		Ground level: 107.91mOD	Logged by: 	Vertical scale: 1:50	Project ID: 42171																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
<table><tr><th colspan="3">Samples & In Situ Testing</th><th colspan="4">Strata Details</th><th colspan="2">Groundwater</th></tr><tr><th>Depth</th><th>Sample ID</th><th>Test Result</th><th>Level (mAOD)</th><th>Depth (m) (Thickness)</th><th>Strata Description</th><th>Legend</th><th>Water Strike</th><th>Backfill/ Installation</th></tr><tr><td>10.00</td><td rowspan="4">B24</td><td rowspan="4">SPT(S) N=11 (2,2/2,3,3,3)</td><td rowspan="4"></td><td rowspan="4"></td><td rowspan="4">Dark brown, very slightly decomposed, mainly fine fibrous PEAT with rare amorphous material and some coarse fibres. H3, B2 (probably), F3, R2, W0, N0, A0 and P0. <i>Below 9.95: some wood fragments <15mm W2.</i></td><td rowspan="4"></td><td rowspan="4"></td><td rowspan="4"></td></tr><tr><td>10.00 - 10.45</td></tr><tr><td>10.45</td></tr><tr><td>10.60</td></tr><tr><td>11.00 - 11.45</td><td>U27</td><td>21 blows. 80% recovery</td><td></td><td>(2.50)</td><td><i>Below 11.00m: wood fragments <40mm.</i></td><td></td><td>11</td><td></td></tr><tr><td>11.45 - 11.50</td><td>D28</td><td rowspan="4">32 blows. 90% recovery</td><td rowspan="4">96.11</td><td rowspan="4">11.80</td><td rowspan="4">Very soft, brownish grey, slightly sandy, silty CLAY with occasional decomposed rootlets.</td><td rowspan="4"></td><td rowspan="4"></td><td rowspan="4"></td></tr><tr><td>11.60</td></tr><tr><td>11.80 - 11.90</td></tr><tr><td>11.90</td></tr><tr><td>12.00 - 12.45</td><td>U32</td><td>HVP=159, HVR=17kPa</td><td rowspan="4">95.91</td><td rowspan="4">12.00</td><td rowspan="4">Firm, brownish grey, slightly sandy, slightly gravelly, silty CLAY. Gravel is subangular to subrounded, fine and medium including mudstone. <i>Below 12.00m: stiff.</i></td><td rowspan="4"></td><td rowspan="4"></td><td rowspan="4"></td></tr><tr><td>12.45 - 12.50</td></tr><tr><td>12.50</td></tr><tr><td>12.50 - 12.95</td></tr><tr><td>12.95 - 13.10</td><td>B34</td><td>HVP=123, HVR=17kPa</td><td rowspan="4"></td><td rowspan="4">(3.00)</td><td rowspan="4"></td><td rowspan="4"></td><td rowspan="4"></td><td rowspan="4"></td></tr><tr><td>13.10</td></tr><tr><td></td></tr><tr><td></td></tr><tr><td></td><td>D35</td><td>SPT(S) N=23 (4,5/5,5,6,7)</td><td rowspan="4"></td><td rowspan="4"></td><td rowspan="4"></td><td rowspan="4"></td><td rowspan="4"></td><td rowspan="4"></td></tr><tr><td></td></tr><tr><td></td></tr><tr><td></td></tr><tr><td></td><td></td><td>PID=0.0ppm</td><td rowspan="4"></td><td rowspan="4"></td><td rowspan="4"></td><td rowspan="4"></td><td rowspan="4"></td><td rowspan="4"></td></tr><tr><td></td></tr><tr><td></td></tr><tr><td></td></tr><tr><td>14.50 - 14.95</td><td>U37</td><td rowspan="4">HVP=123, HVR=19kPa</td><td rowspan="4">92.91</td><td rowspan="4">15.00</td><td rowspan="4">End of Borehole at 15.00m</td><td rowspan="4"></td><td rowspan="4"></td><td rowspan="4"></td></tr><tr><td>14.95 - 15.00</td></tr><tr><td>15.00</td></tr><tr><td>15.00</td></tr><tr><td>15.00</td><td>D38</td><td>HVP=138, HVR=26kPa</td><td rowspan="4"></td><td rowspan="4"></td><td rowspan="4"></td><td rowspan="4"></td><td rowspan="4"></td><td rowspan="4"></td></tr><tr><td>15.00</td></tr><tr><td></td></tr><tr><td></td></tr><tr><td></td><td></td><td></td><td rowspan="4"></td><td rowspan="4"></td><td rowspan="4"></td><td rowspan="4"></td><td rowspan="4"></td><td rowspan="4"></td></tr><tr><td></td></tr><tr><td></td></tr><tr><td></td></tr><tr><td></td><td></td><td></td><td rowspan="4"></td><td rowspan="4"></td><td rowspan="4"></td><td rowspan="4"></td><td rowspan="4"></td><td 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H3, B2 (probably), F3, R2, W0, N0, A0 and P0. <i>Below 9.95: some wood fragments <15mm W2.</i>				10.00 - 10.45	10.45	10.60	11.00 - 11.45	U27	21 blows. 80% recovery		(2.50)	<i>Below 11.00m: wood fragments <40mm.</i>		11		11.45 - 11.50	D28	32 blows. 90% recovery	96.11	11.80	Very soft, brownish grey, slightly sandy, silty CLAY with occasional decomposed rootlets.				11.60	11.80 - 11.90	11.90	12.00 - 12.45	U32	HVP=159, HVR=17kPa	95.91	12.00	Firm, brownish grey, slightly sandy, slightly gravelly, silty CLAY. Gravel is subangular to subrounded, fine and medium including mudstone. <i>Below 12.00m: stiff.</i>				12.45 - 12.50	12.50	12.50 - 12.95	12.95 - 13.10	B34	HVP=123, HVR=17kPa		(3.00)					13.10				D35	SPT(S) N=23 (4,5/5,5,6,7)												PID=0.0ppm										14.50 - 14.95	U37	HVP=123, HVR=19kPa	92.91	15.00	End of Borehole at 15.00m				14.95 - 15.00	15.00	15.00	15.00	D38	HVP=138, HVR=26kPa							15.00																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
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10.00	B24	SPT(S) N=11 (2,2/2,3,3,3)			Dark brown, very slightly decomposed, mainly fine fibrous PEAT with rare amorphous material and some coarse fibres. H3, B2 (probably), F3, R2, W0, N0, A0 and P0. <i>Below 9.95: some wood fragments <15mm W2.</i>																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
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11.45 - 11.50	D28	32 blows. 90% recovery	96.11	11.80	Very soft, brownish grey, slightly sandy, silty CLAY with occasional decomposed rootlets.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
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Plant used:
Cable percussion rig

Dates:
24/04/2018 - 25/04/2018

Project:
Ashton Moss

Client:
Tameside Metropolitan Council

Location ID:
ARP-BH105

Cable Percussion Borehole Log

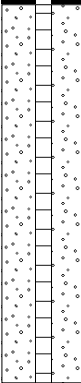
Location:
391709.77E 398700.10N

Ground level:
108.36mOD

Logged by:


Vertical scale:
1:50

Sheet 1 of 2
Project ID:
42171

Samples & In Situ Testing			Strata Details				Groundwater	
Depth	Sample ID	Test Result	Level (mAOD)	Depth (m) (Thickness)	Strata Description	Legend	Water Strike	Backfill/ Installation
0.00 - 1.00	B1				MADE GROUND: Soft, brown, slightly sandy, gravelly CLAY with low cobble content. Gravel is angular to subrounded, fine to coarse including brick, sandstone and limestone.			
1.00	ES2			(2.00)			1	
1.20		SPT(C) N=19 (3,4/4,5,5,5)						
1.20 - 1.70	B3				Below 1.20m: soft (probably stiff), sandy.			
1.20		PID=0.3ppm						
1.90	ES4		106.36	2.00			2	
2.00		SPT(C) N=12 (3,3/2,3,3,4)			MADE GROUND: Medium dense, brown, very clayey, very sandy, angular to subrounded, fine to coarse GRAVEL including brick, sandstone and limestone. With low cobble content of subangular brick.			
2.00 - 2.50	B5							
2.00		PID=0.6ppm						
2.90	ES6						3	
3.00		SPT(C) N=15 (3,3/3,4,4,4)						
3.00 - 3.50	B7			(3.00)				
3.00		PID=2.0ppm						
3.90	ES8						4	
4.00		SPT(C) N=16 (4,3/3,3,5,5)						
4.00 - 4.50	B9							
4.00		PID=0.6ppm						
4.90	ES10		103.36	5.00			5	
5.00		SPT(C) N=3 (1,0/1,0,1,1)			MADE GROUND: Very soft, grey mottled brown, slightly sandy, slightly gravelly CLAY with occasional pockets of mainly fine fibrous peat, pockets are indistinct, humification not discernable. Gravel is angular to subrounded, fine to coarse including limestone.			
5.00 - 5.50	B11							
5.00		PID=0.8ppm						
5.90	ES12						6	
6.50		SPT(C) N=11 (2,2/2,3,2,4)						
6.50 - 7.00	B13			(4.40)			7	
7.50 - 7.60	D14				Below 7.50m: occasional gravel of brick.			
8.00		SPT(S) N=7 (1,0/1,2,2,2)					8	
8.00	ES15							
8.00 - 8.45	D17							
8.00 - 8.50	B16							
8.00		PID=0.0ppm						
8.90	ES18						9	
9.50		SPT(S) N=19 (4,4/4,5,5,5)	98.96	9.40				
9.50 - 10.00	B19				Dark brown, slightly decomposed, fine and coarse fibrous PEAT with rare amorphous material. Slight hydrocarbon odour. H4, (B2 probably) F3, R3, W0, N0, A1 and P0.			
9.50 - 9.95	D20							
9.50		PID=0.0ppm					10	

Continued next sheet

Chiselling				Borehole Diameter		Boring Progress				Remarks:					
From (m)	To (m)	Time (mins)	Remarks	Depth (m)	Dia (mm)	Date	Time	Depth (m)	Cased (m)	Water (m)					
1.80	1.90	30		12.00	200	24/04	16:30	9.40	9.40		Service inspection pit hand excavated from GL to 1.20m. Weather: 11-12 degrees celsius, dry, 1009-1010mb. SPT Hammer: AR1559 Energy Ratio: 61%				
				16.00	150	25/04	08:00	9.40	9.40						
						25/04	16:30	20.00	16.00						
				Casing Diameter		Water Strikes				Monitoring Installations					
				Depth (m)	Dia (mm)	Strike (m)	Cased (m)	Sealed (m)	Time (mins)	Rose to (m)	Remarks	Top (m)	Base (m)	Pipe Type	Dia (mm)
				12.00	200	1.40			0	1.40		0.00	7.50	Plain	
				16.00	150	1.70			0	1.70		7.50	10.50	Slotted	
						2.10			0	2.10					

Checked by:

MHW

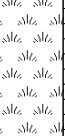
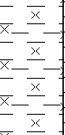
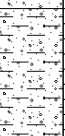
Log status:

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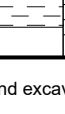
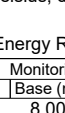
v01.01

		Plant used:		Project:			Location ID:	
		Cable percussion rig		Ashton Moss			ARP-BH105	
		Dates:		Client:			Sheet 2 of 2	
		24/04/2018 - 25/04/2018		Tameside Metropolitan Council				
Cable Percussion Borehole Log		Location:		Ground level:	Logged by:	Vertical scale:	Project ID:	
		391709.77E 398700.10N		108.36mOD		1:50	42171	

Samples & In Situ Testing			Strata Details				Groundwater	
Depth	Sample ID	Test Result	Level (mAOD)	Depth (m) (Thickness)	Strata Description	Legend	Water Strike	Backfill/ Installation
10.90 - 11.00	ES21	SPT(S) N=23 (4,4/6,5,6,6)	97.36	11.00	Dark brown, slightly decomposed, fine and coarse fibrous PEAT with rare amorphous material. Slight hydrocarbon odour. H4, (B2 probably) F3, R3, W0, N0, A1 and P0.			
11.00 - 11.45	D23							
11.00 - 11.50	B22	PID=0.0ppm			Firm, brown mottled grey, silty CLAY with occasional decomposed rootlets.			
12.50 - 12.95	U24	29 blows. 100% recovery						
12.95 - 13.00	D25	HVP=166, HVR=8kPa	95.36	13.00	Firm, brown mottled grey, slightly sandy, slightly gravelly CLAY. Gravel is angular to subrounded, fine to coarse including mudstone.			
13.00 - 13.45	D27							
13.00 - 13.50	B26	PID=0.0ppm						
14.50 - 14.95	U28	39 blows. 100% recovery						
14.95 - 15.00	D29	HVP=144, HVR=4kPa	93.36	15.00	Stiff, brown, slightly sandy, slightly gravelly CLAY. Gravel is angular to subrounded, fine to coarse including mudstone.			
15.00 - 15.45	D31							
15.00 - 15.50	B30	PID=0.0ppm						
16.50 - 16.95	D32	SPT(S) N=27 (6,6/6,7,7,7)						
16.50 - 17.00		PID=0.0ppm						
18.00 - 18.45	D33	SPT(S) N=32 (7,7/8,8,8,8)						
19.50 - 19.95	D34	SPT(S) N=32 (7,7/7,8,8,9)						
19.50 - 20.00		PID=0.0ppm	88.36	20.00	End of Borehole at 20.00m			

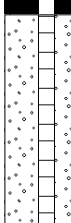
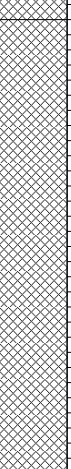
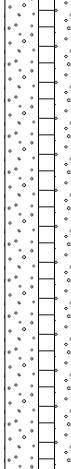
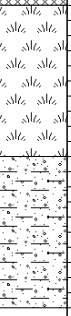
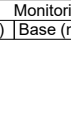
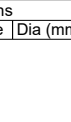
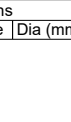
Chiselling				Borehole Diameter		Boring Progress				Remarks:	
From (m)	To (m)	Time (mins)	Remarks	Depth (m)	Dia (mm)	Date	Time	Depth (m)	Cased (m)		
										SPT Hammer: AR1559 Energy Ratio: 61%	
				Casing Diameter		Water Strikes				Monitoring Installations	
				Depth (m)	Dia (mm)	Strike (m)	Cased (m)	Sealed (m)	Time (mins)	Rose to (m)	Remarks
Checked by:		MHW	IFA CP								
Log status:		DRAFT	v01.01								

	Plant used: Cable percussion rig		Project: Ashton Moss			Location ID: ARP-BH106	
	Dates: 09/04/2018 - 10/04/2018		Client: Tameside Metropolitan Council			Sheet 1 of 1	
Cable Percussion Borehole Log		Location: 392108.10E 399283.60N		Ground level: 104.42mOD	Logged by: 	Vertical scale: 1:50	Project ID: 42171

Samples & In Situ Testing				Strata Details				Groundwater	
Depth	Sample ID	Test Result	Level (mAOD)	Depth (m) (Thickness)	Strata Description	Legend		Water Strike	Backfill/ Installation
0.00 - 0.80	B1				MADE GROUND: Grey, slightly sandy, clayey, angular to subangular, fine to coarse GRAVEL including of siltstone, mudstone and limestone.				
0.50	ES2			(0.80)					
0.80 - 1.20	B3		103.62	0.80	MADE GROUND: Firm, grey, slightly sandy, gravelly CLAY with low cobble content. Gravel is angular to subrounded, fine to coarse including siltstone, mudstone and brick.		1		
1.00	ES4			(0.40)					
1.20		SPT(S) N=10 (2,2/2,2,2,4)	103.22	1.20	MADE GROUND: Firm, greyish brown, slightly sandy, slightly gravelly CLAY with rare pockets of decomposed organic material. Gravel is angular to subrounded, fine to coarse including sandstone, siltstone, mudstone, limestone and brick.				
1.20 - 1.65	B5								
1.20 - 1.65	D6								
2.00		SPT(S) N=10 (2,3/3,3,1,3)			Between 2.00m and 2.45m: occasionally mottled light brown.		2		
2.00	ES7								
2.00 - 2.45	B8								
2.00 - 2.45	D9								
3.00		SPT(S) N=14 (2,4/3,4,3,4)					3		
3.00	ES10								
3.00 - 3.45	B11								
3.00 - 3.45	D12								
4.00		SPT(S) N=2 (1,1/0,1,1,0)	100.42	4.00	MADE GROUND: Reworked, blackish brown, very strongly to completely decomposed amorphous PEAT with fine fibres and rootlets. Mild organic odour. Occasional pockets of very soft, grey, slightly sandy, slightly gravelly, organic CLAY. Gravel is angular to subrounded, fine and medium including sandstone, limestone, mudstone and rare brick. H8, H10 (B2 probably) F1, R0, W0, N0, A1, P1.		4		
4.00	ES13								
4.00 - 4.45	B14								
4.00 - 4.45	D15								
5.00		SPT(S) N=21 (1,20/8,7,3,3)			Below 5.00m: completely decomposed H10.		5		
5.00	ES16				Between 5.00m and 6.00m: rare manmade fabric fragments.				
5.00 - 5.45	B17								
5.00 - 5.45	D18								
6.00	ES19						6		
6.00 - 6.45	B20								
6.00 - 6.45	D21								
7.00	ES22		97.42	7.00	Firm, brownish grey, slightly sandy, slightly gravelly CLAY. Gravel is subangular to well rounded, fine and medium including sandstone, limestone, mudstone and quartz.		7		
7.00 - 7.45	B23								
7.50 - 7.95	UT24	100 blows. 100% recovery HVP=131, HVR=23kPa					8		
7.50									
7.95		HVP=76, HVR=11kPa							
8.00		SPT(S) N=27 (4,5/5,7,7,8)			Below 8.00m: stiff.				
8.00	D26								
8.00 - 8.45	B25								
8.00 - 8.45	D27								
9.00 - 9.45	UT28	110 blows. 80% recovery HVP=168, HVR=23kPa					9		
9.00									
9.45		HVP=161, HVR=32kPa							
9.50		SPT(S) N=30 (4,5/6,7,8,9)							
9.50	D30								
9.50 - 9.95	B29		94.47	9.95			10		
9.50 - 9.95	D31				End of Borehole at 10.00m				

Chiselling				Borehole Diameter		Boring Progress				Remarks:	
From (m)	To (m)	Time (mins)	Remarks	Depth (m)	Dia (mm)	Date	Time	Depth (m)	Cased (m)	Water (m)	
				10.00	200	09/04	16:30	7.00	7.00	Dry	Service inspection pit hand excavated from GL to 1.20m.
						10/04	08:00	7.00	7.00	7.00	Weather: 15-8 degrees celsius, dry, 1006-1004mb.
						10/04	16:30	10.00	10.00	Dry	SPT Hammer: AR1559 Energy Ratio: 61%
				Casing Diameter		Water Strikes				Monitoring Installations	
				Depth (m)	Dia (mm)	Strike (m)	Cased (m)	Sealed (m)	Time (mins)	Rose to (m)	Remarks
				10.00	200						
								Top (m)	Base (m)	Pipe Type	Dia (mm)
								0.00	8.00	Plain	
								8.00	10.00	Slotted	
Checked by:		MHW	IFA CP v01.01								
Log status:		DRAFT									

				Plant used: Cable percussion rig		Project: Ashton Moss				Location ID: ARP-BH108													
				Dates: 18/04/2018		Client: Tameside Metropolitan Council				Sheet 1 of 3													
Cable Percussion Borehole Log				Location: 392057.41E 398982.92N		Ground level: 115.62mOD		Logged by: 		Vertical scale: 1:50													
Samples & In Situ Testing				Strata Details						Groundwater													
Depth		Sample ID		Test Result		Level (mAOD)		Depth (m) (Thickness)		Strata Description		Legend		Water Strike		Backfill/ Installation							
0.00 - 1.20 0.00		B1		PID=6.9ppm						MADE GROUND: Firm, greyish brown, slightly sandy, slightly gravelly, locally gravelly CLAY. Gravel is angular to subrounded, fine to coarse including brick, sandstone and mudstone.													
1.00		ES2		SPT(C) N=12 (2,1/3,2,4,3)								1											
1.20 - 1.65 1.20		B3		PID=6.2ppm																			
2.00		ES4		SPT(C) N=20 (2,5/7,8,3,2)								2											
2.00 - 2.45 2.00		B5		PID=4.3ppm																			
3.00		ES6		SPT(C) N=9 (1,3/2,1,4,2)								3											
3.00 - 3.45 3.00		B7		PID=3.9ppm																			
4.00		ES8		SPT(C) N=14 (2,1/4,5,2,3)						Below 4.00m: low cobble content of subangular brick.		4											
4.00 - 4.45 4.00		B9		PID=2.3ppm				(8.50)															
5.00		ES10		SPT(C) N=33 (25 for 125mm/16,10,4,3)						Between 5.00m and 6.00m: rare fragments (<40x40mm) of fabric.		5											
5.00 - 5.45 5.00		B11		PID=3.2ppm																			
6.00		ES12		SPT(C) N=10 (2,3/2,3,4,1)						Between 6.00m and 7.50m: rare wood fragments.		6											
6.00 - 6.45 6.00		B13		PID=3.8ppm																			
7.00		D15								Between 7.00m and 7.50m: gravelly.		7											
7.00		ES14																					
7.50		B16		SPT(C) N=12 (3,2/1,5,4,2)						Below 7.50m: slightly organic.		8											
7.50 - 7.95 7.50				PID=3.6ppm																			
8.00		ES17										8											
8.50		D18				107.12		8.50		MADE GROUND: Stiff, brown mottled grey and light brown, slightly sandy, slightly gravelly CLAY with slight hydrocarbon odour and low cobble content. Gravel is angular to subrounded, fine to coarse including mudstone, brick, ironstone and coal.		9											
9.00		ES19		SPT(C) N=23 (3,5/5,6,5,7)																			
9.00 - 9.45 9.00		B20		PID=12.1ppm																			
10.00		D22								Continued next sheet		10											
Chiselling				Borehole Diameter		Boring Progress						Remarks:											
From (m)		To (m)		Time (mins)		Remarks		Depth (m)		Dia (mm)		Date		Time		Depth (m)		Cased (m)		Water (m)		Service inspection pit hand excavated from GL to 1.20m.	
12.00		12.25		60				20.00		200		18/04		16:30		4.00		4.00		Dry		Weather: 17-18 degrees celsius, dry, 1023-1024mb.	
												19/04		08:00		4.00		4.00		Dry			
												19/04		16:30		16.00		15.00		14.00			
												20/04		08:00		16.00		15.00		Dry		SPT Hammer: AR1559 Energy Ratio: 61%	
				Casing Diameter		Water Strikes						Monitoring Installations											
Depth (m)		Dia (mm)		Strike (m)		Cased (m)		Sealed (m)		Time (mins)		Rose to (m)		Remarks		Top (m)		Base (m)		Pipe Type		Dia (mm)	
20.00		200		18.00		17.50				20		16.00				0.00		13.50		Plain			
																13.50		18.00		Slotted			
Checked by:		MHW		IFA CP																			
Log status:		DRAFT		v01.01																			

Samples & In Situ Testing				Strata Details				Groundwater								
Depth	Sample ID	Test Result	Level (mAOD)	Depth (m) (Thickness)	Strata Description	Legend	Water Strike	Backfill/ Installation								
10.00 10.00	ES21	PID=4.8ppm		(3.50)	MADE GROUND: Stiff, brown mottled grey and light brown, slightly sandy, slightly gravelly CLAY with slight hydrocarbon odour and low cobble content. Gravel is angular to subrounded, fine to coarse including mudstone, brick, ironstone and coal.		11									
10.50 10.50 - 10.95	B23	SPT(C) N=23 (2,3/6,8,5,4)														
10.50 10.95		PID=11.5ppm														
11.00	ES24															
11.50	D25															
12.00		SPT(C) 50 (25 for 50mm/50 for 60mm)	103.62	12.00	MADE GROUND: Soft (probably stiff), greyish brown, slightly sandy, slightly gravelly CLAY with high cobble content. Gravel is angular to subrounded, fine to coarse including sandstone and brick.		12									
12.00 12.00 - 12.45	ES26 B27	PID=0.0ppm	(1.00)													
12.00																
13.00 13.00	D29 ES28															
13.00			102.62	13.00	MADE GROUND: Brown, sandy, very clayey, angular to subangular, fine to coarse GRAVEL including sandstone and brick.		13									
13.00			(0.50)													
13.50 13.50 - 13.95	B30	SPT(C) N=7 (1,2/2,2,1,2)		102.12	13.50	MADE GROUND: Soft, brown mottled blackish brown, slightly sandy, slightly gravelly CLAY with frequent pockets of mainly fine fibrous peat, pockets indistinct, humification not discernable. Gravel is angular to subrounded, fine to coarse including brick, sandstone and limestone.		14								
13.50 13.95		PID=6.4ppm	(1.50)													
13.50																
14.00	ES31															
15.00 15.00	ES32	SPT(C) N=18 (3,5/7,4,5,2)	100.62	15.00	MADE GROUND: Blackish brown, slightly sandy, slightly gravelly, very clayey, moderately decomposed, mainly fine to coarse, fibrous PEAT with some amorphous material, and rare wood. Gravel is angular to subrounded, fine to coarse including brick and mudstone. H5, (B2 probably) F3, R3, W1, N1, A0 and P0.		15									
15.00 15.00 - 15.45	B33	PID=8.4ppm	(3.00)													
15.00																
16.00	ES34															
16.50 16.50 - 16.95	B35	SPT(S) N=6 (1,2/1,2,1,2)					16									
16.50 16.95	D36		(3.00)													
16.50 16.95																
16.50 17.00	ES37	PID=8.3ppm														
18.00 18.00	ES38	SPT(S) N=10 (2,3/2,3,2,3)	97.62	18.00	Dark brown, slightly decomposed, mainly fine fibrous PEAT with some coarse fibres and rare amorphous material. H4, (B2 probably) F3, R2, W0, N0, A0 and P0.		18									
18.00 18.00 - 18.45	B39		(1.00)													
18.00 18.45	D40															
18.00		PID=1.4ppm														
19.00 19.00 - 19.45	ES42 U41	120 blows. 75% recovery	96.62	19.00	Stiff, brown mottled grey, slightly sandy, slightly gravelly CLAY. Gravel is subangular to subrounded, fine to coarse including mudstone and coal.		19									
19.00 19.45			(1.00)													
19.00																
19.45 19.50	D43	HVP=117, HVR=11kPa HVP=155, HVR=15kPa SPT(S) N=36 (5,7/8,9,9,10)														
19.50 19.50			95.62	20.00	Continued next sheet		20									
Chiselling				Borehole Diameter		Boring Progress			Remarks:							
From (m)	To (m)	Time (mins)	Remarks	Depth (m)	Dia (mm)	Date	Time	Depth (m)	Cased (m)	Water (m)						
						20/04	16:30	20.00	20.00	18.00						
									SPT Hammer: AR1559 Energy Ratio: 61%							
				Casing Diameter		Water Strikes				Monitoring Installations						
				Depth (m) Dia (mm)		Strike (m)		Cased (m)	Sealed (m)	Time (mins)	Rose to (m)	Remarks	Top (m)	Base (m)	Pipe Type	Dia (mm)
Checked by:		MHW	IFA CP													
Log status:		DRAFT	v01.01													

Chiselling				Borehole Diameter		Boring Progress						Remarks:			
From (m)	To (m)	Time (mins)	Remarks	Depth (m)	Dia (mm)	Date	Time	Depth (m)	Cased (m)	Water (m)					
											SPT Hammer: AR1559 Energy Ratio: 61%				
				Casing Diameter		Water Strikes					Monitoring Installations				
				Depth (m)	Dia (mm)	Strike (m)	Cased (m)	Sealed (m)	Time (mins)	Rose to (m)	Remarks	Top (m)	Base (m)	Pipe Type	Dia (mm)
Checked by:		MHW	IFA CP v01.01												
Log status:		DRAFT													

		Plant used: Cable percussion rig		Project: Ashton Moss			Location ID: ARP-BH109	
		Dates: 16/04/2018 - 17/04/2018		Client: Tameside Metropolitan Council			Sheet 1 of 2	
Cable Percussion Borehole Log		Location: 391817.73E 398871.40N		Ground level: 107.62mOD		Logged by: 		Vertical scale: 1:50
								Project ID: 42171

Samples & In Situ Testing			Strata Details				Groundwater	
Depth	Sample ID	Test Result	Level (mAOD)	Depth (m) (Thickness)	Strata Description	Legend	Water Strike	Backfill/ Installation
0.00 - 1.20	B1				MADE GROUND: Brown, very clayey, sandy angular to subrounded, fine to coarse GRAVEL including brick, limestone and ash.			
0.50	ES2			(1.20)				
1.00	ES3						1	
1.20		SPT(S) N=15 (2,3/4,4,3,4)	106.42	1.20				
1.20 - 1.65	B4				MADE GROUND: Medium dense, brown, slightly clayey, very sandy GRAVEL with medium cobble content. Gravel is angular to subrounded, fine to coarse including brick, limestone and ash.			
1.20 - 1.65	D5							
1.20		PID=10.3ppm						
1.65		PID=12.6ppm						
2.00		SPT(S) N=17 (2,3/8,4,2,3)					2	
2.00	ES6							
2.00 - 2.45	B7							
2.00 - 2.45	D8							
2.00		PID=15.7ppm		(3.10)				
3.00		SPT(C) 50 (25 for 60mm/50 for 125mm)			Between 3.00m and 3.25m: driller notes obstruction. Between 3.01 and 3.45m: 1no subrounded cobble of concrete and occasional pockets of soft brown, slightly sandy, slightly gravelly CLAY.		3	
3.00	ES9							
3.00 - 3.45	B10							
3.00		PID=11.7ppm						
4.00		SPT(C) N=7 (4,4/3,2,1,1)					4	
4.00	ES11							
4.00 - 4.45	B12		103.32	4.30				
4.00		PID=5.9ppm			MADE GROUND: Reworked blackish brown, moderately decomposed, predominantly amorphous PEAT with some fine fibres and occasional pockets of very soft brown, slightly sandy, slightly gravelly clay. Gravel is angular to subrounded, fine and medium including brick, sandstone. Slight organic odour. H5, (B2 probably), F2, R2, W0, N0, A1, P1.		5	
5.00		SPT(S) N=7 (1,2/2,2,1,2)		(1.70)				
5.00	ES13							
5.00 - 5.45	B14							
5.00 - 5.45	D15							
5.00		PID=1.7ppm						
6.00		SPT(S) N=2 (1,1/1,1,1)	101.62	6.00			6	
6.00	ES16				MADE GROUND: Reworked blackish brown, clayey, slightly sandy, partially decomposed, predominantly amorphous PEAT with some fine fibres. Slight organic odour. H9, (B2 probably), F2, R2, W0, N0, A1, P1.			
6.00 - 6.45	B17							
6.00 - 6.45	D18							
6.00		PID=1.3ppm		(1.50)				
7.00	D20				Below 7.00m: rare coarse fibres, R1.		7	
7.00	ES19							
7.50		SPT(S) N=6 (1,1/1,2,1,2)	100.12	7.50				
7.50 - 7.95	B21				MADE GROUND: Reworked blackish brown, slightly sandy, partially decomposed, predominantly amorphous PEAT with some fine fibres and rare coarse fibres and occasional pockets of brown, slightly sandy, slightly gravelly clay. Gravel is angular to subrounded, fine including mudstone. Slight organic odour. H5, (B2 probably), F2, R1, W0, N0, A1, P1.		8	
7.50 - 7.98	D22			(0.50)				
7.50		PID=1.9ppm	99.62	8.00				
8.00	ES23				MADE GROUND: Very soft, dark brown, slightly sandy, slightly gravelly, organic CLAY. Gravel is angular to subrounded, fine to coarse including brick, sandstone and mudstone.			
8.50	D24							
9.00		SPT(S) N=6 (1,1/2,1,1,2)		(2.00)			9	
9.00	ES25							
9.00 - 9.45	B26							
9.00 - 9.45	D27							
9.00		PID=1.2ppm						
10.00	D29		97.62	10.00	Continued next sheet		10	

Chiselling				Borehole Diameter		Boring Progress					Remarks:					
From (m)	To (m)	Time (mins)	Remarks	Depth (m)	Dia (mm)	Date	Time	Depth (m)	Cased (m)	Water (m)	Service inspection pit hand excavated from GL to 1.20m.					
3.00	3.25	60		15.45	150	16/04	16:30	11.00	11.00	10.00	Weather: 14-12 degrees celsius, dry, 1009-1014mb.					
						17/04	08:00	11.00	11.00	3.00						
						17/04	16:30	15.00	15.00	Dry	SPT Hammer: AR1559 Energy Ratio: 61%					
				Casing Diameter		Water Strikes					Monitoring Installations					
				Depth (m)	Dia (mm)	Strike (m)	Cased (m)	Sealed (m)	Time (mins)	Rose to (m)	Remarks	Top (m)	Base (m)	Pipe Type	Dia (mm)	
				15.00	150							0.00	1.00	Plain		
												1.00	10.00	Slotted		
Checked by:		MHW	IFA CP v01.01													
Log status:		DRAFT														

Plant used: Cable percussion rig	Project: Ashton Moss			Location ID: ARP-BH109
Dates: 16/04/2018 - 17/04/2018	Client: Tameside Metropolitan Council			
Location: 391817.73E 398871.40N	Ground level: 107.62mOD	Logged by: 	Vertical scale: 1:50	Sheet 2 of 2 Project ID: 42171

	Plant used: Cable percussion rig		Project: Ashton Moss			Location ID: ARP-BH110	
	Dates: 10/04/2018 - 11/04/2018		Client: Tameside Metropolitan Council			Sheet 1 of 2	
Cable Percussion Borehole Log		Location: 392011.06E 398650.63N		Ground level: 101.57mOD	Logged by: 	Vertical scale: 1:50	Project ID: 42171

Samples & In Situ Testing			Strata Details				Groundwater	
Depth	Sample ID	Test Result	Level (mAOD)	Depth (m) (Thickness)	Strata Description	Legend	Water Strike	Backfill/ Installation
0.20	ES28		101.47 101.42	0.18 (1.65)	MADE GROUND: Soft brown, slightly sandy, slightly gravelly CLAY with rootlets. Gravel is subangular to subrounded, fine to coarse including limestone (Topsoil). MADE GROUND: Grey, subangular, fine to coarse GRAVEL including limestone. MADE GROUND: Firm, brown mottled blackish brown, slightly sandy, slightly gravelly, organic CLAY. Gravel is subangular to subrounded, fine to coarse including sandstone, mudstone, coal and brick.			
1.20 - 1.65	D1	PID=0.0ppm						
1.20								
1.50 - 1.80	B2	PID=0.0ppm						
1.50								
			99.77	1.80				
2.10 - 2.55	B3				MADE GROUND: Blackish brown, partially decomposed slightly gravelly amorphous PEAT with rare rootlets. Gravel is angular to subrounded, fine to coarse including sandstone, limestone, mudstone and brick. Slight organic odour. H9,B2 (probably), Fo, Ro, Wo, No, A1, P1. <i>Between: 1.80m and 3.00m: occasional fragments of manmade fabric (<60mm). Occasional pockets of very soft brown, slightly sandy, slightly gravelly CLAY. Gravel is angular to subrounded, fine to coarse including sandstone, limestone, mudstone and brick.</i>			
2.10 - 2.55	B4							
2.10 - 2.55	D5	PID=0.0ppm						
2.10								
				(2.20)				
3.00		SPT(S) N=3 (1,1/0,1,1,1)						
3.00	ES6							
3.00 - 3.45	B7							
3.00 - 3.45	D8							
3.00		PID=0.8ppm						
3.00		PID=2.1ppm						
			97.57	4.00	Dark brown, moderately decomposed, fine fibrous PEAT with some coarse fibres and some amorphous material. Slight organic odour. H5, B2 (probably), F3, R, W0, N0,A1, P1.			
4.00	ES9	SPT(S) N=2 (1,1/0,1,1,0)						
4.00	B10							
4.00 - 4.45	D11							
4.00		PID=0.0ppm						
4.50 - 7.95	U12	75 blows. 95% recovery						
5.00		SPT(S) N=7 (1,1/2,2,1,2)						
5.00	ES13							
5.00 - 5.45	B14							
5.00 - 5.45	D15							
5.00		PID=0.4ppm						
5.00		PID=1.4ppm						
				(1.50)				
6.00		SPT(S) N=9 (1,1/2,2,2,3)						
6.00	ES16				<i>Below 6.00m: occasional pockets of brown, slightly sandy, completely decomposed H10 amorphous PEAT.</i>			
6.00 - 6.45	B17							
6.00 - 6.45	D18							
6.00		PID=0.5ppm						
6.00		PID=1.4ppm						
6.50 - 6.95	B19		95.07	6.50	Soft, brownish grey, slightly sandy, slightly gravelly CLAY. Gravel is subangular to rounded, fine to coarse including sandstone, mudstone, coal and quartz.			
7.50	ES20	HVP=106, HVR=25kPa			<i>Below 7.50m: firm.</i>			
7.50		PID=0.0ppm						
7.50								
7.95		HVP=57, HVR=10kPa						
8.00		SPT(S) N=18 (3,3/3,4,5,6)						
8.00	D21			(3.50)				
8.00 - 8.45	D22							
8.00		PID=0.0ppm			<i>Below 8.50m: stiff.</i>			
8.50	D23							
9.00 - 9.45	U24	95 blows. 95% recovery						
9.00		HVP=136, HVR=25kPa						
9.45		HVP=123, HVR=19kPa						
9.50		SPT(S) N=22 (3,4/5,5,6,6)						
9.50	D25							
9.50 - 9.95	D26							
9.50		PID=0.0ppm	91.57	10.00	Continued next sheet			

Chiselling				Borehole Diameter		Boring Progress				Remarks:					
From (m)	To (m)	Time (mins)	Remarks	Depth (m)	Dia (mm)	Date	Time	Depth (m)	Cased (m)	Water (m)					
				10.00	150	10/04	16:30	7.00	7.00	Dry	Service inspection pit hand excavated from GL to 1.20m. Weather: 8 degrees celsius, dry, 1004-1009mb. SPT Hammer: AR1559 Energy Ratio: 61%				
						11/04	08:00	7.00	7.00	Dry					
						11/04	16:30	10.00	10.00	Dry					
				Casing Diameter		Water Strikes				Monitoring Installations					
				Depth (m)	Dia (mm)	Strike (m)	Cased (m)	Sealed (m)	Time (mins)	Rose to (m)	Remarks	Top (m)	Base (m)	Pipe Type	Dia (mm)
				10.00	150							0.00	5.00	Plain	
												5.00	10.00	Slotted	
Checked by:		MHW	IFA CP												
Log status:		DRAFT	v01.01												



Plant used: Cable percussion rig	Project: Ashton Moss		Location ID: ARP-BH110		
Dates: 10/04/2018 - 11/04/2018	Client: Tameside Metropolitan Council				
Cable Percussion Borehole Log	Location: 392011.06E 398650.63N	Ground level: 101.57mOD	Logged by: [Redacted]	Vertical scale: 1:50	Sheet 2 of 2 Project ID: 42171

Samples & In Situ Testing			Strata Details				Groundwater	
Depth	Sample ID	Test Result	Level (mAOD)	Depth (m) (Thickness)	Strata Description	Legend	Water Strike	Backfill/ Installation
10.00 10.00	D27	PID=0.0ppm			End of Borehole at 10.00m			
							11	
							12	
							13	
							14	
							15	
							16	
							17	
							18	
							19	
							20	

Chiselling				Borehole Diameter		Boring Progress				Remarks:					
From (m)	To (m)	Time (mins)	Remarks	Depth (m)	Dia (mm)	Date	Time	Depth (m)	Cased (m)			Water (m)			
										SPT Hammer: AR1559 Energy Ratio: 61%					
				Casing Diameter		Water Strikes				Monitoring Installations					
				Depth (m)	Dia (mm)	Strike (m)	Cased (m)	Sealed (m)	Time (mins)	Rose to (m)	Remarks	Top (m)	Base (m)	Pipe Type	Dia (mm)
Checked by:		MHW	IFA CP												
Log status:		DRAFT	v01.01												

		Plant used:		Project:				Location ID:	
		Cable percussion rig		Ashton Moss				ARP-BH111	
Cable Percussion Borehole Log		Dates:		Client:				Sheet 1 of 2	
		17/04/2018		Tameside Metropolitan Council				Project ID: 42171	
Cable Percussion Borehole Log		Location:		Ground level:	Logged by:	Vertical scale:			
		391748.76E 398641.24N		108.03mOD		1:50			

Samples & In Situ Testing				Strata Details				Groundwater	
Depth	Sample ID	Test Result	Level (mAOD)	Depth (m) (Thickness)	Strata Description	Legend	Water Strike	Backfill/ Installation	
0.00 - 1.00 0.00	B1	PID=0.0ppm			MADE GROUND: Loose, dark brown mottled black, clayey, very sandy GRAVEL with low to medium cobble content and frequent pockets of clay. Gravel is angular to subrounded, fine to coarse including sandstone, concrete and brick. Cobbles are subangular of concrete and brick.				
1.00 1.10	ES2	SPT(C) N=5 (1,0/1,0,2,2)		(2.00)			1		
1.20 - 1.70 1.20	B3	PID=0.0ppm							
2.00 2.00 - 2.50 2.00	B4	SPT(C) N=8 (1,1/1,2,2,3) PID=0.0ppm	106.03	2.00	MADE GROUND: Soft, firm in places, dark brown, sandy, gravelly CLAY. Gravel is angular to subrounded, fine to coarse including sandstone, concrete and brick.		2		
2.60	ES5								
3.00 3.00 - 3.50 3.00	B6	SPT(C) N=10 (2,2/2,2,3,3) PID=0.9ppm		(2.00)			3		
3.60	ES7								
4.00 4.00 - 4.50 4.00	B8	SPT(C) N=6 (1,0/1,1,2,2) PID=0.2ppm	104.03	4.00	MADE GROUND: Soft, dark grey and dark brown mottled, sandy, gravelly CLAY with occasional dark brown, very slightly decomposed, coarse fibrous peat with some fine fibres, H3, B2, F1, R3, W0, N0, A0 and P0. Gravel is angular to subrounded, fine to coarse including sandstone, siltstone and rare brick.		4		
4.60	ES9								
5.00 5.00 - 5.50 5.00	B10	SPT(S) N=8 (1,2/2,2,2,2) PID=0.0ppm		(2.20)			5		
5.00 - 5.50 5.00	D11								
5.60	ES12								
6.20 - 6.30 6.20	D13	PID=0.0ppm	101.83	6.20	MADE GROUND: Dark brown, oxidising to black, clayey, moderately decomposed (H5), mainly fine fibrous PEAT with some coarse fibres and amorphous material and occasional pockets of clay. Slight hydrocarbon odour. H5, B2, F3, R1, W0, N3, A1 and P1.		6		
6.30 6.50 - 6.95 6.50	ES14	20 blows. 100% recovery HVP=19, HVR=2kPa							
6.50	U15	SPT(S) N=8 (1,0/2,2,2,2)							
6.95 6.95 - 7.00 6.95	D16	HVP=23, HVR=2kPa					7		
7.00 - 7.50 7.00 - 7.50 7.00	B17								
7.00 - 7.50 7.00	D18	PID=0.0ppm		(2.90)					
7.60	ES19								
8.00 - 8.45 8.00	U20	20 blows. 100% recovery HVP=11kPa					8		
8.45 - 8.50 8.45	D21	HVP=26, HVR=4kPa							
8.50 8.50 - 9.00 8.50	B22	SPT(S) N=8 (1,0/2,2,2,2)							
8.50 - 9.00 8.50	D23	PID=0.1ppm	98.93	9.10	Soft, grey mottled brown and black, silty, organic CLAY with frequent pockets of black, moderately decomposed mainly fine fibrous peat with some coarse fibres and some amorphous material, H5, B2, F3, R2, W0, N0, A0 and P0.		9		
9.10 - 9.20 9.10	D24	PID=0.0ppm							
9.30 9.50 - 9.95 9.50	ES25	25 blows. 100% recovery HVP=57, HVR=4kPa							
9.50 - 9.95 9.50	U26								
9.95 - 10.00	D27						10		

Continued next sheet

Chiselling				Borehole Diameter		Boring Progress				Remarks:	
From (m)	To (m)	Time (mins)	Remarks	Depth (m)	Dia (mm)	Date	Time	Depth (m)	Cased (m)	Water (m)	
3.70	3.80	30		15.00	150	17/04	16:30	15.00	14.40	Dry	Service inspection pit hand excavated from GL to 1.20m. Weather: 12-17 degrees celsius, dry, 1012-1023mb. SPT Hammer: AR1559 Energy Ratio: 61%
				Casing Diameter		Water Strikes				Monitoring Installations	
				Depth (m)	Dia (mm)	Strike (m)	Cased (m)	Sealed (m)	Time (mins)	Rose to (m)	Remarks
				14.40	150						
								Top (m)		Base (m)	
								0.00		1.00	
								1.00		9.00	
								Plain		Slotted	
Checked by: MHW								IFA CP v01.01			
Log status: DRAFT											

Plant used: Cable percussion rig	Project: Ashton Moss			Location ID: ARP-BH111
Dates: 17/04/2018	Client: Tameside Metropolitan Council			
Location: 391748.76E 398641.24N	Ground level: 108.03mOD	Logged by: 	Vertical scale: 1:50	Sheet 2 of 2 Project ID: 42171

		Plant used:		Project:				Location ID:	
		Cable percussion rig		Ashton Moss				ARP-BH112	
Cable Percussion Borehole Log		Dates:		Client:				Sheet 1 of 1	
		30/04/2018		Tameside Metropolitan Council				Project ID: 42171	
Location:		Ground level:		Logged by:		Vertical scale:			
391805.36E 399200.99N		100.94mOD		█		1:50			

Samples & In Situ Testing				Strata Details				Groundwater	
Depth	Sample ID	Test Result	Level (mAOD)	Depth (m) (Thickness)	Strata Description	Legend	Water Strike	Backfill/ Installation	
0.00 - 1.20 0.00	B1	PID=0.0ppm			MADE GROUND: Firm, brown, slightly sandy, slightly gravelly CLAY with low cobble content of angular to subangular brick and concrete. Gravel is angular to subrounded, fine to coarse including brick, mudstone, concrete, sandstone and coal.				
1.00	ES2	SPT(C) N=18 (3,3/4,4,5,5)					1		
1.20 - 1.70 1.20	B3	PID=0.0ppm		(3.00)					
1.90	ES4	SPT(C) N=14 (3,3/3,3,4,4)					2		
2.00 - 2.50 2.00	B5	PID=0.0ppm							
2.90	ES6	SPT(C) N=13 (2,2/3,3,3,4)	97.94	3.00	MADE GROUND: Soft, dark brown mottled blackish brown, slightly sandy, slightly gravelly CLAY with occasional pockets of reworked mainly amorphous peat, humification not discernable. Gravel is angular to subrounded, fine to coarse including brick, mudstone and coal.		3		
3.00 - 3.50 3.00	B7	PID=0.0ppm		(1.40)					
3.90	ES8	SPT(S) N=12 (2,2/3,3,3,3)					4		
4.00 - 4.45 4.00 - 4.50 4.00	D10 B9	PID=0.0ppm	96.54	4.40	MADE GROUND: Blackish brown, nearly completely decomposed highly amorphous PEAT with rare fragments of ceramic (<30mm), and occasional pockets of very soft brownish grey, slightly sandy, slightly gravelly clay. Gravel is angular to subrounded, fine to coarse including brick and mudstone. H9, (Probably B2), F0, R0, W0, N0, A0, and P1.		5		
4.90	ES11	SPT(S) N=14 (2,2/3,3,4,4)		(1.60)					
5.00 - 5.45 5.00 - 5.50 5.00	D13 B12	PID=0.0ppm							
5.90	ES14		94.94	6.00	Firm, brown, slightly sandy, slightly gravelly CLAY. Gravel is subangular to subrounded, fine to coarse including mudstone, sandstone, limestone and coal.		6		
6.30 - 6.40	D15								
6.50 - 6.95 6.50	U16	HVP=132, HVR=15kPa							
6.95 - 7.00	D17	HVP=110, HVR=8kPa					7		
6.95 - 7.00 7.00		SPT(S) N=14 (2,3/3,3,4,4)							
7.00 - 7.45 7.00 - 7.50 7.00	D19 B18	PID=0.0ppm							
8.00	ES21			(4.00)			8		
8.00 - 8.45 8.00	U20	HVP=216, HVR=30kPa							
8.45 - 8.50	D22	HVP=227, HVR=19kPa							
8.45 - 8.50 8.50		SPT(S) N=21 (4,4/5,5,5,6)							
8.50 - 8.95 8.50 - 9.00 8.50	D24 B23	PID=0.0ppm					9		
			90.94	10.00	End of Borehole at 10.00m		10		

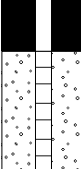
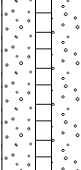
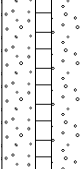
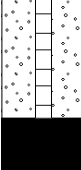
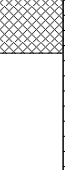
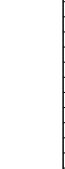
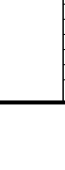
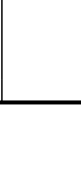
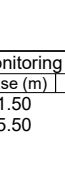
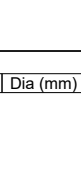
Chiselling				Borehole Diameter		Boring Progress				Remarks: Service inspection pit hand excavated from GL to 1.20m. Weather: 7 degrees celsius, dry, 1010mb. SPT Hammer: AR1559 Energy Ratio: 61%	
From (m)	To (m)	Time (mins)	Remarks	Depth (m)	Dia (mm)	Date	Time	Depth (m)	Cased (m)		
				10.00	150	23/04	16:30	10.00	10.00	Dry	
				Casing Diameter		Water Strikes				Monitoring Installations	
				Depth (m)	Dia (mm)	Strike (m)	Cased (m)	Sealed (m)	Time (mins)	Rose to (m)	Remarks
				10.00	150						
								Top (m)	Base (m)	Pipe Type	Dia (mm)
								0.00	1.00	Plain	
								1.00	5.50	Slotted	
Checked by:		MHW	IFA CP v01.01								
Log status:		DRAFT									

Dynamic Sample Recovery					Remarks:									
Top (m)	Base (m)	Dia (mm)	Recovery %	Remarks	Service inspection pit hand excavated from GL to 1.20m.									
1.20	2.00	87	100		Weather: 9 degrees celsius, dry, 1009mb.									
					SPT Hammer: 110.45 Energy Ratio: 84%									
					Water Strikes					Monitoring Installations				
					Strike (m)	Cased (m)	Sealed (m)	Time (mins)	Rose to (m)	Remarks	Top (m)	Base (m)	Pipe Type	Dia (mm)
Checked by:		MHW		IFA DS v01.01										
Log status:		DRAFT												

Dynamic Sample Recovery					Remarks:									
Top (m)	Base (m)	Dia (mm)	Recovery %	Remarks	Service inspection pit hand excavated from GL to 1.20m.									
1.20	1.70	87	100		Weather: 9 degrees celsius, dry, 1009mb.									
					SPT Hammer: 110.45 Energy Ratio: 84%									
					Water Strikes					Monitoring Installations				
					Strike (m)	Cased (m)	Sealed (m)	Time (mins)	Rose to (m)	Remarks	Top (m)	Base (m)	Pipe Type	Dia (mm)
Checked by:		MHW		IFA DS v01.01										
Log status:		DRAFT												

Dynamic Sample Recovery					Remarks:									
Top (m)	Base (m)	Dia (mm)	Recovery %	Remarks	Service inspection pit hand excavated from GL to 1.20m.									
1.20	2.00	87	100		Weather: 9 degrees celsius, dry, 1009mb.									
2.00	3.00	77	90											
3.00	4.00	67	80											
4.00	5.00	67	80		SPT Hammer: 110.45 Energy Ratio: 84%									
					Water Strikes					Monitoring Installations				
					Strike (m)	Cased (m)	Sealed (m)	Time (mins)	Rose to (m)	Remarks	Top (m)	Base (m)	Pipe Type	Dia (mm)
					0.80			0	0.80		0.00	1.00	Plain	
											1.00	5.00	Slotted	
Checked by:		MHW		IFA DS v01.01										
Log status:		DRAFT												

	Plant used: Premier 110		Project: Ashton Moss			Location ID: ARP-WS103	
	Dates: 25/04/2018 - 26/04/2018		Client: Tameside Metropolitan Council			Sheet 1 of 1	
Dynamic Sample Borehole Log		Location: 391701.09E 398481.19N		Ground level: 101.41mOD	Logged by: 	Vertical scale: 1:50	Project ID: 42171

Samples & In Situ Testing				Strata Details			Groundwater	
Depth	Sample ID	Test Result	Level (mAOD)	Depth (m) (Thickness)	Strata Description	Legend	Water Strike	Backfill/ Installation
0.00 - 0.80	B1				MADE GROUND: Soft, brown, slightly sandy, gravelly CLAY. Gravel is angular to subangular, fine to coarse including brick and concrete.			
0.40	ES2			(1.20)				
0.80	D3				At 0.80m: band of grey, sandy, angular to subangular, fine to coarse gravel of limestone.			
1.20		SPT(S) N=4 (1,1/1,1,1,1)	100.21	1.20	MADE GROUND: Blackish brown, slightly sandy, slightly gravelly, nearly completely decomposed, highly amorphous PEAT with rare fine fibres. H9, B2, F1, R0, W0, A0 and P0.			
1.20 - 1.65	D5							
1.20 - 2.00	B4			(0.80)				
1.60	ES6							
2.00		SPT(S) N=2 (1,0/1,0,0,1)	99.41	2.00	No recovery, assumed to be PEAT.			
2.00 - 2.45	D7							
				(1.00)				
3.00		SPT(S) N=1 (1,0/0,0,1,0)	98.41	3.00	MADE GROUND: Dark brown, slightly gravelly, moderately strongly decomposed, highly amorphous PEAT with some fine fibres. Gravel is subangular, fine including brick. H6, B3, F2, R0, W0, N0, A0 & P0.			
3.00 - 3.45	D8							
3.50	ES9							
3.80	D10			(1.70)				
4.00		SPT(S) N=0 (0,0/0,0,0,0)			Below 4.00m: gravel absent.			
4.00 - 4.45	D11							
4.30	D12							
4.50	ES13							
4.80	D14		96.71	4.70	MADE GROUND: Very soft, grey, slightly sandy, slightly gravelly CLAY with occasional fine sandy partings and decomposed rootlets and plant remains.			
5.00		SPT(S) N=0 (0,0/0,0,0,0)	96.41	(0.30)				
5.00 - 5.45	D17				MADE GROUND: Blackish brown, nearly completely decomposed highly amorphous PEAT with some fine fibres. H9, B3, F2, R0, W0, N0, A0 and P0.			
5.30	ES15			(0.50)				
5.40	D16		95.91	5.50	MADE GROUND: Very soft, grey, slightly sandy CLAY with occasional fine sandy partings. Gravel is angular to subangular, fine to coarse including brick and concrete.			
5.80	ES18				At 5.60m: slightly gravelly. Gravel is subangular, fine including brick. Below 6.00m: occasional bands of fine sand <5cm.			
6.00		SPT(S) N=8 (2,1/2,2,2,2)						
6.00 - 6.45	D19			(1.95)				
6.00 - 7.00	D20							
7.00		SPT(S) N=23 (3,3/5,6,6,6)						
7.00 - 7.45	D21		93.96	7.45	End of Borehole at 7.45m			

Dynamic Sample Recovery					Remarks:									
Top (m)	Base (m)	Dia (mm)	Recovery %	Remarks	Service inspection pit hand excavated from GL to 1.20m.									
1.20	2.00	87	100		Weather: 9 degrees celsius, dry, 1009mb.									
2.00	3.00	87	0		SPT Hammer: 110.45 Energy Ratio: 84%									
3.00	4.00	77	60		Water Strikes					Monitoring Installations				
4.00	5.00	77	70		Strike (m)	Cased (m)	Sealed (m)	Time (mins)	Rose to (m)	Remarks	Top (m)	Base (m)	Pipe Type	Dia (mm)
5.00	6.00	67	80		6.50			0	6.50		0.00	1.50	Plain	
6.00	7.00	57	75								1.50	5.50	Slotted	
Checked by: MHW					IFA DS v01.01									
Log status: DRAFT														



Plant used:
Competitor Dart

Project:
Ashton Moss

Location ID:
ARP-BH107

Dates:
26/04/2018 - 27/04/2018

Client:
Tameside Metropolitan Council

Sheet 1 of 2

Dynamic Sample Borehole Log

Location:
391631.65E 398612.34N

Ground level:
106.64mOD

Logged by:

Vertical scale:
1:50

Project ID:
42171

Samples & In Situ Testing				Strata Details			Groundwater	
Depth	Sample ID	Test Result	Level (mAOD)	Depth (m) (Thickness)	Strata Description	Legend	Water Strike	Backfill/ Installation
0.00 - 0.30	B1							
0.20	ES2							
0.30 - 0.80	B3		106.34	(0.30)	MADE GROUND: Dark brown, gravelly, very clayey, fine to coarse SAND. Gravel is angular to subrounded, fine to coarse including brick, limestone, sandstone and concrete.			
0.50	ES4			0.30	MADE GROUND: Stiff, dark brown, slightly sandy, slightly gravelly CLAY with low cobble content of subangular brick. Gravel is angular to subrounded fine to coarse including brick limestone, sandstone and concrete.			
1.20		SPT(S) N=19 (2,2/2,2,9,6)						
1.20 - 1.65	D6				Below 1.20m: firm.			
1.20 - 2.00	B5							
1.50	ES7			(3.00)				
2.00		SPT(S) N=12 (4,3/2,4,3,3)						
2.00 - 2.45	D9							
2.00 - 3.00	B8							
2.50	ES10				Below 2.50m: occasional pockets of brown, fine to coarse sand (<50mm).			
3.00		SPT(S) N=8 (2,6/3,2,2,1)						
3.00 - 3.45	D11							
3.30 - 4.00	B12		103.34	3.30	MADE GROUND: Stiff, brown mottled dark brown and grey, slightly sandy, slightly gravelly CLAY. Gravel is angular to subrounded, fine to coarse including brick, sandstone and limestone.			
3.60	ES13							
4.00		SPT(S) N=16 (3,5/3,5,5,3)						
4.00 - 4.45	D15				Below 4.30m: stiff.			
4.00 - 4.60	B14			(1.30)				
4.70	ES16		102.04	4.60	MADE GROUND: Firm, dark brown, slightly sandy, slightly gravelly, slightly organic CLAY. Gravel is angular to subrounded, fine to coarse including brick, sandstone, limestone, mudstone and occasional coal.			
4.90	D17				Below 5.00m: firm.			
5.00		SPT(S) N=12 (1,2/3,3,3,3)						
5.00 - 5.45	D19							
5.00 - 6.00	B18							
5.50	ES20			(1.55)	Below 5.70m: stiff, occasional wood fragments.			
6.00		SPT(S) N=7 (2,1/2,2,1,2)						
6.00 - 6.45	D21		100.49	6.15	MADE GROUND: Dark brown, slightly sandy, slightly gravelly, organic CLAY. Gravel is angular to subrounded, fine and medium including limestone.			
6.30	D22			(0.45)				
6.50	ES23			6.60	MADE GROUND: Blackish brown, slightly sandy, slightly gravelly, nearly completely decomposed, highly amorphous PEAT with rare fine and rare coarse fibres. Gravel is angular to subrounded, fine and medium including limestone and brick. Slight hydrocarbon odour. H9, B2, F1, R1, W0, N0, A1 and P1.			
6.80	ES24		100.04					
7.00		SPT(S) N=19 (3,2/3,6,5,5)						
7.00 - 7.45	D26							
7.00 - 8.00	ES25			(1.60)				
7.50	ES27							
8.00		SPT(S) N=13 (3,3/3,4,3,3)						
8.00 - 8.45	D28		98.44	8.20	MADE GROUND: Blackish brown, slightly sandy, slightly gravelly, very strongly decomposed, highly amorphous PEAT with rare fine and rare coarse fibres. Gravel is angular to subrounded, fine and medium including brick, mudstone and cinder. Slight hydrocarbon odour. H8, B2, F2, R2, W0, N0, A1 and P1.			
8.20 - 9.00	B29							
8.50	ES30			(1.40)				
9.00		SPT(S) N=9 (1,2/2,1,3,3)						
9.00 - 9.45	D31							
9.30	D32							
9.80	ES33		97.04	9.60	Firm, grey, slightly sandy, silty CLAY with occasional fine, sandy partings.			
10.00		SPT(S) N=16 (3,3/4,4,4,4)			Continued next sheet			

Dynamic Sample Recovery

Top (m)	Base (m)	Dia (mm)	Recovery %	Remarks
1.20	2.00	87	100	
2.00	3.00	87	90	
3.00	4.00	77	100	
4.00	5.00	77	100	
5.00	6.00	67	100	
6.00	7.00	57	100	
7.00	8.00	57	75	

Checked by:

MHW

IFA DS

Log status:

DRAFT

v01.01

Remarks:

Service inspection pit hand excavated from GL to 1.20m.

Weather: 9 degrees celsius, dry, 1012mb.

SPT Hammer: Dart416 Energy Ratio: 71%

Water Strikes					Monitoring Installations				
Strike (m)	Cased (m)	Sealed (m)	Time (mins)	Rose to (m)	Remarks	Top (m)	Base (m)	Pipe Type	Dia (mm)
						0.00	1.00	Plain	
						1.00	6.00	Slotted	



Plant used: Competitor Dart	Project: Ashton Moss			Location ID: ARP-BH107	
Dates: 26/04/2018 - 27/04/2018	Client: Tameside Metropolitan Council				
Dynamic Sample Borehole Log	Location: 391631.65E 398612.34N	Ground level: 106.64mOD	Logged by: [Redacted]	Vertical scale: 1:50	Sheet 2 of 2
	Project ID: 42171				

Samples & In Situ Testing			Strata Details				Groundwater	
Depth	Sample ID	Test Result	Level (mAOD)	Depth (m) (Thickness)	Strata Description	Legend	Water Strike	Backfill/ Installation
10.00 - 10.45	D34		96.19	(0.85) 10.45	Firm, grey, slightly sandy, silty CLAY with occasional fine, sandy partings.			
					End of Borehole at 10.45m			
							11	
							12	
							13	
							14	
							15	
							16	
							17	
							18	
							19	
							20	

Dynamic Sample Recovery					Remarks: SPT Hammer: Dart416 Energy Ratio: 71%				
Top (m)	Base (m)	Dia (mm)	Recovery %	Remarks					
8.00	9.00	47	75						
9.00	10.00	37	90						
Water Strikes					Monitoring Installations				
Strike (m)	Cased (m)	Sealed (m)	Time (mins)	Rose to (m)	Remarks	Top (m)	Base (m)	Pipe Type	Dia (mm)
Checked by:	MHW	IFA DS v01.01							
Log status:	DRAFT								

APPENDIX 4

GEOTECHNICAL LABORATORY TEST RESULTS

APPENDIX 4

GENERAL NOTES ON LABORATORY TESTS ON SOILS

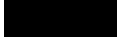
A4.1 GENERAL

A4.1.1 Where applicable all tests are carried out in accordance with the relevant British Standard. The laboratory test procedures are as below:

Test Name	Procedures BS1377:1990 Part:Clause
Moisture Content	2:3
Liquid Limit	2:4
Plastic Limit and Plastic Index	2:5
Linear Shrinkage	2:6
Particle Size Distribution	2:9
Loss on Ignition	3:4*
Sulphate content	3:5
Chloride Content	3:7*
pH Value	3:9
Compaction Test	4:3*
Moisture condition Value	4:5
California Bearing Ratio	4:7
Consolidation	5:3
Bulk Density	7:2*
Laboratory Vane Tests	7:3*
Shear Box	7:4*
Triaxial Compression	
Total Stress Single-Stage	7:8
Total Stress Multi-Stage	7:9
Effective Stress	Note 1*
Permeability	Note 2*
Desiccation	Note 3*
In-situ density by Sand replacement	Part 9
Core Cutter	Part 9
Nuclear density	Part 9
	BS812 Part:Clause
Ten % fines (Dry and Soaked)	111
Aggregate crushing value	110
Particle density and water absorption	2
Particle size distribution	103
Moisture content – oven drying	109
Soundness	121

Chloride Content	124:10.2
Sulphate content	124:10.3
Curing/density and compressive strength of concrete tubes	116-111-114
Location of reinforcement	204
Carbonation	Note 4
Resistivity	Note 5
Sampling of concrete dust by drilling	Note 6
Half cell potential	Note 7

Note 1 - Manual of soils laboratory testing volume 3: 1985, section 19.2 by 

Note 2 - Manual of soils laboratory testing volume 2: 1985, section 10.7 by 

Note 3 - BRE Information paper IP4 issued February 1993

Note 4 - BRE Information paper IP6/81

Note 5 - In-house document number 109

Note 6 - In-house document number 112

Note 7 - ASTM C876-91

* Tests are not included in UKAS accreditation

A4.1.2 Any discussion in this report is based on the values and results obtained from the appropriate tests. Due allowance should be made, when considering any result in isolation, of the possible inaccuracy of any such individual result. Details of the accuracy of results are included in this section, where applicable.

F.A.O.

Test Report - 42171 / 3

Site: Ashton Moss
Job Number: 42171
Originating Client: Tameside Metropolitan Council
Originating Reference: 42171
Date Sampled: 23/04/2018
Date Scheduled: 14/05/2018
Date Testing Started: 22/05/2018
Date Testing Finished: 12/06/2018
Remarks:

Authorised By:



Quality Technician

Date: 12/06/2018

Site: Ashton Moss

Job Number: 42171

Client: Thameside Metropolitan Council

Page: 2

Determination of Water Content, Liquid Limit and Plastic Limit and Derivation of Plasticity and Liquidity Index

Borehole / Trial Pit	Depth (m)	Sample	Natural / Sieved	Natural Water Content %	Sample Passing 425 µm Sieve		Liquid Limit %	Plastic Limit %	Plasticity Index %	Liquidity Index	Class	Description / Remarks
					Percentage %	Water Content %						
ARP-BH101	1.20	B3	Sieved	41.2	53	73.0	57	44	13	2.27	MH	Grey slightly clayey, silty, sandy GRAVEL
ARP-BH101	5.00	B14	Natural	28	67	39.0	35	19	16	1.27	CL/CI	Grey gravelly, clayey, sandy SILT
ARP-BH101	9.00	B23	Sieved	27.3	63	41.0	32	28	4	3.17	ML	Brown clayey, silty, sandy GRAVEL
ARP-BH101	13.00	D36	Natural	20.9	93	22.0	40	18	22	0.18	CI	Brown slightly gravelly, sandy, clayey SILT
ARP-BH101	16.50	B	Natural	27.5	100	28.0	45	22	23	0.24	CI	Brown clayey SILT
ARP-BH101	21.00	B48	Natural	25.9	100	26.0	47	22	25	0.16	CI	Brown slightly sandy, clayey SILT
ARP-BH102	0.00	B1	Sieved	21.4	57	34.0	32	20	12	1.13	CL	Brown slightly clayey GRAVEL (Mainly COBBLES)
ARP-BH102	1.20	B3		20.6								Brown gravelly, sandy CLAY
ARP-BH102	2.00	B5		17.6								Brown gravelly, sandy CLAY
ARP-BH102	3.00	B7		20.4								Brown gravelly, sandy CLAY
ARP-BH102	4.00	B8	Sieved	30	69	41.0	58	45	13	-0.30	MH	Black clayey, gravelly, silty SAND (PEAT)
ARP-BH102	5.00	B11		41.2								Grey sandy, gravelly CLAY
ARP-BH102	6.50	B14		21.6								Black sandy, gravelly CLAY
ARP-BH102	8.00	B18	Sieved	30.5	54	52.0	41	33	8	2.38	MI	Black slightly clayey, silty, gravelly SAND
ARP-BH102	9.00	B21		26.8								Grey sandy, gravelly CLAY
ARP-BH102	10.00	B22		28.2								Grey sandy, gravelly CLAY
ARP-BH102	10.90	D25		26								Grey sandy, gravelly CLAY
ARP-BH102	11.00	B26		28.2								Black peaty CLAY
ARP-BH102	12.50	D30		27.7								Brown slightly silty, slightly gravelly CLAY
ARP-BH102	13.00	B31	Natural	38.1	96	39.0	54	28	26	0.44	CH	Black gravelly, clayey, sandy, organic SILT
ARP-BH102	14.10	D33		52								Black organic CLAY
ARP-BH102	14.50	B35		39.2								Black gravelly, sandy CLAY
ARP-BH102	15.20	D37		501								Black organic CLAY
ARP-BH102	16.90	D39		18.8								Brown slightly silty CLAY
ARP-BH102	17.00	B40	Natural	29	91	31.0	29	16	13	1.19	CL	Brown sandy, silty CLAY
ARP-BH102	18.95	D44		25.2								Brown CLAY
ARP-BH102	19.00	B45		8								Brown slightly sandy, slightly gravelly CLAY
ARP-BH102	20.95	D48		19.7								Brown silty CLAY
ARP-BH102	22.50	B54	Natural	18.7	97	19.0	40	19	21	0.01	CI	Brown slightly gravelly, sandy, clayey SILT
ARP-BH102	24.00	B58	Natural	36.5	100	37.0	34	20	14	1.18	CL	Grey sandy, clayey SILT
ARP-BH103	0.00	B1	Sieved	18.6	12	116.0	26	18	8	12.20	CL	Brown clayey, sandy GRAVEL
ARP-BH103	5.00	B13	Natural	22.9	96	24.0	41	16	25	0.31	CI	Brown clayey, sandy SILT
ARP-BH103	8.50	D22	Natural	41.8	90	46.0	43	21	22	1.13	CI	Brown slightly gravelly, slightly sandy, clayey SILT
ARP-BH104	0.00	B1	Sieved	20.1	54	33.0	31	22	9	1.21	CL	Brown slightly clayey, silty, gravelly SAND
ARP-BH104	4.00	B9	Sieved	22.3	70	30.0	40	19	21	0.51	CI	Brown clayey, silty, sandy GRAVEL
ARP-BH104	7.90	D	Sieved	38	22	157.0	36	22	14	9.63	CI	Black gravelly, silty CLAY

Method of Preparation: BS EN ISO 17892 : Part 1 : 2014 : Clause 5.1 Water content test preparation
BS 1377 : Part 1 : 2016 : Clause 8.4.3 Preparation of samples for plasticity tests
BS 1377 : Part 2 : 1990 : Clause 4.2 Preparation of samples for plastic limit tests

Method of Test: BS EN ISO 17892 : Part 1 : 2014 : Clause 5.2 Water content test execution
BS 1377 : Part 2 : 1990 : Clause 4.3 or 4.4 Determination of the liquid limit
BS 1377 : Part 2 : 1990 : Clause 5.3 Determination of the plastic limit and plasticity index

Site: Ashton Moss

Job Number: 42171

Client: Thameside Metropolitan Council

Page: 3

Determination of Water Content, Liquid Limit and Plastic Limit and Derivation of Plasticity and Liquidity Index

Borehole / Trial Pit	Depth (m)	Sample	Natural / Sieved	Natural Water Content %	Sample Passing 425 µm Sieve		Liquid Limit %	Plastic Limit %	Plasticity Index %	Liquidity Index	Class	Description / Remarks
					Percentage %	Water Content %						
ARP-BH104	8.00	U19	Sieved	38.9	100	39.0	36	20	16	1.18	CI	Brown sandy, gravelly CLAY
ARP-BH104	12.50	B34	Natural	23.3	97	24.0	43	21	22	0.13	CI	Brown sandy, clayey SILT
ARP-BH104	14.95	D38	Natural	18.7	90	20.0	32	18	14	0.16	CL	Brown clayey, sandy SILT
ARP-BH105	1.20	B3	Natural	21.4	92	23.0	686	379	307	-1.16	MEO	Brown clayey, sandy GRAVEL
ARP-BH105	5.00	B11	Sieved	30.4	45	61.0	60	37	23	1.05	MH	Brown/Grey clayey, silty, sandy, organic GRAVEL
ARP-BH105	9.50	B19	Sieved	123	55	218.0		NP				Black slightly clayey, silty, gravelly SAND (PEAT)
ARP-BH105	13.00	B26	Natural	24	95	25.0	42	22	20	0.15	CI	Brown sandy, silty CLAY
ARP-BH106	0.80	B3		11.7								Brown slightly clayey, sandy, silty GRAVEL
ARP-BH106	4.00	B14	Sieved	86.2	47	177.0	65	44	21	6.35	MH	Black gravelly, silty CLAY/PEAT
ARP-BH106	8.00	B25	Natural	16.3	100	16.0	31	15	16	0.08	CL	Brown slightly sandy, slightly gravelly CLAY
ARP-BH108	0.00	B1	Sieved	18.2	56	28.0	29	17	12	0.95	CL	Brown sandy, gravelly SILT
ARP-BH108	1.20	B3		13								Brown sandy, gravelly CLAY
ARP-BH108	2.00	B5		18.4								Brown gravelly, sandy CLAY
ARP-BH108	3.00	B7		14								Grey sandy, gravelly CLAY
ARP-BH108	4.00	B9	Sieved	17.2	59	26.0	44	24	20	0.09	CI	Brown clayey, silty, sandy GRAVEL
ARP-BH108	5.00	B11		21.8								Brown gravelly, silty CLAY (BRICK noted)
ARP-BH108	6.00	B13		20.7								Brown gravelly CLAY
ARP-BH108	7.00	D15		20.3								Brown slightly sandy, gravelly CLAY
ARP-BH108	7.50	B16		23.5								Brown silty, very gravelly CLAY
ARP-BH108	8.50	D18		12.6								Brown silty, gravelly CLAY
ARP-BH108	9.00	B20	Sieved	26.8	51	48.0	35	21	14	1.94	CL/CI	Black clayey, silty SAND/GRAVEL
ARP-BH108	10.00	D22		15.8								Black gravelly, sandy CLAY
ARP-BH108	10.50	B23		19.7								Grey sandy, clayey GRAVEL
ARP-BH108	11.50	D25		29.8								Black/Brown gravelly, sandy CLAY
ARP-BH108	12.00	B27	Sieved	24.2	69	33.0	47	22	25	0.43	CI	Brown/Grey slightly clayey, silty, sandy GRAVEL
ARP-BH108	13.00	D29		38.5								Black/Brown very gravelly SAND
ARP-BH108	13.50	B30		15.2								Brown sandy, gravelly CLAY
ARP-BH108	15.00	B33		80.7								Black clayey PEAT
ARP-BH108	16.50	B35	Sieved	46.1	76	59.0	65	41	24	0.74	MH	Black clayey, silty, gravelly, organic SAND
ARP-BH108	18.00	B39		41.6								Brown PEAT
ARP-BH108	19.50	D43	Natural	32.7	90	36.0	36	23	13	0.98	CI	Brown slightly gravelly, silty CLAY
ARP-BH109	0.00	B1		16.9								Brown silty, gravelly CLAY
ARP-BH109	1.20	B4		13.6								Brown clayey, sandy GRAVEL
ARP-BH109	2.00	B7		18.1								Brown sandy, gravelly CLAY
ARP-BH109	3.00	B10		22.9								Black silty, sandy CLAY
ARP-BH109	4.00	B12		30.5								Grey sandy, gravelly CLAY

Method of Preparation: BS EN ISO 17892 : Part 1 : 2014 : Clause 5.1 Water content test preparation
BS 1377 : Part 1 : 2016 : Clause 8.4.3 Preparation of samples for plasticity tests
BS 1377 : Part 2 : 1990 : Clause 4.2 Preparation of samples for plastic limit tests

Method of Test: BS EN ISO 17892 : Part 1 : 2014 : Clause 5.2 Water content test execution
BS 1377 : Part 2 : 1990 : Clause 4.3 or 4.4 Determination of the liquid limit
BS 1377 : Part 2 : 1990 : Clause 5.3 Determination of the plastic limit and plasticity index

Site: Ashton Moss

Job Number: 42171

Client: Thameside Metropolitan Council

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Determination of Water Content, Liquid Limit and Plastic Limit and Derivation of Plasticity and Liquidity Index

Borehole / Trial Pit	Depth (m)	Sample	Natural / Sieved	Natural Water Content %	Sample Passing 425 µm Sieve		Liquid Limit %	Plastic Limit %	Plasticity Index %	Liquidity Index	Class	Description / Remarks
					Percentage %	Water Content %						
ARP-BH109	5.00	B14	Sieved	45.7	67	66.0	69	42	27	0.90	MH	Black clayey, gravelly, silty SAND (PEAT)
ARP-BH109	6.00	B17		92.7								Black PEAT/CLAY
ARP-BH109	7.00	D20		100								Black PEAT/CLAY
ARP-BH109	7.50	B21		64.1								Black PEAT
ARP-BH109	8.50	D24		27.7								Brown/Black slightly gravelly, silty CLAY
ARP-BH109	9.00	B26	Sieved	29.4	85	34.0	32	21	11	1.16	CL	Black slightly gravelly, sandy, silty CLAY
ARP-BH109	10.50	B30		79.4								Black PEAT
ARP-BH109	11.50	D33		30.4								Brown silty CLAY
ARP-BH109	12.50	D	Natural	19.5	100	20.0	37	19	18	0.03	CI	Brown slightly gravelly, sandy, silty CLAY
ARP-BH109	12.50	D36		17.5								Brown CLAY
ARP-BH109	14.00	D40		22.8								Brown silty CLAY
ARP-BH109	15.00	D41		37.3								Brown slightly gravelly, silty CLAY
ARP-BH110	1.50	B2	Natural	23.5	100	24.0	37	21	16	0.16	CI	Grey slightly sandy, slightly gravelly CLAY
ARP-BH110	6.00	B17		81								Black silty, organic CLAY
ARP-BH110	10.00	D27	Natural	16.1	93	17.0	30	14	16	0.19	CL	Brown clayey, sandy SILT
ARP-BH111	1.20	B3	Sieved	23.7	67	33.0	36	23	13	0.75	CI	Brown/Black slightly clayey, silty, sandy GRAVEL
ARP-BH111	5.00	B10	Sieved	26.4	56	43.0	42	25	17	1.08	CI	Black clayey, silty, gravelly, organic SAND
ARP-BH111	8.50	B22	Sieved	11.7	73	14.0	50	33	17	-1.11	MI/MH	Black clayey, gravelly, silty, organic SAND
ARP-BH111	12.95	D	Natural	27.1	100	27.0	42	23	19	0.22	CI	Brown/Grey sandy, clayey SILT (PEAT)
ARP-BH112	0.00	B1	Sieved	17	70	22.0	27	20	7	0.32	CL	Brown slightly clayey, silty, sandy GRAVEL
ARP-BH112	1.20	B3		20.2								Grey sandy, gravelly CLAY
ARP-BH112	2.00	B5		18.5								Grey sandy, gravelly CLAY
ARP-BH112	3.00	B7		33.6								Brown sandy, gravelly CLAY
ARP-BH112	4.00	B9	Sieved	24.9	60	38.0	34	23	11	1.36	CL	Brown slightly clayey, gravelly, silty SAND
ARP-BH112	5.00	B12		34								Black organic CLAY
ARP-BH112	6.95	D17		13.7								Black/Brown slightly gravelly, silty CLAY
ARP-BH112	7.00	B18		20								Brown sandy, silty, gravelly CLAY
ARP-BH112	8.50	B23	Natural	21.6	100	22.0	31	18	13	0.28	CL	Grey slightly gravelly, sandy, clayey SILT
ARP-WS101	0.00	B1	Natural	92.3	55	163.0	64	44	20	5.95	MH	Brown clayey, silty SAND/GRAVEL
ARP-WS101	1.20	B4	Natural	40.8	66	59.0	64	43	21	0.77	MHO	Brown clayey, gravelly, sandy SILT
ARP-WS102	0.00	B1	Sieved	63.1	70	88.0	66	50	16	2.39	MH	Black clayey, sandy, silty GRAVEL (PEAT)
ARP-WS102	5.00	D	Natural	214	100	214.0		NP				Black slightly gravelly, sandy SILT (PEAT)
ARP-WS103	0.00	B1	Sieved	11.4	60	16.0	35	22	13	-0.48	CL/CI	Brown slightly clayey, sandy, silty GRAVEL
ARP-WS103	5.40	D16	Natural	526	100	526.0	34	23	11	45.73	CL	Black slightly clayey GRAVEL/SILT/SAND (PEAT)
ARP-BH107	0.00	B1		15.5								Brown gravelly, silty CLAY
ARP-BH107	0.30	B3	Sieved	16	60	23.0	31	21	10	0.25	CL	Brown slightly clayey, silty SAND/GRAVEL

Method of Preparation: BS EN ISO 17892 : Part 1 : 2014 : Clause 5.1 Water content test preparation
BS 1377 : Part 1 : 2016 : Clause 8.4.3 Preparation of samples for plasticity tests
BS 1377 : Part 2 : 1990 : Clause 4.2 Preparation of samples for plastic limit tests

Method of Test: BS EN ISO 17892 : Part 1 : 2014 : Clause 5.2 Water content test execution
BS 1377 : Part 2 : 1990 : Clause 4.3 or 4.4 Determination of the liquid limit
BS 1377 : Part 2 : 1990 : Clause 5.3 Determination of the plastic limit and plasticity index

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Method of Test: BS 1377 : Part 2 : 1990 : Clause 8.2 Determination of particle density (Gas jar method)



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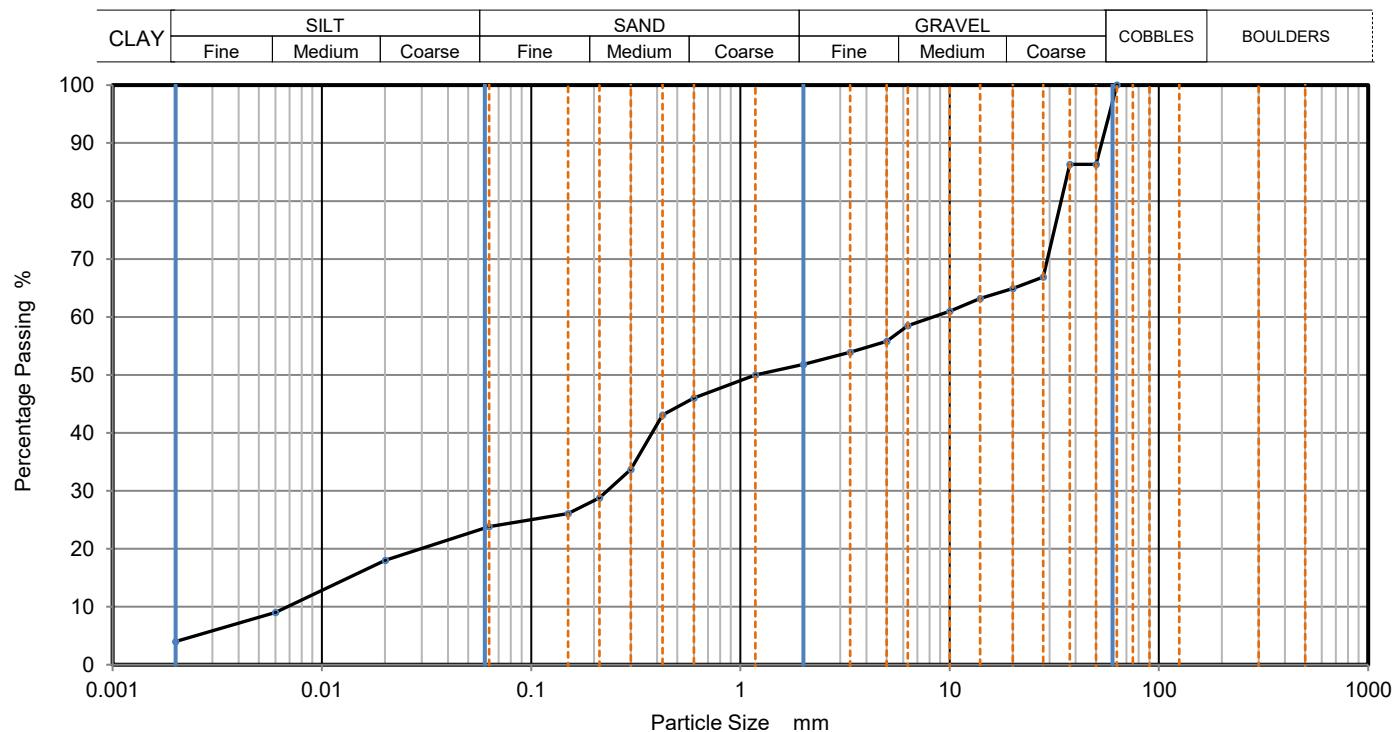
Job Number: 42171

Client: Tameside Metropolitan Council

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DETERMINATION OF PARTICLE SIZE DISTRIBUTION

Borehole / Trial Pit	Depth (m)	Sample	Testing Type	Description
ARP-BH101	1.20	B3	Wet Sieve + Pipette	Grey slightly clayey, silty, sandy GRAVEL



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
		0.0201	18
		0.0060	9
		0.0020	4
63	100		
50	86		
37.5	86		
28	67		
20	65		
14	63		
10	61		
6.3	59		
5	56		
3.35	54		
2	52		
1.18	50	Particle density (assumed) 2.65 Mg/m3	
0.6	46		
0.425	43		
0.3	34		
0.212	29		
0.15	26		
0.063	24		

Dry Mass of sample, g

1117

Sample Proportions	% dry mass
Very coarse	0
Gravel	48
Sand	28
Silt	20
Clay	4

Grading Analysis		
D100	mm	63
D60	mm	8.32
D30	mm	0.231
D10	mm	0.00682
Uniformity Coefficient		1200
Curvature Coefficient		0.94

Remarks

Preparation and testing in accordance with BS1377 unless noted below

Method of Preparation: BS 1377:Part 1:1990, clause 7.3 Initial preparation
BS 1377:Part 1:1990, clause 7.4.5 Preparation of particle size tests

Method of Test: BS1377:Part 2:1990, clause 9.2 Determination of particle size distribution by wet sieving method
BS1377:Part 2:1990, clause 9.4 Determination of sedimentation by pipette method





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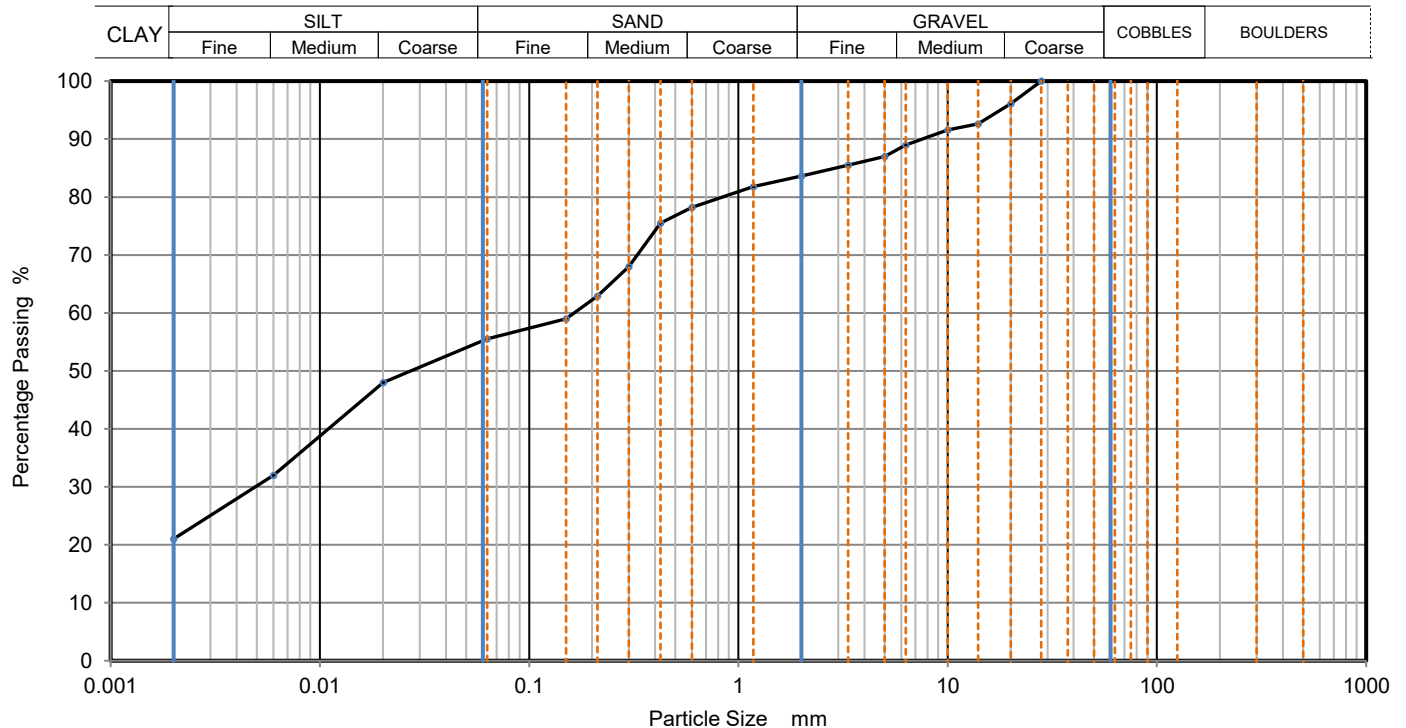
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Client: Tameside Metropolitan Council

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DETERMINATION OF PARTICLE SIZE DISTRIBUTION

Borehole / Trial Pit	Depth (m)	Sample	Testing Type	Description
ARP-BH101	5.00	B14	Wet Sieve + Pipette	Grey gravelly, clayey, sandy SILT



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
		0.0201	48
		0.0060	32
		0.0020	21
28	100		
20	96		
14	93		
10	92		
6.3	89		
5	87		
3.35	86		
2	84		
1.18	82	Particle density (assumed) 2.65 Mg/m ³	
0.6	78		
0.425	76		
0.3	68		
0.212	63		
0.15	59		
0.063	56		

Dry Mass of sample, g

536

Sample Proportions	% dry mass
Very coarse	0
Gravel	16
Sand	28
Silt	34
Clay	22

Grading Analysis		
D100	mm	28
D60	mm	0.164
D30	mm	0.00483
D10	mm	
Uniformity Coefficient		
Curvature Coefficient		

Remarks

Preparation and testing in accordance with BS1377 unless noted below

Method of Preparation: BS 1377:Part 1:1990, clause 7.3 Initial preparation
BS 1377:Part 1:1990, clause 7.4.5 Preparation of particle size tests

Method of Test: BS1377:Part 2:1990, clause 9.2 Determination of particle size distribution by wet sieving method
BS1377:Part 2:1990, clause 9.4 Determination of sedimentation by pipette method





Site: Ashton Moss

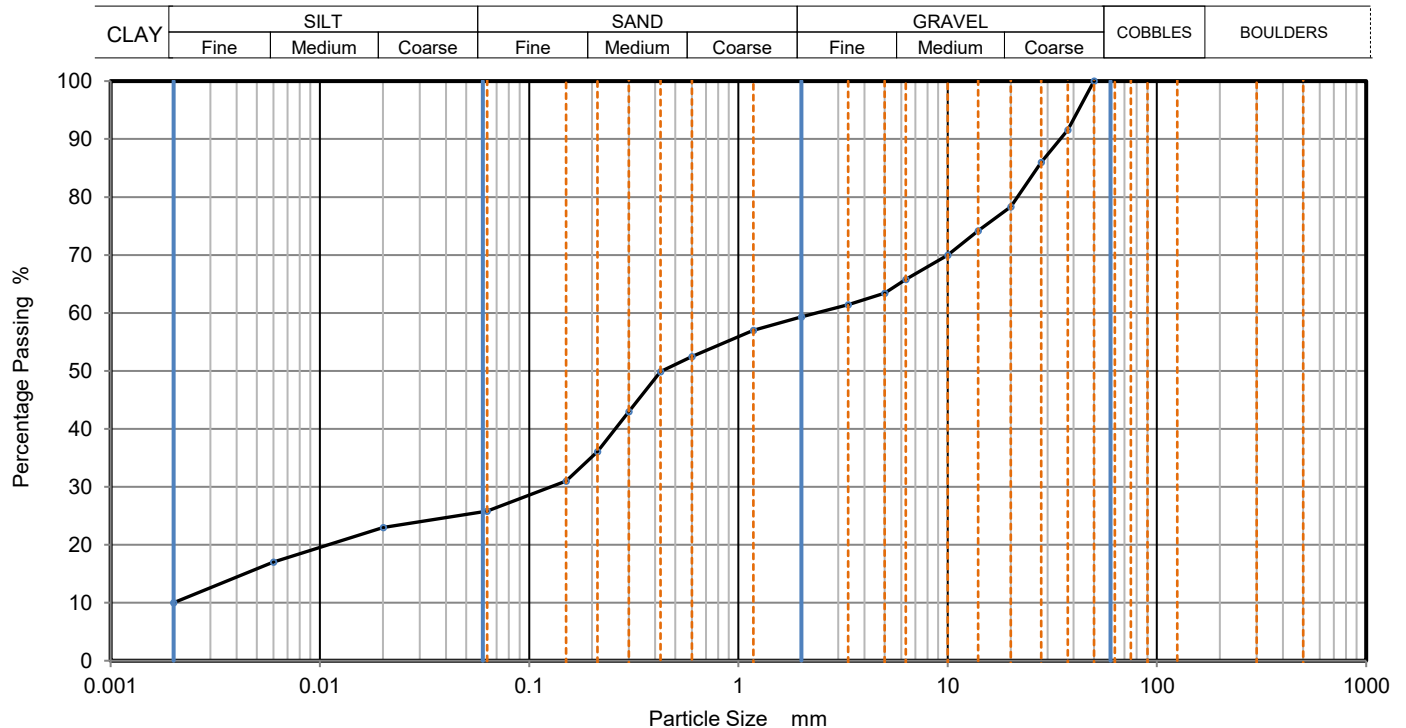
Job Number: 42171

Client: Tameside Metropolitan Council

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DETERMINATION OF PARTICLE SIZE DISTRIBUTION

Borehole / Trial Pit	Depth (m)	Sample	Testing Type	Description
ARP-BH101	9.00	B23	Wet Sieve + Pipette	Brown clayey, silty, sandy GRAVEL



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
		0.0201	23
		0.0060	17
		0.0020	10
50	100		
37.5	92		
28	86		
20	78		
14	74		
10	70		
6.3	66		
5	63		
3.35	61		
2	59		
1.18	57	Particle density (assumed) 2.65 Mg/m ³	
0.6	53		
0.425	50		
0.3	43		
0.212	36		
0.15	31		
0.063	26		

Dry Mass of sample, g

1343

Sample Proportions	% dry mass
Very coarse	0
Gravel	41
Sand	34
Silt	16
Clay	10

Grading Analysis		
D100	mm	50
D60	mm	2.38
D30	mm	0.127
D10	mm	0.00203
Uniformity Coefficient		1200
Curvature Coefficient		3.3

Remarks

Preparation and testing in accordance with BS1377 unless noted below

Method of Preparation: BS 1377:Part 1:1990, clause 7.3 Initial preparation
BS 1377:Part 1:1990, clause 7.4.5 Preparation of particle size tests

Method of Test: BS1377:Part 2:1990, clause 9.2 Determination of particle size distribution by wet sieving method
BS1377:Part 2:1990, clause 9.4 Determination of sedimentation by pipette method





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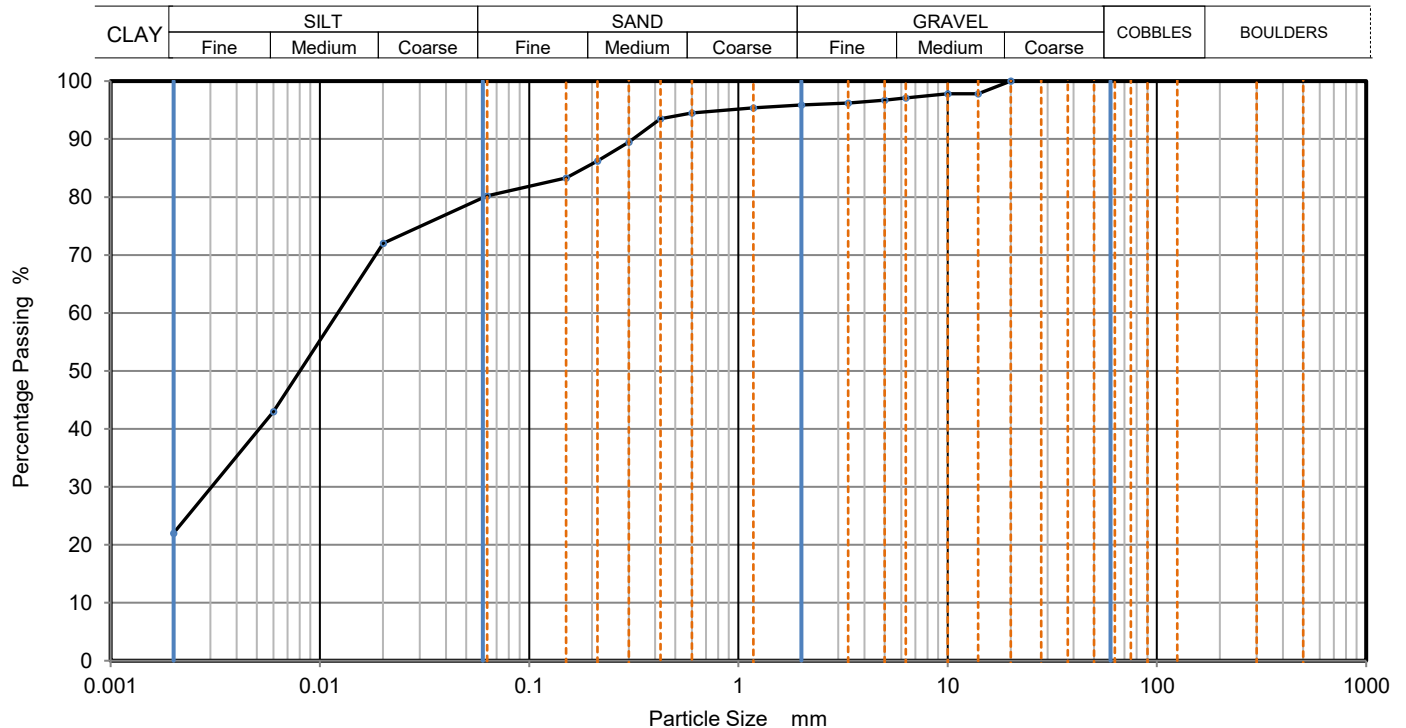
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DETERMINATION OF PARTICLE SIZE DISTRIBUTION

Borehole / Trial Pit	Depth (m)	Sample	Testing Type	Description
ARP-BH101	13.00	D36	Wet Sieve + Pipette	Brown slightly gravelly, sandy, clayey SILT



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
		0.0201	72
		0.0060	43
		0.0020	22
20	100		
14	98		
10	98		
6.3	97		
5	97		
3.35	96		
2	96		
1.18	95	Particle density (assumed) 2.65 Mg/m ³	
0.6	95		
0.425	94		
0.3	90		
0.212	86		
0.15	83		
0.063	80		

Dry Mass of sample, g

245

Sample Proportions	% dry mass
Very coarse	0
Gravel	4
Sand	16
Silt	58
Clay	22

Grading Analysis		
D100	mm	20
D60	mm	0.0124
D30	mm	0.00301
D10	mm	
Uniformity Coefficient		
Curvature Coefficient		

Remarks

Preparation and testing in accordance with BS1377 unless noted below

Method of Preparation: BS 1377:Part 1:1990, clause 7.3 Initial preparation
BS 1377:Part 1:1990, clause 7.4.5 Preparation of particle size tests

Method of Test: BS1377:Part 2:1990, clause 9.2 Determination of particle size distribution by wet sieving method
BS1377:Part 2:1990, clause 9.4 Determination of sedimentation by pipette method



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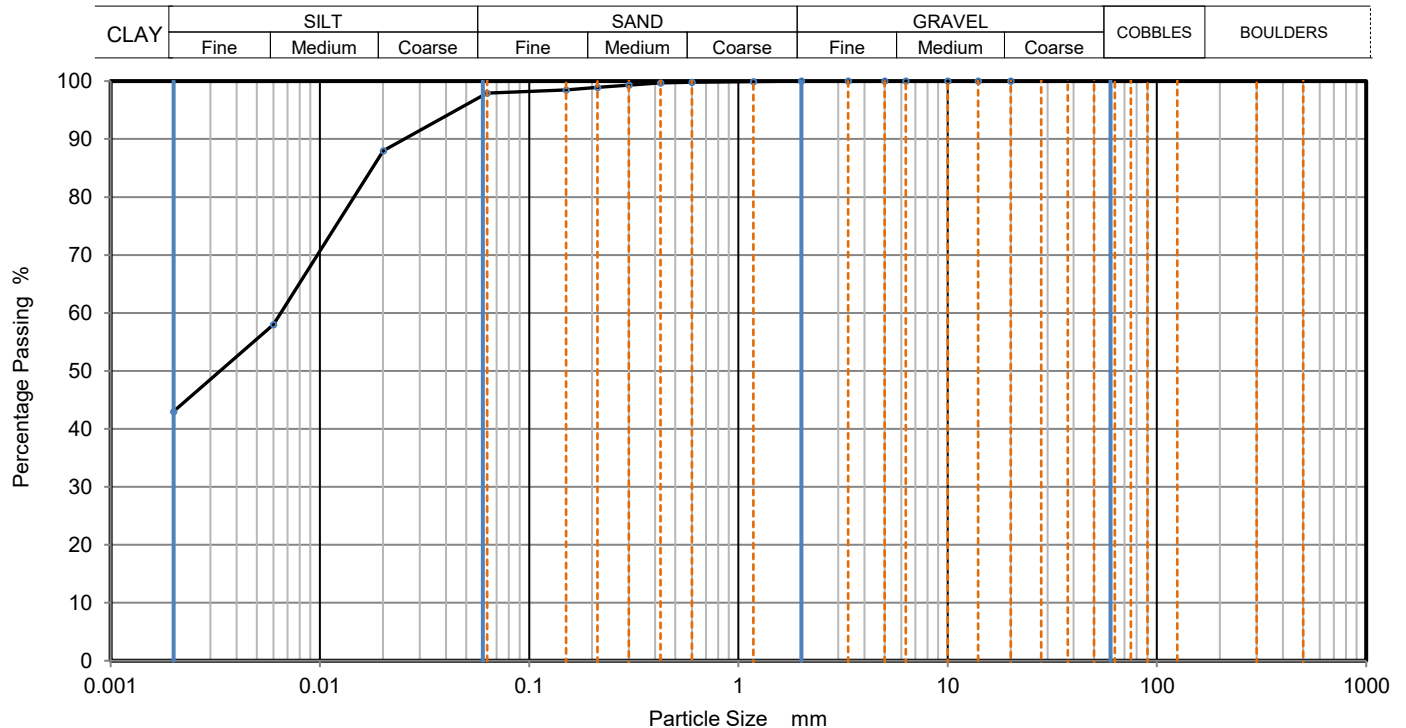
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DETERMINATION OF PARTICLE SIZE DISTRIBUTION

Borehole / Trial Pit	Depth (m)	Sample	Testing Type	Description
ARP-BH101	16.50	B	Wet Sieve + Pipette	Brown clayey SILT



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
		0.0201	88
		0.0060	58
		0.0020	43
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100	Particle density (assumed) 2.65 Mg/m ³	
1.18	100		
0.6	100		
0.425	100		
0.3	99		
0.212	99		
0.15	99		
0.063	98		

Dry Mass of sample, g
1183

Sample Proportions	% dry mass
Very coarse	0
Gravel	0
Sand	2
Silt	55
Clay	43

Grading Analysis		
D100	mm	3.35
D60	mm	0.00647
D30	mm	
D10	mm	
Uniformity Coefficient		
Curvature Coefficient		

Remarks

Preparation and testing in accordance with BS1377 unless noted below

Method of Preparation: BS 1377:Part 1:1990, clause 7.3 Initial preparation
BS 1377:Part 1:1990, clause 7.4.5 Preparation of particle size tests

Method of Test: BS1377:Part 2:1990, clause 9.2 Determination of particle size distribution by wet sieving method
BS1377:Part 2:1990, clause 9.4 Determination of sedimentation by pipette method



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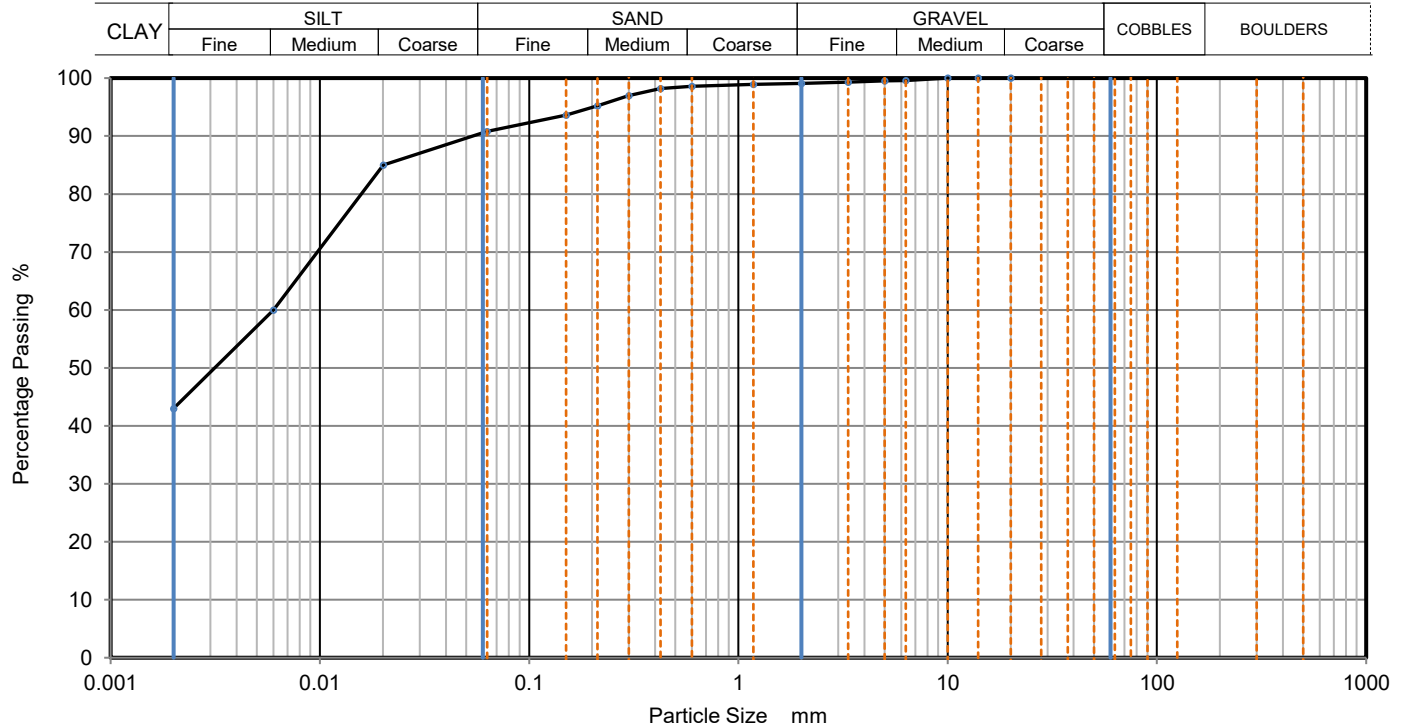
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DETERMINATION OF PARTICLE SIZE DISTRIBUTION

Borehole / Trial Pit	Depth (m)	Sample	Testing Type	Description
ARP-BH101	21.00	B48	Wet Sieve + Pipette	Brown slightly sandy, clayey SILT



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
		0.0201	85
		0.0060	60
		0.0020	43
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	99		
2	99	Particle density (assumed) 2.65 Mg/m ³	
1.18	99		
0.6	99		
0.425	98		
0.3	97		
0.212	95		
0.15	94		
0.063	91		

Dry Mass of sample, g

629

Sample Proportions	% dry mass
Very coarse	0
Gravel	1
Sand	8
Silt	48
Clay	43

Grading Analysis		
D100	mm	10
D60	mm	0.00606
D30	mm	
D10	mm	
Uniformity Coefficient		
Curvature Coefficient		

Remarks

Preparation and testing in accordance with BS1377 unless noted below

Method of Preparation: BS 1377:Part 1:1990, clause 7.3 Initial preparation
BS 1377:Part 1:1990, clause 7.4.5 Preparation of particle size tests

Method of Test: BS1377:Part 2:1990, clause 9.2 Determination of particle size distribution by wet sieving method
BS1377:Part 2:1990, clause 9.4 Determination of sedimentation by pipette method





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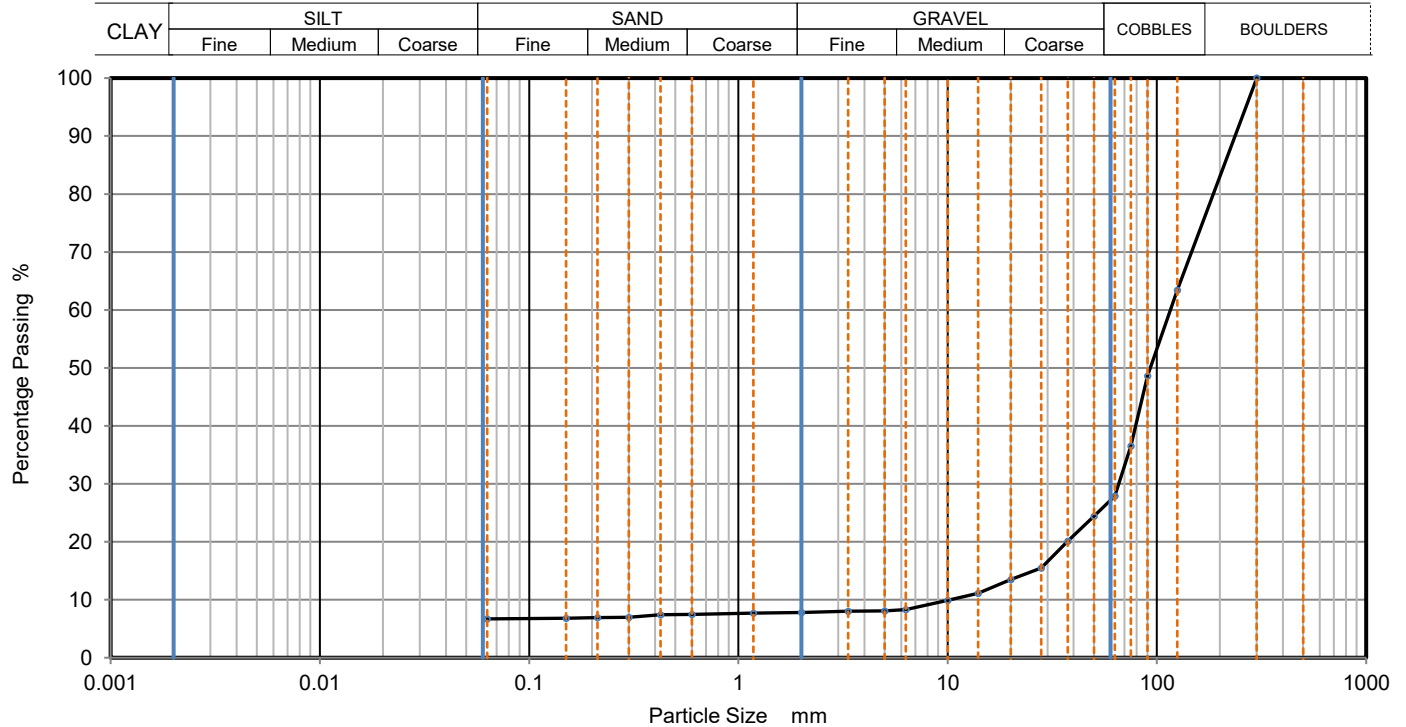
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DETERMINATION OF PARTICLE SIZE DISTRIBUTION

Borehole / Trial Pit	Depth (m)	Sample	Testing Type	Description
ARP-BH102	0.00	B1	Wet Sieve	Brown slightly clayey GRAVEL (Mainly COBBLES)



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
300	100		
125	63		
90	49		
75	37		
63	28		
50	24		
37.5	20		
28	16		
20	14		
14	11		
10	10		
6.3	8		
5	8		
3.35	8		
2	8		
1.18	8		
0.6	8		
0.425	7		
0.3	7		
0.212	7		
0.15	7		
0.063	7		

Dry Mass of sample, g

8514

Sample Proportions	% dry mass
Very coarse	72
Gravel	20
Sand	1
Fines <0.063mm	7

Grading Analysis		
D100	mm	300
D60	mm	116
D30	mm	65.7
D10	mm	10.2
Uniformity Coefficient		11
Curvature Coefficient		3.7

Remarks

Preparation and testing in accordance with BS1377 unless noted below

Method of Preparation: BS 1377:Part 1:1990, clause 7.3 Initial preparation
BS 1377:Part 1:1990, clause 7.4.5 Preparation of particle size tests

Method of Test: BS1377:Part 2:1990, clause 9.2 Determination of particle size distribution by wet sieving method





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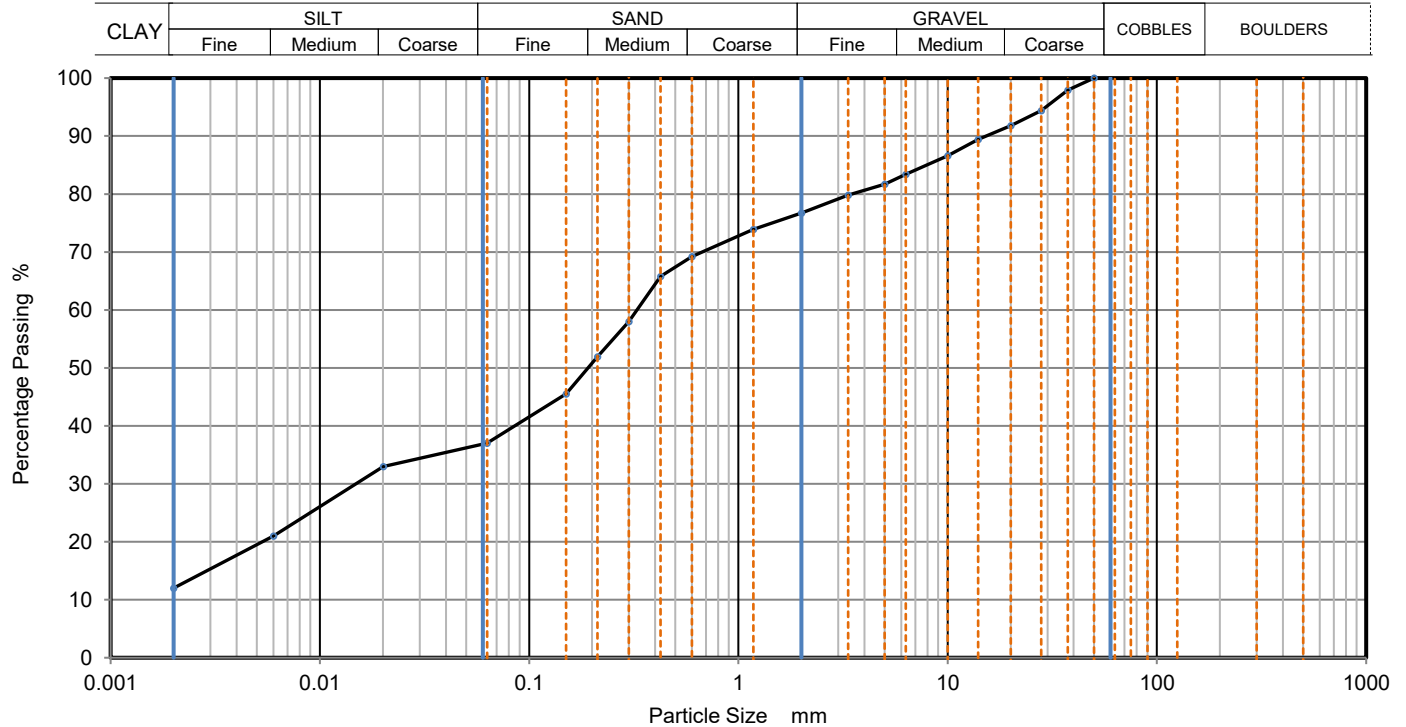
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DETERMINATION OF PARTICLE SIZE DISTRIBUTION

Borehole / Trial Pit	Depth (m)	Sample	Testing Type	Description
ARP-BH102	4.00	B8	Wet Sieve + Pipette	Black clayey, gravelly, silty SAND (PEAT)



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
		0.0201	33
		0.0060	21
		0.0020	12
50	100		
37.5	98		
28	94		
20	92		
14	89		
10	87		
6.3	83		
5	82		
3.35	80		
2	77		
1.18	74	Particle density (assumed) 2.65 Mg/m3	
0.6	69		
0.425	66		
0.3	58		
0.212	52		
0.15	46		
0.063	37		

Dry Mass of sample, g

2761

Sample Proportions	% dry mass
Very coarse	0
Gravel	23
Sand	40
Silt	25
Clay	12

Grading Analysis		
D100	mm	50
D60	mm	0.328
D30	mm	0.0154
D10	mm	
Uniformity Coefficient		
Curvature Coefficient		

Remarks

Preparation and testing in accordance with BS1377 unless noted below

Method of Preparation: BS 1377:Part 1:1990, clause 7.3 Initial preparation
BS 1377:Part 1:1990, clause 7.4.5 Preparation of particle size tests

Method of Test: BS1377:Part 2:1990, clause 9.2 Determination of particle size distribution by wet sieving method
BS1377:Part 2:1990, clause 9.4 Determination of sedimentation by pipette method





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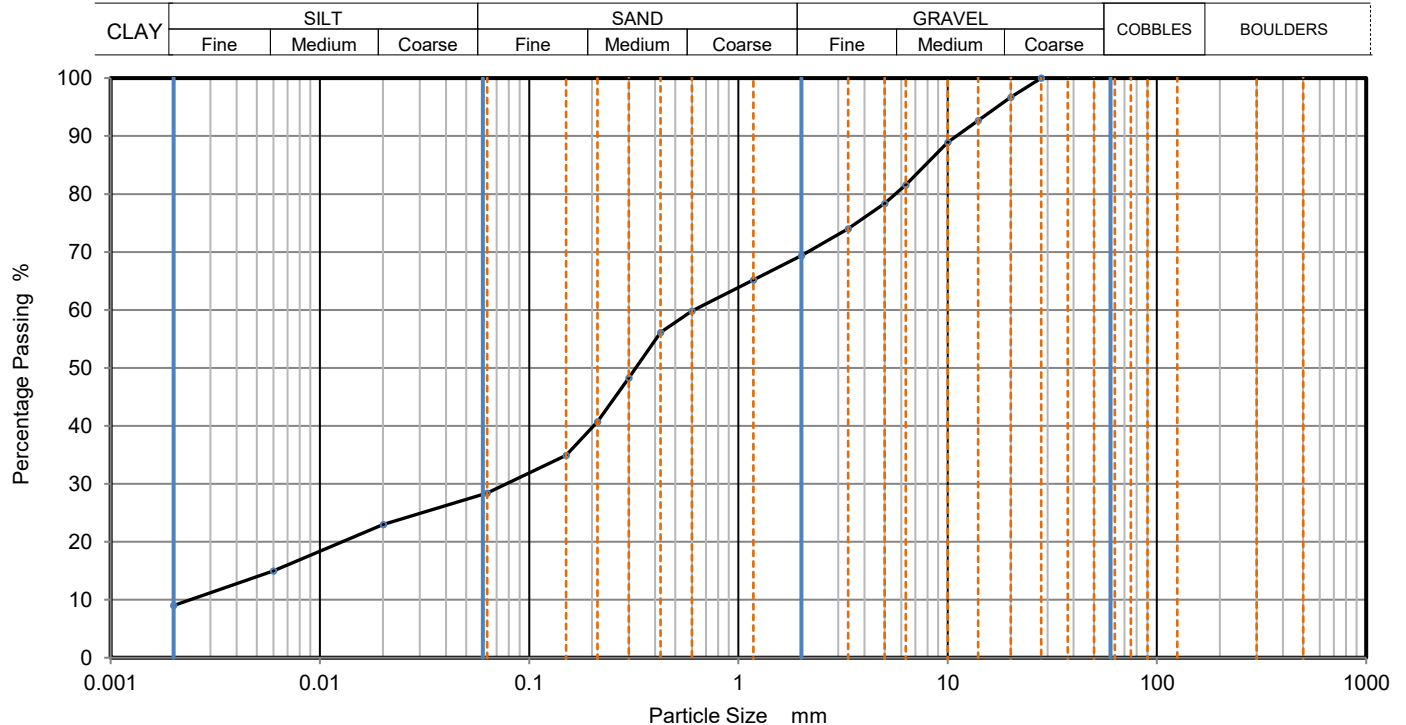
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DETERMINATION OF PARTICLE SIZE DISTRIBUTION

Borehole / Trial Pit	Depth (m)	Sample	Testing Type	Description
ARP-BH102	8.00	B18	Wet Sieve + Pipette	Black slightly clayey, silty, gravelly SAND



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
		0.0201	23
		0.0060	15
		0.0020	9
28	100		
20	97		
14	93		
10	89		
6.3	82		
5	78		
3.35	74		
2	69		
1.18	65	Particle density (assumed) 2.65 Mg/m3	
0.6	60		
0.425	56		
0.3	48		
0.212	41		
0.15	35		
0.063	28		

Dry Mass of sample, g

1871

Sample Proportions	% dry mass
Very coarse	0
Gravel	31
Sand	41
Silt	20
Clay	9

Grading Analysis		
D100	mm	28
D60	mm	0.618
D30	mm	0.0783
D10	mm	0.00256
Uniformity Coefficient		240
Curvature Coefficient		3.9

Remarks

Preparation and testing in accordance with BS1377 unless noted below

Method of Preparation: BS 1377:Part 1:1990, clause 7.3 Initial preparation
BS 1377:Part 1:1990, clause 7.4.5 Preparation of particle size tests

Method of Test: BS1377:Part 2:1990, clause 9.2 Determination of particle size distribution by wet sieving method
BS1377:Part 2:1990, clause 9.4 Determination of sedimentation by pipette method





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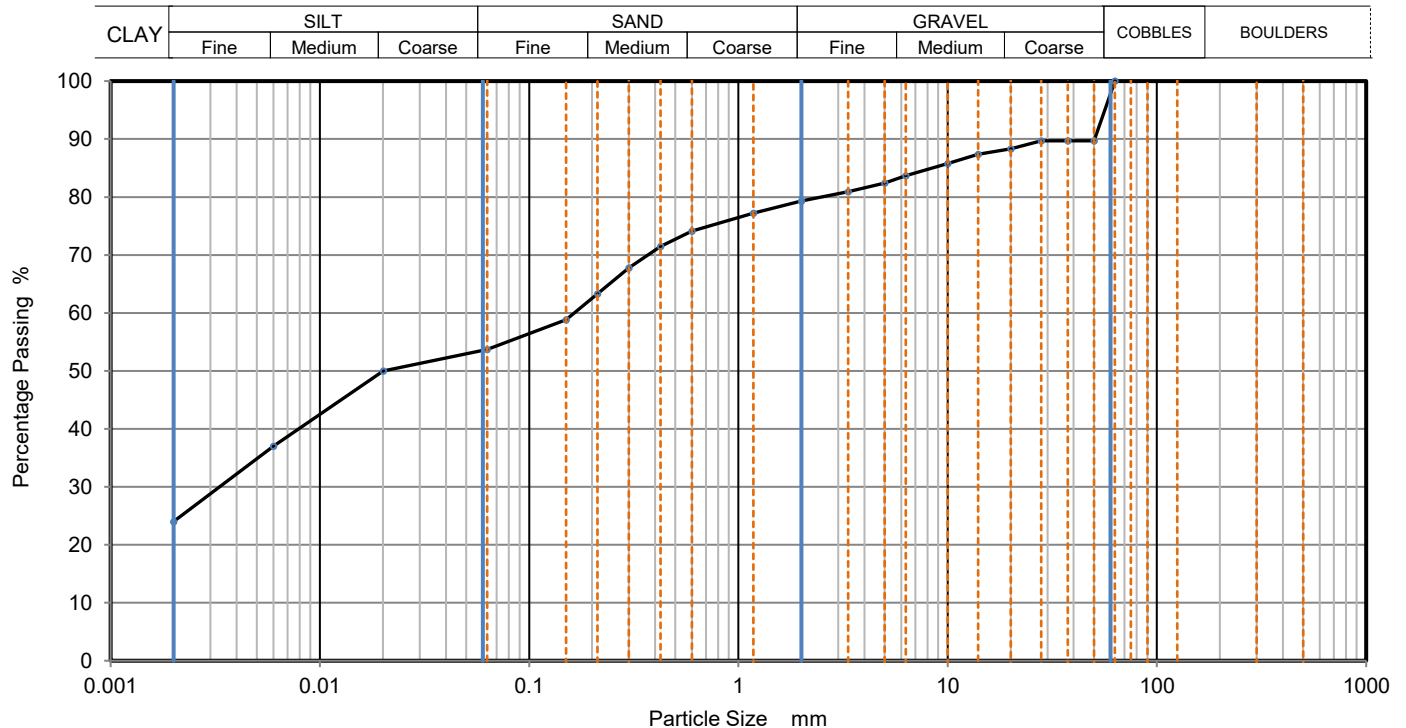
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DETERMINATION OF PARTICLE SIZE DISTRIBUTION

Borehole / Trial Pit	Depth (m)	Sample	Testing Type	Description
ARP-BH102	13.00	B31	Wet Sieve + Pipette	Black gravelly, clayey, sandy, organic SILT



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
		0.0201	50
		0.0060	37
		0.0020	24
63	100		
50	90		
37.5	90		
28	90		
20	88		
14	87		
10	86		
6.3	84		
5	82		
3.35	81		
2	79	Particle density (assumed) 2.65 Mg/m3	
1.18	77		
0.6	74		
0.425	72		
0.3	68		
0.212	63		
0.15	59		
0.063	54		

Dry Mass of sample, g

1829

Sample Proportions	% dry mass
Very coarse	0
Gravel	21
Sand	26
Silt	30
Clay	24

Grading Analysis	
D100	mm 63
D60	mm 0.165
D30	mm 0.00336
D10	mm
Uniformity Coefficient	
Curvature Coefficient	

Remarks

Preparation and testing in accordance with BS1377 unless noted below

Method of Preparation: BS 1377:Part 1:1990, clause 7.3 Initial preparation
BS 1377:Part 1:1990, clause 7.4.5 Preparation of particle size tests

Method of Test: BS1377:Part 2:1990, clause 9.2 Determination of particle size distribution by wet sieving method
BS1377:Part 2:1990, clause 9.4 Determination of sedimentation by pipette method





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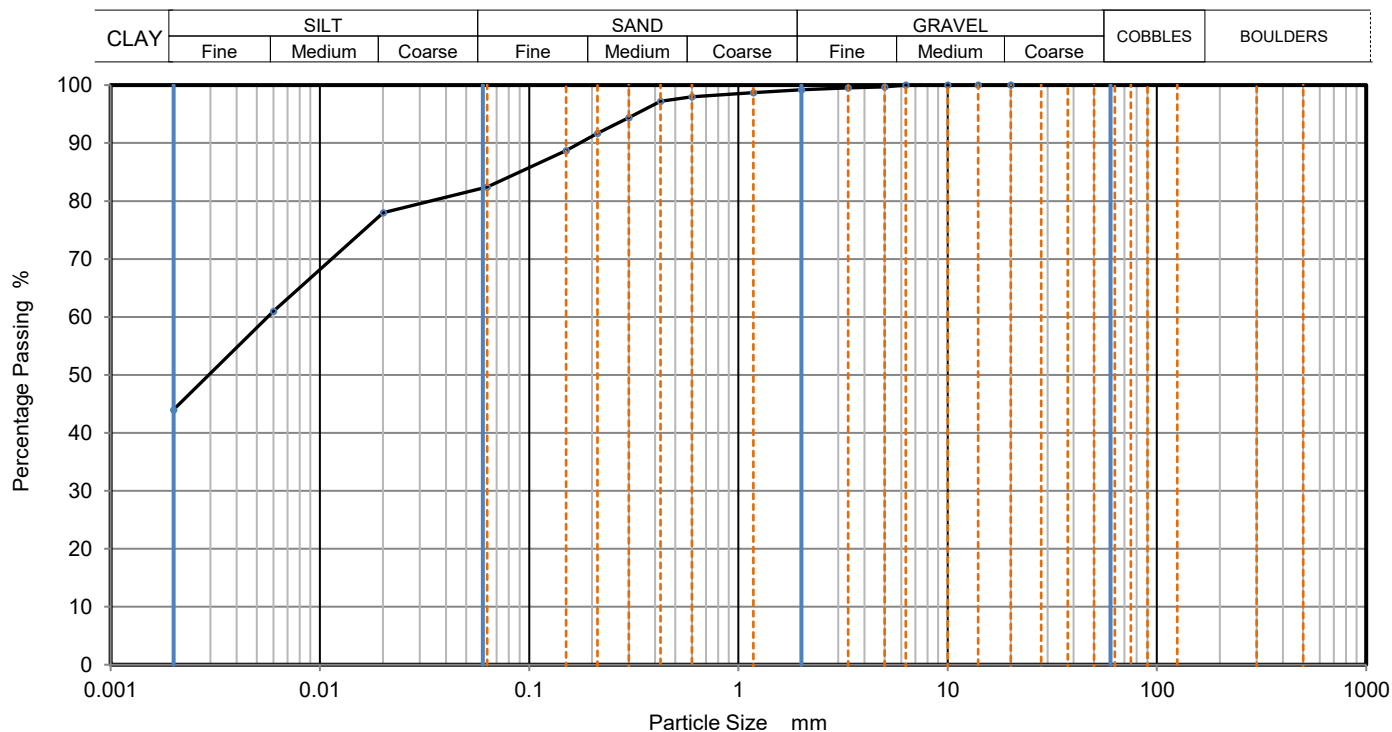
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DETERMINATION OF PARTICLE SIZE DISTRIBUTION

Borehole / Trial Pit	Depth (m)	Sample	Testing Type	Description
ARP-BH102	17.00	B40	Wet Sieve + Pipette	Brown sandy, silty CLAY



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
		0.0201	78
		0.0060	61
		0.0020	44
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	99	Particle density (assumed) 2.65 Mg/m ³	
1.18	99		
0.6	98		
0.425	97		
0.3	94		
0.212	92		
0.15	89		
0.063	82		

Dry Mass of sample, g

1623

Sample Proportions	% dry mass
Very coarse	0
Gravel	1
Sand	17
Silt	39
Clay	44

Grading Analysis		
D100	mm	6.3
D60	mm	0.0056
D30	mm	
D10	mm	
Uniformity Coefficient		
Curvature Coefficient		

Remarks

Preparation and testing in accordance with BS1377 unless noted below

Method of Preparation: BS 1377:Part 1:1990, clause 7.3 Initial preparation
BS 1377:Part 1:1990, clause 7.4.5 Preparation of particle size tests

Method of Test: BS1377:Part 2:1990, clause 9.2 Determination of particle size distribution by wet sieving method
BS1377:Part 2:1990, clause 9.4 Determination of sedimentation by pipette method





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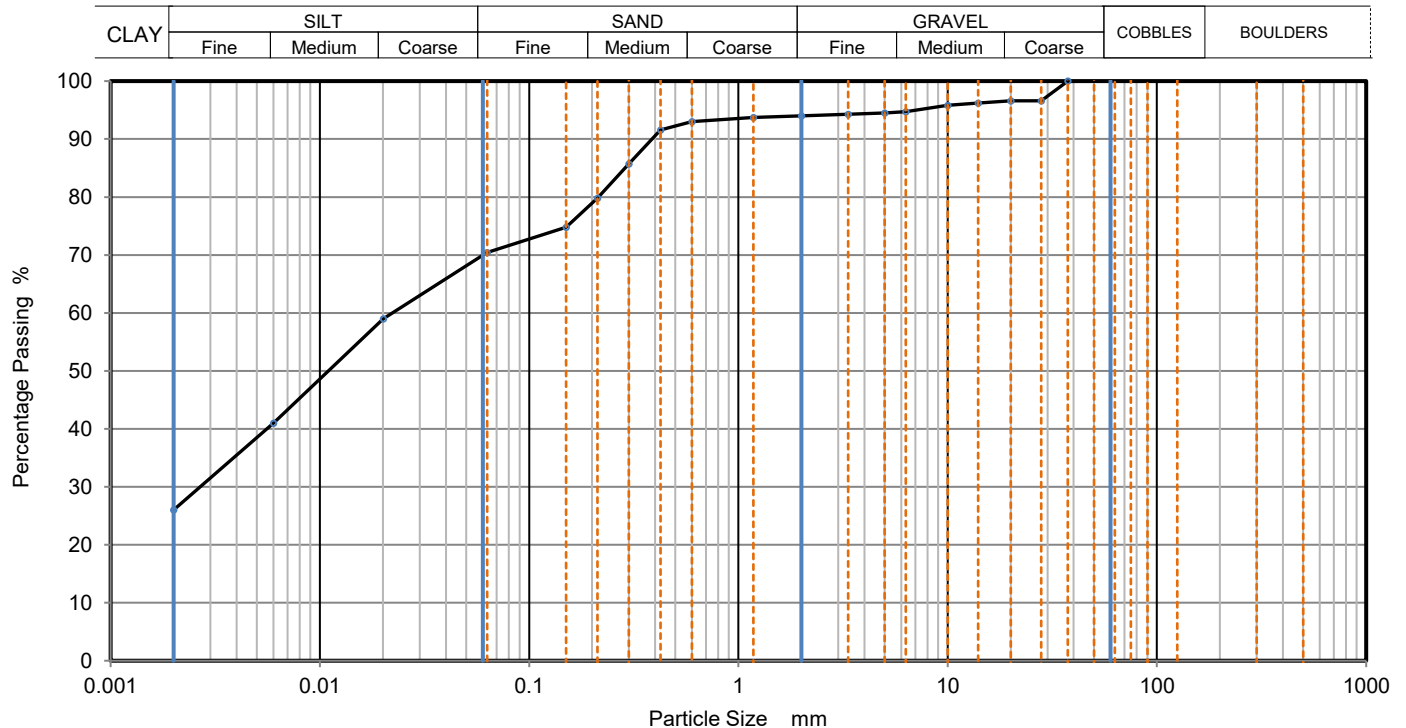
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DETERMINATION OF PARTICLE SIZE DISTRIBUTION

Borehole / Trial Pit	Depth (m)	Sample	Testing Type	Description
ARP-BH102	22.50	B54	Wet Sieve + Pipette	Brown slightly gravelly, sandy, clayey SILT



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
		0.0201	59
		0.0060	41
		0.0020	26
37.5	100		
28	97		
20	97		
14	96		
10	96		
6.3	95		
5	95		
3.35	94		
2	94		
1.18	94	Particle density (assumed) 2.65 Mg/m ³	
0.6	93		
0.425	92		
0.3	86		
0.212	80		
0.15	75		
0.063	70		

Dry Mass of sample, g

1393

Sample Proportions	% dry mass
Very coarse	0
Gravel	6
Sand	24
Silt	44
Clay	27

Grading Analysis		
D100	mm	37.5
D60	mm	0.0222
D30	mm	0.00261
D10	mm	
Uniformity Coefficient		
Curvature Coefficient		

Remarks

Preparation and testing in accordance with BS1377 unless noted below

Method of Preparation: BS 1377:Part 1:1990, clause 7.3 Initial preparation
BS 1377:Part 1:1990, clause 7.4.5 Preparation of particle size tests

Method of Test: BS1377:Part 2:1990, clause 9.2 Determination of particle size distribution by wet sieving method
BS1377:Part 2:1990, clause 9.4 Determination of sedimentation by pipette method



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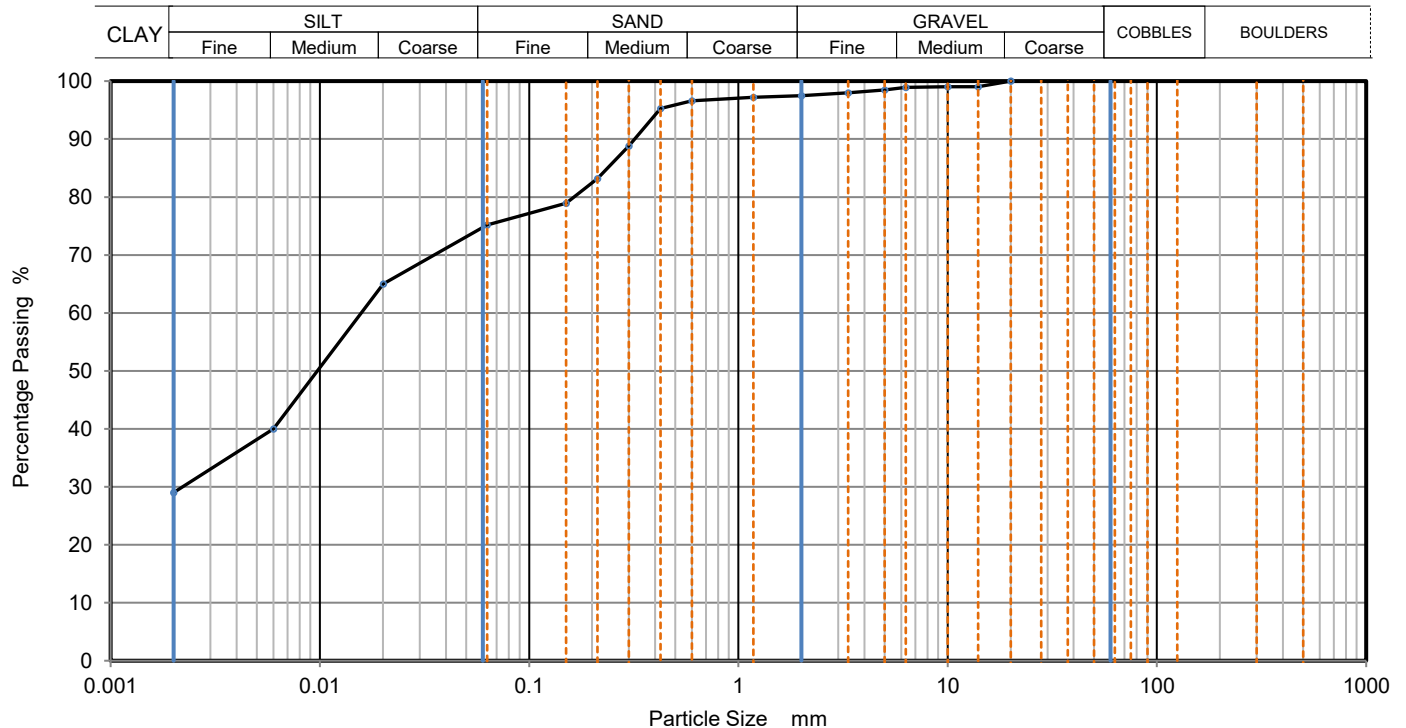
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DETERMINATION OF PARTICLE SIZE DISTRIBUTION

Borehole / Trial Pit	Depth (m)	Sample	Testing Type	Description
ARP-BH102	24.00	B58	Wet Sieve + Pipette	Grey sandy, clayey SILT



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
		0.0201	65
		0.0060	40
		0.0020	29
20	100		
14	99		
10	99		
6.3	99		
5	99		
3.35	98		
2	98		
1.18	97	Particle density (assumed) 2.65 Mg/m3	
0.6	97		
0.425	95		
0.3	89		
0.212	83		
0.15	79		
0.063	75		

Dry Mass of sample, g
937

Sample Proportions	% dry mass
Very coarse	0
Gravel	3
Sand	22
Silt	46
Clay	30

Grading Analysis		
D100	mm	20
D60	mm	0.016
D30	mm	0.00211
D10	mm	
Uniformity Coefficient		
Curvature Coefficient		

Remarks

Preparation and testing in accordance with BS1377 unless noted below

Method of Preparation: BS 1377:Part 1:1990, clause 7.3 Initial preparation
BS 1377:Part 1:1990, clause 7.4.5 Preparation of particle size tests

Method of Test: BS1377:Part 2:1990, clause 9.2 Determination of particle size distribution by wet sieving method
BS1377:Part 2:1990, clause 9.4 Determination of sedimentation by pipette method



Site: Ashton Moss

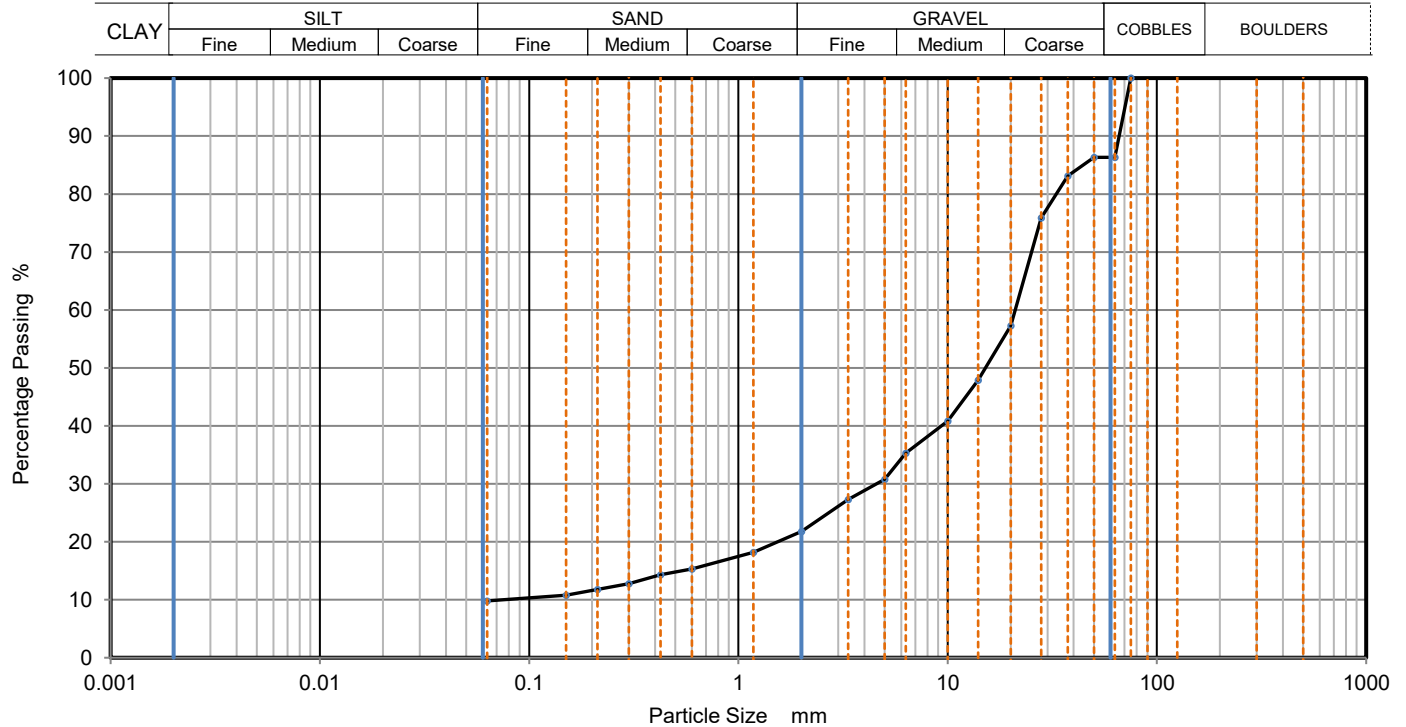
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DETERMINATION OF PARTICLE SIZE DISTRIBUTION

Borehole / Trial Pit	Depth (m)	Sample	Testing Type	Description
ARP-BH103	0.00	B1	Wet Sieve	Brown clayey, sandy GRAVEL



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
75	100		
63	86		
50	86		
37.5	83		
28	76		
20	57		
14	48		
10	41		
6.3	35		
5	31		
3.35	27		
2	22		
1.18	18		
0.6	15		
0.425	14		
0.3	13		
0.212	12		
0.15	11		
0.063	10		

Dry Mass of sample, g

4934

Sample Proportions	% dry mass
Very coarse	14
Gravel	65
Sand	12
Fines <0.063mm	10

Grading Analysis		
D100	mm	75
D60	mm	21
D30	mm	4.56
D10	mm	0.0755
Uniformity Coefficient		280
Curvature Coefficient		13

Remarks

Preparation and testing in accordance with BS1377 unless noted below

Method of Preparation: BS 1377:Part 1:1990, clause 7.3 Initial preparation
BS 1377:Part 1:1990, clause 7.4.5 Preparation of particle size tests

Method of Test: BS1377:Part 2:1990, clause 9.2 Determination of particle size distribution by wet sieving method





Site: Ashton Moss

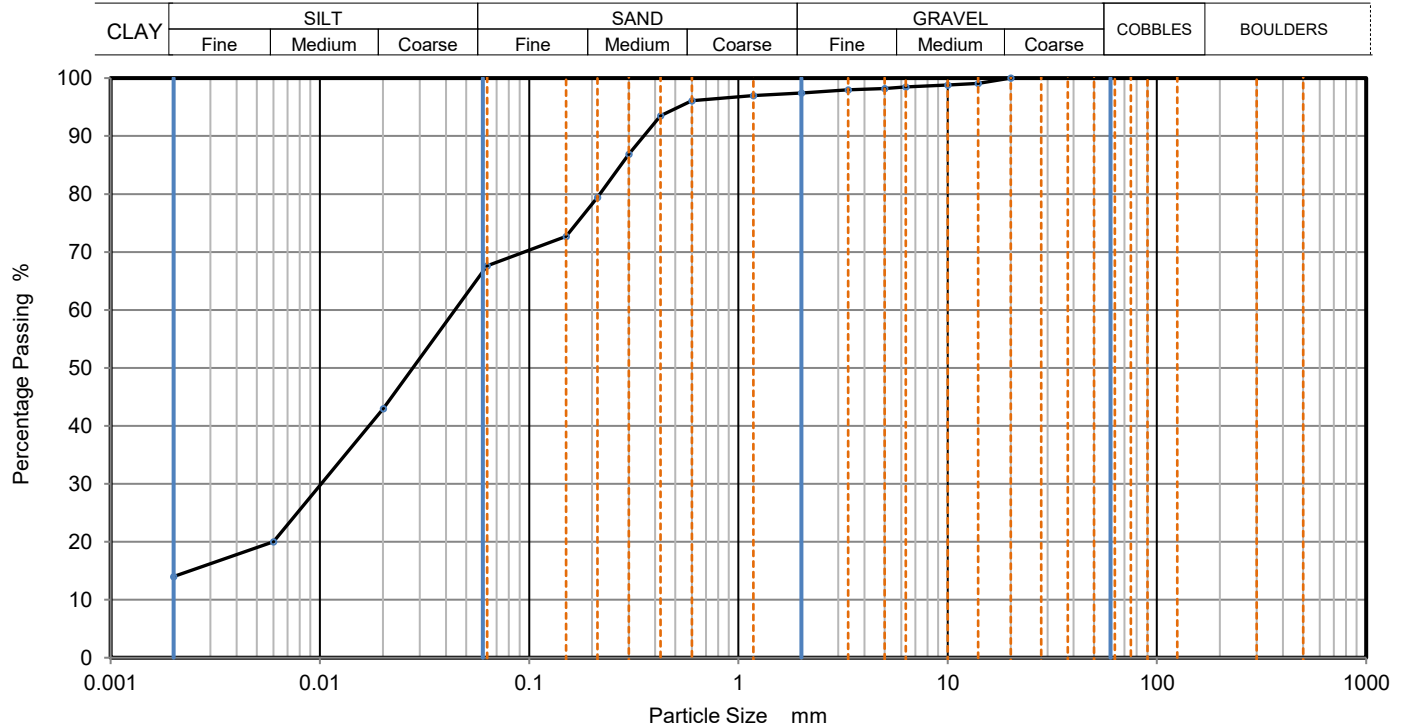
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DETERMINATION OF PARTICLE SIZE DISTRIBUTION

Borehole / Trial Pit	Depth (m)	Sample	Testing Type	Description
ARP-BH103	5.00	B13	Wet Sieve + Pipette	Brown clayey, sandy SILT



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
		0.0201	43
		0.0060	20
		0.0020	14
20	100		
14	99		
10	99		
6.3	99		
5	98		
3.35	98		
2	97	Particle density (assumed) 2.65 Mg/m3	
1.18	97		
0.6	96		
0.425	94		
0.3	87		
0.212	79		
0.15	73		
0.063	68		

Dry Mass of sample, g

1030

Sample Proportions	% dry mass
Very coarse	0
Gravel	3
Sand	30
Silt	53
Clay	14

Grading Analysis		
D100	mm	20
D60	mm	0.0444
D30	mm	0.0103
D10	mm	
Uniformity Coefficient		
Curvature Coefficient		

Remarks

Preparation and testing in accordance with BS1377 unless noted below

Method of Preparation: BS 1377:Part 1:1990, clause 7.3 Initial preparation
BS 1377:Part 1:1990, clause 7.4.5 Preparation of particle size tests

Method of Test: BS1377:Part 2:1990, clause 9.2 Determination of particle size distribution by wet sieving method
BS1377:Part 2:1990, clause 9.4 Determination of sedimentation by pipette method





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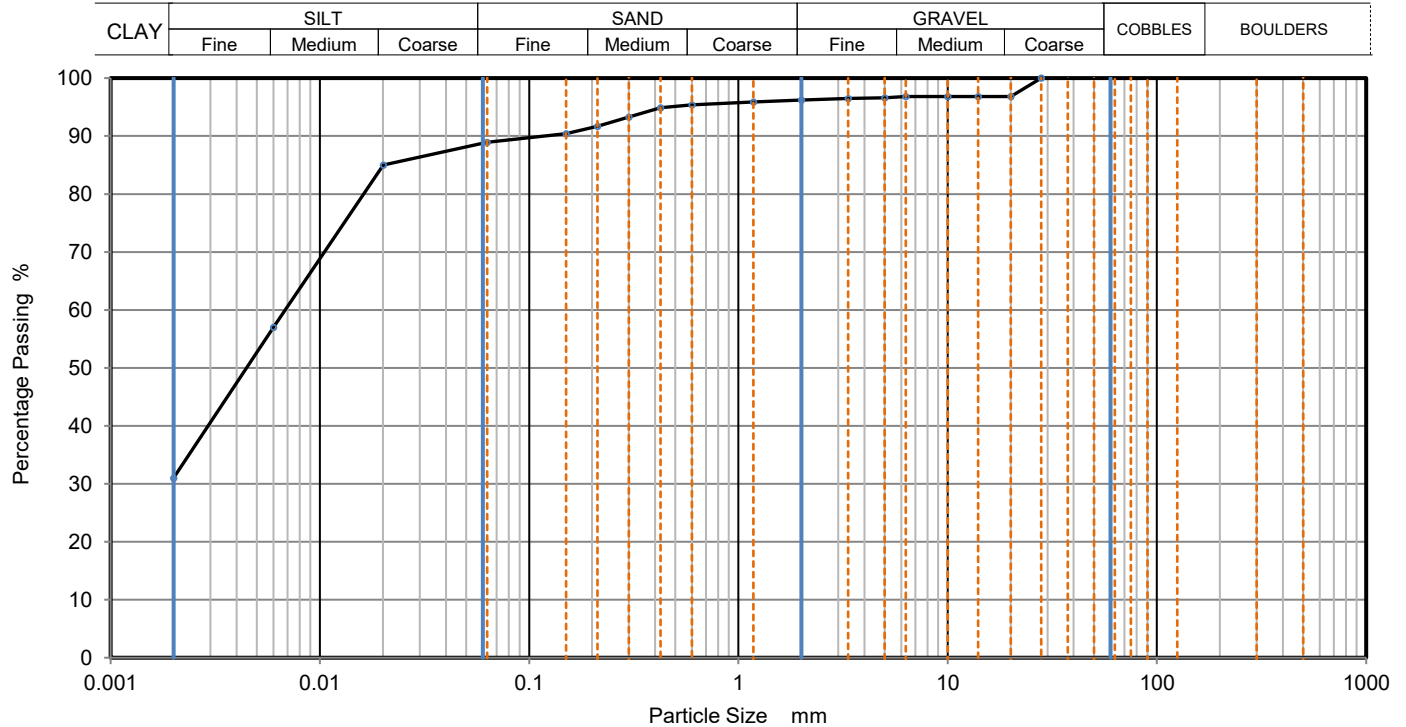
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DETERMINATION OF PARTICLE SIZE DISTRIBUTION

Borehole / Trial Pit	Depth (m)	Sample	Testing Type	Description
ARP-BH103	8.50	D22	Wet Sieve + Pipette	Brown slightly gravelly, slightly sandy, clayey SILT



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
		0.0201	85
		0.0060	57
		0.0020	31
28	100		
20	97		
14	97		
10	97		
6.3	97		
5	97		
3.35	97		
2	96		
1.18	96	Particle density (assumed) 2.65 Mg/m3	
0.6	95		
0.425	95		
0.3	93		
0.212	92		
0.15	90		
0.063	89		

Dry Mass of sample, g

424

Sample Proportions	% dry mass
Very coarse	0
Gravel	4
Sand	7
Silt	58
Clay	31

Grading Analysis		
D100	mm	28
D60	mm	0.00688
D30	mm	
D10	mm	
Uniformity Coefficient		
Curvature Coefficient		

Remarks

Preparation and testing in accordance with BS1377 unless noted below

Method of Preparation: BS 1377:Part 1:1990, clause 7.3 Initial preparation
BS 1377:Part 1:1990, clause 7.4.5 Preparation of particle size tests

Method of Test: BS1377:Part 2:1990, clause 9.2 Determination of particle size distribution by wet sieving method
BS1377:Part 2:1990, clause 9.4 Determination of sedimentation by pipette method





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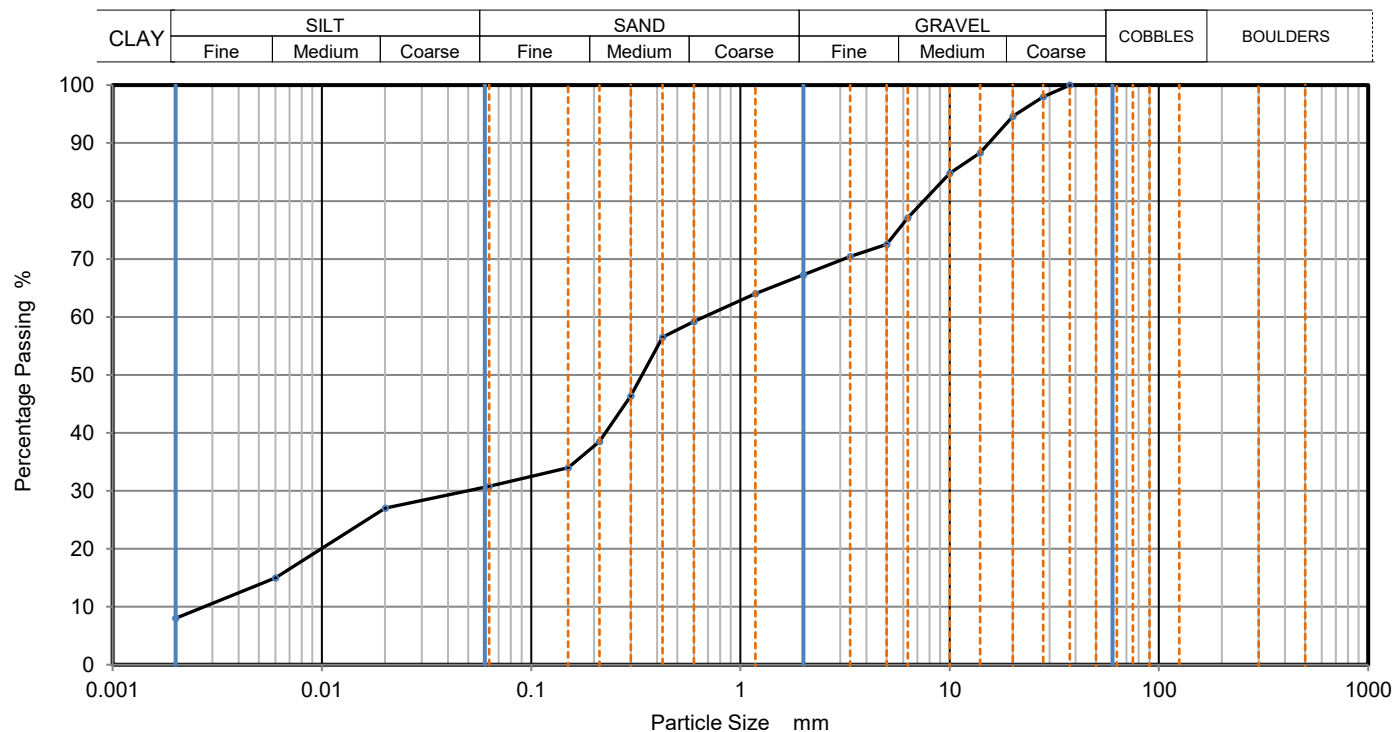
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DETERMINATION OF PARTICLE SIZE DISTRIBUTION

Borehole / Trial Pit	Depth (m)	Sample	Testing Type	Description
ARP-BH104	0.00	B1	Wet Sieve + Pipette	Brown slightly clayey, silty, gravelly SAND



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
		0.0201	27
		0.0060	15
		0.0020	8
37.5	100		
28	98		
20	95		
14	88		
10	85		
6.3	77		
5	73		
3.35	70		
2	67		
1.18	64	Particle density (assumed) 2.65 Mg/m3	
0.6	59		
0.425	57		
0.3	46		
0.212	39		
0.15	34		
0.063	31		

Dry Mass of sample, g

1015

Sample Proportions	% dry mass
Very coarse	0
Gravel	33
Sand	37
Silt	23
Clay	8

Grading Analysis		
D100	mm	37.5
D60	mm	0.669
D30	mm	0.0509
D10	mm	0.00288
Uniformity Coefficient		230
Curvature Coefficient		1.3

Remarks

Preparation and testing in accordance with BS1377 unless noted below

Method of Preparation: BS 1377:Part 1:1990, clause 7.3 Initial preparation
BS 1377:Part 1:1990, clause 7.4.5 Preparation of particle size tests

Method of Test: BS1377:Part 2:1990, clause 9.2 Determination of particle size distribution by wet sieving method
BS1377:Part 2:1990, clause 9.4 Determination of sedimentation by pipette method



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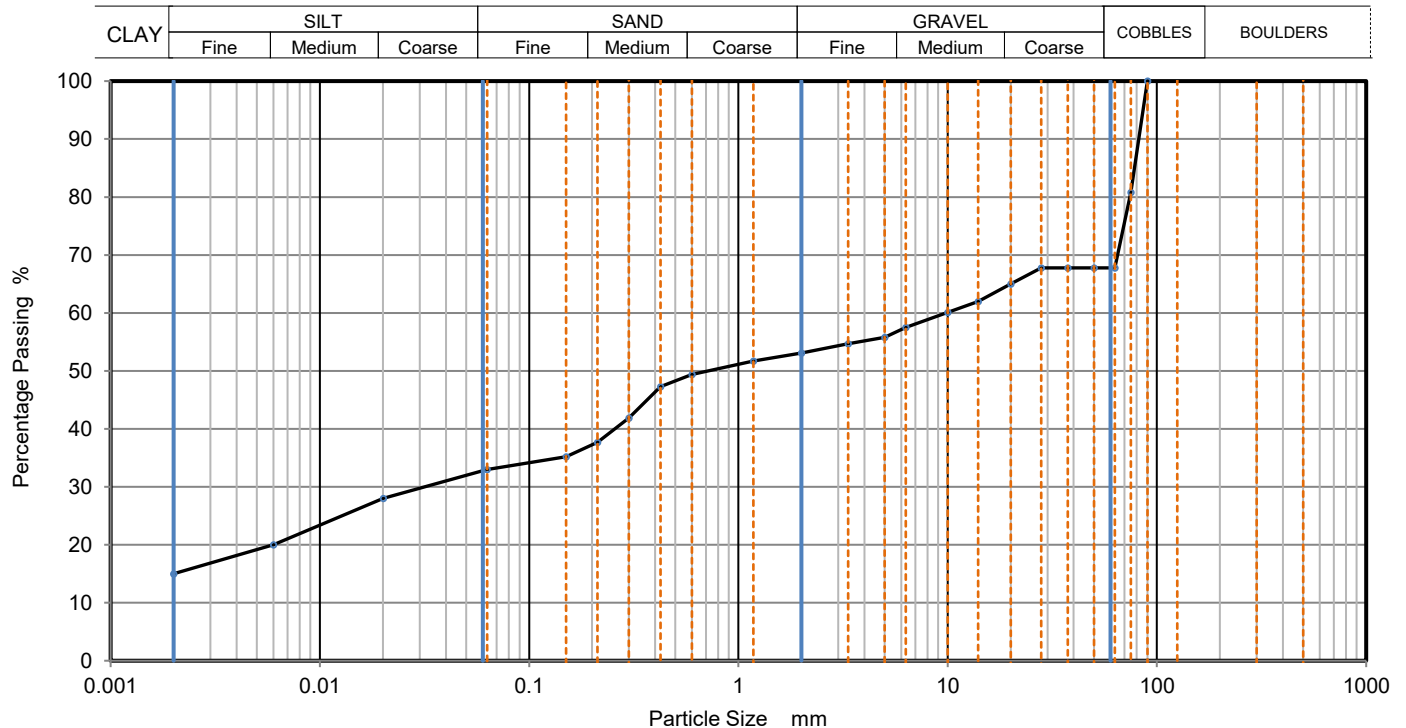
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DETERMINATION OF PARTICLE SIZE DISTRIBUTION

Borehole / Trial Pit	Depth (m)	Sample	Testing Type	Description
ARP-BH104	4.00	B9	Wet Sieve + Pipette	Brown clayey, silty, sandy GRAVEL



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
		0.0201	28
		0.0060	20
		0.0020	15
90	100		
75	81		
63	68		
50	68		
37.5	68		
28	68		
20	65		
14	62		
10	60		
6.3	58		
5	56		
3.35	55		
2	53	Particle density (assumed) 2.65 Mg/m3	
1.18	52		
0.6	49		
0.425	47		
0.3	42		
0.212	38		
0.15	35		
0.063	33		

Dry Mass of sample, g

3021

Sample Proportions	% dry mass
Very coarse	32
Gravel	15
Sand	20
Silt	18
Clay	15

Grading Analysis		
D100	mm	90
D60	mm	9.78
D30	mm	0.0325
D10	mm	
Uniformity Coefficient		
Curvature Coefficient		

Remarks

Preparation and testing in accordance with BS1377 unless noted below

Method of Preparation: BS 1377:Part 1:1990, clause 7.3 Initial preparation
BS 1377:Part 1:1990, clause 7.4.5 Preparation of particle size tests

Method of Test: BS1377:Part 2:1990, clause 9.2 Determination of particle size distribution by wet sieving method
BS1377:Part 2:1990, clause 9.4 Determination of sedimentation by pipette method





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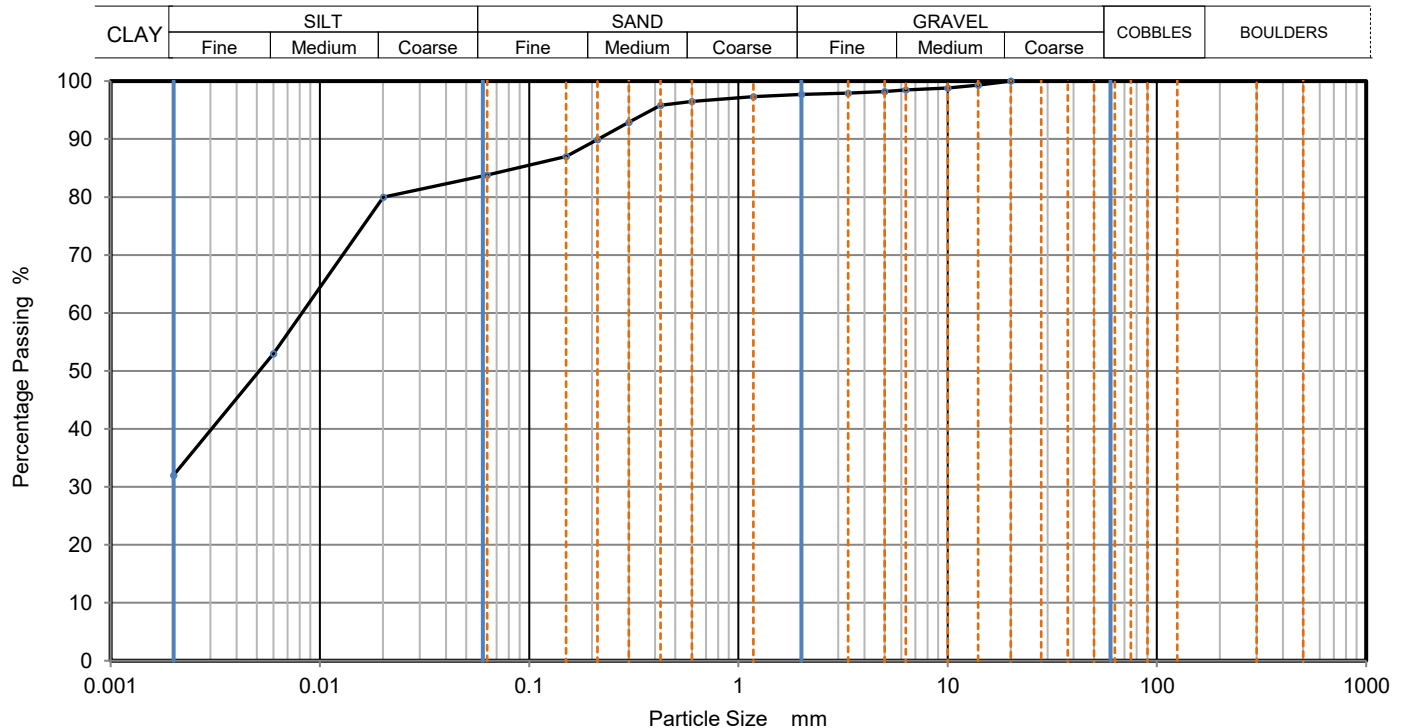
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DETERMINATION OF PARTICLE SIZE DISTRIBUTION

Borehole / Trial Pit	Depth (m)	Sample	Testing Type	Description
ARP-BH104	12.50	B34	Wet Sieve + Pipette	Brown sandy, clayey SILT



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
		0.0201	80
		0.0060	53
		0.0020	32
20	100		
14	99		
10	99		
6.3	99		
5	98		
3.35	98		
2	98	Particle density (assumed) 2.65 Mg/m ³	
1.18	97		
0.6	97		
0.425	96		
0.3	93		
0.212	90		
0.15	87		
0.063	84		

Dry Mass of sample, g

1067

Sample Proportions	% dry mass
Very coarse	0
Gravel	2
Sand	14
Silt	51
Clay	33

Grading Analysis		
D100	mm	20
D60	mm	0.00823
D30	mm	
D10	mm	
Uniformity Coefficient		
Curvature Coefficient		

Remarks

Preparation and testing in accordance with BS1377 unless noted below

Method of Preparation: BS 1377:Part 1:1990, clause 7.3 Initial preparation
BS 1377:Part 1:1990, clause 7.4.5 Preparation of particle size tests

Method of Test: BS1377:Part 2:1990, clause 9.2 Determination of particle size distribution by wet sieving method
BS1377:Part 2:1990, clause 9.4 Determination of sedimentation by pipette method





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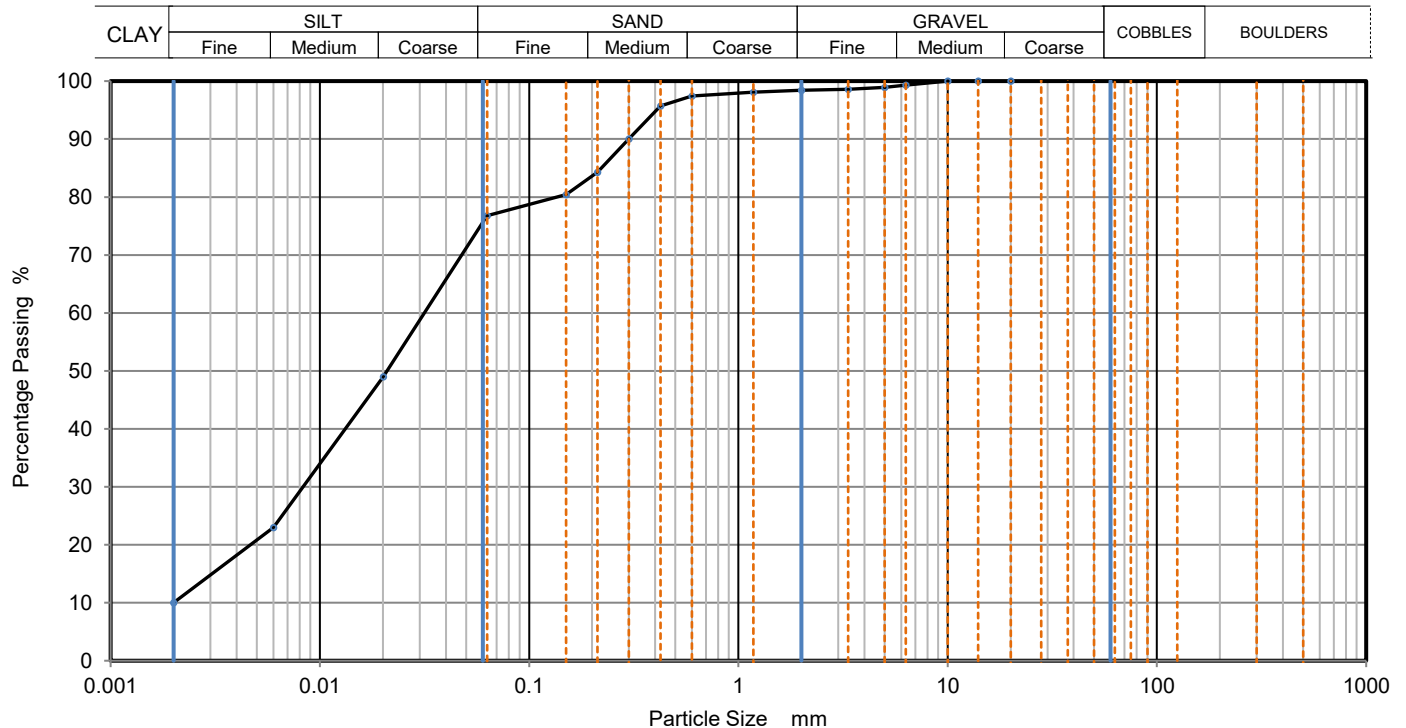
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DETERMINATION OF PARTICLE SIZE DISTRIBUTION

Borehole / Trial Pit	Depth (m)	Sample	Testing Type	Description
ARP-BH104	14.95	D38	Wet Sieve + Pipette	Brown clayey, sandy SILT



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
		0.0201	49
		0.0060	23
		0.0020	10
20	100		
14	100		
10	100		
6.3	99		
5	99		
3.35	99		
2	98		
1.18	98	Particle density (assumed) 2.65 Mg/m3	
0.6	97		
0.425	96		
0.3	90		
0.212	84		
0.15	80		
0.063	77		

Dry Mass of sample, g

322

Sample Proportions	% dry mass
Very coarse	0
Gravel	2
Sand	22
Silt	67
Clay	10

Grading Analysis		
D100	mm	10
D60	mm	0.0319
D30	mm	0.00843
D10	mm	0.00203
Uniformity Coefficient		16
Curvature Coefficient		1.1

Remarks

Preparation and testing in accordance with BS1377 unless noted below

Method of Preparation: BS 1377:Part 1:1990, clause 7.3 Initial preparation
BS 1377:Part 1:1990, clause 7.4.5 Preparation of particle size tests

Method of Test: BS1377:Part 2:1990, clause 9.2 Determination of particle size distribution by wet sieving method
BS1377:Part 2:1990, clause 9.4 Determination of sedimentation by pipette method





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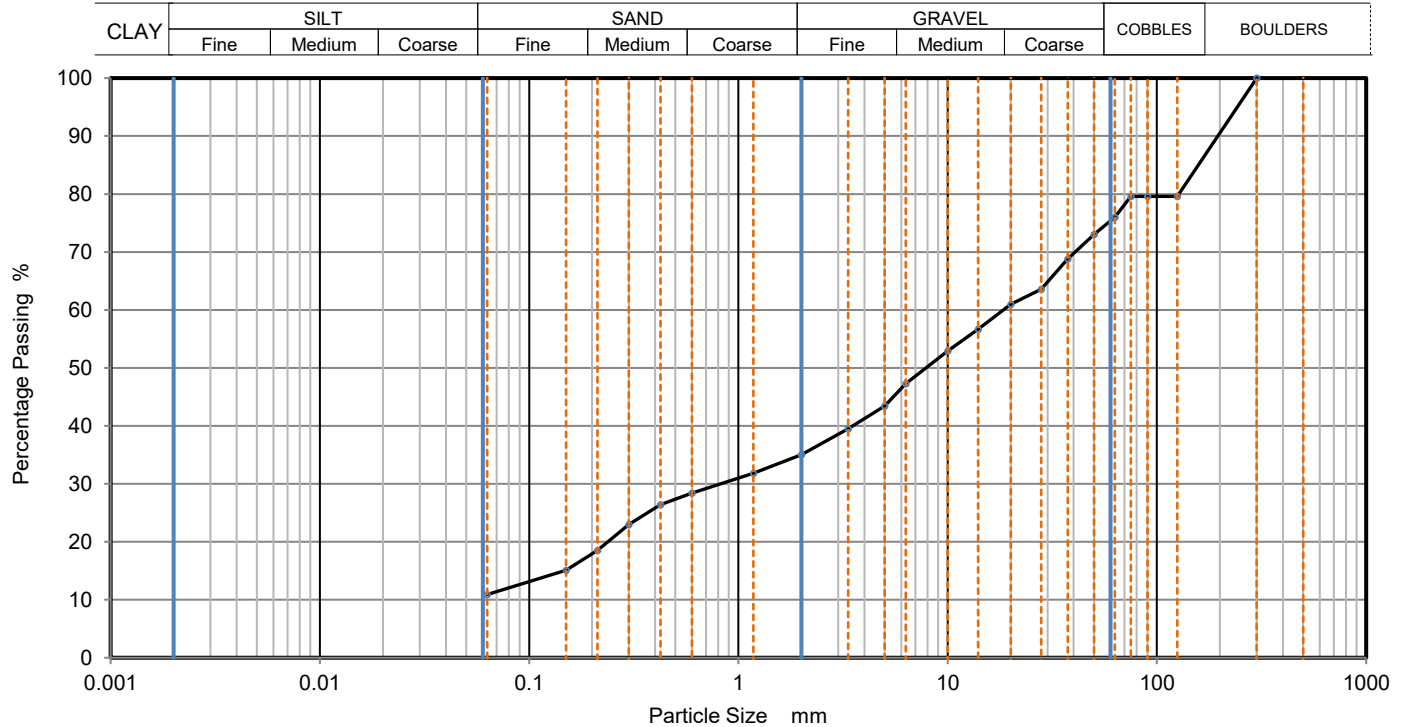
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DETERMINATION OF PARTICLE SIZE DISTRIBUTION

Borehole / Trial Pit	Depth (m)	Sample	Testing Type	Description
ARP-BH105	1.20	B3	Wet Sieve	Brown clayey, sandy GRAVEL



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
300	100		
125	80		
90	80		
75	80		
63	76		
50	73		
37.5	69		
28	64		
20	61		
14	57		
10	53		
6.3	47		
5	43		
3.35	40		
2	35		
1.18	32		
0.6	28		
0.425	26		
0.3	23		
0.212	19		
0.15	15		
0.063	11		

Dry Mass of sample, g

12635

Sample Proportions	% dry mass
Very coarse	24
Gravel	41
Sand	24
Fines <0.063mm	11

Grading Analysis		
D100	mm	300
D60	mm	18.4
D30	mm	0.826
D10	mm	
Uniformity Coefficient		
Curvature Coefficient		

Remarks

Preparation and testing in accordance with BS1377 unless noted below

Method of Preparation: BS 1377:Part 1:1990, clause 7.3 Initial preparation
BS 1377:Part 1:1990, clause 7.4.5 Preparation of particle size tests

Method of Test: BS1377:Part 2:1990, clause 9.2 Determination of particle size distribution by wet sieving method





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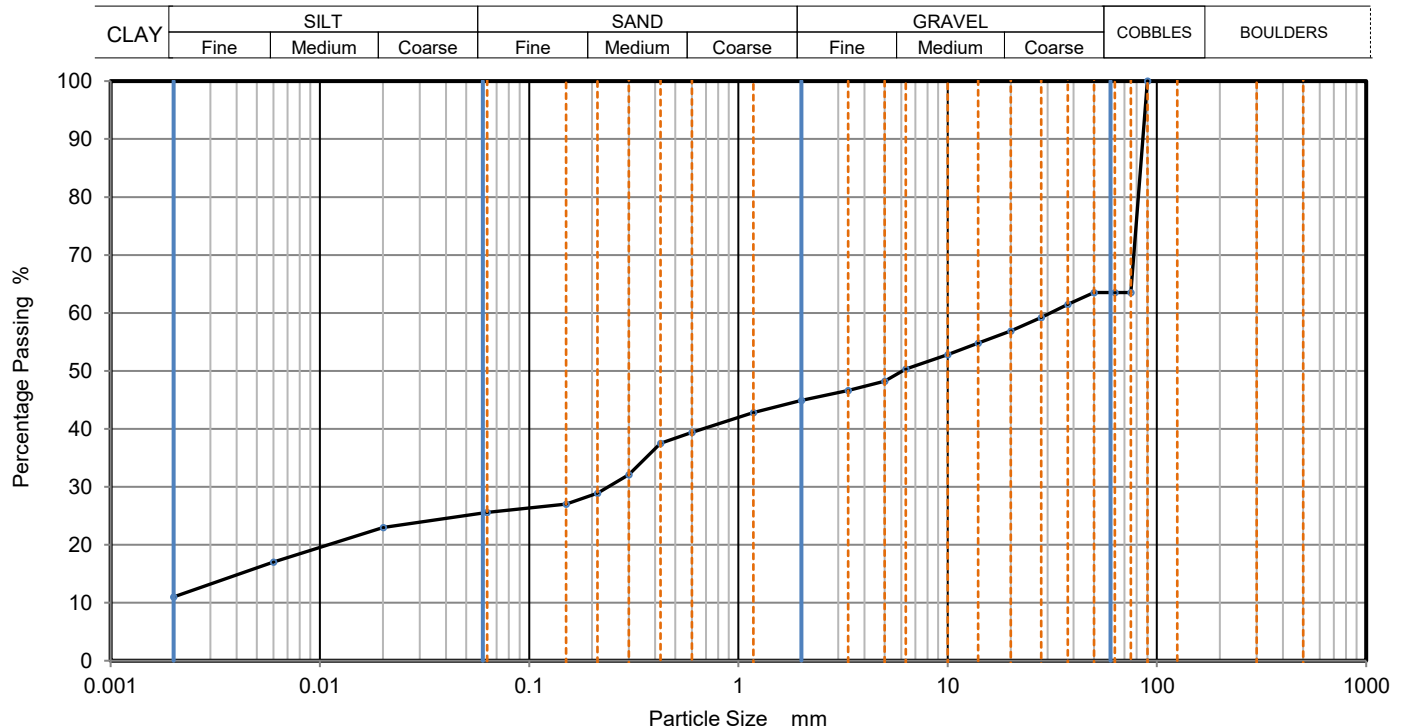
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DETERMINATION OF PARTICLE SIZE DISTRIBUTION

Borehole / Trial Pit	Depth (m)	Sample	Testing Type	Description
ARP-BH105	5.00	B11	Wet Sieve + Pipette	Brown/Grey clayey, silty, sandy, organic GRAVEL



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
		0.0201	23
		0.0060	17
		0.0020	11
90	100		
75	64		
63	64		
50	64		
37.5	62		
28	59		
20	57		
14	55		
10	53		
6.3	50		
5	48		
3.35	47		
2	45		
1.18	43	Particle density (assumed) 2.65 Mg/m3	
0.6	39		
0.425	38		
0.3	32		
0.212	29		
0.15	27		
0.063	26		

Dry Mass of sample, g

4514

Sample Proportions	% dry mass
Very coarse	37
Gravel	19
Sand	19
Silt	14
Clay	11

Grading Analysis		
D100	mm	90
D60	mm	31
D30	mm	0.239
D10	mm	
Uniformity Coefficient		
Curvature Coefficient		

Remarks

Preparation and testing in accordance with BS1377 unless noted below

Method of Preparation: BS 1377:Part 1:1990, clause 7.3 Initial preparation
BS 1377:Part 1:1990, clause 7.4.5 Preparation of particle size tests

Method of Test: BS1377:Part 2:1990, clause 9.2 Determination of particle size distribution by wet sieving method
BS1377:Part 2:1990, clause 9.4 Determination of sedimentation by pipette method





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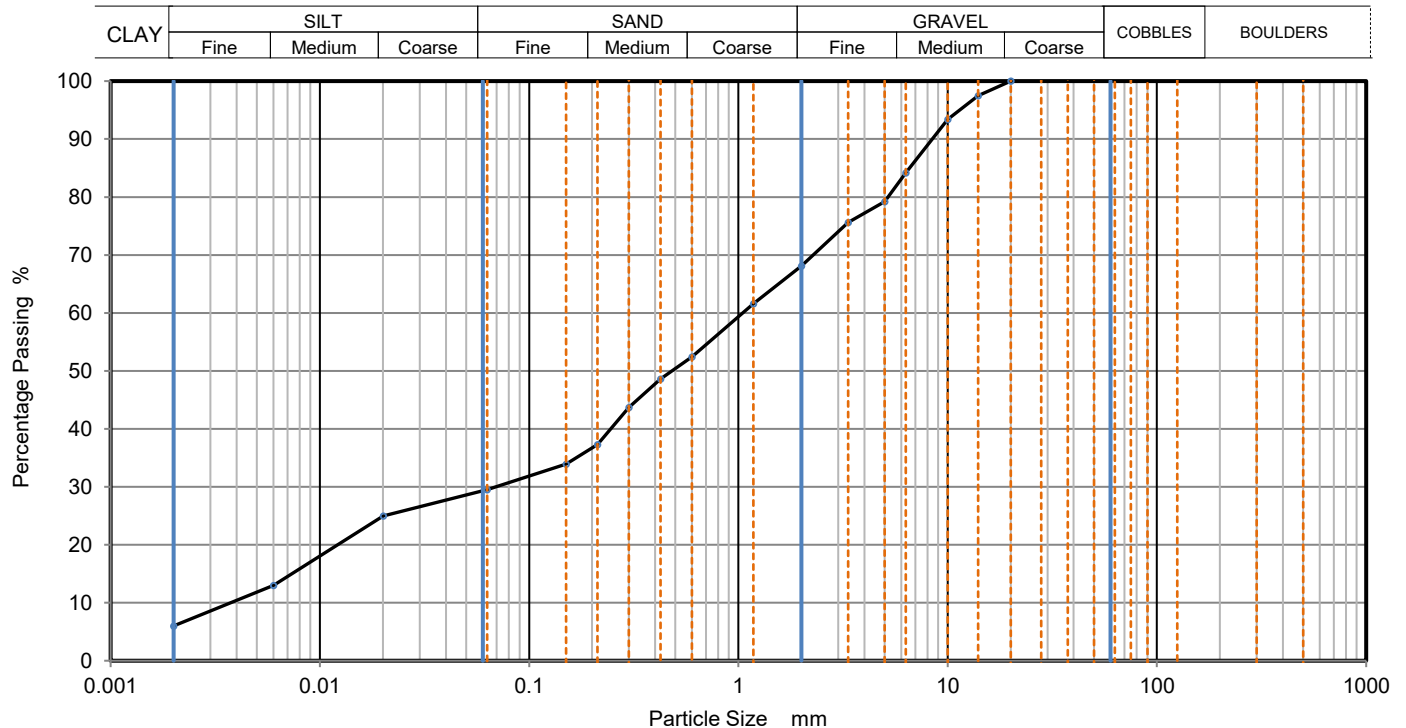
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DETERMINATION OF PARTICLE SIZE DISTRIBUTION

Borehole / Trial Pit	Depth (m)	Sample	Testing Type	Description
ARP-BH105	9.50	B19	Wet Sieve + Pipette	Black slightly clayey, silty, gravelly SAND (PEAT)



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
		0.0201	25
		0.0060	13
		0.0020	6
20	100		
14	98		
10	93		
6.3	84		
5	79		
3.35	76		
2	68		
1.18	62	Particle density (assumed) 2.65 Mg/m3	
0.6	52		
0.425	49		
0.3	44		
0.212	37		
0.15	34		
0.063	30		

Dry Mass of sample, g

329

Sample Proportions	% dry mass
Very coarse	0
Gravel	32
Sand	39
Silt	24
Clay	6

Grading Analysis		
D100	mm	20
D60	mm	1.05
D30	mm	0.0695
D10	mm	0.00381
Uniformity Coefficient		280
Curvature Coefficient		1.2

Remarks

Preparation and testing in accordance with BS1377 unless noted below

Method of Preparation: BS 1377:Part 1:1990, clause 7.3 Initial preparation
BS 1377:Part 1:1990, clause 7.4.5 Preparation of particle size tests

Method of Test: BS1377:Part 2:1990, clause 9.2 Determination of particle size distribution by wet sieving method
BS1377:Part 2:1990, clause 9.4 Determination of sedimentation by pipette method





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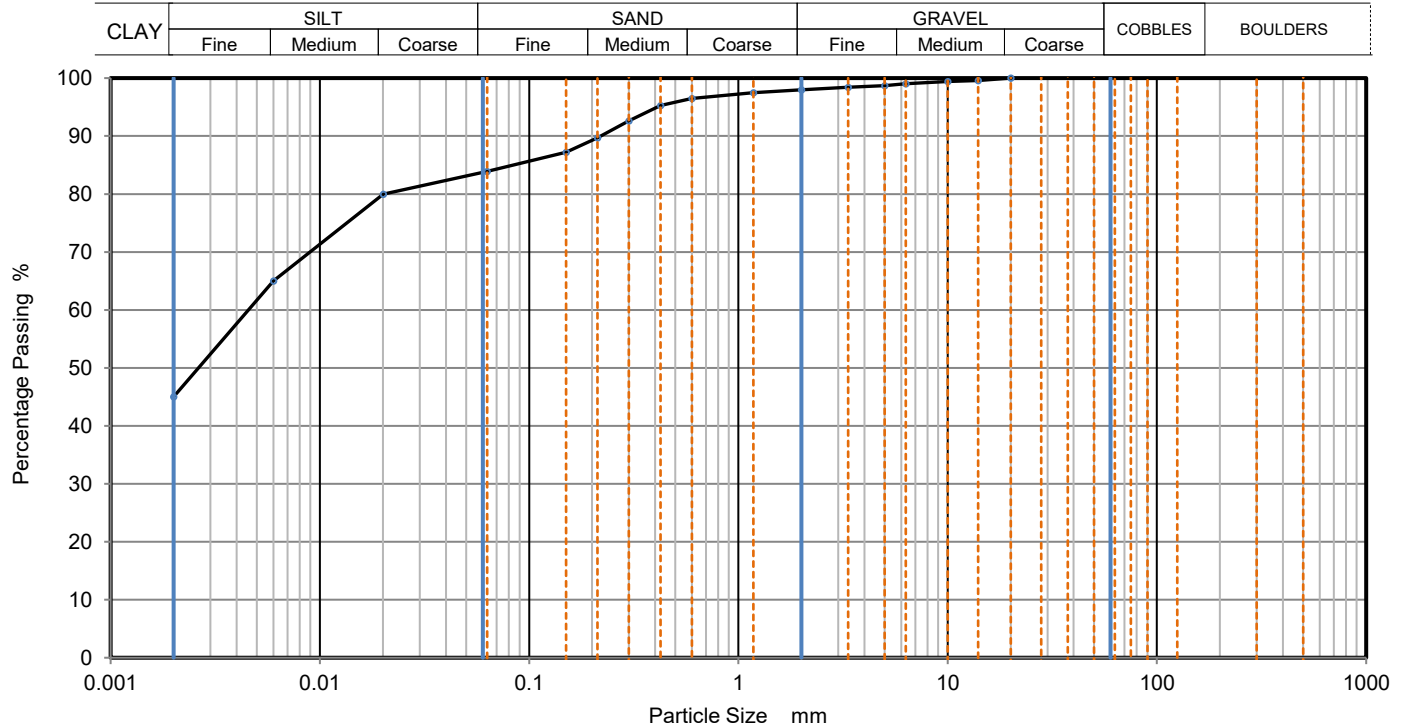
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DETERMINATION OF PARTICLE SIZE DISTRIBUTION

Borehole / Trial Pit	Depth (m)	Sample	Testing Type	Description
ARP-BH105	13.00	B26	Wet Sieve + Pipette	Brown sandy, silty CLAY



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
		0.0201	80
		0.0060	65
		0.0020	45
20	100		
14	100		
10	99		
6.3	99		
5	99		
3.35	98		
2	98		
1.18	98	Particle density (assumed) 2.65 Mg/m3	
0.6	97		
0.425	95		
0.3	93		
0.212	90		
0.15	87		
0.063	84		

Dry Mass of sample, g

1395

Sample Proportions	% dry mass
Very coarse	0
Gravel	2
Sand	14
Silt	39
Clay	45

Grading Analysis		
D100	mm	20
D60	mm	0.00462
D30	mm	
D10	mm	
Uniformity Coefficient		
Curvature Coefficient		

Remarks

Preparation and testing in accordance with BS1377 unless noted below

Method of Preparation: BS 1377:Part 1:1990, clause 7.3 Initial preparation
BS 1377:Part 1:1990, clause 7.4.5 Preparation of particle size tests

Method of Test: BS1377:Part 2:1990, clause 9.2 Determination of particle size distribution by wet sieving method
BS1377:Part 2:1990, clause 9.4 Determination of sedimentation by pipette method





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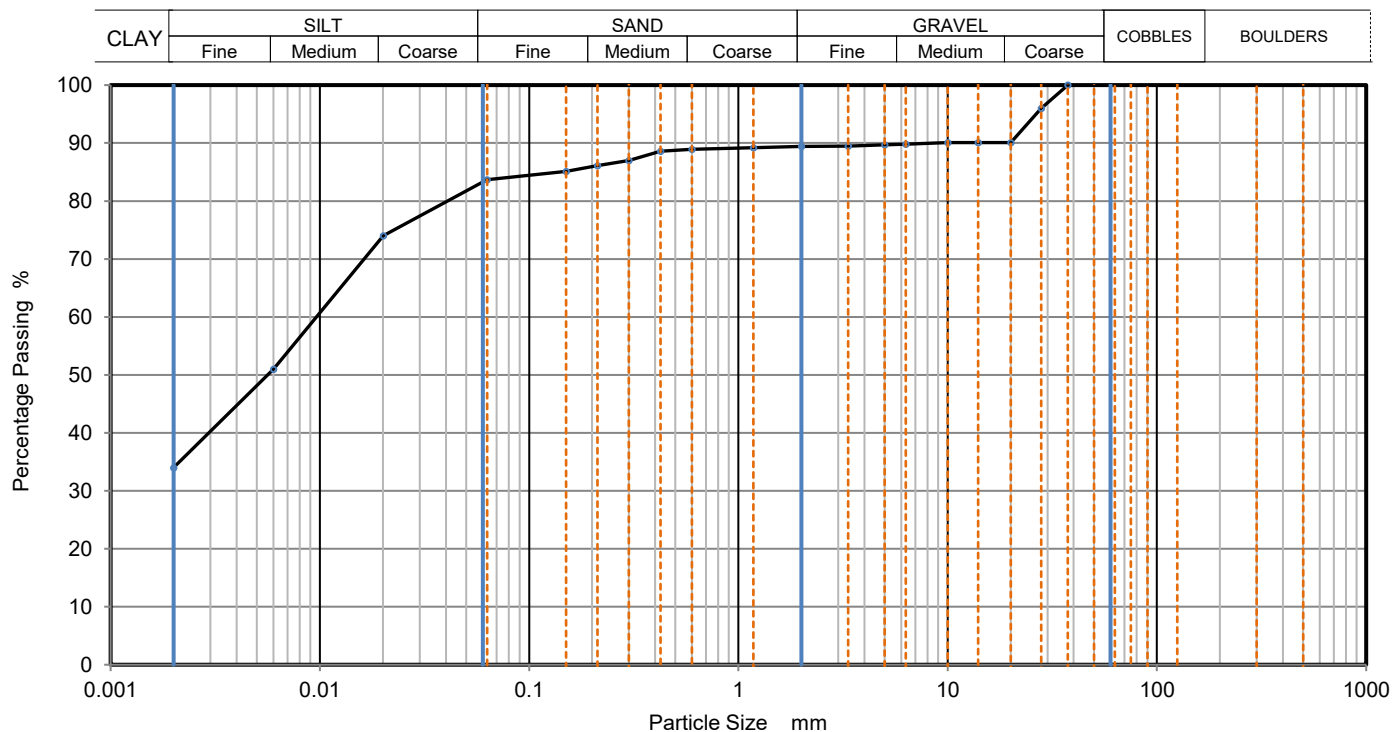
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DETERMINATION OF PARTICLE SIZE DISTRIBUTION

Borehole / Trial Pit	Depth (m)	Sample	Testing Type	Description
ARP-BH105	16.50	D	Wet Sieve + Pipette	Brown slightly sandy, gravelly, clayey SILT



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
		0.0201	74
		0.0060	51
		0.0020	34
37.5	100		
28	96		
20	90		
14	90		
10	90		
6.3	90		
5	90		
3.35	90		
2	89	Particle density (assumed) 2.65 Mg/m3	
1.18	89		
0.6	89		
0.425	89		
0.3	87		
0.212	86		
0.15	85		
0.063	84		

Dry Mass of sample, g

550

Sample Proportions	% dry mass
Very coarse	0
Gravel	11
Sand	6
Silt	50
Clay	34

Grading Analysis		
D100	mm	37.5
D60	mm	0.00975
D30	mm	
D10	mm	
Uniformity Coefficient		
Curvature Coefficient		

Remarks

Preparation and testing in accordance with BS1377 unless noted below

Method of Preparation: BS 1377:Part 1:1990, clause 7.3 Initial preparation
BS 1377:Part 1:1990, clause 7.4.5 Preparation of particle size tests

Method of Test: BS1377:Part 2:1990, clause 9.2 Determination of particle size distribution by wet sieving method
BS1377:Part 2:1990, clause 9.4 Determination of sedimentation by pipette method





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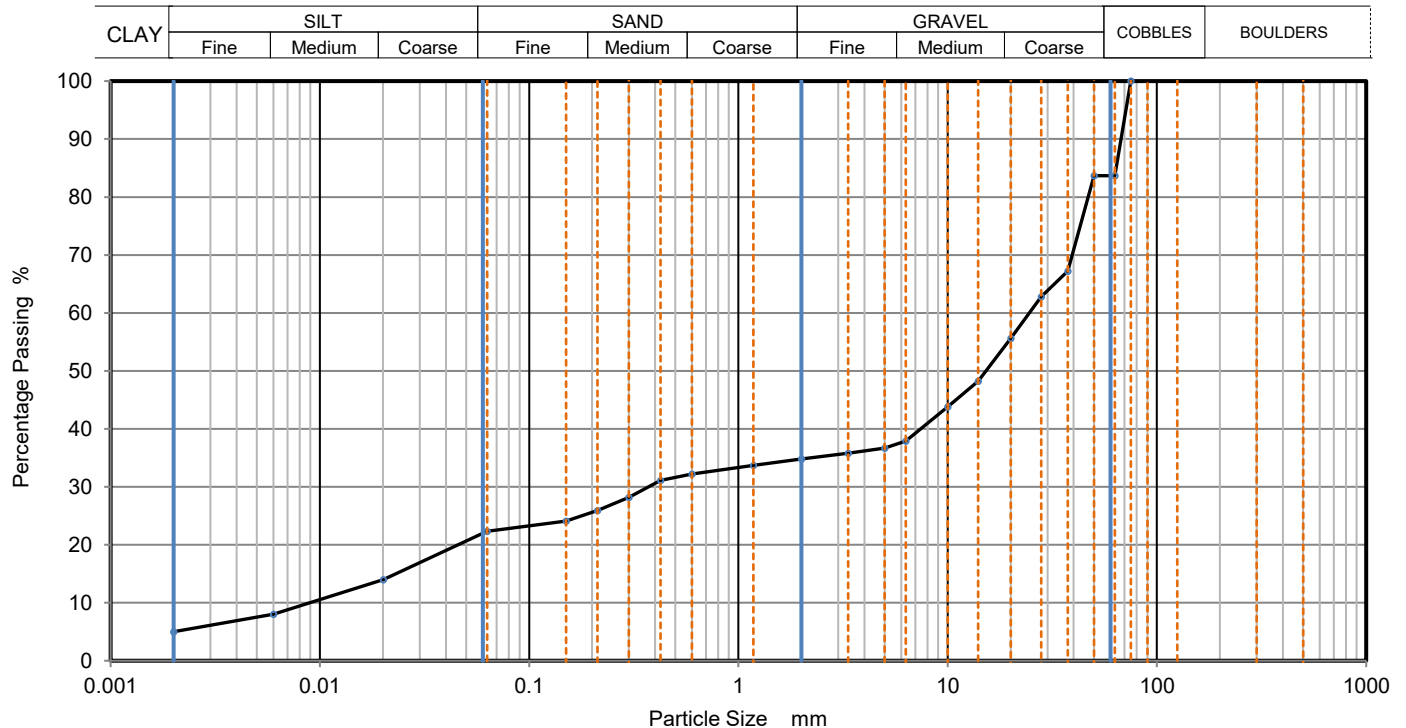
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DETERMINATION OF PARTICLE SIZE DISTRIBUTION

Borehole / Trial Pit	Depth (m)	Sample	Testing Type	Description
ARP-BH106	0.80	B3	Wet Sieve + Pipette	Brown slightly clayey, sandy, silty GRAVEL



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
		0.0201	14
		0.0060	8
		0.0020	5
75	100		
63	84		
50	84		
37.5	67		
28	63		
20	56		
14	48		
10	44		
6.3	38		
5	37		
3.35	36		
2	35		
1.18	34	Particle density (assumed) 2.65 Mg/m ³	
0.6	32		
0.425	31		
0.3	28		
0.212	26		
0.15	24		
0.063	22		

Dry Mass of sample, g

3729

Sample Proportions	% dry mass
Very coarse	16
Gravel	49
Sand	12
Silt	18
Clay	5

Grading Analysis		
D100	mm	75
D60	mm	24.5
D30	mm	0.371
D10	mm	0.00878
Uniformity Coefficient		2800
Curvature Coefficient		0.64

Remarks

Preparation and testing in accordance with BS1377 unless noted below

Method of Preparation: BS 1377:Part 1:1990, clause 7.3 Initial preparation
BS 1377:Part 1:1990, clause 7.4.5 Preparation of particle size tests

Method of Test: BS1377:Part 2:1990, clause 9.2 Determination of particle size distribution by wet sieving method
BS1377:Part 2:1990, clause 9.4 Determination of sedimentation by pipette method





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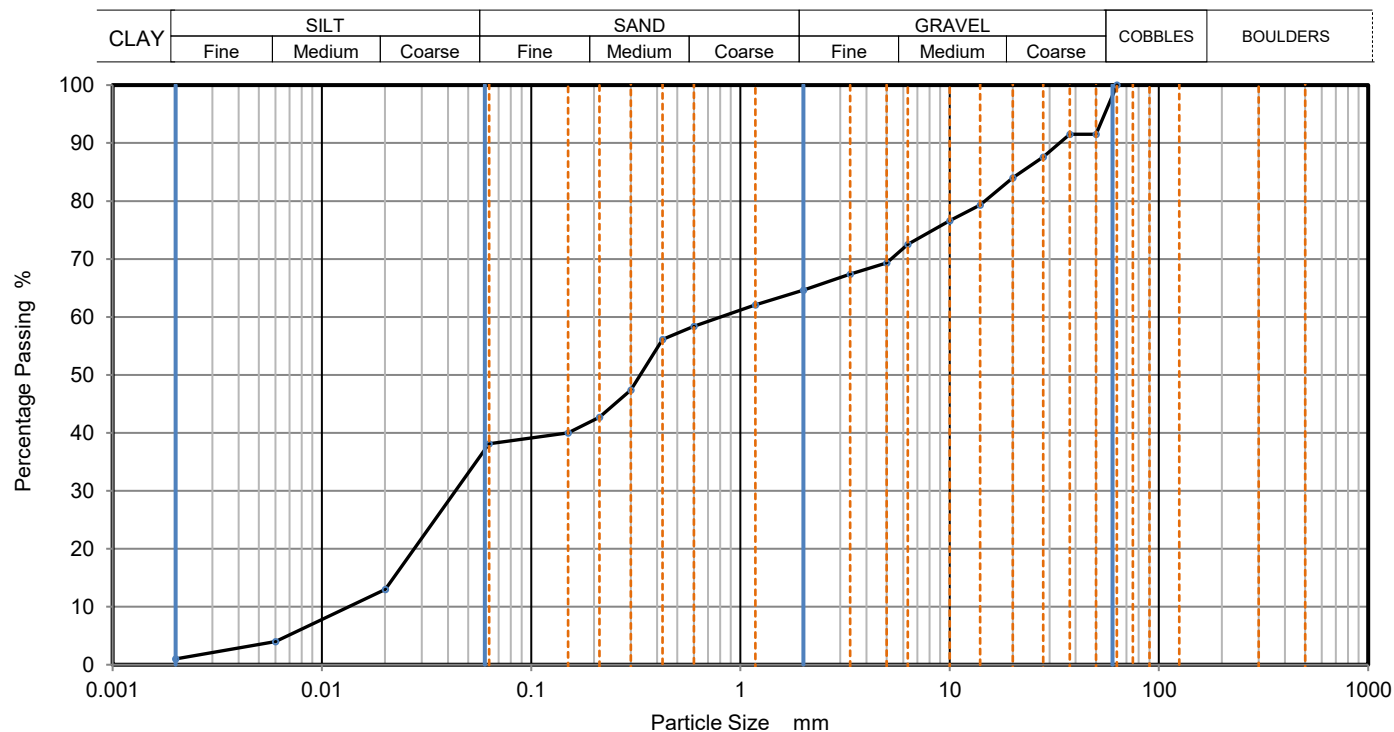
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DETERMINATION OF PARTICLE SIZE DISTRIBUTION

Borehole / Trial Pit	Depth (m)	Sample	Testing Type	Description
ARP-BH108	0.00	B1	Wet Sieve + Pipette	Brown sandy, gravelly SILT



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
		0.0201	13
		0.0060	4
		0.0020	1
63	100		
50	92		
37.5	92		
28	88		
20	84		
14	79		
10	77		
6.3	73		
5	69		
3.35	67		
2	65		
1.18	62	Particle density (assumed) 2.65 Mg/m3	
0.6	58		
0.425	56		
0.3	47		
0.212	43		
0.15	40		
0.063	38		

Dry Mass of sample, g

3139

Sample Proportions	% dry mass
Very coarse	0
Gravel	35
Sand	27
Silt	37
Clay	1

Grading Analysis		
D100	mm	63
D60	mm	0.799
D30	mm	0.0438
D10	mm	0.0139
Uniformity Coefficient		58
Curvature Coefficient		0.17

Remarks

Preparation and testing in accordance with BS1377 unless noted below

Method of Preparation: BS 1377:Part 1:1990, clause 7.3 Initial preparation
BS 1377:Part 1:1990, clause 7.4.5 Preparation of particle size tests

Method of Test: BS1377:Part 2:1990, clause 9.2 Determination of particle size distribution by wet sieving method
BS1377:Part 2:1990, clause 9.4 Determination of sedimentation by pipette method





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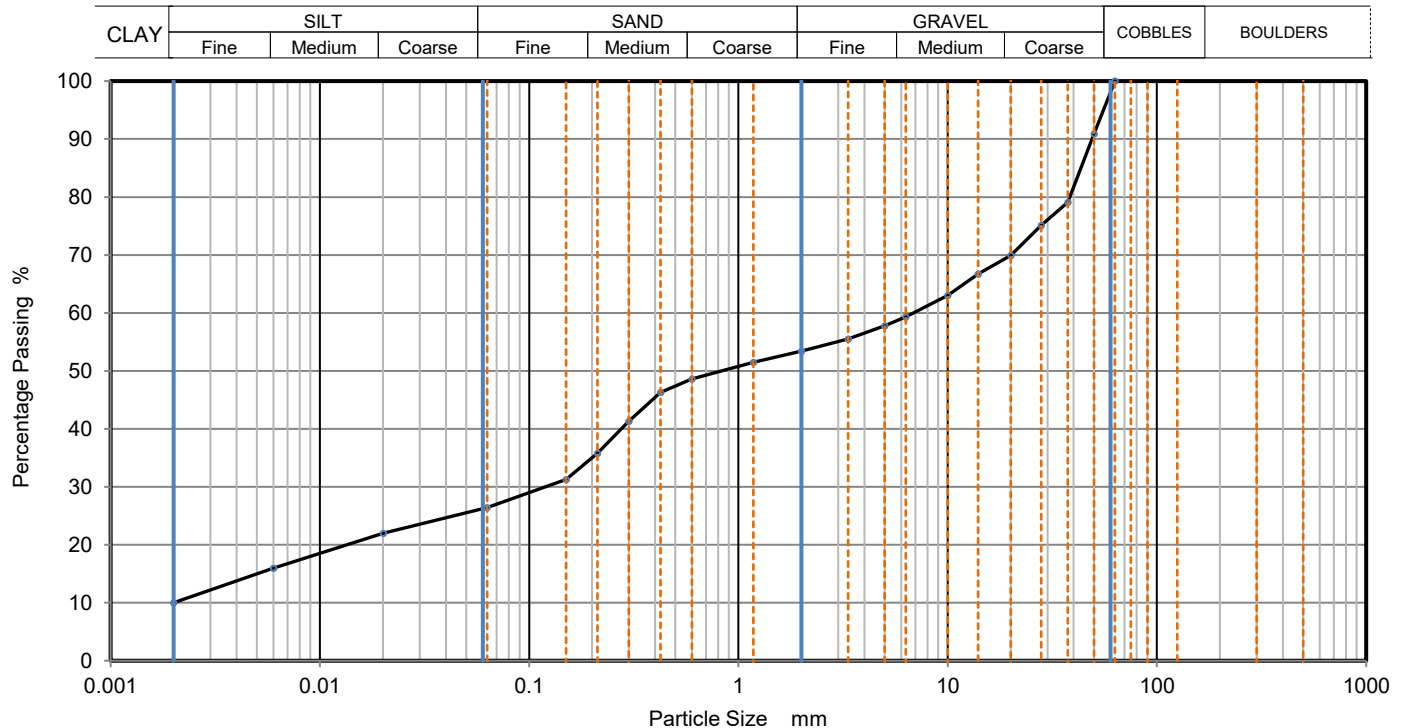
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DETERMINATION OF PARTICLE SIZE DISTRIBUTION

Borehole / Trial Pit	Depth (m)	Sample	Testing Type	Description
ARP-BH108	4.00	B9	Wet Sieve + Pipette	Brown clayey, silty, sandy GRAVEL



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
		0.0201	22
		0.0060	16
		0.0020	10
63	100		
50	91		
37.5	79		
28	75		
20	70		
14	67		
10	63		
6.3	59		
5	58		
3.35	56		
2	53		
1.18	52	Particle density (assumed) 2.65 Mg/m ³	
0.6	49		
0.425	46		
0.3	41		
0.212	36		
0.15	31		
0.063	26		

Dry Mass of sample, g

2335

Sample Proportions	% dry mass
Very coarse	0
Gravel	47
Sand	27
Silt	16
Clay	10

Grading Analysis		
D100	mm	63
D60	mm	6.91
D30	mm	0.119
D10	mm	0.00205
Uniformity Coefficient		3400
Curvature Coefficient		1

Remarks

Preparation and testing in accordance with BS1377 unless noted below

Method of Preparation: BS 1377:Part 1:1990, clause 7.3 Initial preparation
BS 1377:Part 1:1990, clause 7.4.5 Preparation of particle size tests

Method of Test: BS1377:Part 2:1990, clause 9.2 Determination of particle size distribution by wet sieving method
BS1377:Part 2:1990, clause 9.4 Determination of sedimentation by pipette method





Site: Ashton Moss

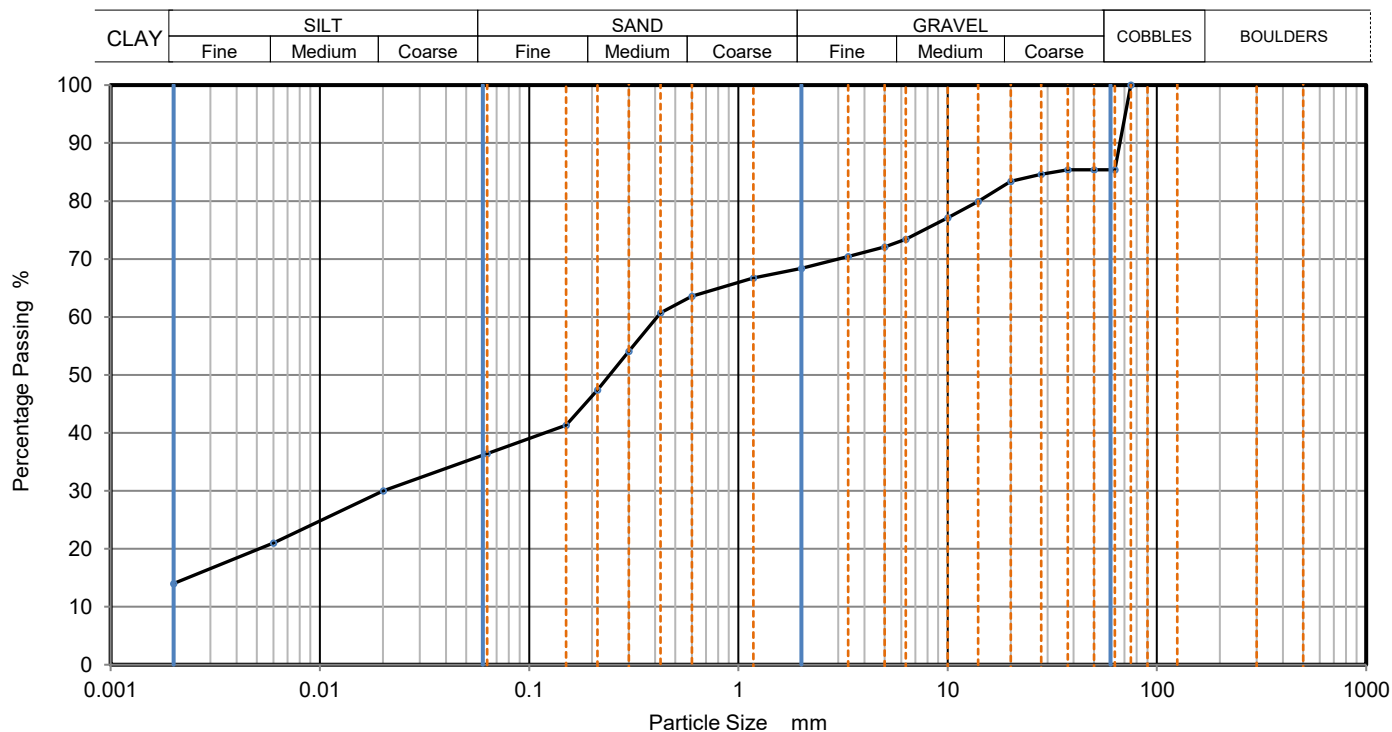
Job Number: 42171

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DETERMINATION OF PARTICLE SIZE DISTRIBUTION

Borehole / Trial Pit	Depth (m)	Sample	Testing Type	Description
ARP-BH108	9.00	B20	Wet Sieve + Pipette	Black clayey, silty SAND/GRAVEL



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
		0.0201	30
		0.0060	21
		0.0020	14
75	100		
63	85		
50	85		
37.5	85		
28	85		
20	83		
14	80		
10	77		
6.3	73		
5	72		
3.35	70		
2	68		
1.18	67	Particle density (assumed) 2.65 Mg/m ³	
0.6	64		
0.425	61		
0.3	54		
0.212	47		
0.15	41		
0.063	36		

Dry Mass of sample, g

2418

Sample Proportions	% dry mass
Very coarse	15
Gravel	17
Sand	32
Silt	23
Clay	14

Grading Analysis		
D100	mm	75
D60	mm	0.41
D30	mm	0.019
D10	mm	
Uniformity Coefficient		
Curvature Coefficient		

Remarks

Preparation and testing in accordance with BS1377 unless noted below

Method of Preparation: BS 1377:Part 1:1990, clause 7.3 Initial preparation
BS 1377:Part 1:1990, clause 7.4.5 Preparation of particle size tests

Method of Test: BS1377:Part 2:1990, clause 9.2 Determination of particle size distribution by wet sieving method
BS1377:Part 2:1990, clause 9.4 Determination of sedimentation by pipette method





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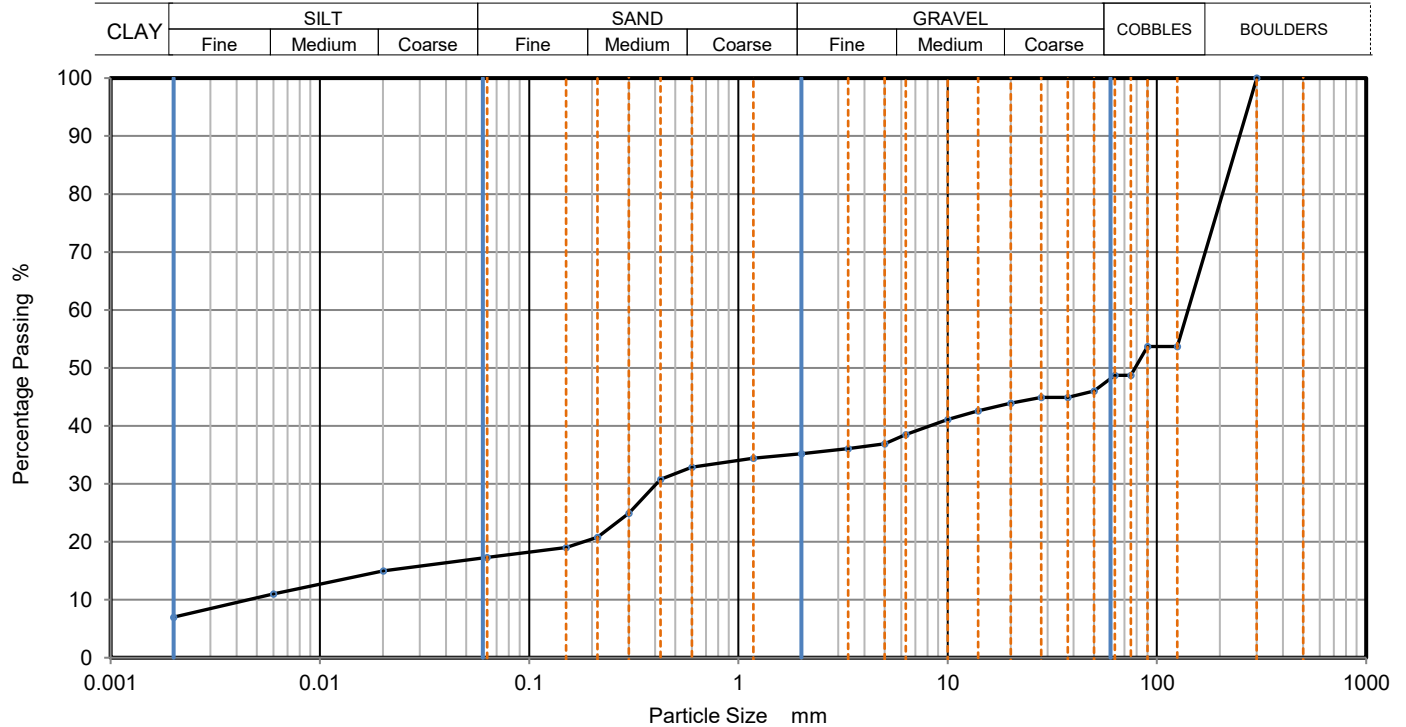
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DETERMINATION OF PARTICLE SIZE DISTRIBUTION

Borehole / Trial Pit	Depth (m)	Sample	Testing Type	Description
ARP-BH108	12.00	B27	Wet Sieve + Pipette	Brown/Grey slightly clayey, silty, sandy GRAVEL



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
		0.0201	15
300	100	0.0060	11
125	54	0.0020	7
90	54		
75	49		
63	49		
50	46		
37.5	45		
28	45		
20	44		
14	43		
10	41		
6.3	39		
5	37		
3.35	36		
2	35	Particle density (assumed) 2.65 Mg/m ³	
1.18	34		
0.6	33		
0.425	31		
0.3	25		
0.212	21		
0.15	19		
0.063	17		

Dry Mass of sample, g

8924

Sample Proportions	% dry mass
Very coarse	51
Gravel	14
Sand	18
Silt	10
Clay	7

Grading Analysis		
D100	mm	300
D60	mm	
D30	mm	0.406
D10	mm	0.00465
Uniformity Coefficient		
Curvature Coefficient		

Remarks

Preparation and testing in accordance with BS1377 unless noted below

Method of Preparation: BS 1377:Part 1:1990, clause 7.3 Initial preparation
BS 1377:Part 1:1990, clause 7.4.5 Preparation of particle size tests

Method of Test: BS1377:Part 2:1990, clause 9.2 Determination of particle size distribution by wet sieving method
BS1377:Part 2:1990, clause 9.4 Determination of sedimentation by pipette method





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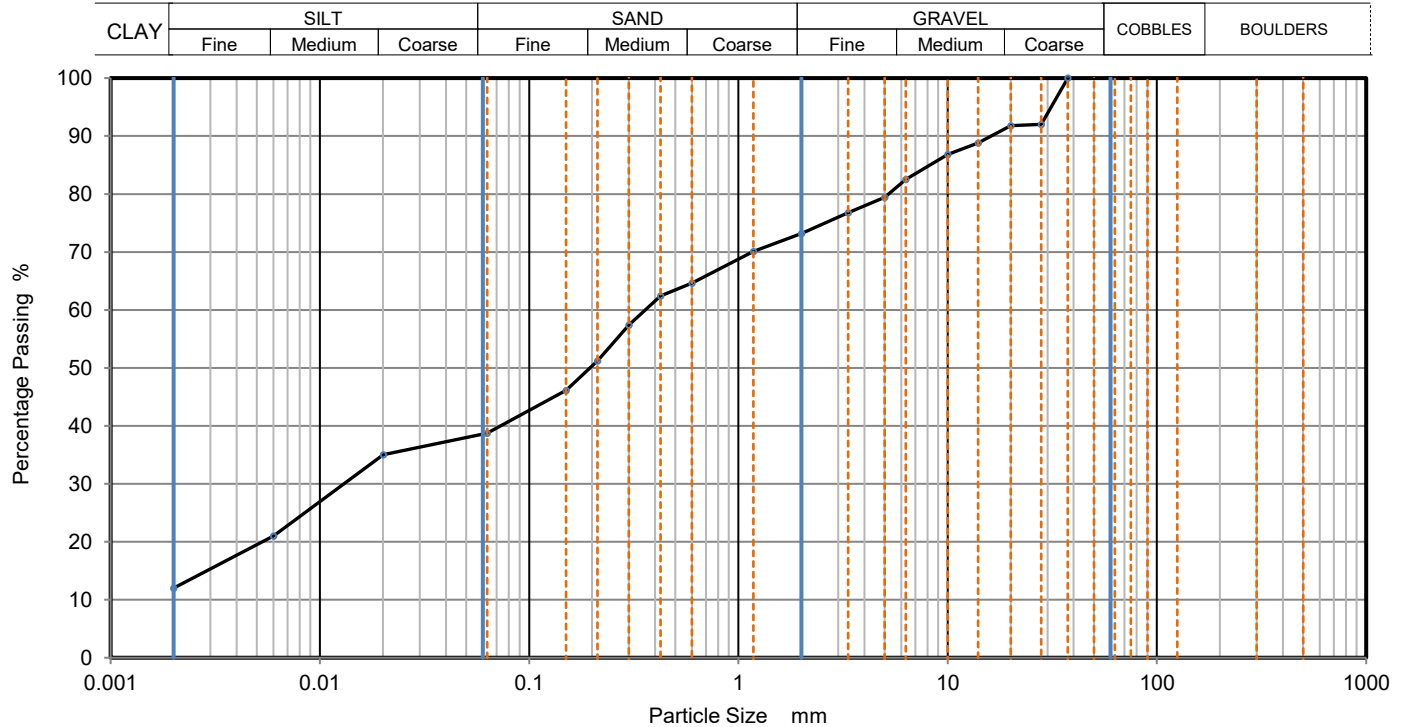
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DETERMINATION OF PARTICLE SIZE DISTRIBUTION

Borehole / Trial Pit	Depth (m)	Sample	Testing Type	Description
ARP-BH108	16.50	B35	Wet Sieve + Pipette	Black clayey, silty, gravelly, organic SAND



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
		0.0201	35
		0.0060	21
		0.0020	12
37.5	100		
28	92		
20	92		
14	89		
10	87		
6.3	83		
5	79		
3.35	77		
2	73		
1.18	70	Particle density (assumed) 2.65 Mg/m3	
0.6	65		
0.425	62		
0.3	57		
0.212	51		
0.15	46		
0.063	39		

Dry Mass of sample, g

1090

Sample Proportions	% dry mass
Very coarse	0
Gravel	27
Sand	35
Silt	27
Clay	12

Grading Analysis		
D100	mm	37.5
D60	mm	0.359
D30	mm	0.0131
D10	mm	
Uniformity Coefficient		
Curvature Coefficient		

Remarks

Preparation and testing in accordance with BS1377 unless noted below

Method of Preparation: BS 1377:Part 1:1990, clause 7.3 Initial preparation
BS 1377:Part 1:1990, clause 7.4.5 Preparation of particle size tests

Method of Test: BS1377:Part 2:1990, clause 9.2 Determination of particle size distribution by wet sieving method
BS1377:Part 2:1990, clause 9.4 Determination of sedimentation by pipette method





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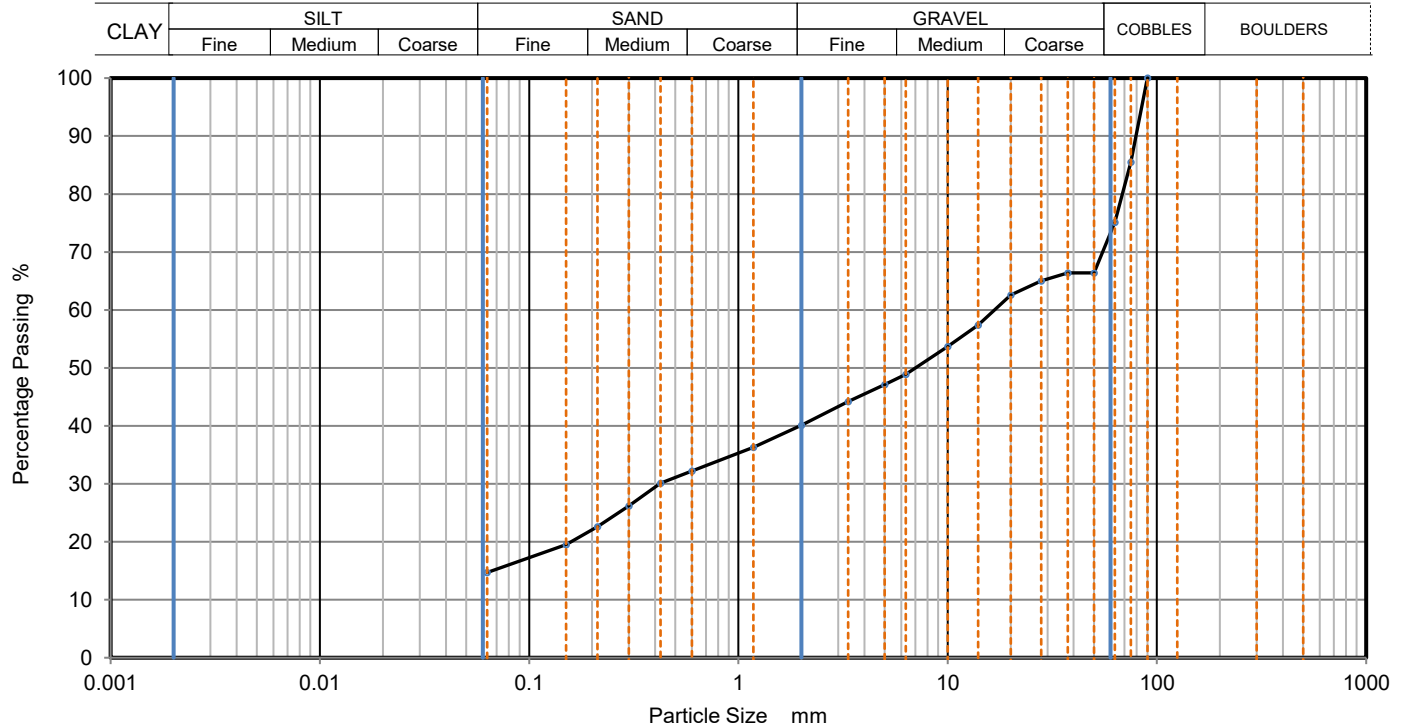
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DETERMINATION OF PARTICLE SIZE DISTRIBUTION

Borehole / Trial Pit	Depth (m)	Sample	Testing Type	Description
ARP-BH109	1.20	B4	Wet Sieve	Brown clayey, sandy GRAVEL



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
90	100		
75	86		
63	75		
50	66		
37.5	66		
28	65		
20	63		
14	57		
10	54		
6.3	49		
5	47		
3.35	44		
2	40		
1.18	36		
0.6	32		
0.425	30		
0.3	26		
0.212	23		
0.15	20		
0.063	15		

Dry Mass of sample, g

4440

Sample Proportions	% dry mass
Very coarse	25
Gravel	35
Sand	25
Fines <0.063mm	15

Grading Analysis		
D100	mm	90
D60	mm	16.8
D30	mm	0.421
D10	mm	
Uniformity Coefficient		
Curvature Coefficient		

Remarks

Preparation and testing in accordance with BS1377 unless noted below

Method of Preparation: BS 1377:Part 1:1990, clause 7.3 Initial preparation
BS 1377:Part 1:1990, clause 7.4.5 Preparation of particle size tests

Method of Test: BS1377:Part 2:1990, clause 9.2 Determination of particle size distribution by wet sieving method





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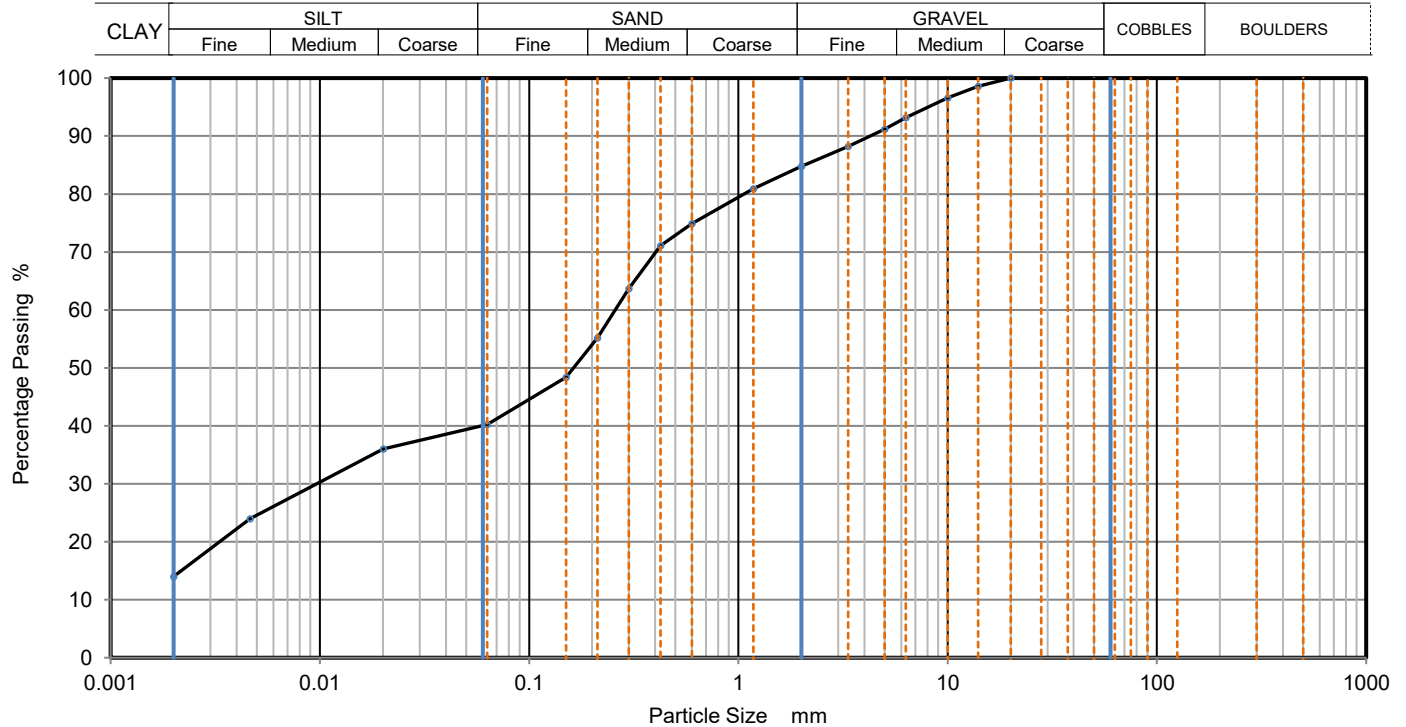
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DETERMINATION OF PARTICLE SIZE DISTRIBUTION

Borehole / Trial Pit	Depth (m)	Sample	Testing Type	Description
ARP-BH109	5.00	B14	Wet Sieve + Pipette	Black clayey, gravelly, silty SAND (PEAT)



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
		0.0201	36
		0.0046	24
		0.0020	14
20	100		
14	99		
10	97		
6.3	93		
5	91		
3.35	88		
2	85		
1.18	81	Particle density (assumed) 2.65 Mg/m3	
0.6	75		
0.425	71		
0.3	64		
0.212	55		
0.15	48		
0.063	40		

Dry Mass of sample, g

526

Sample Proportions	% dry mass
Very coarse	0
Gravel	15
Sand	45
Silt	26
Clay	14

Grading Analysis		
D100	mm	20
D60	mm	0.258
D30	mm	0.00982
D10	mm	
Uniformity Coefficient		
Curvature Coefficient		

Remarks

Preparation and testing in accordance with BS1377 unless noted below

Method of Preparation: BS 1377:Part 1:1990, clause 7.3 Initial preparation
BS 1377:Part 1:1990, clause 7.4.5 Preparation of particle size tests

Method of Test: BS1377:Part 2:1990, clause 9.2 Determination of particle size distribution by wet sieving method
BS1377:Part 2:1990, clause 9.4 Determination of sedimentation by pipette method





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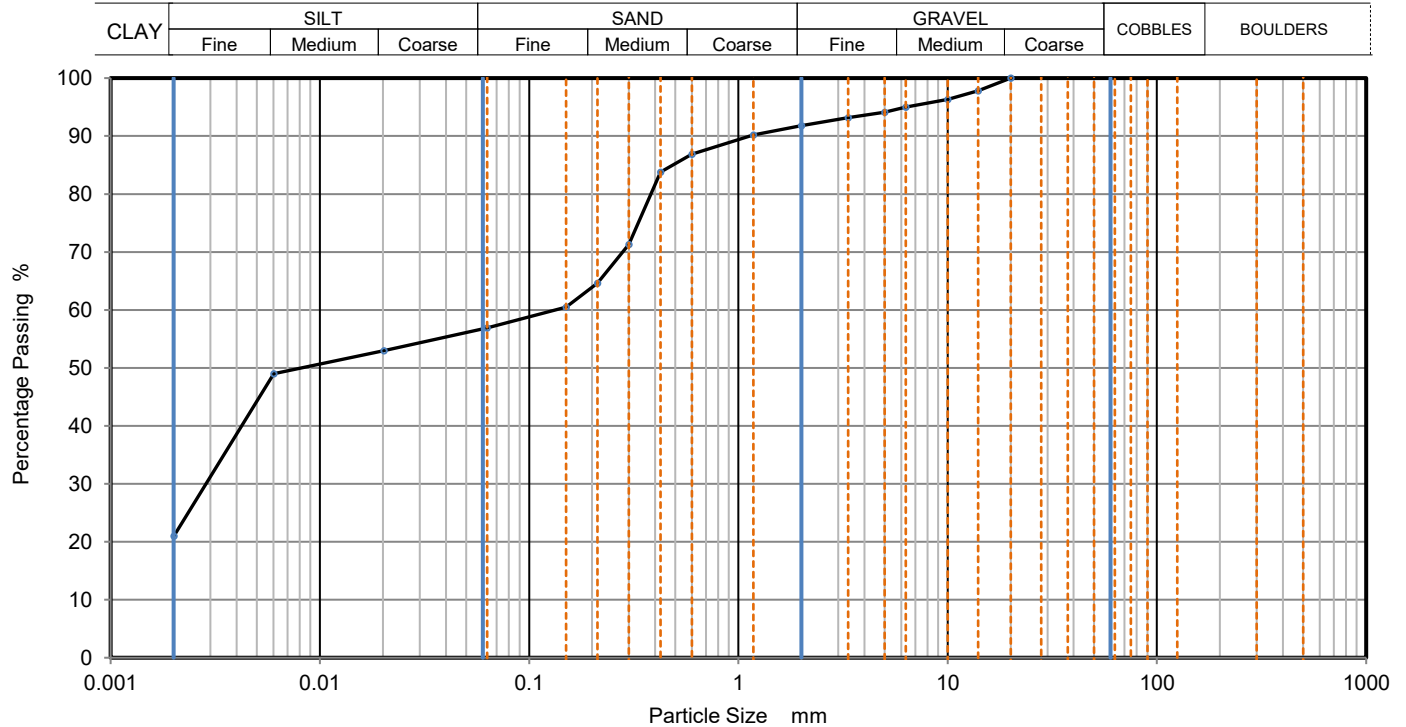
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DETERMINATION OF PARTICLE SIZE DISTRIBUTION

Borehole / Trial Pit	Depth (m)	Sample	Testing Type	Description
ARP-BH109	9.00	B26	Wet Sieve + Pipette	Black slightly gravelly, sandy, silty CLAY



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
		0.0202	53
		0.0060	49
		0.0020	21
20	100		
14	98		
10	96		
6.3	95		
5	94		
3.35	93		
2	92		
1.18	90	Particle density (assumed) 2.64 Mg/m3	
0.6	87		
0.425	84		
0.3	71		
0.212	65		
0.15	61		
0.063	57		

Dry Mass of sample, g

1352

Sample Proportions	% dry mass
Very coarse	0
Gravel	8
Sand	35
Fines <0.063mm	57

Grading Analysis		
D100	mm	20
D60	mm	0.132
D30	mm	0.00287
D10	mm	
Uniformity Coefficient		
Curvature Coefficient		

Remarks

Preparation and testing in accordance with BS1377 unless noted below

Method of Preparation: BS 1377:Part 1:1990, clause 7.3 Initial preparation
BS 1377:Part 1:1990, clause 7.4.5 Preparation of particle size tests

Method of Test: BS1377:Part 2:1990, clause 9.2 Determination of particle size distribution by wet sieving method
BS1377:Part 2:1990, clause 9.4 Determination of sedimentation by pipette method





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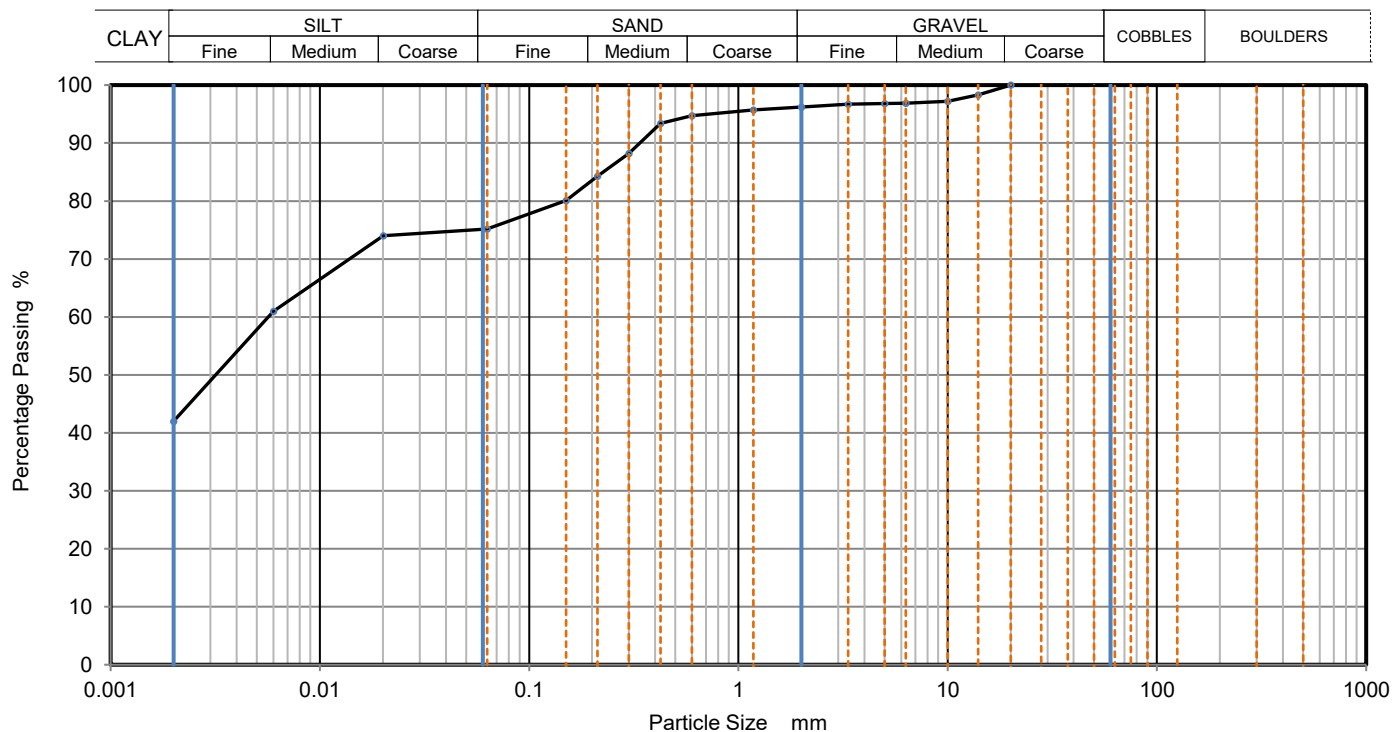
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DETERMINATION OF PARTICLE SIZE DISTRIBUTION

Borehole / Trial Pit	Depth (m)	Sample	Testing Type	Description
ARP-BH109	12.50	D	Wet Sieve + Pipette	Brown slightly gravelly, sandy, silty CLAY



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
		0.0201	74
		0.0060	61
		0.0020	42
20	100		
14	98		
10	97		
6.3	97		
5	97		
3.35	97		
2	96		
1.18	96	Particle density (assumed) 2.65 Mg/m3	
0.6	95		
0.425	93		
0.3	88		
0.212	84		
0.15	80		
0.063	75		

Dry Mass of sample, g

339

Sample Proportions	% dry mass
Very coarse	0
Gravel	4
Sand	21
Silt	33
Clay	42

Grading Analysis		
D100	mm	20
D60	mm	0.00562
D30	mm	
D10	mm	
Uniformity Coefficient		
Curvature Coefficient		

Remarks

Preparation and testing in accordance with BS1377 unless noted below

Method of Preparation: BS 1377:Part 1:1990, clause 7.3 Initial preparation
BS 1377:Part 1:1990, clause 7.4.5 Preparation of particle size tests

Method of Test: BS1377:Part 2:1990, clause 9.2 Determination of particle size distribution by wet sieving method
BS1377:Part 2:1990, clause 9.4 Determination of sedimentation by pipette method



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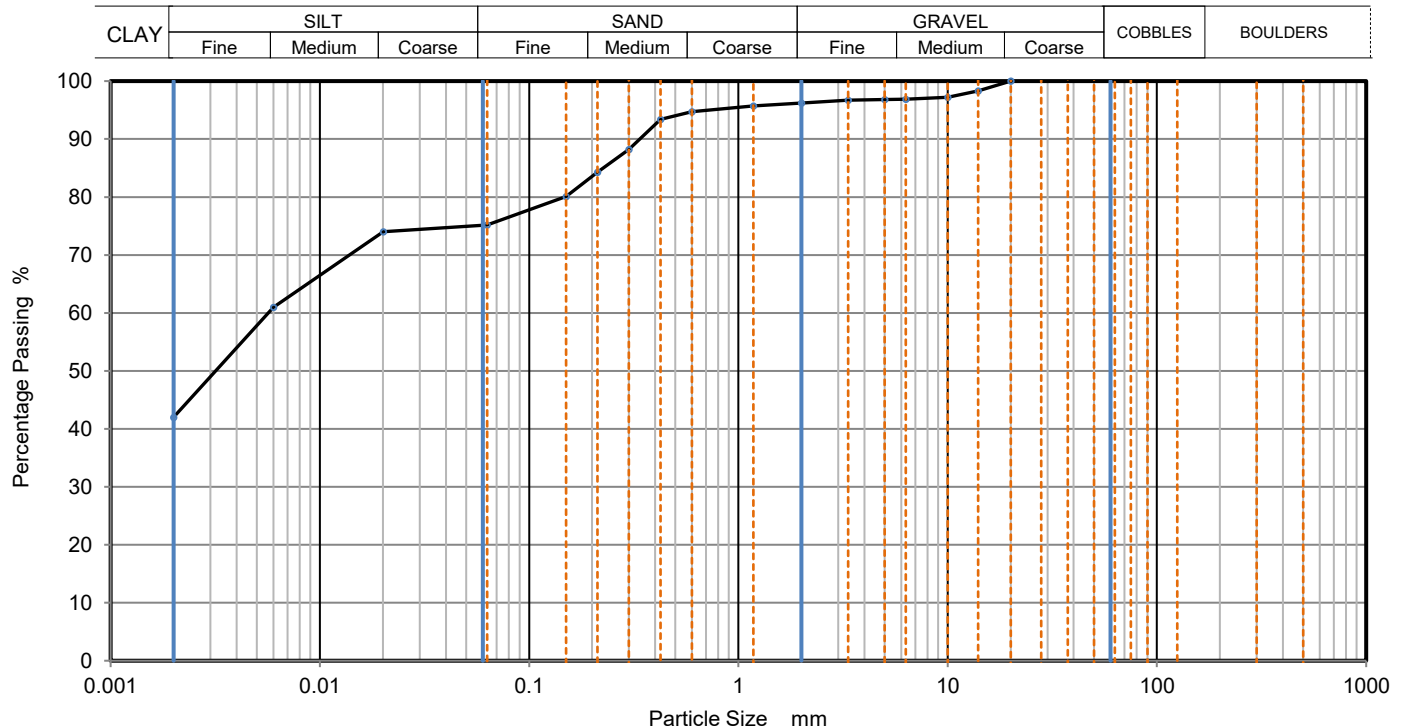
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DETERMINATION OF PARTICLE SIZE DISTRIBUTION

Borehole / Trial Pit	Depth (m)	Sample	Testing Type	Description
ARP-BH109	13.00	D38	Wet Sieve + Pipette	Brown slightly gravelly, sandy, silty CLAY



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
		0.0201	74
		0.0060	61
		0.0020	42
20	100		
14	98		
10	97		
6.3	97		
5	97		
3.35	97		
2	96		
1.18	96	Particle density (assumed) 2.65 Mg/m3	
0.6	95		
0.425	93		
0.3	88		
0.212	84		
0.15	80		
0.063	75		

Dry Mass of sample, g

339

Sample Proportions	% dry mass
Very coarse	0
Gravel	4
Sand	21
Silt	33
Clay	42

Grading Analysis		
D100	mm	20
D60	mm	0.00562
D30	mm	
D10	mm	
Uniformity Coefficient		
Curvature Coefficient		

Remarks

Preparation and testing in accordance with BS1377 unless noted below

Method of Preparation: BS 1377:Part 1:1990, clause 7.3 Initial preparation
BS 1377:Part 1:1990, clause 7.4.5 Preparation of particle size tests

Method of Test: BS1377:Part 2:1990, clause 9.2 Determination of particle size distribution by wet sieving method
BS1377:Part 2:1990, clause 9.4 Determination of sedimentation by pipette method





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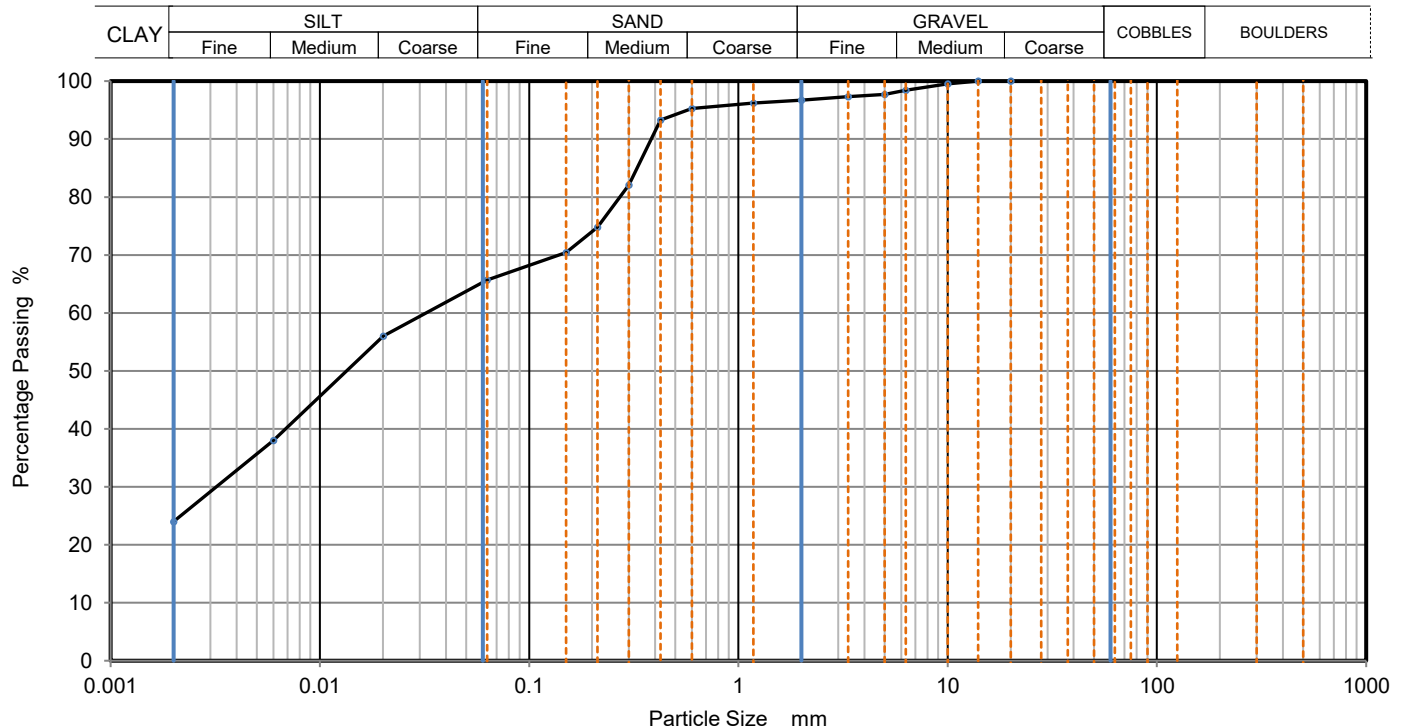
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DETERMINATION OF PARTICLE SIZE DISTRIBUTION

Borehole / Trial Pit	Depth (m)	Sample	Testing Type	Description
ARP-BH110	10.00	D27	Wet Sieve + Pipette	Brown clayey, sandy SILT



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
		0.0201	56
		0.0060	38
		0.0020	24
20	100		
14	100		
10	100		
6.3	98		
5	98		
3.35	97		
2	97		
1.18	96	Particle density (assumed) 2.65 Mg/m3	
0.6	95		
0.425	93		
0.3	82		
0.212	75		
0.15	70		
0.063	66		

Dry Mass of sample, g

328

Sample Proportions	% dry mass
Very coarse	0
Gravel	3
Sand	31
Silt	42
Clay	24

Grading Analysis		
D100	mm	14
D60	mm	0.033
D30	mm	0.00325
D10	mm	
Uniformity Coefficient		
Curvature Coefficient		

Remarks

Preparation and testing in accordance with BS1377 unless noted below

Method of Preparation: BS 1377:Part 1:1990, clause 7.3 Initial preparation
BS 1377:Part 1:1990, clause 7.4.5 Preparation of particle size tests

Method of Test: BS1377:Part 2:1990, clause 9.2 Determination of particle size distribution by wet sieving method
BS1377:Part 2:1990, clause 9.4 Determination of sedimentation by pipette method





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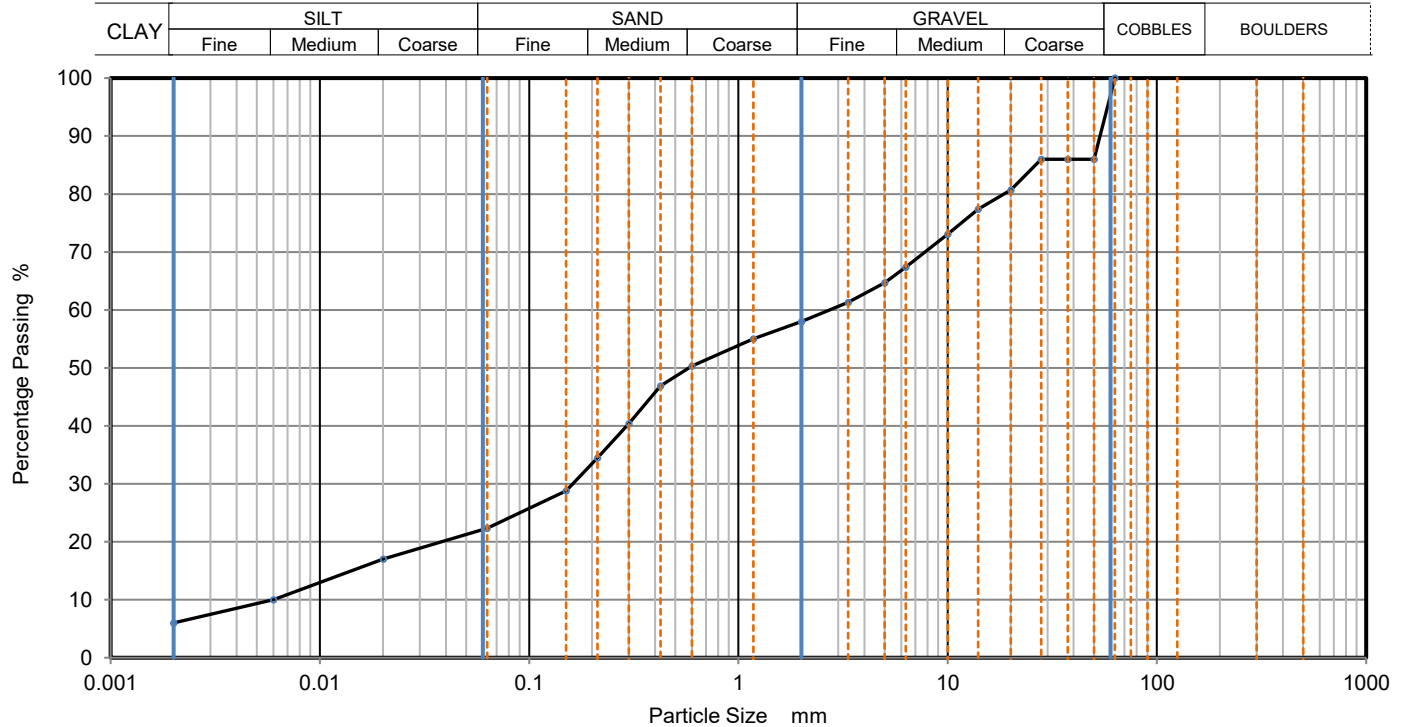
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DETERMINATION OF PARTICLE SIZE DISTRIBUTION

Borehole / Trial Pit	Depth (m)	Sample	Testing Type	Description
ARP-BH111	1.20	B3	Wet Sieve + Pipette	Brown/Black slightly clayey, silty, sandy GRAVEL



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
		0.0201	17
		0.0060	10
		0.0020	6
63	100		
50	86		
37.5	86		
28	86		
20	81		
14	77		
10	73		
6.3	67		
5	65		
3.35	61		
2	58		
1.18	55	Particle density (assumed) 2.65 Mg/m3	
0.6	50		
0.425	47		
0.3	40		
0.212	35		
0.15	29		
0.063	22		

Dry Mass of sample, g

2594

Sample Proportions	% dry mass
Very coarse	0
Gravel	42
Sand	36
Silt	17
Clay	6

Grading Analysis		
D100	mm	63
D60	mm	2.73
D30	mm	0.161
D10	mm	0.00565
Uniformity Coefficient		480
Curvature Coefficient		1.7

Remarks

Preparation and testing in accordance with BS1377 unless noted below

Method of Preparation: BS 1377:Part 1:1990, clause 7.3 Initial preparation
BS 1377:Part 1:1990, clause 7.4.5 Preparation of particle size tests

Method of Test: BS1377:Part 2:1990, clause 9.2 Determination of particle size distribution by wet sieving method
BS1377:Part 2:1990, clause 9.4 Determination of sedimentation by pipette method





Site: Ashton Moss

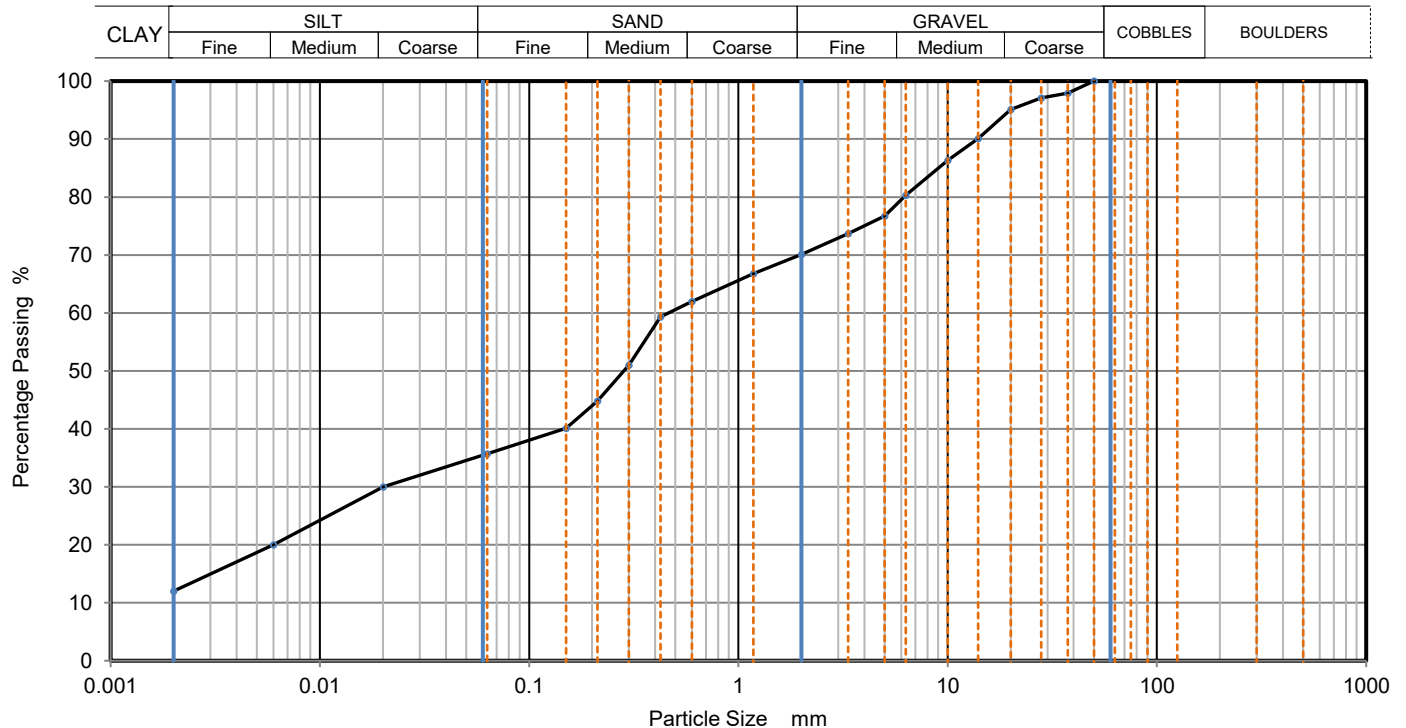
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DETERMINATION OF PARTICLE SIZE DISTRIBUTION

Borehole / Trial Pit	Depth (m)	Sample	Testing Type	Description
ARP-BH111	5.00	B10	Wet Sieve + Pipette	Black clayey, silty, gravelly, organic SAND



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
		0.0201	30
		0.0060	20
		0.0020	12
50	100		
37.5	98		
28	97		
20	95		
14	90		
10	86		
6.3	80		
5	77		
3.35	74		
2	70		
1.18	67	Particle density (assumed) 2.65 Mg/m ³	
0.6	62		
0.425	59		
0.3	51		
0.212	45		
0.15	40		
0.063	36		

Dry Mass of sample, g

5493

Sample Proportions	% dry mass
Very coarse	0
Gravel	30
Sand	34
Silt	24
Clay	12

Grading Analysis		
D100	mm	50
D60	mm	0.466
D30	mm	0.0191
D10	mm	
Uniformity Coefficient		
Curvature Coefficient		

Remarks

Preparation and testing in accordance with BS1377 unless noted below

Method of Preparation: BS 1377:Part 1:1990, clause 7.3 Initial preparation
BS 1377:Part 1:1990, clause 7.4.5 Preparation of particle size tests

Method of Test: BS1377:Part 2:1990, clause 9.2 Determination of particle size distribution by wet sieving method
BS1377:Part 2:1990, clause 9.4 Determination of sedimentation by pipette method





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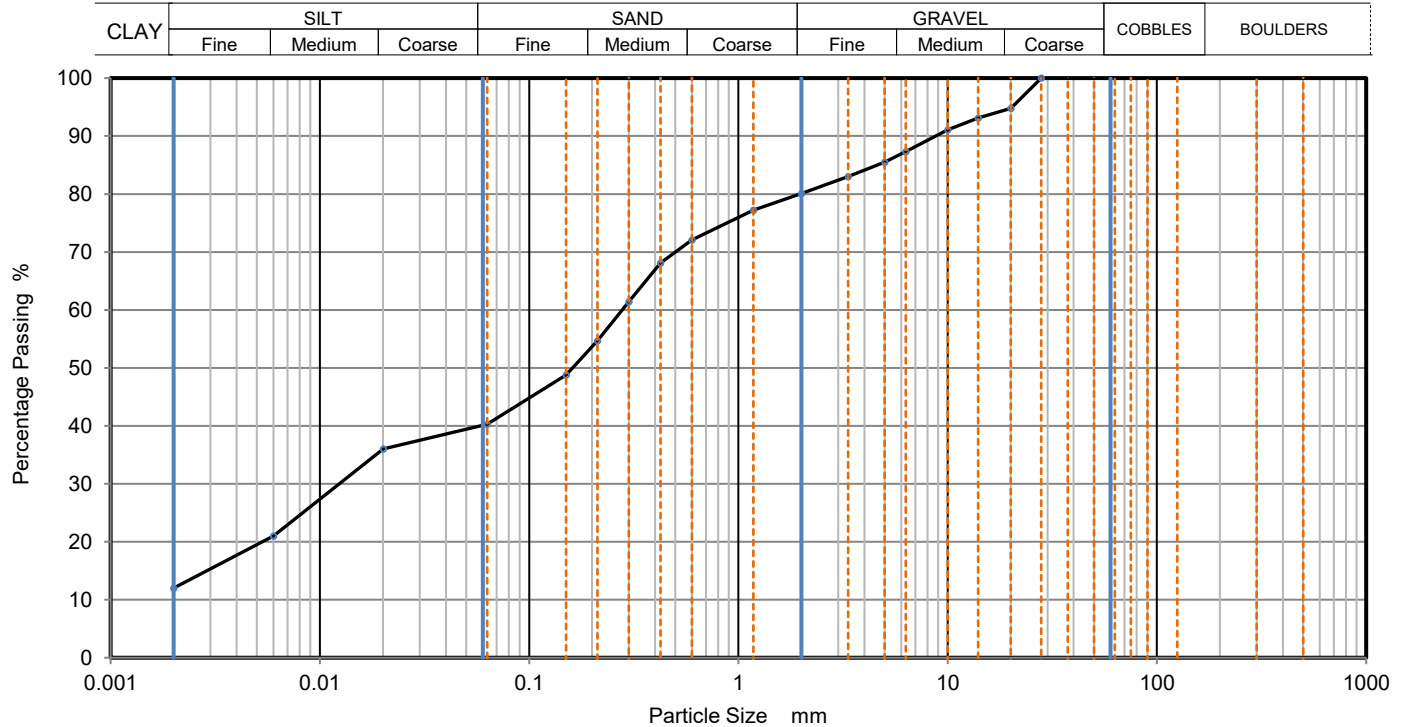
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DETERMINATION OF PARTICLE SIZE DISTRIBUTION

Borehole / Trial Pit	Depth (m)	Sample	Testing Type	Description
ARP-BH111	8.50	B22	Wet Sieve + Pipette	Black clayey, gravelly, silty, organic SAND



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
		0.0201	36
		0.0060	21
		0.0020	12
28	100		
20	95		
14	93		
10	91		
6.3	87		
5	86		
3.35	83		
2	80	Particle density (assumed) 2.65 Mg/m ³	
1.18	77		
0.6	72		
0.425	68		
0.3	61		
0.212	55		
0.15	49		
0.063	40		

Dry Mass of sample, g

1309

Sample Proportions	% dry mass
Very coarse	0
Gravel	20
Sand	40
Silt	29
Clay	12

Grading Analysis		
D100	mm	28
D60	mm	0.279
D30	mm	0.012
D10	mm	
Uniformity Coefficient		
Curvature Coefficient		

Remarks

Preparation and testing in accordance with BS1377 unless noted below

Method of Preparation: BS 1377:Part 1:1990, clause 7.3 Initial preparation
BS 1377:Part 1:1990, clause 7.4.5 Preparation of particle size tests

Method of Test: BS1377:Part 2:1990, clause 9.2 Determination of particle size distribution by wet sieving method
BS1377:Part 2:1990, clause 9.4 Determination of sedimentation by pipette method





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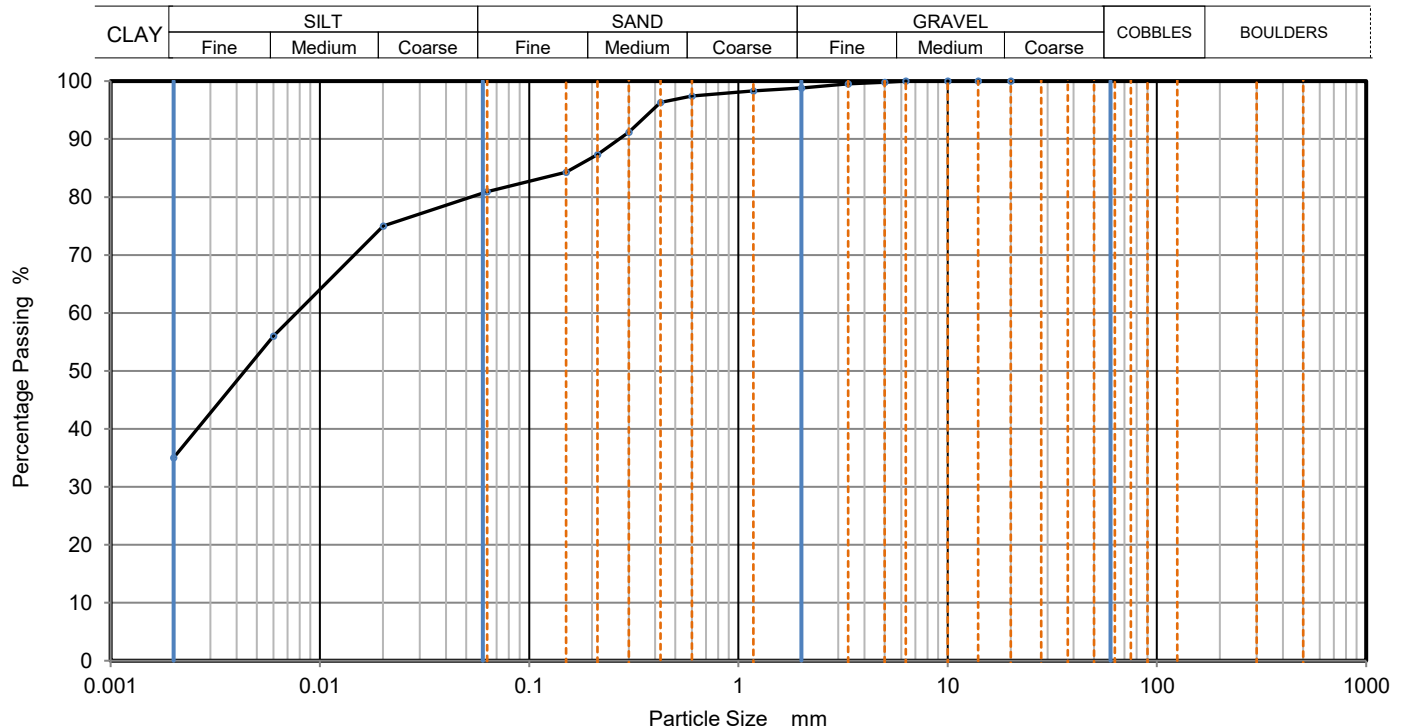
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DETERMINATION OF PARTICLE SIZE DISTRIBUTION

Borehole / Trial Pit	Depth (m)	Sample	Testing Type	Description
ARP-BH111	12.95	D	Wet Sieve + Pipette	Brown/Grey sandy, clayey SILT (PEAT)



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
		0.0201	75
		0.0060	56
		0.0020	35
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	99	Particle density (assumed) 2.65 Mg/m ³	
1.18	98		
0.6	97		
0.425	96		
0.3	91		
0.212	87		
0.15	84		
0.063	81		

Dry Mass of sample, g

243

Sample Proportions	% dry mass
Very coarse	0
Gravel	1
Sand	18
Silt	45
Clay	35

Grading Analysis		
D100	mm	6.3
D60	mm	0.00788
D30	mm	
D10	mm	
Uniformity Coefficient		
Curvature Coefficient		

Remarks

Preparation and testing in accordance with BS1377 unless noted below

Method of Preparation: BS 1377:Part 1:1990, clause 7.3 Initial preparation
BS 1377:Part 1:1990, clause 7.4.5 Preparation of particle size tests

Method of Test: BS1377:Part 2:1990, clause 9.2 Determination of particle size distribution by wet sieving method
BS1377:Part 2:1990, clause 9.4 Determination of sedimentation by pipette method





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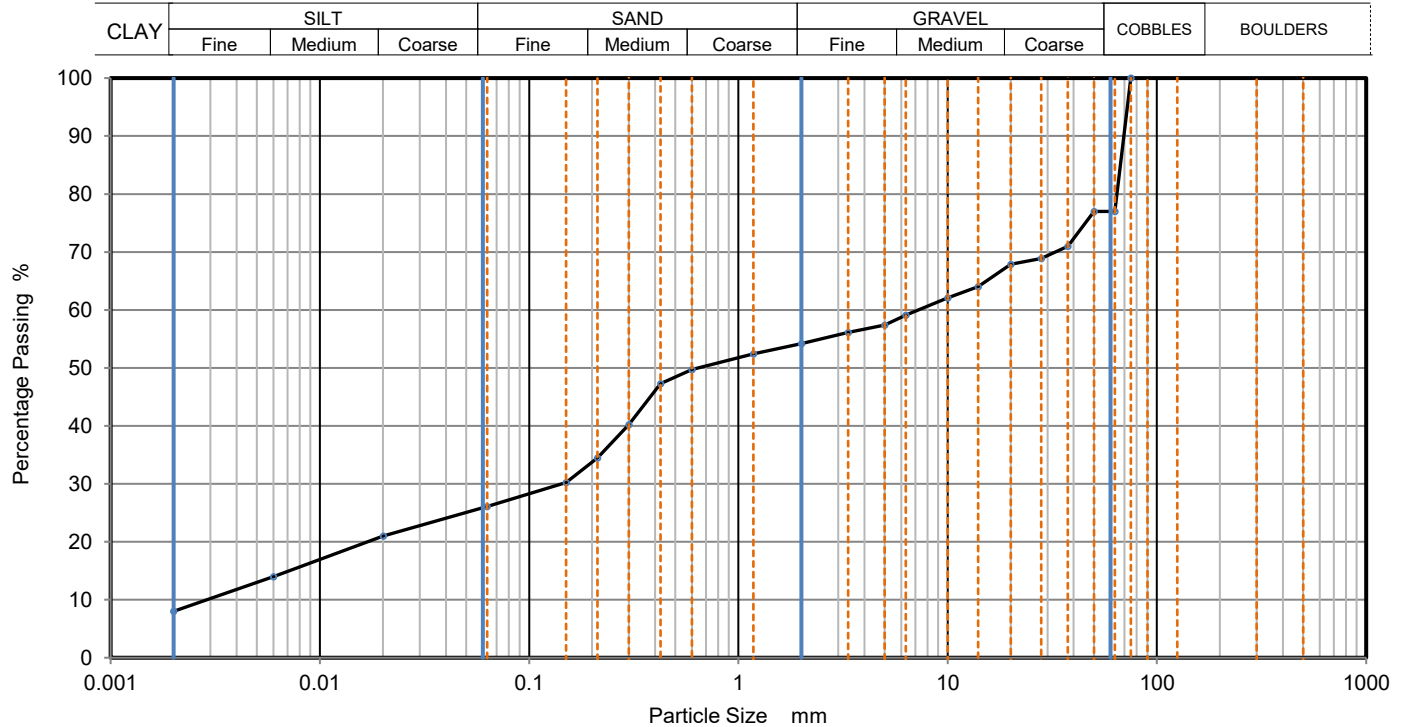
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DETERMINATION OF PARTICLE SIZE DISTRIBUTION

Borehole / Trial Pit	Depth (m)	Sample	Testing Type	Description
ARP-BH112	0.00	B1	Wet Sieve + Pipette	Brown slightly clayey, silty, sandy GRAVEL



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
		0.0201	21
		0.0060	14
		0.0020	8
75	100		
63	77		
50	77		
37.5	71		
28	69		
20	68		
14	64		
10	62		
6.3	59		
5	57		
3.35	56		
2	54		
1.18	52	Particle density (assumed) 2.65 Mg/m ³	
0.6	50		
0.425	47		
0.3	40		
0.212	35		
0.15	30		
0.063	26		

Dry Mass of sample, g

1943

Sample Proportions	% dry mass
Very coarse	23
Gravel	23
Sand	28
Silt	18
Clay	8

Grading Analysis		
D100	mm	75
D60	mm	7.25
D30	mm	0.143
D10	mm	0.00281
Uniformity Coefficient		2600
Curvature Coefficient		1

Remarks

Preparation and testing in accordance with BS1377 unless noted below

Method of Preparation: BS 1377:Part 1:1990, clause 7.3 Initial preparation
BS 1377:Part 1:1990, clause 7.4.5 Preparation of particle size tests

Method of Test: BS1377:Part 2:1990, clause 9.2 Determination of particle size distribution by wet sieving method
BS1377:Part 2:1990, clause 9.4 Determination of sedimentation by pipette method





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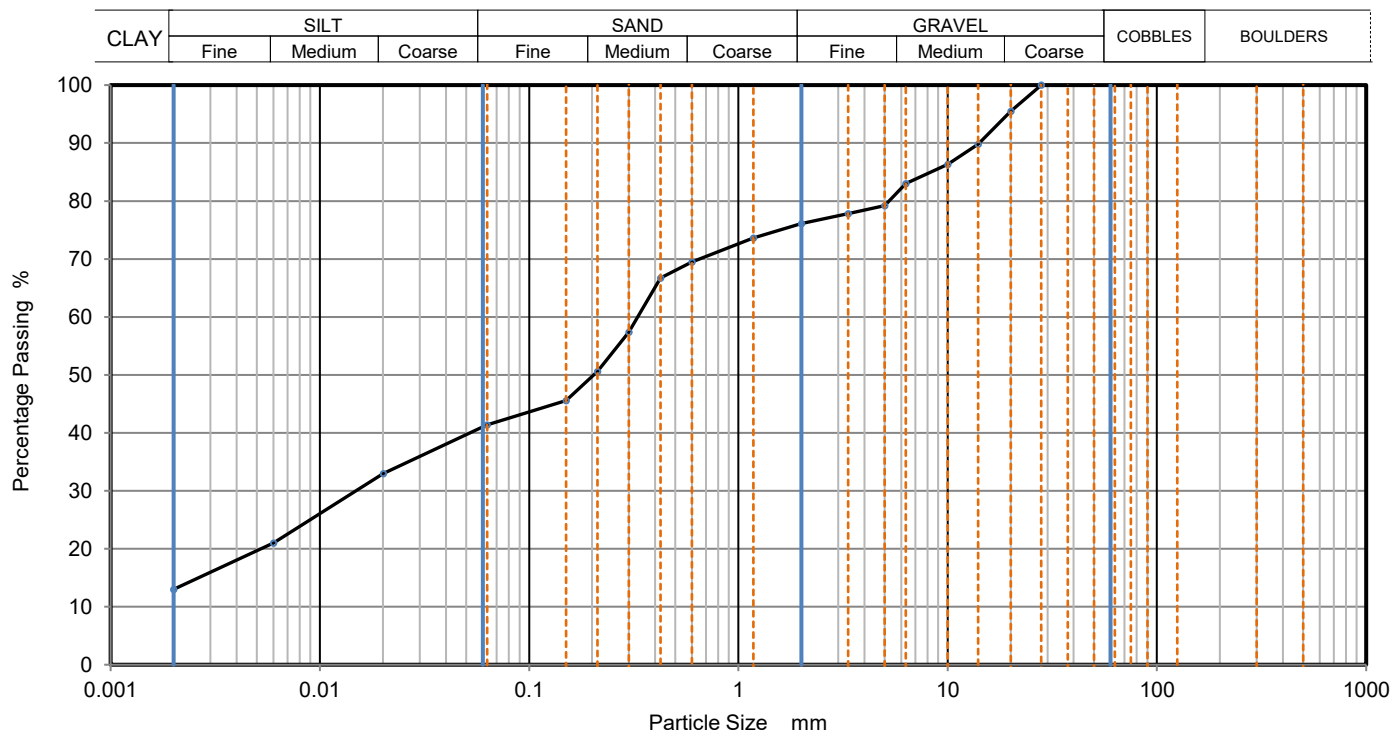
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DETERMINATION OF PARTICLE SIZE DISTRIBUTION

Borehole / Trial Pit	Depth (m)	Sample	Testing Type	Description
ARP-BH112	4.00	B9	Wet Sieve + Pipette	Brown slightly clayey, gravelly, silty SAND



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
		0.0201	33
		0.0060	21
		0.0020	13
28	100		
20	96		
14	90		
10	86		
6.3	83		
5	79		
3.35	78		
2	76		
1.18	74	Particle density (assumed) 2.65 Mg/m3	
0.6	70		
0.425	67		
0.3	57		
0.212	51		
0.15	46		
0.063	41		

Dry Mass of sample, g

1274

Sample Proportions	% dry mass
Very coarse	0
Gravel	24
Sand	35
Silt	29
Clay	13

Grading Analysis		
D100	mm	28
D60	mm	0.331
D30	mm	0.0148
D10	mm	
Uniformity Coefficient		
Curvature Coefficient		

Remarks

Preparation and testing in accordance with BS1377 unless noted below

Method of Preparation: BS 1377:Part 1:1990, clause 7.3 Initial preparation
BS 1377:Part 1:1990, clause 7.4.5 Preparation of particle size tests

Method of Test: BS1377:Part 2:1990, clause 9.2 Determination of particle size distribution by wet sieving method
BS1377:Part 2:1990, clause 9.4 Determination of sedimentation by pipette method





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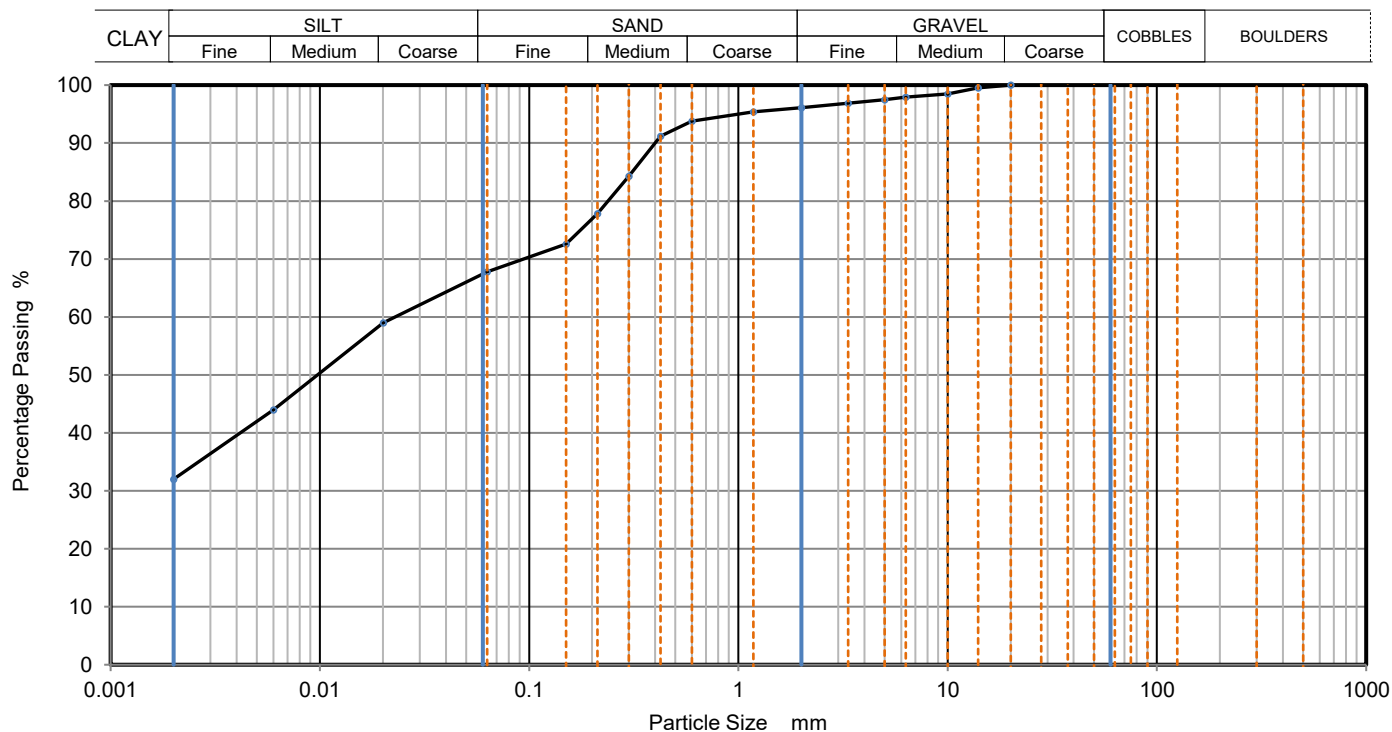
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DETERMINATION OF PARTICLE SIZE DISTRIBUTION

Borehole / Trial Pit	Depth (m)	Sample	Testing Type	Description
ARP-BH112	8.50	B23	Wet Sieve + Pipette	Grey slightly gravelly, sandy, clayey SILT



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
		0.0201	59
		0.0060	44
		0.0020	32
20	100		
14	100		
10	99		
6.3	98		
5	98		
3.35	97		
2	96		
1.18	95	Particle density (assumed) 2.65 Mg/m ³	
0.6	94		
0.425	91		
0.3	84		
0.212	78		
0.15	73		
0.063	68		

Dry Mass of sample, g

1195

Sample Proportions	% dry mass
Very coarse	0
Gravel	4
Sand	28
Silt	36
Clay	32

Grading Analysis		
D100	mm	20
D60	mm	0.0219
D30	mm	
D10	mm	
Uniformity Coefficient		
Curvature Coefficient		

Remarks

Preparation and testing in accordance with BS1377 unless noted below

Method of Preparation: BS 1377:Part 1:1990, clause 7.3 Initial preparation
BS 1377:Part 1:1990, clause 7.4.5 Preparation of particle size tests

Method of Test: BS1377:Part 2:1990, clause 9.2 Determination of particle size distribution by wet sieving method
BS1377:Part 2:1990, clause 9.4 Determination of sedimentation by pipette method





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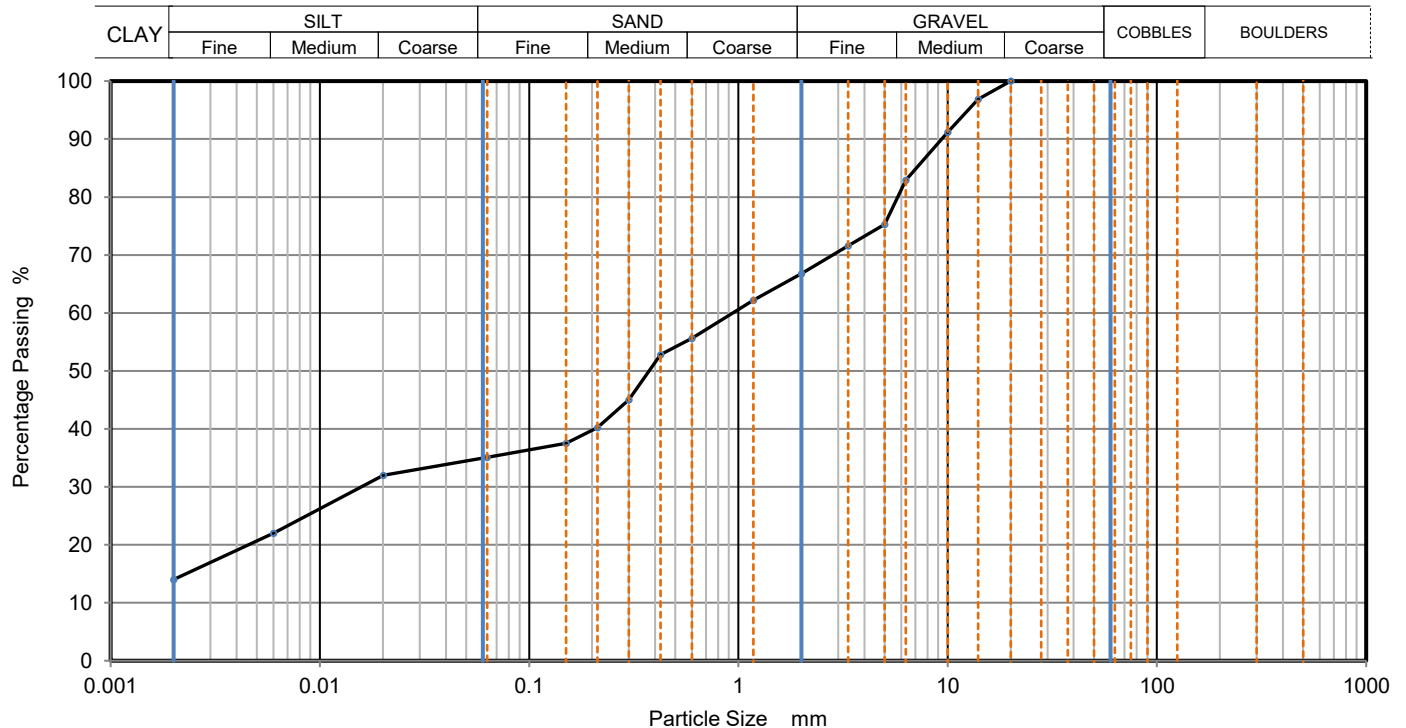
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DETERMINATION OF PARTICLE SIZE DISTRIBUTION

Borehole / Trial Pit	Depth (m)	Sample	Testing Type	Description
ARP-WS101	0.00	B1	Wet Sieve + Pipette	Brown clayey, silty SAND/GRAVEL



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
		0.0201	32
		0.0060	22
		0.0020	14
20	100		
14	97		
10	91		
6.3	83		
5	75		
3.35	72		
2	67		
1.18	62	Particle density (assumed) 2.65 Mg/m3	
0.6	56		
0.425	53		
0.3	45		
0.212	40		
0.15	38		
0.063	35		

Dry Mass of sample, g

592

Sample Proportions	% dry mass
Very coarse	0
Gravel	33
Sand	32
Silt	21
Clay	14

Grading Analysis		
D100	mm	20
D60	mm	0.939
D30	mm	0.0155
D10	mm	
Uniformity Coefficient		
Curvature Coefficient		

Remarks

Preparation and testing in accordance with BS1377 unless noted below

Method of Preparation: BS 1377:Part 1:1990, clause 7.3 Initial preparation
BS 1377:Part 1:1990, clause 7.4.5 Preparation of particle size tests

Method of Test: BS1377:Part 2:1990, clause 9.2 Determination of particle size distribution by wet sieving method
BS1377:Part 2:1990, clause 9.4 Determination of sedimentation by pipette method





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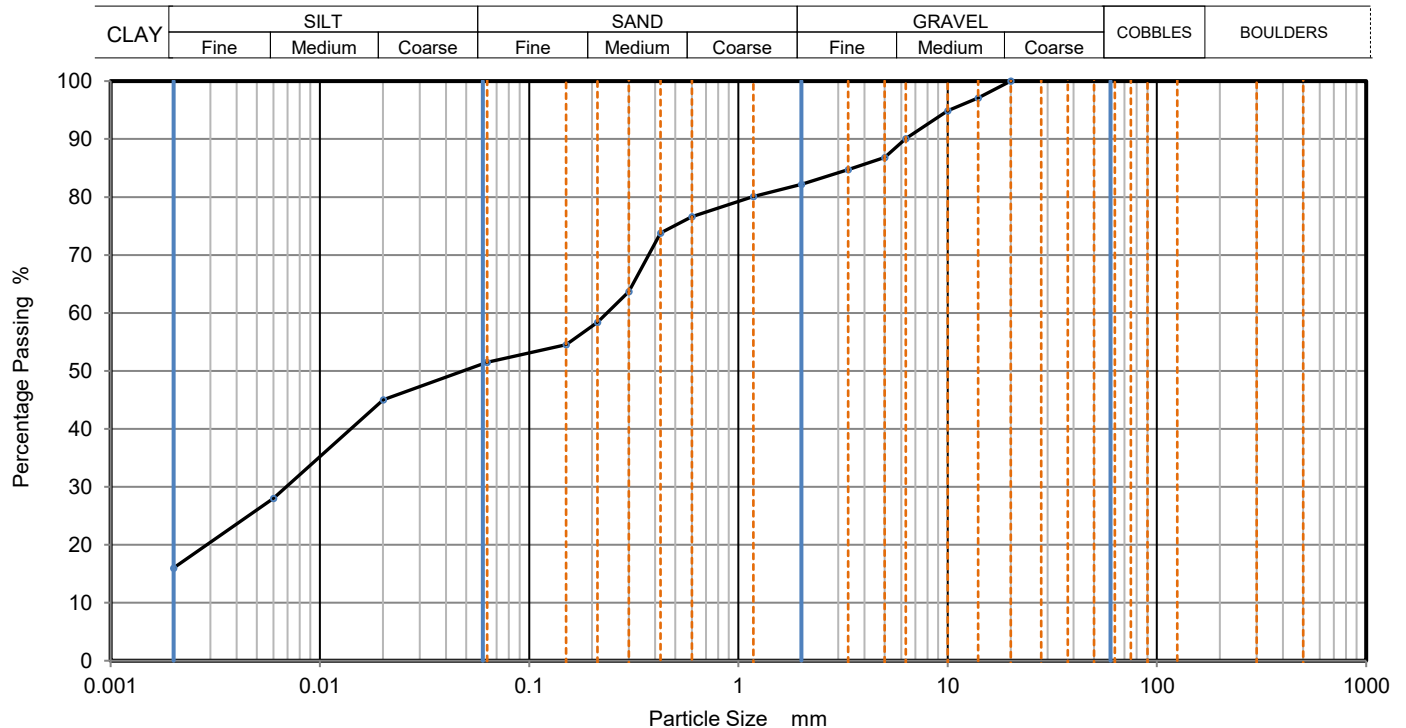
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DETERMINATION OF PARTICLE SIZE DISTRIBUTION

Borehole / Trial Pit	Depth (m)	Sample	Testing Type	Description
ARP-WS101	1.20	B4	Wet Sieve + Pipette	Brown clayey, gravelly, sandy SILT



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
		0.0201	45
		0.0060	28
		0.0020	16
20	100		
14	97		
10	95		
6.3	90		
5	87		
3.35	85		
2	82		
1.18	80	Particle density (assumed) 2.65 Mg/m3	
0.6	77		
0.425	74		
0.3	64		
0.212	58		
0.15	55		
0.063	52		

Dry Mass of sample, g

411

Sample Proportions	% dry mass
Very coarse	0
Gravel	18
Sand	31
Silt	36
Clay	16

Grading Analysis		
D100	mm	20
D60	mm	0.236
D30	mm	0.00673
D10	mm	
Uniformity Coefficient		
Curvature Coefficient		

Remarks

Preparation and testing in accordance with BS1377 unless noted below

Method of Preparation: BS 1377:Part 1:1990, clause 7.3 Initial preparation
BS 1377:Part 1:1990, clause 7.4.5 Preparation of particle size tests

Method of Test: BS1377:Part 2:1990, clause 9.2 Determination of particle size distribution by wet sieving method
BS1377:Part 2:1990, clause 9.4 Determination of sedimentation by pipette method





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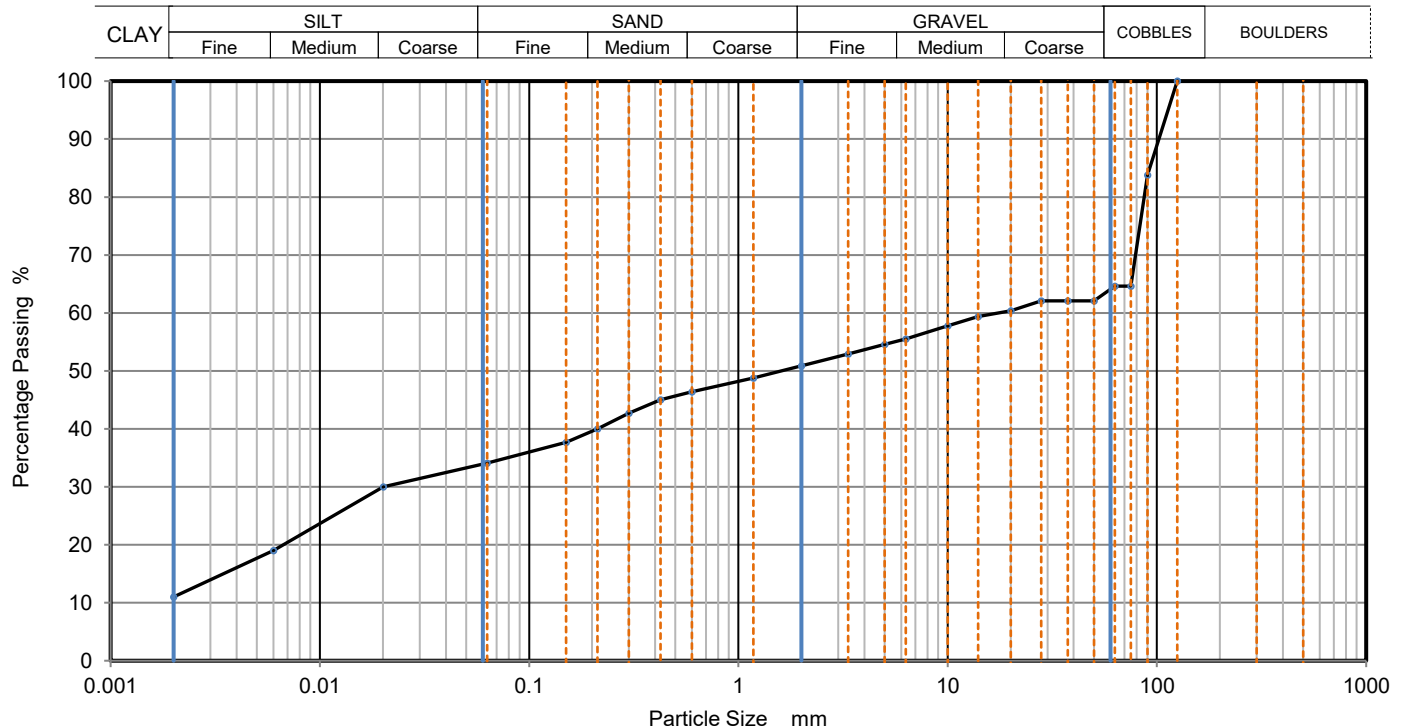
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DETERMINATION OF PARTICLE SIZE DISTRIBUTION

Borehole / Trial Pit	Depth (m)	Sample	Testing Type	Description
ARP-WS102	0.00	B1	Wet Sieve + Pipette	Black clayey, sandy, silty GRAVEL (PEAT)



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
		0.0201	30
		0.0060	19
125	100	0.0020	11
90	84		
75	65		
63	65		
50	62		
37.5	62		
28	62		
20	60		
14	59		
10	58		
6.3	56		
5	55		
3.35	53		
2	51	Particle density (assumed) 2.65 Mg/m ³	
1.18	49		
0.6	46		
0.425	45		
0.3	43		
0.212	40		
0.15	38		
0.063	34		

Dry Mass of sample, g

4820

Sample Proportions	% dry mass
Very coarse	35
Gravel	14
Sand	17
Silt	23
Clay	11

Grading Analysis		
D100	mm	125
D60	mm	17.4
D30	mm	0.021
D10	mm	
Uniformity Coefficient		
Curvature Coefficient		

Remarks

Preparation and testing in accordance with BS1377 unless noted below

Method of Preparation: BS 1377:Part 1:1990, clause 7.3 Initial preparation
BS 1377:Part 1:1990, clause 7.4.5 Preparation of particle size tests

Method of Test: BS1377:Part 2:1990, clause 9.2 Determination of particle size distribution by wet sieving method
BS1377:Part 2:1990, clause 9.4 Determination of sedimentation by pipette method





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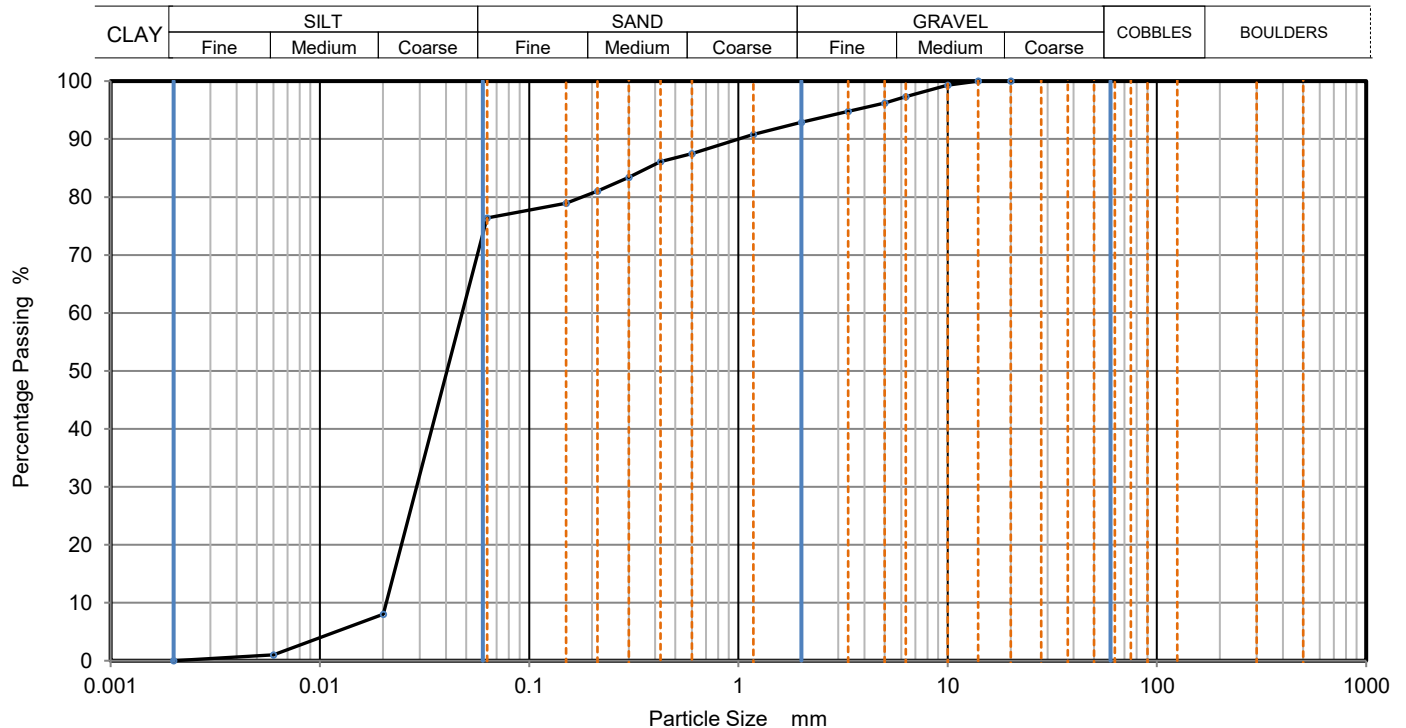
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DETERMINATION OF PARTICLE SIZE DISTRIBUTION

Borehole / Trial Pit	Depth (m)	Sample	Testing Type	Description
ARP-WS102	5.00	D	Wet Sieve + Pipette	Black slightly gravelly, sandy SILT (PEAT)



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
		0.0201	8
		0.0060	1
		0.0020	0
20	100		
14	100		
10	99		
6.3	97		
5	96		
3.35	95		
2	93		
1.18	91	Particle density (assumed) 2.65 Mg/m3	
0.6	88		
0.425	86		
0.3	83		
0.212	81		
0.15	79		
0.063	76		

Dry Mass of sample, g

418

Sample Proportions	% dry mass
Very coarse	0
Gravel	7
Sand	17
Silt	76
Clay	0

Grading Analysis		
D100	mm	14
D60	mm	0.048
D30	mm	0.0291
D10	mm	0.0209
Uniformity Coefficient		2.3
Curvature Coefficient		0.85

Remarks

Preparation and testing in accordance with BS1377 unless noted below

Method of Preparation: BS 1377:Part 1:1990, clause 7.3 Initial preparation
BS 1377:Part 1:1990, clause 7.4.5 Preparation of particle size tests

Method of Test: BS1377:Part 2:1990, clause 9.2 Determination of particle size distribution by wet sieving method
BS1377:Part 2:1990, clause 9.4 Determination of sedimentation by pipette method





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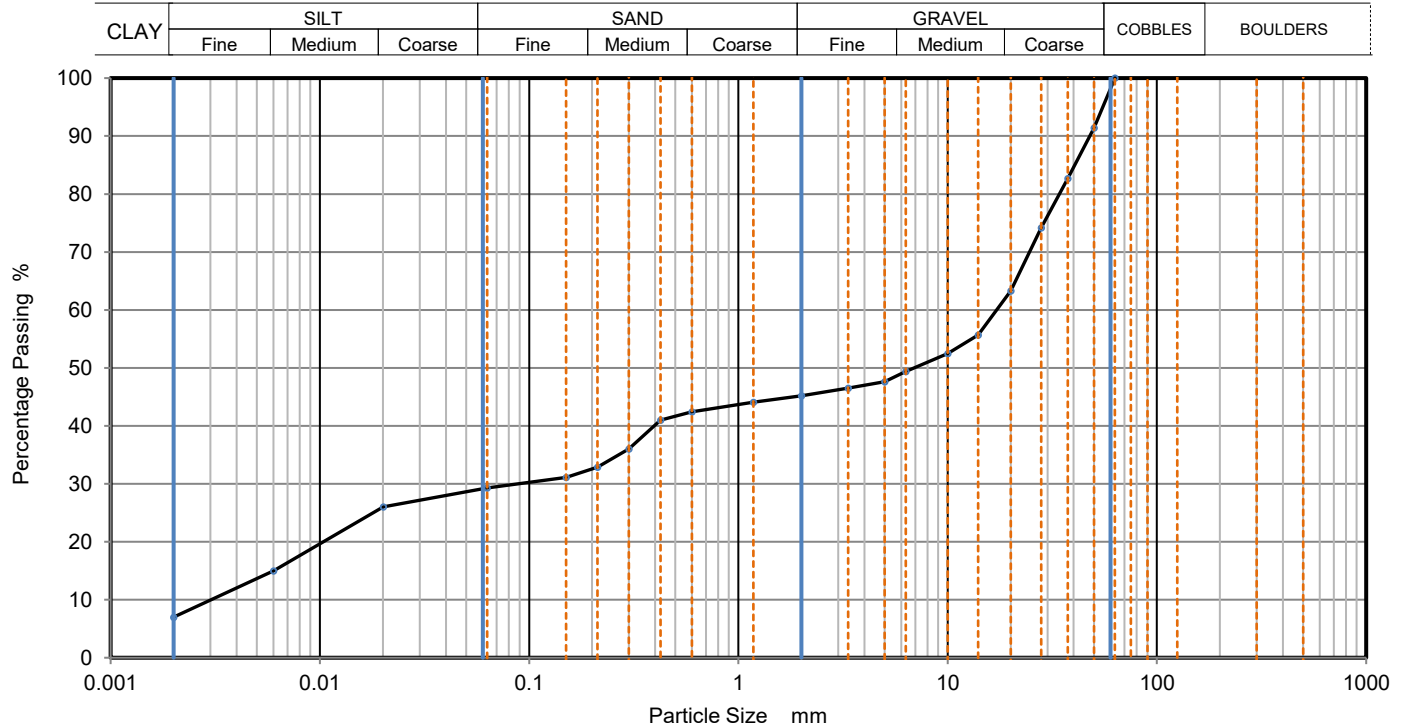
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DETERMINATION OF PARTICLE SIZE DISTRIBUTION

Borehole / Trial Pit	Depth (m)	Sample	Testing Type	Description
ARP-WS103	0.00	B1	Wet Sieve + Pipette	Brown slightly clayey, sandy, silty GRAVEL



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
		0.0201	26
		0.0060	15
		0.0020	7
63	100		
50	91		
37.5	83		
28	74		
20	63		
14	56		
10	53		
6.3	49		
5	48		
3.35	47		
2	45		
1.18	44	Particle density (assumed) 2.65 Mg/m ³	
0.6	42		
0.425	41		
0.3	36		
0.212	33		
0.15	31		
0.063	29		

Dry Mass of sample, g

1739

Sample Proportions	% dry mass
Very coarse	0
Gravel	55
Sand	16
Silt	22
Clay	7

Grading Analysis		
D100	mm	63
D60	mm	17.1
D30	mm	0.087
D10	mm	0.00285
Uniformity Coefficient		6000
Curvature Coefficient		0.15

Remarks

Preparation and testing in accordance with BS1377 unless noted below

Method of Preparation: BS 1377:Part 1:1990, clause 7.3 Initial preparation
BS 1377:Part 1:1990, clause 7.4.5 Preparation of particle size tests

Method of Test: BS1377:Part 2:1990, clause 9.2 Determination of particle size distribution by wet sieving method
BS1377:Part 2:1990, clause 9.4 Determination of sedimentation by pipette method





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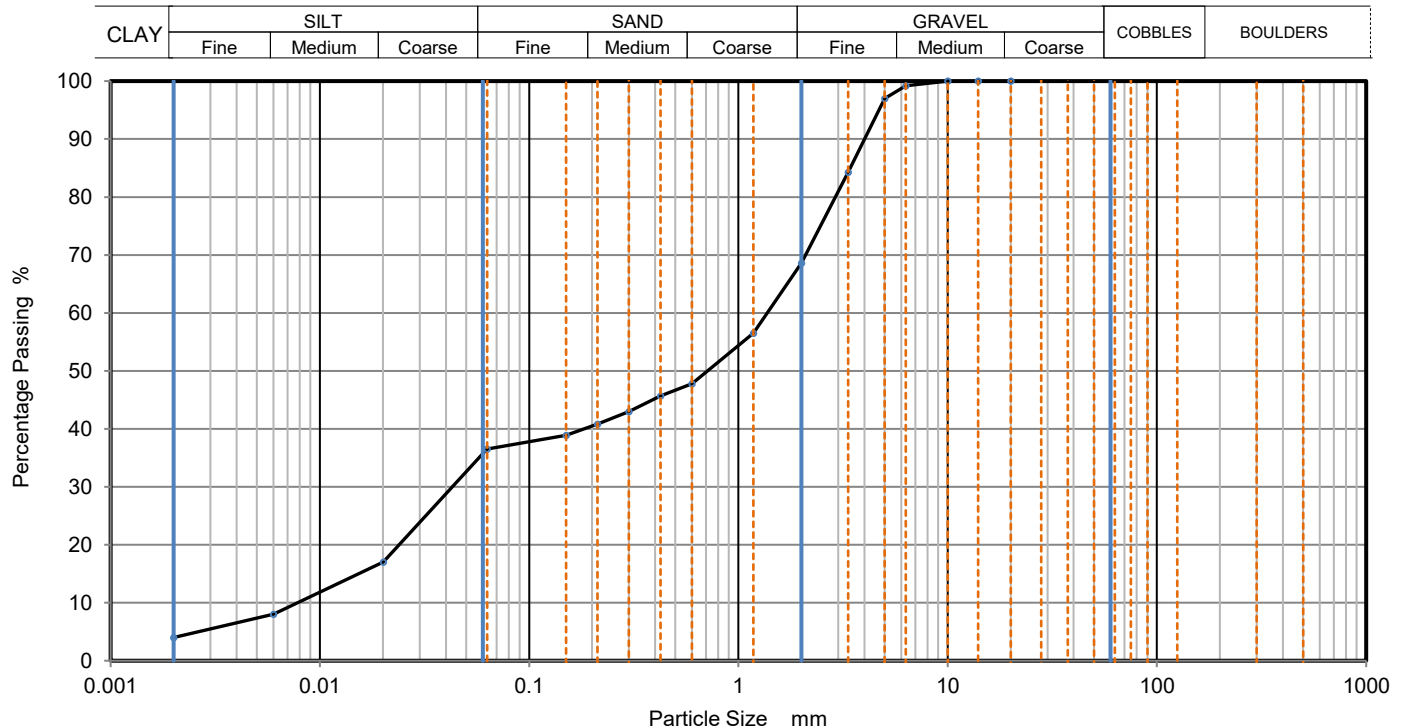
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DETERMINATION OF PARTICLE SIZE DISTRIBUTION

Borehole / Trial Pit	Depth (m)	Sample	Testing Type	Description
ARP-WS103	5.40	D16	Wet Sieve + Pipette	Black slightly clayey GRAVEL/SILT/SAND (PEAT)



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
		0.0201	17
		0.0060	8
		0.0020	4
20	100		
14	100		
10	100		
6.3	99		
5	97		
3.35	84		
2	69		
1.18	57	Particle density (assumed) 2.65 Mg/m3	
0.6	48		
0.425	46		
0.3	43		
0.212	41		
0.15	39		
0.063	37		

Dry Mass of sample, g

37

Sample Proportions	% dry mass
Very coarse	0
Gravel	31
Sand	32
Silt	32
Clay	4

Grading Analysis		
D100	mm	10
D60	mm	1.37
D30	mm	0.0434
D10	mm	0.00823
Uniformity Coefficient		170
Curvature Coefficient		0.17

Remarks

Preparation and testing in accordance with BS1377 unless noted below

Method of Preparation: BS 1377:Part 1:1990, clause 7.3 Initial preparation
BS 1377:Part 1:1990, clause 7.4.5 Preparation of particle size tests

Method of Test: BS1377:Part 2:1990, clause 9.2 Determination of particle size distribution by wet sieving method
BS1377:Part 2:1990, clause 9.4 Determination of sedimentation by pipette method





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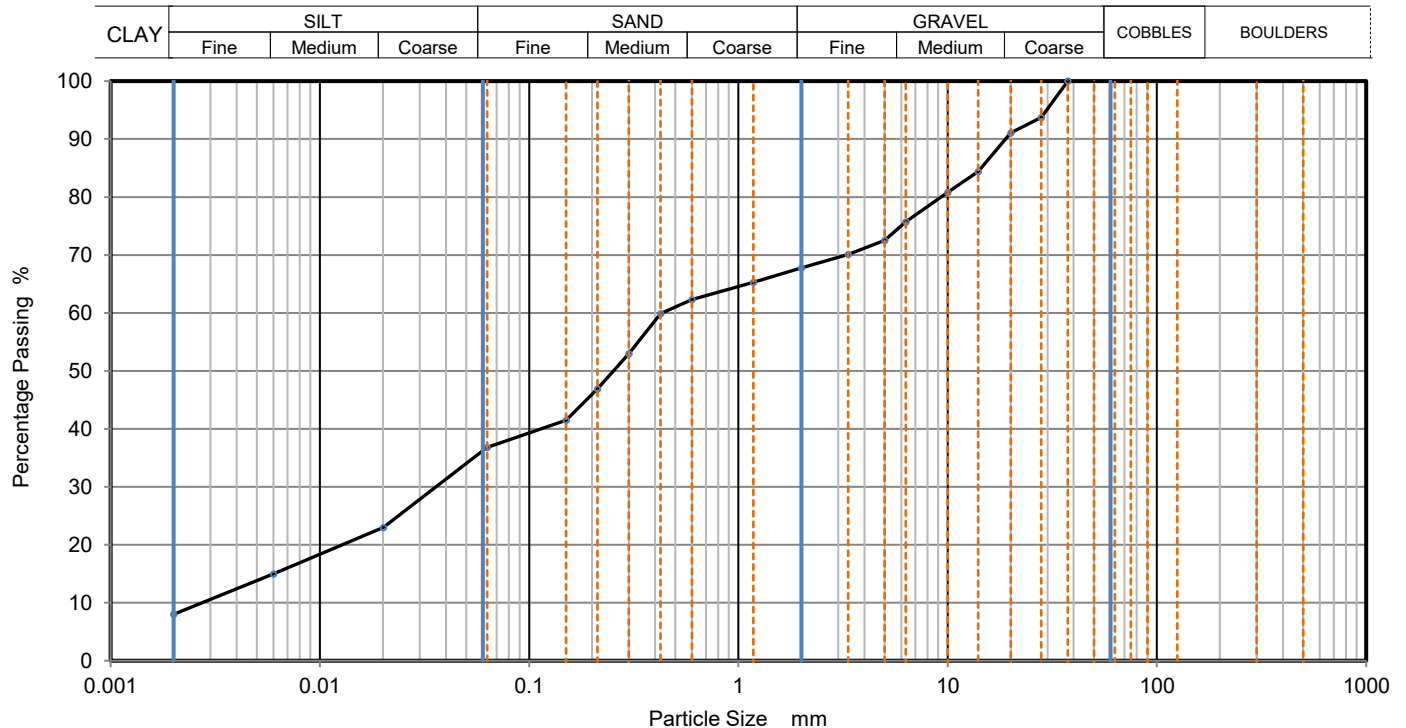
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DETERMINATION OF PARTICLE SIZE DISTRIBUTION

Borehole / Trial Pit	Depth (m)	Sample	Testing Type	Description
ARP-BH107	0.30	B3	Wet Sieve + Pipette	Brown slightly clayey, silty SAND/GRAVEL



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
		0.0201	23
		0.0060	15
		0.0020	8
37.5	100		
28	94		
20	91		
14	84		
10	81		
6.3	76		
5	73		
3.35	70		
2	68		
1.18	65	Particle density (assumed) 2.65 Mg/m ³	
0.6	62		
0.425	60		
0.3	53		
0.212	47		
0.15	42		
0.063	37		

Dry Mass of sample, g

2041

Sample Proportions	% dry mass
Very coarse	0
Gravel	32
Sand	31
Silt	29
Clay	8

Grading Analysis		
D100	mm	37.5
D60	mm	0.431
D30	mm	0.0362
D10	mm	0.00271
Uniformity Coefficient		160
Curvature Coefficient		1.1

Remarks

Preparation and testing in accordance with BS1377 unless noted below

Method of Preparation: BS 1377:Part 1:1990, clause 7.3 Initial preparation
BS 1377:Part 1:1990, clause 7.4.5 Preparation of particle size tests

Method of Test: BS1377:Part 2:1990, clause 9.2 Determination of particle size distribution by wet sieving method
BS1377:Part 2:1990, clause 9.4 Determination of sedimentation by pipette method





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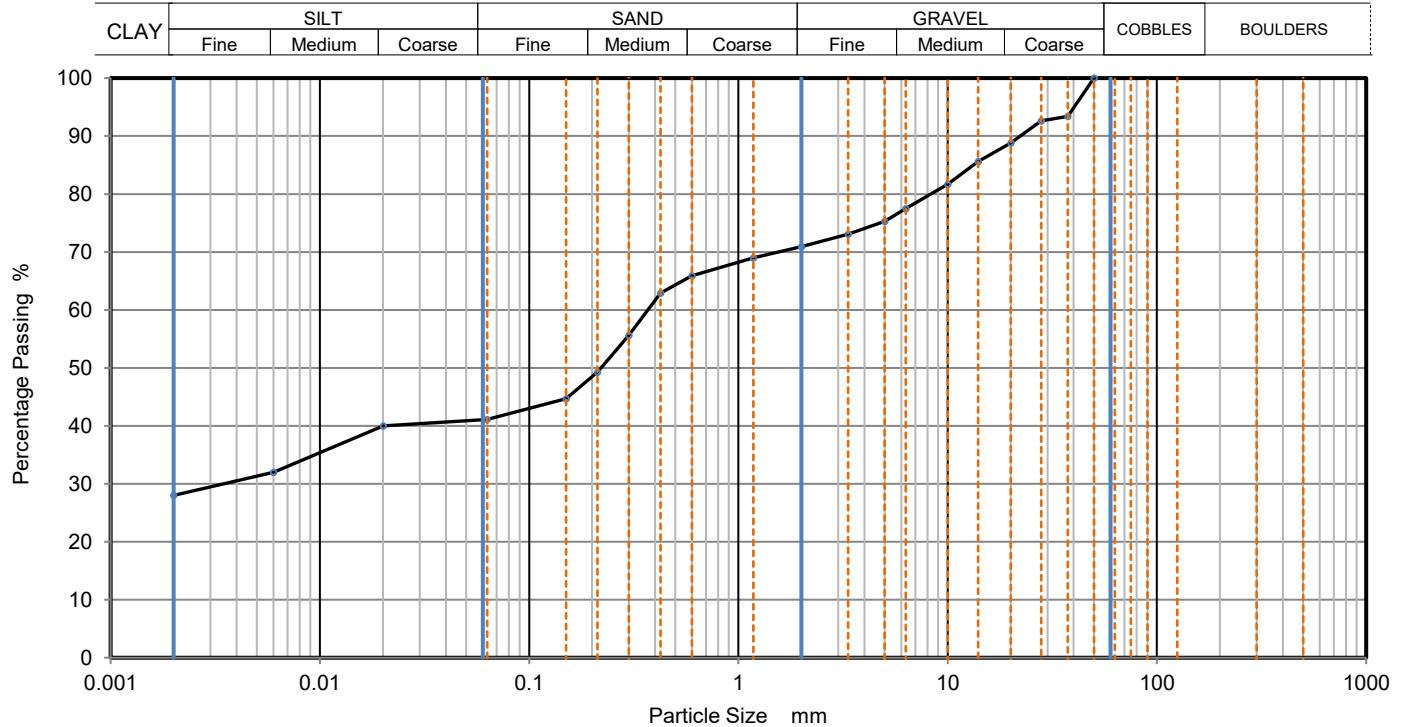
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DETERMINATION OF PARTICLE SIZE DISTRIBUTION

Borehole / Trial Pit	Depth (m)	Sample	Testing Type	Description
ARP-BH107	4.00	B14	Wet Sieve + Pipette	Brown silty CLAY/GRAVEL/SAND



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
		0.0201	40
		0.0060	32
		0.0020	28
50	100		
37.5	93		
28	93		
20	89		
14	86		
10	82		
6.3	78		
5	75		
3.35	73		
2	71		
1.18	69	Particle density (assumed) 2.65 Mg/m ³	
0.6	66		
0.425	63		
0.3	56		
0.212	49		
0.15	45		
0.063	41		

Dry Mass of sample, g

2374

Sample Proportions	% dry mass
Very coarse	0
Gravel	29
Sand	30
Silt	13
Clay	28

Grading Analysis		
D100	mm	50
D60	mm	0.37
D30	mm	0.00349
D10	mm	
Uniformity Coefficient		
Curvature Coefficient		

Remarks

Preparation and testing in accordance with BS1377 unless noted below

Method of Preparation: BS 1377:Part 1:1990, clause 7.3 Initial preparation
BS 1377:Part 1:1990, clause 7.4.5 Preparation of particle size tests

Method of Test: BS1377:Part 2:1990, clause 9.2 Determination of particle size distribution by wet sieving method
BS1377:Part 2:1990, clause 9.4 Determination of sedimentation by pipette method





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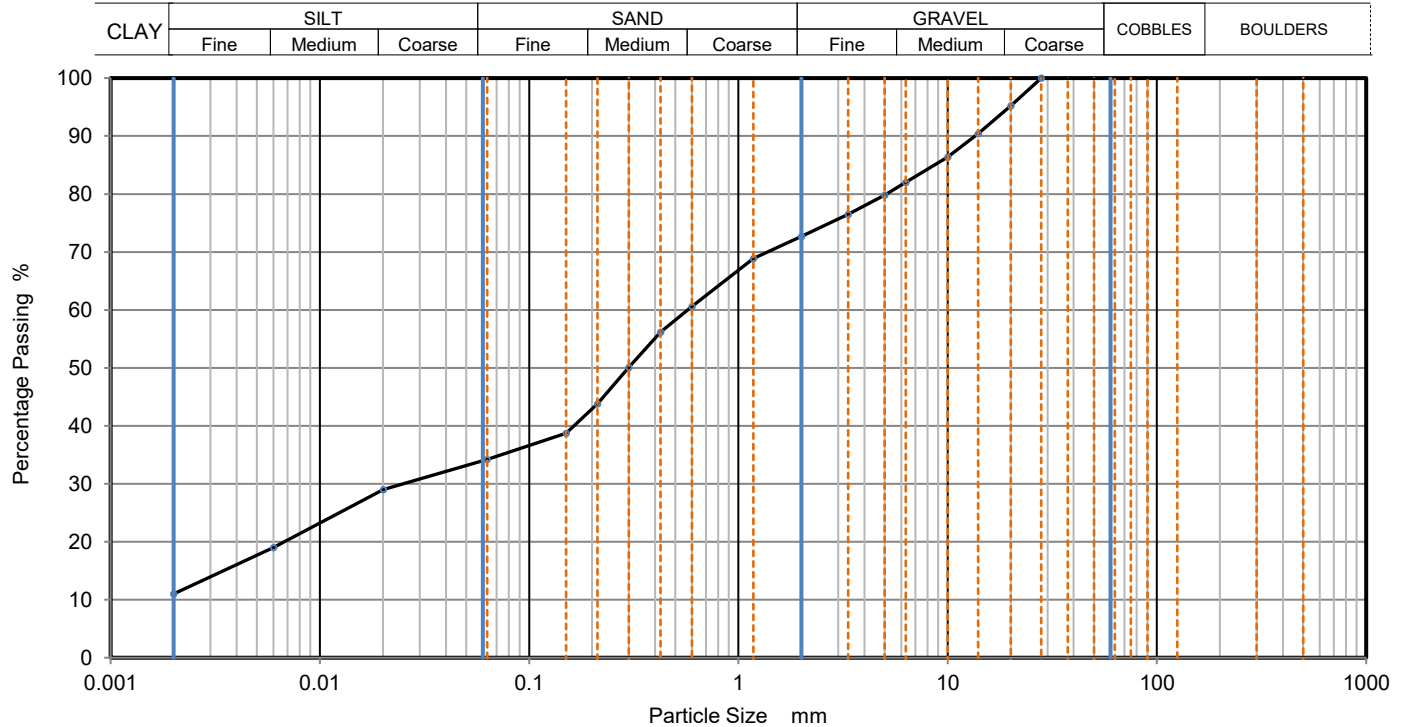
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DETERMINATION OF PARTICLE SIZE DISTRIBUTION

Borehole / Trial Pit	Depth (m)	Sample	Testing Type	Description
ARP-BH107	8.20	B29	Wet Sieve + Pipette	Black clayey, silty, gravelly, organic SAND



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
		0.0201	29
		0.0060	19
		0.0020	11
28	100		
20	95		
14	90		
10	86		
6.3	82		
5	80		
3.35	77		
2	73		
1.18	69	Particle density (assumed) 2.65 Mg/m ³	
0.6	61		
0.425	56		
0.3	50		
0.212	44		
0.15	39		
0.063	34		

Dry Mass of sample, g

659

Sample Proportions	% dry mass
Very coarse	0
Gravel	27
Sand	39
Silt	23
Clay	11

Grading Analysis		
D100	mm	28
D60	mm	0.573
D30	mm	0.023
D10	mm	
Uniformity Coefficient		
Curvature Coefficient		

Remarks

Preparation and testing in accordance with BS1377 unless noted below

Method of Preparation: BS 1377:Part 1:1990, clause 7.3 Initial preparation
BS 1377:Part 1:1990, clause 7.4.5 Preparation of particle size tests

Method of Test: BS1377:Part 2:1990, clause 9.2 Determination of particle size distribution by wet sieving method
BS1377:Part 2:1990, clause 9.4 Determination of sedimentation by pipette method



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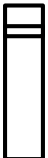
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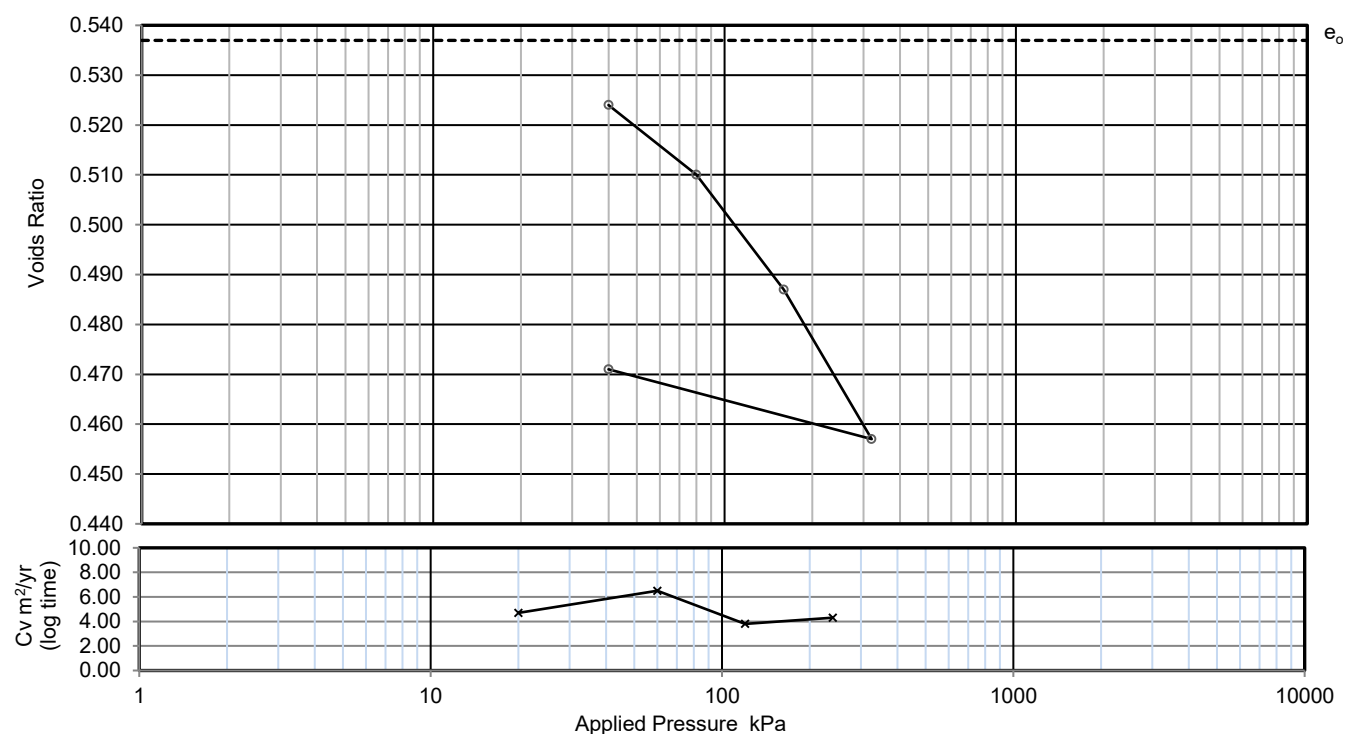
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DETERMINATION OF THE ONE-DIMENSIONAL CONSOLIDATION PROPERTIES

Borehole / Trial Pit	Depth (m)	Sample	Description
ARP-BH102	16.50	UT38	Brown silty, gravelly CLAY

Initial Specimen		Length of Sample (mm)	425.00
		Depth from top of specimen (mm)	75.00
		Condition of Sample:	Undisturbed
		Orientation:	Vertical
		Diameter (mm)	75.02
		Particle density (Mg/m³)	2.65 assumed
		Swelling Pressure (kPa)	
		Lab Temp. (°C)	20.8



Applied Pressure kPa	M_v m ² /MN	C_v ($t_{50, \log}$) m ² /yr	C_v ($t_{90, \text{root}}$) m ² /yr	C_{sec}	Voids ratio
0	-	-	-	-	0.537
40	0.21	4.7	23	0.00035	0.524
80	0.23	6.5	17	0.0012	0.510
160	0.19	3.8	41	0.00093	0.487
320	0.13	4.3	25	0.0013	0.457
40	0.032				0.471

	Initial	Final
Height (mm)	19.01	18.19
Water Content (%)	19.0	18.6
Bulk density (Mg/m ³)	2.05	2.14
Dry density (Mg/m ³)	1.72	1.80
Voids Ratio	0.537	0.471
Degree of Saturation (%)	94	105

Method of Preparation: BS 1377:Part 5:1990, clause 3.3 Preparation of specimen
BS 1377:Part 5:1990, clause 3.4 Preparation and assembly of apparatus

Method of Test: BS 1377:Part 5:1990, clause 3.5 Determination of the one-dimensional consolidation properties

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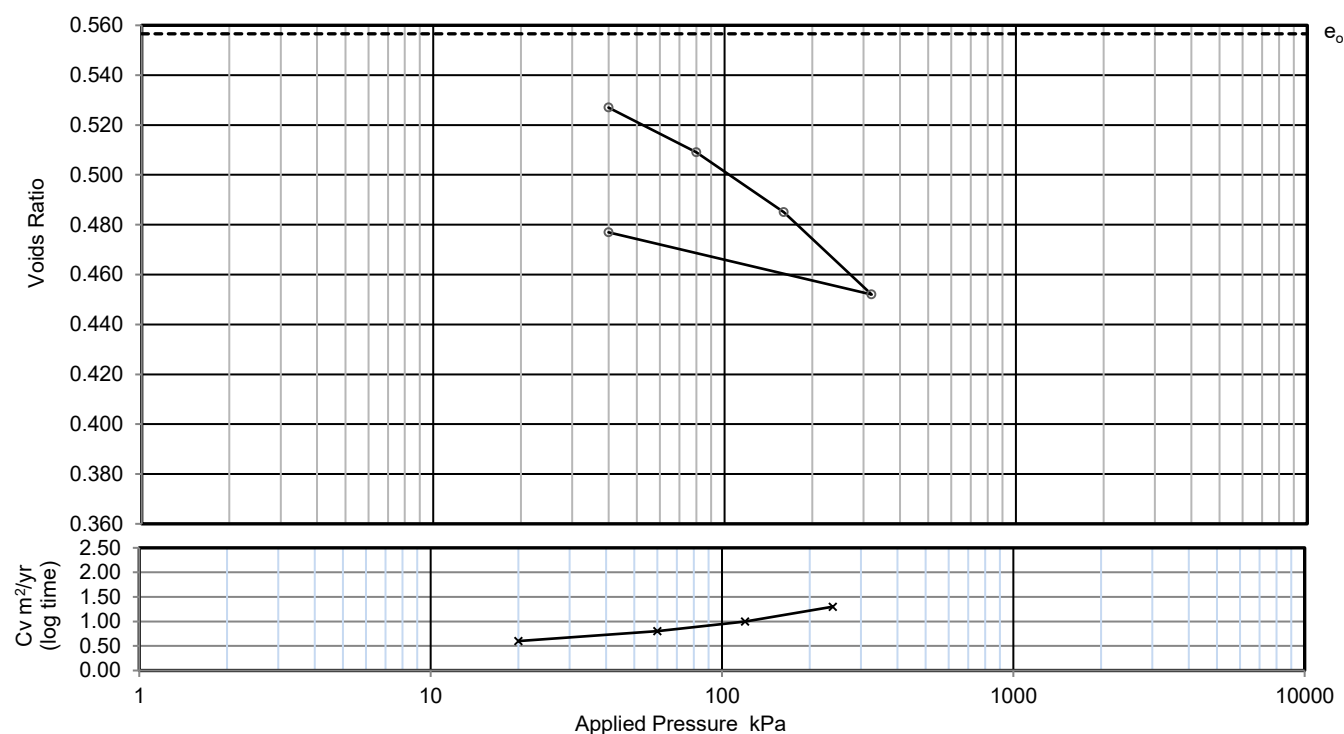
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DETERMINATION OF THE ONE-DIMENSIONAL CONSOLIDATION PROPERTIES

Borehole / Trial Pit	Depth (m)	Sample	Description
ARP-BH102	18.50	UT43	Brown gravelly CLAY

Initial Specimen		Length of Sample (mm)	425.00	Diameter (mm)	75.02
		Depth from top of specimen (mm)	50.00	Particle density (Mg/m ³)	2.65 assumed
		Condition of Sample:	Undisturbed	Swelling Pressure (kPa)	
		Orientation:	Vertical	Lab Temp. (°C)	20.8



Applied Pressure kPa	M_v m ² /MN	C_v ($t_{50, \log}$) m ² /yr	C_v ($t_{90, \text{root}}$) m ² /yr	C_{sec}	Voids ratio
0	-	-	-	-	0.557
40	0.47	0.60	0.41	0.00018	0.527
80	0.30	0.80	1.0	0.00070	0.509
160	0.20	1.0	1.7	0.00076	0.485
320	0.14	1.3	1.9	0.00093	0.452
40	0.062				0.477

	Initial	Final
Height (mm)	19.03	18.06
Water Content (%)	22.2	20.6
Bulk density (Mg/m ³)	2.08	2.16
Dry density (Mg/m ³)	1.70	1.79
Voids Ratio	0.557	0.477
Degree of Saturation (%)	106	114

Method of Preparation: BS 1377:Part 5:1990, clause 3.3 Preparation of specimen
BS 1377:Part 5:1990, clause 3.4 Preparation and assembly of apparatus

Method of Test: BS 1377:Part 5:1990, clause 3.5 Determination of the one-dimensional consolidation properties

Site: Ashton Moss

Job Number: 42171

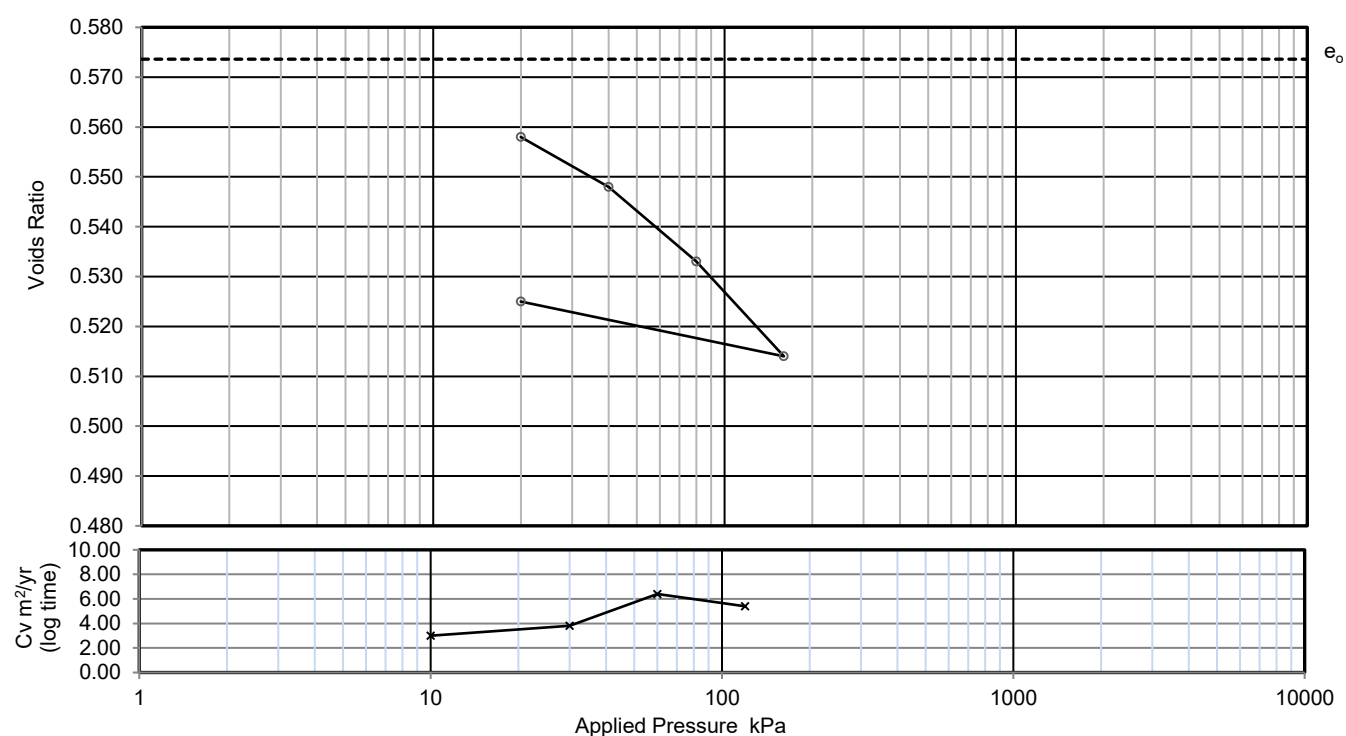
Client: Tameside Metropolitan Council

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DETERMINATION OF THE ONE-DIMENSIONAL CONSOLIDATION PROPERTIES

Borehole / Trial Pit	Depth (m)	Sample	Description
ARP-BH104	8.00	U19	Brown sandy, gravelly CLAY

Initial Specimen		Length of Sample (mm)	300.00
		Depth from top of specimen (mm)	110.00
		Condition of Sample:	Undisturbed
		Orientation:	Vertical
		Diameter (mm)	75.02
		Particle density (Mg/m³)	2.65 assumed
		Swelling Pressure (kPa)	
		Lab Temp. (°C)	20.8



Applied Pressure kPa	M _v m²/MN	C _v (t _{50, log}) m²/yr	C _v (t _{90, root}) m²/yr	C _{sec}	Voids ratio
0	-	-	-	-	0.574
20	0.51	3.0	6.1	0.00037	0.558
40	0.32	3.8	13	0.00049	0.548
80	0.23	6.4	20	0.00085	0.533
160	0.14	5.4	41	0.00068	0.514
20	0.050				0.525

	Initial	Final
Height (mm)	19.04	18.45
Water Content (%)	18.5	18.5
Bulk density (Mg/m³)	2.00	2.06
Dry density (Mg/m³)	1.68	1.74
Voids Ratio	0.574	0.525
Degree of Saturation (%)	85	93

Method of Preparation: BS 1377:Part 5:1990, clause 3.3 Preparation of specimen

BS 1377:Part 5:1990, clause 3.4 Preparation and assembly of apparatus

Method of Test: BS 1377:Part 5:1990, clause 3.5 Determination of the one-dimensional consolidation properties

Site: Ashton Moss

Job Number: 42171

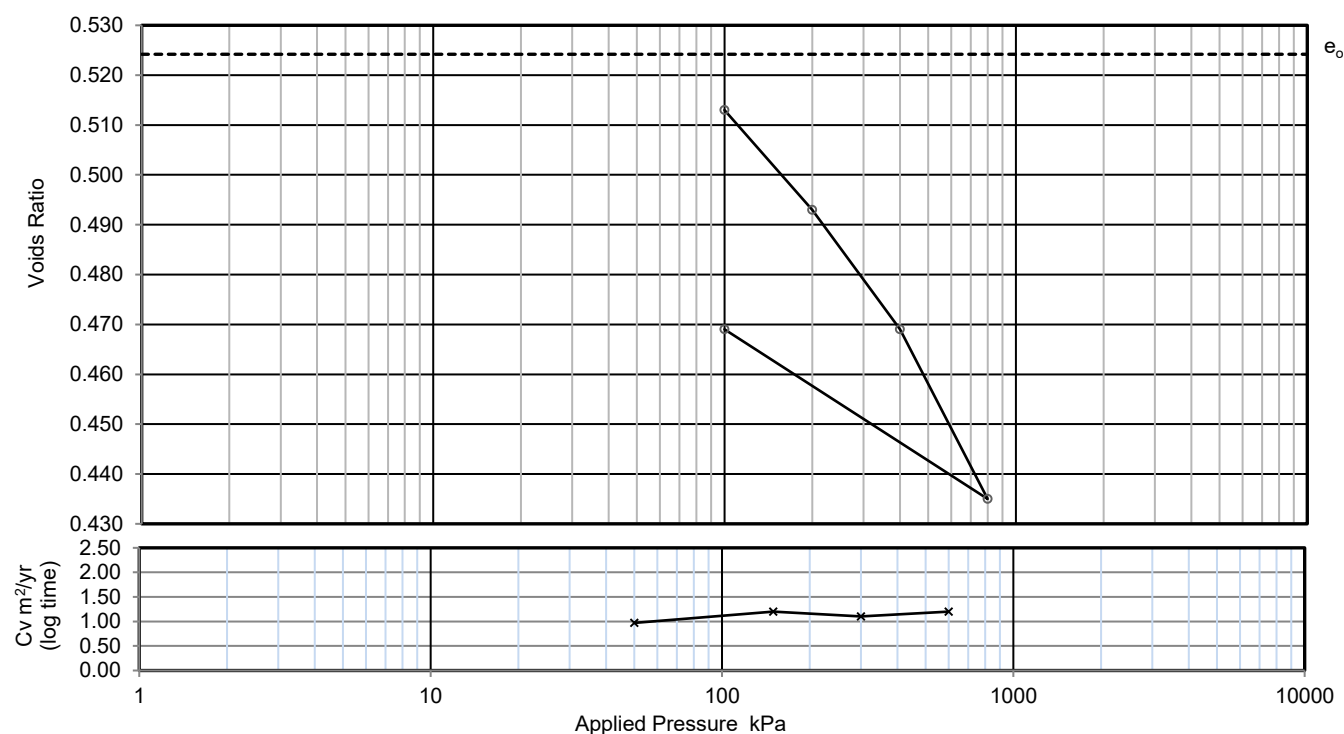
Client: Tameside Metropolitan Council

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DETERMINATION OF THE ONE-DIMENSIONAL CONSOLIDATION PROPERTIES

Borehole / Trial Pit	Depth (m)	Sample	Description
ARP-BH108	19.00	U41	Brown silty CLAY

Initial Specimen		Length of Sample (mm)	350.00	Diameter (mm)	75.05
		Depth from top of specimen (mm)	55.00	Particle density (Mg/m ³)	2.65 assumed
		Condition of Sample:	Undisturbed	Swelling Pressure (kPa)	50
		Orientation:	Vertical	Lab Temp. (°C)	20.8



Applied Pressure kPa	M_v m ² /MN	C_v ($t_{50, \log}$) m ² /yr	C_v ($t_{90, \text{root}}$) m ² /yr	C_{sec}	Voids ratio
50.0	-	-	-	-	0.524
100	0.075	0.97	4.1	0.00019	0.513
200	0.13	1.2	3.2	0.00093	0.493
400	0.083	1.1	2.5	0.00093	0.469
800	0.057	1.2	1.8	0.0014	0.435
100	0.034				0.469

	Initial	Final
Height (mm)	19.02	18.34
Water Content (%)	21.4	20.7
Bulk density (Mg/m ³)	2.11	2.18
Dry density (Mg/m ³)	1.74	1.80
Voids Ratio	0.524	0.469
Degree of Saturation (%)	108	117

Method of Preparation: BS 1377:Part 5:1990, clause 3.3 Preparation of specimen
BS 1377:Part 5:1990, clause 3.4 Preparation and assembly of apparatus

Method of Test: BS 1377:Part 5:1990, clause 4.3 Measurement of swelling pressure
BS 1377:Part 5:1990, clause 3.5 Determination of the one-dimensional consolidation properties

Site: Ashton Moss

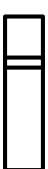
Job Number: 42171

Client: Tameside Metropolitan Council

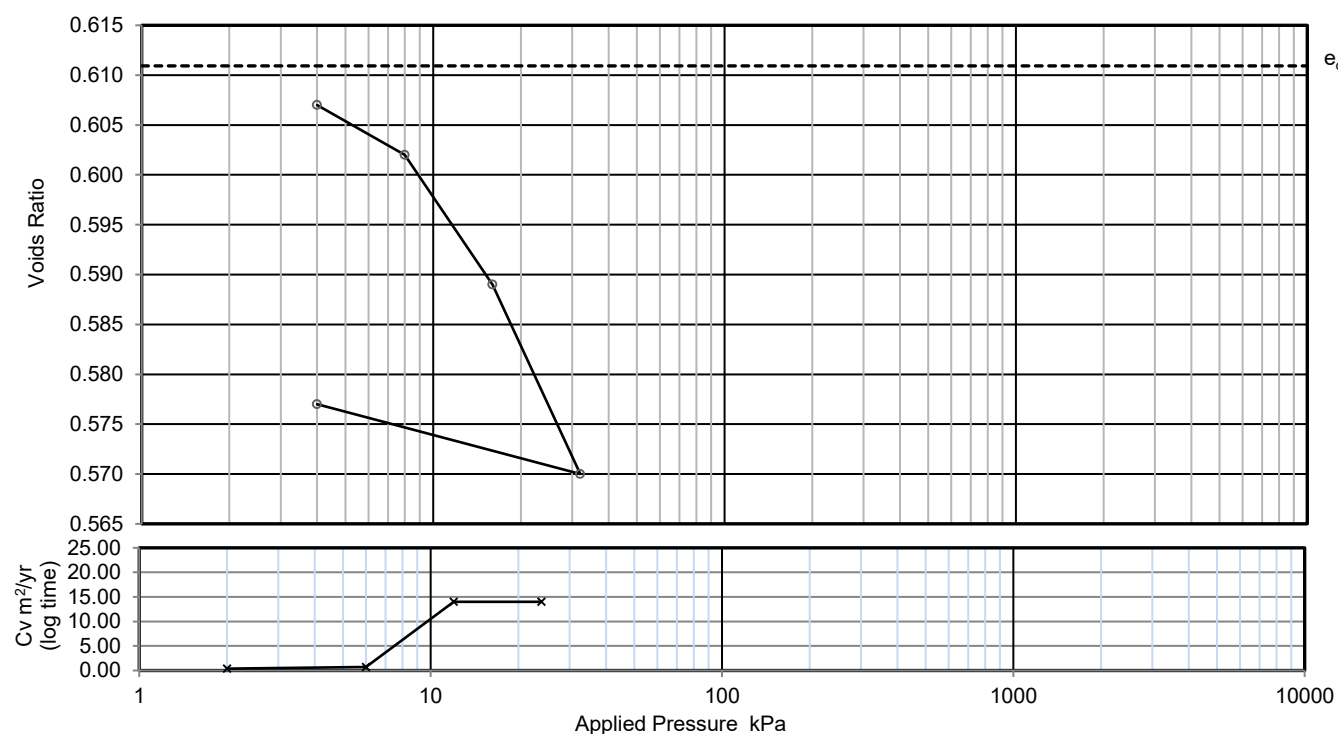
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DETERMINATION OF THE ONE-DIMENSIONAL CONSOLIDATION PROPERTIES

Borehole / Trial Pit	Depth (m)	Sample	Description
ARP-BH111	8.00	U20	Black gravelly, silty, organic CLAY

Initial Specimen		Length of Sample (mm)	440.00
		Depth from top of specimen (mm)	125.00
		Condition of Sample:	Undisturbed
		Orientation:	Vertical

Diameter (mm)	75.03
Particle density (Mg/m³)	2.65 assumed
Swelling Pressure (kPa)	
Lab Temp. (°C)	20.8



Applied Pressure kPa	M _v m ² /MN	C _v (t _{50, log}) m ² /yr	C _v (t _{90, root}) m ² /yr	C _{sec}	Voids ratio
0	-	-	-	-	0.611
4	0.59	0.38	0.15	0.00036	0.607
8	0.91	0.69	6.4	0.00047	0.602
16	0.98	14	12	0.0012	0.589
32	0.74	14	12	0.0019	0.570
4	0.14				0.577

	Initial	Final
Height (mm)	18.99	18.59
Water Content (%)	22.0	20.5
Bulk density (Mg/m ³)	2.01	2.02
Dry density (Mg/m ³)	1.65	1.68
Voids Ratio	0.611	0.577
Degree of Saturation (%)	96	94

Method of Preparation: BS 1377:Part 5:1990, clause 3.3 Preparation of specimen
BS 1377:Part 5:1990, clause 3.4 Preparation and assembly of apparatus

Method of Test: BS 1377:Part 5:1990, clause 3.5 Determination of the one-dimensional consolidation properties

Site: Ashton Moss

Job Number: 42171

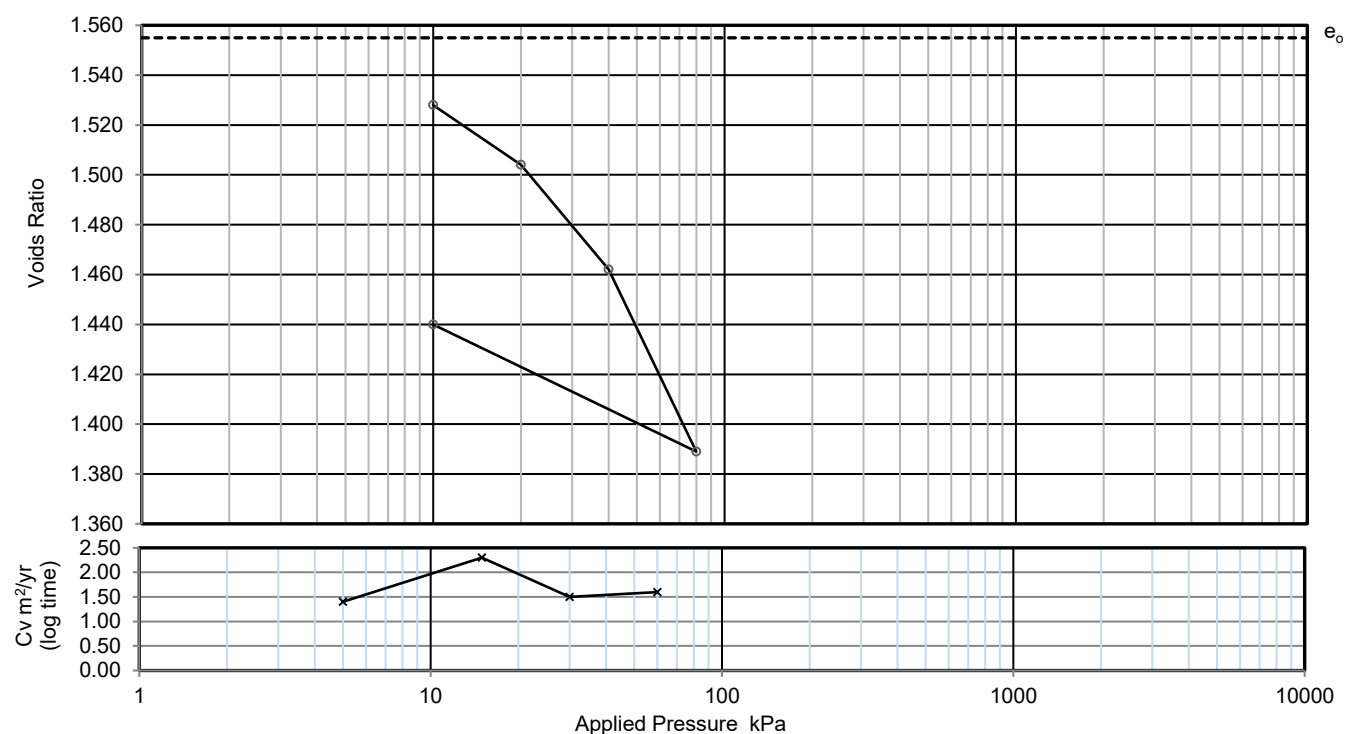
Client: Tameside Metropolitan Council

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DETERMINATION OF THE ONE-DIMENSIONAL CONSOLIDATION PROPERTIES

Borehole / Trial Pit	Depth (m)	Sample	Description
ARP-BH111	9.50	U26	Brown/Black gravelly, peaty CLAY

Initial Specimen		Length of Sample (mm)	440.00	Diameter (mm)	75.02
		Depth from top of specimen (mm)	75.00	Particle density (Mg/m ³)	2.65 assumed
		Condition of Sample:	Undisturbed	Swelling Pressure (kPa)	
		Orientation:	Vertical	Lab Temp. (°C)	20.8



Applied Pressure kPa	M _v m ² /MN	C _v (t ₅₀ , log) m ² /yr	C _v (t ₉₀ , root) m ² /yr	C _{sec}	Voids ratio
0	-	-	-	-	1.555
10	1.0	1.4	27	0.000090	1.528
20	0.97	2.3	2.2	0.0016	1.504
40	0.83	1.5	3.6	0.0024	1.462
80	0.75	1.6	3.5	0.0040	1.389
10	0.31				1.440

	Initial	Final
Height (mm)	18.99	18.14
Water Content (%)	55.9	53.4
Bulk density (Mg/m ³)	1.62	1.67
Dry density (Mg/m ³)	1.04	1.09
Voids Ratio	1.555	1.440
Degree of Saturation (%)	95	98

Method of Preparation: BS 1377:Part 5:1990, clause 3.3 Preparation of specimen
BS 1377:Part 5:1990, clause 3.4 Preparation and assembly of apparatus

Method of Test: BS 1377:Part 5:1990, clause 3.5 Determination of the one-dimensional consolidation properties

Site: Ashton Moss

Job Number: 42171

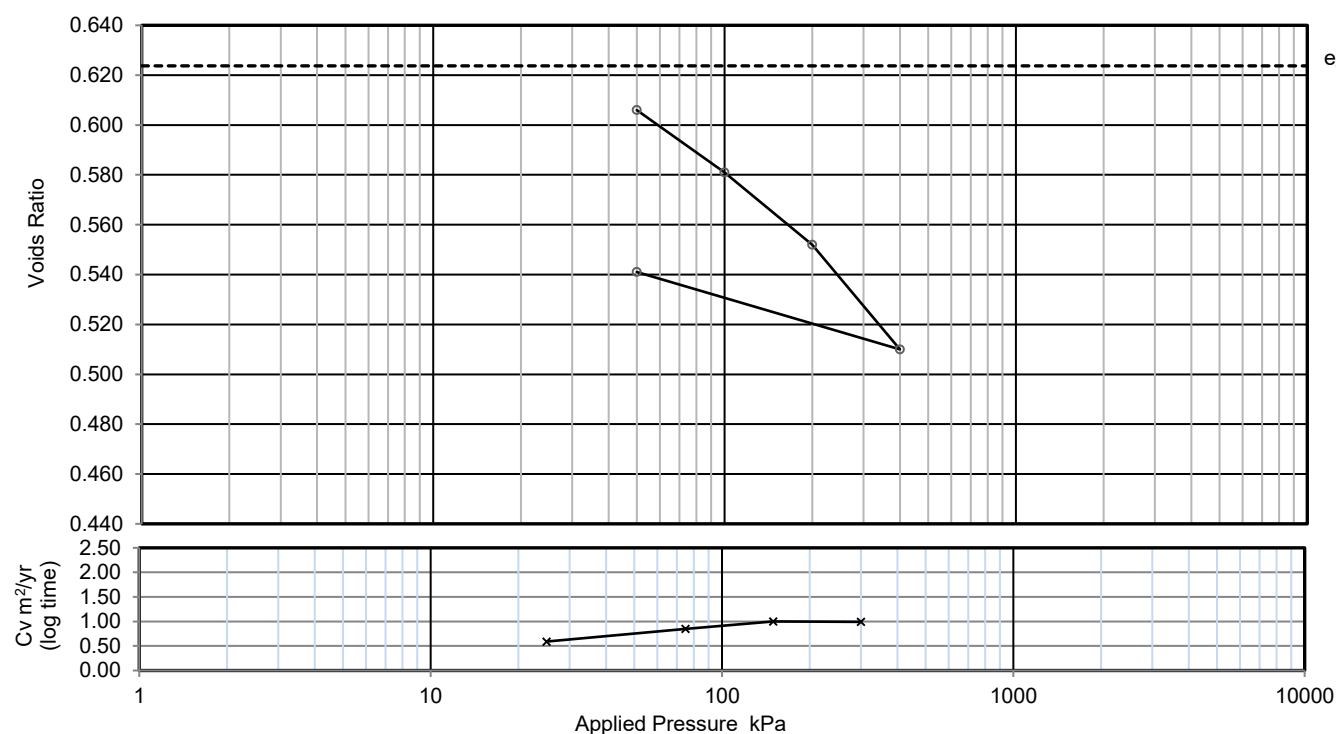
Client: Tameside Metropolitan Council

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DETERMINATION OF THE ONE-DIMENSIONAL CONSOLIDATION PROPERTIES

Borehole / Trial Pit	Depth (m)	Sample	Description
ARP-BH111	12.50	U35	Brown silty CLAY

Initial Specimen		Length of Sample (mm)	300.00	Diameter (mm)	75.03
		Depth from top of specimen (mm)	40.00	Particle density (Mg/m ³)	2.65 assumed
		Condition of Sample:	Undisturbed	Swelling Pressure (kPa)	25
		Orientation:	Vertical	Lab Temp. (°C)	20.8



Applied Pressure kPa	M _v m ² /MN	C _v (t _{50, log}) m ² /yr	C _v (t _{90, root}) m ² /yr	C _{sec}	Voids ratio
25.0	-	-	-	-	0.624
50	0.22	0.59	0.93	0.00019	0.606
100	0.31	0.85	1.4	0.0011	0.581
200	0.19	1.0	1.9	0.0012	0.552
400	0.13	0.99	1.5	0.0014	0.510
50	0.059				0.541

	Initial	Final
Height (mm)	18.98	18.02
Water Content (%)	25.1	23.1
Bulk density (Mg/m ³)	2.04	2.12
Dry density (Mg/m ³)	1.63	1.72
Voids Ratio	0.624	0.541
Degree of Saturation (%)	107	113

Method of Preparation: BS 1377:Part 5:1990, clause 3.3 Preparation of specimen
BS 1377:Part 5:1990, clause 3.4 Preparation and assembly of apparatus

Method of Test: BS 1377:Part 5:1990, clause 4.3 Measurement of swelling pressure
BS 1377:Part 5:1990, clause 3.5 Determination of the one-dimensional consolidation properties



Test Report - 42171 / 3

Site: Ashton Moss

Job Number: 42171

Originating Client: Tameside Metropolitan Council

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Date: 12/06/2018

PARTICLE DENSITY

Borehole / Trial Pit	Depth m	Sample Ref	Sample Type	Description	Particle Density Mg/m ³	Test Method
ARP-BH102	4.00	B8	D	Dark grey organic CLAY with rare gravel.	2.43	2
ARP-BH102	8.00	B18	D	Dark brown sandy silty CLAY with rare fine to medium gravel.	2.61	2
ARP-BH102	13.00	B31	D	Dark grey mottled brown organic CLAY with rare fine gravel.	2.50	2
ARP-BH102	17.00	B40	D	Brown slightly sandy CLAY.	2.71	2
ARP-BH105	5.00	B11	D	Dark brown slightly organic silty CLAY with rare fine to medium gravel.	2.66	2
ARP-BH105	9.50	B19	D	Brown PEAT.	1.43	2
ARP-BH105	13.00	B26	D	Brown silty CLAY.	2.70	2
ARP-BH105	18.00		D	Brown slightly sandy CLAY.	2.67	2
ARP-BH108	4.00	B9	D	Grey brown sandy gravelly slightly organic CLAY.	2.59	2
ARP-BH108	9.00	B20	D	Multicoloured lightly gravelly sandy CLAY.	2.66	2
ARP-BH108	12.00	B27	D	Brown and dark brown slightly organic CLAY with rare fine gravel.	2.62	2
ARP-BH108	16.50	B35	D	Dark brown organic silty CLAY.	2.28	2
ARP-BH108	19.50	D43	D	Brown silty CLAY.	2.68	2
ARP-BH109	5.00	B14	D	Brown organic CLAY with rare fine to medium gravel.	2.60	2
ARP-BH109	13.00	D38	D	Brown silty CLAY.	2.69	2

Notes

Test Method

1. Gas jar : BS1377 : Part 2 : 1990 Clause 8.2

2. Pycnometer : BS EN ISO 17892-3:2015

Checked and Approved by:



07/06/2018

Project Number:

GEO / 27518

Project Name:

**ASHTON MOSS
42171**

Notes	Test Method
	1. Gas jar : BS1377 : Part 2 : 1990 Clause 8.2
	2. Pycnometer : BS EN ISO 17892-3:2015

07/06/2018

Project Name:

ASHTON MOSS
42171



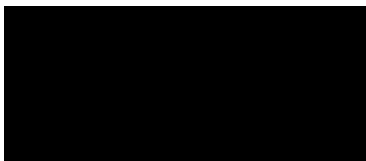
FINAL ANALYTICAL TEST REPORT

Envirolab Job Number: 18/04259
Issue Number: 1
Date: 05 June, 2018

Client: Ian Farmer Associates (Newcastle)
Unit 4, Faraday Close
Pattinson North Industrial Estate
Washington
Tyne and Wear
NE38 8QJ

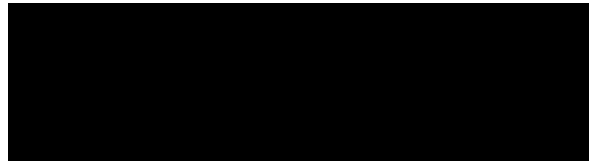
Project Manager: [REDACTED]
Project Name: Ashton Moss
Project Ref: 42171
Order No: 44549
Date Samples Received: 31/05/18
Date Instructions Received: 31/05/18
Date Analysis Completed: 05/06/18

Prepared by:



Laboratory Coordinator

Approved by:



Client Manager

Envirolab Job Number: 18/04259

Client Project Name: Ashton Moss

Client Project Ref: 42171

Lab Sample ID	18/04259/1	18/04259/2	18/04259/3	18/04259/4	18/04259/5	18/04259/6	18/04259/7	18/04259/8	Units	Method ref
Client Sample No	3	14	23	36	43	48	8	18		
Client Sample ID	ARP-BH101	ARP-BH101	ARP-BH101	ARP-BH101	ARP-BH101	ARP-BH101	ARP-BH102	ARP-BH102		
Depth to Top	1.20	5.00	9.00	13.00	16.50	21.00	4.00	8.00		
Depth To Bottom		5.45								
Date Sampled	23-Apr-18	23-Apr-18	23-Apr-18	23-Apr-18	23-Apr-18	23-Apr-18	19-Apr-18	20-Apr-18		
Sample Type	Soil - B	Soil - B	Soil - B	Soil - D	Soil - D	Soil - B	Soil - B	Soil - B		
Sample Matrix Code	3	6B	6AE	3	3	3	2AE	6AE		
% Stones >10mm _A	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	7.8	11.9	% w/w	A-T-044
pH BRE _D ^{M#}	7.52	7.63	7.75	7.67	8.09	8.06	7.31	8.64	pH	A-T-031s
Chloride BRE, SO4 equiv. (water sol 2:1) _D ^{M#}	<7	20	19	<7	<7	<7	40	44	mg/l	A-T-026s
Nitrate BRE, SO4 equiv. (water sol 2:1) _D	2.2	0.5	1.0	3.3	<0.4	<0.4	1.3	6.4	mg/l	A-T-026s
Sulphate BRE (water sol 2:1) _D ^{M#}	20	98	233	30	39	75	226	174	mg/l	A-T-026s
Magnesium BRE (water sol 2:1) _D	17	16	10	9	21	32	30	4	mg/l	A-T-SOLMETs
Loss on ignition (550degC) _D	-	-	-	-	-	-	12.4	6.6	% w/w	A-T-030s

Envirolab Job Number: 18/04259

Client Project Name: Ashton Moss

Client Project Ref: 42171

Lab Sample ID	18/04259/9	18/04259/10	18/04259/11	18/04259/12	18/04259/13	18/04259/14	18/04259/15	18/04259/16	Units	Method ref
Client Sample No	31	40	54	58	1	13	22	1		
Client Sample ID	ARP-BH102	ARP-BH102	ARP-BH102	ARP-BH102	ARP-BH103	ARP-BH103	ARP-BH103	ARP-BH104		
Depth to Top	13.00	17.00	22.50	24.00	0.00	5.00	8.50	0.00		
Depth To Bottom										
Date Sampled	19-Apr-18	17-Apr-18	20-Apr-18	20-Apr-18	17-Apr-18	18-Apr-18	18-Apr-18	13-Apr-18		
Sample Type	Soil - B	Soil - B	Soil - B	Soil - B	Solid	Soil - B	Soil - B	Soil - B		
Sample Matrix Code	6E	6	3	3	7	3	3	4AB		
% Stones >10mm _A	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	14.0	% w/w	A-T-044
pH BRE _D ^{M#}	7.12	7.64	7.88	7.98	8.69	8.02	7.76	8.82	pH	A-T-031s
Chloride BRE, SO4 equiv. (water sol 2:1) _D ^{M#}	24	<7	<7	<7	<7	16	9	41	mg/l	A-T-026s
Nitrate BRE, SO4 equiv. (water sol 2:1) _D	59.3	8.9	2.0	4.1	0.9	12.2	14.0	11.2	mg/l	A-T-026s
Sulphate BRE (water sol 2:1) _D ^{M#}	181	35	28	20	15	76	39	252	mg/l	A-T-026s
Magnesium BRE (water sol 2:1) _D	32	5	18	18	4	12	11	3	mg/l	A-T-SOLMETs
Loss on ignition (550degC) _D	7.1	3.8	-	-	-	-	-	-	% w/w	A-T-030s

Envirolab Job Number: 18/04259

Client Project Name: Ashton Moss

Client Project Ref: 42171

Lab Sample ID	18/04259/17	18/04259/18	18/04259/19	18/04259/20	18/04259/21	18/04259/22	18/04259/23	18/04259/24	Units	Method ref
Client Sample No	9	20	34	38	3	11	19	26		
Client Sample ID	ARP-BH104	ARP-BH104	ARP-BH104	ARP-BH104	ARP-BH105	ARP-BH105	ARP-BH105	ARP-BH105		
Depth to Top	4.00	8.45	12.50	14.95	1.20	5.00	9.50	13.00		
Depth To Bottom		8.50		15.00						
Date Sampled	13-Apr-18	24-Apr-18	16-Apr-18	16-Apr-18	26-May-18	24-Apr-18	24-May-18	25-Apr-18		
Sample Type	Soil - B	Soil - B	Soil - B	Soil - B	Soil - B	Soil - B	Soil - B	Soil - B		
Sample Matrix Code	6B	6A	6	6	6	6E	2E	3		
% Stones >10mm _A	<0.1	8.9	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	% w/w	A-T-044
pH BRE _D ^{M#}	7.95	7.53	7.70	7.99	9.58	7.59	5.45	7.58	pH	A-T-031s
Chloride BRE, SO4 equiv. (water sol 2:1) _D ^{M#}	29	15	13	<7	30	47	113	7	mg/l	A-T-026s
Nitrate BRE, SO4 equiv. (water sol 2:1) _D	1.8	3.5	1.8	20.3	<0.4	0.5	97.9	4.6	mg/l	A-T-026s
Sulphate BRE (water sol 2:1) _D ^{M#}	366	938	34	19	127	431	411	33	mg/l	A-T-026s
Magnesium BRE (water sol 2:1) _D	20	156	11	5	1	41	139	4	mg/l	A-T-SOLMETs
Loss on ignition (550degC) _D	-	13.2	-	-	-	6.6	76.7	4.6	% w/w	A-T-030s

Envirolab Job Number: 18/04259

Client Project Name: Ashton Moss

Client Project Ref: 42171

Lab Sample ID	18/04259/25	18/04259/26	18/04259/27	18/04259/28	18/04259/29	18/04259/30	18/04259/31	18/04259/32	Units	Method ref
Client Sample No	33	3	14	25	1	9	20	27		
Client Sample ID	ARP-BH105	ARP-BH106	ARP-BH106	ARP-BH106	ARP-BH108	ARP-BH108	ARP-BH108	ARP-BH108		
Depth to Top	18.00	0.80	4.00	8.00	0.00	4.00	9.00	12.00		
Depth To Bottom										
Date Sampled	25-Apr-18	09-Apr-18	09-Apr-18	10-Apr-18	18-Apr-18	19-Apr-18	19-Apr-18	19-Apr-18		
Sample Type	Soil - B	Soil - B	Soil - B	Soil - B	Soil - B	Soil - B	Soil - B	Soil - B		
Sample Matrix Code	3	6BE	2A	6	6AB	6A	6A	6A		
% Stones >10mm _A	<0.1	<0.1	14.0	<0.1	6.3	13.5	1.7	4.6	% w/w	A-T-044
pH BRE _D ^{M#}	8.14	8.13	7.02	8.03	7.93	7.90	8.05	7.75	pH	A-T-031s
Chloride BRE, SO4 equiv. (water sol 2:1) _D ^{M#}	<7	-	-	-	13	14	40	48	mg/l	A-T-026s
Nitrate BRE, SO4 equiv. (water sol 2:1) _D	<0.4	-	-	-	0.5	<0.4	1.5	0.7	mg/l	A-T-026s
Sulphate BRE (water sol 2:1) _D ^{M#}	32	171	202	<10	95	245	1130	224	mg/l	A-T-026s
Magnesium BRE (water sol 2:1) _D	9	-	-	-	11	16	14	11	mg/l	A-T-SOLMETs
Loss on ignition (550degC) _D	2.5	-	-	-	-	3.1	3.6	3.2	% w/w	A-T-030s

Envirolab Job Number: 18/04259

Client Project Name: Ashton Moss

Client Project Ref: 42171

Lab Sample ID	18/04259/33	18/04259/34	18/04259/35	18/04259/36	18/04259/37	18/04259/38	18/04259/39	18/04259/40	Units	Method ref
Client Sample No	35	4	14	26	38	2	17	27		
Client Sample ID	ARP-BH108	ARP-BH109	ARP-BH109	ARP-BH109	ARP-BH109	ARP-BH110	ARP-BH110	ARP-BH110		
Depth to Top	16.50	1.20	5.00	9.00	13.00	1.50	6.00	10.00		
Depth To Bottom										
Date Sampled	20-Apr-18	26-May-18	16-Apr-18	16-Apr-18	17-Apr-18	10-Apr-18	10-Apr-18	11-Apr-18		
Sample Type	Soil - B	Solid	Soil - B	Soil - B	Soil - B	Soil - B	Soil - B	Soil - B		
Sample Matrix Code	2AE	7	2AE	3	3	6E	4E	4E		
% Stones >10mm _A	16.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	% w/w	A-T-044
pH BRE _D ^{M#}	6.84	9.87	7.41	8.02	8.03	8.01	6.53	6.17	pH	A-T-031s
Chloride BRE, SO4 equiv. (water sol 2:1) _D ^{M#}	37	47	34	<7	<7	-	-	-	mg/l	A-T-026s
Nitrate BRE, SO4 equiv. (water sol 2:1) _D	0.9	3.6	4.3	1.0	<0.4	-	-	-	mg/l	A-T-026s
Sulphate BRE (water sol 2:1) _D ^{M#}	147	558	290	23	23	54	35	36	mg/l	A-T-026s
Magnesium BRE (water sol 2:1) _D	36	3	47	4	4	-	-	-	mg/l	A-T-SOLMETS
Loss on ignition (550degC) _D	16.0	-	12.7	-	4.9	-	-	-	% w/w	A-T-030s

Envirolab Job Number: 18/04259

Client Project Name: Ashton Moss

Client Project Ref: 42171

Lab Sample ID	18/04259/41	18/04259/42	18/04259/43	18/04259/44	18/04259/45	18/04259/46	18/04259/47	18/04259/48	Units	Method ref
Client Sample No	3	10	22	37	38	1	9	23		
Client Sample ID	ARP-BH111	ARP-BH111	ARP-BH111	ARP-BH111	ARP-BH111	ARP-BH112	ARP-BH112	ARP-BH112		
Depth to Top	1.20	5.00	8.50	13.00	13.00	0.00	4.00	8.50		
Depth To Bottom						1.20				
Date Sampled	26-May-18	17-Apr-18	17-Apr-18	26-May-18	23-Apr-18	23-Apr-18	23-Apr-18	23-Apr-18		
Sample Type	Soil - B	Soil - B	Soil - B	Soil - B	Soil - B	Soil - B	Soil - B	Soil - B		
Sample Matrix Code	4AE	5A	6E	6	6	6BD	6A	6		
% Stones >10mm _A	<0.1	32.1	<0.1	<0.1	<0.1	<0.1	13.3	<0.1	% w/w	A-T-044
pH BRE _D ^{M#}	7.25	8.34	7.68	7.18	-	6.82	7.75	7.84	pH	A-T-031s
Chloride BRE, SO4 equiv. (water sol 2:1) _D ^{M#}	20	29	33	9	-	24	23	10	mg/l	A-T-026s
Nitrate BRE, SO4 equiv. (water sol 2:1) _D	4.6	<0.4	<0.4	26.5	-	1.0	0.5	9.6	mg/l	A-T-026s
Sulphate BRE (water sol 2:1) _D ^{M#}	71	146	173	25	-	284	162	22	mg/l	A-T-026s
Magnesium BRE (water sol 2:1) _D	8	3	23	19	-	18	16	6	mg/l	A-T-SOLMETS
Loss on ignition (550degC) _D	-	3.9	10.7	-	6.7	-	-	-	% w/w	A-T-030s

Envirolab Job Number: 18/04259

Client Project Name: Ashton Moss

Client Project Ref: 42171

Lab Sample ID	18/04259/49	18/04259/50	18/04259/51	18/04259/52	18/04259/53	18/04259/54	18/04259/55	18/04259/56	Units	Method ref
Client Sample No	1	4	1	13	1	16	3	14		
Client Sample ID	ARP-WS101	ARP-WS101	ARP-WS102	ARP-WS102	ARP-WS103	ARP-WS103	ARP-BH107	ARP-BH107		
Depth to Top	0.00	1.20	0.00	4.00	0.00	5.40	0.30	4.00		
Depth To Bottom										
Date Sampled	25-Apr-18	25-Apr-18	25-Apr-18	25-Apr-18	25-Apr-18	25-Apr-18	26-Apr-18	26-Apr-18		
Sample Type	Soil - B	Soil - B	Soil - B	Soil - B	Soil - B	Soil - B	Soil - B	Soil - B		
Sample Matrix Code	6	6BE	6	2E	6AB	2	6AB	6A		
% Stones >10mm _A	<0.1	<0.1	<0.1	<0.1	41.1	<0.1	<0.1	<0.1	% w/w	A-T-044
pH BRE _D ^{M#}	6.67	7.01	7.46	6.74	6.25	5.23	6.77	10.56	pH	A-T-031s
Chloride BRE, SO4 equiv. (water sol 2:1) _D ^{M#}	9	11	7	43	<7	178	49	20	mg/l	A-T-026s
Nitrate BRE, SO4 equiv. (water sol 2:1) _D	12.7	1.3	23.6	171	3.8	17.3	14.6	1.1	mg/l	A-T-026s
Sulphate BRE (water sol 2:1) _D ^{M#}	24	329	16	239	29	108	327	349	mg/l	A-T-026s
Magnesium BRE (water sol 2:1) _D	18	27	14	53	4	34	8	<1	mg/l	A-T-SOLMETs
Loss on ignition (550degC) _D	21.1	10.7	3.0	30.0	2.7	80.8	-	-	% w/w	A-T-030s

Envirolab Job Number: 18/04259

Client Project Name: Ashton Moss

Client Project Ref: 42171

Lab Sample ID	18/04259/57								Units	Method ref
Client Sample No	29									
Client Sample ID	ARP-BH107									
Depth to Top	8.20									
Depth To Bottom										
Date Sampled	27-Apr-18									
Sample Type	Soil - B									
Sample Matrix Code	2E									
% Stones >10mm _A	<0.1								% w/w	A-T-044
pH BRE _D ^{M#}	7.31								pH	A-T-031s
Chloride BRE, SO4 equiv. (water sol 2:1) _D ^{M#}	56								mg/l	A-T-026s
Nitrate BRE, SO4 equiv. (water sol 2:1) _D	114								mg/l	A-T-026s
Sulphate BRE (water sol 2:1) _D ^{M#}	241								mg/l	A-T-026s
Magnesium BRE (water sol 2:1) _D	55								mg/l	A-T-SOLMETs

REPORT NOTES

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Opinions and interpretations expressed are outside the scope of our accreditation.

If results are in italic font they are associated with an AQC failure and there is insufficient sample to repeat the analysis. These are not accredited and are unreliable.

A deviating samples report is appended and will indicate if samples or tests have been found to be deviating. Any test results affected may not be an accurate record of the concentration at the time of sampling and, as a result, may be invalid.

Soil chemical analysis:

All results are reported as dry weight (<40°C).

For samples with Matrix Codes 1 - 6 natural stones, brick and concrete fragments >10mm and any extraneous material (visible glass, metal or twigs) are removed and excluded from the sample prior to analysis and reported results corrected to a whole sample basis. This is reported as '% stones >10mm'.

For samples with Matrix Code 7 the whole sample is dried and crushed prior to analysis and this supersedes any "A" subscripts

All analysis is performed on the sample as received for soil samples which are positive for asbestos or the client has informed asbestos may be present and/or if they are from outside the European Union and this supersedes any "D" subscripts.

TPH analysis of water by method A-T-007:

Free and visible oils are excluded from the sample used for analysis so that the reported result represents the dissolved phase only.

Electrical Conductivity of water by Method A-T-037:

Results greater than 12900µS/cm @ 25°C / 11550µS/cm @ 20°C fall outside the calibration range and as such are unaccredited.

Asbestos:

Asbestos in soil analysis is performed on a dried aliquot of the submitted sample and cannot guarantee to identify asbestos if only present in small numbers as discrete fibres/fragments in the original sample.

Stones etc. are not removed from the sample prior to analysis.

Quantification of asbestos is a 3 stage process including visual identification, hand picking and weighing and fibre counting by sedimentation/phase contrast optical microscopy if required. If asbestos is identified as being present but is not in a form that is suitable for analysis by hand picking and weighing (normally if the asbestos is present as free fibres) quantification by sedimentation is performed. Where ACMs are found a percentage asbestos is assigned to each with reference to 'HSG264, Asbestos: The survey guide' and the calculated asbestos content is expressed as a percentage of the dried soil sample aliquot used.

Predominant Matrix Codes:

1 = SAND, 2 = LOAM, 3 = CLAY, 4 = LOAM/SAND, 5 = SAND/CLAY, 6 = CLAY/LOAM, 7 = OTHER, 8 = Asbestos bulk ID sample.

Samples with Matrix Code 7 & 8 are not predominantly a SAND/LOAM/CLAY mix and are not covered by our BSEN 17025 or MCERTS accreditations, with the exception of bulk asbestos which are BSEN 17025 accredited.

Secondary Matrix Codes:

A = contains stones, B = contains construction rubble, C = contains visible hydrocarbons, D = contains glass/metal,

E = contains roots/twigs.

Key:

IS indicates Insufficient Sample for analysis.

US indicates Unsuitable Sample for analysis.

NDP indicates No Determination Possible.

NAD indicates No Asbestos Detected.

N/A indicates Not Applicable.

Superscript # indicates method accredited to ISO 17025.

Superscript "M" indicates method accredited to MCERTS.

Subscript "A" indicates analysis performed on the sample as received.

Subscript "D" indicates analysis performed on the dried sample, crushed to pass a 2mm sieve

Please contact us if you need any further information.

APPENDIX 5

CHEMICAL LABORATORY TEST RESULTS

FINAL ANALYTICAL TEST REPORT

Envirolab Job Number: 18/02990

Issue Number: 1

Date: 30 April, 2018

Client: Ian Farmer Associates (Warrington)
14/15 Rufford Court
Hardwick Grange
Warrington
WA1 4RF

Project Manager: [REDACTED]

Project Name: Ashton Moss

Project Ref: 42171

Order No: 44426

Date Samples Received: 11/04/18

Date Instructions Received: 20/04/18

Date Analysis Completed: 30/04/18

Prepared by:

[REDACTED]

Laboratory Coordinator

Approved by:

[REDACTED]

Analytical Consultant

Envirolab Job Number: 18/02990

Client Project Name: Ashton Moss

Client Project Ref: 42171

Lab Sample ID	18/02990/1	18/02990/2	18/02990/3	18/02990/4	18/02990/5				Units	Method ref
Client Sample No	2	13	22							
Client Sample ID	ARP-BH106	ARP-BH106	ARP-BH106	ARP-BH110	ARP-BH110					
Depth to Top	0.50	4.00	7.00	0.20	4.00					
Depth To Bottom										
Date Sampled	09-Apr-18	09-Apr-18	10-Apr-18	10-Apr-18	10-Apr-18					
Sample Type	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES					
Sample Matrix Code	6A	6AE	6	6A	6E					
% Stones >10mm _A	30.3	4.7	<0.1	22.2	<0.1				% w/w	A-T-044
pH _D ^{M#}	8.39	7.19	7.41	7.52	5.48				pH	A-T-031s
Cyanide (total) _A ^{M#}	<1	<1	<1	<1	<1				mg/kg	A-T-042sTCN
Phenols - Total by HPLC _A	<0.2	<0.2	<0.2	<0.2	<0.2				mg/kg	A-T-050s
Total Organic Carbon _D ^{M#}	0.37	5.77	1.25	1.92	32.9				% w/w	A-T-032s
Antimony _D	<5	<5	<5	<5	<5				mg/kg	A-T-024s
Arsenic _D ^{M#}	<1	6	<1	3	21				mg/kg	A-T-024s
Beryllium _D [#]	<0.5	0.7	1.2	0.7	1.1				mg/kg	A-T-024s
Boron (water soluble) _D ^{M#}	<1.0	1.0	<1.0	<1.0	1.4				mg/kg	A-T-027s
Cadmium _D ^{M#}	1.0	1.0	3.4	1.1	1.6				mg/kg	A-T-024s
Copper _D ^{M#}	10	43	19	19	85				mg/kg	A-T-024s
Chromium _D ^{M#}	17	19	30	19	16				mg/kg	A-T-024s
Chromium (hexavalent) _D	<1	<1	<1	<1	<2				mg/kg	A-T-040s
Lead _D ^{M#}	13	82	17	27	194				mg/kg	A-T-024s
Mercury _D	<0.17	1.44	<0.17	0.23	0.65				mg/kg	A-T-024s
Nickel _D ^{M#}	22	20	40	23	22				mg/kg	A-T-024s
Selenium _D ^{M#}	1	2	2	2	2				mg/kg	A-T-024s
Vanadium _D ^{M#}	13	22	31	22	29				mg/kg	A-T-024s
Zinc _D ^{M#}	43	90	67	54	106				mg/kg	A-T-024s
Asbestos in Soil (inc. matrix) ^										
Asbestos in soil _A [#]	NAD	NAD	NAD	NAD	NAD					A-T-045
Asbestos ACM - Suitable for Water Absorption Test?	N/A	N/A	N/A	N/A	N/A					

Envirolab Job Number: 18/02990

Client Project Name: Ashton Moss

Client Project Ref: 42171

Lab Sample ID	18/02990/1	18/02990/2	18/02990/3	18/02990/4	18/02990/5				Units	Method ref
Client Sample No	2	13	22							
Client Sample ID	ARP-BH106	ARP-BH106	ARP-BH106	ARP-BH110	ARP-BH110					
Depth to Top	0.50	4.00	7.00	0.20	4.00					
Depth To Bottom										
Date Sampled	09-Apr-18	09-Apr-18	10-Apr-18	10-Apr-18	10-Apr-18					
Sample Type	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES					
Sample Matrix Code	6A	6AE	6	6A	6E					
PAH-16MS										
Acenaphthene _A ^{M#}	<0.01	0.28	<0.01	0.03	<0.01				mg/kg	A-T-019s
Acenaphthylene _A ^{M#}	<0.01	<0.01	<0.01	<0.01	<0.01				mg/kg	A-T-019s
Anthracene _A ^{M#}	<0.02	0.20	<0.02	0.04	<0.02				mg/kg	A-T-019s
Benzo(a)anthracene _A ^{M#}	<0.04	0.31	<0.04	0.08	<0.04				mg/kg	A-T-019s
Benzo(a)pyrene _A ^{M#}	<0.04	0.19	<0.04	0.06	<0.04				mg/kg	A-T-019s
Benzo(b)fluoranthene _A ^{M#}	<0.05	0.22	<0.05	0.07	<0.05				mg/kg	A-T-019s
Benzo(ghi)perylene _A ^{M#}	<0.05	0.13	<0.05	0.05	<0.05				mg/kg	A-T-019s
Benzo(k)fluoranthene _A ^{M#}	<0.07	<0.07	<0.07	<0.07	<0.07				mg/kg	A-T-019s
Chrysene _A ^{M#}	<0.06	0.40	<0.06	0.11	<0.06				mg/kg	A-T-019s
Dibenzo(ah)anthracene _A ^{M#}	<0.04	<0.04	<0.04	<0.04	<0.04				mg/kg	A-T-019s
Fluoranthene _A ^{M#}	<0.08	0.91	<0.08	0.16	<0.08				mg/kg	A-T-019s
Fluorene _A ^{M#}	<0.01	0.19	<0.01	0.02	<0.01				mg/kg	A-T-019s
Indeno(123-cd)pyrene _A ^{M#}	<0.03	0.16	<0.03	0.05	<0.03				mg/kg	A-T-019s
Naphthalene _A ^{M#}	<0.03	0.29	<0.03	<0.03	<0.03				mg/kg	A-T-019s
Phenanthrene _A ^{M#}	0.03	1.00	<0.03	0.15	<0.03				mg/kg	A-T-019s
Pyrene _A ^{M#}	<0.07	0.83	<0.07	0.17	<0.07				mg/kg	A-T-019s
PAH (total 16) _A ^{M#}	<0.08	5.08	<0.08	0.99	<0.08				mg/kg	A-T-019s

Envirolab Job Number: 18/02990

Client Project Name: Ashton Moss

Client Project Ref: 42171

Lab Sample ID	18/02990/1	18/02990/2	18/02990/3	18/02990/4	18/02990/5				Units	Method ref
Client Sample No	2	13	22							
Client Sample ID	ARP-BH106	ARP-BH106	ARP-BH106	ARP-BH110	ARP-BH110					
Depth to Top	0.50	4.00	7.00	0.20	4.00					
Depth To Bottom										
Date Sampled	09-Apr-18	09-Apr-18	10-Apr-18	10-Apr-18	10-Apr-18					
Sample Type	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES					
Sample Matrix Code	6A	6AE	6	6A	6E					
TPH UKCWG										
Ali >C5-C6 _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01				mg/kg	A-T-022s
Ali >C6-C8 _A [#]	<0.01	0.01	<0.01	<0.01	0.07				mg/kg	A-T-022s
Ali >C8-C10 _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01				mg/kg	A-T-022s
Ali >C10-C12 _A [#]	<0.1	<0.1	<0.1	<0.1	<0.1				mg/kg	A-T-023s
Ali >C12-C16 _A [#]	<0.1	<0.1	<0.1	<0.1	<0.1				mg/kg	A-T-023s
Ali >C16-C21 _A [#]	<0.1	0.6	<0.1	<0.1	<0.1				mg/kg	A-T-023s
Ali >C21-C35 _A [#]	<0.1	11.1	<0.1	2.4	<0.1				mg/kg	A-T-023s
Ali >C35-C44 _A	<0.1	<0.1	<0.1	<0.1	<0.1				mg/kg	A-T-023s
Total Aliphatics _A	<0.1	11.9	<0.1	2.4	<0.1				mg/kg	A-T-023s
Aro >C5-C7 _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01				mg/kg	A-T-022s
Aro >C7-C8 _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01				mg/kg	A-T-022s
Aro >C8-C9 _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01				mg/kg	A-T-022s
Aro >C9-C10 _A [#]	<0.01	0.01	<0.01	<0.01	<0.01				mg/kg	A-T-022s
Aro >C10-C12 _A [#]	<0.1	0.9	<0.1	<0.1	<0.1				mg/kg	A-T-023s
Aro >C12-C16 _A [#]	<0.1	5.0	<0.1	<0.1	<0.1				mg/kg	A-T-023s
Aro >C16-C21 _A [#]	<0.1	14.2	<0.1	<0.1	<0.1				mg/kg	A-T-023s
Aro >C21-C35 _A [#]	0.9	55.8	<0.1	<0.1	<0.1				mg/kg	A-T-023s
Aro >C35-C44 _A	<0.1	<0.1	<0.1	<0.1	<0.1				mg/kg	A-T-023s
Total Aromatics _A	0.9	76.0	<0.1	<0.1	<0.1				mg/kg	A-T-023s
TPH (Ali & Aro) _A	0.9	87.7	<0.1	2.4	<0.1				mg/kg	A-T-023s
BTEX - Benzene _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01				mg/kg	A-T-022s
BTEX - Toluene _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01				mg/kg	A-T-022s
BTEX - Ethyl Benzene _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01				mg/kg	A-T-022s
BTEX - m & p Xylene _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01				mg/kg	A-T-022s
BTEX - o Xylene _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01				mg/kg	A-T-022s
MTBE _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01				mg/kg	A-T-022s

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If results are in italic font they are associated with an AQC failure and there is insufficient sample to repeat the analysis. These are not accredited and are unreliable.

A deviating samples report is appended and will indicate if samples or tests have been found to be deviating. Any test results affected may not be an accurate record of the concentration at the time of sampling and, as a result, may be invalid.

Soil chemical analysis:

All results are reported as dry weight (<40°C).

For samples with Matrix Codes 1 - 6 natural stones, brick and concrete fragments >10mm and any extraneous material (visible glass, metal or twigs) are removed and excluded from the sample prior to analysis and reported results corrected to a whole sample basis. This is reported as '% stones >10mm'.

For samples with Matrix Code 7 the whole sample is dried and crushed prior to analysis and this supersedes any "A" subscripts

All analysis is performed on the sample as received for soil samples which are positive for asbestos or the client has informed asbestos may be present and/or if they are from outside the European Union and this supersedes any "D" subscripts.

TPH analysis of water by method A-T-007:

Free and visible oils are excluded from the sample used for analysis so that the reported result represents the dissolved phase only.

Electrical Conductivity of water by Method A-T-037:

Results greater than 12900µS/cm @ 25°C / 11550µS/cm @ 20°C fall outside the calibration range and as such are unaccredited.

Asbestos:

Asbestos in soil analysis is performed on a dried aliquot of the submitted sample and cannot guarantee to identify asbestos if only present in small numbers as discrete fibres/fragments in the original sample.

Stones etc. are not removed from the sample prior to analysis.

Quantification of asbestos is a 3 stage process including visual identification, hand picking and weighing and fibre counting by sedimentation/phase contrast optical microscopy if required. If asbestos is identified as being present but is not in a form that is suitable for analysis by hand picking and weighing (normally if the asbestos is present as free fibres) quantification by sedimentation is performed. Where ACMs are found a percentage asbestos is assigned to each with reference to 'HSG264, Asbestos: The survey guide' and the calculated asbestos content is expressed as a percentage of the dried soil sample aliquot used.

Predominant Matrix Codes:

1 = SAND, 2 = LOAM, 3 = CLAY, 4 = LOAM/SAND, 5 = SAND/CLAY, 6 = CLAY/LOAM, 7 = OTHER, 8 = Asbestos bulk ID sample.

Samples with Matrix Code 7 & 8 are not predominantly a SAND/LOAM/CLAY mix and are not covered by our BSEN 17025 or MCERTS accreditations, with the exception of bulk asbestos which are BSEN 17025 accredited.

Secondary Matrix Codes:

A = contains stones, B = contains construction rubble, C = contains visible hydrocarbons, D = contains glass/metal,

E = contains roots/twigs.

Key:

IS indicates Insufficient Sample for analysis.

US indicates Unsuitable Sample for analysis.

NDP indicates No Determination Possible.

NAD indicates No Asbestos Detected.

N/A indicates Not Applicable.

Superscript # indicates method accredited to ISO 17025.

Superscript "M" indicates method accredited to MCERTS.

Subscript "A" indicates analysis performed on the sample as received.

Subscript "D" indicates analysis performed on the dried sample, crushed to pass a 2mm sieve

Please contact us if you need any further information.

Final Test Report

Envirolab Job Number: 18/02990

Issue Number: 1

Date: 14-May-18

Client: Ian Farmer Associates (Warrington)
14/15 Rufford Court
Hardwick Grange
Warrington
WA1 4RF

Project Manager: [REDACTED]
Project Name: Ashton Moss
Project Ref: 42171
Order No: 44426

Date Samples Received: 11-Apr-18
Date Instructions Received: 20-Apr-18
Date Analysis Completed: 14-May-18

Notes - Soil analysis

All results are reported as dry weight (<40 °C).

For samples with Matrix Codes 1 - 6 natural stones >10mm are removed or excluded from the sample prior to analysis and reported results corrected to a whole sample basis.

For samples with Matrix Code 7 the whole sample is dried and crushed prior to analysis.

Notes - General

This report shall not be reproduced, except in full, without written approval from Envirolab.

Subscript "A" indicates analysis performed on the sample as received. "D" indicates analysis performed on the dried sample, crushed to pass a 2mm sieve, unless asbestos is found to be present in which case all analysis is performed on the sample as received.

All analysis is performed on the dried and crushed sample for samples with Matrix Code 7 and this supercedes any "A" subscripts.

All analysis is performed on the sample as received for soil samples from outside the European Union and this supercedes any "D" subscripts

Superscript "M" indicates method accredited to MCERTS.

For complex, multi-compound analysis, quality control results do not always fall within chart limits for every compound and we have criteria for reporting in these situations.

If results are in italic font they are associated with such quality control failures and may be unreliable.

A deviating samples report is appended and will indicate if samples or tests have been found to be deviating. Any test results affected may not be an accurate record of the concentration at the time of sampling and, as a result, may be invalid

Predominant Matrix Codes: 1 = SAND, 2 = LOAM, 3 = CLAY, 4 = LOAM/SAND, 5 = SAND/CLAY, 6 = CLAY/LOAM, 7 = OTHER, 8 = Asbestos bulk ID sample

Samples with Matrix Code 7 & 8 are not predominantly a SAND/LOAM/CLAY mix and are not covered by our BSEN 17025 or MCERTS accreditations, with the exception of bulk asbestos which are BSEN 17025 accredited

Secondary Matrix Codes: A = contains stones, B = contains construction rubble, C = contains visible hydrocarbons, D = contains glass/metal, E = contains roots/twigs.

IS indicates Insufficient sample for analysis, NDP indicates No Determination Possible and NAD indicates No Asbestos Detected.

Superscript # indicates method accredited to ISO 17025.

Analytical results reflect the quality of the sample at the time of analysis only. Opinions and interpretations expressed are outside the scope of our accreditation.

Please contact us if you need any further information.

Prepared by:

Approved by:

[REDACTED]
Laboratory Coordinator

[REDACTED]
Managing Director



Sample Details							Landfill Waste Acceptance Criteria Limits			
Lab Sample ID	Method	ISO17025	MCERTS	18/02990/13						
Client Sample Number				16			Inert Waste Landfill	Stable Non-reactive Hazardous Waste in Non-Hazardous Landfill	Hazardous Waste Landfill	
Client Sample ID				ARP-BH106						
Depth to Top				5						
Depth to Bottom										
Date Sampled				09/04/2018						
Sample Type				Soil - ES						
Sample Matrix Code				6E						
Solid Waste Analysis										
pH (pH Units) _D	A-T-031	Y	Y					-	>6	-
ANC to pH 4 (mol/kg) _D	A-T-ANC	N	N					-	to be evaluated	to be evaluated
ANC to pH 6 (mol/kg) _D	A-T-ANC	N	N					-	to be evaluated	to be evaluated
Loss on Ignition (%) _D	A-T-030	Y	N					-	-	10
Total Organic Carbon (%) _D	A-T-032	Y	Y	6.36				3	5	6
PAH Sum of 17 (mg/kg) _A	A-T-019	N	N	480				100	-	-
Mineral Oil (mg/kg) _A	A-T-007	N	N	78				500	-	-
Sum of 7 PCBs (mg/kg) _D	A-T-004	N	N	<0.007				1	-	-
Sum of BTEX (mg/kg) _A	A-T-022	N	N	<0.01				6	-	-
Eluate Analysis				2:1	8:1	2:1	Cumulative 10:1	Limit values for compliance leaching test using		
				mg/l		mg/kg		BS EN 12457-3 at L/S 10 l/kg (mg/kg)		
Arsenic	A-T-025	Y	N	0.002	0.003	0.007	0.030	0.5	2	25
Barium	A-T-025	Y	N	0.094	0.046	0.298	0.570	20	100	300
Cadmium	A-T-025	Y	N	<0.001	<0.001	<0.002	<0.01	0.04	1	5
Chromium	A-T-025	Y	N	<0.001	<0.001	<0.002	<0.01	0.5	10	70
Copper	A-T-025	Y	N	0.003	0.003	0.010	0.040	2	50	100
Mercury	A-T-025	Y	N	<0.0005	<0.0005	<0.001	<0.005	0.01	0.2	2
Molybdenum	A-T-025	Y	N	0.044	0.017	0.141	0.220	0.5	10	30
Nickel	A-T-025	Y	N	0.002	<0.001	0.005	0.010	0.4	10	40
Lead	A-T-025	Y	N	<0.001	0.003	<0.002	<0.01	0.5	10	50
Antimony	A-T-025	Y	N	0.006	0.003	0.019	0.040	0.06	0.7	5
Selenium	A-T-025	Y	N	<0.001	<0.001	<0.002	<0.01	0.1	0.5	7
Zinc	A-T-025	Y	N	0.030	0.054	0.095	0.570	4	50	200
Chloride	A-T-026	Y	N	13	2	40	36	800	15000	25000
Fluoride	A-T-026	Y	N	0.4	0.4	1.2	4.0	10	150	500
Sulphate as SO ₄	A-T-026	Y	N	104	27	330	385	1000	20000	50000
Total Dissolved Solids	A-T-035	N	N	287	125	912	1582	4000	60000	100000
Phenol Index	A-T-050	N	N	<0.01	<0.01	<0.02	<0.1	1	-	-
Dissolved Organic Carbon	A-T-032	N	N	<20.0	<20.0	<40	<200	500	800	1000
Leach Test Information										
pH (pH Units)	A-T-031	N	Y	7.8	7.5					
Conductivity (µS/cm)	A-T-037	N	N	574	250					
Mass Sample (kg)				0.200						
Dry Matter (%)	A-T-044	N	N	65.8						
Stage 1										
Volume Leachant, L ₂ (l)	A-T-046			0.350						
Filtered Eluate Volume, VE ₁ (l)	A-T-046			0.150						
Stage 2										
Volume Leachant, L ₈ (l)	A-T-046			1.050						
Stated acceptance limits are for guidance only and Envirolab cannot be held responsible for any discrepancies with current legislation										

Sample Details							Landfill Waste Acceptance Criteria Limits			
Lab Sample ID	Method	ISO17025	MCERTS	18/02990/17						
Client Sample Number				16			Inert Waste Landfill	Stable Non-reactive Hazardous Waste in Non-Hazardous Landfill	Hazardous Waste Landfill	
Client Sample ID				ARP-BH110						
Depth to Top				5						
Depth to Bottom										
Date Sampled				10/04/2018						
Sample Type				Soil - ES						
Sample Matrix Code				4E						
Solid Waste Analysis										
pH (pH Units) _D	A-T-031	Y	Y					-	>6	-
ANC to pH 4 (mol/kg) _D	A-T-ANC	N	N					-	to be evaluated	to be evaluated
ANC to pH 6 (mol/kg) _D	A-T-ANC	N	N					-	to be evaluated	to be evaluated
Loss on Ignition (%) _D	A-T-030	Y	N					-	-	10
Total Organic Carbon (%) _D	A-T-032	Y	Y	54.4				3	5	6
PAH Sum of 17 (mg/kg) _A	A-T-019	N	N	<0.08				100	-	-
Mineral Oil (mg/kg) _A	A-T-007	N	N	<10				500	-	-
Sum of 7 PCBs (mg/kg) _D	A-T-004	N	N	<0.007				1	-	-
Sum of BTEX (mg/kg) _A	A-T-022	N	N	<0.01				6	-	-
Eluate Analysis				2:1	8:1	2:1	Cumulative 10:1	Limit values for compliance leaching test using		
				mg/l		mg/kg		BS EN 12457-3 at L/S 10 l/kg (mg/kg)		
Arsenic	A-T-025	Y	N	0.024	0.032	0.384	0.720	0.5	2	25
Barium	A-T-025	Y	N	0.076	0.017	1.197	0.680	20	100	300
Cadmium	A-T-025	Y	N	<0.001	<0.001	<0.002	<0.01	0.04	1	5
Chromium	A-T-025	Y	N	0.001	0.001	0.019	0.030	0.5	10	70
Copper	A-T-025	Y	N	0.026	0.022	0.417	0.550	2	50	100
Mercury	A-T-025	Y	N	<0.0005	<0.0005	<0.001	<0.005	0.01	0.2	2
Molybdenum	A-T-025	Y	N	<0.001	<0.001	<0.002	<0.01	0.5	10	30
Nickel	A-T-025	Y	N	0.003	0.002	0.041	0.050	0.4	10	40
Lead	A-T-025	Y	N	0.008	0.006	0.123	0.140	0.5	10	50
Antimony	A-T-025	Y	N	<0.001	<0.001	<0.002	<0.01	0.06	0.7	5
Selenium	A-T-025	Y	N	<0.001	<0.001	<0.002	<0.01	0.1	0.5	7
Zinc	A-T-025	Y	N	0.265	0.140	4.177	3.900	4	50	200
Chloride	A-T-026	Y	N	10	5	156	146	800	15000	25000
Fluoride	A-T-026	Y	N	0.2	0.2	3.3	4.0	10	150	500
Sulphate as SO ₄	A-T-026	Y	N	2	<1.00	36	10	1000	20000	50000
Total Dissolved Solids	A-T-035	N	N	34	23	535	596	4000	60000	100000
Phenol Index	A-T-050	N	N	<0.01	<0.01	<0.02	<0.1	1	-	-
Dissolved Organic Carbon	A-T-032	N	N	52.1	46.40	820	1128	500	800	1000
Leach Test Information										
pH (pH Units)	A-T-031	N	Y	5.8	5.3					
Conductivity (µS/cm)	A-T-037	N	N	69	46					
Mass Sample (kg)				0.200						
Dry Matter (%)	A-T-044	N	N	16.4						
Stage 1										
Volume Leachant, L ₂ (l)	A-T-046			0.350						
Filtered Eluate Volume, VE ₁ (l)	A-T-046			0.150						
Stage 2										
Volume Leachant, L ₈ (l)	A-T-046			0.260						
Stated acceptance limits are for guidance only and Envirolab cannot be held responsible for any discrepancies with current legislation										

FINAL ANALYTICAL TEST REPORT

Envirolab Job Number: 18/03064
Issue Number: 1

Date: 22 May, 2018

Client: Ian Farmer Associates (Warrington)
14/15 Rufford Court
Hardwick Grange
Warrington
WA1 4RF

Project Manager: [REDACTED]
Project Name: Ashton Moss
Project Ref: 42171
Order No: 44440
Date Samples Received: 18/04/18
Date Instructions Received: 24/04/18
Date Analysis Completed: 22/05/18

Prepared by:

[REDACTED]

Administrative Assistant

Approved by:

[REDACTED]

Client Manager

Envirolab Job Number: 18/03064

Client Project Name: Ashton Moss

Client Project Ref: 42171

Lab Sample ID	18/03064/1	18/03064/2	18/03064/3	18/03064/4	18/03064/5	18/03064/6	18/03064/7	18/03064/8	Units	Method ref
Client Sample No	2	3	12	21	2	11	22	33		
Client Sample ID	ARP-BH102	ARP-BH103	ARP-BH103	ARP-BH103	ARP-BH104	ARP-BH104	ARP-BH104	ARP-BH104		
Depth to Top	1.00	1.00	4.00	7.00	1.00	3.90	7.90	11.60		
Depth To Bottom										
Date Sampled	18-Apr-18	17-Apr-18	17-Apr-18	18-Apr-18	13-Apr-18	13-Apr-18	16-Apr-18	16-Apr-18		
Sample Type	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES		
Sample Matrix Code	6A	6BE	6E	6	6BE	6	6A	6E		
% Stones >10mm _A	<0.1	0.2	0.8	<0.1	<0.1	<0.1	<0.1	<0.1	% w/w	A-T-044
pH _D ^{M#}	8.74	9.29	8.15	8.49	9.15	8.37	8.07	7.42	pH	A-T-031s
Cyanide (total) _A ^{M#}	<1	<1	<1	<1	<1	<1	<1	<1	mg/kg	A-T-042sTCN
Phenols - Total by HPLC _A	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	mg/kg	A-T-050s
Total Organic Carbon _D ^{M#}	2.38	3.57	5.74	1.26	2.03	3.15	8.95	12.4	% w/w	A-T-032s
Antimony _D	<5	<5	<5	<5	<5	<5	<5	<5	mg/kg	A-T-024s
Arsenic _D ^{M#}	14	32	18	21	12	16	30	21	mg/kg	A-T-024s
Beryllium _D [#]	0.5	0.8	0.9	1.0	0.5	0.9	0.9	0.9	mg/kg	A-T-024s
Boron (water soluble) _D ^{M#}	<1.0	1.6	1.7	<1.0	<1.0	1.2	<1.0	1.3	mg/kg	A-T-027s
Cadmium _D ^{M#}	1.0	1.4	1.5	1.8	1.0	1.5	1.6	1.5	mg/kg	A-T-024s
Copper _D ^{M#}	21	62	52	23	25	34	37	46	mg/kg	A-T-024s
Chromium _D ^{M#}	17	33	24	27	16	29	18	20	mg/kg	A-T-024s
Chromium (hexavalent) _D	<1	<1	<1	<1	<1	<1	<1	<1	mg/kg	A-T-040s
Lead _D ^{M#}	80	224	79	14	61	72	27	50	mg/kg	A-T-024s
Mercury _D	0.29	4.33	0.43	<0.17	<0.17	0.41	<0.17	<0.17	mg/kg	A-T-024s
Nickel _D ^{M#}	16	22	28	37	18	30	37	32	mg/kg	A-T-024s
Selenium _D ^{M#}	2	2	2	1	2	2	3	<1	mg/kg	A-T-024s
Vanadium _D ^{M#}	20	19	25	25	18	27	19	20	mg/kg	A-T-024s
Zinc _D ^{M#}	87	239	108	61	66	75	73	86	mg/kg	A-T-024s
Asbestos in Soil (inc. matrix) ^										
Asbestos in soil _A [#]	Chrysotile	NAD	NAD	NAD	Chrysotile	NAD	NAD	NAD		A-T-045
Asbestos Matrix (visual) _A	Board	-	-	-	-	-	-	-		A-T-045
Asbestos Matrix (microscope) _A	Board & Loose Fibres	-	-	-	loose fibres	-	-	-		A-T-045
Asbestos ACM - Suitable for Water Absorption Test?	NO	N/A	N/A	N/A	N/A	N/A	N/A	N/A		
Asbestos in Soil Quantification % (Hand Picking & Weighing)										
Asbestos in soil % composition (hand picking and weighing) _D	0.054	-	-	-	<0.001	-	-	-	% w/w	A-T-054

Envirolab Job Number: 18/03064

Client Project Name: Ashton Moss

Client Project Ref: 42171

Lab Sample ID	18/03064/1	18/03064/2	18/03064/3	18/03064/4	18/03064/5	18/03064/6	18/03064/7	18/03064/8	Units	Method ref
Client Sample No	2	3	12	21	2	11	22	33		
Client Sample ID	ARP-BH102	ARP-BH103	ARP-BH103	ARP-BH103	ARP-BH104	ARP-BH104	ARP-BH104	ARP-BH104		
Depth to Top	1.00	1.00	4.00	7.00	1.00	3.90	7.90	11.60		
Depth To Bottom										
Date Sampled	18-Apr-18	17-Apr-18	17-Apr-18	18-Apr-18	13-Apr-18	13-Apr-18	16-Apr-18	16-Apr-18		
Sample Type	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES		
Sample Matrix Code	6A	6BE	6E	6	6BE	6	6A	6E		
PAH-16MS										
Acenaphthene _A ^{M#}	0.52	0.40	0.65	0.01	2.63	0.64	0.05	0.02	mg/kg	A-T-019s
Acenaphthylene _A ^{M#}	0.04	0.08	0.12	<0.01	0.08	0.03	<0.01	<0.01	mg/kg	A-T-019s
Anthracene _A ^{M#}	0.83	0.58	0.93	<0.02	2.42	0.80	0.05	<0.02	mg/kg	A-T-019s
Benzo(a)anthracene _A ^{M#}	2.26	1.84	1.52	<0.04	3.79	1.67	0.09	0.08	mg/kg	A-T-019s
Benzo(a)pyrene _A ^{M#}	2.02	1.63	1.14	<0.04	2.98	1.34	0.06	0.08	mg/kg	A-T-019s
Benzo(b)fluoranthene _A ^{M#}	2.36	1.92	1.32	<0.05	3.42	1.61	0.09	0.11	mg/kg	A-T-019s
Benzo(ghi)perylene _A ^{M#}	1.01	0.95	0.54	<0.05	1.25	0.67	<0.05	<0.05	mg/kg	A-T-019s
Benzo(k)fluoranthene _A ^{M#}	0.83	0.69	0.53	<0.07	1.36	0.59	<0.07	<0.07	mg/kg	A-T-019s
Chrysene _A ^{M#}	2.48	1.99	1.48	<0.06	3.73	1.62	0.11	<0.06	mg/kg	A-T-019s
Dibenzo(ah)anthracene _A ^{M#}	0.27	0.24	0.16	<0.04	0.34	0.18	<0.04	<0.04	mg/kg	A-T-019s
Fluoranthene _A ^{M#}	4.89	3.87	3.71	<0.08	9.69	3.83	0.16	0.14	mg/kg	A-T-019s
Fluorene _A ^{M#}	0.41	0.35	0.79	0.01	2.13	0.57	0.05	<0.01	mg/kg	A-T-019s
Indeno(123-cd)pyrene _A ^{M#}	1.12	0.98	0.62	<0.03	1.41	0.75	<0.03	<0.03	mg/kg	A-T-019s
Naphthalene _A ^{M#}	0.29	0.50	0.62	<0.03	2.12	0.49	0.51	<0.03	mg/kg	A-T-019s
Phenanthrene _A ^{M#}	3.36	2.78	3.82	0.07	10	3.09	0.44	0.11	mg/kg	A-T-019s
Pyrene _A ^{M#}	4.43	3.58	3.15	<0.07	8.51	3.39	0.15	0.14	mg/kg	A-T-019s
PAH (total 16) _A ^{M#}	27.1	22.4	21.1	0.10	55.9	21.3	1.74	0.66	mg/kg	A-T-019s

Envirolab Job Number: 18/03064

Client Project Name: Ashton Moss

Client Project Ref: 42171

Lab Sample ID	18/03064/1	18/03064/2	18/03064/3	18/03064/4	18/03064/5	18/03064/6	18/03064/7	18/03064/8	Units	Method ref
Client Sample No	2	3	12	21	2	11	22	33		
Client Sample ID	ARP-BH102	ARP-BH103	ARP-BH103	ARP-BH103	ARP-BH104	ARP-BH104	ARP-BH104	ARP-BH104		
Depth to Top	1.00	1.00	4.00	7.00	1.00	3.90	7.90	11.60		
Depth To Bottom										
Date Sampled	18-Apr-18	17-Apr-18	17-Apr-18	18-Apr-18	13-Apr-18	13-Apr-18	16-Apr-18	16-Apr-18		
Sample Type	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES		
Sample Matrix Code	6A	6BE	6E	6	6BE	6	6A	6E		
TPH UKCWG										
Ali >C5-C6 _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	A-T-022s
Ali >C6-C8 _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	A-T-022s
Ali >C8-C10 _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	A-T-022s
Ali >C10-C12 _A [#]	<0.1	<0.1	0.5	<0.1	<0.1	<0.1	<0.1	<0.1	mg/kg	A-T-023s
Ali >C12-C16 _A [#]	<0.1	<0.1	19.4	<0.1	<0.1	<0.1	<0.1	<0.1	mg/kg	A-T-023s
Ali >C16-C21 _A [#]	<0.1	<0.1	32.2	<0.1	<0.1	<0.1	<0.1	<0.1	mg/kg	A-T-023s
Ali >C21-C35 _A [#]	<0.1	5.0	16.1	<0.1	<0.1	<0.1	<0.1	<0.1	mg/kg	A-T-023s
Ali >C35-C44 _A	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	mg/kg	A-T-023s
Total Aliphatics _A	<0.1	5.0	68.1	<0.1	<0.1	<0.1	<0.1	<0.1	mg/kg	A-T-023s
Aro >C5-C7 _A [#]	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	A-T-022s
Aro >C7-C8 _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	A-T-022s
Aro >C8-C9 _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	A-T-022s
Aro >C9-C10 _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.03	mg/kg	A-T-022s
Aro >C10-C12 _A [#]	1.3	0.7	1.0	<0.1	0.7	0.3	0.9	<0.1	mg/kg	A-T-023s
Aro >C12-C16 _A [#]	4.3	2.8	11.5	<0.1	4.3	1.3	3.5	<0.1	mg/kg	A-T-023s
Aro >C16-C21 _A [#]	13.0	6.0	31.0	<0.1	10.6	6.5	2.0	<0.1	mg/kg	A-T-023s
Aro >C21-C35 _A [#]	42.3	10.3	35.0	<0.1	23.1	17.8	0.6	<0.1	mg/kg	A-T-023s
Aro >C35-C44 _A	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	mg/kg	A-T-023s
Total Aromatics _A	61.1	19.8	78.4	<0.1	38.7	25.9	7.0	<0.1	mg/kg	A-T-023s
TPH (Ali & Aro) _A	61.1	24.7	146	<0.1	38.7	25.9	7.0	<0.1	mg/kg	A-T-023s
BTEX - Benzene _A [#]	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	A-T-022s
BTEX - Toluene _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	A-T-022s
BTEX - Ethyl Benzene _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	A-T-022s
BTEX - m & p Xylene _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	A-T-022s
BTEX - o Xylene _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	A-T-022s
MTBE _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	A-T-022s

Envirolab Job Number: 18/03064

Client Project Name: Ashton Moss

Client Project Ref: 42171

Lab Sample ID	18/03064/9	18/03064/10	18/03064/11	18/03064/12	18/03064/13	18/03064/14	18/03064/19	18/03064/22	Units	Method ref
Client Sample No	2	15	26	39	16	29	17	29		
Client Sample ID	ARP-BH109	ARP-BH109	ARP-BH109	ARP-BH109	ARP-BH111	ARP-BH111	ARP-BH109	ARP-BH109		
Depth to Top	0.50	5.00	9.00	13.00	5.60	9.30	6.00	10.00		
Depth To Bottom										
Date Sampled	16-Apr-18	16-Apr-18	16-Apr-18	15-Apr-18	17-Apr-18	17-Apr-18	16-Apr-18	16-Apr-18		
Sample Type	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES		
Sample Matrix Code	6BE	6E	6BE	6	6	6	2E	2E		
% Stones >10mm _A	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	% w/w	A-T-044
pH _D ^{M#}	10.44	7.75	7.77	8.14	8.13	7.60	-	-	pH	A-T-031s
Cyanide (total) _A ^{M#}	<1	<1	<1	<1	<1	<1	-	-	mg/kg	A-T-042sTCN
Phenols - Total by HPLC _A	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	-	-	mg/kg	A-T-050s
Total Organic Carbon _D ^{M#}	1.92	4.16	5.20	1.07	3.39	11.2	8.69	41.2	% w/w	A-T-032s
Antimony _D	<5	<5	<5	<5	<5	<5	-	-	mg/kg	A-T-024s
Arsenic _D ^{M#}	17	15	12	13	18	19	-	-	mg/kg	A-T-024s
Beryllium _D [#]	0.6	0.6	0.7	1.0	0.9	0.8	-	-	mg/kg	A-T-024s
Boron (water soluble) _D ^{M#}	1.5	1.4	<1.0	<1.0	1.1	2.1	-	-	mg/kg	A-T-027s
Cadmium _D ^{M#}	1.6	1.3	1.2	1.6	1.4	1.6	-	-	mg/kg	A-T-024s
Copper _D ^{M#}	31	27	27	15	29	38	-	-	mg/kg	A-T-024s
Chromium _D ^{M#}	32	29	17	22	22	16	-	-	mg/kg	A-T-024s
Chromium (hexavalent) _D	<1	<1	<1	<1	<1	<1	-	-	mg/kg	A-T-040s
Lead _D ^{M#}	64	49	21	9	50	70	-	-	mg/kg	A-T-024s
Mercury _D	0.72	<0.17	<0.17	<0.17	<0.17	<0.17	-	-	mg/kg	A-T-024s
Nickel _D ^{M#}	26	22	26	29	26	22	-	-	mg/kg	A-T-024s
Selenium _D ^{M#}	<1	1	1	3	2	4	-	-	mg/kg	A-T-024s
Vanadium _D ^{M#}	32	19	17	22	24	21	-	-	mg/kg	A-T-024s
Zinc _D ^{M#}	83	69	48	44	70	85	-	-	mg/kg	A-T-024s
Asbestos in Soil (inc. matrix) ^										
Asbestos in soil _A [#]	NAD	NAD	NAD	NAD	NAD	NAD	-	-		A-T-045
Asbestos ACM - Suitable for Water Absorption Test?	N/A	N/A	N/A	N/A	N/A	N/A	-	-		

Envirolab Job Number: 18/03064

Client Project Name: Ashton Moss

Client Project Ref: 42171

Lab Sample ID	18/03064/9	18/03064/10	18/03064/11	18/03064/12	18/03064/13	18/03064/14	18/03064/19	18/03064/22	Units	Method ref
Client Sample No	2	15	26	39	16	29	17	29		
Client Sample ID	ARP-BH109	ARP-BH109	ARP-BH109	ARP-BH109	ARP-BH111	ARP-BH111	ARP-BH109	ARP-BH109		
Depth to Top	0.50	5.00	9.00	13.00	5.60	9.30	6.00	10.00		
Depth To Bottom										
Date Sampled	16-Apr-18	16-Apr-18	16-Apr-18	15-Apr-18	17-Apr-18	17-Apr-18	16-Apr-18	16-Apr-18		
Sample Type	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES		
Sample Matrix Code	6BE	6E	6BE	6	6	6	2E	2E		
PAH-16MS										
Acenaphthene _A ^{M#}	0.35	0.06	0.02	<0.01	2.31	0.25	-	-	mg/kg	A-T-019s
Acenaphthylene _A ^{M#}	0.03	<0.01	<0.01	<0.01	0.09	<0.01	-	-	mg/kg	A-T-019s
Anthracene _A ^{M#}	0.57	0.08	<0.02	<0.02	3.82	0.30	-	-	mg/kg	A-T-019s
Benzo(a)anthracene _A ^{M#}	1.51	0.15	<0.04	<0.04	6.93	0.47	-	-	mg/kg	A-T-019s
Benzo(a)pyrene _A ^{M#}	1.46	0.11	<0.04	<0.04	5.27	0.34	-	-	mg/kg	A-T-019s
Benzo(b)fluoranthene _A ^{M#}	1.70	0.15	<0.05	<0.05	5.85	0.40	-	-	mg/kg	A-T-019s
Benzo(ghi)perylene _A ^{M#}	0.77	<0.05	<0.05	<0.05	2.22	0.15	-	-	mg/kg	A-T-019s
Benzo(k)fluoranthene _A ^{M#}	0.61	<0.07	<0.07	<0.07	2.41	0.17	-	-	mg/kg	A-T-019s
Chrysene _A ^{M#}	1.55	0.17	<0.06	<0.06	6.35	0.47	-	-	mg/kg	A-T-019s
Dibenzo(ah)anthracene _A ^{M#}	0.19	<0.04	<0.04	<0.04	0.58	<0.04	-	-	mg/kg	A-T-019s
Fluoranthene _A ^{M#}	3.04	0.41	<0.08	<0.08	17.5	1.27	-	-	mg/kg	A-T-019s
Fluorene _A ^{M#}	0.29	0.06	0.01	<0.01	2.12	0.21	-	-	mg/kg	A-T-019s
Indeno(123-cd)pyrene _A ^{M#}	0.83	0.07	<0.03	<0.03	2.60	0.17	-	-	mg/kg	A-T-019s
Naphthalene _A ^{M#}	0.22	<0.03	<0.03	<0.03	0.82	0.23	-	-	mg/kg	A-T-019s
Phenanthrene _A ^{M#}	2.17	0.39	0.10	<0.03	15.8	1.31	-	-	mg/kg	A-T-019s
Pyrene _A ^{M#}	2.79	0.35	<0.07	<0.07	14.7	1.14	-	-	mg/kg	A-T-019s
PAH (total 16) _A ^{M#}	18.1	2.01	0.14	<0.08	89.4	6.89	-	-	mg/kg	A-T-019s

Envirolab Job Number: 18/03064

Client Project Name: Ashton Moss

Client Project Ref: 42171

Lab Sample ID	18/03064/9	18/03064/10	18/03064/11	18/03064/12	18/03064/13	18/03064/14	18/03064/19	18/03064/22	Units	Method ref
Client Sample No	2	15	26	39	16	29	17	29		
Client Sample ID	ARP-BH109	ARP-BH109	ARP-BH109	ARP-BH109	ARP-BH111	ARP-BH111	ARP-BH109	ARP-BH109		
Depth to Top	0.50	5.00	9.00	13.00	5.60	9.30	6.00	10.00		
Depth To Bottom										
Date Sampled	16-Apr-18	16-Apr-18	16-Apr-18	15-Apr-18	17-Apr-18	17-Apr-18	16-Apr-18	16-Apr-18		
Sample Type	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES		
Sample Matrix Code	6BE	6E	6BE	6	6	6	2E	2E		
TPH UKCWG										
Ali >C5-C6 _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	-	mg/kg	A-T-022s
Ali >C6-C8 _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	-	mg/kg	A-T-022s
Ali >C8-C10 _A [#]	<0.01	<0.01	<0.01	0.05	<0.01	<0.01	-	-	mg/kg	A-T-022s
Ali >C10-C12 _A [#]	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	mg/kg	A-T-023s
Ali >C12-C16 _A [#]	1.7	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	mg/kg	A-T-023s
Ali >C16-C21 _A [#]	10.8	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	mg/kg	A-T-023s
Ali >C21-C35 _A [#]	81.7	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	mg/kg	A-T-023s
Ali >C35-C44 _A	7.6	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	mg/kg	A-T-023s
Total Aliphatics _A	94.2	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	mg/kg	A-T-023s
Aro >C5-C7 _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	-	mg/kg	A-T-022s
Aro >C7-C8 _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	-	mg/kg	A-T-022s
Aro >C8-C9 _A [#]	<0.01	<0.01	0.02	<0.01	0.03	<0.01	-	-	mg/kg	A-T-022s
Aro >C9-C10 _A [#]	<0.01	<0.01	<0.01	<0.01	0.04	<0.01	-	-	mg/kg	A-T-022s
Aro >C10-C12 _A [#]	0.2	<0.1	<0.1	<0.1	0.4	<0.1	-	-	mg/kg	A-T-023s
Aro >C12-C16 _A [#]	2.0	<0.1	<0.1	<0.1	1.9	1.3	-	-	mg/kg	A-T-023s
Aro >C16-C21 _A [#]	10.0	<0.1	<0.1	<0.1	5.3	3.0	-	-	mg/kg	A-T-023s
Aro >C21-C35 _A [#]	71.8	<0.1	<0.1	<0.1	4.9	6.1	-	-	mg/kg	A-T-023s
Aro >C35-C44 _A	14.7	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	mg/kg	A-T-023s
Total Aromatics _A	84.0	<0.1	<0.1	<0.1	12.6	10.6	-	-	mg/kg	A-T-023s
TPH (Ali & Aro) _A	178	<0.1	<0.1	<0.1	12.6	10.6	-	-	mg/kg	A-T-023s
BTEX - Benzene _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	-	mg/kg	A-T-022s
BTEX - Toluene _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	-	mg/kg	A-T-022s
BTEX - Ethyl Benzene _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	-	mg/kg	A-T-022s
BTEX - m & p Xylene _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	-	mg/kg	A-T-022s
BTEX - o Xylene _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	-	mg/kg	A-T-022s
MTBE _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	-	mg/kg	A-T-022s

Envirolab Job Number: 18/03064

Client Project Name: Ashton Moss

Client Project Ref: 42171

Lab Sample ID	18/03064/25	18/03064/34	18/03064/40	18/03064/44					Units	Method ref
Client Sample No	16	12	2	17						
Client Sample ID	ARP-BH104	ARP-BH103	ARP-BH111	ARP-BH111						
Depth to Top	5.80	5.00	1.00	6.30						
Depth To Bottom										
Date Sampled	16-Apr-18	18-Apr-18	17-Apr-18	17-Apr-18						
Sample Type	Soil - ES	Soil - ES	Soil - ES	Soil - ES						
Sample Matrix Code	6E	6	6A	3						
% Stones >10mm _A	<0.1	<0.1	21.0	<0.1					% w/w	A-T-044
pH _D ^{M#}	-	-	8.56	-					pH	A-T-031s
Cyanide (total) _A ^{M#}	-	-	<1	-					mg/kg	A-T-042sTCN
Phenols - Total by HPLC _A	-	-	<0.2	-					mg/kg	A-T-050s
Total Organic Carbon _D ^{M#}	4.77	1.51	3.11	1.06					% w/w	A-T-032s
Antimony _D	-	-	<5	-					mg/kg	A-T-024s
Arsenic _D ^{M#}	-	-	6	-					mg/kg	A-T-024s
Beryllium _D [#]	-	-	0.6	-					mg/kg	A-T-024s
Boron (water soluble) _D ^{M#}	-	-	<1.0	-					mg/kg	A-T-027s
Cadmium _D ^{M#}	-	-	1.4	-					mg/kg	A-T-024s
Copper _D ^{M#}	-	-	33	-					mg/kg	A-T-024s
Chromium _D ^{M#}	-	-	21	-					mg/kg	A-T-024s
Chromium (hexavalent) _D	-	-	<1	-					mg/kg	A-T-040s
Lead _D ^{M#}	-	-	62	-					mg/kg	A-T-024s
Mercury _D	-	-	<0.17	-					mg/kg	A-T-024s
Nickel _D ^{M#}	-	-	42	-					mg/kg	A-T-024s
Selenium _D ^{M#}	-	-	<1	-					mg/kg	A-T-024s
Vanadium _D ^{M#}	-	-	20	-					mg/kg	A-T-024s
Zinc _D ^{M#}	-	-	69	-					mg/kg	A-T-024s
Asbestos in Soil (inc. matrix) ^										
Asbestos in soil _A [#]	-	-	NAD	-						A-T-045
Asbestos ACM - Suitable for Water Absorption Test?	-	-	N/A	-						

Envirolab Job Number: 18/03064

Client Project Name: Ashton Moss

Client Project Ref: 42171

Lab Sample ID	18/03064/25	18/03064/34	18/03064/40	18/03064/44					Units	Method ref
Client Sample No	16	12	2	17						
Client Sample ID	ARP-BH104	ARP-BH103	ARP-BH111	ARP-BH111						
Depth to Top	5.80	5.00	1.00	6.30						
Depth To Bottom										
Date Sampled	16-Apr-18	18-Apr-18	17-Apr-18	17-Apr-18						
Sample Type	Soil - ES	Soil - ES	Soil - ES	Soil - ES						
Sample Matrix Code	6E	6	6A	3						
PAH-16MS										
Acenaphthene _A ^{M#}	-	-	0.32	-					mg/kg	A-T-019s
Acenaphthylene _A ^{M#}	-	-	0.02	-					mg/kg	A-T-019s
Anthracene _A ^{M#}	-	-	0.34	-					mg/kg	A-T-019s
Benzo(a)anthracene _A ^{M#}	-	-	0.85	-					mg/kg	A-T-019s
Benzo(a)pyrene _A ^{M#}	-	-	0.66	-					mg/kg	A-T-019s
Benzo(b)fluoranthene _A ^{M#}	-	-	0.81	-					mg/kg	A-T-019s
Benzo(ghi)perylene _A ^{M#}	-	-	0.35	-					mg/kg	A-T-019s
Benzo(k)fluoranthene _A ^{M#}	-	-	0.28	-					mg/kg	A-T-019s
Chrysene _A ^{M#}	-	-	0.89	-					mg/kg	A-T-019s
Dibenzo(ah)anthracene _A ^{M#}	-	-	0.09	-					mg/kg	A-T-019s
Fluoranthene _A ^{M#}	-	-	1.82	-					mg/kg	A-T-019s
Fluorene _A ^{M#}	-	-	0.23	-					mg/kg	A-T-019s
Indeno(123-cd)pyrene _A ^{M#}	-	-	0.39	-					mg/kg	A-T-019s
Naphthalene _A ^{M#}	-	-	0.29	-					mg/kg	A-T-019s
Phenanthrene _A ^{M#}	-	-	1.36	-					mg/kg	A-T-019s
Pyrene _A ^{M#}	-	-	1.71	-					mg/kg	A-T-019s
PAH (total 16) _A ^{M#}	-	-	10.4	-					mg/kg	A-T-019s

Envirolab Job Number: 18/03064

Client Project Name: Ashton Moss

Client Project Ref: 42171

Lab Sample ID	18/03064/25	18/03064/34	18/03064/40	18/03064/44					Units	Method ref
Client Sample No	16	12	2	17						
Client Sample ID	ARP-BH104	ARP-BH103	ARP-BH111	ARP-BH111						
Depth to Top	5.80	5.00	1.00	6.30						
Depth To Bottom										
Date Sampled	16-Apr-18	18-Apr-18	17-Apr-18	17-Apr-18						
Sample Type	Soil - ES	Soil - ES	Soil - ES	Soil - ES						
Sample Matrix Code	6E	6	6A	3						
TPH UKCWG										
Ali >C5-C6 _A [#]	-	-	<0.01	-					mg/kg	A-T-022s
Ali >C6-C8 _A [#]	-	-	<0.01	-					mg/kg	A-T-022s
Ali >C8-C10 _A [#]	-	-	<0.01	-					mg/kg	A-T-022s
Ali >C10-C12 _A [#]	-	-	<0.1	-					mg/kg	A-T-023s
Ali >C12-C16 _A [#]	-	-	<0.1	-					mg/kg	A-T-023s
Ali >C16-C21 _A [#]	-	-	<0.1	-					mg/kg	A-T-023s
Ali >C21-C35 _A [#]	-	-	<0.1	-					mg/kg	A-T-023s
Ali >C35-C44 _A	-	-	<0.1	-					mg/kg	A-T-023s
Total Aliphatics _A	-	-	<0.1	-					mg/kg	A-T-023s
Aro >C5-C7 _A [#]	-	-	<0.01	-					mg/kg	A-T-022s
Aro >C7-C8 _A [#]	-	-	<0.01	-					mg/kg	A-T-022s
Aro >C8-C9 _A [#]	-	-	<0.01	-					mg/kg	A-T-022s
Aro >C9-C10 _A [#]	-	-	<0.01	-					mg/kg	A-T-022s
Aro >C10-C12 _A [#]	-	-	0.3	-					mg/kg	A-T-023s
Aro >C12-C16 _A [#]	-	-	2.6	-					mg/kg	A-T-023s
Aro >C16-C21 _A [#]	-	-	10.9	-					mg/kg	A-T-023s
Aro >C21-C35 _A [#]	-	-	18.8	-					mg/kg	A-T-023s
Aro >C35-C44 _A	-	-	<0.1	-					mg/kg	A-T-023s
Total Aromatics _A	-	-	32.5	-					mg/kg	A-T-023s
TPH (Ali & Aro) _A	-	-	32.5	-					mg/kg	A-T-023s
BTEX - Benzene _A [#]	-	-	<0.01	-					mg/kg	A-T-022s
BTEX - Toluene _A [#]	-	-	<0.01	-					mg/kg	A-T-022s
BTEX - Ethyl Benzene _A [#]	-	-	<0.01	-					mg/kg	A-T-022s
BTEX - m & p Xylene _A [#]	-	-	<0.01	-					mg/kg	A-T-022s
BTEX - o Xylene _A [#]	-	-	<0.01	-					mg/kg	A-T-022s
MTBE _A [#]	-	-	<0.01	-					mg/kg	A-T-022s

REPORT NOTES

General:

This report shall not be reproduced, except in full, without written approval from Envirolab.

All samples contained within this report, and any received with the same delivery, will be disposed of one month after the date of this report.

Analytical results reflect the quality of the sample at the time of analysis only.

Opinions and interpretations expressed are outside the scope of our accreditation.

If results are in italic font they are associated with an AQC failure and there is insufficient sample to repeat the analysis. These are not accredited and are unreliable.

A deviating samples report is appended and will indicate if samples or tests have been found to be deviating. Any test results affected may not be an accurate record of the concentration at the time of sampling and, as a result, may be invalid.

Soil chemical analysis:

All results are reported as dry weight (<40°C).

For samples with Matrix Codes 1 - 6 natural stones, brick and concrete fragments >10mm and any extraneous material (visible glass, metal or twigs) are removed and excluded from the sample prior to analysis and reported results corrected to a whole sample basis. This is reported as '% stones >10mm'.

For samples with Matrix Code 7 the whole sample is dried and crushed prior to analysis and this supersedes any "A" subscripts

All analysis is performed on the sample as received for soil samples which are positive for asbestos or the client has informed asbestos may be present and/or if they are from outside the European Union and this supersedes any "D" subscripts.

TPH analysis of water by method A-T-007:

Free and visible oils are excluded from the sample used for analysis so that the reported result represents the dissolved phase only.

Electrical Conductivity of water by Method A-T-037:

Results greater than 12900µS/cm @ 25°C / 11550µS/cm @ 20°C fall outside the calibration range and as such are unaccredited.

Asbestos:

Asbestos in soil analysis is performed on a dried aliquot of the submitted sample and cannot guarantee to identify asbestos if only present in small numbers as discrete fibres/fragments in the original sample.

Stones etc. are not removed from the sample prior to analysis.

Quantification of asbestos is a 3 stage process including visual identification, hand picking and weighing and fibre counting by sedimentation/phase contrast optical microscopy if required. If asbestos is identified as being present but is not in a form that is suitable for analysis by hand picking and weighing (normally if the asbestos is present as free fibres) quantification by sedimentation is performed. Where ACMs are found a percentage asbestos is assigned to each with reference to 'HSG264, Asbestos: The survey guide' and the calculated asbestos content is expressed as a percentage of the dried soil sample aliquot used.

Predominant Matrix Codes:

1 = SAND, 2 = LOAM, 3 = CLAY, 4 = LOAM/SAND, 5 = SAND/CLAY, 6 = CLAY/LOAM, 7 = OTHER, 8 = Asbestos bulk ID sample.

Samples with Matrix Code 7 & 8 are not predominantly a SAND/LOAM/CLAY mix and are not covered by our BSEN 17025 or MCERTS accreditations, with the exception of bulk asbestos which are BSEN 17025 accredited.

Secondary Matrix Codes:

A = contains stones, B = contains construction rubble, C = contains visible hydrocarbons, D = contains glass/metal,

E = contains roots/twigs.

Key:

IS indicates Insufficient Sample for analysis.

US indicates Unsuitable Sample for analysis.

NDP indicates No Determination Possible.

NAD indicates No Asbestos Detected.

N/A indicates Not Applicable.

Superscript # indicates method accredited to ISO 17025.

Superscript "M" indicates method accredited to MCERTS.

Subscript "A" indicates analysis performed on the sample as received.

Subscript "D" indicates analysis performed on the dried sample, crushed to pass a 2mm sieve

Please contact us if you need any further information.

Final Test Report

Envirolab Job Number: 18/03064
Issue Number: 1

Date: 15-May-18

Client: Ian Farmer Associates (Warrington)
14/15 Rufford Court
Hardwick Grange
Warrington
WA1 4RF

Project Manager: [REDACTED]
Project Name: Ashton Moss
Project Ref: 42171
Order No: 44440

Date Samples Received: 18-Apr-18
Date Instructions Received: 24-Apr-18
Date Analysis Completed: 15-May-18

Notes - Soil analysis

All results are reported as dry weight (<40°C).

For samples with Matrix Codes 1 - 6 natural stones >10mm are removed or excluded from the sample prior to analysis and reported results corrected to a whole sample basis.

For samples with Matrix Code 7 the whole sample is dried and crushed prior to analysis.

Notes - General

This report shall not be reproduced, except in full, without written approval from Envirolab.

Subscript "A" indicates analysis performed on the sample as received. "D" indicates analysis performed on the dried sample, crushed to pass a 2mm sieve, unless asbestos is found to be present in which case all analysis is performed on the sample as received.

All analysis is performed on the dried and crushed sample for samples with Matrix Code 7 and this supercedes any "A" subscripts.

All analysis is performed on the sample as received for soil samples from outside the European Union and this supercedes any "D" subscripts

Superscript "M" indicates method accredited to MCERTS.

For complex, multi-compound analysis, quality control results do not always fall within chart limits for every compound and we have criteria for reporting in these situations.

If results are in italic font they are associated with such quality control failures and may be unreliable.

A deviating samples report is appended and will indicate if samples or tests have been found to be deviating. Any test results affected may not be an accurate record of the concentration at the time of sampling and, as a result, may be invalid

Predominant Matrix Codes: 1 = SAND, 2 = LOAM, 3 = CLAY, 4 = LOAM/SAND, 5 = SAND/CLAY, 6 = CLAY/LOAM, 7 = OTHER, 8 = Asbestos bulk ID sample

Samples with Matrix Code 7 & 8 are not predominantly a SAND/LOAM/CLAY mix and are not covered by our BSEN 17025 or MCERTS accreditations, with the exception of bulk asbestos which are BSEN 17025 accredited

Secondary Matrix Codes: A = contains stones, B = contains construction rubble, C = contains visible hydrocarbons, D = contains glass/metal, E = contains roots/twigs.

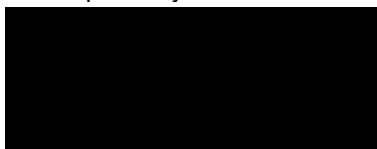
IS indicates Insufficient sample for analysis, NDP indicates No Determination Possible and NAD indicates No Asbestos Detected.

Superscript # indicates method accredited to ISO 17025.

Analytical results reflect the quality of the sample at the time of analysis only. Opinions and interpretations expressed are outside the scope of our accreditation.

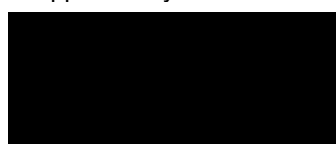
Please contact us if you need any further information.

Prepared by:



Administrative Assistant

Approved by:



Client Manager



Sample Details							Landfill Waste Acceptance Criteria Limits			
Lab Sample ID	Method	ISO17025	MCERTS	18/03064/19						
Client Sample Number				17			Inert Waste Landfill	Stable Non-reactive Hazardous Waste in Non-Hazardous Landfill	Hazardous Waste Landfill	
Client Sample ID				ARP-BH109						
Depth to Top				6						
Depth to Bottom										
Date Sampled				16/04/2018						
Sample Type				Soil - ES						
Sample Matrix Code				2E						
Solid Waste Analysis										
pH (pH Units) _D	A-T-031	Y	Y					-	>6	-
ANC to pH 4 (mol/kg) _D	A-T-ANC	N	N					-	to be evaluated	to be evaluated
ANC to pH 6 (mol/kg) _D	A-T-ANC	N	N					-	to be evaluated	to be evaluated
Loss on Ignition (%) _D	A-T-030	Y	N					-	-	10
Total Organic Carbon (%) _D	A-T-032	Y	Y	8.69				3	5	6
PAH Sum of 17 (mg/kg) _A	A-T-019	N	N	2.13				100	-	-
Mineral Oil (mg/kg) _A	A-T-007	N	N	93				500	-	-
Sum of 7 PCBs (mg/kg) _D	A-T-004	N	N	<0.007				1	-	-
Sum of BTEX (mg/kg) _A	A-T-022	N	N	<0.01				6	-	-
Eluate Analysis				2:1	8:1	2:1	Cumulative 10:1	Limit values for compliance leaching test using		
				mg/l		mg/kg		BS EN 12457-3 at L/S 10 l/kg (mg/kg)		
Arsenic	A-T-025	Y	N	0.009	0.007	0.038	0.090	0.5	2	25
Barium	A-T-025	Y	N	0.078	0.038	0.330	0.520	20	100	300
Cadmium	A-T-025	Y	N	<0.001	<0.001	<0.002	<0.01	0.04	1	5
Chromium	A-T-025	Y	N	<0.001	<0.001	<0.002	<0.01	0.5	10	70
Copper	A-T-025	Y	N	0.005	0.004	0.021	0.050	2	50	100
Mercury	A-T-025	Y	N	<0.0005	<0.0005	<0.001	<0.005	0.01	0.2	2
Molybdenum	A-T-025	Y	N	0.227	0.084	0.961	1.230	0.5	10	30
Nickel	A-T-025	Y	N	0.004	0.001	0.019	0.020	0.4	10	40
Lead	A-T-025	Y	N	0.002	0.003	0.009	0.040	0.5	10	50
Antimony	A-T-025	Y	N	0.008	0.006	0.033	0.080	0.06	0.7	5
Selenium	A-T-025	Y	N	<0.001	<0.001	<0.002	<0.01	0.1	0.5	7
Zinc	A-T-025	Y	N	0.038	0.014	0.161	0.210	4	50	200
Chloride	A-T-026	Y	N	18	4	77	73	800	15000	25000
Fluoride	A-T-026	Y	N	0.5	0.4	2.3	6.0	10	150	500
Sulphate as SO ₄	A-T-026	Y	N	92	52	392	689	1000	20000	50000
Total Dissolved Solids	A-T-035	N	N	257	145	1090	1935	4000	60000	100000
Phenol Index	A-T-050	N	N	<0.01	<0.01	<0.02	<0.1	1	-	-
Dissolved Organic Carbon	A-T-032	N	N	32.5	<20.0	138	<200	500	800	1000
Leach Test Information										
pH (pH Units)	A-T-031	N	Y	7.3	7.5					
Conductivity (µS/cm)	A-T-037	N	N	513	289					
Mass Sample (kg)				0.200						
Dry Matter (%)	A-T-044	N	N	52.5						
Stage 1										
Volume Leachant, L ₂ (l)	A-T-046			0.350						
Filtered Eluate Volume, VE ₁ (l)	A-T-046			0.150						
Stage 2										
Volume Leachant, L ₈ (l)	A-T-046			0.840						
Stated acceptance limits are for guidance only and Envirolab cannot be held responsible for any discrepancies with current legislation										

Sample Details							Landfill Waste Acceptance Criteria Limits			
Lab Sample ID	Method	ISO17025	MCERTS	18/03064/25						
Client Sample Number				16			Inert Waste Landfill	Stable Non-reactive Hazardous Waste in Non-Hazardous Landfill	Hazardous Waste Landfill	
Client Sample ID				ARP-BH104						
Depth to Top				5.8						
Depth to Bottom										
Date Sampled				16/04/2018						
Sample Type				Soil - ES						
Sample Matrix Code				6E						
Solid Waste Analysis										
pH (pH Units) _D	A-T-031	Y	Y					-	>6	-
ANC to pH 4 (mol/kg) _D	A-T-ANC	N	N					-	to be evaluated	to be evaluated
ANC to pH 6 (mol/kg) _D	A-T-ANC	N	N					-	to be evaluated	to be evaluated
Loss on Ignition (%) _D	A-T-030	Y	N					-	-	10
Total Organic Carbon (%) _D	A-T-032	Y	Y	4.77				3	5	6
PAH Sum of 17 (mg/kg) _A	A-T-019	N	N	0.58				100	-	-
Mineral Oil (mg/kg) _A	A-T-007	N	N	<10				500	-	-
Sum of 7 PCBs (mg/kg) _D	A-T-004	N	N	<0.007				1	-	-
Sum of BTEX (mg/kg) _A	A-T-022	N	N	<0.01				6	-	-
Eluate Analysis				2:1	8:1	2:1	Cumulative 10:1	Limit values for compliance leaching test using		
				mg/l		mg/kg		BS EN 12457-3 at L/S 10 l/kg (mg/kg)		
Arsenic	A-T-025	Y	N	0.002	0.003	0.008	0.030	0.5	2	25
Barium	A-T-025	Y	N	0.101	0.059	0.342	0.720	20	100	300
Cadmium	A-T-025	Y	N	<0.001	<0.001	<0.002	<0.01	0.04	1	5
Chromium	A-T-025	Y	N	<0.001	<0.001	<0.002	<0.01	0.5	10	70
Copper	A-T-025	Y	N	0.003	0.005	0.010	0.060	2	50	100
Mercury	A-T-025	Y	N	<0.0005	<0.0005	<0.001	<0.005	0.01	0.2	2
Molybdenum	A-T-025	Y	N	0.010	0.007	0.035	0.090	0.5	10	30
Nickel	A-T-025	Y	N	0.001	<0.001	0.004	0.010	0.4	10	40
Lead	A-T-025	Y	N	0.001	0.004	0.004	0.040	0.5	10	50
Antimony	A-T-025	Y	N	0.003	0.002	0.010	0.020	0.06	0.7	5
Selenium	A-T-025	Y	N	<0.001	<0.001	<0.002	<0.01	0.1	0.5	7
Zinc	A-T-025	Y	N	0.025	0.013	0.085	0.160	4	50	200
Chloride	A-T-026	Y	N	13	3	45	48	800	15000	25000
Fluoride	A-T-026	Y	N	0.4	0.4	1.2	5.0	10	150	500
Sulphate as SO ₄	A-T-026	Y	N	71	21	242	301	1000	20000	50000
Total Dissolved Solids	A-T-035	N	N	247	118	839	1499	4000	60000	100000
Phenol Index	A-T-050	N	N	<0.01	<0.01	<0.02	<0.1	1	-	-
Dissolved Organic Carbon	A-T-032	N	N	<20.0	<20.0	<40	<200	500	800	1000
Leach Test Information										
pH (pH Units)	A-T-031	N	Y	7.8	7.5					
Conductivity (µS/cm)	A-T-037	N	N	494	236					
Mass Sample (kg)				0.201						
Dry Matter (%)	A-T-044	N	N	62.4						
Stage 1										
Volume Leachant, L ₂ (l)	A-T-046			0.350						
Filtered Eluate Volume, VE ₁ (l)	A-T-046			0.150						
Stage 2										
Volume Leachant, L ₈ (l)	A-T-046			1.000						
Stated acceptance limits are for guidance only and Envirolab cannot be held responsible for any discrepancies with current legislation										

Sample Details							Landfill Waste Acceptance Criteria Limits			
Lab Sample ID	Method	ISO17025	MCERTS	18/03064/34						
Client Sample Number				12			Inert Waste Landfill	Stable Non-reactive Hazardous Waste in Non-Hazardous Landfill	Hazardous Waste Landfill	
Client Sample ID				ARP-BH103						
Depth to Top				5						
Depth to Bottom										
Date Sampled				18/04/2018						
Sample Type				Soil - ES						
Sample Matrix Code				6						
Solid Waste Analysis										
pH (pH Units) _D	A-T-031	Y	Y					-	>6	-
ANC to pH 4 (mol/kg) _D	A-T-ANC	N	N					-	to be evaluated	to be evaluated
ANC to pH 6 (mol/kg) _D	A-T-ANC	N	N					-	to be evaluated	to be evaluated
Loss on Ignition (%) _D	A-T-030	Y	N					-	-	10
Total Organic Carbon (%) _D	A-T-032	Y	Y	1.51				3	5	6
PAH Sum of 17 (mg/kg) _A	A-T-019	N	N	<0.08				100	-	-
Mineral Oil (mg/kg) _A	A-T-007	N	N	<10				500	-	-
Sum of 7 PCBs (mg/kg) _D	A-T-004	N	N	<0.007				1	-	-
Sum of BTEX (mg/kg) _A	A-T-022	N	N	<0.01				6	-	-
Eluate Analysis				2:1	8:1	2:1	Cumulative 10:1	Limit values for compliance leaching test using		
				mg/l		mg/kg		BS EN 12457-3 at L/S 10 l/kg (mg/kg)		
Arsenic	A-T-025	Y	N	<0.001	<0.001	<0.002	<0.01	0.5	2	25
Barium	A-T-025	Y	N	0.112	0.150	0.269	1.530	20	100	300
Cadmium	A-T-025	Y	N	<0.001	<0.001	<0.002	<0.01	0.04	1	5
Chromium	A-T-025	Y	N	<0.001	<0.001	<0.002	<0.01	0.5	10	70
Copper	A-T-025	Y	N	0.002	0.002	0.005	0.020	2	50	100
Mercury	A-T-025	Y	N	<0.0005	<0.0005	<0.001	<0.005	0.01	0.2	2
Molybdenum	A-T-025	Y	N	0.006	0.002	0.013	0.030	0.5	10	30
Nickel	A-T-025	Y	N	<0.001	<0.001	<0.002	<0.01	0.4	10	40
Lead	A-T-025	Y	N	<0.001	<0.001	<0.002	<0.01	0.5	10	50
Antimony	A-T-025	Y	N	0.001	<0.001	0.003	0.010	0.06	0.7	5
Selenium	A-T-025	Y	N	0.001	<0.001	0.002	<0.01	0.1	0.5	7
Zinc	A-T-025	Y	N	0.012	0.015	0.030	0.150	4	50	200
Chloride	A-T-026	Y	N	8	2	19	25	800	15000	25000
Fluoride	A-T-026	Y	N	0.5	0.3	1.1	3.0	10	150	500
Sulphate as SO ₄	A-T-026	Y	N	33	11	79	136	1000	20000	50000
Total Dissolved Solids	A-T-035	N	N	138	59	333	688	4000	60000	100000
Phenol Index	A-T-050	N	N	<0.01	<0.01	<0.02	<0.1	1	-	-
Dissolved Organic Carbon	A-T-032	N	N	<20.0	<20.0	<40	<200	500	800	1000
Leach Test Information										
pH (pH Units)	A-T-031	N	Y	7.7	7.5					
Conductivity (µS/cm)	A-T-037	N	N	276	118					
Mass Sample (kg)				0.201						
Dry Matter (%)	A-T-044	N	N	80.4						
Stage 1										
Volume Leachant, L ₂ (l)	A-T-046			0.350						
Filtered Eluate Volume, VE ₁ (l)	A-T-046			0.150						
Stage 2										
Volume Leachant, L ₈ (l)	A-T-046			1.290						
Stated acceptance limits are for guidance only and Envirolab cannot be held responsible for any discrepancies with current legislation										

*Landfill WAC analysis must not be used for hazardous waste classification purposes.
This analysis is only applicable for landfill acceptance and does not give any indication
as to whether a waste may be hazardous or non-hazardous.*

Sample Details							Landfill Waste Acceptance Criteria Limits			
Lab Sample ID	Method	ISO17025	MCERTS	18/03064/44						
Client Sample Number				17			Inert Waste Landfill	Stable Non-reactive Hazardous Waste in Non-Hazardous Landfill	Hazardous Waste Landfill	
Client Sample ID				ARP-BH111						
Depth to Top				6.3						
Depth to Bottom										
Date Sampled				17/04/2018						
Sample Type				Soil - ES						
Sample Matrix Code				3						
Solid Waste Analysis										
pH (pH Units) _D	A-T-031	Y	Y					-	>6	-
ANC to pH 4 (mol/kg) _D	A-T-ANC	N	N					-	to be evaluated	to be evaluated
ANC to pH 6 (mol/kg) _D	A-T-ANC	N	N					-	to be evaluated	to be evaluated
Loss on Ignition (%) _D	A-T-030	Y	N					-	-	10
Total Organic Carbon (%) _D	A-T-032	Y	Y	1.06				3	5	6
PAH Sum of 17 (mg/kg) _A	A-T-019	N	N	1.81				100	-	-
Mineral Oil (mg/kg) _A	A-T-007	N	N	78				500	-	-
Sum of 7 PCBs (mg/kg) _D	A-T-004	N	N	<0.007				1	-	-
Sum of BTEX (mg/kg) _A	A-T-022	N	N	<0.01				6	-	-
Eluate Analysis				2:1	8:1	2:1	Cumulative 10:1	Limit values for compliance leaching test using		
				mg/l		mg/kg		BS EN 12457-3 at L/S 10 l/kg (mg/kg)		
Arsenic	A-T-025	Y	N	0.003	0.004	0.007	0.040	0.5	2	25
Barium	A-T-025	Y	N	0.105	0.060	0.250	0.660	20	100	300
Cadmium	A-T-025	Y	N	<0.001	<0.001	<0.002	<0.01	0.04	1	5
Chromium	A-T-025	Y	N	<0.001	<0.001	<0.002	<0.01	0.5	10	70
Copper	A-T-025	Y	N	0.003	0.005	0.007	0.050	2	50	100
Mercury	A-T-025	Y	N	<0.0005	<0.0005	<0.001	<0.005	0.01	0.2	2
Molybdenum	A-T-025	Y	N	0.034	0.022	0.081	0.240	0.5	10	30
Nickel	A-T-025	Y	N	0.002	<0.001	0.004	<0.01	0.4	10	40
Lead	A-T-025	Y	N	<0.001	0.004	<0.002	<0.01	0.5	10	50
Antimony	A-T-025	Y	N	0.004	0.002	0.010	0.020	0.06	0.7	5
Selenium	A-T-025	Y	N	<0.001	<0.001	<0.002	<0.01	0.1	0.5	7
Zinc	A-T-025	Y	N	0.045	0.023	0.108	0.260	4	50	200
Chloride	A-T-026	Y	N	22	4	52	56	800	15000	25000
Fluoride	A-T-026	Y	N	0.3	0.4	0.7	4.0	10	150	500
Sulphate as SO ₄	A-T-026	Y	N	56	12	133	170	1000	20000	50000
Total Dissolved Solids	A-T-035	N	N	269	125	642	1431	4000	60000	100000
Phenol Index	A-T-050	N	N	<0.01	<0.01	<0.02	<0.1	1	-	-
Dissolved Organic Carbon	A-T-032	N	N	<20.0	<20.0	<40	<200	500	800	1000
Leach Test Information										
pH (pH Units)	A-T-031	N	Y	7.8	7.6					
Conductivity (µS/cm)	A-T-037	N	N	538	249					
Mass Sample (kg)				0.200						
Dry Matter (%)	A-T-044	N	N	81.1						
Stage 1										
Volume Leachant, L ₂ (l)	A-T-046			0.350						
Filtered Eluate Volume, VE ₁ (l)	A-T-046			0.150						
Stage 2										
Volume Leachant, L ₈ (l)	A-T-046			1.300						
Stated acceptance limits are for guidance only and Envirolab cannot be held responsible for any discrepancies with current legislation										

Final Test Report

Envirolab Job Number: 18/03064
Issue Number: 1

Date: 22-May-18

Client: Ian Farmer Associates (Warrington)
14/15 Rufford Court
Hardwick Grange
Warrington
WA1 4RF

Project Manager: [REDACTED]
Project Name: Ashton Moss
Project Ref: 42171
Order No: 44440

Date Samples Received: 18-Apr-18
Date Instructions Received: 24-Apr-18
Date Analysis Completed: 22-May-18

Notes - Soil analysis

All results are reported as dry weight (<40°C).

For samples with Matrix Codes 1 - 6 natural stones >10mm are removed or excluded from the sample prior to analysis and reported results corrected to a whole sample basis.

For samples with Matrix Code 7 the whole sample is dried and crushed prior to analysis.

Notes - General

This report shall not be reproduced, except in full, without written approval from Envirolab.

Subscript "A" indicates analysis performed on the sample as received. "D" indicates analysis performed on the dried sample, crushed to pass a 2mm sieve, unless asbestos is found to be present in which case all analysis is performed on the sample as received.

All analysis is performed on the dried and crushed sample for samples with Matrix Code 7 and this supercedes any "A" subscripts.

All analysis is performed on the sample as received for soil samples from outside the European Union and this supercedes any "D" subscripts

Superscript "M" indicates method accredited to MCERTS.

For complex, multi-compound analysis, quality control results do not always fall within chart limits for every compound and we have criteria for reporting in these situations.

If results are in italic font they are associated with such quality control failures and may be unreliable.

A deviating samples report is appended and will indicate if samples or tests have been found to be deviating. Any test results affected may not be an accurate record of the concentration at the time of sampling and, as a result, may be invalid

Predominant Matrix Codes: 1 = SAND, 2 = LOAM, 3 = CLAY, 4 = LOAM/SAND, 5 = SAND/CLAY, 6 = CLAY/LOAM, 7 = OTHER, 8 = Asbestos bulk ID sample

Samples with Matrix Code 7 & 8 are not predominantly a SAND/LOAM/CLAY mix and are not covered by our BSEN 17025 or MCERTS accreditations, with the exception of bulk asbestos which are BSEN 17025 accredited

Secondary Matrix Codes: A = contains stones, B = contains construction rubble, C = contains visible hydrocarbons, D = contains glass/metal, E = contains roots/twigs.

IS indicates Insufficient sample for analysis, NDP indicates No Determination Possible and NAD indicates No Asbestos Detected.

Superscript # indicates method accredited to ISO 17025.

Analytical results reflect the quality of the sample at the time of analysis only. Opinions and interpretations expressed are outside the scope of our accreditation.

Please contact us if you need any further information.

Prepared by:

Approved by:

[REDACTED]
Administrative Assistant

[REDACTED]
Client Manager



Sample Details							Landfill Waste Acceptance Criteria Limits			
Lab Sample ID	Method	ISO17025	MCERTS	18/03064/22						
Client Sample Number				29			Inert Waste Landfill	Stable Non-reactive Hazardous Waste in Non-Hazardous Landfill	Hazardous Waste Landfill	
Client Sample ID				ARP-BH109						
Depth to Top				10						
Depth to Bottom										
Date Sampled				16/04/2018						
Sample Type				Soil - ES						
Sample Matrix Code				2E						
Solid Waste Analysis										
pH (pH Units) _D	A-T-031	Y	Y					-	>6	-
ANC to pH 4 (mol/kg) _D	A-T-ANC	N	N					-	to be evaluated	to be evaluated
ANC to pH 6 (mol/kg) _D	A-T-ANC	N	N					-	to be evaluated	to be evaluated
Loss on Ignition (%) _D	A-T-030	Y	N					-	-	10
Total Organic Carbon (%) _D	A-T-032	Y	Y	41.2				3	5	6
PAH Sum of 17 (mg/kg) _A	A-T-019	N	N	<0.08				100	-	-
Mineral Oil (mg/kg) _A	A-T-007	N	N	18				500	-	-
Sum of 7 PCBs (mg/kg) _D	A-T-004	N	N	<0.007				1	-	-
Sum of BTEX (mg/kg) _A	A-T-022	N	N	<0.01				6	-	-
Eluate Analysis				2:1	8:1	2:1	Cumulative 10:1	Limit values for compliance leaching test using		
				mg/l		mg/kg		BS EN 12457-3 at L/S 10 l/kg (mg/kg)		
Arsenic	A-T-025	Y	N	0.012	0.010	0.154	0.220	0.5	2	25
Barium	A-T-025	Y	N	0.020	0.009	0.265	0.230	20	100	300
Cadmium	A-T-025	Y	N	<0.001	<0.001	<0.002	<0.01	0.04	1	5
Chromium	A-T-025	Y	N	<0.001	<0.001	<0.002	<0.01	0.5	10	70
Copper	A-T-025	Y	N	0.004	0.003	0.056	0.070	2	50	100
Mercury	A-T-025	Y	N	<0.0005	<0.0005	<0.001	<0.005	0.01	0.2	2
Molybdenum	A-T-025	Y	N	<0.001	<0.001	<0.002	<0.01	0.5	10	30
Nickel	A-T-025	Y	N	0.002	0.002	0.026	0.040	0.4	10	40
Lead	A-T-025	Y	N	0.002	0.004	0.030	0.070	0.5	10	50
Antimony	A-T-025	Y	N	<0.001	<0.001	<0.002	<0.01	0.06	0.7	5
Selenium	A-T-025	Y	N	<0.001	<0.001	<0.002	<0.01	0.1	0.5	7
Zinc	A-T-025	Y	N	0.064	0.152	0.830	2.860	4	50	200
Chloride	A-T-026	Y	N	16	8	212	197	800	15000	25000
Fluoride	A-T-026	Y	N	0.2	0.1	1.9	3.0	10	150	500
Sulphate as SO ₄	A-T-026	Y	N	41	20	534	498	1000	20000	50000
Total Dissolved Solids	A-T-035	N	N	66	22	855	629	4000	60000	100000
Phenol Index	A-T-050	N	N	<0.01	<0.01	<0.02	<0.1	1	-	-
Dissolved Organic Carbon	A-T-032	N	N	31.7	27.40	411	591	500	800	1000
Leach Test Information										
pH (pH Units)	A-T-031	N	Y	6.0	5.9					
Conductivity (µS/cm)	A-T-037	N	N	131	44					
Mass Sample (kg)				0.200						
Dry Matter (%)	A-T-044	N	N	19.7						
Stage 1										
Volume Leachant, L ₂ (l)	A-T-046			0.350						
Filtered Eluate Volume, VE ₁ (l)	A-T-046			0.150						
Stage 2										
Volume Leachant, L ₈ (l)	A-T-046			0.320						
Stated acceptance limits are for guidance only and Envirolab cannot be held responsible for any discrepancies with current legislation										

FINAL ANALYTICAL TEST REPORT

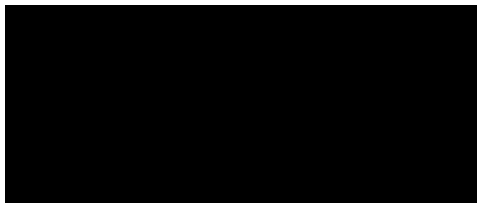
Envirolab Job Number: 18/03153
Issue Number: 1

Date: 04 May, 2018

Client: Ian Farmer Associates (Warrington)
14/15 Rufford Court
Hardwick Grange
Warrington
WA1 4RF

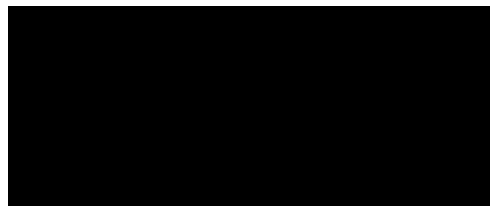
Project Manager: [REDACTED]
Project Name: Ashton Moss
Project Ref: 42171
Order No: 44440
Date Samples Received: 25/04/18
Date Instructions Received: 26/04/18
Date Analysis Completed: 04/05/18

Prepared by:



Administrative Assistant

Approved by:



Client Manager

Envirolab Job Number: 18/03153

Client Project Name: Ashton Moss

Client Project Ref: 42171

Lab Sample ID	18/03153/1	18/03153/2							Units	Method ref
Client Sample No	2	6								
Client Sample ID	ARP-BH108	ARP-BH108								
Depth to Top	1.00	3.00								
Depth To Bottom										
Date Sampled	18-Apr-18	18-Apr-18								
Sample Type	Soil - ES	Soil - ES								
Sample Matrix Code	6B	6B								
% Stones >10mm _A	<0.1	12.3							% w/w	A-T-044
pH _D ^{M#}	8.60	7.93							pH	A-T-031s
Cyanide (total) _A ^{M#}	<1	<1							mg/kg	A-T-042sTCN
Phenols - Total by HPLC _A	<0.2	<0.2							mg/kg	A-T-050s
Total Organic Carbon _D ^{M#}	4.98	2.28							% w/w	A-T-032s
Antimony _D	<5	<5							mg/kg	A-T-024s
Arsenic _D ^{M#}	7	5							mg/kg	A-T-024s
Beryllium _D [#]	0.9	0.7							mg/kg	A-T-024s
Boron (water soluble) _D ^{M#}	<1.0	1.4							mg/kg	A-T-027s
Cadmium _D ^{M#}	1.6	1.2							mg/kg	A-T-024s
Copper _D ^{M#}	36	35							mg/kg	A-T-024s
Chromium _D ^{M#}	30	18							mg/kg	A-T-024s
Chromium (hexavalent) _D	<1	<1							mg/kg	A-T-040s
Lead _D ^{M#}	70	63							mg/kg	A-T-024s
Mercury _D	0.47	0.37							mg/kg	A-T-024s
Nickel _D ^{M#}	24	20							mg/kg	A-T-024s
Selenium _D ^{M#}	<1	<1							mg/kg	A-T-024s
Vanadium _D ^{M#}	28	23							mg/kg	A-T-024s
Zinc _D ^{M#}	80	82							mg/kg	A-T-024s
Asbestos in Soil (inc. matrix) ^										
Asbestos in soil _A [#]	NAD	NAD								A-T-045
Asbestos ACM - Suitable for Water Absorption Test?	N/A	N/A								

Envirolab Job Number: 18/03153

Client Project Name: Ashton Moss

Client Project Ref: 42171

Lab Sample ID	18/03153/1	18/03153/2							Units	Method ref
Client Sample No	2	6								
Client Sample ID	ARP-BH108	ARP-BH108								
Depth to Top	1.00	3.00								
Depth To Bottom										
Date Sampled	18-Apr-18	18-Apr-18								
Sample Type	Soil - ES	Soil - ES								
Sample Matrix Code	6B	6B								
PAH-16MS										
Acenaphthene _A ^{M#}	2.67	0.36							mg/kg	A-T-019s
Acenaphthylene _A ^{M#}	0.04	0.02							mg/kg	A-T-019s
Anthracene _A ^{M#}	4.57	0.48							mg/kg	A-T-019s
Benzo(a)anthracene _A ^{M#}	5.18	1.06							mg/kg	A-T-019s
Benzo(a)pyrene _A ^{M#}	3.46	0.75							mg/kg	A-T-019s
Benzo(b)fluoranthene _A ^{M#}	3.83	0.94							mg/kg	A-T-019s
Benzo(ghi)perylene _A ^{M#}	1.61	0.43							mg/kg	A-T-019s
Benzo(k)fluoranthene _A ^{M#}	1.25	0.27							mg/kg	A-T-019s
Chrysene _A ^{M#}	4.39	1.12							mg/kg	A-T-019s
Dibenzo(ah)anthracene _A ^{M#}	0.33	0.08							mg/kg	A-T-019s
Fluoranthene _A ^{M#}	15.2	2.71							mg/kg	A-T-019s
Fluorene _A ^{M#}	3.92	0.29							mg/kg	A-T-019s
Indeno(123-cd)pyrene _A ^{M#}	2.14	0.53							mg/kg	A-T-019s
Naphthalene _A ^{M#}	2.59	0.14							mg/kg	A-T-019s
Phenanthrene _A ^{M#}	19.1	2.05							mg/kg	A-T-019s
Pyrene _A ^{M#}	12.1	2.43							mg/kg	A-T-019s
PAH (total 16) _A ^{M#}	82.3	13.7							mg/kg	A-T-019s

Envirolab Job Number: 18/03153

Client Project Name: Ashton Moss

Client Project Ref: 42171

Lab Sample ID	18/03153/1	18/03153/2							Units	Method ref
Client Sample No	2	6								
Client Sample ID	ARP-BH108	ARP-BH108								
Depth to Top	1.00	3.00								
Depth To Bottom										
Date Sampled	18-Apr-18	18-Apr-18								
Sample Type	Soil - ES	Soil - ES								
Sample Matrix Code	6B	6B								
TPH UKCWG										
Ali >C5-C6 _A [#]	<0.01	<0.01							mg/kg	A-T-022s
Ali >C6-C8 _A [#]	<0.01	<0.01							mg/kg	A-T-022s
Ali >C8-C10 _A [#]	<0.01	<0.01							mg/kg	A-T-022s
Ali >C10-C12 _A [#]	<0.1	<0.1							mg/kg	A-T-023s
Ali >C12-C16 _A [#]	<0.1	<0.1							mg/kg	A-T-023s
Ali >C16-C21 _A [#]	<0.1	<0.1							mg/kg	A-T-023s
Ali >C21-C35 _A [#]	<0.1	<0.1							mg/kg	A-T-023s
Ali >C35-C44 _A	<0.1	<0.1							mg/kg	A-T-023s
Total Aliphatics _A	<0.1	<0.1							mg/kg	A-T-023s
Aro >C5-C7 _A [#]	<0.01	<0.01							mg/kg	A-T-022s
Aro >C7-C8 _A [#]	<0.01	<0.01							mg/kg	A-T-022s
Aro >C8-C9 _A [#]	<0.01	<0.01							mg/kg	A-T-022s
Aro >C9-C10 _A [#]	<0.01	<0.01							mg/kg	A-T-022s
Aro >C10-C12 _A [#]	0.7	0.5							mg/kg	A-T-023s
Aro >C12-C16 _A [#]	8.2	4.8							mg/kg	A-T-023s
Aro >C16-C21 _A [#]	25.0	16.8							mg/kg	A-T-023s
Aro >C21-C35 _A [#]	40.4	40.9							mg/kg	A-T-023s
Aro >C35-C44 _A	<0.1	1.8							mg/kg	A-T-023s
Total Aromatics _A	74.3	62.9							mg/kg	A-T-023s
TPH (Ali & Aro) _A	74.3	62.9							mg/kg	A-T-023s
BTEX - Benzene _A [#]	<0.01	<0.01							mg/kg	A-T-022s
BTEX - Toluene _A [#]	<0.01	<0.01							mg/kg	A-T-022s
BTEX - Ethyl Benzene _A [#]	<0.01	<0.01							mg/kg	A-T-022s
BTEX - m & p Xylene _A [#]	<0.01	<0.01							mg/kg	A-T-022s
BTEX - o Xylene _A [#]	<0.01	<0.01							mg/kg	A-T-022s
MTBE _A [#]	<0.01	<0.01							mg/kg	A-T-022s

REPORT NOTES

General:

This report shall not be reproduced, except in full, without written approval from Envirolab.

All samples contained within this report, and any received with the same delivery, will be disposed of one month after the date of this report.

Analytical results reflect the quality of the sample at the time of analysis only.

Opinions and interpretations expressed are outside the scope of our accreditation.

If results are in italic font they are associated with an AQC failure and there is insufficient sample to repeat the analysis. These are not accredited and are unreliable.

A deviating samples report is appended and will indicate if samples or tests have been found to be deviating. Any test results affected may not be an accurate record of the concentration at the time of sampling and, as a result, may be invalid.

Soil chemical analysis:

All results are reported as dry weight (<40°C).

For samples with Matrix Codes 1 - 6 natural stones, brick and concrete fragments >10mm and any extraneous material (visible glass, metal or twigs) are removed and excluded from the sample prior to analysis and reported results corrected to a whole sample basis. This is reported as '% stones >10mm'.

For samples with Matrix Code 7 the whole sample is dried and crushed prior to analysis and this supersedes any "A" subscripts

All analysis is performed on the sample as received for soil samples which are positive for asbestos or the client has informed asbestos may be present and/or if they are from outside the European Union and this supersedes any "D" subscripts.

TPH analysis of water by method A-T-007:

Free and visible oils are excluded from the sample used for analysis so that the reported result represents the dissolved phase only.

Electrical Conductivity of water by Method A-T-037:

Results greater than 12900µS/cm @ 25°C / 11550µS/cm @ 20°C fall outside the calibration range and as such are unaccredited.

Asbestos:

Asbestos in soil analysis is performed on a dried aliquot of the submitted sample and cannot guarantee to identify asbestos if only present in small numbers as discrete fibres/fragments in the original sample.

Stones etc. are not removed from the sample prior to analysis.

Quantification of asbestos is a 3 stage process including visual identification, hand picking and weighing and fibre counting by sedimentation/phase contrast optical microscopy if required. If asbestos is identified as being present but is not in a form that is suitable for analysis by hand picking and weighing (normally if the asbestos is present as free fibres) quantification by sedimentation is performed. Where ACMs are found a percentage asbestos is assigned to each with reference to 'HSG264, Asbestos: The survey guide' and the calculated asbestos content is expressed as a percentage of the dried soil sample aliquot used.

Predominant Matrix Codes:

1 = SAND, 2 = LOAM, 3 = CLAY, 4 = LOAM/SAND, 5 = SAND/CLAY, 6 = CLAY/LOAM, 7 = OTHER, 8 = Asbestos bulk ID sample.

Samples with Matrix Code 7 & 8 are not predominantly a SAND/LOAM/CLAY mix and are not covered by our BSEN 17025 or MCERTS accreditations, with the exception of bulk asbestos which are BSEN 17025 accredited.

Secondary Matrix Codes:

A = contains stones, B = contains construction rubble, C = contains visible hydrocarbons, D = contains glass/metal,

E = contains roots/twigs.

Key:

IS indicates Insufficient Sample for analysis.

US indicates Unsuitable Sample for analysis.

NDP indicates No Determination Possible.

NAD indicates No Asbestos Detected.

N/A indicates Not Applicable.

Superscript # indicates method accredited to ISO 17025.

Superscript "M" indicates method accredited to MCERTS.

Subscript "A" indicates analysis performed on the sample as received.

Subscript "D" indicates analysis performed on the dried sample, crushed to pass a 2mm sieve

Please contact us if you need any further information.

FINAL ANALYTICAL TEST REPORT

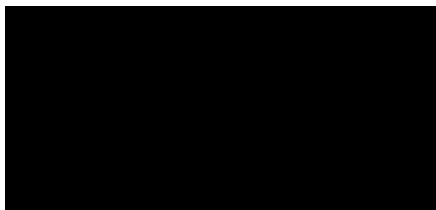
Envirolab Job Number: 18/03369
Issue Number: 1

Date: 18 May, 2018

Client: Ian Farmer Associates (Warrington)
14/15 Rufford Court
Hardwick Grange
Warrington
WA1 4RF

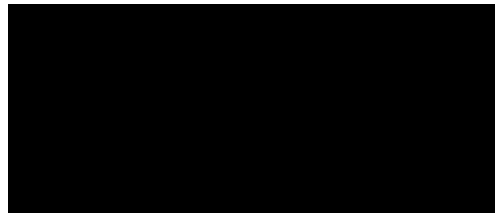
Project Manager: [REDACTED]
Project Name: Ashton Moss
Project Ref: 42171
Order No: 44481
Date Samples Received: 20/04/18
Date Instructions Received: 03/05/18
Date Analysis Completed: 18/05/18

Prepared by:



Administrative Assistant

Approved by:



Client Manager

Envirolab Job Number: 18/03369

Client Project Name: Ashton Moss

Client Project Ref: 42171

Lab Sample ID	18/03369/1	18/03369/5	18/03369/6	18/03369/9	18/03369/12	18/03369/13	18/03369/14	18/03369/16	Units	Method ref
Client Sample No	2	13	16	24	35	10	13	20		
Client Sample ID	ARP-BH101	ARP-BH101	ARP-BH101	ARP-BH101	ARP-BH101	ARP-BH102	ARP-BH102	ARP-BH102		
Depth to Top	1.00	5.00	6.00	10.00	13.00	4.90	5.90	8.90		
Depth To Bottom										
Date Sampled	23-Apr-18	23-Apr-18	23-Apr-18	23-Apr-18	23-Apr-18	20-Apr-18	20-Apr-18	20-Apr-18		
Sample Type	Soil - ES	Soil - ES	Solid	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES		
Sample Matrix Code	6BD	3B	7	6E	3	6A	6A	6		
% Stones >10mm _A	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	9.3	<0.1	% w/w	A-T-044
pH _D ^{M#}	9.19	8.72	-	7.41	8.03	7.97	-	8.24	pH	A-T-031s
Cyanide (total) _A ^{M#}	<1	<1	-	<1	<1	<1	-	<1	mg/kg	A-T-042sTCN
Phenols - Total by HPLC _A	<0.2	<0.2	-	<0.2	<0.2	<0.2	-	<0.2	mg/kg	A-T-050s
Total Organic Carbon _D ^{M#}	1.62	0.88	1.68	6.11	1.03	7.36	5.32	3.03	% w/w	A-T-032s
Antimony _D	<5	<5	-	<5	<5	<5	-	<5	mg/kg	A-T-024s
Arsenic _D ^{M#}	7	4	-	4	<1	7	-	3	mg/kg	A-T-024s
Beryllium _D [#]	0.8	1.0	-	1.0	1.3	0.6	-	0.7	mg/kg	A-T-024s
Boron (water soluble) _D ^{M#}	<1.0	<1.0	-	<1.0	<1.0	1.2	-	1.1	mg/kg	A-T-027s
Cadmium _D ^{M#}	1.4	1.4	-	1.1	2.0	1.0	-	1.2	mg/kg	A-T-024s
Copper _D ^{M#}	32	21	-	32	19	36	-	24	mg/kg	A-T-024s
Chromium _D ^{M#}	22	27	-	32	36	16	-	24	mg/kg	A-T-024s
Chromium (hexavalent) _D	<1	<1	-	<1	<1	<1	-	<1	mg/kg	A-T-040s
Lead _D ^{M#}	67	19	-	42	11	90	-	39	mg/kg	A-T-024s
Mercury _D	0.31	<0.17	-	<0.17	<0.17	0.23	-	<0.17	mg/kg	A-T-024s
Nickel _D ^{M#}	25	34	-	32	40	19	-	25	mg/kg	A-T-024s
Selenium _D ^{M#}	<1	<1	-	<1	<1	<1	-	<1	mg/kg	A-T-024s
Vanadium _D ^{M#}	27	26	-	33	38	23	-	24	mg/kg	A-T-024s
Zinc _D ^{M#}	74	57	-	81	59	88	-	67	mg/kg	A-T-024s
Asbestos in Soil (inc. matrix) ^										
Asbestos in soil _A [#]	NAD	NAD	-	NAD	NAD	Chrysotile	-	NAD		A-T-045
Asbestos Matrix (microscope) _A	-	-	-	-	-	Loose Fibres	-	-		A-T-045
Asbestos ACM - Suitable for Water Absorption Test?	N/A	N/A	-	N/A	N/A	N/A	-	N/A		
Asbestos in Soil Quantification % (Hand Picking & Weighing)										
Asbestos in soil % composition (hand picking and weighing) _D	-	-	-	-	-	<0.001	-	-	% w/w	A-T-054

Envirolab Job Number: 18/03369

Client Project Name: Ashton Moss

Client Project Ref: 42171

Lab Sample ID	18/03369/1	18/03369/5	18/03369/6	18/03369/9	18/03369/12	18/03369/13	18/03369/14	18/03369/16	Units	Method ref
Client Sample No	2	13	16	24	35	10	13	20		
Client Sample ID	ARP-BH101	ARP-BH101	ARP-BH101	ARP-BH101	ARP-BH101	ARP-BH102	ARP-BH102	ARP-BH102		
Depth to Top	1.00	5.00	6.00	10.00	13.00	4.90	5.90	8.90		
Depth To Bottom										
Date Sampled	23-Apr-18	23-Apr-18	23-Apr-18	23-Apr-18	23-Apr-18	20-Apr-18	20-Apr-18	20-Apr-18		
Sample Type	Soil - ES	Soil - ES	Solid	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES		
Sample Matrix Code	6BD	3B	7	6E	3	6A	6A	6		
PAH-16MS										
Acenaphthene _A ^{M#}	0.08	<0.01	-	0.11	<0.01	0.08	-	0.17	mg/kg	A-T-019s
Acenaphthylene _A ^{M#}	<0.01	<0.01	-	<0.01	<0.01	<0.01	-	<0.01	mg/kg	A-T-019s
Anthracene _A ^{M#}	0.35	<0.02	-	0.08	<0.02	0.11	-	0.16	mg/kg	A-T-019s
Benzo(a)anthracene _A ^{M#}	0.50	<0.04	-	0.08	<0.04	0.14	-	0.13	mg/kg	A-T-019s
Benzo(a)pyrene _A ^{M#}	0.34	<0.04	-	0.10	<0.04	0.12	-	0.10	mg/kg	A-T-019s
Benzo(b)fluoranthene _A ^{M#}	0.36	<0.05	-	0.11	<0.05	0.13	-	0.11	mg/kg	A-T-019s
Benzo(ghi)perylene _A ^{M#}	0.13	<0.05	-	<0.05	<0.05	<0.05	-	<0.05	mg/kg	A-T-019s
Benzo(k)fluoranthene _A ^{M#}	0.20	<0.07	-	<0.07	<0.07	<0.07	-	<0.07	mg/kg	A-T-019s
Chrysene _A ^{M#}	0.58	<0.06	-	0.14	<0.06	0.22	-	0.18	mg/kg	A-T-019s
Dibenzo(ah)anthracene _A ^{M#}	<0.04	<0.04	-	<0.04	<0.04	<0.04	-	<0.04	mg/kg	A-T-019s
Fluoranthene _A ^{M#}	1.25	<0.08	-	0.29	<0.08	0.48	-	0.51	mg/kg	A-T-019s
Fluorene _A ^{M#}	0.09	<0.01	-	0.06	<0.01	0.05	-	0.10	mg/kg	A-T-019s
Indeno(123-cd)pyrene _A ^{M#}	0.16	<0.03	-	0.06	<0.03	0.05	-	0.04	mg/kg	A-T-019s
Naphthalene _A ^{M#}	0.06	<0.03	-	0.13	<0.03	0.04	-	0.06	mg/kg	A-T-019s
Phenanthrene _A ^{M#}	0.97	<0.03	-	0.29	<0.03	0.32	-	0.45	mg/kg	A-T-019s
Pyrene _A ^{M#}	0.94	<0.07	-	0.26	<0.07	0.46	-	0.44	mg/kg	A-T-019s
PAH (total 16) _A ^{M#}	6.03	<0.08	-	1.72	<0.08	2.23	-	2.43	mg/kg	A-T-019s

Envirolab Job Number: 18/03369

Client Project Name: Ashton Moss

Client Project Ref: 42171

Lab Sample ID	18/03369/1	18/03369/5	18/03369/6	18/03369/9	18/03369/12	18/03369/13	18/03369/14	18/03369/16	Units	Method ref
Client Sample No	2	13	16	24	35	10	13	20		
Client Sample ID	ARP-BH101	ARP-BH101	ARP-BH101	ARP-BH101	ARP-BH101	ARP-BH102	ARP-BH102	ARP-BH102		
Depth to Top	1.00	5.00	6.00	10.00	13.00	4.90	5.90	8.90		
Depth To Bottom										
Date Sampled	23-Apr-18	23-Apr-18	23-Apr-18	23-Apr-18	23-Apr-18	20-Apr-18	20-Apr-18	20-Apr-18		
Sample Type	Soil - ES	Soil - ES	Solid	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES		
Sample Matrix Code	6BD	3B	7	6E	3	6A	6A	6		
TPH UKCWG										
Ali >C5-C6 _A [#]	<0.01	<0.01	-	<0.05	<0.01	<0.01	-	<0.01	mg/kg	A-T-022s
Ali >C6-C8 _A [#]	<0.01	<0.01	-	<0.05	<0.01	<0.01	-	<0.01	mg/kg	A-T-022s
Ali >C8-C10 _A [#]	<0.01	<0.01	-	<0.05	<0.01	<0.01	-	<0.01	mg/kg	A-T-022s
Ali >C10-C12 _A [#]	<0.1	<0.1	-	<0.1	<0.1	<0.1	-	<0.1	mg/kg	A-T-023s
Ali >C12-C16 _A [#]	<0.1	<0.1	-	<0.1	<0.1	<0.1	-	<0.1	mg/kg	A-T-023s
Ali >C16-C21 _A [#]	<0.1	<0.1	-	<0.1	2.5	<0.1	-	0.6	mg/kg	A-T-023s
Ali >C21-C35 _A [#]	<0.1	<0.1	-	<0.1	24.7	<0.1	-	13.3	mg/kg	A-T-023s
Ali >C35-C44 _A	<0.1	<0.1	-	<0.1	0.5	<0.1	-	<0.1	mg/kg	A-T-023s
Total Aliphatics _A	<0.1	<0.1	-	<0.1	27.2	<0.1	-	14.0	mg/kg	A-T-023s
Aro >C5-C7 _A [#]	<0.01	<0.01	-	<0.05	<0.01	<0.01	-	<0.01	mg/kg	A-T-022s
Aro >C7-C8 _A [#]	<0.01	<0.01	-	<0.05	<0.01	<0.01	-	<0.01	mg/kg	A-T-022s
Aro >C8-C9 _A [#]	<0.01	<0.01	-	<0.05	<0.01	<0.01	-	<0.01	mg/kg	A-T-022s
Aro >C9-C10 _A [#]	<0.01	<0.01	-	<0.05	<0.01	<0.01	-	<0.01	mg/kg	A-T-022s
Aro >C10-C12 _A [#]	0.6	<0.1	-	0.5	<0.1	0.2	-	<0.1	mg/kg	A-T-023s
Aro >C12-C16 _A [#]	2.2	<0.1	-	4.2	<0.1	1.2	-	<0.1	mg/kg	A-T-023s
Aro >C16-C21 _A [#]	3.5	<0.1	-	6.1	<0.1	3.2	-	<0.1	mg/kg	A-T-023s
Aro >C21-C35 _A [#]	16.4	<0.1	-	6.1	<0.1	7.5	-	13.6	mg/kg	A-T-023s
Aro >C35-C44 _A	0.3	<0.1	-	<0.1	<0.1	0.8	-	<0.1	mg/kg	A-T-023s
Total Aromatics _A	22.6	<0.1	-	16.9	<0.1	12.2	-	13.6	mg/kg	A-T-023s
TPH (Ali & Aro) _A	22.6	<0.1	-	16.9	27.2	12.2	-	27.4	mg/kg	A-T-023s
BTEX - Benzene _A [#]	<0.01	<0.01	-	<0.05	<0.01	<0.01	-	<0.01	mg/kg	A-T-022s
BTEX - Toluene _A [#]	<0.01	<0.01	-	<0.05	<0.01	<0.01	-	<0.01	mg/kg	A-T-022s
BTEX - Ethyl Benzene _A [#]	<0.01	<0.01	-	<0.05	<0.01	<0.01	-	<0.01	mg/kg	A-T-022s
BTEX - m & p Xylene _A [#]	<0.01	<0.01	-	<0.05	<0.01	<0.01	-	<0.01	mg/kg	A-T-022s
BTEX - o Xylene _A [#]	<0.01	<0.01	-	<0.05	<0.01	<0.01	-	<0.01	mg/kg	A-T-022s
MTBE _A [#]	<0.01	<0.01	-	<0.05	<0.01	<0.01	-	<0.01	mg/kg	A-T-022s

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Lab Sample ID	18/03369/19	18/03369/21	18/03369/22	18/03369/26	18/03369/28	18/03369/29	18/03369/34	18/03369/35	Units	Method ref
Client Sample No	32	42	2	10	15	18	12	14		
Client Sample ID	ARP-BH102	ARP-BH102	ARP-BH105	ARP-BH105	ARP-BH105	ARP-BH105	ARP-BH108	ARP-BH108		
Depth to Top	13.60	18.00	1.00	4.90	8.00	8.90	6.00	7.00		
Depth To Bottom										
Date Sampled	20-Apr-18	20-Apr-18	24-Apr-18	24-Apr-18	24-Apr-18	24-Apr-18	19-Apr-18	19-Apr-18		
Sample Type	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES		
Sample Matrix Code	6	3	6B	6A	2E	2A	6A	6A		
% Stones >10mm _A	<0.1	<0.1	<0.1	5.8	7.3	6.1	10.3	<0.1	% w/w	A-T-044
pH _D ^{M#}	7.57	7.63	9.46	8.10	-	6.86	-	7.94	pH	A-T-031s
Cyanide (total) _A ^{M#}	<1	<1	<1	<1	-	<1	-	<1	mg/kg	A-T-042sTCN
Phenols - Total by HPLC _A	<0.2	<0.2	<0.2	<0.2	-	<0.2	-	<0.2	mg/kg	A-T-050s
Total Organic Carbon _D ^{M#}	7.12	0.94	2.16	2.41	7.27	13.7	1.97	0.59	% w/w	A-T-032s
Antimony _D	<5	<5	<5	<5	-	<5	-	<5	mg/kg	A-T-024s
Arsenic _D ^{M#}	9	<1	5	2	-	19	-	7	mg/kg	A-T-024s
Beryllium _D [#]	1.1	0.9	0.9	1.1	-	1.4	-	0.8	mg/kg	A-T-024s
Boron (water soluble) _D ^{M#}	1.3	<1.0	<1.0	<1.0	-	1.5	-	<1.0	mg/kg	A-T-027s
Cadmium _D ^{M#}	1.9	1.9	1.1	1.2	-	1.7	-	1.3	mg/kg	A-T-024s
Copper _D ^{M#}	39	19	36	26	-	79	-	24	mg/kg	A-T-024s
Chromium _D ^{M#}	25	24	22	25	-	29	-	21	mg/kg	A-T-024s
Chromium (hexavalent) _D	<1	<1	<1	<1	-	<1	-	<1	mg/kg	A-T-040s
Lead _D ^{M#}	59	10	118	31	-	147	-	28	mg/kg	A-T-024s
Mercury _D	0.52	<0.17	0.30	<0.17	-	0.37	-	<0.17	mg/kg	A-T-024s
Nickel _D ^{M#}	28	36	23	33	-	33	-	29	mg/kg	A-T-024s
Selenium _D ^{M#}	<1	<1	<1	<1	-	<1	-	<1	mg/kg	A-T-024s
Vanadium _D ^{M#}	31	25	29	30	-	38	-	21	mg/kg	A-T-024s
Zinc _D ^{M#}	82	54	86	66	-	182	-	66	mg/kg	A-T-024s
Asbestos in Soil (inc. matrix) ^										
Asbestos in soil _A [#]	NAD	NAD	NAD	NAD	-	NAD	-	Chrysotile		A-T-045
Asbestos Matrix (microscope) _A	-	-	-	-	-	-	-	Loose Fibres		A-T-045
Asbestos ACM - Suitable for Water Absorption Test?	N/A	N/A	N/A	N/A	-	N/A	-	N/A		
Asbestos in Soil Quantification % (Hand Picking & Weighing)										
Asbestos in soil % composition (hand picking and weighing) _D	-	-	-	-	-	-	-	<0.001	% w/w	A-T-054

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Lab Sample ID	18/03369/19	18/03369/21	18/03369/22	18/03369/26	18/03369/28	18/03369/29	18/03369/34	18/03369/35	Units	Method ref
Client Sample No	32	42	2	10	15	18	12	14		
Client Sample ID	ARP-BH102	ARP-BH102	ARP-BH105	ARP-BH105	ARP-BH105	ARP-BH105	ARP-BH108	ARP-BH108		
Depth to Top	13.60	18.00	1.00	4.90	8.00	8.90	6.00	7.00		
Depth To Bottom										
Date Sampled	20-Apr-18	20-Apr-18	24-Apr-18	24-Apr-18	24-Apr-18	24-Apr-18	19-Apr-18	19-Apr-18		
Sample Type	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES		
Sample Matrix Code	6	3	6B	6A	2E	2A	6A	6A		
PAH-16MS										
Acenaphthene _A ^{M#}	0.06	<0.01	1.95	0.12	-	0.05	-	0.06	mg/kg	A-T-019s
Acenaphthylene _A ^{M#}	<0.01	<0.01	0.06	<0.01	-	<0.01	-	<0.01	mg/kg	A-T-019s
Anthracene _A ^{M#}	0.08	<0.02	1.93	0.10	-	0.07	-	0.07	mg/kg	A-T-019s
Benzo(a)anthracene _A ^{M#}	0.09	<0.04	2.72	0.06	-	0.07	-	0.07	mg/kg	A-T-019s
Benzo(a)pyrene _A ^{M#}	0.08	<0.04	1.93	<0.04	-	<0.04	-	0.06	mg/kg	A-T-019s
Benzo(b)fluoranthene _A ^{M#}	<0.05	<0.05	2.27	<0.05	-	<0.05	-	0.07	mg/kg	A-T-019s
Benzo(ghi)perylene _A ^{M#}	<0.05	<0.05	0.81	<0.05	-	<0.05	-	<0.05	mg/kg	A-T-019s
Benzo(k)fluoranthene _A ^{M#}	<0.07	<0.07	1.06	<0.07	-	<0.07	-	<0.07	mg/kg	A-T-019s
Chrysene _A ^{M#}	0.12	<0.06	2.75	0.08	-	0.10	-	0.12	mg/kg	A-T-019s
Dibenzo(ah)anthracene _A ^{M#}	<0.04	<0.04	0.23	<0.04	-	<0.04	-	<0.04	mg/kg	A-T-019s
Fluoranthene _A ^{M#}	0.28	<0.08	8.45	0.23	-	0.24	-	0.27	mg/kg	A-T-019s
Fluorene _A ^{M#}	0.03	<0.01	1.49	0.06	-	0.02	-	0.05	mg/kg	A-T-019s
Indeno(123-cd)pyrene _A ^{M#}	<0.03	<0.03	0.94	<0.03	-	<0.03	-	<0.03	mg/kg	A-T-019s
Naphthalene _A ^{M#}	0.05	<0.03	0.37	0.06	-	<0.03	-	<0.03	mg/kg	A-T-019s
Phenanthrene _A ^{M#}	0.25	<0.03	8.23	0.26	-	0.19	-	0.26	mg/kg	A-T-019s
Pyrene _A ^{M#}	0.26	<0.07	7.07	0.20	-	0.24	-	0.24	mg/kg	A-T-019s
PAH (total 16) _A ^{M#}	1.31	<0.08	42.3	1.19	-	0.95	-	1.29	mg/kg	A-T-019s

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Lab Sample ID	18/03369/19	18/03369/21	18/03369/22	18/03369/26	18/03369/28	18/03369/29	18/03369/34	18/03369/35	Units	Method ref
Client Sample No	32	42	2	10	15	18	12	14		
Client Sample ID	ARP-BH102	ARP-BH102	ARP-BH105	ARP-BH105	ARP-BH105	ARP-BH105	ARP-BH108	ARP-BH108		
Depth to Top	13.60	18.00	1.00	4.90	8.00	8.90	6.00	7.00		
Depth To Bottom										
Date Sampled	20-Apr-18	20-Apr-18	24-Apr-18	24-Apr-18	24-Apr-18	24-Apr-18	19-Apr-18	19-Apr-18		
Sample Type	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES		
Sample Matrix Code	6	3	6B	6A	2E	2A	6A	6A		
TPH UKCWG										
Ali >C5-C6 _A [#]	<0.05	<0.01	<0.01	<0.01	-	<0.05	-	<0.01	mg/kg	A-T-022s
Ali >C6-C8 _A [#]	<0.05	<0.01	<0.01	<0.01	-	<0.05	-	<0.01	mg/kg	A-T-022s
Ali >C8-C10 _A [#]	<0.05	<0.01	<0.01	<0.01	-	<0.05	-	<0.01	mg/kg	A-T-022s
Ali >C10-C12 _A [#]	<0.1	<0.1	0.5	<0.1	-	<0.1	-	<0.1	mg/kg	A-T-023s
Ali >C12-C16 _A [#]	<0.1	<0.1	2.0	<0.1	-	<0.1	-	<0.1	mg/kg	A-T-023s
Ali >C16-C21 _A [#]	<0.1	<0.1	3.9	<0.1	-	<0.1	-	<0.1	mg/kg	A-T-023s
Ali >C21-C35 _A [#]	<0.1	<0.1	57.7	<0.1	-	<0.1	-	7.4	mg/kg	A-T-023s
Ali >C35-C44 _A	<0.1	<0.1	7.4	<0.1	-	<0.1	-	<0.1	mg/kg	A-T-023s
Total Aliphatics _A	<0.1	<0.1	64.1	<0.1	-	<0.1	-	7.4	mg/kg	A-T-023s
Aro >C5-C7 _A [#]	<0.05	<0.01	<0.01	<0.01	-	<0.05	-	<0.01	mg/kg	A-T-022s
Aro >C7-C8 _A [#]	<0.05	<0.01	<0.01	<0.01	-	<0.05	-	<0.01	mg/kg	A-T-022s
Aro >C8-C9 _A [#]	<0.05	<0.01	<0.01	<0.01	-	<0.05	-	<0.01	mg/kg	A-T-022s
Aro >C9-C10 _A [#]	<0.05	<0.01	<0.01	<0.01	-	<0.05	-	<0.01	mg/kg	A-T-022s
Aro >C10-C12 _A [#]	<0.1	<0.1	0.6	<0.1	-	<0.1	-	0.4	mg/kg	A-T-023s
Aro >C12-C16 _A [#]	<0.1	<0.1	4.0	<0.1	-	0.8	-	2.6	mg/kg	A-T-023s
Aro >C16-C21 _A [#]	<0.1	<0.1	7.4	<0.1	-	3.9	-	3.7	mg/kg	A-T-023s
Aro >C21-C35 _A [#]	<0.1	<0.1	52.3	<0.1	-	9.8	-	4.6	mg/kg	A-T-023s
Aro >C35-C44 _A	<0.1	<0.1	5.1	<0.1	-	<0.1	-	<0.1	mg/kg	A-T-023s
Total Aromatics _A	<0.1	<0.1	64.2	<0.1	-	14.5	-	11.2	mg/kg	A-T-023s
TPH (Ali & Aro) _A	<0.1	<0.1	128	<0.1	-	14.5	-	18.7	mg/kg	A-T-023s
BTEX - Benzene _A [#]	<0.05	<0.01	<0.01	<0.01	-	<0.05	-	<0.01	mg/kg	A-T-022s
BTEX - Toluene _A [#]	<0.05	<0.01	<0.01	<0.01	-	<0.05	-	<0.01	mg/kg	A-T-022s
BTEX - Ethyl Benzene _A [#]	<0.05	<0.01	<0.01	<0.01	-	<0.05	-	<0.01	mg/kg	A-T-022s
BTEX - m & p Xylene _A [#]	<0.05	<0.01	<0.01	<0.01	-	<0.05	-	<0.01	mg/kg	A-T-022s
BTEX - o Xylene _A [#]	<0.05	<0.01	<0.01	<0.01	-	<0.05	-	<0.01	mg/kg	A-T-022s
MTBE _A [#]	<0.05	<0.01	<0.01	<0.01	-	<0.05	-	<0.01	mg/kg	A-T-022s

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Client Sample No	21	24	32	42	2	11	21	6		
Client Sample ID	ARP-BH108	ARP-BH108	ARP-BH108	ARP-BH108	ARP-BH112	ARP-BH112	ARP-BH112	ARP-WS101		
Depth to Top	10.00	11.00	15.00	19.00	1.00	4.90	8.00	1.70		
Depth To Bottom										
Date Sampled	19-Apr-18	19-Apr-18	19-Apr-18	20-Apr-18	23-Apr-18	23-Apr-18	23-Apr-18	25-Apr-18		
Sample Type	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES		
Sample Matrix Code	5A	6A	6E	6	6A	2A	6	6B		
% Stones >10mm _A	3.6	3.3	<0.1	<0.1	<0.1	1.4	<0.1	<0.1	% w/w	A-T-044
pH _D ^{M#}	-	8.44	7.16	5.26	7.71	7.10	8.08	8.89	pH	A-T-031s
Cyanide (total) _A ^{M#}	-	<1	<1	<1	<1	<1	<1	<1	mg/kg	A-T-042sTCN
Phenols - Total by HPLC _A	-	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	mg/kg	A-T-050s
Total Organic Carbon _D ^{M#}	1.48	1.56	9.73	0.91	1.05	12.9	0.81	4.54	% w/w	A-T-032s
Antimony _D	-	<5	<5	<5	<5	<5	<5	<5	mg/kg	A-T-024s
Arsenic _D ^{M#}	-	4	2	<1	5	36	1	5	mg/kg	A-T-024s
Beryllium _D [#]	-	0.9	0.9	1.2	<0.5	1.5	0.7	<0.5	mg/kg	A-T-024s
Boron (water soluble) _D ^{M#}	-	<1.0	<1.0	<1.0	1.2	2.4	<1.0	3.9	mg/kg	A-T-027s
Cadmium _D ^{M#}	-	1.3	0.9	1.3	1.0	4.4	1.4	0.9	mg/kg	A-T-024s
Copper _D ^{M#}	-	26	22	22	30	134	18	33	mg/kg	A-T-024s
Chromium _D ^{M#}	-	25	26	32	15	26	20	38	mg/kg	A-T-024s
Chromium (hexavalent) _D	-	<1	<1	<1	<1	<1	<1	<1	mg/kg	A-T-040s
Lead _D ^{M#}	-	41	28	11	60	264	12	72	mg/kg	A-T-024s
Mercury _D	-	0.17	<0.17	<0.17	0.37	1.50	<0.17	0.44	mg/kg	A-T-024s
Nickel _D ^{M#}	-	26	25	46	18	35	31	17	mg/kg	A-T-024s
Selenium _D ^{M#}	-	<1	<1	<1	<1	2	<1	<1	mg/kg	A-T-024s
Vanadium _D ^{M#}	-	26	31	32	17	38	21	21	mg/kg	A-T-024s
Zinc _D ^{M#}	-	76	53	58	76	218	49	92	mg/kg	A-T-024s
Asbestos in Soil (inc. matrix) ^										
Asbestos in soil _A [#]	-	NAD	NAD	NAD	Chrysotile	NAD	NAD	Amosite		A-T-045
Asbestos Matrix (microscope) _A	-	-	-	-	Loose Fibres	-	-	Loose Fibres		A-T-045
Asbestos ACM - Suitable for Water Absorption Test?	-	N/A	N/A	N/A	N/A	N/A	N/A	N/A		
Asbestos in Soil Quantification % (Hand Picking & Weighing)										
Asbestos in soil % composition (hand picking and weighing) _D	-	-	-	-	<0.001	-	-	<0.001	% w/w	A-T-054

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Client Sample No	21	24	32	42	2	11	21	6		
Client Sample ID	ARP-BH108	ARP-BH108	ARP-BH108	ARP-BH108	ARP-BH112	ARP-BH112	ARP-BH112	ARP-WS101		
Depth to Top	10.00	11.00	15.00	19.00	1.00	4.90	8.00	1.70		
Depth To Bottom										
Date Sampled	19-Apr-18	19-Apr-18	19-Apr-18	20-Apr-18	23-Apr-18	23-Apr-18	23-Apr-18	25-Apr-18		
Sample Type	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES		
Sample Matrix Code	5A	6A	6E	6	6A	2A	6	6B		
PAH-16MS										
Acenaphthene _A ^{M#}	-	0.05	0.03	<0.01	0.17	0.25	<0.01	0.12	mg/kg	A-T-019s
Acenaphthylene _A ^{M#}	-	<0.01	<0.01	<0.01	0.01	<0.01	<0.01	<0.01	mg/kg	A-T-019s
Anthracene _A ^{M#}	-	0.05	0.03	<0.02	0.24	0.23	<0.02	0.08	mg/kg	A-T-019s
Benzo(a)anthracene _A ^{M#}	-	0.06	<0.04	<0.04	0.41	0.37	<0.04	0.14	mg/kg	A-T-019s
Benzo(a)pyrene _A ^{M#}	-	<0.04	<0.04	<0.04	0.39	0.27	<0.04	0.13	mg/kg	A-T-019s
Benzo(b)fluoranthene _A ^{M#}	-	<0.05	<0.05	<0.05	0.42	0.28	<0.05	0.14	mg/kg	A-T-019s
Benzo(ghi)perylene _A ^{M#}	-	<0.05	<0.05	<0.05	0.20	0.12	<0.05	0.07	mg/kg	A-T-019s
Benzo(k)fluoranthene _A ^{M#}	-	<0.07	<0.07	<0.07	0.18	0.15	<0.07	<0.07	mg/kg	A-T-019s
Chrysene _A ^{M#}	-	0.08	<0.06	<0.06	0.56	0.48	<0.06	0.22	mg/kg	A-T-019s
Dibenzo(ah)anthracene _A ^{M#}	-	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	mg/kg	A-T-019s
Fluoranthene _A ^{M#}	-	0.22	<0.08	<0.08	1.14	1.12	<0.08	0.42	mg/kg	A-T-019s
Fluorene _A ^{M#}	-	0.02	<0.01	<0.01	0.11	0.13	<0.01	0.06	mg/kg	A-T-019s
Indeno(123-cd)pyrene _A ^{M#}	-	<0.03	<0.03	<0.03	0.22	0.12	<0.03	0.07	mg/kg	A-T-019s
Naphthalene _A ^{M#}	-	0.04	<0.03	<0.03	0.12	0.20	<0.03	0.12	mg/kg	A-T-019s
Phenanthrene _A ^{M#}	-	0.19	0.10	<0.03	0.90	0.95	<0.03	0.40	mg/kg	A-T-019s
Pyrene _A ^{M#}	-	0.19	0.11	<0.07	1.07	1.02	<0.07	0.41	mg/kg	A-T-019s
PAH (total 16) _A ^{M#}	-	0.92	0.29	<0.08	6.14	5.70	<0.08	2.42	mg/kg	A-T-019s

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Client Project Name: Ashton Moss

Client Project Ref: 42171

Lab Sample ID	18/03369/38	18/03369/39	18/03369/43	18/03369/47	18/03369/48	18/03369/52	18/03369/54	18/03369/56	Units	Method ref
Client Sample No	21	24	32	42	2	11	21	6		
Client Sample ID	ARP-BH108	ARP-BH108	ARP-BH108	ARP-BH108	ARP-BH112	ARP-BH112	ARP-BH112	ARP-WS101		
Depth to Top	10.00	11.00	15.00	19.00	1.00	4.90	8.00	1.70		
Depth To Bottom										
Date Sampled	19-Apr-18	19-Apr-18	19-Apr-18	20-Apr-18	23-Apr-18	23-Apr-18	23-Apr-18	25-Apr-18		
Sample Type	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES		
Sample Matrix Code	5A	6A	6E	6	6A	2A	6	6B		
TPH UKCWG										
Ali >C5-C6 _A [#]	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	mg/kg	A-T-022s
Ali >C6-C8 _A [#]	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	mg/kg	A-T-022s
Ali >C8-C10 _A [#]	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	mg/kg	A-T-022s
Ali >C10-C12 _A [#]	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	mg/kg	A-T-023s
Ali >C12-C16 _A [#]	-	<0.1	<0.1	<0.1	1.2	<0.1	<0.1	<0.1	mg/kg	A-T-023s
Ali >C16-C21 _A [#]	-	<0.1	<0.1	<0.1	5.8	<0.1	<0.1	<0.1	mg/kg	A-T-023s
Ali >C21-C35 _A [#]	-	<0.1	<0.1	<0.1	30.1	<0.1	6.4	<0.1	mg/kg	A-T-023s
Ali >C35-C44 _A	-	<0.1	<0.1	<0.1	1.7	<0.1	<0.1	<0.1	mg/kg	A-T-023s
Total Aliphatics _A	-	<0.1	<0.1	<0.1	37.1	<0.1	6.4	<0.1	mg/kg	A-T-023s
Aro >C5-C7 _A [#]	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	mg/kg	A-T-022s
Aro >C7-C8 _A [#]	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	mg/kg	A-T-022s
Aro >C8-C9 _A [#]	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	0.02	mg/kg	A-T-022s
Aro >C9-C10 _A [#]	-	<0.01	<0.01	<0.01	<0.01	0.03	<0.05	0.01	mg/kg	A-T-022s
Aro >C10-C12 _A [#]	-	<0.1	<0.1	<0.1	2.2	2.2	<0.1	0.4	mg/kg	A-T-023s
Aro >C12-C16 _A [#]	-	1.7	2.4	<0.1	4.3	5.2	<0.1	2.5	mg/kg	A-T-023s
Aro >C16-C21 _A [#]	-	3.5	4.5	<0.1	5.8	12.0	<0.1	5.5	mg/kg	A-T-023s
Aro >C21-C35 _A [#]	-	2.9	2.1	<0.1	18.8	23.6	<0.1	14.0	mg/kg	A-T-023s
Aro >C35-C44 _A	-	<0.1	<0.1	<0.1	1.2	2.2	<0.1	1.2	mg/kg	A-T-023s
Total Aromatics _A	-	8.1	9.0	<0.1	31.1	42.8	<0.1	22.6	mg/kg	A-T-023s
TPH (Ali & Aro) _A	-	8.1	9.0	<0.1	68.2	42.8	6.4	22.6	mg/kg	A-T-023s
BTEX - Benzene _A [#]	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	mg/kg	A-T-022s
BTEX - Toluene _A [#]	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	mg/kg	A-T-022s
BTEX - Ethyl Benzene _A [#]	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	mg/kg	A-T-022s
BTEX - m & p Xylene _A [#]	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	mg/kg	A-T-022s
BTEX - o Xylene _A [#]	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	mg/kg	A-T-022s
MTBE _A [#]	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	mg/kg	A-T-022s

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Lab Sample ID	18/03369/57	18/03369/58	18/03369/62	18/03369/63	18/03369/66	18/03369/68	18/03369/69	18/03369/74	Units	Method ref
Client Sample No	2	2	14	2	13	18	2	16		
Client Sample ID	ARP-WS101A	ARP-WS102	ARP-WS102	ARP-WS103	ARP-WS103	ARP-WS103	ARP-BH107	ARP-BH107		
Depth to Top	0.60	0.50	4.50	0.40	4.50	5.80	0.20	4.70		
Depth To Bottom										
Date Sampled	25-Apr-18	25-Apr-18	25-Apr-18	25-Apr-18	25-Apr-18	25-Apr-18	26-Apr-18	26-Apr-18		
Sample Type	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES		
Sample Matrix Code	6E	2B	2	6A	2	5	6AE	6B		
% Stones >10mm _A	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	13.8	<0.1	% w/w	A-T-044
pH _D ^{M#}	8.06	7.75	6.75	7.45	5.79	-	7.72	9.11	pH	A-T-031s
Cyanide (total) _A ^{M#}	<1	<1	<1	<1	<1	-	<1	<1	mg/kg	A-T-042sTCN
Phenols - Total by HPLC _A	<0.2	<0.2	<0.2	<0.2	<0.2	-	<0.2	<0.2	mg/kg	A-T-050s
Total Organic Carbon _D ^{M#}	6.15	9.85	14.5	3.23	38	1.68	2.21	1.92	% w/w	A-T-032s
Antimony _D	<5	<5	<5	<5	<5	-	<5	<5	mg/kg	A-T-024s
Arsenic _D ^{M#}	15	9	16	7	17	-	9	6	mg/kg	A-T-024s
Beryllium _D [#]	1.0	0.8	0.9	0.6	0.9	-	0.8	0.5	mg/kg	A-T-024s
Boron (water soluble) _D ^{M#}	<1.0	<1.0	1.9	<1.0	1.8	-	<1.0	<1.0	mg/kg	A-T-027s
Cadmium _D ^{M#}	1.3	1.1	1.7	1.2	1.2	-	1.4	1.0	mg/kg	A-T-024s
Copper _D ^{M#}	43	36	80	38	55	-	45	41	mg/kg	A-T-024s
Chromium _D ^{M#}	20	18	19	17	16	-	16	15	mg/kg	A-T-024s
Chromium (hexavalent) _D	<1	<1	<1	<1	<2	-	<1	<1	mg/kg	A-T-040s
Lead _D ^{M#}	72	64	157	77	118	-	483	88	mg/kg	A-T-024s
Mercury _D	0.22	0.19	0.63	0.21	0.36	-	0.42	0.30	mg/kg	A-T-024s
Nickel _D ^{M#}	28	23	24	20	19	-	23	19	mg/kg	A-T-024s
Selenium _D ^{M#}	<1	1	2	<1	2	-	<1	<1	mg/kg	A-T-024s
Vanadium _D ^{M#}	23	22	28	20	22	-	21	19	mg/kg	A-T-024s
Zinc _D ^{M#}	94	86	134	92	114	-	97	79	mg/kg	A-T-024s
Asbestos in Soil (inc. matrix) ^										
Asbestos in soil _A [#]	NAD	NAD	NAD	Chrysotile	NAD	-	NAD	Chrysotile		A-T-045
Asbestos Matrix (microscope) _A	-	-	-	Loose Fibres	-	-	-	Loose Fibres		A-T-045
Asbestos ACM - Suitable for Water Absorption Test?	N/A	N/A	N/A	N/A	N/A	-	N/A	N/A		
Asbestos in Soil Quantification % (Hand Picking & Weighing)										
Asbestos in soil % composition (hand picking and weighing) _D	-	-	-	<0.001	-	-	-	<0.001	% w/w	A-T-054

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Client Sample No	2	2	14	2	13	18	2	16		
Client Sample ID	ARP-WS101A	ARP-WS102	ARP-WS102	ARP-WS103	ARP-WS103	ARP-WS103	ARP-BH107	ARP-BH107		
Depth to Top	0.60	0.50	4.50	0.40	4.50	5.80	0.20	4.70		
Depth To Bottom										
Date Sampled	25-Apr-18	25-Apr-18	25-Apr-18	25-Apr-18	25-Apr-18	25-Apr-18	26-Apr-18	26-Apr-18		
Sample Type	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES		
Sample Matrix Code	6E	2B	2	6A	2	5	6AE	6B		
PAH-16MS										
Acenaphthene _A ^{M#}	0.03	0.01	0.17	0.08	<0.01	-	0.35	0.16	mg/kg	A-T-019s
Acenaphthylene _A ^{M#}	<0.01	<0.01	<0.01	0.01	<0.01	-	<0.01	<0.01	mg/kg	A-T-019s
Anthracene _A ^{M#}	0.03	0.03	0.24	0.17	<0.02	-	0.35	0.12	mg/kg	A-T-019s
Benzo(a)anthracene _A ^{M#}	<0.04	<0.04	0.19	0.30	<0.04	-	0.65	0.09	mg/kg	A-T-019s
Benzo(a)pyrene _A ^{M#}	<0.04	<0.04	0.15	0.30	<0.04	-	0.57	0.06	mg/kg	A-T-019s
Benzo(b)fluoranthene _A ^{M#}	<0.05	<0.05	0.12	0.34	<0.05	-	0.61	0.07	mg/kg	A-T-019s
Benzo(ghi)perylene _A ^{M#}	<0.05	<0.05	<0.05	0.16	<0.05	-	0.24	<0.05	mg/kg	A-T-019s
Benzo(k)fluoranthene _A ^{M#}	<0.07	<0.07	<0.07	0.16	<0.07	-	0.30	<0.07	mg/kg	A-T-019s
Chrysene _A ^{M#}	<0.06	<0.06	0.29	0.42	<0.06	-	0.88	0.13	mg/kg	A-T-019s
Dibenzo(ah)anthracene _A ^{M#}	<0.04	<0.04	<0.04	<0.04	<0.04	-	0.07	<0.04	mg/kg	A-T-019s
Fluoranthene _A ^{M#}	<0.08	0.16	0.73	0.80	<0.08	-	1.93	0.39	mg/kg	A-T-019s
Fluorene _A ^{M#}	0.01	<0.01	0.10	0.05	<0.01	-	0.21	0.10	mg/kg	A-T-019s
Indeno(123-cd)pyrene _A ^{M#}	<0.03	<0.03	<0.03	0.17	<0.03	-	0.24	<0.03	mg/kg	A-T-019s
Naphthalene _A ^{M#}	0.05	<0.03	0.24	<0.03	<0.03	-	0.16	0.17	mg/kg	A-T-019s
Phenanthrene _A ^{M#}	0.09	0.11	1.00	0.50	<0.03	-	1.65	0.50	mg/kg	A-T-019s
Pyrene _A ^{M#}	<0.07	0.16	0.70	0.77	<0.07	-	1.93	0.34	mg/kg	A-T-019s
PAH (total 16) _A ^{M#}	0.21	0.47	3.98	4.20	<0.08	-	10.2	2.15	mg/kg	A-T-019s

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Client Sample No	2	2	14	2	13	18	2	16		
Client Sample ID	ARP-WS101A	ARP-WS102	ARP-WS102	ARP-WS103	ARP-WS103	ARP-WS103	ARP-BH107	ARP-BH107		
Depth to Top	0.60	0.50	4.50	0.40	4.50	5.80	0.20	4.70		
Depth To Bottom										
Date Sampled	25-Apr-18	25-Apr-18	25-Apr-18	25-Apr-18	25-Apr-18	25-Apr-18	26-Apr-18	26-Apr-18		
Sample Type	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES		
Sample Matrix Code	6E	2B	2	6A	2	5	6AE	6B		
TPH UKCWG										
Ali >C5-C6 _A [#]	<0.01	<0.01	<0.05	<0.01	<0.05	-	<0.01	<0.01	mg/kg	A-T-022s
Ali >C6-C8 _A [#]	<0.01	<0.01	<0.05	<0.01	<0.05	-	<0.01	<0.01	mg/kg	A-T-022s
Ali >C8-C10 _A [#]	<0.01	<0.01	<0.05	<0.01	0.44	-	<0.01	<0.01	mg/kg	A-T-022s
Ali >C10-C12 _A [#]	<0.1	<0.1	1.2	<0.1	<0.1	-	<0.1	<0.1	mg/kg	A-T-023s
Ali >C12-C16 _A [#]	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	mg/kg	A-T-023s
Ali >C16-C21 _A [#]	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	mg/kg	A-T-023s
Ali >C21-C35 _A [#]	<0.1	<0.1	10.9	<0.1	<0.1	-	<0.1	<0.1	mg/kg	A-T-023s
Ali >C35-C44 _A	<0.1	<0.1	1.0	<0.1	<0.1	-	<0.1	<0.1	mg/kg	A-T-023s
Total Aliphatics _A	<0.1	<0.1	12.1	<0.1	<0.1	-	<0.1	<0.1	mg/kg	A-T-023s
Aro >C5-C7 _A [#]	<0.01	<0.01	<0.05	<0.01	<0.05	-	<0.01	<0.01	mg/kg	A-T-022s
Aro >C7-C8 _A [#]	<0.01	<0.01	<0.05	<0.01	<0.05	-	<0.01	<0.01	mg/kg	A-T-022s
Aro >C8-C9 _A [#]	<0.01	<0.01	<0.05	<0.01	<0.05	-	<0.01	<0.01	mg/kg	A-T-022s
Aro >C9-C10 _A [#]	<0.01	<0.01	<0.05	<0.01	<0.05	-	<0.01	0.01	mg/kg	A-T-022s
Aro >C10-C12 _A [#]	1.3	<0.1	<0.1	<0.1	<0.1	-	0.8	0.5	mg/kg	A-T-023s
Aro >C12-C16 _A [#]	4.9	1.0	1.2	1.6	<0.1	-	6.0	5.5	mg/kg	A-T-023s
Aro >C16-C21 _A [#]	14.4	2.3	6.1	8.9	<0.1	-	14.8	11.6	mg/kg	A-T-023s
Aro >C21-C35 _A [#]	19.8	8.9	21.8	31.2	13.3	-	31.5	22.9	mg/kg	A-T-023s
Aro >C35-C44 _A	1.3	1.1	1.7	5.6	4.4	-	4.0	3.7	mg/kg	A-T-023s
Total Aromatics _A	40.5	12.2	28.9	41.7	13.3	-	53.1	40.5	mg/kg	A-T-023s
TPH (Ali & Aro) _A	40.5	12.2	41.0	41.7	13.3	-	53.1	40.5	mg/kg	A-T-023s
BTEX - Benzene _A [#]	<0.01	<0.01	<0.05	<0.01	<0.05	-	<0.01	<0.01	mg/kg	A-T-022s
BTEX - Toluene _A [#]	<0.01	<0.01	<0.05	<0.01	<0.05	-	<0.01	<0.01	mg/kg	A-T-022s
BTEX - Ethyl Benzene _A [#]	<0.01	<0.01	<0.05	<0.01	<0.05	-	<0.01	<0.01	mg/kg	A-T-022s
BTEX - m & p Xylene _A [#]	<0.01	<0.01	<0.05	<0.01	<0.05	-	<0.01	<0.01	mg/kg	A-T-022s
BTEX - o Xylene _A [#]	<0.01	<0.01	<0.05	<0.01	<0.05	-	<0.01	<0.01	mg/kg	A-T-022s
MTBE _A [#]	<0.01	<0.01	<0.05	<0.01	<0.05	-	<0.01	<0.01	mg/kg	A-T-022s

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Lab Sample ID	18/03369/75	18/03369/79	18/03369/80						Units	Method ref
Client Sample No	20	30	33							
Client Sample ID	ARP-BH107	ARP-BH107	ARP-BH107							
Depth to Top	5.50	8.50	9.80							
Depth To Bottom										
Date Sampled	26-Apr-18	27-Apr-18	27-Apr-18							
Sample Type	Soil - ES	Soil - ES	Soil - ES							
Sample Matrix Code	6A	6E	3							
% Stones >10mm _A	23.6	<0.1	<0.1						% w/w	A-T-044
pH _D ^{M#}	-	6.75	-						pH	A-T-031s
Cyanide (total) _A ^{M#}	-	<1	-						mg/kg	A-T-042sTCN
Phenols - Total by HPLC _A	-	<0.2	-						mg/kg	A-T-050s
Total Organic Carbon _D ^{M#}	2.49	4.19	1.69						% w/w	A-T-032s
Antimony _D	-	<5	-						mg/kg	A-T-024s
Arsenic _D ^{M#}	-	3	-						mg/kg	A-T-024s
Beryllium _D [#]	-	1.0	-						mg/kg	A-T-024s
Boron (water soluble) _D ^{M#}	-	<1.0	-						mg/kg	A-T-027s
Cadmium _D ^{M#}	-	0.8	-						mg/kg	A-T-024s
Copper _D ^{M#}	-	40	-						mg/kg	A-T-024s
Chromium _D ^{M#}	-	23	-						mg/kg	A-T-024s
Chromium (hexavalent) _D	-	<1	-						mg/kg	A-T-040s
Lead _D ^{M#}	-	37	-						mg/kg	A-T-024s
Mercury _D	-	<0.17	-						mg/kg	A-T-024s
Nickel _D ^{M#}	-	22	-						mg/kg	A-T-024s
Selenium _D ^{M#}	-	<1	-						mg/kg	A-T-024s
Vanadium _D ^{M#}	-	22	-						mg/kg	A-T-024s
Zinc _D ^{M#}	-	49	-						mg/kg	A-T-024s
Asbestos in Soil (inc. matrix) ^										
Asbestos in soil _A [#]	-	NAD	-							A-T-045
Asbestos ACM - Suitable for Water Absorption Test?	-	N/A	-							

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Lab Sample ID	18/03369/75	18/03369/79	18/03369/80						Units	Method ref
Client Sample No	20	30	33							
Client Sample ID	ARP-WS107	ARP-WS107	ARP-WS107							
Depth to Top	5.50	8.50	9.80							
Depth To Bottom										
Date Sampled	26-Apr-18	27-Apr-18	27-Apr-18							
Sample Type	Soil - ES	Soil - ES	Soil - ES							
Sample Matrix Code	6A	6E	3							
PAH-16MS										
Acenaphthene _A ^{M#}	-	0.16	-						mg/kg	A-T-019s
Acenaphthylene _A ^{M#}	-	<0.01	-						mg/kg	A-T-019s
Anthracene _A ^{M#}	-	0.13	-						mg/kg	A-T-019s
Benzo(a)anthracene _A ^{M#}	-	0.23	-						mg/kg	A-T-019s
Benzo(a)pyrene _A ^{M#}	-	0.22	-						mg/kg	A-T-019s
Benzo(b)fluoranthene _A ^{M#}	-	0.23	-						mg/kg	A-T-019s
Benzo(ghi)perylene _A ^{M#}	-	0.10	-						mg/kg	A-T-019s
Benzo(k)fluoranthene _A ^{M#}	-	0.14	-						mg/kg	A-T-019s
Chrysene _A ^{M#}	-	0.36	-						mg/kg	A-T-019s
Dibenzo(ah)anthracene _A ^{M#}	-	<0.04	-						mg/kg	A-T-019s
Fluoranthene _A ^{M#}	-	0.73	-						mg/kg	A-T-019s
Fluorene _A ^{M#}	-	0.09	-						mg/kg	A-T-019s
Indeno(123-cd)pyrene _A ^{M#}	-	0.09	-						mg/kg	A-T-019s
Naphthalene _A ^{M#}	-	0.09	-						mg/kg	A-T-019s
Phenanthrene _A ^{M#}	-	0.63	-						mg/kg	A-T-019s
Pyrene _A ^{M#}	-	0.71	-						mg/kg	A-T-019s
PAH (total 16) _A ^{M#}	-	3.88	-						mg/kg	A-T-019s

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Lab Sample ID	18/03369/75	18/03369/79	18/03369/80						Units	Method ref
Client Sample No	20	30	33							
Client Sample ID	ARP-WS107	ARP-WS107	ARP-WS107							
Depth to Top	5.50	8.50	9.80							
Depth To Bottom										
Date Sampled	26-Apr-18	27-Apr-18	27-Apr-18							
Sample Type	Soil - ES	Soil - ES	Soil - ES							
Sample Matrix Code	6A	6E	3							
TPH UKCWG										
Ali >C5-C6 _A [#]	-	<0.05	-						mg/kg	A-T-022s
Ali >C6-C8 _A [#]	-	<0.05	-						mg/kg	A-T-022s
Ali >C8-C10 _A [#]	-	<0.05	-						mg/kg	A-T-022s
Ali >C10-C12 _A [#]	-	<0.1	-						mg/kg	A-T-023s
Ali >C12-C16 _A [#]	-	<0.1	-						mg/kg	A-T-023s
Ali >C16-C21 _A [#]	-	<0.1	-						mg/kg	A-T-023s
Ali >C21-C35 _A [#]	-	<0.1	-						mg/kg	A-T-023s
Ali >C35-C44 _A	-	<0.1	-						mg/kg	A-T-023s
Total Aliphatics _A	-	<0.1	-						mg/kg	A-T-023s
Aro >C5-C7 _A [#]	-	<0.05	-						mg/kg	A-T-022s
Aro >C7-C8 _A [#]	-	<0.05	-						mg/kg	A-T-022s
Aro >C8-C9 _A [#]	-	<0.05	-						mg/kg	A-T-022s
Aro >C9-C10 _A [#]	-	<0.05	-						mg/kg	A-T-022s
Aro >C10-C12 _A [#]	-	0.4	-						mg/kg	A-T-023s
Aro >C12-C16 _A [#]	-	5.0	-						mg/kg	A-T-023s
Aro >C16-C21 _A [#]	-	10.5	-						mg/kg	A-T-023s
Aro >C21-C35 _A [#]	-	19.7	-						mg/kg	A-T-023s
Aro >C35-C44 _A	-	0.4	-						mg/kg	A-T-023s
Total Aromatics _A	-	35.7	-						mg/kg	A-T-023s
TPH (Ali & Aro) _A	-	35.7	-						mg/kg	A-T-023s
BTEX - Benzene _A [#]	-	<0.05	-						mg/kg	A-T-022s
BTEX - Toluene _A [#]	-	<0.05	-						mg/kg	A-T-022s
BTEX - Ethyl Benzene _A [#]	-	<0.05	-						mg/kg	A-T-022s
BTEX - m & p Xylene _A [#]	-	<0.05	-						mg/kg	A-T-022s
BTEX - o Xylene _A [#]	-	<0.05	-						mg/kg	A-T-022s
MTBE _A [#]	-	<0.05	-						mg/kg	A-T-022s

REPORT NOTES

General:

This report shall not be reproduced, except in full, without written approval from Envirolab.

All samples contained within this report, and any received with the same delivery, will be disposed of one month after the date of this report.

Analytical results reflect the quality of the sample at the time of analysis only.

Opinions and interpretations expressed are outside the scope of our accreditation.

If results are in italic font they are associated with an AQC failure and there is insufficient sample to repeat the analysis. These are not accredited and are unreliable.

A deviating samples report is appended and will indicate if samples or tests have been found to be deviating. Any test results affected may not be an accurate record of the concentration at the time of sampling and, as a result, may be invalid.

Soil chemical analysis:

All results are reported as dry weight (<40°C).

For samples with Matrix Codes 1 - 6 natural stones, brick and concrete fragments >10mm and any extraneous material (visible glass, metal or twigs) are removed and excluded from the sample prior to analysis and reported results corrected to a whole sample basis. This is reported as '% stones >10mm'.

For samples with Matrix Code 7 the whole sample is dried and crushed prior to analysis and this supersedes any "A" subscripts

All analysis is performed on the sample as received for soil samples which are positive for asbestos or the client has informed asbestos may be present and/or if they are from outside the European Union and this supersedes any "D" subscripts.

TPH analysis of water by method A-T-007:

Free and visible oils are excluded from the sample used for analysis so that the reported result represents the dissolved phase only.

Electrical Conductivity of water by Method A-T-037:

Results greater than 12900µS/cm @ 25°C / 11550µS/cm @ 20°C fall outside the calibration range and as such are unaccredited.

Asbestos:

Asbestos in soil analysis is performed on a dried aliquot of the submitted sample and cannot guarantee to identify asbestos if only present in small numbers as discrete fibres/fragments in the original sample.

Stones etc. are not removed from the sample prior to analysis.

Quantification of asbestos is a 3 stage process including visual identification, hand picking and weighing and fibre counting by sedimentation/phase contrast optical microscopy if required. If asbestos is identified as being present but is not in a form that is suitable for analysis by hand picking and weighing (normally if the asbestos is present as free fibres) quantification by sedimentation is performed. Where ACMs are found a percentage asbestos is assigned to each with reference to 'HSG264, Asbestos: The survey guide' and the calculated asbestos content is expressed as a percentage of the dried soil sample aliquot used.

Predominant Matrix Codes:

1 = SAND, 2 = LOAM, 3 = CLAY, 4 = LOAM/SAND, 5 = SAND/CLAY, 6 = CLAY/LOAM, 7 = OTHER, 8 = Asbestos bulk ID sample.

Samples with Matrix Code 7 & 8 are not predominantly a SAND/LOAM/CLAY mix and are not covered by our BSEN 17025 or MCERTS accreditations, with the exception of bulk asbestos which are BSEN 17025 accredited.

Secondary Matrix Codes:

A = contains stones, B = contains construction rubble, C = contains visible hydrocarbons, D = contains glass/metal,

E = contains roots/twigs.

Key:

IS indicates Insufficient Sample for analysis.

US indicates Unsuitable Sample for analysis.

NDP indicates No Determination Possible.

NAD indicates No Asbestos Detected.

N/A indicates Not Applicable.

Superscript # indicates method accredited to ISO 17025.

Superscript "M" indicates method accredited to MCERTS.

Subscript "A" indicates analysis performed on the sample as received.

Subscript "D" indicates analysis performed on the dried sample, crushed to pass a 2mm sieve

Please contact us if you need any further information.

Final Test Report

Envirolab Job Number: 18/03369

Issue Number: 1

Date: 14-May-18

Client: Ian Farmer Associates (Warrington)
14/15 Rufford Court
Hardwick Grange
Warrington
WA1 4RF

Project Manager: [REDACTED]
Project Name: Ashton Moss
Project Ref: 42171
Order No: 44481

Date Samples Received: 20-Apr-18
Date Instructions Received: 3-May-18
Date Analysis Completed: 14-May-18

Notes - Soil analysis

All results are reported as dry weight (<40°C).

For samples with Matrix Codes 1 - 6 natural stones >10mm are removed or excluded from the sample prior to analysis and reported results corrected to a whole sample basis.

For samples with Matrix Code 7 the whole sample is dried and crushed prior to analysis.

Notes - General

This report shall not be reproduced, except in full, without written approval from Envirolab.

Subscript "A" indicates analysis performed on the sample as received. "D" indicates analysis performed on the dried sample, crushed to pass a 2mm sieve, unless asbestos is found to be present in which case all analysis is performed on the sample as received.

All analysis is performed on the dried and crushed sample for samples with Matrix Code 7 and this supercedes any "A" subscripts.

All analysis is performed on the sample as received for soil samples from outside the European Union and this supercedes any "D" subscripts

Superscript "M" indicates method accredited to MCERTS.

For complex, multi-compound analysis, quality control results do not always fall within chart limits for every compound and we have criteria for reporting in these situations.

If results are in italic font they are associated with such quality control failures and may be unreliable.

A deviating samples report is appended and will indicate if samples or tests have been found to be deviating. Any test results affected may not be an accurate record of the concentration at the time of sampling and, as a result, may be invalid

Predominant Matrix Codes: 1 = SAND, 2 = LOAM, 3 = CLAY, 4 = LOAM/SAND, 5 = SAND/CLAY, 6 = CLAY/LOAM, 7 = OTHER, 8 = Asbestos bulk ID sample

Samples with Matrix Code 7 & 8 are not predominantly a SAND/LOAM/CLAY mix and are not covered by our BSEN 17025 or MCERTS accreditations, with the exception of bulk asbestos which are BSEN 17025 accredited

Secondary Matrix Codes: A = contains stones, B = contains construction rubble, C = contains visible hydrocarbons, D = contains glass/metal, E = contains roots/twigs.

IS indicates Insufficient sample for analysis, NDP indicates No Determination Possible and NAD indicates No Asbestos Detected.

Superscript # indicates method accredited to ISO 17025.

Analytical results reflect the quality of the sample at the time of analysis only. Opinions and interpretations expressed are outside the scope of our accreditation.

Please contact us if you need any further information.

Prepared by:

Approved by:

[REDACTED]
Laboratory Coordinator

[REDACTED]
Managing Director



Sample Details							Landfill Waste Acceptance Criteria Limits			
Lab Sample ID	Method	ISO17025	MCERTS	18/03369/6						
Client Sample Number				16			Inert Waste Landfill	Stable Non-reactive Hazardous Waste in Non-Hazardous Landfill	Hazardous Waste Landfill	
Client Sample ID				ARP-BH101						
Depth to Top				6						
Depth to Bottom										
Date Sampled				23/04/2018						
Sample Type				Solid						
Sample Matrix Code				7						
Solid Waste Analysis										
pH (pH Units) _D	A-T-031	Y	Y					-	>6	-
ANC to pH 4 (mol/kg) _D	A-T-ANC	N	N					-	to be evaluated	to be evaluated
ANC to pH 6 (mol/kg) _D	A-T-ANC	N	N					-	to be evaluated	to be evaluated
Loss on Ignition (%) _D	A-T-030	Y	N					-	-	10
Total Organic Carbon (%) _D	A-T-032	Y	Y	1.68				3	5	6
PAH Sum of 17 (mg/kg) _A	A-T-019	N	N	3.18				100	-	-
Mineral Oil (mg/kg) _A	A-T-007	N	N	252				500	-	-
Sum of 7 PCBs (mg/kg) _D	A-T-004	N	N	<0.007				1	-	-
Sum of BTEX (mg/kg) _A	A-T-022	N	N	<0.01				6	-	-
Eluate Analysis				2:1	8:1	2:1	Cumulative 10:1	Limit values for compliance leaching test using		
				mg/l		mg/kg		BS EN 12457-3 at L/S 10 l/kg (mg/kg)		
Arsenic	A-T-025	Y	N	0.004	0.008	0.010	0.080	0.5	2	25
Barium	A-T-025	Y	N	0.051	0.038	0.114	0.400	20	100	300
Cadmium	A-T-025	Y	N	<0.001	<0.001	<0.002	<0.01	0.04	1	5
Chromium	A-T-025	Y	N	<0.001	<0.001	<0.002	<0.01	0.5	10	70
Copper	A-T-025	Y	N	0.007	0.006	0.016	0.060	2	50	100
Mercury	A-T-025	Y	N	<0.0005	<0.0005	<0.001	<0.005	0.01	0.2	2
Molybdenum	A-T-025	Y	N	0.048	0.011	0.107	0.150	0.5	10	30
Nickel	A-T-025	Y	N	0.002	<0.001	0.004	<0.01	0.4	10	40
Lead	A-T-025	Y	N	0.003	0.005	0.007	0.050	0.5	10	50
Antimony	A-T-025	Y	N	0.011	0.005	0.024	0.060	0.06	0.7	5
Selenium	A-T-025	Y	N	<0.001	0.001	<0.002	<0.01	0.1	0.5	7
Zinc	A-T-025	Y	N	0.010	0.005	0.021	0.050	4	50	200
Chloride	A-T-026	Y	N	3	<1.00	7	<10	800	15000	25000
Fluoride	A-T-026	Y	N	0.8	0.3	1.7	3.0	10	150	500
Sulphate as SO ₄	A-T-026	Y	N	65	29	145	325	1000	20000	50000
Total Dissolved Solids	A-T-035	N	N	139	62	310	702	4000	60000	100000
Phenol Index	A-T-050	N	N	<0.01	<0.01	<0.02	<0.1	1	-	-
Dissolved Organic Carbon	A-T-032	N	N	<20.0	<20.0	<40	<200	500	800	1000
Leach Test Information										
pH (pH Units)	A-T-031	N	Y	7.3	7.3					
Conductivity (µS/cm)	A-T-037	N	N	278	123					
Mass Sample (kg)				0.201						
Dry Matter (%)	A-T-044	N	N	85						
Stage 1										
Volume Leachant, L ₂ (l)	A-T-046			0.350						
Filtered Eluate Volume, VE ₁ (l)	A-T-046			0.150						
Stage 2										
Volume Leachant, L ₈ (l)	A-T-046			1.360						
Stated acceptance limits are for guidance only and Envirolab cannot be held responsible for any discrepancies with current legislation										

Sample Details								Landfill Waste Acceptance Criteria Limits		
Lab Sample ID	Method	ISO17025	MCERTS	18/03369/14						
Client Sample Number				13				Inert Waste Landfill	Stable Non-reactive Hazardous Waste in Non-Hazardous Landfill	Hazardous Waste Landfill
Client Sample ID				ARP-BH102						
Depth to Top				5.9						
Depth to Bottom										
Date Sampled				20/04/2018						
Sample Type				Soil - ES						
Sample Matrix Code				6A						
Solid Waste Analysis										
pH (pH Units) _D	A-T-031	Y	Y					-	>6	-
ANC to pH 4 (mol/kg) _D	A-T-ANC	N	N					-	to be evaluated	to be evaluated
ANC to pH 6 (mol/kg) _D	A-T-ANC	N	N					-	to be evaluated	to be evaluated
Loss on Ignition (%) _D	A-T-030	Y	N					-	-	10
Total Organic Carbon (%) _D	A-T-032	Y	Y	5.32				3	5	6
PAH Sum of 17 (mg/kg) _A	A-T-019	N	N	8.82				100	-	-
Mineral Oil (mg/kg) _A	A-T-007	N	N	193				500	-	-
Sum of 7 PCBs (mg/kg) _D	A-T-004	N	N	<0.007				1	-	-
Sum of BTEX (mg/kg) _A	A-T-022	N	N	<0.01				6	-	-
Eluate Analysis				2:1	8:1	2:1	Cumulative 10:1	Limit values for compliance leaching test using		
				mg/l		mg/kg		BS EN 12457-3 at L/S 10 l/kg (mg/kg)		
Arsenic	A-T-025	Y	N	0.006	0.009	0.014	0.090	0.5	2	25
Barium	A-T-025	Y	N	0.048	0.027	0.111	0.300	20	100	300
Cadmium	A-T-025	Y	N	<0.001	<0.001	<0.002	<0.01	0.04	1	5
Chromium	A-T-025	Y	N	<0.001	<0.001	<0.002	<0.01	0.5	10	70
Copper	A-T-025	Y	N	0.015	0.014	0.036	0.150	2	50	100
Mercury	A-T-025	Y	N	<0.0005	<0.0005	<0.001	<0.005	0.01	0.2	2
Molybdenum	A-T-025	Y	N	0.050	0.011	0.115	0.150	0.5	10	30
Nickel	A-T-025	Y	N	0.002	<0.001	0.004	<0.01	0.4	10	40
Lead	A-T-025	Y	N	0.015	0.016	0.036	0.160	0.5	10	50
Antimony	A-T-025	Y	N	0.014	0.006	0.033	0.070	0.06	0.7	5
Selenium	A-T-025	Y	N	<0.001	<0.001	<0.002	<0.01	0.1	0.5	7
Zinc	A-T-025	Y	N	0.019	0.013	0.044	0.140	4	50	200
Chloride	A-T-026	Y	N	7	1	15	20	800	15000	25000
Fluoride	A-T-026	Y	N	0.9	0.4	2.1	5.0	10	150	500
Sulphate as SO ₄	A-T-026	Y	N	79	17	181	229	1000	20000	50000
Total Dissolved Solids	A-T-035	N	N	180	61	415	736	4000	60000	100000
Phenol Index	A-T-050	N	N	<0.01	<0.01	<0.02	<0.1	1	-	-
Dissolved Organic Carbon	A-T-032	N	N	<20.0	<20.0	<40	<200	500	800	1000
Leach Test Information										
pH (pH Units)	A-T-031	N	Y	7.4	7.2					
Conductivity (µS/cm)	A-T-037	N	N	360	122					
Mass Sample (kg)				0.200						
Dry Matter (%)	A-T-044	N	N	83.2						
Stage 1										
Volume Leachant, L ₂ (l)	A-T-046			0.350						
Filtered Eluate Volume, VE ₁ (l)	A-T-046			0.150						
Stage 2										
Volume Leachant, L ₈ (l)	A-T-046			1.330						
Stated acceptance limits are for guidance only and Envirolab cannot be held responsible for any discrepancies with current legislation										

Sample Details							Landfill Waste Acceptance Criteria Limits			
Lab Sample ID	Method	ISO17025	MCERTS	18/03369/28						
Client Sample Number				15			Inert Waste Landfill	Stable Non-reactive Hazardous Waste in Non-Hazardous Landfill	Hazardous Waste Landfill	
Client Sample ID				ARP-BH105						
Depth to Top				8						
Depth to Bottom										
Date Sampled				24/04/2018						
Sample Type				Soil - ES						
Sample Matrix Code				2E						
Solid Waste Analysis										
pH (pH Units) _D	A-T-031	Y	Y					-	>6	-
ANC to pH 4 (mol/kg) _D	A-T-ANC	N	N					-	to be evaluated	to be evaluated
ANC to pH 6 (mol/kg) _D	A-T-ANC	N	N					-	to be evaluated	to be evaluated
Loss on Ignition (%) _D	A-T-030	Y	N					-	-	10
Total Organic Carbon (%) _D	A-T-032	Y	Y	7.27				3	5	6
PAH Sum of 17 (mg/kg) _A	A-T-019	N	N	<0.08				100	-	-
Mineral Oil (mg/kg) _A	A-T-007	N	N	<10				500	-	-
Sum of 7 PCBs (mg/kg) _D	A-T-004	N	N	<0.007				1	-	-
Sum of BTEX (mg/kg) _A	A-T-022	N	N	<0.01				6	-	-
Eluate Analysis				2:1	8:1	2:1	Cumulative 10:1	Limit values for compliance leaching test using		
				mg/l		mg/kg		BS EN 12457-3 at L/S 10 l/kg (mg/kg)		
Arsenic	A-T-025	Y	N	0.003	0.002	0.011	0.030	0.5	2	25
Barium	A-T-025	Y	N	0.100	0.097	0.338	1.110	20	100	300
Cadmium	A-T-025	Y	N	<0.001	<0.001	<0.002	<0.01	0.04	1	5
Chromium	A-T-025	Y	N	<0.001	<0.001	<0.002	<0.01	0.5	10	70
Copper	A-T-025	Y	N	0.009	0.013	0.029	0.140	2	50	100
Mercury	A-T-025	Y	N	<0.0005	<0.0005	<0.001	<0.005	0.01	0.2	2
Molybdenum	A-T-025	Y	N	0.027	0.012	0.093	0.150	0.5	10	30
Nickel	A-T-025	Y	N	0.001	0.002	0.003	0.020	0.4	10	40
Lead	A-T-025	Y	N	0.003	0.007	0.011	0.080	0.5	10	50
Antimony	A-T-025	Y	N	0.004	0.002	0.015	0.030	0.06	0.7	5
Selenium	A-T-025	Y	N	<0.001	<0.001	<0.002	<0.01	0.1	0.5	7
Zinc	A-T-025	Y	N	0.023	0.141	0.079	1.470	4	50	200
Chloride	A-T-026	Y	N	13	3	44	44	800	15000	25000
Fluoride	A-T-026	Y	N	0.3	0.3	0.9	3.0	10	150	500
Sulphate as SO ₄	A-T-026	Y	N	22	9	75	119	1000	20000	50000
Total Dissolved Solids	A-T-035	N	N	188	75	637	989	4000	60000	100000
Phenol Index	A-T-050	N	N	<0.01	<0.01	<0.02	<0.1	1	-	-
Dissolved Organic Carbon	A-T-032	N	N	<20.0	<20.0	<40	<200	500	800	1000
Leach Test Information										
pH (pH Units)	A-T-031	N	Y	7.8	7.0					
Conductivity (µS/cm)	A-T-037	N	N	375	151					
Mass Sample (kg)				0.200						
Dry Matter (%)	A-T-044	N	N	62.7						
Stage 1										
Volume Leachant, L ₂ (l)	A-T-046			0.350						
Filtered Eluate Volume, VE ₁ (l)	A-T-046			0.150						
Stage 2										
Volume Leachant, L ₈ (l)	A-T-046			1.000						
Stated acceptance limits are for guidance only and Envirolab cannot be held responsible for any discrepancies with current legislation										

Sample Details								Landfill Waste Acceptance Criteria Limits		
Lab Sample ID	Method	ISO17025	MCERTS	18/03369/34						
Client Sample Number				12				Inert Waste Landfill	Stable Non-reactive Hazardous Waste in Non-Hazardous Landfill	Hazardous Waste Landfill
Client Sample ID				ARP-BH108						
Depth to Top				6						
Depth to Bottom										
Date Sampled				19/04/2018						
Sample Type				Soil - ES						
Sample Matrix Code				6A						
Solid Waste Analysis										
pH (pH Units) _D	A-T-031	Y	Y					-	>6	-
ANC to pH 4 (mol/kg) _D	A-T-ANC	N	N					-	to be evaluated	to be evaluated
ANC to pH 6 (mol/kg) _D	A-T-ANC	N	N					-	to be evaluated	to be evaluated
Loss on Ignition (%) _D	A-T-030	Y	N					-	-	10
Total Organic Carbon (%) _D	A-T-032	Y	Y	1.97				3	5	6
PAH Sum of 17 (mg/kg) _A	A-T-019	N	N	4.49				100	-	-
Mineral Oil (mg/kg) _A	A-T-007	N	N	393				500	-	-
Sum of 7 PCBs (mg/kg) _D	A-T-004	N	N	<0.007				1	-	-
Sum of BTEX (mg/kg) _A	A-T-022	N	N	<0.01				6	-	-
Eluate Analysis				2:1	8:1	2:1	Cumulative 10:1	Limit values for compliance leaching test using		
				mg/l		mg/kg		BS EN 12457-3 at L/S 10 l/kg (mg/kg)		
Arsenic	A-T-025	Y	N	0.009	0.007	0.021	0.080	0.5	2	25
Barium	A-T-025	Y	N	0.066	0.030	0.155	0.340	20	100	300
Cadmium	A-T-025	Y	N	<0.001	<0.001	<0.002	<0.01	0.04	1	5
Chromium	A-T-025	Y	N	<0.001	<0.001	<0.002	<0.01	0.5	10	70
Copper	A-T-025	Y	N	0.016	0.009	0.038	0.100	2	50	100
Mercury	A-T-025	Y	N	<0.0005	<0.0005	<0.001	<0.005	0.01	0.2	2
Molybdenum	A-T-025	Y	N	0.075	0.016	0.174	0.220	0.5	10	30
Nickel	A-T-025	Y	N	0.005	0.002	0.013	0.020	0.4	10	40
Lead	A-T-025	Y	N	0.020	0.011	0.047	0.120	0.5	10	50
Antimony	A-T-025	Y	N	0.017	0.007	0.039	0.080	0.06	0.7	5
Selenium	A-T-025	Y	N	<0.001	<0.001	<0.002	<0.01	0.1	0.5	7
Zinc	A-T-025	Y	N	0.018	0.008	0.043	0.090	4	50	200
Chloride	A-T-026	Y	N	6	2	15	20	800	15000	25000
Fluoride	A-T-026	Y	N	1.0	0.4	2.2	5.0	10	150	500
Sulphate as SO ₄	A-T-026	Y	N	66	17	155	216	1000	20000	50000
Total Dissolved Solids	A-T-035	N	N	172	64	402	760	4000	60000	100000
Phenol Index	A-T-050	N	N	<0.01	<0.01	<0.02	<0.1	1	-	-
Dissolved Organic Carbon	A-T-032	N	N	22.7	<20.0	53	<200	500	800	1000
Leach Test Information										
pH (pH Units)	A-T-031	N	Y	7.5	7.2					
Conductivity (µS/cm)	A-T-037	N	N	344	128					
Mass Sample (kg)				0.200						
Dry Matter (%)	A-T-044	N	N	82.3						
Stage 1										
Volume Leachant, L ₂ (l)	A-T-046			0.350						
Filtered Eluate Volume, VE ₁ (l)	A-T-046			0.150						
Stage 2										
Volume Leachant, L ₈ (l)	A-T-046			1.320						
Stated acceptance limits are for guidance only and Envirolab cannot be held responsible for any discrepancies with current legislation										

Sample Details							Landfill Waste Acceptance Criteria Limits			
Lab Sample ID	Method	ISO17025	MCERTS	18/03369/38						
Client Sample Number				21			Inert Waste Landfill	Stable Non-reactive Hazardous Waste in Non-Hazardous Landfill	Hazardous Waste Landfill	
Client Sample ID				ARP-BH108						
Depth to Top				10						
Depth to Bottom										
Date Sampled				19/04/2018						
Sample Type				Soil - ES						
Sample Matrix Code				5A						
Solid Waste Analysis										
pH (pH Units) _D	A-T-031	Y	Y					-	>6	-
ANC to pH 4 (mol/kg) _D	A-T-ANC	N	N					-	to be evaluated	to be evaluated
ANC to pH 6 (mol/kg) _D	A-T-ANC	N	N					-	to be evaluated	to be evaluated
Loss on Ignition (%) _D	A-T-030	Y	N					-	-	10
Total Organic Carbon (%) _D	A-T-032	Y	Y	1.48				3	5	6
PAH Sum of 17 (mg/kg) _A	A-T-019	N	N	2.31				100	-	-
Mineral Oil (mg/kg) _A	A-T-007	N	N	1220				500	-	-
Sum of 7 PCBs (mg/kg) _D	A-T-004	N	N	<0.007				1	-	-
Sum of BTEX (mg/kg) _A	A-T-022	N	N	<0.01				6	-	-
Eluate Analysis				2:1	8:1	2:1	Cumulative 10:1	Limit values for compliance leaching test using		
				mg/l		mg/kg		BS EN 12457-3 at L/S 10 l/kg (mg/kg)		
Arsenic	A-T-025	Y	N	0.003	0.002	0.007	0.030	0.5	2	25
Barium	A-T-025	Y	N	0.057	0.025	0.135	0.290	20	100	300
Cadmium	A-T-025	Y	N	<0.001	<0.001	<0.002	<0.01	0.04	1	5
Chromium	A-T-025	Y	N	<0.001	<0.001	<0.002	<0.01	0.5	10	70
Copper	A-T-025	Y	N	0.004	0.003	0.009	0.030	2	50	100
Mercury	A-T-025	Y	N	<0.0005	<0.0005	<0.001	<0.005	0.01	0.2	2
Molybdenum	A-T-025	Y	N	0.049	0.016	0.117	0.200	0.5	10	30
Nickel	A-T-025	Y	N	0.003	<0.001	0.006	0.010	0.4	10	40
Lead	A-T-025	Y	N	<0.001	<0.001	<0.002	<0.01	0.5	10	50
Antimony	A-T-025	Y	N	0.012	0.007	0.029	0.070	0.06	0.7	5
Selenium	A-T-025	Y	N	<0.001	<0.001	<0.002	<0.01	0.1	0.5	7
Zinc	A-T-025	Y	N	0.021	0.003	0.050	0.050	4	50	200
Chloride	A-T-026	Y	N	20	3	47	47	800	15000	25000
Fluoride	A-T-026	Y	N	0.8	0.6	1.9	6.0	10	150	500
Sulphate as SO ₄	A-T-026	Y	N	566	102	1339	1482	1000	20000	50000
Total Dissolved Solids	A-T-035	N	N	577	141	1365	1861	4000	60000	100000
Phenol Index	A-T-050	N	N	<0.01	<0.01	<0.02	<0.1	1	-	-
Dissolved Organic Carbon	A-T-032	N	N	<20.0	<20.0	<40	<200	500	800	1000
Leach Test Information										
pH (pH Units)	A-T-031	N	Y	7.3	7.1					
Conductivity (µS/cm)	A-T-037	N	N	1154	282					
Mass Sample (kg)				0.200						
Dry Matter (%)	A-T-044	N	N	81.7						
Stage 1										
Volume Leachant, L ₂ (l)	A-T-046			0.350						
Filtered Eluate Volume, VE ₁ (l)	A-T-046			0.150						
Stage 2										
Volume Leachant, L ₈ (l)	A-T-046			1.310						
Stated acceptance limits are for guidance only and Envirolab cannot be held responsible for any discrepancies with current legislation										

Sample Details								Landfill Waste Acceptance Criteria Limits		
Lab Sample ID	Method	ISO17025	MCERTS	18/03369/68						
Client Sample Number				18				Inert Waste Landfill	Stable Non-reactive Hazardous Waste in Non-Hazardous Landfill	Hazardous Waste Landfill
Client Sample ID				ARP-WS103						
Depth to Top				5.8						
Depth to Bottom										
Date Sampled				25/04/2018						
Sample Type				Soil - ES						
Sample Matrix Code				5						
Solid Waste Analysis										
pH (pH Units) _D	A-T-031	Y	Y					-	>6	-
ANC to pH 4 (mol/kg) _D	A-T-ANC	N	N					-	to be evaluated	to be evaluated
ANC to pH 6 (mol/kg) _D	A-T-ANC	N	N					-	to be evaluated	to be evaluated
Loss on Ignition (%) _D	A-T-030	Y	N					-	-	10
Total Organic Carbon (%) _D	A-T-032	Y	Y	1.68				3	5	6
PAH Sum of 17 (mg/kg) _A	A-T-019	N	N	<0.08				100	-	-
Mineral Oil (mg/kg) _A	A-T-007	N	N	15				500	-	-
Sum of 7 PCBs (mg/kg) _D	A-T-004	N	N	<0.007				1	-	-
Sum of BTEX (mg/kg) _A	A-T-022	N	N	<0.05				6	-	-
Eluate Analysis				2:1	8:1	2:1	Cumulative 10:1	Limit values for compliance leaching test using		
				mg/l		mg/kg		BS EN 12457-3 at L/S 10 l/kg (mg/kg)		
Arsenic	A-T-025	Y	N	0.006	0.002	0.014	0.030	0.5	2	25
Barium	A-T-025	Y	N	0.224	0.105	0.523	1.190	20	100	300
Cadmium	A-T-025	Y	N	<0.001	<0.001	<0.002	<0.01	0.04	1	5
Chromium	A-T-025	Y	N	0.001	<0.001	0.003	<0.01	0.5	10	70
Copper	A-T-025	Y	N	0.060	0.017	0.140	0.220	2	50	100
Mercury	A-T-025	Y	N	<0.0005	<0.0005	<0.001	<0.005	0.01	0.2	2
Molybdenum	A-T-025	Y	N	0.004	0.004	0.009	0.040	0.5	10	30
Nickel	A-T-025	Y	N	0.003	0.002	0.008	0.020	0.4	10	40
Lead	A-T-025	Y	N	0.015	0.003	0.035	0.040	0.5	10	50
Antimony	A-T-025	Y	N	<0.001	<0.001	<0.002	<0.01	0.06	0.7	5
Selenium	A-T-025	Y	N	<0.001	<0.001	<0.002	<0.01	0.1	0.5	7
Zinc	A-T-025	Y	N	0.020	0.025	0.048	0.250	4	50	200
Chloride	A-T-026	Y	N	2	<1.00	4	<10	800	15000	25000
Fluoride	A-T-026	Y	N	0.1	0.1	0.3	1.0	10	150	500
Sulphate as SO ₄	A-T-026	Y	N	2	<1.00	6	<10	1000	20000	50000
Total Dissolved Solids	A-T-035	N	N	84	66	196	698	4000	60000	100000
Phenol Index	A-T-050	N	N	<0.01	<0.01	<0.02	<0.1	1	-	-
Dissolved Organic Carbon	A-T-032	N	N	<20.0	<20.0	<40	<200	500	800	1000
Leach Test Information										
pH (pH Units)	A-T-031	N	Y	7.5	7.5					
Conductivity (µS/cm)	A-T-037	N	N	168	132					
Mass Sample (kg)				0.200						
Dry Matter (%)	A-T-044	N	N	82.5						
Stage 1										
Volume Leachant, L ₂ (l)	A-T-046			0.350						
Filtered Eluate Volume, VE ₁ (l)	A-T-046			0.150						
Stage 2										
Volume Leachant, L ₈ (l)	A-T-046			1.320						
Stated acceptance limits are for guidance only and Envirolab cannot be held responsible for any discrepancies with current legislation										

Sample Details							Landfill Waste Acceptance Criteria Limits			
Lab Sample ID	Method	ISO17025	MCERTS	18/03369/75						
Client Sample Number				20			Inert Waste Landfill	Stable Non-reactive Hazardous Waste in Non-Hazardous Landfill	Hazardous Waste Landfill	
Client Sample ID				ARP-BH107						
Depth to Top				5.5						
Depth to Bottom										
Date Sampled				26/04/2018						
Sample Type				Soil - ES						
Sample Matrix Code				6A						
Solid Waste Analysis										
pH (pH Units) _D	A-T-031	Y	Y					-	>6	-
ANC to pH 4 (mol/kg) _D	A-T-ANC	N	N					-	to be evaluated	to be evaluated
ANC to pH 6 (mol/kg) _D	A-T-ANC	N	N					-	to be evaluated	to be evaluated
Loss on Ignition (%) _D	A-T-030	Y	N					-	-	10
Total Organic Carbon (%) _D	A-T-032	Y	Y	2.49				3	5	6
PAH Sum of 17 (mg/kg) _A	A-T-019	N	N	1.33				100	-	-
Mineral Oil (mg/kg) _A	A-T-007	N	N	90				500	-	-
Sum of 7 PCBs (mg/kg) _D	A-T-004	N	N	<0.007				1	-	-
Sum of BTEX (mg/kg) _A	A-T-022	N	N	<0.01				6	-	-
Eluate Analysis				2:1	8:1	2:1	Cumulative 10:1	Limit values for compliance leaching test using		
				mg/l		mg/kg		BS EN 12457-3 at L/S 10 l/kg (mg/kg)		
Arsenic	A-T-025	Y	N	0.008	0.006	0.018	0.060	0.5	2	25
Barium	A-T-025	Y	N	0.082	0.035	0.176	0.390	20	100	300
Cadmium	A-T-025	Y	N	<0.001	<0.001	<0.002	<0.01	0.04	1	5
Chromium	A-T-025	Y	N	<0.001	<0.001	<0.002	<0.01	0.5	10	70
Copper	A-T-025	Y	N	0.070	0.014	0.150	0.190	2	50	100
Mercury	A-T-025	Y	N	<0.0005	<0.0005	<0.001	<0.005	0.01	0.2	2
Molybdenum	A-T-025	Y	N	<0.001	0.085	<0.002	<0.01	0.5	10	30
Nickel	A-T-025	Y	N	0.008	0.002	0.017	0.030	0.4	10	40
Lead	A-T-025	Y	N	0.068	0.013	0.146	0.180	0.5	10	50
Antimony	A-T-025	Y	N	0.033	0.011	0.070	0.130	0.06	0.7	5
Selenium	A-T-025	Y	N	0.001	<0.001	0.002	<0.01	0.1	0.5	7
Zinc	A-T-025	Y	N	0.066	0.013	0.141	0.170	4	50	200
Chloride	A-T-026	Y	N	9	1	19	20	800	15000	25000
Fluoride	A-T-026	Y	N	0.9	0.3	2.0	3.0	10	150	500
Sulphate as SO ₄	A-T-026	Y	N	51	27	109	295	1000	20000	50000
Total Dissolved Solids	A-T-035	N	N	145	67	312	747	4000	60000	100000
Phenol Index	A-T-050	N	N	<0.01	<0.01	<0.02	<0.1	1	-	-
Dissolved Organic Carbon	A-T-032	N	N	23.8	<20.0	51	<200	500	800	1000
Leach Test Information										
pH (pH Units)	A-T-031	N	Y	7.1	7.2					
Conductivity (µS/cm)	A-T-037	N	N	289	134					
Mass Sample (kg)				0.200						
Dry Matter (%)	A-T-044	N	N	87.2						
Stage 1										
Volume Leachant, L ₂ (l)	A-T-046			0.350						
Filtered Eluate Volume, VE ₁ (l)	A-T-046			0.150						
Stage 2										
Volume Leachant, L ₈ (l)	A-T-046			1.400						
Stated acceptance limits are for guidance only and Envirolab cannot be held responsible for any discrepancies with current legislation										

Sample Details							Landfill Waste Acceptance Criteria Limits			
Lab Sample ID	Method	ISO17025	MCERTS	18/03369/80						
Client Sample Number				33			Inert Waste Landfill	Stable Non-reactive Hazardous Waste in Non-Hazardous Landfill	Hazardous Waste Landfill	
Client Sample ID				ARP-BH107						
Depth to Top				9.8						
Depth to Bottom										
Date Sampled				27/04/2018						
Sample Type				Soil - ES						
Sample Matrix Code				3						
Solid Waste Analysis										
pH (pH Units) _D	A-T-031	Y	Y					-	>6	-
ANC to pH 4 (mol/kg) _D	A-T-ANC	N	N					-	to be evaluated	to be evaluated
ANC to pH 6 (mol/kg) _D	A-T-ANC	N	N					-	to be evaluated	to be evaluated
Loss on Ignition (%) _D	A-T-030	Y	N					-	-	10
Total Organic Carbon (%) _D	A-T-032	Y	Y	1.69				3	5	6
PAH Sum of 17 (mg/kg) _A	A-T-019	N	N	<0.08				100	-	-
Mineral Oil (mg/kg) _A	A-T-007	N	N	<10				500	-	-
Sum of 7 PCBs (mg/kg) _D	A-T-004	N	N	<0.007				1	-	-
Sum of BTEX (mg/kg) _A	A-T-022	N	N	<0.01				6	-	-
Eluate Analysis				2:1	8:1	2:1	Cumulative 10:1	Limit values for compliance leaching test using		
				mg/l		mg/kg		BS EN 12457-3 at L/S 10 l/kg (mg/kg)		
Arsenic	A-T-025	Y	N	0.008	0.003	0.019	0.040	0.5	2	25
Barium	A-T-025	Y	N	<0.001	0.327	<0.002	<0.01	20	100	300
Cadmium	A-T-025	Y	N	<0.001	<0.001	<0.002	<0.01	0.04	1	5
Chromium	A-T-025	Y	N	0.003	0.004	0.007	0.040	0.5	10	70
Copper	A-T-025	Y	N	0.284	0.053	0.694	0.770	2	50	100
Mercury	A-T-025	Y	N	<0.0005	<0.0005	<0.001	<0.005	0.01	0.2	2
Molybdenum	A-T-025	Y	N	<0.001	<0.001	<0.002	<0.01	0.5	10	30
Nickel	A-T-025	Y	N	0.014	0.006	0.034	0.070	0.4	10	40
Lead	A-T-025	Y	N	0.028	0.012	0.068	0.140	0.5	10	50
Antimony	A-T-025	Y	N	<0.001	<0.001	<0.002	<0.01	0.06	0.7	5
Selenium	A-T-025	Y	N	0.002	<0.001	0.004	<0.01	0.1	0.5	7
Zinc	A-T-025	Y	N	0.229	0.116	0.561	1.320	4	50	200
Chloride	A-T-026	Y	N	9	3	23	37	800	15000	25000
Fluoride	A-T-026	Y	N	0.6	0.3	1.4	3.0	10	150	500
Sulphate as SO ₄	A-T-026	Y	N	31	6	76	82	1000	20000	50000
Total Dissolved Solids	A-T-035	N	N	181	<20	443	<200	4000	60000	100000
Phenol Index	A-T-050	N	N	<0.01	<0.01	<0.02	<0.1	1	-	-
Dissolved Organic Carbon	A-T-032	N	N	102	57.40	249	641	500	800	1000
Leach Test Information										
pH (pH Units)	A-T-031	N	Y	5.5	5.7					
Conductivity (µS/cm)	A-T-037	N	N	361	21					
Mass Sample (kg)				0.200						
Dry Matter (%)	A-T-044	N	N	79.8						
Stage 1										
Volume Leachant, L ₂ (l)	A-T-046			0.350						
Filtered Eluate Volume, VE ₁ (l)	A-T-046			0.150						
Stage 2										
Volume Leachant, L ₈ (l)	A-T-046			1.280						
Stated acceptance limits are for guidance only and Envirolab cannot be held responsible for any discrepancies with current legislation										

APPENDIX 6
MONITORING

Visit 1

>>>> = Flow above detection limit of 30 l/hr, <<< = Negative flow greater than -10 l/hr. >Max = In excess of lower explosive limit. NR = Not Recorded

Gas and Groundwater Monitoring Results

Contract Number:		42171				Gas Monitor:		G503249	
Contract Name:		Ashton Moss				Readings Taken By:			
Date:		10th May 2018				Checked By:			
Background Readings:		Weather Conditions:				Cloudy			
		Ground Conditions (dry / wet etc):				Dry			
		Atmospheric Pressure (Start):				1004mb			
		Atmospheric Pressure (Finish):				1004mb			
O ₂ % v/v	20.9	CO ₂ % v/v	0.1	CH ₄ % v/v	0.0	CO ppm	0	H ₂ S ppm	0
Hole No:	O ₂ % v/v	CO ₂ % v/v	CH ₄ % v/v	LEL %	H ₂ S ppm	CO ppm	Gas flow Rate (l/hr)		Diff. Pressure
ARP-BH102	Steady	Steady	Steady	Steady	Steady	Steady	Mins	Steady	
SHALLOW 5 secs	15.0	14.6	75.2	>max	0	1	0	0.1	0.03
30 secs	5.7	5.2	61.3	>max	0	1	1	0.7	
1 min	5.1	5.1	59.7	>max	0	1	2	0.4	
DEEP 5 secs	20.9	0.1	0.0	0.0	0	0	3	0.3	
30 secs	6.0	5.0	58.9	>max	0	1	4	0.3	
1 min	5.7	4.9	57.5	>max	0	1	5	0.4	
CIRCULATE 1 min	16.5	1.6	18.3	>max	0	0	6	0.4	
2 mins	16.4	1.6	18.5	>max	0	1	7		
3 mins	16.5	1.6	18.3	>max	0	1	8		
4 mins	16.5	1.6	18.2	>max	0	1	9		
5 mins	16.6	1.6	18.1	>max	0	1	10		
6 mins	16.6	1.5	17.9	>max	0	1			
7 mins	16.6	1.5	17.8	>max	0	1			
8 mins	16.6	1.5	17.7	>max	0	1			
9 mins	16.6	1.5	17.7	>max	0	1			
10 mins	16.6	1.5	17.7	>max	0	1			
SHALLOW 5 secs	20.9	0.1	0.0	0.0	0	0			
30 secs	16.8	1.5	17.5	>max	0	1			
1 min	16.7	1.5	17.6	>max	0	1			
DEEP 5 secs	20.9	0.1	0.1	2.0	0	1			
30 secs	16.9	1.5	17.2	>max	0	1			
1 min	16.8	1.5	17.1	>max	0	1			
VOC ppm	0.0	Depth to base of well	13.62	SWL	0.44	LNAPL or DNAPL	ND	Temp	11.0
	Steady		mBGL		mBGL	mBGL	°C		
>>>> = Flow above detection limit of 30 l/hr, <<<< = Negative flow greater than -10 l/hr. >Max = In excess of lower explosive limit. NR = Not Recorded Remarks: Start time: 12:12 Finish Time:									

>>>> = Flow above detection limit of 30 l/hr, <<< = Negative flow greater than -10 l/hr. >Max = In excess of lower explosive limit. NR = Not Recorded

>>>> = Flow above detection limit of 30 l/hr, <<< = Negative flow greater than -10 l/hr. >Max = In excess of lower explosive limit. NR = Not Recorded

>>>> = Flow above detection limit of 30 l/hr, <<< = Negative flow greater than -10 l/hr. >Max = In excess of lower explosive limit. NR = Not Recorded

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>>>> = Flow above detection limit of 30 l/hr, <<< = Negative flow greater than -10 l/hr. >Max = In excess of lower explosive limit. NR = Not Recorded

>>>> = Flow above detection limit of 30 l/hr, <<< = Negative flow greater than -10 l/hr. >Max = In excess of lower explosive limit. NR = Not Recorded

>>>> = Flow above detection limit of 30 l/hr, <<< = Negative flow greater than -10 l/hr. >Max = In excess of lower explosive limit. NR = Not Recorded



>>>> = Flow above detection limit of 30 l/hr, <<< = Negative flow greater than -10 l/hr. >Max = In excess of lower explosive limit. NR = Not Recorded

>>>> = Flow above detection limit of 30 l/hr, <<< = Negative flow greater than -10 l/hr. >Max = In excess of lower explosive limit. NR = Not Recorded

Visit 2

>>>> = Flow above detection limit of 30 l/hr, <<< = Negative flow greater than -10 l/hr. >Max = In excess of lower explosive limit. NR = Not Recorded

>>>> = Flow above detection limit of 30 l/hr, <<< = Negative flow greater than -10 l/hr. >Max = In excess of lower explosive limit. NR = Not Recorded

>>>> = Flow above detection limit of 30 l/hr, <<< = Negative flow greater than -10 l/hr. >Max = In excess of lower explosive limit. NR = Not Recorded

>>>> = Flow above detection limit of 30 l/hr, <<< = Negative flow greater than -10 l/hr. >Max = In excess of lower explosive limit. NR = Not Recorded

>>>> = Flow above detection limit of 30 l/hr, <<< = Negative flow greater than -10 l/hr. >Max = In excess of lower explosive limit. NR = Not Recorded

>>>> = Flow above detection limit of 30 l/hr. <<< = Negative flow greater than -10 l/hr. >Max = In excess of lower explosive limit. NR = Not Recorded

>>>> = Flow above detection limit of 30 l/hr, <<< = Negative flow greater than -10 l/hr. >Max = In excess of lower explosive limit. NR = Not Recorded

>>>> = Flow above detection limit of 30 l/hr, <<< = Negative flow greater than -10 l/hr. >Max = In excess of lower explosive limit. NR = Not Recorded

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>>>> = Flow above detection limit of 30 l/hr, <<< = Negative flow greater than -10 l/hr. >Max = In excess of lower explosive limit. NR = Not Recorded

>>>> = Flow above detection limit of 30 l/hr, <<< = Negative flow greater than -10 l/hr. >Max = In excess of lower explosive limit. NR = Not Recorded

>>>> = Flow above detection limit of 30 l/hr, <<< = Negative flow greater than -10 l/hr. >Max = In excess of lower explosive limit. NR = Not Recorded

Gas and Groundwater Monitoring Results

Contract Number: 42171						Gas Monitor: G503522			
Contract Name: Ashton Moss						Readings Taken By:			
Date: 15/05/2018						Checked By:			
Background Readings:		Weather Conditions:				Sun			
		Ground Conditions (dry / wet etc):				Dry			
		Atmospheric Pressure (Start):				1014mb			
		Atmospheric Pressure (Finish):				1014mb			
O ₂ % v/v	20.9	CO ₂ % v/v	0.1	CH ₄ % v/v	0.0	CO ppm	0	H ₂ S ppm	0
Hole No:	O ₂ % v/v	CO ₂ % v/v	CH ₄ % v/v	LEL %	H ₂ S ppm	CO ppm	Gas flow Rate (l/hr)		Diff. Pressure
	Steady	Steady	Steady	Steady	Steady	Steady	Mins	Steady	
ARP-WS103									
SHALLOW									
5 secs	20.4	0.3	0.1	2.0	0	1	0	-3.4	0.01
30 secs	19.7	3.3	2.5	50.0	0	3	1	-1.9	
1 min	19.7	3.5	2.2	44.0	0	3	2	-1.0	
DEEP									
5 secs	20.9	0.1	0.0	0.0	0	0	3	-0.5	
30 secs	19.8	3.6	1.8	36.0	0	3	4	-0.2	
1 min	19.7	3.7	1.8	36.0	0	3	5	-0.2	
CIRCULATE									
1 min	20.1	2.4	0.9	18.0	0	1	6	-0.2	
2 mins	20.1	1.3	0.6	12.0	0	2	7	-0.2	
3 mins	20.9	1.1	0.5	10.0	0	2	8	-0.2	
4 mins	20.9	1.0	0.5	10.0	0	2	9		
5 mins	20.9	1.0	0.5	10.0	0	2	10		
6 mins	20.9	1.0	0.5	10.0	0	2			
7 mins	20.9	1.0	0.5	10.0	0	2			
8 mins	20.9	1.0	0.5	10.0	0	2			
9 mins	20.9	1.0	0.5	10.0	0	2			
10 mins	20.9	1.0	0.5	10.0	0	2			
SHALLOW									
5 secs	20.9	1.0	0.0	0.0	0	2			
30 secs	20.7	1.0	0.5	10.0	0	2			
1 min	20.8	1.0	0.5	10.0	0	2			
DEEP									
5 secs	20.8	0.1	0.0	0.0	0	0			
30 secs	20.6	1.0	0.5	0.0	0	2			
1 min	20.4	1.2	0.6	0.0	0	2			
VOC ppm	0.0	Depth to base of well	5.37	SWL	0.67	LNAPL or DNAPL	ND	Temp	16.0
	Steady		Top		Top		mBGL		°C
>>>> = Flow above detection limit of 30 l/hr, <<< = Negative flow greater than -10 l/hr. >Max = In excess of lower explosive limit. NR = Not Recorded									
Remarks: Start time: 10:20 Finish Time: 10:42									

Visit 3

>>>> = Flow above detection limit of 30 l/hr, <<< = Negative flow greater than -10 l/hr. >Max = In excess of lower explosive limit. NR = Not Recorded

>>>> = Flow above detection limit of 30 l/hr, <<< = Negative flow greater than -10 l/hr. >Max = In excess of lower explosive limit. NR = Not Recorded

>>>> = Flow above detection limit of 30 l/hr, <<< = Negative flow greater than -10 l/hr. >Max = In excess of lower explosive limit. NR = Not Recorded

>>>> = Flow above detection limit of 30 l/hr, <<< = Negative flow greater than -10 l/hr. >Max = In excess of lower explosive limit. NR = Not Recorded

>>>> = Flow above detection limit of 30 l/hr, <<< = Negative flow greater than -10 l/hr. >Max = In excess of lower explosive limit. NR = Not Recorded

>>>> = Flow above detection limit of 30 l/hr, <<< = Negative flow greater than -10 l/hr. >Max = In excess of lower explosive limit. NR = Not Recorded

>>>> = Flow above detection limit of 30 l/hr, <<< = Negative flow greater than -10 l/hr. >Max = In excess of lower explosive limit. NR = Not Recorded

>>>> = Flow above detection limit of 30 l/hr, <<< = Negative flow greater than -10 l/hr. >Max = In excess of lower explosive limit. NR = Not Recorded

>>>> = Flow above detection limit of 30 l/hr, <<< = Negative flow greater than -10 l/hr. >Max = In excess of lower explosive limit. NR = Not Recorded

>>>> = Flow above detection limit of 30 l/hr, <<< = Negative flow greater than -10 l/hr. >Max = In excess of lower explosive limit. NR = Not Recorded

>>>> = Flow above detection limit of 30 l/hr, <<< = Negative flow greater than -10 l/hr. >Max = In excess of lower explosive limit. NR = Not Recorded

>>>> = Flow above detection limit of 30 l/hr, <<< = Negative flow greater than -10 l/hr. >Max = In excess of lower explosive limit. NR = Not Recorded



>>>> = Flow above detection limit of 30 l/hr, <<< = Negative flow greater than -10 l/hr. >Max = In excess of lower explosive limit. NR = Not Recorded

Visit 4

>>>> = Flow above detection limit of 30 l/hr, <<< = Negative flow greater than -10 l/hr. >Max = In excess of lower explosive limit. NR = Not Recorded

>>>> = Flow above detection limit of 30 l/hr, <<< = Negative flow greater than -10 l/hr. >Max = In excess of lower explosive limit. NR = Not Recorded

>>>> = Flow above detection limit of 30 l/hr, <<< = Negative flow greater than -10 l/hr. >Max = In excess of lower explosive limit. NR = Not Recorded

>>>> = Flow above detection limit of 30 l/hr, <<< = Negative flow greater than -10 l/hr. >Max = In excess of lower explosive limit. NR = Not Recorded

>>>> = Flow above detection limit of 30 l/hr, <<< = Negative flow greater than -10 l/hr. >Max = In excess of lower explosive limit. NR = Not Recorded

>>>> = Flow above detection limit of 30 l/hr, <<< = Negative flow greater than -10 l/hr. >Max = In excess of lower explosive limit. NR = Not Recorded

>>>> = Flow above detection limit of 30 l/hr, <<< = Negative flow greater than -10 l/hr. >Max = In excess of lower explosive limit. NR = Not Recorded

>>>> = Flow above detection limit of 30 l/hr, <<< = Negative flow greater than -10 l/hr. >Max = In excess of lower explosive limit. NR = Not Recorded

>>>> = Flow above detection limit of 30 l/hr, <<< = Negative flow greater than -10 l/hr. >Max = In excess of lower explosive limit. NR = Not Recorded

>>>> = Flow above detection limit of 30 l/hr, <<< = Negative flow greater than -10 l/hr. >Max = In excess of lower explosive limit. NR = Not Recorded

Remarks:	Start time:11:04
	Finish Time: NR

>>>> = Flow above detection limit of 30 l/hr, <<< = Negative flow greater than -10 l/hr. >Max = In excess of lower explosive limit. NR = Not Recorded

>>>> = Flow above detection limit of 30 l/hr, <<< = Negative flow greater than -10 l/hr. >Max = In excess of lower explosive limit. NR = Not Recorded

Visit 5



>>>> = Flow above detection limit of 30 l/hr. <<< = Negative flow greater than -10 l/hr. >Max = In excess of lower explosive limit. NR = Not Recorded



>>>> = Flow above detection limit of 30 l/hr, <<< = Negative flow greater than -10 l/hr. >Max = In excess of lower explosive limit. NR = Not Recorded



>>>> = Flow above detection limit of 30 l/hr, <<< = Negative flow greater than -10 l/hr. >Max = In excess of lower explosive limit. NR = Not Recorded



>>>> = Flow above detection limit of 30 l/hr. <<< = Negative flow greater than -10 l/hr. >Max = In excess of lower explosive limit. NR = Not Recorded



>>>> = Flow above detection limit of 30 l/hr, <<< = Negative flow greater than -10 l/hr. >Max = In excess of lower explosive limit. NR = Not Recorded



>>>> = Flow above detection limit of 30 l/hr, <<< = Negative flow greater than -10 l/hr. >Max = In excess of lower explosive limit. NR = Not Recorded



>>>> = Flow above detection limit of 30 l/hr. <<< = Negative flow greater than -10 l/hr. >Max = In excess of lower explosive limit. NR = Not Recorded



>>>> = Flow above detection limit of 30 l/hr, <<< = Negative flow greater than -10 l/hr. >Max = In excess of lower explosive limit. NR = Not Recorded



>>>> = Flow above detection limit of 30 l/hr, <<< = Negative flow greater than -10 l/hr. >Max = In excess of lower explosive limit. NR = Not Recorded



>>>> = Flow above detection limit of 30 l/hr, <<< = Negative flow greater than -10 l/hr. >Max = In excess of lower explosive limit. NR = Not Recorded



>>>> = Flow above detection limit of 30 l/hr, <<< = Negative flow greater than -10 l/hr. >Max = In excess of lower explosive limit. NR = Not Recorded



>>>> = Flow above detection limit of 30 l/hr, <<< = Negative flow greater than -10 l/hr. >Max = In excess of lower explosive limit. NR = Not Recorded



>>>> = Flow above detection limit of 30 l/hr, <<< = Negative flow greater than -10 l/hr. >Max = In excess of lower explosive limit. NR = Not Recorded

Visit 6

>>>> = Flow above detection limit of 30 l/hr, <<< = Negative flow greater than -10 l/hr. >Max = In excess of lower explosive limit. NR = Not Recorded

>>>> = Flow above detection limit of 30 l/hr, <<< = Negative flow greater than -10 l/hr. >Max = In excess of lower explosive limit. NR = Not Recorded

>>>> = Flow above detection limit of 30 l/hr, <<< = Negative flow greater than -10 l/hr. >Max = In excess of lower explosive limit. NR = Not Recorded

>>>> = Flow above detection limit of 30 l/hr, <<< = Negative flow greater than -10 l/hr. >Max = In excess of lower explosive limit. NR = Not Recorded

>>>> = Flow above detection limit of 30 l/hr. <<< = Negative flow greater than -10 l/hr. >Max = In excess of lower explosive limit. NR = Not Recorded

>>>> = Flow above detection limit of 30 l/hr, <<< = Negative flow greater than -10 l/hr. >Max = In excess of lower explosive limit. NR = Not Recorded

>>>> = Flow above detection limit of 30 l/hr, <<< = Negative flow greater than -10 l/hr. >Max = In excess of lower explosive limit. NR = Not Recorded

Gas and Groundwater Monitoring Results

Contract Number:		42171				Gas Monitor:		G502481	
Contract Name:		Ashton Moss				Readings Taken By:		█	
Date:		12th June 2018				Checked By:		█	
Background Readings:		Weather Conditions:				Cloudy			
		Ground Conditions (dry / wet etc):				Dry			
		Atmospheric Pressure (Start):				1004mb			
		Atmospheric Pressure (Finish):				1005mb			
O ₂ % v/v	20.9	CO ₂ % v/v	0.0	CH ₄ % v/v	0.0	CO ppm	0	H ₂ S ppm	0
Hole No:	O ₂ % v/v	CO ₂ % v/v	CH ₄ % v/v	LEL %	H ₂ S ppm	CO ppm	Gas flow Rate (l/hr)		Diff. Pressure
ARP-BH109	Steady	Steady	Steady	Steady	Steady	Steady	Mins	Steady	
SHALLOW 5 secs	20.8	0.6	0.0	12.0	0	0	0	0.1	0.86
30 secs	0.8	6.5	61.0	>Max	0	0	1	0.0	
1 min	0.0	6.5	61.2	>Max	0	0	2	0.0	
DEEP 5 secs	20.8	0.8	0.0	0.0	0	0	3	0.0	
30 secs	0.6	6.0	57.4	>Max	0	0	4	0.0	
1 min	0.0	6.0	57.2	>Max	0	2	5	0.0	
CIRCULATE 1 min	0.0	6.4	61.0	>Max	0	0	6		
2 mins	0.0	6.4	60.7	>Max	0	0	7		
3 mins	0.0	6.4	60.4	>Max	0	0	8		
4 mins	0.0	6.3	59.9	>Max	0	0	9		
5 mins	0.0	6.3	59.7	>Max	0	0	10		
6 mins	0.0	6.3	59.7	>Max	0	0			
7 mins	0.0	6.3	59.5	>Max	0	0			
8 mins	0.0	6.3	59.5	>Max	0	0			
9 mins	0.0	6.3	59.5	>Max	0	0			
10 mins	0.0	6.3	59.5	>Max	0	0			
SHALLOW 5 secs	19.9	0.5	0.7	14.0	0	0			
30 secs	0.4	6.3	65.3	>Max	0	0			
1 min	0.1	6.2	65.1	>Max	0	0			
DEEP 5 secs	20.6	0.7	0.0	0.0	0	0			
30 secs	0.4	5.8	61.3	>Max	0	0			
1 min	0.0	6.0	61.9	>Max	0	0			
VOC ppm	0.0	Depth to base of well	9.23	SWL	2.56	LNAPL or DNAPL	ND	Temp	17.0
	Steady		mBGL		mBGL	mBGL			°C
>>>> = Flow above detection limit of 30 l/hr, <<< = Negative flow greater than -10 l/hr. >Max = In excess of lower explosive limit. NR = Not Recorded									
Remarks: Start time: 11:01 Finish Time: 11:25									

>>>> = Flow above detection limit of 30 l/hr, <<< = Negative flow greater than -10 l/hr. >Max = In excess of lower explosive limit. NR = Not Recorded

>>>> = Flow above detection limit of 30 l/hr, <<< = Negative flow greater than -10 l/hr. >Max = In excess of lower explosive limit. NR = Not Recorded

>>>> = Flow above detection limit of 30 l/hr, <<< = Negative flow greater than -10 l/hr. >Max = In excess of lower explosive limit. NR = Not Recorded

Gas and Groundwater Monitoring Results

Contract Number:		42171				Gas Monitor:		G502481	
Contract Name:		Ashton Moss				Readings Taken By:			
Date:		12th June 2018				Checked By:			
Background Readings:		Weather Conditions:				Sunny			
		Ground Conditions (dry / wet etc):				Dry			
		Atmospheric Pressure (Start):				1006mb			
		Atmospheric Pressure (Finish):				1005mb			
O ₂ % v/v	20.9	CO ₂ % v/v	0.0	CH ₄ % v/v	0.0	CO ppm	0	H ₂ S ppm	0
Hole No:	O ₂ % v/v	CO ₂ % v/v	CH ₄ % v/v	LEL %	H ₂ S ppm	CO ppm	Gas flow Rate (l/hr)		Diff. Pressure
	Steady	Steady	Steady	Steady	Steady	Steady	Mins	Steady	
ARP-WS102 SHALLOW 5 secs	20.8	1.4	0.3	6.0	0	0	0	0.6	0.43
30 secs	0.4	32.4	67.4	>Max	0	0	1	0.1	
1 min	0.0	32.5	67.4	>Max	0	0	2	0.1	
DEEP 5 secs	20.8	1.2	0.0	>Max	0	0	3	0.1	
30 secs	0.5	32.5	67.3	>Max	0	0	4	0.1	
1 min	0.0	32.5	67.2	>Max	0	0	5	0.1	
CIRCULATE 1 min	1.1	31.6	61.6	>Max	0	0	6		
2 mins	0.8	31.0	62.4	>Max	0	0	7		
3 mins	1.0	31.0	62.5	>Max	0	0	8		
4 mins	0.9	30.9	62.4	>Max	0	0	9		
5 mins	0.9	30.8	62.4	>Max	0	0	10		
6 mins	1.0	31.0	62.5	>Max	0	0			
7 mins	0.9	31.0	62.4	>Max	0	0			
8 mins	0.9	31.0	62.4	>Max	0	0			
9 mins	0.9	31.0	62.4	>Max	0	0			
10 mins	0.9	31.0	62.4	>Max	0	0			
SHALLOW 5 secs	20.5	1.9	1.3	26.0	0	0			
30 secs	1.1	31.2	62.7	>Max	0	0			
1 min	0.8	31.2	63.1	>Max	0	0			
DEEP 5 secs	20.5	1.8	0.0	0.0	0	0			
30 secs	1.1	31.4	63.4	>Max	0	0			
1 min	1.0	31.4	64.2	>Max	0	0			
VOC ppm	0.0	Depth to base of well	4.87	SWL	2.06	LNAPL or DNAPL	ND	Temp	20.0
	Steady		mBGL		mBGL		mBGL		°C
>>>> = Flow above detection limit of 30 l/hr, <<<< = Negative flow greater than -10 l/hr. >Max = In excess of lower explosive limit. NR = Not Recorded									
Remarks: Start time: 13:34 Finish Time: 13:57									

>>>> = Flow above detection limit of 30 l/hr, <<< = Negative flow greater than -10 l/hr. >Max = In excess of lower explosive limit. NR = Not Recorded

Visit 7

>>>> = Flow above detection limit of 30 l/hr, <<< = Negative flow greater than -10 l/hr. >Max = In excess of lower explosive limit. NR = Not Recorded

>>>> = Flow above detection limit of 30 l/hr, <<< = Negative flow greater than -10 l/hr. >Max = In excess of lower explosive limit. NR = Not Recorded



>>>> = Flow above detection limit of 30 l/hr, <<< = Negative flow greater than -10 l/hr. >Max = In excess of lower explosive limit. NR = Not Recorded

>>>> = Flow above detection limit of 30 l/hr, <<< = Negative flow greater than -10 l/hr. >Max = In excess of lower explosive limit. NR = Not Recorded

>>>> = Flow above detection limit of 30 l/hr, <<< = Negative flow greater than -10 l/hr. >Max = In excess of lower explosive limit. NR = Not Recorded

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>>>> = Flow above detection limit of 30 l/hr, <<< = Negative flow greater than -10 l/hr. >Max = In excess of lower explosive limit. NR = Not Recorded

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>>>> = Flow above detection limit of 30 l/hr, <<<< = Negative flow greater than -10 l/hr. >Max = In excess of lower explosive limit. NR = Not Recorded

Visit 8

>>>> = Flow above detection limit of 30 l/hr, <<< = Negative flow greater than -10 l/hr. >Max = In excess of lower explosive limit. NR = Not Recorded

Gas and Groundwater Monitoring Results

Contract Number:		42171				Gas Monitor:		G503807	
Contract Name:		Asthon Moss				Readings Taken By:			
Date:		27th of June 2018				Checked By:			
Background Readings:		Weather Conditions:				Sunny			
		Ground Conditions (dry / wet etc):				Dry			
		Atmospheric Pressure (Start):				1016mb			
		Atmospheric Pressure (Finish):				1016mb			
O ₂ % v/v	20.9	CO ₂ % v/v	0.1	CH ₄ % v/v	0.0	CO ppm	0.0	H ₂ S ppm	0.0
Hole No:	O ₂ % v/v	CO ₂ % v/v	CH ₄ % v/v	LEL %	H ₂ S ppm	CO ppm	Gas flow Rate (l/hr)		Diff. Pressure
ARP-BH102	Steady	Steady	Steady	Steady	Steady	Steady	Mins	Steady	0.02
SHALLOW 5 secs	20.9	0.1	0.1	2.0	0	0	0	0.0	
30 secs	7.6	4.1	48.6	>Max	0	1	1	0.1	
1 min	9.7	3.5	40.6	>Max	0	0	2	0.1	
DEEP 5 secs	20.9	0.1	0.0	0.0	0	0	3	0.1	
30 secs	11.9	2.8	31.8	>Max	0	0	4	0.1	
1 min	12.0	2.7	31.0	>Max	0	0	5	0.1	
CIRCULATE 1 min	15.3	1.7	19.5	>Max	0	0	6		
2 mins	15.1	1.8	20.6	>Max	0	0	7		
3 mins	14.7	1.9	22.0	>Max	0	0	8		
4 mins	14.7	1.9	22.2	>Max	0	0	9		
5 mins	14.6	1.9	22.3	>Max	0	0	10		
6 mins	14.6	1.9	22.4	>Max	0	0			
7 mins	14.6	1.9	22.4	>Max	0	0			
8 mins	14.6	1.9	22.4	>Max	0	0			
9 mins	14.6	1.9	22.5	>Max	0	0			
10 mins	14.6	1.9	22.5	>Max	0	0			
SHALLOW 5 secs	20.9	0.1	0.0	0.0	0	0			
30 secs	15.2	1.8	21.2	>Max	0	0			
1 min	16.1	1.5	18.0	>Max	0	0			
DEEP 5 secs	20.9	0.1	0.0	0.0	0	0			
30 secs	16.8	1.2	14.9	>Max	0	0			
1 min	16.8	1.2	15.0	>Max	0	0			
VOC ppm	0.0	Depth to base of well	NR	SWL	NR	LNAPL or DNAPL	NR	Temp	24.0
	Steady		mBGL		mBGL		mBGL		°C
>>>> = Flow above detection limit of 30 l/hr, <<<< = Negative flow greater than -10 l/hr. >Max = In excess of lower explosive limit. NR = Not Recorded									
Remarks: Start time: NR Finish Time: NR Bung stuck in well.									

>>>> = Flow above detection limit of 30 l/hr, <<< = Negative flow greater than -10 l/hr. >Max = In excess of lower explosive limit. NR = Not Recorded

>>>> = Flow above detection limit of 30 l/hr, <<< = Negative flow greater than -10 l/hr. >Max = In excess of lower explosive limit. NR = Not Recorded

>>>> = Flow above detection limit of 30 l/hr, <<< = Negative flow greater than -10 l/hr. >Max = In excess of lower explosive limit. NR = Not Recorded

Gas and Groundwater Monitoring Results

Contract Number: 42171						Gas Monitor: G503807			
Contract Name: Ashton Moss						Readings Taken By: [REDACTED]			
Date: 27th June 2018						Checked By: [REDACTED]			
Background Readings:		Weather Conditions:				Sunny			
		Ground Conditions (dry / wet etc):				Dry			
		Atmospheric Pressure (Start):				1015mb			
		Atmospheric Pressure (Finish):				1015mb			
O ₂ % v/v	20.9	CO ₂ % v/v	0.1	CH ₄ % v/v	0.0	CO ppm	0.0	H ₂ S ppm	0.0
Hole No:	O ₂ % v/v	CO ₂ % v/v	CH ₄ % v/v	LEL %	H ₂ S ppm	CO ppm	Gas flow Rate (l/hr)		Diff. Pressure
ARP-BH107	Steady	Steady	Steady	Steady	Steady	Steady	Mins	Steady	0.02
SHALLOW							0	0.0	
5 secs									
30 secs							1	0.0	
1 min							2	0.0	
DEEP							3	0.0	
5 secs									
30 secs							4	0.0	
1 min							5	0.0	
CIRCULATE									
1 min	19.8	0.0	0.0	0.0	0.0	0.0	6		
2 mins	19.9	0.0	0.0	0.0	0.0	0.0	7		
3 mins	19.9	0.0	0.0	0.0	0.0	0.0	8		
4 mins	19.9	0.0	0.0	0.0	0.0	0.0	9		
5 mins	19.9	0.0	0.0	0.0	0.0	0.0	10		
6 mins	19.8	0.0	0.0	0.0	0.0	0.0			
7 mins	19.9	0.0	0.0	0.0	0.0	0.0			
8 mins	19.9	0.0	0.0	0.0	0.0	0.0			
9 mins	19.9	0.0	0.0	0.0	0.0	0.0			
10 mins	19.9	0.0	0.0	0.0	0.0	0.0			
SHALLOW									
5 secs									
30 secs									
1 min									
DEEP									
5 secs									
30 secs									
1 min									
VOC ppm	0.0	Depth to base of well	5.72	SWL	2.06	LNAPL or DNAPL	ND	Temp	20.0
	Steady		mBGL		mBGL		mBGL		°C

>>>> = Flow above detection limit of 30 l/hr, <<<< = Negative flow greater than -10 l/hr. >Max = In excess of lower explosive limit. NR = Not Recorded

Remarks: Start time: 8:10
Finish Time: NR
Bung stolen, analyser tubing lowered into pipe.

>>>> = Flow above detection limit of 30 l/hr, <<< = Negative flow greater than -10 l/hr. >Max = In excess of lower explosive limit. NR = Not Recorded

>>>> = Flow above detection limit of 30 l/hr, <<< = Negative flow greater than -10 l/hr. >Max = In excess of lower explosive limit. NR = Not Recorded

>>>> = Flow above detection limit of 30 l/hr, <<< = Negative flow greater than -10 l/hr. >Max = In excess of lower explosive limit. NR = Not Recorded

>>>> = Flow above detection limit of 30 l/hr, <<< = Negative flow greater than -10 l/hr. >Max = In excess of lower explosive limit. NR = Not Recorded

>>>> = Flow above detection limit of 30 l/hr, <<< = Negative flow greater than -10 l/hr. >Max = In excess of lower explosive limit. NR = Not Recorded

>>>> = Flow above detection limit of 30 l/hr, <<< = Negative flow greater than -10 l/hr. >Max = In excess of lower explosive limit. NR = Not Recorded

>>>> = Flow above detection limit of 30 l/hr, <<< = Negative flow greater than -10 l/hr. >Max = In excess of lower explosive limit. NR = Not Recorded

Visit 9

Gas and Groundwater Monitoring Results

Contract Number:		42171				Gas Monitor:		G503807	
Contract Name:		Ashton Moss				Readings Taken By:			
Date:		2nd July 2018				Checked By:			
Background Readings:		Weather Conditions:				Sunny			
		Ground Conditions (dry / wet etc):				Dry			
		Atmospheric Pressure (Start):				1009mb			
		Atmospheric Pressure (Finish):				1009mb			
O ₂ % v/v	20.9	CO ₂ % v/v	0.1	CH ₄ % v/v	0.0	CO ppm	0.0	H ₂ S ppm	0.0
Hole No:	O ₂ % v/v	CO ₂ % v/v	CH ₄ % v/v	LEL %	H ₂ S ppm	CO ppm	Gas flow Rate (l/hr)		Diff. Pressure
ARP-BH101	Steady	Steady	Steady	Steady	Steady	Steady	Mins	Steady	0.02
SHALLOW 5 secs	20.9	0.1	0.0	0.0	0	0	0	0.1	
30 secs	0.2	7.0	75.9	>Max	0	0	1	0.1	
1 min	0.1	7.0	75.9	>Max	0	0	2	0.1	
DEEP 5 secs	20.9	0.1	0.0	0.0	0	0	3	0.1	
30 secs	0.4	7.3	64.2	>Max	0	0	4	0.1	
1 min	0.4	7.3	60.0	>Max	0	0	5	0.1	
CIRCULATE 1 min	0.7	6.8	72.8	>Max	0	0	6		
2 mins	0.5	6.9	73.8	>Max	0	0	7		
3 mins	0.3	6.9	74.4	>Max	0	0	8		
4 mins	0.2	6.9	74.8	>Max	0	0	9		
5 mins	0.1	6.9	74.9	>Max	0	0	10		
6 mins	1.4	6.7	66.7	>Max	0	0			
7 mins	1.4	6.6	66.6	>Max	0	0			
8 mins	1.3	6.7	67.3	>Max	0	0			
9 mins	1.3	6.7	67.4	>Max	0	0			
10 mins	1.3	6.7	67.5	>Max	0	0			
SHALLOW 5 secs	20.9	0.1	0.4	8.0	0	0			
30 secs	1.6	6.6	66.5	>Max	0	0			
1 min	1.4	6.6	67.2	>Max	0	0			
DEEP 5 secs	20.9	0.1	0.0	0.0	0	0			
30 secs	3.1	6.8	35.7	>Max	0	0			
1 min	3.0	6.8	34.9	>Max	0	0			
VOC ppm	0.0	Depth to base of well	11.09	SWL	2.58	LNAPL or DNAPL	ND	Temp	22.0
	Steady		mBGL		mBGL		mBGL		°C
>>>> = Flow above detection limit of 30 l/hr, <<<< = Negative flow greater than -10 l/hr. >Max = In excess of lower explosive limit. NR = Not Recorded									
Remarks: Start time: 11:15 Finish Time: NR									

Gas and Groundwater Monitoring Results

Contract Number:		42171				Gas Monitor:		G503807	
Contract Name:		Ashton Moss				Readings Taken By:			
Date:		2nd July 2018				Checked By:			
Background Readings:		Weather Conditions:				Sunny			
		Ground Conditions (dry / wet etc):				Dry			
		Atmospheric Pressure (Start):				1008mb			
		Atmospheric Pressure (Finish):				1008mb			
O ₂ % v/v	20.9	CO ₂ % v/v	0.1	CH ₄ % v/v	0.0	CO ppm	0.0	H ₂ S ppm	0.0
Hole No:	O ₂ % v/v	CO ₂ % v/v	CH ₄ % v/v	LEL %	H ₂ S ppm	CO ppm	Gas flow Rate (l/hr)		Diff. Pressure
ARP-BH102	Steady	Steady	Steady	Steady	Steady	Steady	Mins	Steady	0.02
SHALLOW 5 secs	20.9	0.1	0.0	0.0	0	0	0	0.1	
30 secs	1.4	6.0	71.4	>Max	0	3	1	0.1	
1 min	4.1	5.3	60.8	>Max	0	2	2	0.1	
DEEP 5 secs	20.9	0.1	0.0	0.0	0	0	3	0.1	
30 secs	8.1	4.0	43.9	>Max	0	2	4	0.1	
1 min	8.1	4.0	43.2	>Max	0	1	5	0.1	
CIRCULATE 1 min	13.4	2.4	25.8	>Max	0	1	6		
2 mins	12.9	2.5	27.2	>Max	0	1	7		
3 mins	12.7	2.5	27.5	>Max	0	1	8		
4 mins	12.7	2.6	27.8	>Max	0	1	9		
5 mins	12.7	2.6	28.0	>Max	0	1	10		
6 mins	12.7	2.6	28.1	>Max	0	1			
7 mins	12.6	2.6	28.1	>Max	0	1			
8 mins	12.6	2.6	28.2	>Max	0	1			
9 mins	12.6	2.6	28.2	>Max	0	1			
10 mins	12.6	2.6	28.2	>Max	0	1			
SHALLOW 5 secs	20.8	0.1	0.2	4.0	0	0			
30 secs	13.3	2.5	27.1	>Max	0	1			
1 min	14.4	2.2	23.3	>Max	0	1			
DEEP 5 secs	20.9	0.1	0.0	0.0	0	0			
30 secs	15.7	1.7	18.7	>Max	0	1			
1 min	15.6	1.7	18.9	>Max	0	1			
VOC ppm	0.1	Depth to base of well	NR	SWL	NR	LNAPL or DNAPL	ND	Temp	21.0
	Steady		mBGL		mBGL		mBGL		°C
>>>> = Flow above detection limit of 30 l/hr, <<< = Negative flow greater than -10 l/hr. >Max = In excess of lower explosive limit. NR = Not Recorded									
Remarks: Start time: 10:20									
Finish Time: NR Bung stuck in standpipe									

Gas and Groundwater Monitoring Results

Contract Number:		42171				Gas Monitor:		G503807	
Contract Name:		Ashton Moss				Readings Taken By:		█	
Date:		2nd July 2018				Checked By:		█	
Background Readings:		Weather Conditions:				Sunny			
		Ground Conditions (dry / wet etc):				Dry			
		Atmospheric Pressure (Start):				1009mb			
		Atmospheric Pressure (Finish):				1009mb			
O ₂ % v/v	20.9	CO ₂ % v/v	0.1	CH ₄ % v/v	0.0	CO ppm	0.0	H ₂ S ppm	0.0
Hole No: <i>ARP-BH104</i>	O ₂ % v/v	CO ₂ % v/v	CH ₄ % v/v	LEL %	H ₂ S ppm	CO ppm	Gas flow Rate (l/hr)		Diff. Pressure
	Steady	Steady	Steady	Steady	Steady	Steady	Mins	Steady	0.02
SHALLOW 5 secs	20.9	0.1	0.0	0.0	0	0	0	0.0	
30 secs	20.6	0.2	0.1	2.0	1	1	1	-0.1	
1 min	20.5	0.1	0.1	2.0	1	1	2	-0.1	
DEEP 5 secs	20.9	0.1	0.0	0.0	0	0	3	-0.1	
30 secs	20.5	0.2	0.2	4.0	0	0	4	-0.1	
1 min	20.5	0.2	0.2	4.0	0	0	5	-0.1	
CIRCULATE 1 min	20.5	0.1	0.1	2.0	0	0	6		
2 mins	20.4	0.2	0.1	2.0	0	0	7		
3 mins	20.4	0.1	0.1	2.0	0	0	8		
4 mins	20.4	0.1	0.1	2.0	0	0	9		
5 mins	20.5	0.1	0	2.0	0	0	10		
6 mins	20.5	0.1	0	0.0	0	0			
7 mins	20.5	0.1	0	0.0	0	0			
8 mins	20.5	0.1	0	0.0	0	0			
9 mins	20.5	0.1	0	0.0	0	0			
10 mins	20.5	0.1	0	0.0	0	0			
SHALLOW 5 secs	20.9	0.1	0	0.0	0	0			
30 secs	20.4	0.1	0	0.0	0	0			
1 min	20.4	0.1	0	0.0	0	1			
DEEP 5 secs	20.9	0.1	0	0.0	0	0			
30 secs	20.4	0.1	0	0.0	0	0			
1 min	20.4	0.1	0	2.0	0	0			
VOC ppm	0.0	Depth to base of well	9.67	SWL	0.75	LNAPL or DNAPL	ND	Temp	22.0
	Steady		mBGL		mBGL		mBGL		°C
>>>> = Flow above detection limit of 30 l/hr, <<< = Negative flow greater than -10 l/hr. >Max = In excess of lower explosive limit. NR = Not Recorded									
Remarks: Start time: 12:09 Finish Time: NR									

Gas and Groundwater Monitoring Results

Contract Number:		42171				Gas Monitor:		G503807	
Contract Name:		Ashton Moss				Readings Taken By:		█	
Date:		2nd July 2018				Checked By:		█	
Background Readings:		Weather Conditions:				Sunny			
		Ground Conditions (dry / wet etc):				Dry			
		Atmospheric Pressure (Start):				1007mb			
		Atmospheric Pressure (Finish):				1007mb			
O ₂ % v/v	20.9	CO ₂ % v/v	0.1	CH ₄ % v/v	0.0	CO ppm	0.0	H ₂ S ppm	0.0
Hole No:	O ₂ % v/v	CO ₂ % v/v	CH ₄ % v/v	LEL %	H ₂ S ppm	CO ppm	Gas flow Rate (l/hr)		Diff. Pressure
ARP-BH105	Steady	Steady	Steady	Steady	Steady	Steady	Mins	Steady	0.22
SHALLOW 5 secs	20.9	0.1	0.0	0.0	0	0	0	21.0	
30 secs	3.8	14.9	50.7	>Max	0	2	1	14.1	
1 min	3.6	15.1	50.9	>Max	0	2	2	11.2	
DEEP 5 secs	20.9	0.1	0.0	0.0	0	0	3	7.9	
30 secs	4.8	14.2	46.5	>Max	4	2	4	5.6	
1 min	3.5	15.3	50.8	>Max	5	2	5	4.5	
CIRCULATE 1 min	42.0	14.6	48.3	>Max	0	2	6	4.4	
2 mins	4.0	14.8	49.3	>Max	0	2	7	3.0	
3 mins	3.8	14.9	49.9	>Max	0	2	8	2.5	
4 mins	3.7	15.0	50.3	>Max	0	2	9	1.5	
5 mins	4.9	14.2	47.4	>Max	0	1	10	0.6	
6 mins	5.3	13.7	44.7	>Max	0	1			
7 mins	5.1	13.8	45.3	>Max	0	2			
8 mins	5.0	13.9	45.7	>Max	0	1			
9 mins	5.0	13.9	45.9	>Max		1			
10 mins	5.0	13.9	46.0	>Max	0	1			
SHALLOW 5 secs	20.9	0.1	0.0	0.0	0	0			
30 secs	5.2	13.7	45.5	>Max	0	2			
1 min	5.0	13.8	45.8	>Max	0	2			
DEEP 5 secs	20.9	0.1	0.0	0.0	0	0			
30 secs	6.8	12.3	39.6	>Max	11	2			
1 min	6.5	12.6	41.1	>Max	12	2			
VOC ppm	0.0	Depth to base of well	10.60	SWL	2.84	LNAPL or DNAPL	ND	Temp	18.0
	Steady		mBGL		mBGL		mBGL		°C
>>>> = Flow above detection limit of 30 l/hr, <<<< = Negative flow greater than -10 l/hr. >Max = In excess of lower explosive limit. NR = Not Recorded									
Remarks: Start time: 9:22 Finish Time: NR									

Gas and Groundwater Monitoring Results

Contract Number:		42171				Gas Monitor:		G503807	
Contract Name:		Ashton Moss				Readings Taken By:		█	
Date:		2nd July 2018				Checked By:		█	
Background Readings:		Weather Conditions:				Sunny			
		Ground Conditions (dry / wet etc):				Dry			
		Atmospheric Pressure (Start):				1009mb			
		Atmospheric Pressure (Finish):				1009mb			
O ₂ % v/v	20.9	CO ₂ % v/v	0.1	CH ₄ % v/v	0.0	CO ppm	0.0	H ₂ S ppm	0.0
Hole No:	O ₂ % v/v	CO ₂ % v/v	CH ₄ % v/v	LEL %	H ₂ S ppm	CO ppm	Gas flow Rate (l/hr)		Diff. Pressure
ARP-BH106	Steady	Steady	Steady	Steady	Steady	Steady	Mins	Steady	0.03
SHALLOW 5 secs	20.9	0.1	0.0	0.0	0	0	0	2.8	
30 secs	5.0	14.1	35.0	>Max	1	2	1	2.3	
1 min	4.7	14.3	35.1	>Max	1	2	2	1.7	
DEEP 5 secs	20.9	0.1	0.0	0.0	0	0	3	1.3	
30 secs	1.5	19.1	40.9	>Max	1	2	4	1.0	
1 min	1.5	19.9	42.0	>Max	0	2	5	0.7	
CIRCULATE 1 min	4.4	14.1	37.3	>Max	1	1	6	0.5	
2 mins	4.0	14.1	39.0	>Max	1	1	7	0.3	
3 mins	3.7	14.1	46.5	>Max	1	1	8	0.2	
4 mins	3.6	14.1	41.1	>Max	0	1	9	0.1	
5 mins	3.6	14.1	41.3	>Max	0	1	10	0.1	
6 mins	3.5	14.1	41.5	>Max	0	1			
7 mins	3.5	14.1	41.6	>Max	0	0			
8 mins	3.5	14.1	41.6	>Max	0	0			
9 mins	3.5	14.1	41.5	>Max	0	0			
10 mins	3.5	14.1	41.7	>Max	0	0			
SHALLOW 5 secs	20.9	0.1	0.0	0.0	0	0			
30 secs	4.5	13.1	38.0	>Max	0	1			
1 min	3.8	14.4	38.9	>Max	0	1			
DEEP 5 secs	20.9	0.1	0.0	0.0	0	0			
30 secs	3.6	15.2	40.1	>Max	0	1			
1 min	3.5	15.3	39.9	>Max	0	1			
VOC ppm	0.0	Depth to base of well	9.68	SWL	6.60	LNAPL or DNAPL	ND	Temp	24.0
	Steady		mBGL		mBGL		mBGL		°C
>>>> = Flow above detection limit of 30 l/hr, <<<< = Negative flow greater than -10 l/hr. >Max = In excess of lower explosive limit. NR = Not Recorded									
Remarks: Start time: 13:17 Finish Time: NR									

>>>> = Flow above detection limit of 30 l/hr, <<< = Negative flow greater than -10 l/hr. >Max = In excess of lower explosive limit. NR = Not Recorded

Gas and Groundwater Monitoring Results

Contract Number: 42171						Gas Monitor: G503807			
Contract Name: Ashton Moss						Readings Taken By: █			
Date: 2nd July 2018						Checked By: █			
Background Readings:		Weather Conditions:				Sunny			
		Ground Conditions (dry / wet etc):				Dry			
		Atmospheric Pressure (Start):				1008mb			
		Atmospheric Pressure (Finish):				1008mb			
O ₂ % v/v	20.9	CO ₂ % v/v	0.1	CH ₄ % v/v	0.0	CO ppm	0.0	H ₂ S ppm	0.0
Hole No:	O ₂ % v/v	CO ₂ % v/v	CH ₄ % v/v	LEL %	H ₂ S ppm	CO ppm	Gas flow Rate (l/hr)		Diff. Pressure
ARP-BH108	Steady	Steady	Steady	Steady	Steady	Steady	Mins	Steady	0.24
SHALLOW 5 secs	20.9	0.1	0.0	0.0	0	0	0	0.0	
30 secs	1.0	32.9	45.3	>Max	1	3	1	0.0	
1 min	0.8	33.1	45.3	>Max	1	3	2	0.1	
DEEP 5 secs	20.9	0.1	0.0	>Max	0	0	3	0.1	
30 secs	4.6	27.5	36.8	>Max	1	1	4	0.1	
1 min	2.0	31.1	41.6	>Max	1	2	5	0.1	
CIRCULATE 1 min	3.6	28.6	39.3	>Max	1	1	6		
2 mins	6.2	24.6	32.8	>Max	1	1	7		
3 mins	5.7	25.2	33.6	>Max	1	1	8		
4 mins	5.6	25.4	34.1	>Max	1	1	9		
5 mins	5.7	25.3	33.9	>Max	0	1	10		
6 mins	5.6	25.3	34.1	>Max	0	0			
7 mins	5.6	25.3	34.1	>Max	0	0			
8 mins	5.6	25.4	34.2	>Max	0	0			
9 mins	5.5	25.4	34.2	>Max	0	0			
10 mins	5.5	25.4	34.2	>Max	0	0			
SHALLOW 5 secs	20.9	0.1	0.0	0.0	0	0			
30 secs	6.1	24.4	33.2	>Max	0	1			
1 min	5.7	24.9	33.6	>Max	0	1			
DEEP 5 secs	20.9	0.1	0.0	0.0	0	0			
30 secs	5.0	26.1	35.6	>Max	1	1			
1 min	2.8	29.1	39.9	>Max	1	1			
VOC ppm	0.0	Depth to base of well	17.19	SWL	0.79	LNAPL or DNAPL	ND	Temp	22.0
	Steady		mBGL		mBGL		mBGL		°C
>>>> = Flow above detection limit of 30 l/hr, <<< = Negative flow greater than -10 l/hr. >Max = In excess of lower explosive limit. NR = Not Recorded									
Remarks: Start time: 11:40									
Finish Time: NR									

Gas and Groundwater Monitoring Results

Contract Number: 42171						Gas Monitor: G503807			
Contract Name: Ashton Moss						Readings Taken By: [REDACTED]			
Date: 2nd July 2018						Checked By: [REDACTED]			
Background Readings:		Weather Conditions:				Sunny			
		Ground Conditions (dry / wet etc):				Dry			
		Atmospheric Pressure (Start):				1008mb			
		Atmospheric Pressure (Finish):				1008mb			
O ₂ % v/v	20.9	CO ₂ % v/v	0.1	CH ₄ % v/v	0.0	CO ppm	0.0	H ₂ S ppm	0.0
Hole No:	O ₂ % v/v	CO ₂ % v/v	CH ₄ % v/v	LEL %	H ₂ S ppm	CO ppm	Gas flow Rate (l/hr)		Diff. Pressure
ARP-BH109	Steady	Steady	Steady	Steady	Steady	Steady	Mins	Steady	0.01
SHALLOW									
5 secs	20.9	0.1	0.0	0.0	0	0	0	0.0	
30 secs	0.4	4.9	25.5	>Max	0	8	1	0.1	
1 min	0.2	5.0	25.7	>Max	0	8	2	0.1	
DEEP									
5 secs	20.9	0.1	0.0	0.0	0	0	3	0.1	
30 secs	0.1	4.2	22.5	>Max	0	7	4	0.1	
1 min	0.0	4.3	23.1	>Max	0	7	5	0.1	
CIRCULATE									
1 min	0.1	5.0	26.4	>Max	0	7	6		
2 mins	0.0	5.0	26.7	>Max	0	6	7		
3 mins	0.0	5.0	26.7	>Max	0	6	8		
4 mins	0.0	4.6	24.5	>Max	0	5	9		
5 mins	0.0	4.3	23.4	>Max	0	5	10		
6 mins	0.0	4.4	23.3	>Max	0	5			
7 mins	0.0	4.4	23.3	>Max	0	5			
8 mins	0.0	4.4	23.3	>Max	0	5			
9 mins	0.0	4.4	23.4	>Max	0	5			
10 mins	0.0	4.4	23.4	>Max	0	5			
SHALLOW									
5 secs	20.9	0.1	0.0	0.0	0	0			
30 secs	0.0	4.4	23.5	>Max	0	5			
1 min	0.0	4.4	23.6	>Max	0	5			
DEEP									
5 secs	20.9	0.1	0.0	0.0	0	0			
30 secs	0.0	4.1	22.3	>Max	0	5			
1 min	0.0	4.2	22.3	0.0	0	5			
VOC ppm	0.0	Depth to base of well	9.06	SWL	2.57	LNAPL or DNAPL	ND	Temp	21.0
	Steady		mBGL		mBGL		mBGL		°C

>>>> = Flow above detection limit of 30 l/hr, <<< = Negative flow greater than -10 l/hr. >Max = In excess of lower explosive limit. NR = Not Recorded

Remarks: Start time: 9:55
Finish Time: NR

>>>> = Flow above detection limit of 30 l/hr. <<< = Negative flow greater than -10 l/hr. >Max = In excess of lower explosive limit. NR = Not Recorded

Gas and Groundwater Monitoring Results

Contract Number: 42171						Gas Monitor: G503807			
Contract Name: Ashton Moss						Readings Taken By: [REDACTED]			
Date: 2nd July 2018						Checked By: [REDACTED]			
Background Readings:		Weather Conditions:				Sunny			
		Ground Conditions (dry / wet etc):				Dry			
		Atmospheric Pressure (Start):				1008mb			
		Atmospheric Pressure (Finish):				1008mb			
O ₂ % v/v	20.9	CO ₂ % v/v	0.1	CH ₄ % v/v	0.0	CO ppm	0.0	H ₂ S ppm	0.0
Hole No:	O ₂ % v/v	CO ₂ % v/v	CH ₄ % v/v	LEL %	H ₂ S ppm	CO ppm	Gas flow Rate (l/hr)		Diff. Pressure
ARP-BH111	Steady	Steady	Steady	Steady	Steady	Steady	Mins	Steady	0.00
SHALLOW									
5 secs	20.9	0.1	0.0	0.0	0	0	0	0.1	
30 secs	1.5	10.4	68.1	>Max	0	2	1	0.1	
1 min	4.0	9.2	58.1	>Max	0	3	2	0.1	
DEEP									
5 secs	20.9	0.1	0.0	0.0	0	0	3	0.1	
30 secs	6.8	7.8	46.1	>Max	1	2	4	0.1	
1 min	7.9	7.2	42.4	>Max	1	2	5	0.1	
CIRCULATE									
1 min	9.1	6.5	37.4	>Max	2	2	6		
2 mins	8.9	6.6	37.6	>Max	2	2	7		
3 mins	8.7	6.7	38.1	>Max	2	2	8		
4 mins	8.6	6.7	38.4	>Max	2	2	9		
5 mins	8.6	6.7	38.4	>Max	1	2	10		
6 mins	8.6	6.7	38.5	>Max	1	2			
7 mins	8.6	6.7	38.5	>Max	1	2			
8 mins	8.6	6.7	38.5	>Max	1	2			
9 mins	8.6	6.7	38.5	>Max	1	2			
10 mins	8.6	6.7	38.5	>Max	1	2			
SHALLOW									
5 secs	20.9	0.1	0.0	0.0	0	0			
30 secs	9.7	6.2	35.4	>Max	2	2			
1 min	10.9	5.5	31.3	>Max	2	2			
DEEP									
5 secs	20.9	0.1	0.0	0.0	0	0			
30 secs	12.8	4.4	25.4	>Max	2	1			
1 min	13.4	4.1	23.4	>Max	2	2			
VOC ppm	0.0	Depth to base of well	5.82	SWL	0.99	LNAPL or DNAPL	ND	Temp	18.0
	Steady		mBGL		mBGL		mBGL		°C

>>>> = Flow above detection limit of 30 l/hr, <<< = Negative flow greater than -10 l/hr. >Max = In excess of lower explosive limit. NR = Not Recorded

Remarks: Start time: 8:58
Finish Time: NR

Gas and Groundwater Monitoring Results

Contract Number: 42171						Gas Monitor: G503807			
Contract Name: Ashton Moss						Readings Taken By: [REDACTED]			
Date: 2nd July 2018						Checked By: [REDACTED]			
Background Readings:		Weather Conditions:				Sunny			
		Ground Conditions (dry / wet etc):				Dry			
		Atmospheric Pressure (Start):				1010mb			
		Atmospheric Pressure (Finish):				1010mb			
O ₂ % v/v	20.9	CO ₂ % v/v	0.1	CH ₄ % v/v	0.0	CO ppm	0.0	H ₂ S ppm	0.0
Hole No:	O ₂ % v/v	CO ₂ % v/v	CH ₄ % v/v	LEL %	H ₂ S ppm	CO ppm	Gas flow Rate (l/hr)		Diff. Pressure
ARP-BH112	Steady	Steady	Steady	Steady	Steady	Steady	Mins	Steady	0.03
SHALLOW 5 secs	20.9	0.1	0.0	0.0	0	0	0	0.0	
30 secs	0.5	41.6	37.6	>Max	0	0	1	0.1	
1 min	0.3	42.0	37.6	>Max	0	0	2	0.1	
DEEP 5 secs	20.9	0.1	0.0	0.0	0	0	3	0.1	
30 secs	0.1	44.7	35.5	>Max	7	0	4	0.1	
1 min	0.0	45.2	35.5	>Max	7	0	5	0.1	
CIRCULATE 1 min	0.1	42.1	37.7	>Max	0	0	6		
2 mins	0.0	42.4	37.7	>Max	0	0	7		
3 mins	0.0	42.4	37.7	>Max	0	0	8		
4 mins	0.0	42.6	37.8	>Max	0	0	9		
5 mins	0.0	42.8	37.8	>Max	0	0	10		
6 mins	0.0	42.8	37.8	>Max	0	0			
7 mins	0.0	42.8	37.8	>Max	0	0			
8 mins	0.0	42.8	37.7	>Max	0	0			
9 mins	0.0	42.8	37.7	>Max	0	0			
10 mins	0.0	42.7	37.7	>Max	0	0			
SHALLOW 5 secs	20.9	0.1	0.0	0.0	0	0			
30 secs	0.0	42.7	37.6	>Max	0	0			
1 min	0.0	42.8	37.7	>Max	0	0			
DEEP 5 secs	20.9	0.1	0.0	0.0	0	0			
30 secs	0.1	44.1	36.0	>Max	3	0			
1 min	0.0	44.6	35.9	>Max	3	0			
VOC ppm	0.0	Depth to base of well	5.41	SWL	5.14	LNAPL or DNAPL	ND	Temp	21.0
	Steady		mBGL		mBGL		mBGL		°C

>>>> = Flow above detection limit of 30 l/hr, <<< = Negative flow greater than -10 l/hr. >Max = In excess of lower explosive limit. NR = Not Recorded

Remarks: Start time:
Finish Time:

>>>> = Flow above detection limit of 30 l/hr. <<< = Negative flow greater than -10 l/hr. >Max = In excess of lower explosive limit. NR = Not Recorded

Gas and Groundwater Monitoring Results

Contract Number: 42171						Gas Monitor: G503807			
Contract Name: Ashton Moss						Readings Taken By: 			
Date: 2nd July 2018						Checked By: 			
Background Readings:		Weather Conditions:				Sunny			
		Ground Conditions (dry / wet etc):				Dry			
		Atmospheric Pressure (Start):				1008mb			
		Atmospheric Pressure (Finish):				1008mb			
O ₂ % v/v	20.9	CO ₂ % v/v	0.1	CH ₄ % v/v	0.0	CO ppm	0.0	H ₂ S ppm	0.0
Hole No:	O ₂ % v/v	CO ₂ % v/v	CH ₄ % v/v	LEL %	H ₂ S ppm	CO ppm	Gas flow Rate (l/hr)		Diff. Pressure
ARP-WS103	Steady	Steady	Steady	Steady	Steady	Steady	Mins	Steady	0.02
SHALLOW 5 secs	20.9	0.1	0.0	0.0	0	0	0	14.2	
30 secs	9.7	21.9	20.6	>Max	0	3	1	9.7	
1 min	9.4	22.0	20.6	>Max	0	3	2	7.6	
DEEP 5 secs	20.8	0.1	0.0	0.0	0	0	3	5.5	
30 secs	13.2	15.3	14.2	>Max	0	2	4	3.3	
1 min	12.9	15.6	14.4	>Max	0	2	5	2.4	
CIRCULATE 1 min	13.9	13.9	12.7	>Max	0	2	6	1.9	
2 mins	13.9	13.9	12.8	>Max	0	2	7	1.4	
3 mins	13.8	14.0	12.8	>Max	0	2	8	1.0	
4 mins	13.8	14.1	12.9	>Max	0	2	9	0.8	
5 mins	13.7	14.1	13.0	>Max	0	2	10	0.6	
6 mins	13.7	14.1	13.0	>Max	0	2			
7 mins	13.7	14.1	13.1	>Max	0	2			
8 mins	13.7	14.2	13.1	>Max	0	2			
9 mins	13.7	14.2	13.1	>Max	0	2			
10 mins	13.6	14.2	13.1	>Max	0	2			
SHALLOW 5 secs	20.9	0.1	0.0	0.0	0	0			
30 secs	14.0	13.8	12.7	>Max	0	2			
1 min	13.7	14.1	13.0	>Max	0	3			
DEEP 5 secs	20.8	0.1	0.0	0.0	0	1			
30 secs	15.7	10.4	9.5	>Max	0	2			
1 min	15.5	10.7	9.8	>Max	0	2			
VOC ppm	0.0	Depth to base of well	5.37	SWL	1.30	LNAPL or DNAPL	ND	Temp	16.0
	Steady		mBGL		mBGL		mBGL		°C
>>>> = Flow above detection limit of 30 l/hr, <<<< = Negative flow greater than -10 l/hr. >Max = In excess of lower explosive limit. NR = Not Recorded									
Remarks: Start time: 8:29									
Finish Time:									

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Gas and Groundwater Monitoring Results

Contract Number: 42171						Gas Monitor: G503807			
Contract Name: Ashton Moss						Readings Taken By: XXXXXXXXXX			
Date: 9th July 2018						Checked By: XXXXXXXXXX			
Background Readings:		Weather Conditions:				Patchy cloud			
		Ground Conditions (dry / wet etc):				Dry			
		Atmospheric Pressure (Start):				1018mb			
		Atmospheric Pressure (Finish):				1018mb			
O ₂ % v/v	20.9	CO ₂ % v/v	0.1	CH ₄ % v/v	0.0	CO ppm	0.0	H ₂ S ppm	0.0
Hole No:	O ₂ % v/v	CO ₂ % v/v	CH ₄ % v/v	LEL %	H ₂ S ppm	CO ppm	Gas flow Rate (l/hr)		Diff. Pressure
	Steady	Steady	Steady	Steady	Steady	Steady	Mins	Steady	
ARP-BH101									
SHALLOW									
5 secs	20.9	0.1	0.0	0.0	0	0	0	0.0	0.02
30 secs	0.1	7.3	85.7	>Max	0	4	1	0.1	
1 min	0.0	7.1	84.0	>Max	0	4	2	0.1	
DEEP									
5 secs	20.9	0.1	0.0	0.0	0	0	3	0.1	
30 secs	0.1	7.6	67.6	>Max	1	3	4	0.1	
1 min	0.1	7.7	60.0	>Max	2	3	5	0.1	
CIRCULATE									
1 min	0.5	6.9	81.1	>Max	0	3	6		
2 mins	0.1	7.0	81.9	>Max	0	2	7		
3 mins	0.2	7.0	82.4	>Max	0	2	8		
4 mins	0.1	7.1	82.7	>Max	0	2	9		
5 mins	0.1	7.2	80.9	>Max	0	1	10		
6 mins	0.6	7.2	74.9	>Max	0	1			
7 mins	0.6	7.0	75.3	>Max	0	1			
8 mins	0.5	7.0	75.8	>Max	0	1			
9 mins	0.5	7.0	75.8	>Max	0	1			
10 mins	0.5	7.0	75.9	>Max	0	1			
SHALLOW									
5 secs	20.9	0.1	0.2	4.0	0	0			
30 secs	0.8	6.9	75.0	>Max	0	1			
1 min	0.8	6.9	75.3	>Max	0	1			
DEEP									
5 secs	20.7	0.1	0.1	2.0	0	0			
30 secs	1.1	7.5	44.4	>Max	0	2			
1 min	1.0	7.5	45.0	>Max	0	2			
VOC ppm	0.0	Depth to base of well	11.09	SWL	2.79	LNAPL or DNAPL	ND	Temp	20.0
	Steady		mBGL		mBGL		mBGL		°C
>>>> = Flow above detection limit of 30 l/hr, <<<< = Negative flow greater than -10 l/hr. >Max = In excess of lower explosive limit. NR = Not Recorded									
Remarks: Start time: 11:15									
Finish Time: NR									
Gas taps left open on completion of monitoring on instruction of Engineer									

Gas and Groundwater Monitoring Results

Contract Number:		42171				Gas Monitor:		G503807	
Contract Name:		Ashton Moss				Readings Taken By:			
Date:		7th July 2018				Checked By:			
Background Readings:		Weather Conditions:				Patchy cloud			
		Ground Conditions (dry / wet etc):				Dry			
		Atmospheric Pressure (Start):				1017mb			
		Atmospheric Pressure (Finish):				1017mb			
O ₂ % v/v	20.9	CO ₂ % v/v	0.1	CH ₄ % v/v	0.0	CO ppm	0.0	H ₂ S ppm	0.0
Hole No:	O ₂ % v/v	CO ₂ % v/v	CH ₄ % v/v	LEL %	H ₂ S ppm	CO ppm	Gas flow Rate (l/hr)		Diff. Pressure
	Steady	Steady	Steady	Steady	Steady	Steady	Mins	Steady	
ARP-BH102									
SHALLOW									
5 secs	20.9	0.1	0.0	0.0	0	0	0	0.0	0.02
30 secs	6.3	5.2	56.1	>Max	0	3	1	0.0	
1 min	8.8	4.4	47.5	>Max	0	2	2	0.0	
DEEP									
5 secs	20.9	0.1	0.0	0.0	0	0	3	0.0	
30 secs	11.3	3.5	36.0	>Max	0	2	4	0.0	
1 min	11.2	3.5	36.1	>Max	0	2	5	0.0	
CIRCULATE									
1 min	14.4	2.3	24.2	>Max	0	1	6		
2 mins	13.9	2.5	26.1	>Max	0	1	7		
3 mins	13.6	2.5	27.3	>Max	0	1	8		
4 mins	13.6	2.6	27.4	>Max	0	1	9		
5 mins	13.6	2.6	27.5	>Max	0	1	10		
6 mins	13.6	2.6	27.5	>Max	0	1			
7 mins	13.6	2.5	27.4	>Max	0	1			
8 mins	13.6	2.5	27.4	>Max	0	1			
9 mins	13.6	2.5	27.4	>Max	0	1			
10 mins	13.6	2.5	27.4	>Max	0	1			
SHALLOW									
5 secs	20.9	0.1	0.0	0.0	0	0			
30 secs	14.2	2.4	26.0	>Max	0	1			
1 min	15.2	2.1	23.1	>Max	0	1			
DEEP									
5 secs	20.9	0.1	0.0	0.0	0	0			
30 secs	15.7	1.8	19.6	>Max	0	2			
1 min	15.7	1.8	19.7	>Max	0	2			
VOC ppm	0.0	Depth to base of well	NR	SWL	NR	LNAPL or DNAPL	NR	Temp	18.0
	Steady		mBGL		mBGL		mBGL		°C
>>>> = Flow above detection limit of 30 l/hr, <<<< = Negative flow greater than -10 l/hr. >Max = In excess of lower explosive limit. NR = Not Recorded									
Remarks: Start time: 10:25									
Finish Time: NR Bung stuck in pipe, unable to remove.									
Gas taps left open on completion of monitoring on instruction of Engineer									

Gas and Groundwater Monitoring Results

Contract Number: 42171						Gas Monitor: G503807			
Contract Name: Ashton Moss						Readings Taken By: XXXXXXXXXX			
Date: 9th July 2018						Checked By: XXXXXXXXXX			
Background Readings:		Weather Conditions:				Patchy cloud			
		Ground Conditions (dry / wet etc):				Dry			
		Atmospheric Pressure (Start):				1017mb			
		Atmospheric Pressure (Finish):				1017mb			
O ₂ % v/v	20.9	CO ₂ % v/v	0.1	CH ₄ % v/v	0.0	CO ppm	0.0	H ₂ S ppm	0.0
Hole No:	O ₂ % v/v	CO ₂ % v/v	CH ₄ % v/v	LEL %	H ₂ S ppm	CO ppm	Gas flow Rate (l/hr)		Diff. Pressure
	Steady	Steady	Steady	Steady	Steady	Steady	Mins	Steady	
ARP-BH104									
SHALLOW									
5 secs	20.9	0.1	0.0	0.0	0	0	0	0.0	-0.02
30 secs	20.5	0.4	0.3	6.0	0	1	1	0.1	
1 min	20.4	0.4	0.3	6.0	0	1	2	0.1	
DEEP									
5 secs	20.9	0.1	0.0	0.0	0	1	3	0.1	
30 secs	20.4	0.4	0.4	8.0	0	1	4	0.1	
1 min	20.4	0.4	0.4	8.0	0	1	5	0.1	
CIRCULATE									
1 min	20.4	0.4	0.3	6.0	0	1	6		
2 mins	20.4	0.4	0.4	8.0	0	1	7		
3 mins	20.4	0.4	0.3	6.0	0	1	8		
4 mins	20.4	0.4	0.4	8.0	0	1	9		
5 mins	20.4	0.4	0	8.0	0	1	10		
6 mins	20.4	0.4	0	6.0	0	1			
7 mins	20.4	0.4	0	6.0	0	1			
8 mins	20.4	0.4	0	6.0	0	1			
9 mins	20.4	0.4	0	6.0	0	1			
10 mins	20.4	0.4	0	6.0	0	1			
SHALLOW									
5 secs	20.9	0.1	0	0.0	0	0			
30 secs	20.4	0.4	0	6.0	0	0			
1 min	20.5	0.3	0	6.0	0	0			
DEEP									
5 secs	20.9	0.1	0	0.0	0	0			
30 secs	20.5	0.3	0	6.0	0	0			
1 min	20.4	0.3	0	6.0	0	0			
VOC ppm	0.0	Depth to base of well	9.57	SWL	0.73	LNAPL or DNAPL	ND	Temp	20.0
	Steady		mBGL		mBGL		mBGL		°C
>>>> = Flow above detection limit of 30 l/hr, <<< = Negative flow greater than -10 l/hr. >Max = In excess of lower explosive limit. NR = Not Recorded									
Remarks: Start time: 12:35									
Finish Time: NR									
Gas taps left open on completion of monitoring on instruction of Engineer									

Gas and Groundwater Monitoring Results

Contract Number: 42171						Gas Monitor: G503807			
Contract Name: Ashton Moss						Readings Taken By: XXXXXXXXXX			
Date: 6th September 2018						Checked By: XXXXXXXXXX			
Background Readings:		Weather Conditions:				Overcast 16°C			
		Ground Conditions (dry / wet etc):				Dry			
		Atmospheric Pressure (Start):				1009mb			
		Atmospheric Pressure (Finish):				1009mb			
O ₂ % v/v		CO ₂ % v/v		CH ₄ % v/v	0.0	CO ppm	0.0	H ₂ S ppm	0.0
Hole No:	O ₂ % v/v	CO ₂ % v/v	CH ₄ % v/v	LEL %	H ₂ S ppm	CO ppm	Gas flow Rate (l/hr)		Diff. Pressure
	Steady	Steady	Steady	Steady	Steady	Steady	Mins	Steady	
ARP-BH105									
SHALLOW									
5 secs	20.0	0.5	0.9	18.0	0	0	0	32.1	-0.99
30 secs	16.2	4.3	13.8	>Max	0	0	1	11.4	
1 min	16.2	3.9	12.6	>Max	0	0	2	6.7	
DEEP									
5 secs	20.0	0.4	0.4	8.0	0	0	3	4.9	
30 secs	16.5	4.6	14.6	>Max	0	0	4	4.0	
1 min	16.0	4.6	14.5	>Max	0	0	5	2.8	
CIRCULATE									
1 min	15.9	4.5	14.6	>Max	0	0	6	2.7	
2 mins	16.0	4.6	14.5	>Max	0	0	7	2.7	
3 mins	16.1	4.7	14.5	>Max	0	0	8	2.7	
4 mins	16.0	4.6	14.4	>Max	0	0	9	2.7	
5 mins	16.0	4.6	14.4	>Max	0	0	10	2.7	
6 mins	16.0	4.6	14.4	>Max	0	0			
7 mins	16.0	4.6	14.4	>Max	0	0			
8 mins	16.0	4.6	14.4	>Max	0	0			
9 mins	16.0	4.6	14.4	>Max	0	0			
10 mins	16.0	4.6	14.4	>Max	0	0			
SHALLOW									
5 secs	19.8	0.6	0.8	16.0	0	0			
30 secs	16.1	4.4	13.5	>Max	0	0			
1 min	16.1	4.2	13.0	>Max	0	0			
DEEP									
5 secs	20.1	0.2	0.3	6.0	0	0			
30 secs	16.6	4.1	14.2	>Max	0	0			
1 min	16.5	4.1	14.3	>Max	0	0			
VOC ppm	0.0	Depth to base of well	10.71	SWL	2.52	LNAPL or DNAPL	ND	Temp	18.0
	Steady		mBGL		mBGL		mBGL		°C
>>>> = Flow above detection limit of 30 l/hr, <<<< = Negative flow greater than -10 l/hr. >Max = In excess of lower explosive limit. NR = Not Recorded									
Remarks: Start time:10.15 Finish Time:10.47 Gas taps left open on completion of monitoring on instruction of Engineer									

Gas and Groundwater Monitoring Results

Contract Number: 42171						Gas Monitor: G503807			
Contract Name: Ashton Moss						Readings Taken By: XXXXXXXXXX			
Date: 6th September 2018						Checked By: XXXXXXXXXX			
Background Readings:		Weather Conditions:				Drizzle 15°C			
		Ground Conditions (dry / wet etc):				Damp			
		Atmospheric Pressure (Start):				1006mb			
		Atmospheric Pressure (Finish):				1006mb			
O ₂ % v/v		CO ₂ % v/v		CH ₄ % v/v	0.0	CO ppm	0.0	H ₂ S ppm	0.0
Hole No:	O ₂ % v/v	CO ₂ % v/v	CH ₄ % v/v	LEL %	H ₂ S ppm	CO ppm	Gas flow Rate (l/hr)		Diff. Pressure
	Steady	Steady	Steady	Steady	Steady	Steady	Mins	Steady	
ARP-BH106									
SHALLOW									
5 secs	19.3	2.4	4.0	80.0	0	0	0	3.2	-0.11
30 secs	1.0	14.9	70.1	>Max	0	0	1	1.4	
1 min	0.5	15.1	70.1	>Max	0	0	2	0.2	
DEEP									
5 secs	20.7	1.5	2.0	40.0	0	0	3	0.2	
30 secs	0.3	16.9	71.0	>Max	0	0	4	0.2	
1 min	0.0	17.0	71.1	>Max	0	0	5	0.2	
CIRCULATE									
1 min	0.3	15.1	71.0	>Max	0	0	6		
2 mins	0.2	15.0	70.8	>Max	0	0	7		
3 mins	0.2	15.1	70.8	>Max	0	0	8		
4 mins	0.2	15.1	70.7	>Max	0	0	9		
5 mins	0.2	15.1	70.5	>Max	0	0	10		
6 mins	0.2	15.1	70.4	>Max	0	0			
7 mins	0.2	15.1	70.4	>Max	0	0			
8 mins	0.2	15.1	70.4	>Max	0	0			
9 mins	0.2	15.1	70.4	>Max	0	0			
10 mins	0.2	15.1	70.4	>Max	0	0			
SHALLOW									
5 secs	19.5	1.9	2.1	42.0	0	0			
30 secs	1.1	14.7	73.1	>Max	0	0			
1 min	0.6	14.9	73.2	>Max	0	0			
DEEP									
5 secs	20.5	1.6	2.2	44.0	0	0			
30 secs	0.4	16.4	70.8	>Max	0	0			
1 min		16.8	70.4	>Max	0	0			
VOC ppm	0.0	Depth to base of well	9.75	SWL	6.95	LNAPL or DNAPL	ND	Temp	16.0
	Steady		mBGL		mBGL		mBGL		°C
>>>> = Flow above detection limit of 30 l/hr, <<< = Negative flow greater than -10 l/hr. >Max = In excess of lower explosive limit. NR = Not Recorded									
Remarks: Start time: 15.54 Finish Time: 16.20 Gas taps left open on completion of monitoring on instruction of Engineer									

Gas and Groundwater Monitoring Results

Contract Number: 42171						Gas Monitor: G503807			
Contract Name: Ashton Moss						Readings Taken By: [REDACTED]			
Date: 9th July 2018						Checked By: [REDACTED]			
Background Readings:		Weather Conditions:				Patchy cloud			
		Ground Conditions (dry / wet etc):				Dry			
		Atmospheric Pressure (Start):				1016mb			
		Atmospheric Pressure (Finish):				1016mb			
O ₂ % v/v	20.9	CO ₂ % v/v	0.1	CH ₄ % v/v	0.0	CO ppm	0.0	H ₂ S ppm	0.0
Hole No:	O ₂ % v/v	CO ₂ % v/v	CH ₄ % v/v	LEL %	H ₂ S ppm	CO ppm	Gas flow Rate (l/hr)		Diff. Pressure
ARP-BH107	Steady	Steady	Steady	Steady	Steady	Steady	Mins	Steady	
SHALLOW									
5 secs							0	0.0	0.00
30 secs							1	0.0	
1 min							2	0.0	
DEEP									
5 secs							3	0.0	
30 secs							4	0.0	
1 min							5	0.0	
CIRCULATE									
1 min	19.5	0.3	0	0	0	0	6		
2 mins	19.5	0.3	0	0	0	1	7		
3 mins	19.5	0.3	0	0	0	1	8		
4 mins	19.5	0.3	0	0	0	1	9		
5 mins	19.5	0.3	0	0	0	1	10		
6 mins	19.5	0.3	0	0	0	1			
7 mins	19.5	0.3	0	0	0	0			
8 mins	19.5	0.3	0	0	0	1			
9 mins	19.5	0.3	0	0	0	1			
10 mins	19.5	0.3	0	0	0	1			
SHALLOW									
5 secs									
30 secs									
1 min									
DEEP									
5 secs									
30 secs									
1 min									
VOC ppm	0.0	Depth to base of well	5.71	SWL	2.13	LNAPL or DNAPL	ND	Temp	18.0
	Steady		mBGL		mBGL		mBGL		°C
>>>> = Flow above detection limit of 30 l/hr, <<< = Negative flow greater than -10 l/hr, >Max = In excess of lower explosive limit. NR = Not Recorded									
Remarks: Start time: 8:11 Finish Time: NR Bung stolen. Analyser tubing lowered into pipe. Gas taps left open on completion of monitoring on instruction of Engineer									

Gas and Groundwater Monitoring Results

Contract Number: 42171						Gas Monitor: G503807			
Contract Name: Ashton Moss						Readings Taken By: [REDACTED]			
Date: 9th July 2018						Checked By: [REDACTED]			
Background Readings:		Weather Conditions:				Patchy cloud			
		Ground Conditions (dry / wet etc):				Dry			
		Atmospheric Pressure (Start):				1016mb			
		Atmospheric Pressure (Finish):				1016mb			
O ₂ % v/v	20.9	CO ₂ % v/v	0.1	CH ₄ % v/v	0.0	CO ppm	0.0	H ₂ S ppm	0.0
Hole No:	O ₂ % v/v	CO ₂ % v/v	CH ₄ % v/v	LEL %	H ₂ S ppm	CO ppm	Gas flow Rate (l/hr)		Diff. Pressure
	ARP-BH108	Steady	Steady	Steady	Steady	Steady	Mins	Steady	
SHALLOW 5 secs	20.9	0.1	0.0	0.0	0	0	0	0.0	0.20
30 secs	0.1	33.0	57.4	>Max	1	4	1	0.0	
1 min	0.0	33.2	57.4	>Max	1	3	2	0.0	
DEEP 5 secs	20.9	0.1	0.0	>Max	0	0	3	0.0	
30 secs	0.0	33.7	56.8	>Max	2	2	4	0.0	
1 min	0.0	33.7	57.2	>Max	3	1	5	0.0	
CIRCULATE 1 min	0.0	33.7	56.4	>Max	2	1	6		
2 mins	0.0	33.7	56.3	>Max	2	1	7		
3 mins	0.0	34.9	54.7	>Max	2	0	8		
4 mins	0.0	34.8	54.7	>Max	2	0	9		
5 mins	0.0	34.7	55.0	>Max	2	0	10		
6 mins	0.0	34.8	54.9	>Max	2	0			
7 mins	0.0	36.0	53.5	>Max	2	0			
8 mins	0.0	36.2	53.3	>Max	2	0			
9 mins	0.0	36.3	53.2	>Max	2	0			
10 mins	0.0	36.3	53.2	>Max	2	0			
SHALLOW 5 secs	20.9	0.1	0.0	0.0	0	0			
30 secs	0.0	35.6	53.3	>Max	2	0			
1 min	0.0	36.1	53.5	>Max	3	0			
DEEP 5 secs	20.9	0.1	0.0	0.0	0	0			
30 secs	0.0	35.4	53.6	>Max	3	0			
1 min		35.8	53.8	>Max	3	0			
VOC ppm	0.0	Depth to base of well	17.19	SWL	2.47	LNAPL or DNAPL	ND	Temp	20.0
	Steady		mBGL		mBGL		mBGL		°C
>>>> = Flow above detection limit of 30 l/hr, <<<< = Negative flow greater than -10 l/hr. >Max = In excess of lower explosive limit. NR = Not Recorded									
Remarks: Start time: 11:50 Finish Time: NR Gas taps left open on completion of monitoring on instruction of Engineer									

Gas and Groundwater Monitoring Results

Contract Number: 42171						Gas Monitor: G503807			
Contract Name: Ashton Moss						Readings Taken By:			
Date: 9th July 2018						Checked By:			
Background Readings:		Weather Conditions:				Patchy cloud			
		Ground Conditions (dry / wet etc):				Dry			
		Atmospheric Pressure (Start):				1018mb			
		Atmospheric Pressure (Finish):				1018mb			
O ₂ % v/v	20.9	CO ₂ % v/v	0.1	CH ₄ % v/v	0.0	CO ppm	0.0	H ₂ S ppm	0.0
Hole No:	O ₂ % v/v	CO ₂ % v/v	CH ₄ % v/v	LEL %	H ₂ S ppm	CO ppm	Gas flow Rate (l/hr)		Diff. Pressure
	ARP-BH109	Steady	Steady	Steady	Steady	Steady	Mins	Steady	
SHALLOW 5 secs	20.9	0.1	0.0	0.0	0	0	0	0.1	0.02
30 secs	0.2	4.5	25.0	>Max	0	3	1	0.2	
1 min	0.0	4.5	25.1	>Max	0	3	2	0.2	
DEEP 5 secs	20.6	0.1	0.3	6.0	0	1	3	0.2	
30 secs	0.0	4.3	23.4	>Max	2	2	4	0.2	
1 min	0.0	4.4	23.9	>Max	3	2	5	0.2	
CIRCULATE 1 min	0.0	4.5	25.1	>Max	0	1	6		
2 mins	0.0	4.5	24.9	>Max	0	1	7		
3 mins	0.0	4.4	24.5	>Max	1	0	8		
4 mins	0.0	4.3	23.8	>Max	1	0	9		
5 mins	0.0	4.3	23.7	>Max	1	0	10		
6 mins	0.0	4.3	23.8	>Max	1	0			
7 mins	0.0	4.3	23.9	>Max	1	0			
8 mins	0.0	4.3	23.9	>Max	1	0			
9 mins	0.0	4.3	23.9	>Max	1	0			
10 mins	0.0	4.3	23.9	>Max	1	0			
SHALLOW 5 secs	20.9	0.1	0.1	2.0	0	0			
30 secs	0.0	4.3	24.0	>Max	1	0			
1 min	0.0	4.4	24.1	>Max	1	0			
DEEP 5 secs	20.9	0.1	0.0	0.0	0	0			
30 secs	0.0	4.5	24.7	>Max	2	0			
1 min	0.0	4.5	24.9	>Max	2	0			
VOC ppm	0.0	Depth to base of well	9.05	SWL	2.58	LNAPL or DNAPL	ND	Temp	18.0
	Steady		mBGL		mBGL	mBGL	°C		
>>>> = Flow above detection limit of 30 l/hr, <<< = Negative flow greater than -10 l/hr. >Max = In excess of lower explosive limit. NR = Not Recorded									
Remarks: Start time: 9:58 Finish Time: NR Gas taps left open on completion of monitoring on instruction of Engineer									

Contract Number: 42171						Gas Monitor: G503807			
Contract Name: Ashton Moss						Readings Taken By:			
Date: 9th July 2018						Checked By:			
Background Readings:		Weather Conditions:				Cloud			
		Ground Conditions (dry / wet etc):				Dry			
		Atmospheric Pressure (Start):				1018mb			
		Atmospheric Pressure (Finish):				1018mb			
O ₂ % v/v	20.9	CO ₂ % v/v	0.1	CH ₄ % v/v	0.0	CO ppm	0.0	H ₂ S ppm	0.0
Hole No:	O ₂ % v/v	CO ₂ % v/v	CH ₄ % v/v	LEL %	H ₂ S ppm	CO ppm	Gas flow Rate (l/hr)		Diff. Pressure
	ARP-BH110	Steady	Steady	Steady	Steady	Steady	Mins	Steady	
SHALLOW 5 secs	20.9	0.1	0.0	0.0	0	0	0	0.0	0.00
30 secs	5.8	20.5	44.1	>Max	0	4	1	0.1	
1 min	8.6	16.7	34.3	>Max	0	2	2	0.1	
DEEP 5 secs	20.9	0.1	0.0	0.0	0	0	3	0.1	
30 secs	0.0	27.1	60.3	>Max	0	3	4	0.1	
1 min	0.0	27.4	60.6	>Max	0	3	5	0.1	
CIRCULATE 1 min	8.3	16.4	32.7	>Max	0	2	6		
2 mins	6.4	18.9	38.8	>Max	0	2	7		
3 mins	6.2	19.2	39.6	>Max	0	2	8		
4 mins	5.3	20.2	42.2	>Max	0	2	9		
5 mins	5.1	20.5	42.9	>Max	0	2	10		
6 mins	4.7	20.9	44.1	>Max	0	2			
7 mins	4.4	21.3	45.3	>Max	0	2			
8 mins	4.0	21.7	46.3	>Max	0	2			
9 mins	3.7	22.2	47.1	>Max	0	2			
10 mins	3.5	22.8	47.8	>Max	0	2			
SHALLOW 5 secs	20.9	0.1	0.0	0.0	0	0			
30 secs	5.2	20.7	45.2	>Max	0	2			
1 min	7.9	17.0	35.7	>Max	0	2			
DEEP 5 secs	20.9	0.1	0.0	0.0	0	0			
30 secs	4.5	21.2	45.3	>Max	0	2			
1 min	4.5	21.2	45.1	>Max	0	2			
VOC ppm	0.0	Depth to base of well	9.74	SWL	4.52	LNAPL or DNAPL	ND	Temp	16.0
	Steady		mBGL		mBGL		mBGL		°C
>>>> = Flow above detection limit of 30 l/hr, <<<< = Negative flow greater than -10 l/hr. >Max = In excess of lower explosive limit. NR = Not Recorded									
Remarks: Start time: 14:36 Finish Time: NR Gas taps left open on completion of monitoring on instruction of Engineer									

Gas and Groundwater Monitoring Results

Contract Number: 42171						Gas Monitor: G503807			
Contract Name: Ashton Moss						Readings Taken By:			
Date: 9th July 2018						Checked By:			
Background Readings:		Weather Conditions:				Patchy cloud			
		Ground Conditions (dry / wet etc):				Dry			
		Atmospheric Pressure (Start):				1018mb			
		Atmospheric Pressure (Finish):				1018mb			
O ₂ % v/v	20.9	CO ₂ % v/v	0.1	CH ₄ % v/v	0.0	CO ppm	0.0	H ₂ S ppm	0.0
Hole No:	O ₂ % v/v	CO ₂ % v/v	CH ₄ % v/v	LEL %	H ₂ S ppm	CO ppm	Gas flow Rate (l/hr)		Diff. Pressure
	ARP-BH111	Steady	Steady	Steady	Steady	Steady	Mins	Steady	
SHALLOW 5 secs	20.9	0.1	0.0	0.0	0	0	0	0.0	0.02
30 secs	0.6	11.8	78.0	>Max	0	3	1	0.2	
1 min	0.9	11.5	76.1	>Max	0	2	2	0.2	
DEEP 5 secs	20.8	0.1	0.0	0.0	0	0	3	0.2	
30 secs	5.8	8.9	54.5	>Max	1	2	4	0.2	
1 min	5.3	9.1	55.7	>Max	1	2	5	0.2	
CIRCULATE 1 min	9.2	6.9	40.3	>Max	2	1	6		
2 mins	8.0	7.6	44.7	>Max	1	2	7		
3 mins	7.0	7.7	45.3	>Max	2	1	8		
4 mins	7.4	7.7	45.6	>Max	2	1	9		
5 mins	7.7	7.7	45.8	>Max	2	1	10		
6 mins	7.7	7.7	45.8	>Max	1	1			
7 mins	7.7	7.7	45.8	>Max	1	1			
8 mins	7.7	7.7	45.8	>Max	1	1			
9 mins	7.6	7.7	45.9	>Max	1	1			
10 mins	7.6	7.7	45.9	>Max	1	1			
SHALLOW 5 secs	20.9	0.1	0.0	0.0	0	0			
30 secs	8.1	7.5	44.5	>Max	1	1			
1 min	8.4	7.3	43.8	>Max	1	1			
DEEP 5 secs	20.9	0.1	0.0	0.0	0	0			
30 secs	11.1	5.7	33.4	>Max	1	1			
1 min	11.0	5.8	33.7	>Max	2	1			
VOC ppm	0.0	Depth to base of well	5.81	SWL	1.03	LNAPL or DNAPL	ND	Temp	18.0
	Steady		mBGL		mBGL		mBGL		°C
>>>> = Flow above detection limit of 30 l/hr, <<< = Negative flow greater than -10 l/hr. >Max = In excess of lower explosive limit. NR = Not Recorded									
Remarks: Start time: 9:03 Finish Time: NR Gas taps left open on completion of monitoring on instruction of Engineer									

>>>> = Flow above detection limit of 30 l/hr, <<< = Negative flow greater than -10 l/hr. >Max = In excess of lower explosive limit. NR = Not Recorded

Gas and Groundwater Monitoring Results

Contract Number: 42171						Gas Monitor: G503807			
Contract Name: Ashton Moss						Readings Taken By: [REDACTED]			
Date: 7th July 2018						Checked By: [REDACTED]			
Background Readings:		Weather Conditions:				Cloud			
		Ground Conditions (dry / wet etc):				Dry			
		Atmospheric Pressure (Start):				1017mb			
		Atmospheric Pressure (Finish):				1017mb			
O ₂ % v/v	20.9	CO ₂ % v/v	0.1	CH ₄ % v/v	0.0	CO ppm	0.0	H ₂ S ppm	0.0
Hole No:	O ₂ % v/v	CO ₂ % v/v	CH ₄ % v/v	LEL %	H ₂ S ppm	CO ppm	Gas flow Rate (l/hr)		Diff. Pressure
ARP-WS102	Steady	Steady	Steady	Steady	Steady	Steady	Mins	Steady	
SHALLOW 5 secs	20.9	0.1	0.0	0.0	0	0	0	0.0	0.00
30 secs	0.2	41.9	46.0	>Max	0	5	1	0.1	
1 min	0.1	42.3	46.1	>Max	0	4	2	0.1	
DEEP 5 secs	20.9	0.1	0.0	0.0	0	0	3	0.1	
30 secs	0.1	41.4	45.8	>Max	0	3	4	0.1	
1 min	0.0	42.6	46.0	>Max	0	3	5	0.1	
CIRCULATE 1 min	1.2	40.1	42.8	>Max	0	3	6		
2 mins	1.1	40.3	43.0	>Max	0	2	7		
3 mins	0.9	40.5	43.3	>Max	0	2	8		
4 mins	0.9	40.7	43.6	>Max	0	2	9		
5 mins	0.8	40.9	43.8	>Max	0	2	10		
6 mins	0.7	40.9	43.9	>Max	0	2			
7 mins	0.7	41.0	43.9	>Max	0	2			
8 mins	0.6	41.0	44.0	>Max	0	2			
9 mins	0.6	41.0	44.1	>Max	0	2			
10 mins	0.6	41.1	44.1	>Max	0	2			
SHALLOW 5 secs	20.9	0.1	0.0	0.0	0	0			
30 secs	0.6	41.2	44.2	>Max	0	2			
1 min	0.5	41.4	44.3	>Max	0	2			
DEEP 5 secs	20.9	0.1	0.0	0.0	0	0			
30 secs	0.1	42.0	45.4	>Max	0	2			
1 min	0.0	42.5	45.6	>Max	0	2			
VOC ppm	0.0	Depth to base of well	4.89	SWL	2.40	LNAPL or DNAPL	ND	Temp	16.0
	Steady		mBGL		mBGL	mBGL	°C		
>>>> = Flow above detection limit of 30 l/hr, <<< = Negative flow greater than -10 l/hr, >Max = In excess of lower explosive limit. NR = Not Recorded Remarks: Start time: 14:04 Finish Time: NR Gas taps left open on completion of monitoring on instruction of Engineer									

Gas and Groundwater Monitoring Results

Contract Number: 42171						Gas Monitor: G503807			
Contract Name: Ashton Moss						Readings Taken By:			
Date: 9th July 2018						Checked By:			
Background Readings:		Weather Conditions:				Patchy cloud			
		Ground Conditions (dry / wet etc):				Dry			
		Atmospheric Pressure (Start):				1018mb			
		Atmospheric Pressure (Finish):				1018mb			
O ₂ % v/v	20.9	CO ₂ % v/v	0.1	CH ₄ % v/v	0.0	CO ppm	0.0	H ₂ S ppm	0.0
Hole No:	O ₂ % v/v	CO ₂ % v/v	CH ₄ % v/v	LEL %	H ₂ S ppm	CO ppm	Gas flow Rate (l/hr)		Diff. Pressure
	ARP-WS103	Steady	Steady	Steady	Steady	Steady	Mins	Steady	
SHALLOW 5 secs	20.9	0.1	0.0	0.0	0	0	0	13.7	0.02
30 secs	7.5	27.5	26.0	>Max	0	3	1	10.3	
1 min	7.3	27.7	26.1	>Max	0	3	2	6.9	
DEEP 5 secs	20.9	0.0	0.0	0.0	0	0	3	4.7	
30 secs	9.7	22.8	21.5	>Max	0	3	4	3.3	
1 min	9.7	23.0	21.6	>Max	0	3	5	2.3	
CIRCULATE 1 min	11.8	18.7	17.5	>Max	0	2	6	1.6	
2 mins	11.7	19.0	17.9	>Max	0	2	7	1.3	
3 mins	11.6	19.3	18.1	>Max	0	2	8	1.0	
4 mins	11.5	19.4	18.3	>Max	0	2	9	0.8	
5 mins	11.4	19.5	18.4	>Max	0	2	10	0.6	
6 mins	11.4	19.6	18.5	>Max	0	2			
7 mins	11.3	19.6	18.5	>Max	0	2			
8 mins	11.3	19.6	18.6	>Max	0	2			
9 mins	11.3	19.7	18.6	>Max	0	2			
10 mins	11.2	19.7	18.6	>Max	0	2			
SHALLOW 5 secs	20.9	0.1	0.0	0.0	0	0			
30 secs	11.6	19.1	8.1	>Max	0	2			
1 min	11.4	19.6	18.5	>Max	0	2			
DEEP 5 secs	20.9	0.1	0.0	0.0	0	0			
30 secs	13.8	14.3	13.4	>Max	0	1			
1 min	13.5	14.9	13.8	>Max	0	1			
VOC ppm	0.0	Depth to base of well	5.38	SWL	1.38	LNAPL or DNAPL	ND	Temp	18.0
	Steady		mBGL		mBGL		mBGL		°C
>>>> = Flow above detection limit of 30 l/hr, <<< = Negative flow greater than -10 l/hr. >Max = In excess of lower explosive limit. NR = Not Recorded									
Remarks: Start time: 8:31 Finish Time: NR Gas taps left open on completion of monitoring on instruction of Engineer									

Visit 11

Gas and Groundwater Monitoring Results

Contract Number: 42171						Gas Monitor: GA2000			
Contract Name: Ashton Moss						Readings Taken By: [REDACTED]			
Date: 6th September 2018						Checked By: [REDACTED]			
Background Readings:		Weather Conditions:				Drizzle			
		Ground Conditions (dry / wet etc):				Damp			
		Atmospheric Pressure (Start):				1006mb			
		Atmospheric Pressure (Finish):				1006mb			
O ₂ % v/v	20.8	CO ₂ % v/v	0.0	CH ₄ % v/v	0.0	CO ppm	0.0	H ₂ S ppm	0.0
Hole No:	O ₂ % v/v	CO ₂ % v/v	CH ₄ % v/v	LEL %	H ₂ S ppm	CO ppm	Gas flow Rate (l/hr)		Diff. Pressure
	Steady	Steady	Steady	Steady	Steady	Steady	Mins	Steady	
ARP-BH101									
SHALLOW									
5 secs	18.8	2.9	2.6	52.0	0	0	0	0.2	-0.12
30 secs	12.4	2.8	28.0	>Max	0	0	1	0.0	
1 min	11.8	2.8	28.8	>Max	0	0	2	0.0	
DEEP									
5 secs	18.9	2.7	2.6	52.0	0	0	3	0.0	
30 secs	10.8	3.2	28.2	>Max	0	0	4	0.0	
1 min	9.5	3.3	28.1	>Max	0	0	5	0.0	
CIRCULATE									
1 min	10.2	3.1	27.2	>Max	0	0	6		
2 mins	10.2	3.0	27.5	>Max	0	0	7		
3 mins	10.2	3.0	27.5	>Max	0	0	8		
4 mins	10.2	3.0	27.5	>Max	0	0	9		
5 mins	10.2	3.0	27.5	>Max	0	0	10		
6 mins	10.2	3.0	27.5	>Max	0	0			
7 mins	10.2	3.0	27.5	>Max	0	0			
8 mins	10.2	3.0	27.5	>Max	0	0			
9 mins	10.2	3.0	27.5	>Max	0	0			
10 mins	10.2	3.0	27.5	>Max	0	0			
SHALLOW									
5 secs	18.9	2.8	2.7	54.0	0	0			
30 secs	12.5	2.9	27.2	>Max	0	0			
1 min	11.9	2.9	27.3	>Max	0	0			
DEEP									
5 secs	19.0	2.7	2.4	48.0	0	0			
30 secs	10.9	2.9	27.0	>Max	0	0			
1 min	9.6	3.0	27.0	>Max	0	0			
VOC ppm	0.0	Depth to base of well	11.00	SWL	2.71	LNAPL or DNAPL	ND	Temp	16.0
	Steady		mBGL		mBGL		mBGL		°C
>>>> = Flow above detection limit of 30 l/hr, <<< = Negative flow greater than -10 l/hr. >Max = In excess of lower explosive limit. NR = Not Recorded									
Remarks: Start time: 13:56 Finish Time: 14:20 Gas taps left open on completion of monitoring on instruction of Engineer									

Gas and Groundwater Monitoring Results

Contract Number: 42171						Gas Monitor: GA2000			
Contract Name: Ashton Moss						Readings Taken By: [REDACTED]			
Date: 6th September 2018						Checked By: [REDACTED]			
Background Readings:		Weather Conditions:				Drizzle			
		Ground Conditions (dry / wet etc):				Damp			
		Atmospheric Pressure (Start):				1006mb			
		Atmospheric Pressure (Finish):				1006mb			
O ₂ % v/v	20.8	CO ₂ % v/v	0.0	CH ₄ % v/v	0.0	CO ppm	0.0	H ₂ S ppm	0.0
Hole No:	O ₂ % v/v	CO ₂ % v/v	CH ₄ % v/v	LEL %	H ₂ S ppm	CO ppm	Gas flow Rate (l/hr)		Diff. Pressure
	Steady	Steady	Steady	Steady	Steady	Steady	Mins	Steady	
ARP-BH102									
SHALLOW									
5 secs	19.0	0.6	0.9	18.0	0	0	0	0.0	-0.12
30 secs	17.0	2.2	15.2	>Max	0	0	1	0.0	
1 min	16.9	2.3	15.2	>Max	0	0	2	0.0	
DEEP									
5 secs	19.0	1.8	1.2	24.0	0	0	3	0.0	
30 secs	17.0	2.3	15.4	>Max	0	0	4	0.0	
1 min	16.7	2.4	16.4	>Max	0	0	5	0.0	
CIRCULATE									
1 min	15.9	2.7	19.2	>Max	0	0	6		
2 mins	15.8	2.7	19.1	>Max	0	0	7		
3 mins	15.7	2.7	19.1	>Max	0	0	8		
4 mins	15.7	2.7	19.1	>Max	0	0	9		
5 mins	15.7	2.7	19.1	>Max	0	0	10		
6 mins	15.7	2.7	19.1	>Max	0	0			
7 mins	15.7	2.7	19.1	>Max	0	0			
8 mins	15.7	2.7	19.1	>Max	0	0			
9 mins	15.7	2.7	19.1	>Max	0	0			
10 mins	15.7	2.7	19.1	>Max	0	0			
SHALLOW									
5 secs	18.8	0.8	2.3	46.0	0	0			
30 secs	15.9	2.7	19.8	>Max	0	0			
1 min	15.8	2.8	20.4	>Max	0	0			
DEEP									
5 secs	20.0	2.0	2.5	50.0	0	0			
30 secs	14.9	3.3	21.1	>Max	0	0			
1 min	14.8	3.3	21.3	>Max	0	0			
VOC ppm	0.0	Depth to base of well	13.56	SWL	0.76	LNAPL or DNAPL	ND	Temp	16.0
	Steady		mBGL		mBGL		mBGL		°C
>>>> = Flow above detection limit of 30 l/hr, <<< = Negative flow greater than -10 l/hr. >Max = In excess of lower explosive limit. NR = Not Recorded									
Remarks: Start time: 12.56 Finish Time: 13.20 Gas taps left open on completion of monitoring on instruction of Engineer									

Gas and Groundwater Monitoring Results

Contract Number: 42171						Gas Monitor: GA2000			
Contract Name: Ashton Moss						Readings Taken By: [REDACTED]			
Date: 6th September 2018						Checked By: [REDACTED]			
Background Readings:		Weather Conditions:				Overcast			
		Ground Conditions (dry / wet etc):				Damp			
		Atmospheric Pressure (Start):				1010mb			
		Atmospheric Pressure (Finish):				1010mb			
O ₂ % v/v	20.8	CO ₂ % v/v	0.0	CH ₄ % v/v	0.0	CO ppm	0.0	H ₂ S ppm	0.0
Hole No:	O ₂ % v/v	CO ₂ % v/v	CH ₄ % v/v	LEL %	H ₂ S ppm	CO ppm	Gas flow Rate (l/hr)		Diff. Pressure
	Steady	Steady	Steady	Steady	Steady	Steady	Mins	Steady	
ARP-BH104									
SHALLOW									
5 secs	19.0	1.0	0.8	16.0	0	0	0	0.1	-0.56
30 secs	18.9	1.6	1.7	34.0	0	1	1	0.0	
1 min	18.8	1.7	1.7	34.0	0	1	2	0.1	
DEEP									
5 secs	19.6	0.6	0.4	8.0	0	1	3	0.1	
30 secs	19.0	1.8	1.7	34.0	0	1	4	0.1	
1 min	18.9	1.7	1.5	30.0	0	1	5	0.1	
CIRCULATE									
1 min	19.1	1.8	1.9	38.0	0	1	6		
2 mins	19.0	1.7	2.1	42.0	0	1	7		
3 mins	19.0	1.2	2.2	44.0	0	1	8		
4 mins	19.0	1.9	2.2	44.0	0	1	9		
5 mins	19.0	1.9	2.2	44.0	0	1	10		
6 mins	19.0	2.0	2.2	44.0	0	1			
7 mins	19.0	2.0	2.2	44.0	0	1			
8 mins	19.0	2.0	2.2	44.0	0	1			
9 mins	19.0	2.0	2.2	44.0	0	1			
10 mins	19.0	2.0	2.2	44.0	0	1			
SHALLOW									
5 secs	19.0	0.9	0.7	14.0	0	0			
30 secs	19.1	1.7	1.8	36.0	0	0			
1 min	19.0	1.8	1.9	38.0	0	0			
DEEP									
5 secs	19.3	0.8	0.5	10.0	0	0			
30 secs	19.0	1.9	1.7	34.0	0	0			
1 min	19.0	20.0	1.7	34.0	0	0			
VOC ppm	0.0	Depth to base of well	9.52	SWL	0.67	LNAPL or DNAPL	ND	Temp	16.0
	Steady		mBGL		mBGL		mBGL		°C
>>>> = Flow above detection limit of 30 l/hr, <<< = Negative flow greater than -10 l/hr. >Max = In excess of lower explosive limit. NR = Not Recorded									
Remarks: Start time: 09.40 Finish Time: 10.05 Gas taps left open on completion of monitoring on instruction of Engineer									

Gas and Groundwater Monitoring Results

Contract Number: 42171						Gas Monitor: GA2000			
Contract Name: Ashton Moss						Readings Taken By: XXXXXXXXXX			
Date: 6 th September 2018						Checked By: XXXXXXXXXX			
Background Readings:		Weather Conditions:				Overcast			
		Ground Conditions (dry / wet etc):				Dry			
		Atmospheric Pressure (Start):				1009mb			
		Atmospheric Pressure (Finish):				1009mb			
O ₂ % v/v	20.8	CO ₂ % v/v	0.0	CH ₄ % v/v	0.0	CO ppm	0.0	H ₂ S ppm	0.0
Hole No:	O ₂ % v/v	CO ₂ % v/v	CH ₄ % v/v	LEL %	H ₂ S ppm	CO ppm	Gas flow Rate (l/hr)		Diff. Pressure
	Steady	Steady	Steady	Steady	Steady	Steady	Mins	Steady	
ARP-BH105									
SHALLOW									
5 secs	20.0	0.5	0.9	18.0	0	0	0	32.1	-0.99
30 secs	16.2	4.3	13.8	>Max	0	0	1	11.4	
1 min	16.2	3.9	12.6	>Max	0	0	2	6.7	
DEEP									
5 secs	20.0	0.4	0.4	8.0	0	0	3	4.9	
30 secs	16.5	4.6	14.6	>Max	0	0	4	4.0	
1 min	16.0	4.6	14.5	>Max	0	0	5	2.8	
CIRCULATE									
1 min	15.9	4.5	14.6	>Max	0	0	6	2.7	
2 mins	16.0	4.6	14.5	>Max	0	0	7	2.7	
3 mins	16.1	4.7	14.5	>Max	0	0	8	2.7	
4 mins	16.0	4.6	14.4	>Max	0	0	9	2.7	
5 mins	16.0	4.6	14.4	>Max	0	0	10	2.7	
6 mins	16.0	4.6	14.4	>Max	0	0			
7 mins	16.0	4.6	14.4	>Max	0	0			
8 mins	16.0	4.6	14.4	>Max	0	0			
9 mins	16.0	4.6	14.4	>Max	0	0			
10 mins	16.0	4.6	14.4	>Max	0	0			
SHALLOW									
5 secs	19.8	0.6	0.8	16.0	0	0			
30 secs	16.1	4.4	13.5	>Max	0	0			
1 min	16.1	4.2	13.0	>Max	0	0			
DEEP									
5 secs	20.1	0.2	0.3	6.0	0	0			
30 secs	16.6	4.1	14.2	>Max	0	0			
1 min	16.5	4.1	14.3	>Max	0	0			
VOC ppm	0.0	Depth to base of well	10.61	SWL	2.42	LNAPL or DNAPL	ND	Temp	16.0
	Steady		mBGL		mBGL		mBGL		°C
>>>> = Flow above detection limit of 30 l/hr, <<<< = Negative flow greater than -10 l/hr. >Max = In excess of lower explosive limit. NR = Not Recorded									
Remarks: Start time: 10:15									
Finish Time: 10:47									
Gas taps left open on completion of monitoring on instruction of Engineer									

Gas and Groundwater Monitoring Results

Contract Number: 42171						Gas Monitor: GA2000			
Contract Name: Ashton Moss						Readings Taken By: [REDACTED]			
Date: 6th September 2018						Checked By: [REDACTED]			
Background Readings:		Weather Conditions:				Drizzle			
		Ground Conditions (dry / wet etc):				Damp			
		Atmospheric Pressure (Start):				1006mb			
		Atmospheric Pressure (Finish):				1006mb			
O ₂ % v/v	20.8	CO ₂ % v/v	0.0	CH ₄ % v/v	0.0	CO ppm	0.0	H ₂ S ppm	0.0
Hole No:	O ₂ % v/v	CO ₂ % v/v	CH ₄ % v/v	LEL %	H ₂ S ppm	CO ppm	Gas flow Rate (l/hr)		Diff. Pressure
	Steady	Steady	Steady	Steady	Steady	Steady	Mins	Steady	
ARP-BH106									
SHALLOW									
5 secs	19.3	2.4	4.0	80.0	0	0	0	3.2	-0.11
30 secs	1.0	14.9	70.1	>Max	0	0	1	1.4	
1 min	0.5	15.1	70.1	>Max	0	0	2	0.2	
DEEP									
5 secs	20.7	1.5	2.0	40.0	0	0	3	0.2	
30 secs	0.3	16.9	71.0	>Max	0	0	4	0.2	
1 min	0.0	17.0	71.1	>Max	0	0	5	0.2	
CIRCULATE									
1 min	0.3	15.1	71.0	>Max	0	0	6		
2 mins	0.2	15.0	70.8	>Max	0	0	7		
3 mins	0.2	15.1	70.8	>Max	0	0	8		
4 mins	0.2	15.1	70.7	>Max	0	0	9		
5 mins	0.2	15.1	70.5	>Max	0	0	10		
6 mins	0.2	15.1	70.4	>Max	0	0			
7 mins	0.2	15.1	70.4	>Max	0	0			
8 mins	0.2	15.1	70.4	>Max	0	0			
9 mins	0.2	15.1	70.4	>Max	0	0			
10 mins	0.2	15.1	70.4	>Max	0	0			
SHALLOW									
5 secs	19.5	1.9	2.1	42.0	0	0			
30 secs	1.1	14.7	73.1	>Max	0	0			
1 min	0.6	14.9	73.2	>Max	0	0			
DEEP									
5 secs	20.5	1.6	2.2	44.0	0	0			
30 secs	0.4	16.4	70.8	>Max	0	0			
1 min	0.0	16.8	70.4	>Max	0	0			
VOC ppm	0.0	Depth to base of well	9.65	SWL	6.85	LNAPL or DNAPL	ND	Temp	16.0
	Steady		mBGL		mBGL		mBGL		°C
>>>> = Flow above detection limit of 30 l/hr, <<< = Negative flow greater than -10 l/hr. >Max = In excess of lower explosive limit. NR = Not Recorded									
Remarks: Start time: 15:54 Finish Time: 16:20 Gas taps left open on completion of monitoring on instruction of Engineer									

Gas and Groundwater Monitoring Results

Contract Number: 42171						Gas Monitor: GA2000			
Contract Name: Ashton Moss						Readings Taken By: [REDACTED]			
Date: 6th September 2018						Checked By: [REDACTED]			
Background Readings:		Weather Conditions:				Drizzle			
		Ground Conditions (dry / wet etc):				Damp			
		Atmospheric Pressure (Start):				1008mb			
		Atmospheric Pressure (Finish):				1006mb			
O ₂ % v/v	20.8	CO ₂ % v/v	0.0	CH ₄ % v/v	0.0	CO ppm	0.0	H ₂ S ppm	0.0
Hole No:	O ₂ % v/v	CO ₂ % v/v	CH ₄ % v/v	LEL %	H ₂ S ppm	CO ppm	Gas flow Rate (l/hr)		Diff. Pressure
	Steady	Steady	Steady	Steady	Steady	Steady	Mins	Steady	
ARP-BH107									
SHALLOW									
5 secs	18.6	2.1	0.0	0.0	0	0	0	0.1	
30 secs	11.2	2.3	0.6	12.0	0	0	1	0.0	
1 min	10.2	2.5	0.6	12.0	0	0	2	0.0	
DEEP									
5 secs	18.5	2.5	0.7	14.0	0	0	3	0.0	
30 secs	8.1	3.0	0.9	18.0	0	0	4	0.0	
1 min	7.4	3.0	0.9	18.0	0	0	5	0.0	
CIRCULATE									
1 min	10.0	2.7	1	16.0	0	0	6		
2 mins	9.7	2.6	1	16.0	0	0	7		
3 mins	9.8	2.6	1	16.0	0	0	8		
4 mins	9.7	2.6	1	16.0	0	0	9		
5 mins	9.7	2.6	1	16.0	0	0	10		
6 mins	9.7	2.6	1	16.0	0	0			
7 mins	9.7	2.6	1	16.0	0	0			
8 mins	9.7	2.6	1	16.0	0	0			
9 mins	9.7	2.6	1	16.0	0	0			
10 mins	9.7	2.6	1	16.0	0	0			
SHALLOW									
5 secs	19.0	2.2	0.0	0.0	0	0			
30 secs	11.0	2.4	0.7	14.0	0	0			
1 min	9.9	2.4	0.7	14.0	0	0			
DEEP									
5 secs	18.9	2.6	0.2	4.0	0	0			
30 secs	8.7	3.1	0.8	16.0	0	0			
1 min	7.9	3.1	0.8	16.0	0	0			
VOC ppm	0.0	Depth to base of well	5.59	SWL	2.37	LNAPL or DNAPL	ND	Temp	16.0
	Steady		mBGL		mBGL		mBGL		°C
>>>> = Flow above detection limit of 30 l/hr, <<< = Negative flow greater than -10 l/hr. >Max = In excess of lower explosive limit. NR = Not Recorded									
Remarks: Start time: 10:51 Finish Time: 11:15 Gas taps left open on completion of monitoring on instruction of Engineer									

Gas and Groundwater Monitoring Results

Contract Number: 42171						Gas Monitor: GA2000			
Contract Name: Ashton Moss						Readings Taken By:			
Date: 6th September 2018						Checked By:			
Background Readings:		Weather Conditions:				Overcast			
		Ground Conditions (dry / wet etc):				Damp			
		Atmospheric Pressure (Start):				1006mb			
		Atmospheric Pressure (Finish):				1006mb			
O ₂ % v/v	20.8	CO ₂ % v/v	0.0	CH ₄ % v/v	0.0	CO ppm	0.0	H ₂ S ppm	0.0
Hole No:	O ₂ % v/v	CO ₂ % v/v	CH ₄ % v/v	LEL %	H ₂ S ppm	CO ppm	Gas flow Rate (l/hr)		Diff. Pressure
	ARP-BH108	Steady	Steady	Steady	Steady	Steady	Mins	Steady	
SHALLOW 5 secs	20.9	2.5	0.4	8.0	0	0	0	23.1	0.69
30 secs	0.4	28.7	70.2	>Max	0	0	1	16.2	
1 min	0.0	30.1	70.1	>Max	0	0	2	12.4	
DEEP 5 secs	20.7	2.7	0.8	16.0	0	0	3	8.9	
30 secs	0.2	29.8	71.1	>Max	0	0	4	7.1	
1 min	0.0	31.1	71.2	>Max	0	0	5	5.4	
CIRCULATE 1 min	0.0	31.2	67.2	>Max	0	0	6	3.9	
2 mins	0.2	31.2	67.1	>Max	0	0	7	2.4	
3 mins	0.1	31.2	67.1	>Max	0	0	8	1.7	
4 mins	0.1	31.1	67.1	>Max	0	0	9	1.0	
5 mins	0.0	31.1	67.1	>Max	0	0	10	0.5	
6 mins	0.0	31.1	67.1	>Max	0	0			
7 mins	0.0	31.1	67.1	>Max	0	0			
8 mins	0.0	31.1	67.1	>Max	0	0			
9 mins	0.0	31.1	67.1	>Max	0	0			
10 mins	0.0	31.1	67.1	>Max	0	0			
SHALLOW 5 secs	20.9	2.4	0.4	8.0	0	0			
30 secs	0.6	27.9	67.6	>Max	0	0			
1 min	0.0	29.2	67.4	>Max	0	0			
DEEP 5 secs	20.9	2.3	0.9	18.0	0	0			
30 secs	0.5	28.7	67.5	>Max	0	0			
1 min		30.2	67.4	>Max	0	0			
VOC ppm	0.0	Depth to base of well	17.23	SWL	3.59	LNAPL or DNAPL	ND	Temp	16.0
	Steady		mBGL		mBGL		mBGL		°C
>>>> = Flow above detection limit of 30 l/hr, <<<< = Negative flow greater than -10 l/hr. >Max = In excess of lower explosive limit. NR = Not Recorded									
Remarks: Start time: 14:25 Finish Time: 14:55 Gas taps left open on completion of monitoring on instruction of Engineer									

Gas and Groundwater Monitoring Results

Contract Number: 42171						Gas Monitor: GA2000			
Contract Name: Ashton Moss						Readings Taken By:			
Date: 6th September 2018						Checked By:			
Background Readings:		Weather Conditions:				Overcast			
		Ground Conditions (dry / wet etc):				Damp			
		Atmospheric Pressure (Start):				1006mb			
		Atmospheric Pressure (Finish):				1006mb			
O ₂ % v/v	20.8	CO ₂ % v/v	0.0	CH ₄ % v/v	0.0	CO ppm	0.0	H ₂ S ppm	0.0
Hole No:	O ₂ % v/v	CO ₂ % v/v	CH ₄ % v/v	LEL %	H ₂ S ppm	CO ppm	Gas flow Rate (l/hr)		Diff. Pressure
	ARP-BH109	Steady	Steady	Steady	Steady	Steady	Mins	Steady	
SHALLOW 5 secs	19.7	0.9	1.5	0.0	0	0	0	0.0	0.23
30 secs	1.8	4.1	23.3	>Max	0	0	1	0.0	
1 min	0.0	4.1	23.6	>Max	0	0	2	0.0	
DEEP 5 secs	18.9	1.1	1.3	26.0	0	0	3	0.0	
30 secs	0.4	4.0	23.2	>Max	0	0	4	0.0	
1 min	0.0	4.0	23.1	>Max	0	0	5	0.0	
CIRCULATE 1 min	0.0	1.3	21.5	>Max	0	0	6		
2 mins	0.0	3.9	22.8	>Max	0	0	7		
3 mins	0.0	3.8	22.8	>Max	0	0	8		
4 mins	0.0	4.0	22.8	>Max	0	0	9		
5 mins	0.0	4.0	22.8	>Max	0	0	10		
6 mins	0.0	4.0	22.8	>Max	0	0			
7 mins	0.0	4.0	22.8	>Max	0	0			
8 mins	0.0	4.0	22.8	>Max	0	0			
9 mins	0.0	4.0	22.8	>Max	0	0			
10 mins	0.0	4.0	22.8	>Max	0	0			
SHALLOW 5 secs	19.9	0.9	1.4	28.0	0	0			
30 secs	1.6	4.2	22.8	>Max	0	0			
1 min	0.0	4.2	23.1	>Max	0	0			
DEEP 5 secs	20.0	0.9	1.1	22.0	0	0			
30 secs	0.6	4.0	22.9	>Max	0	0			
1 min	0.0	4.0	22.8	>Max	0	0			
VOC ppm	0.0	Depth to base of well	8.99	SWL	2.59	LNAPL or DNAPL	ND	Temp	16.0
	Steady		mBGL		mBGL		mBGL		°C
>>>> = Flow above detection limit of 30 l/hr, <<<< = Negative flow greater than -10 l/hr. >Max = In excess of lower explosive limit. NR = Not Recorded									
Remarks: Start time: 12:25 Finish Time: 12:50 Gas taps left open on completion of monitoring on instruction of Engineer									

Gas and Groundwater Monitoring Results

Contract Number: 42171						Gas Monitor: GA2000			
Contract Name: Ashton Moss						Readings Taken By: [REDACTED]			
Date:						Checked By: [REDACTED]			
Background Readings:		Weather Conditions:				Overcast			
		Ground Conditions (dry / wet etc):				Damp			
		Atmospheric Pressure (Start):				1010mb			
		Atmospheric Pressure (Finish):				1010mb			
O ₂ % v/v	20.8	CO ₂ % v/v	0.0	CH ₄ % v/v	0.0	CO ppm	0.0	H ₂ S ppm	0.0
Hole No:	O ₂ % v/v	CO ₂ % v/v	CH ₄ % v/v	LEL %	H ₂ S ppm	CO ppm	Gas flow Rate (l/hr)		Diff. Pressure
ARP-BH110	Steady	Steady	Steady	Steady	Steady	Steady	Mins	Steady	
SHALLOW 5 secs	20.9	1.9	1.6	32.0	0	0	0	0.0	-0.86
30 secs	5.8	16.6	37.2	>Max	0	0	1	0.0	
1 min	6.5	14.9	32.6	>Max	0	0	2	0.0	
DEEP 5 secs	18.0	1.1	0.4	8.0	0	0	3	0.0	
30 secs	6.0	20.5	50.8	>Max	0	0	4	0.0	
1 min	0.3	20.7	50.9	>Max	0	0	5	0.0	
CIRCULATE 1 min	1.9	17.4	41.2	>Max	0	0	6		
2 mins	1.7	17.4	40.9	>Max	0	0	7		
3 mins	1.6	17.3	40.8	>Max	0	0	8		
4 mins	1.6	17.3	41.1	>Max	0	0	9		
5 mins	1.6	17.3	41.1	>Max	0	0	10		
6 mins	1.6	17.3	41.1	>Max	0	0			
7 mins	1.6	17.3	41.1	>Max	0	0			
8 mins	1.6	17.3	41.1	>Max	0	0			
9 mins	1.6	17.3	41.1	>Max	0	0			
10 mins	1.6	17.3	41.1	>Max	0	0			
SHALLOW 5 secs	20.8	1.8	0.9	18.0	0	0			
30 secs	4.9	15.2	33.1	>Max	0	0			
1 min	5.0	14.9	30.8	>Max	0	0			
DEEP 5 secs	18.0	1.2	0.1	2.0	0	0			
30 secs	5.8	19.8	42.3	>Max	0	0			
1 min	0.9	19.9	42.4	>Max	0	0			
VOC ppm	0.0	Depth to base of well	9.71	SWL	4.37	LNAPL or DNAPL	ND	Temp	16.0
	Steady		mBGL		mBGL	mBGL	°C		
>>>> = Flow above detection limit of 30 l/hr, <<< = Negative flow greater than -10 l/hr, >Max = In excess of lower explosive limit. NR = Not Recorded									
Remarks: Start time: 09:01 Finish Time: 09:28 Gas taps left open on completion of monitoring on instruction of Engineer									

Gas and Groundwater Monitoring Results

Contract Number: 42171						Gas Monitor: GA2000			
Contract Name: Ashton Moss						Readings Taken By: [REDACTED]			
Date: 6th September 2018						Checked By: [REDACTED]			
Background Readings:		Weather Conditions:				Drizzle			
		Ground Conditions (dry / wet etc):				Damp			
		Atmospheric Pressure (Start):				1006mb			
		Atmospheric Pressure (Finish):				1006mb			
O ₂ % v/v	20.8	CO ₂ % v/v	0.0	CH ₄ % v/v	0.0	CO ppm	0.0	H ₂ S ppm	0.0
Hole No:	O ₂ % v/v	CO ₂ % v/v	CH ₄ % v/v	LEL %	H ₂ S ppm	CO ppm	Gas flow Rate (l/hr)		Diff. Pressure
ARP-BH111	Steady	Steady	Steady	Steady	Steady	Steady	Mins	Steady	0.89
SHALLOW 5 secs	20.6	1.1	0.2	4.0	0	0	0	1.8	
30 secs	0.7	12.4	72.9	>Max	0	0	1	2.6	
1 min	0.1	12.3	71.9	>Max	0	0	2	2.5	
DEEP 5 secs	19.7	1.1	0.4	8.0	0	0	3	2.6	
30 secs	2.5	11.7	67.1	>Max	0	0	4	2.5	
1 min	1.7	11.6	65.6	>Max	0	0	5	2.5	
CIRCULATE 1 min	3.7	11.5	62.1	>Max	0	0	6		
2 mins	3.6	11.2	60.9	>Max	0	0	7		
3 mins	3.5	11.1	60.5	>Max	0	0	8		
4 mins	3.6	11.0	60.4	>Max	0	0	9		
5 mins	3.6	11.0	60.2	>Max	0	0	10		
6 mins	3.6	11.0	60.2	>Max	0	0			
7 mins	3.6	11.0	60.2	>Max	0	0			
8 mins	3.6	11.0	60.2	>Max	0	0			
9 mins	3.6	11.0	60.2	>Max	0	0			
10 mins	3.6	11.0	60.2	>Max	0	0			
SHALLOW 5 secs	20.6	0.9	0.2	4.0	0	0			
30 secs	3.5	11.1	60.3	>Max	0	0			
1 min	3.4	11.0	58.7	>Max	0	0			
DEEP 5 secs	20.4	0.8	0.3	6.0	0	0			
30 secs	4.9	10.7	64.2	>Max	0	0			
1 min	4.8	10.6	63.1	>Max	0	0			
VOC ppm	0.0	Depth to base of well	5.81	SWL	0.90	LNAPL or DNAPL	ND	Temp	16.0
	Steady		mBGL		mBGL	mBGL	°C		
>>>> = Flow above detection limit of 30 l/hr, <<< = Negative flow greater than -10 l/hr, >Max = In excess of lower explosive limit. NR = Not Recorded									
Remarks: Start time: 11:49 Finish Time: 12:14 Gas taps left open on completion of monitoring on instruction of Engineer									

Gas and Groundwater Monitoring Results

Contract Number: 42171						Gas Monitor: GA2000			
Contract Name: Ashton Moss						Readings Taken By: [REDACTED]			
Date: 6th September 2018						Checked By: [REDACTED]			
Background Readings:		Weather Conditions:				Drizzle			
		Ground Conditions (dry / wet etc):				Damp			
		Atmospheric Pressure (Start):				1006mb			
		Atmospheric Pressure (Finish):				1006mb			
O ₂ % v/v	20.8	CO ₂ % v/v	0.0	CH ₄ % v/v	0.0	CO ppm	0.0	H ₂ S ppm	0.0
Hole No:	O ₂ % v/v	CO ₂ % v/v	CH ₄ % v/v	LEL %	H ₂ S ppm	CO ppm	Gas flow Rate (l/hr)		Diff. Pressure
ARP-BH112	Steady	Steady	Steady	Steady	Steady	Steady	Mins	Steady	
SHALLOW 5 secs	20.3	0.6	0.4	8.0	0	0	0	0.0	-0.4
30 secs	1.2	32.2	40.1	>Max	0	0	1	0.0	
1 min	0.0	32.3	40.3	>Max	0	0	2	0.0	
DEEP 5 secs	20.2	2.1	0.4	8.0	0	0	3	0.0	
30 secs	2.3	34.0	36.8	>Max	0	0	4	0.0	
1 min	0.0	34.1	36.9	>Max	0	0	5	0.0	
CIRCULATE 1 min	0.0	33.9	40.2	>Max	0	0	6	0.0	
2 mins	0.0	33.9	40.1	>Max	0	0	7		
3 mins	0.0	33.8	40.2	>Max	0	0	8		
4 mins	0.0	33.8	40.2	>Max	0	0	9		
5 mins	0.0	33.8	40.2	>Max	0	0	10		
6 mins	0.0	33.8	40.2	>Max	0	0			
7 mins	0.0	33.8	40.2	>Max	0	0			
8 mins	0.0	33.8	40.2	>Max	0	0			
9 mins	0.0	33.8	40.2	>Max	0	0			
10 mins	0.0	33.8	40.2	>Max	0	0			
SHALLOW 5 secs	19.8	0.7	0.5	0.0	0	0			
30 secs	0.9	32.1	40.2	>Max	0	0			
1 min	0.0	32.4	40.3	>Max	0	0			
DEEP 5 secs	20.3	1.8	0.8	0.0	0	0			
30 secs	1.1	34.3	37.1	>Max	0	0			
1 min	0.0	34.4	37.2	>Max	0	0			
VOC ppm	0.0	Depth to base of well	5.39	SWL	5.10	LNAPL or DNAPL	ND	Temp	16.0
	Steady		mBGL		mBGL		mBGL		°C
>>>> = Flow above detection limit of 30 l/hr, <<< = Negative flow greater than -10 l/hr, >Max = In excess of lower explosive limit. NR = Not Recorded Remarks: Start time: 13:28 Finish Time: 13:53 Gas taps left open on completion of monitoring on instruction of Engineer									

Gas and Groundwater Monitoring Results

Contract Number: 42171						Gas Monitor: GA2000			
Contract Name: Ashton Moss						Readings Taken By:			
Date: 6th September 2018						Checked By:			
Background Readings:		Weather Conditions:				Drizzle			
		Ground Conditions (dry / wet etc):				Damp			
		Atmospheric Pressure (Start):				1006mb			
		Atmospheric Pressure (Finish):				1006mb			
O ₂ % v/v	20.8	CO ₂ % v/v	0.0	CH ₄ % v/v	0.0	CO ppm	0.0	H ₂ S ppm	0.0
Hole No:	O ₂ % v/v	CO ₂ % v/v	CH ₄ % v/v	LEL %	H ₂ S ppm	CO ppm	Gas flow Rate (l/hr)		Diff. Pressure
	ARP-WS102	Steady	Steady	Steady	Steady	Steady	Mins	Steady	0.41
SHALLOW 5 secs	20.9	0.9	0.2	4.0	0	0	0	0.0	
30 secs	13.4	15.1	20.1	>Max	0	0	1	0.0	
1 min	11.8	16.1	20.4	>Max	0	0	2	0.0	
DEEP 5 secs	20.6	0.5	0.8	16.0	0	0	3	0.0	
30 secs	11.9	20.2	30.6	>Max	0	0	4	0.0	
1 min	9.9	21.2	30.4	>Max	0	0	5	0.0	
CIRCULATE 1 min	11.6	19.9	26.4	>Max	0	0	6		
2 mins	11.5	20.3	26.9	>Max	0	0	7		
3 mins	11.5	21.1	27.0	>Max	0	0	8		
4 mins	11.5	21.4	27.0	>Max	0	0	9		
5 mins	11.6	21.8	27.0	>Max	0	0	10		
6 mins	11.6	21.8	27.0	>Max	0	0			
7 mins	11.6	21.8	27.1	>Max	0	0			
8 mins	11.6	21.8	27.1	>Max	0	0			
9 mins	11.6	21.8	27.1	>Max	0	0			
10 mins	11.6	21.8	27.1	>Max	0	0			
SHALLOW 5 secs	20.9	0.8	0.9	18.0	0	0			
30 secs	10.8	16.2	26.9	>Max	0	0			
1 min	9.7	17.0	28.4	>Max	0	0			
DEEP 5 secs	20.8	0.4	0.1	2.0	0	0			
30 secs	8.3	20.1	33.1	>Max	0	0			
1 min	8.0	20.2	33.3	>Max	0	0			
VOC ppm	0.0	Depth to base of well	4.85	SWL	2.71	LNAPL or DNAPL	ND	Temp	15.0
	Steady		mBGL		mBGL		mBGL		°C
>>>> = Flow above detection limit of 30 l/hr, <<<< = Negative flow greater than -10 l/hr. >Max = In excess of lower explosive limit. NR = Not Recorded									
Remarks: Start time: 15:25 Finish Time: 15:50 Gas taps left open on completion of monitoring on instruction of Engineer									

Contract Number: 42171						Gas Monitor: GA2000			
Contract Name: Ashton Moss						Readings Taken By:			
Date: 6th September 2018						Checked By:			
Background Readings:		Weather Conditions:				Drizzle			
		Ground Conditions (dry / wet etc):				Damp			
		Atmospheric Pressure (Start):				1006mb			
		Atmospheric Pressure (Finish):				1006mb			
O ₂ % v/v	20.8	CO ₂ % v/v	0.0	CH ₄ % v/v	0.0	CO ppm	0.0	H ₂ S ppm	0.0
Hole No:	O ₂ % v/v	CO ₂ % v/v	CH ₄ % v/v	LEL %	H ₂ S ppm	CO ppm	Gas flow Rate (l/hr)		Diff. Pressure
	ARP-WS103	Steady	Steady	Steady	Steady	Steady	Mins	Steady	
SHALLOW 5 secs	19.6	2.1	0.4	8.0	0	0	0	20.1	
30 secs	19.1	4.6	0.6	12.0	0	0	1	3.2	
1 min	18.8	4.6	0.6	12.0	0	0	2	0.1	
DEEP 5 secs	20.2	1.1	0.3	6.0	0	0	3	0.0	
30 secs	19.3	4.7	0.6	12.0	0	0	4	0.0	
1 min	18.9	4.7	0.6	12.0	0	0	5	0.0	
CIRCULATE 1 min	18.9	4.2	0.4	8.0	0	0	6		
2 mins	18.8	4.2	0.5	10.0	0	0	7		
3 mins	18.8	4.2	0.5	10.0	0	0	8		
4 mins	18.8	4.3	0.5	10.0	0	0	9		
5 mins	18.8	4.3	0.5	10.0	0	0	10		
6 mins	18.8	4.3	0.5	10.0	0	0			
7 mins	18.8	4.3	0.5	10.0	0	0			
8 mins	18.8	4.3	0.5	10.0	0	0			
9 mins	18.8	4.3	0.5	10.0	0	0			
10 mins	18.8	4.3	0.5	10.0	0	0			
SHALLOW 5 secs	19.7	2.2	0.3	6.0	0	0			
30 secs	19.1	4.5	0.5	10.0	0	0			
1 min	18.9	4.6	0.5	10.0	0	0			
DEEP 5 secs	20.3	1.2	0.3	6.0	0	0			
30 secs	19.3	4.7	0.6	12.0	0	0			
1 min	18.9	4.7	0.6	12.0	0	0			
VOC ppm	0.0	Depth to base of well	5.33	SWL	1.24	LNAPL or DNAPL	ND	Temp	16.0
	Steady		mBGL		mBGL	mBGL	°C		
>>>> = Flow above detection limit of 30 l/hr, <<<< = Negative flow greater than -10 l/hr. >Max = In excess of lower explosive limit. NR = Not Recorded									
Remarks: Start time: 11:19 Finish Time: 11:45 Gas taps left open on completion of monitoring on instruction of Engineer									

Visit 12

Gas and Groundwater Monitoring Results

Contract Number: 42171						Gas Monitor: GA2000			
Contract Name: Ashton Moss						Readings Taken By: [REDACTED]			
Date: 20th September 2018						Checked By: [REDACTED]			
Background Readings:		Weather Conditions:				Windy & Overcast			
		Ground Conditions (dry / wet etc):				Wet			
		Atmospheric Pressure (Start):				999mb			
		Atmospheric Pressure (Finish):				999mb			
O ₂ % v/v	20.9	CO ₂ % v/v	0.0	CH ₄ % v/v	0.0	CO ppm	0.0	H ₂ S ppm	0.0
Hole No:	O ₂ % v/v	CO ₂ % v/v	CH ₄ % v/v	LEL %	H ₂ S ppm	CO ppm	Gas flow Rate (l/hr)		Diff. Pressure
	Steady	Steady	Steady	Steady	Steady	Steady	Mins	Steady	-0.20
ARP-BH101									
SHALLOW									
5 secs	20.1	0.7	0.1	>Max	0	0	0	-2.9	
30 secs	1.5	2.0	43.9	>Max	0	0	1	-1.5	
1 min	1.2	2.0	44.1	>Max	0	0	2	-1.1	
DEEP									
5 secs	19.9	0.1	1.6	>Max	0	0	3	-0.8	
30 secs	0.7	1.9	37.9	>Max	0	0	4	-0.5	
1 min	0.3	1.9	34.7	>Max	0	0	5	-0.4	
CIRCULATE									
1 min	0.9	2.0	44.5	>Max	0	0	6	-0.4	
2 mins	0.8	2.0	44.7	>Max	0	0	7	-0.3	
3 mins	0.6	2.0	44.8	>Max	0	0	8	-0.3	
4 mins	0.5	2.0	44.9	>Max	0	0	9	-0.3	
5 mins	0.4	2.0	44.9	>Max	0	0	10	-0.3	
6 mins	0.5	2.0	40.2	>Max	0	0			
7 mins	0.6	1.9	40.1	>Max	0	0			
8 mins	0.6	1.9	40.2	>Max	0	0			
9 mins	0.6	2.0	40.2	>Max	0	0			
10 mins	0.6	2.0	40.2	>Max	0	0			
SHALLOW									
5 secs	0.6	1.9	39.7	>Max	0	0			
30 secs	0.6	2.0	40.2	>Max	0	0			
1 min	0.6	2.0	40.3	>Max	0	0			
DEEP									
5 secs	2.7	1.6	37.7	48.0	0	0			
30 secs	3.4	1.6	21.2	>Max	0	0			
1 min	4.0	1.6	20.3	>Max	0	0			
VOC ppm	0.0	Depth to base of well	11.22	SWL	2.23	LNAPL or DNAPL	ND	Temp	NR
	Steady		mBGL		mBGL		mBGL		°C
>>>> = Flow above detection limit of 30 l/hr, <<< = Negative flow greater than -10 l/hr. >Max = In excess of lower explosive limit. NR = Not Recorded									
Remarks: Start time: 10:05 Finish Time: 10:35 Gas taps left open on completion of monitoring on instruction of Engineer									

Gas and Groundwater Monitoring Results

Contract Number: 42171						Gas Monitor: GA2000			
Contract Name: Ashton Moss						Readings Taken By: XXXXXXXXXX			
Date: 20th September 2018						Checked By: XXXXXXXXXX			
Background Readings:		Weather Conditions:				Windy & Sunny			
		Ground Conditions (dry / wet etc):				Wet			
		Atmospheric Pressure (Start):				999mb			
		Atmospheric Pressure (Finish):				999mb			
O ₂ % v/v	20.9	CO ₂ % v/v	0.0	CH ₄ % v/v	0.0	CO ppm	0.0	H ₂ S ppm	0.0
Hole No:	O ₂ % v/v	CO ₂ % v/v	CH ₄ % v/v	LEL %	H ₂ S ppm	CO ppm	Gas flow Rate (l/hr)		Diff. Pressure
	Steady	Steady	Steady	Steady	Steady	Steady	Mins	Steady	-0.13
ARP-BH102									
SHALLOW									
5 secs	20.6	0.6	0.1	0.1	0	0	0	0.0	
30 secs	0.1	8.1	90.8	>Max	0	0	1	1.0	
1 min	0.2	8.1	90.9	>Max	0	0	2	6.4	
DEEP									
5 secs	20.2	2.0	9.5	>Max	0	0	3	5.1	
30 secs	1.8	7.7	83.6	>Max	0	0	4	5.1	
1 min	5.1	6.5	66.9	>Max	0	0	5	4.1	
CIRCULATE									
1 min	3.4	7.2	74.3	>Max	0	0	6	4.1	
2 mins	3.3	7.2	74.5	>Max	0	0	7	4.7	
3 mins	3.2	7.3	74.8	>Max	0	0	8	3.6	
4 mins	3.0	7.4	75.3	>Max	0	0	9	3.4	
5 mins	3.0	7.4	75.6	>Max	0	0	10	3.9	
6 mins	2.9	7.5	75.8	>Max	0	0			
7 mins	2.8	7.6	76.0	>Max	0	0			
8 mins	2.9	7.6	76.4	>Max	0	0			
9 mins	2.7	7.6	76.6	>Max	0	0			
10 mins	2.6	7.7	76.7	>Max	0	0			
SHALLOW									
5 secs	2.6	7.6	75.3	>Max	0	0			
30 secs	5.0	6.8	64.9	>Max	0	0			
1 min	4.3	7.1	67.7	>Max	0	0			
DEEP									
5 secs	4.4	7.3	70.8	>Max	0	0			
30 secs	3.8	7.3	71.1	>Max	0	0			
1 min	3.5	7.4	72.2	>Max	0	0			
VOC ppm	0.0	Depth to base of well	13.78	SWL	1.00	LNAPL or DNAPL	ND	Temp	NR
	Steady		mBGL		mBGL		mBGL		°C
>>>> = Flow above detection limit of 30 l/hr, <<< = Negative flow greater than -10 l/hr. >Max = In excess of lower explosive limit. NR = Not Recorded									
Remarks: Start time: 09:01 Finish Time: 09:30 Gas taps left open on completion of monitoring on instruction of Engineer									

Gas and Groundwater Monitoring Results

Contract Number: 42171						Gas Monitor: GA2000			
Contract Name: Ashton Moss						Readings Taken By: [REDACTED]			
Date: 20th September 2018						Checked By: [REDACTED]			
Background Readings:		Weather Conditions:				Windy & Sunny			
		Ground Conditions (dry / wet etc):				Wet			
		Atmospheric Pressure (Start):				1000mb			
		Atmospheric Pressure (Finish):				1000mb			
O ₂ % v/v	21.1	CO ₂ % v/v	0.0	CH ₄ % v/v	0.0	CO ppm	0.0	H ₂ S ppm	0.0
Hole No:	O ₂ % v/v	CO ₂ % v/v	CH ₄ % v/v	LEL %	H ₂ S ppm	CO ppm	Gas flow Rate (l/hr)		Diff. Pressure
	Steady	Steady	Steady	Steady	Steady	Steady	Mins	Steady	0.21
ARP-BH104									
SHALLOW									
5 secs	20.9	0.0	0.0	0.0	0	0	0	-0.4	
30 secs	20.5	0.3	1.7	33.0	0	0	1	-0.4	
1 min	20.5	0.3	1.5	28.0	0	0	2	-0.4	
DEEP									
5 secs	20.8	0.0	0.0	0.0	0	0	3	-0.4	
30 secs	20.5	0.2	1.2	23.0	0	0	4	-0.4	
1 min	20.5	0.2	1.0	18.0	0	0	5	-0.4	
CIRCULATE									
1 min	20.6	0.1	0.4	8.0	0	0	6		
2 mins	20.6	0.1	0.5	9.0	0	0	7		
3 mins	20.6	0.1	0.5	8.0	0	0	8		
4 mins	20.5	0.1	0.7	13.0	0	0	9		
5 mins	20.5	0.1	0.7	13.0	0	0	10		
6 mins	20.6	0.2	1.0	21.0	0	0			
7 mins	20.4	0.3	1.6	32.0	0	0			
8 mins	20.3	0.3	1.7	34.0	0	0			
9 mins	20.4	0.2	1.5	29.0	0	0			
10 mins	20.5	0.2	1.2	24.0	0	0			
SHALLOW									
5 secs	20.3	0.2	1.0	20.0	0	0			
30 secs	20.6	0.2	0.9	18.0	0	0			
1 min	20.5	0.2	1.1	21.0	0	0			
DEEP									
5 secs	20.5	0.1	0.7	13.0	0	0			
30 secs	20.7	0.1	0.5	10.0	0	0			
1 min	20.7	0.1	0.6	11.0	0	0			
VOC ppm	0.0	Depth to base of well	9.68	SWL	0.36	LNAPL or DNAPL	ND	Temp	NR
	Steady		mBGL		mBGL		mBGL		°C
>>>> = Flow above detection limit of 30 l/hr, <<< = Negative flow greater than -10 l/hr. >Max = In excess of lower explosive limit. NR = Not Recorded									
Remarks: Start time: 8:25 Finish Time: 8.54 Organic Odour. Gas taps left open on completion of monitoring on instruction of Engineer									

Gas and Groundwater Monitoring Results

Contract Number: 42171						Gas Monitor: GA2000			
Contract Name: Ashton Moss						Readings Taken By: [REDACTED]			
Date: 20th September 2018						Checked By: [REDACTED]			
Background Readings:		Weather Conditions:				Rain			
		Ground Conditions (dry / wet etc):				Wet			
		Atmospheric Pressure (Start):				997mb			
		Atmospheric Pressure (Finish):				997mb			
O ₂ % v/v	21.0	CO ₂ % v/v	0.0	CH ₄ % v/v	0.0	CO ppm	0.0	H ₂ S ppm	0.0
Hole No: <i>ARP-BH105</i>	O ₂ % v/v	CO ₂ % v/v	CH ₄ % v/v	LEL %	H ₂ S ppm	CO ppm	Gas flow Rate (l/hr)		Diff. Pressure
	Steady	Steady	Steady	Steady	Steady	Steady	Mins	Steady	-0.26
SHALLOW 5 secs	18.0	0.9	2.2	>Max	0	3	0	0.9	
30 secs	3.5	21.4	61.9	>Max	0	3	1	0.1	
1 min	4.8	19.7	55.4	>Max	0	3	2	0.1	
DEEP 5 secs	0.7	24.5	74.1	>Max	0	3	3	0.1	
30 secs	0.2	24.9	75.2	>Max	0	3	4	0.1	
1 min	0.1	24.9	75.4	>Max	0	2	5	0.1	
CIRCULATE 1 min	3.6	20.9	60.8	>Max	0	0	6		
2 mins	3.5	20.9	61.3	>Max	0	0	7		
3 mins	3.3	21.0	61.8	>Max	0	0	8		
4 mins	3.3	21.0	62.1	>Max	0	0	9		
5 mins	3.4	21.1	61.7	>Max	0	0	10		
6 mins	6.0	18.2	51.5	>Max	0	0			
7 mins	6.2	17.8	49.8	>Max	0	0			
8 mins	6.2	17.8	50.1	>Max	0	0			
9 mins	6.1	17.9	50.3	>Max	0	0			
10 mins	6.1	17.9	50.4	>Max	0	0			
SHALLOW 5 secs	5.4	19.5	56.1	>Max	0	0			
30 secs	4.7	19.6	56.0	>Max	0	0			
1 min	4.7	19.6	56.1	>Max	0	0			
DEEP 5 secs	12.7	8.8	23.0	>Max	0	0			
30 secs	13.0	10.1	27.2	>Max	0	0			
1 min	12.3	10.9	29.5	>Max	0	0			
VOC ppm	0.0	Depth to base of well	10.74	SWL	2.35	LNAPL or DNAPL	ND	Temp	NR
	Steady		mBGL		mBGL		mBGL		°C
>>>> = Flow above detection limit of 30 l/hr, <<< = Negative flow greater than -10 l/hr. >Max = In excess of lower explosive limit. NR = Not Recorded									
Remarks: Start time: 12:20 Finish Time: 12:50 Gas taps left open on completion of monitoring on instruction of Engineer									

Gas and Groundwater Monitoring Results

Contract Number: 42171						Gas Monitor: GA2000			
Contract Name: Ashton Moss						Readings Taken By:			
Date: 20th September 2018						Checked By:			
Background Readings:		Weather Conditions:				Rain			
		Ground Conditions (dry / wet etc):				Wet			
		Atmospheric Pressure (Start):				995mb			
		Atmospheric Pressure (Finish):				995mb			
O ₂ % v/v	21.2	CO ₂ % v/v	0.0	CH ₄ % v/v	0.0	CO ppm	0.0	H ₂ S ppm	0.0
Hole No:	O ₂ % v/v	CO ₂ % v/v	CH ₄ % v/v	LEL %	H ₂ S ppm	CO ppm	Gas flow Rate (l/hr)		Diff. Pressure
	Steady	Steady	Steady	Steady	Steady	Steady	Mins	Steady	-0.23
ARP-BH106									
SHALLOW									
5 secs	10.0	7.7	26.1	>Max	0	0	0	-1.2	
30 secs	0.3	19.9	57.0	>Max	0	0	1	-10.0	
1 min	0.2	19.9	57.1	>Max	0	0	2	-12.4	
DEEP									
5 secs	1.5	23.0	46.7	>Max	0	0	3	-14.0	
30 secs	0.2	28.7	50.1	>Max	0	0	4	-16.0	
1 min	0.1	25.7	50.1	>Max	0	0	5	-17.7	
CIRCULATE									
1 min	0.0	19.5	59.0	>Max	0	0	6	-18.4	
2 mins	0.0	19.2	59.9	>Max	0	0	7	-19.0	
3 mins	0.0	19.2	60.1	>Max	0	0	8	-19.5	
4 mins	0.0	19.1	60.5	>Max	0	0	9	-20.2	
5 mins	0.0	19.0	60.6	>Max	0	0	10	-20.5	
6 mins	0.0	19.0	60.7	>Max	0	0			
7 mins	0.0	19.0	60.6	>Max	0	0			
8 mins	0.0	19.2	60.0	>Max	0	0			
9 mins	0.0	20.9	55.6	>Max	0	0			
10 mins	0.0	21.8	54.1	>Max	0	0			
SHALLOW									
5 secs	0.0	21.8	53.0	>Max	0	0			
30 secs	0.0	22.3	53.5	>Max	0	0			
1 min	0.0	22.4	53.4	>Max	0	0			
DEEP									
5 secs	0.1	22.4	53.4	>Max	0	0			
30 secs	0.0	24.2	53.4	>Max	0	0			
1 min	0.0	24.1	53.4	>Max	0	0			
VOC ppm	0.0	Depth to base of well	9.90	SWL	7.10	LNAPL or DNAPL	ND	Temp	NR
	Steady		mBGL		mBGL		mBGL		°C
>>>> = Flow above detection limit of 30 l/hr, <<<< = Negative flow greater than -10 l/hr. >Max = In excess of lower explosive limit. NR = Not Recorded									
Remarks: Start time: 14:15 Finish Time: 14:45 Gas taps left open on completion of monitoring on instruction of Engineer									

Gas and Groundwater Monitoring Results

Contract Number: 42171						Gas Monitor: GA2000			
Contract Name: Ashton Moss						Readings Taken By: XXXXXXXXXX			
Date: 20th September 2018						Checked By: XXXXXXXXXX			
Background Readings:		Weather Conditions:				Rian			
		Ground Conditions (dry / wet etc):				Wet			
		Atmospheric Pressure (Start):				997mb			
		Atmospheric Pressure (Finish):				997mb			
O ₂ % v/v	21.3	CO ₂ % v/v	0.0	CH ₄ % v/v	0.0	CO ppm	0.0	H ₂ S ppm	0.0
Hole No:	O ₂ % v/v	CO ₂ % v/v	CH ₄ % v/v	LEL %	H ₂ S ppm	CO ppm	Gas flow Rate (l/hr)		Diff. Pressure
	Steady	Steady	Steady	Steady	Steady	Steady	Mins	Steady	-0.22
ARP-BH107									
SHALLOW									
5 secs	20.2	0.1	0.2	45.0	0	3	0	-0.2	
30 secs	0.8	5.7	2.5	50.0	0	3	1	-0.2	
1 min	0.7	5.7	2.6	51.0	0	3	2	-0.2	
DEEP									
5 secs	0.9	5.6	2.5	49.0	0	3	3	-0.2	
30 secs	0.8	5.1	2.2	44.0	0	3	4	-0.2	
1 min	1.6	4.8	2.0	38.0	0	3	5	-0.2	
CIRCULATE									
1 min	0.4	5.7	2.7	53.0	0	2	6		
2 mins	0.3	5.6	2.8	55.0	0	2	7		
3 mins	0.7	5.3	2.6	50.0	0	2	8		
4 mins	1.8	5.0	2.2	43.0	0	2	9		
5 mins	2.1	4.9	2.3	45.0	0	2	10		
6 mins	2.7	4.7	2.2	43.0	0	1			
7 mins	3.0	4.6	2.1	41.0	0	0			
8 mins	3.4	4.5	2.0	40.0	0	2			
9 mins	3.5	4.5	2.0	40.0	0	2			
10 mins	3.6	4.5	2.0	40.0	0	1			
SHALLOW									
5 secs	3.7	4.4	2.0	40.0	0	0			
30 secs	3.8	4.4	2.0	40.0	0	1			
1 min	4.0	4.4	2.0	40.0	0	1			
DEEP									
5 secs	6.6	3.4	1.5	20.0	0	0			
30 secs	8.9	3.2	1.3	26.0	0	0			
1 min	9.4	3.1	1.3	25.0	0	0			
VOC ppm	0.0	Depth to base of well	5.55	SWL	2.20	LNAPL or DNAPL	ND	Temp	NR
	Steady		mBGL		mBGL		mBGL		°C
>>>> = Flow above detection limit of 30 l/hr, <<<< = Negative flow greater than -10 l/hr. >Max = In excess of lower explosive limit. NR = Not Recorded									
Remarks: Start time: 12:50									
Finish Time: 13:25									
Gas taps left open on completion of monitoring on instruction of Engineer									

Gas and Groundwater Monitoring Results

Contract Number: 42171						Gas Monitor: GA2000			
Contract Name: Ashton Moss						Readings Taken By:			
Date: 20th September 2018						Checked By:			
Background Readings:		Weather Conditions:				Sunny & Windy			
		Ground Conditions (dry / wet etc):				Wet			
		Atmospheric Pressure (Start):				998mb			
		Atmospheric Pressure (Finish):				998mb			
O ₂ % v/v	21.1	CO ₂ % v/v	0.0	CH ₄ % v/v	0.0	CO ppm	0.0	H ₂ S ppm	0.0
Hole No:	O ₂ % v/v	CO ₂ % v/v	CH ₄ % v/v	LEL %	H ₂ S ppm	CO ppm	Gas flow Rate (l/hr)		Diff. Pressure
	ARP-BH108	Steady	Steady	Steady	Steady	Steady	Mins	Steady	-0.12
SHALLOW 5 secs	19.7	0.1	0.6	>Max	0	0	0	-4.80	
30 secs	2.8	51.8	35.5	>Max	0	0	1	-1.40	
1 min	0.1	56.8	39.3	>Max	0	0	2	-0.04	
DEEP 5 secs	20.1	0.2	0.1	>Max	0	0	3	-0.04	
30 secs	0.6	55.7	39.5	>Max	0	0	4	-0.04	
1 min	0.4	55.8	39.0	>Max	0	0	5	-0.04	
CIRCULATE 1 min	0.5	53.2	37.0	>Max	0	0	6	-0.04	
2 mins	0.6	51.5	35.7	>Max	0	0	7	-0.04	
3 mins	0.9	49.0	33.8	>Max	0	0	8		
4 mins	1.0	47.6	32.5	>Max	0	0	9		
5 mins	1.1	46.7	31.9	>Max	0	0	10		
6 mins	1.2	45.9	31.2	>Max	0	0			
7 mins	1.3	45.1	30.6	>Max	0	0			
8 mins	1.4	44.1	29.9	>Max	0	0			
9 mins	1.5	43.5	29.4	>Max	0	0			
10 mins	1.5	43.3	29.2	>Max	0	0			
SHALLOW 5 secs	20.1	0.2	0.0	>Max	0	0			
30 secs	3.9	37.9	25.4	>Max	0	0			
1 min	3.0	39.3	26.4	>Max	0	0			
DEEP 5 secs	2.4	39.7	26.3	>Max	0	0			
30 secs	2.1	39.1	25.6	>Max	0	0			
1 min	2.2	38.3	25.1	>Max	0	0			
VOC ppm	0.0	Depth to base of well	17.32	SWL	2.90	LNAPL or DNAPL	ND	Temp	NR
	Steady		mBGL		mBGL		mBGL		°C
>>>> = Flow above detection limit of 30 l/hr, <<<< = Negative flow greater than -10 l/hr. >Max = In excess of lower explosive limit. NR = Not Recorded									
Remarks: Start time: 9:35 Finish Time: 10.00 Gas taps left open on completion of monitoring on instruction of Engineer									

Contract Number: 42171						Gas Monitor: GA2000			
Contract Name: Ashton Moss						Readings Taken By:			
Date: 20th September 2018						Checked By:			
Background Readings:		Weather Conditions:				Overcast			
		Ground Conditions (dry / wet etc):				Wet			
		Atmospheric Pressure (Start):				998mb			
		Atmospheric Pressure (Finish):				998mb			
O ₂ % v/v	21.0	CO ₂ % v/v	0.0	CH ₄ % v/v	0.0	CO ppm	0.0	H ₂ S ppm	0.0
Hole No:	O ₂ % v/v	CO ₂ % v/v	CH ₄ % v/v	LEL %	H ₂ S ppm	CO ppm	Gas flow Rate (l/hr)		Diff. Pressure
ARP-BH109	Steady	Steady	Steady	Steady	Steady	Steady	Mins	Steady	-0.23
SHALLOW 5 secs	19.7	0.6	0.3	37.0	0	0	0	0.0	
30 secs	0.4	6.5	43.0	>Max	0	0	1	0.1	
1 min	0.2	6.5	43.1	>Max	0	0	2	0.1	
DEEP 5 secs	0.1	6.5	43.9	>Max	4	0	3	0.0	
30 secs	0.1	6.5	43.9	>Max	6	0	4	0.0	
1 min	0.1	6.5	43.9	>Max	8	0	5	0.0	
CIRCULATE 1 min	0.1	6.5	43.1	>Max	0	0	6	0.0	
2 mins	0.1	6.5	43.2	>Max	0	0	7	0.0	
3 mins	0.1	6.5	43.3	>Max	1	0	8	0.0	
4 mins	0.0	6.5	43.6	>Max	3	0	9		
5 mins	0.0	6.5	43.7	>Max	4	0	10		
6 mins	0.0	6.5	43.7	>Max	4	0			
7 mins	0.0	6.5	43.7	>Max	4	0			
8 mins	0.0	6.5	43.7	>Max	4	0			
9 mins	0.0	6.5	43.7	>Max	4	0			
10 mins	0.0	6.5	43.7	>Max	4	0			
SHALLOW 5 secs	0.0	6.5	43.6	>Max	4	0			
30 secs	0.0	6.5	43.6	>Max	4	0			
1 min	0.0	6.5	43.7	>Max	4	0			
DEEP 5 secs	0.1	6.4	43.4	>Max	4	0			
30 secs	0.0	6.4	43.4	>Max	6	0			
1 min	0.0	6.4	43.5	>Max	8	0			
VOC ppm	0.0	Depth to base of well	9.15	SWL	2.55	LNAPL or DNAPL	ND	Temp	NR
	Steady		mBGL		mBGL	mBGL	°C		
>>>> = Flow above detection limit of 30 l/hr, <<<< = Negative flow greater than -10 l/hr. >Max = In excess of lower explosive limit. NR = Not Recorded									
Remarks: Start time: 11:05									
Finish Time: 11.30 Strong Organic Odour									
Gas taps left open on completion of monitoring on instruction of Engineer									

>>>> = Flow above detection limit of 30 l/hr, <<< = Negative flow greater than -10 l/hr. >Max = In excess of lower explosive limit. NR = Not Recorded

Gas and Groundwater Monitoring Results

Contract Number: 42171						Gas Monitor: GA2000			
Contract Name: Ashton Moss						Readings Taken By:			
Date: 20th September 2018						Checked By:			
Background Readings:		Weather Conditions:				Rain			
		Ground Conditions (dry / wet etc):				Wet			
		Atmospheric Pressure (Start):				996mb			
		Atmospheric Pressure (Finish):				996mb			
O ₂ % v/v	21.0	CO ₂ % v/v	0.0	CH ₄ % v/v	0.0	CO ppm	0.0	H ₂ S ppm	0.0
Hole No:	O ₂ % v/v	CO ₂ % v/v	CH ₄ % v/v	LEL %	H ₂ S ppm	CO ppm	Gas flow Rate (l/hr)		Diff. Pressure
	ARP-BH111	Steady	Steady	Steady	Steady	Steady	Mins	Steady	-0.23
SHALLOW 5 secs	19.7	0.2	0.5	50.0	0	0	0	4.6	
30 secs	1.8	17.1	73.0	>Max	0	0	1	1.9	
1 min	5.5	13.8	56.5	>Max	0	0	2	0.4	
DEEP 5 secs	7.0	12.7	49.9	>Max	0	0	3	1.0	
30 secs	8.0	11.7	47.6	47.0	0	0	4	0.4	
1 min	9.4	10.2	40.8	40.0	0	0	5	0.0	
CIRCULATE 1 min	10.1	9.9	39.3	40.0	0	0	6	0.0	
2 mins	10.2	9.1	38.8	>Max	0	0	7	0.8	
3 mins	10.9	9.1	36.3	>Max	0	0	8	0.2	
4 mins	11.5	8.7	34.5	>Max	0	0	9	0.2	
5 mins	12.0	8.2	32.6	>Max	0	0	10	0.2	
6 mins	2.3	8.0	31.5	>Max	0	0			
7 mins	12.9	7.5	29.6	>Max	0	0			
8 mins	13.3	7.1	28.2	>Max	0	0			
9 mins	13.8	6.7	26.5	>Max	0	0			
10 mins	14.0	6.6	26.3	>Max	0	0			
SHALLOW 5 secs	14.1	6.4	25.5	>Max	0	0			
30 secs	15.0	5.7	22.5	>Max	0	0			
1 min	16.0	4.7	19.8	>Max	0	0			
DEEP 5 secs	16.4	4.4	17.8	>Max	0	0			
30 secs	16.7	4.2	17.2	>Max	0	0			
1 min	17.0	3.8	15.7	>Max	0	0			
VOC ppm	0.0	Depth to base of well	5.92	SWL	0.95	LNAPL or DNAPL	ND	Temp	NR
	Steady		mBGL		mBGL		mBGL		°C
>>>> = Flow above detection limit of 30 l/hr, <<<< = Negative flow greater than -10 l/hr. >Max = In excess of lower explosive limit. NR = Not Recorded									
Remarks: Start time: 13:20 Finish Time: 13.45 Gas taps left open on completion of monitoring on instruction of Engineer									

>>>> = Flow above detection limit of 30 l/hr, <<< = Negative flow greater than -10 l/hr. >Max = In excess of lower explosive limit. NR = Not Recorded

Contract Number:		42171				Gas Monitor:		GA2000	
Contract Name:		Ashton Moss				Readings Taken By:		[REDACTED]	
Date:		20th September 2018				Checked By:		[REDACTED]	
Background Readings:		Weather Conditions:				Rain			
		Ground Conditions (dry / wet etc):				Wet			
		Atmospheric Pressure (Start):				994mb			
		Atmospheric Pressure (Finish):				994mb			
O ₂ % v/v	20.9	CO ₂ % v/v	0.0	CH ₄ % v/v	0.0	CO ppm	0.0	H ₂ S ppm	0.0
Hole No:	O ₂ % v/v	CO ₂ % v/v	CH ₄ % v/v	LEL %	H ₂ S ppm	CO ppm	Gas flow Rate (l/hr)		Diff. Pressure
ARP-WS102	Steady	Steady	Steady	Steady	Steady	Steady	Mins	Steady	-0.18
SHALLOW 5 secs	2.0	53.9	44.0	>Max	0	0	0	0.0	
30 secs	1.4	53.3	44.0	>Max	0	0	1	0.0	
1 min	0.1	54.6	44.5	>Max	0	0	2	0.0	
DEEP 5 secs	0.2	54.5	44.5	>Max	0	2	3	0.0	
30 secs	0.1	54.5	44.6	>Max	0	0	4	0.0	
1 min	0.1	54.6	44.6	>Max	0	0	5	0.0	
CIRCULATE 1 min	0.2	54.2	44.1	>Max	0	0	6	0.0	
2 mins	0.1	54.4	44.4	>Max	0	0	7	0.0	
3 mins	0.1	54.5	44.4	>Max	0	0	8	0.0	
4 mins	0.1	54.5	44.4	>Max	0	0	9	0.0	
5 mins	0.1	54.5	44.4	>Max	0	0	10	0.0	
6 mins	0.1	54.5	44.4	>Max	0	0			
7 mins	0.1	54.5	44.4	>Max	0	0			
8 mins	0.1	54.5	44.4	>Max	0	0			
9 mins	0.1	54.5	44.4	>Max	0	0			
10 mins	0.1	54.5	44.4	>Max	0	0			
SHALLOW 5 secs	20.6	8.8	6.0	>Max	0	0			
30 secs	12.5	34.5	26.4	>Max	0	0			
1 min	0.8	53.5	43.2	>Max	0	0			
DEEP 5 secs	0.5	53.7	43.4	>Max	0	0			
30 secs	0.3	53.9	43.4	>Max	0	0			
1 min	0.3	53.8	43.1	>Max	0	0			
VOC ppm	0.0	Depth to base of well	4.95	SWL	2.60	LNAPL or DNAPL	ND	Temp	NR
	Steady		mBGL		mBGL		mBGL		°C
>>>> = Flow above detection limit of 30 l/hr, <<<< = Negative flow greater than -10 l/hr. >Max = In excess of lower explosive limit. NR = Not Recorded									
Remarks: Start time: 14:45 Finish Time: 15.15 Gas taps left open on completion of monitoring on instruction of Engineer									

Gas and Groundwater Monitoring Results

Contract Number:		42171				Gas Monitor:		GA2000	
Contract Name:		Ashton Moss				Readings Taken By:		[REDACTED]	
Date:		20th September 2018				Checked By:		[REDACTED]	
Background Readings:		Weather Conditions:				Wet			
		Ground Conditions (dry / wet etc):				Wet			
		Atmospheric Pressure (Start):				994mb			
		Atmospheric Pressure (Finish):				994mb			
O ₂ % v/v	21.0	CO ₂ % v/v	0.0	CH ₄ % v/v	0.0	CO ppm	0.0	H ₂ S ppm	0.0
Hole No:	O ₂ % v/v	CO ₂ % v/v	CH ₄ % v/v	LEL %	H ₂ S ppm	CO ppm	Gas flow Rate (l/hr)		Diff. Pressure
ARP-WS103	Steady	Steady	Steady	Steady	Steady	Steady	Mins	Steady	N/A
SHALLOW 5 secs	19.7	11.0	0.3	6.0	0	0	0	-3.6	
30 secs	17.1	6.7	0.2	3.0	0	0	1	-14.6	
1 min	17.0	6.7	0.2	3.0	0	0	2	-17.4	
DEEP 5 secs	-	-	-	-	-	-	3	-21.0	
30 secs	-	-	-	-	-	-	4	-21.2	
1 min	-	-	-	-	-	-	5	-22.2	
CIRCULATE 1 min	20.1	2.1	0.1	1.0	0	0	6	-23.7	
2 mins	20.1	2.1	0.1	1.0	0	0	7	-24.5	
3 mins	20.1	2.1	0.1	1.0	0	0	8	-25.2	
4 mins	20.1	2.1	0.1	1.0	0	0	9	-25.6	
5 mins	20.1	2.1	0.1	1.0	0	0	10	-25.8	
6 mins	20.1	2.1	0.1	1.0	0	0			
7 mins	20.1	2.1	0.1	1.0	0	0			
8 mins	20.1	2.1	0.1	1.0	0	0			
9 mins	20.1	2.1	0.1	1.0	0	0			
10 mins	20.1	2.1	0.1	1.0	0	0			
SHALLOW 5 secs	20.1	2.1	0.1	0.0	0	0			
30 secs	20.1	2.1	0.1	0.0	0	0			
1 min	20.1	2.1	0.1	0.0	0	0			
DEEP 5 secs	-	-	-	-	-	-			
30 secs	-	-	-	-	-	-			
1 min	-	-	-	-	-	-			
VOC ppm	0.0	Depth to base of well	5.30	SWL	0.00	LNAPL or DNAPL	ND	Temp	NR
	Steady		mBGL		mBGL		mBGL		°C
>>>> = Flow above detection limit of 30 l/hr, <<<< = Negative flow greater than -10 l/hr. >Max = In excess of lower explosive limit. NR = Not Recorded									
Remarks: Start time: 15:30 Finish Time: 16:00 Gas taps left open on completion of visit on instruction of Engineer Sucking up water in deep tubing - unable to monitor									