

Application for Approval of Details Reserved by Condition

Town and Country Planning Act 1990 (as amended); Planning (Listed Buildings and Conservation Areas) Act 1990 (as amended)

Publication of applications on planning authority websites

Please note that the information provided on this application form and in supporting documents may be published on the Authority's website. If you require any further clarification, please contact the Authority's planning department.

Site Location

Disclaimer: We can only make recommendations based on the answers given in the questions.

If you cannot provide a postcode, the description of site location must be completed. Please provide the most accurate site description you can, to help locate the site - for example "field to the North of the Post Office".

Number

Suffix

Property Name

Address Line 1

Address Line 2

Address Line 3

Town/city

Postcode

Description of site location must be completed if postcode is not known:

Easting (x)

Northing (y)

Description

Applicant Details

Name/Company

Title

Mr

First name

Tom

Surname

Maltby

Company Name

Venus Logistics PropCo Ltd

Address

Address line 1

22 Grenville Street

Address line 2

St.2 Helier

Address line 3

Town/City

London

County

Country

Jersey

Postcode

JE4 8PX

Are you an agent acting on behalf of the applicant?

Yes

No

Contact Details

Primary number

***** REDACTED *****

Secondary number

Fax number

Email address

Agent Details

Name/Company

Title

First name

Surname

Company Name

Address

Address line 1

Address line 2

Address line 3

Town/City

County

Country

Postcode

Contact Details

Primary number

***** REDACTED *****

Secondary number

Fax number

Email address

***** REDACTED *****

Description of the Proposal

Please provide a description of the approved development as shown on the decision letter

Development of site to create fourteen industrial units having Planning Use Class E(g) (iii), B2 & B8 uses with ancillary offices, plus trade counter uses for Units 9 to 14, carparking, service areas and soft landscaping along with highways works to Chancel Close

Reference number

22/00014/FUL

Date of decision (date must be pre-application submission)

22/09/2022

Please state the condition number(s) to which this application relates

Condition number(s)

Condition 21 sub sections 1 & 2

Has the development already started?

Yes

No

Part Discharge of Conditions

Are you seeking to discharge only part of a condition?

Yes

No

If Yes, please indicate which part of the condition your application relates to

Condition 21 sub sections 1 & 2

Discharge of Conditions

Please provide a full description and/or list of the materials/details that are being submitted for approval

Site location plan ref 21078/PL1001 Rev00
Proposed Site Plan ref 21078/PL1003 Rev07
Ground Investigation Report by WSP, ref 70020138-R03
Land quality cover letter by WSP, ref 70102939-L01, dated 14/11/2022

Site Visit

Can the site be seen from a public road, public footpath, bridleway or other public land?

- Yes
 No

If the planning authority needs to make an appointment to carry out a site visit, whom should they contact?

- The agent
 The applicant
 Other person

Pre-application Advice

Has assistance or prior advice been sought from the local authority about this application?

- Yes
 No

Declaration

I / We hereby apply for Approval of details reserved by a condition (discharge) as described in this form and accompanying plans/drawings and additional information. I / We confirm that, to the best of my/our knowledge, any facts stated are true and accurate and any opinions given are the genuine options of the persons giving them. I / We also accept that: Once submitted, this information will be transmitted to the Local Planning Authority and, once validated by them, be made available as part of a public register and on the authority's website; our system will automatically generate and send you emails in regard to the submission of this application.

- I / We agree to the outlined declaration

Signed

Roland Lee

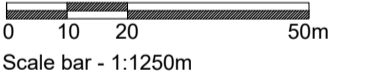
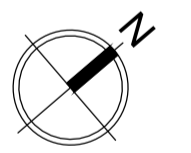
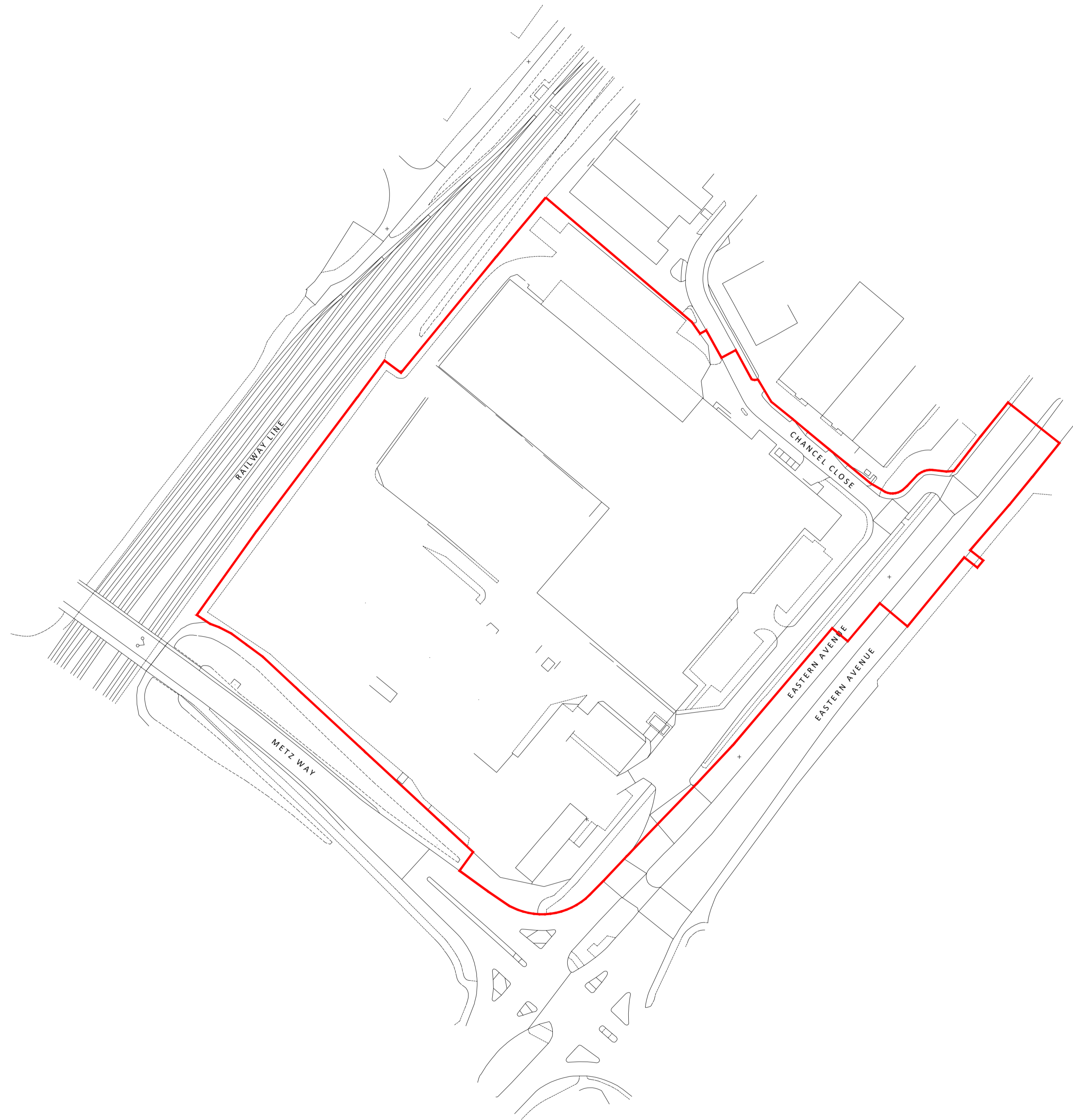
Date

14/11/2022

Disclaimer:
Information Subject to Measured Survey

Notes:

KEY
PLANNING APPLICATION SITE BOUNDARY
(Approx 53,142 m² / 13.13 acres)



00 Planning Issue 30.11.21 HT HA

DR DR Issue 17.11.21 HT HA

Rev: Notes: Date: Dwn: Iss:

Suitability Code:

Client:



hale

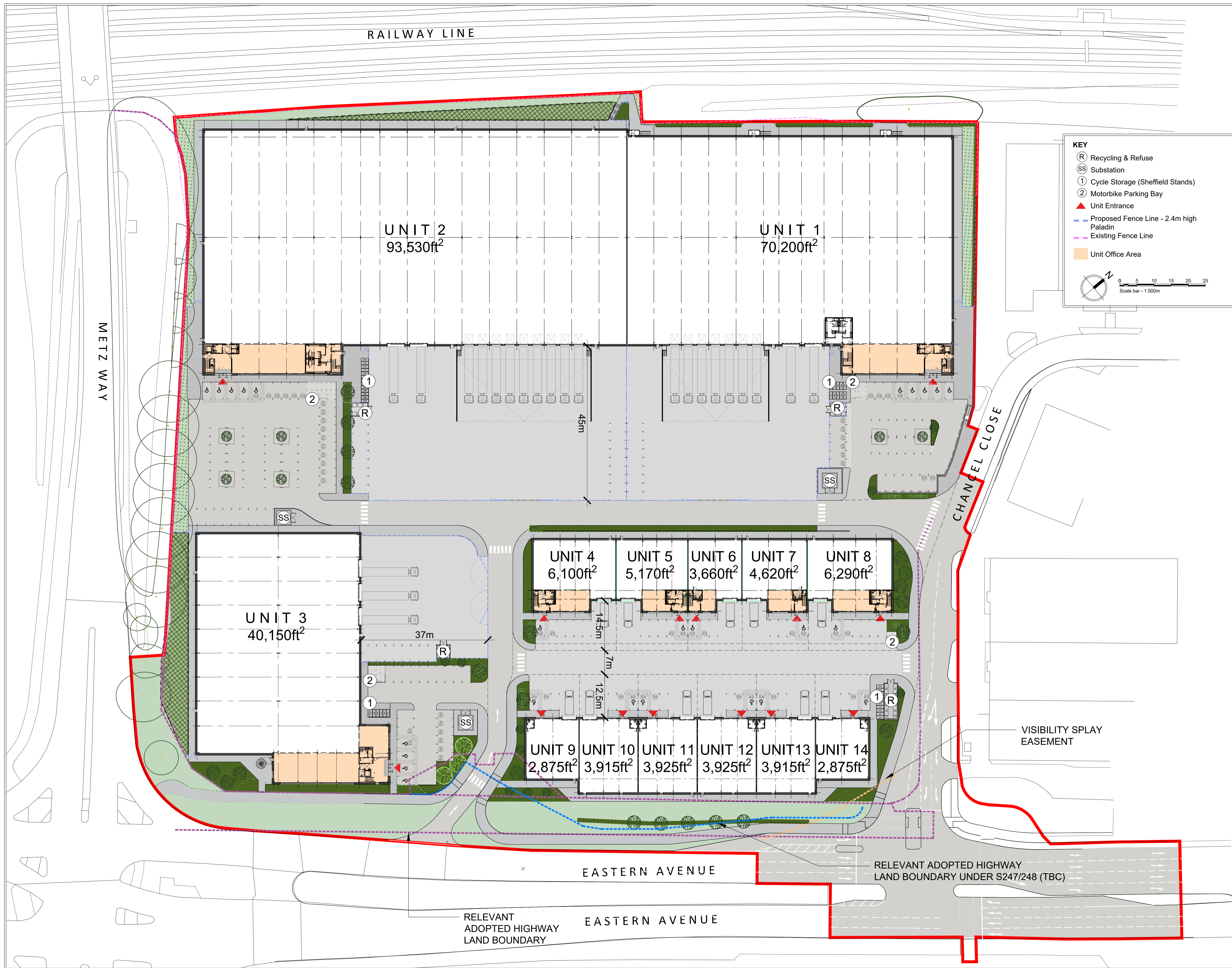
ARCHITECTURE
22c Leathermarket Street, London, SE1 3HP

Project:
Access Park, Gloucester

Drawing Title:
Site Location Plan

Project No: 21078	Scale @ A1 / A3 1:1250 / 1:2500	Revision: 00
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Drawing No:
21078-PL1001



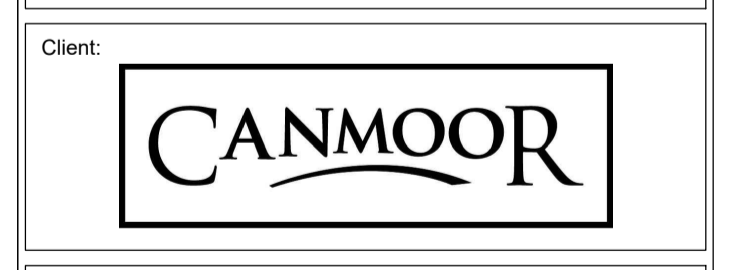
Disclaimer:
Information Subject to Measured Survey

- Notes:
- KEY**
- PLANNING APPLICATION SITE BOUNDARY (Approx 53,142 m² / 13.13 acres)
 - RELEVANT ADOPTED HIGHWAY LAND AND BOUNDARY (WITHIN OWNERSHIP)
 - VISIBILITY SPLAY EASEMENT
 - RELEVANT BOUNDARY UNDER S247/248 (TBC)

AREA SCHEDULE (GIA)

UNIT (GIA)	Area (ft ²)
UNIT 1 (GIA)	70,200 ft²
Warehouse (incl. office Undercroft)	64,600 ft ²
Office (FF Only)	2,700 ft ²
Office (SF Only)	2,900 ft ²
Car parking spaces	44
UNIT 2 (GIA)	93,530 ft²
Warehouse (incl. office Undercroft)	86,450 ft ²
Office (FF Only)	3,430 ft ²
Office (SF Only)	3,650 ft ²
Car parking spaces	77
UNIT 3 (GIA)	40,150 ft²
Warehouse (incl. office Undercroft)	36,375 ft ²
Office (FF Only)	3,775 ft ²
Car parking spaces	31
UNIT 4 (GIA)	6,100 ft²
Warehouse (incl. office Undercroft)	5,050 ft ²
Office (FF Only)	1,050 ft ²
Car parking spaces	6
UNIT 5 (GIA)	5,170 ft²
Warehouse (incl. office Undercroft)	4,330 ft ²
Office (FF Only)	840 ft ²
Car parking spaces	5
UNIT 6 (GIA)	3,660 ft²
Warehouse (incl. office Undercroft)	3,160 ft ²
Office (FF Only)	500 ft ²
Car parking spaces	3
UNIT 7 (GIA)	4,620 ft²
Warehouse (incl. office Undercroft)	3,900 ft ²
Office (FF Only)	720 ft ²
Car parking spaces	4
UNIT 8 (GIA)	6,290 ft²
Warehouse (incl. office Undercroft)	5,195 ft ²
Office (FF Only)	1,095 ft ²
Car parking spaces	6
UNIT 9 (GIA)	2,875 ft²
Warehouse (incl. office Undercroft)	2,875 ft ²
Car parking spaces	3
UNIT 10 (GIA)	3,915 ft²
Warehouse (incl. office Undercroft)	3,915 ft ²
Car parking spaces	3
UNIT 11 (GIA)	3,925 ft²
Warehouse (incl. office Undercroft)	3,925 ft ²
Car parking spaces	3
UNIT 12 (GIA)	3,925 ft²
Warehouse (incl. office Undercroft)	3,925 ft ²
Car parking spaces	3
UNIT 13 (GIA)	3,915 ft²
Warehouse (incl. office Undercroft)	3,915 ft ²
Car parking spaces	3
UNIT 14 (GIA)	2,875 ft²
Warehouse (incl. office Undercroft)	2,875 ft ²
Car parking spaces	3
TOTAL GIA	251,150 ft²
Total Car Parking	194

07	Number of bicycle spaces rationalized 04.05.22 in line with LPA & BREEM requirements & Landscaping updated	PS	HA
06	Increase to landscaping	03.05.22	HT HA
05	Site layout adjusted to amended levels.	28.03.22	PS MM
04	Amendments to unit cores	12.12.21	HT HA
03	Update U9 to 14	30.11.21	HT HA
02	Unit GA, U1&2 move for trees, U4to8 pavement, Unit 3 pavement	23.11.21	HT HA
01	Update to Unit 2	15.11.21	HT HA
00	Site access updated	15.11.21	HT HA
DR	DR Issue	04.11.21	HT HA
Rev:	Notes:	Date:	Dwn: Iss:



hale
ARCHITECTURE
22c Leathermarket Street, London, SE1 3HP

Project:
Access Park, Gloucester

Drawing Title:
Proposed Site Plan

Project No: 21078	Scale @ A1/A3 1:500 / 1:1000	Revision: 07
Drawing No: 21078-PL1003		



Tom Maltby
C/o Venus Logistics Propco 1 Ltd
22 Grenville Street
St. 2 Helier
JE4 8PX
Jersey

Our Ref: 70102939-L01

14 November 2022

By Email Only

Dear Tom,

Centric Park, Gloucester - Land Quality

It is understood that Venus Logistics Propco 1 Ltd (Venus) have acquired the parcel of land formerly known as Access Park, Eastern Avenue, Gloucester from the Paloma Capital LLP / Trinity partnership (known as Paloma Capital LLP). The site is now known as 'Centric Park' and is located to the west of Eastern Avenue, approximately 2km east of Gloucester city centre (GL4 6SW). The site has been subject to several phases of ground investigation, demolition and remediation by the former client prior to purchase by Venus.

Paloma Capital LLP applied to Gloucester City Council for planning permission to redevelop the site into a commercial-led development with associated car parking, servicing, access roads and soft landscaping. The previous planning application for the redevelopment is referenced 18/01444/FUL and was granted in September 2020. The redevelopment plan submitted as part of the previous planning application is presented in **Annex A**. The following planning condition, related to contaminated land, was imposed on the development:

"Condition 5 - No development, other than that required to be carried out as part of an approved scheme of remediation, shall commence until Parts 1 to 5 have been complied with:

- 1. Additional site investigation must be carried out as detailed in WSP Supplementary Ground Investigation Report and WSP letter response dated 7th February 2019 and any subsequent site investigation works considered necessary following the completion of these works (for delineation purposes for example). Details of these works and the findings should be submitted to and approved in writing by the Local Planning Authority. The investigation and risk assessment scheme must be compiled by competent persons and must be designed in accordance with DEFRA and the Environment Agency's "Model Procedures for the Management of Contaminated Land, CLR11"*
- 2. Following completion of the additional site investigation a detailed remediation scheme to bring the site to a condition suitable for the intended use by removing unacceptable risks to identified receptors must be prepared and submitted to and approved in writing by the Local Planning Authority in advance of undertaking. The remediation scheme must ensure that*

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the site will not qualify as Contaminated Land under Part 2A Environmental Protection Act 1990 in relation to the intended use of the land after remediation.

3. *The approved remediation scheme must be carried out in accordance with its terms prior to the commencement of development, other than that required to carry out remediation, unless otherwise agreed in writing by the Local Planning Authority.*
4. *Following the completion of the measures identified in the approved remediation scheme a validation report that demonstrates the effectiveness of the remediation carried out must be produced, and submitted to and approved in writing by the Local Planning Authority prior to the occupation of any buildings.*
5. *In the event that contamination is found at any time when carrying out the approved development that was not previously identified it must be reported in writing immediately to the Local Planning Authority. An investigation and risk assessment must be undertaken and where necessary a remediation scheme must be prepared, these will be subject to the approval of the Local Planning Authority. Following the completion of any measures identified in the approved remediation scheme a validation report must be prepared, which is subject to the approval in writing of the Local Planning Authority prior to the occupation of any buildings.”*

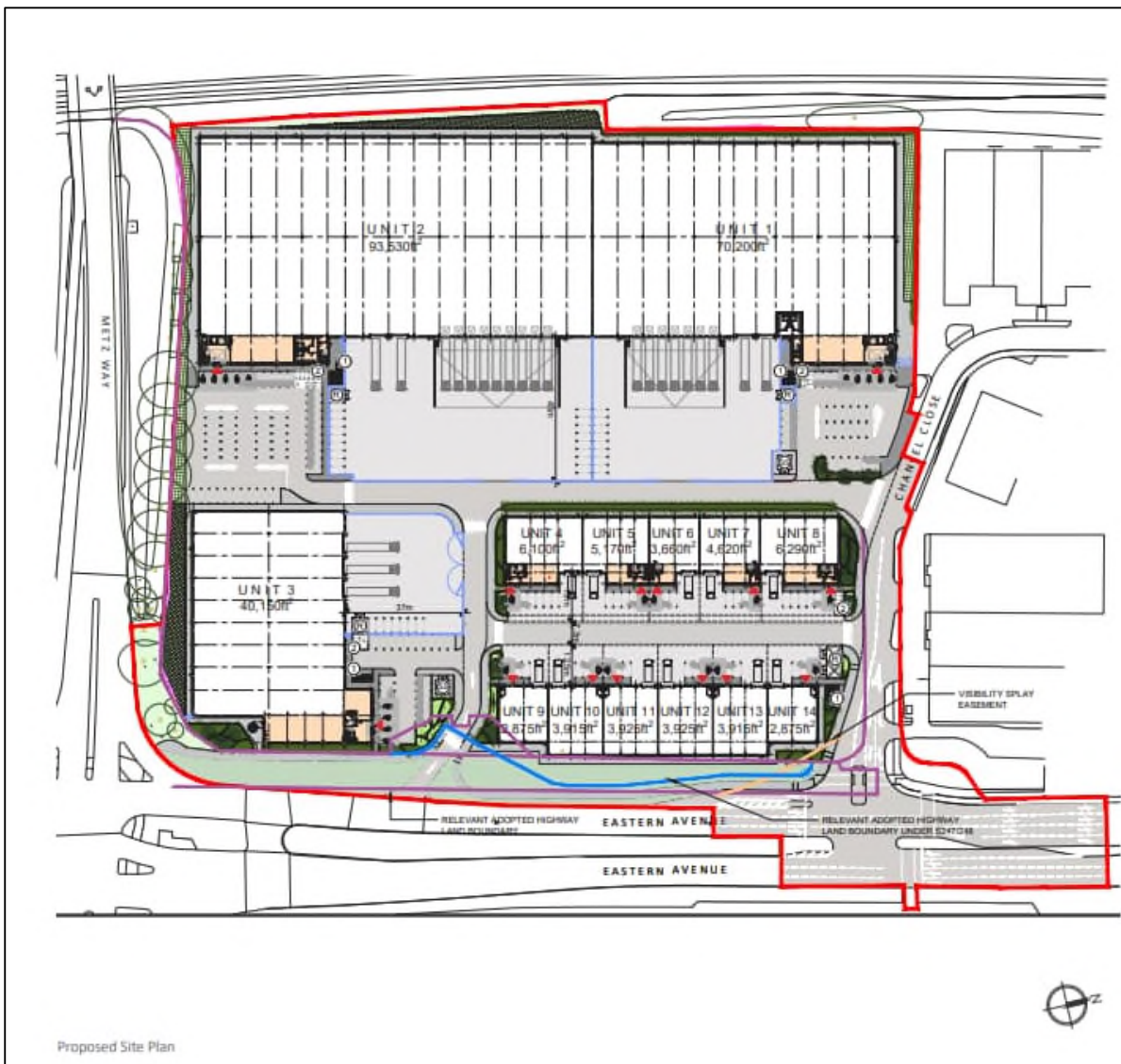
WSP have previously undertaken a number of investigations and assessments at the site to comply with Condition 5 for application 18/01444/FUL. Reports produced by WSP for the site are referenced below:

- WSP UK Limited, ‘*Former Interbrew Site, Gloucester – Geo-environmental Risk Summary*’ for Paloma Capital LLP, dated June 2016 (Ref. 70020138-R01);
- WSP UK Limited, ‘*Former Interbrew Site, Gloucester – Geo-environmental Assessment*’ for Paloma Capital LLP, dated September 2016 (Ref. 70020138-R02);
- WSP UK Limited, ‘*Access Park, Gloucester – Supplementary Ground Investigation*’ for Paloma I (Industrial II) Unit Trust, dated November 2018 (Ref. 70020138-R03);
- WSP UK Limited, ‘*Access Park – Waste Classification and WAC Testing*’ for Paloma I (Industrial II) Unit Trust, dated July 2018 (Ref. 70020138-R04);
- WSP UK Limited, ‘*Access Park, Gloucester – Remediation Strategy*’ for Paloma Capital LLP, dated July 2020 (Ref. 70070440-GRR-R02); and,
- WSP UK Limited, ‘*Access Park, Gloucester – Remediation Verification*’ Report for Paloma Capital LLP, dated October 2021 (Ref. 70070440-R02).

The listed WSP reports were submitted by Paloma Capital LLP to Gloucester City Council to support discharge of Condition 5. Based on a review of the planning portal on 10 November 2022 Condition 5, Parts 1 and 2 were discharged on 08 December 2020 (20/01107/CONDIT). Although no further information on the discharge of parts 3-5 is available on the planning portal it is understood that documentation relating to parts 3 and 5 was submitted and these parts of the condition were subsequently discharged. It is noted that Condition 5, Part 4 discusses the reporting of unexpected contamination during redevelopment and therefore cannot be discharged pre-construction. This is understood to be the only remaining outstanding part to Condition 5 for application 18/01444/FUL.

Following acquisition of the site Venus have submitted a new planning application to Gloucester City Council (22/00014/FUL). Under the new application redevelopment plans have been amended to include different use classes (Class E(g) (iii), B2 & B8); however, the application remains for a commercial-led development in a broadly similar development layout (as shown in **Figure 1**). The new planning application references industrial units with ancillary offices, commercial trade counters, car parking, soft landscaping and highways works. The original planning application development scheme is shown in **Annex A**.

Figure 1 – Proposed development plans for planning application 22/00014/FUL (excerpt from Design and Access Statement dated December 2021)



Planning consent was granted on 17 December 2021. Condition 21, in relation to contaminated land, sets out the implementation of the same protective measures previously conditioned for the site under Condition 5 for 18/01444/FUL, previously discharged.

Although the use classes for the proposed development have been altered from B1, B2, B8, A1, A3, A4, A5 and C1 to E(g) (iii), B2 and B8, from a geo-environmental standpoint the sensitivity of the receptors remain the same and the previous reporting by WSP is considered sufficient to allow



discharge of Condition 21 with no further works required (with the exception of part 4 relating to unexpected contamination). As per part 4 of the condition, we anticipate that unexpected contamination encountered during redevelopment will be assessed, dealt with and subsequently verified in line with the Remediation Strategy previously submitted.

We trust this meets your needs, should you have any further queries, please get in touch.

Yours faithfully



Annex A – Development plans associated with planning application 18/01444/FUL



Annex A – Development plans associated with planning application 18/01444/FUL



Adopted Highway (within ownership)

Development Boundary



For Full Landscaping details. Please refer to Landscape Architects Drawings:

METZ WAY

Metz Way



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- | REV | DATE | DESCRIPTION |
|-----|----------|--|
| A | 05/03/18 | Rear canopy deck amended and access gates to yard amended |
| B | 17/03/18 | Rear Units amended to suit FF elements of new Social Infrastructure provided. Landscaping details added. Large unit split in 3 |
| C | 06/03/18 | Yard to large unit. Gates amended and amended and made adjacent to suit forty seven party. Section 61 of local regulations to suit comments and final site plan. |
| D | 02/03/18 | Units and fence line along Range to rear of units to suit street added. Additional Landscaping indicated. |
| E | 05/11/18 | Updated for Planning |

Roberts Limbrick ARCHITECTS

project
ACCESS PARK
EASTERN AVENUE
GLOUCESTER

client
PALOMA CAPITAL

drawing
Site Layout

status
PLANNING

ROBERTS LIMBRICK LTD
The Carriage Building, Buxton Way,
Gloucester, GL1 1DG
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Newport, NP23 4PG
T. 0333 465 500
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scale 1:500 @ A1
date 02/03/18 author RDD
project 8437 PL01 rev. E



Paloma I (Industrial II) Unit Trust

SUPPLEMENTARY GROUND INVESTIGATION

Access Park, Gloucester





Paloma I (Industrial II) Unit Trust

SUPPLEMENTARY GROUND INVESTIGATION

Access Park, Gloucester

TYPE OF DOCUMENT (VERSION) CONFIDENTIAL

PROJECT NO. 70020138

OUR REF. NO. 70020138-R03

DATE: APRIL 2018

WSP
1 Queens Drive
Birmingham, West Midlands
B5 4PJ



WSP.com



QUALITY CONTROL

Issue/revision	First issue	Revision 1
Remarks	FINAL	
Date	April 2018	
Prepared by	[REDACTED]	
Signature		
Checked by	[REDACTED]	
Signature		
Authorised by	[REDACTED]	
Signature		
Project number	70020138	
Report number	R03	



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APPENDICES

Appendix A – Drawings

Appendix B – Photos

Appendix C – Desk Study Records

Appendix D – Exploratory Hole Records

Appendix E – Data Tables

Appendix F – Ground Gas and Groundwater Monitoring Results

Appendix G – Chemical Data and Screening Sheets

Appendix H – Geotechnical Laboratory Data

Appendix I – Geotechnical Data Plots



EXECUTIVE SUMMARY

Introduction	Paloma I (Industrial II) Unit Trust instructed WSP to undertake a supplementary ground investigation and prepare an updated Geo-environmental Assessment for the Access Park, Gloucester (former Interbrew site). The purpose of the report is to provide an interpretative assessment to inform the discharge of planning conditions and aid in development design.
Site Description and History	The site is a former kegged drinks distribution facility. Potential contamination sources from the former land use include diesel above ground storage tank (AST), an electrical substation, fork lift maintenance area and an engine oil store. The historical uses of the site included agricultural fields, former railway land, a Royal Air Force facility, unlabelled tanks, a suspected former caustic soda store and a backfilled pond.
Ground and Groundwater Conditions	<p>Ground conditions encountered during the investigation comprised hardstanding (concrete and asphalt), overlying limestone gravel sub-base, and localised cohesive Made Ground. Underlying natural strata comprised the Blue Lias Formation and Charmouth Mudstone Formation (BLCMF), which was encountered as a stiff clay. Groundwater strikes were recorded in Made Ground at three locations, Alluvium at two locations and at three locations in the underlying BLCMF.</p> <p>Visual and olfactory evidence of contamination (hydrocarbon odours and staining in Made Ground) was recorded in WS10 only (2016), located adjacent to the diesel AST.</p>
Environmental Risk Assessment	<p>Concentrations of contamination in soil were not recorded above the applied human health assessment criteria for a commercial land use. Asbestos containing materials were recorded in Made Ground in WS103. This will require management during construction, but risks to human health will be mitigated by the presence of hardstanding post-development.</p> <p>An elevated concentration of petroleum hydrocarbons (TPH) was recorded in perched groundwater from adjacent to the diesel storage tank in 2016. During the 2018 ground investigation, no elevated concentrations of TPH were recorded, but vigilance should be maintained during construction for the presence of residual contamination.</p>
Preliminary Geotechnical Constraints	<p>Spread or strip foundations onto BLCMF are expected to be suitable to support lightly loaded, low rise structures. For heavier structures, piled foundations into the unweathered BLCMF are expected to be suitable. Made Ground and Alluvium are not suitable founding strata without reengineering or pre-treatment.</p> <p>Relic foundations from historically demolished structures may be present and will require removal. Depending on the requirements for the development, Made Ground underlying foundations or pavement construction will need to be excavated and re-compacted to a suitable engineering specification, treated in-situ, or removed and replaced with engineered fill.</p>
Conclusions and Recommendations	<p>Management of asbestos in Made Ground will be required during construction via safe systems of work, but the risk to human health will be low post-development.</p> <p>Based on observations during the 2016 investigation, there is potential for residual contamination to be present around the former diesel AST. Any observations of contamination during construction should be reported for further assessment.</p> <p>Areas of the site were inaccessible during the ground investigation (electrical substation and caustic soda store), and limited shallow soils validation will be required following demolition.</p>

Please note: This summary forms part of WSP's Geo-environmental Assessment (ref.: 70020138-R03). Under no circumstances is it to be used as an independent document.

George Baggott

Contact details 0121 352 4725 | george.baggott@wsp.com

1 INTRODUCTION

1.1 AUTHORISATION

Chase Commercial on behalf of Paloma I (Industrial II) Unit Trust instructed WSP UK Limited (WSP) to undertake a Supplementary Geo-environmental Assessment (as per proposal reference 70020138-P02, dated November 2017). The works have been requested to support the planning process and updated preliminary design information for the proposed commercial redevelopment of Access Park, Gloucester (the site).

1.2 BACKGROUND AND PROPOSED REDEVELOPMENT

The site is located to the west of Eastern Avenue, approximately 2km to the east of Gloucester city centre. The site is currently vacant and comprises warehouse and office buildings with large areas of external hard standing. The site was formerly used by DHL Tradetteam as a drinks distribution facility, who vacated the site in late 2016.

WSP have previously prepared a Geo-Environmental Risk Summary (reference 70020138-R01, dated June 2016) and a Geo-Environmental Assessment (Former Interbrew Site, reference 70020138-R02, dated September 2016) for the site. This report supersedes the works presented previously.

At the time of reporting, the most recent development masterplan was shown on Roberts Limrick Architects Drawing No. 8437-SK11A included within **Appendix A**. The masterplan shows that the following proposed land uses:

- A DIY store in the central and eastern portion of the site with a rectangular warehouse, car parking, a bagged goods area, a garden centre and deliveries yard;
- A lodge (hotel) with attached pub and a drive through fast food restaurant in the south of the site; and,
- The western and northern portions of the proposed development comprise a series of six warehouse units (ranging in size from approximately 10,000sqft to 29,500sqft) with delivery yards and car parking.

1.3 SCOPE OF WORKS

This Supplementary Geo-environmental Assessment comprises the following scope of works:

- A review of the desk study information and previous WSP reports prepared for the site;
- A preliminary conceptual site model considering pollutant pathways and linkages;
- Factual description of the ground investigation works, ground conditions and chemical testing results;
- A revised Generic Quantitative Risk Assessment to identify potential risks to human health or controlled waters from soil or groundwater contamination, in line with the requirements of CLR 11 and the National Planning Policy Framework;
- A revised ground gas risk assessment;
- Revised conceptual site model based on the findings of the risk assessments;
- Revised preliminary geotechnical advice on potential foundation solutions and preliminary pavement design; and
- Recommendations/scope for further work or mitigation, if required.

1.4 CONFIDENTIALITY AND LIMITATIONS

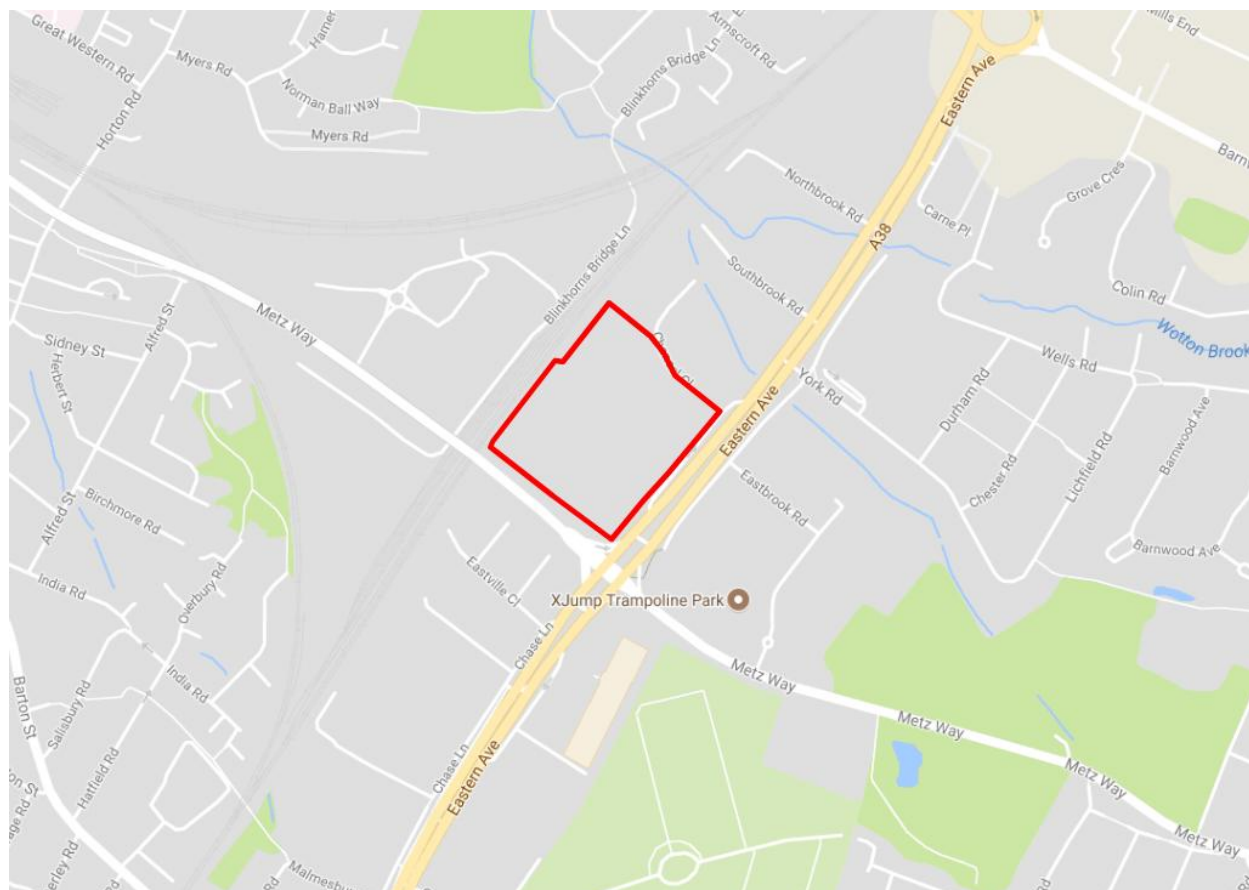
This assessment has been prepared for the sole use and reliance of Paloma I (Industrial II) Unit Trust under the terms agreed within the Appointment. No responsibility will be accepted where this report is used, either in its entirety or in part, by any other party without a formal agreement on reliance.

2 SITE INFORMATION

2.1 SITE LOCATION AND DETAILS

The location of the site is shown in **Figure 1**, below:

Figure 1 – Site Location Plan



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

Details of the site location and a site description are presented in **Table 2.1**, based on site reconnaissance completed by a WSP consultant prior to the ground investigation in February 2018. The observed site features discussed below are shown on **Drawing 70020138-001** within **Appendix A**. A selection of site photographs is included in **Appendix B**.

Table 2.1 - Site Location and Description

ITEM	DESCRIPTION / DETAIL
Site Location	Former Interbrew Site, Eastern Avenue, Gloucester, GL4 6SW
Grid Reference	384911, 217892
Approximate Area	4.49 Hectares
Site Description	The site is currently vacant and comprises a large warehouse / two-storey office building across the majority of the northern part of the site, with a large expanse of external concrete hardstanding and an area of bituminous hardstanding to the east of the offices (Photo 1), which previously served as staff/visitor parking.

ITEM	DESCRIPTION / DETAIL
	<p>Former bike sheds and a single story structure (the previous forklift maintenance shed) are located in the southern corner of the site (Photo 2). A former vehicle washing area was located in along the western boundary of the site. An Aco drain surrounded the vehicle wash area which collected vehicle wash drainage. A surface water drainage interceptor was noted nearby in the former lorry parking area, but it could not be confirmed from the visual inspection if drainage from the vehicle wash passed through the interceptor.</p> <p>A concrete pad marks the former location of an above ground diesel storage tank (Photo 3), and is located to the north of the vehicle washdown area. A storage shed labelled 'Paint Store' is present at the south-eastern end of the concrete pad, and contains numerous oil and paint tins.</p> <p>A number of archaeological trenches had been excavated and backfilled within the southern part of the site (Photo 4), as a result several large mounds of reinforced concrete, and exposed rebar were located in this region.</p>
Topography	The site is split over two elevations, divided roughly in half aligned southeast to northwest. The southern part of this divide lies at 24.63m AOD, whilst the elevation of the northern area is lower at 21.96m AOD.
Asbestos Containing Materials (ACM)	<p>An Asbestos Management Plan was reviewed during the site walkover in 2016. The roof of the forklift maintenance building comprised asbestos containing materials (asbestos bonded cement sheeting). Other areas with asbestos containing materials were present within the main warehouse and office areas; however, the extent of the asbestos was not assessed during the walkover, or as part of this report.</p> <p>Whilst an Asbestos Management Plan was reviewed during the walkover undertaken as part of the previous phase of ground investigation, a Demolition / Refurbishment Survey will be required prior to the commencement of demolition works.</p>
Site Setting and Surrounding Area	<p>Commercial properties are located to the north/ northeast and southeast of the site, including a number of motor industries and Homebase.</p> <p>A branch of the Great Western Union Railway is present to the northwest of the site, with Morrison's supermarket and fuel station beyond.</p> <p>Metz Avenue bound the site to the southwest, with further commercial industries beyond.</p>

2.2 HISTORICAL LAND USE

A study of Ordnance Survey maps provided within the Landmark Envirocheck report (ref. 88327116_1_1 dated June 2016) has been undertaken to assess the former land uses, both on-site and in the surrounding area. A selection of historical maps is included in **Appendix C**.

In addition, a Pre-Desk Study Assessment by Zetica Limited (an unexploded ordnance specialist) has been obtained and is included in **Appendix C**.

Table 2.2 – Site History

Date	Onsite
1884	The site is shown predominantly as an agricultural field with an access track crossing the site from east to west. A disused railway is partially present at the north western boundary, although the land is likely to comprise open ground (as indicated on the 1946 aerial photograph), with no apparent infrastructure present within the site boundary.
1902	The railway is shown to have been re-activated, but is located off-site to the northwest.

Date	Onsite
1946	Historical aerial photography shows that the site is occupied by a warehouse building (covering approximately 30% of the site area) located in the east of the site, and approximately 20 other smaller buildings spread throughout the south, centre and north of the site. A pond is also shown in the north of the site area adjacent to the northwest of the main building.
1955	The site structures are labelled as 'government buildings' that are part of a wider facility.
1985	The pond is no longer shown and has been replaced with an extension to the main warehouse. Two tanks are also shown to the northwest of the depot extension. Some of the government buildings in the central, northern and southern areas of the site are demolished and are open un-labelled areas (assumed to be yard areas).
1994-2000	The warehouse has extended in the northwest of the site, the tanks to the northwest of the warehouse are no longer shown and one of the larger government buildings in the centre of the site appears demolished.
2006	Two of the three remaining government buildings are shown to be demolished in the south.
2016	<p>During the course of the 2016 WSP investigations the centre and west of the site comprised a lorry loading / unloading area (for empty kegs), keg storage areas, a refuelling point (with tank) and lorry parking along the southwestern and north western boundaries. To the northeast of the lorry unloading area, a goods inwards yard was present with lorry parking bays to receive full kegs. A staff car park was present in the south of the site.</p> <p>The north and east of the site were predominantly occupied by two warehouse buildings, with keg storage in the northern warehouse, and palletised drinks (such as bottled products) in the eastern warehouse. Visitor car parking was present along the south eastern boundary of the site and a small storage yard was present along the north eastern boundary.</p> <p>A building situated in the south of the site, in the staff car park, was being used as a forklift maintenance area.</p>

A summary of pertinent potentially contaminative land uses within 250m of the site is presented in **Table 2.3**. Dates referenced are those provided in the Envirocheck Report maps on which the features appear.

Table 2.3 – Pertinent Historical Surrounding Land Use within 250m

Surrounding Feature	Map Dates	Direction	Distance from Site
'Government Buildings' Then Commercial / Industrial Estate	1947 – 1990 1990 – Present	Southwest	Adjacent
'Government Buildings' Then Commercial / Industrial Estate	1947 – 1990 1990 – Present	Northeast	Adjacent
'Government Buildings' Then Commercial / Industrial Estate	1947 – 1990 1990 – Present	Southeast	50m
Railway Lines	1884 – Present	North	100m
Industrial Estate	1975 – Present	Northeast	150 to 250m

Surrounding Feature	Map Dates	Direction	Distance from Site
Railway Lines	1884 – Present	West	200m
Train parking area Then Morrison's Superstore	1903 – 2016 2016 – Present	Northwest	200m
'Government Buildings' Then Commercial Estate	1947 – 1975 1975 – Present	East	200 to 250m
Commercial Estate	1975 – Present	Southeast	200 to 250m
Locomotive Shed Then Depot	1903 – 1975 1975 – Present	Northwest	230m
Cemetery	1947 – Present	South	250m
Ambulance Station Then Commercial / Industrial Estate	1975 – 2006 2006 – Present	Southwest	250m
Wagon Works Then Engineering Works Then Avon Foundry Then Emlyn Works Then Trading Estate Then Residential Housing	1884 – 1903 1903 – 1924 1924 – 1955 1955 – 1990 1990 – 2000 2000 – Present	West	250m

2.3 UNEXPLODED ORDNANCE

A UXO Desk Study and Risk Assessment Report (Referenced P7336-17-R1, dated 29 November 2017) has been obtained for the site. The report states during World War II, the site was part of Royal Air Force (RAF) Barnwood, comprising permanent office buildings, shown to be present on site in 1947 and through to 1961. All operations ceased on the site in 1978. The site formed part of RAF Barnwood that was an administrative centre, tasked with collating, organising and archiving records. A large building was present on site, identified as a printing workshop and equipment store for His Majesty's Stationery Office.

The report states no records of bombing, military activity, or other UXO hazards have been identified for the site. No bomb damage was identified on site from historical photographs. As such the report considered the site to have a low UXO hazard level, as there is no positive evidence of UXO present on site, but their occurrence cannot be totally discounted.

3 REGULATORY INFORMATION AND CONSULTATION

3.1 REGULATORY DATABASE

A review of environmental data obtained from information databases in the Landmark Envirocheck Report (88327116_1_1) dated June 2016 was undertaken, and the results are presented in **Table 3.1** below.

Table 3.1 – Regulatory Database Summary

	0 – 249m	250 – 500m	Details
Integrated Pollution Controls / Pollution Prevention and Controls	1	0	Poeton (Gloucester) Limited hold an integrated pollution control (dated 2013) for surface treating of metals and plastics at a site location approximately 140m northeast.
Local Authority Pollution Prevention and Control (LAPPC)	2	5	The nearby Morrison's Superstore (located approximately 190m northwest of the site) holds two LAPPs for dry cleaning processes and the sale / storage of petroleum products. Five further LAPPs are located between approximately 270m and 465m southwest, west and northwest of the site for a range of processes including aggregate storage, vehicle repairs and a crematorium.
Pollution Incidents to Controlled Waters	12	5	A total of 12 pollution incidents are recorded between approximately 95m and 170m, east and northeast of the site. These incidents are classified as Category 3 – Minor, and dates range from 1995 to 1997. Incidents include storm sewage overflow, organic wastes, inert solids and oils. Pollution incidents further afield located between approximately 250m and 475m from the site relate primarily to sewage company overflows, inert solids from construction sites and litter. These are classified as Category 3 – Minor incidents.
Prosecutions relating to Authorised Processes	0	2	Two prosecutions for a site designated as 'Chase Lane' were recorded approximately 405m southwest of the site for treating a controlled waste without a license. Prosecutions are dated 2006 and 2007.
Substantiated Pollution Incident Register	4	1	Four incidents are located between approximately 205m and 235m north of the site, these are designated as air impact incidents and are not likely to affect the subject site. One incident is located approximately 380m southwest and involved vehicles and vehicle parts in 2006, and was classified as a Category 3 – Minor incident for soil impact.
Historical Landfill Sites	0	1	One historical landfill record is located approximately 290m southeast of the site. No further details are available within the Envirocheck Report.
Licensed Waste Management	0	7	Seven waste management sites are located between approximately 270m and 415m southwest and northwest of

	0 – 249m	250 – 500m	Details
Facilities			the site and relate to metal recycling, end of life vehicles, waste transfer stations and treatment facilities.
Potentially Infilled Land	0	4	Four areas of potentially infilled land are recorded between approximately 440m and 475m southwest of the site, infill dates range between 1938 and 1955. The purposes of these and the material excavated / deposited is unknown.
Registered Waste Transfer Sites	0	2	Two sites are located approximately 280m (northeast) and 350m (southwest) and relate to end of life vehicle recycling and transfer of waste.
Registered Waste Treatment or Disposal Sites	0	3	Three sites are located between approximately 310m and 410m southwest and northwest of the site, and relate to end of life vehicle recycling and aggregate processing.
Fuel Station Entries	1	0	An active fuel station is located approximately 190m northwest of the site at the nearby Morrison's superstore.

Other listed entries within the Envirocheck Report (related to contaminated land) are not identified or are listed as Revoked / Ceased / Obsolete and are therefore not considered to be relevant to the findings of this study.

The majority of items identified in the table above are located at a reasonable distance from the site, or the time elapsed since the incident or item occurred indicate that the majority have a low potential risk to the site. Items which may be of significance and will be considered further within this assessment include:

- Fuel station entry located 190m northwest;
- Use of dry cleaning chemicals 190m northwest; and,
- Various registered waste transfer, treatment and disposal facilities within 500m of the site.

3.2 CONSULTEES

3.2.1 LOCAL AUTHORITY CONTAMINATED LAND OFFICER

The Contaminated Land Officer (CLO) at Gloucester City Council were contacted as part of the 2016 ground investigation to determine whether the site is within the Council's contaminated land inspection strategy and whether the Council holds any pertinent information relevant to the site.

The CLO responded on 13 July 2016 and stated the following:

- *"The site and surrounding areas are not classified as Contaminated Land under Part 2A of the Environmental Protection Act 1990;*
- *The subject site has been identified as a site of potential concern under the Council's Contaminated Land Inspection Strategy due to historical use as 'MOD Offices' (Government Buildings) reference PCL_471. The site has been allocated a Low priority;*
- *There is no record of landfill or mineral extraction on or in the near vicinity of the subject site;*
- *No records of pollution incidents have been identified on, or in the vicinity of the site; and,*
- *No information has been identified relating to environmentally sensitive areas in the near vicinity of the site."*

Whilst the comments made by the CLO above were from the 2016 ground investigation phase, it is considered unlikely that their position on the site as changed since.

3.2.2 ENVIRONMENT AGENCY FLOODING DATA

The Environment Agency website indicates the majority of the site is located within Flood Zone 1, where the chance of flooding is defined as 1 in a 1000 (or <0.1%) in a given year.

The north eastern area of the site (between the warehouse building and the site boundary fence) is partially located within Flood Zones 2 and 3, where the chance of flooding is defined as between 1 in 100 and 1 in 1,000 (0.5% - 0.1%) and more than 1 in 100 (>1%) in any given year. This is likely to be associated with the nearby unnamed drain and Wotton Brook, as well as lower lying land to the northeast of the site.

The Environment Agency surface water flood maps indicate that the peripheries of the main warehouse building (particularly the current goods inwards area) have a 'Low' to 'High' chance of surface water flooding. The remainder of the site is not indicated by the Environment Agency to be at risk of surface water flooding. It should be noted that this review and summary of existing information does not constitute a formal flood risk assessment.

3.2.3 PUBLIC HEALTH ENGLAND – RADON

According to the Public Health England website (accessed 09 April 2018), the site is located within an area where less than 1% of homes are above the Action Level for Radon. Therefore, radon protection measures are considered unlikely to be required for the proposed development.

3.2.4 COAL AUTHORITY

The Coal Authority website was accessed on 09 April 2018 and the site is not located within a Coal Authority designated mining area; as such, risks to the site from coal mining are considered to be low.

4 ENVIRONMENTAL SETTING

4.1 HYDROLOGY

A summary of surface water features within 500m of the site is presented in **Table 4.1**.

Table 4.1 – Summary of Hydrological Features within 500m

Surface Water Feature	Ecological Quality*	Chemical Quality*	Distance	Direction
Un-named drainage ditch	N/A	N/A	90m	Northeast
Wotton Brook	Moderate	Good	160m	Northeast

* - Chemical and ecological water quality according to the Environment Agency Catchment Data Explorer; N/A = Not Assessed

The Wotton Brook to the northeast of the site flows towards the northwest (varying between culverted sections and open channel), joining the River Severn at a confluence approximately 3.5km northwest of the site.

The un-named drainage ditch located 90m northeast also alternates between culverted and open channel sections, and flows northwest. The drainage ditch joins the Wotton Brook approximately 160m northeast of the site. As the un-named drainage ditch has a connection to the Wotton Brook within close proximity to the site, it is likely that a direct potential linkage for potential contaminants entering the ditch to the Wotton Brook is present.

No recorded surface water abstractions or likely discharge consents are present within 500m of the site.

4.2 GEOLOGY AND HYDROGEOLOGY

British Geological Survey (BGS) map Sheet 234, Gloucester, 1:50,000, Solid & Drift edition (1975), and online BGS published geological data (www.bgs.ac.uk) shows the geological sequence (presented in **Table 4.2**) to underlie the site and immediate surrounds.

Table 4.2 – Summary of Anticipated Geological Strata

Group	Unit and description	Aquifer Status
Superficial Deposits	Alluvium <i>'Normally soft to firm consolidated, compressible silty clay, but can contain layers of silt, sand, peat and basal gravel. A stronger, desiccated surface zone may be present.'</i>	Secondary (A) Aquifer
Bedrock	Blue Lias Formation and Charmouth Mudstone Formation (Undifferentiated) <i>'Dark grey laminated shales, and dark, pale and bluish grey mudstones; locally concretionary and tabular limestone beds; abundant argillaceous limestone, phosphatic or ironstone (sideritic mudstone) nodules in some areas'</i>	Secondary (Undifferentiated) Aquifer

Alluvium is not indicated to be present on-site, but is mapped as present to the northeast of the site along the line of the Wotton Brook. The brook is fed by a number of smaller un-named drainage ditches (such as the one 90m northeast), it is considered likely that deposits of Alluvium are present further afield than the mapping suggests, and may therefore be present beneath the site.

A cluster of five BGS historical borehole logs are located approximately 160m northeast of the site (designated SO81NE8/A to SO81NE8/E, as presented in **Appendix C**). The boreholes indicate a generalised sequence comprising topsoil, overlying yellowish brown clay, which in turn overlies stiff to hard dark grey clay. These

descriptions appear to correspond to Alluvium and the Blue Lias and Charmouth Mudstone Formation respectively.

One groundwater abstraction is recorded within 1km of the site. The abstraction is for cooking sanitary and washing and is located approximately 490m to west of the site. Based on BGS geological mapping, the abstraction is likely to be from the Cheltenham Sand and Gravel which is not mapped in the vicinity of the site. Based on this and the flow direction of local surface water features, it is considered likely that this abstraction is located up-hydraulic gradient of the site.

The site is not within a groundwater Source Protection Zone (SPZ).

4.3 ECOLOGY

The Multi-Agency Geographical Information for the Countryside (MAGIC) website was accessed on 09 April 2018 to determine potential ecological constraints for the site.

No statutory or non-statutory ecological designations were identified within 500m of the site.

5 PRELIMINARY CONCEPTUAL SITE MODEL

Table 5.1 – Relevant Sources and Receptors

	Sources	Potential Contaminants of concern	Receptors	Pathways
On site	Made Ground	Metals, PAH, TPH, asbestos Ground gas	Human Health – current and future site users, construction and maintenance workers. Adjacent site users.	Direct contact with shallow soils, dust and groundwater; ingestion and inhalation of soil bound contaminated dust and fibres; and inhalation of ground gas or volatile vapours. Leaching of contamination into groundwater from soil followed by the lateral migration of contamination in permeable strata (Made Ground and Alluvium) off-site towards surface water features. Vertical migration of contamination in groundwater from the superficial deposits into underlying Alluvium and Blue Lias and Charmouth Mudstone Formation aquifers. Ingestion and gas accumulation via cracked slab or service entry point and explosion, and permeation of contamination into water pipelines. Migration of contamination via groundwater or migration of ground gas onto adjacent sites via permeable Made Ground or within the underlying Alluvium.
	Alluvium	Ground gas		
	Former areas of bulk fuel and chemical storage	TPH, PAH, SVOCs and VOCs	Controlled Waters - underlying aquifers within the Alluvium (Secondary A Aquifer) and Blue Lias and Charmouth Mudstone (Secondary Undifferentiated Aquifer). Buildings and infrastructure – existing buildings, infrastructure such as plastic drainage pipes and below ground concrete.	
	Electrical Substation	TPH and PCBs		
	Former infilled pond and areas of potential backfilling following demolition of previous structures on site	Ground Gas Metals , PAH, TPH and asbestos		
Offsite	Potential contamination from offsite neighbouring industries (current and historical) including former RAF facilities	Metals, TPH, PAH, SVOCs and VOC	Third Party Land – Adjacent commercial properties.	

6 GROUND INVESTIGATION

6.1 INVESTIGATION RATIONALE

The ground investigation was designed to target environmental areas of concern associated with the potential pollutant linkages considered in **Section 5**, and provide general coverage for ground conditions characterisation purposes in the remainder of the site. Additionally, investigation across areas of the site previously inaccessible when the site was operational was completed. A summary of the techniques and the investigation rationale used is presented below in **Table 6.1**.

Table 6.1 – Summary of Fieldworks and Rationale

Method	Number	Depth (m bgl)	Rationale
Cable Percussion Borehole	5 (2016)	6.40 to 7.40	General site coverage, characterisation of deeper ground conditions and assessment of groundwater in the underlying Blue Lias and Charmouth Mudstone Formation.
	4 (2018)	8.45	Also in-situ standard penetrations tests, collection of bulk and un-disturbed samples and the installation of deeper ground gas and groundwater monitoring wells.
Windowless Sampler Borehole	12 (2016)	0.46 to 4.60	General site coverage, specific assessment of ground conditions around existing diesel tank, to target former RAF buildings and the pond, allow the collection of environmental samples and the installation of shallow groundwater and ground gas monitoring wells.
	10 (2018)	5.45	
Trial Pitting	6 (2018)	2.20	Establish the presence or otherwise of relic foundations from the former RAF buildings and assess potential contamination within the Made Ground.
Hand Pit	2 (2018)	1.20	Allow collection of environmental samples around the decommissioned diesel tank.
Plate Test Trial Pits	5 (2018)	1.00	Trial pits were excavated to perform plate testing to provide California Bearing Ratio values to inform pavement design.

An exploratory hole plan is presented as **Drawing 70020138-002** in **Appendix B** and the exploratory hole logs from all phases of investigation are presented in **Appendix D**.

Constraints encountered on the site during the course of this investigation included:

- Locations WS106, WS107 and HP101 were terminated on shallow ground obstructions.
- Access to the external areas to the north of the site (in the area of the former caustic soda store and electrical substation) were limited by the presence of a publically accessible area informally used for car parking.
- Locations WS02 and WS11 were terminated on shallow obstructions at 0.50m bgl and 0.8m bgl respectively, as the obstructions could not be discounted as potential utilities.

6.2 GROUND GAS AND GROUNDWATER MONITORING

Details of ground and groundwater conditions, in-situ testing and well installation details are included in the exploratory hole records presented in **Appendix D**. A summary of the monitoring wells installed in selected boreholes is presented in **Table E.1** within **Appendix E**. Ground gas and groundwater monitoring was undertaken on four occasions between 14 June and 13 July 2016 and two occasions between 21 February and 13 March 2018.

During monitoring visits, groundwater elevation and the potential presence of Light Non-Aqueous Phase Liquid (LNAPL) / Dense Non-Aqueous Phase Liquid (DNAPL) were monitored using an electrical interface meter. Groundwater samples were obtained using low flow techniques with a peristaltic pump and multi-parameter monitoring meter. Ground gas monitoring results are included in **Appendix F**.

6.3 LABORATORY ANALYSIS

The chemical and geotechnical laboratory analysis undertaken as part of both phases of ground investigation (2016 and 2018) are summarised in **Tables 6.2 and 6.3** below:

Table 6.2 – Summary of Chemical Laboratory Analysis

Analyte	Number of Tests					
	Soil		Leachate		Groundwater	
	2016	2018	2016	2018	2016	2018
Metals Suite	17	14	9	4	6	3
Total Cyanide	20	14	5	4	6	3
pH	22	14	-	-	6	3
Sulphate	11	4	-	-		3
Polycyclic Hydrocarbon Suite (PAH)	26	16	-	-	6	4
Speciated Total Petroleum Hydrocarbon (TPHCWG) Suite	26	19	-	-	6	4
Hexavalent Chromium	20	14	-	-	6	3
Chloride	-	4	-	-	-	-
Volatile Organic Compound Suite (VOC)	14	2	-	-	6	-
Semi Volatile Organic Compound Suite (SVOC)	15	2	-	-	6	-
Asbestos Screen	17	15	-	-	-	-

Table 6.3 – Summary of Geotechnical Laboratory Analysis

Analyte	Number of Tests	
	2016	2018
Moisture Content	8	13
California Bearing Ratio (CBR)	-	2
One Dimensional Consolidation	2	2
Compaction	-	3
Plasticity (Atterberg Limit*)	8	13
Particle Size Distribution (PSD)	6	8

Analyte	Number of Tests	
	2016	2018
Sedimentation	4	8
Triaxial Effective Stress (Multi-stage)	1	3

7 GROUND MODEL

7.1 GROUND CONDITIONS

A summary of the strata encountered is presented in **Table 7.1** below.

Representative cross sections are included as **Drawings 70010138-003, 70020138-004** and **70020138-005**.

Table 7.1 - Summary of Strata Encountered

Stratum Name	Typical Description	Depth to Base (m bgl)	Elevation of Base of Stratum (m AOD)	Thickness (m)	Distribution
Concrete/ Asphalt	Concrete/ Asphalt	0.10 to 0.53	24.39 to 21.66	0.11 to 0.60	Site Wide
Granular Sub Base	Light pinkish grey fine and medium angular GRAVEL of limestone.	0.23 to 2.00*	24.19 to 20.61 *20.37	0.11 to 1.12 1.90*	Greater thicknesses of sub-base were encountered in locations WS06 (1.0m), WS10 (1.12m), BH05 (0.6m), BH102 (1.1m), WS108 (0.68m) and WS109 (0.87m). Sub-base was absent in WS04 where concrete was directly underlain by cohesive Made Ground.
Made Ground	Soft dark brown slightly sandy slightly gravelly CLAY. Gravel is fine angular to sub-rounded of quartz and limestone fragments. Occasional re-bar and steel cable fragments encountered. Brownish yellow slightly gravelly slightly sandy CLAY. Gravel is fine to coarse sub-angular of sandstone and brick. Orangish brown slightly clayey slightly gravelly fine to coarse SAND. Gravel is fine and medium angular of brick, concrete and sandstone.	0.20 to 2.11	23.49 to 20.38	0.20 to 1.55	Made Ground was encountered across the site; most typically with Granular Made Ground overlying Cohesive Made Ground. A plot showing thickness of Made Ground is included as Drawing 70020138-006 .
Alluvium	Soft to firm yellowish brown slightly sandy slightly	1.20 to 3.40	23.04 to 19.84	0.45 to	Alluvium was encountered in BH01-05

Stratum Name	Typical Description	Depth to Base (m bgl)	Elevation of Base of Stratum (m AOD)	Thickness (m)	Distribution
	gravelly CLAY. Gravel is fine of flint, sandstone and mudstone with occasional coal.			2.50	BH103, TP204, WS07, WS12 and WS103. Predominantly in the southern portion of the site.
Blue Lias and Charmouth Mudstone Formation*	Stiff bluish grey slightly sandy, slightly gravelly silty CLAY. Gravel of fine angular mudstone. Sand is fine to medium.	Not proven (8.38)	Not proven (14.01)	Not fully penetrated (7.08)	Blue Lias and Charmouth Mudstone Formation was encountered in all exploratory holes, with the exception of WS106, WS107 and HP101 and HP102 which terminated in Made Ground. A plot showing the depth to top of Blue Lias and Charmouth Mudstone Formation is included as Drawing 70020138-007 .

Brackets indicate maximum unproven depth and thickness

7.2 GROUNDWATER CONDITIONS

7.2.1 GROUNDWATER STRIKES

Groundwater strikes encountered during the course of this investigation are presented in **Table E.2** in **Appendix E**.

In summary, groundwater strikes were encountered at two locations (BH01 and WS12) in the southwest and northwest of the site within Alluvium at 0.70 and 1.30m bgl (23.34 and 23.69m AOD) and at three locations (WS07, WS10 and WS106) in granular Made Ground between 0.50 and 1.70m bgl (20.78 and 24.07m AOD). Groundwater strikes encountered in Made Ground are likely to represent perched and discontinuous groundwater.

Three groundwater strikes were encountered in the underlying Blue Lias and Charmouth Mudstone Formation in BH03, WS101 and WS109 at depths of 2.30m bgl and 3.00m bgl (19.80m AOD and 22.10m AOD).

7.2.2 MONITORED GROUNDWATER ELEVATIONS AND FLOW DIRECTION

A summary of groundwater elevations recorded during both the 2016 and 2018 groundwater and ground gas monitoring periods are presented in **Table E.3** in **Appendix E**. A representative groundwater elevation plot is included as **Drawing 70020138-008**.

Monitored groundwater elevations within monitoring wells installed in Made Ground were between 0.4 and 1.55m bgl (20.94m and 24.00m AOD). Groundwater was recorded within monitoring wells installed in Alluvium between 0.96m bgl and 5.78m bgl (21.90m AOD and 22.30m AOD). Monitored groundwater elevations within the Blue Lias and Charmouth Mudstone Formation varied between 0.01 and 7.36m bgl (15.25m and 24.25m AOD). Whilst groundwater was recorded close to ground level in some boreholes, this is not considered representative of the underlying groundwater table but flooded monitoring installations located in low permeability clay.

The monitoring results indicate that perched groundwater is likely present within Made Ground, with a deeper groundwater body present within the underlying Blue Lias and Charmouth Mudstone Formation. Downward migration of perched groundwater in Made Ground is possible, but considered unlikely to be readily occurring based on the generally cohesive Alluvium and Blue Lias and Charmouth Mudstone Formation.

The groundwater elevations recorded indicate that groundwater flow within the Blue Lias and Charmouth Mudstone Formation is to the northeast, towards the nearest surface water feature and in line with the surface profile of the bedrock.

7.3 RECORDED OBSERVATIONS

7.3.1 CONTAMINATION OBSERVATIONS

Contamination observations were recorded in location WS10 and TP106.

Hydrocarbon odours and staining were noted at depths of between 0.8 and 1.3m bgl in granular Made Ground at location WS10. It is considered likely that the contamination observation is linked to the adjacent former diesel AST (removed following the 2016 ground investigation phase).

Sulphurous odours were noted in TP106 between 0.60 and 1.3m bgl, within Cohesive Made Ground.

7.3.2 RECORDED OBSTRUCTIONS

Shallow obstructions (not likely to associated with bedrock) during the 2016 ground investigation phase were encountered in exploratory locations WS02 (potential buried concrete floor slab) and WS11 (potential buried utility) which prevented further drilling.

During the 2018 ground investigation, obstructions were encountered in locations WS106 (2.10m bgl) and WS107 (0.63m bgl) within the backfilled pond area. The obstructions (where visible) were noted to comprise sandstone blocks used as backfill within the pond area. Location HP101 recorded an obstruction (potentially a buried utility) in Made Ground at 0.44m bgl, and was terminated.

In the staff car parking area in the south of the site, a hole in the asphalt surfacing was noted, which had exposed an underlying brick surface, it is not clear whether this was an isolated find or representative of a wider feature with similar underlying obstructions in the south of the site.

Historical aerial photography indicates that the staff car park is over the location of a former structure, but that exploratory hole location WS02 is within soft landscaping. Therefore, the obstructions in the staff car park appear to relate to former buildings whereas the obstruction beneath location WS02 is of unknown origin.

It is possible that further shallow obstructions may be present throughout the central, western and southern areas of the site where former building footprints are present.

8 GENERIC QUANTITATIVE RISK ASSESSMENT

8.1 HUMAN HEALTH

To assess the analytical soil data for the site, Soil Guideline Values (SGV) and CLEA compliant risk based Generic Assessment Criteria (GAC) have been selected based on a future commercial and industrial land use assuming 1% soil organic matter (SOM) content, in line with recorded site SOM concentrations. Chemical laboratory data and screening sheets are included within **Appendix G**.

A concentration of lead of 13,300mg/kg was recorded in 2016 in WS05 at 0.65m bgl, which is in excess of the current GAC (1,390mg/kg). No obvious source for the lead was noted in the Made Ground other than metal fragments. During the 2018 ground investigation, trial pit TP106 was located adjacent to WS05 in order to further characterise Made Ground in this area. No obvious source of lead was noted in the Made Ground which was a mixture of sand with brick fragments similar to that recorded in WS05, overlying cohesive fill containing brick fragments and bricks. The recorded concentration of lead in the sample obtained from TP106 at 0.6m bgl was 73.5mg/kg, which is below the applied GAC.

The proposed development layout referenced in this assessment indicates that the area around TP106 and WS05 to be beneath a proposed access road from Chancel Close. The presence of hardstanding will break potential pathways for human contact and reduce the risk associated with the single elevated lead concentration recorded.

Made Ground samples were screened for the presence of asbestos by the laboratory. Of the 32 samples analysed, one sample recorded the presence of asbestos containing materials (WS103 at 0.25m bgl), in which chrysotile (white) asbestos was identified. Windowless sampler borehole WS105 is located beneath a proposed building footprint, and the presence of hardstanding will limit the potential for human exposure post development. However, controls will be required during construction to be protective of human health.

8.2 CONTROLLED WATERS

8.2.1 ASSESSMENT CRITERIA

Laboratory results for soil leachate and groundwater analysis have been compared to appropriate Water Quality Standards (WQS), where available, comprising:

- UK Drinking Water Quality Standards (UKDWS) from The Water Supply (Water Quality) Regulations 2000 (amended 2004).
- Environmental Quality Standards (EQS) from The Water Framework Directive (Standards and Classification) Directions (England and Wales) 2015.
- CL:AIRE 'Petroleum Hydrocarbons in Groundwater: Guidance on assessing petroleum hydrocarbons using existing hydrogeological risk assessment methodologies' v1.1 March 2017.
- European Commission Drinking Water Directive 1998.
- World Health Organisation Petroleum Products in Drinking Water (2008) (WHO 2008).
- World Health Organisation Guidelines for Drinking Water Quality 2017.

Laboratory data and data screening sheets are included in **Appendix G**.

8.2.2 SOIL LEACHATE RESULTS

A total of nine soil samples were subject leachate analysis for a suite of metals and cyanide. The sample from WS04 at 0.3m bgl recorded a total chromium concentration of 4.84µg/l compared to a WQS of 4.70µg/l. The exceeding concentration is considered to be marginal, and total chromium was not recorded at an elevated concentration in the soil analytical results.

Copper recorded in samples from BH01, BH02, BH04, TP106 and WS04 at a maximum concentration of 2.23µg/l, and lead in samples from BH01 and TP106 at a maximum concentration of 2.41µg/l exceeding EQS. Both EQS for lead and copper are 1µg/l, and given that the concentrations only marginally exceed the assessment criteria, no further assessment is considered necessary.

The recorded concentrations of inorganic contaminants are not considered indicative of a contamination source that may represent a potential risk to controlled waters. The site will also be covered by hardstanding with hard drainage installed, limiting the potential for contaminant leaching.

8.2.3 GROUNDWATER RESULTS

A summary of the recorded concentrations exceeding the WQS is presented in **Table E.6** in **Appendix E**.

8.2.3.1 INORGANIC CONTAMINATION

Concentrations of arsenic, nickel, copper, lead, chromium, mercury, sulphate and selenium exceeding the applied criteria were recorded in groundwater samples obtained during the 2016 and 2018 ground investigations. Whilst potential sources of inorganic contamination from historical and current land use have been identified on the site, concentrations of inorganic contamination recorded in groundwater are generally low.

Concentrations of sulphate and selenium do not appear to relate to direct source of contamination on site, and may be attributable to naturally occurring concentrations in the underlying mudstone or off-site sources.

Recorded total and leachable concentrations of arsenic or nickel were low, indicating site soils are unlikely to be the source of the low level impact recorded in groundwater. In addition, concentrations of arsenic recorded are above the WQS for drinking water (but not in excess of the EQS relating to surface water quality) and the aquifer beneath the site is unlikely to be an important drinking water extraction due to the likely low yields.

Recorded concentrations of copper, lead, chromium and mercury are marginally above the most sensitive bioavailable EQS, but are within the same order of magnitude as their respective assessment criteria. The concentrations are considered to be typical of an industrial site of this nature, and are unlikely to represent an impact to surface water features at a distance of approximately 90m.

As such, the concentrations of inorganic contamination at the site are considered to represent a low risk to controlled waters.

8.2.3.2 ORGANIC CONTAMINATION

A sample of perched groundwater taken in 2016 from location WS10 (in proximity to the former diesel AST) recorded elevated concentrations of TPH (up to 45,800µg/l), which may have represented a potential risk to controlled waters receptors and human health. However, following removal of the diesel AST by the tenant, a contemporary sample was obtained from WS10 during the 2018 ground investigation and the sample did not contain an elevated concentration of TPH (49µg/l).

It is considered likely that the perched groundwater around the tank has been diluted and/or flushed by rainwater ingress following removal of the tank. Although it is possible that residual concentrations of TPH may remain in perched water below the concrete hardstanding, no current requirement for remediation of perched groundwater has been established. Diligence should be maintained during the construction works with any observations of potential contamination (in soil or groundwater) reported for further assessment.

Samples from remaining borehole locations were obtained from monitoring wells with the screened interval present in the underlying Blue Lias and Charmouth Mudstone Formation. Relatively low concentrations of selected PAH compounds were recorded above the WQS in BH02 and WS03. With the exception of the concentration of benzo(b)fluoranthene recorded in location BH02 (0.113µg/l against a WQS of 0.017µg/l), concentrations of PAH compounds in these locations only marginally exceed the WQS.

The concentration of total TPH in BH02 (75µg/l), WS03 (13µg/l) and WS10 (49µg/l) were only marginally above the Environment Agency WQS of 10µg/l. Samples recovered from monitoring wells installed as part of the 2018 ground investigation did not contain concentrations of TPH above the laboratory limit of detection.

The low concentrations of organic contaminants recorded indicate that there is not widespread contamination in groundwater beneath the site. Locations WS03 and BH02 are on the south-eastern edge of the site and based on the recorded groundwater flow direction, the potential source of the hydrocarbon contamination recorded in these locations may be off-site. The recorded contaminant concentrations are considered to represent a low risk to controlled waters off-site.

9 GROUND GAS RISK ASSESSMENT

9.1 ASSESSMENT METHODOLOGY

The ground investigation and risk assessment is undertaken in general accordance with the following guidance:

- CIRIA (2007) C665 – Assessing Risks Posed by Hazardous Gases to Buildings;
- BS 8576 (2013) Guidance on investigations for Ground Gas – Permanent Gases and Volatile Organic Compounds; and,
- BS 8485 (2015) Code of Practice for the Design of Protective Measures for Methane and Carbon Dioxide Ground Gases for New Buildings.

9.2 MONITORING RESULTS

Ground gas monitoring records are summarised in **Table E.4** within **Appendix E**, and are provided in full as **Appendix F**. A summary of the monitoring results carried out over both the 2016 and 2018 ground investigations is presented below:

- Atmospheric pressures ranged from 990mB to 1026mB during the course of the monitoring period, with monitoring visits undertaken during rising, stable and falling pressure conditions;
- Steady state gas flows were generally recorded as <0.1 l/hr, with the exception of WS01 on Visit 1 which recorded a steady state flow of 5.3l/hr;
- Carbon dioxide was detected in the majority of locations during the monitoring period, at steady state concentrations ranging between <0.1%v/v and 8.5%v/v (BH04 on Visit 2) but was typically <2%v/v;
- Methane was generally recorded as <0.1%v/v, with occasionally recorded concentrations up to 0.1%v/v;
- Oxygen concentrations generally ranged between 4.2 and 22.0%v/v;
- Volatile organic vapours were detected in the majority of locations, but concentrations did not exceed 10ppm;
- Carbon monoxide concentrations were recorded between the limit of detection (<1ppm) and 2ppm; and,
- Hydrogen sulphide concentrations were less than the limit of detection (<1ppm) in all locations.

9.3 SUITABILITY OF THE DATASET

In the context of the proposed commercial redevelopment and guidance documents CIRIA C665 and BS:8576, summary of the ground gas monitoring undertaken is presented in **Table 9.1**.

Table 9.1 - Ground Gas Data Requirements

Category	Ground Gas Generation Potential	Sensitivity of proposed use	CIRIA C665 Guidance	Output	Actions
Hole Spacing	Low	Low	Approximate hole spacing should be wide (50-75m)	The site is approximately 4.49 hectares indicating approximately eight monitoring points are recommended.	A total of 17 ground gas monitoring wells were installed.
Monitoring Period	Very Low	Low	Monitoring may not be necessary or should be over a two month period	Monitoring period should comprise a minimum of four visits over a two month period.	Boreholes were monitored on a total of six occasions over two separate monitoring periods.
Monitoring Frequency			Monitoring frequency should be four visits		

The table above demonstrates that the monitoring well spacing and the number of monitoring visits are in general accordance with guidance referenced in **Section 9.1**.

On all monitoring visits, groundwater levels were recorded above the screened interval in monitoring wells at BH03, WS03, WS04 and WS07 (summarised in **Table E-5** in **Appendix E**). In addition, monitoring wells BH01, BH02, BH04, WS01, WS06, WS101 and WS103 were flooded during part of the monitoring period.

High groundwater levels may impede the migration of ground gas into the monitoring well and often gives rise to falsely high gas flow rates and high concentrations of methane and / or carbon dioxide. Given that flooding of boreholes can interfere with monitoring results, high concentrations and flow rates have not been considered in the assessment below where they occur in flooded borehole locations. Where high values have been discounted the next highest value has been considered.

9.4 DATA INTERPRETATION

Based on the justification provided in **Section 9.3** above, the following values have been utilised for the assessment presented below:

- Maximum steady carbon dioxide concentration of 5.0%v/v (from BH04 on 14 June 2016);
- Maximum steady methane concentration of 0.1%v/v (from WS103 on 21 February 2018); and,
- Maximum recorded steady gas flow rate of 0.1l/hr (representing the limits of detection for the equipment used, and accounting for flows attributable to flooded wells).

The maximum calculated Gas Screening Values (GSVs) (gas concentration as fraction multiplied by the maximum-recorded flow) are as follows:

Table 9.2 - Ground Gas Risk Classification

	Carbon Dioxide	Methane	Flow
Max values (%v/v)	5.0	0.10	0.1
GSV based on Max Values (l/h)	0.025	0.02	-

The assessment of results and derivation of GSVs indicate a Characteristic Situation 1 - Very Low Risk, with no ground gas protection measures required.

Whilst it is recognised that a proportion of boreholes were flooded throughout the entirety of the monitoring period, the remaining monitoring locations recorded typically low ground gas concentrations and low flow rates. The underlying natural strata have a very low ground gas generation potential. As such, it is considered that the assessment presented is considered to be representative of the potential ground gas risks at the site.

10 REVISED CONCEPTUAL SITE MODEL

As a result of the GQRA, the preliminary conceptual model (**Section 4**) has been revised below in **Table 10.1**. The CSM considers the proposed redevelopment for continued use of site commercial use with extensive hardstanding surface cover.

Table 10.1 - Revised Conceptual Site Model

Sources	Contaminant of concern	Discernible Risk to Human Health?	Discernible risk to controlled waters?
Site Sources			
<ul style="list-style-type: none"> Site wide Made Ground. 	Metals, PAH, TPH and Asbestos	Asbestos containing materials in Made Ground around the locations of WS103 should be considered during construction works, proposed warehouse should break pathways post-development.	None assessed.
	Ground gas	None assessed.	Not applicable.
<ul style="list-style-type: none"> Areas of bulk fuel and chemical storage from current on-site activities. 	TPH, PAH, SVOCs and VOCs	None assessed.	Previous concentrations recorded in 2016 not recorded in 2018. Potential for isolated residual perched groundwater impact around the former above ground fuel tank.
<ul style="list-style-type: none"> Electrical Substation. 	TPH and PCB	No access to this area at the time of the ground investigation.	No access to this area at the time of the ground investigation.
<ul style="list-style-type: none"> Former infilled pond and potential areas of backfilling following historical demolition. 	Ground gas	None assessed.	Not applicable.
	Metals, PAH, TPH and Asbestos	None assessed.	None assessed.
Off-site Sources			
<ul style="list-style-type: none"> Potential contamination from off-site sources including neighbouring industrial land use and historical RAF activities. 	Metals, TPH, PAH, SVOC and VOC	None assessed.	None assessed

11 PRELIMINARY ENGINEERING ASSESSMENT

11.1 SCOPE AND OBJECTIVES

This section assesses the geotechnical ground conditions under the site and summarises potential ground risks.

11.2 GEOTECHNICAL PARAMETERS

The ground model is described in **Section 7**. A summary of the typical stratigraphy of the site comprises of:

- Granular Sub-base;
- Made Ground;
- Alluvium; and
- Weathered Blue Lias and Charmouth Mudstone Formation.

Geotechnical laboratory results are included in **Appendix H** with interpretive geotechnical data plots presented in **Appendix I**. Geotechnical parameters provided take consideration of all available data from the 2016 and 2018 Ground Investigations.

11.2.1 GRANULAR SUB-BASE

Granular sub-base material was typically recorded under a reinforced concrete / asphalt hardstanding. In exploratory holes WS06, WS10, WS108, WS109, BH05 and BH102 the sub-base was thicker (up to 1.12m) suggesting infilling of historic excavation (e.g. grubbed out foundations) and / or general ground raising and levelling of the site. CBR testing was carried out on the Sub-Base and this is discussed in **Section 11.6**.

A single SPT was carried out which returned a value of 9 at 1.2m bgl in WS10.

11.2.2 COHESIVE MADE GROUND

The Cohesive Made Ground was recorded in exploratory holes across the site at a thickness of between 0.20m to 1.55m. The exploratory hole logs suggest the cohesive Made Ground comprises reworked Alluvium. Based on the in-situ and laboratory testing, soil parameters are assumed in **Table 11.1**.

Table 11.1 - Parameters for Cohesive Made Ground

Parameter		Range (number of tests)	Characteristic Value	Comments
Unit Weight (kN/m ²)		Not directly measured	18	BS8002:2015
SPT "N" Value		7-20 (4)	10	
Atterberg Limits	Plastic Limit (%)	22-23 (2)	22	
	Liquid Limit (%)	54-56 (2)	55	
	Plasticity Index	31-34 (2)	32	
	Natural Moisture Content (%)	25.7 – 26.4 (2)	26	
Internal Angle of Friction (°)		24	24	From Unmodified Plasticity Index (BS8002:2015)
Compaction	Max Dry Density (Mg/m ³)	1.72 (1)	1.72	
	Optimum MC (%)	19 (1)	19	

11.2.3 GRANULAR MADE GROUND

The Granular Made Ground was recorded in exploratory holes across the site at a thickness of between 0.11m to 1.12m. The exploratory hole logs suggest that the Granular Made Ground comprises a clayey, gravelly sand

with brick, concrete and sandstone. Based on the in-situ and laboratory testing, soil parameters are assumed in **Table 11.2**.

Table 11.2 - Parameters for Granular Made Ground

Parameter		Range (number of tests)	Characteristic Value	Comments
Unit Weight (kN/m ²)		Not directly measured	21	BS8002:2015
SPT "N" Value		13-50 (2)	25	
Compaction	Max Dry Density (Mg/m ³)	1.69 (1)	1.69	
	Optimum MC (%)	13 (1)	13	

11.2.4 ALLUVIUM

Geological cross sections (**Drawings 70020138-003 to 70020138-005**) indicate that Alluvium was encountered in various boreholes across the site, though it is not a continuous stratum. Borehole BH05 recorded a 2.50m thickness of Alluvium which is significantly thicker than in other exploratory holes. However, the base elevation of the stratum in BH05 is similar to that recorded in other exploratory holes, and thinner alluvial deposits have likely been recorded elsewhere on site due to removal of Alluvium to create a level development platform, or replacement by Made Ground.

In-situ and laboratory testing, as outlined in **Section 6**, has allowed the derivation of the following parameters. Related geotechnical plots are presented in **Appendix I**. Based on the in-situ and laboratory testing, soil parameters are assumed in **Table 11.3**.

Table 11.3 - Parameters for Alluvium

Parameter		Range (number of tests)	Characteristic Value	Comments
Unit Weight (kN/m ²)		Not directly measured	18	BS8002:2015
SPT "N" Value		8-21 (9)	10	
Atterberg Limits	Plastic Limit (%)	14-24 (7)	15	
	Liquid Limit (%)	34-65 (7)	50	
	Plasticity Index	20-41 (7)	30	
	Natural Moisture Content (%)	5.8 – 25.3 (7)	22	
Internal Angle of Friction (°)		Not directly measured	24	From Unmodified Plasticity Index (BS8002:2015)

11.2.5 BLUE LIAS AND CHARMOUTH MUDSTONE FORMATION

The Blue Lias and Charmouth Mudstone Formation underlie the whole site. The ground investigation only encountered the weathered upper section of the formation to a maximum proven thickness of 7.08m. A gradational transition to unweathered mudstone is expected below the depths investigated.

Geotechnical laboratory and in situ testing (outlined in **Section 6**) has allowed the derivation of the following parameters:

Table 11.4 Parameters for Blue Lias and Charmouth Mudstone Formation

Parameter		Range (number of tests)	Characteristic Value	Comments
Unit Weight (kN/m ²)		Not directly measured	20	BS8002:2015
SPT "N" Value		4-55 (95)	Increases with depth	Uncorrected values.

Parameter		Range (number of tests)	Characteristic Value	Comments
				See design line on SPT vs depth plot (Appendix I)
Atterberg Limits	Plastic Limit (%)	18-28 (11)	23	Average value
	Liquid Limit (%)	48-69 (11)	58	
	Plasticity Index	27-45 (11)	36	
Internal Angle of Friction (°)		24	24	From Unmodified Plasticity Index (BS8002:2015)
Young modulus(E')(MPa)		Not directly measured	$0.42 \times N_{60}$	From SPT "N" Value (Stroud 1989) N_{60} is variable
Undrained Shear Strength (Cu) (kPa)	Correlation	Not directly measured	$4.2 \times N_{60}$	From SPT "N" Value (Stroud 1974) N_{60} is variable
	Unconsolidated Undrained Triaxial Test	40 – 68 (3)	50	Average of lower Cu value taken from each set of tests
Oedometer	Mv (m ² /MN)	0.018 - 0.16 (5)	Varies with load (see test certificate)	Pressure (kPa) 160 - 1280
		0.012 – 0.052 (5)		Pressure (kPa) 200 - 1600
	Cv (m ² /yr)	0.52 – 0.78	Varies with load (see test certificate)	Pressure (kPa) 160 - 1280
		0.35 – 2.40		Pressure (kPa) 200 - 1600

11.3 FOUNDATION SOLUTIONS

11.3.1 BUILDING FOUNDATIONS

The weathered Blue Lias and Charmouth Mudstone Formation is expected to be fairly incompressible, therefore are considered to be a suitable founding stratum for lightly loaded, low rise structures. The likely bearing capacity would be expected to be approximately 250kPa, assuming an undrained shear strength of approximately 50kPa. Spread foundations will be suitable but trench fill may be required where the depth of the overlying Made Ground lowers to the north.

The Made Ground and Alluvium are not suitable for founding on because they are highly variable, soft, compressible units of soil. They are unlikely to provide sufficient bearing capacity and are likely to undergo large and unpredictable settlement. Made Ground may be excavated and recompacted to an engineering specification depending on the required bearing capacity and settlement tolerances.

For heavy column loads foundation piles embedded into the unweathered mudstone of the Blue Lias and Charmouth Mudstone Formation would be expected to be suitable. The likely bearing capacity would be expected to be approximately 600kPa, assuming founding on extremely weak mudstone.

The modified plasticity index indicates that the weathered Blue Lias and Charmouth Mudstone Formation, as well as the Alluvium, has a medium to high volume change potential. This means that foundations should be placed at a minimum depth of 0.9m provided foundation is outside the zone of influence of trees, or a minimum depth of 1.25m with restricted new planting (NHBC, 2016).

If excavations extend below the groundwater table then ingress of groundwater may be an issue. Pumping techniques and/or shoring off the excavations may be required to control the groundwater level.

11.3.2 GROUND BEARING SLABS

Ground bearing floor slabs are a feasible solution in areas of fill provided the Made Ground and the softer Alluvium are removed prior to fill material being placed to a performance specification. The upper layers of the weathered Blue Lias and Charmouth Mudstone Formation may have been softened by weathering and may exhibit increased settlement which may cause problems for a ground bearing slab.

The geotechnical properties of the proposed formation layer should be determined to confirm they comply with the floor slab designer's requirements. As a minimum the formation is likely to require proof rolling and the provision of a sub-base of granular fill. Cohesive Made Ground may require some form of treatment to adjust moisture content and/or may require excavation and recompaction depending on the slab tolerance required.

Ground bearing slabs can be detrimentally affected by hard spots formed by buried obstructions. It is therefore important that all buried obstructions are removed to a depth of at least 1.5m below floor slab locations.

11.4 EARTHWORKS

Details of proposed earthworks have not been provided. The current topography of the site is in a series of level plateaus suggesting major earthworks are not expected. If proposed developments require larger flat plateaus then cut and fill earthworks could be used to level the site. Retaining walls could be required to retain the approximate 2m height difference across the site.

Should earthworks be required an earthworks specification will be required along with classification of site won materials to for re-use. The Granular Sub-base is expected to be suitable for re-use as engineered fill, subject to earthworks classification and validation. Excavations into the Blue Lias and Charmouth Mudstone Formation are also expected to yield material suitable for re-use. Alluvium is not expected to be suitable for re-use in earthworks.

If present at founding depth, Made Ground would need to be excavated and recompacted to an engineering specification as part of earthworks, or replaced with granular fill. Testing on Cohesive Made Ground shows that it is typically significantly wet of optimum with a natural moisture content of 26% and an optimum moisture content of 19%. The Cohesive Made Ground would need to be dried to be suitable for use as engineering fill.

Any soft material encountered should not be re-used as backfill beneath any planned structures, road pavements, hardstanding areas or other areas that may be sensitive to future settlement.

A historical pond has been identified within the footprint of a warehouse in the north of the site (as shown on **Drawing 70020138-001**). The material used and the quality of the infilling work has not been confirmed. It is recommended that infilled material is excavated and replaced with a suitable engineered fill material to prevent hard spots beneath the road and proposed DIY store.

Demolition of buildings in the southern section of the site is proposed. As part of the demolition works, grubbing out of the foundations should be undertaken to a depth of 1.5m below finished ground level. To refill the areas excavated as part of the grubbing out it is expected that demolition rubble can be sorted and crushed to produce a granular fill material. Such a material would be suitable to infill the grubbed out foundation excavations as well as use to infill excavations of Made Ground.

11.5 OBSTRUCTIONS

Prior to excavation, any utilities services are to be disconnected and removed under the footprints of the proposed areas of works.

Historical demolitions within the site area may have taken structures down to ground level and left foundations or decommissioned services in the ground. Limited evidence of former foundations has been recorded as part of the ground investigation, but some shallow obstructions were encountered locally. There is therefore potential for relic foundations to be encountered and these will require removal if beneath any proposed development footprints. Areas from which obstructions are removed from the ground may need to be infilled with suitable granular engineered fill material (e.g. sorted and crushed demolition rubble, see **Section 11.4**).

It is recommended that the upper 1.5m of the ground is turned over and re-compacted to identify any potential obstructions under proposed new structures.

11.6 PAVEMENT DESIGN

Indicative road layouts and areas of car parking have been provided, but were not fixed at the time of reporting.

CBR values of the Granular Sub-Base were determined from 5 No. plate bearing tests undertaken on site during the 2018 ground investigation. In addition 1 No. remoulded CBR was carried out in the laboratory on the sample from BH102 at 0.6m. A summary of CBR testing for the Sub-Base is given in **Table 11.4**.

Table 11.4: CBR results for Sub-Base

Test Type	Strata	CBR Value (%)		
		Max	Min	Characteristic Value
Plate Bearing	Crushed Rock and Fines (Sub-Base)	24.0	4.9	8
Remoulded	Slightly gravelly sandy silty clay ¹ (Sub-base)	2.3	2.3	2.3

¹ Sample description differs from borehole log description

There is likely to be a variable quantity and type of material at formation level, the characteristic values in Table 11.4 above are therefore conservative estimates.

CBR testing was not undertaken for the weathered Blue Lias and Charmouth Mudstone Formation. Using the Highways England's IAN 73 (Table 5.1) an equilibrium CBR value of 2.5% can be derived using the characteristic plasticity index.

Any roads on site should be constructed in accordance with the Design Manual for Roads and Bridges (DMRB) Volume 4, Section 1, Part 1 (HA44/91), and Volume 7, Section 2, Part 2 (HD25/94). Further ground investigation should include CBR testing once founding levels and layouts for the roads are fixed, in order to assist in the design of roads. If CBR tests are found to be lower than proposed (i.e. soft spots are found on site) the material in the area should be excavated and replaced with suitable engineered fill.

Particular care should be taken to avoid excessive trafficking in areas of proposed pavement, and pavements should be constructed soon after excavation in order to limit deterioration and softening of the formation.

11.7 CHEMICAL ATTACK ON BURIED CONCRETE

Laboratory testing undertaken on the Blue Lias and Charmouth Mudstone Formation has been used to derive a Design Sulphate Class and an ACEC Class. As the stratum contains pyrite and it may be disturbed during foundation construction, the additional steps 6 to 8 in Section C5.1.2 of CIRIA Special Digest 1 have been carried out as well as using Table C2, to derive the classification of Design Sulphate Class DS-2 and ACEC Class AC-2.

The Design Sulphate class of Made Ground is DS-1 and ACEC Class AC-1. No sulphate testing was carried out on the Alluvium.

11.8 GEOTECHNICAL RISK REGISTER

A preliminary geotechnical risk register is included in **Table 11.3** identifying geotechnical hazards and risks associated with the site. The risks have been rated using a simple rating for probability and impact of 1 to 5, where 1 represents a negligible probability / impact and 5 being a very high probability / impact. The risk rating has been calculated by multiplying the probability and impact.

Table 11.5: Geotechnical Risk Register

Risks	Consequence	Control Measures	Probability	Impact	Risk Rating
Presence of unexpected Alluvium below proposed foundations.	Excessive foundation settlement and potential bearing capacity failure.	The Alluvium is not considered to be suitable as founding stratum. Foundation excavations encountering Alluvium should over excavate the Alluvium and replace it with engineered fill.	3	2	6
Buried obstructions under foundations.	Additional work to remove obstructions and refill any additional excavations.	Turning over and compaction of the top 1 to 2m of ground under historical building footprints should identify and remove any obstructions efficiently.	2	3	6
In situ CBRs lower than expected.	Additional thickness of sub-base required for pavement design.	In situ CBR tests should be undertaken in areas of proposed pavement to confirm equilibrium CBR determined from plasticity index.	2	2	4
UXO encountered during construction.	Risk to construction workers, members of the public and structures Delays to construction programme.	An unexploded ordnance assessment should be carried out by a specialist consultant.	1	4	4
Encountering buried services during construction.	Risk to construction workers. Delays to construction programme.	Obtain buried services plans for the area and arrange service diversions, wayleaves or avoid services as necessary.	1	3	3
Unforeseen ground conditions due to lack of GI coverage due to lack of access during works.	Design changes resulting in additional cost / time.	Further ground investigation once access to areas is possible to confirm ground conditions.	2	3	6
Soft spots in the Alluvium / Made Ground.	Differential settlement in structures and pavements.	Over excavate and re fill soft spots. Make allowance for soft spots in foundation and pavement design.	3	2	6
Relic shear surfaces in the weathered Blue Lias Formation.	Failure of slopes / foundations due to movement along relic shear surfaces.	In the event that cut slopes are incorporated into the development, further investigation will be required to assess if there are shear surfaces present. Slope stability design for cut slopes on site.	2	2	4
Perched ground water in the Made Ground / granular sub-base.	Water ingress into excavation resulting in excavation instability	Inflow is expected to be encountered and mitigated by the use temporary sumps and associated pumping.	3	1	4

12 CONCLUSIONS AND RECOMMENDATIONS

12.1 INTRODUCTION

This report provides a revised ground model, Generic Quantitative Risk Assessments and revised conceptual site model based on the findings of the 2016 and 2018 ground investigations carried out across the site. The available information has been used to assess potential environmental constraints and preliminary geotechnical considerations for the redevelopment for continued use of the site for a commercial land use.

12.2 GEO-ENVIRONMENTAL CONSIDERATIONS

The ground investigation across accessible parts of the site has recorded asbestos containing materials in Made Ground at WS103, which will require management during construction via safe systems of work. Should the development proceed as per the current masterplan, potential human health pathways to the potential asbestos will be broken by hardstanding. No other potential pollutant linkages for human health have been recorded.

Impacted perched groundwater was recorded surrounding the former diesel tank recorded in 2016. Results from the 2018 ground investigation did not record any TPH impact at the same location and it is conjectured that perched impacted groundwater has been flushed and/or diluted by rainwater ingress since the fuel tank was removed by the tenant. It is considered possible that some locally impacted soils and possibly perched groundwater may be present below the former tank location. It would be prudent to include some allowance for soils removal and off-site disposal should also be made within the project budget. This is considered to be the responsibility of the former tenant.

The area surrounding the substation and former caustic soda store were not accessible for ground investigation, and some shallow soil sampling to validate soils beneath these features will be required post demolition. Although localised contamination may be present associated with these features, the presence of low permeability geology beneath the site should reduce the risk of contaminant migration, and thus potential liability, which is also indicated by the absence of widespread groundwater impact.

12.3 GEOTECHNICAL CONSIDERATIONS

The following typical stratigraphy has been identified within the site:

- Granular Sub-base;
- Made Ground;
- Alluvium, and;
- Weathered Blue Lias and Charmouth Mudstone Formation.

Spread foundations in the weathered Blue Lias and Charmouth Mudstone Formation are expected to be suitable to support lightly loaded, low rise structures. Heavier or more settlement sensitive structures are likely to require pile foundations founding in the unweathered Blue Lias and Charmouth Mudstone Formation.

A risk of obstructions in the form of relic building foundations has been identified which can be addressed by turning over a 1.5m deep layer of ground under proposed building footprints. This could be carried out as part of any demolition works.

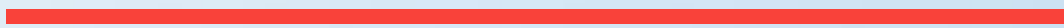
The backfilled pond contains deep uncompacted Made Ground and has not been proven to full depth. Made Ground within the former pond may need to be excavated and replaced with suitable engineered material if buildings or structures are to be located above the pond, and to prevent hard spots beneath roads and pavements.

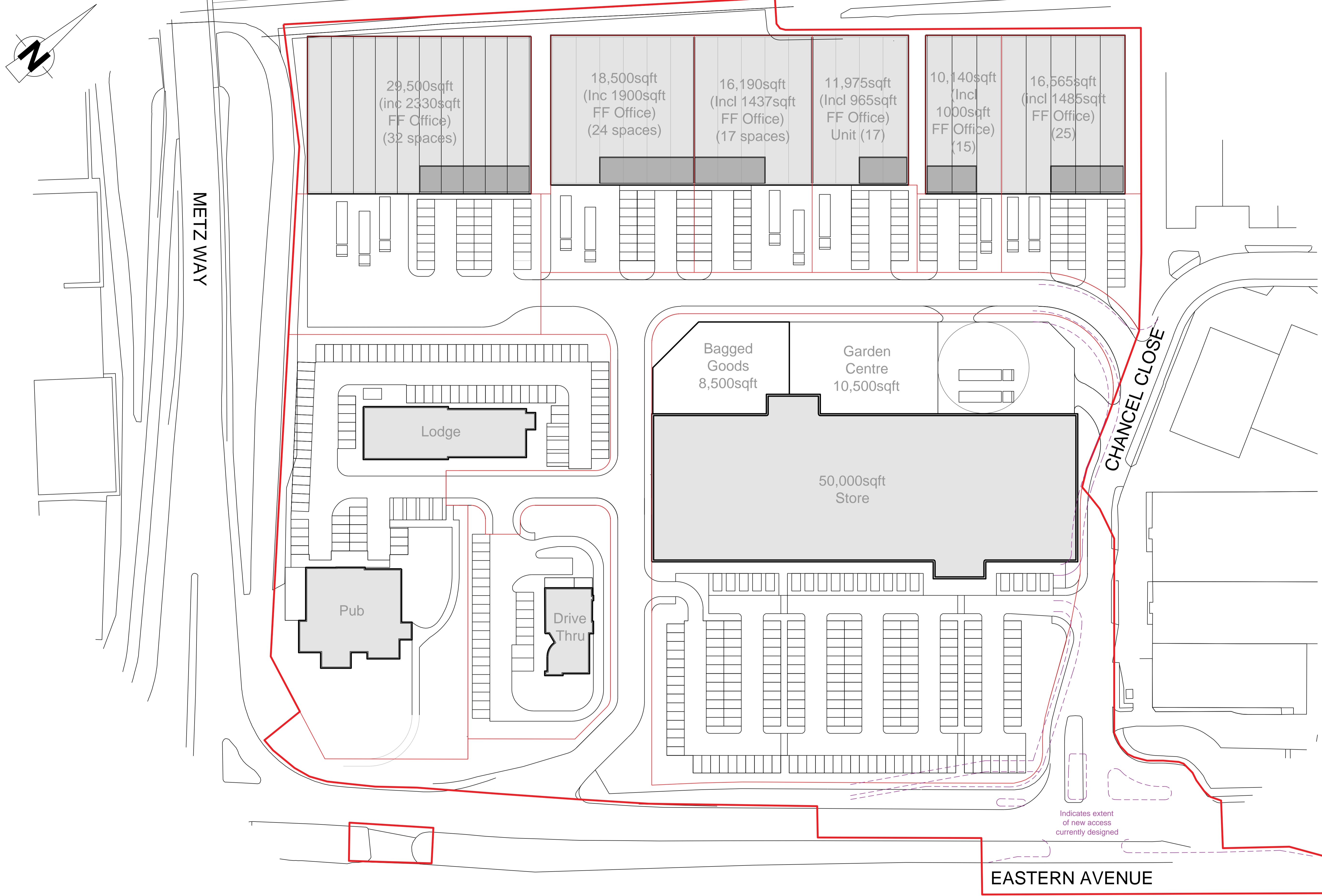
Compaction of the Made Ground may be necessary to support ground bearing slabs, depending on the suitability of the material. Made Ground present at founding depth will need to be excavated and recompacted, or replaced with engineered fill. It is noted that cohesive Made Ground is generally wet of optimum and will need to be dried prior to placement during earthworks.

The strength of the Alluvium is expected to vary around the site, hence it is not considered to be suitable as founding stratum. Foundation excavations encountering Alluvium should over excavate the Alluvium and replace it with engineered fill.

Appendix A

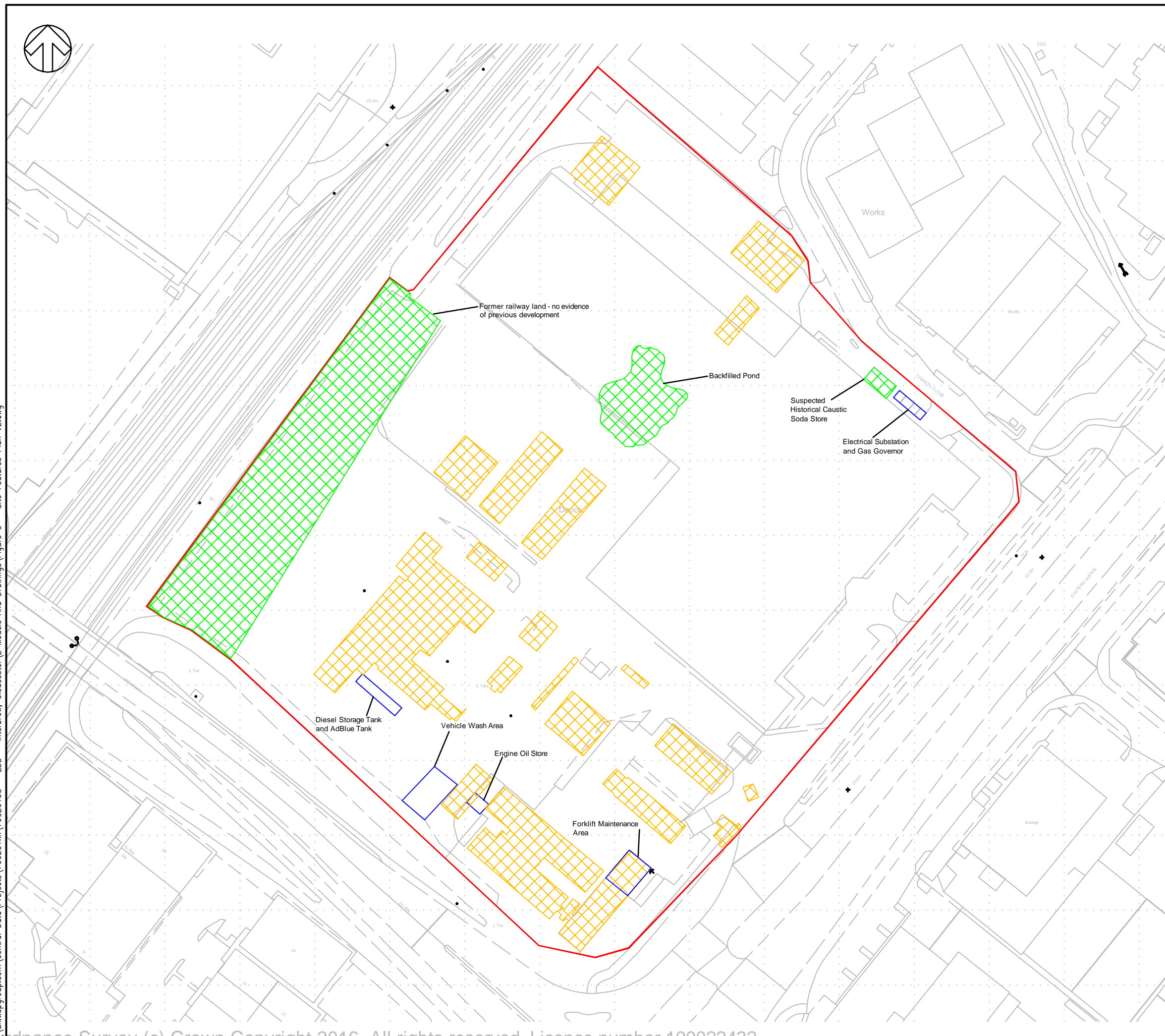
DRAWINGS











\\uk.wspgroup.com\central_Data\Projects\70020138 - EDD - Interbrew, Gloucester\1 Models And Drawings\Figure 3 - Site Features Plan V2.dwg



DO NOT SCALE

-  Site Boundary
-  Former Government / MOD Buildings
-  Historical potential contamination sources
-  Current potential contamination sources

REV	DATE	BY	DESCRIPTION	CHK	APD

DRAWING STATUS: **FOR INFORMATION ONLY**



One Queens Drive Birmingham West Midlands B5 4PJ
www.wspgroup.com - www.pbworld.com

CLIENT: **PALOMA CAPITAL LLP**

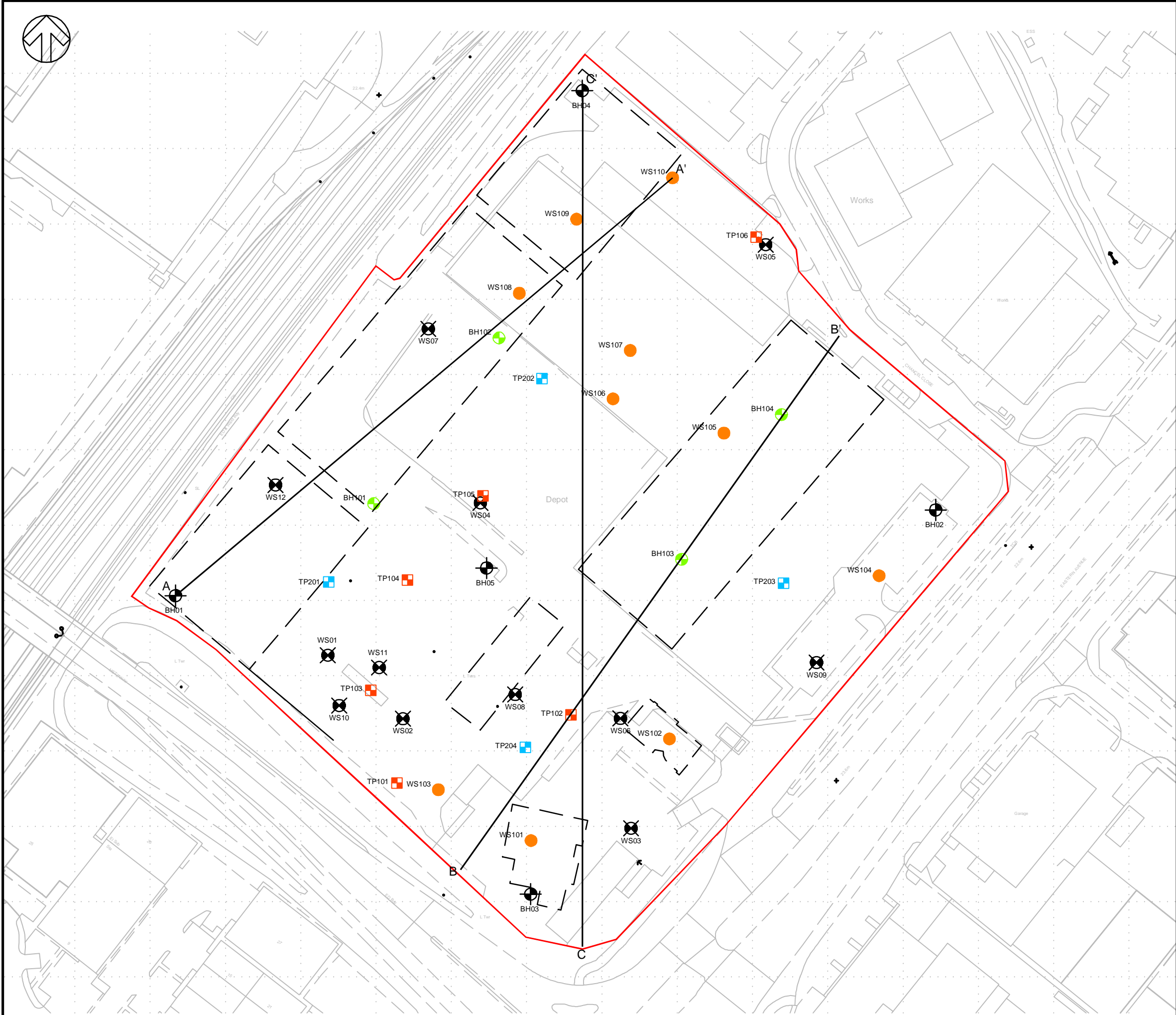
ARCHITECT: **N/A**

PROJECT: **FORMER TRADETEAM SITE, GLOUCESTER**

TITLE: **SITE FEATURES PLAN**

SCALE @ A3: 1:1,250@A3	CHECKED: JMC	APPROVED: CLR
CAD FILE: 001	DESIGN-DRAWN: GEB	DATE: 21 July 2016
PROJECT No: 70020138	DRAWING No: 70020138-001	REV: -

© WSP Group Ltd



DO NOT SCALE

- Site Boundary
- Indicative Proposed Building Footprint
- WS01 2016 Windowless Sample Borehole
- BH01 2016 Cable Percussion Borehole
- BH101 2018 Cable Percussion Borehole
- WS101 2018 Windowless Sample Borehole
- TP101 2018 Shallow Trial Pit
- TP201 2018 Plate Test
- A—A' Lines of Cross Section

P02	20/02/2018	JMC	AMENDED BUILDING FOOTPRINTS		
P01	10/11/2017	JMC	FIRST ISSUE		
REV	DATE	BY	DESCRIPTION	CHK	APP

DRAWING STATUS: **S2 - FOR INFORMATION**



One Queens Drive, Birmingham, B5 4PJ, UK
wsp.com

CLIENT: **PALOMA I (INDUSTRIAL II) UNIT TRUST**

ARCHITECT: **ROBERTS LIMBRICK ARCHITECTS**

PROJECT: **FORMER INTERBREW SITE, GLOUCESTER**

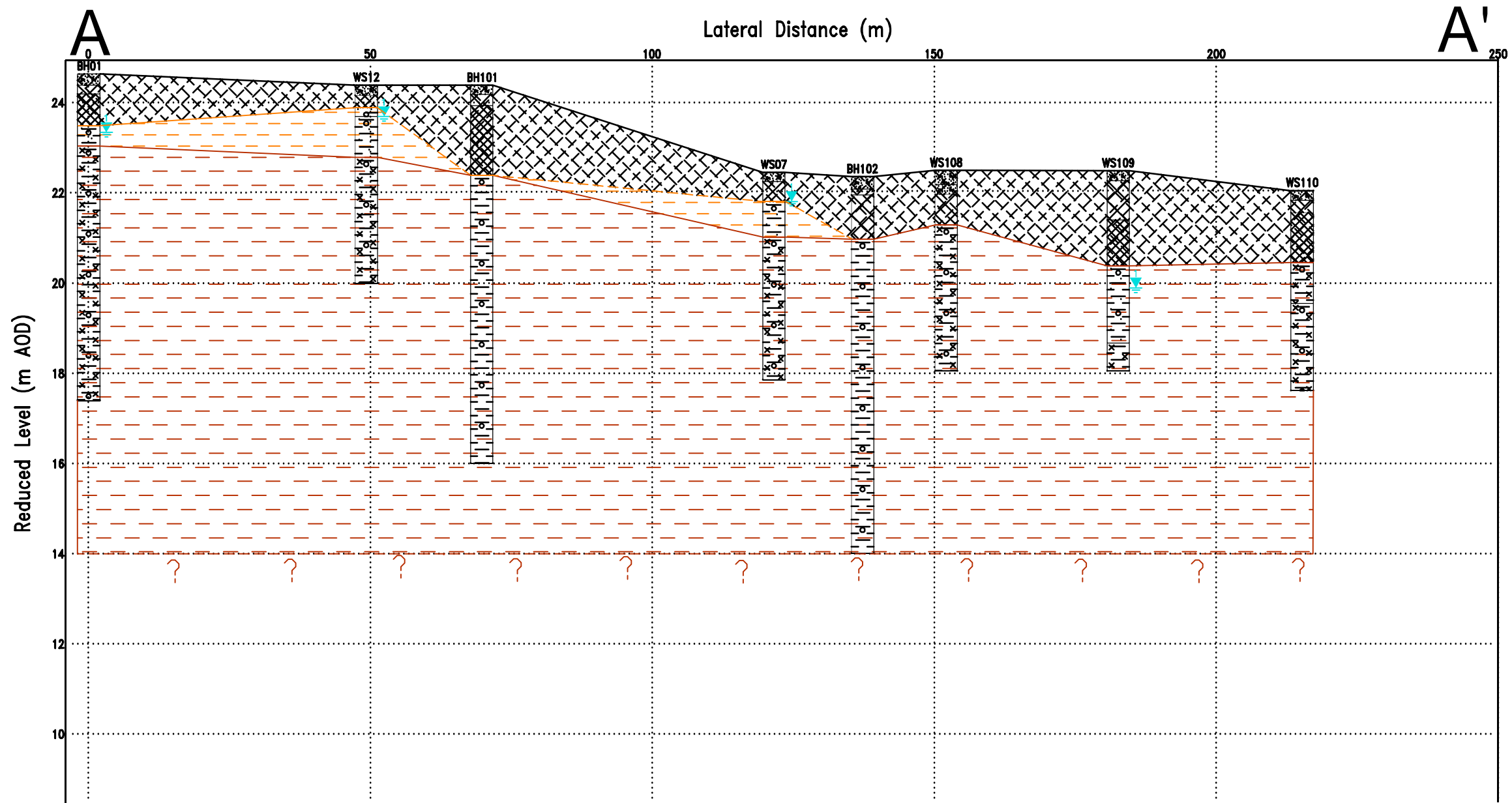
TITLE: **EXPLORATORY HOLE LOCATION PLAN**

SCALE @ A3:	CHECKED:	APPROVED:
1:1000	JMC	JMC
PROJECT No:	DESIGNED:	DRAWN:
70020138		GEB
		DATE:
		APRIL 2018

DRAWING No: **70020138-002** REV: -

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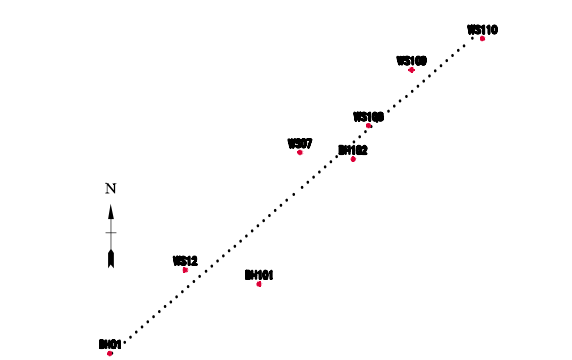
File name \\UK.WSPGROUP.COM\CENTRAL DATA\PROJECTS\70020138 - EDD - INTERBREW, GLOUCESTER MODELS AND DRAWINGS\5) R03 DRAWINGS\CROSSSECTIONS\A-A' FENCE.DWG, printed on 16 April 2018 08:41:16, by Baggott, George



This is a generalised section based on ground conditions encountered in exploratory holes. Actual ground conditions including depths and the properties of strata may vary.

Key **DO NOT SCALE**

- MADE GROUND**
- Alluvium**
- Blue Lias Formation and Charmouth Mudstone Formation (Undifferentiated)**
- Water strike during drilling**
- Water level during monitoring (approx)**



REV	DATE	BY	DESCRIPTION	CHK	APP

DRAWING STATUS: S2 - FOR INFORMATION

One Queens Drive, Birmingham, B5 4PJ, UK
wsp.com

CLIENT: PALOMA CAPITAL

ARCHITECT: ROBERTS LIMBRICK ARCHITECTS

PROJECT: FORMER INTERBREW SITE, GLOUCESTER

TITLE: GEOLOGICAL CROSS SECTION A-A'

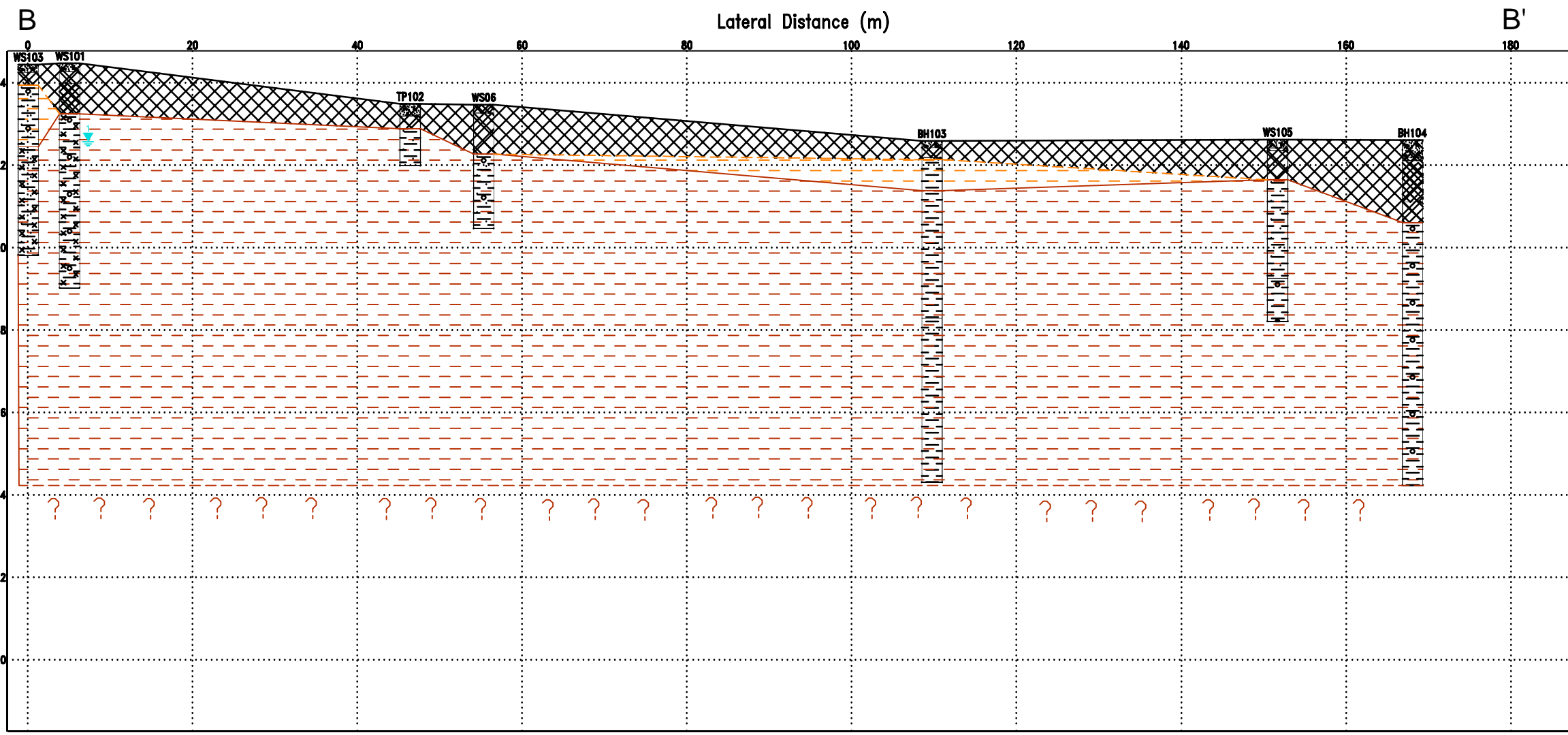
SCALE @ A3: NTS	CHECKED: GEB	APPROVED: JMC	
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PROJECT No: 70020138	DESIGNED:	DRAWN: BF	DATE: April 18
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DRAWING No: 70020138-003	REV: P01
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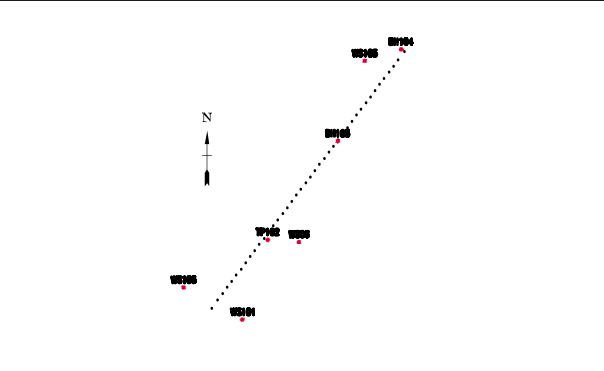
File name: \\UK.WSPGROUP\UP.COM\CENTRAL_DATA\PROJECTS\70020138 - EDD - INTERBREW, GLOUCESTER MODELS AND DRAWINGS\5) R03 DRAWINGCROSSSECTIONS\B-B' FENCE.DWG, printed on 16 April 2018 08:45:54, by Baggot, George



This is a generalised section based on ground conditions encountered in exploratory holes. Actual ground conditions including depths and the properties of strata may vary.

Key **DO NOT SCALE**

- MADE GROUND**
- Alluvium**
- Blue Lias Formation and Charmouth Mudstone Formation (Undifferentiated)**
- Water strike during drilling**
- Water level during monitoring (approx)**



REV	DATE	BY	DESCRIPTION	CHK	APP

DRAWING STATUS: **S2 - FOR INFORMATION**

One Queens Drive, Birmingham, B5 4PJ, UK
wsp.com

CLIENT: **PALOMA CAPITAL**

ARCHITECT: **ROBERTS LIMBRICK ARCHITECTS**

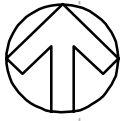
PROJECT: **FORMER INTERBREW SITE, GLOUCESTER**

TITLE: **GEOLOGICAL CROSS SECTION B-B'**

SCALE @ A3: NTS	CHECKED: GEB	APPROVED: JMC
PROJECT No: 70020138	DESIGNED: BF	DATE: April 18

DRAWING No: 70020138-004	REV: -
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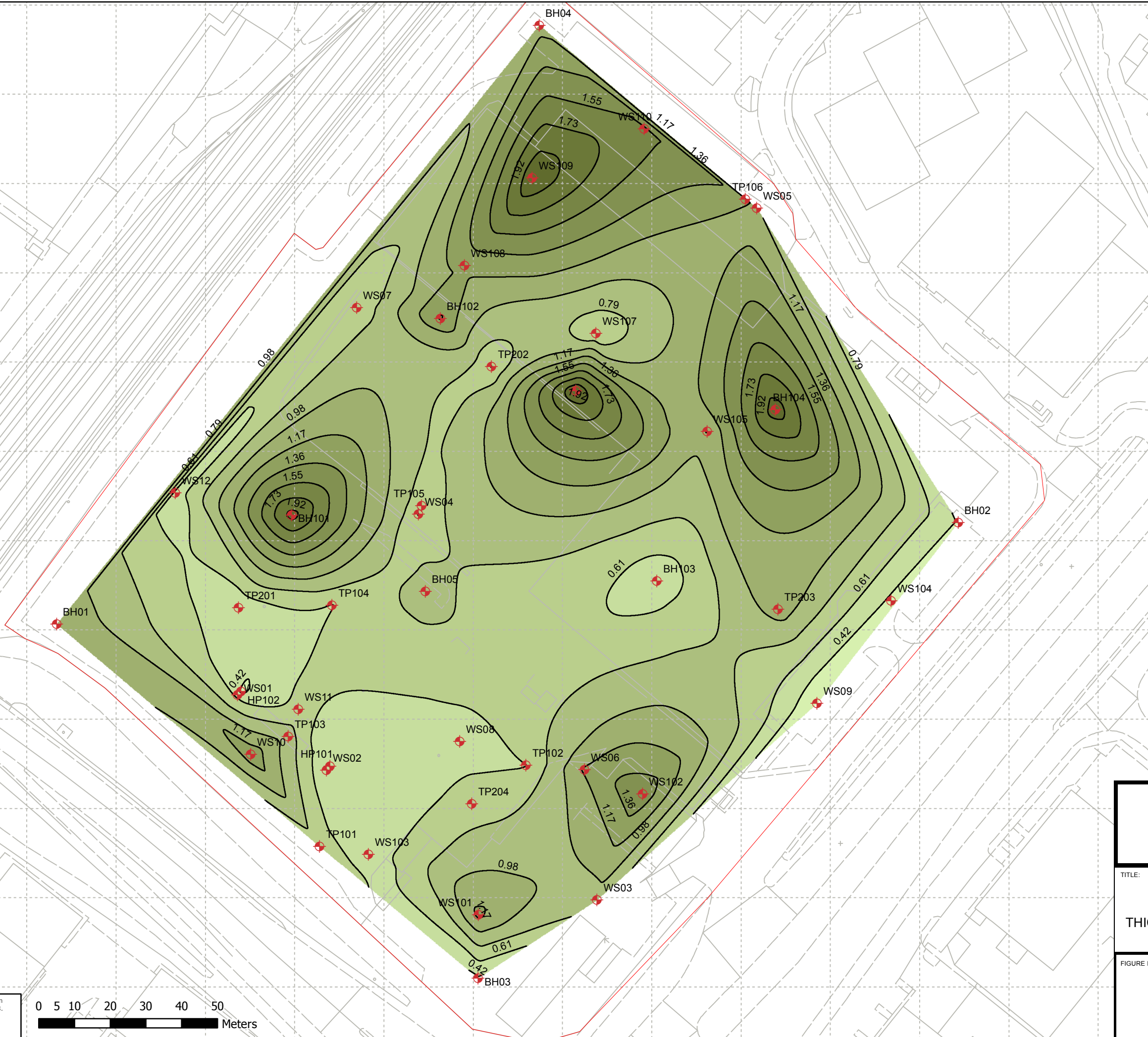


Key

- ◆ Exploratory Holes

**Thickness of MG
Metres**

Lightest Green	0.23 - 0.42
Light Green	0.43 - 0.61
Medium-Light Green	0.62 - 0.79
Medium Green	0.8 - 0.98
Medium-Dark Green	0.99 - 1.2
Dark Green	1.3 - 1.4
Very Dark Green	1.5 - 1.5
Dark Olive Green	1.6 - 1.7
Dark Green	1.8 - 1.9
Darkest Green	2 - 2.1

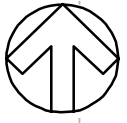


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TITLE:
**FORMER INTERBREW
SITE, GLOUCESTER
THICKNESS OF MADE GROUND**

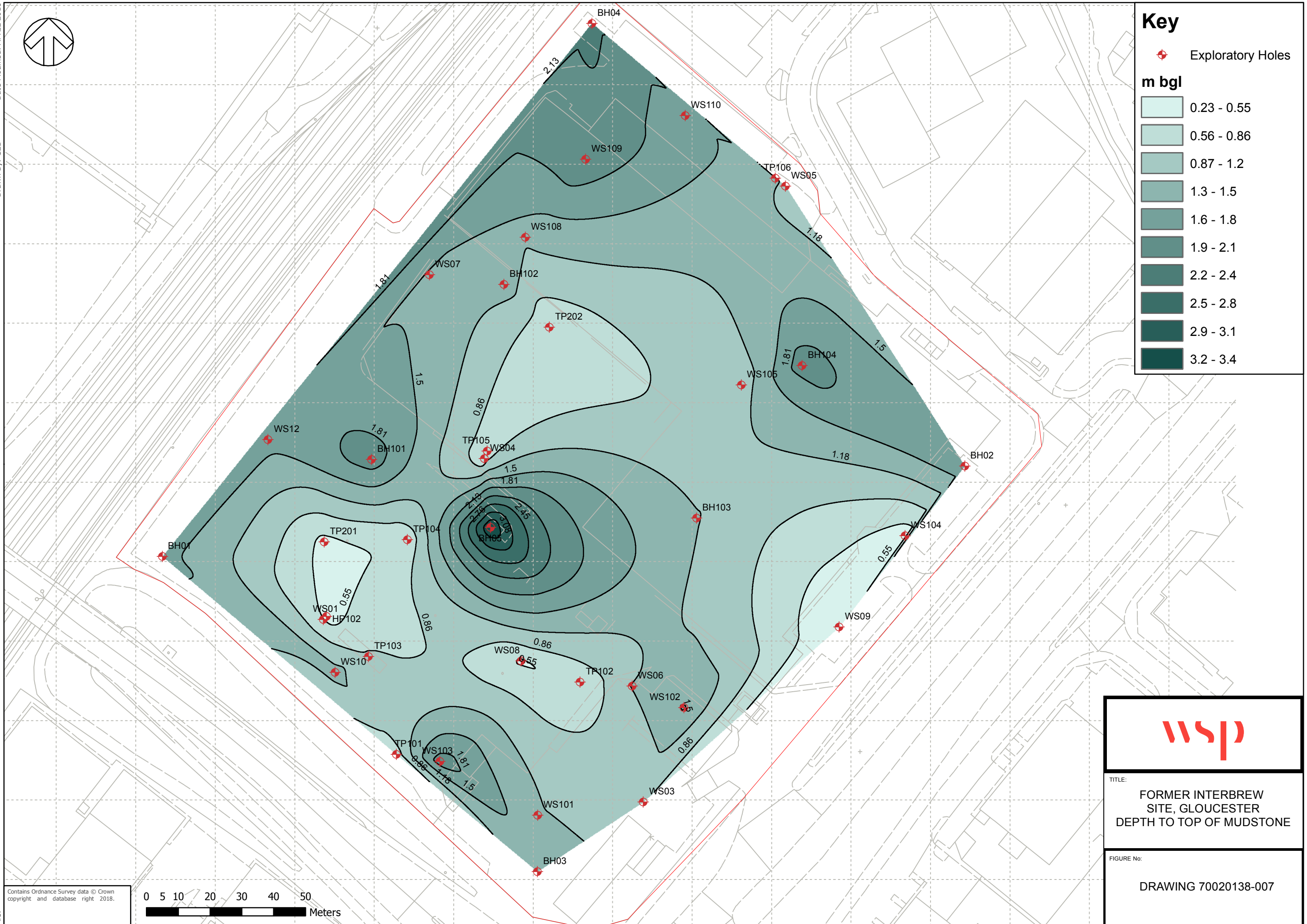
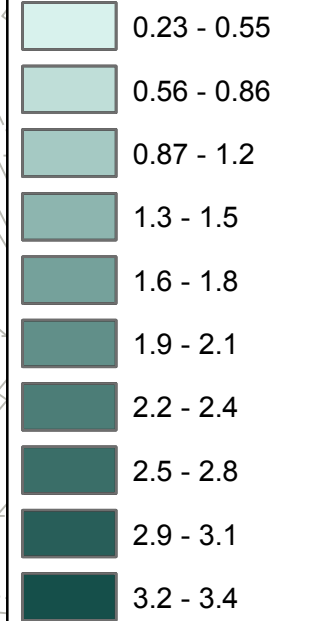
FIGURE No:
DRAWING 70020138-006



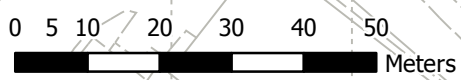
Key


Exploratory Holes

m bgl



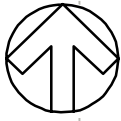
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TITLE:
**FORMER INTERBREW
SITE, GLOUCESTER
DEPTH TO TOP OF MUDSTONE**

FIGURE No:
DRAWING 70020138-007

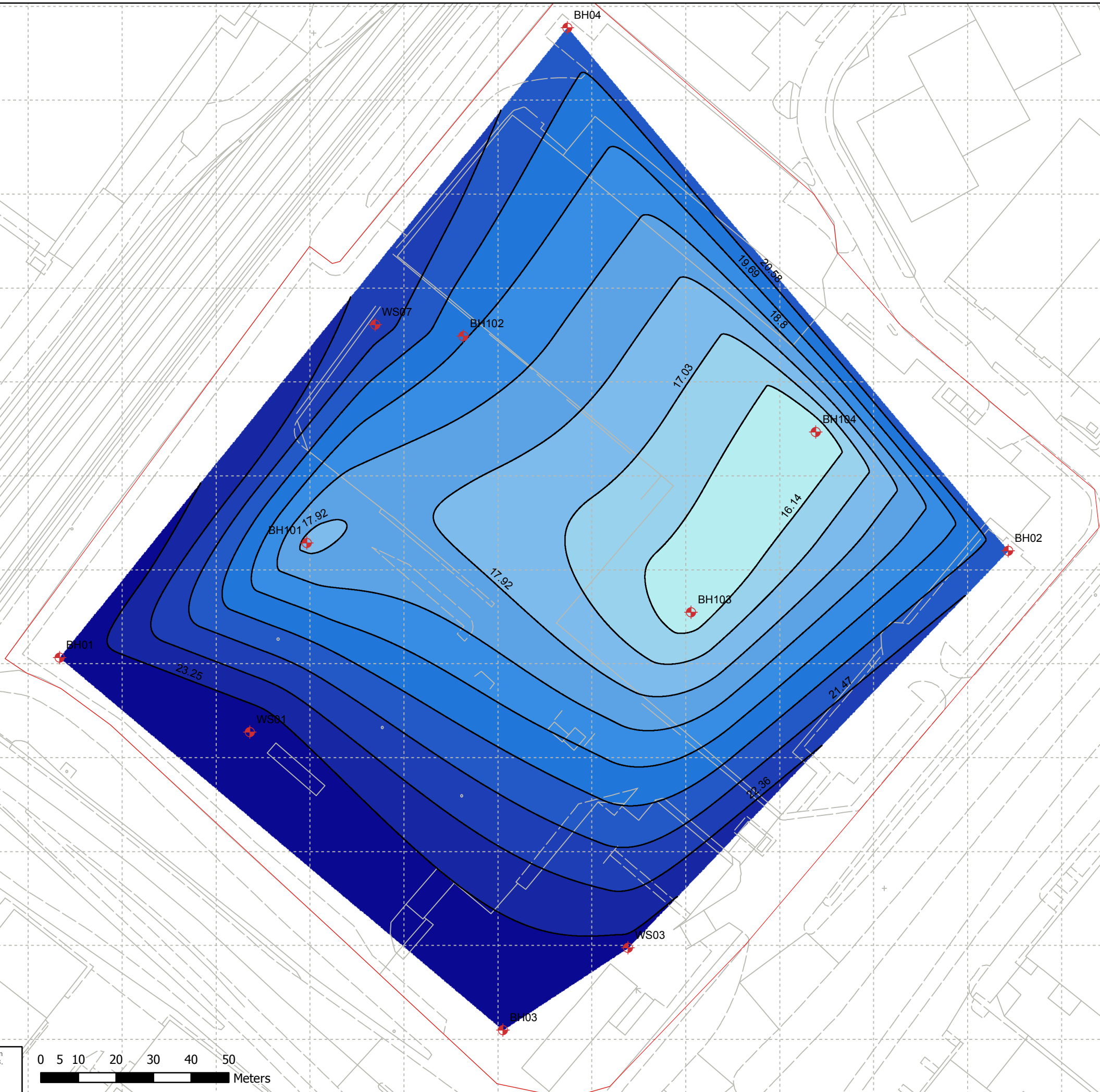


Key

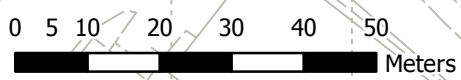
Exploratory Holes


m AOD

	15 - 16
	17 - 17
	18 - 18
	19 - 19
	20 - 20
	21 - 21
	22 - 21
	22 - 22
	23 - 23
	24 - 24



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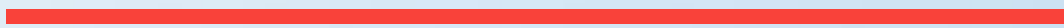
TITLE:
FORMER INTERBREW
SITE, GLOUCESTER
GROUNDWATER ELEVATIONS
CHARMOUTH MUDSTONE

FIGURE No:

DRAWING 70020138-008

Appendix B

PHOTOGRAPHIC RECORD





1. Car Parking east of offices



2. Former Fork Lift Repair Building



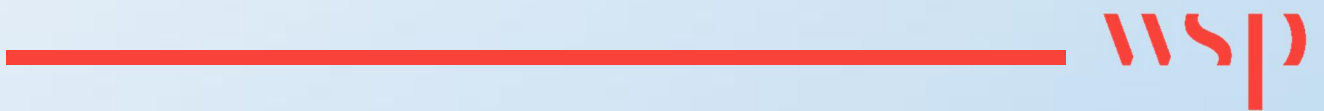
3. Former diesel AST



4. Archaeological Trenches

Appendix C

DESK STUDY RECORDS



Historical Mapping Legends

Ordnance Survey County Series and Ordnance Survey Plan 1:2,500

Quarry **Gravel Pit** **Sand Pit**
Clay Pit **Shingle** **Refuse Heap**
Sloping Masonry **Flat Rock**
Marsh **Reeds** **Osiers**
Rough Pasture **Furze** **Wood**
Mixed Wood **Brushwood** **Orchard**
Fir **Ford** **Stepping Stones**
Ferry **Waterfall** **Lock**
Trig. Station 507 **Altitude at Trig. Station**
B.M. 325.9 **Bench Mark** 342 **Surface Level**
Arrow denotes flow of water **Antiquities (site of)**
Cutting **Embankment**
Railway crossing Road **Level Crossing** **Road crossing Railway**
Railway crossing River or Canal **Road over single stream** **Road over River or Canal**
County Boundary (Geographical)
County & Civil Parish Boundary
Administrative County & Civil Parish Boundary
County Borough Boundary (England)
County Burgh Boundary (Scotland)
Co. Boro. Bdy.
Co. Burgh Bdy.
BP BS **Boundary Post or Stone** **P.C.B** **Police Call Box**
B.R. **Bridle Road** **P** **Pump**
E.P **Electricity Pylon** **S.P** **Signal Post**
F.B. **Foot Bridge** **Sl** **Sluice**
F.P. **Foot Path** **Sp.** **Spring**
G.P **Guide Post or Board** **T.C.B** **Telephone Call Box**
M.S **Mile Stone** **Tr.** **Trough**
M.P M.R **Mooring Post or Ring** **W** **Well**

Ordnance Survey Plan, Additional SIMs and Supply of Unpublished Survey Information 1:2,500 and 1:1,250

Inactive Quarry, Chalk Pit or Clay Pit **Active Quarry, Chalk Pit or Clay Pit**
Rock **Boulders**
Cliff **Slopes** **Top**
Roofed Building **Glazed Roof Building**
Sloping Masonry **Archway**
Non-Coniferous Tree (surveyed) **Coniferous Tree (surveyed)**
Non-Coniferous Trees (not surveyed) **Coniferous Trees (not surveyed)**
Orchard Tree **Scrub** **Bracken**
Coppice, Osier **Reeds** **Marsh, Saltings**
Rough Grassland **Heath** **Culvert**
Direction of water flow **Bench Mark** **Antiquity (site of)**
Cave Entrance **Triangulation Station** **Electricity Pylon**
Electricity Transmission Line
County Boundary (Geographical)
County & Civil Parish Boundary
Civil Parish Boundary
Admin. County or County Bor. Boundary
London Borough Boundary
Symbol marking point where boundary mereing changes
BH **Beer House** **P** **Pillar, Pole or Post**
BP, BS **Boundary Post or Stone** **PO** **Post Office**
Cn, C **Capstan, Crane** **PC** **Public Convenience**
Chy **Chimney** **PH** **Public House**
D Fn **Drinking Fountain** **Pp** **Pump**
EI P **Electricity Pillar or Post** **SB, S Br** **Signal Box or Bridge**
FAP **Fire Alarm Pillar** **SP, SL** **Signal Post or Light**
FB **Foot Bridge** **Spr** **Spring**
GP **Guide Post** **Tk** **Tank or Track**
H **Hydrant or Hydraulic** **TCB** **Telephone Call Box**
LC **Level Crossing** **TCP** **Telephone Call Post**
MH **Manhole** **Tr** **Trough**
MP **Mile Post or Mooring Post** **Wr Pt, Wr T** **Water Point, Water Tap**
MS **Mile Stone** **W** **Well**
NTL **Normal Tidal Limit** **Wd Pp** **Wind Pump**

Large-Scale National Grid Data 1:2,500 and 1:1,250

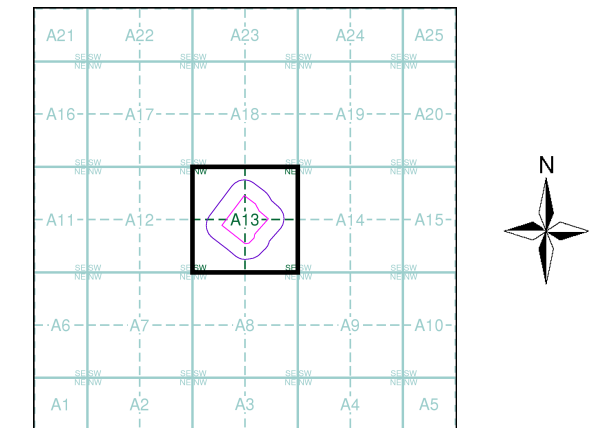
Cliff **Slopes** **Top**
Rock **Rock (scattered)**
Boulders **Boulders (scattered)**
Positioned Boulder **Scree**
Non-Coniferous Tree (surveyed) **Coniferous Tree (surveyed)**
Non-Coniferous Trees (not surveyed) **Coniferous Trees (not surveyed)**
Orchard Tree **Scrub** **Bracken**
Coppice, Osier **Reeds** **Marsh, Saltings**
Rough Grassland **Heath** **Culvert**
Direction of water flow **Triangulation Station** **Antiquity (site of)**
Electricity Transmission Line **Electricity Pylon**
B.M. 231.60m **Bench Mark** **Buildings with Building Seed**
Roofed Building **Glazed Roof Building**
Civil parish/community boundary
District boundary
County boundary
Boundary post/stone
Boundary mereing symbol (note: these always appear in opposed pairs or groups of three)
Bks **Barracks** **P** **Pillar, Pole or Post**
Bty **Battery** **PO** **Post Office**
Cemy **Cemetery** **PC** **Public Convenience**
Chy **Chimney** **Pp** **Pump**
Cis **Cistern** **Ppg Sta** **Pumping Station**
Dismtd Rly **Dismantled Railway** **PW** **Place of Worship**
EI Gen Sta **Electricity Generating Station** **Sewage Ppg Sta** **Sewage Pumping Station**
EI P **Electricity Pole, Pillar** **SB, S Br** **Signal Box or Bridge**
EI Sub Sta **Electricity Sub Station** **SP, SL** **Signal Post or Light**
FB **Filter Bed** **Spr** **Spring**
Fn / D Fn **Fountain / Drinking Ftn.** **Tk** **Tank or Track**
Gas Gov **Gas Valve Compound** **Tr** **Trough**
GVC **Gas Governor** **Wd Pp** **Wind Pump**
GP **Guide Post** **Wr Pt, Wr T** **Water Point, Water Tap**
MH **Manhole** **Wks** **Works (building or area)**
MP, MS **Mile Post or Mile Stone** **W** **Well**



Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Gloucestershire	1:2,500	1884 - 1886	2
Gloucestershire	1:2,500	1902	3
Gloucestershire	1:2,500	1923	4
Gloucestershire	1:2,500	1936	5
Historical Aerial Photography	1:1,250	1946	6
Ordnance Survey Plan	1:1,250	1955 - 1956	7
Ordnance Survey Plan	1:2,500	1956	8
Ordnance Survey Plan	1:1,250	1963 - 1971	9
Ordnance Survey Plan	1:2,500	1965	10
Supply of Unpublished Survey Information	1:1,250	1973 - 1975	11
Ordnance Survey Plan	1:1,250	1975 - 1976	12
Additional SIMs	1:1,250	1984 - 1988	13
Additional SIMs	1:1,250	1987 - 1991	14
Additional SIMs	1:1,250	1988 - 1992	15
Additional SIMs	1:1,250	1989	16
Additional SIMs	1:1,250	1991	17
Large-Scale National Grid Data	1:1,250	1994	18
Large-Scale National Grid Data	1:1,250	1996	19

Historical Map - Segment A13



Order Details

Order Number: 88327116_1_1
 Customer Ref: 70020138-001
 National Grid Reference: 384910, 217910
 Slice: A
 Site Area (Ha): 4.76
 Search Buffer (m): 100

Site Details

Interbrew UK Ltd, Eastern Avenue, GLOUCESTER, GL4 6SW





Gloucestershire

Published 1884 - 1886

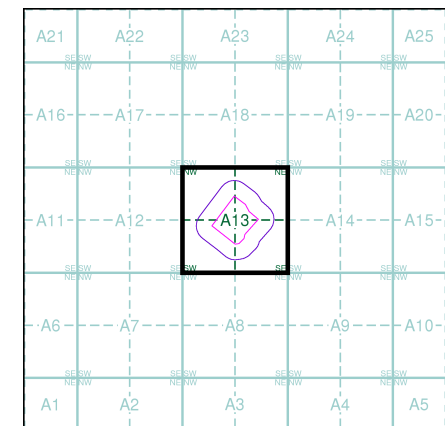
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)

025_15	1886	1:2,500
033_03	1884	1:2,500

Historical Map - Segment A13

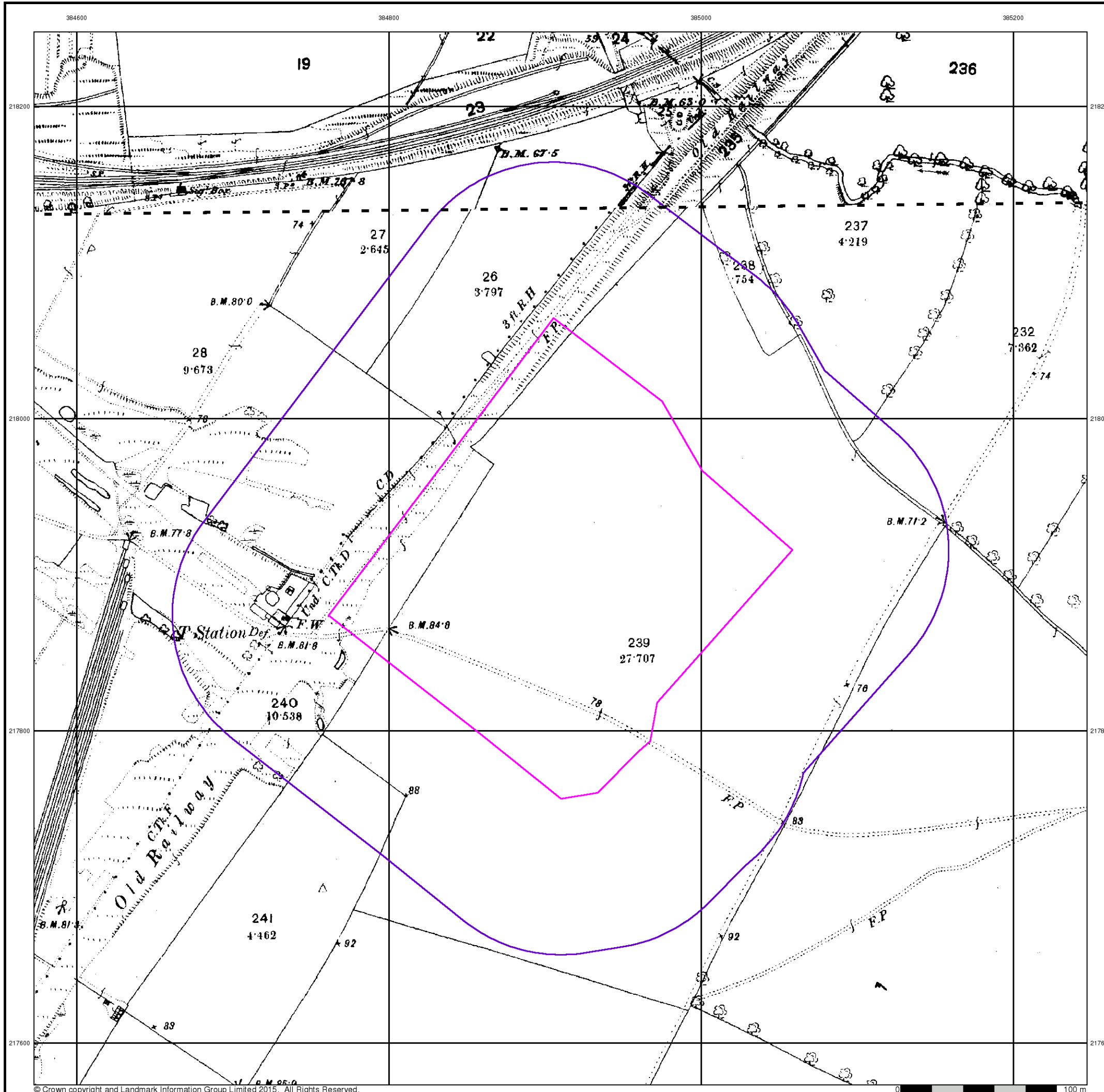


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Site Details

Interbrew UK Ltd, Eastern Avenue, GLOUCESTER, GL4 6SW





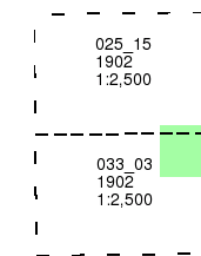
Gloucestershire

Published 1902

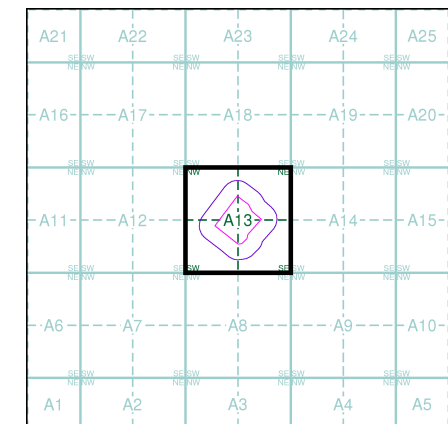
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Map Name(s) and Date(s)



Historical Map - Segment A13

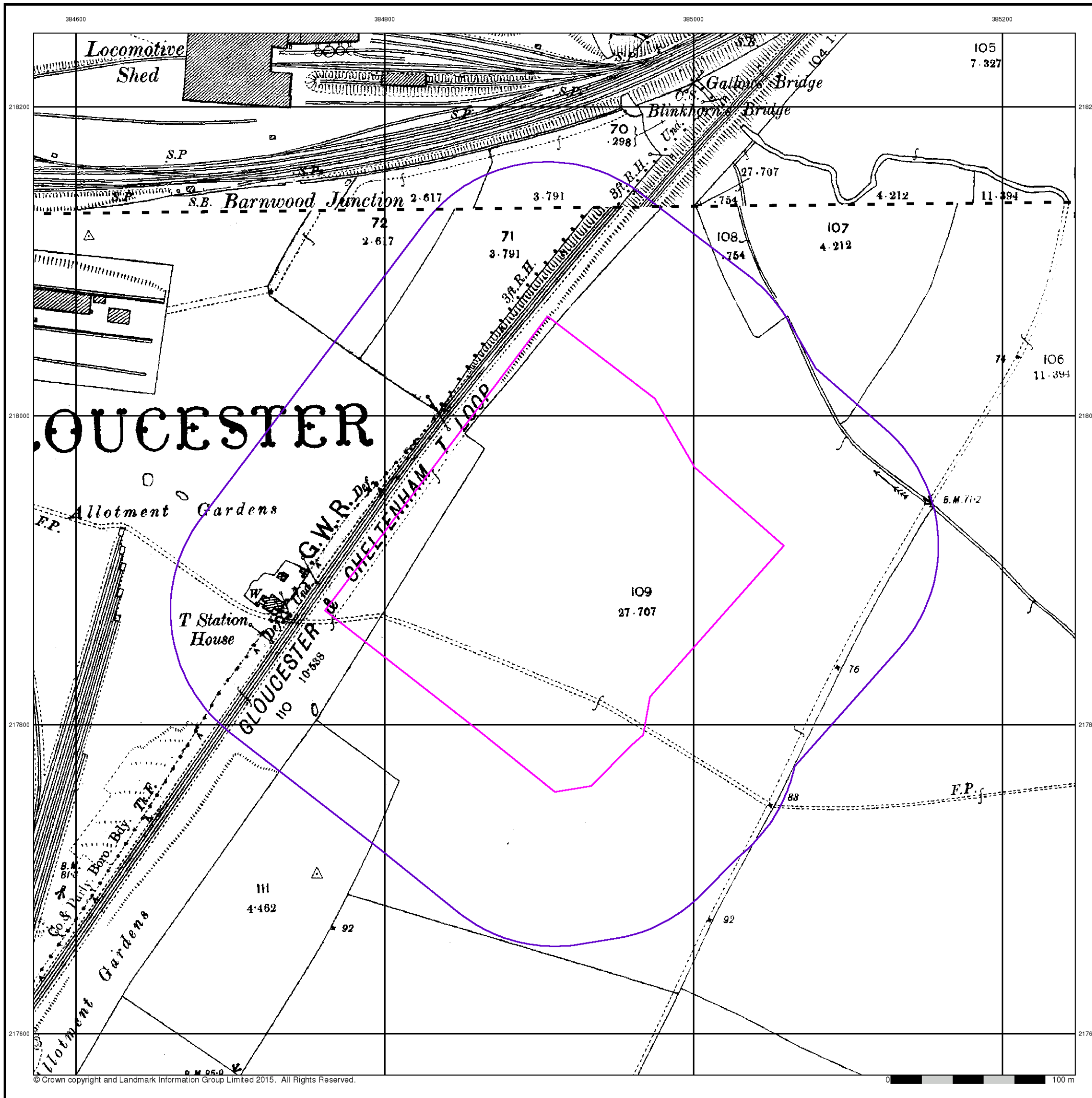


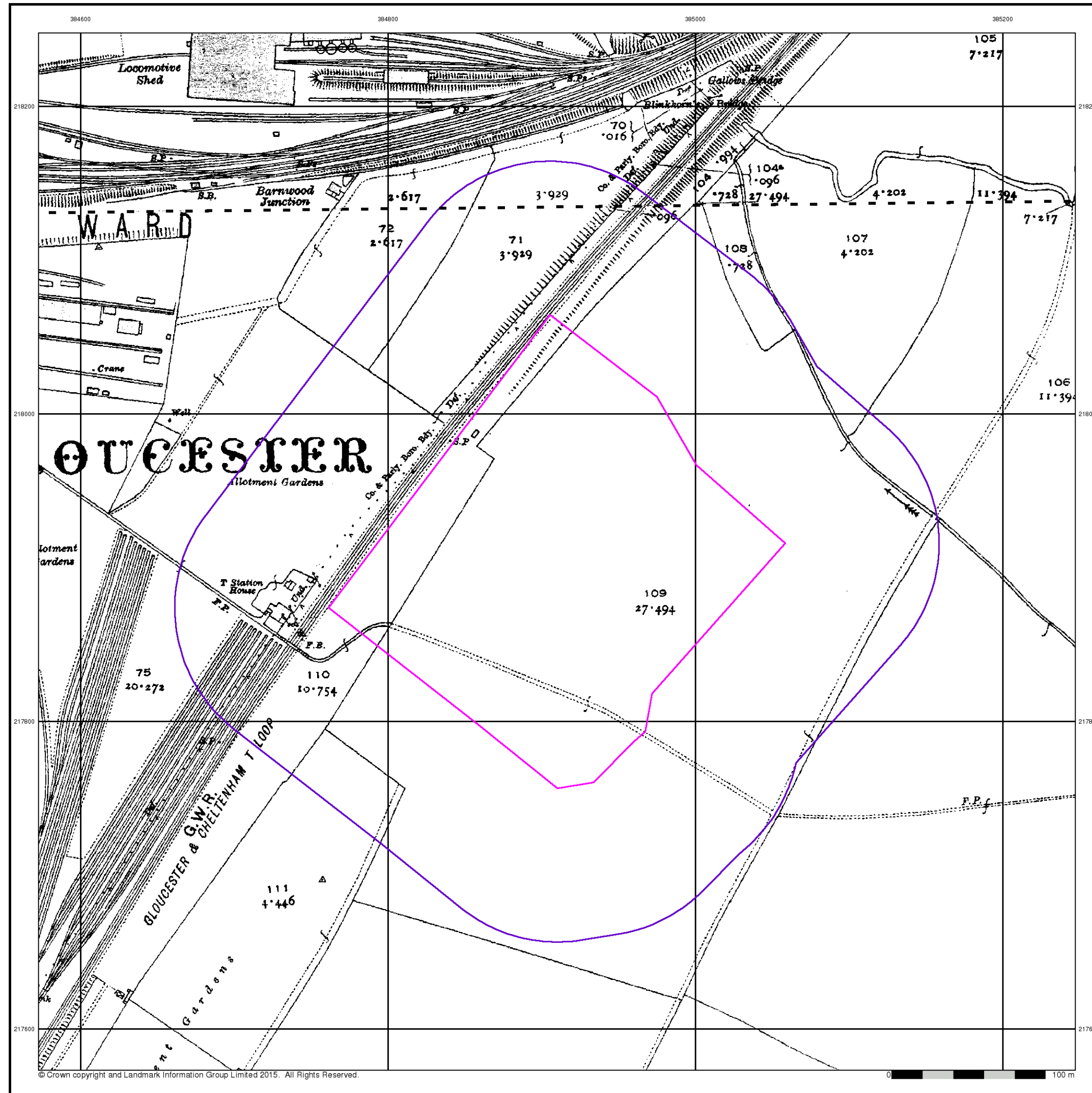
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Slice: A
Site Area (Ha): 4.76
Search Buffer (m): 100

Site Details

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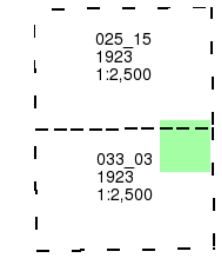




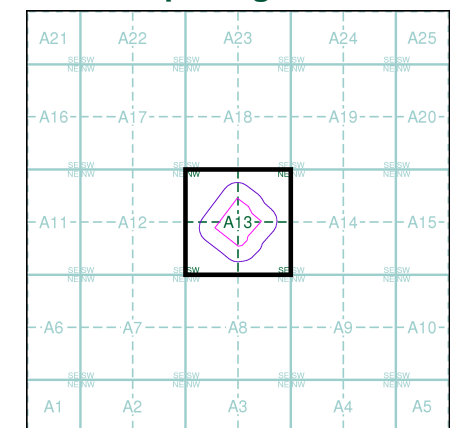
Gloucestershire
Published 1923
Source map scale - 1:2,500

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Map Name(s) and Date(s)



Historical Map - Segment A13



Order Details

Order Number: 88327116_1_1
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Site Details

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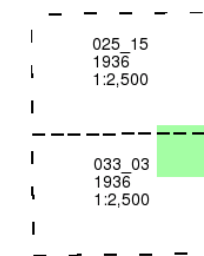
Gloucestershire

Published 1936

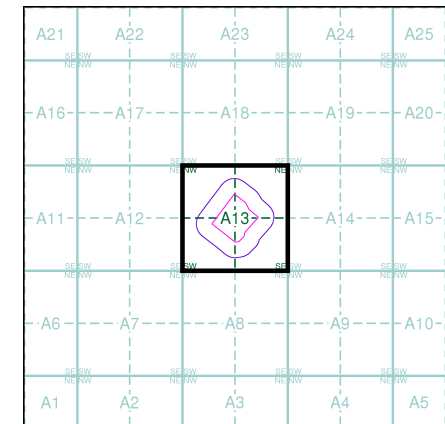
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Map Name(s) and Date(s)



Historical Map - Segment A13



Order Details

Order Number: 88327116_1_1
Customer Ref: 70020138-001
National Grid Reference: 384910, 217910
Slice: A
Site Area (Ha): 4.76
Search Buffer (m): 100

Site Details

Interbrew UK Ltd, Eastern Avenue, GLOUCESTER, GL4 6SW





Historical Aerial Photography

Published 1946

Source map scale - 1:1,250

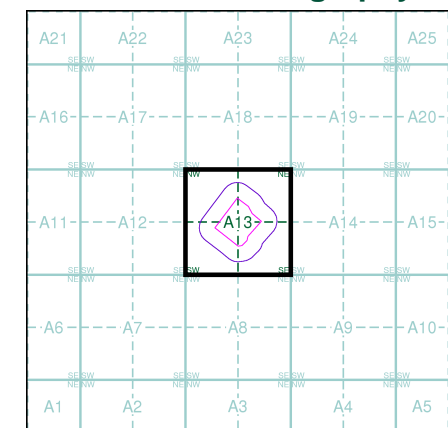
The Historical Aerial Photos were produced by the Ordnance Survey at a scale of 1:1,250 and 1:10,560 from Air Force photography. They were produced between 1944 and 1951 as an interim measure, pending preparation of conventional mapping, due to post war resource shortages. New security measures in the 1950's meant that every photograph was re-checked for potentially unsafe information with security sites replaced by fake fields or clouds. The original editions were withdrawn and only later made available after a period of fifty years although due to the accuracy of the editing, without viewing both revisions it is not easy to spot the edits. Where available Landmark have included both revisions.

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Map Name(s) and Date(s)

SO8418SE 1946 1:1,250	SO8518SW 1946 1:1,250
SO8417NE 1946 1:1,250	SO8517NW 1946 1:1,250

Historical Aerial Photography - Segment A13

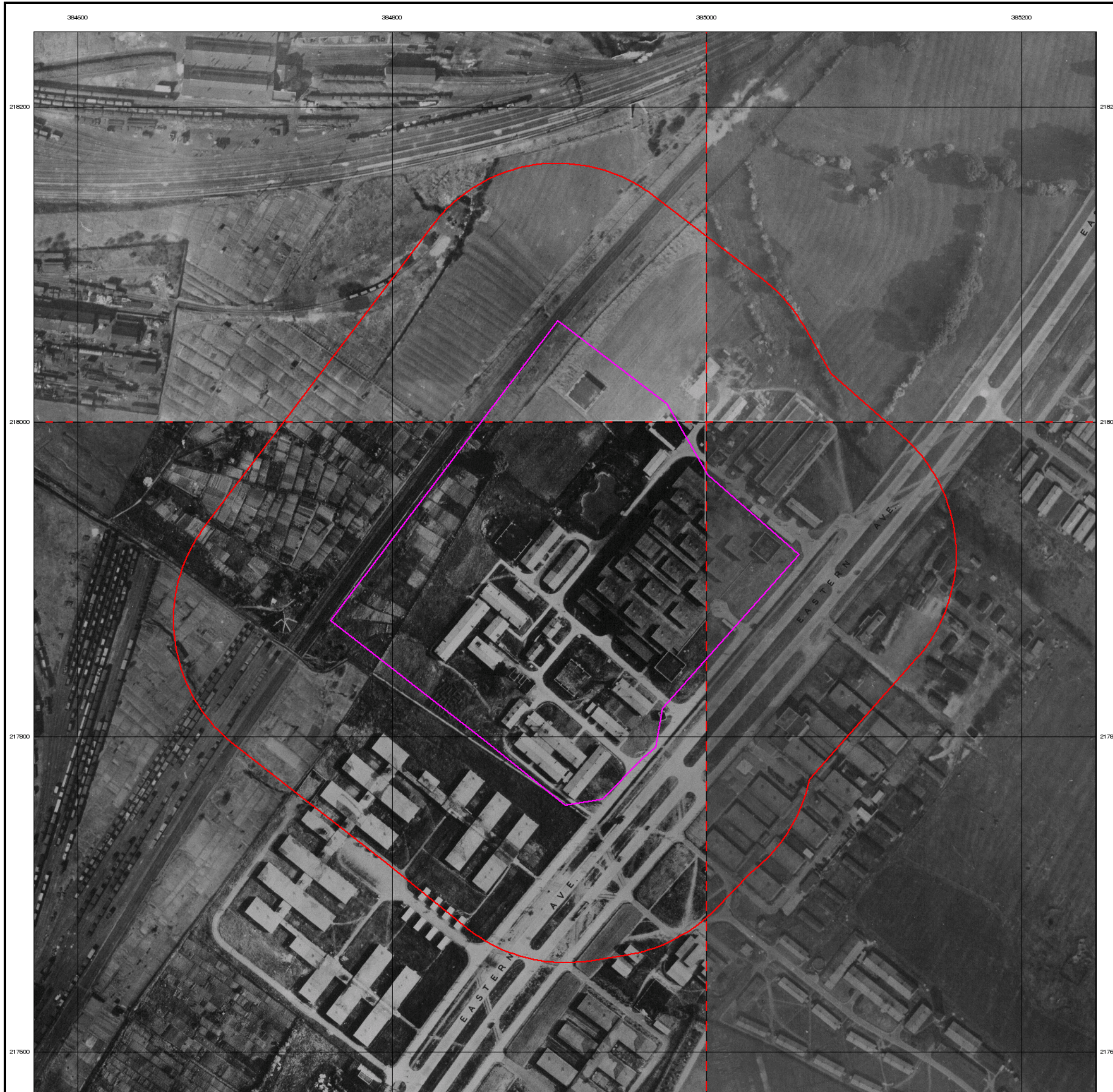


Order Details

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 National Grid Reference: 384910, 217910
 Slice: A
 Site Area (Ha): 4.76
 Search Buffer (m): 100

Site Details

Interbrew UK Ltd, Eastern Avenue, GLOUCESTER, GL4 6SW



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0 100 m



Ordnance Survey Plan

Published 1955 - 1956

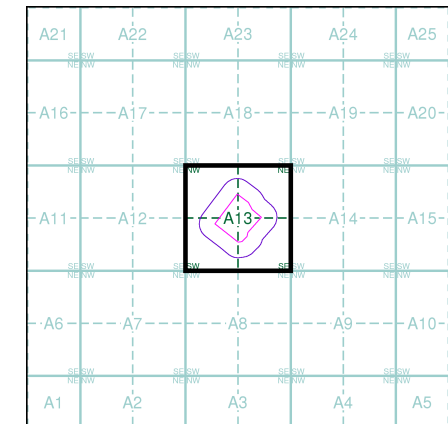
Source map scale - 1:1,250

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)

SO8418SE 1955 1:1,250	SO8518SW 1956 1:1,250
SO8417NE 1955 1:1,250	SO8517NW 1955 1:1,250

Historical Map - Segment A13

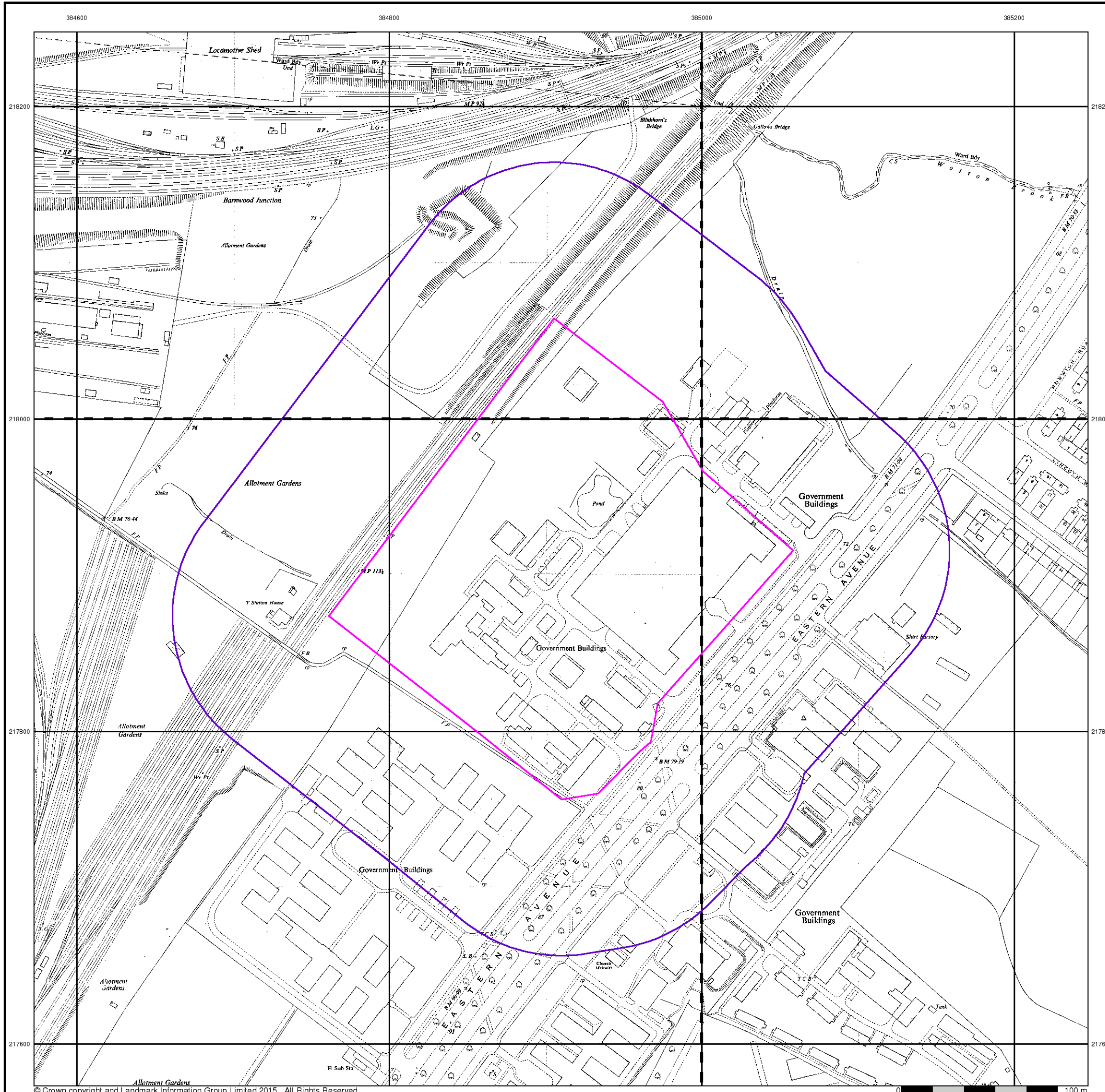


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 Customer Ref: 70020138-001
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Site Details

Interbrew UK Ltd, Eastern Avenue, GLOUCESTER, GL4 6SW





Ordnance Survey Plan

Published 1956

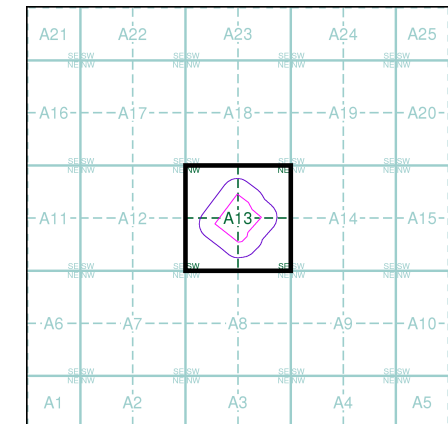
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)

SO8418 1956 12,500	SO8518 1956 12,500
SO8417 1956 12,500	SO8517 1956 12,500

Historical Map - Segment A13

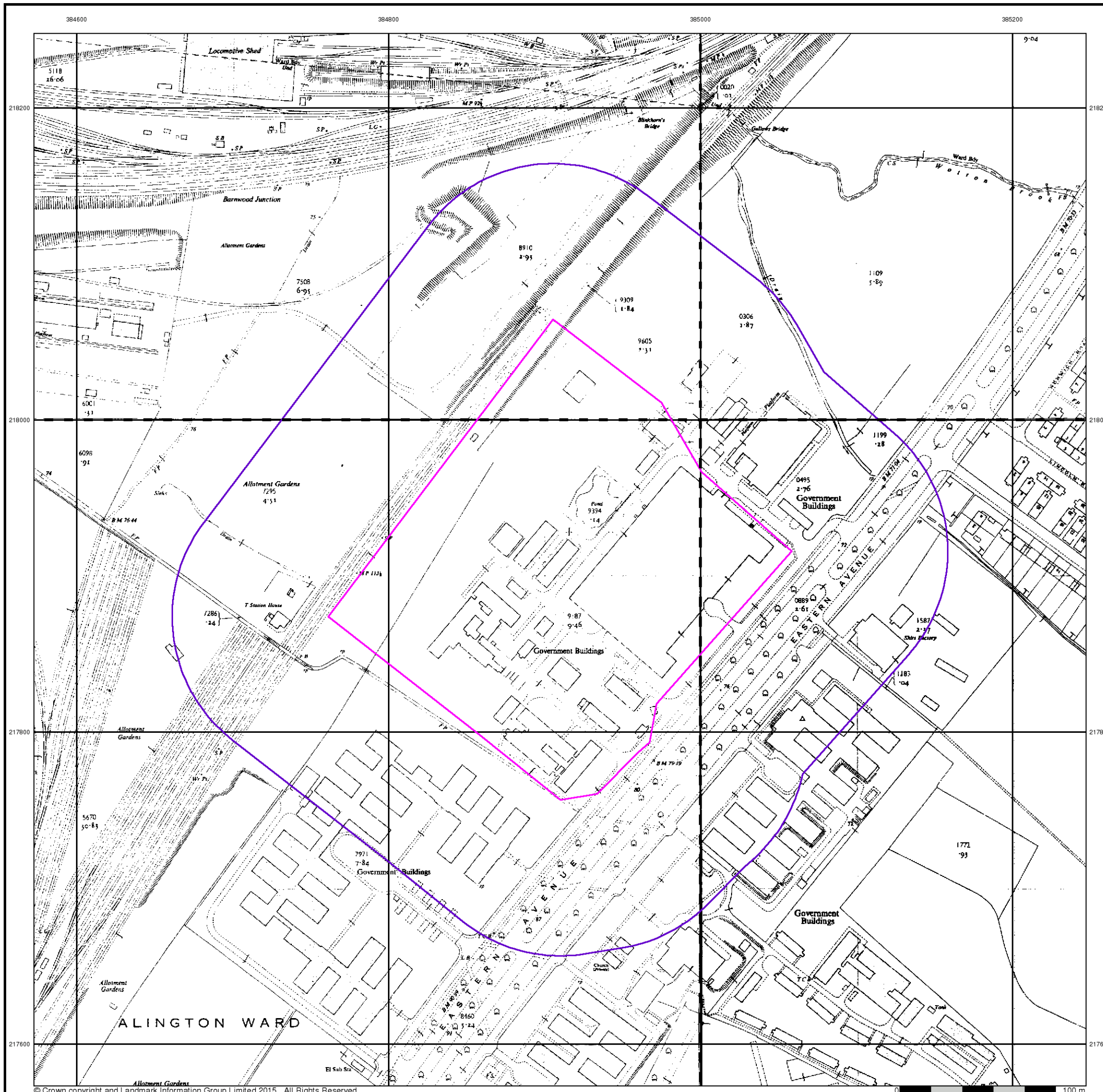


Order Details

Order Number: 88327116_1_1
 Customer Ref: 70020138-001
 National Grid Reference: 384910, 217910
 Slice: A
 Site Area (Ha): 4.76
 Search Buffer (m): 100

Site Details

Interbrew UK Ltd, Eastern Avenue, GLOUCESTER, GL4 6SW





Ordnance Survey Plan

Published 1963 - 1971

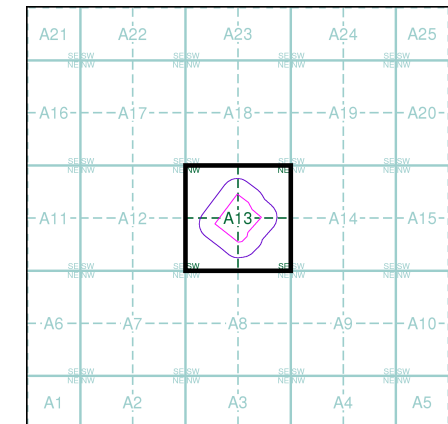
Source map scale - 1:1,250

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)

SO8418SE 1971 1:1,250	SO8518SW 1963 1:1,250
SO8417NE 1970 1:1,250	SO8517NW 1965 1:1,250

Historical Map - Segment A13

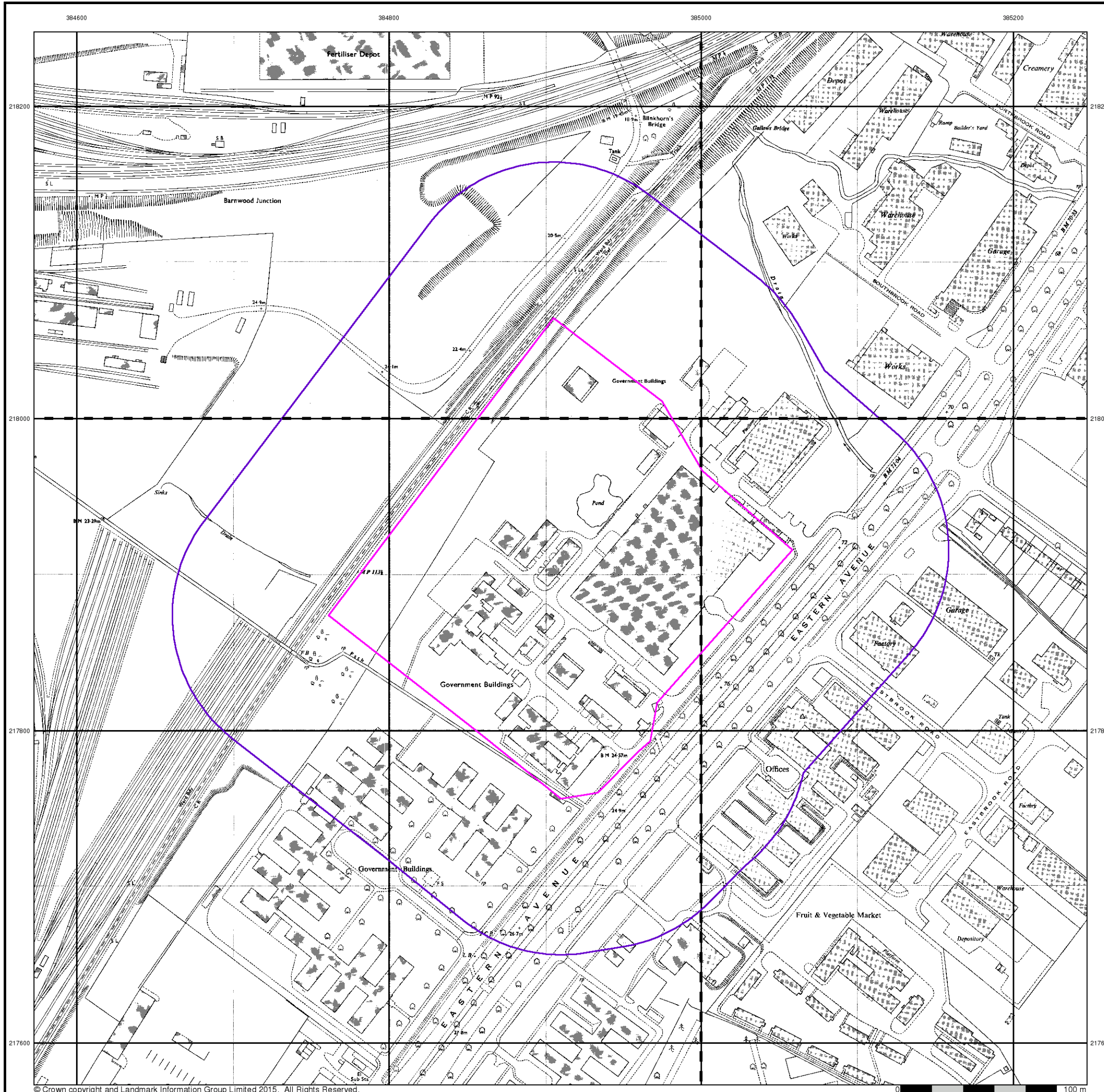


Order Details

Order Number: 88327116_1_1
 Customer Ref: 70020138-001
 National Grid Reference: 384910, 217910
 Slice: A
 Site Area (Ha): 4.76
 Search Buffer (m): 100

Site Details

Interbrew UK Ltd, Eastern Avenue, GLOUCESTER, GL4 6SW





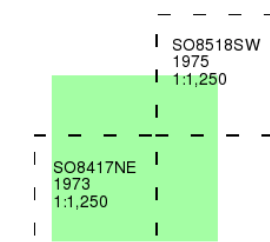
Supply of Unpublished Survey Information

Published 1973 - 1975

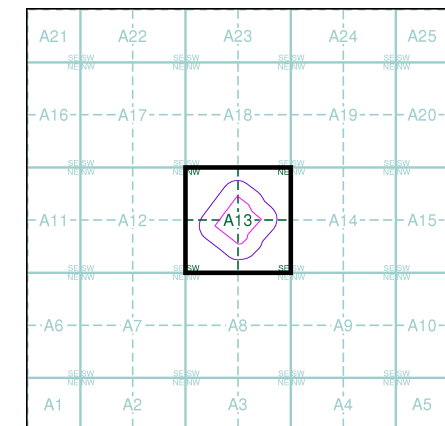
Source map scale - 1:1,250

SUSI maps (Supply of Unpublished Survey Information) were produced between 1972 and 1977, mainly for internal use at Ordnance Survey. These were more of a 'work-in-progress' plan as they showed updates of individual areas on a map. These maps were unpublished, and they do not represent a single moment in time. They were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)



Historical Map - Segment A13

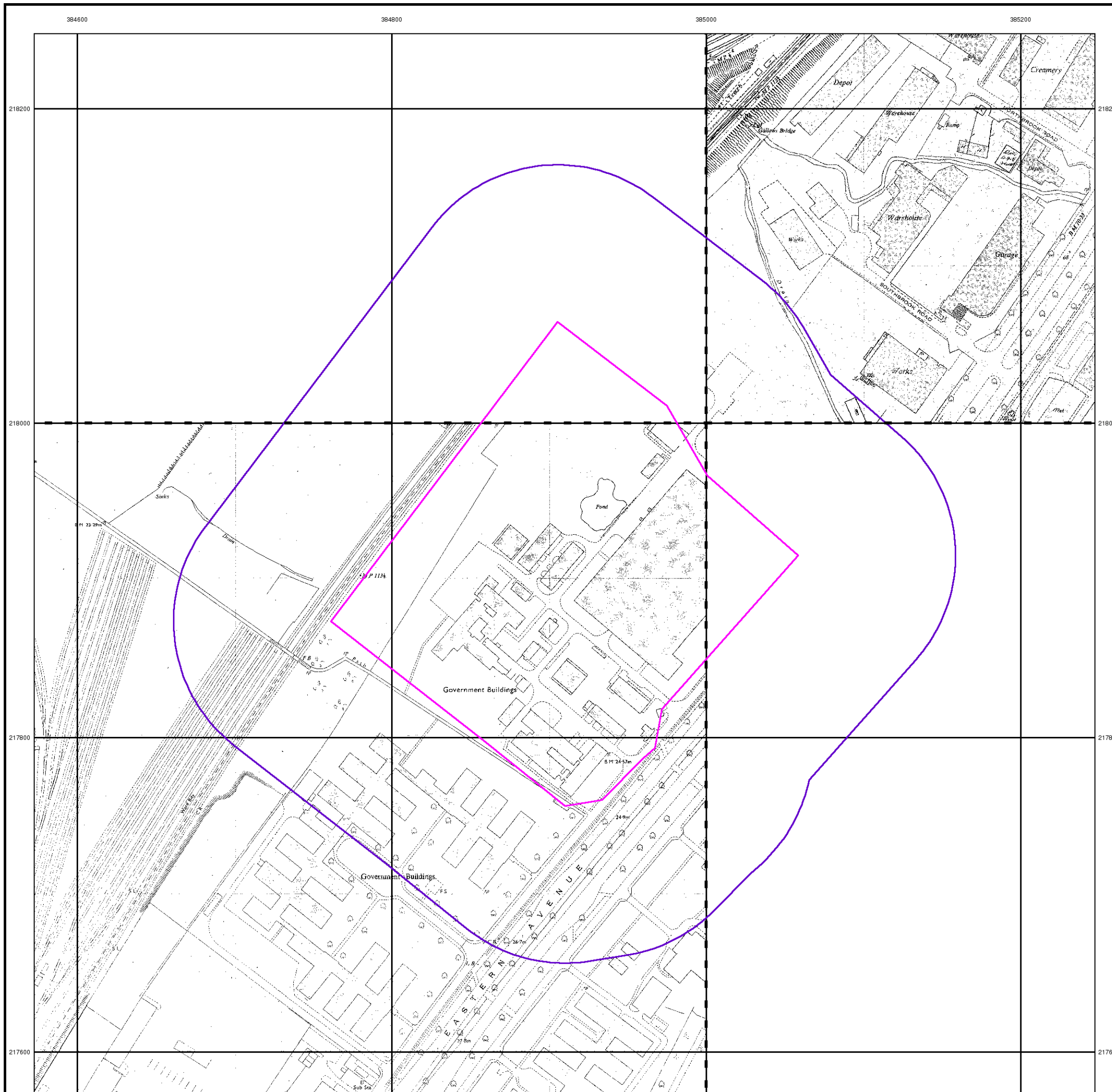


Order Details

Order Number: 88327116_1_1
Customer Ref: 70020138-001
National Grid Reference: 384910, 217910
Slice: A
Site Area (Ha): 4.76
Search Buffer (m): 100

Site Details

Interbrew UK Ltd, Eastern Avenue, GLOUCESTER, GL4 6SW





Ordnance Survey Plan

Published 1975 - 1976

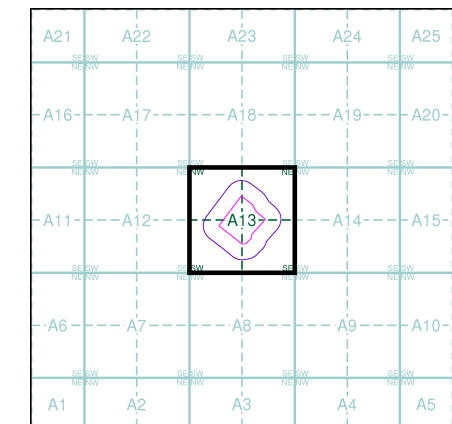
Source map scale - 1:1,250

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)

SO8518SW	1976	1:1,250
SO8517NW	1975	1:1,250

Historical Map - Segment A13

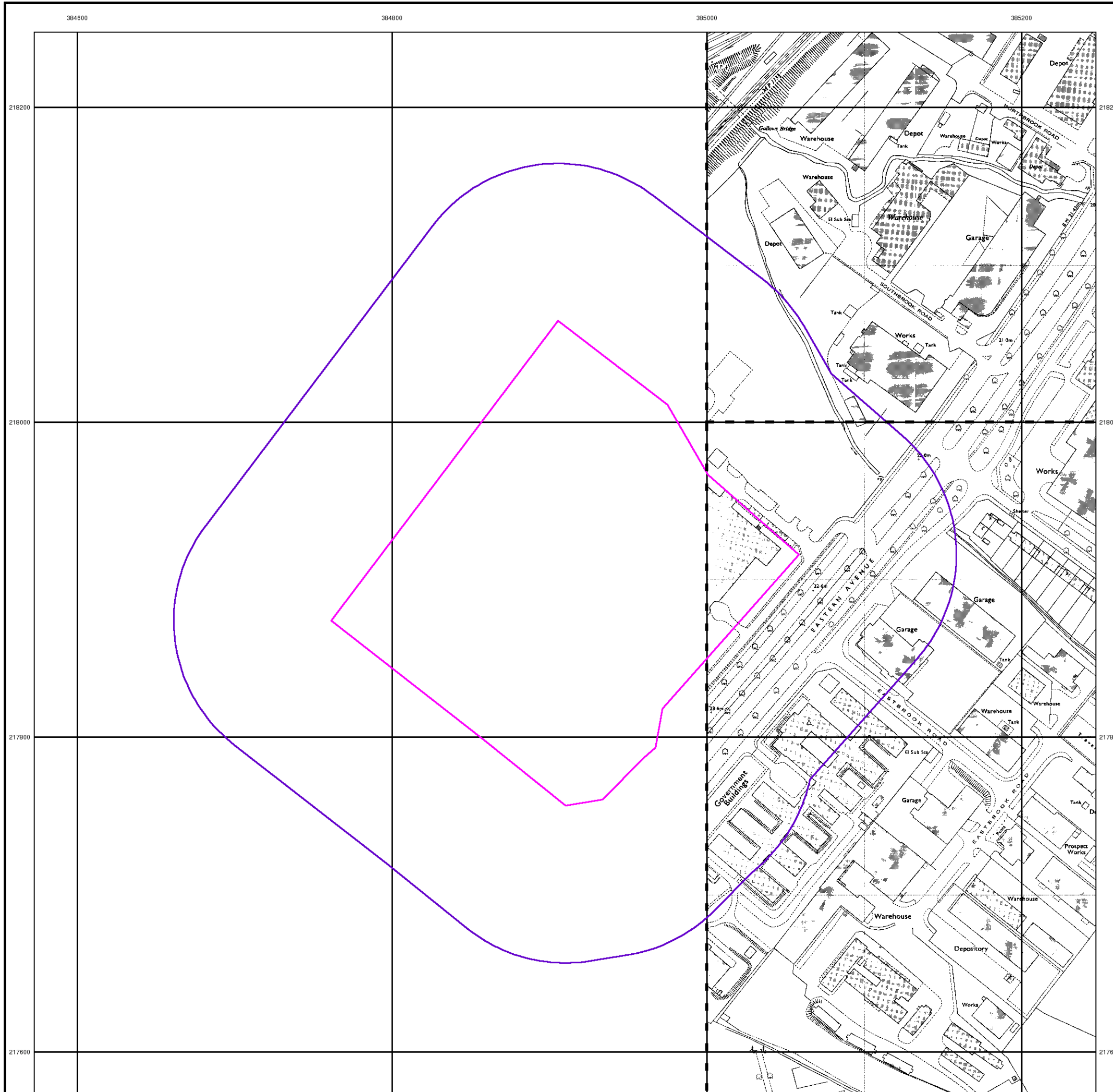


Order Details

Order Number: 88327116_1_1
 Customer Ref: 70020138-001
 National Grid Reference: 384910, 217910
 Slice: A
 Site Area (Ha): 4.76
 Search Buffer (m): 100

Site Details

Interbrew UK Ltd, Eastern Avenue, GLOUCESTER, GL4 6SW





Additional SIMs

Published 1984 - 1988

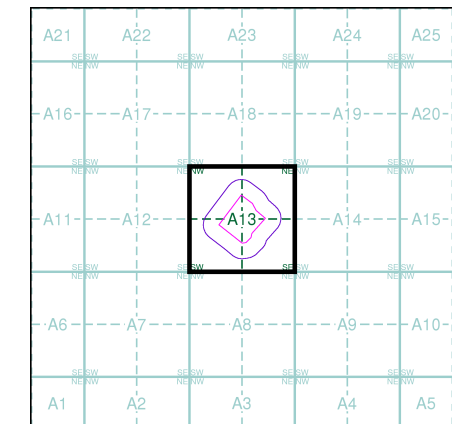
Source map scale - 1:1,250

The SIM cards (Ordnance Survey's 'Survey of Information on Microfilm') are further, minor editions of mapping which were produced and published in between the main editions as an area was updated. They date from 1947 to 1994, and contain detailed information on buildings, roads and land-use. These maps were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)

SO8418SE 1984 1:1,250	SO8518SW 1984 1:1,250
SO8417NE 1985 1:1,250	SO8517NW 1988 1:1,250

Historical Map - Segment A13

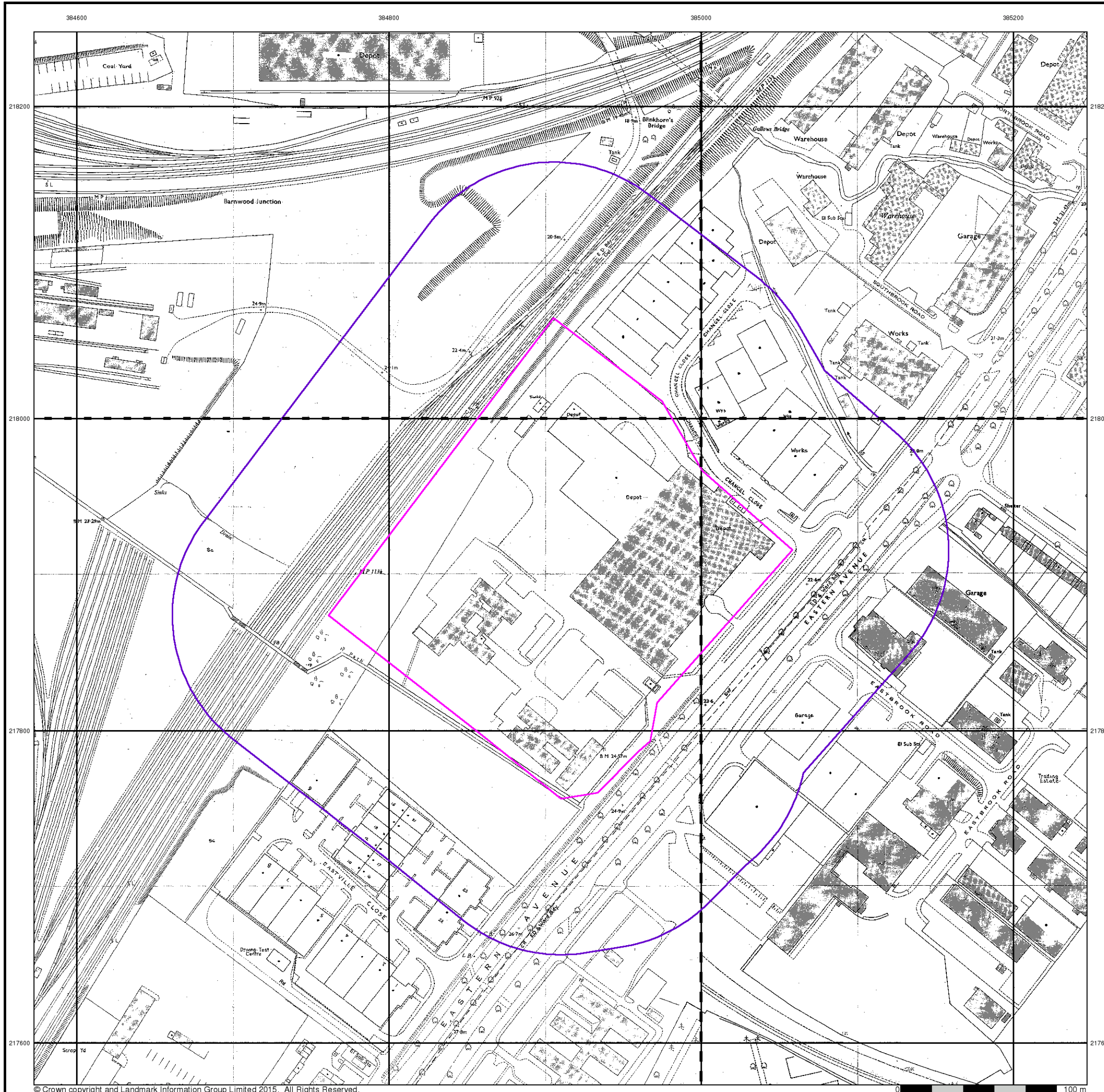


Order Details

Order Number: 88327116_1_1
 Customer Ref: 70020138-001
 National Grid Reference: 384910, 217910
 Slice: A
 Site Area (Ha): 4.76
 Search Buffer (m): 100

Site Details

Interbrew UK Ltd, Eastern Avenue, GLOUCESTER, GL4 6SW





Additional SIMs

Published 1987 - 1991

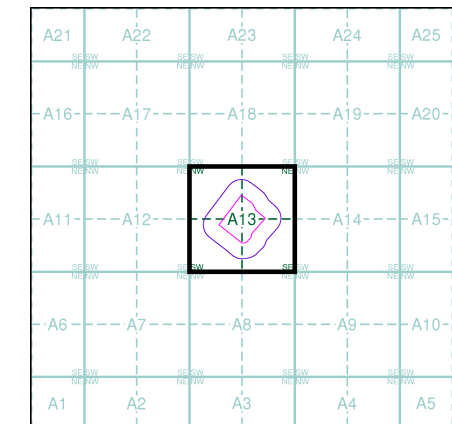
Source map scale - 1:1,250

The SIM cards (Ordnance Survey's 'Survey of Information on Microfilm') are further, minor editions of mapping which were produced and published in between the main editions as an area was updated. They date from 1947 to 1994, and contain detailed information on buildings, roads and land-use. These maps were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)

SO8418SE 1987 1:1,250	SO8518SW 1991 1:1,250
SO8417NE 1990 1:1,250	SO8517NW 1988 1:1,250

Historical Map - Segment A13

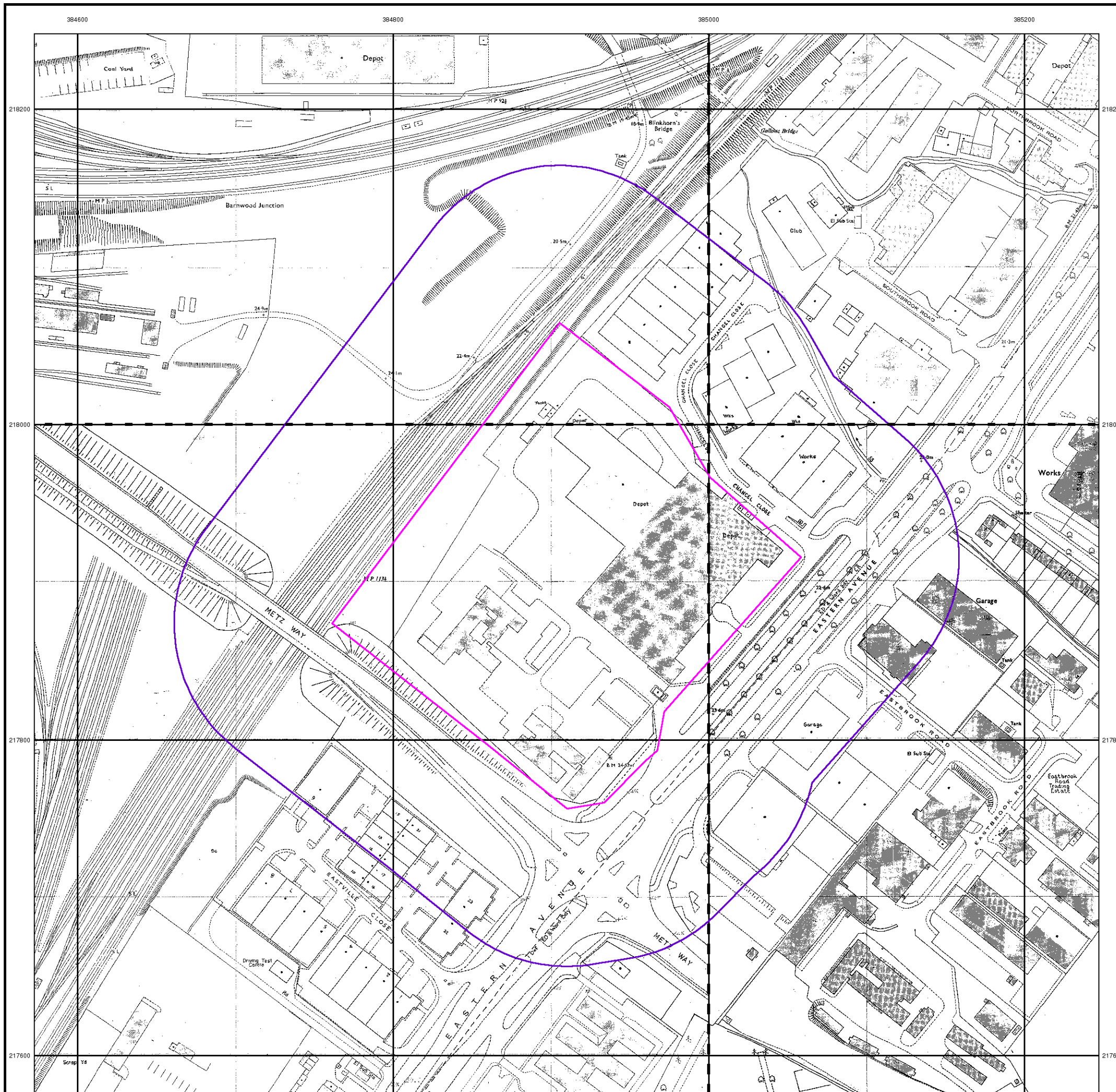


Order Details

Order Number: 88327116_1_1
 Customer Ref: 70020138-001
 National Grid Reference: 384910, 217910
 Slice: A
 Site Area (Ha): 4.76
 Search Buffer (m): 100

Site Details

Interbrew UK Ltd, Eastern Avenue, GLOUCESTER, GL4 6SW





Additional SIMs

Published 1988 - 1992

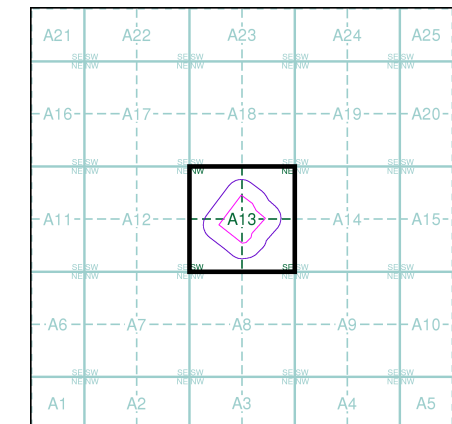
Source map scale - 1:1,250

The SIM cards (Ordnance Survey's 'Survey of Information on Microfilm') are further, minor editions of mapping which were produced and published in between the main editions as an area was updated. They date from 1947 to 1994, and contain detailed information on buildings, roads and land-use. These maps were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)

SO8418SE	1988	1:1,250
SO8417NE	1991	1:1,250
SO8517NW	1992	1:1,250

Historical Map - Segment A13



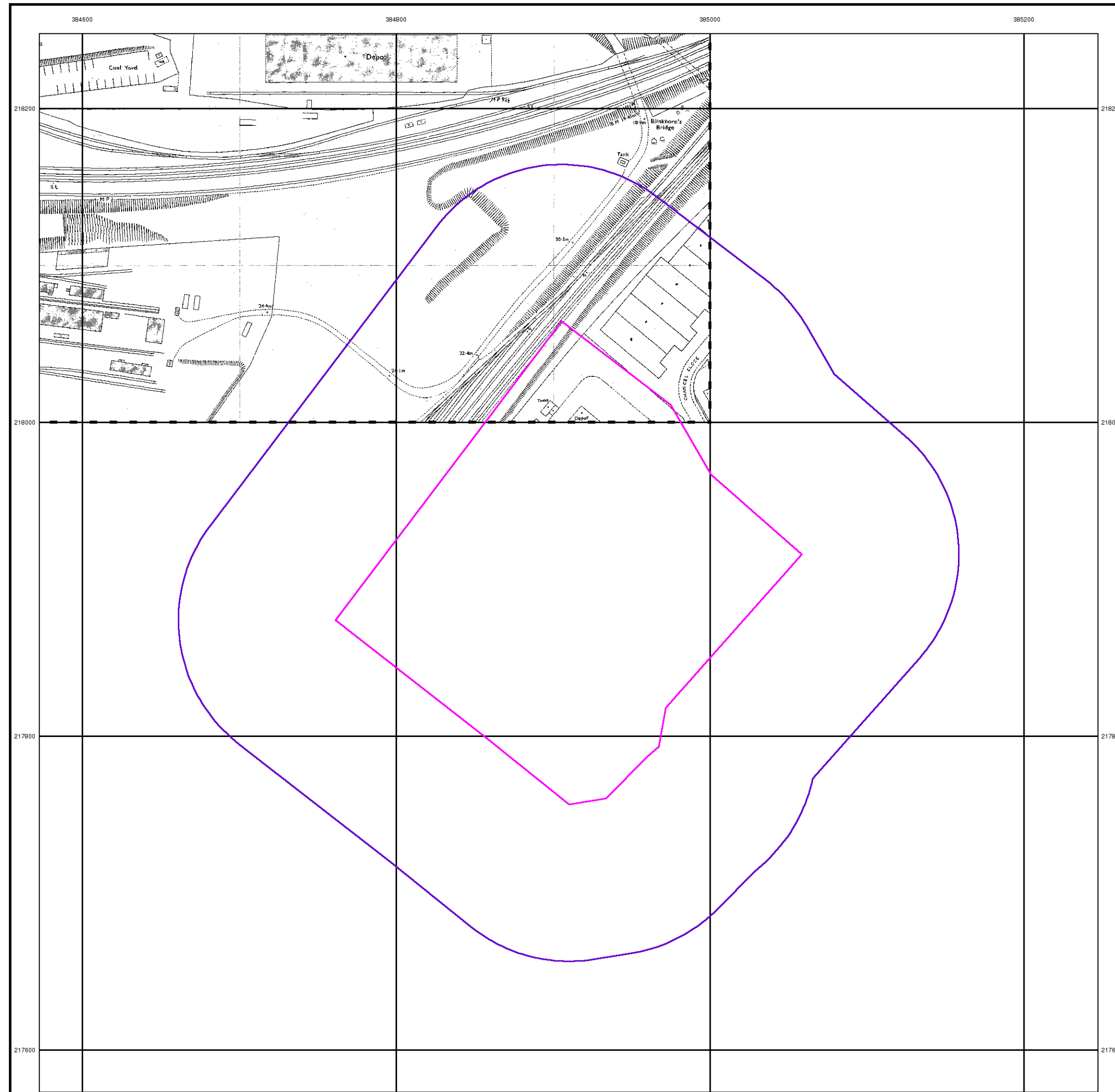
Order Details

Order Number: 88327116_1_1
 Customer Ref: 70020138-001
 National Grid Reference: 384910, 217910
 Slice: A
 Site Area (Ha): 4.76
 Search Buffer (m): 100

Site Details

Interbrew UK Ltd, Eastern Avenue, GLOUCESTER, GL4 6SW

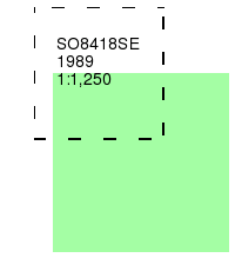




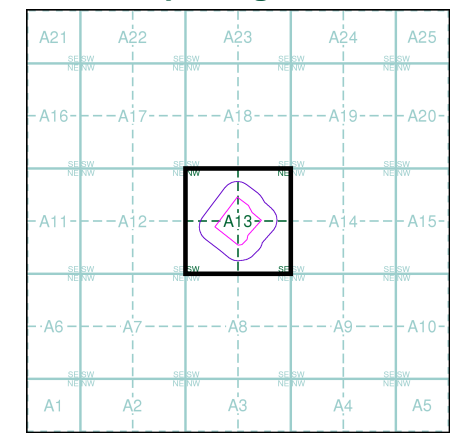
**Additional SIMs
Published 1989
Source map scale - 1:1,250**

The SIM cards (Ordnance Survey's 'Survey of Information on Microfilm') are further, minor editions of mapping which were produced and published in between the main editions as an area was updated. They date from 1947 to 1994, and contain detailed information on buildings, roads and land-use. These maps were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)



Historical Map - Segment A13



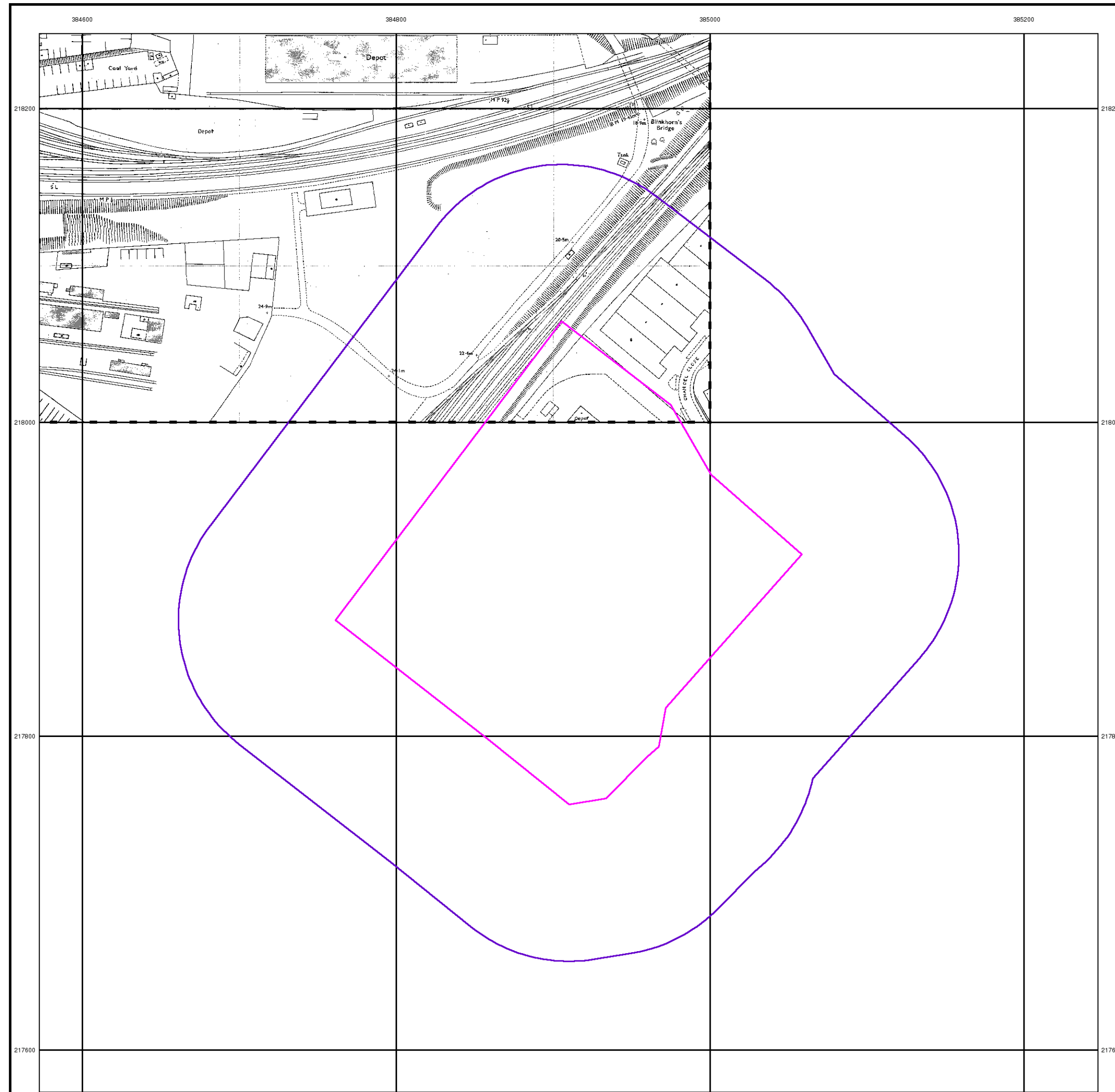
Order Details

Order Number: 88327116_1_1
 Customer Ref: 70020138-001
 National Grid Reference: 384910, 217910
 Slice: A
 Site Area (Ha): 4.76
 Search Buffer (m): 100

Site Details

Interbrew UK Ltd, Eastern Avenue, GLOUCESTER, GL4 6SW

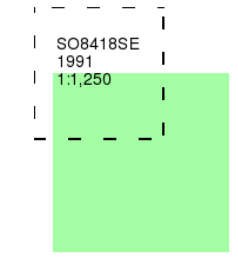




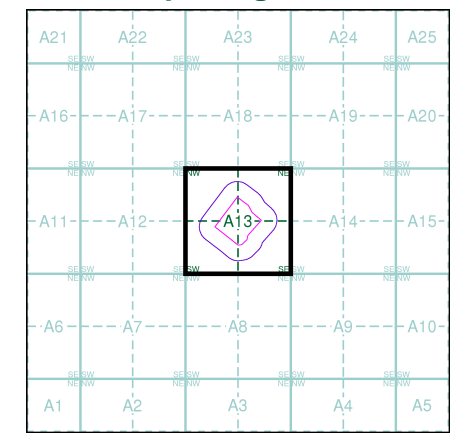
Additional SIMs
Published 1991
Source map scale - 1:1,250

The SIM cards (Ordnance Survey's 'Survey of Information on Microfilm') are further, minor editions of mapping which were produced and published in between the main editions as an area was updated. They date from 1947 to 1994, and contain detailed information on buildings, roads and land-use. These maps were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)



Historical Map - Segment A13



Order Details

Order Number: 88327116_1_1
 Customer Ref: 70020138-001
 National Grid Reference: 384910, 217910
 Slice: A
 Site Area (Ha): 4.76
 Search Buffer (m): 100

Site Details

Interbrew UK Ltd, Eastern Avenue, GLOUCESTER, GL4 6SW





Large-Scale National Grid Data

Published 1994

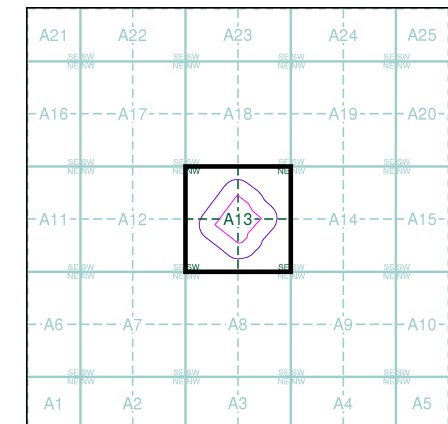
Source map scale - 1:1,250

'Large Scale National Grid Data' superseded SIM cards (Ordnance Survey's 'Survey of Information on Microfilm') in 1992, and continued to be produced until 1999. These maps were the fore-runners of digital mapping and so provide detailed information on houses and roads, but tend to show less topographic features such as vegetation. These maps were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)

SO8418SE 1994 1:1,250	SO8518SW 1994 1:1,250
SO8417NE 1994 1:1,250	SO8517NW 1994 1:1,250

Historical Map - Segment A13

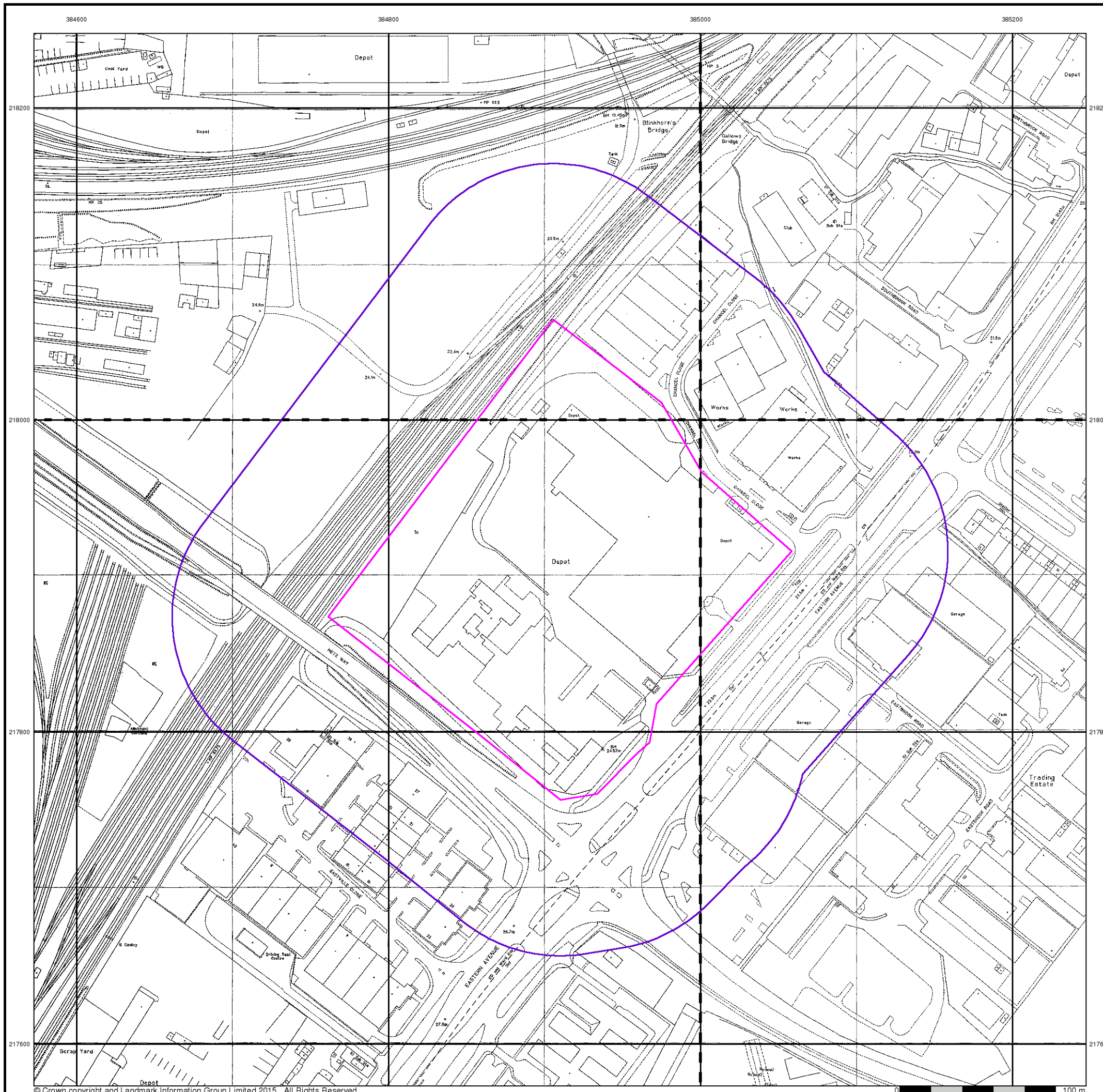


Order Details

Order Number: 88327116_1_1
 Customer Ref: 70020138-001
 National Grid Reference: 384910, 217910
 Slice: A
 Site Area (Ha): 4.76
 Search Buffer (m): 100

Site Details

Interbrew UK Ltd, Eastern Avenue, GLOUCESTER, GL4 6SW





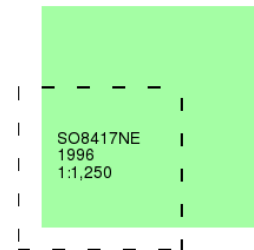
Large-Scale National Grid Data

Published 1996

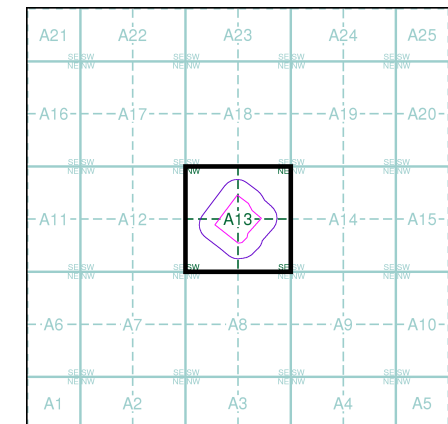
Source map scale - 1:1,250

'Large Scale National Grid Data' superseded SIM cards (Ordnance Survey's 'Survey of Information on Microfilm') in 1992, and continued to be produced until 1999. These maps were the fore-runners of digital mapping and so provide detailed information on houses and roads, but tend to show less topographic features such as vegetation. These maps were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)



Historical Map - Segment A13



Order Details

Order Number: 88327116_1_1
Customer Ref: 70020138-001
National Grid Reference: 384910, 217910
Slice: A
Site Area (Ha): 4.76
Search Buffer (m): 100

Site Details

Interbrew UK Ltd, Eastern Avenue, GLOUCESTER, GL4 6SW



Name of Shaft or Bore given by Geological Survey:

50 81 NE/8A

Name and Number given by owner:

Borehole No. 1.

Nat. Grid Reference

85133

For whom made

Town or Village *Gloucester*

County

1" N.S. Map No.

1" O.S. Map No.

Confidential or not

Exact site

Attach a tracing from a map, or a sketch-map, if possible.

234

Purpose for which made

Ground Level at ^{shaft}bore relative to O.D.

If not ground level give O.D. of beginning of ^{shaft}bore

Made by

Date of sinking

Information from

Date received

Examined by

SPECIMEN NUMBERS AND ADDITIONAL NOTES

(For Survey use only)

GEOLOGICAL CLASSIFICATION

DESCRIPTION OF STRATA

THICKNESS

DEPTH

Ft

in.

Ft

in.

Top soil

Firm to stiff grey and brown

slightly silty clay

Stiff grey shaley clay with occasional iron-stained shale layers

Very stiff grey clay shale with occasional stiff clay, silty and brittle in parts

1 0 (0.30) 0

4 9 (1.35) 9

7 9 (2.11) 13 6

9 6 (7.0) 23 0

Name of Shaft or Bore given by Geological Survey:

SO 81 NE/8B

Name and Number given by owner:

Borehole No. 2

Nat. Grid Reference

85129 18120

For whom made

Town or Village Gloucester

County

Exact site

Attach a tracing from a map, or a sketch-map, if possible.

1" N.S. Map No.

1" O.S. Map No.

Confidential or not

234

Purpose for which made

Ground Level at shaft bore relative to O.D.

If not ground level give O.D. of beginning of shaft bore

Made by

Date of sinking

Information from

Date received

Examined by

SPECIMEN NUMBERS AND ADDITIONAL NOTES

(For Survey use only)

GEOLOGICAL CLASSIFICATION

DESCRIPTION OF STRATA

THICKNESS

DEPTH

Ft

in.

Ft

in.

Loamy topsoil

Firm becoming stiff with depth, yellowish and mottled clay

Stiff grey, weathered yellow in part, silty shaley clay becoming stiffer with increasing depth

Very stiff grey shaley clay with occasional hard shale layers

1

0

(m) 0.30

0

3

3

(30) 4

3

8

3

(3.8) 12

6

9

0

(55) 21

6

Name of Shaft or Bore given by Geological Survey:

SO 81 NE/ 80

Name and Number given by owner:

Borehole No. 3

Nat. Grid Reference

85138 18155

For whom made

Town or Village Gloucester

County

Exact site

Attach a tracing from a map, or a sketch-map, if possible.

1" N.S. Map No.

1" O.S. Map No.

Confidential or not

234

Purpose for which made

Ground Level at shaft bore relative to O.D. If not ground level give O.D. of beginning of shaft bore

Made by

Date of sinking

Information from

Date received

Examined by

SPECIMEN NUMBERS AND ADDITIONAL NOTES

(For Survey use only)

GEOLOGICAL CLASSIFICATION

DESCRIPTION OF STRATA

THICKNESS

DEPTH

Ft

in.

Ft

in.

Topsoil

Fine yellowish silty clay

Brownish silty clay

Firm to stiff mottled silty clay becoming stiff and shaley with increasing depth

Very stiff grey shaley clay with occasional hard shale layers

(M)

9 (2.3)

9

2

9 (2.3)

6

6 (1.2)

0

4

9 (2.7)

9

12

3 (0.9)

0

SO 81 NE/8D

Name of Shaft or Bore given by Geological Survey:

Name and Number given by owner:

Borehole No. 4.

Nat. Grid Reference

85164 18150

For whom made

Town or Village Gloucester

County

1" N.S. Map No.

1" O.S. Map No.

Confidential or not

234

Exact site

(Attach a tracing from a map, or a sketch-map, if possible.

Purpose for which made

Ground Level at shaft bore relative to O.D.

If not ground level give O.D. of beginning of shaft bore

Made by

Date of sinking

Information from

Date received

Examined by

SPECIMEN NUMBERS AND ADDITIONAL NOTES

(For Survey use only) GEOLOGICAL CLASSIFICATION	DESCRIPTION OF STRATA	THICKNESS		DEPTH	
		Ft	in.	Ft	in.
	Topsoil	1	0 (0-30)	0	0
	Firm to stiff yellowish brown silty clay	B	0 (1-22)	0	0
	Firm to stiff mottled silty fissured clay	1	3 (1-60)	3	3
	Stiff grey shaley clay with some hard shale layers	15	3 (0-25)	20	6

To: [REDACTED]
Subject: RE: Eastern Avenue, Gloucester

From: [REDACTED]
Sent: 14 June 2016 14:40
To: [REDACTED]
Cc: [REDACTED]
Subject: RE: Eastern Avenue, Gloucester

Please find below a pre-desk study assessment for the site. It appears that the site was part of an RAF facility during WWII (RAF Barnwood), with an associated military camp possibly related to a local Anti-Aircraft (AA) gun battery and as accommodation for American troops in the build-up to D-Day. Likely that some more detailed research would unveil some useful plans indicating exact use of each building.

Hope this helps for now. If you have any questions, don't hesitate to contact us.



Pre-Desk Study Assessment

Site:	Eastern Avenue, Gloucester
Client:	WSP Parsons Brinckerhoff
Contact:	[REDACTED]
Date:	14 th June 2016
Pre-WWI Military Activity on or Affecting the Site	None identified.
WWI Military Activity on or Affecting the Site	None identified.
WWI Strategic Targets (within 5km of Site)	The following strategic targets were located within the vicinity of the Site: <ul style="list-style-type: none">■ Docklands, with associated wharves and warehouses.■ Industries important to the war effort, including engineering works, saw mills and timber yards.■ Public utilities and transport infrastructure, including the Gloucester & Sharpness Canal.
WWI Bombing	None identified on the Site.
Interwar Military Activity on or Affecting the Site	None identified.
WWII Military Activity on or Affecting the Site	Royal Air Force (RAF) Barnwood and an associated military camp were established on land surrounding the Site. RAF Barnwood was an administrative centre, which was tasked with organising and coordinating the movement of personnel and equipment. A camp was constructed to accommodate RAF staff, in addition to troops which manned nearby Anti-Aircraft (AA) defences. The camp was also used to accommodate American troops prior to D-Day.

WWII Strategic Targets (within 5km of Site)	<p>The following strategic targets were located in the vicinity of the Site:</p> <ul style="list-style-type: none"> ■ RAF Barnwood and military camp. ■ Docklands, with associated wharves and warehouses. ■ Industries important to the war effort, including engineering works, saw mills and timber yards. ■ Public utilities and transport infrastructure, including the Gloucester & Sharpness Canal. ■ 1No. military depot at Gloucester Docks. ■ RAF technical school. ■ AA and anti-invasion defences.
WWII Bombing Decoys (within 5km of Site)	None.
WWII Bombing	<p>During WWII the Site was located in the County Borough (CB) of Gloucester which officially recorded 7No. High Explosive (HE) bombs with a very low regional bombing density of 1.5 bombs per 405 hectares (ha).</p> <p>No readily available records have been found indicating that HE bombs fell on the Site.</p>
Post-WWII Military Activity on or Affecting the Site	After WWII the camp was gradually dismantled. RAF Barnwood itself continued to operate until the 1970s.
Recommendation	<p>During WWII, the Site comprised part of an RAF establishment and associated military camp, which involved the occupation of American troops. The exact use of the military facilities surrounding the Site is unknown at this stage of the research.</p> <p>Given this, a detailed desk study is recommended to assess, and potentially zone, the Unexploded Ordnance (UXO) hazard level on the Site.</p>
<p>This summary is based on a cursory review of readily available records. Caution is advised if you plan to action work based on this summary.</p> <p>It should be noted that where a potentially significant source of UXO hazard has been identified on the Site, the requirement for a detailed desk study and risk assessment has been confirmed and no further research will be undertaken at this stage. It is possible that further in-depth research as part of a detailed UXO study and risk assessment may identify other potential sources of UXO hazard on the Site.</p>	

Kind regards

[Redacted Signature]

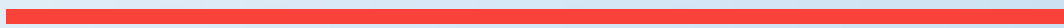
[Redacted Name]
Lead Researcher
Zetica Limited












[Redacted Contact Info] | W. www.zetica.com | [Redacted Contact Info]

Appendix D

EXPLORATORY HOLE LOGS



 WSP UK Limited 1 Queens Drive Birmingham, B5 4PJ	BOREHOLE LOG		Hole No. BH01
	Project Former Interbrew Site, Gloucester		Sheet 1 of 2
Job No 70020138	Client Paloma Capital LLP		Date 02-06-16 02-06-16
Contractor / Driller Dynamic Sampling UK Ltd	Method/Plant Used Dando 2000	Logged By George Baggott	Co-Ordinates (NGR) E 384783.386 N 217876.620
			Ground Level (m OD) 24.643

SAMPLES & TESTS						STRATA					Install / Backfill	
Depth	Type	Test Result	PID (ppmV)	HSV (kN/m ²)	P Pen (kN/m ²)	Water	Elev. (mOD)	Depth (Thick-ness)	Description	Legend	Geology	Dia. mm
							24.39	0.25	Reinforced CONCRETE.		CONC	
							24.19	0.45	Light pinkish brown sandy fine and medium angular GRAVEL of limestone. Sand is medium to coarse. (MADE GROUND)		GMG	
0.50-1.00	B							(0.70)	Soft dark brown slightly sandy slightly gravelly CLAY. Gravel is fine angular to sub-rounded of quartz and limestone fragments. Sand is medium to coarse. Occasional re-bar and steel cable fragments encountered. (MADE GROUND)		CMG	
0.50-0.50	D											
0.60-0.60	ES											
1.20	SPT	18.7.2 7.7.5 N=21(S)					23.49	1.15	Soft dark yellowish brown slightly sandy slightly gravelly CLAY. Gravel is fine angular to rounded of flint, sandstone and occasional coal fragments. Sand is medium to coarse. (ALLUVIUM)		ALV	
1.20-1.20	D							1.60	Firm dark bluish grey silty slightly gravelly CLAY. Gravel is fine sub-angular of flint. Occasional shell fragments. (Weathered BLUE LIAS FORMATION and CHARMOUTH MUDSTONE FORMATION)			
1.20-1.20	ES											
1.50-1.50	D											
1.80-1.80	ES											
2.00	SPT	4.4.3 4.4.4 N=15(S)										
2.00-2.00	D											
2.50-3.00	B											
2.50-2.50	D											
3.00-3.00	D											
3.00-3.25	U100	100 blows 50% recovery										
3.50-3.50	D											
4.00	SPT	7.9.8 9,10,10 N=37(S)						(5.65)	4.00 Becoming stiff 4.00 - 4.00 Becoming stiff		CHAM	
4.00-4.00	D											
4.50-4.50	D											
5.00	SPT	4.6.7 8,8,11 N=34(S)										
5.00-5.00	D											
5.50-6.00	B											
5.50-5.50	D											
6.00	SPT	9,10,9 10,13,18 N=50/ 0.28(S)										
6.00-6.00	D											
6.50-6.50	D								6.45 Becoming weathered mudstone 6.45 - 6.45 Becoming weathered mudstone			
7.00	SPT	10,14,26 24,0.0 N=50/ 0.145(S)					17.39	7.25	Hole terminated at 7.25m bgl on effective refusal		END	
7.00-7.00	D											

Boring Progress						Water Strikes					
Date	Time	Depth	Casing Dpt	Dia. (mm)	Water Dpt	Date	Time	Strike	Minutes	Standing	Casing
						02-06-16		1.30			
Chiselling			Water Added								
From	To	Hours	Tool	From	To	General Remarks					
						Hole terminated at 7.25m bgl on effective refusal. Groundwater encountered at 1.30m bgl. No visual or olfactory evidence of contamination encountered.					
Scale 1:62.5		Notes: All dimensions in metres. Logs should be read in accordance with the provided Key. Descriptions are based on visual and manual identification.									

17 WSP BH LOG 70020138 - FORMER INTERBREW SITE, GLOUCESTER - MASTER DATABASE2.GPJ, WSPTEMPLATE7.00.GDT, 13/4/18

LEGEND



CONCRETE



GRANULAR MADE GROUND




COHESIVE MADE GROUND



Sandy gravelly CLAY



Silty gravelly CLAY

 WSP UK Limited 1 Queens Drive Birmingham, B5 4PJ	BOREHOLE LOG		Hole No. BH02
	Project Former Interbrew Site, Gloucester		Sheet 1 of 2
Job No 70020138	Client Paloma Capital LLP		Date 06-06-16 06-06-16
Contractor / Driller Dynamic Sampling UK Ltd	Method/Plant Used Dando 2000	Logged By George Baggott	Co-Ordinates (NGR) E 385035.798 N 217905.083
			Ground Level (m OD) 22.532

SAMPLES & TESTS						STRATA						Install / Backfill
Depth	Type	Test Result	PID (ppmV)	HSV (kN/m ²)	P Pen (kN/m ²)	Water	Elev. (mOD)	Depth (Thickness)	Description	Legend	Geology	Dia. mm
							22.38	0.15	ASPHALT.		TARMAC	
							22.23	0.30	Dark pinkish brown sandy fine and medium angular GRAVEL of limestone. Sand is medium to coarse. (MADE GROUND)		GMG	
							22.13	0.40			GMG	
0.50-1.00	B								Light orangish brown fine sub-angular to rounded GRAVEL of quartz. (MADE GROUND)			
0.50-0.50	D											
0.50-0.50	ES											
1.20	SPT	1,2,2 2,3,3 N=10(S)						(1.30)	Firm dark yellowish brown slightly sandy slightly gravelly CLAY. Gravel is fine and medium angular to sub-rounded of flint and occasional mudstone. Sand is medium. (ALLUVIUM)		ALV	
1.20-1.20	D						20.83	1.70	Stiff dark bluish grey silty slightly gravelly CLAY. Gravel is fine angular of mudstone. Occasional shell fragments encountered. (Weathered BLUE LIAS FORMATION and CHARMOUTH MUDSTONE FORMATION)			
1.50-1.50	D											
1.80-1.80	ES											
2.00-2.50	B											
2.00-2.00	D											
2.00-2.00	U100	93 blows										
2.50-2.50	D											
3.00	SPT	6,6,6 7,9,10 N=32(S)										
3.00-3.00	D											
3.50-3.50	D											
4.00	SPT	6,7,7 8,10,10 N=35(S)										
4.00-4.00	D							(5.60)				
4.50-4.50	D											
5.00	SPT	6,7,8 11,13,15 N=47(S)										
5.00-5.00	D											
5.50-5.50	D											
6.00	SPT	6,8,12 17,17,4 N=50/ 0.23(S)										
6.00-6.00	D											
6.50-7.00	B											
6.50-6.50	D											
7.00	SPT	7,7,10 21,19,0 N=50/ 0.21(S)					15.23	7.30				
7.00-7.00	D								Hole terminated at 7.30m bgl on effective refusal		END	

Boring Progress						Water Strikes					
Date	Time	Depth	Casing Dpt	Dia. (mm)	Water Dpt	Date	Time	Strike	Minutes	Standing	Casing
Chiselling				Water Added		General Remarks Hole terminated at 7.30m bgl on effective refusal. No groundwater encountered. No visual or olfactory evidence of contamination encountered.					
From	To	Hours	Tool	From	To						
						Scale 1:62.5					
Notes: All dimensions in metres. Logs should be read in accordance with the provided Key. Descriptions are based on visual and manual identification.											

17 WSP BH LOG 70020138 - FORMER INTERBREW SITE, GLOUCESTER - MASTER DATABASE2.GPJ, WSPTEMPLATE7.00.GDT, 13/4/18

LEGEND



Tarmac




GRANULAR MADE GROUND



















Sandy gravelly CLAY



Silty gravelly CLAY

 WSP UK Limited 1 Queens Drive Birmingham, B5 4PJ	BOREHOLE LOG		Hole No. BH03
	Project Former Interbrew Site, Gloucester		Sheet 1 of 2
Job No 70020138	Client Paloma Capital LLP		Date 06-06-16 06-06-16
Contractor / Driller Dynamic Sampling UK Ltd	Method/Plant Used Dando 2000	Logged By George Baggott	Co-Ordinates (NGR) E 384901.364 N 217777.526
			Ground Level (m OD) 24.396

SAMPLES & TESTS						STRATA						Install / Backfill
Depth	Type	Test Result	PID (ppmV)	HSV (kN/m ²)	P Pen (kN/m ²)	Water	Elev. (mOD)	Depth (Thickness)	Description	Legend	Geology	Dia. mm
							24.30	0.10	ASPHALT.		TARMAC	
							24.15	0.25	CONCRETE.		CONC	
							24.00	0.40			GMG	
0.40-0.40	ES								Light orangish brown slightly clayey sandy fine and medium angular GRAVEL of limestone. Sand is medium. (MADE GROUND)		ALV	
0.50-0.50	D											
0.80-0.80	ES							(1.00)	Firm locally stiff dark yellowish brown mottled grey slightly sandy slightly gravelly CLAY. Gravel is fine angular of flint and mudstone. Sand is medium. (ALLUVIUM)		ALV	
1.00-1.50	B											
1.20	SPT	2,2,3 2,3,3 N=11(S)					23.00	1.40	Stiff dark bluish grey silty slightly gravelly CLAY. Gravel is fine angular of mudstone. Occasional shell fragments. (Weathered BLUE LIAS FORMATION and CHARMOUTH MUDSTONE FORMATION)		CHAM	
1.20-1.20	D											
1.50-1.50	D										CHAM	
2.00-2.50	B											
2.00-2.00	D										CHAM	
2.00-2.45	U100	93 blows										
3.00	SPT	4,5,5 6,7,9 N=27(S)									CHAM	
3.00-3.00	D											
3.50-3.50	D										CHAM	
4.00	SPT	4,6,6 8,9,9 N=32(S)										
4.00-4.00	D										CHAM	
4.50-4.50	D											
5.00	SPT	6,3,7 7,8,10 N=32(S)									CHAM	
5.00-5.00	D											
5.50-5.50	D										CHAM	
6.00	SPT	5,6,9 10,16,15 N=50/ 0.777(S)										
6.00-6.00	D										CHAM	
6.50-7.00	B											
6.50-6.50	D										CHAM	
7.00	SPT	5,7,11 29,10,0 N=50/ 0.155(S)										
7.00-7.00	D						17.10	7.30	Hole terminated at 7.30m bgl on effective refusal		END	

Boring Progress						Water Strikes					
Date	Time	Depth	Casing Dpt	Dia. (mm)	Water Dpt	Date	Time	Strike	Minutes	Standing	Casing
						06-06-16		2.30			
Chiselling			Water Added			General Remarks Hole terminated at 7.30m bgl on effective refusal. Groundwater encountered at 2.30m bgl. No visual or olfactory evidence of contamination encountered.					
From	To	Hours	Tool	From	To						
Scale 1:62.5		Notes: All dimensions in metres. Logs should be read in accordance with the provided Key. Descriptions are based on visual and manual identification.									

17 WSP BH LOG 70020138 - FORMER INTERBREW SITE, GLOUCESTER - MASTER DATABASE2.GPJ, WSPTEMPLATE7.00.GDT, 13/4/18

LEGEND



Tarmac



CONCRETE




GRANULAR MADE GROUND









Sandy gravelly CLAY



Silty gravelly CLAY

 WSP UK Limited 1 Queens Drive Birmingham, B5 4PJ	BOREHOLE LOG		Hole No. BH04
	Project Former Interbrew Site, Gloucester		Sheet 1 of 2
Job No 70020138	Client Paloma Capital LLP		Date 02-06-16 03-06-16
Contractor / Driller Dynamic Sampling UK Ltd	Method/Plant Used Dando 2000	Logged By George Baggott	Co-Ordinates (NGR) E 384918.479 N 218044.298
			Ground Level (m OD) 22.036

SAMPLES & TESTS							STRATA					Install / Backfill
Depth	Type	Test Result	PID (ppmV)	HSV (kN/m ²)	P Pen (kN/m ²)	Water	Elev. (mOD)	Depth (Thickness)	Description	Legend	Geology	Dia. mm
							21.74	0.30	Reinforced CONCRETE.		CONC	
0.50-1.00	B						21.44	0.60	Light pinkish brown sandy fine and medium angular GRAVEL of limestone. Sand is fine to coarse. (MADE GROUND)		GMG	
0.50-0.50	D							(0.50)	Dark brown slightly sandy slightly gravelly CLAY. Gravel is fine and medium angular to sub-rounded of limestone, quartz and occasional brick fragments. Sand is medium to coarse. (MADE GROUND)		CMG	
0.70-0.70	ES						20.94	1.10	Soft dark yellowish brown slightly sandy slightly gravelly CLAY. Gravel is fine angular to sub-rounded of flint, sandstone and occasional coal fragments. Sand is medium. (ALLUVIUM)		ALV	
1.20	SPT	1,1,2 2,2,2 N=8(S)						(1.10)	1.50 Becoming mottled orange / brown			
1.20-1.20	D						19.84	2.20	1.50 - 1.50 Becoming mottled orange / brown		ALV	
1.20-1.20	ES								Firm dark bluish grey silty slightly gravelly CLAY. Gravel is fine angular of mudstone. Occasional shell fragments. (Weathered BLUE LIAS FORMATION and CHARMOUTH MUDSTONE FORMATION)		CHAM	
1.50-2.00	B											
1.50-1.50	D											
2.00-2.00	D											
2.00-2.45	U100	100 blows										
2.50-2.50	D											
3.00	SPT	5,6,6 6,5,7 N=24(S)										
3.00-3.00	D											
3.50-3.50	B											
3.50-3.50	D											
4.00	SPT	6,7,6 7,8,9 N=30(S)							4.00 Becoming stiff			
4.00-4.00	D								4.00 - 4.00 Becoming stiff			
4.50-4.50	D							(5.20)				
5.00	SPT	7,9,9 10,9,11 N=39(S)										
5.00-5.00	D											
5.50-5.50	ES											
6.00	SPT	6,9,11 14,14,11 N=50/ 0.275(S)										
6.00-6.00	D											
6.50-6.50	D											
7.00	SPT	7,9,11 15,17,7 N=50/ 0.275(S)					14.64	7.40	Hole terminated at 7.40m bgl on effective refusal		END	
7.00-7.00	D											

Boring Progress						Water Strikes					
Date	Time	Depth	Casing Dpt	Dia. (mm)	Water Dpt	Date	Time	Strike	Minutes	Standing	Casing
Chiselling			Water Added								
From	To	Hours	Tool	From	To	General Remarks					
						Hole terminated at 7.40m bgl on effective refusal. No groundwater encountered. No visual or olfactory evidence of contamination encountered.					
Scale 1:62.5		Notes: All dimensions in metres. Logs should be read in accordance with the provided Key. Descriptions are based on visual and manual identification.									

17 WSP BH LOG 70020138 - FORMER INTERBREW SITE, GLOUCESTER - MASTER DATABASE2.GPJ WSPTEMPLATE7.00.GDT 13/4/18

LEGEND



CONCRETE



GRANULAR MADE GROUND




COHESIVE MADE GROUND



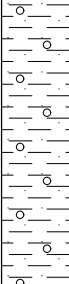
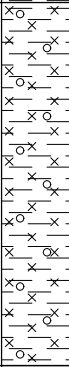


Sandy gravelly CLAY



Silty gravelly CLAY

 WSP UK Limited 1 Queens Drive Birmingham, B5 4PJ	BOREHOLE LOG		Hole No. BH05
	Project Former Interbrew Site, Gloucester		Sheet 1 of 2
Job No 70020138	Client Paloma Capital LLP		Date 03-06-16 03-06-16
Contractor / Driller Dynamic Sampling UK Ltd	Method/Plant Used Dando 2000	Logged By George Baggott	Co-Ordinates (NGR) E 384886.675 N 217885.806
			Ground Level (m OD) 24.223

SAMPLES & TESTS							STRATA					Install / Backfill
Depth	Type	Test Result	PID (ppmV)	HSV (kN/m ²)	P Pen (kN/m ²)	Water	Elev. (mOD)	Depth (Thickness)	Description	Legend	Geology	Dia. mm
							23.92	0.30	Reinforced CONCRETE.		CONC	
0.50-0.50	D							(0.60)	Light brown sandy fine and medium angular to sub-angular GRAVEL of limestone. Sand is fine to medium. (MADE GROUND)		GMG	
0.85-0.85	ES						23.32	0.90	Soft to firm dark yellowish brown mottled grey slightly sandy slightly gravelly CLAY. Gravel is fine sub-angular of mudstone. Sand is medium. (ALLUVIUM)		ALV	
1.00-1.50	B											
1.20	SPT	2.2,2 2.3,3 N=10(S)										
1.20-1.20	D											
1.20-1.20	ES							(2.50)				
1.50-1.50	D											
2.00	SPT	2.3,4 4.4,5 N=17(S)										
2.00-2.00	D											
2.50-2.50	D											
3.00	SPT	2.3,4 4.6,7 N=21(S)					20.82	3.40	3.00 - 3.40 Becoming bluish grey			
3.00-3.00	D								Stiff dark bluish grey silty slightly gravelly CLAY. Gravel is fine angular of mudstone. (Weathered BLUE LIAS FORMATION and CHARMOUTH MUDSTONE FORMATION)		CHAM	
3.50-3.50	D											
3.50-3.50	ES											
4.00	SPT	4.5,7 9,9,11 N=36(S)										
4.00-4.50	B							(3.00)				
4.00-4.00	D											
4.50-4.50	D											
5.00	SPT	5,8,10 17,15,8 N=50/ 0.235(S)										
5.00-5.00	D											
5.50-6.00	B											
5.50-6.00	D											
5.50-5.50	D											
6.00	SPT	7,9,11 15,17,7 N=50/ 0.24(S)					17.82	6.40				
6.00-6.00	D								Hole terminated at 6.40m bgl on effective refusal		END	

Boring Progress						Water Strikes					
Date	Time	Depth	Casing Dpt	Dia. (mm)	Water Dpt	Date	Time	Strike	Minutes	Standing	Casing
Chiselling			Water Added								
From	To	Hours	Tool	From	To	General Remarks					
						Hole terminated at 6.40m bgl on effective refusal. No groundwater encountered. No visual or olfactory evidence of contamination encountered.					
Scale 1:62.5		Notes: All dimensions in metres. Logs should be read in accordance with the provided Key. Descriptions are based on visual and manual identification.									

17 WSP BH LOG 70020138 - FORMER INTERBREWSITE, GLOUCESTER - MASTER DATABASE2.GPJ WSPTEMPLATE7.00.GDT 13/4/18

LEGEND



CONCRETE




GRANULAR MADE GROUND














Sandy gravelly CLAY



Silty gravelly CLAY

 WSP UK Limited 1 Queens Drive Birmingham, B5 4PJ	BOREHOLE LOG			Hole No. BH101
	Project Former Interbrew Site, Gloucester			Sheet 1 of 2
Job No 70020138	Client Paloma Capital LLP			Date 08-02-18 09-02-18
Contractor / Driller Borehole Solutions Limited	Method/Plant Used Dando 2000	Logged By Charlie Orme	Co-Ordinates (NGR) E 384849.224 N 217907.171	Ground Level (m OD) 24.390

SAMPLES & TESTS							STRATA					Install / Backfill
Depth	Type	Test Result	PID (ppmV)	HSV (kN/m2)	P Pen (kN/m2)	Water	Elev. (mOD)	Depth (Thickness)	Description	Legend	Geology	Dia. mm
			0				24.19	0.21	CONCRETE. Geotextile membrane at base.		CONC	
0.30-0.30	ES		0				23.94	0.45	Reddish brown sandy fine to coarse very angular to subrounded GRAVEL of limestone. Geotextile membrane at base. (MADE GROUND)		GMG	
0.50-0.50	D		0									
0.60-0.60	ES								Firm light bluish grey mottled brown slightly gravelly slightly sandy CLAY. Gravel is medium and coarse angular to subrounded of mudstone and limestone. (MADE GROUND)		CMG	
1.00-1.00	D						(1.55)					
1.50	SPT	1,2,2 1,2,2 N=7(S)					22.39	2.00	Firm dark bluish grey slightly gravelly CLAY. Gravel is fine subrounded to rounded of mudstone. With rare shell fragments.		CHAM	
1.50-1.50	D											
2.00-2.00	U	65 blows									CHAM	
2.50-2.50	D											
3.00	SPT	2,2,3 4,5,5 N=17(S)									CHAM	
3.00-3.00	D											
3.50-3.50	D										CHAM	
4.00-4.45	U	160 blows										
4.50-4.50	D										CHAM	
5.00	SPT	5,5,8 9,10,14 N=41(S)						(6.38)				
5.00-5.00	D										CHAM	
6.00-6.45	D											
6.50	SPT	5,7,10 13,16,11 N=50/ 0.269(S)									CHAM	
6.50-6.50	D											
7.50-7.50	D										CHAM	
8.00	SPT	7,8,11 15,21,3 N=50/ 0.23(S)										
8.00-8.38	D						16.01	8.38	Borehole completed at 8.38m bgl.		END	

Boring Progress						Water Strikes					
Date	Time	Depth	Casing Dpt	Dia. (mm)	Water Dpt	Date	Time	Strike	Minutes	Standing	Casing
Chiselling				Water Added							
From	To	Hours	Tool	From	To	General Remarks					
						Hand dug trial pit to 1.50m bgl. No groundwater encountered. No visual or olfactory evidence of contamination encountered. Hole complete at 8.45m bgl.					
Scale 1:62.5		Notes: All dimensions in metres. Logs should be read in accordance with the provided Key. Descriptions are based on visual and manual identification.									

17 WSP BH LOG 70020138 - FORMER INTERBREW SITE, GLOUCESTER - MASTER DATABASE2.GPJ, WSPTEMPLATE7.00.GDT, 13/04/18

LEGEND



CONCRETE




GRANULAR MADE GROUND







COHESIVE MADE GROUND



Gravelly CLAY

 WSP UK Limited 1 Queens Drive Birmingham, B5 4PJ	BOREHOLE LOG		Hole No. BH102
	Project Former Interbrew Site, Gloucester		Sheet 1 of 2
Job No 70020138	Client Paloma Capital LLP		Date 08-02-18 08-02-18
Contractor / Driller Borehole Solutions Limited	Method/Plant Used Dando 2000	Logged By Charlie Orme	Co-Ordinates (NGR) E 384890.831 N 217962.196
			Ground Level (m OD) 22.360

SAMPLES & TESTS							STRATA					Install / Backfill
Depth	Type	Test Result	PID (ppmV)	HSV (kN/m ²)	P Pen (kN/m ²)	Water	Elev. (mOD)	Depth (Thickness)	Description	Legend	Geology	Dia. mm
0.30-0.50	ES		0				22.09	0.27	Reinforced CONCRETE. Reinforcing bar at 0.175m.		CONC	
0.30-0.40	ES						21.96	0.40	Brown clayey slightly sandy medium and coarse subrounded to angular GRAVEL of limestone. (MADE GROUND)		GMG	
0.50-0.50	B		0					(0.98)	Greenish brown slightly clayey slightly gravelly medium and coarse SAND. Gravel is fine and medium subrounded and angular of limestone. (MADE GROUND)		GMG	
0.60	D											
0.75	ES											
1.20	D		0				20.98	1.38	Firm dark bluish grey slightly gravelly CLAY. Gravel is fine subrounded of mudstone.			
1.40	ES		0									
1.45-1.45	ES											
1.50-1.95	U100											
1.60-1.60	ES											
2.00	SPT	2.22 2.34 N=11(S)										
2.50	D											
2.60	D											
3.00-3.45	U											
3.50	D											
4.00	SPT	4.44 6.79 N=26(S)							4.00 Becoming stiff			
4.00-4.45	D											
4.00	D											
4.50	D							(6.97)			CHAM	
5.00-5.45	U100											
5.50	D											
6.50	SPT	3.69 15,18,8 N=50/ 0.24(S)										
6.50	D											
7.50	D											
8.00	SPT	9,14,15 18,17,0 N=50/ 0.2(S)										
8.00	D						14.01	8.35	Borehole completed at 8.35m bgl.		END	

Boring Progress						Water Strikes					
Date	Time	Depth	Casing Dpt	Dia. (mm)	Water Dpt	Date	Time	Strike	Minutes	Standing	Casing
Chiselling				Water Added							
From	To	Hours	Tool	From	To	General Remarks					
				3	4	Hand dug trial pit to 1.50m bgl No groundwater encountered. No visual or olfactory evidence of contamination. Hole complete at 8.45m bgl.					
				6	6.5						
Scale 1:62.5		Notes: All dimensions in metres. Logs should be read in accordance with the provided Key. Descriptions are based on visual and manual identification.									

17 WSP BH LOG 70020138 - FORMER INTERBREW SITE, GLOUCESTER - MASTER DATABASE2.GPJ, WSPTEMPLATE7.00.GDT, 13/4/18

LEGEND



CONCRETE



GRANULAR MADE GROUND



Gravelly CLAY



WSP UK Limited
1 Queens Drive
Birmingham, B5 4PJ

BOREHOLE LOG

Hole No.
BH103

Project
Former Interbrew Site, Gloucester

Sheet
1 of 2

Job No
70020138

Client
Paloma Capital LLP

Date
08-02-18
08-02-18

Contractor / Driller Borehole Solutions Limited	Method/Plant Used Dando 2000	Logged By Charlie Orme	Co-Ordinates (NGR) E 384951.467 N 217888.677	Ground Level (m OD) 22.586
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SAMPLES & TESTS							STRATA					Install / Backfill
Depth	Type	Test Result	PID (ppmV)	HSV (kN/m ²)	P Pen (kN/m ²)	Water	Elev. (mOD)	Depth (Thickness)	Description	Legend	Geology	Dia. mm
0.25-0.40	ES						22.43	0.16	CONCRETE.		CONC	
0.30-0.40	ES						22.19	0.40	Light grey slightly clayey sandy fine to coarse very angular to subangular GRAVEL of limestone. (MADE GROUND)		GMG	
0.50-1.00	B						22.14	0.45			GMG	
0.50-0.50	D							(0.75)	Light grey coarse angular GRAVEL of limestone with frequent cobbles of limestone. (MADE GROUND)		ALV	
0.60-0.70	ES											
0.75-0.75	ES						21.39	1.20	Soft very dark brown CLAY with rare fragments of wood and relic plant shoots. (ALLUVIUM) Stiff bluish grey mottled brown CLAY.			
1.00-1.00	D											
1.20	SPT	1,2,1 2,2,2 N=7(S)										
1.20-1.20	D											
1.45-1.45	ES											
1.80	D											
1.80-1.80	D											
2.00-2.45	U											
2.50-2.50	ES		0									
3.00	SPT	3,3,7 8,8,9 N=32(S)										
3.00-3.00	D											
3.50-3.50	D											
4.00-4.45	U											
4.50-4.50	D											
5.00	SPT	4,6,11 13,16,14 N=54/ 0.285(S)										
6.00-6.00	D											
6.50	SPT	6,9,17 26,7,0 N=50/ 0.16(S)										
8.00	SPT	7,74,22 28,0,0 N=50/ 0.135(S)										
8.00-8.10	D						14.31	8.28	Borehole completed at 8.28m bgl.		END	

Boring Progress						Water Strikes					
Date	Time	Depth	Casing Dpt	Dia. (mm)	Water Dpt	Date	Time	Strike	Minutes	Standing	Casing
				140							
Chiselling			Water Added								
From	To	Hours	Tool	From	To	General Remarks					
						Hand dug trial pit to 1.10m bgl. No groundwater encountered. No visual or olfactory evidence of contamination encountered. Hole complete at 8.1m bgl					
Scale 1:62.5		Notes: All dimensions in metres. Logs should be read in accordance with the provided Key. Descriptions are based on visual and manual identification.									

17 WSP BH LOG 70020138 - FORMER INTERBREW SITE, GLOUCESTER - MASTER DATABASE2.GPJ, WSPTEMPLATE7.00.GDT, 13/4/18

LEGEND




CONCRETE


















GRANULAR MADE GROUND



CLAY

 WSP UK Limited 1 Queens Drive Birmingham, B5 4PJ	BOREHOLE LOG		Hole No. BH104
	Project Former Interbrew Site, Gloucester		Sheet 1 of 2
Job No 70020138	Client Paloma Capital LLP		Date 09-02-18 09-02-18
Contractor / Driller Borehole Solutions Limited	Method/Plant Used Dando 2000	Logged By Charlie Orme	Co-Ordinates (NGR) E 384984.602 N 217936.742
			Ground Level (m OD) 22.611

SAMPLES & TESTS							STRATA					Install / Backfill
Depth	Type	Test Result	PID (ppmV)	HSV (kN/m ²)	P.Pen (kN/m ²)	Water	Elev. (mOD)	Depth (Thickness)	Description	Legend	Geology	Dia. mm
							22.27	0.34	Reinforced CONCRETE. Reinforcing bar at 0.3m.		CONC	
0.50-0.50	ES		0				22.06	0.55	Firm very dark brown sandy slightly gravelly CLAY. Gravel is medium and coarse angular to subrounded of brick and tile fragments, occasional coarse glass fragments and fine ash. Pockets of orangish brown clay. (MADE GROUND)		CMG	
0.50	ES		0									
0.60-1.20	B							(0.95)	Soft light brown mottled orange gravelly CLAY. Gravel is fine to coarse angular to subrounded of mudstone. (MADE GROUND)		CMG	
0.60-0.60	D											
0.80-0.80	ES						21.11	1.50	Multi-coloured medium and coarse angular to subangular GRAVEL of foundry slag with frequent cobble sized fragments of slag. (MADE GROUND)		GMG	
0.80	ES											
1.20-1.20	D							(0.50)	Stiff locally very stiff light bluish grey slightly gravelly CLAY. Gravel is fine and medium angular to subrounded of mudstone.			
1.30-1.30	ES											
1.50-2.00	B						20.61	2.00	Stiff locally very stiff light bluish grey slightly gravelly CLAY. Gravel is fine and medium angular to subrounded of mudstone.			
1.50-2.00	U											
2.00	SPT	2.2,2 2.2,2 N=8(S)	0						Stiff locally very stiff light bluish grey slightly gravelly CLAY. Gravel is fine and medium angular to subrounded of mudstone.			
2.00	D											
2.00	ES								Stiff locally very stiff light bluish grey slightly gravelly CLAY. Gravel is fine and medium angular to subrounded of mudstone.			
2.50	D											
3.00	SPT	2.2,3 3.4,5 N=15(S)							Stiff locally very stiff light bluish grey slightly gravelly CLAY. Gravel is fine and medium angular to subrounded of mudstone.			
3.00	D											
3.50	D								Stiff locally very stiff light bluish grey slightly gravelly CLAY. Gravel is fine and medium angular to subrounded of mudstone.			
4.00	SPT	3.3,5 7.8,8 N=28(S)										
4.00	D								Stiff locally very stiff light bluish grey slightly gravelly CLAY. Gravel is fine and medium angular to subrounded of mudstone.			
4.50	D											
5.00	SPT	7.8,9 9.11,12 N=41(S)						(6.38)	Stiff locally very stiff light bluish grey slightly gravelly CLAY. Gravel is fine and medium angular to subrounded of mudstone.		CHAM	
5.00	D											
6.00	D								Stiff locally very stiff light bluish grey slightly gravelly CLAY. Gravel is fine and medium angular to subrounded of mudstone.			
6.50	SPT	6.9,10 15.18,7 N=50/ 0.24(S)										
6.50	D								Stiff locally very stiff light bluish grey slightly gravelly CLAY. Gravel is fine and medium angular to subrounded of mudstone.			
7.50	D											
8.00	SPT	8.15,25 25 N=50/ 0.125(S)							Stiff locally very stiff light bluish grey slightly gravelly CLAY. Gravel is fine and medium angular to subrounded of mudstone.			
8.00	D											
8.00							14.23	8.38	Borehole completed at 8.38m bgl.		END	

Boring Progress						Water Strikes					
Date	Time	Depth	Casing Dpt	Dia. (mm)	Water Dpt	Date	Time	Strike	Minutes	Standing	Casing
Chiselling			Water Added								
From	To	Hours	Tool	From	To	General Remarks					
						Hand dug trial pit to 1.50m bgl No groundwater encountered No visual or olfactory evidence of contamination Hole complete at 8.38m bgl.					
Scale 1:62.5		Notes: All dimensions in metres. Logs should be read in accordance with the provided Key. Descriptions are based on visual and manual identification.									

17 WSP BH LOG 70020138 - FORMER INTERBREW SITE, GLOUCESTER - MASTER DATABASE2.GPJ, WSPTEMPLATE7.00.GDT, 13/4/18

LEGEND



CONCRETE




COHESIVE MADE GROUND



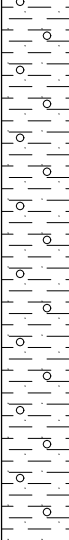


GRANULAR MADE GROUND




Gravelly CLAY






 WSP UK Limited 1 Queens Drive Birmingham, B5 4PJ	WINDOW SAMPLE LOG		Hole No. WS01
	Project Former Interbrew Site, Gloucester		Sheet 1 of 1
Job No 70020138	Client Paloma Capital LLP		Date 06-06-16 06-06-16
Contractor / Driller Dynamic Sampling UK Ltd	Method/Plant Used Premier 110	Logged By Matt Riding	Co-Ordinates (NGR) E 384833.997 N 217856.831
			Ground Level (m OD) 24.504

SAMPLES & TESTS							STRATA					Install / Backfill
Depth	Type	Test Result	PID (ppmV)	HSV (kN/m2)	P Pen (kN/m2)	Water	Elev. (mOD)	Depth (Thickness)	Description	Legend	Geology	Dia. mm
0.30-0.30	ES		10				24.28	0.22	Reinforced CONCRETE.		CONC	
								(0.34)	Pinkish brown sandy slightly clayey fine to coarse angular to sub-angular GRAVEL of limestone. Sand is fine to coarse. (MADE GROUND)		GMG	
0.70-0.70	ES		10				23.94	0.56	Stiff bluish grey slightly sandy slightly gravelly silty CLAY. Gravel is fine and medium angular of mudstone. Sand is fine to medium. (Weathered BLUE LIAS FORMATION and CHARMOUTH MUDSTONE FORMATION)		CHAM	
1.20	(S)	1,1,3 4,4,5 N=16.										
2.00	(S)	3,4,5 5,6,10 N=26.					(2.74)					
3.00	(S)	6,6,10 11,15,14 N=50/ 0.245.					21.20	3.30	Hole terminated at 3.3m bgl on effective refusal		END	

Hole Diameter			Recovery			Water Strikes					
Depth	Diameter (mm)	Remarks	Core Top (m)	Core Base (m)	% Recovery	Date	Time	Strike	Minutes	Standing	Casing
						General Remarks Hole terminated at 3.30m bgl due to effective refusal. No groundwater encountered. No visual or olfactory evidence of contamination encountered.					
Scale 1:37.5		Notes: All dimensions in metres. Logs should be read in accordance with the provided Key. Descriptions are based on visual and manual identification.									


17 WSP WINDOW SAMPLE LOG - 70020138 - FORMER INTERBREWSITE, GLOUCESTER - MASTER DATABASE2.GPJ WSPTEMPLATE7.00.GDT 13/4/18






 WSP UK Limited 1 Queens Drive Birmingham, B5 4PJ	WINDOW SAMPLE LOG		Hole No. WS02
	Project Former Interbrew Site, Gloucester		Sheet 1 of 1
Job No 70020138	Client Paloma Capital LLP		Date 06-06-16 06-06-16
Contractor / Driller Dynamic Sampling UK Ltd	Method/Plant Used Premier 110	Logged By Matt Riding	Co-Ordinates (NGR) E 384858.903 N 217835.753
			Ground Level (m OD) 24.483

SAMPLES & TESTS							STRATA					Install / Backfill
Depth	Type	Test Result	PID (ppmV)	HSV (kN/m2)	P Pen (kN/m2)	Water	Elev. (mOD)	Depth (Thickness)	Description	Legend	Geology	Dia. mm
0.22-0.22	ES		38				24.30	0.18	Reinforced CONCRETE.		CONC	
							24.05	0.43	Orangish grey sandy fine to coarse subangular GRAVEL of brick, sandstone and limestone. Sand is fine to coarse. (MADE GROUND)		GMG	
									Hole terminated at 0.43m bgl on concrete obstruction.		END	

Hole Diameter			Recovery			Water Strikes					
Depth	Diameter (mm)	Remarks	Core Top (m)	Core Base (m)	% Recovery	Date	Time	Strike	Minutes	Standing	Casing
						General Remarks Hole terminated at 0.46m bgl on concrete obstruction. No groundwater encountered. No visual or olfactory evidence of contamination encountered.					
Scale 1:37.5		Notes: All dimensions in metres. Logs should be read in accordance with the provided Key. Descriptions are based on visual and manual identification.									


17 WSP WINDOW SAMPLE LOG 70020138 - FORMER INTERBREWE SITE, GLOUCESTER - MASTER DATABASE2.GPJ WSPTEMPLATE7.00.GDT 13/4/18





 WSP UK Limited 1 Queens Drive Birmingham, B5 4PJ	WINDOW SAMPLE LOG		Hole No. WS03	
	Project Former Interbrew Site, Gloucester		Sheet 1 of 1	
Job No 70020138	Client Paloma Capital LLP		Date 03-06-16 03-06-16	
Contractor / Driller Dynamic Sampling UK Ltd	Method/Plant Used Premier 110	Logged By Matt Riding	Co-Ordinates (NGR) E 384934.661 N 217799.367	Ground Level (m OD) 24.242

SAMPLES & TESTS							STRATA					Install / Backfill Dia. mm
Depth	Type	Test Result	PID (ppmV)	HSV (kN/m2)	P Pen (kN/m2)	Water	Elev. (mOD)	Depth (Thickness)	Description	Legend	Geology	
0.80-0.80	ES						23.98	0.26	Reinforced CONCRETE.		CONC	
							(0.44)		Pinkish grey sandy fine to coarse angular to subrounded GRAVEL of brick, concrete and sandstone. Sand is fine to coarse. Occasional sub-angular cobbles of brick and sandstone. (MADE GROUND)		GMG	
							23.54	0.70				
							23.34	0.90	Soft brownish yellow slightly gravelly slightly sandy CLAY. Gravel is fine to coarse sub-angular of sandstone and brick. (MADE GROUND)		CMG	
1.20-1.20	ES						(3.10)		Firm to stiff bluish grey slightly sandy slightly gravelly silty CLAY. Gravel is fine angular of mudstone. Sand is fine to medium. (Weathered BLUE LIAS FORMATION and CHARMOUTH MUDSTONE FORMATION)		CHAM	
4.00	(S)	6.8,13 13,13,11 N=50/ 0.25.					20.24	4.00	Hole terminated at 4m bgl on effective refusal.		END	

Hole Diameter			Recovery			Water Strikes					
Depth	Diameter (mm)	Remarks	Core Top (m)	Core Base (m)	% Recovery	Date	Time	Strike	Minutes	Standing	Casing
General Remarks Hole terminated at 4.00m bgl on effective refusal. No groundwater encountered. No visual or olfactory evidence of contamination encountered.											
Scale 1:37.5		Notes: All dimensions in metres. Logs should be read in accordance with the provided Key. Descriptions are based on visual and manual identification.									


17 WSP WINDOW SAMPLE LOG 70020138 - FORMER INTERBREW SITE, GLOUCESTER - MASTER DATABASE2.GPJ WSPTEMPLATE7.00.GDT 13/4/18







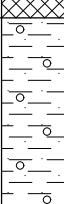

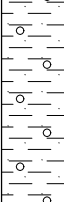


 WSP UK Limited 1 Queens Drive Birmingham, B5 4PJ	WINDOW SAMPLE LOG		Hole No. WS04
	Project Former Interbrew Site, Gloucester		Sheet 1 of 1
Job No 70020138	Client Paloma Capital LLP		Date 06-06-16 06-06-16
Contractor / Driller Dynamic Sampling UK Ltd	Method/Plant Used Premier 110	Logged By Matt Riding	Co-Ordinates (NGR) E 384884.639 N 217907.420
			Ground Level (m OD) 22.598

SAMPLES & TESTS							STRATA					Install / Backfill Dia. mm
Depth	Type	Test Result	PID (ppmV)	HSV (kN/m2)	P Pen (kN/m2)	Water	Elev. (mOD)	Depth (Thickness)	Description	Legend	Geology	
0.30-0.30	ES	.	0.3				22.38	0.22	Reinforced CONCRETE.		CONC	
0.60-0.60	ES	.	7.6				22.00	0.60	Pinkish brown slightly sandy slightly gravelly CLAY. Gravel is fine and medium sub-angular of brick, concrete, mudstone and sandstone. Sand is fine to coarse. (MADE GROUND)		CMG	
								(2.40)	Firm to stiff bluish grey slightly sandy slightly gravelly silty CLAY. Gravel is fine and medium angular of mudstone. Sand is fine to medium. (Weathered BLUE LIAS FORMATION and CHARMOUTH MUDSTONE FORMATION)		CHAM	
3.00	(S)	5,6,12 12,16,10 N=50/ 0.255.					19.60	3.00	Hole terminated at 3m bgl on effective refusal.		END	

Hole Diameter			Recovery			Water Strikes					
Depth	Diameter (mm)	Remarks	Core Top (m)	Core Base (m)	% Recovery	Date	Time	Strike	Minutes	Standing	Casing
						General Remarks Hole terminated at 3.00m bgl on effective refusal. No groundwater encountered. No visual or olfactory evidence of contamination encountered.					
Scale 1:37.5		Notes: All dimensions in metres. Logs should be read in accordance with the provided Key. Descriptions are based on visual and manual identification.									


17 WSP WINDOW SAMPLE LOG - 70020138 - FORMER INTERBREW SITE, GLOUCESTER - MASTER DATABASE2.GPJ WSPTEMPLATE7.00.GDT 13/4/18





 WSP UK Limited 1 Queens Drive Birmingham, B5 4PJ	WINDOW SAMPLE LOG		Hole No. WS05
	Project Former Interbrew Site, Gloucester		Sheet 1 of 1
Job No 70020138	Client Paloma Capital LLP		Date 03-06-16 03-06-16
Contractor / Driller Dynamic Sampling UK Ltd	Method/Plant Used Premier 110	Logged By Matt Riding	Co-Ordinates (NGR) E 384979.379 N 217993.159
			Ground Level (m OD) 21.940

SAMPLES & TESTS							STRATA					Install / Backfill
Depth	Type	Test Result	PID (ppmV)	HSV (kN/m2)	P Pen (kN/m2)	Water	Elev. (mOD)	Depth (Thickness)	Description	Legend	Geology	Dia. mm
0.65-0.65	ES						21.69	0.25	Reinforced CONCRETE.		CONC	
							21.44	0.50	Pinkish brown sandy slightly clayey fine to coarse angular GRAVEL of limestone and occasional sub-angular brick. Sand is fine to coarse. (MADE GROUND)		GMG	
							20.94	1.00	Yellowish brown slightly sandy gravelly CLAY. Gravel is fine to coarse angular to sub-angular rough of limestone and brick. Sand is fine to coarse. (MADE GROUND)		CMG	
1.20-1.20	ES (S)	2.2,2 2.3,3 N=10.						Firm bluish grey slightly gravelly slightly sandy silty CLAY. Gravel is fine and medium angular of mudstone. Sand is fine to medium. (Weathered BLUE LIAS FORMATION and CHARMOUTH MUDSTONE FORMATION)		CHAM		
2.00	(S)	4.4,5 5.5,5 N=20.					(2.00)	2.00 - 2.00 m bgl		CHAM		
3.00	(S)	5.5,10 12,15,13 N=50/ 0.26.					18.94	3.00	Hole terminated at 3m bgl on effective refusal		END	

Hole Diameter			Recovery			Water Strikes					
Depth	Diameter (mm)	Remarks	Core Top (m)	Core Base (m)	% Recovery	Date	Time	Strike	Minutes	Standing	Casing
General Remarks Hole terminated at 3.00m bgl on effective refusal. No groundwater encountered. No visual or olfactory evidence of contamination encountered.											
Scale 1:37.5		Notes: All dimensions in metres. Logs should be read in accordance with the provided Key. Descriptions are based on visual and manual identification.									


17 WSP WINDOW SAMPLE LOG 70020138 - FORMER INTERBREW SITE, GLOUCESTER - MASTER DATABASE2.GPJ WSPTEMPLATE7.00.GDT 13/4/18





 WSP UK Limited 1 Queens Drive Birmingham, B5 4PJ Telephone: [REDACTED]	WINDOW SAMPLE LOG		Hole No. WS06
	Project Former Interbrew Site, Gloucester		Sheet 1 of 1
Job No 70020138	Client Paloma Capital LLP		Date 03-06-16 03-06-16
Contractor / Driller Dynamic Sampling UK Ltd	Method/Plant Used Premier 110	Logged By Matt Riding	Co-Ordinates (NGR) E 384931.155 N 217835.854
			Ground Level (m OD) 23.467

SAMPLES & TESTS							STRATA					Install / Backfill Dia. mm
Depth	Type	Test Result	PID (ppmV)	HSV (kN/m2)	P Pen (kN/m2)	Water	Elev. (mOD)	Depth (Thickness)	Description	Legend	Geology	
0.60-0.60	ES						23.27	0.20	Brown slightly sandy slightly gravelly CLAY. Gravel is fine and medium sub-angular of flint and sandstone. Sand is fine to coarse. (TOPSOIL) (MADE GROUND)		CMG	
1.20	(S)	1,1,1 1,1,1 N=4.					22.27	1.20	Orangish brown slightly clayey slightly gravelly fine to coarse SAND. Gravel is fine and medium angular of brick, concrete and sandstone. Occasional metal fragments encountered. (MADE GROUND)		GMG	
1.30-1.30	ES								Firm to stiff bluish grey slightly sandy slightly gravelly silty CLAY. Gravel is fine and medium angular of mudstone. Sand is fine to medium. (Weathered BLUE LIAS FORMATION and CHARMOUTH MUDSTONE FORMATION)		CHAM	
2.00	(S)	4,4,5 5,5,5 N=20.					20.47	3.00	Hole terminated at 3m bgl on effective refusal.		END	
3.00	(S)	5,5,9 12,15,14 N=50/ 0,265.										

Hole Diameter			Recovery			Water Strikes					
Depth	Diameter (mm)	Remarks	Core Top (m)	Core Base (m)	% Recovery	Date	Time	Strike	Minutes	Standing	Casing
General Remarks Hole terminated at 3.00m bgl on effective refusal. No groundwater encountered. No visual or olfactory evidence of contamination encountered.											
Scale 1:37.5		Notes: All dimensions in metres. Logs should be read in accordance with the provided Key. Descriptions are based on visual and manual identification.									


17 WSP WINDOW SAMPLE LOG 70020138 - FORMER INTERBREW SITE, GLOUCESTER - MASTER DATABASE2.GPJ WSPTEMPLATE7.00.GDT 13/4/18






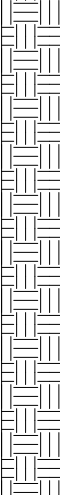

 WSP UK Limited 1 Queens Drive Birmingham, B5 4PJ Telephone: [REDACTED]	WINDOW SAMPLE LOG		Hole No. WS07
	Project Former Interbrew Site, Gloucester		Sheet 1 of 1
Job No 70020138	Client Paloma Capital LLP		Date 03-06-16 03-06-16
Contractor / Driller Dynamic Sampling UK Ltd	Method/Plant Used Premier 110	Logged By Matt Riding	Co-Ordinates (NGR) E 384867.341 N 217965.180
			Ground Level (m OD) 22.460

SAMPLES & TESTS							STRATA					Install / Backfill Dia. mm
Depth	Type	Test Result	PID (ppmV)	HSV (kN/m2)	P Pen (kN/m2)	Water	Elev. (mOD)	Depth (Thickness)	Description	Legend	Geology	
0.65-0.85	ES	.				↓	22.25	0.21	Reinforced CONCRETE.		CONC	
0.70-0.70	ES	.						(0.44)	Pinkish grey slightly gravelly fine to medium SAND. Gravel is fine and medium angular to sub-angular of sandstone. (MADE GROUND)		GMG	
1.20	(S)	1,1,2 4,4,5 N=15.					21.81	0.65	Yellowish brown slightly sandy slightly gravelly CLAY. Gravel is fine to coarse angular to sub-rounded of flint. Sand is fine to coarse. (ALLUVIUM) 0.80 - 0.80 m bgl		ALV	
1.60-1.60	ES	.					21.02	1.44	Stiff bluish grey slightly sandy slightly gravelly silty CLAY. Gravel is fine and medium angular of mudstone. Sand is fine to medium. (Weathered BLUE LIAS FORMATION and CHARMOUTH MUDSTONE FORMATION)		CHAM	
2.00	(S)	1,3,5 5,5,8 N=23.						(3.16)				
3.00	(S)	3,6,6 6,6,7 N=25.										
4.00	(S)	8,10,13 15,15,7 N=50/ 0.245.										
							17.86	4.60	Hole terminated at 4.6m bgl on effective refusal.		END	

Hole Diameter			Recovery			Water Strikes					
Depth	Diameter (mm)	Remarks	Core Top (m)	Core Base (m)	% Recovery	Date	Time	Strike	Minutes	Standing	Casing
						03-06-16		0.65			
General Remarks Hole terminated at 4.60m bgl on effective refusal. Groundwater encountered at 0.65m bgl. No visual or olfactory evidence of contamination encountered.											
Scale 1:37.5		Notes: All dimensions in metres. Logs should be read in accordance with the provided Key. Descriptions are based on visual and manual identification.									


17 WSP WINDOW SAMPLE LOG 70020138 - FORMER INTERBREWSITE, GLOUCESTER - MASTER DATABASE2.GPJ WSPTEMPLATE7.00.GDT 13/4/18

 WSP UK Limited 1 Queens Drive Birmingham, B5 4PJ Telephone: [REDACTED]	WINDOW SAMPLE LOG		Hole No. WS08
	Project Former Interbrew Site, Gloucester		Sheet 1 of 1
Job No 70020138	Client Paloma Capital LLP		Date 03-06-16 03-06-16
Contractor / Driller Dynamic Sampling UK Ltd	Method/Plant Used Premier 110	Logged By Matt Riding	Co-Ordinates (NGR) E 384896.207 N 217843.800
		Ground Level (m OD) 24.006	

SAMPLES & TESTS							STRATA					Install / Backfill Dia. mm
Depth	Type	Test Result	PID (ppmV)	HSV (kN/m2)	P Pen (kN/m2)	Water	Elev. (mOD)	Depth (Thickness)	Description	Legend	Geology	
0.30-0.30	ES	.					23.75	0.26	Reinforced CONCRETE.		CONC	
0.70-0.70	ES	.					23.51	0.50	Orange sandy fine and medium sub-angular to angular GRAVEL of sandstone. Sand is fine to medium. (MADE GROUND)		GMG	
1.20	(S)	1,1,2 2,3,4 N=11.					(2.50)		Firm to stiff bluish grey slightly sandy slightly gravelly silty CLAY. Gravel is fine angular of mudstone. Sand is fine to medium. (Weathered BLUE LIAS FORMATION and CHARMOUTH MUDSTONE FORMATION)		CHAM	
2.00	(S)	3,3,5 7,7,10 N=29.										
3.00	(S)	6,8,10 11,13,16 N=50.					21.01	3.00	Hole terminated at 3m bgl on effective refusal.		END	

Hole Diameter			Recovery			Water Strikes					
Depth	Diameter (mm)	Remarks	Core Top (m)	Core Base (m)	% Recovery	Date	Time	Strike	Minutes	Standing	Casing
General Remarks Hole terminated at 3.00m bgl on effective refusal. No groundwater encountered. No visual or olfactory evidence of contamination encountered.											
Scale 1:37.5		Notes: All dimensions in metres. Logs should be read in accordance with the provided Key. Descriptions are based on visual and manual identification.									


17 WSP WINDOW SAMPLE LOG 70020138 - FORMER INTERBREWSITE, GLOUCESTER - MASTER DATABASE2.GPJ WSPTEMPLATE7.00.GDT 13/4/18




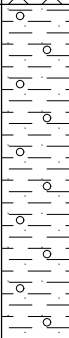
 WSP UK Limited 1 Queens Drive Birmingham, B5 4PJ Telephone: [REDACTED]	WINDOW SAMPLE LOG		Hole No. WS09
	Project Former Interbrew Site, Gloucester		Sheet 1 of 1
Job No 70020138	Client Paloma Capital LLP		Date 06-06-16 06-06-16
Contractor / Driller Dynamic Sampling UK Ltd	Method/Plant Used Premier 110	Logged By Matt Riding	Co-Ordinates (NGR) E 384996.267 N 217854.413
			Ground Level (m OD) 22.597

SAMPLES & TESTS							STRATA					Install / Backfill
Depth	Type	Test Result	PID (ppmV)	HSV (kN/m2)	P Pen (kN/m2)	Water	Elev. (mOD)	Depth (Thickness)	Description	Legend	Geology	Dia. mm
0.20-0.20	ES	.	0				22.48	0.12	ASPHALT.	[Symbol]	TARMAC	[Symbol]
0.35-0.35	ES	.	1.2				22.37	0.23	ASPHALT.	[Symbol]	TARMAC GMG	[Symbol]
1.20	(S)	1,1,2 2,3,3 N=10.					(1.77)		Greyish pink sandy fine to medium subangular GRAVEL of sandstone. Sand is fine to coarse. (MADE GROUND) Firm to stiff bluish grey slightly sandy slightly gravelly silty CLAY. Gravel is fine angular of mudstone. Sand is fine to medium. (Weathered BLUE LIAS FORMATION and CHARMOUTH MUDSTONE FORMATION)	[Symbol]	CHAM	[Symbol]
2.00	(S)	6,8,11 14,16,10 N=51/ 0.26.					20.60	2.00	Hole terminated at 2m bgl on effective refusal.	[Symbol]	END	[Symbol]

Hole Diameter			Recovery			Water Strikes					
Depth	Diameter (mm)	Remarks	Core Top (m)	Core Base (m)	% Recovery	Date	Time	Strike	Minutes	Standing	Casing
						General Remarks Hole terminated at 2.00m bgl on effective refusal. No groundwater encountered. No visual or olfactory evidence of contamination encountered.					
Scale 1:37.5		Notes: All dimensions in metres. Logs should be read in accordance with the provided Key. Descriptions are based on visual and manual identification.									


17 WSP WINDOW SAMPLE LOG 70020138 - FORMER INTERBREW SITE, GLOUCESTER - MASTER DATABASE2.GPJ WSPTEMPLATE7.00.GDT 13/4/18



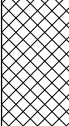
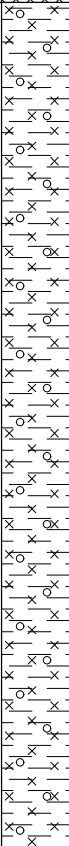
 WSP UK Limited 1 Queens Drive Birmingham, B5 4PJ Telephone: [REDACTED]	WINDOW SAMPLE LOG		Hole No. WS10
	Project Former Interbrew Site, Gloucester		Sheet 1 of 1
Job No 70020138	Client Paloma Capital LLP		Date 06-06-16 06-06-16
Contractor / Driller Dynamic Sampling UK Ltd	Method/Plant Used Premier 110	Logged By Matt Riding	Co-Ordinates (NGR) E 384837.737 N 217840.145
			Ground Level (m OD) 24.570

SAMPLES & TESTS							STRATA					Install / Backfill
Depth	Type	Test Result	PID (ppmV)	HSV (kN/m2)	P Pen (kN/m2)	Water	Elev. (mOD)	Depth (Thickness)	Description	Legend	Geology	Dia. mm
0.30-0.30	ES		10			↓	24.39	0.18	Reinforced CONCRETE.		CONC	
							24.07	0.50	Orange sandy fine and medium sub-angular GRAVEL of sandstone. Sand is fine to coarse. (MADE GROUND)		GMG	
1.20	(S)	2.2,1 2.3,3 N=9.					(0.32)		Light grey fine to coarse sub-angular GRAVEL of limestone and sandstone. (MADE GROUND)		GMG	
							(0.80)	0.80 - 0.80 m bgl				
1.65-1.65	ES		75				23.27	1.30	Firm to stiff bluish grey slightly gravelly slightly sandy silty CLAY. Gravel is fine angular of mudstone. Sand is medium. (Weathered BLUE LIAS FORMATION and CHARMOUTH MUDSTONE FORMATION)		CHAM	
2.00	(S)	1.1,4 4,6,10 N=24.					(1.70)					
2.50-2.50	ES		12.2									
3.00	(S)	5,5,10 11,14,15 N=50/ 0.27.					21.57	3.00	Hole terminated at 3m bgl on effective refusal.		END	

Hole Diameter			Recovery			Water Strikes					
Depth	Diameter (mm)	Remarks	Core Top (m)	Core Base (m)	% Recovery	Date	Time	Strike	Minutes	Standing	Casing
						06-06-16		0.50			
General Remarks Hole terminated at 3.00m bgl on effective refusal. Groundwater encountered at 0.50m bgl. Visual and olfactory evidence of contamination encountered. Geotextile membrane encountered at 0.50m bgl.											
Scale 1:37.5		Notes: All dimensions in metres. Logs should be read in accordance with the provided Key. Descriptions are based on visual and manual identification.									


17 WSP WINDOW SAMPLE LOG - 70020138 - FORMER INTERBREW SITE, GLOUCESTER - MASTER DATABASE2.GPJ WSPTEMPLATE7.00.GDT 13/4/18



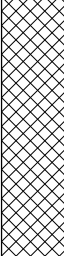

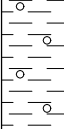

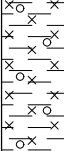


 WSP UK Limited 1 Queens Drive Birmingham, B5 4PJ Telephone: [REDACTED]	WINDOW SAMPLE LOG		Hole No. WS101
	Project Former Interbrew Site, Gloucester		Sheet 1 of 1
Job No 70020138	Client Paloma Capital LLP		Date 12-02-18 12-02-18
Contractor / Driller Dynamic Sampling UK Ltd	Method/Plant Used Premier 110	Logged By Charlie Orme	Co-Ordinates (NGR) E 384901.460 N 217795.290
			Ground Level (m OD) 24.470

SAMPLES & TESTS							STRATA					Install / Backfill
Depth	Type	Test Result	PID (ppmV)	HSV (kN/m2)	P Pen (kN/m2)	Water	Elev. (mOD)	Depth (Thick-ness)	Description	Legend	Geology	Dia. mm
							24.27	0.20	CONCRETE.		CONC	
0.30-0.45	ES	.						(0.29)	Very dark greyish black sandy fine and medium angular to subrounded GRAVEL of ash. (MADE GROUND)		GMG	
0.30-0.45	ES	.	0				23.98	0.49				
0.55-0.80	ES	.	0					(0.73)	Soft light greenish brown slightly sandy slightly gravelly CLAY. Gravel is fine to coarse of limestone and mudstone. (MADE GROUND)		CMG	
							23.25	1.22				
1.30-1.30	ES	.							Dark bluish grey slightly silty slightly gravelly CLAY with frequent orangish brown coarse sand pockets. Gravel is fine and medium angular to subrounded of mudstone and shell fragments.		CHAM	
1.30-1.30	ES	.	0									
1.50	(S)	1,1,1 1,1,1 N=4.										
2.00	(S)	1,1,1 2,2,2 N=7.										
3.00	(S)	3,3,4 5,5,6 N=20.						(4.23)				
4.00	(S)	6,6,7 7,10,10 N=34.										
5.00	(S)	10,11,11 13,13,13 N=50/ 0.28.										
							19.02	5.45	Borehole completed at 5.45m bgl.		END	

Hole Diameter			Recovery			Water Strikes					
Depth	Diameter (mm)	Remarks	Core Top (m)	Core Base (m)	% Recovery	Date	Time	Strike	Minutes	Standing	Casing
								2.30			
General Remarks Hand dug trial pit to 1.50m bgl No visual or olfactory evidence of contamination encountered Perched groundwater encountered at 3.00m bgl Hole complete at 5.45m bgl											
Scale 1:37.5		Notes: All dimensions in metres. Logs should be read in accordance with the provided Key. Descriptions are based on visual and manual identification.									


17 WSP WINDOW SAMPLE LOG - FORMER INTERBREW SITE, GLOUCESTER - MASTER DATABASE2.GPJ WSPTEMPLATE7.00.GDT 13/4/18



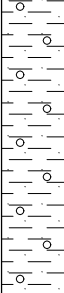
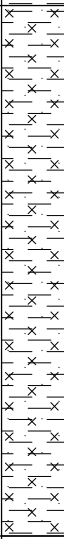
 WSP UK Limited 1 Queens Drive Birmingham, B5 4PJ Telephone: [REDACTED]	WINDOW SAMPLE LOG		Hole No. WS102
	Project Former Interbrew Site, Gloucester		Sheet 1 of 1
Job No 70020138	Client Paloma Capital LLP		Date 12-02-18 12-02-18
Contractor / Driller Dynamic Sampling UK Ltd	Method/Plant Used Premier 110	Logged By Charlie Orme	Co-Ordinates (NGR) E 384947.407 N 217829.043
			Ground Level (m OD) 23.273

SAMPLES & TESTS							STRATA					Install / Backfill
Depth	Type	Test Result	PID (ppmV)	HSV (kN/m2)	P Pen (kN/m2)	Water	Elev. (mOD)	Depth (Thickness)	Description	Legend	Geology	Dia. mm
0.30-0.50	ES	.					23.04	0.23	CONCRETE.		CONC	
0.30-0.30	ES	.	0					(1.29)	Soft greyish brown sandy gravelly CLAY. Gravel is fine to coarse very angular to subrounded of limestone and mudstone. (MADE GROUND)		CMG	
1.50	(S)	1,1,2 2,2,3 N=9.		4			21.75	1.52	Firm low strength light brownish grey mottled orangish brown slightly gravelly CLAY. Gravel is fine angular to subrounded of mudstone.		CHAM	
1.60-1.60	ES	.		4				(0.68)				
2.00	(S)	2,3,3 4,4,5 N=16.		30			21.07	2.20	Firm medium strength grey slightly gravelly slightly silty CLAY. Gravel is fine and medium angular to subrounded of mudstone and shell fragments.		CHAM	
3.00	(S)	3,4,5 5,5,6 N=21.		80								
				60								
				60								
				78								
				68								
4.00	(S)	6,6,7 7,9,10 N=33.						(3.21)			CHAM	
5.00	(S)	10,10,13 15,17,10 N=55/ 0.26.					17.86	5.41	Borehole completed at 5.45m bgl.		END	

Hole Diameter			Recovery			Water Strikes					
Depth	Diameter (mm)	Remarks	Core Top (m)	Core Base (m)	% Recovery	Date	Time	Strike	Minutes	Standing	Casing
						General Remarks Hand dug trial pit to 1.50m bgl No visual or olfactory evidence of contamination No groundwater encountered Hole complete at 5.45m bgl					
Scale 1:37.5		Notes: All dimensions in metres. Logs should be read in accordance with the provided Key. Descriptions are based on visual and manual identification.									


17 WSP WINDOW SAMPLE LOG - FORMER INTERBREWSITE, GLOUCESTER - MASTER DATABASE2.GPJ WSPTEMPLATE7.00.GDT 13/4/18



















 WSP UK Limited 1 Queens Drive Birmingham, B5 4PJ Telephone: [REDACTED]	WINDOW SAMPLE LOG		Hole No. WS103
	Project Former Interbrew Site, Gloucester		Sheet 1 of 1
Job No 70020138	Client Paloma Capital LLP		Date 12-02-18 12-02-18
Contractor / Driller Dynamic Sampling UK Ltd	Method/Plant Used Premier 110	Logged By Charlie Orme	Co-Ordinates (NGR) E 384870.668 N 217812.189
			Ground Level (m OD) 24.445

SAMPLES & TESTS							STRATA					Install / Backfill
Depth	Type	Test Result	PID (ppmV)	HSV (kN/m2)	P Pen (kN/m2)	Water	Elev. (mOD)	Depth (Thick-ness)	Description	Legend	Geology	Dia. mm
0.25-0.25	ES	.					24.25	0.20	Reinforced CONCRETE. Rebar at 0.11m. Geotextile membrane at base.		CONC	
0.25-0.40	ES	.	0					(0.30)	Light orangish brown slightly clayey sandy fine to coarse subangular to subrounded GRAVEL of limestone. (MADE GROUND)		GMG	
0.70-0.70	ES	.						0.50	Soft light greenish grey mottled orangish brown slightly gravelly sandy CLAY. Gravel is fine and medium subangular of mudstone.		ALV	
							(1.50)					
1.50	(S)	2.2.2 2.2.2 N=8.					22.45	2.00	Dark bluish grey slightly sandy slightly silty CLAY.		CHAM	
2.00	(S)	2.3.3 3.4.4 N=14.					(2.63)					
3.00	(S)	3.4.6 7.9.9 N=31.										
4.00	(S)	8, 10, 12 14, 14, 10 N=50/ 0.265.					19.82	4.63	Borehole terminated at 4.63m bgl on effective refusal.		END	

Hole Diameter			Recovery			Water Strikes					
Depth	Diameter (mm)	Remarks	Core Top (m)	Core Base (m)	% Recovery	Date	Time	Strike	Minutes	Standing	Casing
General Remarks Hand dug pit to 1.50m bgl No visual or olfactory evidence of contamination No groundwater encountered Hole terminated at 4.63mbgl on SPT refusal											
Scale 1:37.5		Notes: All dimensions in metres. Logs should be read in accordance with the provided Key. Descriptions are based on visual and manual identification.									


17 WSP WINDOW SAMPLE LOG - 70020138 - FORMER INTERBREW SITE, GLOUCESTER - MASTER DATABASE2.GPJ WSPTEMPLATE7.00.GDT 13/4/18







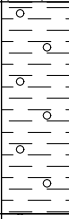


 WSP UK Limited 1 Queens Drive Birmingham, B5 4PJ Telephone: [REDACTED]	WINDOW SAMPLE LOG		Hole No. WS104
	Project Former Interbrew Site, Gloucester		Sheet 1 of 1
Job No 70020138	Client Paloma Capital LLP		Date 13-02-18 13-02-18
Contractor / Driller Dynamic Sampling UK Ltd	Method/Plant Used Premier 110	Logged By Charlie Orme	Co-Ordinates (NGR) E 385017.029 N 217883.232
			Ground Level (m OD) 22.562

SAMPLES & TESTS							STRATA					Install / Backfill
Depth	Type	Test Result	PID (ppmV)	HSV (kN/m2)	P Pen (kN/m2)	Water	Elev. (mOD)	Depth (Thickness)	Description	Legend	Geology	Dia. mm
							22.45	0.11	ASPHALT.		TARMAC	
0.30-0.30	ES	.					22.18	0.38	Light pinkish cream slightly clayey sandy fine to coarse subangular to subrounded GRAVEL of limestone. (MADE GROUND)		GMG	
0.30-0.30	ES	.	0						Stiff light brownish grey slightly gravelly CLAY. Gravel is fine subangular to subrounded of mudstone.			
0.90-0.90	ES	.										
0.90-0.90	ES	.	0									
1.50	(S)	1,2,2 2,2,2 N=8.										
2.00	(S)	5,5,6 6,6,7 N=25.					(3.17)				CHAM	
3.00	(S)	7,8,11 12,14,13 N=50/ 0.285.										
							19.01	3.55	Borehole terminated at 3.55m bgl on effective refusal.		END	

Hole Diameter			Recovery			Water Strikes					
Depth	Diameter (mm)	Remarks	Core Top (m)	Core Base (m)	% Recovery	Date	Time	Strike	Minutes	Standing	Casing
						General Remarks Hand dug trial pit to 1.50m bgl No visual or olfactory evidence of contamination No groundwater encountered Hole terminated at 3.55mbgl on SPT refusal					
Scale 1:37.5			Notes: All dimensions in metres. Logs should be read in accordance with the provided Key. Descriptions are based on visual and manual identification.								


17 WSP WINDOW SAMPLE LOG 70020138 - FORMER INTERBREW SITE, GLOUCESTER - MASTER DATABASE2.GPJ WSPTEMPLATE7.00.GDT 13/4/18





 WSP UK Limited 1 Queens Drive Birmingham, B5 4PJ Telephone: ██████████	WINDOW SAMPLE LOG		Hole No. WS105
	Project Former Interbrew Site, Gloucester		Sheet 1 of 1
Job No 70020138	Client Paloma Capital LLP		Date 13-02-18 13-02-18
Contractor / Driller Dynamic Sampling UK Ltd	Method/Plant Used Premier 110	Logged By Charlie Orme	Co-Ordinates (NGR) E 384965.510 N 217930.605
			Ground Level (m OD) 22.625

SAMPLES & TESTS							STRATA					Install / Backfill
Depth	Type	Test Result	PID (ppmV)	HSV (kN/m2)	P.Pen (kN/m2)	Water	Elev. (mOD)	Depth (Thickness)	Description	Legend	Geology	Dia. mm
							22.42	0.21	Reinforced CONCRETE.		CONC	
0.25-0.25	ES	.	0				22.36	0.27	Very dark brownish black gravelly coarse SAND. Gravel is fine and medium angular to subangular of ash and tar. (MADE GROUND) Light pinkish cream clayey sandy GRAVEL with frequent cobble sized fragments of sandstone.		GMG	
0.25-0.25	ES	.	0									
0.45-0.60	ES	.	0					(0.71)				
0.70-0.70	ES	.					21.65	0.98	Firm locally stiff light greyish brown mottled orangish brown slightly sandy CLAY.		CHAM	
1.10-1.10	ES	.	0									
1.10-1.10	ES	.	0									
1.50	(S)	2.1,1 2.2,3 N=8.										
2.00	(S)	2.2,3 4.5,5 N=17.						(2.39)				
				48								
				48								
3.00	(S)	4.4,4 5.5,6 N=20.										
				68								
				72								
4.00	(S)	5.6,10 10,10,10 N=40.						(1.05)	Stiff dark bluish grey slightly gravelly CLAY. Gravel is fine subangular of mudstone and rare shell fragments.		CHAM	
				90								
							18.21	4.42	Borehole completed at 4.45m bgl.		END	
5.00	(S)	9,9,12 14,14,10 N=50/ 0.27.										

Hole Diameter			Recovery			Water Strikes					
Depth	Diameter (mm)	Remarks	Core Top (m)	Core Base (m)	% Recovery	Date	Time	Strike	Minutes	Standing	Casing
						General Remarks Hand dug trial pit to 1.50m bgl No visual or olfactory evidence of contamination encountered No groundwater encountered Hole complete at 4.45m bgl					
Scale 1:37.5		Notes: All dimensions in metres. Logs should be read in accordance with the provided Key. Descriptions are based on visual and manual identification.									


17 WSP WINDOW SAMPLE LOG - 70020138 - FORMER INTERBREWE SITE, GLOUCESTER - MASTER DATABASE2.GPJ WSPTEMPLATE7.00.GDT 13/4/18







 WSP UK Limited 1 Queens Drive Birmingham, B5 4PJ Telephone: [REDACTED]	WINDOW SAMPLE LOG		Hole No. WS106
	Project Former Interbrew Site, Gloucester		Sheet 1 of 1
Job No 70020138	Client Paloma Capital LLP		Date 12-02-18 12-02-18
Contractor / Driller Dynamic Sampling UK Ltd	Method/Plant Used Premier 110	Logged By Charlie Orme	Co-Ordinates (NGR) E 384928.680 N 217941.976
			Ground Level (m OD) 22.474

SAMPLES & TESTS							STRATA					Install / Backfill Dia. mm
Depth	Type	Test Result	PID (ppmV)	HSV (kN/m2)	P Pen (kN/m2)	Water	Elev. (mOD)	Depth (Thickness)	Description	Legend	Geology	
0.60-0.60	ES	.					22.27	0.20	CONCRETE.		CONC	
0.60-0.60	ES	.	0						Light orangish brown clayey sandy fine to coarse very angular to rounded GRAVEL of limestone occasional cobble sized fragments of limestone. (MADE GROUND)		GMG	
1.50	(S)	2.22 2.27 N=13.						(1.90)				
2.00	(S)	25.28 22 N=50/ 0.125.					20.37	2.10	Borehole terminated at 2.10m bgl on effective refusal.		END	

Hole Diameter			Recovery			Water Strikes					
Depth	Diameter (mm)	Remarks	Core Top (m)	Core Base (m)	% Recovery	Date	Time	Strike	Minutes	Standing	Casing
								1.70			
						General Remarks Hand dug pit to 1.50m bgl No visual or olfactory evidence of contamination encountered Groundwater encountered at 1.70m bgl Hole terminated at 2.10m due to refusal					
Scale 1:37.5			Notes: All dimensions in metres. Logs should be read in accordance with the provided Key. Descriptions are based on visual and manual identification.								


17 WSP WINDOW SAMPLE LOG 70020138 - FORMER INTERBREWE SITE, GLOUCESTER - MASTER DATABASE2.GPJ WSPTEMPLATE7.00.GDT 13/4/18






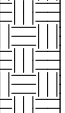
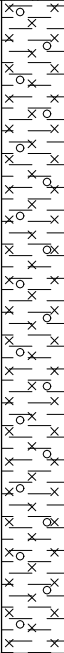



 WSP UK Limited 1 Queens Drive Birmingham, B5 4PJ Telephone: [REDACTED]	WINDOW SAMPLE LOG		Hole No. WS107
	Project Former Interbrew Site, Gloucester		Sheet 1 of 1
Job No 70020138	Client Paloma Capital LLP		Date 12-02-18 12-02-18
Contractor / Driller Dynamic Sampling UK Ltd	Method/Plant Used Premier 110	Logged By Charlie Orme	Co-Ordinates (NGR) E 384934.404 N 217958.032
			Ground Level (m OD) 22.464

SAMPLES & TESTS							STRATA					Install / Backfill
Depth	Type	Test Result	PID (ppmV)	HSV (kN/m2)	P Pen (kN/m2)	Water	Elev. (mOD)	Depth (Thickness)	Description	Legend	Geology	Dia. mm
0.45-0.45	ES	.					22.21	0.25	Reinforced CONCRETE. Rebar at 0.08m.		CONC	
0.45-0.50	ES	.	0				21.90	0.56	Soft light orangish brown very gravelly sandy CLAY. Gravel is fine to coarse very angular to subrounded of limestone. (MADE GROUND)		CMG	
							21.83	0.63	Light grey very gravelly COBBLES. Gravel is medium and coarse subangular of limestone. (MADE GROUND) Borehole terminated at 0.63m bgl on obstruction.		GMG END	

Hole Diameter			Recovery			Water Strikes					
Depth	Diameter (mm)	Remarks	Core Top (m)	Core Base (m)	% Recovery	Date	Time	Strike	Minutes	Standing	Casing
						General Remarks Hand dug trial pit to 0.63m bgl No visual or olfactory evidence of contamination No groundwater encountered Hole terminated at 0.63m bgl due to obstruction					
Scale 1:37.5			Notes: All dimensions in metres. Logs should be read in accordance with the provided Key. Descriptions are based on visual and manual identification.								


17 WSP WINDOW SAMPLE LOG 70020138 - FORMER INTERBREW SITE, GLOUCESTER - MASTER DATABASE2.GPJ WSPTEMPLATE7.00.GDT 13/4/18



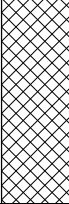


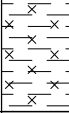
 WSP UK Limited 1 Queens Drive Birmingham, B5 4PJ Telephone: [REDACTED]	WINDOW SAMPLE LOG		Hole No. WS108
	Project Former Interbrew Site, Gloucester		Sheet 1 of 1
Job No 70020138	Client Paloma Capital LLP		Date 12-02-18 12-02-18
Contractor / Driller Dynamic Sampling UK Ltd	Method/Plant Used Premier 110	Logged By Charlie Orme	Co-Ordinates (NGR) E 384897.551 N 217977.022
			Ground Level (m OD) 22.500

SAMPLES & TESTS							STRATA					Install / Backfill
Depth	Type	Test Result	PID (ppmV)	HSV (kN/m2)	P Pen (kN/m2)	Water	Elev. (mOD)	Depth (Thickness)	Description	Legend	Geology	Dia. mm
0.50-0.50	ES						22.19	(0.31)	CONCRETE. Rebar at 0.27m.		CONC	
0.50-0.50	ES		0				21.97	0.53	CONCRETE.		CONC	
1.05-1.05	ES		0				21.29	(0.68)	Light orangish brown clayey sandy medium and coarse angular to subangular GRAVEL of limestone.		GMG	
1.05-1.05	ES		0				21.29	1.21	Stiff light brownish grey slightly silty slightly gravelly CLAY. Gravel is fine subangular to subrounded of mudstone.		CHAM	
1.50	(S)	1,1,2 1,2,1 N=6.										
2.00	(S)	1,2,3 3,4,5 N=15.										
3.00	(S)	4,4,5 6,9,8 N=28.						(3.24)				
4.00	(S)	7,8,9 11,15,15 N=50/ 0.295.										
							18.05	4.45	Borehole completed at 4.45m bgl.		END	

Hole Diameter			Recovery			Water Strikes					
Depth	Diameter (mm)	Remarks	Core Top (m)	Core Base (m)	% Recovery	Date	Time	Strike	Minutes	Standing	Casing
						General Remarks Hand dug pit to 1.50m bgl No visual or olfactory evidence of contamination encountered No ground water encountered Hole complete at 4.45m					
Scale 1:37.5		Notes: All dimensions in metres. Logs should be read in accordance with the provided Key. Descriptions are based on visual and manual identification.									


17 WSP WINDOW SAMPLE LOG - FORMER INTERBREWE SITE, GLOUCESTER - MASTER DATABASE2.GPJ WSPTEMPLATE7.00.GDT 13/4/18







 WSP UK Limited 1 Queens Drive Birmingham, B5 4PJ Telephone: [REDACTED]	WINDOW SAMPLE LOG		Hole No. WS109
	Project Former Interbrew Site, Gloucester		Sheet 1 of 1
Job No 70020138	Client Paloma Capital LLP		Date 13-02-18 13-02-18
Contractor / Driller Dynamic Sampling UK Ltd	Method/Plant Used Premier 110	Logged By Charlie Orme	Co-Ordinates (NGR) E 384916.558 N 218001.621
			Ground Level (m OD) 22.494

SAMPLES & TESTS							STRATA					Install / Backfill
Depth	Type	Test Result	PID (ppmV)	HSV (kN/m2)	P Pen (kN/m2)	Water	Elev. (mOD)	Depth (Thickness)	Description	Legend	Geology	Dia. mm
							22.27	0.22	CONCRETE.		CONC	
0.50-0.50 0.60-0.60	ES ES	.	0					(0.87)	Light greyish brown slightly clayey sandy medium and coarse angular to subangular GRAVEL of limestone with occasional cobble sized fragments of limestone. (MADE GROUND)		GMG	
1.20-1.20 1.20-1.20	ES ES	.	0				21.40	1.09	Soft light brownish grey slightly gravelly sandy CLAY. Gravel is fine and medium angular to subangular of mudstone limestone and occasional sandstone. (MADE GROUND)		CMG	
1.50	(S)	1,3,2 2,2,2 N=8.						(1.02)				
2.00	(S)	2,3,4 5,5,6 N=20.					20.38	2.11	Firm light brownish grey sandy slightly gravelly CLAY with pockets of coarse reddish brown sand. Gravel is fine and medium subangular to subrounded of mudstone.		CHAM	
2.50-3.00	B	.	0	66 68				(1.71)				
3.00	(S)	3,4,4 6,8,7 N=25.										
4.00	(S)	5,7,9 12,14,15 N=50/ 0.285.					18.67	3.82	Light grey slightly silty CLAY. Strata is wet.		CHAM	
							18.05	4.44	Borehole completed at 4.45m bgl.		END	

Hole Diameter			Recovery			Water Strikes					
Depth	Diameter (mm)	Remarks	Core Top (m)	Core Base (m)	% Recovery	Date	Time	Strike	Minutes	Standing	Casing
						13-02-18		2.60			
General Remarks Hand dug trial pit to 1.50mbgl No visual or olfactory evidence of contamination Perched ground water encountered at 2.60m bgl Hole complete at 4.45m bgl											
Scale 1:37.5		Notes: All dimensions in metres. Logs should be read in accordance with the provided Key. Descriptions are based on visual and manual identification.									


17 WSP WINDOW SAMPLE LOG - 70020138 - FORMER INTERBREW SITE, GLOUCESTER - MASTER DATABASE2.GPJ WSPTEMPLATE7.00.GDT 13/4/18





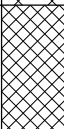
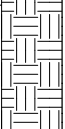
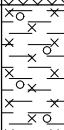
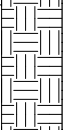

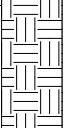
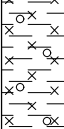
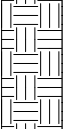
 WSP UK Limited 1 Queens Drive Birmingham, B5 4PJ Telephone: [REDACTED]	WINDOW SAMPLE LOG		Hole No. WS11
	Project Former Interbrew Site, Gloucester		Sheet 1 of 1
Job No 70020138	Client Paloma Capital LLP		Date 06-06-16 06-06-16
Contractor / Driller Dynamic Sampling UK Ltd	Method/Plant Used Premier 110	Logged By Matt Riding	Co-Ordinates (NGR) E 384851.040 N 217852.758
			Ground Level (m OD) 24.446

SAMPLES & TESTS							STRATA					Install / Backfill
Depth	Type	Test Result	PID (ppmV)	HSV (kN/m2)	P Pen (kN/m2)	Water	Elev. (mOD)	Depth (Thickness)	Description	Legend	Geology	Dia. mm
0.30-0.30	ES	.					24.19	0.26	Reinforced CONCRETE.		CONC	
0.50-0.50	ES	.					23.99	0.46	Brownish yellow slightly clayey sandy fine to coarse sub-angular to angular GRAVEL of sandstone. Sand is fine to coarse. (MADE GROUND)		GMG	
							23.79	0.66	Bluish grey slightly sandy slightly gravelly silty CLAY. Gravel is fine to coarse angular of mudstone. Sand is fine to medium. (MADE GROUND)		CMG	
									Hole terminated at 0.66m bgl on potential utility find.		END	

Hole Diameter			Recovery			Water Strikes					
Depth	Diameter (mm)	Remarks	Core Top (m)	Core Base (m)	% Recovery	Date	Time	Strike	Minutes	Standing	Casing
						General Remarks Hole terminated at 0.66m bgl due to potential buried utility presence. No groundwater encountered. No visual or olfactory evidence of contamination encountered.					
Scale 1:37.5		Notes: All dimensions in metres. Logs should be read in accordance with the provided Key. Descriptions are based on visual and manual identification.									


17 WSP WINDOW SAMPLE LOG 70020138 - FORMER INTERBREW SITE, GLOUCESTER - MASTER DATABASE2.GPJ WSPTEMPLATE7.00.GDT 13/4/18


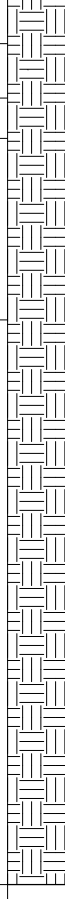




 WSP UK Limited 1 Queens Drive Birmingham, B5 4PJ Telephone: [REDACTED]	WINDOW SAMPLE LOG		Hole No. WS110
	Project Former Interbrew Site, Gloucester		Sheet 1 of 1
Job No 70020138	Client Paloma Capital LLP		Date 12-02-18 12-02-18
Contractor / Driller Dynamic Sampling UK Ltd	Method/Plant Used Premier 110	Logged By Charlie Orme	Co-Ordinates (NGR) E 384947.847 N 218015.382
			Ground Level (m OD) 22.054

SAMPLES & TESTS							STRATA					Install / Backfill
Depth	Type	Test Result	PID (ppmV)	HSV (kN/m2)	P Pen (kN/m2)	Water	Elev. (mOD)	Depth (Thick-ness)	Description	Legend	Geology	Dia. mm
0.30-0.30	ES	.					21.83	0.22	Reinforced CONCRETE. Rebar at 0.08m bgl and 0.14m bgl. Geotextile membrane at base.		CONC	
0.30-0.30	ES	.	0				21.56	0.49	Light grey slightly sandy clayey fine to coarse angular to subrounded GRAVEL of limestone. (MADE GROUND)		GMG	
1.05-1.05	ES	.					(1.11)		Soft dark greyish brown slightly sandy gravelly CLAY. Gravel is fine to coarse angular to subrounded of limestone and mudstone. (MADE GROUND)		CMG	
1.50	(S)	1,2,1 2,2,2 N=7.		68			20.45	1.60				
2.00	(S)	2,2,2 3,4,5 N=14.		46			(0.90)		Firm light brownish grey slightly gravelly slightly silty CLAY. Gravel is fine and medium angular to subrounded of mudstone.		CHAM	
3.00	(S)	4,4,5 7,7,7 N=26.		40			19.55	2.50				
4.00	(S)	9,10,11 13,16,10 N=50/ 0.285.		112			(1.94)		Stiff light bluish grey mottled light greenish brown slightly gravelly slightly silty CLAY. Gravel is fine and medium subangular to subrounded of mudstone.		CHAM	
				126			17.61	4.44	Borehole completed at 4.45m bgl.		END	
				116								

Hole Diameter			Recovery			Water Strikes					
Depth	Diameter (mm)	Remarks	Core Top (m)	Core Base (m)	% Recovery	Date	Time	Strike	Minutes	Standing	Casing
General Remarks Hand dug trial pit to 1.50m bgl No visual or olfactory evidence of contamination No groundwater encountered Hole complete at 4.45m bgl											
Scale 1:37.5		Notes: All dimensions in metres. Logs should be read in accordance with the provided Key. Descriptions are based on visual and manual identification.									


17 WSP WINDOW SAMPLE LOG - FORMER INTERBREW SITE, GLOUCESTER - MASTER DATABASE2.GPJ WSPTEMPLATE7.00.GDT 13/4/18


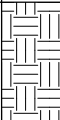


 WSP UK Limited 1 Queens Drive Birmingham, B5 4PJ Telephone: [REDACTED]	WINDOW SAMPLE LOG		Hole No. WS12
	Project Former Interbrew Site, Gloucester		Sheet 1 of 1
Job No 70020138	Client Paloma Capital LLP		Date 03-06-16 03-06-16
Contractor / Driller Dynamic Sampling UK Ltd	Method/Plant Used Premier 110	Logged By Matt Riding	Co-Ordinates (NGR) E 384816.640 N 217913.377
			Ground Level (m OD) 24.394

SAMPLES & TESTS							STRATA					Install / Backfill Dia. mm
Depth	Type	Test Result	PID (ppmV)	HSV (kN/m2)	P Pen (kN/m2)	Water	Elev. (mOD)	Depth (Thickness)	Description	Legend	Geology	
0.50-0.70	ES	.				↓	24.16	0.23	Reinforced CONCRETE.		CONC	
0.60-0.60	ES	.			23.89		0.50	Light pinkish grey sandy fine and medium angular GRAVEL of limestone. (MADE GROUND)		GMG		
0.70-0.50	ES	.			23.69		0.70	Light yellow clayey slightly gravelly medium to coarse SAND. Gravel is fine to coarse sub-angular to angular of flint. (ALLUVIUM)		ALV		
0.80-0.80	ES	.			(0.90)			Brownish yellow slightly sandy slightly gravelly CLAY. Gravel is fine to coarse sub-angular to angular of flint. Sand is medium to coarse. (ALLUVIUM)		ALV		
					22.79		1.60					
						(2.80)		Stiff bluish grey slightly sandy slightly gravelly silty CLAY. Gravel is fine angular of mudstone. Sand is fine to medium. (Weathered BLUE LIAS FORMATION and CHARMOUTH MUDSTONE FORMATION)		CHAM		
4.00	(S)	6, 10, 12 12, 15, 11 N=50/ 0.255.				19.99	4.40				END	
								Hole terminated at 4.4m bgl on effective refusal.				

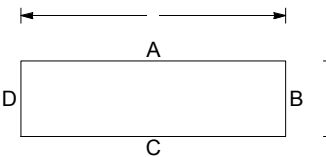
Hole Diameter			Recovery			Water Strikes					
Depth	Diameter (mm)	Remarks	Core Top (m)	Core Base (m)	% Recovery	Date	Time	Strike	Minutes	Standing	Casing
						03-06-16		0.70			
General Remarks Hole terminated at 4.40m bgl on effective refusal. No groundwater encountered. No visual or olfactory evidence of contamination encountered.											
Scale 1:37.5		Notes: All dimensions in metres. Logs should be read in accordance with the provided Key. Descriptions are based on visual and manual identification.									


17 WSP WINDOW SAMPLE LOG 70020138 - FORMER INTERBREW SITE, GLOUCESTER - MASTER DATABASE2.GPJ WSPTEMPLATE7.00.GDT 13/4/18


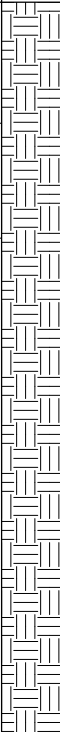

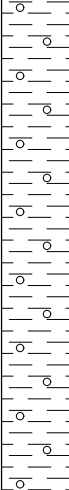
 WSP UK Limited 1 Queens Drive Birmingham, B5 4PJ Telephone: [REDACTED] Fax: 0121 352 4701	TRIAL PIT LOG		Hole No. HP101	
	Project Former Interbrew Site, Gloucester		Sheet 1 of 1	
Job No 70020138	Client Paloma Capital LLP		Date 13-02-18 13-02-18	
Contractor / Driller Dynamic Sampling UK Ltd	Method/Plant Used Hand Dug Pit	Logged By Charlie Orme	Co-Ordinates (NGR) E 384859.903 N 217836.753	Ground Level (m OD) 24.483

SAMPLES & TESTS							STRATA					Install / Backfill
Depth	Type	PID (ppmV)	HSV (kN/m2)	P.Pen (kN/m2)	Water	Elev. (mOD)	Depth (Thickness)	Description	Legend	Geology		
0.30-0.30 0.30-0.30	ES ES	0				24.28	0.20	CONCRETE.		CONC		
						24.04	0.44	Light orangish brown sandy fine to coarse angular to subrounded GRAVEL of limestone. (MADE GROUND)		GMG		
								Hand pit terminated at 0.44m bgl.		END		

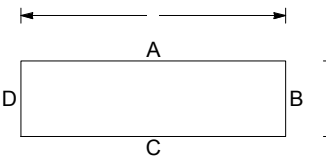
08 WSP TP LOG STANDARD 70020138 - FORMER INTERBREW SITE, GLOUCESTER - MASTER DATABASE2.GPJ WSPTEMPLATE1.03.GDT 13/4/18


	Length m	Shoring/Support:	Water Strikes					
	Width m		Date	Time	Strike	Minutes	Standing	Remarks
	Orientation degrees from north	Stability:	General Remarks Hand dug pit to 0.44m No visual or olfactory evidence of contamination No groundwater encountered Hole terminated at 0.44m due to hard digging on concrete obstruction					
Scale 1:12.5	Notes: All dimensions in metres. Logs should be read in accordance with the provided Key. Descriptions are based on visual and manual identification.							





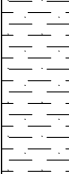
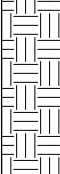
 WSP UK Limited 1 Queens Drive Birmingham, B5 4PJ Telephone: [REDACTED] Fax: 0121 352 4701	TRIAL PIT LOG		Hole No. HP102
	Project Former Interbrew Site, Gloucester		Sheet 1 of 1
Job No 70020138	Client Paloma Capital LLP		Date 13-02-18 13-02-18
Contractor / Driller Dynamic Sampling UK Ltd	Method/Plant Used Hand Dug Pit	Logged By Charlie Orme	Co-Ordinates (NGR) E 384834.997 N 217857.831
		Ground Level (m OD) 24.504	

SAMPLES & TESTS							STRATA					Install / Backfill
Depth	Type	PID (ppmV)	HSV (kN/m ²)	P Pen (kN/m ²)	Water	Elev. (mOD)	Depth (Thickness)	Description	Legend	Geology		
0.30-0.30 0.30-0.30	ES ES	0				24.30	0.20	CONCRETE.		CONC		
						24.11	0.39	Light brownish grey slightly clayey slightly sandy fine to coarse very angular to subrounded GRAVEL of limestone and quartz.		GMG		
0.60-0.60 0.60-0.60	ES ES	0					(0.82)	Firm light brownish grey mottled light orangish brown slightly gravelly CLAY.		CHAM		
						23.29	1.21	Hand pit completed at 1.21m bgl.		END		

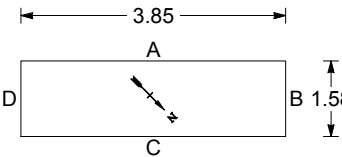
08 WSP TP LOG STANDARD 70020138 - FORMER INTERBREW SITE, GLOUCESTER - MASTER DATABASE2.GPJ WSPTEMPLATE1.03.GDT 13/4/18


	Length m	Shoring/Support:	Water Strikes					
	Width m		Date	Time	Strike	Minutes	Standing	Remarks
	Orientation degrees from north	Stability:	General Remarks Hand dug pit to 1.21m bgl No visual or olfactory evidence of contamination No groundwater encountered Hole terminated at 121m bgl due to hard digging					
Scale 1:12.5	Notes: All dimensions in metres. Logs should be read in accordance with the provided Key. Descriptions are based on visual and manual identification.							


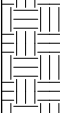

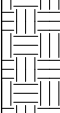

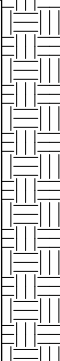
 WSP UK Limited 1 Queens Drive Birmingham, B5 4PJ Telephone: [REDACTED] Fax: 0121 352 4701	TRIAL PIT LOG		Hole No. TP101	
	Project Former Interbrew Site, Gloucester		Sheet 1 of 1	
Job No 70020138	Client Paloma Capital LLP		Date 08-02-18 08-02-18	
Contractor / Driller Lynch Plant Hire	Method/Plant Used 360 Excavator	Logged By Abbie McCarthy	Co-Ordinates (NGR) E 384856.957 N 217814.402	Ground Level (m OD) 24.572

SAMPLES & TESTS							STRATA					Install / Backfill
Depth	Type	PID (ppmV)	HSV (kN/m2)	P Pen (kN/m2)	Water	Elev. (mOD)	Depth (Thickness)	Description	Legend	Geology		
						24.07	0.50	Reinforced CONCRETE.		CONC		
0.50-0.50	ES	0.3				23.87	0.70	Light orangish brown gravelly SAND. Gravel is fine and medium subangular to angular of quartz, mudstone and plastic. (MADE GROUND)		GMG		
0.65-0.65	B	0.1						Dark greyish blue slightly sandy CLAY. 0.70 - 1.50 Pockets of orange sand from 0.7m bgl		CHAM		
1.00-1.00	ES											
1.20-1.20 1.20-1.20	B D					23.07	1.50	Trial pit completed at 1.50m bgl.		END		

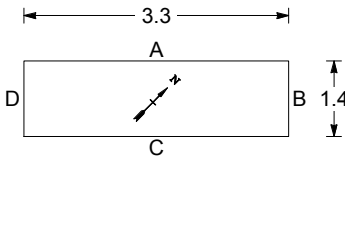
08 WSP TP LOG STANDARD 70020138 - FORMER INTERBREWSITE - GLOUCESTER - MASTER DATABASE2.GPJ WSPTEMPLATE1.03.GDT 13/4/18


	Length 3.85m	Shoring/Support:	Water Strikes							
	Width 1.58m		Stability:	Date	Time	Strike	Minutes	Standing	Remarks	
	Orientation 45 degrees from north	General Remarks Hole completed at 1.50m bgl. No visual or olfactory evidence of contamination was encountered. Groundwater was not encountered.								
Scale 1:18.75	Notes: All dimensions in metres. Logs should be read in accordance with the provided Key. Descriptions are based on visual and manual identification.									


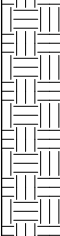

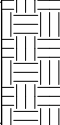
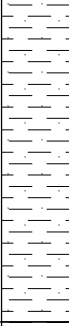
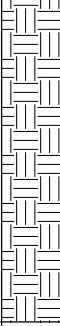
 WSP UK Limited 1 Queens Drive Birmingham, B5 4PJ Telephone: [REDACTED] Fax: 0121 352 4701	TRIAL PIT LOG		Hole No. TP102	
	Project Former Interbrew Site, Gloucester		Sheet 1 of 1	
Job No 70020138	Client Paloma Capital LLP		Date 08-02-18 08-02-18	
Contractor / Driller Lynch Plant Hire	Method/Plant Used 360 Excavator	Logged By Abbie McCarthy	Co-Ordinates (NGR) E 384914.750 N 217837.037	Ground Level (m OD) 23.490

SAMPLES & TESTS						STRATA					Install / Backfill
Depth	Type	PID (ppmV)	HSV (kN/m2)	P Pen (kN/m2)	Water	Elev. (mOD)	Depth (Thickness)	Description	Legend	Geology	
						23.19	0.30	Reinforced CONCRETE.		CONC	
0.40-0.40 0.50-0.50	ES B D	0.1				22.89	0.60	Light orangish brown gravelly SAND. Gravel is fine and medium subangular to angular of quartz and mudstone. (MADE GROUND)		GMG	
0.70-0.70 1.20-1.20 1.20-1.20	ES B D	0				21.99	1.50	Dark greyish blue sandy CLAY. 0.60 - 1.50 Pockets of orange sand		CHAM	
								Trial pit completed at 1.50m bgl.		END	

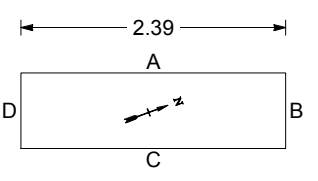
08 WSP TP LOG STANDARD 70020138 - FORMER INTERBREW SITE, GLOUCESTER - MASTER DATABASE2.GPJ WSPTEMPLATE1.03.GDT 13/4/18


	Length 3.30m	Shoring/Support:	Water Strikes					
	Width 1.40m		Stability:	Date	Time	Strike	Minutes	Standing	Remarks
	Orientation 135 degrees from north	General Remarks Hole completed at 1.50m bgl. No visual or olfactory evidence of contamination encountered. Groundwater was not encountered.						
Scale 1:18.75	Notes: All dimensions in metres. Logs should be read in accordance with the provided Key. Descriptions are based on visual and manual identification.							


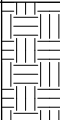



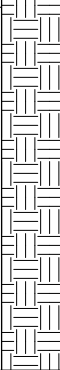

 WSP UK Limited 1 Queens Drive Birmingham, B5 4PJ Telephone: [REDACTED] Fax: 0121 352 4701	TRIAL PIT LOG			Hole No. TP103
	Project Former Interbrew Site, Gloucester			Sheet 1 of 1
Job No 70020138	Client Paloma Capital LLP			Date 08-02-18 08-02-18
Contractor / Driller Lynch Plant Hire	Method/Plant Used 360 Excavator	Logged By Abbie McCarthy	Co-Ordinates (NGR) E 384848.203 N 217845.183	Ground Level (m OD) 24.632

SAMPLES & TESTS							STRATA					Install / Backfill
Depth	Type	PID (ppmV)	HSV (kN/m ²)	P Pen (kN/m ²)	Water	Elev. (mOD)	Depth (Thickness)	Description	Legend	Geology		
						24.03	0.60	Reinforced CONCRETE.		CONC		
0.70-0.70 0.70-0.70 0.80-0.80	B D ES	27				23.73	0.90	Dark greyish brown gravelly SAND. (MADE GROUND)		GMG		
1.00-1.00	ES	1.9					(0.80)	Dark greyish blue sandy CLAY. 1.00 - 1.00 Pockets of orange sand from 1.00m bgl.		CHAM		
1.50-1.50	ES	0.1										
1.60-1.60 1.60-1.60	B D					22.93	1.70	Trial pit completed at 1.70m bgl.		END		

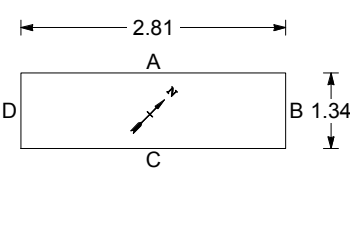
08 WSP TP LOG STANDARD 70020138 - FORMER INTERBREWSITE - GLOUCESTER - MASTER DATABASE2.GPJ WSPTEMPLATE1.03.GDT 13/4/18


	Length 2.39m	Shoring/Support:	Water Strikes					
	Width 1.70m		Stability:	Date	Time	Strike	Minutes	Standing	Remarks
	Orientation 110 degrees from north	General Remarks Hole completed at 1.70m bgl. Visual and olfactory evidence of contamination was encountered. Groundwater was encountered at 1.10m bgl.						
Scale 1:18.75	Notes: All dimensions in metres. Logs should be read in accordance with the provided Key. Descriptions are based on visual and manual identification.							


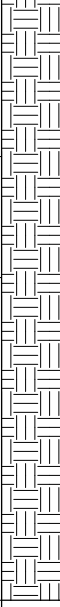


 WSP UK Limited 1 Queens Drive Birmingham, B5 4PJ Telephone: [REDACTED] Fax: 0121 352 4701	TRIAL PIT LOG			Hole No. TP104
	Project Former Interbrew Site, Gloucester			Sheet 1 of 1
Job No 70020138	Client Paloma Capital LLP			Date 08-02-18 08-02-18
Contractor / Driller Lynch Plant Hire	Method/Plant Used 360 Excavator	Logged By Abbie McCarthy	Co-Ordinates (NGR) E 384860.456 N 217881.850	Ground Level (m OD) 24.300

SAMPLES & TESTS						STRATA					Install / Backfill
Depth	Type	PID (ppmV)	HSV (kN/m2)	P Pen (kN/m2)	Water	Elev. (mOD)	Depth (Thickness)	Description	Legend	Geology	
						24.00	0.30	Reinforced CONCRETE.		CONC	
0.50-0.50 0.50-0.50 0.50-0.50	B D ES	0 0 0				23.70	0.60	Light orangish brown gravelly SAND. Gravel is fine and medium subangular to subrounded of quartz, mudstone and plastic. (MADE GROUND)		GMG	
0.80-0.80	ES	0.1					(0.90)	Dark greyish blue sandy CLAY. 0.60 - 1.50 Pockets of orange sand from 0.6m bgl		CHAM	
1.30-1.30 1.30-1.30	B D					22.80	1.50	Trial pit completed at 1.50m bgl.		END	

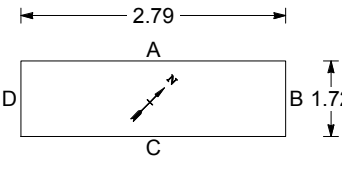
08 WSP TP LOG STANDARD 70020138 - FORMER INTERBREW SITE, GLOUCESTER - MASTER DATABASE2.GPJ WSPTEMPLATE1.03.GDT 13/4/18


	Length 2.81m	Shoring/Support:	Water Strikes					
	Width 1.34m		Stability:	Date	Time	Strike	Minutes	Standing	Remarks
	Orientation 135 degrees from north	General Remarks Hole completed at 1.50m bgl. No visual or olfactory evidence of contamination encountered. Groundwater was not encountered.						
Scale 1:18.75	Notes: All dimensions in metres. Logs should be read in accordance with the provided Key. Descriptions are based on visual and manual identification.							


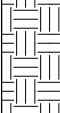

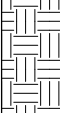
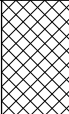
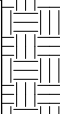
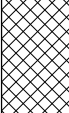
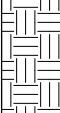
 WSP UK Limited 1 Queens Drive Birmingham, B5 4PJ Telephone: [REDACTED] Fax: 0121 352 4701	TRIAL PIT LOG		Hole No. TP105	
	Project Former Interbrew Site, Gloucester		Sheet 1 of 1	
Job No 70020138	Client Paloma Capital LLP		Date 08-02-18 08-02-18	
Contractor / Driller Lynch Plant Hire	Method/Plant Used 360 Excavator	Logged By Abbie McCarthy	Co-Ordinates (NGR) E 384885.536 N 217909.755	Ground Level (m OD) 22.568

SAMPLES & TESTS							STRATA				Install / Backfill
Depth	Type	PIV (ppmV)	HSV (kN/m2)	P Pen (kN/m2)	Water	Elev. (mOD)	Depth (Thickness)	Description	Legend	Geology	
						22.17	0.40	Reinforced CONCRETE.		CONC	
0.60-0.60 0.60-0.60 0.65-0.65	B D ES	0.2				21.87	0.70	Dark orangish brown gravelly SAND. Gravel is fine and medium subangular to angular of quartz, mudstone and brick. (MADE GROUND)		GMG	
0.80-0.80	ES	0.1						Dark greyish blue sandy CLAY. 0.70 - 1.50 Pockets of orange sand from 0.7m bgl		CHAM	
1.40-1.40 1.40-1.40	B D					21.07	1.50	Trial pit terminated at 1.50m bgl.		END	

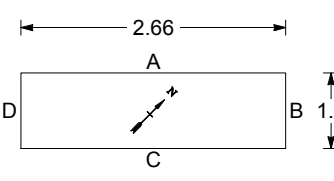
08 WSP TP LOG STANDARD 70020138 - FORMER INTERBREW SITE, GLOUCESTER - MASTER DATABASE2.GPJ WSPTEMPLATE1.03.GDT 13/4/18


	Length 2.79m	Shoring/Support:	Water Strikes					
	Width 1.72m		Stability:	Date	Time	Strike	Minutes	Standing	Remarks
	Orientation 135 degrees from north	General Remarks Hole completed at 1.50m bgl. No visual or olfactory evidence of contamination was encountered. Groundwater was not encountered.						
Scale 1:18.75	Notes: All dimensions in metres. Logs should be read in accordance with the provided Key. Descriptions are based on visual and manual identification.							


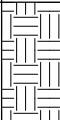




 WSP UK Limited 1 Queens Drive Birmingham, B5 4PJ Telephone: [REDACTED] Fax: 0121 352 4701	TRIAL PIT LOG			Hole No. TP106
	Project Former Interbrew Site, Gloucester			Sheet 1 of 1
Job No 70020138	Client Paloma Capital LLP			Date 08-02-18 08-02-18
Contractor / Driller Lynch Plant Hire	Method/Plant Used 360 Excavator	Logged By Abbie McCarthy	Co-Ordinates (NGR) E 384976.217 N 217995.653	Ground Level (m OD) 21.963

SAMPLES & TESTS						STRATA					Install / Backfill
Depth	Type	PID (ppmV)	HSV (kN/m2)	P Pen (kN/m2)	Water	Elev. (mOD)	Depth (Thickness)	Description	Legend	Geology	
						21.66	0.30	Reinforced CONCRETE.		CONC	
0.40-0.40 0.40-0.40	B D					21.36	0.60	Light orangish brown gravelly SAND. Gravel is fine and medium subangular to angular of quartz, mudstone, plastic and brick. (MADE GROUND)		GMG	
0.60-0.60	ES	0.1					(0.70)	Dark greyish brown slightly sandy slightly gravelly CLAY. Gravel is fine and medium subangular to angular of quartz, mudstone and brick. 0.60 - 1.30 Sulphurous odour and whole brick		CMG	
1.00-1.00	ES	0.4									
1.20-1.20 1.20-1.20	B D					20.66	1.30	Dark greyish blue sandy CLAY.		CHAM	
1.40-1.40	ES	0.2					(0.90)				
2.00-2.00 2.00-2.00	B D					19.76	2.20				
								Trial pit completed at 2.20m bgl.		END	

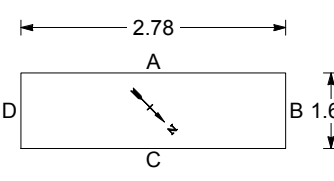
08 WSP TP LOG STANDARD 70020138 - FORMER INTERBREWSITE - GLOUCESTER - MASTER DATABASE2.GPJ WSPTEMPLATE1.03.GDT 13/4/18


	Length 2.66m	Shoring/Support:	Water Strikes					
	Width 1.40m		Stability:	Date	Time	Strike	Minutes	Standing	Remarks
	Orientation 135 degrees from north	General Remarks Hole completed at 2.20m bgl. Visual and olfactory evidence of contamination was encountered. Groundwater was not encountered.						
Scale 1:18.75	Notes: All dimensions in metres. Logs should be read in accordance with the provided Key. Descriptions are based on visual and manual identification.							




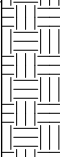
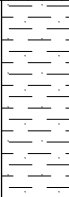

 WSP UK Limited 1 Queens Drive Birmingham, B5 4PJ Telephone: [REDACTED] Fax: 0121 352 4701	TRIAL PIT LOG			Hole No. TP201
	Project Former Interbrew Site, Gloucester			Sheet 1 of 1
Job No 70020138	Client Paloma Capital LLP			Date 09-02-18 09-02-18
Contractor / Driller Lynch Plant Hire	Method/Plant Used 360 Excavator	Logged By Abbie McCarthy	Co-Ordinates (NGR) E 384834.259 N 217881.201	Ground Level (m OD) 24.630

SAMPLES & TESTS							STRATA				Install / Backfill
Depth	Type	PID (ppmV)	HSV (kN/m2)	P Pen (kN/m2)	Water	Elev. (mOD)	Depth (Thickness)	Description	Legend	Geology	
0.40-0.40 0.40-0.40	B D					24.33	0.30	Reinforced CONCRETE.		CONC	
						24.18	(0.15) 0.45	Light orangish brown gravelly SAND. Gravel is fine and medium subangular to angular of quartz and mudstone. (MADE GROUND)		GMG	
0.90-0.90 0.90-0.90	B D					23.63	(0.55) 1.00	Light bluish grey mottled light grey sandy CLAY.		CHAM	
								Trial pit completed at 1.00m bgl.		END	

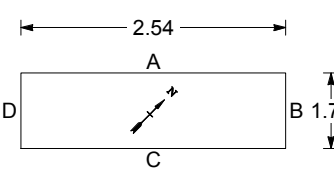
08 WSP TP LOG STANDARD 70020138 - FORMER INTERBREWSITE - GLOUCESTER - MASTER DATABASE2.GPJ WSPTEMPLATE1.03.GDT 13/4/18


	Length 2.78m	Shoring/Support:	Water Strikes					
	Width 1.66m		Stability:	Date	Time	Strike	Minutes	Standing	Remarks
	Orientation 45 degrees from north	General Remarks Hole completed at 1.00m bgl. No visual or olfactory evidence of contamination was encountered. Groundwater was not encountered.						
Scale 1:18.75	Notes: All dimensions in metres. Logs should be read in accordance with the provided Key. Descriptions are based on visual and manual identification.							






 WSP UK Limited 1 Queens Drive Birmingham, B5 4PJ Telephone: [REDACTED] Fax: 0121 352 4701	TRIAL PIT LOG		Hole No. TP202	
	Project Former Interbrew Site, Gloucester		Sheet 1 of 1	
Job No 70020138	Client Paloma Capital LLP		Date 09-02-18 09-02-18	
Contractor / Driller Lynch Plant Hire	Method/Plant Used 360 Excavator	Logged By Abbie McCarthy	Co-Ordinates (NGR) E 384905.071 N 217948.711	Ground Level (m OD) 22.375

SAMPLES & TESTS						STRATA					Install / Backfill
Depth	Type	PID (ppmV)	HSV (kN/m2)	P Pen (kN/m2)	Water	Elev. (mOD)	Depth (Thickness)	Description	Legend	Geology	
						22.18	0.20	Reinforced CONCRETE.		CONC	
0.40-0.40 0.40-0.40	B D					21.78	0.60	Light orangish brown gravelly SAND. Gravel is fine and medium subangular to angular of quartz, mudstone and brick. (MADE GROUND)		GMG	
1.10-1.10 1.10-1.10	B D					21.28	1.10	Light bluish grey CLAY. 0.60 - 0.60 Groundwater encountered at 0.6m bgl 0.60 - 1.10 Large pockes of orange sand		CHAM	
								Trial pit completed at 1.10m bgl.		END	

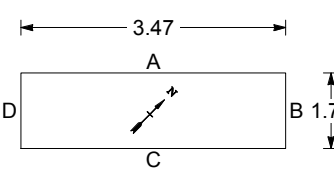
08 WSP TP LOG STANDARD 70020138 - FORMER INTERBREWSITE - MASTER DATABASE2.GPJ WSPTEMPLATE1.03.GDT 13/4/18


	Length 2.54m	Shoring/Support:	Water Strikes						
	Width 1.71m		Stability:	Date	Time	Strike	Minutes	Standing	Remarks
	Orientation 135 degrees from north	General Remarks Hole completed at 1.10m bgl. No visual or olfactory evidence of contamination was not encountered. Groundwater was encountered at 0.6m bgl.							
Scale 1:18.75	Notes: All dimensions in metres. Logs should be read in accordance with the provided Key. Descriptions are based on visual and manual identification.								




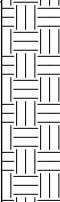


 WSP UK Limited 1 Queens Drive Birmingham, B5 4PJ Telephone: [REDACTED] Fax: 0121 352 4701	TRIAL PIT LOG		Hole No. TP203	
	Project Former Interbrew Site, Gloucester		Sheet 1 of 1	
Job No 70020138	Client Paloma Capital LLP		Date 09-02-18 09-02-18	
Contractor / Driller Lynch Plant Hire	Method/Plant Used 360 Excavator	Logged By Abbie McCarthy	Co-Ordinates (NGR) E 384985.345 N 217880.794	Ground Level (m OD) 22.634

SAMPLES & TESTS						STRATA					Install / Backfill
Depth	Type	PID (ppmV)	HSV (kN/m2)	P Pen (kN/m2)	Water	Elev. (mOD)	Depth (Thickness)	Description	Legend	Geology	
						22.58	0.05	ASPHALT.		TARMAC	
						22.43	(0.15) 0.20	Reinforced CONCRETE.		CONC	
0.50-0.50 0.50-0.50	B D						(0.70)	Dark brown gravelly SAND. Gravel is fine to coarse subangular to angular of quartz, concrete, asphalt and brick. (MADE GROUND)		GMG	
1.00-1.00 1.00-1.00	B D					21.73	0.90	Dark greyish black slightly sandy slightly gravelly CLAY. Gravel is fine and medium subangular to angular of quartz, mudstone and brick. (MADE GROUND)		CMG	
						21.53	1.10	Trial pit completed at 1.10m bgl.		END	

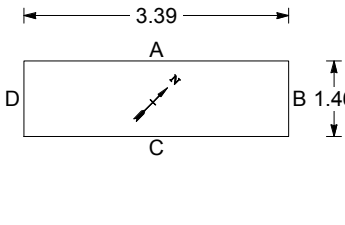
08 WSP TP LOG STANDARD 70020138 - FORMER INTERBREW SITE, GLOUCESTER - MASTER DATABASE2.GPJ WSPTEMPLATE1.03.GDT 13/4/18

	Length 3.47m	Shoring/Support:	Water Strikes					
	Width 1.79m		Stability:	Date	Time	Strike	Minutes	Standing	Remarks
	Orientation 135 degrees from north	General Remarks Hole completed at 1.10m bgl. No visual or olfactory evidence of contamination was encountered. Groundwater was not encountered.						
Scale 1:18.75	Notes: All dimensions in metres. Logs should be read in accordance with the provided Key. Descriptions are based on visual and manual identification.							

 WSP UK Limited 1 Queens Drive Birmingham, B5 4PJ Telephone: [REDACTED] Fax: 0121 352 4701	TRIAL PIT LOG		Hole No. TP204	
	Project Former Interbrew Site, Gloucester		Sheet 1 of 1	
Job No 70020138	Client Paloma Capital LLP		Date 09-02-18 09-02-18	
Contractor / Driller Lynch Plant Hire	Method/Plant Used 360 Excavator	Logged By Abbie McCarthy	Co-Ordinates (NGR) E 384899.575 N 217826.285	Ground Level (m OD) 24.030

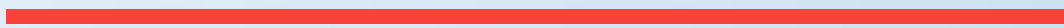
SAMPLES & TESTS							STRATA				Install / Backfill
Depth	Type	PID (ppmV)	HSV (kN/m2)	P Pen (kN/m2)	Water	Elev. (mOD)	Depth (Thickness)	Description	Legend	Geology	
						23.83	0.20	Reinforced CONCRETE.		CONC	
0.60-0.60 0.60-0.60	B D					23.33	0.70	Light orangish brown gravelly SAND. Gravel is fine and medium subangular to angular of quartz, mudstone and plastic.		GMG	
1.00-1.00 1.00-1.00	B D					23.03	1.00	Dark grey sandy CLAY. 0.70 - 1.00 Large pockets of orange sand		ALV	
								Trial pit completed at 1.00m bgl.		END	

08 WSP TP LOG STANDARD 70020138 - FORMER INTERBREWSITE - GLOUCESTER - MASTER DATABASE2.GPJ WSPTEMPLATE1.03.GDT 13/4/18

	Length 3.39m	Shoring/Support:	Water Strikes					
	Width 1.46m		Stability:	Date	Time	Strike	Minutes	Standing	Remarks
	Orientation 135 degrees from north	General Remarks Hole completed at 1.00m bgl. No visual or olfactory evidence of contamination was encountered. Groundwater was not encountered.						
Scale 1:18.75	Notes: All dimensions in metres. Logs should be read in accordance with the provided Key. Descriptions are based on visual and manual identification.							

Appendix E

DATA TABLES



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Table E.1: Summary of Monitoring Installations

Exploratory Hole	Ground Level (m AOD)	Screen Top and Base Depth (m bgl)	Screen Top and Base Elevation (m AOD)	Strata Targeted
BH01	24.643	2.00 to 7.00	22.64 to 17.64	Charmouth Mudstone Formation
BH01	24.643	2.00 to 7.00	22.64 to 17.64	Charmouth Mudstone Formation
BH02	22.532	2.00 to 7.00	20.53 to 15.53	Charmouth Mudstone Formation
BH03	24.396	1.50 to 7.00	22.90 to 17.40	Charmouth Mudstone Formation
BH04	22.036	1.50 to 7.00	20.54 to 15.04	Charmouth Mudstone Formation
BH05	24.223	1.00 to 3.00	23.22 to 21.22	Alluvium
BH101	24.390	2.00 to 8.00	22.39 to 16.39	Charmouth Mudstone Formation
BH102	22.360	2.00 to 8.00	20.36 to 14.36	Charmouth Mudstone Formation
BH103	22.586	2.00 to 8.00	20.59 to 14.59	Charmouth Mudstone Formation
BH104	22.611	2.00 to 8.00	20.61 to 14.61	Charmouth Mudstone Formation
WS01	24.504	1.00 to 3.00	23.50 to 21.50	Charmouth Mudstone Formation
WS03	24.242	1.00 to 4.00	23.24 to 20.24	Charmouth Mudstone Formation
WS04	22.598	1.00 to 3.00	21.60 to 19.60	Charmouth Mudstone Formation
WS06	23.467	0.50 to 1.20	22.97 to 22.27	Made Ground Granular
WS07	22.460	1.50 to 4.60	20.96 to 17.86	Charmouth Mudstone Formation
WS10	24.570	0.50 to 1.50	24.07 to 23.07	Made Ground Granular
WS101	24.470	1.50 to 5.00	22.97 to 19.47	Charmouth Mudstone Formation
WS103	24.445	1.00 to 4.00	23.45 to 20.45	Charmouth Mudstone Formation
WS106	22.474	1.00 to 2.00	21.47 to 20.47	Made Ground Granular
WS109	22.494	1.00 to 2.00	21.49 to 20.49	Made Ground Granular / Cohesive



Table E.2: Summary of Groundwater Strikes

Exploratory Hole	Depth Groundwater Encountered (Strike) (m bgl)	Elevation Groundwater Encountered (Strike) (m AOD)	Remarks
WS101	2.30	22.17	Blue Lias and Charmouth Mudstone Formation
WS106	1.70	20.77	Granular Made Ground
WS109	2.60	19.89	Blue Lias and Charmouth Mudstone Formation
BH01	1.30	23.34	Alluvium
BH03	2.30	22.10	Blue Lias and Charmouth Mudstone Formation
WS12	0.70	23.69	Alluvium
WS07	0.65	21.81	Granular Made Ground
WS10	0.50	24.07	Granular Made Ground

Table E.3: Summary of Groundwater Levels During Monitoring

Exploratory Hole	Elevation of Screen Top (m AOD)	Elevation of Screen Base (m AOD)	Geology of Response Zone	Groundwater Levels recorded (m AOD)		
				Min	Mean	Max
BH01	22.64	17.64	CHAM	17.79	22.77	24.08
BH02	20.53	15.53	CHAM	20.00	20.87	21.72
BH03	22.90	17.40	CHAM	23.22	23.35	23.70
BH04	20.54	15.04	CHAM	16.26	19.95	21.08
BH05	23.22	21.22	ALV	21.91	22.1	22.29
BH101	22.39	16.39	CHAM	17.61	17.85	18.14
BH102	20.36	14.36	CHAM	19.75	19.99	20.23
BH103	20.59	14.59	CHAM	15.51	15.51	15.51
BH104	20.61	14.61	CHAM	15.25	15.25	15.25
WS01	23.50	21.50	CHAM	23.81	24.06	24.25
WS03	23.24	20.24	CHAM	23.54	23.64	24.18
WS04	21.60	19.60	CHAM	21.61	22.21	22.59

Exploratory Hole	Elevation of Screen Top (m AOD)	Elevation of Screen Base (m AOD)	Geology of Response Zone	Groundwater Levels recorded (m AOD)		
				Min	Mean	Max
WS06	22.97	22.27	MG	22.03	22.84	23.04
WS07	20.96	17.86	CHAM	21.82	22.07	22.39
WS10	24.07	23.07	MG	23.92	23.98	24.01
WS101	22.97	19.47	CHAM	23.22	23.25	23.27
WS103	23.45	20.45	ALV / CHAM	20.45	22.12	23.80
WS106	21.47	20.47	MG	20.94	20.95	20.96
WS109	21.49	20.49	MG	20.94	21.03	21.10

Table E.4: Summary of Ground Gas Monitoring Results

Monitoring Point	Methane (% v/v)		Carbon Dioxide (% v/v)		Oxygen (% v/v)		Flow (l/hr)	
	Min	Max	Min	Max	Min	Max	Min	Max
BH01	0.00	0.00	0.00	1.30	18.30	20.50	-0.70	0.10
BH02	0.00	0.00	0.00	3.80	8.60	21.70	-7.00	0.00
BH03	0.00	0.00	0.00	1.90	13.40	22.00	0.00	0.00
BH04	0.00	0.00	0.00	8.50	11.70	21.90	-6.80	0.00
BH05	0.00	0.00	0.00	0.70	19.10	22.00	-1.00	0.20
BH101	0.00	0.00	0.00	1.70	15.50	21.00	0.00	0.00
BH102	0.00	0.00	0.00	1.80	17.30	22.00	-0.30	0.00
BH103	0.00	0.00	0.00	1.30	15.40	22.00	0.00	0.00
BH104	0.00	0.00	0.00	1.40	19.70	22.00	0.03	0.05
WS01	0.00	0.00	0.00	4.60	4.10	20.60	0.00	21.00
WS03	0.00	0.00	0.00	0.40	0.00	21.50	0.00	0.00
WS04	0.00	0.00	0.00	1.70	18.90	20.90	-1.50	6.00
WS06	0.00	0.00	0.10	1.90	17.70	22.00	-7.00	0.10
WS07	0.00	0.00	0.00	1.80	18.40	22.00	-6.80	0.00
WS10	0.00	0.00	0.00	0.30	20.10	21.50	-0.30	0.10



Monitoring Point	Methane (% v/v)		Carbon Dioxide (% v/v)		Oxygen (% v/v)		Flow (l/hr)	
	Min	Max	Min	Max	Min	Max	Min	Max
WS101	0.00	0.10	0.00	0.80	21.20	21.60	0.00	0.10
WS103	0.00	0.10	0.00	0.10	19.20	22.30	0.00	0.00
WS106	0.00	0.00	0.00	0.20	20.60	22.00	0.00	0.00
WS109	0.00	0.00	0.00	0.10	20.40	21.90	0.00	0.00

Table E.5: Summary of Flooded Borehole Locations

Monitoring Point	Top of Response Zone (m bgl)	Bottom of Response Zone (m bgl)	Standing Water Depth		Frequency of Flooding
			Min	Max	
BH01	2.00	7.00	0.56	6.85	5 of 6
BH02	2.00	7.00	0.81	2.53	3 of 7
BH03	1.50	7.00	0.70	1.18	7 of 7
BH04	1.50	7.00	0.96	5.78	5 of 7
BH05	1.00	3.00	1.93	2.31	0 of 7
BH101	2.00	8.00	6.25	6.78	0 of 3
BH102	2.00	8.00	2.13	2.61	0 of 3
BH103	2.00	8.00	7.08	7.08	0 of 3
BH104	2.00	8.00	7.36	7.36	0 of 3
WS01	1.00	3.00	0.25	0.70	6 of 7
WS03	1.00	4.00	0.06	0.70	7 of 7
WS04	1.00	3.00	0.01	0.99	5 of 5
WS06	0.50	1.20	0.43	1.44	4 of 7
WS07	1.50	4.60	0.07	0.65	7 of 7
WS10	0.50	1.50	0.56	0.66	0 of 7
WS101	1.50	5.00	1.20	1.25	2 of 2
WS103	1.00	4.00	0.65	4.00	1 of 3
WS106	1.00	2.00	1.51	1.53	0 of 3
WS109	1.00	2.00	1.39	1.55	0 of 3

Analyte	Units	No. samples	No. > LOD	Min	Max	WQS	No. > WQS	Monitoring Wells
Metals and Inorganics								
Arsenic	µg/L	8	5	0.665	10.3	10 ¹ 50 ²	1 0	BH02
Chromium	µg/L	8	8	0.013	15.9	50 ¹ 4.7 ²	0 4	BH01, BH02, BH04 and WS03
Copper	µg/L	8	8	1.35	7.78	2,000 ¹ 1 ²	0 8	BH01, BH02, BH04, BH05, BH101, BH102, WS01 and WS03
Lead	µg/L	8	8	0.07	1.52	10 ¹ 1 ²	0 1	BH04
Nickel	µg/L	8	8	5.16	59.1	20 ¹ 4 ²	2 8	BH01, BH02, BH04, BH05, BH101, BH102, WS01 and WS03
Mercury	µg/L	8	1	0.01	0.164	1 ¹ 0.07 ²	0 1	BH101
Selenium	µg/L	8	5	2.59	134	10 ¹	5	BH02, BH05, BH102, WS01 and WS03
Zinc	µg/L	8	7	1.0	22.7	10.9 ²	4	BH04, BH102, WS01 and WS03
Sulphate	mg/L	8	5	165	1,600	250 ¹	4	BH02, BH04, WS01 and WS03
PAH								
PAH4*	µg/L	8	3	0.027	0.24	0.1 ¹	3	BH02, WS03 and WS10
Benzo(a)pyrene	µg/L	8	4	<0.009	0.04	0.01 ¹ 0.0002 ²	2 2	BH02 and WS03
Benzo(b)fluorant hene	µg/L	8	4	<0.023	0.113	0.017 ²	2	BH02 and WS03

Analyte	Units	No. samples	No. > LOD	Min	Max	WQS	No. > WQS	Monitoring Wells
Benzo(ghi)perylene	µg/L	8	3	<0.016	0.0883	0.008 ²	3	BH02, WS03 and WS10
Benzo(k)fluoranthene	µg/L	8	5	<0.027	0.0287	0.017 ²	1	BH02
Fluoranthene	µg/L	8	3	<0.014	0.041	0.006 ²	3	BH02, BH04 and WS03
Naphthalene	µg/L	8	1	0.01	2.61	2 ²	1	WS10
TPH								
Aliphatic C10-C12	µg/L	8	1	<10	516	300 ⁴	1	WS10
Aliphatic C12-C16	µg/L	8	1	<10	11,600	300 ⁴	1	WS10
Aliphatic C16-C21	µg/L	8	1	<10	13,700	300 ⁴	1	WS10
Aliphatic C21-C35	µg/L	8	2	<10	6,630	300 ⁴	1	WS10
Aromatic >EC10-EC12	µg/L	8	1	<10	344	90 ⁴	1	WS10
Aromatic >EC12-EC16	µg/L	8	1	<10	3,100	90 ⁴	1	WS10
Aromatic >EC16-EC21	µg/L	8	1	<10	6,700	90 ⁴	1	WS10
Aromatic >EC21-EC35	µg/L	8	2	10	2,970	90 ⁴	1	WS10
Total Aliphatic and Aromatic (C5-C35)	µg/L	8	3	<10	45,800	10 ⁵	3	WS10, WS03 and BH02

1 - UK Drinking Water Standards (2016)

2 - The River Basin District Typology, Standards and Groundwater Threshold Values (Water Framework Directive) (England and Wales), Directions, 2014 (RBDT).

3 - European Commission Drinking Water Directive 98/83/EC

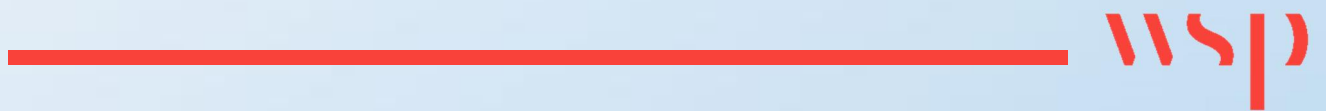
4 - World Health Organisation Drinking Water Quality Standards (2008)

5 - Environment Agency - Supplementary Guidance on Hydrocarbons (2009)

* - PAH4 relates to the combined effects of benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(g,h,i)perylene and indeno(1,2,3-cd)pyrene

Appendix F





MONITORING RESULTS



Former Interbrew Site, Gloucester



Key:

	Depth to water		Methane	Carbon Dioxide	Gas Flow
	Response zone <i>fully</i> flooded during sampling		> 1% v/v	> 5% v/v	> 70 l/hr
	Response zone <i>significantly</i> flooded during sampling				
	Datum or response zone information missing. Response zone flooding cannot be calculated				

Visit 1, Event: Visit 2, Date: 14/06/2016

Sheet 1 of 1





<table border="0"> <tr> <td>Engineer</td> <td>Matt</td> </tr> <tr> <td>Start/End Time</td> <td>08:13 - 12:05</td> </tr> <tr> <td>Pressure Start/End (mB)</td> <td>991 - 990</td> </tr> <tr> <td>Temperature (Deg C)</td> <td>19.00</td> </tr> <tr> <td>Weather Conditions</td> <td>Dry</td> </tr> </table>	Engineer	Matt	Start/End Time	08:13 - 12:05	Pressure Start/End (mB)	991 - 990	Temperature (Deg C)	19.00	Weather Conditions	Dry	<table border="0"> <tr> <td>Equipment</td> <td>SerialNo</td> <td>Calibrated</td> </tr> <tr> <td>GFM Gas Kit</td> <td>12019</td> <td>Yes</td> </tr> <tr> <td>PhoCheck Tiger PID</td> <td>T-109211</td> <td>Yes</td> </tr> <tr> <td>Solinst Interface Meter</td> <td>122 253006</td> <td>Yes</td> </tr> </table>	Equipment	SerialNo	Calibrated	GFM Gas Kit	12019	Yes	PhoCheck Tiger PID	T-109211	Yes	Solinst Interface Meter	122 253006	Yes	<p>Comments and Ground Conditions: Location BH03 had damaged gas tap. Location WS04, high groundwater level inhibited ground gas monitoring.</p>
Engineer	Matt																							
Start/End Time	08:13 - 12:05																							
Pressure Start/End (mB)	991 - 990																							
Temperature (Deg C)	19.00																							
Weather Conditions	Dry																							
Equipment	SerialNo	Calibrated																						
GFM Gas Kit	12019	Yes																						
PhoCheck Tiger PID	T-109211	Yes																						
Solinst Interface Meter	122 253006	Yes																						

Borehole	Response Zone (m)		Gas Flow (l/hr)		Borehole Differential Pressure Pa	Methane (% v/v)		Carbon Dioxide (% v/v)		Oxygen (% v/v)		Other Gases (ppmV)			Depth to Water m	Depth to Base m	Thickness of product mm	Sampled ? Y/N
	Top	Base	Initial	Steady		Initial	Steady	Initial	Steady	Initial	Steady	PID	H2S	CO				
BH01	2.00	7.00	0.00	0.00		0.00	0.00	1.10	1.10	18.60	18.70		0.00	0.00	0.91	6.83	N/A	No
BH02	2.00	7.00	0.00	0.00		0.00	0.00	0.50	0.80	19.00	18.40		0.00	0.00		6.69	N/A	No
BH03	1.50	7.00	0.00	0.00		0.00	0.00	0.80	0.80	19.20	18.90		0.00	0.00	1.12	6.95	N/A	No
BH04	1.50	7.00	0.00	0.00		0.00	0.00	4.70	5.00	14.00	12.70		0.00	0.00	3.50	6.96	N/A	No
BH05	1.00	3.00	0.00	0.00		0.00	0.00	0.60	0.70	19.40	19.10		0.00	0.00		2.99	N/A	No
WS01	1.00	3.00	19.90	5.30	77	0.00	0.00	0.70	0.80	18.80	17.80		0.00	0.00	0.70	2.97	N/A	No
WS03	1.00	4.00	0.00	0.00		0.00	0.00	0.00	0.00	20.50	20.50		0.00	0.00	0.68	3.95	N/A	No
WS04	1.00	3.00	0.00	0.00											0.01	3.02	N/A	No
WS06	0.50	1.20	0.00	0.00		0.00	0.00	0.20	0.20	19.50	18.50		0.00	0.00	1.44	1.70	N/A	No
WS07	1.50	4.60	0.00	0.00		0.00	0.00	0.10	0.10	20.30	20.40		0.00	0.00	0.34	3.90	N/A	No
WS10	0.50	1.50	0.00	0.00		0.00	0.00	0.00	0.00	20.10	20.30		0.00	0.00	0.60	1.65	N/A	No

Former Interbrew Site, Gloucester



Key:

	Depth to water Response zone <i>fully</i> flooded during sampling		Methane > 1% v/v	Carbon Dioxide > 5% v/v	Gas Flow > 70 l/hr
	Response zone <i>significantly</i> flooded during sampling				
	Datum or response zone information missing. Response zone flooding cannot be calculated				

Visit 2, Event: Visit 3, Date: 21/06/2016

Sheet 1 of 1





<table border="0"> <tr> <td>Engineer</td> <td>VK</td> </tr> <tr> <td>Start/End Time</td> <td>08:05 - 10:00</td> </tr> <tr> <td>Pressure Start/End (mB)</td> <td>1012 - 1012</td> </tr> <tr> <td>Temperature (Deg C)</td> <td>18.00</td> </tr> <tr> <td>Weather Conditions</td> <td>Dry and sunny</td> </tr> </table>	Engineer	VK	Start/End Time	08:05 - 10:00	Pressure Start/End (mB)	1012 - 1012	Temperature (Deg C)	18.00	Weather Conditions	Dry and sunny	<table border="0"> <tr> <td>Equipment</td> <td>SerialNo</td> <td>Calibrated</td> </tr> <tr> <td>GFM Gas Kit</td> <td>12019</td> <td>Yes</td> </tr> <tr> <td>PhoCheck Tiger PID</td> <td>T-109211</td> <td>Yes</td> </tr> <tr> <td>Solinst Interface Meter</td> <td>122 253006</td> <td>Yes</td> </tr> </table>	Equipment	SerialNo	Calibrated	GFM Gas Kit	12019	Yes	PhoCheck Tiger PID	T-109211	Yes	Solinst Interface Meter	122 253006	Yes	<p>Comments and Ground Conditions: None.</p>
Engineer	VK																							
Start/End Time	08:05 - 10:00																							
Pressure Start/End (mB)	1012 - 1012																							
Temperature (Deg C)	18.00																							
Weather Conditions	Dry and sunny																							
Equipment	SerialNo	Calibrated																						
GFM Gas Kit	12019	Yes																						
PhoCheck Tiger PID	T-109211	Yes																						
Solinst Interface Meter	122 253006	Yes																						

Borehole	Response Zone (m)		Gas Flow (l/hr)		Borehole Differential Pressure Pa	Methane (% v/v)		Carbon Dioxide (% v/v)		Oxygen (% v/v)		Other Gases (ppmV)			Depth to Water m	Depth to Base m	Thickness of product mm	Sampled ? Y/N
	Top	Base	Initial	Steady		Initial	Steady	Initial	Steady	Initial	Steady	PID	H2S	CO	m	m	mm	Y/N
BH01	2.00	7.00	-0.70	-0.70	-3	0.00	0.00	0.60	0.60	19.50	19.50	0.90	0.00	-10.00	0.96	6.88	N/A	No
BH02	2.00	7.00	-7.00	-0.90	-3	0.00	0.00	0.20	0.10	17.70	19.90	0.00	0.00	0.00	0.81	6.76	N/A	No
BH03	1.50	7.00	0.00	0.00	0	0.00	0.00	0.40	0.40	18.80	18.60	0.30	0.00	-10.00	1.10	7.02	N/A	No
BH04	1.50	7.00	-6.80	-6.70	-57	0.00	0.00	7.60	8.50	12.60	11.70	0.70	0.00	0.00	1.09	6.98	N/A	No
BH05	1.00	3.00	-0.70	-0.70	-3	0.00	0.00	0.60	0.70	19.80	19.40	0.40	0.00	-10.00		2.93	N/A	No
WS01	1.00	3.00	4.10	0.00	0	0.00	0.00	0.40	0.30	19.70	19.80	0.90	0.00	0.00	0.47	3.00	N/A	No
WS03	1.00	4.00	0.00	0.00	0	0.00	0.00	0.10	0.10	19.70	20.00	0.50	0.00	-10.00	0.69	3.99	N/A	No
WS04	1.00	3.00	-1.50	-0.70	-2	0.00	0.00	0.00	0.00	20.80	20.90	0.00	0.00	-10.00	0.15	3.08	N/A	No
WS06	0.50	1.20	-7.00	-6.60	-55	0.00	0.00	0.70	0.30	17.90	18.40	0.00	0.00	0.00	0.49	1.76	N/A	No
WS07	1.50	4.60	-6.80	-6.70	-57	0.00	0.00	0.10	0.00	20.60	20.80	0.20	0.00	0.00	0.34	3.88	N/A	No
WS10	0.50	1.50	0.00	0.00	0	0.00	0.00	0.00	0.00	20.70	20.50	0.10	0.00	-10.00	0.56	1.68	N/A	No

Former Interbrew Site, Gloucester



Key:

	Depth to water Response zone <i>fully</i> flooded during sampling		Methane > 1% v/v	Carbon Dioxide > 5% v/v	Gas Flow > 70 l/hr
	Response zone <i>significantly</i> flooded during sampling				
	Datum or reponse zone information missing. Response zone flooding cannot be calculated				

Visit 3, Event: Visit 4, Date: 29/06/2016

Sheet 1 of 1





<table border="0"> <tr> <td>Engineer</td> <td>Matt</td> </tr> <tr> <td>Start/End Time</td> <td>09:20 - 11:30</td> </tr> <tr> <td>Pressure Start/End (mB)</td> <td>1001 - 1001</td> </tr> <tr> <td>Temperature (Deg C)</td> <td>18.00</td> </tr> <tr> <td>Weather Conditions</td> <td>Dry</td> </tr> </table>	Engineer	Matt	Start/End Time	09:20 - 11:30	Pressure Start/End (mB)	1001 - 1001	Temperature (Deg C)	18.00	Weather Conditions	Dry	<table border="0"> <tr> <td>Equipment</td> <td>SerialNo</td> <td>Calibrated</td> </tr> <tr> <td>GFM Gas Kit</td> <td>12019</td> <td>Yes</td> </tr> <tr> <td>PhoCheck Tiger PID</td> <td>T-109211</td> <td>Yes</td> </tr> <tr> <td>Solinst Interface Meter</td> <td>122 253006</td> <td>Yes</td> </tr> </table>	Equipment	SerialNo	Calibrated	GFM Gas Kit	12019	Yes	PhoCheck Tiger PID	T-109211	Yes	Solinst Interface Meter	122 253006	Yes	<p>Comments and Ground Conditions: None</p>
Engineer	Matt																							
Start/End Time	09:20 - 11:30																							
Pressure Start/End (mB)	1001 - 1001																							
Temperature (Deg C)	18.00																							
Weather Conditions	Dry																							
Equipment	SerialNo	Calibrated																						
GFM Gas Kit	12019	Yes																						
PhoCheck Tiger PID	T-109211	Yes																						
Solinst Interface Meter	122 253006	Yes																						

Borehole	Response Zone (m)		Gas Flow (l/hr)		Borehole Differential Pressure Pa	Methane (% v/v)		Carbon Dioxide (% v/v)		Oxygen (% v/v)		Other Gases (ppmV)			Depth to Water	Depth to Base	Thickness of product	Sampled ?
	Top	Base	Initial	Steady		Initial	Steady	Initial	Steady	Initial	Steady	PID	H2S	CO	m	m	mm	Y/N
BH01	2.00	7.00	0.00	0.00	1,000	0.00	0.00	1.20	1.30	18.40	18.30	0.80	0.00	0.00	0.92	6.80	N/A	No
BH02	2.00	7.00	0.00	0.00	1,001	0.00	0.00	1.10	0.70	19.30	19.00	0.20	0.00	0.00	2.53	6.70	N/A	No
BH03	1.50	7.00	0.00	0.00	1,000	0.00	0.00	1.20	1.50	19.00	18.40	0.70	0.00	0.00	1.10	6.96	N/A	No
BH04	1.50	7.00	0.00	0.00	1,001	0.00	0.00	2.20	1.70	19.20	19.30	0.70	0.00	0.00	1.06	6.95	N/A	No
BH05	1.00	3.00	0.00	0.00	1,001	0.00	0.00	0.50	0.70	20.00	19.50	0.50	0.00	0.00		2.89	N/A	No
WS01	1.00	3.00	21.00	3.00	1,001	0.00	0.00	0.40	0.30	18.90	18.90	2.10	0.00	0.00	0.47	2.98	N/A	No
WS03	1.00	4.00	0.00	0.00	1,001	0.00	0.00	0.20	0.20	20.30	20.30	0.40	0.00	0.00	0.69	3.95	N/A	No
WS04	1.00	3.00	6.00	0.00	1,001	0.00	0.00	1.70	1.40	18.90	19.20	1.00	0.00	0.00	0.66	3.03	N/A	No
WS06	0.50	1.20	0.00	0.00	1,001	0.00	0.00	0.30	0.30	19.00	17.70	0.90	0.00	0.00	0.43	1.72	N/A	No
WS07	1.50	4.60	0.00	0.00	1,001	0.00	0.00	0.90	0.70	19.50	19.20	1.00	0.00	0.00	0.07	3.94	N/A	No
WS10	0.50	1.50	0.00	0.00	1,000	0.00	0.00	0.20	0.10	20.40	20.50	0.80	0.00	0.00	0.56	1.65	N/A	No

Former Interbrew Site, Gloucester



Key:

	Depth to water Response zone <i>fully</i> flooded during sampling		Methane > 1% v/v	Carbon Dioxide > 5% v/v	Gas Flow > 70 l/hr
	Response zone <i>significantly</i> flooded during sampling				
	Datum or response zone information missing. Response zone flooding cannot be calculated				

Visit 4, Event: Visit 5, Date: 13/07/2016

Sheet 1 of 1





<table border="0"> <tr> <td>Engineer</td> <td>LM</td> </tr> <tr> <td>Start/End Time</td> <td>09:10 - 11:30</td> </tr> <tr> <td>Pressure Start/End (mB)</td> <td>1014 - 1013</td> </tr> <tr> <td>Temperature (Deg C)</td> <td>14.00</td> </tr> <tr> <td>Weather Conditions</td> <td>Dry</td> </tr> </table>	Engineer	LM	Start/End Time	09:10 - 11:30	Pressure Start/End (mB)	1014 - 1013	Temperature (Deg C)	14.00	Weather Conditions	Dry	<table border="0"> <tr> <td>Equipment</td> <td>SerialNo</td> <td>Calibrated</td> </tr> <tr> <td>GFM Gas Kit</td> <td>12019</td> <td>Yes</td> </tr> <tr> <td>PhoCheck Tiger PID</td> <td>T-109211</td> <td>Yes</td> </tr> <tr> <td>Solinst Interface Meter</td> <td>122 253006</td> <td>Yes</td> </tr> </table>	Equipment	SerialNo	Calibrated	GFM Gas Kit	12019	Yes	PhoCheck Tiger PID	T-109211	Yes	Solinst Interface Meter	122 253006	Yes	<p>Comments and Ground Conditions: None</p>
Engineer	LM																							
Start/End Time	09:10 - 11:30																							
Pressure Start/End (mB)	1014 - 1013																							
Temperature (Deg C)	14.00																							
Weather Conditions	Dry																							
Equipment	SerialNo	Calibrated																						
GFM Gas Kit	12019	Yes																						
PhoCheck Tiger PID	T-109211	Yes																						
Solinst Interface Meter	122 253006	Yes																						

Borehole	Response Zone (m)		Gas Flow (l/hr)		Borehole Differential Pressure Pa	Methane (% v/v)		Carbon Dioxide (% v/v)		Oxygen (% v/v)		Other Gases (ppmV)			Depth to Water	Depth to Base	Thickness of product	Sampled ?
	Top	Base	Initial	Steady		Initial	Steady	Initial	Steady	Initial	Steady	PID	H2S	CO	m	m	mm	Y/N
BH02	2.00	7.00	0.00	0.00		0.00	0.00	0.00	0.10	20.90	20.80	0.00	0.00	0.00	2.30	6.52	N/A	No
BH03	1.50	7.00	0.00	0.00		0.00	0.00	0.40	0.40	20.10	20.25	0.00	0.00	0.00	1.10	6.95	N/A	No
BH04	1.50	7.00	-1.50	-1.20		0.00	0.00	0.80	3.00	19.70	18.10	0.00	0.00	0.00	1.25	6.98	N/A	No
BH05	1.00	3.00	-1.00	-0.90		0.00	0.00	0.40	0.30	20.60	20.60	0.20	0.00	0.00		2.95	N/A	No
WS01	1.00	3.00	0.00	0.00		0.00	0.00	0.80	0.20	18.10	20.10	0.20	0.00	0.00	0.25	3.02	N/A	No
WS03	1.00	4.00	0.00	0.00		0.00	0.00	0.10	0.10	20.50	20.50	0.20	0.00	0.00	0.69	4.05	N/A	No
WS04	1.00	3.00	-1.00	-1.00											0.15	3.10	N/A	No
WS06	0.50	1.20	0.00	0.00		0.00	0.00	0.40	0.20	19.20	19.70	0.00	0.00	0.00	0.45	1.75	N/A	No
WS07	1.50	4.60	-1.00	-0.70		0.00	0.00	0.50	0.10	20.50	20.60	0.00	0.00	0.00	0.28	3.98	N/A	No
WS10	0.50	1.50	-0.30	-0.30		0.00	0.00	0.10	0.00	20.70	20.70	0.00	0.00	0.00	0.58	1.69	N/A	No

Former Interbrew Site, Gloucester



Key:

	Depth to water		Methane	Carbon Dioxide	Gas Flow
	Response zone <i>fully</i> flooded during sampling		> 1% v/v	> 5% v/v	> 70 l/hr
	Response zone <i>significantly</i> flooded during sampling				
	Datum or response zone information missing. Response zone flooding cannot be calculated				





Visit 5, Event: Round 1 Feb 2018, Date: 21/02/2018

Sheet 1 of 2

Engineer Charlie Orme Start/End Time 08:45 - 15:52 Pressure Start/End (mB) 1026 - 1026 Temperature (Deg C) 5.00 Weather Conditions Overcast	Equipment SerialNo Calibrated Gas Analyser G501281 Yes	Comments and Ground Conditions:
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Borehole	Response Zone (m)		Gas Flow (l/hr)		Borehole Differential Pressure Pa	Methane (% v/v)		Carbon Dioxide (% v/v)		Oxygen (% v/v)		Other Gases (ppmV)			Depth to Water m	Depth to Base m	Thickness of product mm	Sampled ? Y/N
	Top	Base	Initial	Steady		Initial	Steady	Initial	Steady	Initial	Steady	PID	H2S	CO				
BH01	2.00	7.00	0.10	0.10	-3	0.00	0.00	0.90	0.90	19.50	19.20	0.00	0.00		6.85	0.92	N/A	No
BH02	2.00	7.00	0.00	0.00	1	0.00	0.00	0.10	3.80	21.70	8.60	0.00	0.00		1.35	6.50	N/A	No
BH03	1.50	7.00	0.00	0.00	1	0.00	0.00	0.10	1.20	22.00	20.10	0.00	0.00		1.04	7.00	N/A	No
BH04	1.50	7.00	0.00	0.00	0	0.00	0.00	0.10	6.60	21.90	17.70	0.10	0.00		0.98	6.97	N/A	No
BH05	1.00	3.00	0.20	0.20	0	0.00	0.00	0.10	0.20	22.00	21.90	0.00	0.00		1.93	2.93	N/A	No
BH101	2.00	8.00	0.00	0.00	0	0.00	0.00	1.00	1.70	21.00	18.00	0.00	0.00		6.58	7.97	N/A	No
BH102	2.00	8.00	-0.30	-0.30	0	0.00	0.00	0.10	0.90	22.00	20.40	0.00	0.00		2.38	7.90	N/A	No
BH103	2.00	8.00	0.00	0.00	0	0.00	0.00	0.00	1.30	22.00	15.40	2.40	0.00			7.73	N/A	No
BH104	2.00	8.00	0.03	0.05	0	0.00	0.00	0.00	1.40	22.00	19.70	1.80	0.00			7.92	N/A	No
WS01	1.00	3.00	0.00	0.00	0	0.00	0.00	0.10	4.60	20.60	4.10	0.00	0.00		0.39	3.00	N/A	No
WS03	1.00	4.00	0.00	0.00	0	0.00	0.00	0.00	0.40	0.00	21.50	0.10	0.00		0.70	3.97	N/A	No
WS06	0.50	1.20	0.00	0.10	0	0.00	0.00	0.10	1.90	22.00	19.60	0.00	0.00		0.52	1.77	N/A	No
WS07	1.50	4.60	0.00	0.00	0	0.00	0.00	0.10	1.80	22.00	18.40	0.00	0.00		0.55	4.94	N/A	No
WS10	0.50	1.50	0.10	0.10	0	0.00	0.00	0.30	0.30	21.50	21.50	0.00	0.00		0.59	1.68	N/A	No

Key:

	Depth to water Response zone <i>fully</i> flooded during sampling		Methane > 1% v/v	Carbon Dioxide > 5% v/v	Gas Flow > 70 l/hr
	Response zone <i>significantly</i> flooded during sampling				
	Datum or response zone information missing. Response zone flooding cannot be calculated				

Visit 5, Event: Round 1 Feb 2018, Date: 21/02/2018

Sheet 2 of 2

Engineer Charlie Orme Start/End Time 08:45 - 15:52 Pressure Start/End (mB) 1026 - 1026 Temperature (Deg C) 5.00 Weather Conditions Overcast	Equipment SerialNo Calibrated Gas Analyser G501281 Yes	Comments and Ground Conditions:
---	---	---------------------------------

Borehole	Response Zone (m)		Gas Flow (l/hr)		Borehole Differential Pressure Pa	Methane (% v/v)		Carbon Dioxide (% v/v)		Oxygen (% v/v)		Other Gases (ppmV)			Depth to Water m	Depth to Base m	Thickness of product mm	Sampled ? Y/N
	Top	Base	Initial	Steady		Initial	Steady	Initial	Steady	Initial	Steady	PID	H2S	CO				
WS101	1.50	5.00	0.00	0.10	0	0.00	0.10	0.00	0.80	21.60	21.20	0.00	0.00		1.20	5.02	N/A	No
WS103	1.00	4.00	0.00	0.00	0	0.10	0.10	0.10	0.10	22.30	22.30	7.20	0.00			4.03	N/A	No
WS106	1.00	2.00	0.00	0.00	0	0.00	0.00	0.20	0.10	21.90	22.00	0.40	0.00		1.51	1.83	N/A	No
WS109	1.00	2.00	0.00	0.00	0	0.00	0.00	0.00	0.10	21.90	21.80	2.50	0.00		1.39	2.06	N/A	No

Key:	<table border="0"> <tr> <td style="background-color: #004a99; color: white; width: 15px; height: 15px;"></td> <td>Depth to water</td> </tr> <tr> <td style="background-color: #66a4cc; width: 15px; height: 15px;"></td> <td>Response zone <i>fully</i> flooded during sampling</td> </tr> <tr> <td style="background-color: #d9ead3; width: 15px; height: 15px;"></td> <td>Response zone <i>significantly</i> flooded during sampling</td> </tr> <tr> <td style="background-color: #f5f5dc; width: 15px; height: 15px;"></td> <td>Datum or response zone information missing. Response zone flooding cannot be calculated</td> </tr> </table>		Depth to water		Response zone <i>fully</i> flooded during sampling		Response zone <i>significantly</i> flooded during sampling		Datum or response zone information missing. Response zone flooding cannot be calculated	<table border="0"> <tr> <td style="background-color: #ffc107; width: 15px; height: 15px;"></td> <td>Methane</td> </tr> <tr> <td></td> <td>> 1% v/v</td> </tr> <tr> <td></td> <td></td> </tr> </table>		Methane		> 1% v/v			<table border="0"> <tr> <td style="background-color: #ffc107; width: 15px; height: 15px;"></td> <td>Carbon Dioxide</td> </tr> <tr> <td></td> <td>> 5% v/v</td> </tr> <tr> <td></td> <td></td> </tr> </table>		Carbon Dioxide		> 5% v/v			<table border="0"> <tr> <td style="background-color: #ffc107; width: 15px; height: 15px;"></td> <td>Gas Flow</td> </tr> <tr> <td></td> <td>> 70 l/hr</td> </tr> <tr> <td></td> <td></td> </tr> </table>		Gas Flow		> 70 l/hr		
		Depth to water																												
		Response zone <i>fully</i> flooded during sampling																												
	Response zone <i>significantly</i> flooded during sampling																													
	Datum or response zone information missing. Response zone flooding cannot be calculated																													
	Methane																													
	> 1% v/v																													
	Carbon Dioxide																													
	> 5% v/v																													
	Gas Flow																													
	> 70 l/hr																													





Visit 6, Event: 13 March 2018, Date: 13/03/2018

Sheet 1 of 2

Engineer Charlie Orme Start/End Time 12:49 - 15:06 Pressure Start/End (mB) 1005 - 1005 Temperature (Deg C) 11.00 Weather Conditions Fine	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th>Equipment</th> <th>SerialNo</th> <th>Calibrated</th> </tr> <tr> <td>PID</td> <td></td> <td>Yes</td> </tr> <tr> <td>Gas Analyser</td> <td></td> <td>Yes</td> </tr> </table>	Equipment	SerialNo	Calibrated	PID		Yes	Gas Analyser		Yes	Comments and Ground Conditions:
Equipment	SerialNo	Calibrated									
PID		Yes									
Gas Analyser		Yes									

Borehole	Response Zone (m)		Gas Flow (l/hr)		Borehole Differential Pressure	Methane (% v/v)		Carbon Dioxide (% v/v)		Oxygen (% v/v)		Other Gases (ppmV)			Depth to Water	Depth to Base	Thickness of product	Sampled ?
	Top	Base	Initial	Steady		Pa	Initial	Steady	Initial	Steady	Initial	Steady	PID	H2S	CO	m	m	mm	Y/N
BH01	2.00	7.00	0.00	0.00	0	0.00	0.00	0.00	0.00	20.50	20.30	0.20			0.56	6.89	N/A	No
BH02	2.00	7.00	0.00		0	0.00	0.00	0.20	1.30	20.30	19.50	0.10			1.32	6.58	N/A	No
BH03	1.50	7.00			0	0.00	0.00	0.00	1.90	20.50	13.40	0.00			0.70	7.02	N/A	No
BH04	1.50	7.00				0.00	0.00	0.00	3.30	20.60	18.70	0.50			0.96	6.96	N/A	No
BH05	1.00	3.00				0.00	0.00	0.00	0.10	20.60	20.30	0.10			2.31	2.94	N/A	No
BH101	2.00	8.00	0.00	0.00	0	0.00	0.00	0.00	1.70	20.50	15.50	0.80			6.78	7.95	N/A	No
BH102	2.00	8.00	0.00	0.00	0	0.00	0.00	0.00	1.80	20.40	17.30	0.80			2.61	7.91	N/A	No
BH103	2.00	8.00	0.00	0.00	0	0.00	0.00	0.00	0.00	20.90	20.70	0.90	0.00	0.00	7.08	7.78	N/A	No
BH104	2.00	8.00				0.00	0.00	0.00	0.00	20.80	20.60	0.80			7.36	7.90	N/A	No
WS01	1.00	3.00	0.00	0.00	0	0.00	0.00	0.00	3.00	20.50	17.00	0.00			0.37	2.99	N/A	No
WS03	1.00	4.00	0.00	0.00	0	0.00	0.00	0.00	0.00	20.40	20.40	0.00			0.69	1.01	N/A	No
WS06	0.50	1.20		0.00	0	0.00	0.00	0.10	0.20	20.50	19.80	0.00			0.43	1.78	N/A	No
WS07	1.50	4.60	0.00	0.00	0	0.00	0.00	0.00	0.80	20.90	20.00	0.00			0.48	3.95	N/A	No
WS10	0.50	1.50	0.00	0.00	0	0.00	0.00	0.00	0.10	20.40	20.20	0.10			0.57	1.69	N/A	No

Key:

	Depth to water Response zone <i>fully</i> flooded during sampling		Methane > 1% v/v	Carbon Dioxide > 5% v/v	Gas Flow > 70 l/hr
	Response zone <i>significantly</i> flooded during sampling				
	Datum or response zone information missing. Response zone flooding cannot be calculated				

Visit 6, Event: 13 March 2018, Date: 13/03/2018 **Sheet 2 of 2**

Engineer: Charlie Orme Start/End Time: 12:49 - 15:06 Pressure Start/End (mB): 1005 - 1005 Temperature (Deg C): 11.00 Weather Conditions: Fine	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th>Equipment</th> <th>SerialNo</th> <th>Calibrated</th> </tr> <tr> <td>PID</td> <td></td> <td>Yes</td> </tr> <tr> <td>Gas Analyser</td> <td></td> <td>Yes</td> </tr> </table>	Equipment	SerialNo	Calibrated	PID		Yes	Gas Analyser		Yes	Comments and Ground Conditions:
Equipment	SerialNo	Calibrated									
PID		Yes									
Gas Analyser		Yes									

Borehole	Response Zone (m)		Gas Flow (l/hr)		Borehole Differential Pressure (Pa)	Methane (% v/v)		Carbon Dioxide (% v/v)		Oxygen (% v/v)		Other Gases (ppmV)			Depth to Water (m)	Depth to Base (m)	Thickness of product (mm)	Sampled ? (Y/N)
	Top	Base	Initial	Steady		Initial	Steady	Initial	Steady	Initial	Steady	PID	H2S	CO	m	m	mm	Y/N
WS103	1.00	4.00				0.00	0.00	0.00	0.10	20.50	19.20	0.00			0.65	4.03	N/A	No
WS106	1.00	2.00				0.00	0.00	0.00	0.00	20.80	20.60	0.30			1.53	1.85	N/A	No
WS109	1.00	2.00	0.00	0.00	0	0.00	0.00	0.00	0.10	20.70	20.40	1.00			1.45	2.09	N/A	No

Appendix G

LABORATORY DATA AND SCREENING





Unit 7-8 Hawarden Business Park
Manor Road (off Manor Lane)
Hawarden
Deeside
CH5 3US



Website: www.alsenvironmental.co.uk

WSP Environmental
One Queens Drive
Birmingham
B5 4PJ

Attention: Charlie Orme

CERTIFICATE OF ANALYSIS

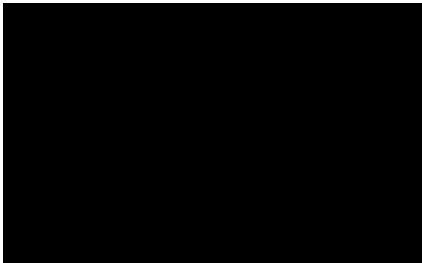
Date: 01 March 2018
Customer: H_WSP_BIR
Sample Delivery Group (SDG): 180216-85
Your Reference: 70020138
Location: Former Interbrew Site, Gloucester
Report No: 446420

This report has been revised and directly supersedes 446021 in its entirety.

We received 46 samples on Friday February 16, 2018 and 19 of these samples were scheduled for analysis which was completed on Thursday March 01, 2018. Accredited laboratory tests are defined within the report, but opinions, interpretations and on-site data expressed herein are outside the scope of ISO 17025 accreditation.

Should this report require incorporation into client reports, it must be used in its entirety and not simply with the data sections alone.

Chemical testing (unless subcontracted) performed at ALS Environmental Hawarden (Method codes TM) or ALS Environmental Aberdeen (Method codes S).





CERTIFICATE OF ANALYSIS

Validated

SDG: 180216-85 Client Reference: 70020138 Report Number: 446420
Location: Former Interbrew Site, GloOrder Number: 70020138-006 Superseded Report: 446021

Received Sample Overview

Lab Sample No(s)	Customer Sample Ref.	AGS Ref.	Depth (m)	Sampled Date
17062989	BH101	ES	0.30 - 0.30	08/02/2018
17063005	BH101	ES	0.60 - 0.60	08/02/2018
17063029	BH102	ES	0.30 - 0.50	08/02/2018
17063039	BH102	ES	1.60 - 1.60	08/02/2018
17063049	BH103	ES	0.30 - 0.40	08/02/2018
17063063	BH103	ES	0.75 - 0.75	08/02/2018
17063071	BH103	ES	1.45 - 1.45	08/02/2018
17063084	BH104	ES	0.50 - 0.50	08/02/2018
17063093	BH104	ES	0.80 - 0.80	08/02/2018
17063113	BH104	ES	1.30 - 1.30	08/02/2018
17063461	HP101	ES	0.30 - 0.30	13/02/2018
17063477	HP102	ES	0.30 - 0.30	13/02/2018
17063487	HP102	ES	0.60 - 0.60	13/02/2018
17062970	TP101	ES	0.50 - 0.50	08/02/2018
17063019	TP101	ES	1.00 - 1.00	08/02/2018
17063145	TP102	ES	0.40 - 0.40	08/02/2018
17063271	TP102	ES	0.70 - 0.70	08/02/2018
17063384	TP103	ES	0.80 - 0.80	08/02/2018
17063395	TP103	ES	1.00 - 1.00	08/02/2018
17063404	TP103	ES	1.50 - 1.50	08/02/2018
17063414	TP104	ES	0.50 - 0.50	08/02/2018
17063424	TP104	ES	0.80 - 0.80	08/02/2018
17063104	TP105	ES	0.65 - 0.65	08/02/2018
17063219	TP105	ES	0.80 - 0.80	08/02/2018
17063353	TP106	ES	0.60 - 0.60	08/02/2018
17063437	TP106	ES	1.00 - 1.00	08/02/2018
17063449	TP106	ES	1.40 - 1.40	08/02/2018
17063122	WS101	ES	0.30 - 0.45	12/02/2018
17063134	WS101	ES	1.30 - 1.30	12/02/2018
17063156	WS102	ES	0.30 - 0.50	12/02/2018
17063169	WS102	ES	1.60 - 1.60	12/02/2018
17063178	WS103	ES	0.25 - 0.25	12/02/2018
17063190	WS103	ES	0.70 - 0.70	12/02/2018
17063198	WS104	ES	0.30 - 0.30	12/02/2018
17063208	WS104	ES	0.90 - 0.90	12/02/2018
17063228	WS105	ES	0.25 - 0.25	12/02/2018
17063238	WS105	ES	0.70 - 0.70	12/02/2018
17063285	WS105	ES	1.10 - 1.10	12/02/2018
17063250	WS106	ES	0.60 - 0.60	12/02/2018
17063260	WS107	ES	0.45 - 0.45	12/02/2018
17063297	WS108	ES	0.50 - 0.50	12/02/2018
17063312	WS108	ES	1.05 - 1.05	12/02/2018
17063325	WS109	ES	0.50 - 0.50	12/02/2018
17063343	WS109	ES	1.20 - 1.20	12/02/2018
17063365	WS110	ES	0.30 - 0.30	12/02/2018
17063375	WS110	ES	1.05 - 1.05	12/02/2018



CERTIFICATE OF ANALYSIS

Validated

SDG:	180216-85	Client Reference:	70020138	Report Number:	446420
Location:	Former Interbrew Site, Glo	Order Number:	70020138-006	Superseded Report:	446021

Maximum Sample/Coolbox Temperature (°C) : 4.6

ISO5667-3 Water quality - Sampling - Part3 -

During Transportation samples shall be stored in a cooling device capable of maintaining a temperature of (5±3)°C.

ALS have data which show that a cool box with 4 frozen icepacks is capable of maintaining pre-chilled samples at a temperature of (5±3)°C for a period of up to 24hrs.

Only received samples which have had analysis scheduled will be shown on the following pages.



CERTIFICATE OF ANALYSIS

Validated

SDG: 180216-85 **Client Reference:** 70020138 **Report Number:** 446420
Location: Former Interbrew Site, GloOrder Number: 70020138-006 **Superseded Report:** 446021

Results Legend <div style="display: flex; flex-direction: column; gap: 5px;"> <div style="display: flex; align-items: center;">X Test</div> <div style="display: flex; align-items: center;">N No Determination Possible</div> </div> Sample Types - S - Soil/Solid UNS - Unspecified Solid GW - Ground Water SW - Surface Water LE - Land Leachate PL - Prepared Leachate PR - Process Water SA - Saline Water TE - Trade Effluent TS - Treated Sewage US - Untreated Sewage RE - Recreational Water DW - Drinking Water Non-regulatory UNL - Unspecified Liquid SL - Sludge G - Gas OTH - Other	Lab Sample No(s)	Customer Sample Reference	AGS Reference	Depth (m)	Container	Sample Type	
		17063005	BH101	ES	0.60 - 0.60	60g VOC (ALE215) 250g Amber Jar (ALE210) 1kg TUB	S
		17063049	BH103	ES	0.30 - 0.40	250g Amber Jar (ALE215) 60g VOC (ALE210) 1kg TUB	S
		17063063	BH103	ES	0.75 - 0.75	60g VOC (ALE215) 250g Amber Jar (ALE210) 1kg TUB	S
		17063084	BH104	ES	0.50 - 0.50	250g Amber Jar (ALE215) 60g VOC (ALE210) 1kg TUB	S
		17063461	HP101	ES	0.30 - 0.30	60g VOC (ALE215) 400g Tub (ALE214) 250g Amber Jar (ALE210) 1kg TUB	S
		17063477	HP102	ES	0.30 - 0.30	250g Amber Jar (ALE215) 60g VOC (ALE210) 1kg TUB	S
	17063487	HP102	ES	0.60 - 0.60	60g VOC (ALE215) 250g Amber Jar (ALE210) 1kg TUB	S	
	17063145	TP102	ES	0.40 - 0.40	1kg TUB	S	
Anions by Kone (soil)	All	NDPs: 0 Tests: 4					
Asbestos ID in Solid Samples	All	NDPs: 0 Tests: 15					
CEN Readings	All	NDPs: 0 Tests: 6					
Cyanide Comp/Free/Total/Thiocyanate	All	NDPs: 0 Tests: 18					
Dissolved Metals by ICP-MS	All	NDPs: 0 Tests: 4					
EPH CWG (Aliphatic) GC (S)	All	NDPs: 0 Tests: 19					
EPH CWG (Aromatic) GC (S)	All	NDPs: 0 Tests: 19					
Ferric Iron	All	NDPs: 0 Tests: 4					
Ferrous Iron	All	NDPs: 0 Tests: 4					
GRO by GC-FID (S)	All	NDPs: 0 Tests: 19					
Hexavalent Chromium (s)	All	NDPs: 0 Tests: 14					
Mercury Dissolved	All	NDPs: 0 Tests: 4					
Metals by iCap-OES Dissolved (W)	All	NDPs: 0 Tests: 4					
Metals in solid samples by OES	All	NDPs: 0 Tests: 14					
PAH by GCMS	All	NDPs: 0 Tests: 16					



CERTIFICATE OF ANALYSIS

Validated

SDG:	180216-85	Client Reference:	70020138	Report Number:	446420
Location:	Former Interbrew Site, Glo	Order Number:	70020138-006	Superseded Report:	446021

Results Legend

- X Test
- N No Determination Possible

Sample Types -

- S - Soil/Solid
- UNS - Unspecified Solid
- GW - Ground Water
- SW - Surface Water
- LE - Land Leachate
- PL - Prepared Leachate
- PR - Process Water
- SA - Saline Water
- TE - Trade Effluent
- TS - Treated Sewage
- US - Untreated Sewage
- RE - Recreational Water
- DW - Drinking Water Non-regulatory
- UNL - Unspecified Liquid
- SL - Sludge
- G - Gas
- OTH - Other

	Lab Sample No(s)	Customer Sample Reference	AGS Reference	Depth (m)	Container		Sample Type
	17063005	BH101	ES	0.60 - 0.60	60g VOC (ALE215)	1kg TUB	S
	17063049	BH103	ES	0.30 - 0.40	60g VOC (ALE215)	1kg TUB	S
	17063063	BH103	ES	0.75 - 0.75	60g VOC (ALE215)	1kg TUB	S
	17063084	BH104	ES	0.50 - 0.50	60g VOC (ALE215)	1kg TUB	S
	17063461	HP101	ES	0.30 - 0.30	60g VOC (ALE215)	1kg TUB	S
	17063477	HP102	ES	0.30 - 0.30	60g VOC (ALE215)	1kg TUB	S
	17063487	HP102	ES	0.60 - 0.60	60g VOC (ALE215)	1kg TUB	S
	17063145	TP102	ES	0.40 - 0.40	60g VOC (ALE215)	1kg TUB	S
pH	All	NDPs: 0 Tests: 14					
Sample description	All	NDPs: 0 Tests: 19					
Semi Volatile Organic Compounds	All	NDPs: 0 Tests: 2					
TPH CWG GC (S)	All	NDPs: 0 Tests: 19					
VOC MS (S)	All	NDPs: 0 Tests: 19					

17063178	WS103	ES	0.25 - 0.25	1kg TUB	S														
17063156	WS102	ES	0.30 - 0.50	60g VOC (ALE215)	S														
				250g Amber Jar (ALE210)	S	X													
				1kg TUB	S														
				60g VOC (ALE215)	S														
17063122	WS101	ES	0.30 - 0.45	250g Amber Jar (ALE210)	S														
				1kg TUB	S														
17063437	TP106	ES	1.00 - 1.00	60g VOC (ALE215)	S														
				250g Amber Jar (ALE210)	S	X													
				1kg TUB	S														
				60g VOC (ALE215)	S														
17063414	TP104	ES	0.50 - 0.50	250g Amber Jar (ALE210)	S														
				1kg TUB	S	X													
17063395	TP103	ES	1.00 - 1.00	60g VOC (ALE215)	S														
				250g Amber Jar (ALE210)	S														
17063384	TP103	ES	0.80 - 0.80	60g VOC (ALE215)	S														
				250g Amber Jar (ALE210)	S	X													
				1kg TUB	S														
				60g VOC (ALE215)	S														
17063145	TP102	ES	0.40 - 0.40	250g Amber Jar (ALE210)	S														



CERTIFICATE OF ANALYSIS

Validated

SDG:	180216-85	Client Reference:	70020138	Report Number:	446420
Location:	Former Interbrew Site, Glo	Order Number:	70020138-006	Superseded Report:	446021

Results Legend

- X Test
- N No Determination Possible

Sample Types -

- S - Soil/Solid
- UNS - Unspecified Solid
- GW - Ground Water
- SW - Surface Water
- LE - Land Leachate
- PL - Prepared Leachate
- PR - Process Water
- SA - Saline Water
- TE - Trade Effluent
- TS - Treated Sewage
- US - Untreated Sewage
- RE - Recreational Water
- DW - Drinking Water Non-regulatory
- UNL - Unspecified Liquid
- SL - Sludge
- G - Gas
- OTH - Other

	Lab Sample No(s)	Customer Sample Reference	AGS Reference	Depth (m)	Container		Sample Type
					250g Amber Jar (ALE210)	60g VOC (ALE215)	
	17063178	WS103	ES	0.25 - 0.25	250g Amber Jar (ALE210)	60g VOC (ALE215)	S
	17063250	WS106	ES	0.60 - 0.60	250g Amber Jar (ALE210)	60g VOC (ALE215)	S
	17063312	WS108	ES	1.05 - 1.05	250g Amber Jar (ALE210)	60g VOC (ALE215)	S
	17063343	WS109	ES	1.20 - 1.20	250g Amber Jar (ALE210)	60g VOC (ALE215)	S
	17063375	WS110	ES	1.05 - 1.05	250g Amber Jar (ALE210)	60g VOC (ALE215)	S
Anions by Kone (soil)	All	NDPs: 0 Tests: 4					
Asbestos ID in Solid Samples	All	NDPs: 0 Tests: 15					
CEN Readings	All	NDPs: 0 Tests: 6					
Cyanide Comp/Free/Total/Thiocyanate	All	NDPs: 0 Tests: 18					
Dissolved Metals by ICP-MS	All	NDPs: 0 Tests: 4					
EPH CWG (Aliphatic) GC (S)	All	NDPs: 0 Tests: 19					
EPH CWG (Aromatic) GC (S)	All	NDPs: 0 Tests: 19					
Ferric Iron	All	NDPs: 0 Tests: 4					
Ferrous Iron	All	NDPs: 0 Tests: 4					
GRO by GC-FID (S)	All	NDPs: 0 Tests: 19					
Hexavalent Chromium (s)	All	NDPs: 0 Tests: 14					
Mercury Dissolved	All	NDPs: 0 Tests: 4					
Metals by iCap-OES Dissolved (W)	All	NDPs: 0 Tests: 4					
Metals in solid samples by OES	All	NDPs: 0 Tests: 14					
PAH by GCMS	All	NDPs: 0 Tests: 16					



CERTIFICATE OF ANALYSIS

Validated

SDG: 180216-85 **Client Reference:** 70020138 **Report Number:** 446420
Location: Former Interbrew Site, Glo **Order Number:** 70020138-006 **Superseded Report:** 446021

Results Legend

- X Test
- N No Determination Possible

Sample Types -

- S - Soil/Solid
- UNS - Unspecified Solid
- GW - Ground Water
- SW - Surface Water
- LE - Land Leachate
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- PR - Process Water
- SA - Saline Water
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- TS - Treated Sewage
- US - Untreated Sewage
- RE - Recreational Water
- DW - Drinking Water Non-regulatory
- UNL - Unspecified Liquid
- SL - Sludge
- G - Gas
- OTH - Other

	Lab Sample No(s)	Customer Sample Reference	AGS Reference	Depth (m)	Container	Sample Type					
							17063178	17063250	17063312	17063343	17063375
pH	All	NDPs: 0 Tests: 14					X	X	X	X	X
Sample description	All	NDPs: 0 Tests: 19					X	X	X	X	X
TPH CWG GC (S)	All	NDPs: 0 Tests: 19					X	X	X	X	X
VOC MS (S)	All	NDPs: 0 Tests: 19					X	X	X	X	X



CERTIFICATE OF ANALYSIS

Validated

SDG: 180216-85 Client Reference: 70020138 Report Number: 446420
 Location: Former Interbrew Site, Glo Order Number: 70020138-006 Superseded Report: 446021

Sample Descriptions

Grain Sizes

very fine	<0.063mm	fine	0.063mm - 0.1mm	medium	0.1mm - 2mm	coarse	2mm - 10mm	very coarse	>10mm
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Lab Sample No(s)	Customer Sample Ref.	Depth (m)	Colour	Description	Inclusions	Inclusions 2
17063005	BH101	0.60 - 0.60	Dark Brown	Sandy Clay	Fibres	Stones
17063049	BH103	0.30 - 0.40	Light Brown	Sandy Loam	Stones	None
17063063	BH103	0.75 - 0.75	Dark Brown	Silt Loam	Stones	Vegetation
17063084	BH104	0.50 - 0.50	Dark Brown	Sandy Clay	Stones	N/A
17063461	HP101	0.30 - 0.30	Light Brown	Sandy Loam	Stones	None
17063477	HP102	0.30 - 0.30	Light Brown	Sand	Stones	None
17063487	HP102	0.60 - 0.60	Grey	Clay	Stones	None
17063145	TP102	0.40 - 0.40	Light Brown	Sand	Stones	None
17063384	TP103	0.80 - 0.80	Grey	Stone/Soil	Stones	None
17063395	TP103	1.00 - 1.00	Grey	Clay	Stones	None
17063414	TP104	0.50 - 0.50	Light Brown	Sand	Stones	None
17063437	TP106	1.00 - 1.00	Dark Brown	Loamy Sand	Stones	None
17063122	WS101	0.30 - 0.45	Dark Brown	Sandy Clay Loam	Stones	Brick
17063156	WS102	0.30 - 0.50	Dark Brown	Silt Loam	Stones	Brick
17063178	WS103	0.25 - 0.25	Light Brown	Stone/Soil	Stones	None
17063250	WS106	0.60 - 0.60	Dark Brown	Sand	Stones	None
17063312	WS108	1.05 - 1.05	Dark Brown	Sandy Clay	Crushed Brick	Stones
17063343	WS109	1.20 - 1.20	Dark Brown	Silty Clay Loam	Stones	None
17063375	WS110	1.05 - 1.05	Dark Brown	Silty Clay Loam	Stones	None

These descriptions are only intended to act as a cross check if sample identities are questioned, and to provide a log of sample matrices with respect to MCERTS validation. They are not intended as full geological descriptions.

We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials - whether these are derived from naturally occurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample.

Other coarse granular materials such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.



CERTIFICATE OF ANALYSIS

Validated

SDG:	180216-85	Client Reference:	70020138	Report Number:	446420
Location:	Former Interbrew Site, Glo	Order Number:	70020138-006	Superseded Report:	446021

Results Legend		Customer Sample Ref.	BH101	BH103	BH103	BH104	HP101	HP102
#	ISO17025 accredited.							
M	mCERTS accredited.							
aq	Aqueous / settled sample.							
diss.filt	Dissolved / filtered sample.							
tot.unfilt	Total / unfiltered sample.							
*	Subcontracted test.							
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery							
(F)	Trigger breach confirmed							
1-5&*\$@	Sample deviation (see appendix)							
		Depth (m)	0.60 - 0.60	0.30 - 0.40	0.75 - 0.75	0.50 - 0.50	0.30 - 0.30	0.30 - 0.30
		Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
		Date Sampled	08/02/2018	08/02/2018	08/02/2018	08/02/2018	13/02/2018	13/02/2018
		Date Received						
		SDG Ref	180216-85	180216-85	180216-85	180216-85	180216-85	180216-85
		Lab Sample No.(s)	17063005	17063049	17063063	17063084	17063461	17063477
		AGS Reference	ES	ES	ES	ES	ES	ES
Component	LOD/Units	Method						
Moisture Content Ratio (% of as received sample)	%	PM024	17	13	16	14	6.3	7.7
pH	1 pH Units	TM133	8.25	10		8.17		
Chromium, Hexavalent	<0.6 mg/kg	TM151	<0.6	<0.6	<0.6	<0.6		
Cyanide, Total	<1 mg/kg	TM153	<1	<1	<1	<1		
Arsenic	<0.6 mg/kg	TM181	15	6.34	19	51.9		
Cadmium	<0.02 mg/kg	TM181	<0.02	0.0331	<0.02	<0.02		
Chromium	<0.9 mg/kg	TM181	17.4	3.53	18.5	33.8		
Copper	<1.4 mg/kg	TM181	19.9	12.8	28.5	81.9		
Lead	<0.7 mg/kg	TM181	26.1	11	48.8	109		
Mercury	<0.14 mg/kg	TM181	<0.14	<0.14	<0.14	<0.14		
Nickel	<0.2 mg/kg	TM181	29.9	7.21	27	53.1		
Selenium	<1 mg/kg	TM181	<1	<1	<1	<1		
Zinc	<1.9 mg/kg	TM181	69.7	20.9	112	148		
Water Soluble Sulphate as SO4 2:1 Extract	<0.004 g/l	TM243	0.0984					
Chloride (soluble)	<5 mg/kg	TM243	26.6					



CERTIFICATE OF ANALYSIS

Validated

SDG:	180216-85	Client Reference:	70020138	Report Number:	446420
Location:	Former Interbrew Site, Glo	Order Number:	70020138-006	Superseded Report:	446021

Results Legend		Customer Sample Ref.	HP102	TP102	TP103	TP103	TP104	TP106
#	ISO17025 accredited.	Depth (m) Sample Type Date Sampled Sampled Time Date Received SDG Ref Lab Sample No.(s) AGS Reference	0.60 - 0.60	0.40 - 0.40	0.80 - 0.80	1.00 - 1.00	0.50 - 0.50	1.00 - 1.00
M	mCERTS accredited.		Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
aq	Aqueous / settled sample.		13/02/2018	08/02/2018	08/02/2018	08/02/2018	08/02/2018	08/02/2018
diss.filt	Dissolved / filtered sample.							
tot.unfilt	Total / unfiltered sample.							
*	Subcontracted test.							
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery							
(F)	Trigger breach confirmed		180216-85	180216-85	180216-85	180216-85	180216-85	180216-85
1-5&*\$@	Sample deviation (see appendix)		17063487	17063145	17063384	17063395	17063414	17063437
			ES	ES	ES	ES	ES	ES
Component	LOD/Units	Method						
Moisture Content Ratio (% of as received sample)	%	PM024	19	4.5	8.6	20	3.6	14
pH	1 pH Units	TM133		11.8	8.09		11.9	7.54
Chromium, Hexavalent	<0.6 mg/kg	TM151		<0.6			<0.6	<0.6
Cyanide, Total	<1 mg/kg	TM153		<1			<1	<1
Arsenic	<0.6 mg/kg	TM181		1.15			10.2	23.2
Cadmium	<0.02 mg/kg	TM181		<0.02			0.614	2.75
Chromium	<0.9 mg/kg	TM181		3.88			4.56	21.4
Copper	<1.4 mg/kg	TM181		<1.4			1.65	50.7
Lead	<0.7 mg/kg	TM181		0.786			24.5	73.5
Mercury	<0.14 mg/kg	TM181		<0.14			0.301	0.338
Nickel	<0.2 mg/kg	TM181		1.9			3.22	29
Selenium	<1 mg/kg	TM181		<1			<1	<1
Zinc	<1.9 mg/kg	TM181		7.2			80.1	374
Water Soluble Sulphate as SO4 2:1 Extract	<0.004 g/l	TM243		0.0134				
Chloride (soluble)	<5 mg/kg	TM243		20.3				



CERTIFICATE OF ANALYSIS

Validated

SDG: 180216-85 Client Reference: 70020138 Report Number: 446420
 Location: Former Interbrew Site, Glo Order Number: 70020138-006 Superseded Report: 446021

Results Legend			Customer Sample Ref.	WS101	WS102	WS103	WS106	WS108	WS109
#	ISO17025 accredited.								
M	mCERTS accredited.								
aq	Aqueous / settled sample.								
diss.filt	Dissolved / filtered sample.								
tot.unfilt	Total / unfiltered sample.								
*	Subcontracted test.								
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery								
(F)	Trigger breach confirmed								
1-5&*\$@	Sample deviation (see appendix)								
Component	LOD/Units	Method	Depth (m)	WS101	WS102	WS103	WS106	WS108	WS109
Moisture Content Ratio (% of as received sample)	%	PM024	0.30 - 0.45	17	17	7.8	4.4	18	9.6
pH	1 pH Units	TM133	Soil/Solid (S) 12/02/2018	8.6	9.15	10.3	9	8.29	8.5
Chromium, Hexavalent	<0.6 mg/kg	TM151	Date Sampled 12/02/2018	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6
Cyanide, Total	<1 mg/kg	TM153	Date Received 16/02/2018	<1	<1	<1	<1	<1	<1
Arsenic	<0.6 mg/kg	TM181	SDG Ref 180216-85	14.8	9.19	1.83	2.8	8.26	6.8
Cadmium	<0.02 mg/kg	TM181	Lab Sample No.(s) 17063122	<0.02	0.0652	<0.02	0.279	<0.02	0.359
Chromium	<0.9 mg/kg	TM181	AGS Reference ES	21.1	14.6	3.68	4.63	25.1	10.2
Copper	<1.4 mg/kg	TM181		21.6	18.5	7.2	2.94	23	21.5
Lead	<0.7 mg/kg	TM181		39.4	30.5	2.05	22.1	12.5	21.8
Mercury	<0.14 mg/kg	TM181		<0.14	<0.14	<0.14	<0.14	<0.14	0.314
Nickel	<0.2 mg/kg	TM181		27.5	20.6	2.4	5.01	42.7	12.2
Selenium	<1 mg/kg	TM181		<1	<1	<1	<1	<1	1.47
Zinc	<1.9 mg/kg	TM181		87.7	78.5	9.45	30.3	70.5	48.7
Water Soluble Sulphate as SO4 2:1 Extract	<0.004 g/l	TM243					0.0859		0.0454
Chloride (soluble)	<5 mg/kg	TM243					8.6		15.3



CERTIFICATE OF ANALYSIS

Validated

SDG: 180216-85 **Client Reference:** 70020138 **Report Number:** 446420
Location: Former Interbrew Site, Glo **Order Number:** 70020138-006 **Superseded Report:** 446021

Results Legend		Customer Sample Ref.	WS110				
#	ISO17025 accredited.						
M	mCERTS accredited.						
aq	Aqueous / settled sample.						
diss.filt	Dissolved / filtered sample.						
tot.unfilt	Total / unfiltered sample.						
*	Subcontracted test.						
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery						
(F)	Trigger breach confirmed						
1-5&*\$@	Sample deviation (see appendix)						
		Depth (m)	1.05 - 1.05				
		Sample Type	Soil/Solid (S)				
		Date Sampled	12/02/2018				
		Sampled Time	.				
		Date Received	16/02/2018				
		SDG Ref	180216-85				
		Lab Sample No.(s)	17063375				
		AGS Reference	ES				
Component	LOD/Units	Method					
Moisture Content Ratio (% of as received sample)	%	PM024	16				
pH	1 pH Units	TM133	7.73				
Chromium, Hexavalent	<0.6 mg/kg	TM151	<0.6				
Cyanide, Total	<1 mg/kg	TM153	<1				
Arsenic	<0.6 mg/kg	TM181	12.9				
Cadmium	<0.02 mg/kg	TM181	0.593				
Chromium	<0.9 mg/kg	TM181	17.2				
Copper	<1.4 mg/kg	TM181	43.6				
Lead	<0.7 mg/kg	TM181	76.1				
Mercury	<0.14 mg/kg	TM181	<0.14				
Nickel	<0.2 mg/kg	TM181	23.3				
Selenium	<1 mg/kg	TM181	<1				
Zinc	<1.9 mg/kg	TM181	182				



CERTIFICATE OF ANALYSIS

Validated

SDG: 180216-85 Client Reference: 70020138 Report Number: 446420
 Location: Former Interbrew Site, GloOrder Number: 70020138-006 Superseded Report: 446021

PAH by GCMS

Results Legend			Customer Sample Ref.	BH101	BH103	BH103	BH104	HP101	HP102
#	ISO17025 accredited.								
M	mCERTS accredited.								
aq	Aqueous / settled sample.								
diss.filt	Dissolved / filtered sample.								
tot.unfilt	Total / unfiltered sample.								
*	Subcontracted test.								
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery								
(F)	Trigger breach confirmed								
1-5&*\$@	Sample deviation (see appendix)								
Component	LOD/Units	Method	Depth (m)	0.60 - 0.60	0.30 - 0.40	0.75 - 0.75	0.50 - 0.50	0.30 - 0.30	0.60 - 0.60
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	08/02/2018	08/02/2018	08/02/2018	08/02/2018	13/02/2018	13/02/2018
			Sampled Time						
			Date Received	16/02/2018	16/02/2018	16/02/2018	16/02/2018	16/02/2018	16/02/2018
			SDG Ref	180216-85	180216-85	180216-85	180216-85	180216-85	180216-85
			Lab Sample No.(s)	17063005	17063049	17063063	17063084	17063461	17063487
			AGS Reference	ES	ES	ES	ES	ES	ES
Naphthalene-d8 % recovery**	%	TM218		110	96.1	90.9	109	91.3	93.3
Acenaphthene-d10 % recovery**	%	TM218		116	91.2	96.6	114	95	88.6
Phenanthrene-d10 % recovery**	%	TM218		116	88.9	91.2	108	90.5	86.7
Chrysene-d12 % recovery**	%	TM218		115	80.1	84	92.7	85.8	81.4
Perylene-d12 % recovery**	%	TM218		124	79.1	86	91.9	91.9	82.4
Naphthalene	<0.009 mg/kg	TM218		<0.009	0.0196	<0.009	0.0588	<0.018	<0.009
Acenaphthylene	<0.012 mg/kg	TM218		<0.012	<0.012	<0.012	0.0192	<0.024	0.0187
Acenaphthene	<0.008 mg/kg	TM218		<0.008	<0.008	<0.008	<0.008	0.0325	<0.008
Fluorene	<0.01 mg/kg	TM218		<0.01	<0.01	<0.01	<0.01	0.0341	<0.01
Phenanthrene	<0.015 mg/kg	TM218		0.0222	0.258	0.0798	0.27	0.124	0.0194
Anthracene	<0.016 mg/kg	TM218		<0.016	0.271	<0.016	0.0335	0.0357	<0.016
Fluoranthene	<0.017 mg/kg	TM218		0.0353	0.0747	0.0469	0.242	0.121	0.0213
Pyrene	<0.015 mg/kg	TM218		0.0295	0.0459	0.0311	0.186	0.117	0.0192
Benz(a)anthracene	<0.014 mg/kg	TM218		0.0236	<0.014	0.0333	0.0965	0.0419	<0.014
Chrysene	<0.01 mg/kg	TM218		0.0165	0.0125	0.024	0.125	0.0307	<0.01
Benzo(b)fluoranthene	<0.015 mg/kg	TM218		0.0331	<0.015	0.0356	0.196	0.0608	<0.015
Benzo(k)fluoranthene	<0.014 mg/kg	TM218		<0.014	<0.014	<0.014	0.0738	<0.028	<0.014
Benzo(a)pyrene	<0.015 mg/kg	TM218		0.0239	<0.015	<0.015	0.102	0.055	<0.015
Indeno(1,2,3-cd)pyrene	<0.018 mg/kg	TM218		<0.018	<0.018	<0.018	0.0674	<0.036	<0.018
Dibenzo(a,h)anthracene	<0.023 mg/kg	TM218		<0.023	<0.023	<0.023	0.0282	<0.046	<0.023
Benzo(g,h,i)perylene	<0.024 mg/kg	TM218		<0.024	<0.024	<0.024	0.106	0.072	<0.024
PAH, Total Detected USEPA 16	<0.118 mg/kg	TM218		0.184	0.681	0.251	1.6	0.725	<0.118



CERTIFICATE OF ANALYSIS

Validated

SDG: 180216-85 Client Reference: 70020138 Report Number: 446420
 Location: Former Interbrew Site, GloOrder Number: 70020138-006 Superseded Report: 446021

PAH by GCMS

Results Legend			Customer Sample Ref.	TP102	TP104	TP106	WS101	WS102	WS103
#	ISO17025 accredited.								
M	mCERTS accredited.								
aq	Aqueous / settled sample.								
diss.filt	Dissolved / filtered sample.								
tot.unfilt	Total / unfiltered sample.								
*	Subcontracted test.								
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery								
(F)	Trigger breach confirmed								
1-5&*\$@	Sample deviation (see appendix)								
Component	LOD/Units	Method	Depth (m)	0.40 - 0.40	0.50 - 0.50	1.00 - 1.00	0.30 - 0.45	0.30 - 0.50	0.25 - 0.25
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	08/02/2018	08/02/2018	08/02/2018	12/02/2018	12/02/2018	12/02/2018
			Sampled Time						
			Date Received	16/02/2018	16/02/2018	16/02/2018	16/02/2018	16/02/2018	16/02/2018
			SDG Ref	180216-85	180216-85	180216-85	180216-85	180216-85	180216-85
			Lab Sample No.(s)	17063145	17063414	17063437	17063122	17063156	17063178
			AGS Reference	ES	ES	ES	ES	ES	ES
Naphthalene-d8 % recovery**	%	TM218		91.4	92.1	92.5	115	92.8	90.5
Acenaphthene-d10 % recovery**	%	TM218		92.4	95.8	97	124	99.2	94.9
Phenanthrene-d10 % recovery**	%	TM218		87.2	91.2	94.5	124	94.1	90.3
Chrysene-d12 % recovery**	%	TM218		85.7	85.5	91.7	124	91	86
Perylene-d12 % recovery**	%	TM218		89.4	87.5	95.1	136	93.4	89.2
Naphthalene	<0.009 mg/kg	TM218		<0.009	0.0223	0.0138	0.0111	0.0589	<0.009
Acenaphthylene	<0.012 mg/kg	TM218		<0.012	<0.012	0.0166	<0.012	0.0281	<0.012
Acenaphthene	<0.008 mg/kg	TM218		<0.008	<0.008	<0.008	<0.008	0.03	<0.008
Fluorene	<0.01 mg/kg	TM218		<0.01	<0.01	<0.01	<0.01	0.0174	<0.01
Phenanthrene	<0.015 mg/kg	TM218		<0.015	0.0203	0.234	<0.015	0.174	<0.015
Anthracene	<0.016 mg/kg	TM218		<0.016	<0.016	0.108	<0.016	0.0407	<0.016
Fluoranthene	<0.017 mg/kg	TM218		<0.017	0.0183	0.456	<0.017	0.273	<0.017
Pyrene	<0.015 mg/kg	TM218		<0.015	0.0182	0.434	<0.015	0.242	<0.015
Benz(a)anthracene	<0.014 mg/kg	TM218		<0.014	<0.014	0.253	0.0283	0.157	<0.014
Chrysene	<0.01 mg/kg	TM218		<0.01	<0.01	0.213	<0.01	0.138	<0.01
Benzo(b)fluoranthene	<0.015 mg/kg	TM218		<0.015	<0.015	0.271	0.0183	0.274	<0.015
Benzo(k)fluoranthene	<0.014 mg/kg	TM218		<0.014	<0.014	0.0761	<0.014	0.085	<0.014
Benzo(a)pyrene	<0.015 mg/kg	TM218		<0.015	<0.015	0.169	<0.015	0.165	<0.015
Indeno(1,2,3-cd)pyrene	<0.018 mg/kg	TM218		<0.018	<0.018	0.0883	<0.018	0.116	<0.018
Dibenzo(a,h)anthracene	<0.023 mg/kg	TM218		<0.023	<0.023	0.0285	<0.023	0.0336	<0.023
Benzo(g,h,i)perylene	<0.024 mg/kg	TM218		<0.024	<0.024	0.143	<0.024	0.177	<0.024
PAH, Total Detected USEPA 16	<0.118 mg/kg	TM218		<0.118	<0.118	2.5	<0.118	2.01	<0.118



CERTIFICATE OF ANALYSIS

Validated

SDG: 180216-85 Client Reference: 70020138 Report Number: 446420
 Location: Former Interbrew Site, GloOrder Number: 70020138-006 Superseded Report: 446021

PAH by GCMS

Results Legend			Customer Sample Ref.	WS106	WS108	WS109	WS110			
#	ISO17025 accredited.									
M	mCERTS accredited.									
aq	Aqueous / settled sample.									
diss.filt	Dissolved / filtered sample.									
tot.unfilt	Total / unfiltered sample.									
*	Subcontracted test.									
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery									
(F)	Trigger breach confirmed									
1-5&*\$@	Sample deviation (see appendix)									
Component	LOD/Units	Method	Depth (m)	Sample Type	Date Sampled	Sampled Time	Date Received	SDG Ref	Lab Sample No.(s)	AGS Reference
Naphthalene-d8 % recovery**	%	TM218	0.60 - 0.60	Soil/Solid (S)	12/02/2018		12/02/2018	180216-85	17063250	ES
Acenaphthene-d10 % recovery**	%	TM218	1.05 - 1.05	Soil/Solid (S)	12/02/2018		12/02/2018	180216-85	17063312	ES
Phenanthrene-d10 % recovery**	%	TM218	1.20 - 1.20	Soil/Solid (S)	12/02/2018		12/02/2018	180216-85	17063343	ES
Chrysene-d12 % recovery**	%	TM218	1.05 - 1.05	Soil/Solid (S)	12/02/2018		12/02/2018	180216-85	17063375	ES
Perylene-d12 % recovery**	%	TM218								
Naphthalene	<0.009 mg/kg	TM218	90.2							
Acenaphthylene	<0.012 mg/kg	TM218	110							
Acenaphthene	<0.008 mg/kg	TM218	97.7							
Fluorene	<0.01 mg/kg	TM218	94							
Phenanthrene	<0.015 mg/kg	TM218	95.4							
Anthracene	<0.016 mg/kg	TM218	117							
Fluoranthene	<0.017 mg/kg	TM218	114							
Pyrene	<0.015 mg/kg	TM218	99.8							
Benz(a)anthracene	<0.014 mg/kg	TM218	86.6							
Chrysene	<0.01 mg/kg	TM218	112							
Benzo(b)fluoranthene	<0.015 mg/kg	TM218	89							
Benzo(k)fluoranthene	<0.014 mg/kg	TM218	119							
Benz(a)pyrene	<0.015 mg/kg	TM218	101							
Indeno(1,2,3-cd)pyrene	<0.018 mg/kg	TM218	89.3							
Dibenzo(a,h)anthracene	<0.023 mg/kg	TM218	90.2							
Benzo(g,h,i)perylene	<0.024 mg/kg	TM218	110							
PAH, Total Detected USEPA 16	<0.118 mg/kg	TM218	94							



CERTIFICATE OF ANALYSIS

Validated

SDG: 180216-85	Client Reference: 70020138	Report Number: 446420	
Location: Former Interbrew Site, Glo	Order Number: 70020138-006	Superseded Report: 446021	

Semi Volatile Organic Compounds

Results Legend		Customer Sample Ref.	HP102	TP103			
# ISO17025 accredited.							
M mCERTS accredited.							
aq Aqueous / settled sample.							
diss.filt Dissolved / filtered sample.							
tot.unfilt Total / unfiltered sample.							
* Subcontracted test.							
** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery							
(F) Trigger breach confirmed							
1-5&*\$@ Sample deviation (see appendix)							
Depth (m)		0.30 - 0.30	0.80 - 0.80				
Sample Type		Soil/Solid (S)	Soil/Solid (S)				
Date Sampled		13/02/2018	08/02/2018				
Sampled Time		-	-				
Date Received		16/02/2018	16/02/2018				
SDG Ref		180216-85	180216-85				
Lab Sample No.(s)		17063477	17063384				
AGS Reference		ES	ES				
Component	LOD/Units	Method					
Phenol	<0.1 mg/kg	TM157	<0.1	<0.1			
Pentachlorophenol	<0.1 mg/kg	TM157	<0.1	<0.1			
n-Nitroso-n-dipropylamine	<0.1 mg/kg	TM157	<0.1	<0.1			
Nitrobenzene	<0.1 mg/kg	TM157	<0.1	<0.1			
Isophorone	<0.1 mg/kg	TM157	<0.1	<0.1			
Hexachloroethane	<0.1 mg/kg	TM157	<0.1	<0.1			
Hexachlorocyclopentadiene	<0.1 mg/kg	TM157	<0.1	<0.1			
Hexachlorobutadiene	<0.1 mg/kg	TM157	<0.1	<0.1			
Hexachlorobenzene	<0.1 mg/kg	TM157	<0.1	<0.1			
n-Dioctyl phthalate	<0.1 mg/kg	TM157	<0.1	<0.1			
Dimethyl phthalate	<0.1 mg/kg	TM157	<0.1	<0.1			
Diethyl phthalate	<0.1 mg/kg	TM157	<0.1	<0.1			
n-Dibutyl phthalate	<0.1 mg/kg	TM157	<0.1	<0.1			
Dibenzofuran	<0.1 mg/kg	TM157	<0.1	<0.1			
Carbazole	<0.1 mg/kg	TM157	<0.1	<0.1			
Butylbenzyl phthalate	<0.1 mg/kg	TM157	<0.1	<0.1			
bis(2-Ethylhexyl) phthalate	<0.1 mg/kg	TM157	<0.1	<0.1			
bis(2-Chloroethoxy)methane	<0.1 mg/kg	TM157	<0.1	<0.1			
bis(2-Chloroethyl)ether	<0.1 mg/kg	TM157	<0.1	<0.1			
Azobenzene	<0.1 mg/kg	TM157	<0.1	<0.1			
4-Nitrophenol	<0.1 mg/kg	TM157	<0.1	<0.1			
4-Nitroaniline	<0.1 mg/kg	TM157	<0.1	<0.1			
4-Methylphenol	<0.1 mg/kg	TM157	<0.1	<0.1			
4-Chlorophenylphenylether	<0.1 mg/kg	TM157	<0.1	<0.1			
4-Chloroaniline	<0.1 mg/kg	TM157	<0.1	<0.1			
4-Chloro-3-methylphenol	<0.1 mg/kg	TM157	<0.1	<0.1			
4-Bromophenylphenylether	<0.1 mg/kg	TM157	<0.1	<0.1			
3-Nitroaniline	<0.1 mg/kg	TM157	<0.1	<0.1			
2-Nitrophenol	<0.1 mg/kg	TM157	<0.1	<0.1			
2-Nitroaniline	<0.1 mg/kg	TM157	<0.1	<0.1			
2-Methylphenol	<0.1 mg/kg	TM157	<0.1	<0.1			
1,2,4-Trichlorobenzene	<0.1 mg/kg	TM157	<0.1	<0.1			



CERTIFICATE OF ANALYSIS

Validated

SDG: 180216-85 Client Reference: 70020138 Report Number: 446420
 Location: Former Interbrew Site, Glo Order Number: 70020138-006 Superseded Report: 446021

Semi Volatile Organic Compounds

Results Legend		Customer Sample Ref.	HP102	TP103			
#	ISO17025 accredited.						
M	mCERTS accredited.						
aq	Aqueous / settled sample.						
diss.filt	Dissolved / filtered sample.						
tot.unfilt	Total / unfiltered sample.						
*	Subcontracted test.						
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery						
(F)	Trigger breach confirmed						
1-5&*\$@	Sample deviation (see appendix)						
		Depth (m)	0.30 - 0.30	0.80 - 0.80			
		Sample Type	Soil/Solid (S)	Soil/Solid (S)			
		Date Sampled	13/02/2018	08/02/2018			
		Sampled Time	-	-			
		Date Received	16/02/2018	16/02/2018			
		SDG Ref	180216-85	180216-85			
		Lab Sample No.(s)	17063477	17063384			
		AGS Reference	ES	ES			
Component	LOD/Units	Method					
2-Chlorophenol	<0.1 mg/kg	TM157	<0.1	<0.1			
2,6-Dinitrotoluene	<0.1 mg/kg	TM157	<0.1	<0.1			
2,4-Dinitrotoluene	<0.1 mg/kg	TM157	<0.1	<0.1			
2,4-Dimethylphenol	<0.1 mg/kg	TM157	<0.1	<0.1			
2,4-Dichlorophenol	<0.1 mg/kg	TM157	<0.1	<0.1			
2,4,6-Trichlorophenol	<0.1 mg/kg	TM157	<0.1	<0.1			
2,4,5-Trichlorophenol	<0.1 mg/kg	TM157	<0.1	<0.1			
1,4-Dichlorobenzene	<0.1 mg/kg	TM157	<0.1	<0.1			
1,3-Dichlorobenzene	<0.1 mg/kg	TM157	<0.1	<0.1			
1,2-Dichlorobenzene	<0.1 mg/kg	TM157	<0.1	<0.1			
2-Chloronaphthalene	<0.1 mg/kg	TM157	<0.1	<0.1			
2-Methylnaphthalene	<0.1 mg/kg	TM157	<0.1	<0.1			
Acenaphthylene	<0.1 mg/kg	TM157	<0.1	<0.1			
Acenaphthene	<0.1 mg/kg	TM157	<0.1	<0.1			
Anthracene	<0.1 mg/kg	TM157	<0.1	<0.1			
Benzo(a)anthracene	<0.1 mg/kg	TM157	<0.1	<0.1			
Benzo(b)fluoranthene	<0.1 mg/kg	TM157	<0.1	<0.1			
Benzo(k)fluoranthene	<0.1 mg/kg	TM157	<0.1	<0.1			
Benzo(a)pyrene	<0.1 mg/kg	TM157	<0.1	<0.1			
Benzo(g,h,i)perylene	<0.1 mg/kg	TM157	<0.1	<0.1			
Chrysene	<0.1 mg/kg	TM157	<0.1	<0.1			
Fluoranthene	<0.1 mg/kg	TM157	<0.1	<0.1			
Fluorene	<0.1 mg/kg	TM157	<0.1	<0.1			
Indeno(1,2,3-cd)pyrene	<0.1 mg/kg	TM157	<0.1	<0.1			
Phenanthrene	<0.1 mg/kg	TM157	<0.1	<0.1			
Pyrene	<0.1 mg/kg	TM157	<0.1	<0.1			
Naphthalene	<0.1 mg/kg	TM157	<0.1	<0.1			
Dibenzo(a,h)anthracene	<0.1 mg/kg	TM157	<0.1	<0.1			
Bis(2-chloroisopropyl) ether	<0.1 mg/kg	TM157	<0.1	<0.1			



CERTIFICATE OF ANALYSIS

Validated

SDG: 180216-85 Client Reference: 70020138 Report Number: 446420
 Location: Former Interbrew Site, GloOrder Number: 70020138-006 Superseded Report: 446021

TPH CWG (S)

Results Legend			Customer Sample Ref.	BH101	BH103	BH103	BH104	HP101	HP102
#	ISO17025 accredited.								
M	mCERTS accredited.								
aq	Aqueous / settled sample.								
diss.filt	Dissolved / filtered sample.								
tot.unfilt	Total / unfiltered sample.								
*	Subcontracted test.								
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery								
(F)	Trigger breach confirmed								
1-5&*\$@	Sample deviation (see appendix)								
Component	LOD/Units	Method	Depth (m)	0.60 - 0.60	0.30 - 0.40	0.75 - 0.75	0.50 - 0.50	0.30 - 0.30	0.30 - 0.30
GRO Surrogate % recovery**	%	TM089	Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
GRO TOT (Moisture Corrected)	<0.044 mg/kg	TM089	Date Sampled	08/02/2018	08/02/2018	08/02/2018	08/02/2018	13/02/2018	13/02/2018
Aliphatics >C5-C6	<0.01 mg/kg	TM089	Sampled Time	.	.	.	.	.	.
Aliphatics >C6-C8	<0.01 mg/kg	TM089	Date Received	16/02/2018	16/02/2018	16/02/2018	16/02/2018	16/02/2018	16/02/2018
Aliphatics >C8-C10	<0.01 mg/kg	TM089	SDG Ref	180216-85	180216-85	180216-85	180216-85	180216-85	180216-85
Aliphatics >C10-C12	<0.01 mg/kg	TM089	Lab Sample No.(s)	17063005	17063049	17063063	17063084	17063461	17063477
Aliphatics >C12-C16	<0.1 mg/kg	TM173	AGS Reference	ES	ES	ES	ES	ES	ES
Aliphatics >C16-C21	<0.1 mg/kg	TM173							
Aliphatics >C21-C35	<0.1 mg/kg	TM173							
Aliphatics >C35-C44	<0.1 mg/kg	TM173							
Total Aliphatics >C12-C44	<0.1 mg/kg	TM173							
Aromatics >EC5-EC7	<0.01 mg/kg	TM089							
Aromatics >EC7-EC8	<0.01 mg/kg	TM089							
Aromatics >EC8-EC10	<0.01 mg/kg	TM089							
Aromatics >EC10-EC12	<0.01 mg/kg	TM089							
Aromatics >EC12-EC16	<0.1 mg/kg	TM173							
Aromatics >EC16-EC21	<0.1 mg/kg	TM173							
Aromatics >EC21-EC35	<0.1 mg/kg	TM173							
Aromatics >EC35-EC44	<0.1 mg/kg	TM173							
Aromatics >EC40-EC44	<0.1 mg/kg	TM173							
Total Aromatics >EC12-EC44	<0.1 mg/kg	TM173							
Total Aliphatics & Aromatics >C5-C44	<0.1 mg/kg	TM173							
Aromatics >EC16-EC35	<0.1 mg/kg	TM173							
				95	85	90	36	79	120
				<0.044	0.336	<0.044	<0.044	<0.044	<0.044
					M	M	M	M	M
				<0.01	0.0276	<0.01	<0.01	<0.01	<0.01
				<0.01	0.102	<0.01	<0.01	<0.01	<0.01
				<0.01	0.0736	<0.01	<0.01	<0.01	<0.01
				<0.01	0.0437	<0.01	<0.01	<0.01	<0.01
				<0.1	<0.1	<0.1	2.64	1.28	<0.1
				<0.1	1.88	<0.1	4.14	2.23	1.91
				<0.1	19.4	<0.1	14.4	15	11.4
				<0.1	13.4	<0.1	3.65	13.5	1.69
				<0.1	34.6	<0.1	24.8	32	15
				<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
				<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
				<0.01	0.0575	<0.01	<0.01	<0.01	<0.01
				<0.01	0.0288	<0.01	<0.01	<0.01	<0.01
				<0.1	1.63	<0.1	1.23	0.972	<0.1
				<0.1	8.89	<0.1	4.34	2.29	<0.1
				<0.1	11.2	3.63	14.8	33.8	2.61
				<0.1	15.7	7.14	4.23	39.8	<0.1
				<0.1	7.85	4.6	1.51	16	<0.1
				1.69	37.4	10.8	24.6	76.8	2.61
				1.69	72.4	10.8	49.4	109	17.6
				1.69	20.1	3.63	19.1	36.1	2.61



CERTIFICATE OF ANALYSIS

Validated

SDG: 180216-85	Client Reference: 70020138	Report Number: 446420	
Location: Former Interbrew Site, Glo	Order Number: 70020138-006	Superseded Report: 446021	

TPH CWG (S)

Results Legend		Customer Sample Ref.	HP102	TP102	TP103	TP103	TP104	TP106
#	ISO17025 accredited.							
M	mCERTS accredited.							
aq	Aqueous / settled sample.							
diss.filt	Dissolved / filtered sample.	Depth (m)	0.60 - 0.60	0.40 - 0.40	0.80 - 0.80	1.00 - 1.00	0.50 - 0.50	1.00 - 1.00
tot.unfilt	Total / unfiltered sample.	Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
*	Subcontracted test.	Date Sampled	13/02/2018	08/02/2018	08/02/2018	08/02/2018	08/02/2018	08/02/2018
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery	Sampled Time	.	.	.	.	.	.
(F)	Trigger breach confirmed	Date Received	16/02/2018	16/02/2018	16/02/2018	16/02/2018	16/02/2018	16/02/2018
1-5&*\$@	Sample deviation (see appendix)	SDG Ref	180216-85	180216-85	180216-85	180216-85	180216-85	180216-85
		Lab Sample No.(s)	17063487	17063145	17063384	17063395	17063414	17063437
		AGS Reference	ES	ES	ES	ES	ES	ES
Component	LOD/Units	Method						
GRO Surrogate % recovery**	%	TM089	82	119	63	83	129	61
GRO TOT (Moisture Corrected)	<0.044 mg/kg	TM089	<0.044	<0.044	23.7	<0.044	<0.044	<0.044
Aliphatics >C5-C6	<0.01 mg/kg	TM089	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Aliphatics >C6-C8	<0.01 mg/kg	TM089	<0.01	<0.01	0.0372	<0.01	<0.01	<0.01
Aliphatics >C8-C10	<0.01 mg/kg	TM089	<0.01	<0.01	3.3	<0.01	<0.01	<0.01
Aliphatics >C10-C12	<0.01 mg/kg	TM089	<0.01	<0.01	10.9	<0.01	<0.01	<0.01
Aliphatics >C12-C16	<0.1 mg/kg	TM173	<0.1	<0.1	170	19.4	<0.1	<0.1
Aliphatics >C16-C21	<0.1 mg/kg	TM173	<0.1	<0.1	201	42.7	1.4	<0.1
Aliphatics >C21-C35	<0.1 mg/kg	TM173	<0.1	<0.1	57.9	10.4	5.66	7.57
Aliphatics >C35-C44	<0.1 mg/kg	TM173	<0.1	<0.1	<0.1	<0.1	0.723	<0.1
Total Aliphatics >C12-C44	<0.1 mg/kg	TM173	<0.1	<0.1	428	72.5	7.78	7.57
Aromatics >EC5-EC7	<0.01 mg/kg	TM089	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Aromatics >EC7-EC8	<0.01 mg/kg	TM089	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Aromatics >EC8-EC10	<0.01 mg/kg	TM089	<0.01	<0.01	2.27	<0.01	<0.01	<0.01
Aromatics >EC10-EC12	<0.01 mg/kg	TM089	<0.01	<0.01	7.25	<0.01	<0.01	<0.01
Aromatics >EC12-EC16	<0.1 mg/kg	TM173	<0.1	<0.1	29.4	2.77	<0.1	<0.1
Aromatics >EC16-EC21	<0.1 mg/kg	TM173	<0.1	<0.1	60.3	11.2	<0.1	1.38
Aromatics >EC21-EC35	<0.1 mg/kg	TM173	<0.1	<0.1	21.7	4.21	<0.1	12.9
Aromatics >EC35-EC44	<0.1 mg/kg	TM173	<0.1	<0.1	0.753	0.195	<0.1	2.14
Aromatics >EC40-EC44	<0.1 mg/kg	TM173	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total Aromatics >EC12-EC44	<0.1 mg/kg	TM173	<0.1	<0.1	112	18.4	<0.1	16.4
Total Aliphatics & Aromatics >C5-C44	<0.1 mg/kg	TM173	<0.1	<0.1	564	90.9	7.78	24
Aromatics >EC16-EC35	<0.1 mg/kg	TM173	<0.1	<0.1	82	15.4	<0.1	14.2



CERTIFICATE OF ANALYSIS

Validated

SDG: 180216-85	Client Reference: 70020138	Report Number: 446420	446420
Location: Former Interbrew Site, Glo	Order Number: 70020138-006	Superseded Report:	446021

TPH CWG (S)

Results Legend			Customer Sample Ref.	WS101	WS102	WS103	WS106	WS108	WS109
#	ISO17025 accredited.								
M	mCERTS accredited.								
aq	Aqueous / settled sample.								
diss.filt	Dissolved / filtered sample.								
tot.unfilt	Total / unfiltered sample.								
*	Subcontracted test.								
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery								
(F)	Trigger breach confirmed								
1-5&*\$@	Sample deviation (see appendix)								
Component	LOD/Units	Method	Depth (m)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
GRO Surrogate % recovery**	%	TM089	0.30 - 0.45	107	38	91	108	91	105
GRO TOT (Moisture Corrected)	<0.044 mg/kg	TM089	12/02/2018	<0.044	<0.044	<0.044	<0.044	<0.044	2.15
Aliphatics >C5-C6	<0.01 mg/kg	TM089	12/02/2018	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Aliphatics >C6-C8	<0.01 mg/kg	TM089	12/02/2018	<0.01	<0.01	<0.01	<0.01	<0.01	0.0211
Aliphatics >C8-C10	<0.01 mg/kg	TM089	12/02/2018	<0.01	<0.01	<0.01	<0.01	<0.01	0.589
Aliphatics >C10-C12	<0.01 mg/kg	TM089	12/02/2018	<0.01	<0.01	<0.01	<0.01	<0.01	0.686
Aliphatics >C12-C16	<0.1 mg/kg	TM173	12/02/2018	<0.1	0.557	<0.1	0.911	<0.1	<0.1
Aliphatics >C16-C21	<0.1 mg/kg	TM173	12/02/2018	<0.1	1.9	<0.1	2.6	<0.1	2.68
Aliphatics >C21-C35	<0.1 mg/kg	TM173	12/02/2018	3.73	6.67	1.69	14.7	<0.1	10.7
Aliphatics >C35-C44	<0.1 mg/kg	TM173	12/02/2018	<0.1	3.89	<0.1	1.56	<0.1	1.28
Total Aliphatics >C12-C44	<0.1 mg/kg	TM173	12/02/2018	3.73	13	1.69	19.8	<0.1	14.6
Aromatics >EC5-EC7	<0.01 mg/kg	TM089	12/02/2018	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Aromatics >EC7-EC8	<0.01 mg/kg	TM089	12/02/2018	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Aromatics >EC8-EC10	<0.01 mg/kg	TM089	12/02/2018	<0.01	<0.01	<0.01	0.0146	<0.01	0.393
Aromatics >EC10-EC12	<0.01 mg/kg	TM089	12/02/2018	<0.01	<0.01	<0.01	<0.01	<0.01	0.457
Aromatics >EC12-EC16	<0.1 mg/kg	TM173	12/02/2018	<0.1	0.624	0.545	0.497	<0.1	<0.1
Aromatics >EC16-EC21	<0.1 mg/kg	TM173	12/02/2018	<0.1	1.85	<0.1	<0.1	<0.1	0.404
Aromatics >EC21-EC35	<0.1 mg/kg	TM173	12/02/2018	1.98	10.4	0.807	4.89	<0.1	4.18
Aromatics >EC35-EC44	<0.1 mg/kg	TM173	12/02/2018	0.416	7.26	<0.1	0.797	<0.1	2.67
Aromatics >EC40-EC44	<0.1 mg/kg	TM173	12/02/2018	<0.1	3.13	<0.1	<0.1	<0.1	0.951
Total Aromatics >EC12-EC44	<0.1 mg/kg	TM173	12/02/2018	2.39	20.1	1.35	6.18	<0.1	7.25
Total Aliphatics & Aromatics >C5-C44	<0.1 mg/kg	TM173	12/02/2018	6.12	33.1	3.04	26	<0.1	24
Aromatics >EC16-EC35	<0.1 mg/kg	TM173	12/02/2018	1.98	12.2	0.807	4.89	<0.1	4.58



CERTIFICATE OF ANALYSIS

Validated

SDG: 180216-85 Client Reference: 70020138 Report Number: 446420
 Location: Former Interbrew Site, GloOrder Number: 70020138-006 Superseded Report: 446021

TPH CWG (S)

Results Legend		Customer Sample Ref.	WS110				
#	ISO17025 accredited.	Depth (m) Sample Type Date Sampled Sampled Time Date Received SDG Ref Lab Sample No.(s) AGS Reference	1.05 - 1.05				
M	mCERTS accredited.		Soil/Solid (S)				
aq	Aqueous / settled sample.		12/02/2018				
diss.filt	Dissolved / filtered sample.		.				
tot.unfilt	Total / unfiltered sample.		16/02/2018				
*	Subcontracted test.		180216-85				
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery		17063375				
(F)	Trigger breach confirmed		ES				
1-5&*\$@	Sample deviation (see appendix)						
Component	LOD/Units		Method				
GRO Surrogate % recovery**	%	TM089	72				
GRO TOT (Moisture Corrected)	<0.044 mg/kg	TM089	<0.044	M			
Aliphatics >C5-C6	<0.01 mg/kg	TM089	<0.01				
Aliphatics >C6-C8	<0.01 mg/kg	TM089	<0.01				
Aliphatics >C8-C10	<0.01 mg/kg	TM089	<0.01				
Aliphatics >C10-C12	<0.01 mg/kg	TM089	<0.01				
Aliphatics >C12-C16	<0.1 mg/kg	TM173	0.901				
Aliphatics >C16-C21	<0.1 mg/kg	TM173	1.52				
Aliphatics >C21-C35	<0.1 mg/kg	TM173	15.5				
Aliphatics >C35-C44	<0.1 mg/kg	TM173	4.69				
Total Aliphatics >C12-C44	<0.1 mg/kg	TM173	22.6				
Aromatics >EC5-EC7	<0.01 mg/kg	TM089	<0.01				
Aromatics >EC7-EC8	<0.01 mg/kg	TM089	<0.01				
Aromatics >EC8-EC10	<0.01 mg/kg	TM089	<0.01				
Aromatics >EC10-EC12	<0.01 mg/kg	TM089	<0.01				
Aromatics >EC12-EC16	<0.1 mg/kg	TM173	<0.1				
Aromatics >EC16-EC21	<0.1 mg/kg	TM173	1.84				
Aromatics >EC21-EC35	<0.1 mg/kg	TM173	17.3				
Aromatics >EC35-EC44	<0.1 mg/kg	TM173	5.74				
Aromatics >EC40-EC44	<0.1 mg/kg	TM173	1.76				
Total Aromatics >EC12-EC44	<0.1 mg/kg	TM173	24.8				
Total Aliphatics & Aromatics >C5-C44	<0.1 mg/kg	TM173	47.5				
Aromatics >EC16-EC35	<0.1 mg/kg	TM173	19.1				



CERTIFICATE OF ANALYSIS

Validated

SDG:	180216-85	Client Reference:	70020138	Report Number:	446420
Location:	Former Interbrew Site, Glo	Order Number:	70020138-006	Superseded Report:	446021

VOC MS (S)

Results Legend		Customer Sample Ref.	BH101	BH103	BH103	BH104	HP101	HP102
#	ISO17025 accredited.	Depth (m)	0.60 - 0.60	0.30 - 0.40	0.75 - 0.75	0.50 - 0.50	0.30 - 0.30	0.30 - 0.30
M	mCERTS accredited.	Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
aq	Aqueous / settled sample.	Date Sampled	08/02/2018	08/02/2018	08/02/2018	08/02/2018	13/02/2018	13/02/2018
diss.filt	Dissolved / filtered sample.	Sampled Time	.	.	.	.	.	.
tot.unfilt	Total / unfiltered sample.	Date Received	16/02/2018	16/02/2018	16/02/2018	16/02/2018	16/02/2018	16/02/2018
*	Subcontracted test.	SDG Ref	180216-85	180216-85	180216-85	180216-85	180216-85	180216-85
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery	Lab Sample No.(s)	17063005	17063049	17063063	17063084	17063461	17063477
(F)	Trigger breach confirmed	AGS Reference	ES	ES	ES	ES	ES	ES
1-5&*\$@	Sample deviation (see appendix)							
Component	LOD/Units	Method						
Dibromofluoromethane**	%	TM116						106
Toluene-d8**	%	TM116						100
4-Bromofluorobenzene**	%	TM116						95.8
Dichlorodifluoromethane	<0.006 mg/kg	TM116						<0.06 M
Chloromethane	<0.007 mg/kg	TM116						<0.07 #
Vinyl Chloride	<0.006 mg/kg	TM116						<0.06 M
Bromomethane	<0.01 mg/kg	TM116						<0.1 M
Chloroethane	<0.01 mg/kg	TM116						<0.1 M
Trichlorofluoromethane	<0.006 mg/kg	TM116						<0.06 M
1,1-Dichloroethene	<0.01 mg/kg	TM116						<0.1 #
Carbon Disulphide	<0.007 mg/kg	TM116						<0.07 M
Dichloromethane	<0.01 mg/kg	TM116						<0.1 #
Methyl Tertiary Butyl Ether	<0.01 mg/kg	TM116	<0.1 M	<0.1 M	<0.1 M	<0.1 M	<0.1 M	<0.1 M
trans-1,2-Dichloroethene	<0.01 mg/kg	TM116						<0.1 M
1,1-Dichloroethane	<0.008 mg/kg	TM116						<0.08 M
cis-1,2-Dichloroethene	<0.006 mg/kg	TM116						<0.06 M
2,2-Dichloropropane	<0.01 mg/kg	TM116						<0.1 M
Bromochloromethane	<0.01 mg/kg	TM116						<0.1 M
Chloroform	<0.008 mg/kg	TM116						<0.08 M
1,1,1-Trichloroethane	<0.007 mg/kg	TM116						<0.07 M
1,1-Dichloropropene	<0.01 mg/kg	TM116						<0.1 M
Carbontetrachloride	<0.01 mg/kg	TM116						<0.1 M
1,2-Dichloroethane	<0.005 mg/kg	TM116						<0.05 M
Benzene	<0.009 mg/kg	TM116	<0.09 M	<0.09 M	<0.09 M	<0.09 M	<0.09 M	<0.09 M
Trichloroethene	<0.009 mg/kg	TM116						<0.09 #
1,2-Dichloropropane	<0.01 mg/kg	TM116						<0.1 M
Dibromomethane	<0.009 mg/kg	TM116						<0.09 M
Bromodichloromethane	<0.007 mg/kg	TM116						<0.07 M
cis-1,3-Dichloropropene	<0.01 mg/kg	TM116						<0.1 M
Toluene	<0.007 mg/kg	TM116	<0.07 M	<0.07 M	<0.07 M	<0.07 M	<0.07 M	<0.07 M
trans-1,3-Dichloropropene	<0.01 mg/kg	TM116						<0.1 M
1,1,2-Trichloroethane	<0.01 mg/kg	TM116						<0.1 M



CERTIFICATE OF ANALYSIS

Validated

SDG:	180216-85	Client Reference:	70020138	Report Number:	446420
Location:	Former Interbrew Site, Glo	Order Number:	70020138-006	Superseded Report:	446021

VOC MS (S)

Results Legend			Customer Sample Ref.	BH101	BH103	BH103	BH104	HP101	HP102
#	ISO17025 accredited.		Depth (m) Sample Type Date Sampled Sampled Time Date Received SDG Ref Lab Sample No.(s) AGS Reference						
M	mCERTS accredited.			0.60 - 0.60	0.30 - 0.40	0.75 - 0.75	0.50 - 0.50	0.30 - 0.30	0.30 - 0.30
aq	Aqueous / settled sample.			Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
diss.filt	Dissolved / filtered sample.			08/02/2018	08/02/2018	08/02/2018	08/02/2018	13/02/2018	13/02/2018
tot.unfilt	Total / unfiltered sample.								
*	Subcontracted test.								
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery			16/02/2018	16/02/2018	16/02/2018	16/02/2018	16/02/2018	16/02/2018
(F)	Trigger breach confirmed			180216-85	180216-85	180216-85	180216-85	180216-85	180216-85
1-5&*\$@	Sample deviation (see appendix)			17063005	17063049	17063063	17063084	17063461	17063477
				ES	ES	ES	ES	ES	ES
Component	LOD/Units	Method							
1,3-Dichloropropane	<0.007 mg/kg	TM116							<0.07 M
Tetrachloroethene	<0.005 mg/kg	TM116							<0.05 M
Dibromochloromethane	<0.01 mg/kg	TM116							<0.1 M
1,2-Dibromoethane	<0.01 mg/kg	TM116							<0.1 M
Chlorobenzene	<0.005 mg/kg	TM116							<0.05 M
1,1,1,2-Tetrachloroethane	<0.01 mg/kg	TM116							<0.1 M
Ethylbenzene	<0.004 mg/kg	TM116	<0.04 M	<0.04 M	<0.04 M	<0.04 M	<0.04 M	<0.04 M	<0.04 M
p/m-Xylene	<0.01 mg/kg	TM116	<0.1 #	<0.1 #	<0.1 #	<0.1 #	<0.1 #	<0.1 #	<0.1 #
o-Xylene	<0.01 mg/kg	TM116	<0.1 M	<0.1 M	<0.1 M	<0.1 M	<0.1 M	<0.1 M	<0.1 M
Styrene	<0.01 mg/kg	TM116							<0.1 #
Bromoform	<0.01 mg/kg	TM116							<0.1 M
Isopropylbenzene	<0.005 mg/kg	TM116							<0.05 #
1,1,2,2-Tetrachloroethane	<0.01 mg/kg	TM116							<0.1 #
1,2,3-Trichloropropane	<0.016 mg/kg	TM116							<0.16 M
Bromobenzene	<0.01 mg/kg	TM116							<0.1 M
Propylbenzene	<0.01 mg/kg	TM116							<0.1 M
2-Chlorotoluene	<0.009 mg/kg	TM116							<0.09 M
1,3,5-Trimethylbenzene	<0.008 mg/kg	TM116							<0.08 M
4-Chlorotoluene	<0.01 mg/kg	TM116							<0.1 M
tert-Butylbenzene	<0.014 mg/kg	TM116							<0.14 M
1,2,4-Trimethylbenzene	<0.009 mg/kg	TM116							<0.09 #
sec-Butylbenzene	<0.01 mg/kg	TM116							<0.1 M
4-Isopropyltoluene	<0.01 mg/kg	TM116							<0.1 M
1,3-Dichlorobenzene	<0.008 mg/kg	TM116							<0.08 M
1,4-Dichlorobenzene	<0.005 mg/kg	TM116							<0.05 M
n-Butylbenzene	<0.011 mg/kg	TM116							<0.11 M
1,2-Dichlorobenzene	<0.01 mg/kg	TM116							<0.1 M
1,2-Dibromo-3-chloropropane	<0.014 mg/kg	TM116							<0.14 M
Tert-amyl methyl ether	<0.01 mg/kg	TM116	<0.1 #	<0.1 #	<0.1 #	<0.1 #	<0.1 #	<0.1 #	<0.1 #
1,2,4-Trichlorobenzene	<0.02 mg/kg	TM116							<0.2 M
Hexachlorobutadiene	<0.02 mg/kg	TM116							<0.2 M
Naphthalene	<0.013 mg/kg	TM116							<0.13 M



CERTIFICATE OF ANALYSIS

Validated

SDG:	180216-85	Client Reference:	70020138	Report Number:	446420
Location:	Former Interbrew Site, Glo	Order Number:	70020138-006	Superseded Report:	446021

VOC MS (S)

Results Legend		Customer Sample Ref.	BH101	BH103	BH103	BH104	HP101	HP102
#	ISO17025 accredited.		Depth (m)	0.60 - 0.60	0.30 - 0.40	0.75 - 0.75	0.50 - 0.50	0.30 - 0.30	0.30 - 0.30
M	mCERTS accredited.	Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
aq	Aqueous / settled sample.	Date Sampled	08/02/2018	08/02/2018	08/02/2018	08/02/2018	13/02/2018	13/02/2018
diss.filt	Dissolved / filtered sample.	Sampled Time	-	-	-	-	-	-
tot.unfilt	Total / unfiltered sample.	Date Received	16/02/2018	16/02/2018	16/02/2018	16/02/2018	16/02/2018	16/02/2018
*	Subcontracted test.	SDG Ref	180216-85	180216-85	180216-85	180216-85	180216-85	180216-85
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery	Lab Sample No.(s)	17063005	17063049	17063063	17063084	17063461	17063477
(F)	Trigger breach confirmed	AGS Reference	ES	ES	ES	ES	ES	ES
1-5&*\$@	Sample deviation (see appendix)							
Component	LOD/Units	Method						
1,2,3-Trichlorobenzene	<0.02 mg/kg	TM116						<0.2



CERTIFICATE OF ANALYSIS

Validated

SDG:	180216-85	Client Reference:	70020138	Report Number:	446420
Location:	Former Interbrew Site, Glo	Order Number:	70020138-006	Superseded Report:	446021

VOC MS (S)

Results Legend			Customer Sample Ref.	HP102	TP102	TP103	TP103	TP104	TP106
# ISO17025 accredited. M mCERTS accredited. aq Aqueous / settled sample. diss.filt Dissolved / filtered sample. tot.unfilt Total / unfiltered sample. * Subcontracted test. ** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery. (F) Trigger breach confirmed 1-5&*\$@ Sample deviation (see appendix)			Depth (m) Sample Type Date Sampled Sampled Time Date Received SDG Ref Lab Sample No.(s) AGS Reference	0.60 - 0.60 Soil/Solid (S) 13/02/2018 . 16/02/2018 180216-85 17063487 ES	0.40 - 0.40 Soil/Solid (S) 08/02/2018 . 16/02/2018 180216-85 17063145 ES	0.80 - 0.80 Soil/Solid (S) 08/02/2018 . 16/02/2018 180216-85 17063384 ES	1.00 - 1.00 Soil/Solid (S) 08/02/2018 . 16/02/2018 180216-85 17063395 ES	0.50 - 0.50 Soil/Solid (S) 08/02/2018 . 16/02/2018 180216-85 17063414 ES	1.00 - 1.00 Soil/Solid (S) 08/02/2018 . 16/02/2018 180216-85 17063437 ES
Component	LOD/Units	Method							
Dibromofluoromethane**	%	TM116				133			
Toluene-d8**	%	TM116				99.1			
4-Bromofluorobenzene**	%	TM116				99.3			
Dichlorodifluoromethane	<0.006 mg/kg	TM116				<0.06	#		
Chloromethane	<0.007 mg/kg	TM116				<0.07	#		
Vinyl Chloride	<0.006 mg/kg	TM116				<0.06	#		
Bromomethane	<0.01 mg/kg	TM116				<0.1	#		
Chloroethane	<0.01 mg/kg	TM116				<0.1	#		
Trichlorofluoromethane	<0.006 mg/kg	TM116				<0.06	#		
1,1-Dichloroethene	<0.01 mg/kg	TM116				<0.1	#		
Carbon Disulphide	<0.007 mg/kg	TM116				<0.07	#		
Dichloromethane	<0.01 mg/kg	TM116				<0.1	#		
Methyl Tertiary Butyl Ether	<0.01 mg/kg	TM116	<0.1 M	<0.1 M	<0.1	<0.1	<0.1 M	<0.1 M	<0.1 M
trans-1,2-Dichloroethene	<0.01 mg/kg	TM116			<0.1				
1,1-Dichloroethane	<0.008 mg/kg	TM116			<0.08				
cis-1,2-Dichloroethene	<0.006 mg/kg	TM116			<0.06				
2,2-Dichloropropane	<0.01 mg/kg	TM116			<0.1				
Bromochloromethane	<0.01 mg/kg	TM116			<0.1				
Chloroform	<0.008 mg/kg	TM116			<0.08				
1,1,1-Trichloroethane	<0.007 mg/kg	TM116			<0.07				
1,1-Dichloropropene	<0.01 mg/kg	TM116			<0.1				
Carbontetrachloride	<0.01 mg/kg	TM116			<0.1				
1,2-Dichloroethane	<0.005 mg/kg	TM116			<0.05				
Benzene	<0.009 mg/kg	TM116	<0.09 M	<0.09 M	<0.09	<0.09	<0.09 M	<0.09 M	<0.09 M
Trichloroethene	<0.009 mg/kg	TM116			<0.09				
1,2-Dichloropropane	<0.01 mg/kg	TM116			<0.1				
Dibromomethane	<0.009 mg/kg	TM116			<0.09				
Bromodichloromethane	<0.007 mg/kg	TM116			<0.07				
cis-1,3-Dichloropropene	<0.01 mg/kg	TM116			<0.1				
Toluene	<0.007 mg/kg	TM116	<0.07 M	<0.07 M	<0.07	<0.07	<0.07 M	<0.07 M	<0.07 M
trans-1,3-Dichloropropene	<0.01 mg/kg	TM116			<0.1				
1,1,2-Trichloroethane	<0.01 mg/kg	TM116			<0.1				



CERTIFICATE OF ANALYSIS

Validated

SDG:	180216-85	Client Reference:	70020138	Report Number:	446420
Location:	Former Interbrew Site, Glo	Order Number:	70020138-006	Superseded Report:	446021

VOC MS (S)

Results Legend			Customer Sample Ref.	HP102	TP102	TP103	TP103	TP104	TP106
# ISO17025 accredited. M mCERTS accredited. aq Aqueous / settled sample. diss.filt Dissolved / filtered sample. tot.unfilt Total / unfiltered sample. * Subcontracted test. ** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery (F) Trigger breach confirmed 1-5&*\$@ Sample deviation (see appendix)			Depth (m) Sample Type Date Sampled Sampled Time Date Received SDG Ref Lab Sample No.(s) AGS Reference	0.60 - 0.60 Soil/Solid (S) 13/02/2018 - 16/02/2018 180216-85 17063487 ES	0.40 - 0.40 Soil/Solid (S) 08/02/2018 - 16/02/2018 180216-85 17063145 ES	0.80 - 0.80 Soil/Solid (S) 08/02/2018 - 16/02/2018 180216-85 17063384 ES	1.00 - 1.00 Soil/Solid (S) 08/02/2018 - 16/02/2018 180216-85 17063395 ES	0.50 - 0.50 Soil/Solid (S) 08/02/2018 - 16/02/2018 180216-85 17063414 ES	1.00 - 1.00 Soil/Solid (S) 08/02/2018 - 16/02/2018 180216-85 17063437 ES
Component	LOD/Units	Method							
1,3-Dichloropropane	<0.007 mg/kg	TM116				<0.07 #			
Tetrachloroethene	<0.005 mg/kg	TM116				<0.05 #			
Dibromochloromethane	<0.01 mg/kg	TM116				<0.1 #			
1,2-Dibromoethane	<0.01 mg/kg	TM116				<0.1 #			
Chlorobenzene	<0.005 mg/kg	TM116				<0.05 #			
1,1,1,2-Tetrachloroethane	<0.01 mg/kg	TM116				<0.1 #			
Ethylbenzene	<0.004 mg/kg	TM116	<0.04 M	<0.04 M	<0.04 #	<0.04 M	<0.04 M	<0.04 M	<0.04 M
p/m-Xylene	<0.01 mg/kg	TM116	<0.1 #	<0.1 #	<0.1 #	<0.1 #	<0.1 #	<0.1 #	<0.1 #
o-Xylene	<0.01 mg/kg	TM116	<0.1 M	<0.1 M	<0.1 #	<0.1 M	<0.1 M	<0.1 M	<0.1 M
Styrene	<0.01 mg/kg	TM116				<0.1 #			
Bromoform	<0.01 mg/kg	TM116				<0.1 #			
Isopropylbenzene	<0.005 mg/kg	TM116				<0.05 #			
1,1,2,2-Tetrachloroethane	<0.01 mg/kg	TM116				<0.1 #			
1,2,3-Trichloropropane	<0.016 mg/kg	TM116				<0.16 #			
Bromobenzene	<0.01 mg/kg	TM116				<0.1 #			
Propylbenzene	<0.01 mg/kg	TM116				<0.1 #			
2-Chlorotoluene	<0.009 mg/kg	TM116				<0.09 #			
1,3,5-Trimethylbenzene	<0.008 mg/kg	TM116				<0.08 #			
4-Chlorotoluene	<0.01 mg/kg	TM116				<0.1 #			
tert-Butylbenzene	<0.014 mg/kg	TM116				<0.14 #			
1,2,4-Trimethylbenzene	<0.009 mg/kg	TM116				<0.09 #			
sec-Butylbenzene	<0.01 mg/kg	TM116				<0.1 #			
4-Isopropyltoluene	<0.01 mg/kg	TM116				<0.1 #			
1,3-Dichlorobenzene	<0.008 mg/kg	TM116				<0.08 #			
1,4-Dichlorobenzene	<0.005 mg/kg	TM116				<0.05 #			
n-Butylbenzene	<0.011 mg/kg	TM116				<0.11 #			
1,2-Dichlorobenzene	<0.01 mg/kg	TM116				<0.1 #			
1,2-Dibromo-3-chloropropane	<0.014 mg/kg	TM116				<0.14 #			
Tert-amyl methyl ether	<0.01 mg/kg	TM116	<0.1 #	<0.1 #	<0.1 #	<0.1 #	<0.1 #	<0.1 #	<0.1 #
1,2,4-Trichlorobenzene	<0.02 mg/kg	TM116				<0.2 #			
Hexachlorobutadiene	<0.02 mg/kg	TM116				<0.2 #			
Naphthalene	<0.013 mg/kg	TM116				<0.13 #			



CERTIFICATE OF ANALYSIS

Validated

SDG: 180216-85 Client Reference: 70020138 Report Number: 446420
 Location: Former Interbrew Site, GloOrder Number: 70020138-006 Superseded Report: 446021

VOC MS (S)

Results Legend			Customer Sample Ref.	WS101	WS102	WS103	WS106	WS108	WS109
#	ISO17025 accredited.								
M	mCERTS accredited.								
aq	Aqueous / settled sample.		Depth (m)	0.30 - 0.45	0.30 - 0.50	0.25 - 0.25	0.60 - 0.60	1.05 - 1.05	1.20 - 1.20
diss.filt	Dissolved / filtered sample.		Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
tot.unfilt	Total / unfiltered sample.		Date Sampled	12/02/2018	12/02/2018	12/02/2018	12/02/2018	12/02/2018	12/02/2018
*	Subcontracted test.		Sampled Time	.	.	.	.	.	.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery		Date Received	16/02/2018	16/02/2018	16/02/2018	16/02/2018	16/02/2018	16/02/2018
(F)	Trigger breach confirmed		SDG Ref	180216-85	180216-85	180216-85	180216-85	180216-85	180216-85
1-5&*\$@	Sample deviation (see appendix)		Lab Sample No.(s)	17063122	17063156	17063178	17063250	17063312	17063343
			AGS Reference	ES	ES	ES	ES	ES	ES
Component	LOD/Units	Method							
Methyl Tertiary Butyl Ether	<0.01 mg/kg	TM116	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
			M	M	#	M	M	M	M
Benzene	<0.009 mg/kg	TM116	<0.09	<0.09	<0.09	<0.09	<0.09	<0.09	<0.09
			M	M	#	M	M	M	M
Toluene	<0.007 mg/kg	TM116	<0.07	<0.07	<0.07	0.0761	<0.07	<0.07	<0.07
			M	M	#	M	M	M	M
Ethylbenzene	<0.004 mg/kg	TM116	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
			M	M	#	M	M	M	M
p/m-Xylene	<0.01 mg/kg	TM116	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
			#	#	#	#	#	#	#
o-Xylene	<0.01 mg/kg	TM116	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
			M	M	#	M	M	M	M
Tert-amyl methyl ether	<0.01 mg/kg	TM116	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
			#	#	#	#	#	#	#



CERTIFICATE OF ANALYSIS

Validated

SDG: 180216-85 Client Reference: 70020138 Report Number: 446420
Location: Former Interbrew Site, GloOrder Number: 70020138-006 Superseded Report: 446021

VOC MS (S)

Table with columns: Component, LOD/Units, Method, and Results. Rows include Methyl Tertiary Butyl Ether, Benzene, Toluene, Ethylbenzene, p/m-Xylene, o-Xylene, and Tert-amyl methyl ether.



CERTIFICATE OF ANALYSIS

Validated

SDG:	180216-85	Client Reference:	70020138	Report Number:	446420
Location:	Former Interbrew Site, Glo	Order Number:	70020138-006	Superseded Report:	446021

Asbestos Identification - Soil

		Date of Analysis	Analysed By	Comments	Amosite (Brown) Asbestos	Chrysotile (White) Asbestos	Crocidolite (Blue) Asbestos	Fibrous Actinolite	Fibrous Anthophyllite	Fibrous Tremolite	Non-Asbestos Fibre
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	BH101 ES 0.60 - 0.60 SOLID 08/02/2018 00:00:00 18/02/2018 13:27:45 180216-85 17063005 TM048	22/02/2018	Renata Bozhkov	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	BH103 ES 0.30 - 0.40 SOLID 08/02/2018 00:00:00 17/02/2018 12:12:03 180216-85 17063049 TM048	22/02/2018	Renata Bozhkov	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	BH104 ES 0.50 - 0.50 SOLID 08/02/2018 00:00:00 18/02/2018 13:20:16 180216-85 17063084 TM048	22/02/2018	Marcin Magdziarek	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	HP101 ES 0.30 - 0.30 SOLID 13/02/2018 00:00:00 19/02/2018 18:35:42 180216-85 17063461 TM048	22/02/2018	Neville Mann	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	HP102 ES 0.30 - 0.30 SOLID 13/02/2018 00:00:00 19/02/2018 18:43:54 180216-85 17063477 TM048	22/02/2018	Marcin Magdziarek	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Detected



CERTIFICATE OF ANALYSIS

Validated

SDG:	180216-85	Client Reference:	70020138	Report Number:	446420
Location:	Former Interbrew Site, Glo	Order Number:	70020138-006	Superseded Report:	446021

		Date of Analysis	Analysed By	Comments	Amosite (Brown) Asbestos	Chrysotile (White) Asbestos	Crocidolite (Blue) Asbestos	Fibrous Actinolite	Fibrous Anthophyllite	Fibrous Tremolite	Non-Asbestos Fibre
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	TP102 ES 0.40 - 0.40 SOLID 08/02/2018 00:00:00 19/02/2018 14:41:11 180216-85 17063145 TM048	22/02/2018	Neville Mann	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	TP103 ES 0.80 - 0.80 SOLID 08/02/2018 00:00:00 19/02/2018 17:43:56 180216-85 17063384 TM048	22/02/2018	Marcin Magdziarek	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	TP104 ES 0.50 - 0.50 SOLID 08/02/2018 00:00:00 19/02/2018 14:42:35 180216-85 17063414 TM048	22/02/2018	Neville Mann	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	TP106 ES 1.00 - 1.00 SOLID 08/02/2018 00:00:00 19/02/2018 14:50:53 180216-85 17063437 TM048	23/02/2018	Marcin Magdziarek	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	WS101 ES 0.30 - 0.45 SOLID 12/02/2018 00:00:00 17/02/2018 10:24:04 180216-85 17063122 TM048	22/02/2018	Neville Mann	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	WS102 ES 0.30 - 0.50 SOLID 12/02/2018 00:00:00 17/02/2018 14:17:52 180216-85 17063156 TM048	22/02/2018	Renata Bozhkov	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected



CERTIFICATE OF ANALYSIS

Validated

SDG:	180216-85	Client Reference:	70020138	Report Number:	446420
Location:	Former Interbrew Site, Glo	Order Number:	70020138-006	Superseded Report:	446021

		Date of Analysis	Analysed By	Comments	Amosite (Brown) Asbestos	Chrysotile (White) Asbestos	Crocidolite (Blue) Asbestos	Fibrous Actinolite	Fibrous Anthophyllite	Fibrous Tremolite	Non-Asbestos Fibre
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	WS103 ES 0.25 - 0.25 SOLID 12/02/2018 00:00:00 17/02/2018 14:15:37 180216-85 17063178 TM048	22/02/2018	Renata Bozhkov	Loose fibres in soil	Not Detected (#)	Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	WS106 ES 0.60 - 0.60 SOLID 12/02/2018 00:00:00 18/02/2018 09:06:37 180216-85 17063250 TM048	22/02/2018	Neville Mann	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	WS109 ES 1.20 - 1.20 SOLID 12/02/2018 00:00:00 18/02/2018 09:08:44 180216-85 17063343 TM048	22/02/2018	Marcin Magdziarek	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	WS110 ES 1.05 - 1.05 SOLID 12/02/2018 00:00:00 19/02/2018 18:36:03 180216-85 17063375 TM048	23/02/2018	Marcin Magdziarek	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected



CERTIFICATE OF ANALYSIS

Validated

SDG: 180216-85	Client Reference: 70020138	Report Number: 446420
Location: Former Interbrew Site, Glo	Order Number: 70020138-006	Superseded Report: 446021

CEN 10:1 SINGLE STAGE LEACHATE TEST

CEN ANALYTICAL RESULTS

REF : BS EN 12457/2

Client Reference		Site Location	Former Interbrew Site, Gloucester
Mass Sample taken (kg)	0.108	Natural Moisture Content (%)	20.5
Mass of dry sample (kg)	0.090	Dry Matter Content (%)	83
Particle Size <4mm	>95%		

Case

SDG	180216-85
Lab Sample Number(s)	17063005
Sampled Date	08-Feb-2018
Customer Sample Ref.	BH101 ESZ
Depth (m)	0.60 - 0.60

Eluate Analysis	C ₂ Conc ⁿ in 10:1 eluate (mg/l)		A ₂ 10:1 conc ⁿ leached (mg/kg)				
	Result	Limit of Detection	Result	Limit of Detection			
Ferric Iron	<0.05	<0.05	<0.5	<0.5	-	-	-
Iron	<0.019	<0.019	<0.19	<0.19	-	-	-
Ferrous Iron	<0.1	<0.1	<1	<1	-	-	-

Leach Test Information

Date Prepared	24-Feb-2018
pH (pH Units)	7.98
Conductivity (µS/cm)	633.00
Temperature (°C)	18.40
Volume Leachant (Litres)	0.882

Mcerts Certification does not apply to leachates

01/03/2018 10:57:00

10:56:36 01/03/2018



CERTIFICATE OF ANALYSIS

Validated

SDG: 180216-85	Client Reference: 70020138	Report Number: 446420
Location: Former Interbrew Site, Gloucester	Order Number: 70020138-006	Superseded Report: 446021

CEN 10:1 SINGLE STAGE LEACHATE TEST

CEN ANALYTICAL RESULTS

REF : BS EN 12457/2

Client Reference		Site Location	Former Interbrew Site, Gloucester
Mass Sample taken (kg)	0.094	Natural Moisture Content (%)	4.71
Mass of dry sample (kg)	0.090	Dry Matter Content (%)	95.5
Particle Size <4mm	>95%		

Case

SDG 180216-85

Lab Sample Number(s) 17063145

Sampled Date 08-Feb-2018

Customer Sample Ref. TP102 ESZ

Depth (m) 0.40 - 0.40

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Eluate Analysis	C ₂ Conc ⁿ in 10:1 eluate (mg/l)		A ₂ 10:1 conc ⁿ leached (mg/kg)				
	Result	Limit of Detection	Result	Limit of Detection			
Ferric Iron	<0.05	<0.05	<0.5	<0.5	-	-	-
Mercury Dissolved (CVAf)	0.0000131	<0.00001	0.000131	<0.0001	-	-	-
Total Cyanide (W)	<0.05	<0.05	<0.5	<0.5	-	-	-
Arsenic	<0.0005	<0.0005	<0.005	<0.005	-	-	-
Iron	<0.019	<0.019	<0.19	<0.19	-	-	-
Ferrous Iron	<0.1	<0.1	<1	<1	-	-	-
Cadmium	<0.00008	<0.00008	<0.0008	<0.0008	-	-	-
Chromium	0.00125	<0.001	0.0125	<0.01	-	-	-
Copper	<0.0003	<0.0003	<0.003	<0.003	-	-	-
Lead	<0.0002	<0.0002	<0.002	<0.002	-	-	-
Nickel	<0.0004	<0.0004	<0.004	<0.004	-	-	-
Selenium	<0.0005	<0.0005	<0.005	<0.005	-	-	-
Zinc	0.00784	<0.001	0.0784	<0.01	-	-	-

Leach Test Information

Date Prepared 21-Feb-2018

pH (pH Units) 11.06

Conductivity (µS/cm) 474.00

Temperature (°C) 18.70

Volume Leachant (Litres) 0.896

Mcerts Certification does not apply to leachates

01/03/2018 10:57:00

10:56:36 01/03/2018



CERTIFICATE OF ANALYSIS

Validated

SDG: 180216-85	Client Reference: 70020138	Report Number: 446420
Location: Former Interbrew Site, Glo	Order Number: 70020138-006	Superseded Report: 446021

CEN 10:1 SINGLE STAGE LEACHATE TEST

CEN ANALYTICAL RESULTS

REF : BS EN 12457/2

Client Reference		Site Location	Former Interbrew Site, Gloucester
Mass Sample taken (kg)	0.094	Natural Moisture Content (%)	4.6
Mass of dry sample (kg)	0.090	Dry Matter Content (%)	95.6
Particle Size <4mm	>95%		

Case

SDG 180216-85

Lab Sample Number(s) 17063250

Sampled Date 12-Feb-2018

Customer Sample Ref. WS106 ESZ

Depth (m) 0.60 - 0.60

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Eluate Analysis	C ₂ Conc ⁿ in 10:1 eluate (mg/l)		A ₂ 10:1 conc ⁿ leached (mg/kg)				
	Result	Limit of Detection	Result	Limit of Detection			
Ferric Iron	<0.05	<0.05	<0.5	<0.5	-	-	-
Iron	0.0218	<0.019	0.218	<0.19	-	-	-
Ferrous Iron	<0.1	<0.1	<1	<1	-	-	-

Leach Test Information

Date Prepared	24-Feb-2018
pH (pH Units)	5.47
Conductivity (µS/cm)	123.00
Temperature (°C)	18.80
Volume Leachant (Litres)	0.896

Mcerts Certification does not apply to leachates

01/03/2018 10:57:00

10:56:36 01/03/2018



CERTIFICATE OF ANALYSIS

Validated

SDG: 180216-85	Client Reference: 70020138	Report Number: 446420
Location: Former Interbrew Site, Gloucester	Order Number: 70020138-006	Superseded Report: 446021

CEN 10:1 SINGLE STAGE LEACHATE TEST

CEN ANALYTICAL RESULTS

REF : BS EN 12457/2

Client Reference		Site Location	Former Interbrew Site, Gloucester
Mass Sample taken (kg)	0.100	Natural Moisture Content (%)	10.6
Mass of dry sample (kg)	0.090	Dry Matter Content (%)	90.4
Particle Size <4mm	>95%		

Case

SDG	180216-85
Lab Sample Number(s)	17063343
Sampled Date	12-Feb-2018
Customer Sample Ref.	WS109 ESZ
Depth (m)	1.20 - 1.20

Eluate Analysis	C ₂ Conc ⁿ in 10:1 eluate (mg/l)		A ₂ 10:1 conc ⁿ leached (mg/kg)				
	Result	Limit of Detection	Result	Limit of Detection			
Ferric Iron	0.145	<0.05	1.45	<0.5	-	-	-
Mercury Dissolved (CVAf)	0.000133	<0.00001	0.000133	<0.0001	-	-	-
Total Cyanide (W)	<0.05	<0.05	<0.5	<0.5	-	-	-
Arsenic	0.00232	<0.0005	0.0232	<0.005	-	-	-
Iron	0.145	<0.019	1.45	<0.19	-	-	-
Ferrous Iron	<0.1	<0.1	<1	<1	-	-	-
Cadmium	<0.00008	<0.00008	<0.0008	<0.0008	-	-	-
Chromium	0.00399	<0.001	0.0399	<0.01	-	-	-
Copper	0.0173	<0.0003	0.173	<0.003	-	-	-
Lead	0.00704	<0.0002	0.0704	<0.002	-	-	-
Nickel	0.00405	<0.0004	0.0405	<0.004	-	-	-
Selenium	0.00262	<0.0005	0.0262	<0.005	-	-	-
Zinc	0.027	<0.001	0.27	<0.01	-	-	-

Leach Test Information

Date Prepared	19-Feb-2018
pH (pH Units)	8.57
Conductivity (µS/cm)	139.00
Temperature (°C)	19.40
Volume Leachant (Litres)	0.890

Mcerts Certification does not apply to leachates

01/03/2018 10:57:00

10:56:36 01/03/2018



CERTIFICATE OF ANALYSIS

Validated

SDG: 180216-85	Client Reference: 70020138	Report Number: 446420
Location: Former Interbrew Site, Gloucester	Order Number: 70020138-006	Superseded Report: 446021

CEN 10:1 SINGLE STAGE LEACHATE TEST

CEN ANALYTICAL RESULTS

REF : BS EN 12457/2

Client Reference		Site Location	Former Interbrew Site, Gloucester
Mass Sample taken (kg)	0.107	Natural Moisture Content (%)	19
Mass of dry sample (kg)	0.090	Dry Matter Content (%)	84
Particle Size <4mm	>95%		

Case

SDG 180216-85

Lab Sample Number(s) 17063375

Sampled Date 12-Feb-2018

Customer Sample Ref. WS110 ESZ

Depth (m) 1.05 - 1.05

Eluate Analysis	C ₂ Conc ⁿ in 10:1 eluate (mg/l)		A ₂ 10:1 conc ⁿ leached (mg/kg)				
	Result	Limit of Detection	Result	Limit of Detection			
Mercury Dissolved (CVAF)	<0.00001	<0.00001	<0.0001	<0.0001	-	-	-
Total Cyanide (W)	<0.05	<0.05	<0.5	<0.5	-	-	-
Arsenic	0.00304	<0.0005	0.0304	<0.005	-	-	-
Cadmium	<0.00008	<0.00008	<0.0008	<0.0008	-	-	-
Chromium	<0.001	<0.001	<0.01	<0.01	-	-	-
Copper	<0.0003	<0.0003	<0.003	<0.003	-	-	-
Lead	0.000269	<0.0002	0.00269	<0.002	-	-	-
Nickel	0.00268	<0.0004	0.0268	<0.004	-	-	-
Selenium	<0.0005	<0.0005	<0.005	<0.005	-	-	-
Zinc	0.00175	<0.001	0.0175	<0.01	-	-	-

Leach Test Information

Date Prepared	21-Feb-2018
pH (pH Units)	8.00
Conductivity (µS/cm)	276.00
Temperature (°C)	18.50
Volume Leachant (Litres)	0.883

Mcerts Certification does not apply to leachates

01/03/2018 10:57:00

10:56:36 01/03/2018



CERTIFICATE OF ANALYSIS

Validated

SDG: 180216-85	Client Reference: 70020138	Report Number: 446420
Location: Former Interbrew Site, Gloucester	Order Number: 70020138-006	Superseded Report: 446021

CEN 10:1 SINGLE STAGE LEACHATE TEST

CEN ANALYTICAL RESULTS

REF : BS EN 12457/2

Client Reference		Site Location	Former Interbrew Site, Gloucester
Mass Sample taken (kg)	0.105	Natural Moisture Content (%)	16.3
Mass of dry sample (kg)	0.090	Dry Matter Content (%)	86
Particle Size <4mm	>95%		

Case

SDG 180216-85

Lab Sample Number(s) 17063437

Sampled Date 08-Feb-2018

Customer Sample Ref. TP106 ESZ

Depth (m) 1.00 - 1.00

Eluate Analysis	C ₂ Conc ⁿ in 10:1 eluate (mg/l)		A ₂ 10:1 conc ⁿ leached (mg/kg)				
	Result	Limit of Detection	Result	Limit of Detection			
Mercury Dissolved (CVAF)	<0.00001	<0.00001	<0.0001	<0.0001	-	-	-
Total Cyanide (W)	<0.05	<0.05	<0.5	<0.5	-	-	-
Arsenic	0.00276	<0.0005	0.0276	<0.005	-	-	-
Cadmium	<0.00008	<0.00008	<0.0008	<0.0008	-	-	-
Chromium	0.00128	<0.001	0.0128	<0.01	-	-	-
Copper	0.00165	<0.0003	0.0165	<0.003	-	-	-
Lead	0.00241	<0.0002	0.0241	<0.002	-	-	-
Nickel	0.00244	<0.0004	0.0244	<0.004	-	-	-
Selenium	0.000561	<0.0005	0.00561	<0.005	-	-	-
Zinc	0.00994	<0.001	0.0994	<0.01	-	-	-

Leach Test Information

Date Prepared	21-Feb-2018
pH (pH Units)	9.32
Conductivity (µS/cm)	220.00
Temperature (°C)	19.70
Volume Leachant (Litres)	0.885

Mcerts Certification does not apply to leachates

01/03/2018 10:57:00

10:56:36 01/03/2018



CERTIFICATE OF ANALYSIS

Validated

SDG: 180216-85 Client Reference: 70020138 Report Number: 446420
 Location: Former Interbrew Site, Glo Order Number: 70020138-006 Superseded Report: 446021

Table of Results - Appendix

Method No	Reference	Description
ASB_PREP		
PM001		Preparation of Samples for Metals Analysis
PM024	Modified BS 1377	Soil preparation including homogenisation, moisture screens of soils for Asbestos Containing Material
PM115		Leaching Procedure for CEN One Stage Leach Test 2:1 & 10:1 1 Step
TM048	HSG 248, Asbestos: The analysts' guide for sampling, analysis and clearance procedures	Identification of Asbestos in Bulk Material
TM089	Modified: US EPA Methods 8020 & 602	Determination of Gasoline Range Hydrocarbons (GRO) and BTEX (MTBE) compounds by Headspace GC-FID (C4-C12)
TM116	Modified: US EPA Method 8260, 8120, 8020, 624, 610 & 602	Determination of Volatile Organic Compounds by Headspace / GC-MS
TM125	DIN 38405 D17	Determination of Total/Ferrous Iron
TM133	BS 1377: Part 3 1990;BS 6068-2.5	Determination of pH in Soil and Water using the GLpH pH Meter
TM151	Method 3500D, AWWA/APHA, 20th Ed., 1999	Determination of Hexavalent Chromium using Kone analyser
TM152	Method 3125B, AWWA/APHA, 20th Ed., 1999	Analysis of Aqueous Samples by ICP-MS
TM153	Method 4500A,B,C, I, M AWWA/APHA, 20th Ed., 1999	Determination of Total Cyanide, Free (Easily Liberatable) Cyanide and Thiocyanate using the Skalar SANS+ System Segmented Flow Analyser
TM157	HP 6890 Gas Chromatograph (GC) system and HP 5973 Mass Selective Detector (MSD).	Determination of SVOC in Soils by GC-MS extracted by sonication in DCM/Acetone
TM173	Analysis of Petroleum Hydrocarbons in Environmental Media – Total Petroleum Hydrocarbon Criteria	Determination of Speciated Extractable Petroleum Hydrocarbons in Soils by GC-FID
TM181	US EPA Method 6010B	Determination of Routine Metals in Soil by iCap 6500 Duo ICP-OES
TM183	BS EN 23506:2002, (BS 6068-2.74:2002) ISBN 0 580 38924 3	Determination of Trace Level Mercury in Waters and Leachates by PSA Cold Vapour Atomic Fluorescence Spectrometry
TM218	Determination of PAH by GCMS Microwave extraction	The determination of PAH in soil samples by microwave extraction and GC-MS
TM227	Standard methods for the examination of waters and wastewaters 20th Edition, AWWA/APHA Method 4500.	Determination of Total Cyanide, Free (Easily Liberatable) Cyanide and Thiocyanate
TM228	US EPA Method 6010B	Determination of Major Cations in Water by iCap 6500 Duo ICP-OES
TM243		Mixed Anions In Soils By Kone

NA = not applicable.

Chemical testing (unless subcontracted) performed at ALS Environmental Hawarden (Method codes TM) or ALS Environmental Aberdeen (Method codes S).



CERTIFICATE OF ANALYSIS

Validated

SDG: 180216-85 Client Reference: 70020138 Report Number: 446420
Location: Former Interbrew Site, GloOrder Number: 70020138-006 Superseded Report: 446021

Test Completion Dates

Table with columns for Lab Sample No(s), Customer Sample Ref., AGS Ref., Depth, Type, and various analytical parameters with completion dates. Includes sub-sections for samples 17063005-17063395 and 17063414-17063375.



CERTIFICATE OF ANALYSIS

Validated

SDG:	180216-85	Client Reference:	70020138	Report Number:	446420
Location:	Former Interbrew Site, Glo	Order Number:	70020138-006	Superseded Report:	446021

Chromatogram

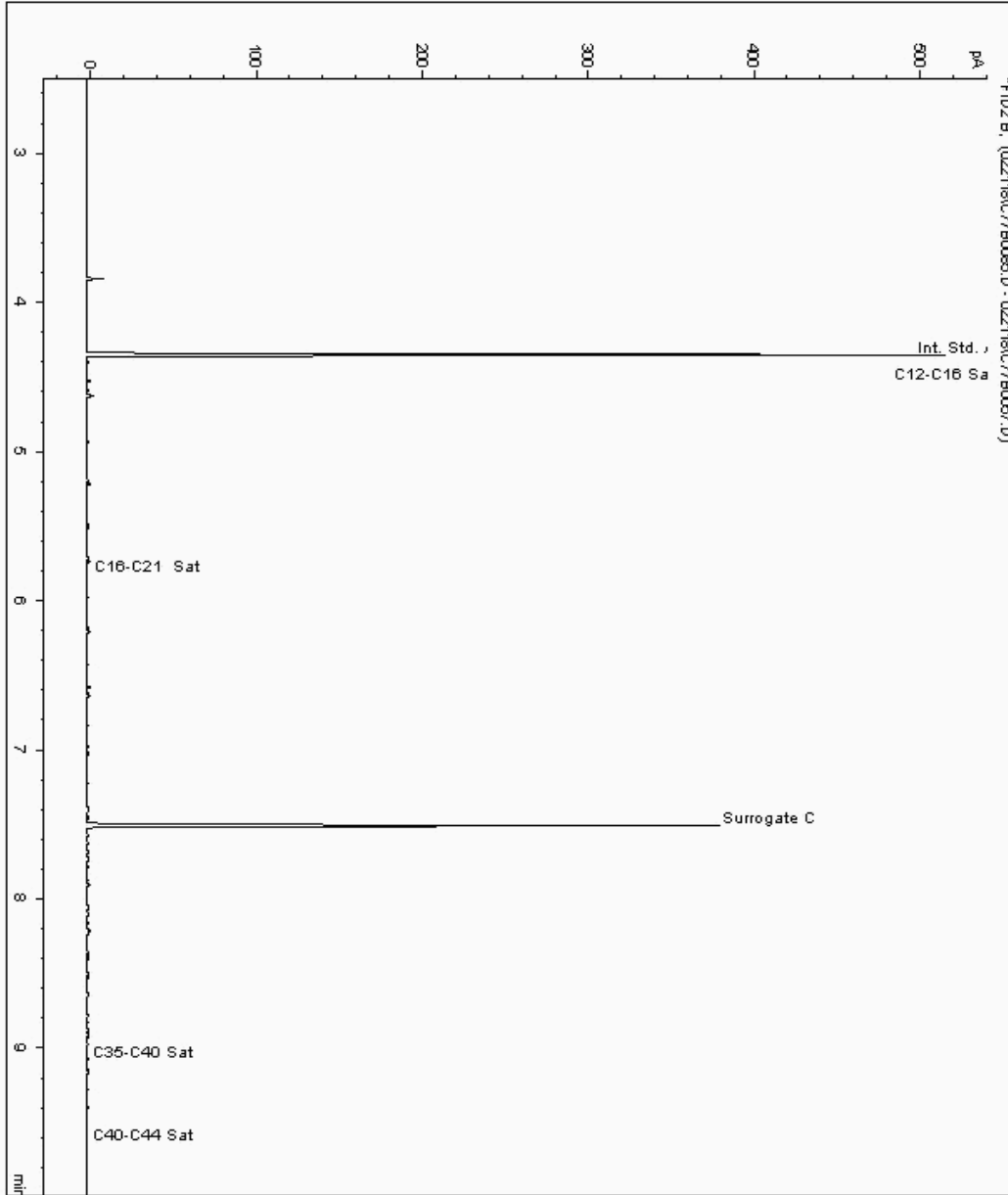
Analysis: EPH CWG (Aliphatic) GC (S)

Sample No : 17067806
Sample ID : WS102

Depth : 0.30 - 0.50

Alcontrol/Geochem Analytical Services
Speciated TPH - SATS (C12 - C40)

Sample Identity: 16018167-
Date Acquired : 2/22/2018 11:47:15 AM
Units : ppb
Dilution :
CF : 1
Multiplier : 1.040





CERTIFICATE OF ANALYSIS

Validated

SDG: 180216-85 Client Reference: 70020138 Report Number: 446420
Location: Former Interbrew Site, Glo Order Number: 70020138-006 Superseded Report: 446021

Chromatogram

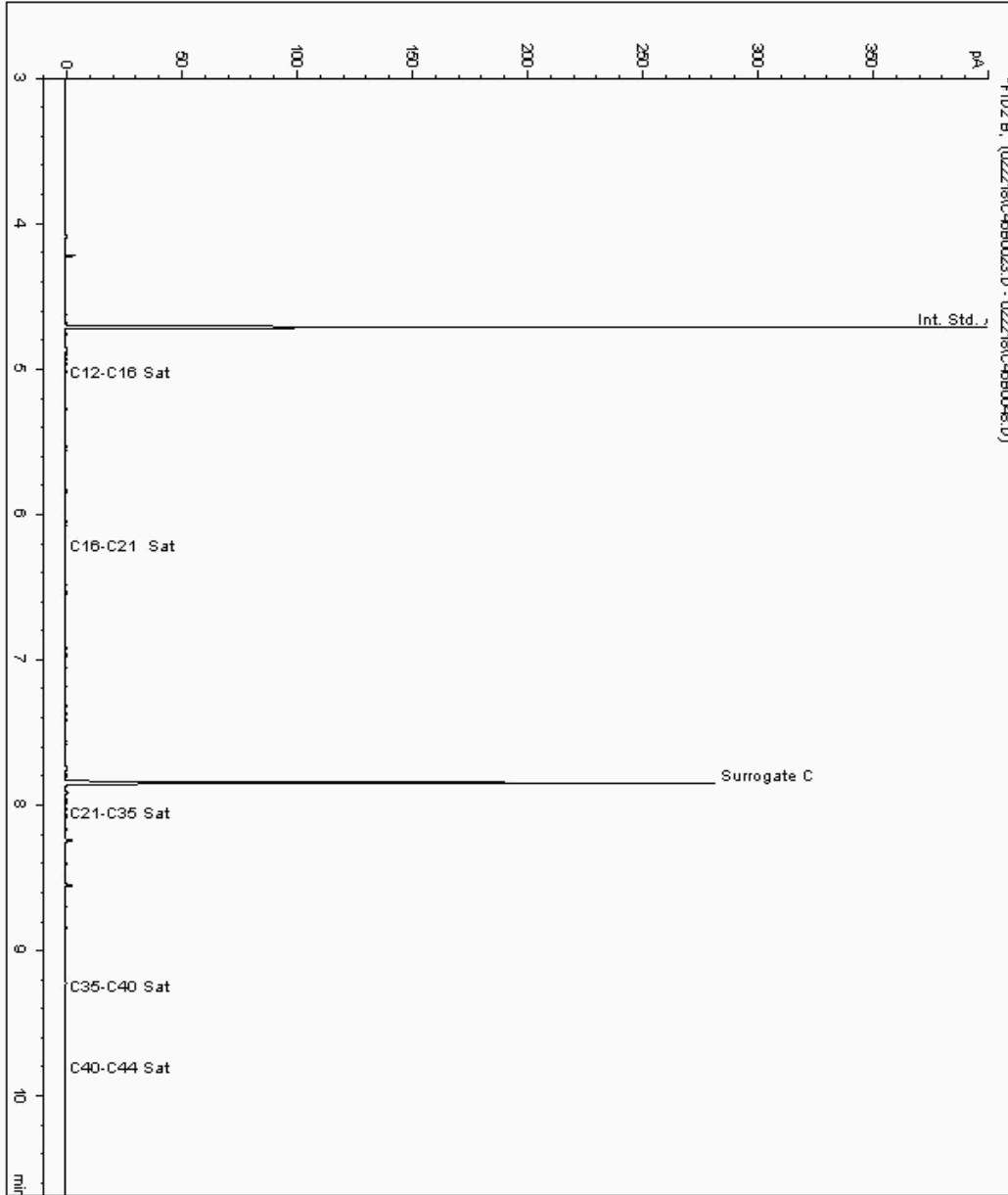
Analysis: EPH CWG (Aliphatic) GC (S)

Sample No : 17068981
Sample ID : BH103

Depth : 0.75 - 0.75

Speciated TPH - AROM (C12 - C40)

Sample Identity: 16018032-
Date Acquired : 22/02/2018 15:14:00 PM
Units : ppb
Dilution: BH103[0.75 - 0.75] ->





CERTIFICATE OF ANALYSIS

Validated

SDG: 180216-85 Client Reference: 70020138 Report Number: 446420
Location: Former Interbrew Site, Glo Order Number: 70020138-006 Superseded Report: 446021

Chromatogram

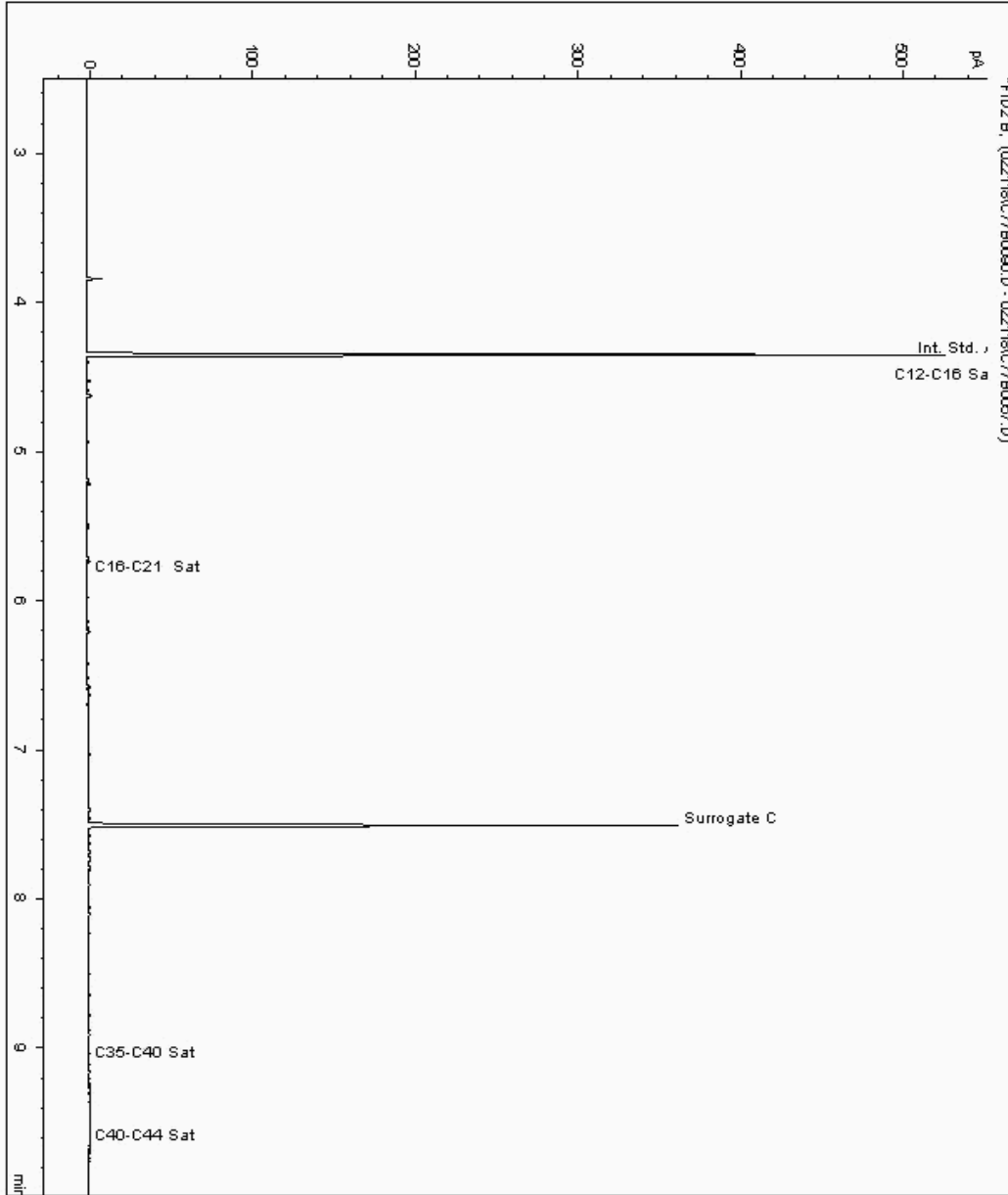
Analysis: EPH CWG (Aliphatic) GC (S)

Sample No : 17069006
Sample ID : BH103

Depth : 0.30 - 0.40

Alcontrol/Geochem Analytical Services
Speciated TPH - SATS (C12 - C40)

Sample Identity: 16017978-
Date Acquired : 2/22/2018 1:11:09 PM
Units : ppb
Dilution :
CF : 1
Multiplier : 1.020





CERTIFICATE OF ANALYSIS

Validated

SDG: 180216-85 Client Reference: 70020138 Report Number: 446420
Location: Former Interbrew Site, Glo Order Number: 70020138-006 Superseded Report: 446021

Chromatogram

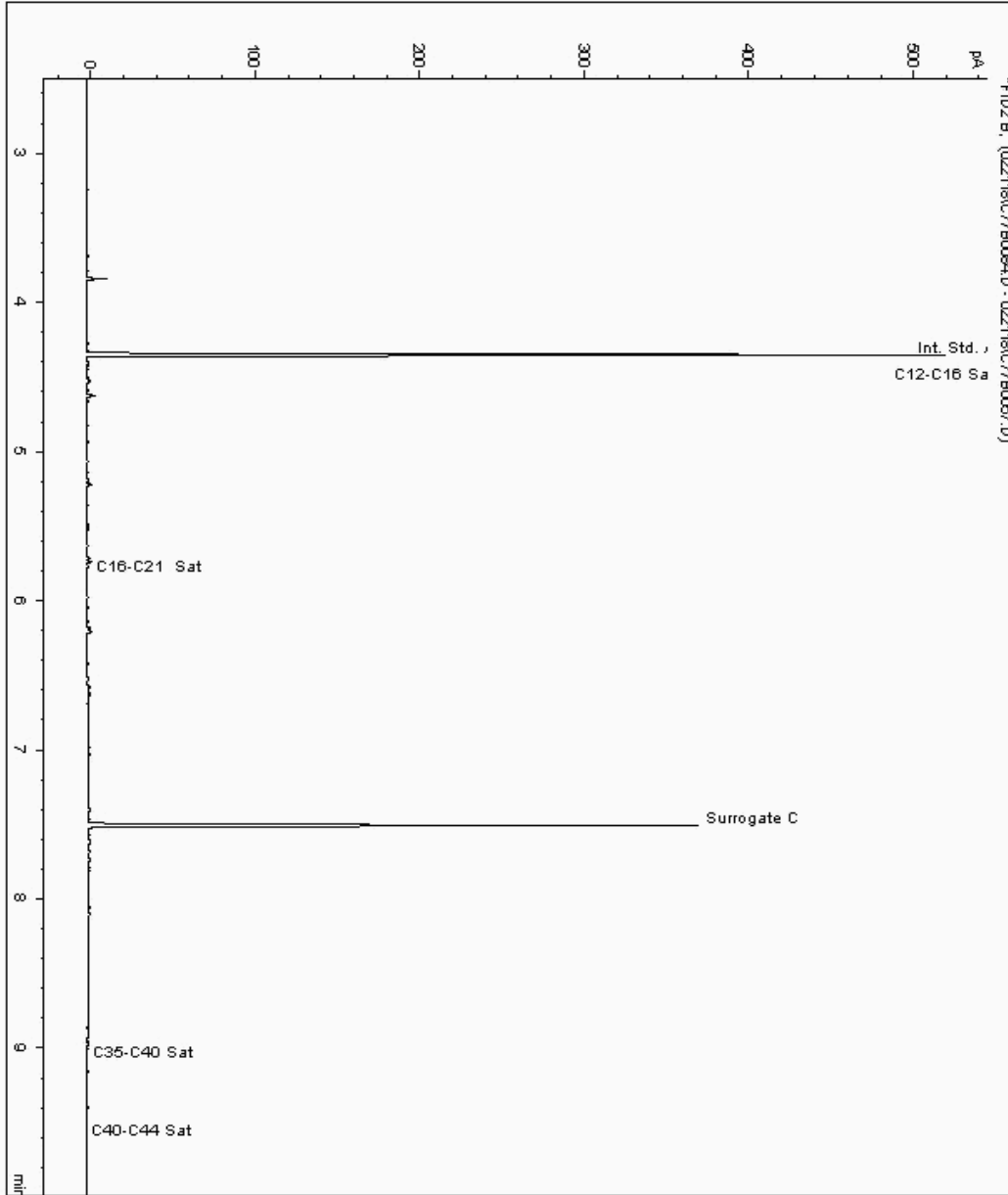
Analysis: EPH CWG (Aliphatic) GC (S)

Sample No : 17069961
Sample ID : WS106

Depth : 0.60 - 0.60

Alcontrol/Geochem Analytical Services
Speciated TPH - SATS (C12 - C40)

Sample Identity: 16018201-
Date Acquired : 2/22/2018 11:27:06 AM
Units : ppb
Dilution :
CF : 1
Multiplier : 1.050





CERTIFICATE OF ANALYSIS

Validated

SDG:	180216-85	Client Reference:	70020138	Report Number:	446420
Location:	Former Interbrew Site, Glo	Order Number:	70020138-006	Superseded Report:	446021

Chromatogram

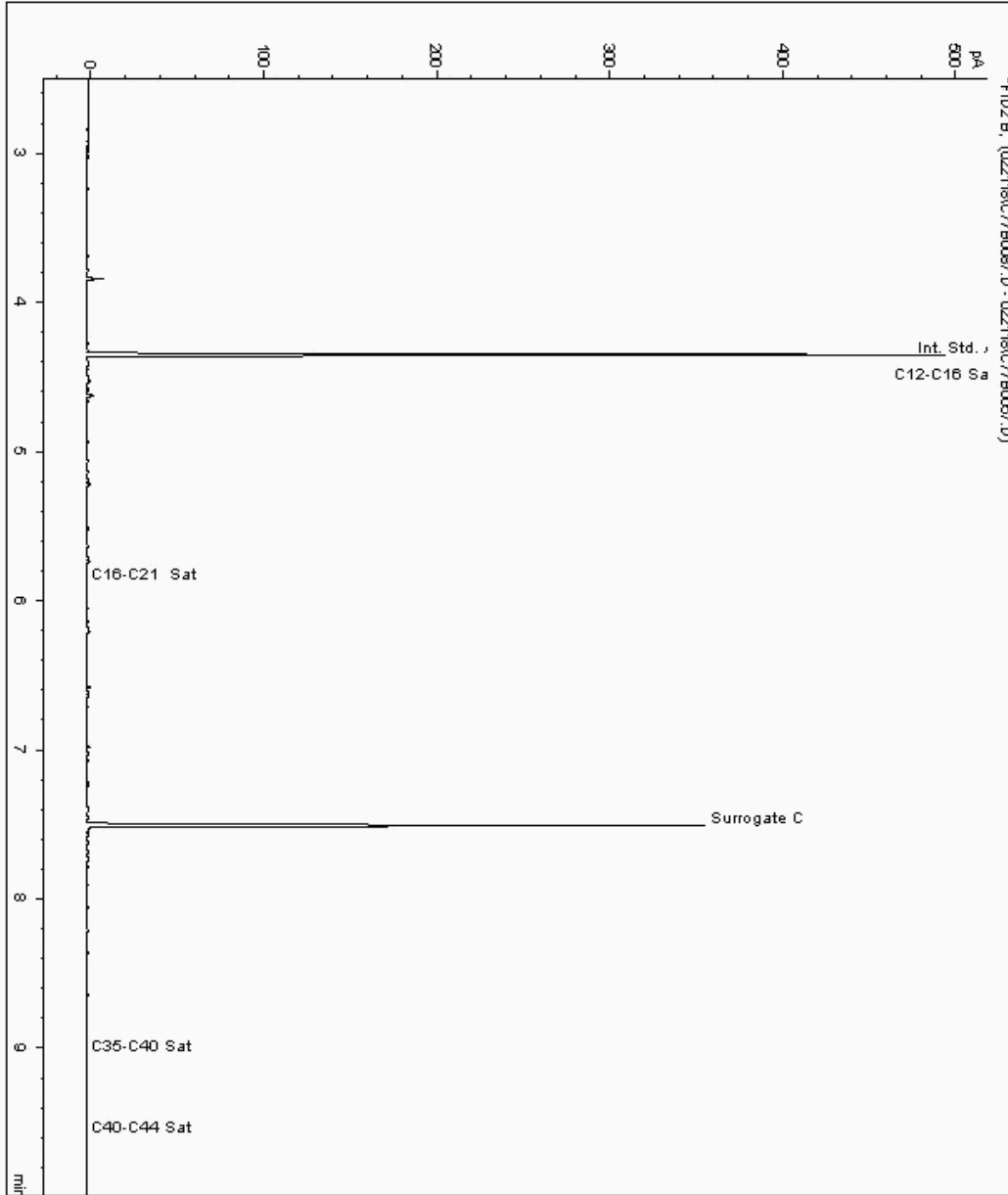
Analysis: EPH CWG (Aliphatic) GC (S)

Sample No : 17070030
Sample ID : WS103

Depth : 0.25 - 0.25

Alcontrol/Geochem Analytical Services
Speciated TPH - SATS (C12 - C40)

Sample Identity: 16018185-
Date Acquired : 2/22/2018 12:19:03 PM
Units : ppb
Dilution :
CF : 1
Multiplier : 1.030





CERTIFICATE OF ANALYSIS

Validated

SDG:	180216-85	Client Reference:	70020138	Report Number:	446420
Location:	Former Interbrew Site, Glo	Order Number:	70020138-006	Superseded Report:	446021

Chromatogram

Analysis: EPH CWG (Aliphatic) GC (S)

Sample No : 17070401
Sample ID : WS101

Depth : 0.30 - 0.45



CERTIFICATE OF ANALYSIS

Validated

SDG:	180216-85	Client Reference:	70020138	Report Number:	446420
Location:	Former Interbrew Site, Glo	Order Number:	70020138-006	Superseded Report:	446021

Chromatogram

Analysis: EPH CWG (Aliphatic) GC (S)

Sample No : 17070738
Sample ID : WS109

Depth : 1.20 - 1.20



CERTIFICATE OF ANALYSIS

Validated

SDG:	180216-85	Client Reference:	70020138	Report Number:	446420
Location:	Former Interbrew Site, Glo	Order Number:	70020138-006	Superseded Report:	446021

Chromatogram

Analysis: EPH CWG (Aliphatic) GC (S)

Sample No : 17071806
Sample ID : WS108

Depth : 1.05 - 1.05



CERTIFICATE OF ANALYSIS

Validated

SDG: 180216-85 Client Reference: 70020138 Report Number: 446420
Location: Former Interbrew Site, Glo Order Number: 70020138-006 Superseded Report: 446021

Chromatogram

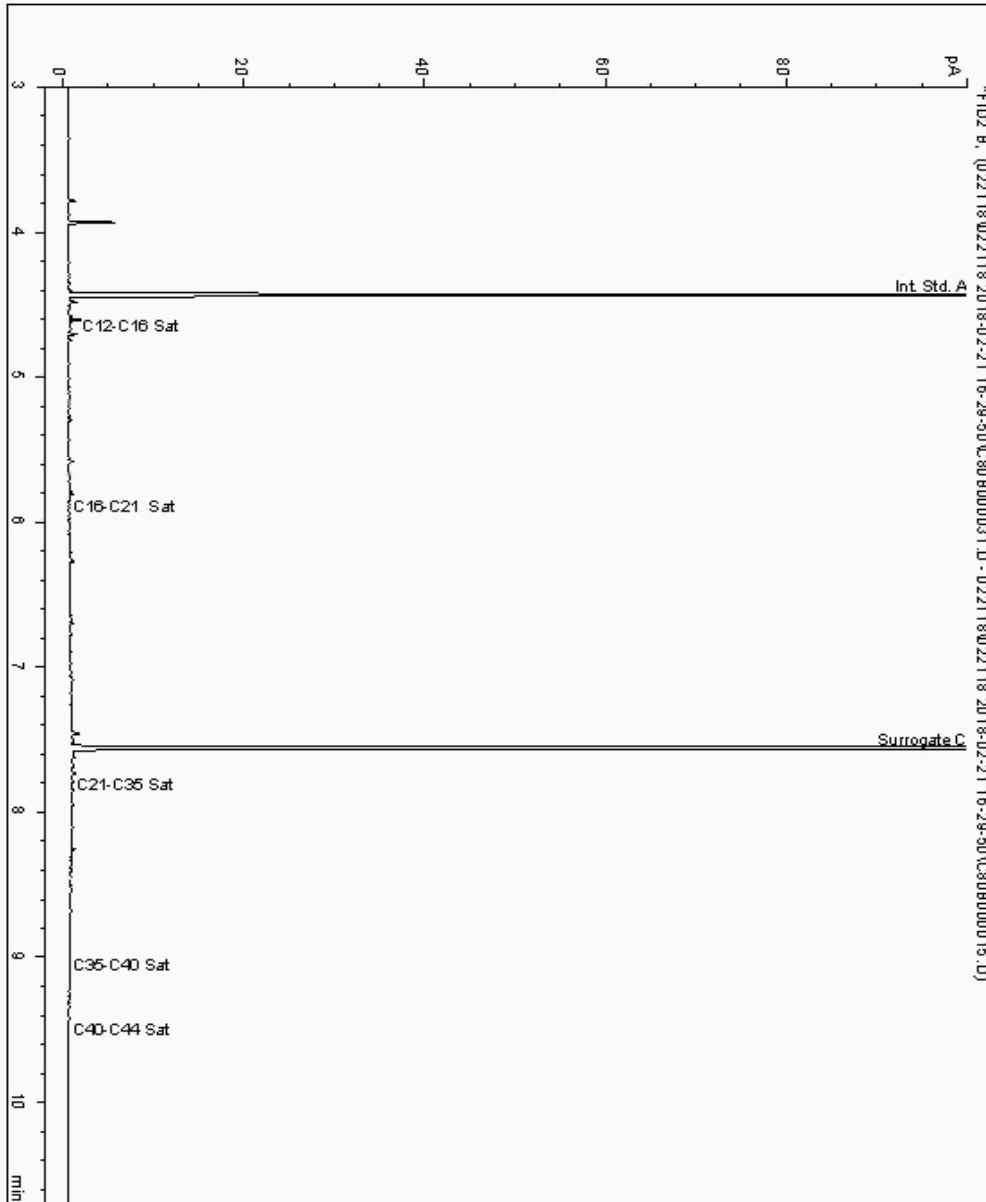
Analysis: EPH CWG (Aliphatic) GC (S)

Sample No : 17072202
Sample ID : BH101

Depth : 0.60 - 0.60

Alcontrol/Geochem Analytical Services
Speciated TPH - SATS (C12 - C40)

Sample Identity: 16017929-
Date Acquired : 22/02/18 00:15:48
Units : ppb
Dilution :
CF : 1
Multiplier : 0.970





CERTIFICATE OF ANALYSIS

Validated

SDG: 180216-85 Client Reference: 70020138 Report Number: 446420
Location: Former Interbrew Site, Glo Order Number: 70020138-006 Superseded Report: 446021

Chromatogram

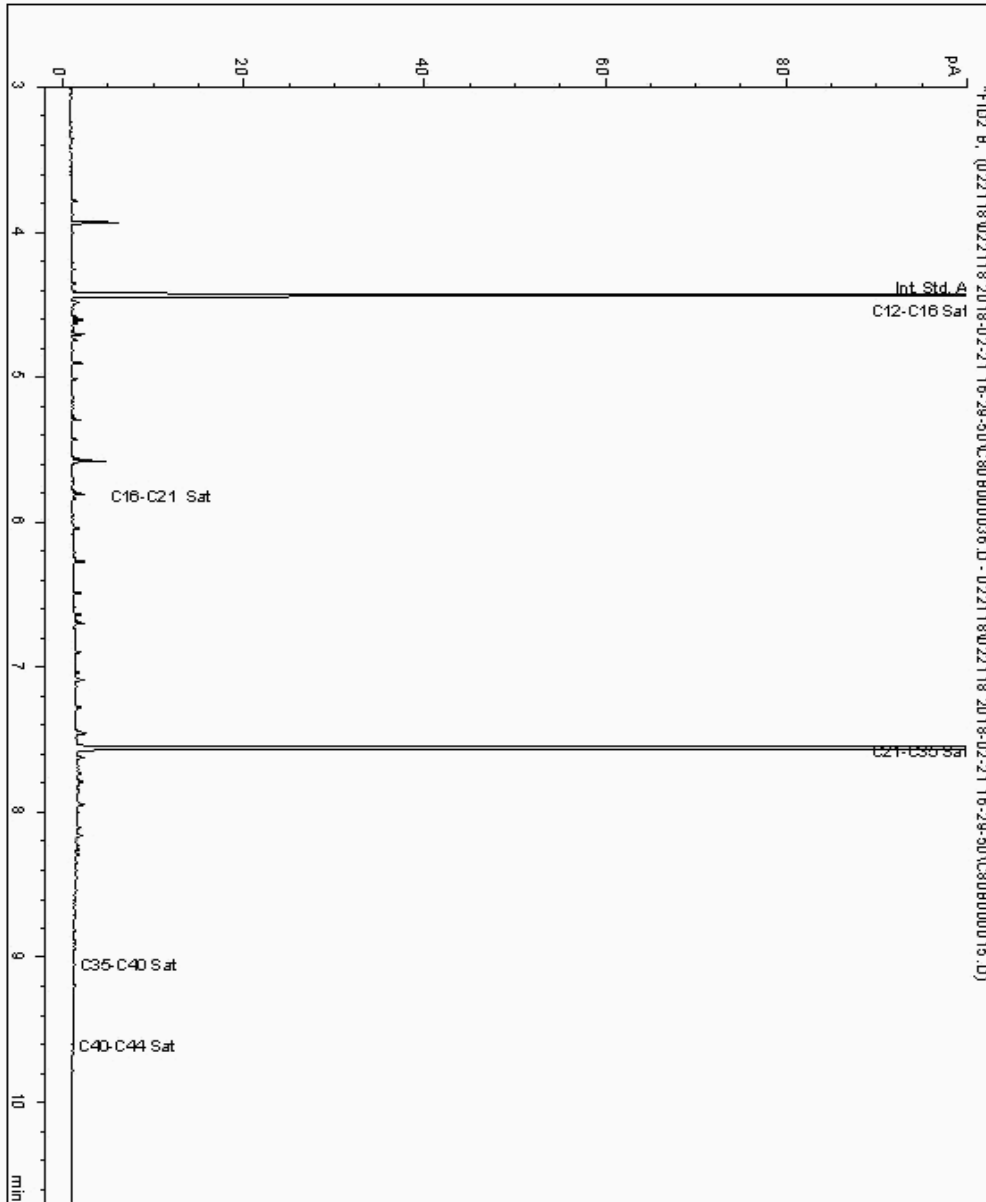
Analysis: EPH CWG (Aliphatic) GC (S)

Sample No : 17072217
Sample ID : BH104

Depth : 0.50 - 0.50

Alcontrol/Geochem Analytical Services
Speciated TPH - SATS (C12 - C40)

Sample Identity: 16018070-
Date Acquired : 22/02/18 01:48:02
Units : ppb
Dilution :
CF : 1
Multiplier : 0.990





CERTIFICATE OF ANALYSIS

Validated

SDG: 180216-85 Client Reference: 70020138 Report Number: 446420
Location: Former Interbrew Site, GloOrder Number: 70020138-006 Superseded Report: 446021

Chromatogram

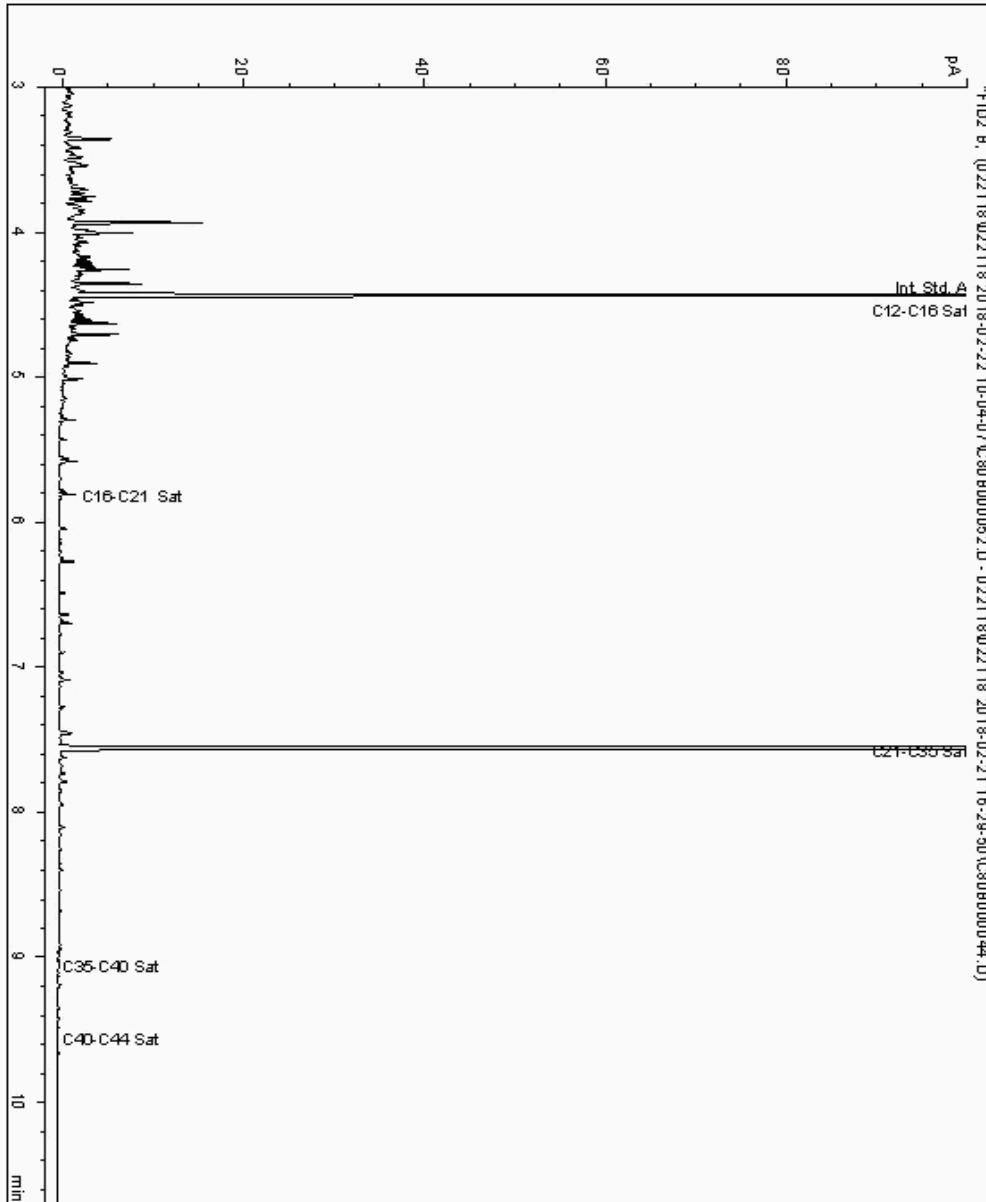
Analysis: EPH CWG (Aliphatic) GC (S)

Sample No : 17075490
Sample ID : TP104

Depth : 0.50 - 0.50

Alcontrol/Geochem Analytical Services
Speciated TPH - SATS (C12 - C40)

Sample Identity: 16018258-
Date Acquired : 22/02/18 06:29:40
Units : ppb
Dilution :
CF : 1
Multiplier : 0.960





CERTIFICATE OF ANALYSIS

Validated

SDG: 180216-85 Client Reference: 70020138 Report Number: 446420
Location: Former Interbrew Site, Glo Order Number: 70020138-006 Superseded Report: 446021

Chromatogram

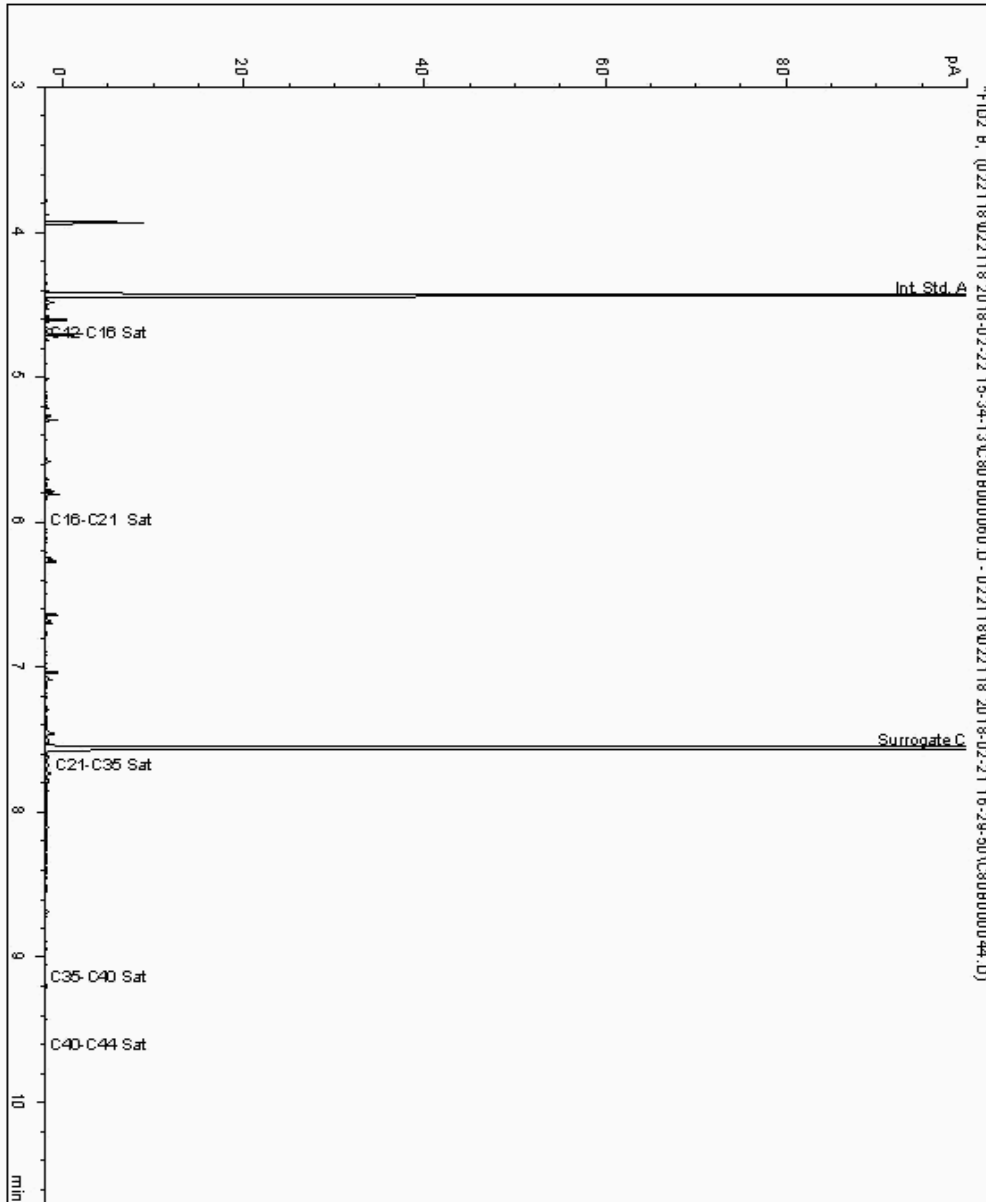
Analysis: EPH CWG (Aliphatic) GC (S)

Sample No : 17075572
Sample ID : TP102

Depth : 0.40 - 0.40

Alcontrol/Geochem Analytical Services
Speciated TPH - SATS (C12 - C40)

Sample Identity: 16018368-
Date Acquired : 22/02/18 19:39:49
Units : ppb
Dilution :
CF : 1
Multiplier : 0.980





CERTIFICATE OF ANALYSIS

Validated

SDG: 180216-85 Client Reference: 70020138 Report Number: 446420
Location: Former Interbrew Site, GloOrder Number: 70020138-006 Superseded Report: 446021

Chromatogram

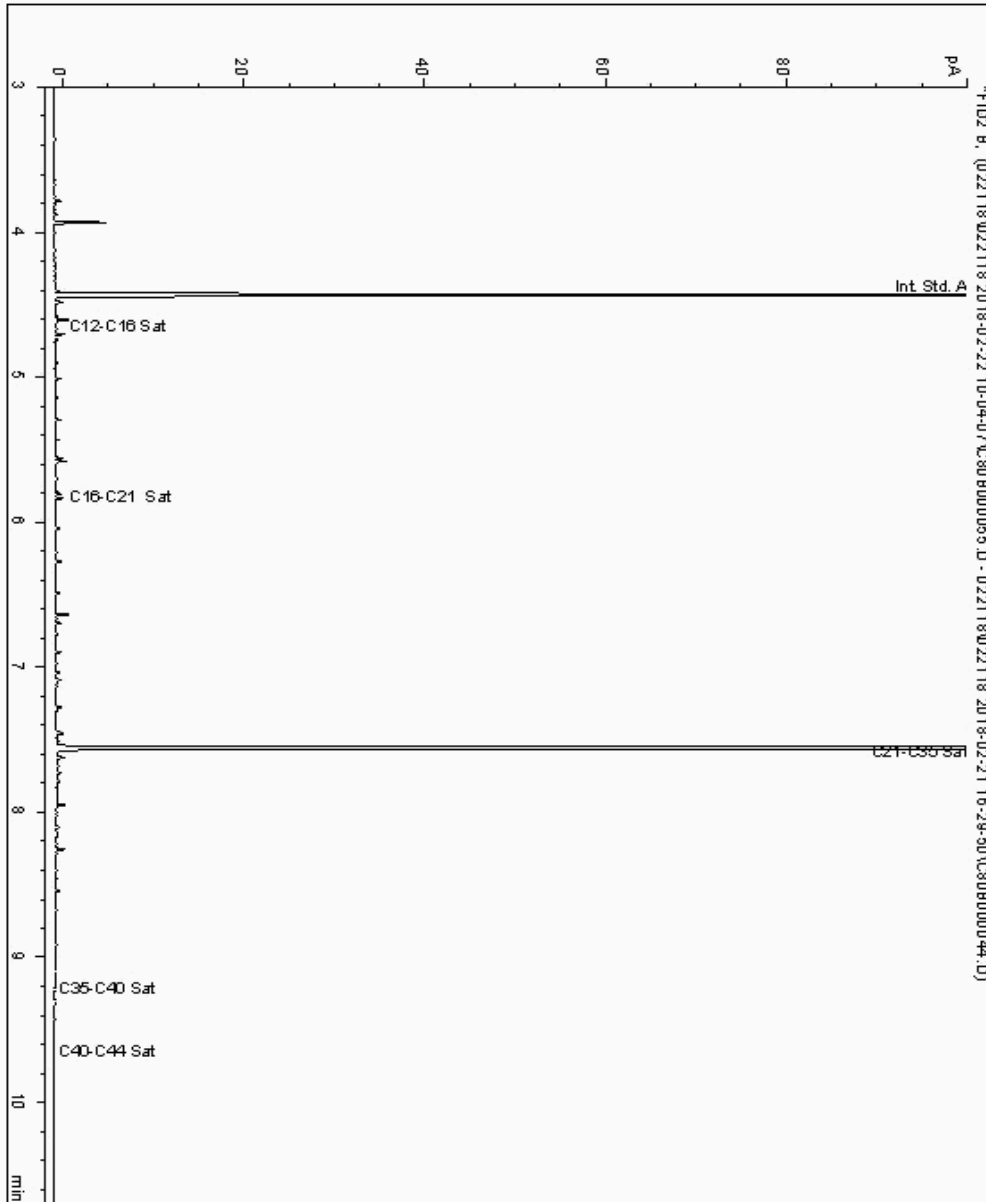
Analysis: EPH CWG (Aliphatic) GC (S)

Sample No : 17075725
Sample ID : TP106

Depth : 1.00 - 1.00

Alcontrol/Geochem Analytical Services
Speciated TPH - SATS (C12 - C40)

Sample Identity: 16018432-
Date Acquired : 22/02/18 07:29:55
Units : ppb
Dilution :
CF : 1
Multiplier : 1.020





CERTIFICATE OF ANALYSIS

Validated

SDG: 180216-85 Client Reference: 70020138 Report Number: 446420
Location: Former Interbrew Site, Glo Order Number: 70020138-006 Superseded Report: 446021

Chromatogram

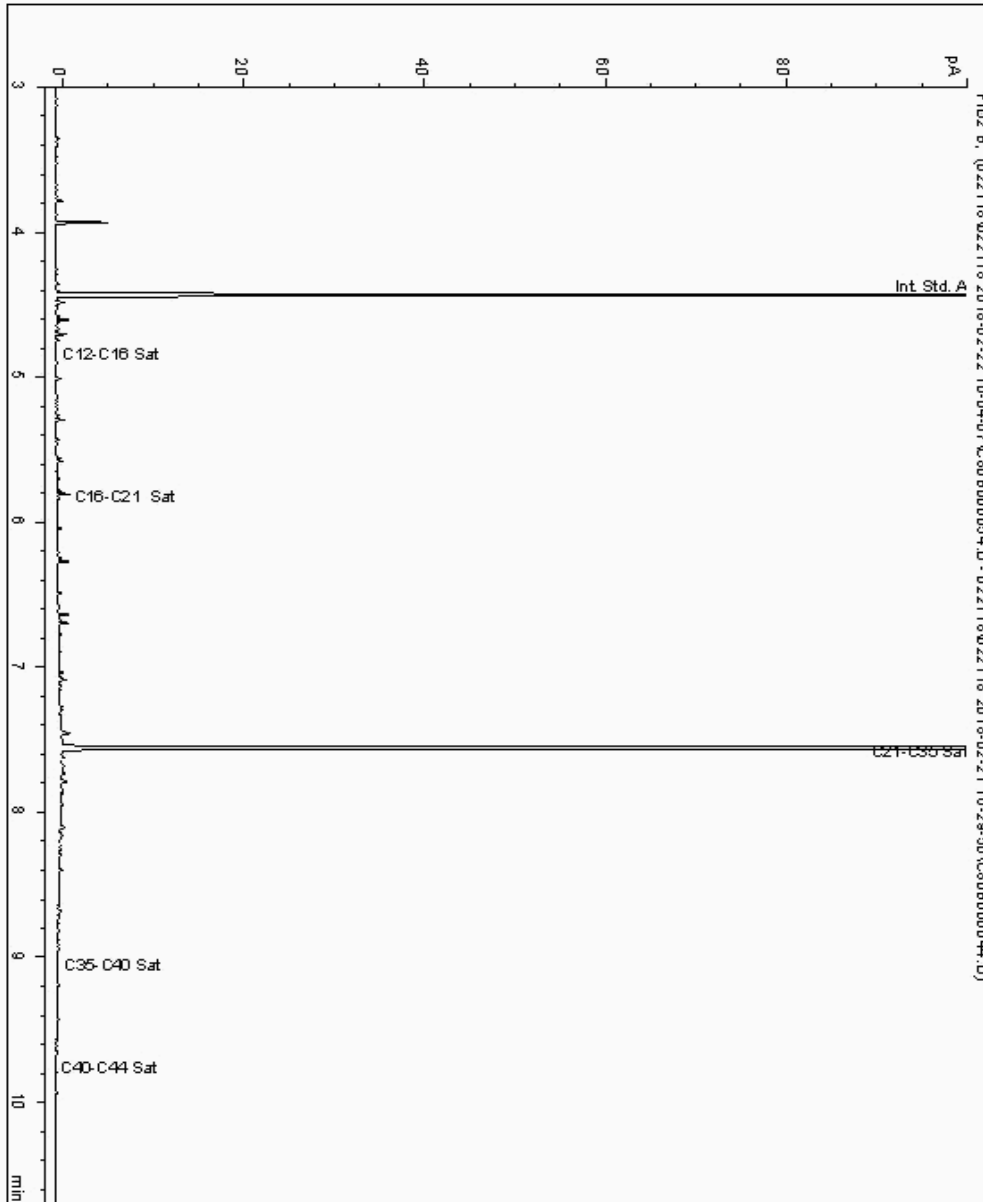
Analysis: EPH CWG (Aliphatic) GC (S)

Sample No : 17075806
Sample ID : WS110

Depth : 1.05 - 1.05

Alcontrol/Geochem Analytical Services
Speciated TPH - SATS (C12 - C40)

Sample Identity: 16018403-
Date Acquired : 22/02/18 07:09:57
Units : ppb
Dilution :
CF : 1
Multiplier : 1.030





CERTIFICATE OF ANALYSIS

Validated

SDG: 180216-85 Client Reference: 70020138 Report Number: 446420
Location: Former Interbrew Site, Glo Order Number: 70020138-006 Superseded Report: 446021

Chromatogram

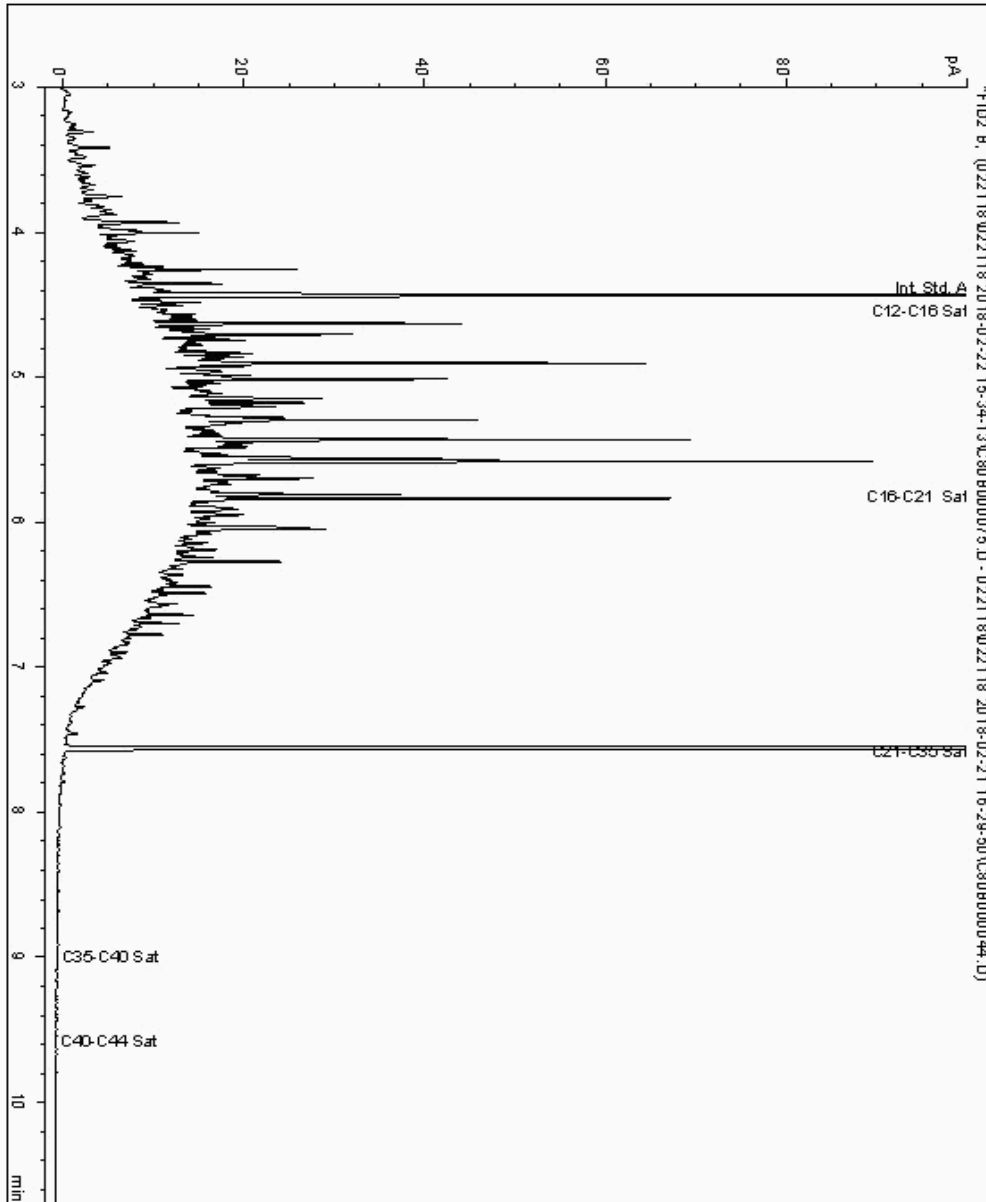
Analysis: EPH CWG (Aliphatic) GC (S)

Sample No : 17076832
Sample ID : TP103

Depth : 0.80 - 0.80

Alcontrol/Geochem Analytical Services
Speciated TPH - SATS (C12 - C40)

Sample Identity: 16018234-
Date Acquired : 22/02/18 23:51:40
Units : ppb
Dilution :
CF : 1
Multiplier : 1.050





CERTIFICATE OF ANALYSIS

Validated

SDG: 180216-85 Client Reference: 70020138 Report Number: 446420
Location: Former Interbrew Site, Glo Order Number: 70020138-006 Superseded Report: 446021

Chromatogram

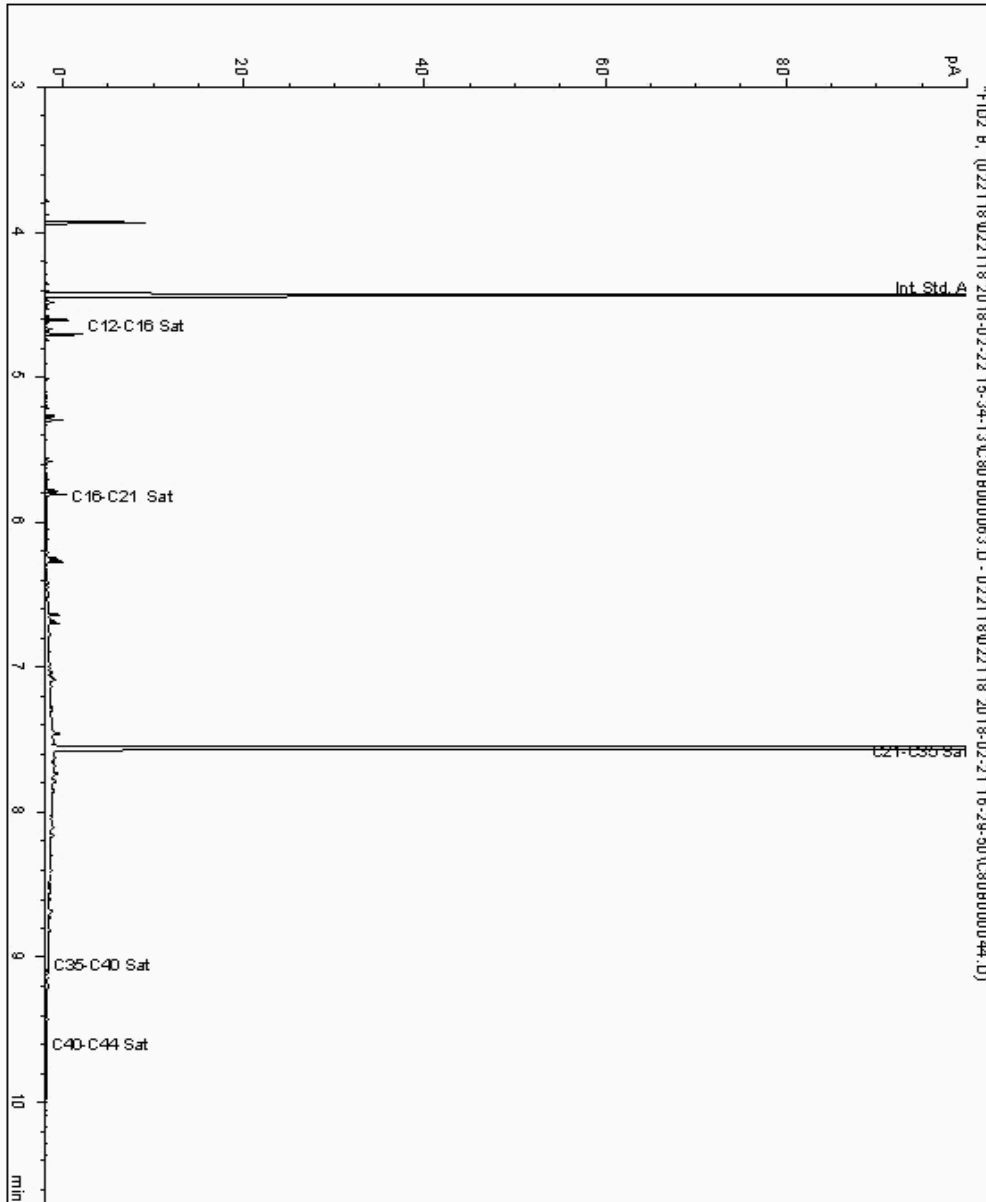
Analysis: EPH CWG (Aliphatic) GC (S)

Sample No : 17076955
Sample ID : HP102

Depth : 0.30 - 0.30

Alcontrol/Geochem Analytical Services
Speciated TPH - SATS (C12 - C40)

Sample Identity: 16018296-
Date Acquired : 22/02/18 20:30:27
Units : ppb
Dilution :
CF : 1
Multiplier : 1.030





CERTIFICATE OF ANALYSIS

Validated

SDG: 180216-85 Client Reference: 70020138 Report Number: 446420
Location: Former Interbrew Site, Glo Order Number: 70020138-006 Superseded Report: 446021

Chromatogram

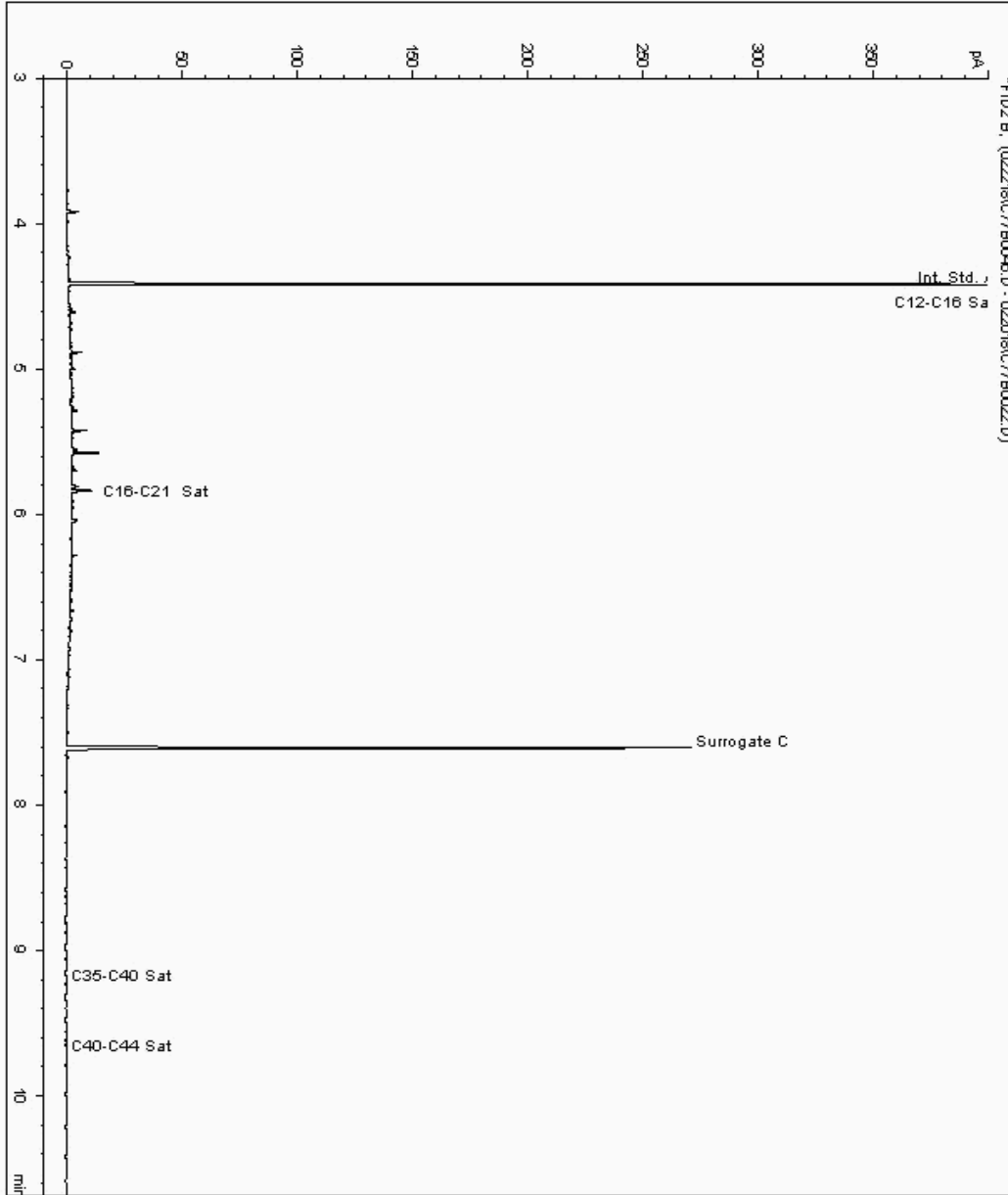
Analysis: EPH CWG (Aliphatic) GC (S)

Sample No : 17076959
Sample ID : TP103

Depth : 1.00 - 1.00

Speciated TPH - SATS (C12 - C40)

Sample Identity: 16018245-
Date Acquired : 22/02/2018 19:24:05 PM
Units : ppb
Dilution:





CERTIFICATE OF ANALYSIS

Validated

SDG: 180216-85 Client Reference: 70020138 Report Number: 446420
Location: Former Interbrew Site, GloOrder Number: 70020138-006 Superseded Report: 446021

Chromatogram

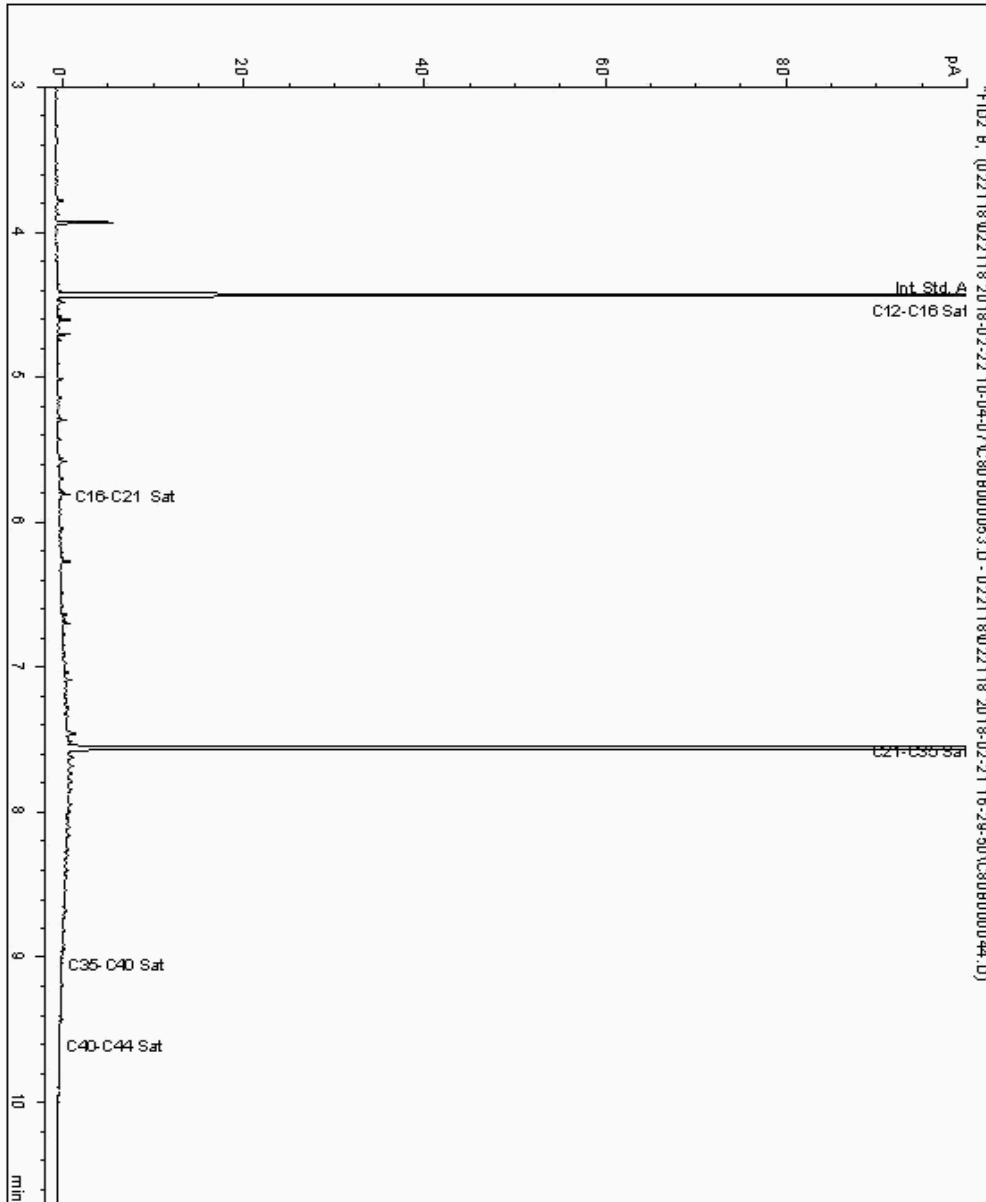
Analysis: EPH CWG (Aliphatic) GC (S)

Sample No : 17076964
Sample ID : HP102

Depth : 0.60 - 0.60

Alcontrol/Geochem Analytical Services
Speciated TPH - SATS (C12 - C40)

Sample Identity: 16018343-
Date Acquired : 22/02/18 06:49:57
Units : ppb
Dilution :
CF : 1
Multiplier : 0.970





CERTIFICATE OF ANALYSIS

Validated

SDG: 180216-85 Client Reference: 70020138 Report Number: 446420
Location: Former Interbrew Site, Glo Order Number: 70020138-006 Superseded Report: 446021

Chromatogram

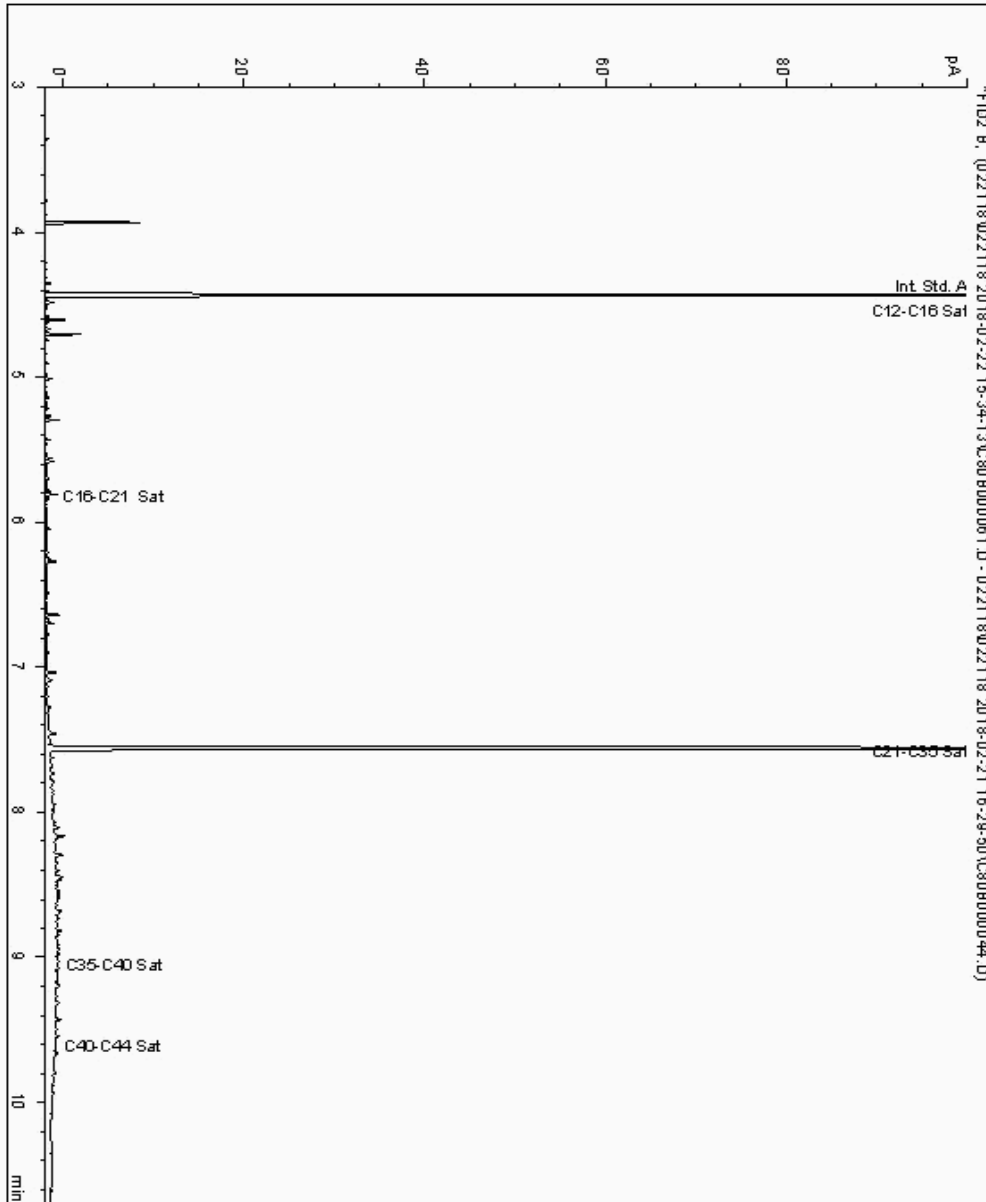
Analysis: EPH CWG (Aliphatic) GC (S)

Sample No : 17076971
Sample ID : HP101

Depth : 0.30 - 0.30

Alcontrol/Geochem Analytical Services
Speciated TPH - SATS (C12 - C40)

Sample Identity: 16018272-
Date Acquired : 22/02/18 19:59:28
Units : ppb
Dilution :
CF : 1
Multiplier : 0.990





CERTIFICATE OF ANALYSIS

Validated

SDG: 180216-85 Client Reference: 70020138 Report Number: 446420
Location: Former Interbrew Site, Glo Order Number: 70020138-006 Superseded Report: 446021

Chromatogram

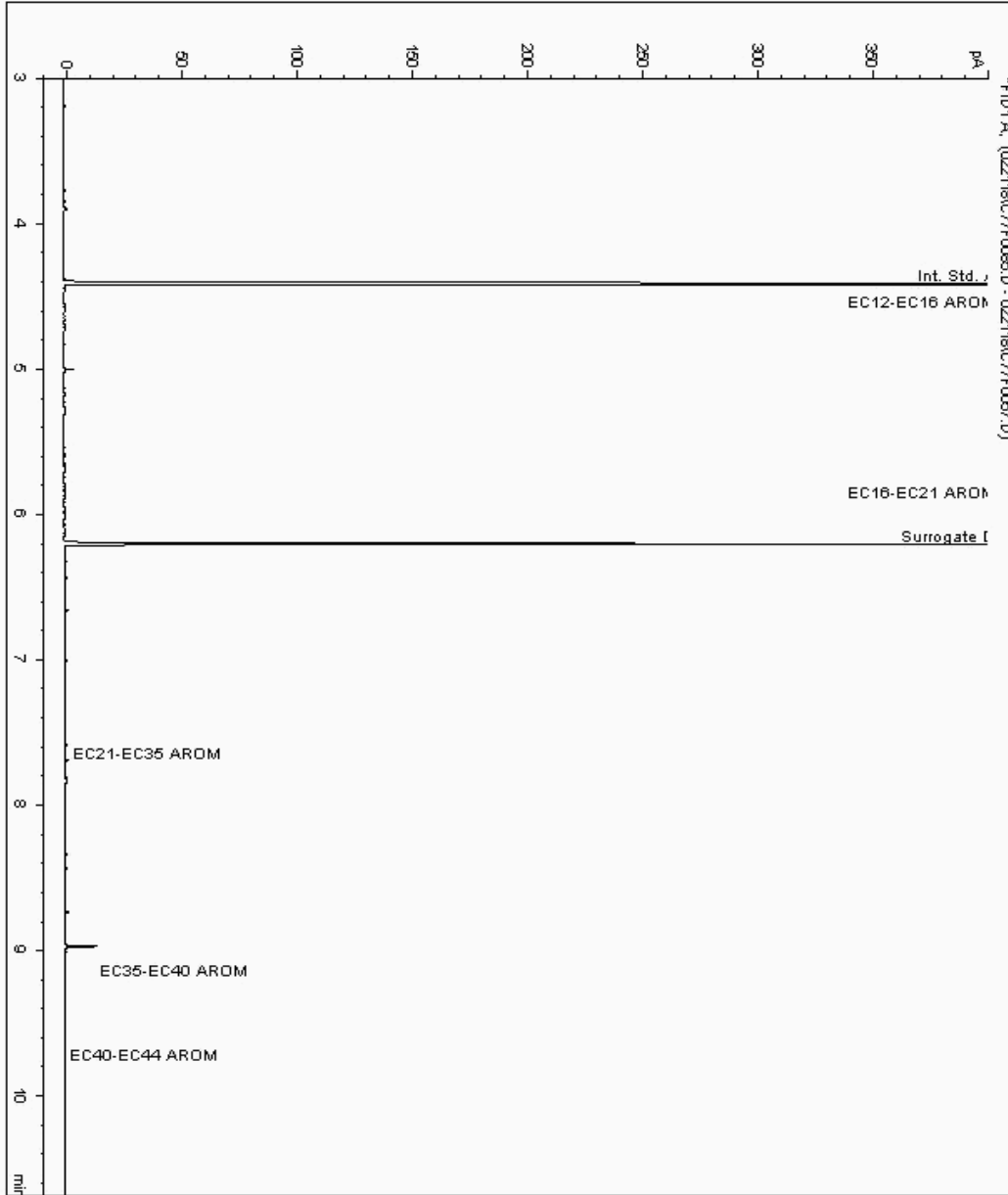
Analysis: EPH CWG (Aromatic) GC (S)

Sample No : 17067806
Sample ID : WS102

Depth : 0.30 - 0.50

Speciated TPH - AROM (C12 - C40)

Sample Identity: 16018168-
Date Acquired : 2/22/2018 11:47:15 AM
Units : ppb
Dilution:





CERTIFICATE OF ANALYSIS

Validated

SDG: 180216-85 Client Reference: 70020138 Report Number: 446420
Location: Former Interbrew Site, Glo Order Number: 70020138-006 Superseded Report: 446021

Chromatogram

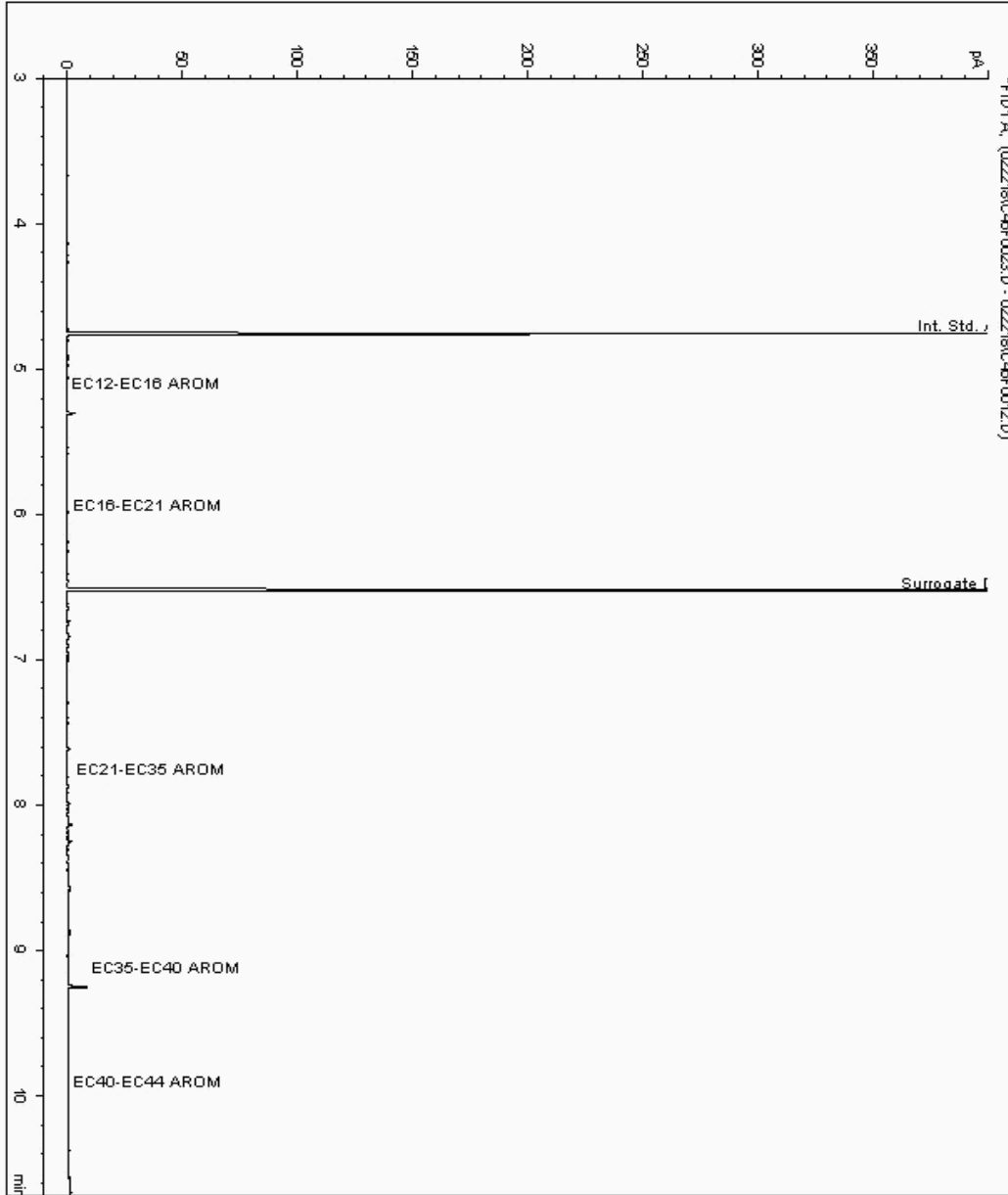
Analysis: EPH CWG (Aromatic) GC (S)

Sample No : 17068981
Sample ID : BH103

Depth : 0.75 - 0.75

Speciated TPH - AROM (C12 - C40)

Sample Identity: 16018033-
Date Acquired : 22/02/2018 15:14:00 PM
Units : ppb
Dilution: BH103[0.75 - 0.75] ->





CERTIFICATE OF ANALYSIS

Validated

SDG: 180216-85 Client Reference: 70020138 Report Number: 446420
Location: Former Interbrew Site, Glo Order Number: 70020138-006 Superseded Report: 446021

Chromatogram

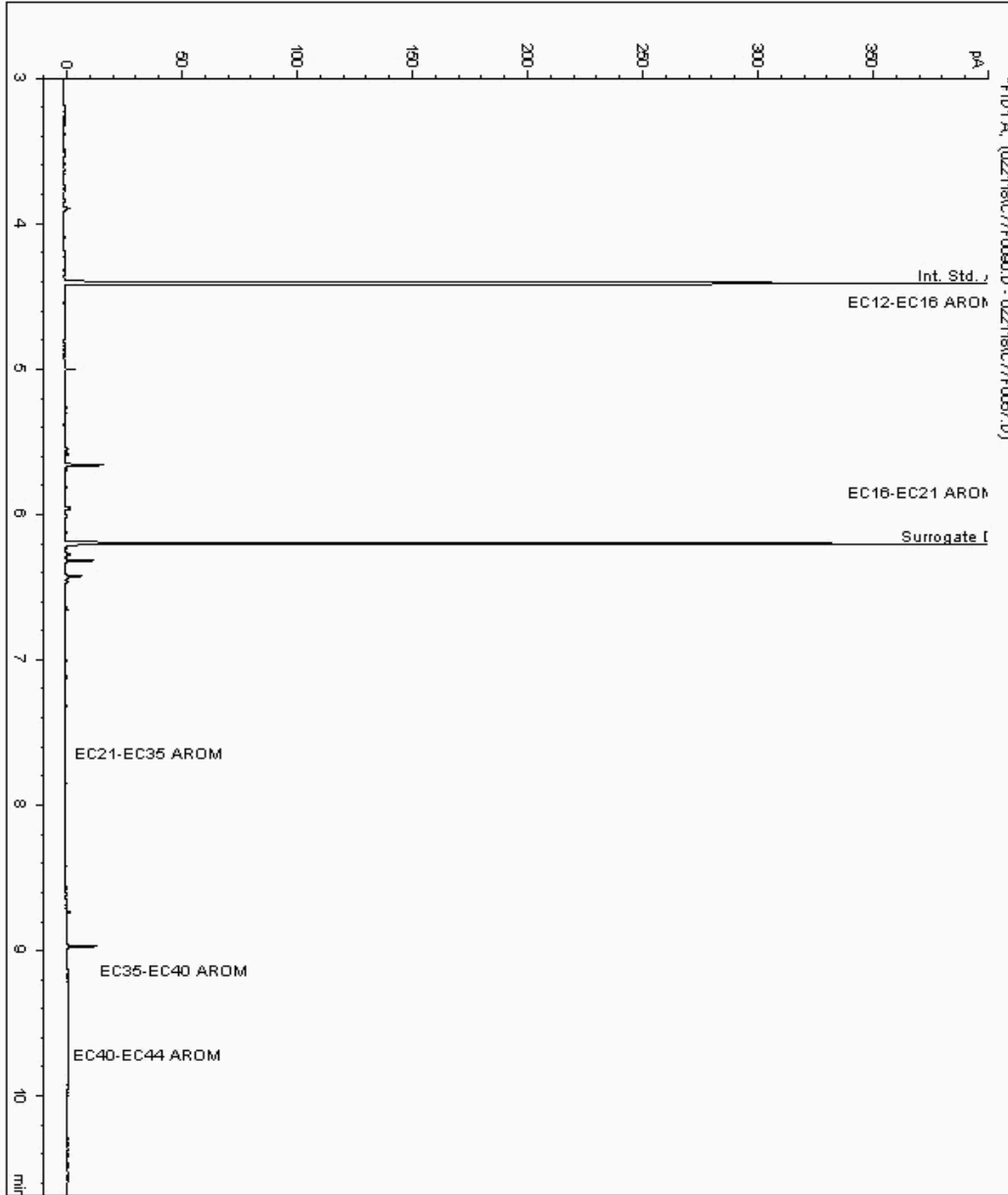
Analysis: EPH CWG (Aromatic) GC (S)

Sample No : 17069006
Sample ID : BH103

Depth : 0.30 - 0.40

Speciated TPH - AROM (C12 - C40)

Sample Identity: 16017979-
Date Acquired : 2/22/2018 1:11:09 PM
Units : ppb
Dilution:





CERTIFICATE OF ANALYSIS

Validated

SDG: 180216-85 Client Reference: 70020138 Report Number: 446420
Location: Former Interbrew Site, Glo Order Number: 70020138-006 Superseded Report: 446021

Chromatogram

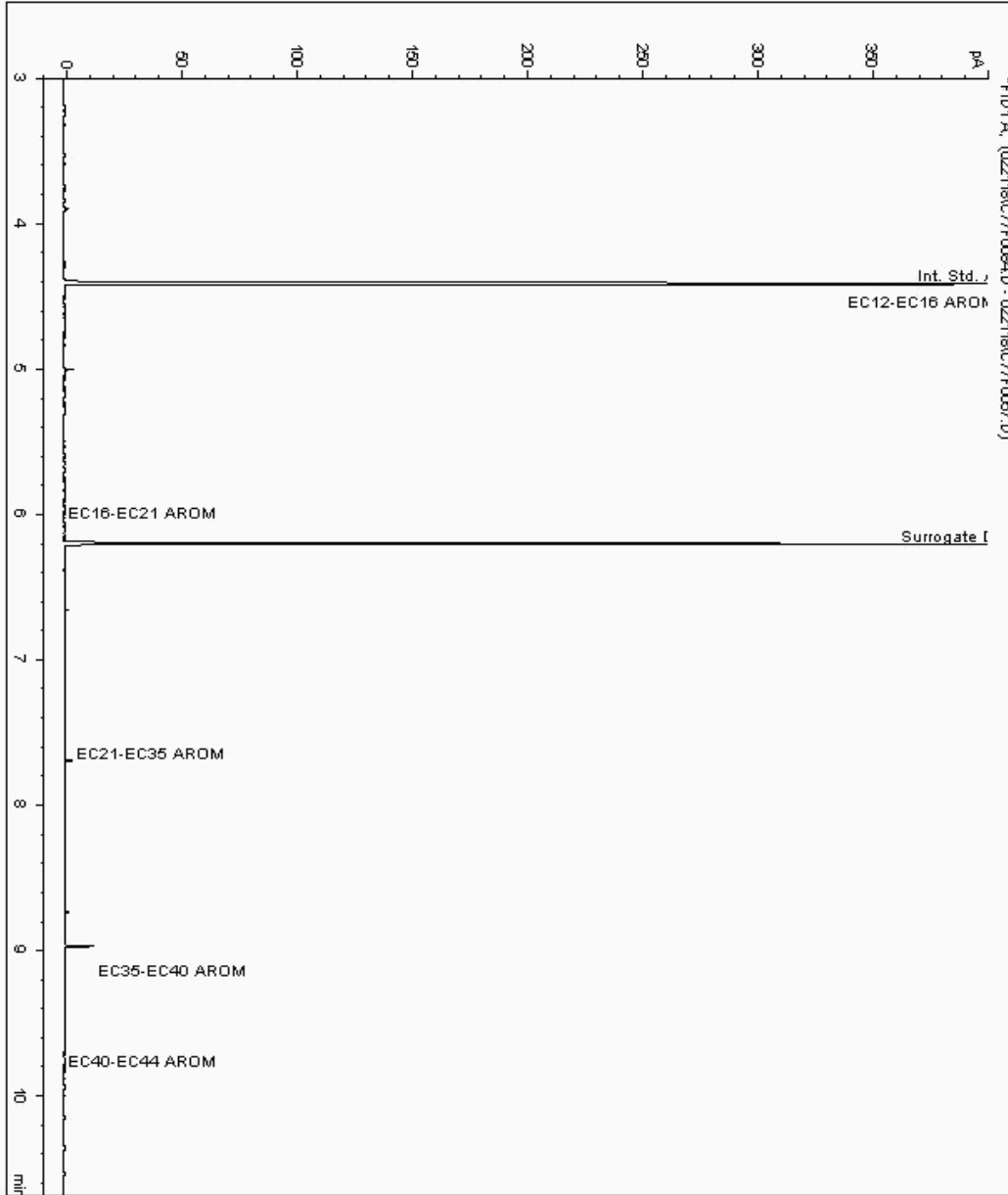
Analysis: EPH CWG (Aromatic) GC (S)

Sample No : 17069961
Sample ID : WS106

Depth : 0.60 - 0.60

Speciated TPH - AROM (C12 - C40)

Sample Identity: 16018202-
Date Acquired : 2/22/2018 11:27:06 AM
Units : ppb
Dilution:





CERTIFICATE OF ANALYSIS

Validated

SDG: 180216-85 Client Reference: 70020138 Report Number: 446420
Location: Former Interbrew Site, Glo Order Number: 70020138-006 Superseded Report: 446021

Chromatogram

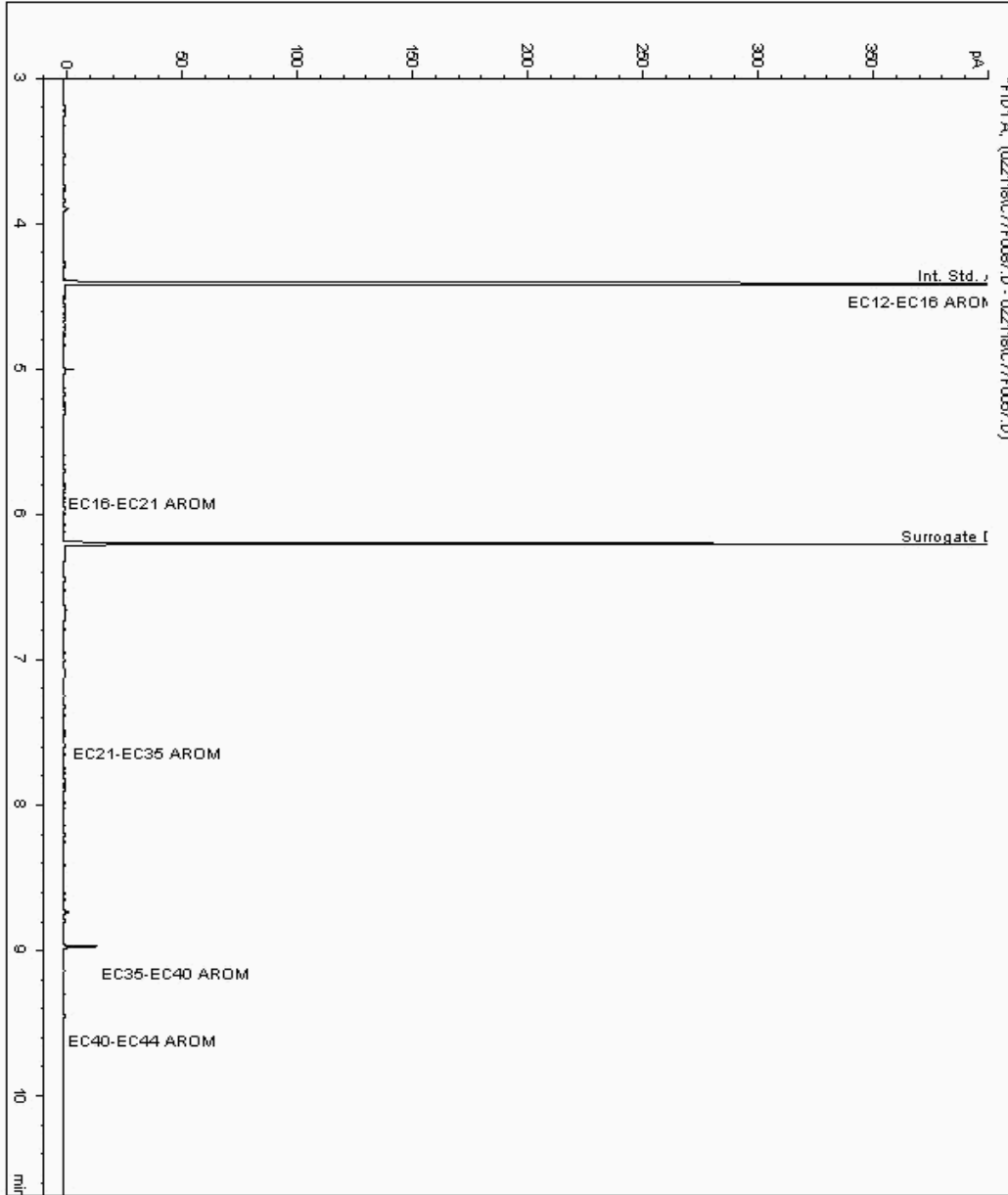
Analysis: EPH CWG (Aromatic) GC (S)

Sample No : 17070030
Sample ID : WS103

Depth : 0.25 - 0.25

Speciated TPH - AROM (C12 - C40)

Sample Identity: 16018186-
Date Acquired : 2/22/2018 12:19:03 PM
Units : ppb
Dilution:





CERTIFICATE OF ANALYSIS

Validated

SDG: 180216-85 Client Reference: 70020138 Report Number: 446420
Location: Former Interbrew Site, Glo Order Number: 70020138-006 Superseded Report: 446021

Chromatogram

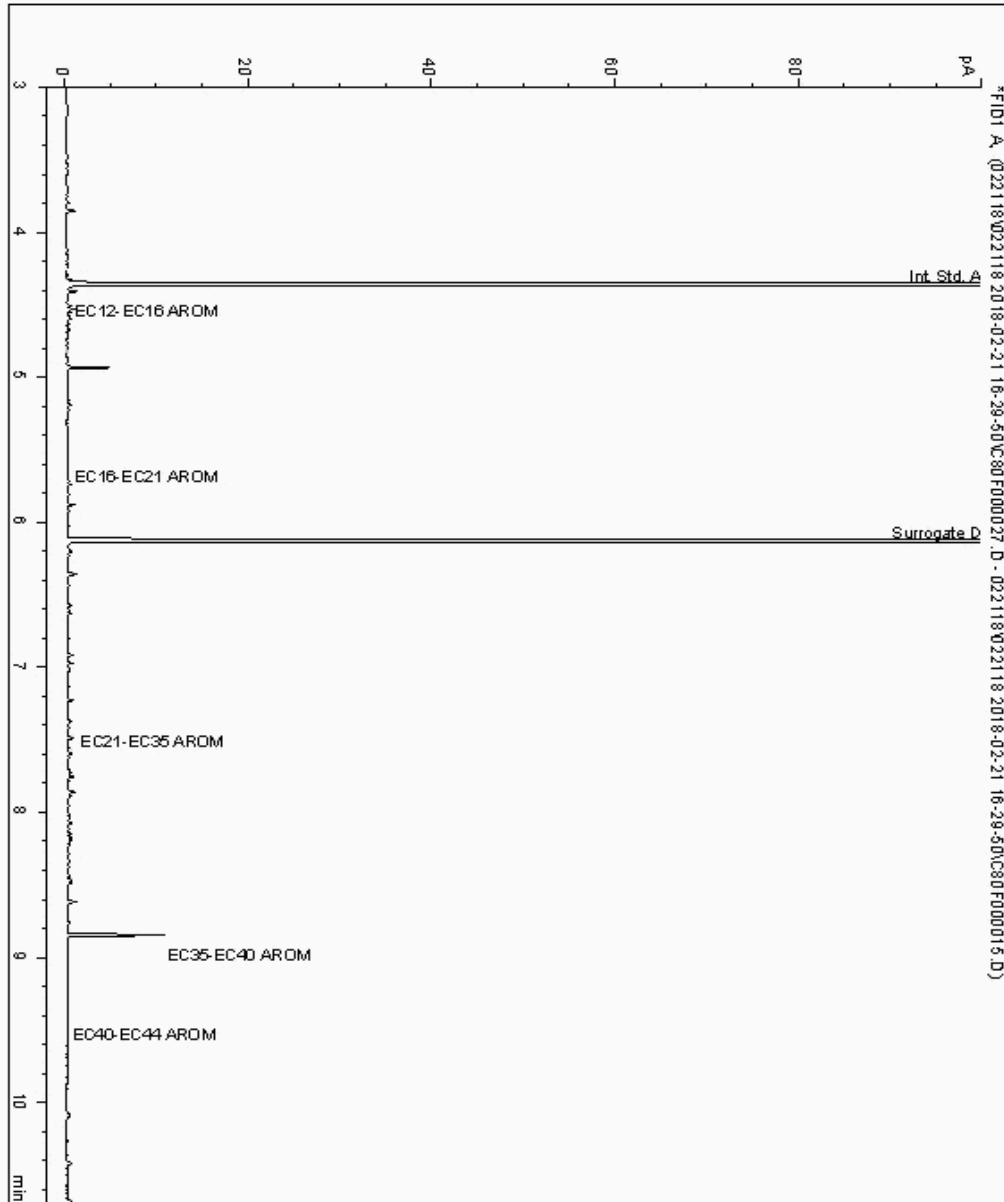
Analysis: EPH CWG (Aromatic) GC (S)

Sample No : 17070401
Sample ID : WS101

Depth : 0.30 - 0.45

Speciated TPH - AROMS (C12 - C44)

Sample Identity: 16018125-
Date Acquired : 21/02/18 22:55:29
Units : ppb
Dilution :
CF : 1
Multiplier : 1.040





CERTIFICATE OF ANALYSIS

Validated

SDG:	180216-85	Client Reference:	70020138	Report Number:	446420
Location:	Former Interbrew Site, Glo	Order Number:	70020138-006	Superseded Report:	446021

Chromatogram

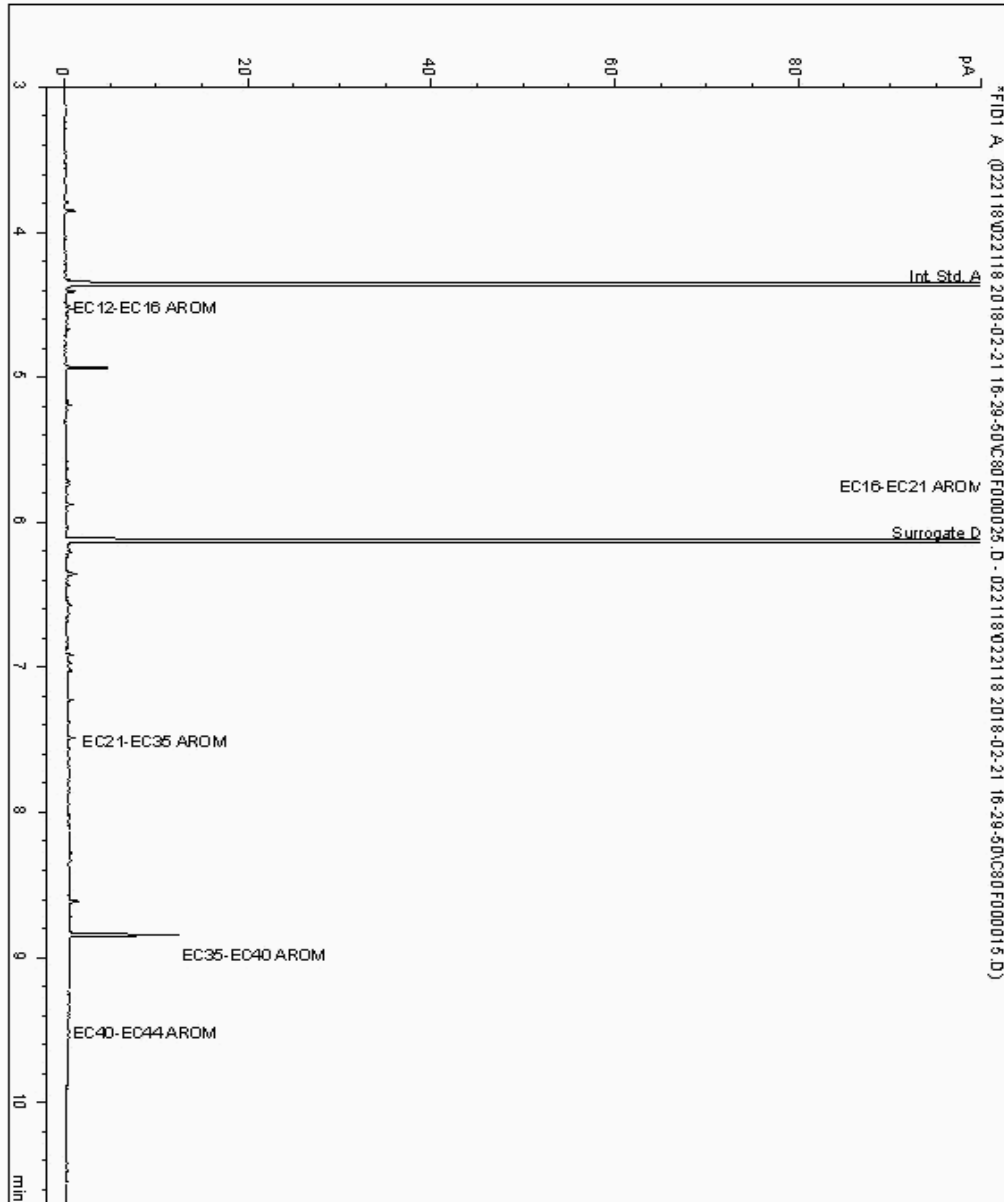
Analysis: EPH CWG (Aromatic) GC (S)

Sample No : 17070738
Sample ID : WS109

Depth : 1.20 - 1.20

Speciated TPH - AROMS (C12 - C44)

Sample Identity: 16018386-
Date Acquired : 21/02/18 22:15:01
Units : ppb
Dilution :
CF : 1
Multiplier : 1.020





CERTIFICATE OF ANALYSIS

Validated

SDG: 180216-85 Client Reference: 70020138 Report Number: 446420
Location: Former Interbrew Site, Glo Order Number: 70020138-006 Superseded Report: 446021

Chromatogram

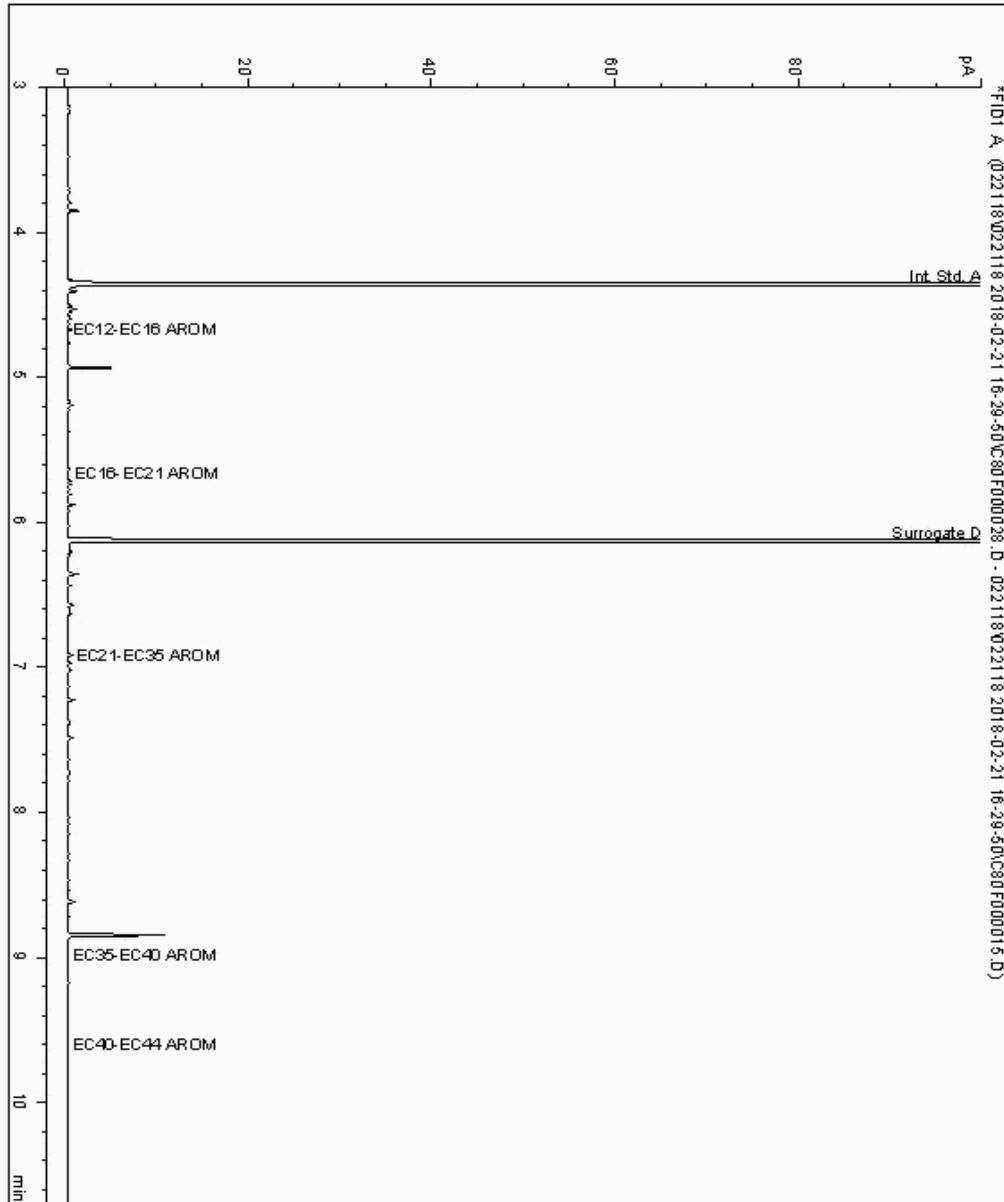
Analysis: EPH CWG (Aromatic) GC (S)

Sample No : 17071806
Sample ID : WS108

Depth : 1.05 - 1.05

Speciated TPH - AROMS (C12 - C44)

Sample Identity: 16018221-
Date Acquired : 21/02/18 23:15:40
Units : ppb
Dilution :
CF : 1
Multiplier : 1.030





CERTIFICATE OF ANALYSIS

Validated

SDG: 180216-85 Client Reference: 70020138 Report Number: 446420
Location: Former Interbrew Site, Glo Order Number: 70020138-006 Superseded Report: 446021

Chromatogram

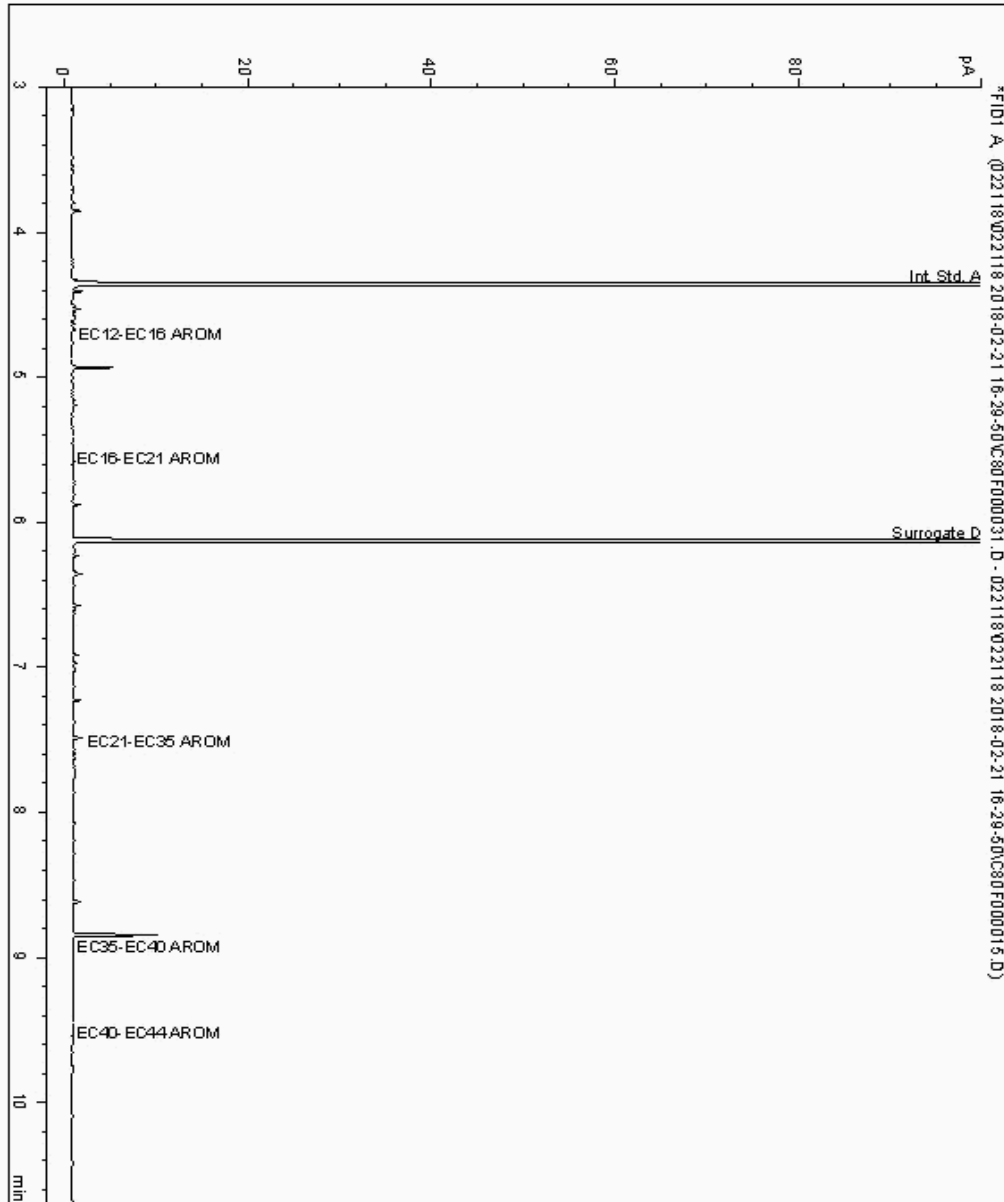
Analysis: EPH CWG (Aromatic) GC (S)

Sample No : 17072202
Sample ID : BH101

Depth : 0.60 - 0.60

Speciated TPH - AROMS (C12 - C44)

Sample Identity: 16017930-
Date Acquired : 22/02/18 00:15:48
Units : ppb
Dilution :
CF : 1
Multiplier : 0.970





CERTIFICATE OF ANALYSIS

Validated

SDG: 180216-85 Client Reference: 70020138 Report Number: 446420
Location: Former Interbrew Site, Glo Order Number: 70020138-006 Superseded Report: 446021

Chromatogram

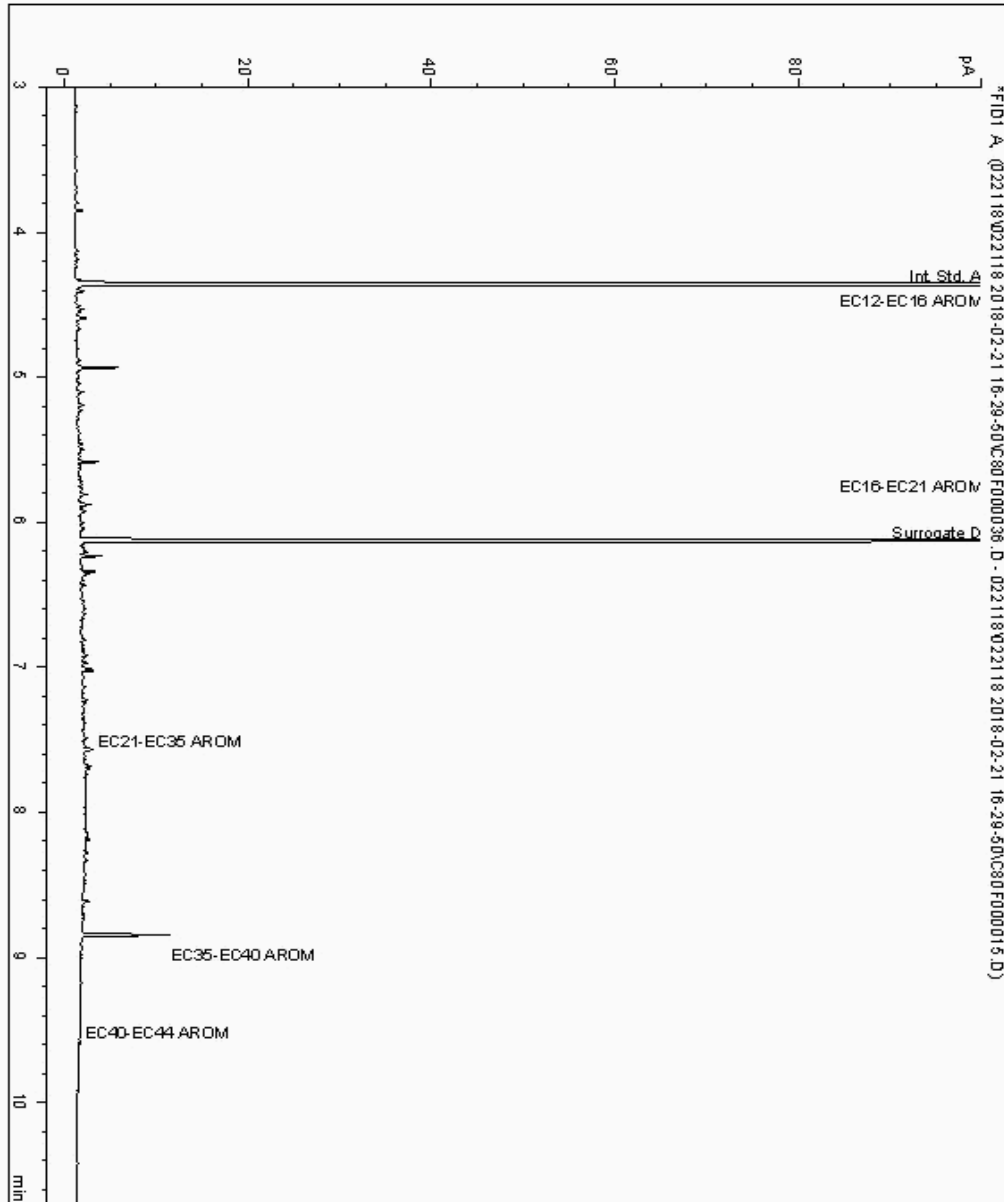
Analysis: EPH CWG (Aromatic) GC (S)

Sample No : 17072217
Sample ID : BH104

Depth : 0.50 - 0.50

Speciated TPH - AROMS (C12 - C44)

Sample Identity: 16018071-
Date Acquired : 22/02/18 01:48:02
Units : ppb
Dilution :
CF : 1
Multiplier : 0.990





CERTIFICATE OF ANALYSIS

Validated

SDG: 180216-85 Client Reference: 70020138 Report Number: 446420
Location: Former Interbrew Site, Glo Order Number: 70020138-006 Superseded Report: 446021

Chromatogram

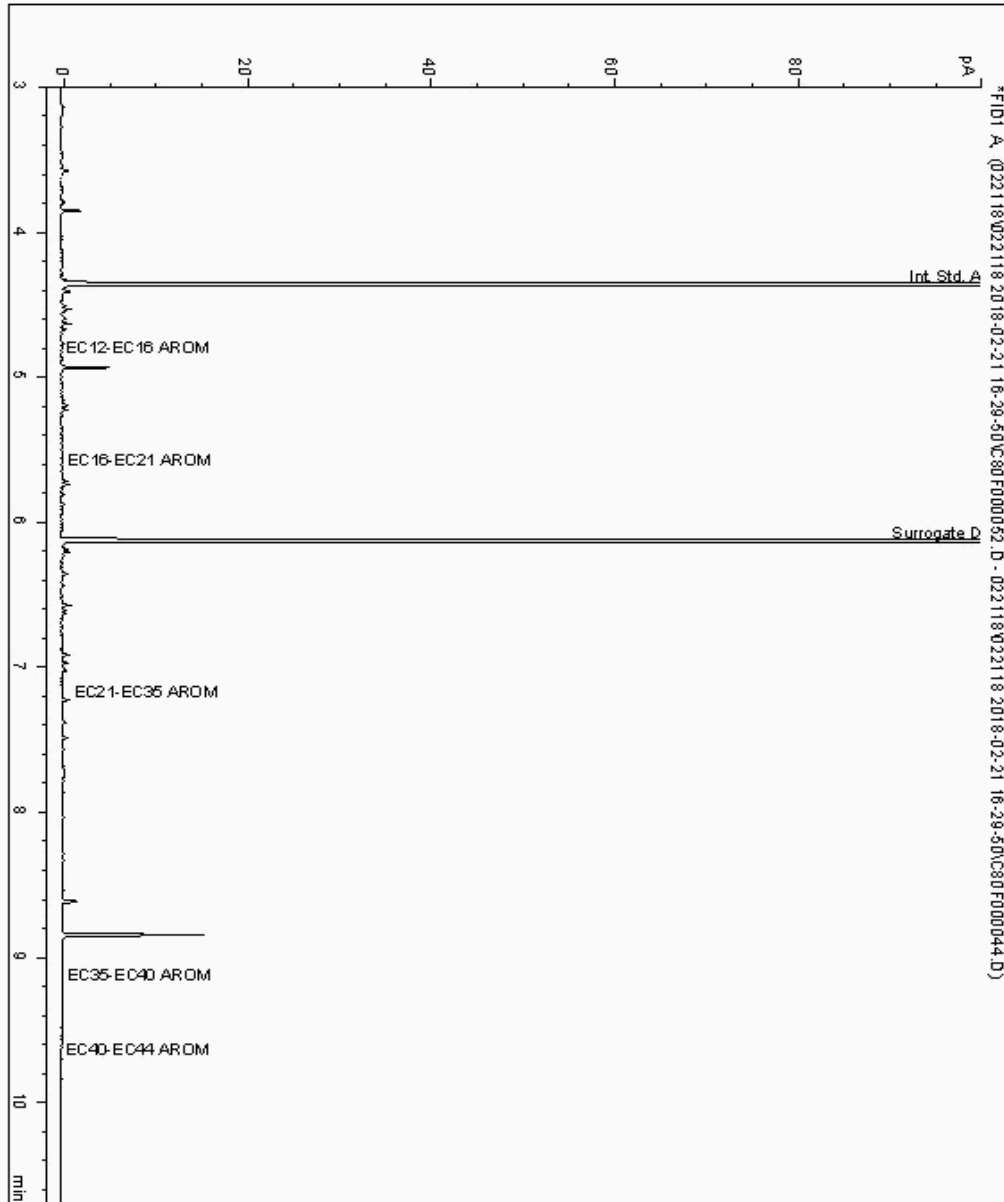
Analysis: EPH CWG (Aromatic) GC (S)

Sample No : 17075490
Sample ID : TP104

Depth : 0.50 - 0.50

Speciated TPH - AROMS (C12 - C44)

Sample Identity: 16018259-
Date Acquired : 22/02/18 06:29:40
Units : ppb
Dilution :
CF : 1
Multiplier : 0.960





CERTIFICATE OF ANALYSIS

Validated

SDG: 180216-85 Client Reference: 70020138 Report Number: 446420
Location: Former Interbrew Site, Glo Order Number: 70020138-006 Superseded Report: 446021

Chromatogram

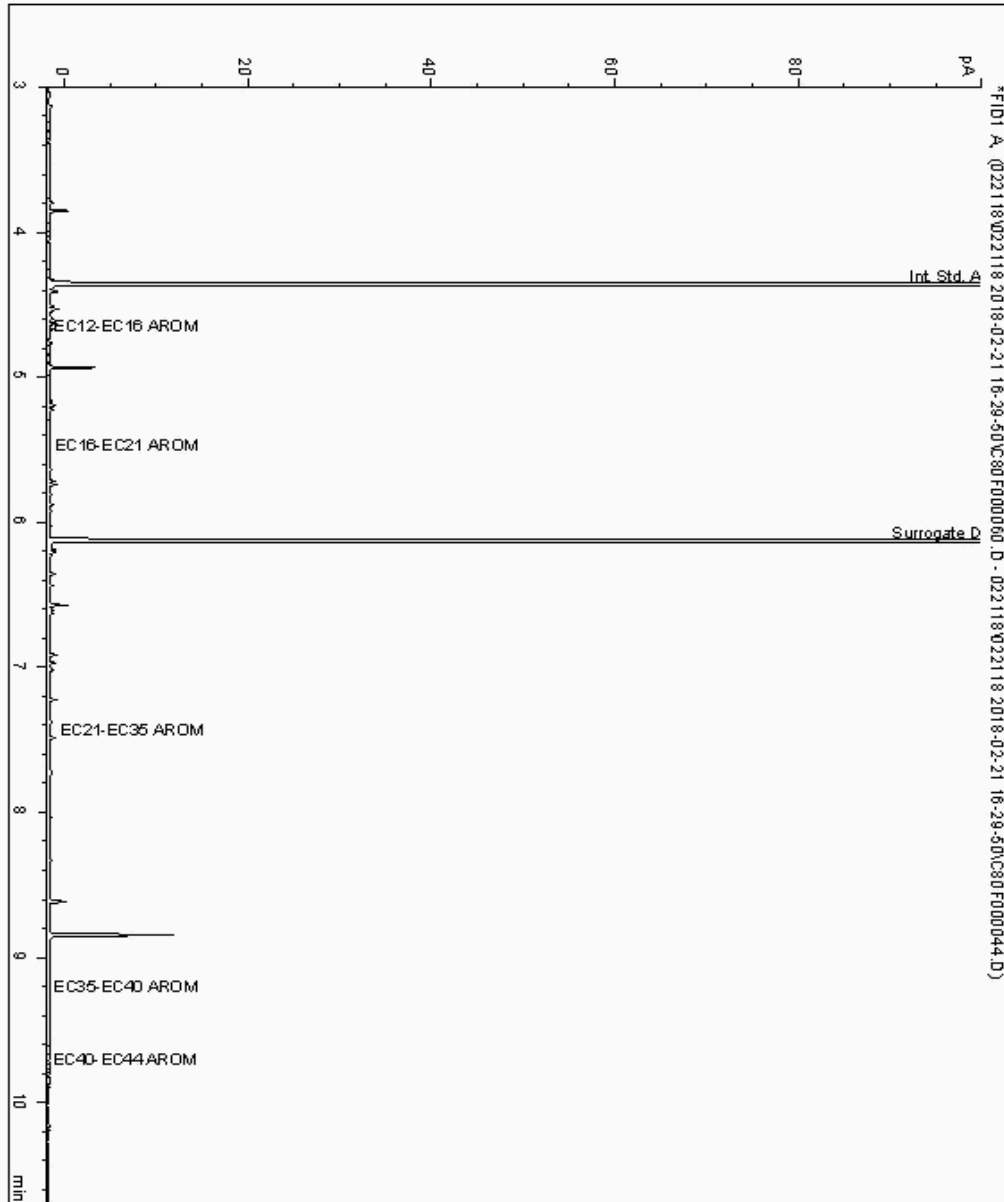
Analysis: EPH CWG (Aromatic) GC (S)

Sample No : 17075572
Sample ID : TP102

Depth : 0.40 - 0.40

Speciated TPH - AROMS (C12 - C44)

Sample Identity: 16018369-
Date Acquired : 22/02/18 08:53:56
Units : ppb
Dilution :
CF : 1
Multiplier : 0.980





CERTIFICATE OF ANALYSIS

Validated

SDG: 180216-85 Client Reference: 70020138 Report Number: 446420
Location: Former Interbrew Site, Glo Order Number: 70020138-006 Superseded Report: 446021

Chromatogram

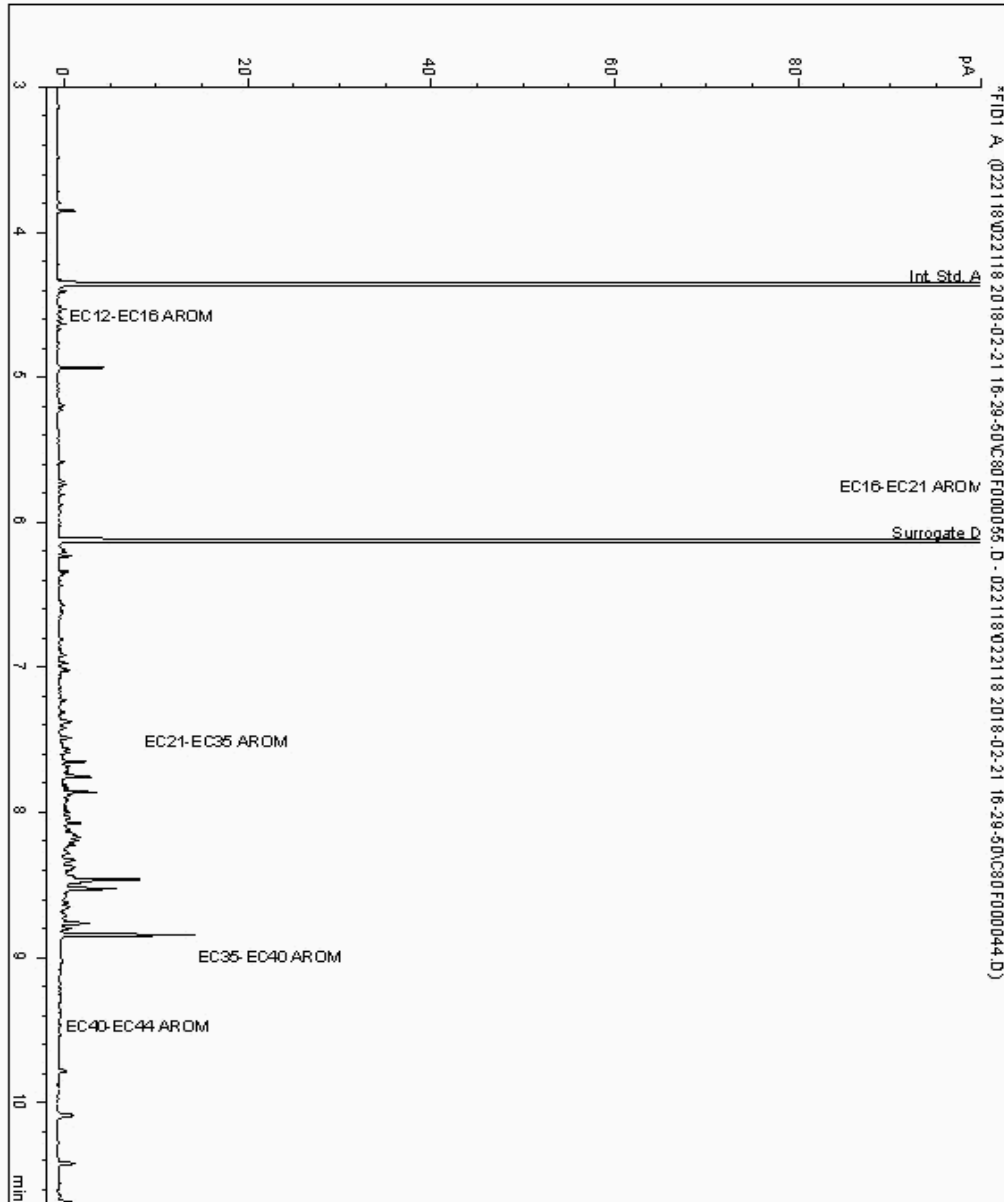
Analysis: EPH CWG (Aromatic) GC (S)

Sample No : 17075725
Sample ID : TP106

Depth : 1.00 - 1.00

Speciated TPH - AROMS (C12 - C44)

Sample Identity: 16018433-
Date Acquired : 22/02/18 07:29:55
Units : ppb
Dilution :
CF : 1
Multiplier : 1.020





CERTIFICATE OF ANALYSIS

Validated

SDG: 180216-85 Client Reference: 70020138 Report Number: 446420
Location: Former Interbrew Site, Glo Order Number: 70020138-006 Superseded Report: 446021

Chromatogram

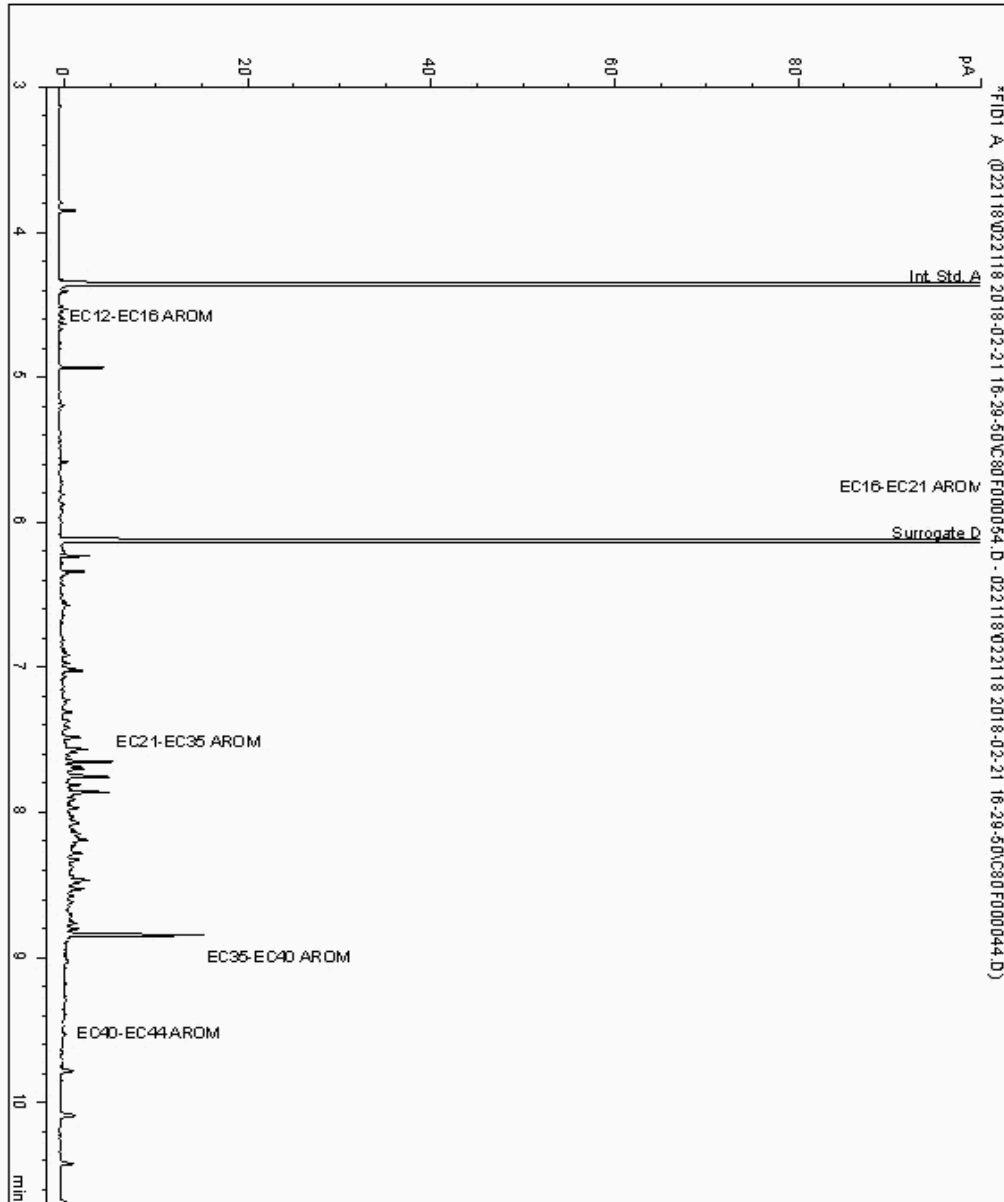
Analysis: EPH CWG (Aromatic) GC (S)

Sample No : 17075806
Sample ID : WS110

Depth : 1.05 - 1.05

Speciated TPH - AROMS (C12 - C44)

Sample Identity: 16018404-
Date Acquired : 22/02/18 07:09:57
Units : ppb
Dilution :
CF : 1
Multiplier : 1.030





CERTIFICATE OF ANALYSIS

Validated

SDG: 180216-85 Client Reference: 70020138 Report Number: 446420
Location: Former Interbrew Site, Glo Order Number: 70020138-006 Superseded Report: 446021

Chromatogram

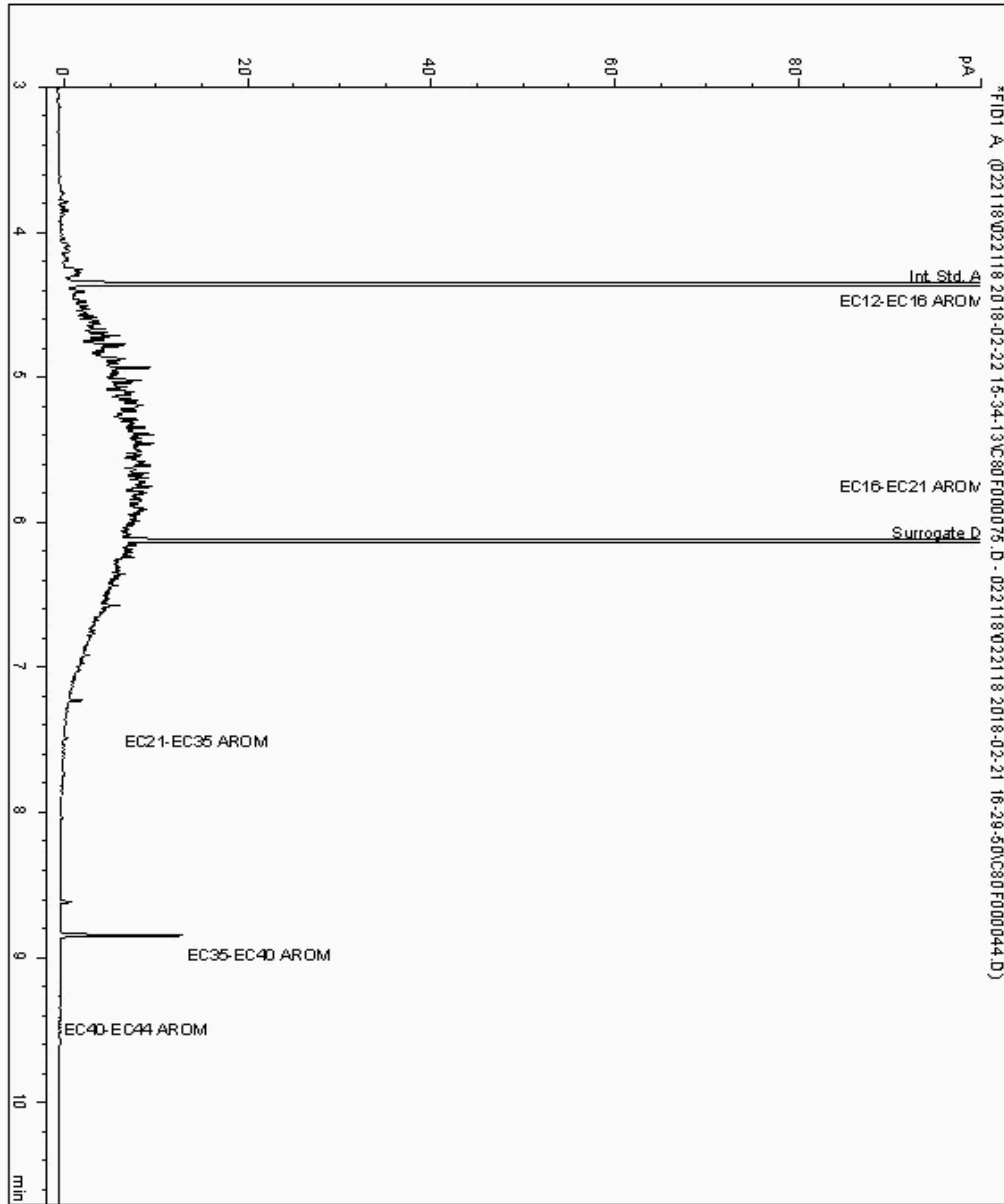
Analysis: EPH CWG (Aromatic) GC (S)

Sample No : 17076832
Sample ID : TP103

Depth : 0.80 - 0.80

Speciated TPH - AROMS (C12 - C44)

Sample Identity: 16018235-
Date Acquired : 22/02/18 23:51:41
Units : ppb
Dilution :
CF : 1
Multiplier : 1.050





CERTIFICATE OF ANALYSIS

Validated

SDG: 180216-85 Client Reference: 70020138 Report Number: 446420
Location: Former Interbrew Site, Glo Order Number: 70020138-006 Superseded Report: 446021

Chromatogram

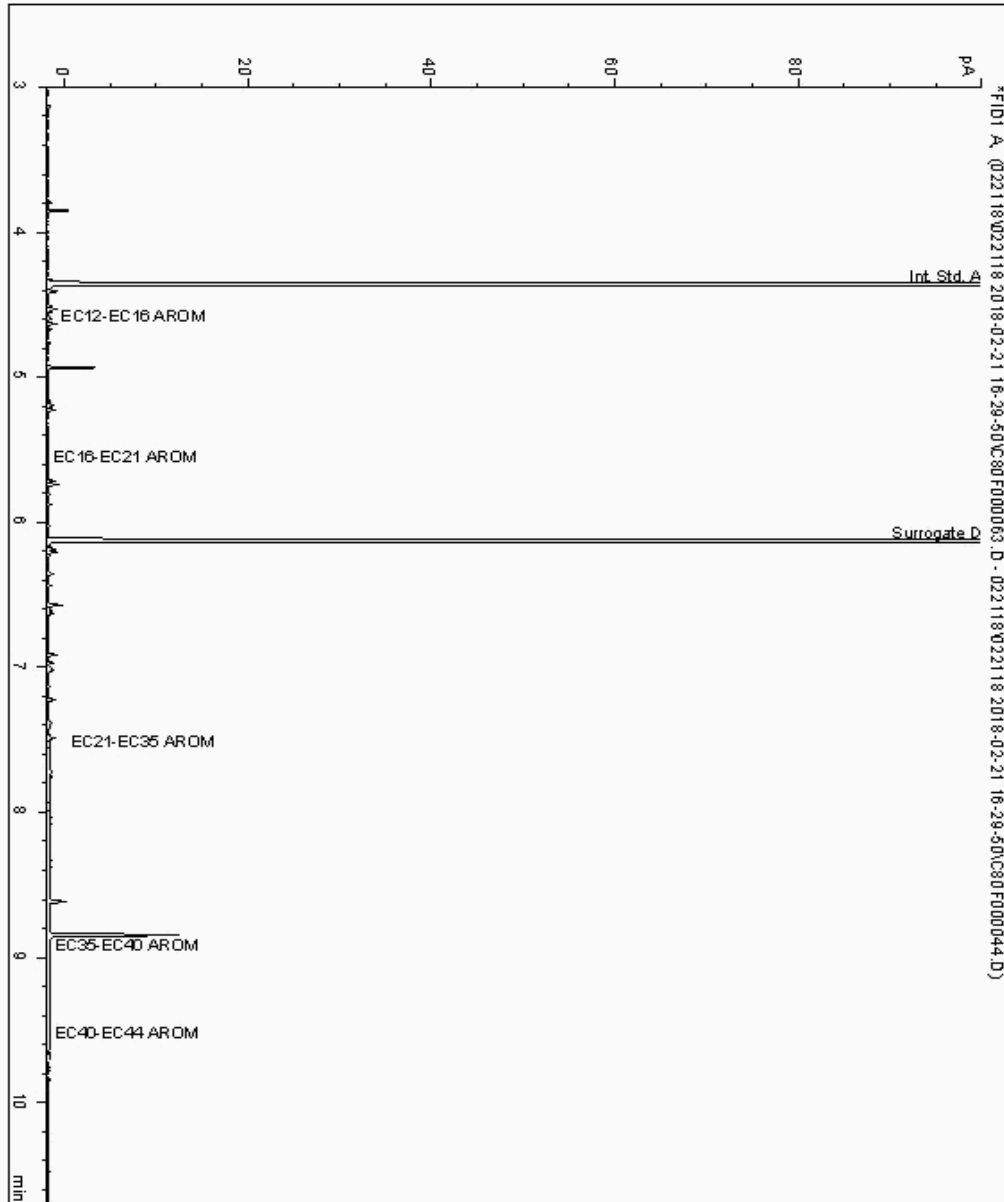
Analysis: EPH CWG (Aromatic) GC (S)

Sample No : 17076955
Sample ID : HP102

Depth : 0.30 - 0.30

Speciated TPH - AROMS (C12 - C44)

Sample Identity: 16018297-
Date Acquired : 22/02/18 09:45:16
Units : ppb
Dilution :
CF : 1
Multiplier : 1.030





CERTIFICATE OF ANALYSIS

Validated

SDG: 180216-85 Client Reference: 70020138 Report Number: 446420
Location: Former Interbrew Site, Glo Order Number: 70020138-006 Superseded Report: 446021

Chromatogram

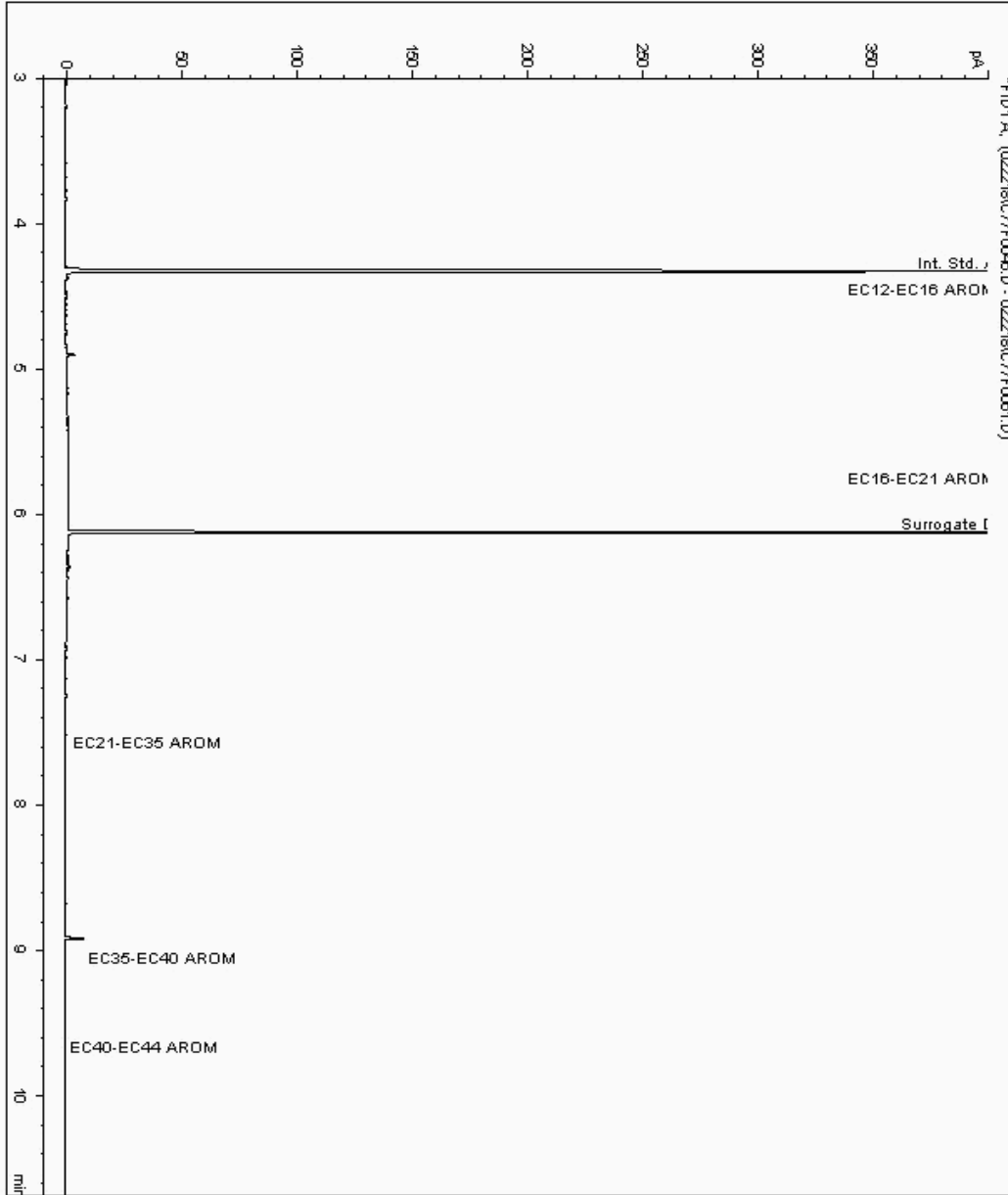
Analysis: EPH CWG (Aromatic) GC (S)

Sample No : 17076959
Sample ID : TP103

Depth : 1.00 - 1.00

Speciated TPH - SATS (C12 - C40)

Sample Identity: 16018246-
Date Acquired : 22/02/2018 19:24:06 PM
Units : ppb
Dilution:





CERTIFICATE OF ANALYSIS

Validated

SDG: 180216-85 Client Reference: 70020138 Report Number: 446420
Location: Former Interbrew Site, Glo Order Number: 70020138-006 Superseded Report: 446021

Chromatogram

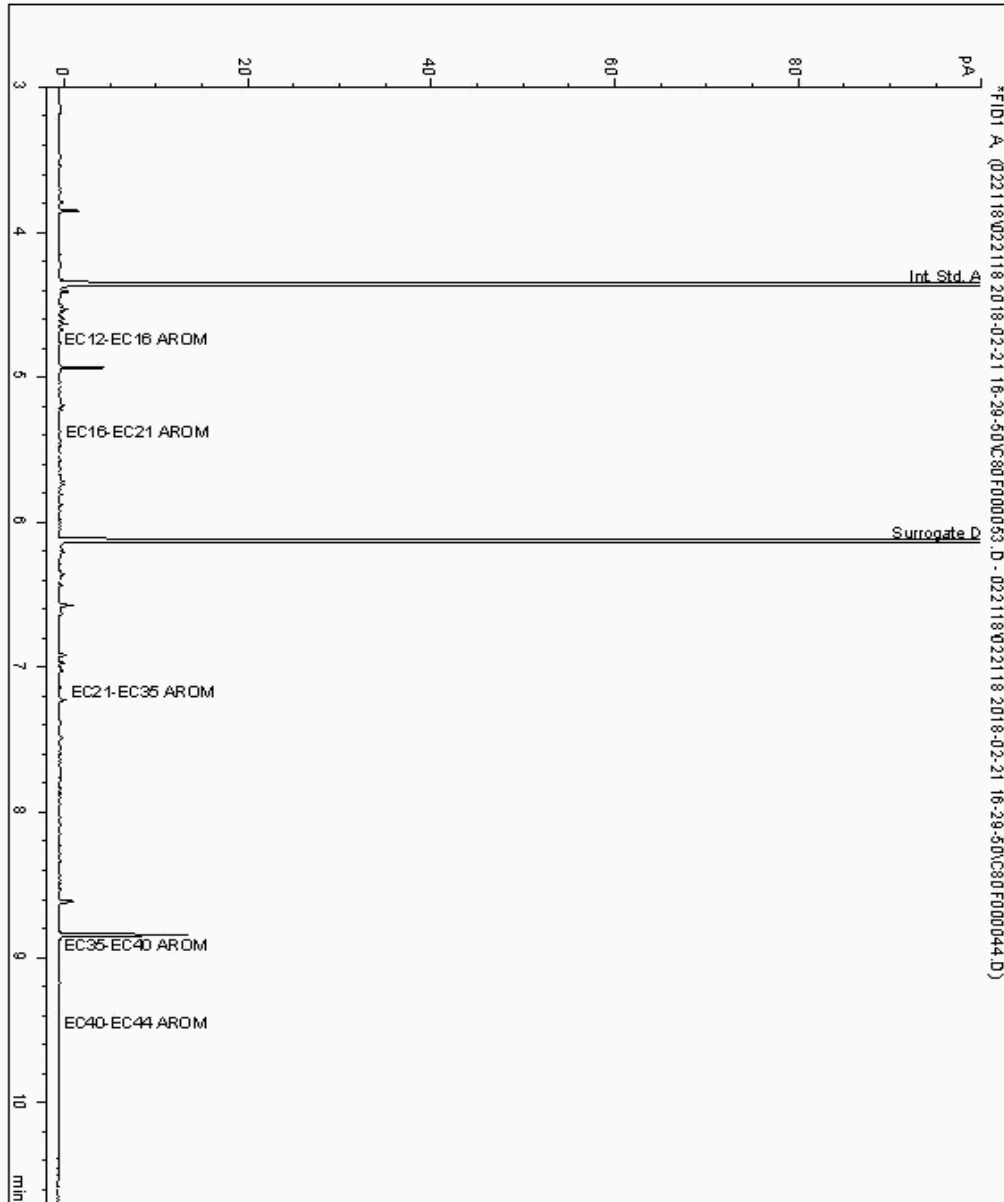
Analysis: EPH CWG (Aromatic) GC (S)

Sample No : 17076964
Sample ID : HP102

Depth : 0.60 - 0.60

Speciated TPH - AROMS (C12 - C44)

Sample Identity: 16018344-
Date Acquired : 22/02/18 06:49:57
Units : ppb
Dilution :
CF : 1
Multiplier : 0.970





CERTIFICATE OF ANALYSIS

Validated

SDG:	180216-85	Client Reference:	70020138	Report Number:	446420
Location:	Former Interbrew Site, Glo	Order Number:	70020138-006	Superseded Report:	446021

Chromatogram

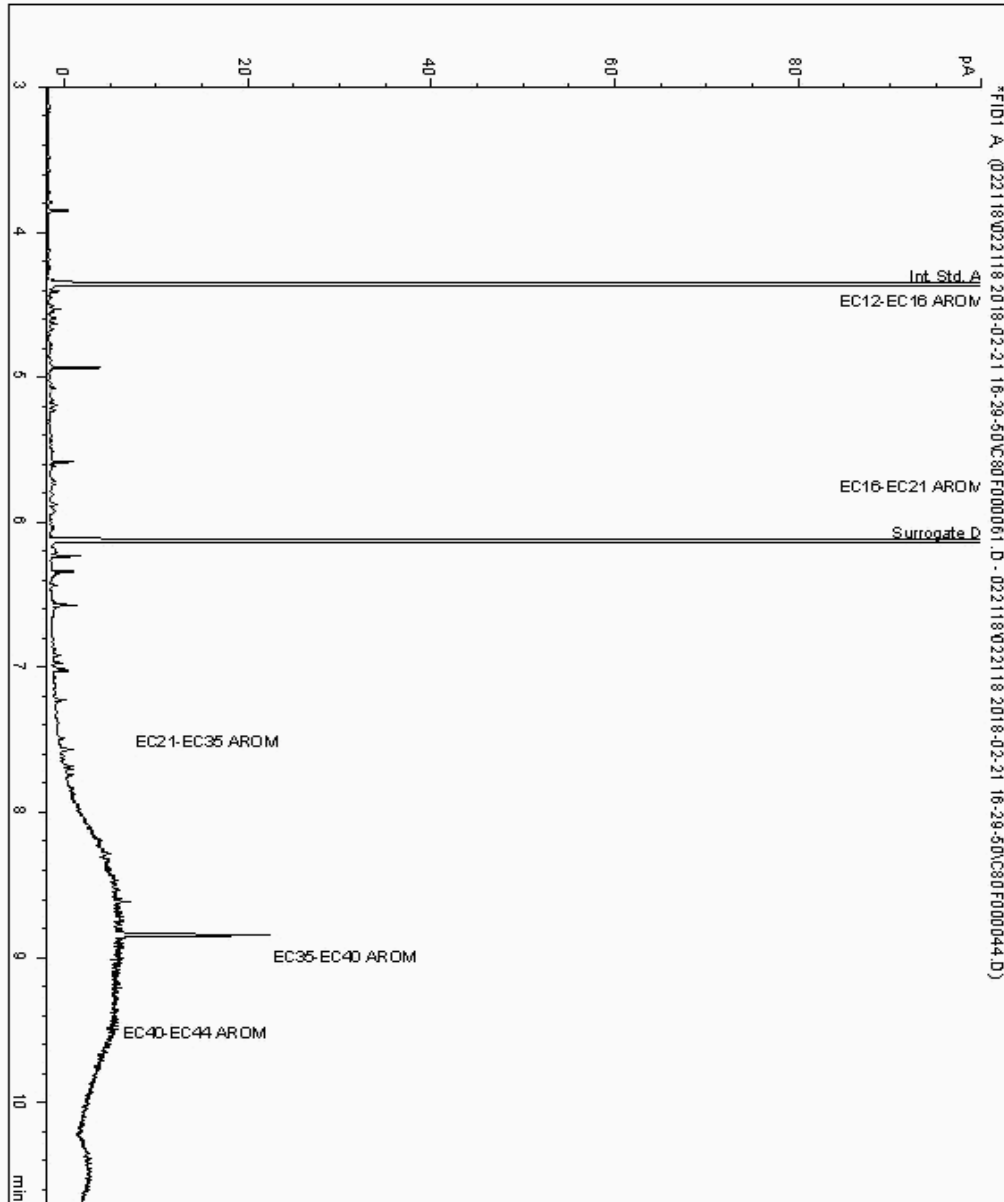
Analysis: EPH CWG (Aromatic) GC (S)

Sample No : 17076971
Sample ID : HP101

Depth : 0.30 - 0.30

Speciated TPH - AROMS (C12 - C44)

Sample Identity: 16018273-
Date Acquired : 22/02/18 09:14:06
Units : ppb
Dilution :
CF : 1
Multiplier : 0.990





CERTIFICATE OF ANALYSIS

Validated

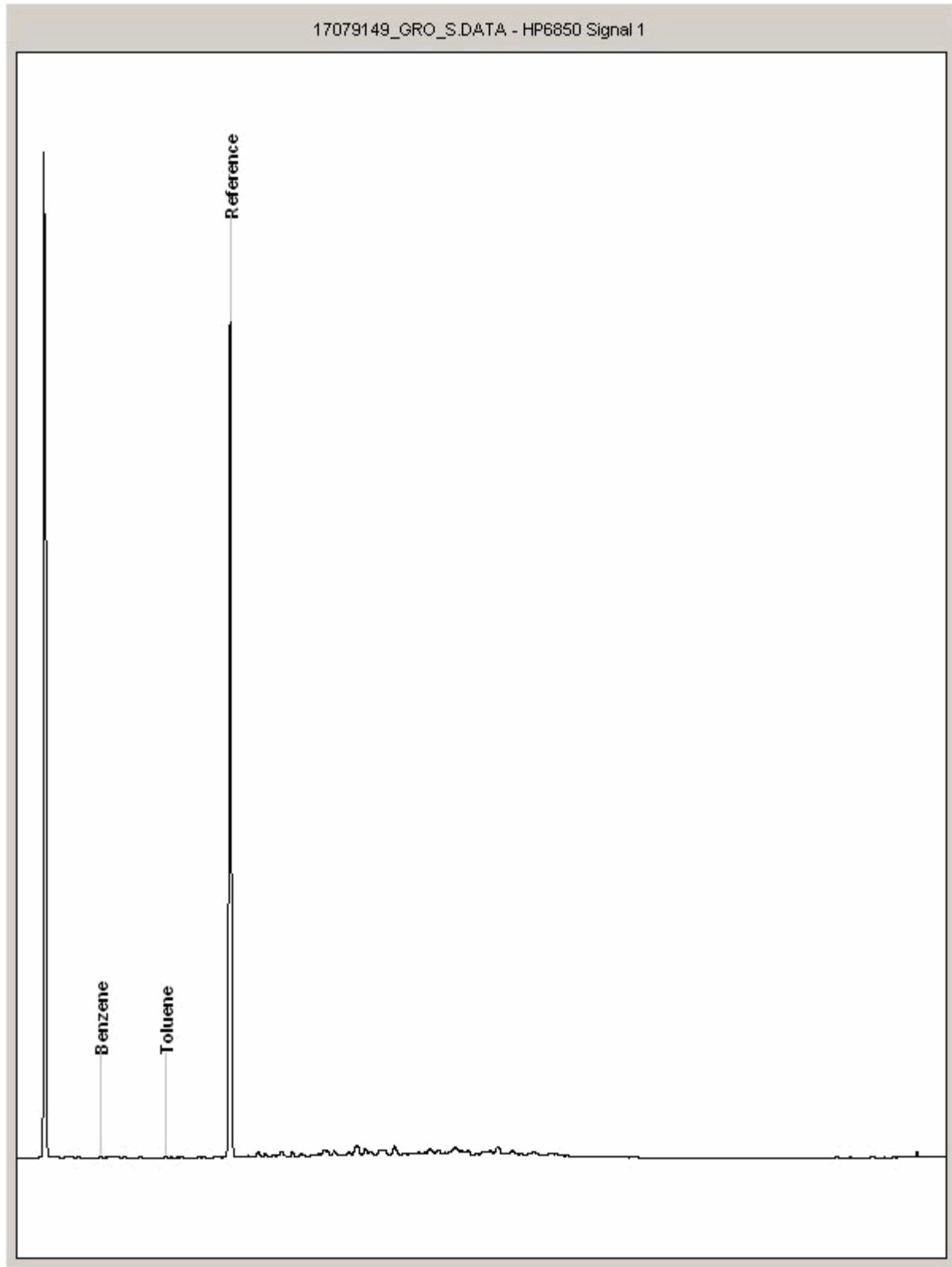
SDG:	180216-85	Client Reference:	70020138	Report Number:	446420
Location:	Former Interbrew Site, Glo	Order Number:	70020138-006	Superseded Report:	446021

Chromatogram

Analysis: GRO by GC-FID (S)

Sample No : 17079149
Sample ID : WS109

Depth : 1.20 - 1.20





CERTIFICATE OF ANALYSIS

Validated

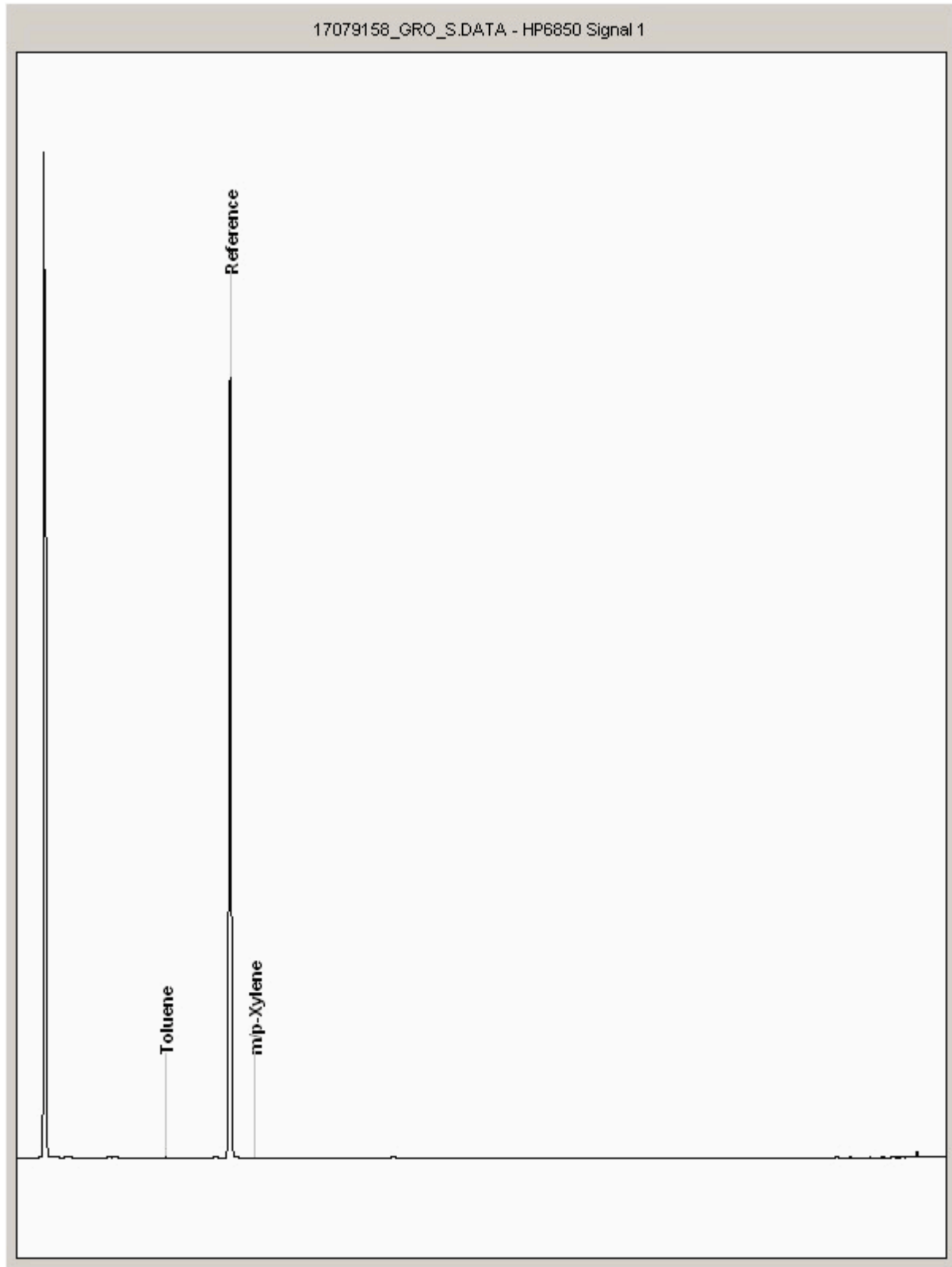
SDG:	180216-85	Client Reference:	70020138	Report Number:	446420
Location:	Former Interbrew Site, Glo	Order Number:	70020138-006	Superseded Report:	446021

Chromatogram

Analysis: GRO by GC-FID (S)

Sample No : 17079158
Sample ID : WS108

Depth : 1.05 - 1.05





CERTIFICATE OF ANALYSIS

Validated

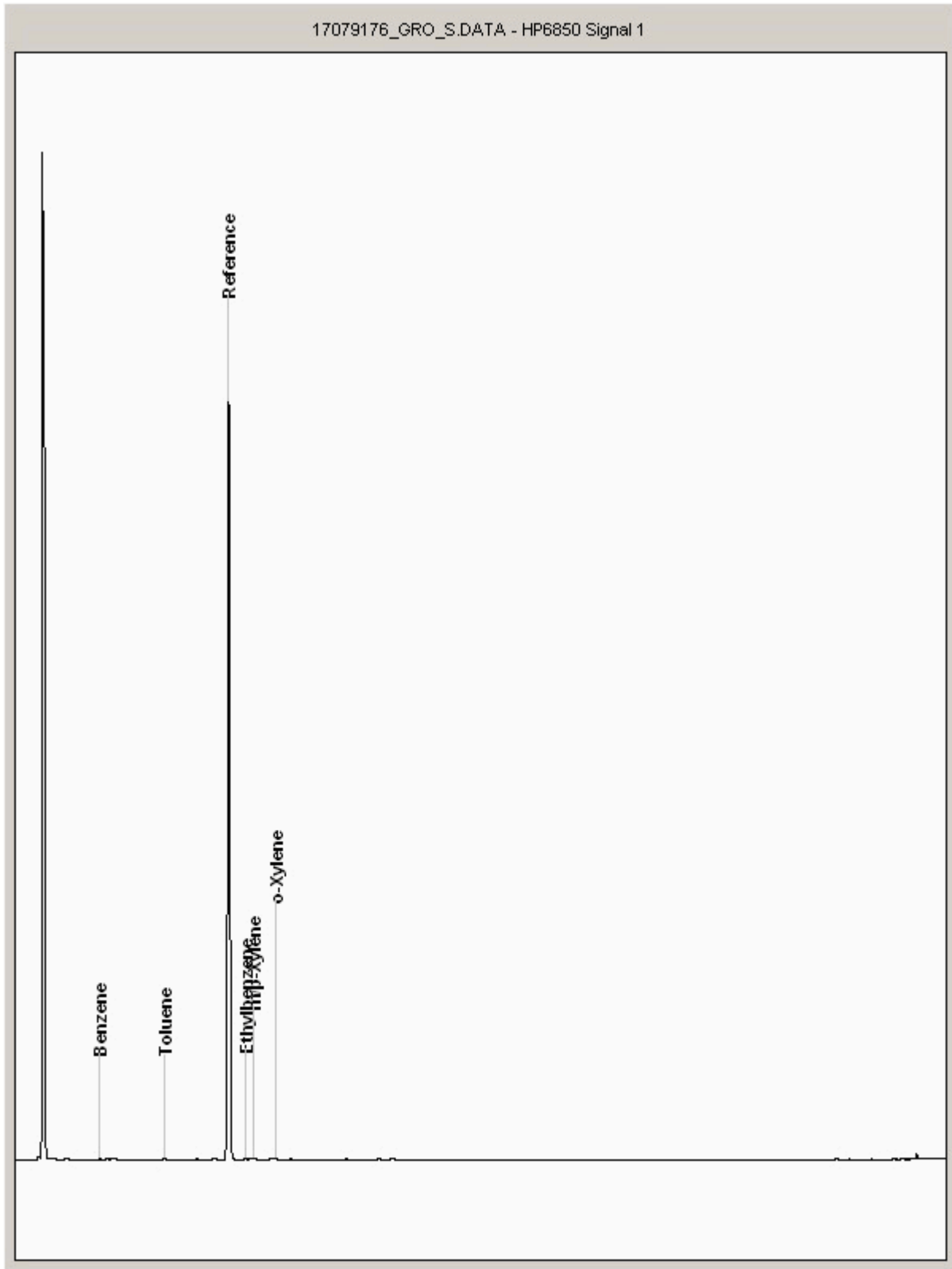
SDG:	180216-85	Client Reference:	70020138	Report Number:	446420
Location:	Former Interbrew Site, Glo	Order Number:	70020138-006	Superseded Report:	446021

Chromatogram

Analysis: GRO by GC-FID (S)

Sample No : 17079176
Sample ID : WS106

Depth : 0.60 - 0.60





CERTIFICATE OF ANALYSIS

Validated

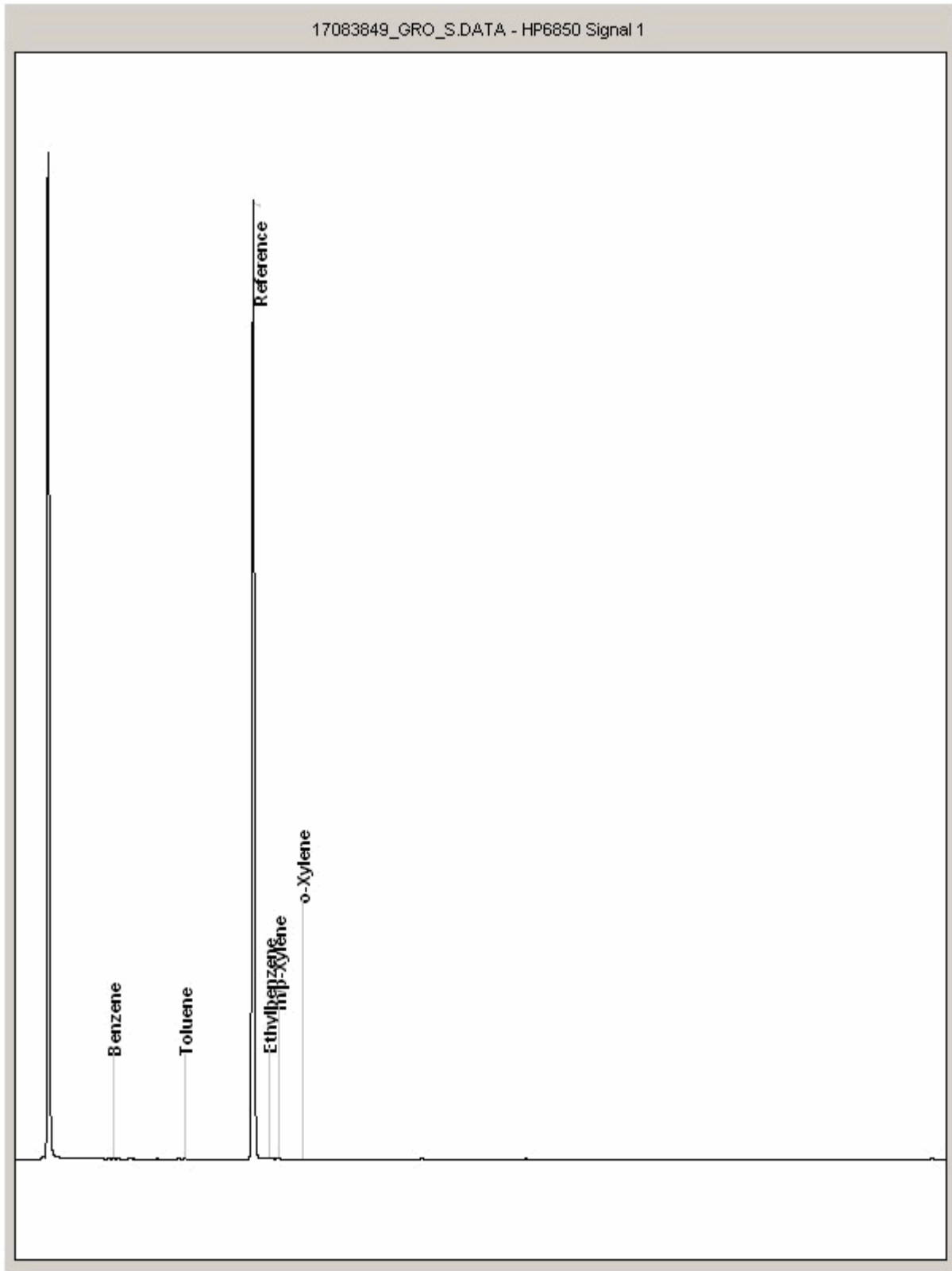
SDG:	180216-85	Client Reference:	70020138	Report Number:	446420
Location:	Former Interbrew Site, Glo	Order Number:	70020138-006	Superseded Report:	446021

Chromatogram

Analysis: GRO by GC-FID (S)

Sample No : 17083849
Sample ID : TP104

Depth : 0.50 - 0.50





CERTIFICATE OF ANALYSIS

Validated

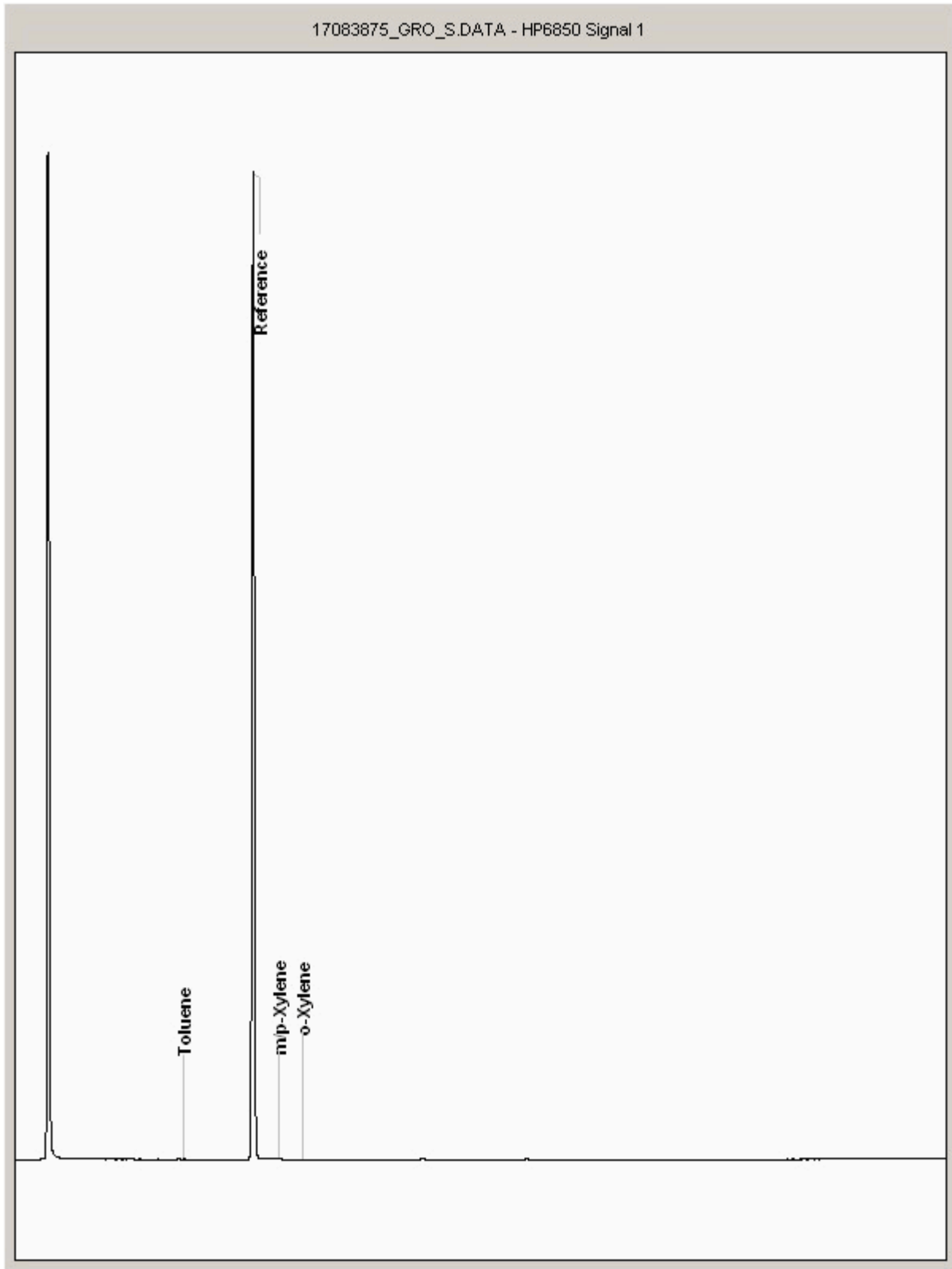
SDG:	180216-85	Client Reference:	70020138	Report Number:	446420
Location:	Former Interbrew Site, Glo	Order Number:	70020138-006	Superseded Report:	446021

Chromatogram

Analysis: GRO by GC-FID (S)

Sample No : 17083875
Sample ID : TP102

Depth : 0.40 - 0.40





CERTIFICATE OF ANALYSIS

Validated

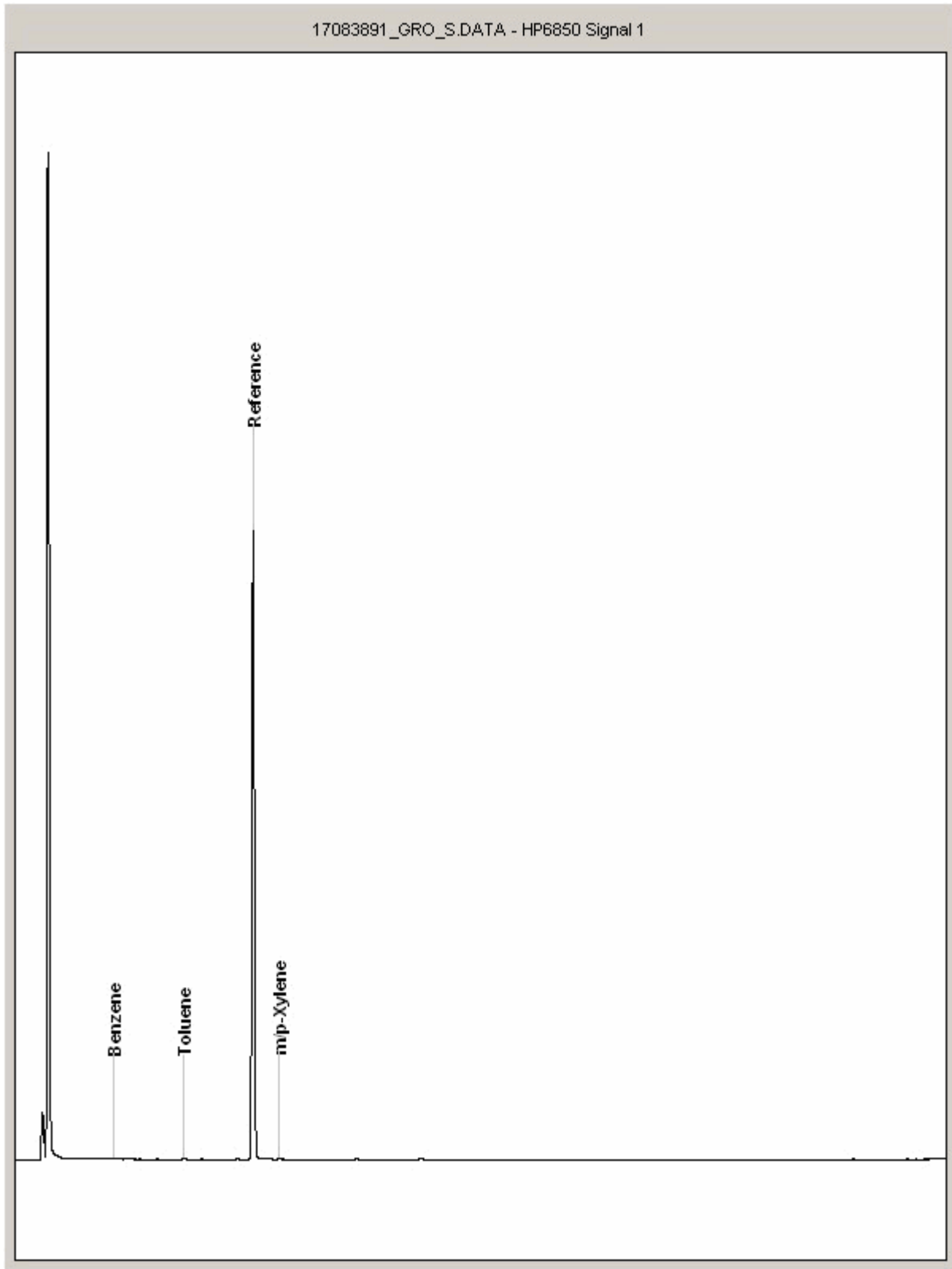
SDG:	180216-85	Client Reference:	70020138	Report Number:	446420
Location:	Former Interbrew Site, Glo	Order Number:	70020138-006	Superseded Report:	446021

Chromatogram

Analysis: GRO by GC-FID (S)

Sample No : 17083891
Sample ID : TP106

Depth : 1.00 - 1.00





CERTIFICATE OF ANALYSIS

Validated

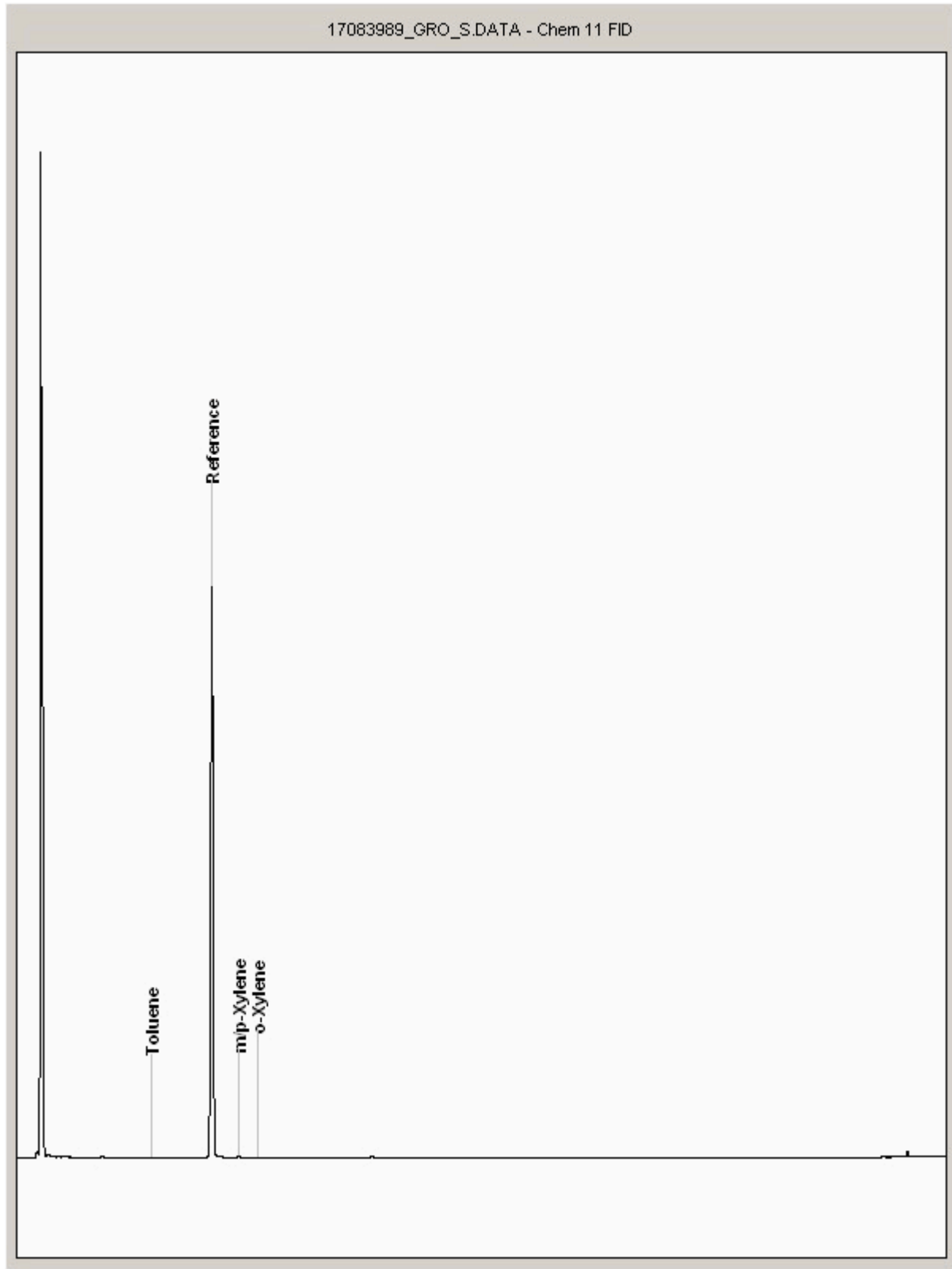
SDG:	180216-85	Client Reference:	70020138	Report Number:	446420
Location:	Former Interbrew Site, Glo	Order Number:	70020138-006	Superseded Report:	446021

Chromatogram

Analysis: GRO by GC-FID (S)

Sample No : 17083989
Sample ID : BH103

Depth : 0.75 - 0.75





CERTIFICATE OF ANALYSIS

Validated

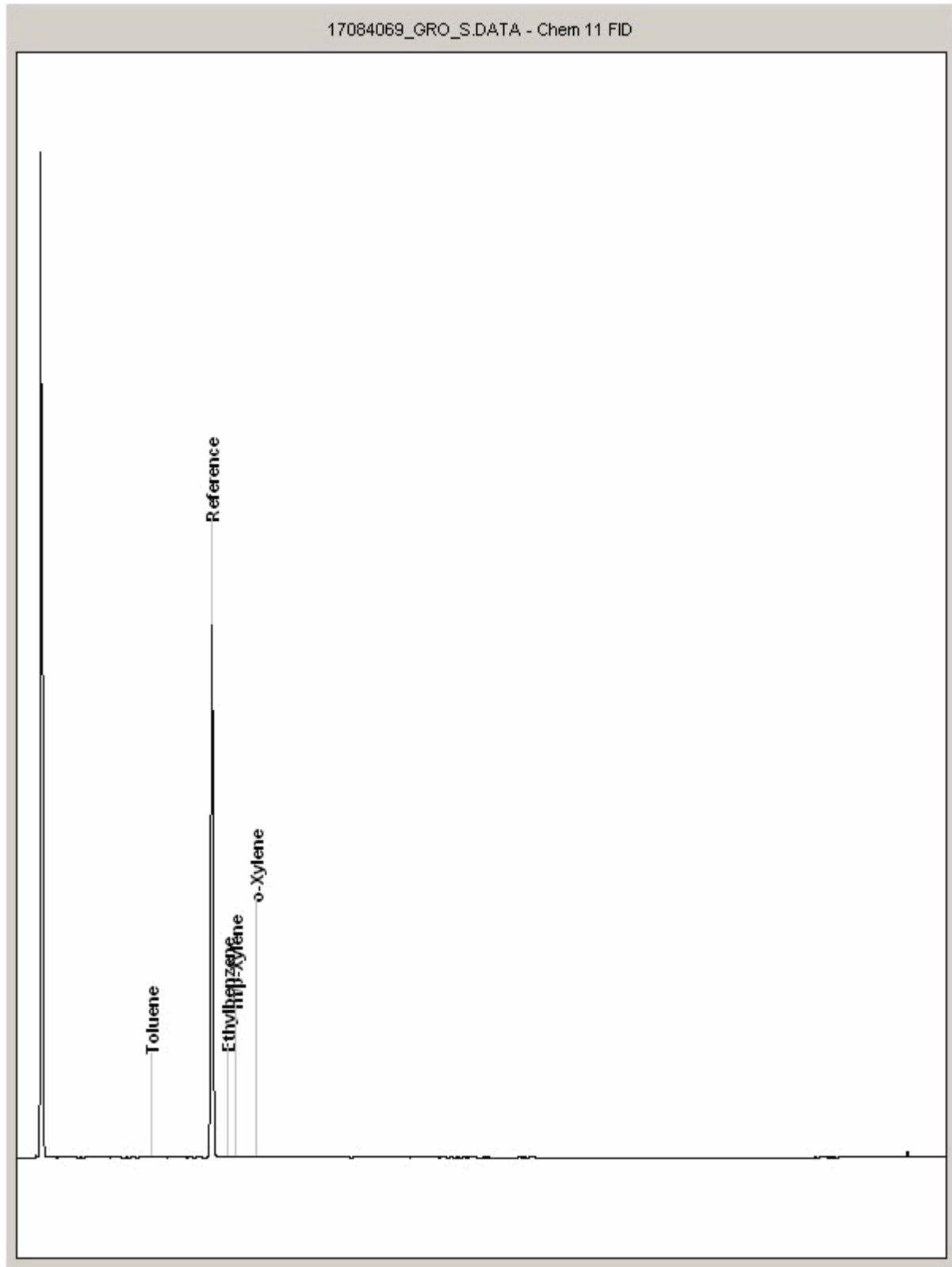
SDG:	180216-85	Client Reference:	70020138	Report Number:	446420
Location:	Former Interbrew Site, Glo	Order Number:	70020138-006	Superseded Report:	446021

Chromatogram

Analysis: GRO by GC-FID (S)

Sample No : 17084069
Sample ID : BH103

Depth : 0.30 - 0.40





CERTIFICATE OF ANALYSIS

Validated

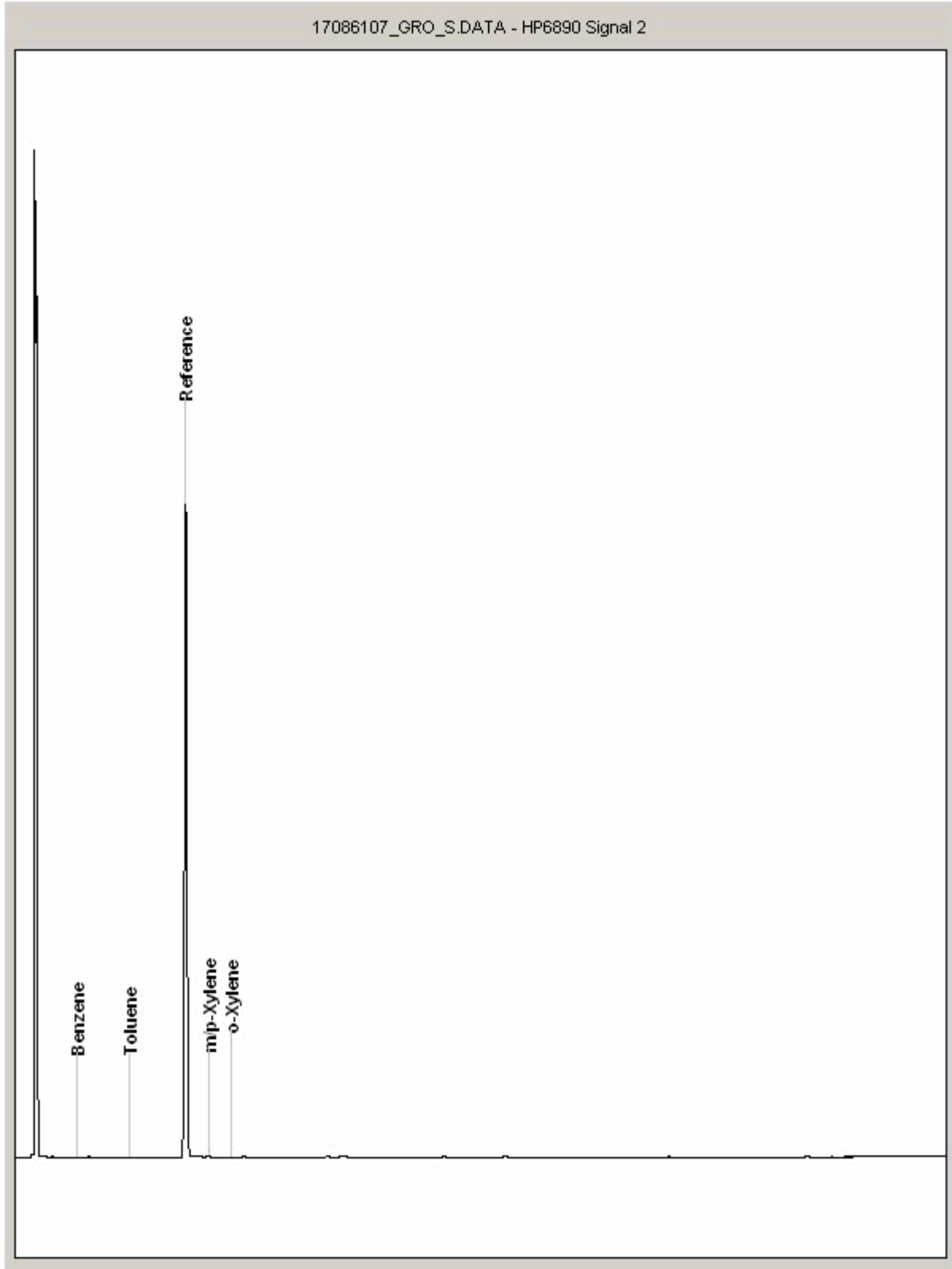
SDG:	180216-85	Client Reference:	70020138	Report Number:	446420
Location:	Former Interbrew Site, Glo	Order Number:	70020138-006	Superseded Report:	446021

Chromatogram

Analysis: GRO by GC-FID (S)

Sample No : 17086107
Sample ID : HP102

Depth : 0.30 - 0.30





CERTIFICATE OF ANALYSIS

Validated

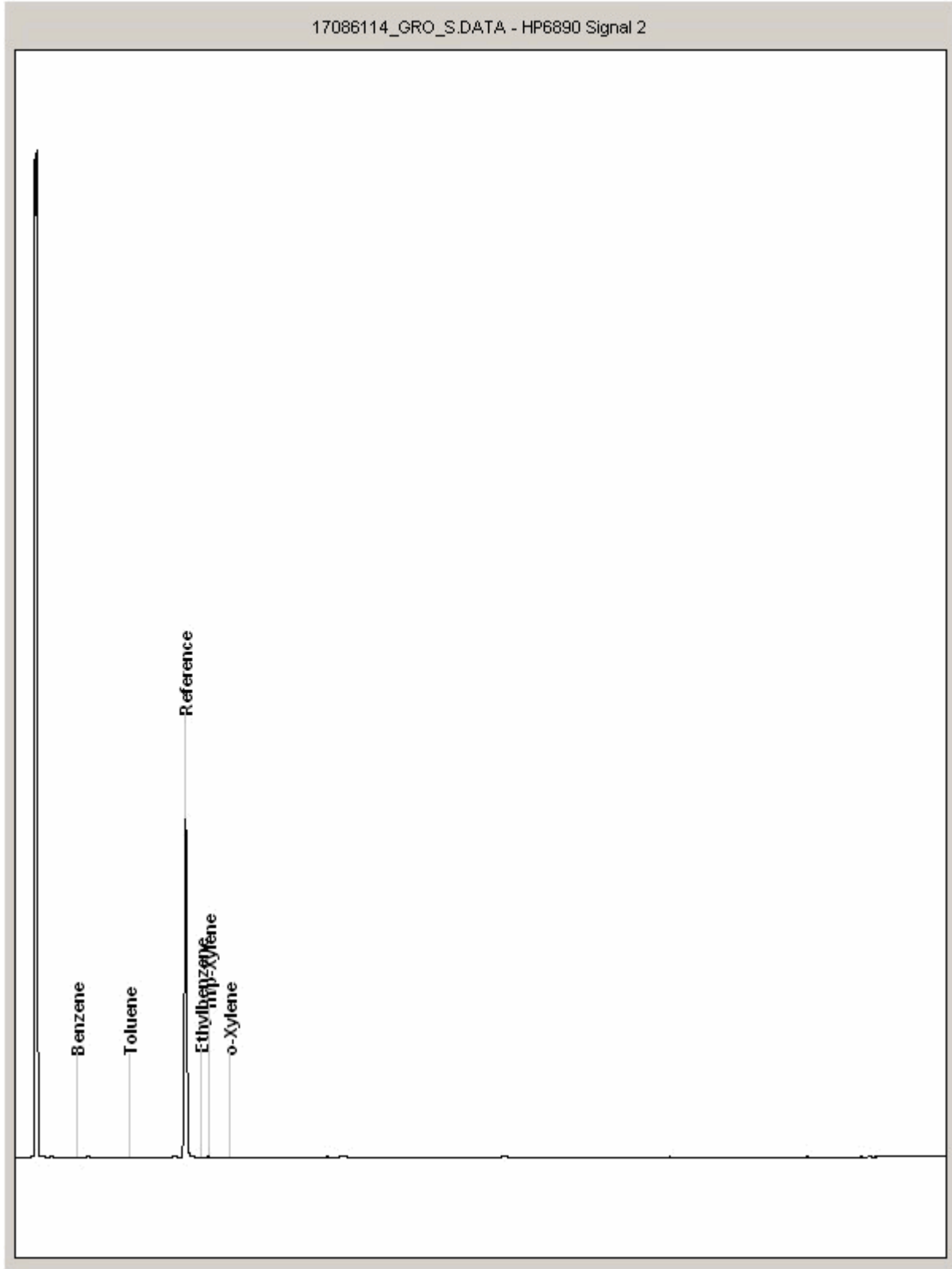
SDG:	180216-85	Client Reference:	70020138	Report Number:	446420
Location:	Former Interbrew Site, Glo	Order Number:	70020138-006	Superseded Report:	446021

Chromatogram

Analysis: GRO by GC-FID (S)

Sample No : 17086114
Sample ID : HP101

Depth : 0.30 - 0.30





CERTIFICATE OF ANALYSIS

Validated

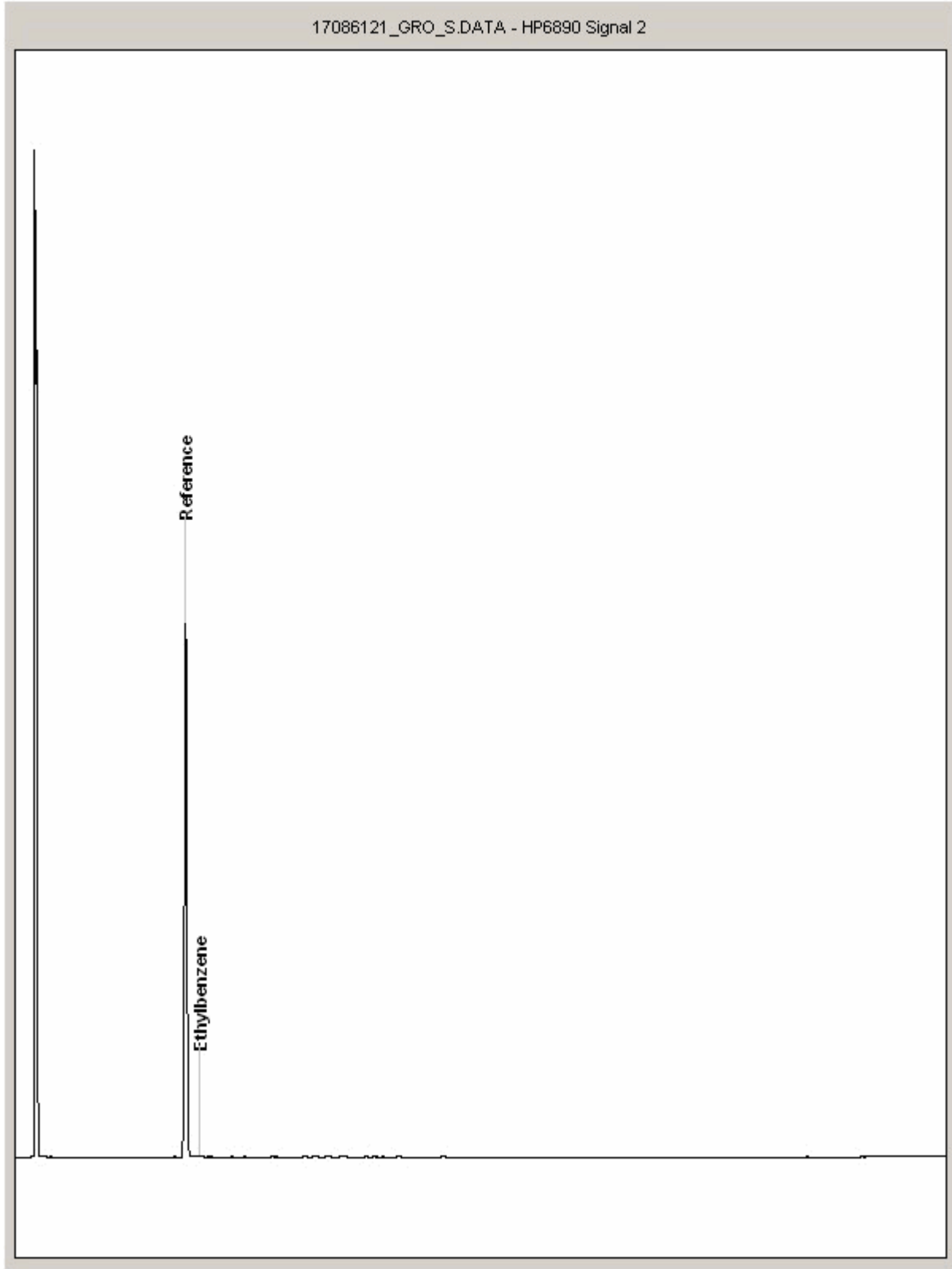
SDG:	180216-85	Client Reference:	70020138	Report Number:	446420
Location:	Former Interbrew Site, Glo	Order Number:	70020138-006	Superseded Report:	446021

Chromatogram

Analysis: GRO by GC-FID (S)

Sample No : 17086121
Sample ID : HP102

Depth : 0.60 - 0.60





CERTIFICATE OF ANALYSIS

Validated

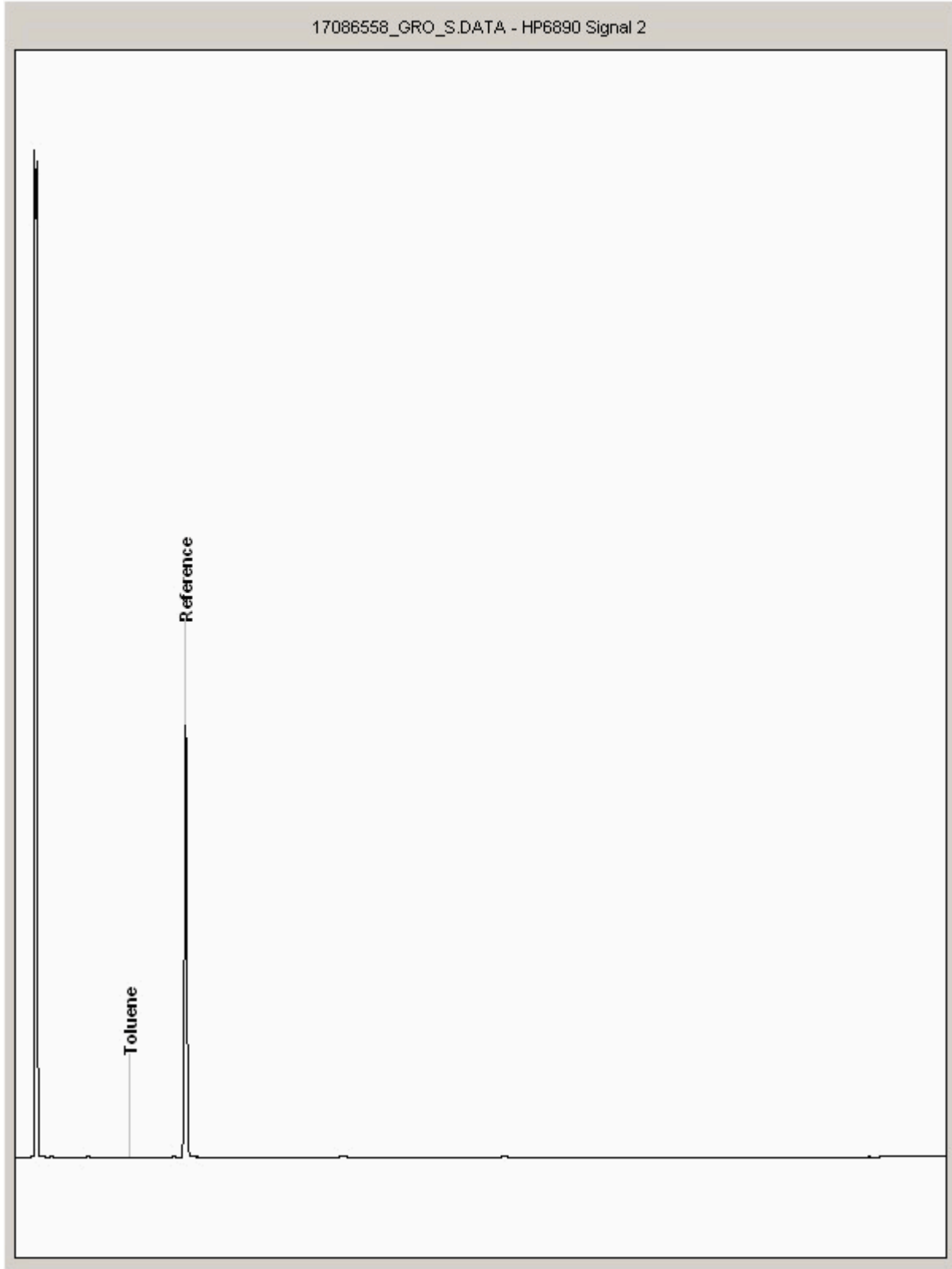
SDG:	180216-85	Client Reference:	70020138	Report Number:	446420
Location:	Former Interbrew Site, Glo	Order Number:	70020138-006	Superseded Report:	446021

Chromatogram

Analysis: GRO by GC-FID (S)

Sample No : 17086558
Sample ID : WS103

Depth : 0.25 - 0.25





CERTIFICATE OF ANALYSIS

Validated

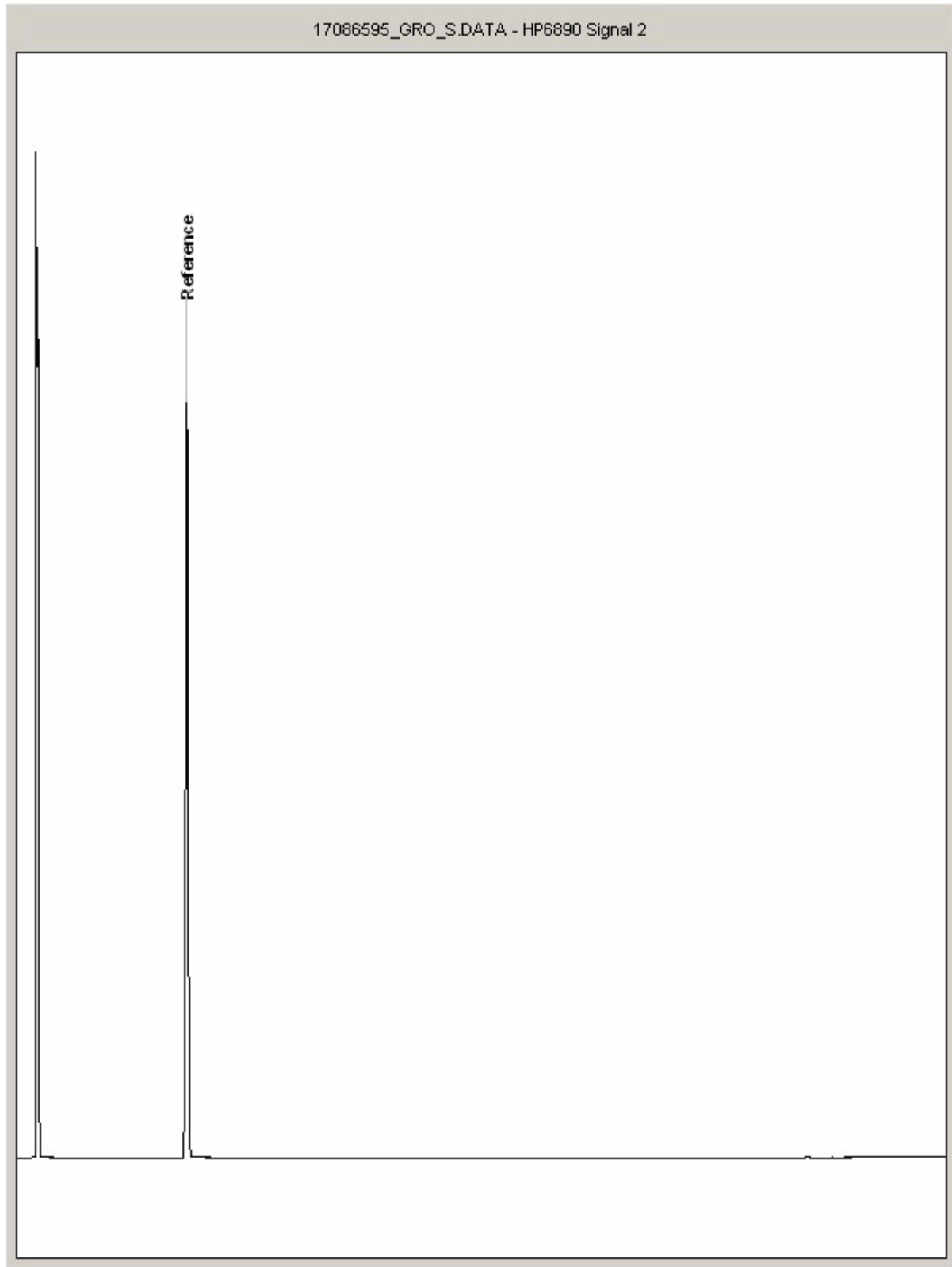
SDG: 180216-85	Client Reference: 70020138	Report Number: 446420
Location: Former Interbrew Site, Glo	Order Number: 70020138-006	Superseded Report: 446021

Chromatogram

Analysis: GRO by GC-FID (S)

Sample No : 17086595
Sample ID : WS101

Depth : 0.30 - 0.45





CERTIFICATE OF ANALYSIS

Validated

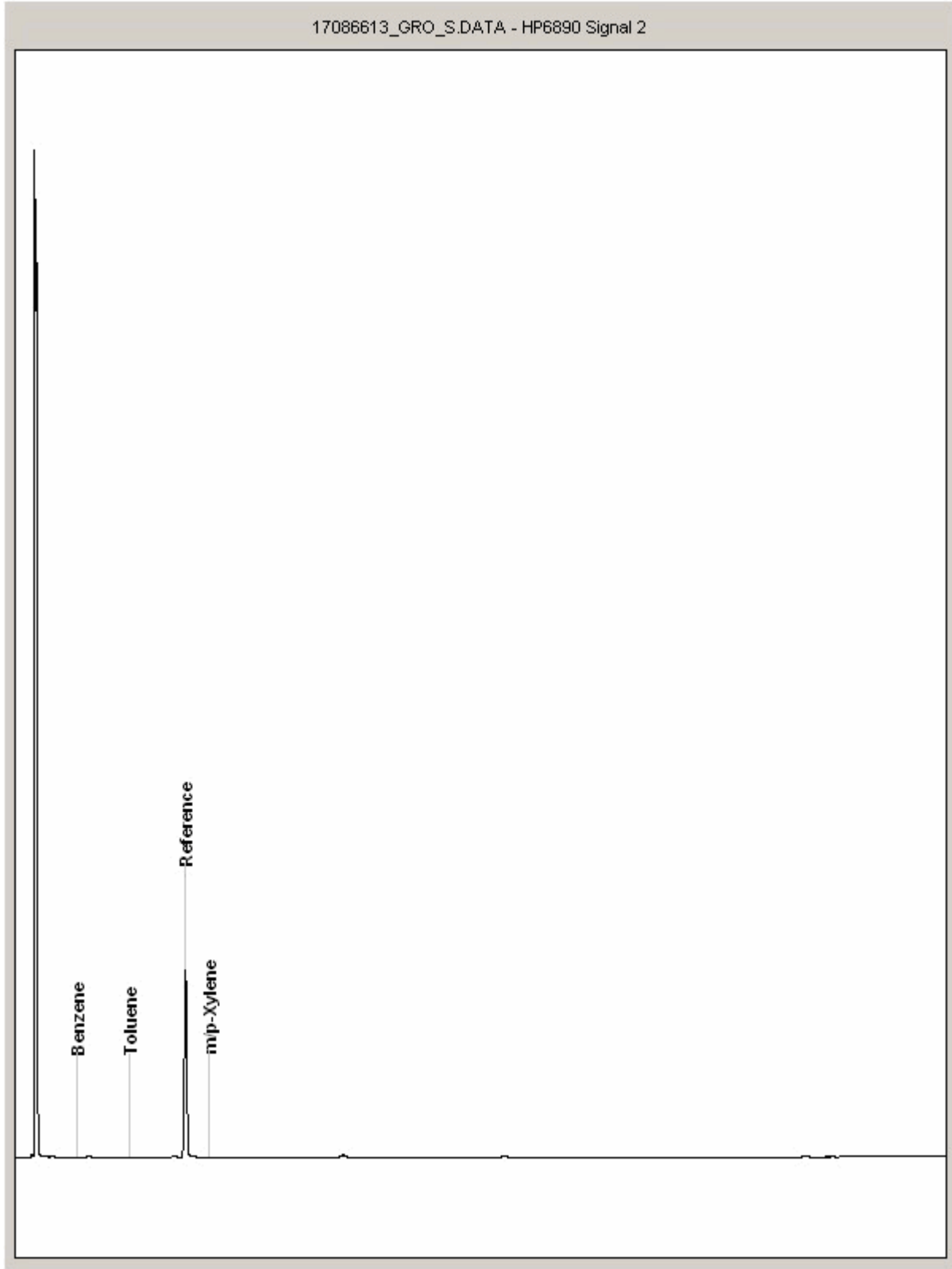
SDG:	180216-85	Client Reference:	70020138	Report Number:	446420
Location:	Former Interbrew Site, Glo	Order Number:	70020138-006	Superseded Report:	446021

Chromatogram

Analysis: GRO by GC-FID (S)

Sample No : 17086613
Sample ID : WS102

Depth : 0.30 - 0.50





CERTIFICATE OF ANALYSIS

Validated

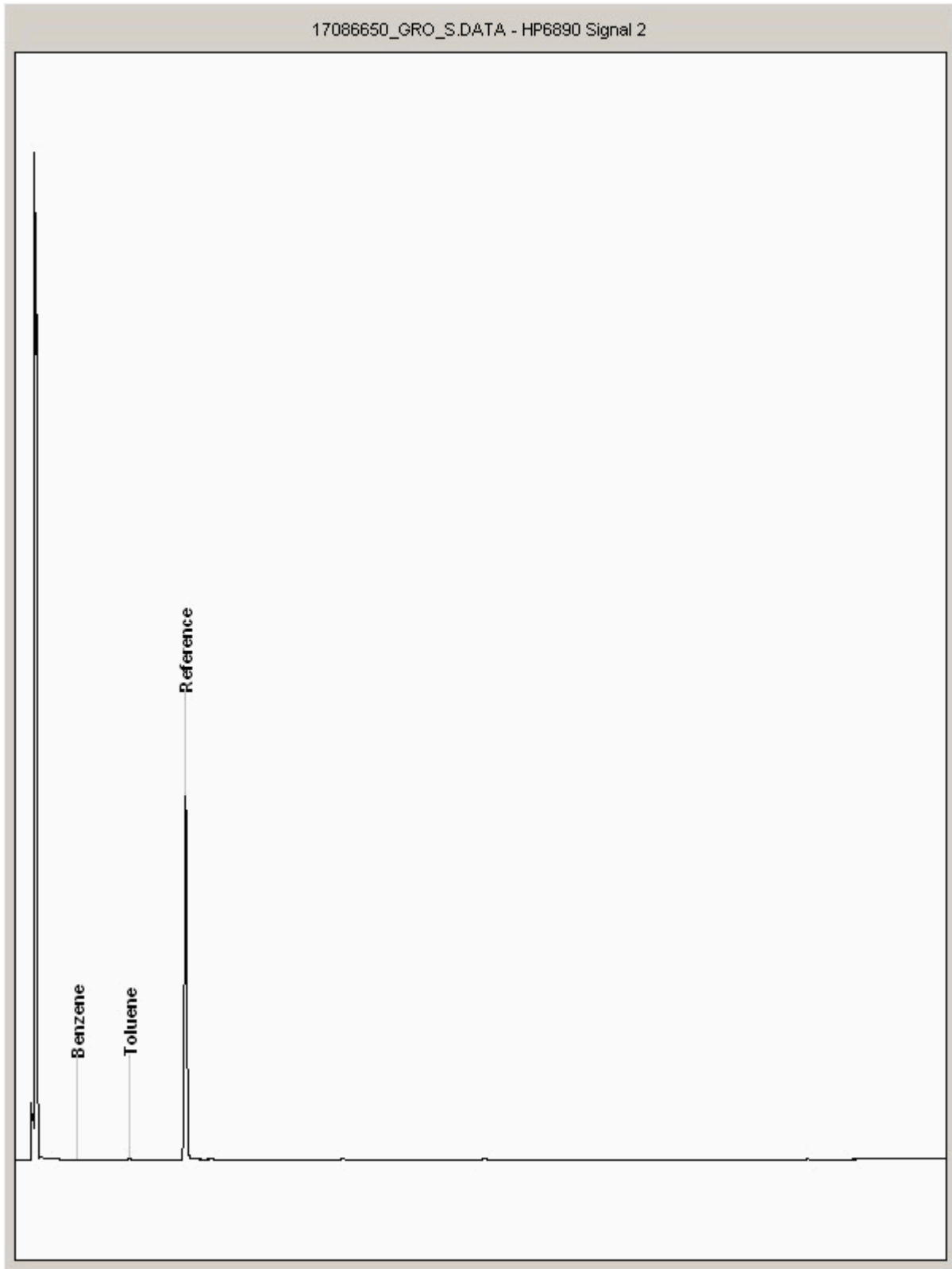
SDG:	180216-85	Client Reference:	70020138	Report Number:	446420
Location:	Former Interbrew Site, Glo	Order Number:	70020138-006	Superseded Report:	446021

Chromatogram

Analysis: GRO by GC-FID (S)

Sample No : 17086650
Sample ID : WS110

Depth : 1.05 - 1.05





CERTIFICATE OF ANALYSIS

Validated

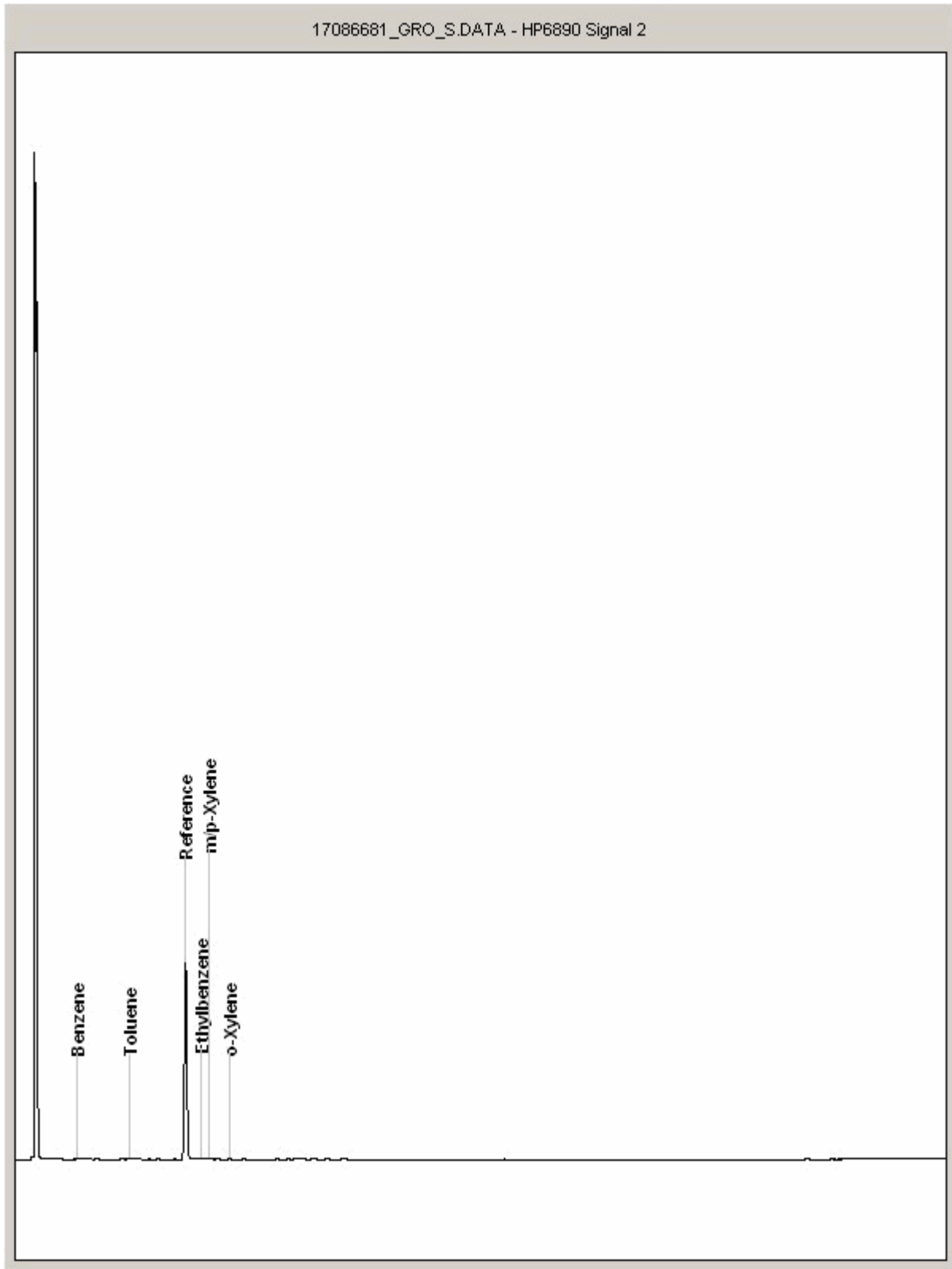
SDG:	180216-85	Client Reference:	70020138	Report Number:	446420
Location:	Former Interbrew Site, Glo	Order Number:	70020138-006	Superseded Report:	446021

Chromatogram

Analysis: GRO by GC-FID (S)

Sample No : 17086681
Sample ID : BH104

Depth : 0.50 - 0.50





CERTIFICATE OF ANALYSIS

Validated

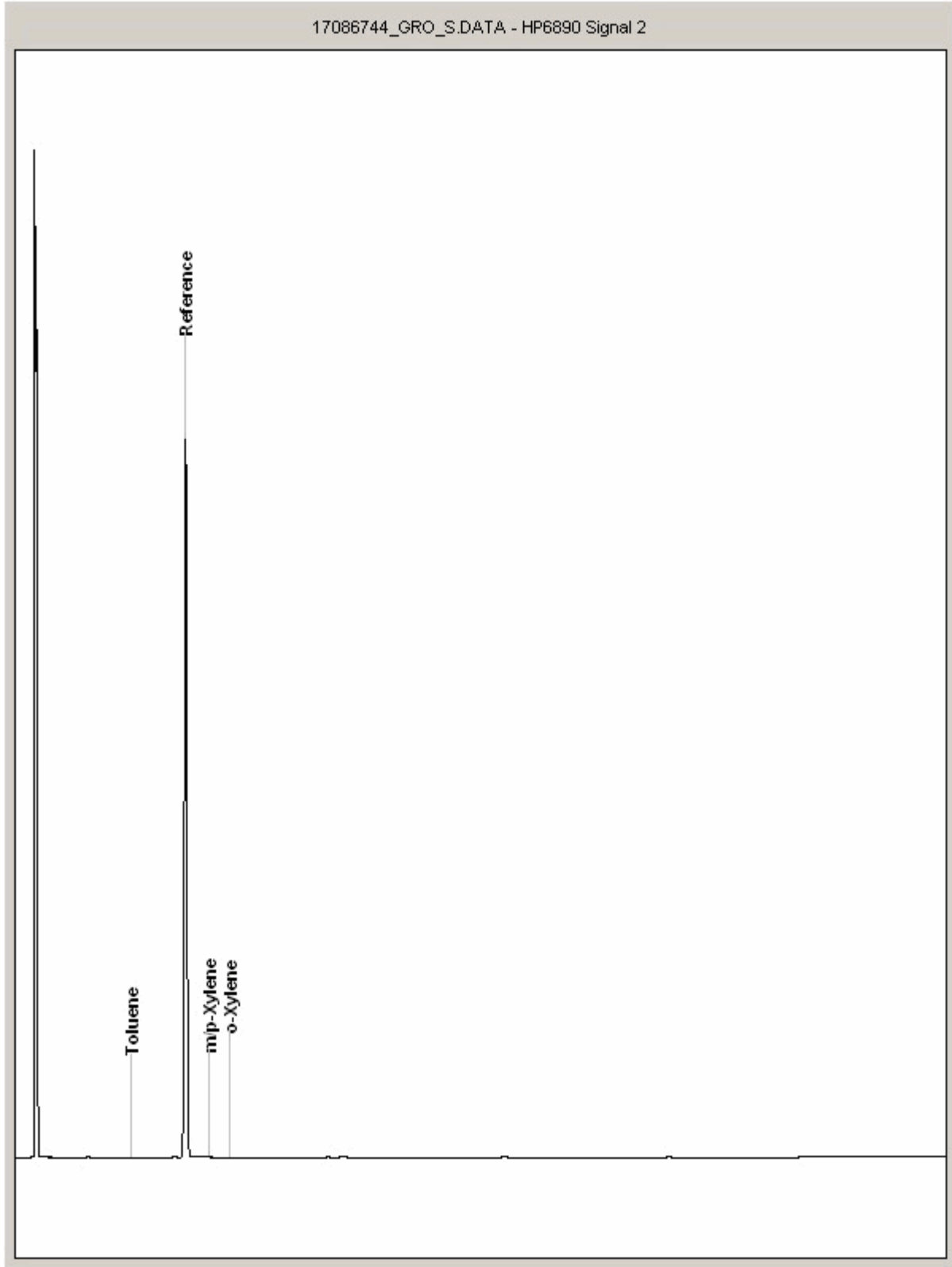
SDG:	180216-85	Client Reference:	70020138	Report Number:	446420
Location:	Former Interbrew Site, Glo	Order Number:	70020138-006	Superseded Report:	446021

Chromatogram

Analysis: GRO by GC-FID (S)

Sample No : 17086744
Sample ID : BH101

Depth : 0.60 - 0.60





CERTIFICATE OF ANALYSIS

Validated

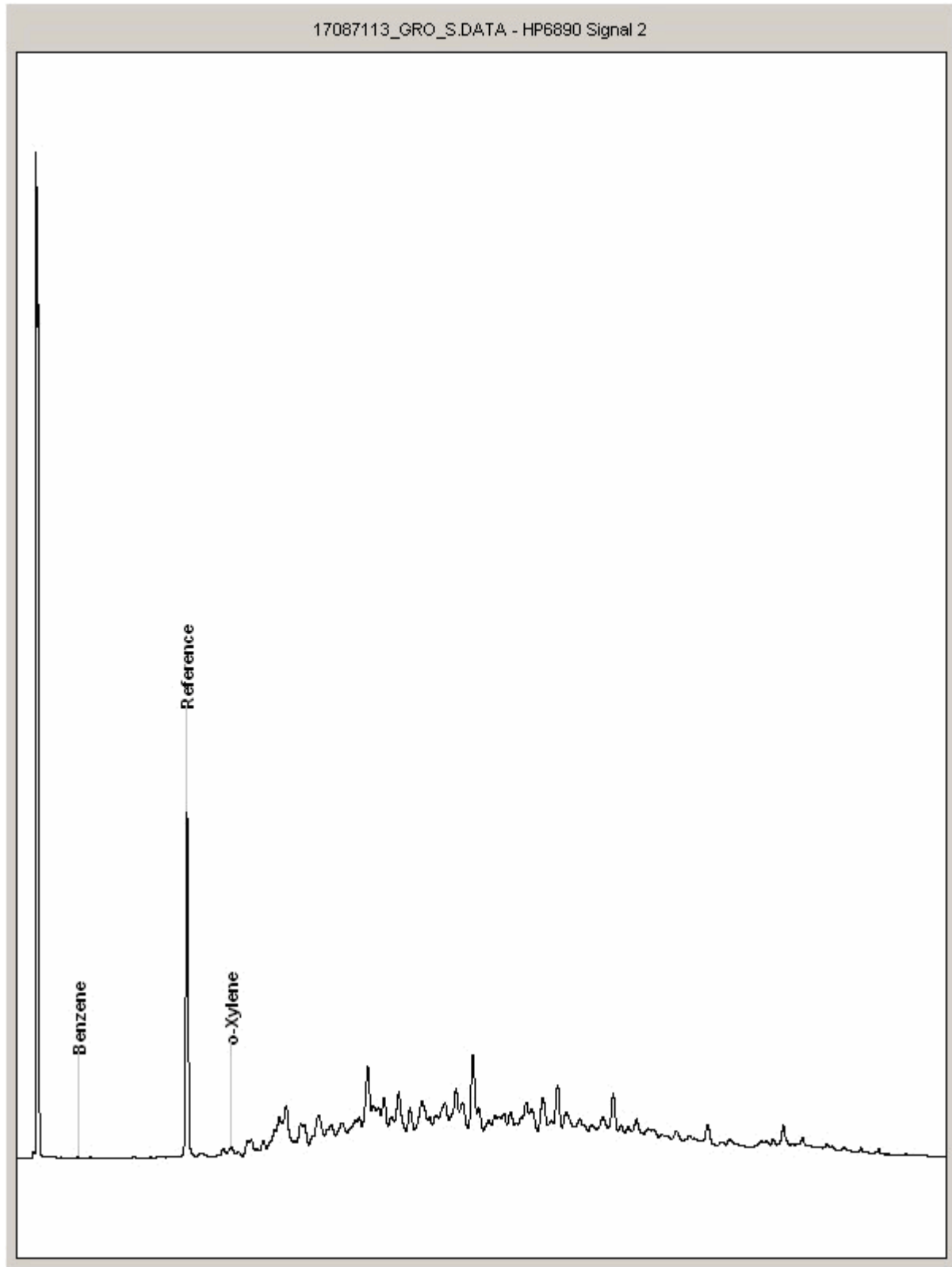
SDG:	180216-85	Client Reference:	70020138	Report Number:	446420
Location:	Former Interbrew Site, Glo	Order Number:	70020138-006	Superseded Report:	446021

Chromatogram

Analysis: GRO by GC-FID (S)

Sample No : 17087113
Sample ID : TP103

Depth : 0.80 - 0.80





CERTIFICATE OF ANALYSIS

Validated

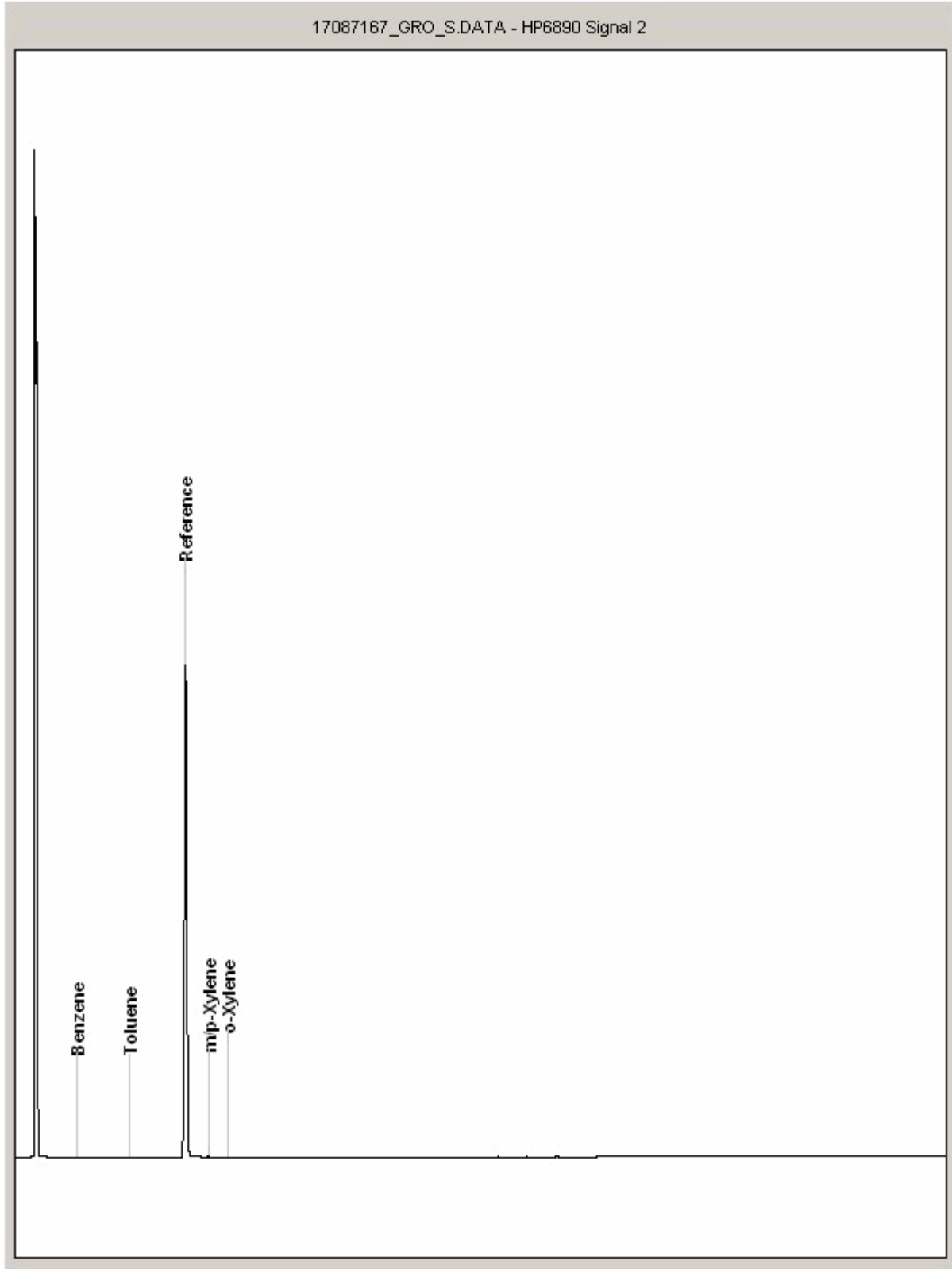
SDG:	180216-85	Client Reference:	70020138	Report Number:	446420
Location:	Former Interbrew Site, Glo	Order Number:	70020138-006	Superseded Report:	446021

Chromatogram

Analysis: GRO by GC-FID (S)

Sample No : 17087167
Sample ID : TP103

Depth : 1.00 - 1.00





CERTIFICATE OF ANALYSIS

SDG: 180216-85	Client Reference: 70020138	Report Number: 446420
Location: Former Interbrew Site, Gloucester	Order Number: 70020138-006	Superseded Report: 446021

Appendix

1. Results are expressed on a dry weight basis (dried at 35°C) for all soil analyses except for the following: NRA and CEN Leach tests, flash point LOI, pH, ammonium as NH4 by the BRE method, VOC TICs and SVOC TICs.

2. Samples will be run in duplicate upon request, but an additional charge may be incurred.

3. If sufficient sample is received a sub sample will be retained free of charge for 30 days after analysis is completed (e-mailed) for all sample types unless the sample is destroyed on testing. The prepared soil sub sample that is analysed for asbestos will be retained for a period of 6 months after the analysis date. All bulk samples will be retained for a period of 6 months after the analysis date. All samples received and not scheduled will be disposed of one month after the date of receipt unless we are instructed to the contrary. Once the initial period has expired, a storage charge will be applied for each month or part thereof until the client cancels the request for sample storage. ALS reserve the right to charge for samples received and stored but not analysed.

4. With respect to turnaround, we will always endeavour to meet client requirements wherever possible, but turnaround times cannot be absolutely guaranteed due to so many variables beyond our control.

5. We take responsibility for any test performed by sub-contractors (marked with an asterisk). We endeavour to use UKAS/MCERTS Accredited Laboratories, who either complete a quality questionnaire or are audited by ourselves. For some determinands there are no UKAS/MCERTS Accredited Laboratories, in this instance a laboratory with a known track record will be utilised.

6. When requested, the individual sub sample scheduled will be analysed in house for the presence of asbestos fibres and asbestos containing material by our documented in house method TM048 based on HSG 248 (2005), which is accredited to ISO17025. If a specific asbestos fibre type is not found this will be reported as "Not detected". If no asbestos fibre types are found all will be reported as "Not detected" and the sub sample analysed deemed to be clear of asbestos. If an asbestos fibre type is found it will be reported as detected (for each fibre type found). Testing can be carried out on asbestos positive samples, but, due to Health and Safety considerations, may be replaced by alternative tests or reported as No Determination Possible (NDP). The quantity of asbestos present is not determined unless specifically requested.

7. If no separate volatile sample is supplied by the client, or if a headspace or sediment is present in the volatile sample, the integrity of the data may be compromised. This will be flagged up as an invalid VOC on the test schedule and the result marked as deviating on the test certificate.

8. If appropriate preserved bottles are not received preservation will take place on receipt. However, the integrity of the data may be compromised.

9. NDP - No determination possible due to insufficient/unsuitable sample.

10. Metals in water are performed on a filtered sample, and therefore represent dissolved metals - total metals must be requested separately.

11. Results relate only to the items tested.

12. LoDs (Limit of Detection) for wet tests reported on a dry weight basis are not corrected for moisture content.

13. **Surrogate recoveries** - Surrogates are added to your sample to monitor recovery of the test requested. A % recovery is reported, results are not corrected for the recovery measured. Typical recoveries for organics tests are 70-130%, they are generally wider for volatiles analysis, 50-150%. Recoveries in soils are affected by organic rich or clay rich matrices. Waters can be affected by remediation fluids or high amounts of sediment. Test results are only ever reported if all of the associated quality checks pass; it is assumed that all recoveries outside of the values above are due to matrix affect.

14. **Product analyses** - Organic analyses on products can only be semi-quantitative due to the matrix effects and high dilution factors employed.

15. Phenols monohydric by HPLC include phenol, cresols (2-Methylphenol, 3-Methylphenol and 4-Methylphenol) and Xylenols (2,3 Dimethylphenol, 2,4 Dimethylphenol, 2,5 Dimethylphenol, 2,6 Dimethylphenol, 3,4 Dimethylphenol, 3,5 Dimethylphenol).

16. Total of 5 speciated phenols by HPLC includes Phenol, 2,3,5-Trimethyl Phenol, 2-Isopropylphenol, Cresols and Xylenols (as detailed in 15).

17. Stones/debris are not routinely removed. We always endeavour to take a representative sub sample from the received sample.

18. In certain circumstances the method detection limit may be elevated due to the sample being outside the calibration range. Other factors that may contribute to this include possible interferences. In both cases the sample would be diluted which would cause the method detection limit to be raised.

19. Mercury results quoted on soils will not include volatile mercury as the analysis is performed on a dried and crushed sample.

20. For leachate preparations other than Zero Headspace Extraction (ZHE) volatile loss may occur.

General

21. For the BSEN 12457-3 two batch process to allow the cumulative release to be calculated, the volume of the leachate produced is measured and filtered for all tests. We therefore cannot carry out any unfiltered analysis. The tests affected include volatiles GCFID/GCMS and all subcontracted analysis.

22. We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials - whether these are derived from naturally occurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample. Other coarse granular material such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

23. Analysis and identification of specific compounds using GCFID is by retention time only, and we routinely calibrate and quantify for benzene, toluene, ethylbenzenes and xylenes (BTEX). For total volatiles in the C5-C12 range, the total area of the chromatogram is integrated and expressed as ug/kg or ug/l. Although this analysis is commonly used for the quantification of gasoline range organics (GRO), the system will also detect other compounds such as chlorinated solvents, and this may lead to a falsely high result with respect to hydrocarbons only. It is not possible to specifically identify these non-hydrocarbons, as standards are not routinely run for any other compounds, and for more definitive identification, volatiles by GCMS should be utilised.

24. **Tentatively Identified Compounds (TICs)** are non-target peaks in VOC and SVOC analysis. All non-target peaks detected with a concentration above the LoD are subjected to a mass spectral library search. Non-target peaks with a library search confidence of >75% are reported based on the best mass spectral library match. When a non-target peak with a library search confidence of <75% is detected it is reported as "mixed hydrocarbons". Non-target compounds identified from the scan data are semi-quantified relative to one of the deuterated internal standards, under the same chromatographic conditions as the target compounds. This result is reported as a semi-quantitative value and reported as Tentatively Identified Compounds (TICs). TICs are outside the scope of UKAS accreditation and are not moisture corrected.

Sample Deviations

If a sample is classed as deviated then the associated results may be compromised.

1	Container with Headspace provided for volatiles analysis
2	Incorrect container received
3	Deviation from method
4	Holding time exceeded before sample received
5	Samples exceeded holding time before preservation was performed
§	Sampled on date not provided
◆	Sample holding time exceeded in laboratory
@	Sample holding time exceeded due to sampled on date
&	Sample Holding Time exceeded - Late arrival of instructions.

Asbestos

Identification of Asbestos in Bulk Materials & Soils

The results for identification of asbestos in bulk materials are obtained from supplied bulk materials which have been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining, based on HSG 248 (2005).

The results for identification of asbestos in soils are obtained from a homogenised sub sample which has been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining, based on HSG 248 (2005).

Astestost Type	Common Name
Chrysotile	White Asbestos
Amosite	Brown Asbestos
Crocidolite	Blue Asbestos
Fibrous Actinolite	-
Fibrous Anthophyllite	-
Fibrous Tremolite	-

Visual Estimation Of Fibre Content

Estimation of fibre content is not permitted as part of our UKAS accredited test other than: - Trace - Where only one or two asbestos fibres were identified.

Further guidance on typical asbestos fibre content of manufactured products can be found in HSG 264.

The identification of asbestos containing materials and soils falls within our schedule of tests for which we hold UKAS accreditation, however opinions, interpretations and all other information contained in the report are outside the scope of UKAS accreditation.



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6 Devonshire Square
London
EC2M 4YE

Attention: Charlie Orme

CERTIFICATE OF ANALYSIS

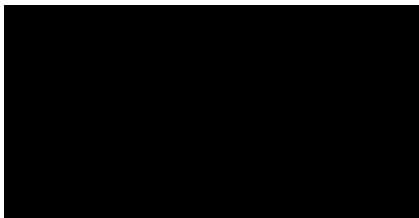
Date: 09 March 2018
Customer: H_WSP_LON
Sample Delivery Group (SDG): 180302-65
Your Reference: 70020138
Location: Interbrew
Report No: 447700

We received 5 samples on Friday March 02, 2018 and 4 of these samples were scheduled for analysis which was completed on Friday March 09, 2018. Accredited laboratory tests are defined within the report, but opinions, interpretations and on-site data expressed herein are outside the scope of ISO 17025 accreditation.

Should this report require incorporation into client reports, it must be used in its entirety and not simply with the data sections alone.

Chemical testing (unless subcontracted) performed at ALS Environmental Hawarden (Method codes TM) or ALS Environmental Aberdeen (Method codes S).

Approved By:



Operations Manager





CERTIFICATE OF ANALYSIS

Validated

SDG: 180302-65
Location: Interbrew

Client Reference: 70020138
Order Number: 70020136-006

Report Number: 447700
Superseded Report:

Received Sample Overview

Lab Sample No(s)	Customer Sample Ref.	AGS Ref.	Depth (m)	Sampled Date
17149835	BH05	EW	0.00 - 0.00	28/02/2018
17149809	BH101	EW	0.00 - 0.00	28/02/2018
17149824	BH102	EW	0.00 - 0.00	28/02/2018
17149856	NO ID			
17149846	WS10	EW	0.00 - 0.00	28/02/2018

Maximum Sample/Coolbox Temperature (°C) :

0

ISO5667-3 Water quality - Sampling - Part3 -

During Transportation samples shall be stored in a cooling device capable of maintaining a temperature of (5±3)°C.

ALS have data which show that a cool box with 4 frozen icepacks is capable of maintaining pre-chilled samples at a temperature of (5±3)°C for a period of up to 24hrs.

Only received samples which have had analysis scheduled will be shown on the following pages.



CERTIFICATE OF ANALYSIS

Validated

SDG: 180302-65
Location: Interbrew

Client Reference: 70020138
Order Number: 70020136-006

Report Number: 447700
Superseded Report:

Results Legend	Lab Sample No(s)		Customer Sample Reference		AGS Reference		Depth (m)		Container		Sample Type	
	X Test	N No Determination Possible										
<p>Sample Types -</p> <p>S - Soil/Solid UNS - Unspecified Solid GW - Ground Water SW - Surface Water LE - Land Leachate PL - Prepared Leachate PR - Process Water SA - Saline Water TE - Trade Effluent TS - Treated Sewage US - Untreated Sewage RE - Recreational Water DW - Drinking Water Non-regulatory UNL - Unspecified Liquid SL - Sludge G - Gas OTH - Other</p>			17149835	BH05	EW	0.00 - 0.00	Vial (ALE297)	GW				
			17149809	BH101	EW	0.00 - 0.00	Vial (ALE297)	GW				
			17149824	BH102	EW	0.00 - 0.00	Vial (ALE297)	GW				
			17149846	WS10	EW	0.00 - 0.00	Vial (ALE297)	GW				
Anions by Kone (w)	All	NDPs: 0 Tests: 3	X				X					
Cyanide Comp/Free/Total/Thiocyanate	All	NDPs: 0 Tests: 3		X			X			X		
Dissolved Metals by ICP-MS	All	NDPs: 0 Tests: 3		X			X			X		
EPH CWG (Aliphatic) Filtered GC (W)	All	NDPs: 0 Tests: 4	X				X				X	
EPH CWG (Aromatic) Filtered GC (W)	All	NDPs: 0 Tests: 4	X				X				X	
GRO by GC-FID (W)	All	NDPs: 0 Tests: 4				X			X		X	
Hexavalent Chromium (w)	All	NDPs: 0 Tests: 3	X				X			X		
Mercury Dissolved	All	NDPs: 0 Tests: 3		X			X			X		
PAH in waters by GC-MS (diss.filt)	All	NDPs: 0 Tests: 4	X				X				X	
pH Value	All	NDPs: 0 Tests: 3		X			X			X		
TPH CWG Filtered (W)	All	NDPs: 0 Tests: 4	X				X				X	



CERTIFICATE OF ANALYSIS

Validated

SDG: 180302-65
Location: Interbrew

Client Reference: 70020138
Order Number: 70020136-006

Report Number: 447700
Superseded Report:

Results Legend		Customer Sample Ref.	BH05	BH101	BH102	WS10		
#	ISO17025 accredited.							
M	mCERTS accredited.							
aq	Aqueous / settled sample.							
diss.filt	Dissolved / filtered sample.							
tot.unfilt	Total / unfiltered sample.							
*	Subcontracted test.							
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery							
(F)	Trigger breach confirmed							
1-5&*\$@	Sample deviation (see appendix)							
Component	LOD/Units	Method						
Arsenic (diss.filt)	<0.5 µg/l	TM152	<0.5 #	0.646 #	1.08 #			
Cadmium (diss.filt)	<0.08 µg/l	TM152	<0.08 #	<0.08 #	<0.08 #			
Chromium (diss.filt)	<1 µg/l	TM152	<1 #	<1 #	2.11 #			
Copper (diss.filt)	<0.3 µg/l	TM152	1.01 #	1.35 #	4.13 #			
Lead (diss.filt)	<0.2 µg/l	TM152	0.31 #	<0.2 #	1.1 #			
Nickel (diss.filt)	<0.4 µg/l	TM152	59.1 #	4.12 #	4.1 #			
Selenium (diss.filt)	<0.5 µg/l	TM152	23.7 #	1.65 #	43.8 #			
Zinc (diss.filt)	<1 µg/l	TM152	7.61 #	<1 #	22.7 #			
Naphthalene (diss.filt)	<0.01 µg/l	TM178	<0.01	<0.01	<0.01	<0.01		
Acenaphthene (diss.filt)	<0.005 µg/l	TM178	<0.005	<0.005	<0.005	<0.005		
Acenaphthylene (diss.filt)	<0.005 µg/l	TM178	<0.005	<0.005	<0.005	<0.005		
Fluoranthene (diss.filt)	<0.005 µg/l	TM178	<0.005	<0.005	<0.005	<0.005		
Anthracene (diss.filt)	<0.005 µg/l	TM178	<0.005	<0.005	<0.005	<0.005		
Phenanthrene (diss.filt)	<0.005 µg/l	TM178	<0.005	0.00572	0.0053	0.00966		
Fluorene (diss.filt)	<0.005 µg/l	TM178	<0.005	<0.005	<0.005	<0.005		
Chrysene (diss.filt)	<0.005 µg/l	TM178	<0.005	<0.005	<0.005	0.0102		
Pyrene (diss.filt)	<0.005 µg/l	TM178	<0.005	<0.005	<0.005	0.032		
Benzo(a)anthracene (diss.filt)	<0.005 µg/l	TM178	<0.005	<0.005	<0.005	<0.005		
Benzo(b)fluoranthene (diss.filt)	<0.005 µg/l	TM178	<0.005	<0.005	<0.005	<0.005		
Benzo(k)fluoranthene (diss.filt)	<0.005 µg/l	TM178	<0.005	<0.005	<0.005	<0.005		
Benzo(a)pyrene (diss.filt)	<0.002 µg/l	TM178	<0.002	<0.002	<0.002	<0.002		
Dibenzo(a,h)anthracene (diss.filt)	<0.005 µg/l	TM178	<0.005	<0.005	<0.005	<0.005		
Benzo(g,h,i)perylene (diss.filt)	<0.005 µg/l	TM178	<0.005	<0.005	<0.005	<0.005		
Indeno(1,2,3-cd)pyrene (diss.filt)	<0.005 µg/l	TM178	<0.005	<0.005	<0.005	<0.005		
PAH Sum of EPA 16 detected (Diss.filt)	<0.082 µg/l	TM178	<0.082	<0.082	<0.082	<0.082		
Mercury (diss.filt)	<0.01 µg/l	TM183	<0.01 #	0.164 #	<0.01 #			
Sulphate as %SO4	<0.0002 %	TM184	0.101 #	0.154 #	0.138 #			
Cyanide, Total	<50 µg/l	TM227	<50 #	<50 #	<50 #			
Chromium, Hexavalent	<30 µg/l	TM241	<30 #	<30 #	<30 #			
pH	<1 pH Units	TM256	7.34 #	7.7 #	7.51 #			



CERTIFICATE OF ANALYSIS

Validated

SDG: 180302-65
Location: Interbrew

Client Reference: 70020138
Order Number: 70020136-006

Report Number: 447700
Superseded Report:

TPH CWG (W)

Results Legend		Customer Sample Ref.	BH05	BH101	BH102	WS10		
#	ISO17025 accredited.	Depth (m) Sample Type Date Sampled Sample Time Date Received SDG Ref Lab Sample No.(s) AGS Reference	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00		
M	mCERTS accredited.		Ground Water (GW)	Ground Water (GW)	Ground Water (GW)	Ground Water (GW)		
aq	Aqueous / settled sample.		28/02/2018	28/02/2018	28/02/2018	28/02/2018		
diss.filt	Dissolved / filtered sample.							
tot.unfilt	Total / unfiltered sample.							
*	Subcontracted test.							
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery							
(F)	Trigger breach confirmed							
1-5&*\$@	Sample deviation (see appendix)							
Component	LOD/Units		Method					
GRO Surrogate % recovery**	%	TM245	90	95	103	93		
GRO >C5-C12	<50 µg/l	TM245	<50 #	<50 #	<50 #	<50 #		
Methyl tertiary butyl ether (MTBE)	<3 µg/l	TM245	<3	<3	<3	<3		
Benzene	<7 µg/l	TM245	<7	<7	<7	<7		
Toluene	<4 µg/l	TM245	<4	<4	<4	<4		
Ethylbenzene	<5 µg/l	TM245	<5	<5	<5	<5		
m,p-Xylene	<8 µg/l	TM245	<8	<8	<8	<8		
o-Xylene	<3 µg/l	TM245	<3	<3	<3	<3		
Sum of detected Xylenes	<11 µg/l	TM245	<11	<11	<11	<11		
Sum of detected BTEX	<28 µg/l	TM245	<28	<28	<28	<28		
Aliphatics >C5-C6	<10 µg/l	TM245	<10	<10	<10	<10		
Aliphatics >C6-C8	<10 µg/l	TM245	<10	<10	<10	<10		
Aliphatics >C8-C10	<10 µg/l	TM245	<10	<10	<10	<10		
Aliphatics >C10-C12	<10 µg/l	TM245	<10	<10	<10	<10		
Aliphatics >C12-C16 (diss.filt)	<10 µg/l	TM174	<10	<10	<10	<10		
Aliphatics >C16-C21 (diss.filt)	<10 µg/l	TM174	<10	<10	<10	<10		
Aliphatics >C21-C35 (diss.filt)	<10 µg/l	TM174	<10	<10	<10	<10		
Total Aliphatics >C12-C35 (diss.filt)	<10 µg/l	TM174	<10	<10	<10	<10		
Aromatics >EC5-EC7	<10 µg/l	TM245	<10	<10	<10	<10		
Aromatics >EC7-EC8	<10 µg/l	TM245	<10	<10	<10	<10		
Aromatics >EC8-EC10	<10 µg/l	TM245	<10	<10	<10	<10		
Aromatics >EC10-EC12	<10 µg/l	TM245	<10	<10	<10	<10		
Aromatics >EC12-EC16 (diss.filt)	<10 µg/l	TM174	<10	<10	<10	<10		
Aromatics >EC16-EC21 (diss.filt)	<10 µg/l	TM174	<10	<10	<10	15		
Aromatics >EC21-EC35 (diss.filt)	<10 µg/l	TM174	<10	<10	<10	10		
Aromatics >EC16-EC35 (diss.filt)	<10 µg/l	TM174	<10	<10	<10	25		
Total Aromatics >EC12-EC35 (diss.filt)	<10 µg/l	TM174	<10	<10	<10	25		
Total Aliphatics & Aromatics >C5-35 (diss.filt)	<10 µg/l	TM174	<10	<10	<10	49		



CERTIFICATE OF ANALYSIS

Validated

SDG: 180302-65
Location: Interbrew

Client Reference: 70020138
Order Number: 70020136-006

Report Number: 447700
Superseded Report:

Table of Results - Appendix

Method No	Reference	Description
TM061	Method for the Determination of EPH, Massachusetts Dept. of EP, 1998	Determination of Extractable Petroleum Hydrocarbons by GC-FID (C10-C40)
TM152	Method 3125B, AWWA/APHA, 20th Ed., 1999	Analysis of Aqueous Samples by ICP-MS
TM174	Analysis of Petroleum Hydrocarbons in Environmental Media – Total Petroleum Hydrocarbon Criteria	Determination of Speciated Extractable Petroleum Hydrocarbons in Waters by GC-FID
TM178	Modified: US EPA Method 8100	Determination of Polynuclear Aromatic Hydrocarbons (PAH) by GC-MS in Waters
TM183	BS EN 23506:2002, (BS 6068-2.74:2002) ISBN 0 580 38924 3	Determination of Trace Level Mercury in Waters and Leachates by PSA Cold Vapour Atomic Fluorescence Spectrometry
TM184	EPA Methods 325.1 & 325.2,	The Determination of Anions in Aqueous Matrices using the Kone Spectrophotometric Analysers
TM227	Standard methods for the examination of waters and wastewaters 20th Edition, AWWA/APHA Method 4500.	Determination of Total Cyanide, Free (Easily Liberatable) Cyanide and Thiocyanate
TM241	Methods for the Examination of Waters and Associated Materials; Chromium in Raw and Potable Waters and Sewage Effluents 1980.	The Determination of Hexavalent Chromium in Waters and Leachates using the Kone Analyser
TM245	By GC-FID	Determination of GRO by Headspace in waters
TM256	The measurement of Electrical Conductivity and the Laboratory determination of pH Value of Natural, Treated and Wastewaters. HMSO, 1978. ISBN 011 751428 4.	Determination of pH in Water and Leachate using the GLpH pH Meter

NA = not applicable.

Chemical testing (unless subcontracted) performed at ALS Environmental Hawarden (Method codes TM) or ALS Environmental Aberdeen (Method codes S).



CERTIFICATE OF ANALYSIS

Validated

SDG: 180302-65
Location: Interbrew

Client Reference: 70020138
Order Number: 70020136-006

Report Number: 447700
Superseded Report:

Test Completion Dates

Lab Sample No(s)	17149835	17149809	17149824	17149846
Customer Sample Ref.	BH05	BH101	BH102	WS10
AGS Ref.	EW	EW	EW	EW
Depth	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00
Type	Ground Water	Ground Water	Ground Water	Ground Water

Anions by Kone (w)	09-Mar-2018	09-Mar-2018	09-Mar-2018	
Cyanide Comp/Free/Total/Thiocyanate	08-Mar-2018	08-Mar-2018	08-Mar-2018	
Dissolved Metals by ICP-MS	09-Mar-2018	08-Mar-2018	09-Mar-2018	
EPH CWG (Aliphatic) Filtered GC (W)	06-Mar-2018	06-Mar-2018	09-Mar-2018	09-Mar-2018
EPH CWG (Aromatic) Filtered GC (W)	06-Mar-2018	06-Mar-2018	09-Mar-2018	09-Mar-2018
GRO by GC-FID (W)	06-Mar-2018	06-Mar-2018	06-Mar-2018	06-Mar-2018
Hexavalent Chromium (w)	07-Mar-2018	07-Mar-2018	07-Mar-2018	
Mercury Dissolved	06-Mar-2018	06-Mar-2018	06-Mar-2018	
PAH in waters by GC-MS (diss.filt)	06-Mar-2018	06-Mar-2018	09-Mar-2018	09-Mar-2018
pH Value	07-Mar-2018	07-Mar-2018	07-Mar-2018	
TPH CWG Filtered (W)	06-Mar-2018	06-Mar-2018	09-Mar-2018	09-Mar-2018



CERTIFICATE OF ANALYSIS

SDG: 180302-65	Client Reference: 70020138	Report Number: 447700
Location: Interbrew	Order Number: 70020136-006	Superseded Report:

Appendix

General

1. Results are expressed on a dry weight basis (dried at 35°C) for all soil analyses except for the following: NRA and CEN Leach tests, flash point LOI, pH, ammonium as NH4 by the BRE method, VOC TICs and SVOC TICs.

2. Samples will be run in duplicate upon request, but an additional charge may be incurred.

3. If sufficient sample is received a sub sample will be retained free of charge for 30 days after analysis is completed (e-mailed) for all sample types unless the sample is destroyed on testing. The prepared soil sub sample that is analysed for asbestos will be retained for a period of 6 months after the analysis date. All bulk samples will be retained for a period of 6 months after the analysis date. All samples received and not scheduled will be disposed of one month after the date of receipt unless we are instructed to the contrary. Once the initial period has expired, a storage charge will be applied for each month or part thereof until the client cancels the request for sample storage. ALS reserve the right to charge for samples received and stored but not analysed.

4. With respect to turnaround, we will always endeavour to meet client requirements wherever possible, but turnaround times cannot be absolutely guaranteed due to so many variables beyond our control.

5. We take responsibility for any test performed by sub-contractors (marked with an asterisk). We endeavour to use UKAS/MCERTS Accredited Laboratories, who either complete a quality questionnaire or are audited by ourselves. For some determinands there are no UKAS/MCERTS Accredited Laboratories, in this instance a laboratory with a known track record will be utilised.

6. When requested, the individual sub sample scheduled will be analysed in house for the presence of asbestos fibres and asbestos containing material by our documented in house method TM048 based on HSG 248 (2005), which is accredited to ISO17025. If a specific asbestos fibre type is not found this will be reported as "Not detected". If no asbestos fibre types are found all will be reported as "Not detected" and the sub sample analysed deemed to be clear of asbestos. If an asbestos fibre type is found it will be reported as detected (for each fibre type found). Testing can be carried out on asbestos positive samples, but, due to Health and Safety considerations, may be replaced by alternative tests or reported as No Determination Possible (NDP). The quantity of asbestos present is not determined unless specifically requested.

7. If no separate volatile sample is supplied by the client, or if a headspace or sediment is present in the volatile sample, the integrity of the data may be compromised. This will be flagged up as an invalid VOC on the test schedule and the result marked as deviating on the test certificate.

8. If appropriate preserved bottles are not received preservation will take place on receipt. However, the integrity of the data may be compromised.

9. NDP - No determination possible due to insufficient/unsuitable sample.

10. Metals in water are performed on a filtered sample, and therefore represent dissolved metals - total metals must be requested separately.

11. Results relate only to the items tested.

12. LoDs (Limit of Detection) for wet tests reported on a dry weight basis are not corrected for moisture content.

13. **Surrogate recoveries** - Surrogates are added to your sample to monitor recovery of the test requested. A % recovery is reported, results are not corrected for the recovery measured. Typical recoveries for organics tests are 70-130%, they are generally wider for volatiles analysis, 50-150%. Recoveries in soils are affected by organic rich or clay rich matrices. Waters can be affected by remediation fluids or high amounts of sediment. Test results are only ever reported if all of the associated quality checks pass; it is assumed that all recoveries outside of the values above are due to matrix affect.

14. **Product analyses** - Organic analyses on products can only be semi-quantitative due to the matrix effects and high dilution factors employed.

15. Phenols monohydric by HPLC include phenol, cresols (2-Methylphenol, 3-Methylphenol and 4-Methylphenol) and Xylenols (2,3 Dimethylphenol, 2,4 Dimethylphenol, 2,5 Dimethylphenol, 2,6 Dimethylphenol, 3,4 Dimethylphenol, 3,5 Dimethylphenol).

16. Total of 5 speciated phenols by HPLC includes Phenol, 2,3,5-Trimethyl Phenol, 2-Isopropylphenol, Cresols and Xylenols (as detailed in 15).

17. Stones/debris are not routinely removed. We always endeavour to take a representative sub sample from the received sample.

18. In certain circumstances the method detection limit may be elevated due to the sample being outside the calibration range. Other factors that may contribute to this include possible interferences. In both cases the sample would be diluted which would cause the method detection limit to be raised.

19. Mercury results quoted on soils will not include volatile mercury as the analysis is performed on a dried and crushed sample.

20. For leachate preparations other than Zero Headspace Extraction (ZHE) volatile loss may occur.

21. For the BSEN 12457-3 two batch process to allow the cumulative release to be calculated, the volume of the leachate produced is measured and filtered for all tests. We therefore cannot carry out any unfiltered analysis. The tests affected include volatiles GCFID/GCMS and all subcontracted analysis.

22. We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials - whether these are derived from naturally occurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample. Other coarse granular material such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

23. Analysis and identification of specific compounds using GCFID is by retention time only, and we routinely calibrate and quantify for benzene, toluene, ethylbenzenes and xylenes (BTEX). For total volatiles in the C5-C12 range, the total area of the chromatogram is integrated and expressed as ug/kg or ug/l. Although this analysis is commonly used for the quantification of gasoline range organics (GRO), the system will also detect other compounds such as chlorinated solvents, and this may lead to a falsely high result with respect to hydrocarbons only. It is not possible to specifically identify these non-hydrocarbons, as standards are not routinely run for any other compounds, and for more definitive identification, volatiles by GCMS should be utilised.

24. **Tentatively Identified Compounds (TICs)** are non-target peaks in VOC and SVOC analysis. All non-target peaks detected with a concentration above the LoD are subjected to a mass spectral library search. Non-target peaks with a library search confidence of >75% are reported based on the best mass spectral library match. When a non-target peak with a library search confidence of <75% is detected it is reported as "mixed hydrocarbons". Non-target compounds identified from the scan data are semi-quantified relative to one of the deuterated internal standards, under the same chromatographic conditions as the target compounds. This result is reported as a semi-quantitative value and reported as Tentatively Identified Compounds (TICs). TICs are outside the scope of UKAS accreditation and are not moisture corrected.

Sample Deviations

If a sample is classed as deviated then the associated results may be compromised.

1	Container with Headspace provided for volatiles analysis
2	Incorrect container received
3	Deviation from method
4	Holding time exceeded before sample received
5	Samples exceeded holding time before preservation was performed
§	Sampled on date not provided
◆	Sample holding time exceeded in laboratory
@	Sample holding time exceeded due to sampled on date
&	Sample Holding Time exceeded - Late arrival of instructions.

Asbestos

Identification of Asbestos in Bulk Materials & Soils

The results for identification of asbestos in bulk materials are obtained from supplied bulk materials which have been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining, based on HSG 248 (2005).

The results for identification of asbestos in soils are obtained from a homogenised sub sample which has been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining, based on HSG 248 (2005).

Astestostype	CommonName
Chrysotile	WhiteAsbestos
Amosite	BrownAsbestos
Coödolite	BlueAsbestos
Fibrous Actinolite	-
Fibrous Anthophyllite	-
Fibrous Tremolite	-

Visual Estimation Of Fibre Content

Estimation of fibre content is not permitted as part of our UKAS accredited test other than: - Trace - Where only one or two asbestos fibres were identified.

Further guidance on typical asbestos fibre content of manufactured products can be found in HSG 264.

The identification of asbestos containing materials and soils falls within our schedule of tests for which we hold UKAS accreditation, however opinions, interpretations and all other information contained in the report are outside the scope of UKAS accreditation.



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CERTIFICATE OF ANALYSIS

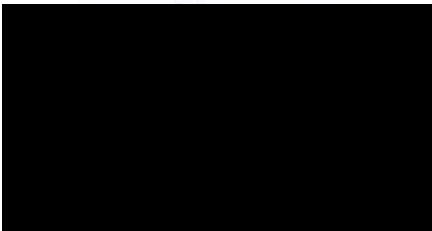
Date:	13/06/2016 16:55		
Customer:	H_WSP_LON		
Sample Delivery Group (SDG):	160604-60	Report No.:	364748
Your Reference:	70020138		
Location:	Tradeteam Site (DHL) Gloucester		

We received 20 samples on Saturday June 04, 2016 and 13 of these samples were scheduled for analysis which was then completed on Monday June 13, 2016. Accredited laboratory tests are defined in the report, but opinions, interpretations and on-site data expressed herein are outside the scope of ISO 17025 accreditation.

Should this report require incorporation into client reports, it must be used in its entirety and not simply with data sections alone.

All chemical testing (unless subcontracting) is performed at ALcontrol Hawarden Laboratories.

Approved By:



Operations Manager



ALcontrol Laboratories is a trading division of ALcontrol UK Limited

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SOLID

Customer Sample Ref.	BH01	BH01	BH04	BH05	BH05	WS03	WS03	WS05	WS06
Depth (m)	0.60 - 0.60	1.20 - 1.20	0.70 - 0.70	0.85 - 0.85	1.20 - 1.20	0.80 - 0.80	1.20 - 1.20	0.65 - 0.65	0.60 - 0.60
Sample Type	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID
Date Sampled	03/06/2016	03/06/2016	03/06/2016	03/06/2016	03/06/2016	03/06/2016	03/06/2016	03/06/2016	03/06/2016
Date Received	04/06/2016 15:37	04/06/2016 15:37	04/06/2016 15:37	04/06/2016 15:37	04/06/2016 15:37	04/06/2016 15:37	04/06/2016 15:37	04/06/2016 15:37	04/06/2016 15:37
SDG Ref	160604-60	160604-60	160604-60	160604-60	160604-60	160604-60	160604-60	160604-60	160604-60
Lab Sample No.(s)	13540987	13541088	13541121	13541150	13541166	13541036	13541045	13541020	13541058
AGS Reference	ES	ES	ES	ES	ES	ES	ES	ES	ES
Component	LOD	Units	Method						

MISC												
Moisture Content Ratio (% of as received sample)		%	PM024	18	14	17	16	17	15	23	13	8.5
Date of Analysis		-	TM048	06/09/2016		06/09/2016	06/09/2016		06/09/2016		06/09/2016	06/09/2016
Analysed By		-	TM048	Lauren Sargeant		Kevin Bowron	Lauren Sargeant		Lauren Sargeant		Rebecca Rawlings	Lauren Sargeant
Comments		-	TM048	0		0	0		0		0	0
Chrysotile (White) Asbestos		- *	TM048	Not Detected		Not Detected	Not Detected		Not Detected		Not Detected	Not Detected
Amosite (Brown) Asbestos		- *	TM048	Not Detected		Not Detected	Not Detected		Not Detected		Not Detected	Not Detected
Crocidolite (Blue) Asbestos		- *	TM048	Not Detected		Not Detected	Not Detected		Not Detected		Not Detected	Not Detected
Fibrous Anthophyllite		- *	TM048	Not Detected		Not Detected	Not Detected		Not Detected		Not Detected	Not Detected
Fibrous Tremolite		- *	TM048	Not Detected		Not Detected	Not Detected		Not Detected		Not Detected	Not Detected
Fibrous Actinolite		- *	TM048	Not Detected		Not Detected	Not Detected		Not Detected		Not Detected	Not Detected
Non-Asbestos Fibre		-	TM048	Not Detected		Detected	Not Detected		Not Detected		Not Detected	Not Detected
pH	1	pH Units M	TM133	7.83	7.9	8.1	8.82	8.26	8.18	8.21	9.2	9.84
Chromium, Hexavalent	<0.6	mg/kg *	TM151	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6		<0.6	<0.6
Cyanide, Total	<1	mg/kg M	TM153	<1	<1	<1	<1	<1	<1		<1	<1
Arsenic	<0.6	mg/kg M	TM181	16	20.4	16.1	10.5	11.9	14.6		17.3 (&)	6.44
Cadmium	<0.02	mg/kg M	TM181	0.873	1	0.882	0.892	0.403	0.463		0.853	0.404
Chromium	<0.9	mg/kg M	TM181	21.1	25	28.2	19.8	20.8	17.8		13.6	9.01
Copper	<1.4	mg/kg M	TM181	46.4	61.3	60.2	14.8	17.5	31		18.3 (&)	4.76
Lead	<0.7	mg/kg M	TM181	79.4	36.9	73.3	27.2	11.2	17.9		13300 (&)	13.4
Mercury	<0.14	mg/kg M	TM181	<0.14	<0.14	<0.14	<0.14	<0.14	<0.14		<0.14	<0.14
Nickel	<0.2	mg/kg M	TM181	22.7	44.4	27.7	24.2	27.1	27.4		14.4	5.18
Selenium	<1	mg/kg *	TM181	<1	<1	<1	<1	<1	<1		<1	<1
Zinc	<1.9	mg/kg M	TM181	165	209	144	88.7	64.4	73.5		132 (&)	63.4
Water Soluble Sulphate as SO4 2:1 Extract	<0.004	g/l M	TM243	<0.004		0.0117	0.113	0.432		1.9	0.0397	0.107
Soil Organic Matter (SOM)	<0.35	% *	TM132		1.51		0.59	1.03			2.16	0.833
PAH by GCMS												
Naphthalene-d8 % recovery**		%	TM218	107	91.4	109	108	111	111		106	113
Acenaphthene-d10 % recovery**		%	TM218	100	92.3	102	101	102	105		99	107
Phenanthrene-d10 % recovery**		%	TM218	100	93.8	102	102	97.7	103		99.7	108
Chrysene-d12 % recovery**		%	TM218	99.3	79.5	98.3	101	91.5	99.5		96	105
Perylene-d12 % recovery**		%	TM218	98	78.4	96.7	99.8	80.7	98.8		89.8	102
Naphthalene	<0.009	mg/kg M	TM218	0.0429	<0.009	0.0225	<0.009	<0.009	0.0245		0.0124	0.0554
Acenaphthylene	<0.012	mg/kg M	TM218	0.0496	<0.012	<0.012	<0.012	<0.012	<0.012		<0.012	<0.012
Acenaphthene	<0.008	mg/kg M	TM218	0.0118	<0.008	<0.008	<0.008	<0.008	<0.008		<0.008	0.026
Fluorene	<0.01	mg/kg M	TM218	0.0226	<0.01	<0.01	<0.01	<0.01	<0.01		<0.01	<0.01
Phenanthrene	<0.015	mg/kg M	TM218	0.332	0.13	0.111	<0.015	<0.015	0.0671		0.0373	0.142
Anthracene	<0.016	mg/kg M	TM218	0.0846	0.0233	<0.016	<0.016	<0.016	0.0284		<0.016	0.0312
Fluoranthene	<0.017	mg/kg M	TM218	0.714	0.234	0.227	0.0263	<0.017	0.22		0.0835	0.267
Pyrene	<0.015	mg/kg M	TM218	0.597	0.19	0.185	0.0243	<0.015	0.224		0.0741	0.234
Benz(a)anthracene	<0.014	mg/kg M	TM218	0.319	0.116	0.0983	<0.014	<0.014	0.126		0.0482	0.103
Chrysene	<0.01	mg/kg M	TM218	0.402	0.0887	0.119	<0.01	<0.01	0.115		0.0427	0.102
Benzo(b)fluoranthene	<0.015	mg/kg M	TM218	0.63	0.109	0.198	<0.015	<0.015	0.212		0.0672	0.123
Benzo(k)fluoranthene	<0.014	mg/kg M	TM218	0.232	0.0435	0.0648	<0.014	<0.014	0.0752		0.0252	0.0519
Benzo(a)pyrene	<0.015	mg/kg M	TM218	0.41	0.0794	0.114	<0.015	<0.015	0.164		0.0411	0.122
Indeno(1,2,3-cd)pyrene	<0.018	mg/kg M	TM218	0.289	0.044	0.086	<0.018	<0.018	0.112		0.0308	0.0828
Dibenzo(a,h)anthracene	<0.023	mg/kg M	TM218	0.0882	<0.023	<0.023	<0.023	<0.023	0.0283		<0.023	<0.023
Benzo(g,h,i)perylene	<0.024	mg/kg M	TM218	0.389	0.0548	0.12	<0.024	<0.024	0.156		0.0446	0.121
PAH, Total Detected USEPA 16	<0.118	mg/kg	TM218	4.61	1.11	1.34	<0.118	<0.118	1.55		0.507	1.46
TPH CWG (S)												
GRO Surrogate % recovery**		%	TM089	53	119	66	63	73	82		81	83
GRO TOT (Moisture Corrected)	<0.044	mg/kg M	TM089	<0.044	<0.044	<0.044	<0.044	<0.044	1.2		<0.044	<0.044
Aliphatics >C5-C6	<0.01	mg/kg	TM089	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		<0.01	<0.01
Aliphatics >C6-C8	<0.01	mg/kg	TM089	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		<0.01	<0.01
Aliphatics >C8-C10	<0.01	mg/kg	TM089	<0.01	<0.01	<0.01	<0.01	<0.01	0.405		<0.01	<0.01
Aliphatics >C10-C12	<0.01	mg/kg	TM089	<0.01	<0.01	<0.01	<0.01	<0.01	0.308		<0.01	<0.01
Aliphatics >C12-C16	<0.1	mg/kg	TM173	<0.1	<0.1	<0.1	0.25	0.284	0.198		<0.1	1.24
Aliphatics >C16-C21	<0.1	mg/kg	TM173	0.632	0.443	<0.1	<0.1	<0.1	<0.1		0.892	2.61

SOLID

		Customer Sample Ref.	BH01	BH01	BH04	BH05	BH05	WS03	WS03	WS05	WS06	
		Depth (m)	0.60 - 0.60	1.20 - 1.20	0.70 - 0.70	0.85 - 0.85	1.20 - 1.20	0.80 - 0.80	1.20 - 1.20	0.65 - 0.65	0.60 - 0.60	
		Sample Type	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	
		Date Sampled	03/06/2016	03/06/2016	03/06/2016	03/06/2016	03/06/2016	03/06/2016	03/06/2016	03/06/2016	03/06/2016	
		Date Received	04/06/2016 15:37	04/06/2016 15:37	04/06/2016 15:37	04/06/2016 15:37	04/06/2016 15:37	04/06/2016 15:37	04/06/2016 15:37	04/06/2016 15:37	04/06/2016 15:37	
		SDG Ref	160604-60	160604-60	160604-60	160604-60	160604-60	160604-60	160604-60	160604-60	160604-60	
		Lab Sample No.(s)	13540987	13541088	13541121	13541150	13541166	13541036	13541045	13541020	13541058	
		AGS Reference	ES	ES	ES	ES	ES	ES	ES	ES	ES	
Component	LOD	Units	Method									
Aliphatics >C21-C35	<0.1	mg/kg	TM173	8.15	13.2	3.57	3.12	<0.1	5.98		27.2	14.1
Aliphatics >C35-C44	<0.1	mg/kg	TM173	0.844	6.75	<0.1	<0.1	<0.1	<0.1		25.1	18.3
Total Aliphatics >C12-C44	<0.1	mg/kg	TM173	9.62	20.4	3.57	3.37	0.284	6.18		53.2	36.2
Aromatics >EC5-EC7	<0.01	mg/kg	TM089	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		<0.01	<0.01
Aromatics >EC7-EC8	<0.01	mg/kg	TM089	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		<0.01	<0.01
Aromatics >EC8-EC10	<0.01	mg/kg	TM089	<0.01	<0.01	<0.01	<0.01	<0.01	0.27		<0.01	<0.01
Aromatics >EC10-EC12	<0.01	mg/kg	TM089	<0.01	<0.01	<0.01	<0.01	<0.01	0.205		<0.01	<0.01
Aromatics >EC12-EC16	<0.1	mg/kg	TM173	0.332	<0.1	<0.1	<0.1	0.183	<0.1		<0.1	0.579
Aromatics >EC16-EC21	<0.1	mg/kg	TM173	7.05	2.71	1.15	<0.1	<0.1	1.34		0.802	2.7
Aromatics >EC21-EC35	<0.1	mg/kg	TM173	40.9	24.8	15	1.7	0.606	8.19		42.2	12.8
Aromatics >EC35-EC44	<0.1	mg/kg	TM173	12.2	11.2	3.95	0.653	<0.1	1.5		37.7	17.6
Aromatics >EC40-EC44	<0.1	mg/kg	TM173	4.7	4.38	1.34	<0.1	<0.1	<0.1		16.5	8.46
Total Aromatics >EC12-EC44	<0.1	mg/kg	TM173	60.5	38.7	20.1	2.35	0.789	11		80.6	33.7
Total Aliphatics & Aromatics >C5-C44	<0.1	mg/kg	TM173	70.1	59.1	23.6	5.73	1.07	18.4		134	69.9
Aromatics >EC16-EC35	<0.1	mg/kg	TM173	47.9	27.5	16.1	1.7	0.606	9.53		43	15.5
VOC MS (S)												
Methyl Tertiary Butyl Ether	<0.01	mg/kg M	TM116	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		<0.01	<0.01
Benzene	<0.009	mg/kg M	TM116	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009		<0.009	<0.009
Toluene	<0.007	mg/kg M	TM116	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007		<0.007	<0.007
Ethylbenzene	<0.004	mg/kg M	TM116	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004		<0.004	<0.004
p/m-Xylene	<0.01	mg/kg *	TM116	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		<0.01	<0.01
o-Xylene	<0.01	mg/kg M	TM116	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		<0.01	<0.01
Tert-amyl methyl ether	<0.01	mg/kg *	TM116	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		<0.01	<0.01

SOLID

		WS06	WS07	WS08	WS12
		1.30 - 1.30	0.70 - 0.70	0.30 - 0.30	0.60 - 0.60
		SOLID	SOLID	SOLID	SOLID
		03/06/2016	03/06/2016	03/06/2016	03/06/2016
		04/06/2016 15:37	04/06/2016 15:37	04/06/2016 15:37	04/06/2016 15:37
		160604-60	160604-60	160604-60	160604-60
		13541068	13541004	13541080	13541200
		ES	ES	ES	ES
Component	LOD	Units			

MISC

Moisture Content Ratio (% of as received sample)		%	14	18	6.3	12
Date of Analysis		-		06/09/2016	06/09/2016	06/09/2016
Analysed By		-		Lauren Sargeant	Lauren Sargeant	Rebecca Rawlings
Comments		-		0	0	0
Chrysotile (White) Asbestos		- *		Not Detected	Not Detected	Not Detected
Amosite (Brown) Asbestos		- *		Not Detected	Not Detected	Not Detected
Crocidolite (Blue) Asbestos		- *		Not Detected	Not Detected	Not Detected
Fibrous Anthophyllite		- *		Not Detected	Not Detected	Not Detected
Fibrous Tremolite		- *		Not Detected	Not Detected	Not Detected
Fibrous Actinolite		- *		Not Detected	Not Detected	Not Detected
Non-Asbestos Fibre		-		Not Detected	Not Detected	Not Detected
pH	1	pH Units M	8.27	8.42	11.5	9.04
Chromium, Hexavalent	<0.6	mg/kg *	<0.6	<0.6	<0.6	<0.6
Cyanide, Total	<1	mg/kg M	<1	<1	<1	<1
Arsenic	<0.6	mg/kg M	10.5	28.8	2.3	16.9
Cadmium	<0.02	mg/kg M	0.497	0.86	0.15	0.651
Chromium	<0.9	mg/kg M	24.6	25.6	8.35	13.8
Copper	<1.4	mg/kg M	19.1	31.4	4.17	12.7
Lead	<0.7	mg/kg M	12.9	20.1	<0.7	724
Mercury	<0.14	mg/kg M	<0.14	<0.14	<0.14	<0.14
Nickel	<0.2	mg/kg M	25.8	76.3	2.6	19
Selenium	<1	mg/kg *	<1	<10	<1	<1
Zinc	<1.9	mg/kg M	68.5	56.4	7.26	53.9
Water Soluble Sulphate as SO4 2:1 Extract	<0.004	g/l M	0.194			
Soil Organic Matter (SOM)	<0.35	% *				

PAH by GCMS

Naphthalene-d8 % recovery**		%	99.4	105	111	109
Acenaphthene-d10 % recovery**		%	96.4	96.6	103	101
Phenanthrene-d10 % recovery**		%	95.1	97.3	104	100
Chrysene-d12 % recovery**		%	90.6	93.9	99.3	98
Perylene-d12 % recovery**		%	99.4	85.1	86.3	92.7
Naphthalene	<0.009	mg/kg M	0.0201	<0.009	<0.009	<0.009
Acenaphthylene	<0.012	mg/kg M	<0.012	<0.012	<0.012	<0.012
Acenaphthene	<0.008	mg/kg M	0.0119	<0.008	<0.008	<0.008
Fluorene	<0.01	mg/kg M	0.0123	<0.01	<0.01	<0.01
Phenanthrene	<0.015	mg/kg M	0.112	<0.015	<0.015	0.025
Anthracene	<0.016	mg/kg M	0.0229	<0.016	<0.016	<0.016
Fluoranthene	<0.017	mg/kg M	0.0992	<0.017	<0.017	0.0506
Pyrene	<0.015	mg/kg M	0.0749	<0.015	<0.015	0.0418
Benz(a)anthracene	<0.014	mg/kg M	0.0283	<0.014	<0.014	<0.014
Chrysene	<0.01	mg/kg M	0.027	<0.01	<0.01	0.0208
Benzo(b)fluoranthene	<0.015	mg/kg M	0.0424	<0.015	<0.015	0.026
Benzo(k)fluoranthene	<0.014	mg/kg M	0.0196	<0.014	<0.014	<0.014
Benzo(a)pyrene	<0.015	mg/kg M	0.0355	<0.015	<0.015	0.0185
Indeno(1,2,3-cd)pyrene	<0.018	mg/kg M	<0.018	<0.018	<0.018	<0.018
Dibenzo(a,h)anthracene	<0.023	mg/kg M	<0.023	<0.023	<0.023	<0.023
Benzo(g,h,i)perylene	<0.024	mg/kg M	<0.024	<0.024	<0.024	<0.024
PAH, Total Detected USEPA 16	<0.118	mg/kg	0.506	<0.118	<0.118	0.183

TPH CWG (S)

GRO Surrogate % recovery**		%	86	121	102	97
GRO TOT (Moisture Corrected)	<0.044	mg/kg M	4.87	<0.044	<0.044	<0.044
Aliphatics >C5-C6	<0.01	mg/kg	<0.01	<0.01	<0.01	<0.01
Aliphatics >C6-C8	<0.01	mg/kg	0.014	<0.01	<0.01	<0.01
Aliphatics >C8-C10	<0.01	mg/kg	1.73	<0.01	<0.01	<0.01
Aliphatics >C10-C12	<0.01	mg/kg	1.18	<0.01	<0.01	<0.01
Aliphatics >C12-C16	<0.1	mg/kg	<0.1	<0.1	<0.1	<0.1
Aliphatics >C16-C21	<0.1	mg/kg	<0.1	<0.1	<0.1	<0.1

SOLID

		WS06	WS07	WS08	WS12	
		1.30 - 1.30	0.70 - 0.70	0.30 - 0.30	0.60 - 0.60	
		SOLID	SOLID	SOLID	SOLID	
		03/06/2016	03/06/2016	03/06/2016	03/06/2016	
		04/06/2016 15:37	04/06/2016 15:37	04/06/2016 15:37	04/06/2016 15:37	
		160604-60	160604-60	160604-60	160604-60	
		13541068	13541004	13541080	13541200	
		ES	ES	ES	ES	
Component	LOD	Units				
Aliphatics >C21-C35	<0.1	mg/kg	3.94	<0.1	3.14	<0.1
Aliphatics >C35-C44	<0.1	mg/kg	1.75	<0.1	<0.1	<0.1
Total Aliphatics >C12-C44	<0.1	mg/kg	5.69	<0.1	3.14	<0.1
Aromatics >EC5-EC7	<0.01	mg/kg	<0.01	<0.01	<0.01	<0.01
Aromatics >EC7-EC8	<0.01	mg/kg	<0.01	<0.01	<0.01	<0.01
Aromatics >EC8-EC10	<0.01	mg/kg	1.15	<0.01	<0.01	<0.01
Aromatics >EC10-EC12	<0.01	mg/kg	0.784	<0.01	<0.01	<0.01
Aromatics >EC12-EC16	<0.1	mg/kg	<0.1	<0.1	<0.1	<0.1
Aromatics >EC16-EC21	<0.1	mg/kg	0.688	<0.1	<0.1	<0.1
Aromatics >EC21-EC35	<0.1	mg/kg	9.94	<0.1	0.129	<0.1
Aromatics >EC35-EC44	<0.1	mg/kg	15.4	<0.1	<0.1	<0.1
Aromatics >EC40-EC44	<0.1	mg/kg	7.67	<0.1	<0.1	<0.1
Total Aromatics >EC12-EC44	<0.1	mg/kg	26	<0.1	0.129	<0.1
Total Aliphatics & Aromatics >C5-C44	<0.1	mg/kg	36.6	<0.1	3.27	<0.1
Aromatics >EC16-EC35	<0.1	mg/kg	10.6	<0.1	0.129	<0.1
VOC MS (S)						
Methyl Tertiary Butyl Ether	<0.01	mg/kg M	<0.01	<0.01	<0.01	<0.01
Benzene	<0.009	mg/kg M	<0.009	<0.009	<0.009	<0.009
Toluene	<0.007	mg/kg M	<0.007	<0.007	<0.007	<0.007
Ethylbenzene	<0.004	mg/kg M	<0.004	<0.004	<0.004	<0.004
p/m-Xylene	<0.01	mg/kg *	<0.01	<0.01	<0.01	<0.01
o-Xylene	<0.01	mg/kg M	<0.01	<0.01	<0.01	<0.01
Tert-amyl methyl ether	<0.01	mg/kg *	<0.01	<0.01	<0.01	<0.01

NRA

Customer Sample Ref.	BH01	BH04	BH05	WS08
Depth (m)	0.60 - 0.60	0.70 - 0.70	0.85 - 0.85	0.30 - 0.30
Sample Type	SOLID	SOLID	SOLID	SOLID
Date Sampled	03/06/2016	03/06/2016	03/06/2016	03/06/2016
Date Received	04/06/2016 15:37	04/06/2016 15:37	04/06/2016 15:37	04/06/2016 15:37
SDG Ref	160604-60	160604-60	160604-60	160604-60
Lab Sample No.(s)	13540987	13541121	13541150	13541080
AGS Reference	ES	ES	ES	ES
Component	LOD	Units	Method	

MISC

Arsenic (diss.filt) NRA leach	<0.12	µg/l	TM152	5.24	1.64	0.647	<0.12
Cadmium (diss.filt) NRA leach	<0.1	µg/l	TM152	<0.1	<0.1	<0.1	<0.1
Chromium (diss.filt) NRA leach	<0.22	µg/l	TM152	1.6	1.46	3.03	1.47
Copper (diss.filt) NRA leach	<0.85	µg/l	TM152	1.1	1.23	<0.85	<0.85
Lead (diss.filt) NRA leach	<0.02	µg/l	TM152	1.21	0.468	0.087	<0.02
Nickel (diss.filt) NRA leach	<0.15	µg/l	TM152	2.82	2.72	1.54	0.337
Selenium (diss.filt) NRA leach	<0.39	µg/l	TM152	0.435	<0.39	<0.39	<0.39
Zinc (diss.filt) NRA leach	<0.41	µg/l	TM152	2.65	1.44	0.55	<0.41
Mercury (diss.filt) NRA leach	<0.01	µg/l	TM183	<0.01	0.011	<0.01	0.0152
Cyanide, Total NRA leach	<50	µg/l	TM227	<50	<50	<50	<50

NRA

	Customer Sample Ref.	BH01	BH04	BH05	WS08																	
	Depth (m)	0.60 - 0.60	0.70 - 0.70	0.85 - 0.85	0.30 - 0.30																	
	Sample Type	SOLID	SOLID	SOLID	SOLID																	
	Date Sampled	03/06/2016	03/06/2016	03/06/2016	03/06/2016																	
	Date Received	04/06/2016 15:37	04/06/2016 15:37	04/06/2016 15:37	04/06/2016 15:37																	
	SDG Ref	160604-60	160604-60	160604-60	160604-60																	
	Lab Sample No.(s)	13540987	13541121	13541150	13541080																	
	AGS Reference	ES	ES	ES	ES																	
Component	LOD	Units	Method																			



WSP PB LBH
WSP PB
4th Floor
6 Devonshire Square
London
EC2M 4YE
Attention : George Baggot

[Redacted]
Website: www.alcontrol.com

CERTIFICATE OF ANALYSIS

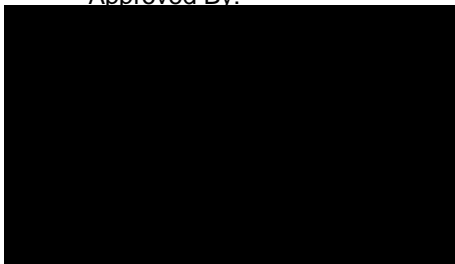
Date:	13/06/2016 16:59		
Customer:	H_WSP_LON		
Sample Delivery Group (SDG):	160607-39	Report No.:	364753
Your Reference:	70020138		
Location:	Tradeteam Site (DHL) Gloucester		

We received 16 samples on Tuesday June 07, 2016 and 15 of these samples were scheduled for analysis which was then completed on Monday June 13, 2016. Accredited laboratory tests are defined in the report, but opinions, interpretations and on-site data expressed herein are outside the scope of ISO 17025 accreditation.

Should this report require incorporation into client reports, it must be used in its entirety and not simply with data sections alone.

All chemical testing (unless subcontracting) is performed at ALcontrol Hawarden Laboratories.

Approved By:



SOLID

Component	LOD	Units	Method	Customer Sample Ref.	BH02	BH02	BH03	BH03	WS01	WS01	WS02	WS04
				Depth (m)	0.50 - 0.50	1.80 - 1.80	0.40 - 0.40	0.80 - 0.80	0.30 - 0.30	0.70 - 0.70	0.22 - 0.22	0.30 - 0.30
				Sample Type	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID
				Date Sampled	06/06/2016	06/06/2016	06/06/2016	06/06/2016	06/06/2016	06/06/2016	06/06/2016	06/06/2016
				Date Received	07/06/2016 13:07	07/06/2016 13:07	07/06/2016 13:07	07/06/2016 13:07	07/06/2016 13:07	07/06/2016 13:07	07/06/2016 13:07	07/06/2016 13:07
				SDG Ref	160607-39	160607-39	160607-39	160607-39	160607-39	160607-39	160607-39	160607-39
				Lab Sample No.(s)	13551311	13551320	13551282	13551296	13551336	13551344	13551380	13551388
				AGS Reference	ES	ES	ES	ES	ES	ES	ES	ES

MISC

Moisture Content Ratio (% of as received sample)		%	PM024	16	18	19	23	17	21	7.6	12
Date of Analysis		-	TM048	06/10/2016		06/10/2016		06/10/2016		06/10/2016	06/10/2016
Analysed By		-	TM048	Rebecca Rawlings		Kevin Gill		Rebecca Rawlings		Rebecca Rawlings	Rebecca Rawlings
Comments		-	TM048	0		0		0		0	0
Chrysotile (White) Asbestos		- *	TM048	Not Detected		Not Detected		Not Detected		Not Detected	Not Detected
Amosite (Brown) Asbestos		- *	TM048	Not Detected		Not Detected		Not Detected		Not Detected	Not Detected
Crocidolite (Blue) Asbestos		- *	TM048	Not Detected		Not Detected		Not Detected		Not Detected	Not Detected
Fibrous Anthophyllite		- *	TM048	Not Detected		Not Detected		Not Detected		Not Detected	Not Detected
Fibrous Tremolite		- *	TM048	Not Detected		Not Detected		Not Detected		Not Detected	Not Detected
Fibrous Actinolite		- *	TM048	Not Detected		Not Detected		Not Detected		Not Detected	Not Detected
Non-Asbestos Fibre		-	TM048	Not Detected		Not Detected		Not Detected		Not Detected	Not Detected
Soil Organic Matter (SOM)	<0.35	% *	TM132	3.26		1.17					
pH	1	pH Units M	TM133	8.18	8.13	8.54	8.56				11.3
Chromium, Hexavalent	<0.6	mg/kg *	TM151	<0.6	<0.6	<0.6	<0.6				<0.6
Cyanide, Total	<1	mg/kg M	TM153	<1	<1	<1	<1				<1
Arsenic	<0.6	mg/kg M	TM181	14.7	8.33	13.4	12.9				12.6
Cadmium	<0.02	mg/kg M	TM181	0.712	0.37	0.54	0.415				0.489
Chromium	<0.9	mg/kg M	TM181	29.3	30.2	27.4	27.6				19.1
Copper	<1.4	mg/kg M	TM181	46.8	22.1	26.4	22.5				17.2
Lead	<0.7	mg/kg M	TM181	65.3	12.4	17.4	11.2				13.9
Mercury	<0.14	mg/kg M	TM181	<0.14	<0.14	<0.14	<0.14				<0.14
Nickel	<0.2	mg/kg M	TM181	30	38.1	34.3	27.9				25.5
Selenium	<1	mg/kg *	TM181	<1	<1	<1	<1				<1
Zinc	<1.9	mg/kg M	TM181	131	67.2	54.2	72.1				56.3
Water Soluble Sulphate as SO4 2:1 Extract	<0.004	g/l M	TM243			0.0747	0.121				
Phenol	<0.01	mg/kg M	TM062 (S)								
Cresols	<0.01	mg/kg M	TM062 (S)								
Xylenols	<0.015	mg/kg M	TM062 (S)								
Phenols, Total Detected monohydric	<0.035	mg/kg M	TM062 (S)								

PAH by GCMS

Naphthalene-d8 % recovery**		%	TM218	98.4	106	101	97.9	108	107	94.6	99.9
Acenaphthene-d10 % recovery**		%	TM218	96.8	104	98.9	96.6	106	105	94.1	97.6
Phenanthrene-d10 % recovery**		%	TM218	95.2	103	97.3	94.3	104	102	92.4	95.9
Chrysene-d12 % recovery**		%	TM218	91.5	96.4	93.7	87.8	100	94	88.8	92.8
Perylene-d12 % recovery**		%	TM218	99.3	94	100	85.1	106	89	99.4	101
Naphthalene	<0.009	mg/kg M	TM218	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009	0.0161	<0.009
Acenaphthylene	<0.012	mg/kg M	TM218	<0.012	<0.012	<0.012	<0.012	<0.012	<0.012	0.0199	<0.012
Acenaphthene	<0.008	mg/kg M	TM218	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008	0.00938	0.018
Fluorene	<0.01	mg/kg M	TM218	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.0278	<0.01
Phenanthrene	<0.015	mg/kg M	TM218	0.0661	<0.015	<0.015	<0.015	<0.015	<0.015	0.197	0.214
Anthracene	<0.016	mg/kg M	TM218	<0.016	<0.016	<0.016	<0.016	<0.016	<0.016	0.0513	0.0474
Fluoranthene	<0.017	mg/kg M	TM218	0.086	<0.017	<0.017	<0.017	<0.017	<0.017	0.242	0.314
Pyrene	<0.015	mg/kg M	TM218	0.0664	<0.015	<0.015	<0.015	<0.015	<0.015	0.208	0.238
Benz(a)anthracene	<0.014	mg/kg M	TM218	0.0673	<0.014	<0.014	<0.014	<0.014	<0.014	0.126	0.128
Chrysene	<0.01	mg/kg M	TM218	0.0441	<0.01	<0.01	<0.01	<0.01	<0.01	0.0956	0.125
Benzo(b)fluoranthene	<0.015	mg/kg M	TM218	0.0786	<0.015	<0.015	<0.015	<0.015	<0.015	0.162	0.198
Benzo(k)fluoranthene	<0.014	mg/kg M	TM218	0.0381	<0.014	<0.014	<0.014	<0.014	<0.014	0.0484	0.0779
Benzo(a)pyrene	<0.015	mg/kg M	TM218	0.061	<0.015	<0.015	<0.015	<0.015	<0.015	0.125	0.139
Indeno(1,2,3-cd)pyrene	<0.018	mg/kg M	TM218	0.0379	<0.018	<0.018	<0.018	<0.018	<0.018	0.0712	0.0861
Dibenzo(a,h)anthracene	<0.023	mg/kg M	TM218	<0.023	<0.023	<0.023	<0.023	<0.023	<0.023	<0.023	0.0288
Benzo(g,h,i)perylene	<0.024	mg/kg M	TM218	0.0587	<0.024	<0.024	<0.024	<0.024	<0.024	0.102	0.105
PAH, Total Detected USEPA 16	<0.118	mg/kg	TM218	0.604	<0.118	<0.118	<0.118	<0.118	<0.118	1.5	1.72

Semi Volatile Organic Compounds

Phenol	<0.1	mg/kg	TM157								
Pentachlorophenol	<0.1	mg/kg	TM157								
n-Nitroso-n-dipropylamine	<0.1	mg/kg	TM157								
Nitrobenzene	<0.1	mg/kg	TM157								

SOLID

		Customer Sample Ref.	BH02	BH02	BH03	BH03	WS01	WS01	WS02	WS04
		Depth (m)	0.50 - 0.50	1.80 - 1.80	0.40 - 0.40	0.80 - 0.80	0.30 - 0.30	0.70 - 0.70	0.22 - 0.22	0.30 - 0.30
		Sample Type	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID
		Date Sampled	06/06/2016	06/06/2016	06/06/2016	06/06/2016	06/06/2016	06/06/2016	06/06/2016	06/06/2016
		Date Received	07/06/2016 13:07	07/06/2016 13:07	07/06/2016 13:07	07/06/2016 13:07	07/06/2016 13:07	07/06/2016 13:07	07/06/2016 13:07	07/06/2016 13:07
		SDG Ref	160607-39	160607-39	160607-39	160607-39	160607-39	160607-39	160607-39	160607-39
		Lab Sample No.(s)	13551311	13551320	13551282	13551296	13551336	13551344	13551380	13551388
		AGS Reference	ES	ES	ES	ES	ES	ES	ES	ES
Component	LOD	Units	Method							
Isophorone	<0.1	mg/kg	TM157							
Hexachloroethane	<0.1	mg/kg	TM157							
Hexachlorocyclopentadiene	<0.1	mg/kg	TM157							
Hexachlorobutadiene	<0.1	mg/kg	TM157							
Hexachlorobenzene	<0.1	mg/kg	TM157							
n-Dioctyl phthalate	<0.1	mg/kg	TM157							
Dimethyl phthalate	<0.1	mg/kg	TM157							
Diethyl phthalate	<0.1	mg/kg	TM157							
n-Dibutyl phthalate	<0.1	mg/kg	TM157							
Dibenzofuran	<0.1	mg/kg	TM157							
Carbazole	<0.1	mg/kg	TM157							
Butylbenzyl phthalate	<0.1	mg/kg	TM157							
bis(2-Ethylhexyl) phthalate	<0.1	mg/kg	TM157							
bis(2-Chloroethoxy)methane	<0.1	mg/kg	TM157							
bis(2-Chloroethyl)ether	<0.1	mg/kg	TM157							
Azobenzene	<0.1	mg/kg	TM157							
4-Nitrophenol	<0.1	mg/kg	TM157							
4-Nitroaniline	<0.1	mg/kg	TM157							
4-Methylphenol	<0.1	mg/kg	TM157							
4-Chlorophenylphenylether	<0.1	mg/kg	TM157							
4-Chloroaniline	<0.1	mg/kg	TM157							
4-Chloro-3-methylphenol	<0.1	mg/kg	TM157							
4-Bromophenylphenylether	<0.1	mg/kg	TM157							
3-Nitroaniline	<0.1	mg/kg	TM157							
2-Nitrophenol	<0.1	mg/kg	TM157							
2-Nitroaniline	<0.1	mg/kg	TM157							
2-Methylphenol	<0.1	mg/kg	TM157							
1,2,4-Trichlorobenzene	<0.1	mg/kg	TM157							
2-Chlorophenol	<0.1	mg/kg	TM157							
2,6-Dinitrotoluene	<0.1	mg/kg	TM157							
2,4-Dinitrotoluene	<0.1	mg/kg	TM157							
2,4-Dimethylphenol	<0.1	mg/kg	TM157							
2,4-Dichlorophenol	<0.1	mg/kg	TM157							
2,4,6-Trichlorophenol	<0.1	mg/kg	TM157							
2,4,5-Trichlorophenol	<0.1	mg/kg	TM157							
1,4-Dichlorobenzene	<0.1	mg/kg	TM157							
1,3-Dichlorobenzene	<0.1	mg/kg	TM157							
1,2-Dichlorobenzene	<0.1	mg/kg	TM157							
2-Chloronaphthalene	<0.1	mg/kg	TM157							
2-Methylnaphthalene	<0.1	mg/kg	TM157							
Acenaphthylene	<0.1	mg/kg	TM157							
Acenaphthene	<0.1	mg/kg	TM157							
Anthracene	<0.1	mg/kg	TM157							
Benzo(a)anthracene	<0.1	mg/kg	TM157							
Benzo(b)fluoranthene	<0.1	mg/kg	TM157							
Benzo(k)fluoranthene	<0.1	mg/kg	TM157							
Benzo(a)pyrene	<0.1	mg/kg	TM157							
Benzo(g,h,i)perylene	<0.1	mg/kg	TM157							
Chrysene	<0.1	mg/kg	TM157							
Fluoranthene	<0.1	mg/kg	TM157							
Fluorene	<0.1	mg/kg	TM157							
Indeno(1,2,3-cd)pyrene	<0.1	mg/kg	TM157							
Phenanthrene	<0.1	mg/kg	TM157							
Pyrene	<0.1	mg/kg	TM157							
Naphthalene	<0.1	mg/kg	TM157							
Dibenzo(a,h)anthracene	<0.1	mg/kg	TM157							
Bis(2-chloroisopropyl) ether	<0.1	mg/kg	TM157							
TPH CWG (S)										

SOLID

		Customer Sample Ref.	BH02	BH02	BH03	BH03	WS01	WS01	WS02	WS04	
		Depth (m)	0.50 - 0.50	1.80 - 1.80	0.40 - 0.40	0.80 - 0.80	0.30 - 0.30	0.70 - 0.70	0.22 - 0.22	0.30 - 0.30	
		Sample Type	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	
		Date Sampled	06/06/2016	06/06/2016	06/06/2016	06/06/2016	06/06/2016	06/06/2016	06/06/2016	06/06/2016	
		Date Received	07/06/2016 13:07	07/06/2016 13:07	07/06/2016 13:07	07/06/2016 13:07	07/06/2016 13:07	07/06/2016 13:07	07/06/2016 13:07	07/06/2016 13:07	
		SDG Ref	160607-39	160607-39	160607-39	160607-39	160607-39	160607-39	160607-39	160607-39	
		Lab Sample No.(s)	13551311	13551320	13551282	13551296	13551336	13551344	13551380	13551388	
		AGS Reference	ES	ES	ES	ES	ES	ES	ES	ES	
Component	LOD	Units	Method								
GRO Surrogate % recovery**		%	TM089	34	79	84	35	115	64	93	
GRO TOT (Moisture Corrected)	<0.044	mg/kg M	TM089	<0.044	<0.044	<0.044	<0.044	0.0588	<0.044	<0.044	0.0859
Aliphatics >C5-C6	<0.01	mg/kg	TM089	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	
Aliphatics >C6-C8	<0.01	mg/kg	TM089	<0.01	<0.01	<0.01	<0.01	0.0144	<0.01	<0.01	0.0158
Aliphatics >C8-C10	<0.01	mg/kg	TM089	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.0136
Aliphatics >C10-C12	<0.01	mg/kg	TM089	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.0147
Aliphatics >C12-C16	<0.1	mg/kg	TM173	<0.1	<0.1	<0.1	<0.1	1.01	<0.1	<0.1	<0.1
Aliphatics >C16-C21	<0.1	mg/kg	TM173	<0.1	<0.1	<0.1	<0.1	4.72	<0.1	7.72	2.75
Aliphatics >C21-C35	<0.1	mg/kg	TM173	0.991	<0.1	<0.1	<0.1	43.4	0.422	31.7	59.2
Aliphatics >C35-C44	<0.1	mg/kg	TM173	<0.1	<0.1	<0.1	<0.1	2.29	<0.1	24.4	4.04
Total Aliphatics >C12-C44	<0.1	mg/kg	TM173	0.991	<0.1	<0.1	<0.1	51.5	0.422	65.5	66
Aromatics >EC5-EC7	<0.01	mg/kg	TM089	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Aromatics >EC7-EC8	<0.01	mg/kg	TM089	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Aromatics >EC8-EC10	<0.01	mg/kg	TM089	<0.01	<0.01	<0.01	<0.01	0.0168	<0.01	<0.01	0.0158
Aromatics >EC10-EC12	<0.01	mg/kg	TM089	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.0102
Aromatics >EC12-EC16	<0.1	mg/kg	TM173	<0.1	<0.1	0.166	<0.1	0.166	<0.1	0.606	0.732
Aromatics >EC16-EC21	<0.1	mg/kg	TM173	0.673	<0.1	<0.1	<0.1	0.604	<0.1	2.95	2.97
Aromatics >EC21-EC35	<0.1	mg/kg	TM173	9.64	<0.1	2.94	<0.1	6.42	1.63	53.9	18.8
Aromatics >EC35-EC44	<0.1	mg/kg	TM173	9.07	<0.1	4.72	<0.1	3.96	<0.1	74.5	6.46
Aromatics >EC40-EC44	<0.1	mg/kg	TM173	4.61	<0.1	2.71	<0.1	1.89	<0.1	29.7	2.63
Total Aromatics >EC12-EC44	<0.1	mg/kg	TM173	19.4	<0.1	7.83	<0.1	11.1	1.63	132	29
Total Aliphatics & Aromatics >C5-C44	<0.1	mg/kg	TM173	20.4	<0.1	7.83	<0.1	62.7	2.05	197	95.1
Aromatics >EC16-EC35	<0.1	mg/kg	TM173	10.3	<0.1	2.94	<0.1	7.02	1.63	56.8	21.8
VOC MS (S)											
Methyl Tertiary Butyl Ether	<0.01	mg/kg M	TM116	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Benzene	<0.009	mg/kg M	TM116	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009
Toluene	<0.007	mg/kg M	TM116	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007
Ethylbenzene	<0.004	mg/kg M	TM116	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004
p/m-Xylene	<0.01	mg/kg *	TM116	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
o-Xylene	<0.01	mg/kg M	TM116	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Tert-amyl methyl ether	<0.01	mg/kg *	TM116	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Dibromofluoromethane**		%	TM116							103	83
Toluene-d8**		%	TM116							94.7	92.6
4-Bromofluorobenzene**		%	TM116							77.9	79
Dichlorodifluoromethane	<0.006	mg/kg M	TM116						<0.006	<0.006	<0.006
Chloromethane	<0.007	mg/kg *	TM116						<0.007	<0.007	<0.007
Vinyl Chloride	<0.006	mg/kg M	TM116						<0.006	<0.006	<0.006
Bromomethane	<0.01	mg/kg M	TM116						<0.01	<0.01	<0.01
Chloroethane	<0.01	mg/kg M	TM116						<0.01	<0.01	<0.01
Trichlorofluoromethane	<0.006	mg/kg M	TM116						<0.006	<0.006	<0.006
1,1-Dichloroethene	<0.01	mg/kg *	TM116						<0.01	<0.01	<0.01
Carbon Disulphide	<0.007	mg/kg M	TM116						<0.007	<0.007	<0.007
Dichloromethane	<0.01	mg/kg *	TM116						<0.01	<0.01	<0.01
trans-1,2-Dichloroethene	<0.01	mg/kg M	TM116						<0.01	<0.01	<0.01
1,1-Dichloroethane	<0.008	mg/kg M	TM116						<0.008	<0.008	<0.008
cis-1,2-Dichloroethene	<0.006	mg/kg M	TM116						<0.006	<0.006	<0.006
2,2-Dichloropropane	<0.01	mg/kg M	TM116						<0.01	<0.01	<0.01
Bromochloromethane	<0.01	mg/kg M	TM116						<0.01	<0.01	<0.01
Chloroform	<0.008	mg/kg M	TM116						<0.008	<0.008	<0.008
1,1,1-Trichloroethane	<0.007	mg/kg M	TM116						<0.007	<0.007	<0.007
1,1-Dichloropropene	<0.01	mg/kg M	TM116						<0.01	<0.01	<0.01
Carbontetrachloride	<0.01	mg/kg M	TM116						<0.01	<0.01	<0.01
1,2-Dichloroethane	<0.005	mg/kg M	TM116						<0.005	<0.005	<0.005
Trichloroethene	<0.009	mg/kg *	TM116						<0.009	<0.009	<0.009
1,2-Dichloropropane	<0.01	mg/kg M	TM116						<0.01	<0.01	<0.01
Dibromomethane	<0.009	mg/kg M	TM116						<0.009	<0.009	<0.009
Bromodichloromethane	<0.007	mg/kg M	TM116						<0.007	<0.007	<0.007
cis-1,3-Dichloropropene	<0.01	mg/kg M	TM116						<0.01	<0.01	<0.01

SOLID

		Customer Sample Ref.	BH02	BH02	BH03	BH03	WS01	WS01	WS02	WS04
		Depth (m)	0.50 - 0.50	1.80 - 1.80	0.40 - 0.40	0.80 - 0.80	0.30 - 0.30	0.70 - 0.70	0.22 - 0.22	0.30 - 0.30
		Sample Type	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID
		Date Sampled	06/06/2016	06/06/2016	06/06/2016	06/06/2016	06/06/2016	06/06/2016	06/06/2016	06/06/2016
		Date Received	07/06/2016 13:07	07/06/2016 13:07	07/06/2016 13:07	07/06/2016 13:07	07/06/2016 13:07	07/06/2016 13:07	07/06/2016 13:07	07/06/2016 13:07
		SDG Ref	160607-39	160607-39	160607-39	160607-39	160607-39	160607-39	160607-39	160607-39
		Lab Sample No.(s)	13551311	13551320	13551282	13551296	13551336	13551344	13551380	13551388
		AGS Reference	ES	ES	ES	ES	ES	ES	ES	ES
Component	LOD	Units	Method							
trans-1,3-Dichloropropene	<0.01	mg/kg	TM116						<0.01	<0.01
1,1,2-Trichloroethane	<0.01	mg/kg M	TM116						<0.01	<0.01
1,3-Dichloropropane	<0.007	mg/kg M	TM116						<0.007	<0.007
Tetrachloroethene	<0.005	mg/kg M	TM116						<0.005	<0.005
Dibromochloromethane	<0.01	mg/kg M	TM116						<0.01	<0.01
1,2-Dibromoethane	<0.01	mg/kg M	TM116						<0.01	<0.01
Chlorobenzene	<0.005	mg/kg M	TM116						<0.005	<0.005
1,1,1,2-Tetrachloroethane	<0.01	mg/kg M	TM116						<0.01	<0.01
Styrene	<0.01	mg/kg *	TM116						<0.01	<0.01
Bromoform	<0.01	mg/kg M	TM116						<0.01	<0.01
Isopropylbenzene	<0.005	mg/kg *	TM116						<0.005	<0.005
1,1,2,2-Tetrachloroethane	<0.01	mg/kg M	TM116						<0.01	<0.01
1,2,3-Trichloropropane	<0.016	mg/kg M	TM116						<0.016	<0.016
Bromobenzene	<0.01	mg/kg M	TM116						<0.01	<0.01
Propylbenzene	<0.01	mg/kg M	TM116						<0.01	<0.01
2-Chlorotoluene	<0.009	mg/kg M	TM116						<0.009	<0.009
1,3,5-Trimethylbenzene	<0.008	mg/kg M	TM116						<0.008	<0.008
4-Chlorotoluene	<0.01	mg/kg M	TM116						<0.01	<0.01
tert-Butylbenzene	<0.014	mg/kg M	TM116						<0.014	<0.014
1,2,4-Trimethylbenzene	<0.009	mg/kg *	TM116						<0.009	<0.009
sec-Butylbenzene	<0.01	mg/kg M	TM116						<0.01	<0.01
4-Isopropyltoluene	<0.01	mg/kg M	TM116						<0.01	<0.01
1,3-Dichlorobenzene	<0.008	mg/kg M	TM116						<0.008	<0.008
1,4-Dichlorobenzene	<0.005	mg/kg M	TM116						<0.005	<0.005
n-Butylbenzene	<0.011	mg/kg	TM116						<0.011	<0.011
1,2-Dichlorobenzene	<0.01	mg/kg M	TM116						<0.01	<0.01
1,2-Dibromo-3-chloropropane	<0.014	mg/kg M	TM116						<0.014	<0.014
1,2,4-Trichlorobenzene	<0.02	mg/kg	TM116						<0.02	<0.02
Hexachlorobutadiene	<0.02	mg/kg	TM116						<0.02	<0.02
Naphthalene	<0.013	mg/kg M	TM116						<0.013	<0.013
1,2,3-Trichlorobenzene	<0.02	mg/kg *	TM116						<0.02	<0.02

SOLID

Component	LOD	Units	WS09	WS09	WS10	WS10	WS10	WS11	WS11
			0.20 - 0.20	0.35 - 0.35	0.30 - 0.30	1.65 - 1.65	2.50 - 2.50	0.30 - 0.30	0.50 - 0.50
			SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID
			06/06/2016	06/06/2016	06/06/2016	06/06/2016	06/06/2016	06/06/2016	06/06/2016
			07/06/2016 13:07	07/06/2016 13:07	07/06/2016 13:07	07/06/2016 13:07	07/06/2016 13:07	07/06/2016 13:07	07/06/2016 13:07
			160607-39	160607-39	160607-39	160607-39	160607-39	160607-39	160607-39
			13551265	13551273	13551352	13551363	13551371	13551240	13551328
			ES	ES	ES	ES	ES	ES	ES

MISC

Moisture Content Ratio (% of as received sample)	%		2.2	18	5.6	19	15	6.9	19
Date of Analysis	-		06/10/2016		06/10/2016			06/10/2016	
Analysed By	-		Rebecca Rawlings		Rebecca Rawlings			Rebecca Rawlings	
Comments	-		0		0			0	
Chrysotile (White) Asbestos	- *		Not Detected		Not Detected			Not Detected	
Amosite (Brown) Asbestos	- *		Not Detected		Not Detected			Not Detected	
Crocidolite (Blue) Asbestos	- *		Not Detected		Not Detected			Not Detected	
Fibrous Anthophyllite	- *		Not Detected		Not Detected			Not Detected	
Fibrous Tremolite	- *		Not Detected		Not Detected			Not Detected	
Fibrous Actinolite	- *		Not Detected		Not Detected			Not Detected	
Non-Asbestos Fibre	-		Not Detected		Not Detected			Not Detected	
Soil Organic Matter (SOM)	<0.35	% *			<0.35	1.29			
pH	1	pH Units M	9.32	8.36	9.95			9.97	
Chromium, Hexavalent	<0.6	mg/kg *	<0.6		<0.6			1.04	
Cyanide, Total	<1	mg/kg M	<1		<1			<1	
Arsenic	<0.6	mg/kg M	2.49		1.56			26.7	
Cadmium	<0.02	mg/kg M	0.116		0.132			3.84	
Chromium	<0.9	mg/kg M	4.84		6.45			5.79	
Copper	<1.4	mg/kg M	3.7		3.12			6.86	
Lead	<0.7	mg/kg M	2.12		0.861			78.2	
Mercury	<0.14	mg/kg M	<0.14		<0.14			<0.14	
Nickel	<0.2	mg/kg M	4.56		1.81			7.68	
Selenium	<1	mg/kg *	<1		<1			<1	
Zinc	<1.9	mg/kg M	16.4		6.17			342	
Water Soluble Sulphate as SO4 2:1 Extract	<0.004	g/l M		2.1					
Phenol	<0.01	mg/kg M			<0.01	<0.01	<0.01		
Cresols	<0.01	mg/kg M			<0.01	<0.01	<0.01		
Xylenols	<0.015	mg/kg M			<0.015	<0.015	<0.015		
Phenols, Total Detected monohydric	<0.035	mg/kg M			<0.035	<0.035	<0.035		

PAH by GCMS

Naphthalene-d8 % recovery**	%		96.5		91	108	98.5	92.5	108
Acenaphthene-d10 % recovery**	%		95.4		89.1	107	97.7	90.2	107
Phenanthrene-d10 % recovery**	%		93.5		88.2	104	94.9	89.5	104
Chrysene-d12 % recovery**	%		90.1		83.8	99.7	86.9	85	97
Perylene-d12 % recovery**	%		100		93	105	82.6	92.6	94.7
Naphthalene	<0.009	mg/kg M	<0.009		<0.009	<0.009	<0.009	<0.009	<0.009
Acenaphthylene	<0.012	mg/kg M	<0.012		<0.012	<0.012	<0.012	<0.012	<0.012
Acenaphthene	<0.008	mg/kg M	<0.008		<0.008	<0.008	<0.008	<0.008	<0.008
Fluorene	<0.01	mg/kg M	<0.01		<0.01	<0.01	<0.01	<0.01	<0.01
Phenanthrene	<0.015	mg/kg M	<0.015		<0.015	<0.015	<0.015	<0.015	<0.015
Anthracene	<0.016	mg/kg M	<0.016		<0.016	<0.016	<0.016	<0.016	<0.016
Fluoranthene	<0.017	mg/kg M	<0.017		<0.017	<0.017	<0.017	<0.017	<0.017
Pyrene	<0.015	mg/kg M	<0.015		<0.015	<0.015	<0.015	<0.015	<0.015
Benz(a)anthracene	<0.014	mg/kg M	<0.014		<0.014	<0.014	<0.014	<0.014	<0.014
Chrysene	<0.01	mg/kg M	<0.01		<0.01	<0.01	<0.01	<0.01	<0.01
Benzo(b)fluoranthene	<0.015	mg/kg M	<0.015		<0.015	<0.015	<0.015	<0.015	<0.015
Benzo(k)fluoranthene	<0.014	mg/kg M	<0.014		<0.014	<0.014	<0.014	<0.014	<0.014
Benzo(a)pyrene	<0.015	mg/kg M	<0.015		<0.015	<0.015	<0.015	0.0171	<0.015
Indeno(1,2,3-cd)pyrene	<0.018	mg/kg M	<0.018		<0.018	<0.018	<0.018	<0.018	<0.018
Dibenzo(a,h)anthracene	<0.023	mg/kg M	<0.023		<0.023	<0.023	<0.023	<0.023	<0.023
Benzo(g,h,i)perylene	<0.024	mg/kg M	<0.024		<0.024	<0.024	<0.024	<0.024	<0.024
PAH, Total Detected USEPA 16	<0.118	mg/kg	<0.118		<0.118	<0.118	<0.118	<0.118	<0.118

Semi Volatile Organic Compounds

Phenol	<0.1	mg/kg			<0.1	<0.1	<0.1		
Pentachlorophenol	<0.1	mg/kg			<0.1	<0.1	<0.1		
n-Nitroso-n-dipropylamine	<0.1	mg/kg			<0.1	<0.1	<0.1		
Nitrobenzene	<0.1	mg/kg			<0.1	<0.1	<0.1		

SOLID

Component	LOD	Units	WS09	WS09	WS10	WS10	WS10	WS11	WS11
			0.20 - 0.20	0.35 - 0.35	0.30 - 0.30	1.65 - 1.65	2.50 - 2.50	0.30 - 0.30	0.50 - 0.50
			SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID
			06/06/2016	06/06/2016	06/06/2016	06/06/2016	06/06/2016	06/06/2016	06/06/2016
			07/06/2016 13:07	07/06/2016 13:07	07/06/2016 13:07	07/06/2016 13:07	07/06/2016 13:07	07/06/2016 13:07	07/06/2016 13:07
			160607-39	160607-39	160607-39	160607-39	160607-39	160607-39	160607-39
			13551265	13551273	13551352	13551363	13551371	13551240	13551328
			ES	ES	ES	ES	ES	ES	ES
Isophorone	<0.1	mg/kg			<0.1	<0.1	<0.1		
Hexachloroethane	<0.1	mg/kg			<0.1	<0.1	<0.1		
Hexachlorocyclopentadiene	<0.1	mg/kg			<0.1	<0.1	<0.1		
Hexachlorobutadiene	<0.1	mg/kg			<0.1	<0.1	<0.1		
Hexachlorobenzene	<0.1	mg/kg			<0.1	<0.1	<0.1		
n-Dioctyl phthalate	<0.1	mg/kg			<0.1	<0.1	<0.1		
Dimethyl phthalate	<0.1	mg/kg			<0.1	<0.1	<0.1		
Diethyl phthalate	<0.1	mg/kg			<0.1	<0.1	<0.1		
n-Dibutyl phthalate	<0.1	mg/kg			<0.1	<0.1	<0.1		
Dibenzofuran	<0.1	mg/kg			<0.1	<0.1	<0.1		
Carbazole	<0.1	mg/kg			<0.1	<0.1	<0.1		
Butylbenzyl phthalate	<0.1	mg/kg			<0.1	<0.1	<0.1		
bis(2-Ethylhexyl) phthalate	<0.1	mg/kg			<0.1	<0.1	<0.1		
bis(2-Chloroethoxy)methane	<0.1	mg/kg			<0.1	<0.1	<0.1		
bis(2-Chloroethyl)ether	<0.1	mg/kg			<0.1	<0.1	<0.1		
Azobenzene	<0.1	mg/kg			<0.1	<0.1	<0.1		
4-Nitrophenol	<0.1	mg/kg			<0.1	<0.1	<0.1		
4-Nitroaniline	<0.1	mg/kg			<0.1	<0.1	<0.1		
4-Methylphenol	<0.1	mg/kg			<0.1	<0.1	<0.1		
4-Chlorophenylphenylether	<0.1	mg/kg			<0.1	<0.1	<0.1		
4-Chloroaniline	<0.1	mg/kg			<0.1	<0.1	<0.1		
4-Chloro-3-methylphenol	<0.1	mg/kg			<0.1	<0.1	<0.1		
4-Bromophenylphenylether	<0.1	mg/kg			<0.1	<0.1	<0.1		
3-Nitroaniline	<0.1	mg/kg			<0.1	<0.1	<0.1		
2-Nitrophenol	<0.1	mg/kg			<0.1	<0.1	<0.1		
2-Nitroaniline	<0.1	mg/kg			<0.1	<0.1	<0.1		
2-Methylphenol	<0.1	mg/kg			<0.1	<0.1	<0.1		
1,2,4-Trichlorobenzene	<0.1	mg/kg			<0.1	<0.1	<0.1		
2-Chlorophenol	<0.1	mg/kg			<0.1	<0.1	<0.1		
2,6-Dinitrotoluene	<0.1	mg/kg			<0.1	<0.1	<0.1		
2,4-Dinitrotoluene	<0.1	mg/kg			<0.1	<0.1	<0.1		
2,4-Dimethylphenol	<0.1	mg/kg			<0.1	<0.1	<0.1		
2,4-Dichlorophenol	<0.1	mg/kg			<0.1	<0.1	<0.1		
2,4,6-Trichlorophenol	<0.1	mg/kg			<0.1	<0.1	<0.1		
2,4,5-Trichlorophenol	<0.1	mg/kg			<0.1	<0.1	<0.1		
1,4-Dichlorobenzene	<0.1	mg/kg			<0.1	<0.1	<0.1		
1,3-Dichlorobenzene	<0.1	mg/kg			<0.1	<0.1	<0.1		
1,2-Dichlorobenzene	<0.1	mg/kg			<0.1	<0.1	<0.1		
2-Chloronaphthalene	<0.1	mg/kg			<0.1	<0.1	<0.1		
2-Methylnaphthalene	<0.1	mg/kg			<0.1	<0.1	<0.1		
Acenaphthylene	<0.1	mg/kg			<0.1	<0.1	<0.1		
Acenaphthene	<0.1	mg/kg			<0.1	<0.1	<0.1		
Anthracene	<0.1	mg/kg			<0.1	<0.1	<0.1		
Benzo(a)anthracene	<0.1	mg/kg			<0.1	<0.1	<0.1		
Benzo(b)fluoranthene	<0.1	mg/kg			<0.1	<0.1	<0.1		
Benzo(k)fluoranthene	<0.1	mg/kg			<0.1	<0.1	<0.1		
Benzo(a)pyrene	<0.1	mg/kg			<0.1	<0.1	<0.1		
Benzo(g,h,i)perylene	<0.1	mg/kg			<0.1	<0.1	<0.1		
Chrysene	<0.1	mg/kg			<0.1	<0.1	<0.1		
Fluoranthene	<0.1	mg/kg			<0.1	<0.1	<0.1		
Fluorene	<0.1	mg/kg			<0.1	<0.1	<0.1		
Indeno(1,2,3-cd)pyrene	<0.1	mg/kg			<0.1	<0.1	<0.1		
Phenanthrene	<0.1	mg/kg			<0.1	<0.1	<0.1		
Pyrene	<0.1	mg/kg			<0.1	<0.1	<0.1		
Naphthalene	<0.1	mg/kg			<0.1	<0.1	<0.1		
Dibenzo(a,h)anthracene	<0.1	mg/kg			<0.1	<0.1	<0.1		
Bis(2-chloroisopropyl) ether	<0.1	mg/kg			<0.1	<0.1	<0.1		

TPH CWG (S)

SOLID

		WS09	WS09	WS10	WS10	WS10	WS11	WS11
		0.20 - 0.20	0.35 - 0.35	0.30 - 0.30	1.65 - 1.65	2.50 - 2.50	0.30 - 0.30	0.50 - 0.50
		SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID
		06/06/2016	06/06/2016	06/06/2016	06/06/2016	06/06/2016	06/06/2016	06/06/2016
		07/06/2016 13:07	07/06/2016 13:07	07/06/2016 13:07	07/06/2016 13:07	07/06/2016 13:07	07/06/2016 13:07	07/06/2016 13:07
		160607-39	160607-39	160607-39	160607-39	160607-39	160607-39	160607-39
		13551265	13551273	13551352	13551363	13551371	13551240	13551328
		ES	ES	ES	ES	ES	ES	ES
Component	LOD	Units						
GRO Surrogate % recovery**		%	90	103	71	21	104	76
GRO TOT (Moisture Corrected)	<0.044	mg/kg M	<0.044	<0.044	0.903	0.434	<0.044	0.0632
Aliphatics >C5-C6	<0.01	mg/kg	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Aliphatics >C6-C8	<0.01	mg/kg	<0.01	<0.01	<0.01	0.0106	<0.01	<0.01
Aliphatics >C8-C10	<0.01	mg/kg	<0.01	<0.01	0.286	0.13	<0.01	<0.01
Aliphatics >C10-C12	<0.01	mg/kg	<0.01	<0.01	0.248	0.123	<0.01	0.0223
Aliphatics >C12-C16	<0.1	mg/kg	<0.1	<0.1	3.15	2.42	<0.1	<0.1
Aliphatics >C16-C21	<0.1	mg/kg	<0.1	0.319	6.47	4.26	<0.1	<0.1
Aliphatics >C21-C35	<0.1	mg/kg	21.9	3.91	6.23	6.49	1.38	<0.1
Aliphatics >C35-C44	<0.1	mg/kg	50.5	<0.1	<0.1	<0.1	<0.1	<0.1
Total Aliphatics >C12-C44	<0.1	mg/kg	72.4	4.23	15.8	13.2	1.38	<0.1
Aromatics >EC5-EC7	<0.01	mg/kg	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Aromatics >EC7-EC8	<0.01	mg/kg	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Aromatics >EC8-EC10	<0.01	mg/kg	<0.01	<0.01	0.191	0.0861	<0.01	<0.01
Aromatics >EC10-EC12	<0.01	mg/kg	<0.01	<0.01	0.165	0.0814	<0.01	0.0149
Aromatics >EC12-EC16	<0.1	mg/kg	0.278	<0.1	1.7	0.414	0.186	<0.1
Aromatics >EC16-EC21	<0.1	mg/kg	<0.1	<0.1	3.69	2.07	<0.1	<0.1
Aromatics >EC21-EC35	<0.1	mg/kg	28.6	1.7	3.2	3.35	1.81	<0.1
Aromatics >EC35-EC44	<0.1	mg/kg	66.5	0.385	<0.1	<0.1	3.89	<0.1
Aromatics >EC40-EC44	<0.1	mg/kg	30	<0.1	<0.1	<0.1	2.2	<0.1
Total Aromatics >EC12-EC44	<0.1	mg/kg	95.3	2.08	8.59	5.84	5.88	<0.1
Total Aliphatics & Aromatics >C5-C44	<0.1	mg/kg	168	6.32	25.3	19.4	7.27	<0.1
Aromatics >EC16-EC35	<0.1	mg/kg	28.6	1.7	6.89	5.42	1.81	<0.1
VOC MS (S)								
Methyl Tertiary Butyl Ether	<0.01	mg/kg M	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Benzene	<0.009	mg/kg M	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009
Toluene	<0.007	mg/kg M	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007
Ethylbenzene	<0.004	mg/kg M	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004
p/m-Xylene	<0.01	mg/kg *	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
o-Xylene	<0.01	mg/kg M	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Tert-amyl methyl ether	<0.01	mg/kg *	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Dibromofluoromethane**		%		105	103	101		
Toluene-d8**		%		103	96.2	89.6		
4-Bromofluorobenzene**		%		101	65.5	56		
Dichlorodifluoromethane	<0.006	mg/kg M	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006
Chloromethane	<0.007	mg/kg *	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007
Vinyl Chloride	<0.006	mg/kg M	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006
Bromomethane	<0.01	mg/kg M	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Chloroethane	<0.01	mg/kg M	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Trichlorofluoromethane	<0.006	mg/kg M	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006
1,1-Dichloroethene	<0.01	mg/kg *	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Carbon Disulfide	<0.007	mg/kg M	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007
Dichloromethane	<0.01	mg/kg *	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
trans-1,2-Dichloroethene	<0.01	mg/kg M	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
1,1-Dichloroethane	<0.008	mg/kg M	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008
cis-1,2-Dichloroethene	<0.006	mg/kg M	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006
2,2-Dichloropropane	<0.01	mg/kg M	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Bromochloromethane	<0.01	mg/kg M	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Chloroform	<0.008	mg/kg M	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008
1,1,1-Trichloroethane	<0.007	mg/kg M	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007
1,1-Dichloropropene	<0.01	mg/kg M	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Carbontetrachloride	<0.01	mg/kg M	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
1,2-Dichloroethane	<0.005	mg/kg M	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Trichloroethene	<0.009	mg/kg *	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009
1,2-Dichloropropane	<0.01	mg/kg M	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Dibromomethane	<0.009	mg/kg M	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009
Bromodichloromethane	<0.007	mg/kg M	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007
cis-1,3-Dichloropropene	<0.01	mg/kg M	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01

SOLID

		WS09	WS09	WS10	WS10	WS10	WS11	WS11
		0.20 - 0.20	0.35 - 0.35	0.30 - 0.30	1.65 - 1.65	2.50 - 2.50	0.30 - 0.30	0.50 - 0.50
		SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID
		06/06/2016	06/06/2016	06/06/2016	06/06/2016	06/06/2016	06/06/2016	06/06/2016
		07/06/2016 13:07	07/06/2016 13:07	07/06/2016 13:07	07/06/2016 13:07	07/06/2016 13:07	07/06/2016 13:07	07/06/2016 13:07
		160607-39	160607-39	160607-39	160607-39	160607-39	160607-39	160607-39
		13551265	13551273	13551352	13551363	13551371	13551240	13551328
		ES	ES	ES	ES	ES	ES	ES
Component	LOD	Units						
trans-1,3-Dichloropropene	<0.01	mg/kg		<0.01	<0.01	<0.01		
1,1,2-Trichloroethane	<0.01	mg/kg M		<0.01	<0.01	<0.01		
1,3-Dichloropropane	<0.007	mg/kg M		<0.007	<0.007	<0.007		
Tetrachloroethene	<0.005	mg/kg M		<0.005	<0.005	<0.005		
Dibromochloromethane	<0.01	mg/kg M		<0.01	<0.01	<0.01		
1,2-Dibromoethane	<0.01	mg/kg M		<0.01	<0.01	<0.01		
Chlorobenzene	<0.005	mg/kg M		<0.005	<0.005	<0.005		
1,1,1,2-Tetrachloroethane	<0.01	mg/kg M		<0.01	<0.01	<0.01		
Styrene	<0.01	mg/kg *		<0.01	<0.01	<0.01		
Bromoform	<0.01	mg/kg M		<0.01	<0.01	<0.01		
Isopropylbenzene	<0.005	mg/kg *		<0.005	<0.005	<0.005		
1,1,2,2-Tetrachloroethane	<0.01	mg/kg M		<0.01	<0.01	<0.01		
1,2,3-Trichloropropane	<0.016	mg/kg M		<0.016	<0.016	<0.016		
Bromobenzene	<0.01	mg/kg M		<0.01	<0.01	<0.01		
Propylbenzene	<0.01	mg/kg M		<0.01	<0.01	<0.01		
2-Chlorotoluene	<0.009	mg/kg M		<0.009	<0.009	<0.009		
1,3,5-Trimethylbenzene	<0.008	mg/kg M		<0.008	<0.008	<0.008		
4-Chlorotoluene	<0.01	mg/kg M		<0.01	<0.01	<0.01		
tert-Butylbenzene	<0.014	mg/kg M		<0.014	<0.014	<0.014		
1,2,4-Trimethylbenzene	<0.009	mg/kg *		<0.009	<0.009	<0.009		
sec-Butylbenzene	<0.01	mg/kg M		<0.01	<0.01	<0.01		
4-Isopropyltoluene	<0.01	mg/kg M		<0.01	<0.01	<0.01		
1,3-Dichlorobenzene	<0.008	mg/kg M		<0.008	<0.008	<0.008		
1,4-Dichlorobenzene	<0.005	mg/kg M		<0.005	<0.005	<0.005		
n-Butylbenzene	<0.011	mg/kg		<0.011	<0.011	<0.011		
1,2-Dichlorobenzene	<0.01	mg/kg M		<0.01	<0.01	<0.01		
1,2-Dibromo-3-chloropropane	<0.014	mg/kg M		<0.014	<0.014	<0.014		
1,2,4-Trichlorobenzene	<0.02	mg/kg		<0.02	<0.02	<0.02		
Hexachlorobutadiene	<0.02	mg/kg		<0.02	<0.02	<0.02		
Naphthalene	<0.013	mg/kg M		<0.013	<0.013	<0.013		
1,2,3-Trichlorobenzene	<0.02	mg/kg *		<0.02	<0.02	<0.02		

NRA

Customer Sample Ref.	BH02	BH03	WS04	WS10	WS11								
Depth (m)	0.50 - 0.50	0.40 - 0.40	0.30 - 0.30	0.30 - 0.30	0.30 - 0.30								
Sample Type	SOLID	SOLID	SOLID	SOLID	SOLID								
Date Sampled	06/06/2016	06/06/2016	06/06/2016	06/06/2016	06/06/2016								
Date Received	07/06/2016 13:07	07/06/2016 13:07	07/06/2016 13:07	07/06/2016 13:07	07/06/2016 13:07								
SDG Ref	160607-39	160607-39	160607-39	160607-39	160607-39								
Lab Sample No.(s)	13551311	13551282	13551388	13551352	13551240								
AGS Reference	ES	ES	ES	ES	ES								
Component	LOD	Units	Method										

MISC

Arsenic (diss.filt) NRA leach	<0.12	µg/l	TM152	3.95	<0.12	0.375	0.151	5.53					
Cadmium (diss.filt) NRA leach	<0.1	µg/l	TM152	<0.1	<0.1	<0.1	<0.1	<0.1					
Chromium (diss.filt) NRA leach	<0.22	µg/l	TM152	1.13	2.69	4.84	<0.22	<0.22					
Copper (diss.filt) NRA leach	<0.85	µg/l	TM152	1.11	<0.85	2.23	<0.85	<0.85					
Lead (diss.filt) NRA leach	<0.02	µg/l	TM152	1.13	<0.02	<0.02	<0.02	0.092					
Nickel (diss.filt) NRA leach	<0.15	µg/l	TM152	1.99	0.223	0.635	<0.15	<0.15					
Selenium (diss.filt) NRA leach	<0.39	µg/l	TM152	0.569	<0.39	6.73	<0.39	<0.39					
Zinc (diss.filt) NRA leach	<0.41	µg/l	TM152	1.85	1.08	<0.41	<0.41	1.06					
Mercury (diss.filt) NRA leach	<0.01	µg/l	TM183	<0.01	<0.01	<0.01	<0.01	<0.01					
Cyanide, Free NRA leach	<50	µg/l	TM227	<50	<50	<50	<50	<50					

NRA

	Customer Sample Ref.	BH02	BH03	WS04	WS10	WS11														
	Depth (m)	0.50 - 0.50	0.40 - 0.40	0.30 - 0.30	0.30 - 0.30	0.30 - 0.30														
	Sample Type	SOLID	SOLID	SOLID	SOLID	SOLID														
	Date Sampled	06/06/2016	06/06/2016	06/06/2016	06/06/2016	06/06/2016														
	Date Received	07/06/2016 13:07	07/06/2016 13:07	07/06/2016 13:07	07/06/2016 13:07	07/06/2016 13:07														
	SDG Ref	160607-39	160607-39	160607-39	160607-39	160607-39														
	Lab Sample No.(s)	13551311	13551282	13551388	13551352	13551240														
	AGS Reference	ES	ES	ES	ES	ES														
Component	LOD	Units	Method																	

NRA

			Customer Sample Ref.	BH02	BH03	WS04	WS10	WS11													
		Depth (m)		0.50 - 0.50	0.40 - 0.40	0.30 - 0.30	0.30 - 0.30	0.30 - 0.30													
		Sample Type		SOLID	SOLID	SOLID	SOLID	SOLID													
		Date Sampled		06/06/2016	06/06/2016	06/06/2016	06/06/2016	06/06/2016													
		Date Received		07/06/2016 13:07	07/06/2016 13:07	07/06/2016 13:07	07/06/2016 13:07	07/06/2016 13:07													
		SDG Ref		160607-39	160607-39	160607-39	160607-39	160607-39													
		Lab Sample No.(s)		13551311	13551282	13551388	13551352	13551240													
		AGS Reference		ES	ES	ES	ES	ES													
Component	LOD	Units	Method																		

NRA

		Customer Sample Ref.	BH02	BH03	WS04	WS10	WS11								
		Depth (m)	0.50 - 0.50	0.40 - 0.40	0.30 - 0.30	0.30 - 0.30	0.30 - 0.30								
		Sample Type	SOLID	SOLID	SOLID	SOLID	SOLID								
		Date Sampled	06/06/2016	06/06/2016	06/06/2016	06/06/2016	06/06/2016								
		Date Received	07/06/2016 13:07	07/06/2016 13:07	07/06/2016 13:07	07/06/2016 13:07	07/06/2016 13:07								
		SDG Ref	160607-39	160607-39	160607-39	160607-39	160607-39								
		Lab Sample No.(s)	13551311	13551282	13551388	13551352	13551240								
		AGS Reference	ES	ES	ES	ES	ES								
Component	LOD	Units	Method												



WSP PB LBH
WSP PB
4th Floor
6 Devonshire Square
London
EC2M 4YE
Attention : George Baggot


Website: www.alcontrol.com

CERTIFICATE OF ANALYSIS

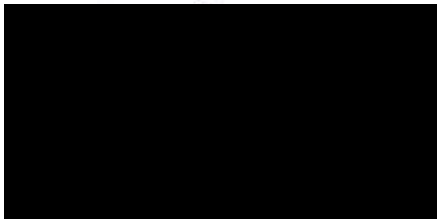
Date:	13/06/2016 16:12		
Customer:	H_WSP_LON		
Sample Delivery Group (SDG):	160609-89	Report No.:	364712
Your Reference:	70020138		
Location:	Tradeteam Site (DHL) Gloucester		

We received 1 sample on Thursday June 09, 2016 and 1 of these samples were scheduled for analysis which was then completed on Monday June 13, 2016. Accredited laboratory tests are defined in the report, but opinions, interpretations and on-site data expressed herein are outside the scope of ISO 17025 accreditation.

Should this report require incorporation into client reports, it must be used in its entirety and not simply with data sections alone.

All chemical testing (unless subcontracting) is performed at ALcontrol Hawarden Laboratories.

Approved By:



Operations Manager



LIQUID

		Customer Sample Ref.	WS10				
		Depth (m)	0.00 - 0.00				
		Sample Type	LIQUID				
		Date Sampled	08/06/2016				
		Date Received	09/06/2016 12:52				
		SDG Ref	160609-89				
		Lab Sample No.(s)	13566116				
		AGS Reference	EW				
Component	LOD	Units	Method				

PAH Spec MS - Aqueous (W)

Naphthalene (aq)	<0.1	µg/l *	TM178	2.61			
Acenaphthene (aq)	<0.015	µg/l *	TM178	<0.015			
Acenaphthylene (aq)	<0.011	µg/l *	TM178	<0.011			
Fluoranthene (aq)	<0.017	µg/l *	TM178	<0.017			
Anthracene (aq)	<0.015	µg/l *	TM178	<0.015			
Phenanthrene (aq)	<0.022	µg/l *	TM178	<0.022			
Fluorene (aq)	<0.014	µg/l *	TM178	<0.014			
Chrysene (aq)	<0.013	µg/l *	TM178	<0.013			
Pyrene (aq)	<0.015	µg/l *	TM178	<0.015			
Benzo(a)anthracene (aq)	<0.017	µg/l *	TM178	<0.017			
Benzo(b)fluoranthene (aq)	<0.023	µg/l *	TM178	<0.023			
Benzo(k)fluoranthene (aq)	<0.027	µg/l *	TM178	<0.027			
Benzo(a)pyrene (aq)	<0.009	µg/l *	TM178	<0.009			
Dibenzo(a,h)anthracene (aq)	<0.016	µg/l *	TM178	0.0424			
Benzo(g,h,i)perylene (aq)	<0.016	µg/l *	TM178	0.0883			
Indeno(1,2,3-cd)pyrene (aq)	<0.014	µg/l *	TM178	0.0532			
PAH, Total Detected USEPA 16 (aq)	<0.344	µg/l	TM178	2.79			

SVOC MS (W) - Aqueous

1,2,4-Trichlorobenzene (aq)	<1	µg/l *	TM176	<1			
1,2-Dichlorobenzene (aq)	<1	µg/l *	TM176	<1			
1,3-Dichlorobenzene (aq)	<1	µg/l *	TM176	<1			
1,4-Dichlorobenzene (aq)	<1	µg/l	TM176	<1			
2,4,5-Trichlorophenol (aq)	<1	µg/l *	TM176	<1			
2,4,6-Trichlorophenol (aq)	<1	µg/l *	TM176	<1			
2,4-Dichlorophenol (aq)	<1	µg/l *	TM176	<1			
2,4-Dimethylphenol (aq)	<1	µg/l *	TM176	<1			
2,4-Dinitrotoluene (aq)	<1	µg/l *	TM176	<1			
2,6-Dinitrotoluene (aq)	<1	µg/l *	TM176	<1			
2-Chloronaphthalene (aq)	<1	µg/l *	TM176	<1			
2-Chlorophenol (aq)	<1	µg/l *	TM176	<1			
2-Methylnaphthalene (aq)	<1	µg/l *	TM176	<1			
2-Methylphenol (aq)	<1	µg/l *	TM176	<1			
2-Nitroaniline (aq)	<1	µg/l *	TM176	<1			
2-Nitrophenol (aq)	<1	µg/l *	TM176	<1			
3-Nitroaniline (aq)	<1	µg/l *	TM176	<1			
4-Bromophenylphenylether (aq)	<1	µg/l *	TM176	<1			
4-Chloro-3-methylphenol (aq)	<1	µg/l *	TM176	<1			
4-Chloroaniline (aq)	<1	µg/l	TM176	<1			
4-Chlorophenylphenylether (aq)	<1	µg/l *	TM176	<1			
4-Methylphenol (aq)	<1	µg/l *	TM176	<1			
4-Nitroaniline (aq)	<1	µg/l *	TM176	<1			
4-Nitrophenol (aq)	<1	µg/l	TM176	<1			
Azobenzene (aq)	<1	µg/l *	TM176	<1			
Acenaphthylene (aq)	<1	µg/l *	TM176	<1			
Acenaphthene (aq)	<1	µg/l *	TM176	<1			
Anthracene (aq)	<1	µg/l *	TM176	<1			
bis(2-Chloroethyl)ether (aq)	<1	µg/l *	TM176	<1			
bis(2-Chloroethoxy)methane (aq)	<1	µg/l *	TM176	<1			
bis(2-Ethylhexyl) phthalate (aq)	<2	µg/l *	TM176	2.25			
Butylbenzyl phthalate (aq)	<1	µg/l *	TM176	<1			
Benzo(a)anthracene (aq)	<1	µg/l *	TM176	<1			
Benzo(b)fluoranthene (aq)	<1	µg/l *	TM176	<1			
Benzo(k)fluoranthene (aq)	<1	µg/l *	TM176	<1			
Benzo(a)pyrene (aq)	<1	µg/l *	TM176	<1			
Benzo(g,h,i)perylene (aq)	<1	µg/l *	TM176	<1			
Carbazole (aq)	<1	µg/l *	TM176	<1			
Chrysene (aq)	<1	µg/l *	TM176	<1			

LIQUID

		Customer Sample Ref.	WS10				
		Depth (m)	0.00 - 0.00				
		Sample Type	LIQUID				
		Date Sampled	08/06/2016				
		Date Received	09/06/2016 12:52				
		SDG Ref	160609-89				
		Lab Sample No.(s)	13566116				
		AGS Reference	EW				
Component	LOD	Units	Method				
Dibenzofuran (aq)	<1	µg/l *	TM176	<1			
n-Dibutyl phthalate (aq)	<1	µg/l *	TM176	<1			
Diethyl phthalate (aq)	<1	µg/l *	TM176	<1			
Dibenzo(a,h)anthracene (aq)	<1	µg/l *	TM176	<1			
Dimethyl phthalate (aq)	<1	µg/l *	TM176	<1			
n-Dioctyl phthalate (aq)	<5	µg/l *	TM176	<5			
Fluoranthene (aq)	<1	µg/l *	TM176	<1			
Fluorene (aq)	<1	µg/l *	TM176	<1			
Hexachlorobenzene (aq)	<1	µg/l *	TM176	<1			
Hexachlorobutadiene (aq)	<1	µg/l *	TM176	<1			
Pentachlorophenol (aq)	<1	µg/l	TM176	<1			
Phenol (aq)	<1	µg/l	TM176	<1			
n-Nitroso-n-dipropylamine (aq)	<1	µg/l *	TM176	<1			
Hexachloroethane (aq)	<1	µg/l *	TM176	<1			
Nitrobenzene (aq)	<1	µg/l *	TM176	<1			
Naphthalene (aq)	<1	µg/l *	TM176	<1			
Isophorone (aq)	<1	µg/l *	TM176	<1			
Hexachlorocyclopentadiene (aq)	<1	µg/l	TM176	<1			
Phenanthrene (aq)	<1	µg/l *	TM176	<1			
Indeno(1,2,3-cd)pyrene (aq)	<1	µg/l *	TM176	<1			
Pyrene (aq)	<1	µg/l *	TM176	3.43			
TPH CWG (W)							
GRO Surrogate % recovery**		%	TM245	87			
GRO >C5-C12	<50	µg/l *	TM245	1080			
Aliphatics >C5-C6	<10	µg/l	TM245	<10			
Aliphatics >C6-C8	<10	µg/l	TM245	<10			
Aliphatics >C8-C10	<10	µg/l	TM245	126			
Aliphatics >C10-C12	<10	µg/l	TM245	516			
Aliphatics >C12-C16 (aq)	<10	µg/l	TM174	11600			
Aliphatics >C16-C21 (aq)	<10	µg/l	TM174	13700			
Aliphatics >C21-C35 (aq)	<10	µg/l	TM174	6630			
Total Aliphatics >C12-C35 (aq)	<10	µg/l	TM174	31900			
Aromatics >EC5-EC7	<10	µg/l	TM245	<10			
Aromatics >EC7-EC8	<10	µg/l	TM245	<10			
Aromatics >EC8-EC10	<10	µg/l	TM245	84			
Aromatics >EC10-EC12	<10	µg/l	TM245	344			
Aromatics >EC12-EC16 (aq)	<10	µg/l	TM174	3100			
Aromatics >EC16-EC21 (aq)	<10	µg/l	TM174	6770			
Aromatics >EC21-EC35 (aq)	<10	µg/l	TM174	2970			
Total Aromatics >EC12-EC35 (aq)	<10	µg/l	TM174	12800			
Total Aliphatics & Aromatics >C5-35 (aq)	<10	µg/l	TM174	45800			
Aromatics >EC16-EC35 (aq)	<10	µg/l	TM174	9740			
VOC MS (W)							
Dibromofluoromethane**		%	TM208	107			
Toluene-d8**		%	TM208	99.6			
4-Bromofluorobenzene**		%	TM208	98.3			
Dichlorodifluoromethane	<1	µg/l	TM208	<1			
Chloromethane	<1	µg/l *	TM208	<1			
Vinyl chloride	<1	µg/l *	TM208	<1			
Bromomethane	<1	µg/l *	TM208	<1			
Chloroethane	<1	µg/l *	TM208	<1			
Trichlorofluoromethane	<1	µg/l *	TM208	<1			
1,1-Dichloroethene	<1	µg/l *	TM208	<1			
Carbon disulphide	<1	µg/l *	TM208	<1			
Dichloromethane	<3	µg/l *	TM208	<3			
Methyl tertiary butyl ether (MTBE)	<1	µg/l *	TM208	<1			
trans-1,2-Dichloroethene	<1	µg/l *	TM208	<1			
1,1-Dichloroethane	<1	µg/l *	TM208	<1			

LIQUID

		Customer Sample Ref.	WS10				
		Depth (m)	0.00 - 0.00				
		Sample Type	LIQUID				
		Date Sampled	08/06/2016				
		Date Received	09/06/2016 12:52				
		SDG Ref	160609-89				
		Lab Sample No.(s)	13566116				
		AGS Reference	EW				
Component	LOD	Units	Method				
cis-1,2-Dichloroethene	<1	µg/l *	TM208	<1			
2,2-Dichloropropane	<1	µg/l	TM208	<1			
Bromochloromethane	<1	µg/l *	TM208	<1			
Chloroform	<1	µg/l *	TM208	<1			
1,1,1-Trichloroethane	<1	µg/l *	TM208	<1			
1,1-Dichloropropene	<1	µg/l *	TM208	<1			
Carbontetrachloride	<1	µg/l *	TM208	<1			
1,2-Dichloroethane	<1	µg/l	TM208	<1			
Benzene	<1	µg/l *	TM208	<1			
Trichloroethene	<1	µg/l *	TM208	<1			
1,2-Dichloropropane	<1	µg/l *	TM208	<1			
Dibromomethane	<1	µg/l *	TM208	<1			
Bromodichloromethane	<1	µg/l *	TM208	<1			
cis-1,3-Dichloropropene	<1	µg/l *	TM208	<1			
Toluene	<1	µg/l *	TM208	<1			
trans-1,3-Dichloropropene	<1	µg/l *	TM208	<1			
1,1,2-Trichloroethane	<1	µg/l *	TM208	<1			
1,3-Dichloropropane	<1	µg/l *	TM208	<1			
Tetrachloroethene	<1	µg/l *	TM208	<1			
Dibromochloromethane	<1	µg/l *	TM208	<1			
1,2-Dibromoethane	<1	µg/l *	TM208	<1			
Chlorobenzene	<1	µg/l *	TM208	<1			
1,1,1,2-Tetrachloroethane	<1	µg/l *	TM208	<1			
Ethylbenzene	<1	µg/l *	TM208	<1			
m,p-Xylene	<1	µg/l *	TM208	<1			
o-Xylene	<1	µg/l *	TM208	<1			
Styrene	<1	µg/l *	TM208	<1			
Bromoform	<1	µg/l *	TM208	<1			
Isopropylbenzene	<1	µg/l *	TM208	<1			
1,1,2,2-Tetrachloroethane	<1	µg/l	TM208	<1			
1,2,3-Trichloropropane	<1	µg/l *	TM208	<1			
Bromobenzene	<1	µg/l *	TM208	<1			
Propylbenzene	<1	µg/l *	TM208	<1			
2-Chlorotoluene	<1	µg/l *	TM208	<1			
1,3,5-Trimethylbenzene	<1	µg/l *	TM208	<1			
4-Chlorotoluene	<1	µg/l *	TM208	<1			
tert-Butylbenzene	<1	µg/l *	TM208	<1			
1,2,4-Trimethylbenzene	<1	µg/l *	TM208	<1			
sec-Butylbenzene	<1	µg/l *	TM208	<1			
4-iso-Propyltoluene	<1	µg/l *	TM208	<1			
1,3-Dichlorobenzene	<1	µg/l *	TM208	<1			
1,4-Dichlorobenzene	<1	µg/l *	TM208	<1			
n-Butylbenzene	<1	µg/l *	TM208	<1			
1,2-Dichlorobenzene	<1	µg/l	TM208	<1			
1,2-Dibromo-3-chloropropane	<1	µg/l	TM208	<1			
1,2,4-Trichlorobenzene	<1	µg/l *	TM208	<1			
Hexachlorobutadiene	<1	µg/l *	TM208	<1			
tert-Amyl methyl ether (TAME)	<1	µg/l *	TM208	<1			
Naphthalene	<1	µg/l *	TM208	<1			
1,2,3-Trichlorobenzene	<1	µg/l *	TM208	<1			
1,3,5-Trichlorobenzene	<1	µg/l	TM208	<1			
Sum of detected Xylenes	<2	µg/l	TM208	<2			



WSP PB LBH
WSP PB
4th Floor
6 Devonshire Square
London
EC2M 4YE

Attention: George Baggot

CERTIFICATE OF ANALYSIS

Date: 01 July 2016
Customer: H_WSP_LON
Sample Delivery Group (SDG): 160627-8
Your Reference: 70020138
Location: Tradeteam Site (DHL) Gloucester
Report No: 367242

We received 6 samples on Monday June 27, 2016 and 6 of these samples were scheduled for analysis which was completed on Friday July 01, 2016. Accredited laboratory tests are defined within the report, but opinions, interpretations and on-site data expressed herein are outside the scope of ISO 17025 accreditation.

Should this report require incorporation into client reports, it must be used in its entirety and not simply with the data sections alone.

All chemical testing (unless subcontracted) is performed at ALcontrol Hawarden Laboratories.

Approved By:





SDG: 160627-8
Job: H_WSP_LON-223
Client Reference: 70020138

Location: Tradetean Site (DHL) Gloucester
Customer: WSP PB LBH
Attention: George Baggot

Order Number: 70020138-001
Report Number: 367242
Superseded Report:

Received Sample Overview

Lab Sample No(s)	Customer Sample Ref.	AGS Ref.	Depth (m)	Sampled Date
13662747	BH01	EW	0.00 - 0.00	21/06/2016
13662767	BH02	EW	0.00 - 0.00	21/06/2016
13662738	BH04	EW	0.00 - 0.00	21/06/2016
13662720	WS01	EW	0.00 - 0.00	21/06/2016
13662758	WS03	EW	0.00 - 0.00	21/06/2016
13662731	WS10	EW	0.00 - 0.00	21/06/2016

Only received samples which have had analysis scheduled will be shown on the following pages.



SDG: 160627-8
 Job: H_WSP_LON-223
 Client Reference: 70020138

Location: Tradeteam Site (DHL) Gloucester
 Customer: WSP PB LBH
 Attention: George Baggot

Order Number: 70020138-001
 Report Number: 367242
 Superseded Report:

LIQUID Results Legend Test No Determination Possible	Lab Sample No(s)	Customer Sample Reference	AGS Reference	Depth (m)	Container	
		13662747	BH01	EW	0.00 - 0.00	Vial (AL E297) Dissolved Metals Pr 1000ml glass bottle
		13662767	BH02	EW	0.00 - 0.00	Vial (AL E297) Dissolved Metals Pr 500ml Plastic (AL E2 1000ml glass bottle
		13662738	BH04	EW	0.00 - 0.00	Dissolved Metals Pr 500ml Plastic (AL E2 1000ml glass bottle
		13662720	WS01	EW	0.00 - 0.00	Dissolved Metals Pr 500ml Plastic (AL E2 1000ml glass bottle
	13662758	WS03	EW	0.00 - 0.00	Dissolved Metals Pr 500ml Plastic (AL E2 1000ml glass bottle	
	13662731	WS10	EW	0.00 - 0.00	Vial (AL E297) Dissolved Metals Pr 1000ml glass bottle	
Anions by Kone (w)	All	NDPs: 0 Tests: 6				
					X X X X X X	
Dissolved Metals by ICP-MS	All	NDPs: 0 Tests: 6				
					X X X X X X	
EPH CWG (Aliphatic) Aqueous GC (W)	All	NDPs: 0 Tests: 6				
					X X X X X X	
EPH CWG (Aromatic) Aqueous GC (W)	All	NDPs: 0 Tests: 6				
					X X X X X X	
GRO by GC-FID (W)	All	NDPs: 0 Tests: 6				
					X X X X X X	
Low Level Cyanide (W)	All	NDPs: 0 Tests: 6				
					X X X X X X	
Low Level Hexavalent Chromium (w)	All	NDPs: 0 Tests: 6				
					X X X X X X	
Mercury Dissolved	All	NDPs: 1 Tests: 5				
					X N X X X X	
PAH Spec MS - Aqueous (W)	All	NDPs: 0 Tests: 6				
					X X X X X X	
pH Value	All	NDPs: 0 Tests: 6				
					X X X X X X	
SVOC MS (W) - Aqueous	All	NDPs: 0 Tests: 2				
					X X	
TPH CWG (W)	All	NDPs: 0 Tests: 6				
					X X X X X X	
VOC MS (W)	All	NDPs: 0 Tests: 6				
					X X X X X X	

CERTIFICATE OF ANALYSIS

SDG: 160627-8
Job: H_WSP_LON-223
Client Reference: 70020138

Location: Tradeteam Site (DHL) Gloucester
Customer: WSP PB LBH
Attention: George Baggot

Order Number: 70020138-001
Report Number: 367242
Superseded Report:

PAH Spec MS - Aqueous (W)

Results Legend		Customer Sample R	BH01	BH02	BH04	WS01	WS03	WS10
#	ISO17025 accredited.	Depth (m) Sample Type Date Sampled Sample Time Date Received SDG Ref Lab Sample No.(s) AGS Reference	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00
M	mCERTS accredited.		Water(GW/SW)	Water(GW/SW)	Water(GW/SW)	Water(GW/SW)	Water(GW/SW)	Water(GW/SW)
aq	Aqueous / settled sample.		21/06/2016	21/06/2016	21/06/2016	21/06/2016	21/06/2016	21/06/2016
diss.filt	Dissolved / filtered sample.							
tot.unfilt	Total / unfiltered sample.							
*	Subcontracted test.							
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery							
(F)	Trigger breach confirmed							
1-5&*\$@	Sample deviation (see appendix)							
Component	LOD/Units		Method					
Naphthalene (aq)	<0.1 µg/l	TM178	<0.1 #	<0.1 #	<0.1 #	<0.1 #	<0.1 #	<0.1 #
Acenaphthene (aq)	<0.015 µg/l	TM178	<0.015 #	<0.015 #	<0.015 #	<0.015 #	<0.015 #	<0.015 #
Acenaphthylene (aq)	<0.011 µg/l	TM178	<0.011 #	<0.011 #	<0.011 #	<0.011 #	<0.011 #	<0.011 #
Fluoranthene (aq)	<0.017 µg/l	TM178	<0.017 #	0.0257 #	0.0198 #	<0.017 #	0.0411 #	<0.017 #
Anthracene (aq)	<0.015 µg/l	TM178	<0.015 #	<0.015 #	<0.015 #	<0.015 #	<0.015 #	<0.015 #
Phenanthrene (aq)	<0.022 µg/l	TM178	<0.022 #	<0.022 #	<0.022 #	<0.022 #	<0.022 #	<0.022 #
Fluorene (aq)	<0.014 µg/l	TM178	<0.014 #	<0.014 #	<0.014 #	<0.014 #	<0.014 #	<0.014 #
Chrysene (aq)	<0.013 µg/l	TM178	<0.013 #	0.0265 #	<0.013 #	<0.013 #	0.0133 #	<0.013 #
Pyrene (aq)	<0.015 µg/l	TM178	<0.015 #	0.0631 #	0.0236 #	<0.015 #	0.0601 #	0.0688 #
Benzo(a)anthracene (aq)	<0.017 µg/l	TM178	<0.017 #	0.0355 #	<0.017 #	<0.017 #	<0.017 #	<0.017 #
Benzo(b)fluoranthene (aq)	<0.023 µg/l	TM178	<0.023 #	0.113 #	<0.023 #	<0.023 #	0.0609 #	<0.023 #
Benzo(k)fluoranthene (aq)	<0.027 µg/l	TM178	<0.027 #	0.0287 #	<0.027 #	<0.027 #	<0.027 #	<0.027 #
Benzo(a)pyrene (aq)	<0.009 µg/l	TM178	<0.009 #	0.0408 #	<0.009 #	<0.009 #	0.0395 #	<0.009 #
Dibenzo(a,h)anthracene (aq)	<0.016 µg/l	TM178	<0.016 #	<0.016 #	<0.016 #	<0.016 #	0.0283 #	<0.016 #
Benzo(g,h,i)perylene (aq)	<0.016 µg/l	TM178	<0.016 #	0.0597 #	<0.016 #	<0.016 #	0.0574 #	<0.016 #
Indeno(1,2,3-cd)pyrene (aq)	<0.014 µg/l	TM178	<0.014 #	0.0405 #	<0.014 #	<0.014 #	0.0668 #	<0.014 #
PAH, Total Detected USEPA 16 (aq)	<0.344 µg/l	TM178	<0.344 #	0.434 #	<0.344 #	<0.344 #	0.367 #	<0.344 #



SDG: 160627-8
Job: H_WSP_LON-223
Client Reference: 70020138

Location: Tradeteam Site (DHL) Gloucester
Customer: WSP PB LBH
Attention: George Baggot

Order Number: 70020138-001
Report Number: 367242
Superseded Report:

SVOC MS (W) - Aqueous

Results Legend		Customer Sample R	WS01	WS10				
#	ISO17025 accredited.	Depth (m) Sample Type Date Sampled Sample Time Date Received SDG Ref Lab Sample No.(s) AGS Reference	0.00 - 0.00	0.00 - 0.00				
M	mCERTS accredited.		Water(GW/SW)	Water(GW/SW)				
aq	Aqueous / settled sample.		21/06/2016	21/06/2016				
diss.filt	Dissolved / filtered sample.							
tot.unfilt	Total / unfiltered sample.							
*	Subcontracted test.							
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery							
(F)	Trigger breach confirmed							
1-5&*\$@	Sample deviation (see appendix)							
Component	LOD/Units		Method					
1,2,4-Trichlorobenzene (aq)	<1 µg/l	TM176	<1	<1	#	#		
1,2-Dichlorobenzene (aq)	<1 µg/l	TM176	<1	<1	#	#		
1,3-Dichlorobenzene (aq)	<1 µg/l	TM176	<1	<1	#	#		
1,4-Dichlorobenzene (aq)	<1 µg/l	TM176	<1	<1				
2,4,5-Trichlorophenol (aq)	<1 µg/l	TM176	<1	<1	#	#		
2,4,6-Trichlorophenol (aq)	<1 µg/l	TM176	<1	<1	#	#		
2,4-Dichlorophenol (aq)	<1 µg/l	TM176	<1	<1	#	#		
2,4-Dimethylphenol (aq)	<1 µg/l	TM176	<1	<1	#	#		
2,4-Dinitrotoluene (aq)	<1 µg/l	TM176	<1	<1	#	#		
2,6-Dinitrotoluene (aq)	<1 µg/l	TM176	<1	<1	#	#		
2-Chloronaphthalene (aq)	<1 µg/l	TM176	<1	<1	#	#		
2-Chlorophenol (aq)	<1 µg/l	TM176	<1	<1	#	#		
2-Methylnaphthalene (aq)	<1 µg/l	TM176	<1	<1	#	#		
2-Methylphenol (aq)	<1 µg/l	TM176	<1	<1	#	#		
2-Nitroaniline (aq)	<1 µg/l	TM176	<1	<1	#	#		
2-Nitrophenol (aq)	<1 µg/l	TM176	<1	<1	#	#		
3-Nitroaniline (aq)	<1 µg/l	TM176	<1	<1	#	#		
4-Bromophenylphenylether (aq)	<1 µg/l	TM176	<1	<1	#	#		
4-Chloro-3-methylphenol (aq)	<1 µg/l	TM176	<1	<1	#	#		
4-Chloroaniline (aq)	<1 µg/l	TM176	<1	<1				
4-Chlorophenylphenylether (aq)	<1 µg/l	TM176	<1	<1	#	#		
4-Methylphenol (aq)	<1 µg/l	TM176	<1	<1	#	#		
4-Nitroaniline (aq)	<1 µg/l	TM176	<1	<1	#	#		
4-Nitrophenol (aq)	<1 µg/l	TM176	<1	<1				
Azobenzene (aq)	<1 µg/l	TM176	<1	<1	#	#		
Acenaphthylene (aq)	<1 µg/l	TM176	<1	<1	#	#		
Acenaphthene (aq)	<1 µg/l	TM176	<1	<1	#	#		
Anthracene (aq)	<1 µg/l	TM176	<1	<1	#	#		
bis(2-Chloroethyl)ether (aq)	<1 µg/l	TM176	<1	<1	#	#		
bis(2-Chloroethoxy)methane (aq)	<1 µg/l	TM176	<1	<1	#	#		
bis(2-Ethylhexyl) phthalate (aq)	<2 µg/l	TM176	<2	<2	#	#		
Butylbenzyl phthalate (aq)	<1 µg/l	TM176	<1	<1	#	#		



SDG: 160627-8
Job: H_WSP_LON-223
Client Reference: 70020138

Location: Tradeteam Site (DHL) Gloucester
Customer: WSP PB LBH
Attention: George Baggot

Order Number: 70020138-001
Report Number: 367242
Superseded Report:

SVOC MS (W) - Aqueous

Results Legend		Customer Sample R	WS01	WS10			
#	ISO17025 accredited.	Depth (m) Sample Type Date Sampled Sample Time Date Received SDG Ref Lab Sample No.(s) AGS Reference	0.00 - 0.00	0.00 - 0.00			
M	mCERTS accredited.		Water(GW/SW)	Water(GW/SW)			
aq	Aqueous / settled sample.		21/06/2016	21/06/2016			
dis.filt	Dissolved / filtered sample.						
tot.unfilt	Total / unfiltered sample.		27/06/2016	27/06/2016			
*	Subcontracted test.		160627-8	160627-8			
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery		13662720	13662731			
(F)	Trigger breach confirmed		EW	EW			
1-5$	Sample deviation (see appendix)						
Component	LOD/Units		Method				
Benzo(a)anthracene (aq)	<1 µg/l	TM176	<1	<1	#	#	
Benzo(b)fluoranthene (aq)	<1 µg/l	TM176	<1	<1	#	#	
Benzo(k)fluoranthene (aq)	<1 µg/l	TM176	<1	<1	#	#	
Benzo(a)pyrene (aq)	<1 µg/l	TM176	<1	<1	#	#	
Benzo(g,h,i)perylene (aq)	<1 µg/l	TM176	<1	<1	#	#	
Carbazole (aq)	<1 µg/l	TM176	<1	<1	#	#	
Chrysene (aq)	<1 µg/l	TM176	<1	<1	#	#	
Dibenzofuran (aq)	<1 µg/l	TM176	<1	<1	#	#	
n-Dibutyl phthalate (aq)	<1 µg/l	TM176	<1	<1	#	#	
Diethyl phthalate (aq)	<1 µg/l	TM176	<1	<1	#	#	
Dibenzo(a,h)anthracene (aq)	<1 µg/l	TM176	<1	<1	#	#	
Dimethyl phthalate (aq)	<1 µg/l	TM176	<1	<1	#	#	
n-Dioctyl phthalate (aq)	<5 µg/l	TM176	<5	<5	#	#	
Fluoranthene (aq)	<1 µg/l	TM176	<1	<1	#	#	
Fluorene (aq)	<1 µg/l	TM176	<1	<1	#	#	
Hexachlorobenzene (aq)	<1 µg/l	TM176	<1	<1	#	#	
Hexachlorobutadiene (aq)	<1 µg/l	TM176	<1	<1	#	#	
Pentachlorophenol (aq)	<1 µg/l	TM176	<1	<1			
Phenol (aq)	<1 µg/l	TM176	<1	<1			
n-Nitroso-n-dipropylamine (aq)	<1 µg/l	TM176	<1	<1	#	#	
Hexachloroethane (aq)	<1 µg/l	TM176	<1	<1	#	#	
Nitrobenzene (aq)	<1 µg/l	TM176	<1	<1	#	#	
Naphthalene (aq)	<1 µg/l	TM176	<1	<1	#	#	
Isophorone (aq)	<1 µg/l	TM176	<1	<1	#	#	
Hexachlorocyclopentadiene (aq)	<1 µg/l	TM176	<1	<1			
Phenanthrene (aq)	<1 µg/l	TM176	<1	<1	#	#	
Indeno(1,2,3-cd)pyrene (aq)	<1 µg/l	TM176	<1	<1	#	#	
Pyrene (aq)	<1 µg/l	TM176	<1	<1	#	#	



SDG: 160627-8
 Job: H_WSP_LON-223
 Client Reference: 70020138

Location: Tradeteam Site (DHL) Gloucester
 Customer: WSP PB LBH
 Attention: George Baggot

Order Number: 70020138-001
 Report Number: 367242
 Superseded Report:

TPH CWG (W)

Results Legend		Customer Sample R	BH01	BH02	BH04	WS01	WS03	WS10
#	ISO17025 accredited.	Depth (m) Sample Type Date Sampled Sample Time Date Received SDG Ref Lab Sample No.(s) AGS Reference	BH01	BH02	BH04	WS01	WS03	WS10
M	mCERTS accredited.		0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00
aq	Aqueous / settled sample.		Water(GW/SW)	Water(GW/SW)	Water(GW/SW)	Water(GW/SW)	Water(GW/SW)	Water(GW/SW)
diss.filt	Dissolved / filtered sample.		21/06/2016	21/06/2016	21/06/2016	21/06/2016	21/06/2016	21/06/2016
tot.unfilt	Total / unfiltered sample.							
*	Subcontracted test.							
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery		27/06/2016	27/06/2016	27/06/2016	27/06/2016	27/06/2016	27/06/2016
(F)	Trigger breach confirmed		160627-8	160627-8	160627-8	160627-8	160627-8	160627-8
1-5&*\$@	Sample deviation (see appendix)		13662747 EW	13662767 EW	13662738 EW	13662720 EW	13662758 EW	13662731 EW
Component	LOD/Units	Method						
GRO Surrogate % recovery**	%	TM245	99	106	94	96	95	97
GRO >C5-C12	<50 µg/l	TM245	<50	<50	<50	<50	<50	<50
			#	#	#	#	#	#
Aliphatics >C5-C6	<10 µg/l	TM245	<10	<10	<10	<10	<10	<10
Aliphatics >C6-C8	<10 µg/l	TM245	<10	<10	<10	<10	<10	<10
Aliphatics >C8-C10	<10 µg/l	TM245	<10	<10	<10	<10	<10	<10
Aliphatics >C10-C12	<10 µg/l	TM245	<10	<10	<10	<10	<10	<10
Aliphatics >C12-C16 (aq)	<10 µg/l	TM174	<10	<10	<10	<10	<10	<10
Aliphatics >C16-C21 (aq)	<10 µg/l	TM174	<10	<10	<10	<10	<10	<10
Aliphatics >C21-C35 (aq)	<10 µg/l	TM174	<10	17	<10	<10	<10	<10
Total Aliphatics >C12-C35 (aq)	<10 µg/l	TM174	<10	17	<10	<10	<10	<10
Aromatics >EC5-EC7	<10 µg/l	TM245	<10	<10	<10	<10	<10	<10
Aromatics >EC7-EC8	<10 µg/l	TM245	<10	<10	<10	<10	<10	<10
Aromatics >EC8-EC10	<10 µg/l	TM245	<10	<10	<10	<10	<10	<10
Aromatics >EC10-EC12	<10 µg/l	TM245	<10	<10	<10	<10	<10	<10
Aromatics >EC12-EC16 (aq)	<10 µg/l	TM174	<10	<10	<10	<10	<10	<10
Aromatics >EC16-EC21 (aq)	<10 µg/l	TM174	<10	<10	<10	<10	<10	<10
Aromatics >EC21-EC35 (aq)	<10 µg/l	TM174	<10	48	<10	<10	<10	<10
Total Aromatics >EC12-EC35 (aq)	<10 µg/l	TM174	<10	48	<10	<10	<10	<10
Total Aliphatics & Aromatics >C5-35 (aq)	<10 µg/l	TM174	<10	75	<10	<10	13	10
Aromatics >EC16-EC35 (aq)	<10 µg/l	TM174	<10	48	<10	<10	<10	<10



SDG: 160627-8
 Job: H_WSP_LON-223
 Client Reference: 70020138

Location: Tradeteam Site (DHL) Gloucester
 Customer: WSP PB LBH
 Attention: George Baggot

Order Number: 70020138-001
 Report Number: 367242
 Superseded Report:

VOC MS (W)

Results Legend		Customer Sample R	BH01	BH02	BH04	WS01	WS03	WS10
#	ISO17025 accredited.	Depth (m) Sample Type Date Sampled Sample Time Date Received SDG Ref Lab Sample No.(s) AGS Reference	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00
M	mCERTS accredited.		Water(GW/SW)	Water(GW/SW)	Water(GW/SW)	Water(GW/SW)	Water(GW/SW)	Water(GW/SW)
aq	Aqueous / settled sample.		21/06/2016	21/06/2016	21/06/2016	21/06/2016	21/06/2016	21/06/2016
diss.filt	Dissolved / filtered sample.							
tot.unfilt	Total / unfiltered sample.							
*	Subcontracted test.							
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery							
(F)	Trigger breach confirmed							
1-5 	Sample deviation (see appendix)							
Component	LOD/Units	Method						
Dibromofluoromethane**	%	TM208				107		113
						1		1
Toluene-d8**	%	TM208				98		97
						1		1
4-Bromofluorobenzene**	%	TM208				99		93.1
						1		1
Dichlorodifluoromethane	<1 µg/l	TM208				<1		<1
						1		1
Chloromethane	<1 µg/l	TM208				<1		<1
						1 #		1 #
Vinyl chloride	<1 µg/l	TM208				<1		<1
						1 #		1 #
Bromomethane	<1 µg/l	TM208				<1		<1
						1 #		1 #
Chloroethane	<1 µg/l	TM208				<1		<1
						1 #		1 #
Trichlorofluoromethane	<1 µg/l	TM208				<1		<1
						1 #		1 #
1,1-Dichloroethene	<1 µg/l	TM208				<1		<1
						1 #		1 #
Carbon disulphide	<1 µg/l	TM208				<1		<1
						1 #		1 #
Dichloromethane	<3 µg/l	TM208				<3		<3
						1 #		1 #
Methyl tertiary butyl ether (MTBE)	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1
			1 #	1 #	1 #	1 #	1 #	1 #
trans-1,2-Dichloroethene	<1 µg/l	TM208				<1		<1
						1 #		1 #
1,1-Dichloroethane	<1 µg/l	TM208				<1		<1
						1 #		1 #
cis-1,2-Dichloroethene	<1 µg/l	TM208				<1		<1
						1 #		1 #
2,2-Dichloropropane	<1 µg/l	TM208				<1		<1
						1		1
Bromochloromethane	<1 µg/l	TM208				<1		<1
						1 #		1 #
Chloroform	<1 µg/l	TM208				<1		<1
						1 #		1 #
1,1,1-Trichloroethane	<1 µg/l	TM208				<1		<1
						1 #		1 #
1,1-Dichloropropene	<1 µg/l	TM208				<1		<1
						1 #		1 #
Carbontetrachloride	<1 µg/l	TM208				<1		<1
						1 #		1 #
1,2-Dichloroethane	<1 µg/l	TM208				<1		<1
						1		1
Benzene	<1 µg/l	TM208	<1	<1	<1	<1	<1	1.52
			1 #	1 #	1 #	1 #	1 #	1 #
Trichloroethene	<1 µg/l	TM208				<1		<1
						1 #		1 #
1,2-Dichloropropane	<1 µg/l	TM208				<1		<1
						1 #		1 #
Dibromomethane	<1 µg/l	TM208				<1		<1
						1 #		1 #
Bromodichloromethane	<1 µg/l	TM208				<1		<1
						1 #		1 #
cis-1,3-Dichloropropene	<1 µg/l	TM208				<1		<1
						1 #		1 #
Toluene	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1
			1 #	1 #	1 #	1 #	1 #	1 #
trans-1,3-Dichloropropene	<1 µg/l	TM208				<1		<1
						1 #		1 #
1,1,2-Trichloroethane	<1 µg/l	TM208				<1		<1
						1 #		1 #



SDG: 160627-8
 Job: H_WSP_LON-223
 Client Reference: 70020138

Location: Tradeteam Site (DHL) Gloucester
 Customer: WSP PB LBH
 Attention: George Baggot

Order Number: 70020138-001
 Report Number: 367242
 Superseded Report:

VOC MS (W)

Results Legend			Customer Sample R		BH01	BH02	BH04	WS01	WS03	WS10
#	ISO17025 accredited.		Depth (m) Sample Type Date Sampled Sample Time Date Received SDG Ref Lab Sample No.(s) AGS Reference							
M	mCERTS accredited.			0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00
aq	Aqueous / settled sample.			Water(GW/SW)	Water(GW/SW)	Water(GW/SW)	Water(GW/SW)	Water(GW/SW)	Water(GW/SW)	Water(GW/SW)
dis.filt	Dissolved / filtered sample.			21/06/2016	21/06/2016	21/06/2016	21/06/2016	21/06/2016	21/06/2016	21/06/2016
tot.unfilt	Total / unfiltered sample.									
*	Subcontracted test.									
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery			27/06/2016	27/06/2016	27/06/2016	27/06/2016	27/06/2016	27/06/2016	27/06/2016
(F)	Trigger breach confirmed			160627-8	160627-8	160627-8	160627-8	160627-8	160627-8	160627-8
1-5	@	Sample deviation (see appendix)			13662747	13662767	13662738	13662720	13662758	13662731	
				EW	EW	EW	EW	EW	EW	
Component	LOD/Units	Method								
1,3-Dichloropropane	<1 µg/l	TM208					<1		<1	
							1 #		1 #	
Tetrachloroethene	<1 µg/l	TM208					<1		<1	
							1 #		1 #	
Dibromochloromethane	<1 µg/l	TM208					<1		<1	
							1 #		1 #	
1,2-Dibromoethane	<1 µg/l	TM208					<1		<1	
							1 #		1 #	
Chlorobenzene	<1 µg/l	TM208					<1		<1	
							1 #		1 #	
1,1,1,2-Tetrachloroethane	<1 µg/l	TM208					<1		<1	
							1 #		1 #	
Ethylbenzene	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	<1	
			1 #	1 #	1 #	1 #	1 #	1 #	1 #	
m,p-Xylene	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	<1	
			1 #	1 #	1 #	1 #	1 #	1 #	1 #	
o-Xylene	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	<1	
			1 #	1 #	1 #	1 #	1 #	1 #	1 #	
Styrene	<1 µg/l	TM208					<1		<1	
							1 #		1 #	
Bromoform	<1 µg/l	TM208					<1		<1	
							1 #		1 #	
Isopropylbenzene	<1 µg/l	TM208					<1		<1	
							1 #		1 #	
1,1,2,2-Tetrachloroethane	<1 µg/l	TM208					<1		<1	
							1		1	
1,2,3-Trichloropropane	<1 µg/l	TM208					<1		<1	
							1 #		1 #	
Bromobenzene	<1 µg/l	TM208					<1		<1	
							1 #		1 #	
Propylbenzene	<1 µg/l	TM208					<1		<1	
							1 #		1 #	
2-Chlorotoluene	<1 µg/l	TM208					<1		<1	
							1 #		1 #	
1,3,5-Trimethylbenzene	<1 µg/l	TM208					<1		<1	
							1 #		1 #	
4-Chlorotoluene	<1 µg/l	TM208					<1		<1	
							1 #		1 #	
tert-Butylbenzene	<1 µg/l	TM208					<1		<1	
							1 #		1 #	
1,2,4-Trimethylbenzene	<1 µg/l	TM208					<1		<1	
							1 #		1 #	
sec-Butylbenzene	<1 µg/l	TM208					<1		<1	
							1 #		1 #	
4-iso-Propyltoluene	<1 µg/l	TM208					<1		<1	
							1 #		1 #	
1,3-Dichlorobenzene	<1 µg/l	TM208					<1		<1	
							1 #		1 #	
1,4-Dichlorobenzene	<1 µg/l	TM208					<1		<1	
							1 #		1 #	
n-Butylbenzene	<1 µg/l	TM208					<1		<1	
							1 #		1 #	
1,2-Dichlorobenzene	<1 µg/l	TM208					<1		<1	
							1		1	
1,2-Dibromo-3-chloropropane	<1 µg/l	TM208					<1		<1	
							1		1	
1,2,4-Trichlorobenzene	<1 µg/l	TM208					<1		<1	
							1 #		1 #	
Hexachlorobutadiene	<1 µg/l	TM208					<1		<1	
							1 #		1 #	
tert-Amyl methyl ether (TAME)	<1 µg/l	TM208	<1	<1	<1	<1	<1	<1	<1	
			1 #	1 #	1 #	1 #	1 #	1 #	1 #	
Naphthalene	<1 µg/l	TM208					<1		<1	
							1 #		1 #	



SDG: 160627-8
Job: H_WSP_LON-223
Client Reference: 70020138

Location: Tradetean Site (DHL) Gloucester
Customer: WSP PB LBH
Attention: George Baggot

Order Number: 70020138-001
Report Number: 367242
Superseded Report:

VOC MS (W)

Table with columns for Results Legend, Customer Sample R, BH01, BH02, BH04, WS01, WS03, WS10. Rows include components like 1,2,3-Trichlorobenzene and Sum of detected Xylenes with LOD/Units and Method.



CERTIFICATE OF ANALYSIS

Validated

SDG: 160627-8
Job: H_WSP_LON-223
Client Reference: 70020138

Location: Tradeteam Site (DHL) Gloucester
Customer: WSP PB LBH
Attention: George Baggot

Order Number: 70020138-001
Report Number: 367242
Superseded Report:

Notification of NDPs (No determination possible)

Date Received : 27/06/2016 09:19:29

Sample No	Customer Sample Ref.	Depth (m)	Test	Comment
13662767	BH02 EWZ	0.00 - 0.00	Mercury Dissolved	Sample cannot be filtered



SDG: 160627-8
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Client Reference: 70020138

Location: Tradeteam Site (DHL) Gloucester
Customer: WSP PB LBH
Attention: George Baggot

Order Number: 70020138-001
Report Number: 367242
Superseded Report:

Table of Results - Appendix

Method No	Reference	Description	Wet/Dry Sample ¹	Surrogate Corrected
TM061	Method for the Determination of EPH, Massachusetts Dept. of EP, 1998	Determination of Extractable Petroleum Hydrocarbons by GC-FID (C10-C40)		
TM152	Method 3125B, AWWA/APHA, 20th Ed., 1999	Analysis of Aqueous Samples by ICP-MS		
TM174	Analysis of Petroleum Hydrocarbons in Environmental Media – Total Petroleum Hydrocarbon Criteria	Determination of Speciated Extractable Petroleum Hydrocarbons in Waters by GC-FID		
TM176	EPA 8270D Semi-Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)	Determination of SVOCs in Water by GCMS		
TM178	Modified: US EPA Method 8100	Determination of Polynuclear Aromatic Hydrocarbons (PAH) by GC-MS in Waters		
TM183	BS EN 23506:2002, (BS 6068-2.74:2002) ISBN 0 580 38924 3	Determination of Trace Level Mercury in Waters and Leachates by PSA Cold Vapour Atomic Fluorescence Spectrometry		
TM184	EPA Methods 325.1 & 325.2,	The Determination of Anions in Aqueous Matrices using the Kone Spectrophotometric Analysers		
TM208	Modified: US EPA Method 8260b & 624	Determination of Volatile Organic Compounds by Headspace / GC-MS in Waters		
TM245	By GC-FID	Determination of GRO by Headspace in waters		
TM256	The measurement of Electrical Conductivity and the Laboratory determination of pH Value of Natural, Treated and Wastewaters. HMSO, 1978. ISBN 011 751428 4.	Determination of pH in Water and Leachate using the GLpH pH Meter		
TM279		Determination of Low Level Easily Liberatable (Free) Cyanides and Total Cyanides in Waters using the Skalar SANS+ System Segmented Flow Analyser		
TM331		Low Level Hexavalent Chromium		

¹ Applies to Solid samples only. DRY indicates samples have been dried at 35°C. NA = not applicable.



SDG: 160627-8
Job: H_WSP_LON-223
Client Reference: 70020138

Location: Tradeteam Site (DHL) Gloucester
Customer: WSP PB LBH
Attention: George Baggot

Order Number: 70020138-001
Report Number: 367242
Superseded Report:

Test Completion Dates

Lab Sample No(s)	13662747	13662767	13662738	13662720	13662758	13662731
Customer Sample Ref.	BH01	BH02	BH04	WS01	WS03	WS10
AGS Ref.	EW	EW	EW	EW	EW	EW
Depth	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00
Type	LIQUID	LIQUID	LIQUID	LIQUID	LIQUID	LIQUID
Anions by Kone (w)	29-Jun-2016	28-Jun-2016	29-Jun-2016	29-Jun-2016	28-Jun-2016	29-Jun-2016
Dissolved Metals by ICP-MS	30-Jun-2016	30-Jun-2016	30-Jun-2016	30-Jun-2016	30-Jun-2016	30-Jun-2016
EPH CWG (Aliphatic) Aqueous GC (W)	30-Jun-2016	30-Jun-2016	30-Jun-2016	30-Jun-2016	30-Jun-2016	30-Jun-2016
EPH CWG (Aromatic) Aqueous GC (W)	30-Jun-2016	30-Jun-2016	30-Jun-2016	30-Jun-2016	30-Jun-2016	30-Jun-2016
GRO by GC-FID (W)	30-Jun-2016	30-Jun-2016	30-Jun-2016	30-Jun-2016	30-Jun-2016	30-Jun-2016
Low Level Cyanide (W)	29-Jun-2016	30-Jun-2016	29-Jun-2016	29-Jun-2016	29-Jun-2016	29-Jun-2016
Low Level Hexavalent Chromium (w)	29-Jun-2016	27-Jun-2016	29-Jun-2016	29-Jun-2016	27-Jun-2016	29-Jun-2016
Mercury Dissolved	01-Jul-2016		01-Jul-2016	01-Jul-2016	01-Jul-2016	01-Jul-2016
PAH Spec MS - Aqueous (W)	30-Jun-2016	30-Jun-2016	30-Jun-2016	30-Jun-2016	30-Jun-2016	30-Jun-2016
pH Value	28-Jun-2016	28-Jun-2016	28-Jun-2016	28-Jun-2016	28-Jun-2016	28-Jun-2016
SVOC MS (W) - Aqueous				30-Jun-2016		30-Jun-2016
TPH CWG (W)	30-Jun-2016	30-Jun-2016	30-Jun-2016	30-Jun-2016	30-Jun-2016	30-Jun-2016
VOC MS (W)	29-Jun-2016	29-Jun-2016	29-Jun-2016	29-Jun-2016	29-Jun-2016	29-Jun-2016



SDG: 160627-8
Job: H_WSP_LON-223
Client Reference: 70020138

Location: Tradetean Site (DHL) Gloucester
Customer: WSP PB LBH
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Order Number: 70020138-001
Report Number: 367242
Superseded Report:

Appendix

1. Results are expressed on a dry weight basis (dried at 35°C) for all soil analyses except for the following: NRA and CEN Leach tests, flash point LOI, pH, ammonium as NH₄ by the BRE method, VOC TICs and SVOC TICs.

2. Samples will be run in duplicate upon request, but an additional charge may be incurred.

3. If sufficient sample is received a sub sample will be retained free of charge for 30 days after analysis is completed (e-mailed) for all sample types unless the sample is destroyed on testing. The prepared soil sub sample that is analysed for asbestos will be retained for a period of 6 months after the analysis date. All bulk samples will be retained for a period of 6 months after the analysis date. All samples received and not scheduled will be disposed of one month after the date of receipt unless we are instructed to the contrary. Once the initial period has expired, a storage charge will be applied for each month or part thereof until the client cancels the request for sample storage. ALcontrol Laboratories reserve the right to charge for samples received and stored but not analysed.

4. With respect to turnaround, we will always endeavour to meet client requirements wherever possible, but turnaround times cannot be absolutely guaranteed due to so many variables beyond our control.

5. We take responsibility for any test performed by sub-contractors (marked with an asterisk). We endeavour to use UKAS/MCERTS Accredited Laboratories, who either complete a quality questionnaire or are audited by ourselves. For some determinands there are no UKAS/MCERTS Accredited Laboratories, in this instance a laboratory with a known track record will be utilised.

6. When requested, the individual sub sample scheduled will be analysed in house for the presence of asbestos fibres and asbestos containing material by our documented in house method TM048 based on HSG 248 (2005), which is accredited to ISO17025. If a specific asbestos fibre type is not found this will be reported as "Not detected". If no asbestos fibre types are found all will be reported as "Not detected" and the sub sample analysed deemed to be clear of asbestos. If an asbestos fibre type is found it will be reported as detected (for each fibre type found). Testing can be carried out on asbestos positive samples, but, due to Health and Safety considerations, may be replaced by alternative tests or reported as No Determination Possible (NDP). The quantity of asbestos present is not determined unless specifically requested.

7. If no separate volatile sample is supplied by the client, or if a headspace or sediment is present in the volatile sample, the integrity of the data may be compromised. This will be flagged up as an invalid VOC on the test schedule and the result marked as deviating on the test certificate.

8. If appropriate preserved bottles are not received preservation will take place on receipt. However, the integrity of the data may be compromised.

9. NDP - No determination possible due to insufficient/unsuitable sample.

10. Metals in water are performed on a filtered sample, and therefore represent dissolved metals - total metals must be requested separately.

11. Results relate only to the items tested.

12. LoDs (Limit of Detection) for wet tests reported on a dry weight basis are not corrected for moisture content.

13. **Surrogate recoveries** - Surrogates are added to your sample to monitor recovery of the test requested. A % recovery is reported, results are not corrected for the recovery measured. Typical recoveries for organics tests are 70-130%, they are generally wider for volatiles analysis, 50-150%. Recoveries in soils are affected by organic rich or clay rich matrices. Waters can be affected by remediation fluids or high amounts of sediment. Test results are only ever reported if all of the associated quality checks pass; it is assumed that all recoveries outside of the values above are due to matrix affect.

14. **Product analyses** - Organic analyses on products can only be semi-quantitative due to the matrix effects and high dilution factors employed.

15. Phenols monohydric by HPLC include phenol, cresols (2-Methylphenol, 3-Methylphenol and 4-Methylphenol) and Xylenols (2,3 Dimethylphenol, 2,4 Dimethylphenol, 2,5 Dimethylphenol, 2,6 Dimethylphenol, 3,4 Dimethylphenol, 3,5 Dimethylphenol).

16. Total of 5 speciated phenols by HPLC includes Phenol, 2,3,5-Trimethyl Phenol, 2-Isopropylphenol, Cresols and Xylenols (as detailed in 15).

17. Stones/debris are not routinely removed. We always endeavour to take a representative sub sample from the received sample.

18. In certain circumstances the method detection limit may be elevated due to the sample being outside the calibration range. Other factors that may contribute to this include possible interferences. In both cases the sample would be diluted which would cause the method detection limit to be raised.

19. Mercury results quoted on soils will not include volatile mercury as the analysis is performed on a dried and crushed sample.

General

20. For the BSEN 12457-3 two batch process to allow the cumulative release to be calculated, the volume of the leachate produced is measured and filtered for all tests. We therefore cannot carry out any unfiltered analysis. The tests affected include volatiles GCFID/GCMS and all subcontracted analysis.

21. For leachate preparations other than Zero Headspace Extraction (ZHE) volatile loss may occur.

22. We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials - whether these are derived from naturally occurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample. Other coarse granular material such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

23. Analysis and identification of specific compounds using GCFID is by retention time only, and we routinely calibrate and quantify for benzene, toluene, ethylbenzenes and xylenes (BTEX). For total volatiles in the C5-C12 range, the total area of the chromatogram is integrated and expressed as ug/kg or ug/l. Although this analysis is commonly used for the quantification of gasoline range organics (GRO), the system will also detect other compounds such as chlorinated solvents, and this may lead to a falsely high result with respect to hydrocarbons only. It is not possible to specifically identify these non-hydrocarbons, as standards are not routinely run for any other compounds, and for more definitive identification, volatiles by GCMS should be utilised.

24. **Tentatively Identified Compounds (TICs)** are non-target peaks in VOC and SVOC analysis. All non-target peaks detected with a concentration above the LoD are subjected to a mass spectral library search. Non-target peaks with a library search confidence of >75% are reported based on the best mass spectral library match. When a non-target peak with a library search confidence of <75% is detected it is reported as "mixed hydrocarbons". Non-target compounds identified from the scan data are semi-quantified relative to one of the deuterated internal standards, under the same chromatographic conditions as the target compounds. This result is reported as a semi-quantitative value and reported as Tentatively Identified Compounds (TICs). TICs are outside the scope of UKAS accreditation and are not moisture corrected.

Sample Deviations

1	Container with Headspace provided for volatiles analysis
2	Incorrect container received
3	Deviation from method
4	Holding time exceeded before sample received
5	Samples exceeded holding time before preservation was performed
\$	Sampled on date not provided
+	Sample holding time exceeded in laboratory
@	Sample holding time exceeded due to sampled on date
&	Sample Holding Time exceeded - Late arrival of instructions.

Asbestos

Identification of Asbestos in Bulk Materials & Soils

The results for identification of asbestos in bulk materials are obtained from supplied bulk materials which have been examined to determine the presence of asbestos fibres using ALcontrol Laboratories (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining, based on HSG 248 (2005).

The results for identification of asbestos in soils are obtained from a homogenised sub sample which has been examined to determine the presence of asbestos fibres using ALcontrol Laboratories (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining, based on HSG 248 (2005).

Asbestos Type	Common Name
Crystalline	White Asbestos
Amphibole	Brown Asbestos
Crystalline	Blue Asbestos
Fibrous Asbestos	-
Fibrous Amphibole	-
Fibrous Tremolite	-

Visual Estimation Of Fibre Content

Estimation of fibre content is not permitted as part of our UKAS accredited test other than: - Trace - Where only one or two asbestos fibres were identified.

Further guidance on typical asbestos fibre content of manufactured products can be found in HSG 264.

The identification of asbestos containing materials and soils falls within our schedule of tests for which we hold UKAS accreditation, however opinions, interpretations and all other information contained in the report are outside the scope of UKAS accreditation.

Former Interbrew Site, Gloucester



Commercial, SOM=1%

Site Area(s) Selected: Whole site,2016,2018

Phase(s): All phases

Notes: * For results below LOD, a value of half LOD is used in the calculation of the mean

Unrecognised analytes

ANALYTE	MADEGROUND			NATURAL GROUND			ASSESSMENT CRITERIA (AC)	UNITS	NO. OF LOCATIONS	NO. OF SAMPLES	NO. OF SAMPLES > LOD	NO. OF LOCATIONS >AC	LOCATIONS FAILING SCREENING
	MIN	MEAN*	MAX	MIN	MEAN*	MAX							
Bis(2-chloroisopropyl)ether (TIC) (Unrecognised code)	0.10	0.050	0.10	-	-	-	-	mg/kg	1	1	0	0	

Aliphatics and Aromatics

ANALYTE	MADEGROUND			NATURAL GROUND			ASSESSMENT CRITERIA (AC)	UNITS	NO. OF LOCATIONS	NO. OF SAMPLES	NO. OF SAMPLES > LOD	NO. OF LOCATIONS >AC	LOCATIONS FAILING SCREENING
	MIN	MEAN*	MAX	MIN	MEAN*	MAX							
Aliphatic C05-C06	0.010	0.005	0.010	0.010	0.005	0.010	3,190	mg/kg	22	32	0	0	
Aliphatic C06-C08	0.010	0.008	0.037	0.010	0.006	0.014	7,780	mg/kg	22	32	5	0	
Aliphatic C08-C10	0.010	0.21	3.30	0.010	0.17	1.73	2,000	mg/kg	22	32	6	0	
Aliphatic C10-C12	0.010	0.63	10.9	0.010	0.12	1.18	9,690	mg/kg	22	32	7	0	
Aliphatic C12-C16	0.10	9.72	170	0.10	1.98	19.4	58,800	mg/kg	22	32	11	0	
Aliphatic C16-C21	0.10	12.4	201	0.10	4.18	42.7	-	mg/kg	22	32	14	0	
Aliphatic C21-C35	0.10	16.6	59.2	0.10	3.23	13.2	-	mg/kg	22	32	24	0	
Aliphatic C35-C44	0.10	7.04	50.5	0.10	0.70	6.75	1,910,000	mg/kg	22	32	11	0	

Former Interbrew Site, Gloucester



Commercial, SOM=1%

Site Area(s) Selected: Whole site,2016,2018

Phase(s): All phases

Notes: * For results below LOD, a value of half LOD is used in the calculation of the mean

Aliphatics and Aromatics

ANALYTE	MADEGROUND			NATURAL GROUND			ASSESSMENT CRITERIA (AC)	UNITS	NO. OF LOCATIONS	NO. OF SAMPLES	NO. OF SAMPLES > LOD	NO. OF LOCATIONS >AC	LOCATIONS FAILING SCREENING
	MIN	MEAN*	MAX	MIN	MEAN*	MAX							
Aliphatics C12-C44	0.10	45.5	428	0.10	9.96	72.5	-	mg/kg	22	32	25	0	
Aromatic C06-C07	0.010	0.005	0.010	0.010	0.005	0.010	-	mg/kg	22	32	0	0	
Aromatic C07-C08	0.010	0.005	0.010	0.010	0.005	0.010	56,100	mg/kg	22	32	0	0	
Aromatic C08-C10	0.010	0.15	2.27	0.010	0.11	1.15	3,460	mg/kg	22	32	7	0	
Aromatic C10-C12	0.010	0.42	7.25	0.010	0.083	0.78	16,200	mg/kg	22	32	7	0	
Aromatic C12-C16	0.10	1.82	29.4	0.10	0.43	2.77	36,200	mg/kg	22	32	14	0	
Aromatic C12-C44	0.10	34.0	132	0.10	9.80	38.7	-	mg/kg	22	32	25	0	
Aromatic C16-C21	0.10	4.54	60.3	0.10	1.64	11.2	28,600	mg/kg	22	32	17	0	
Aromatic C16-C35	0.10	19.3	82.0	0.10	6.27	27.5	-	mg/kg	22	32	25	0	
Aromatic C21-C35	0.10	14.8	53.9	0.10	4.66	24.8	28,600	mg/kg	22	32	25	0	
Aromatic C35-C44	0.10	12.9	74.5	0.10	3.15	15.4	28,600	mg/kg	22	32	20	0	
Aromatic C40-C44	0.10	5.44	30.0	0.10	1.52	7.67	-	mg/kg	22	32	14	0	
Total Aliphatics and Aromatics (C5-C44)	0.10	81.0	564	0.10	20.2	90.9	-	mg/kg	22	32	26	0	
TPH Hazard Index	-	0.002	0.011	-	0.0005	0.002	1.00	mg/kg	22	32	N/A	0	

Former Interbrew Site, Gloucester



Commercial, SOM=1%

Site Area(s) Selected: Whole site,2016,2018

Phase(s): All phases

Notes: * For results below LOD, a value of half LOD is used in the calculation of the mean

Asbestos

ANALYTE	MADEGROUND			NATURAL GROUND			ASSESSMENT CRITERIA (AC)	UNITS	NO. OF LOCATIONS	NO. OF SAMPLES	NO. OF SAMPLES > LOD	NO. OF LOCATIONS >AC	LOCATIONS FAILING SCREENING
	MIN	MEAN*	MAX	MIN	MEAN*	MAX							
Asbestos Ex. actinolite	-	-	-	-	-	-	-	No units	5	5	0	0	
Asbestos Ex. Amosite	-	-	-	-	-	-	-	No units	5	5	0	0	
Asbestos Ex. anthophyllite	-	-	-	-	-	-	-	No units	5	5	0	0	
Asbestos Ex. Chrysotile	-	-	-	-	-	-	-	No units	5	5	0	0	
Asbestos Ex. crocidolite	-	-	-	-	-	-	-	No units	5	5	0	0	
Asbestos Ex. tremolite	-	-	-	-	-	-	-	No units	5	5	0	0	
Non-Asbestos Fibres	-	-	-	-	-	-	-	No units	5	5	0	0	
Asbestos Ex. actinolite	-	-	-	-	-	-	-	JNKNOWN	17	17	0	0	
Asbestos Ex. Amosite	-	-	-	-	-	-	-	JNKNOWN	17	17	0	0	
Asbestos Ex. anthophyllite	-	-	-	-	-	-	-	JNKNOWN	17	17	0	0	
Asbestos Ex. Chrysotile	-	-	-	-	-	-	-	JNKNOWN	17	17	0	0	
Asbestos Ex. crocidolite	-	-	-	-	-	-	-	JNKNOWN	17	17	0	0	
Asbestos Ex. tremolite	-	-	-	-	-	-	-	JNKNOWN	17	17	0	0	
Non-Asbestos Fibres	-	-	-	-	-	-	-	JNKNOWN	17	17	0	0	

Former Interbrew Site, Gloucester



Commercial, SOM=1%

Site Area(s) Selected: Whole site,2016,2018

Phase(s): All phases

Notes: * For results below LOD, a value of half LOD is used in the calculation of the mean

BTEX and Fuel Additives

ANALYTE	MADEGROUND			NATURAL GROUND			ASSESSMENT CRITERIA (AC)	UNITS	NO. OF LOCATIONS	NO. OF SAMPLES	NO. OF SAMPLES > LOD	NO. OF LOCATIONS >AC	LOCATIONS FAILING SCREENING
	MIN	MEAN*	MAX	MIN	MEAN*	MAX							
1,2,4-Trimethylbenzene	0.009	0.015	0.090	0.009	0.005	0.009	611	mg/kg	4	6	0	0	
1,3,5-Trimethylbenzene	0.008	0.013	0.080	0.008	0.004	0.008	-	mg/kg	4	6	0	0	
Benzene	0.009	0.014	0.090	0.009	0.008	0.090	27.0	mg/kg	22	32	0	0	
Ethylbenzene	0.004	0.006	0.040	0.004	0.003	0.040	5,710	mg/kg	22	32	0	0	
Methyl t-butylether (MTBE)	0.010	0.015	0.10	0.010	0.008	0.10	7,480	mg/kg	22	32	0	0	
Tertiary Amyl Methyl Ether (TAME)	0.010	0.015	0.10	0.010	0.008	0.10	-	mg/kg	22	32	0	0	
Toluene	0.007	0.011	0.070	0.007	0.006	0.070	56,300	mg/kg	22	32	0	0	
Xylene - Total (Summed)	0.010	0.030	0.10	0.010	0.017	0.10	5,920	mg/kg	22	32	32	0	
Xylene-m & p	0.010	0.015	0.10	0.010	0.008	0.10	5,920	mg/kg	22	32	0	0	
Xylene-o	0.010	0.015	0.10	0.010	0.008	0.10	5,920	mg/kg	22	32	0	0	

Former Interbrew Site, Gloucester



Commercial, SOM=1%

Site Area(s) Selected: Whole site,2016,2018

Phase(s): All phases

Notes: * For results below LOD, a value of half LOD is used in the calculation of the mean

Chlorinated Aliphatics

ANALYTE	MADEGROUND			NATURAL GROUND			ASSESSMENT CRITERIA (AC)	UNITS	NO. OF LOCATIONS	NO. OF SAMPLES	NO. OF SAMPLES > LOD	NO. OF LOCATIONS >AC	LOCATIONS FAILING SCREENING
	MIN	MEAN*	MAX	MIN	MEAN*	MAX							
1,1,1,2-Tetrachloroethane	0.010	0.016	0.10	0.010	0.005	0.010	108 mg/kg	4	6	0	0		
1,1,1-Trichloroethane	0.007	0.011	0.070	0.007	0.004	0.007	1,580 mg/kg	4	6	0	0		
1,1,2,2-Tetrachloroethane	0.010	0.016	0.10	0.010	0.005	0.010	274 mg/kg	4	6	0	0		
1,1,2-Trichloroethane	0.010	0.016	0.10	0.010	0.005	0.010	89.0 mg/kg	4	6	0	0		
1,1-Dichloroethane	0.008	0.013	0.080	0.008	0.004	0.008	263 mg/kg	4	6	0	0		
1,1-Dichloroethene	0.010	0.016	0.10	0.010	0.005	0.010	24.0 mg/kg	4	6	0	0		
1,1-Dichloropropene	0.010	0.016	0.10	0.010	0.005	0.010	- mg/kg	4	6	0	0		
1,2,3-Trichloropropane	0.016	0.026	0.16	0.016	0.008	0.016	- mg/kg	4	6	0	0		
1,2-Dichloroethane	0.005	0.008	0.050	0.005	0.003	0.005	0.67 mg/kg	4	6	0	0		
1,2-Dichloropropane	0.010	0.016	0.10	0.010	0.005	0.010	3.10 mg/kg	4	6	0	0		
1,3-Dichloropropane	0.007	0.011	0.070	0.007	0.004	0.007	- mg/kg	4	6	0	0		
2,2-Dichloropropane	0.010	0.016	0.10	0.010	0.005	0.010	- mg/kg	4	6	0	0		
Carbon tetrachloride	0.010	0.016	0.10	0.010	0.005	0.010	31.0 mg/kg	4	6	0	0		
Chloroethane	0.010	0.016	0.10	0.010	0.005	0.010	904 mg/kg	4	6	0	0		
Chloroform	0.008	0.013	0.080	0.008	0.004	0.008	99.0 mg/kg	4	6	0	0		
Chloromethane	0.007	0.011	0.070	0.007	0.004	0.007	0.96 mg/kg	4	6	0	0		

Former Interbrew Site, Gloucester



Commercial, SOM=1%

Site Area(s) Selected: Whole site,2016,2018

Phase(s): All phases

Notes: * For results below LOD, a value of half LOD is used in the calculation of the mean

Chlorinated Aliphatics

ANALYTE	MADEGROUND			NATURAL GROUND			ASSESSMENT CRITERIA (AC)	UNITS	NO. OF LOCATIONS	NO. OF SAMPLES	NO. OF SAMPLES > LOD	NO. OF LOCATIONS >AC	LOCATIONS FAILING SCREENING
	MIN	MEAN*	MAX	MIN	MEAN*	MAX							
Cis 1,2-Dichloroethene	0.006	0.010	0.060	0.006	0.003	0.006	14.0	mg/kg	4	6	0	0	
Cis 1,3-Dichloropropene	0.010	0.016	0.10	0.010	0.005	0.010	-	mg/kg	4	6	0	0	
Dichloromethane	0.010	0.016	0.10	0.010	0.005	0.010	257	mg/kg	4	6	0	0	
Hexachlorobutadiene	0.020	0.020	0.10	0.020	0.010	0.020	31.0	mg/kg	4	6	0	0	
Hexachloroethane	0.10	0.050	0.10	0.10	0.050	0.10	21.0	mg/kg	2	4	0	0	
Tetrachloroethene (PCE)	0.005	0.008	0.050	0.005	0.003	0.005	19.0	mg/kg	4	6	0	0	
Trans-1,2-Dichloroethene	0.010	0.016	0.10	0.010	0.005	0.010	21.0	mg/kg	4	6	0	0	
Trans-1,3-Dichloropropene	0.010	0.016	0.10	0.010	0.005	0.010	-	mg/kg	4	6	0	0	
Trichloroethene (TCE)	0.009	0.015	0.090	0.009	0.005	0.009	1.20	mg/kg	4	6	0	0	
Vinyl chloride	0.006	0.010	0.060	0.006	0.003	0.006	0.059	mg/kg	4	6	0	0	

Former Interbrew Site, Gloucester



Commercial, SOM=1%

Site Area(s) Selected: Whole site,2016,2018

Phase(s): All phases

Notes: * For results below LOD, a value of half LOD is used in the calculation of the mean

Chlorinated Aromatics

ANALYTE	MADEGROUND			NATURAL GROUND			ASSESSMENT CRITERIA (AC)	UNITS	NO. OF LOCATIONS	NO. OF SAMPLES	NO. OF SAMPLES > LOD	NO. OF LOCATIONS >AC	LOCATIONS FAILING SCREENING
	MIN	MEAN*	MAX	MIN	MEAN*	MAX							
1,2,3-Trichlorobenzene	0.020	0.033	0.20	0.020	0.010	0.020	102	mg/kg	4	6	0	0	
1,2,4-Trichlorobenzene	0.020	0.020	0.10	0.020	0.010	0.020	265	mg/kg	4	6	0	0	
1,2-Dichlorobenzene	0.010	0.016	0.10	0.010	0.005	0.010	2,020	mg/kg	4	6	0	0	
1,3-Dichlorobenzene	0.008	0.013	0.080	0.008	0.004	0.008	30.0	mg/kg	4	6	0	0	
1,4-Dichlorobenzene	0.005	0.008	0.050	0.005	0.003	0.005	584	mg/kg	4	6	0	0	
2-Chlorotoluene	0.009	0.015	0.090	0.009	0.005	0.009	-	mg/kg	4	6	0	0	
4-Chlorotoluene	0.010	0.016	0.10	0.010	0.005	0.010	-	mg/kg	4	6	0	0	
Chlorobenzene	0.005	0.008	0.050	0.005	0.003	0.005	58.0	mg/kg	4	6	0	0	
Hexachlorobenzene	0.10	0.050	0.10	0.10	0.050	0.10	105	mg/kg	2	4	0	0	

Former Interbrew Site, Gloucester



Commercial, SOM=1%

Site Area(s) Selected: Whole site,2016,2018

Phase(s): All phases

Notes: * For results below LOD, a value of half LOD is used in the calculation of the mean

Chlorinated Phenols

ANALYTE	MADEGROUND			NATURAL GROUND			ASSESSMENT CRITERIA (AC)	UNITS	NO. OF LOCATIONS	NO. OF SAMPLES	NO. OF SAMPLES > LOD	NO. OF LOCATIONS >AC	LOCATIONS FAILING SCREENING
	MIN	MEAN*	MAX	MIN	MEAN*	MAX							
2,4,5-Trichlorophenol	0.10	0.050	0.10	0.10	0.050	0.10	-	mg/kg	2	4	0	0	
2,4,6-Trichlorophenol	0.10	0.050	0.10	0.10	0.050	0.10	2,700	mg/kg	2	4	0	0	
2,4-Dichlorophenol	0.10	0.050	0.10	0.10	0.050	0.10	2,700	mg/kg	2	4	0	0	
2-Chlorophenol	0.10	0.050	0.10	0.10	0.050	0.10	2,700	mg/kg	2	4	0	0	
4-Chloro-3-Methylphenol	0.10	0.050	0.10	0.10	0.050	0.10	-	mg/kg	2	4	0	0	
Chlorophenols - Total (Summed Isomers)	0.10	0.10	0.10	0.10	0.10	0.10	2,700	mg/kg	2	4	4	0	

Dioxins and Furans

ANALYTE	MADEGROUND			NATURAL GROUND			ASSESSMENT CRITERIA (AC)	UNITS	NO. OF LOCATIONS	NO. OF SAMPLES	NO. OF SAMPLES > LOD	NO. OF LOCATIONS >AC	LOCATIONS FAILING SCREENING
	MIN	MEAN*	MAX	MIN	MEAN*	MAX							
Dibenzofuran	0.10	0.050	0.10	0.10	0.050	0.10	-	mg/kg	2	4	0	0	

Former Interbrew Site, Gloucester



Commercial, SOM=1%

Site Area(s) Selected: Whole site,2016,2018

Phase(s): All phases

Notes: * For results below LOD, a value of half LOD is used in the calculation of the mean

Dyes

ANALYTE	MADEGROUND			NATURAL GROUND			ASSESSMENT CRITERIA (AC)	UNITS	NO. OF LOCATIONS	NO. OF SAMPLES	NO. OF SAMPLES > LOD	NO. OF LOCATIONS >AC	LOCATIONS FAILING SCREENING
	MIN	MEAN*	MAX	MIN	MEAN*	MAX							
3-Nitroaniline	0.10	0.050	0.10	0.10	0.050	0.10	-	mg/kg	2	4	0	0	
4-Nitroaniline	0.10	0.050	0.10	0.10	0.050	0.10	-	mg/kg	2	4	0	0	

Explosives

ANALYTE	MADEGROUND			NATURAL GROUND			ASSESSMENT CRITERIA (AC)	UNITS	NO. OF LOCATIONS	NO. OF SAMPLES	NO. OF SAMPLES > LOD	NO. OF LOCATIONS >AC	LOCATIONS FAILING SCREENING
	MIN	MEAN*	MAX	MIN	MEAN*	MAX							
2,4-Dinitrotoluene	0.10	0.050	0.10	0.10	0.050	0.10	3,720	mg/kg	2	4	0	0	
2,6-Dinitrotoluene	0.10	0.050	0.10	0.10	0.050	0.10	1,850	mg/kg	2	4	0	0	

Former Interbrew Site, Gloucester



Commercial, SOM=1%

Site Area(s) Selected: Whole site,2016,2018

Phase(s): All phases

Notes: * For results below LOD, a value of half LOD is used in the calculation of the mean

General Chemistry

ANALYTE	MADEGROUND			NATURAL GROUND			ASSESSMENT CRITERIA (AC)	UNITS	NO. OF LOCATIONS	NO. OF SAMPLES	NO. OF SAMPLES > LOD	NO. OF LOCATIONS > AC	LOCATIONS FAILING SCREENING
	MIN	MEAN*	MAX	MIN	MEAN*	MAX							
pH	7.54	9.56	11.9	7.90	8.35	9.04	-	pH Units	20	27	27	0	

Former Interbrew Site, Gloucester



Commercial, SOM=1%

Site Area(s) Selected: Whole site,2016,2018

Phase(s): All phases

Notes: * For results below LOD, a value of half LOD is used in the calculation of the mean

Halogenated Hydrocarbons

ANALYTE	MADEGROUND			NATURAL GROUND			ASSESSMENT CRITERIA (AC)	UNITS	NO. OF LOCATIONS	NO. OF SAMPLES	NO. OF SAMPLES > LOD	NO. OF LOCATIONS >AC	LOCATIONS FAILING SCREENING
	MIN	MEAN*	MAX	MIN	MEAN*	MAX							
1,2-Dibromo-3-Chloropropane	0.014	0.023	0.14	0.014	0.007	0.014	-	mg/kg	4	6	0	0	
1,2-Dibromoethane	0.010	0.016	0.10	0.010	0.005	0.010	-	mg/kg	4	6	0	0	
Bromobenzene	0.010	0.016	0.10	0.010	0.005	0.010	91.0	mg/kg	4	6	0	0	
Bromochloromethane	0.010	0.016	0.10	0.010	0.005	0.010	-	mg/kg	4	6	0	0	
Bromodichloromethane	0.007	0.011	0.070	0.007	0.004	0.007	2.00	mg/kg	4	6	0	0	
Bromoform	0.010	0.016	0.10	0.010	0.005	0.010	714	mg/kg	4	6	0	0	
Bromomethane	0.010	0.016	0.10	0.010	0.005	0.010	-	mg/kg	4	6	0	0	
Dibromochloromethane	0.010	0.016	0.10	0.010	0.005	0.010	-	mg/kg	4	6	0	0	
Dibromomethane	0.009	0.015	0.090	0.009	0.005	0.009	-	mg/kg	4	6	0	0	
Dichlorodifluoromethane	0.006	0.010	0.060	0.006	0.003	0.006	-	mg/kg	4	6	0	0	
Trichlorofluoromethane	0.006	0.010	0.060	0.006	0.003	0.006	-	mg/kg	4	6	0	0	

Former Interbrew Site, Gloucester



Commercial, SOM=1%

Site Area(s) Selected: Whole site,2016,2018

Phase(s): All phases

Notes: * For results below LOD, a value of half LOD is used in the calculation of the mean

Inorganics

ANALYTE	MADEGROUND			NATURAL GROUND			ASSESSMENT CRITERIA (AC)	UNITS	NO. OF LOCATIONS	NO. OF SAMPLES	NO. OF SAMPLES > LOD	NO. OF LOCATIONS >AC	LOCATIONS FAILING SCREENING
	MIN	MEAN*	MAX	MIN	MEAN*	MAX							
Chloride	20.3	20.3	20.3	-	-	-	-	mg/kg	1	1	1	0	
Cyanide (Total)	1.00	0.50	1.00	1.00	0.50	1.00	-	mg/kg	19	24	0	0	
Sulphate as SO4	4,000	47,800	113,000	74,700	803,617	2,100,000	-	ug/l	9	12	11	0	

Ketones

ANALYTE	MADEGROUND			NATURAL GROUND			ASSESSMENT CRITERIA (AC)	UNITS	NO. OF LOCATIONS	NO. OF SAMPLES	NO. OF SAMPLES > LOD	NO. OF LOCATIONS >AC	LOCATIONS FAILING SCREENING
	MIN	MEAN*	MAX	MIN	MEAN*	MAX							
Isophorone	0.10	0.050	0.10	0.10	0.050	0.10	-	mg/kg	2	4	0	0	

Former Interbrew Site, Gloucester



Commercial, SOM=1%

Site Area(s) Selected: Whole site,2016,2018

Phase(s): All phases

Notes: * For results below LOD, a value of half LOD is used in the calculation of the mean

ANALYTE	MADEGROUND			NATURAL GROUND			ASSESSMENT CRITERIA (AC)	UNITS	NO. OF LOCATIONS	NO. OF SAMPLES	NO. OF SAMPLES > LOD	NO. OF LOCATIONS >AC	LOCATIONS FAILING SCREENING
	MIN	MEAN*	MAX	MIN	MEAN*	MAX							
	Arsenic	1.15	11.5	26.7	8.33	15.3								28.8	635 mg/kg	19	24	24	0
Cadmium	0.020	0.89	3.84	0.37	0.61	1.00	223 mg/kg	19	24	22	0		
Chromium	3.88	13.1	28.2	13.8	24.9	30.2	- mg/kg	19	24	24	0		
Copper	1.40	18.8	60.2	12.7	28.9	61.3	69,800 mg/kg	19	24	23	0		
Hexavalent Chromium	0.60	0.35	1.04	0.60	0.30	0.60	24.0 mg/kg	19	24	1	0		
Lead	0.70	979	13,300	11.2	101	724	1,390 mg/kg	19	24	23	1	WS05	
Mercury	0.14	0.11	0.34	0.14	0.070	0.14	1,110 mg/kg	19	24	2	0		
Nickel	1.81	14.1	29.0	19.0	35.9	76.3	1,710 mg/kg	19	24	24	0		
Selenium	1.00	0.50	1.00	1.00	1.00	10.0	12,300 mg/kg	19	24	0	0		
Zinc	6.17	111	374	53.9	86.3	209	1,050,000 mg/kg	19	24	24	0		

Former Interbrew Site, Gloucester



Commercial, SOM=1%

Site Area(s) Selected: Whole site,2016,2018

Phase(s): All phases

Notes: * For results below LOD, a value of half LOD is used in the calculation of the mean

Other

ANALYTE	MADEGROUND			NATURAL GROUND			ASSESSMENT CRITERIA (AC)	UNITS	NO. OF LOCATIONS	NO. OF SAMPLES	NO. OF SAMPLES > LOD	NO. OF LOCATIONS >AC	LOCATIONS FAILING SCREENING
	MIN	MEAN*	MAX	MIN	MEAN*	MAX							
Soil Organic Matter (SOM)	0.35	0.94	2.16	1.03	1.65	3.26	-	%	7	9	8	0	
2-Chloronaphthalene	0.10	0.050	0.10	0.10	0.050	0.10	370	mg/kg	2	4	0	0	
4-Bromophenylphenyl ether	0.10	0.050	0.10	0.10	0.050	0.10	-	mg/kg	2	4	0	0	
4-Chloroaniline	0.10	0.050	0.10	0.10	0.050	0.10	-	mg/kg	2	4	0	0	
4-Chlorophenyl phenyl ether	0.10	0.050	0.10	0.10	0.050	0.10	-	mg/kg	2	4	0	0	
Azobenzene	0.10	0.050	0.10	0.10	0.050	0.10	-	mg/kg	2	4	0	0	
Bis (2-chloroethoxy) methane	0.10	0.050	0.10	0.10	0.050	0.10	-	mg/kg	2	4	0	0	
Bis (2-chloroethyl) ether	0.10	0.050	0.10	0.10	0.050	0.10	-	mg/kg	2	4	0	0	
Carbazole	0.10	0.050	0.10	0.10	0.050	0.10	-	mg/kg	2	4	0	0	
Carbon Disulphide	0.007	0.011	0.070	0.007	0.004	0.007	11.0	mg/kg	4	6	0	0	
Nitrobenzene	0.10	0.050	0.10	0.10	0.050	0.10	-	mg/kg	2	4	0	0	
n-Nitrosodi-n-Propylamine	0.10	0.050	0.10	0.10	0.050	0.10	-	mg/kg	2	4	0	0	
Styrene	0.010	0.016	0.10	0.010	0.005	0.010	3,170	mg/kg	4	6	0	0	

Former Interbrew Site, Gloucester



Commercial, SOM=1%

Site Area(s) Selected: Whole site,2016,2018

Phase(s): All phases

Notes: * For results below LOD, a value of half LOD is used in the calculation of the mean

PAHs													
ANALYTE	MADEGROUND			NATURAL GROUND			ASSESSMENT CRITERIA (AC)	UNITS	NO. OF LOCATIONS	NO. OF SAMPLES	NO. OF SAMPLES > LOD	NO. OF LOCATIONS >AC	LOCATIONS FAILING SCREENING
	MIN	MEAN*	MAX	MIN	MEAN*	MAX							
2-Methylnaphthalene	0.10	0.050	0.10	0.10	0.050	0.10	-	mg/kg	2	4	0	0	
Acenaphthene	0.008	0.009	0.10	0.008	0.005	0.012	-	mg/kg	22	31	5	0	
Acenaphthylene	0.012	0.012	0.10	0.012	0.006	0.012	-	mg/kg	22	31	4	0	
Anthracene	0.016	0.027	0.11	0.016	0.011	0.023	-	mg/kg	22	31	9	0	
Benzo (a) anthracene	0.014	0.073	0.32	0.014	0.023	0.12	-	mg/kg	22	31	12	0	
Benzo (a) pyrene	0.015	0.078	0.41	0.015	0.021	0.079	38.0	mg/kg	22	31	14	0	
Benzo (b) fluoranthene	0.015	0.11	0.63	0.015	0.026	0.11	-	mg/kg	22	31	13	0	
Benzo (ghi) perylene	0.024	0.074	0.39	0.024	0.019	0.059	-	mg/kg	22	31	11	0	
Benzo (k) fluoranthene	0.014	0.042	0.23	0.014	0.014	0.044	-	mg/kg	22	31	12	0	
Chrysene	0.010	0.073	0.40	0.010	0.018	0.089	-	mg/kg	22	31	13	0	
Dibenzo (ah) anthracene	0.023	0.021	0.10	0.023	0.012	0.023	-	mg/kg	22	31	5	0	
Fluoranthene	0.017	0.15	0.71	0.017	0.045	0.23	-	mg/kg	22	31	15	0	
Fluorene	0.010	0.010	0.10	0.010	0.006	0.012	-	mg/kg	22	31	3	0	
Indeno (1,2,3-cd) pyrene	0.018	0.054	0.29	0.018	0.014	0.044	-	mg/kg	22	31	11	0	
Naphthalene	0.009	0.017	0.10	0.009	0.006	0.020	193	mg/kg	22	31	10	0	
PAH Total (EPA 16)	0.12	0.92	4.61	0.12	0.24	1.11	-	mg/kg	21	30	13	0	

Former Interbrew Site, Gloucester



Commercial, SOM=1%

Site Area(s) Selected: Whole site,2016,2018

Phase(s): All phases

Notes: * For results below LOD, a value of half LOD is used in the calculation of the mean

PAHs

ANALYTE	MADEGROUND			NATURAL GROUND			ASSESSMENT CRITERIA (AC)	UNITS	NO. OF LOCATIONS	NO. OF SAMPLES	NO. OF SAMPLES > LOD	NO. OF LOCATIONS >AC	LOCATIONS FAILING SCREENING
	MIN	MEAN*	MAX	MIN	MEAN*	MAX							
Phenanthrene	0.015	0.081	0.33	0.015	0.033	0.13	-	mg/kg	22	31	14	0	
Pyrene	0.015	0.13	0.60	0.015	0.036	0.19	-	mg/kg	22	31	15	0	

Pesticides, Herbicides and Insecticides

ANALYTE	MADEGROUND			NATURAL GROUND			ASSESSMENT CRITERIA (AC)	UNITS	NO. OF LOCATIONS	NO. OF SAMPLES	NO. OF SAMPLES > LOD	NO. OF LOCATIONS >AC	LOCATIONS FAILING SCREENING
	MIN	MEAN*	MAX	MIN	MEAN*	MAX							
Hexachlorocyclopentadiene	0.10	0.050	0.10	0.10	0.050	0.10	-	mg/kg	2	4	0	0	
Pentachlorophenol	0.10	0.050	0.10	0.10	0.050	0.10	406	mg/kg	2	4	0	0	

Former Interbrew Site, Gloucester



Commercial, SOM=1%

Site Area(s) Selected: Whole site,2016,2018

Phase(s): All phases

Notes: * For results below LOD, a value of half LOD is used in the calculation of the mean

Pharmaceuticals

ANALYTE	MADEGROUND			NATURAL GROUND			ASSESSMENT CRITERIA (AC)	UNITS	NO. OF LOCATIONS	NO. OF SAMPLES	NO. OF SAMPLES > LOD	NO. OF LOCATIONS > AC	LOCATIONS FAILING SCREENING
	MIN	MEAN*	MAX	MIN	MEAN*	MAX							
2-Nitroaniline	0.10	0.050	0.10	0.10	0.050	0.10	-	mg/kg	2	4	0	0	

Former Interbrew Site, Gloucester



Commercial, SOM=1%

Site Area(s) Selected: Whole site,2016,2018

Phase(s): All phases

Notes: * For results below LOD, a value of half LOD is used in the calculation of the mean

Phenols

ANALYTE	MADEGROUND			NATURAL GROUND			ASSESSMENT CRITERIA (AC)	UNITS	NO. OF LOCATIONS	NO. OF SAMPLES	NO. OF SAMPLES > LOD	NO. OF LOCATIONS >AC	LOCATIONS FAILING SCREENING
	MIN	MEAN*	MAX	MIN	MEAN*	MAX							
2,4-Dimethylphenol	0.10	0.050	0.10	0.10	0.050	0.10	15,700	mg/kg	2	4	0	0	
2-Methylphenol (o-Cresol)	0.10	0.050	0.10	0.10	0.050	0.10	160,000	mg/kg	2	4	0	0	
2-Nitrophenol	0.10	0.050	0.10	0.10	0.050	0.10	-	mg/kg	2	4	0	0	
4-Methylphenol	0.10	0.050	0.10	0.10	0.050	0.10	160,000	mg/kg	2	4	0	0	
4-Nitrophenol	0.10	0.050	0.10	0.10	0.050	0.10	-	mg/kg	2	4	0	0	
Cresols	0.010	0.005	0.010	0.010	0.005	0.010	160,000	mg/kg	1	3	0	0	
Methylphenols Total (Summed)	0.10	0.10	0.10	0.10	0.10	0.10	160,000	mg/kg	2	4	4	0	
Phenol	0.010	0.028	0.10	0.010	0.005	0.010	760	mg/kg	2	4	0	0	
Phenol (Monohydric)	0.035	0.018	0.035	0.035	0.018	0.035	-	mg/kg	1	3	0	0	
Xylenols	0.015	0.008	0.015	0.015	0.008	0.015	-	mg/kg	1	3	0	0	

Former Interbrew Site, Gloucester



Commercial, SOM=1%

Site Area(s) Selected: Whole site,2016,2018

Phase(s): All phases

Notes: * For results below LOD, a value of half LOD is used in the calculation of the mean

Phthalates													
ANALYTE	MADEGROUND			NATURAL GROUND			ASSESSMENT CRITERIA (AC)	UNITS	NO. OF LOCATIONS	NO. OF SAMPLES	NO. OF SAMPLES > LOD	NO. OF LOCATIONS >AC	LOCATIONS FAILING SCREENING
	MIN	MEAN*	MAX	MIN	MEAN*	MAX							
Bis (2-ethylhexyl) phthalate	0.10	0.050	0.10	0.10	0.050	0.10	85,200	mg/kg	2	4	0	0	
Butyl benzyl phthalate	0.10	0.050	0.10	0.10	0.050	0.10	940,000	mg/kg	2	4	0	0	
Diethyl phthalate	0.10	0.050	0.10	0.10	0.050	0.10	144,000	mg/kg	2	4	0	0	
Dimethyl phthalate	0.10	0.050	0.10	0.10	0.050	0.10	-	mg/kg	2	4	0	0	
Di-n-butyl phthalate	0.10	0.050	0.10	0.10	0.050	0.10	15,400	mg/kg	2	4	0	0	
Di-n-octyl phthalate	0.10	0.050	0.10	0.10	0.050	0.10	89,100	mg/kg	2	4	0	0	

Former Interbrew Site, Gloucester



Commercial, SOM=1%

Site Area(s) Selected: Whole site,2016,2018

Phase(s): All phases

Notes: * For results below LOD, a value of half LOD is used in the calculation of the mean

QA Standard

ANALYTE	MADEGROUND			NATURAL GROUND			ASSESSMENT CRITERIA (AC)	UNITS	NO. OF LOCATIONS	NO. OF SAMPLES	NO. OF SAMPLES > LOD	NO. OF LOCATIONS >AC	LOCATIONS FAILING SCREENING
	MIN	MEAN*	MAX	MIN	MEAN*	MAX							
4-Bromofluorobenzene	77.9	89.3	101	56.0	60.8	65.5	-	%	4	6	6	0	
Acenaphthene-d10	89.1	98.9	107	92.3	99.5	107	-	%	21	30	30	0	
Chrysene-d12	83.8	94.0	105	79.5	92.0	99.7	-	%	21	30	30	0	
Dibromofluoromethane	83.0	106	133	101	102	103	-	%	4	6	6	0	
Naphthalene-d8	91.0	102	113	91.4	103	111	-	%	21	30	30	0	
Perylene-d12 IS	86.3	97.0	106	78.4	90.9	105	-	%	17	26	26	0	
Perylene-d12**	87.5	90.7	95.1	-	-	-	-	%	4	4	4	0	
Phenanthrene-d10 IS	87.2	97.6	108	93.8	97.9	104	-	%	21	30	30	0	
Toluene-d8 Surrogate	92.6	97.4	103	89.6	92.9	96.2	-	%	4	6	6	0	

Former Interbrew Site, Gloucester



Commercial, SOM=1%

Site Area(s) Selected: Whole site,2016,2018

Phase(s): All phases

Notes: * For results below LOD, a value of half LOD is used in the calculation of the mean

TPH/EPH													
ANALYTE	MADEGROUND			NATURAL GROUND			ASSESSMENT CRITERIA (AC)	UNITS	NO. OF LOCATIONS	NO. OF SAMPLES	NO. OF SAMPLES > LOD	NO. OF LOCATIONS >AC	LOCATIONS FAILING SCREENING
	MIN	MEAN*	MAX	MIN	MEAN*	MAX							
GRO Surrogate	53.0	86.2	129	21.0	74.4	121	-	%	22	32	32	0	
PRO (C5-C12)	0.044	1.41	23.7	0.044	0.49	4.87	-	mg/kg	22	32	8	0	

VOCs													
ANALYTE	MADEGROUND			NATURAL GROUND			ASSESSMENT CRITERIA (AC)	UNITS	NO. OF LOCATIONS	NO. OF SAMPLES	NO. OF SAMPLES > LOD	NO. OF LOCATIONS >AC	LOCATIONS FAILING SCREENING
	MIN	MEAN*	MAX	MIN	MEAN*	MAX							
4-Isopropyltoluene	0.010	0.016	0.10	0.010	0.005	0.010	-	mg/kg	4	6	0	0	
iso-Propylbenzene	0.005	0.008	0.050	0.005	0.003	0.005	1,300	mg/kg	4	6	0	0	
n-Butylbenzene	0.011	0.018	0.11	0.011	0.006	0.011	-	mg/kg	4	6	0	0	
n-Propylbenzene	0.010	0.016	0.10	0.010	0.005	0.010	3,860	mg/kg	4	6	0	0	
Sec-Butylbenzene	0.010	0.016	0.10	0.010	0.005	0.010	-	mg/kg	4	6	0	0	
Tert-Butylbenzene	0.014	0.023	0.14	0.014	0.007	0.014	-	mg/kg	4	6	0	0	

THERE WERE NO EXCEEDANCES OF Commercial, SOM=1%

EXCEEDANCES OF Commercial, SOM=1%

Metals						
Analyte	Point ID	Depth	Result	Threshold	Units	Stratum
Lead	WS05	0.65 - 0.65	13300	1390	mg/kg	Made Ground Cohesive

Region	Wales and England
Water Body	Groundwater
Water Body Type	NA
Surface Water Type	NA

Hardness	NA
Receiving surface water status	NA
Altitude	NA

Sample Matrix: LEACHATE

Site Area(s) Selected: Whole site

Event(s) Selected: All events

General Chemistry

ANALYTE	MIN	MEAN*	MAX	ASSESSMENT CRITERIA (AC)	ASSESSMENT CRITERIA SOURCE	UNITS	NO. LOCATIONS SAMPLED	NO. SAMPLES > LOD	NO. LOCATIONS > AC	LOCATION(S) FAILING SCREENING
pH	9.3	10.2	11.1	6.50/10.0	UK DWS	pH Units	2	2	1	TP102
Electrical conductivity	220	347	474	2,500	UK DWS	uS/cm	2	2	0	

Inorganics

ANALYTE	MIN	MEAN*	MAX	ASSESSMENT CRITERIA (AC)	ASSESSMENT CRITERIA SOURCE	UNITS	NO. LOCATIONS SAMPLED	NO. SAMPLES > LOD	NO. LOCATIONS > AC	LOCATION(S) FAILING SCREENING
Cyanide (Total)	0.50	0.25	0.50	-		mg/kg	2	-	0	
Cyanide (Free)	50.0	25.0	50.0	50.0	UK DWS - Assumes Total Cyanide	ug/l	5	-	0	
Cyanide (Total)	50.0	25.0	50.0	50.0	UK DWS	ug/l	6	-	0	

Sample Matrix: LEACHATE

Site Area(s) Selected: Whole site
Event(s) Selected: All events

Metals

ANALYTE	MIN	MEAN*	MAX	ASSESSMENT CRITERIA (AC)	ASSESSMENT CRITERIA SOURCE	UNITS	NO. LOCATIONS SAMPLED	NO. SAMPLES > LOD	NO. LOCATIONS > AC	LOCATION(S) FAILING SCREENING
Arsenic	0.005	0.015	0.028	-		mg/kg	2	1	0	
Cadmium	0.0008	0.0004	0.0008	-		mg/kg	2	-	0	
Chromium	0.013	0.013	0.013	-		mg/kg	2	2	0	
Copper	0.003	0.009	0.017	-		mg/kg	2	1	0	
Ferric Iron	0.50	0.25	0.50	-		mg/kg	1	-	0	
Ferrous Iron	1.00	0.50	1.00	-		mg/kg	1	-	0	
Iron	0.190	0.095	0.190	-		mg/kg	1	-	0	
Lead	0.002	0.013	0.024	-		mg/kg	2	1	0	
Mercury	0.0001	0.0001	0.0001	-		mg/kg	2	1	0	
Nickel	0.004	0.013	0.024	-		mg/kg	2	1	0	
Selenium	0.005	0.004	0.006	-		mg/kg	2	1	0	
Zinc	0.078	0.089	0.099	-		mg/kg	2	2	0	
Arsenic	0.12	1.88	5.53	10.0	UK DWS	ug/l	11	8	0	
Cadmium	0.080	0.048	0.100	5.00	UK DWS	ug/l	11	-	0	
Chromium	0.22	1.72	4.84	50.0	UK DWS	ug/l	11	9	0	
Copper	0.30	0.87	2.23	2,000	UK DWS	ug/l	11	5	0	
Ferric Iron	50.0	25.0	50.0	-		ug/l	1	-	0	
Ferrous Iron	100.0	50.0	100.0	-		ug/l	1	-	0	

Sample Matrix: LEACHATE

Site Area(s) Selected: Whole site
Event(s) Selected: All events

Metals

ANALYTE	MIN	MEAN*	MAX	ASSESSMENT CRITERIA (AC)	ASSESSMENT CRITERIA SOURCE	UNITS	NO. LOCATIONS SAMPLED	NO. SAMPLES > LOD	NO. LOCATIONS > AC	LOCATION(S) FAILING SCREENING
Iron	19.00	9.50	19.00	200	UK DWS	ug/l	1	-	0	
Lead	0.02	0.50	2.41	10.0	UK DWS	ug/l	11	6	0	
Mercury	0.010	0.007	0.015	1.00	UK DWS	ug/l	11	3	0	
Nickel	0.15	1.19	2.82	20.0	UK DWS	ug/l	11	8	0	
Selenium	0.39	0.88	6.73	10.0	UK DWS	ug/l	11	4	0	
Zinc	0.41	2.46	9.94	-		ug/l	11	8	0	

Physical

ANALYTE	MIN	MEAN*	MAX	ASSESSMENT CRITERIA (AC)	ASSESSMENT CRITERIA SOURCE	UNITS	NO. LOCATIONS SAMPLED	NO. SAMPLES > LOD	NO. LOCATIONS > AC	LOCATION(S) FAILING SCREENING
Temperature	18.7	19.2	19.7	-		DegC	2	2	0	

Sample Matrix: WATER

Site Area(s) Selected: Whole site

Event(s) Selected: All events

Unrecognised analytes Aquifer: ALV

ANALYTE	MIN	MEAN*	MAX	ASSESSMENT CRITERIA (AC)	ASSESSMENT CRITERIA SOURCE	UNITS	NO. LOCATIONS SAMPLED	NO. SAMPLES > LOD	NO. LOCATIONS > AC	LOCATION(S) FAILING SCREENING
(Unrecognised code)	0.10	0.10	0.10	-		%	1	1	0	
(Unrecognised code)	0.005	0.003	0.005	-		ug/l	1	-	0	

Sample Matrix: WATER

Site Area(s) Selected: Whole site

Event(s) Selected: All events

Aliphatics and Aromatics Aquifer: ALV

ANALYTE	MIN	MEAN*	MAX	ASSESSMENT CRITERIA (AC)	ASSESSMENT CRITERIA SOURCE	UNITS	NO. LOCATIONS SAMPLED	NO. SAMPLES > LOD	NO. LOCATIONS > AC	LOCATION(S) FAILING SCREENING
Aliphatic C05-C06	10.00	5.00	10.00	15,000	WHO 2008	ug/l	1	-	0	
Aliphatic C06-C08	10.00	5.00	10.00	15,000	WHO 2008	ug/l	1	-	0	
Aliphatic C08-C10	10.00	5.00	10.00	300	WHO 2008	ug/l	1	-	0	
Aliphatic C10-C12	10.00	5.00	10.00	300	WHO 2008	ug/l	1	-	0	
Aliphatic C12-C16	10.00	5.00	10.00	300	WHO 2008	ug/l	1	-	0	
Aliphatic C16-C21	10.00	5.00	10.00	-		ug/l	1	-	0	
Aliphatic C21-C35	10.00	5.00	10.00	-		ug/l	1	-	0	
Aliphatics C12-C35	10.00	5.00	10.00	-		ug/l	1	-	0	
Aromatic C06-C07	10.00	5.00	10.00	-		ug/l	1	-	0	
Aromatic C07-C08	10.00	5.00	10.00	-		ug/l	1	-	0	
Aromatic C08-C10	10.00	5.00	10.00	300	WHO 2008	ug/l	1	-	0	
Aromatic C10-C12	10.00	5.00	10.00	90.0	WHO 2008	ug/l	1	-	0	
Aromatic C12-C16	10.00	5.00	10.00	90.0	WHO 2008	ug/l	1	-	0	
Aromatic C12-C35	10.00	5.00	10.00	-		ug/l	1	-	0	
Aromatic C16-C21	10.00	5.00	10.00	90.0	WHO 2008	ug/l	1	-	0	
Aromatic C21-C35	10.00	5.00	10.00	90.0	WHO 2008	ug/l	1	-	0	
Total Aliphatics and Aromatics (C5-C35)	10.00	5.00	10.00	10.0	EA 2009	ug/l	1	-	0	

Sample Matrix: WATER

Site Area(s) Selected: Whole site

Event(s) Selected: All events

BTEX and Fuel Additives Aquifer: ALV

ANALYTE	MIN	MEAN*	MAX	ASSESSMENT CRITERIA (AC)	ASSESSMENT CRITERIA SOURCE	UNITS	NO. LOCATIONS SAMPLED	NO. SAMPLES > LOD	NO. LOCATIONS > AC	LOCATION(S) FAILING SCREENING
Benzene	7.00	3.50	7.00	1.00	UK DWS	ug/l	1	-	0	
BTEX	28.0	14.0	28.0	-		ug/l	1	-	0	
Ethylbenzene	5.00	2.50	5.00	300	WHO 2017	ug/l	1	-	0	
Methyl t-butylether (MTBE)	3.00	1.50	3.00	15.0	WHO 2017	ug/l	1	-	0	
Toluene	4.00	2.00	4.00	700	WHO 2017	ug/l	1	-	0	
Xylene-m & p	8.00	4.00	8.00	-		ug/l	1	-	0	
Xylene-o	3.00	1.50	3.00	-		ug/l	1	-	0	

General Chemistry Aquifer: ALV

ANALYTE	MIN	MEAN*	MAX	ASSESSMENT CRITERIA (AC)	ASSESSMENT CRITERIA SOURCE	UNITS	NO. LOCATIONS SAMPLED	NO. SAMPLES > LOD	NO. LOCATIONS > AC	LOCATION(S) FAILING SCREENING
pH	7.34	7.34	7.34	6.50/10.0	UK DWS	pH Units	1	1	0	

Sample Matrix: WATER

Site Area(s) Selected: Whole site

Event(s) Selected: All events

Inorganics

Aquifer: ALV

ANALYTE	MIN	MEAN*	MAX	ASSESSMENT CRITERIA (AC)	ASSESSMENT CRITERIA SOURCE	UNITS	NO. LOCATIONS SAMPLED	NO. SAMPLES > LOD	NO. LOCATIONS > AC	LOCATION(S) FAILING SCREENING
Cyanide (Total)	50.0	25.0	50.0	50.0	UK DWS	ug/l	1	-	0	

Sample Matrix: WATER

Site Area(s) Selected: Whole site

Event(s) Selected: All events

Metals **Aquifer: ALV**

ANALYTE	MIN	MEAN*	MAX	ASSESSMENT CRITERIA (AC)	ASSESSMENT CRITERIA SOURCE	UNITS	NO. LOCATIONS SAMPLED	NO. SAMPLES > LOD	NO. LOCATIONS > AC	LOCATION(S) FAILING SCREENING
Arsenic	0.50	0.25	0.50	10.0	UK DWS	ug/l	1	-	0	
Cadmium	0.080	0.040	0.080	5.00	UK DWS	ug/l	1	-	0	
Chromium	1.00	0.50	1.00	50.0	UK DWS	ug/l	1	-	0	
Copper	1.01	1.01	1.01	2,000	UK DWS	ug/l	1	1	0	
Hexavalent Chromium	30.0	15.0	30.0	-		ug/l	1	-	0	
Lead	0.31	0.31	0.31	10.0	UK DWS	ug/l	1	1	0	
Mercury	0.010	0.005	0.010	1.00	UK DWS	ug/l	1	-	0	
Nickel	59.1	59.1	59.1	20.0	UK DWS	ug/l	1	1	1	BH05
Selenium	23.7	23.7	23.7	10.0	UK DWS	ug/l	1	1	1	BH05
Zinc	7.61	7.61	7.61	-		ug/l	1	1	0	

Sample Matrix: WATER

Site Area(s) Selected: Whole site

Event(s) Selected: All events

PAHs

Aquifer: ALV

ANALYTE	MIN	MEAN*	MAX	ASSESSMENT CRITERIA (AC)	ASSESSMENT CRITERIA SOURCE	UNITS	NO. LOCATIONS SAMPLED	NO. SAMPLES > LOD	NO. LOCATIONS > AC	LOCATION(S) FAILING SCREENING
Acenaphthene	0.005	0.003	0.005	-		ug/l	1	-	0	
Acenaphthylene	0.005	0.003	0.005	-		ug/l	1	-	0	
Anthracene	0.005	0.003	0.005	-		ug/l	1	-	0	
Benzo (a) anthracene	0.005	0.003	0.005	-		ug/l	1	-	0	
Benzo (a) pyrene	0.002	0.001	0.002	0.010	UK DWS	ug/l	1	-	0	
Benzo (b) fluoranthene	0.005	0.003	0.005	-		ug/l	1	-	0	
Benzo (k) fluoranthene	0.005	0.003	0.005	-		ug/l	1	-	0	
Chrysene	0.005	0.003	0.005	-		ug/l	1	-	0	
Dibenzo (ah) anthracene	0.005	0.003	0.005	-		ug/l	1	-	0	
Fluoranthene	0.005	0.003	0.005	-		ug/l	1	-	0	
Fluorene	0.005	0.003	0.005	-		ug/l	1	-	0	
Indeno (1,2,3-cd) pyrene	0.005	0.003	0.005	-		ug/l	1	-	0	
Naphthalene	0.010	0.005	0.010	-		ug/l	1	-	0	
PAH Total (EPA 16)	0.082	0.041	0.082	-		ug/l	1	-	0	
Phenanthrene	0.005	0.003	0.005	-		ug/l	1	-	0	
Pyrene	0.005	0.003	0.005	-		ug/l	1	-	0	



Sample Matrix: WATER

Site Area(s) Selected: Whole site

Event(s) Selected: All events

Phenols

Aquifer: ALV

ANALYTE	MIN	MEAN*	MAX	ASSESSMENT CRITERIA (AC)	ASSESSMENT CRITERIA SOURCE	UNITS	NO. LOCATIONS SAMPLED	NO. SAMPLES > LOD	NO. LOCATIONS > AC	LOCATION(S) FAILING SCREENING
Xylenols	11.00	5.50	11.00	-		ug/l	1	-	0	

TPH/EPH

Aquifer: ALV

ANALYTE	MIN	MEAN*	MAX	ASSESSMENT CRITERIA (AC)	ASSESSMENT CRITERIA SOURCE	UNITS	NO. LOCATIONS SAMPLED	NO. SAMPLES > LOD	NO. LOCATIONS > AC	LOCATION(S) FAILING SCREENING
GRO Surrogate	90.0	90.0	90.0	-		%	1	1	0	
PRO (C5-C12)	50.0	25.0	50.0	-		ug/l	1	-	0	

Sample Matrix: WATER

Site Area(s) Selected: Whole site

Event(s) Selected: All events

Sample Matrix: WATER

Site Area(s) Selected: Whole site

Event(s) Selected: All events

Unrecognised analytes

Aquifer: CHAM

ANALYTE	MIN	MEAN*	MAX	ASSESSMENT CRITERIA (AC)	ASSESSMENT CRITERIA SOURCE	UNITS	NO. LOCATIONS SAMPLED	NO. SAMPLES > LOD	NO. LOCATIONS > AC	LOCATION(S) FAILING SCREENING
(Unrecognised code)	0.14	0.15	0.15	-		%	2	2	0	
(Unrecognised code)	0.005	0.003	0.005	-		ug/l	2	-	0	
C16-C35 Aromatics (Unrecognised code)	10.0	13.6	48.0	-		ug/l	5	1	0	

Sample Matrix: WATER

Site Area(s) Selected: Whole site

Event(s) Selected: All events

Aliphatics and Aromatics

Aquifer: CHAM

ANALYTE	MIN	MEAN*	MAX	ASSESSMENT CRITERIA (AC)	ASSESSMENT CRITERIA SOURCE	UNITS	NO. LOCATIONS SAMPLED	NO. SAMPLES > LOD	NO. LOCATIONS > AC	LOCATION(S) FAILING SCREENING
Aliphatic C05-C06	10.00	5.00	10.00	15,000	WHO 2008	ug/l	7	-	0	
Aliphatic C06-C08	10.00	5.00	10.00	15,000	WHO 2008	ug/l	7	-	0	
Aliphatic C08-C10	10.00	5.00	10.00	300	WHO 2008	ug/l	7	-	0	
Aliphatic C10-C12	10.00	5.00	10.00	300	WHO 2008	ug/l	7	-	0	
Aliphatic C12-C16	10.00	5.00	10.00	300	WHO 2008	ug/l	7	-	0	
Aliphatic C16-C21	10.00	5.00	10.00	-		ug/l	7	-	0	
Aliphatic C21-C35	10.00	6.71	17.00	-		ug/l	7	1	0	
Aliphatics C12-C35	10.00	6.71	17.00	-		ug/l	7	1	0	
Aromatic C06-C07	10.00	5.00	10.00	-		ug/l	7	-	0	
Aromatic C07-C08	10.00	5.00	10.00	-		ug/l	7	-	0	
Aromatic C08-C10	10.00	5.00	10.00	300	WHO 2008	ug/l	7	-	0	
Aromatic C10-C12	10.00	5.00	10.00	90.0	WHO 2008	ug/l	7	-	0	
Aromatic C12-C16	10.00	5.00	10.00	90.0	WHO 2008	ug/l	7	-	0	
Aromatic C12-C35	10.0	11.1	48.0	-		ug/l	7	1	0	
Aromatic C16-C21	10.00	5.00	10.00	90.0	WHO 2008	ug/l	7	-	0	
Aromatic C21-C35	10.0	11.1	48.0	90.0	WHO 2008	ug/l	7	1	0	
Total Aliphatics and Aromatics (C5-C35)	10.0	16.1	75.0	10.0	EA 2009	ug/l	7	2	2	BH02, WS03

Sample Matrix: WATER

Site Area(s) Selected: Whole site

Event(s) Selected: All events

BTEX and Fuel Additives

Aquifer: CHAM

ANALYTE	MIN	MEAN*	MAX	ASSESSMENT CRITERIA (AC)	ASSESSMENT CRITERIA SOURCE	UNITS	NO. LOCATIONS SAMPLED	NO. SAMPLES > LOD	NO. LOCATIONS > AC	LOCATION(S) FAILING SCREENING
1,2,4-Trimethylbenzene	1.00	0.50	1.00	-		ug/l	1	-	0	
1,3,5-Trimethylbenzene	1.00	0.50	1.00	-		ug/l	1	-	0	
Benzene	1.00	1.36	7.00	1.00	UK DWS	ug/l	7	-	0	
BTEX	28.0	14.0	28.0	-		ug/l	2	-	0	
Ethylbenzene	1.00	1.07	5.00	300	WHO 2017	ug/l	7	-	0	
Methyl t-butylether (MTBE)	1.00	0.79	3.00	15.0	WHO 2017	ug/l	7	-	0	
Tertiary Amyl Methyl Ether (TAME)	1.00	0.50	1.00	-		ug/l	5	-	0	
Toluene	1.00	0.93	4.00	700	WHO 2017	ug/l	7	-	0	
Xylene	2.00	1.00	2.00	500	WHO 2017	ug/l	5	-	0	
Xylene-m & p	1.00	1.50	8.00	-		ug/l	7	-	0	
Xylene-o	1.00	0.79	3.00	-		ug/l	7	-	0	

Sample Matrix: WATER

Site Area(s) Selected: Whole site

Event(s) Selected: All events

Chlorinated Aliphatics Aquifer: CHAM

ANALYTE	MIN	MEAN*	MAX	ASSESSMENT CRITERIA (AC)	ASSESSMENT CRITERIA SOURCE	UNITS	NO. LOCATIONS SAMPLED	NO. SAMPLES > LOD	NO. LOCATIONS > AC	LOCATION(S) FAILING SCREENING
1,1,1,2-Tetrachloroethane	1.00	0.50	1.00	-		ug/l	1	-	0	
1,1,1-Trichloroethane	1.00	0.50	1.00	2,000	WHO 2017	ug/l	1	-	0	
1,1,2,2-Tetrachloroethane	1.00	0.50	1.00	-		ug/l	1	-	0	
1,1,2-Trichloroethane	1.00	0.50	1.00	-		ug/l	1	-	0	
1,1-Dichloroethane	1.00	0.50	1.00	-		ug/l	1	-	0	
1,1-Dichloroethene	1.00	0.50	1.00	140	WHO 2017	ug/l	1	-	0	
1,1-Dichloropropene	1.00	0.50	1.00	20.0	WHO 2017	ug/l	1	-	0	
1,2,3-Trichloropropane	1.00	0.50	1.00	-		ug/l	1	-	0	
1,2-Dichloroethane	1.00	0.50	1.00	3.00	UK DWS	ug/l	1	-	0	
1,2-Dichloropropane	1.00	0.50	1.00	40.0	WHO 2017	ug/l	1	-	0	
1,3-Dichloropropane	1.00	0.50	1.00	-		ug/l	1	-	0	
2,2-Dichloropropane	1.00	0.50	1.00	-		ug/l	1	-	0	
Carbon tetrachloride	1.00	0.50	1.00	3.00	UK DWS	ug/l	1	-	0	
Chloroethane	1.00	0.50	1.00	-		ug/l	1	-	0	
Chloroform	1.00	0.50	1.00	-		ug/l	1	-	0	
Chloromethane	1.00	0.50	1.00	-		ug/l	1	-	0	
Cis 1,2-Dichloroethene	1.00	0.50	1.00	50.0	WHO 2017	ug/l	1	-	0	
Cis 1,3-Dichloropropene	1.00	0.50	1.00	-		ug/l	1	-	0	

Sample Matrix: WATER

Site Area(s) Selected: Whole site

Event(s) Selected: All events

Chlorinated Aliphatics

Aquifer: CHAM

ANALYTE	MIN	MEAN*	MAX	ASSESSMENT CRITERIA (AC)	ASSESSMENT CRITERIA SOURCE	UNITS	NO. LOCATIONS SAMPLED	NO. SAMPLES > LOD	NO. LOCATIONS > AC	LOCATION(S) FAILING SCREENING
Dichloromethane	3.00	1.50	3.00	20.0	WHO 2017	ug/l	1	-	0	
Hexachlorobutadiene	1.00	0.50	1.00	0.60	WHO 2017	ug/l	1	-	0	
Hexachloroethane	1.00	0.50	1.00	-		ug/l	1	-	0	
Tetrachloroethene (PCE)	1.00	0.50	1.00	-		ug/l	1	-	0	
Trans-1,2-Dichloroethene	1.00	0.50	1.00	50.0	WHO 2017	ug/l	1	-	0	
Trans-1,3-Dichloropropene	1.00	0.50	1.00	-		ug/l	1	-	0	
Trichloroethene (TCE)	1.00	0.50	1.00	-		ug/l	1	-	0	
Vinyl chloride	1.00	0.50	1.00	0.50	UK DWS	ug/l	1	-	0	

Sample Matrix: WATER

Site Area(s) Selected: Whole site

Event(s) Selected: All events

Chlorinated Aromatics Aquifer: CHAM

ANALYTE	MIN	MEAN*	MAX	ASSESSMENT CRITERIA (AC)	ASSESSMENT CRITERIA SOURCE	UNITS	NO. LOCATIONS SAMPLED	NO. SAMPLES > LOD	NO. LOCATIONS > AC	LOCATION(S) FAILING SCREENING
1,2,3-Trichlorobenzene	1.00	0.50	1.00	-		ug/l	1	-	0	
1,2,4-Trichlorobenzene	1.00	0.50	1.00	-		ug/l	1	-	0	
1,2-Dichlorobenzene	1.00	0.50	1.00	1,000	WHO 2017	ug/l	1	-	0	
1,3,5-Trichlorobenzene	1.00	0.50	1.00	-		ug/l	1	-	0	
1,3-Dichlorobenzene	1.00	0.50	1.00	-		ug/l	1	-	0	
1,4-Dichlorobenzene	1.00	0.50	1.00	300	WHO 2017	ug/l	1	-	0	
2-Chlorotoluene	1.00	0.50	1.00	-		ug/l	1	-	0	
4-Chlorotoluene	1.00	0.50	1.00	-		ug/l	1	-	0	
Chlorobenzene	1.00	0.50	1.00	300	WHO 2017	ug/l	1	-	0	
Hexachlorobenzene	1.00	0.50	1.00	-		ug/l	1	-	0	

Sample Matrix: WATER

Site Area(s) Selected: Whole site

Event(s) Selected: All events

Chlorinated Phenols

Aquifer: CHAM

ANALYTE	MIN	MEAN*	MAX	ASSESSMENT CRITERIA (AC)	ASSESSMENT CRITERIA SOURCE	UNITS	NO. LOCATIONS SAMPLED	NO. SAMPLES > LOD	NO. LOCATIONS > AC	LOCATION(S) FAILING SCREENING
2,4,5-Trichlorophenol	1.00	0.50	1.00	-		ug/l	1	-	0	
2,4,6-Trichlorophenol	1.00	0.50	1.00	200	WHO 2017	ug/l	1	-	0	
2,4-Dichlorophenol	1.00	0.50	1.00	-		ug/l	1	-	0	
2-Chlorophenol	1.00	0.50	1.00	-		ug/l	1	-	0	
4-Chloro-3-Methylphenol	1.00	0.50	1.00	-		ug/l	1	-	0	

Dioxins and Furans

Aquifer: CHAM

ANALYTE	MIN	MEAN*	MAX	ASSESSMENT CRITERIA (AC)	ASSESSMENT CRITERIA SOURCE	UNITS	NO. LOCATIONS SAMPLED	NO. SAMPLES > LOD	NO. LOCATIONS > AC	LOCATION(S) FAILING SCREENING
Dibenzofuran	1.00	0.50	1.00	-		ug/l	1	-	0	

Sample Matrix: WATER

Site Area(s) Selected: Whole site
Event(s) Selected: All events

Dyes **Aquifer: CHAM**

ANALYTE	MIN	MEAN*	MAX	ASSESSMENT CRITERIA (AC)	ASSESSMENT CRITERIA SOURCE	UNITS	NO. LOCATIONS SAMPLED	NO. SAMPLES > LOD	NO. LOCATIONS > AC	LOCATION(S) FAILING SCREENING
3-Nitroaniline	1.00	0.50	1.00	-		ug/l	1	-	0	
4-Nitroaniline	1.00	0.50	1.00	-		ug/l	1	-	0	

Explosives **Aquifer: CHAM**

ANALYTE	MIN	MEAN*	MAX	ASSESSMENT CRITERIA (AC)	ASSESSMENT CRITERIA SOURCE	UNITS	NO. LOCATIONS SAMPLED	NO. SAMPLES > LOD	NO. LOCATIONS > AC	LOCATION(S) FAILING SCREENING
2,4-Dinitrotoluene	1.00	0.50	1.00	-		ug/l	1	-	0	
2,6-Dinitrotoluene	1.00	0.50	1.00	-		ug/l	1	-	0	

Sample Matrix: WATER

Site Area(s) Selected: Whole site

Event(s) Selected: All events

General Chemistry

Aquifer: CHAM

ANALYTE	MIN	MEAN*	MAX	ASSESSMENT CRITERIA (AC)	ASSESSMENT CRITERIA SOURCE	UNITS	NO. LOCATIONS SAMPLED	NO. SAMPLES > LOD	NO. LOCATIONS > AC	LOCATION(S) FAILING SCREENING
pH	7.04	7.46	8.07	6.50/10.0	UK DWS	pH Units	7	7	0	

Sample Matrix: WATER

Site Area(s) Selected: Whole site

Event(s) Selected: All events

Halogenated Hydrocarbons Aquifer: CHAM

ANALYTE	MIN	MEAN*	MAX	ASSESSMENT CRITERIA (AC)	ASSESSMENT CRITERIA SOURCE	UNITS	NO. LOCATIONS SAMPLED	NO. SAMPLES > LOD	NO. LOCATIONS > AC	LOCATION(S) FAILING SCREENING
1,2-Dibromo-3-Chloropropane	1.00	0.50	1.00	1.00	WHO 2017	ug/l	1	-	0	
1,2-Dibromoethane	1.00	0.50	1.00	0.40	WHO 2017	ug/l	1	-	0	
Bromobenzene	1.00	0.50	1.00	-		ug/l	1	-	0	
Bromochloromethane	1.00	0.50	1.00	-		ug/l	1	-	0	
Bromodichloromethane	1.00	0.50	1.00	-		ug/l	1	-	0	
Bromoform	1.00	0.50	1.00	-		ug/l	1	-	0	
Bromomethane	1.00	0.50	1.00	-		ug/l	1	-	0	
Dibromochloromethane	1.00	0.50	1.00	100	WHO 2017	ug/l	1	-	0	
Dibromomethane	1.00	0.50	1.00	-		ug/l	1	-	0	
Dichlorodifluoromethane	1.00	0.50	1.00	-		ug/l	1	-	0	
Trichlorofluoromethane	1.00	0.50	1.00	-		ug/l	1	-	0	

Sample Matrix: WATER

Site Area(s) Selected: Whole site

Event(s) Selected: All events

Inorganics **Aquifer: CHAM**

ANALYTE	MIN	MEAN*	MAX	ASSESSMENT CRITERIA (AC)	ASSESSMENT CRITERIA SOURCE	UNITS	NO. LOCATIONS SAMPLED	NO. SAMPLES > LOD	NO. LOCATIONS > AC	LOCATION(S) FAILING SCREENING
Cyanide	5.00	2.50	5.00	50.0	UK DWS - Assumes Total Cyanide	ug/l	5	-	0	
Cyanide (Total)	50.0	25.0	50.0	50.0	UK DWS	ug/l	2	-	0	
Sulphate as SO4	165000	834800	1600000	250,000	UK DWS	ug/l	5	5	4	BH02, BH04, WS01, WS03

Ketones **Aquifer: CHAM**

ANALYTE	MIN	MEAN*	MAX	ASSESSMENT CRITERIA (AC)	ASSESSMENT CRITERIA SOURCE	UNITS	NO. LOCATIONS SAMPLED	NO. SAMPLES > LOD	NO. LOCATIONS > AC	LOCATION(S) FAILING SCREENING
Isophorone	1.00	0.50	1.00	-		ug/l	1	-	0	

Sample Matrix: WATER

Site Area(s) Selected: Whole site

Event(s) Selected: All events

Metals **Aquifer: CHAM**

ANALYTE	MIN	MEAN*	MAX	ASSESSMENT CRITERIA (AC)	ASSESSMENT CRITERIA SOURCE	UNITS	NO. LOCATIONS SAMPLED	NO. SAMPLES > LOD	NO. LOCATIONS > AC	LOCATION(S) FAILING SCREENING
Arsenic	0.65	3.12	10.30	10.0	UK DWS	ug/l	7	7	1	BH02
Cadmium	0.080	0.057	0.122	5.00	UK DWS	ug/l	7	1	0	
Chromium	1.00	6.62	15.90	50.0	UK DWS	ug/l	7	6	0	
Copper	1.35	4.75	7.78	2,000	UK DWS	ug/l	7	7	0	
Hexavalent Chromium	3.00	5.36	30.00	-		ug/l	7	-	0	
Lead	0.07	0.52	1.52	10.0	UK DWS	ug/l	7	6	0	
Mercury	0.010	0.032	0.164	1.00	UK DWS	ug/l	6	1	0	
Nickel	4.1	13.4	53.7	20.0	UK DWS	ug/l	7	7	1	BH04
Selenium	1.7	38.7	134.0	10.0	UK DWS	ug/l	7	7	4	BH02, BH102, WS01, WS03
Zinc	1.0	11.8	22.7	-		ug/l	7	6	0	

Sample Matrix: WATER

Site Area(s) Selected: Whole site

Event(s) Selected: All events

Other Aquifer: CHAM

ANALYTE	MIN	MEAN*	MAX	ASSESSMENT CRITERIA (AC)	ASSESSMENT CRITERIA SOURCE	UNITS	NO. LOCATIONS SAMPLED	NO. SAMPLES > LOD	NO. LOCATIONS > AC	LOCATION(S) FAILING SCREENING
2-Chloronaphthalene	1.00	0.50	1.00	-		ug/l	1	-	0	
4-Bromophenylphenyl ether	1.00	0.50	1.00	-		ug/l	1	-	0	
4-Chloroaniline	1.00	0.50	1.00	-		ug/l	1	-	0	
4-Chlorophenyl phenyl ether	1.00	0.50	1.00	-		ug/l	1	-	0	
Azobenzene	1.00	0.50	1.00	-		ug/l	1	-	0	
Bis (2-chloroethoxy) methane	1.00	0.50	1.00	-		ug/l	1	-	0	
Bis (2-chloroethyl) ether	1.00	0.50	1.00	-		ug/l	1	-	0	
Carbazole	1.00	0.50	1.00	-		ug/l	1	-	0	
Carbon Disulphide	1.00	0.50	1.00	-		ug/l	1	-	0	
Nitrobenzene	1.00	0.50	1.00	-		ug/l	1	-	0	
n-Nitrosodi-n-Propylamine	1.00	0.50	1.00	-		ug/l	1	-	0	
Styrene	1.00	0.50	1.00	20.0	WHO 2017	ug/l	1	-	0	

Sample Matrix: WATER

Site Area(s) Selected: Whole site

Event(s) Selected: All events

PAHs

Aquifer: CHAM

ANALYTE	MIN	MEAN*	MAX	ASSESSMENT CRITERIA (AC)	ASSESSMENT CRITERIA SOURCE	UNITS	NO. LOCATIONS SAMPLED	NO. SAMPLES > LOD	NO. LOCATIONS > AC	LOCATION(S) FAILING SCREENING
2-Methylnaphthalene	1.00	0.50	1.00	-		ug/l	1	-	0	
Acenaphthene	0.005	0.006	0.015	-		ug/l	7	-	0	
Acenaphthylene	0.005	0.005	0.011	-		ug/l	7	-	0	
Anthracene	0.005	0.006	0.015	-		ug/l	7	-	0	
Benzo (a) anthracene	0.005	0.011	0.036	-		ug/l	7	1	0	
Benzo (a) pyrene	0.002	0.014	0.041	0.010	UK DWS	ug/l	7	2	2	BH02, WS03
Benzo (b) fluoranthene	0.005	0.030	0.113	-		ug/l	7	2	0	
Benzo (ghi) perylene	0.016	0.028	0.060	-		ug/l	5	2	0	
Benzo (k) fluoranthene	0.005	0.013	0.029	-		ug/l	7	1	0	
Chrysene	0.005	0.009	0.027	-		ug/l	7	2	0	
Dibenzo (ah) anthracene	0.005	0.009	0.028	-		ug/l	7	1	0	
Fluoranthene	0.005	0.016	0.041	-		ug/l	7	3	0	
Fluorene	0.005	0.006	0.014	-		ug/l	7	-	0	
Indeno (1,2,3-cd) pyrene	0.005	0.019	0.067	-		ug/l	7	2	0	
Naphthalene	0.010	0.037	0.100	-		ug/l	7	-	0	
PAH (Total)	0.34	0.26	0.43	-		ug/l	5	2	0	
PAH Total (EPA 16)	0.082	0.041	0.082	-		ug/l	2	-	0	
Phenanthrene	0.005	0.009	0.022	-		ug/l	7	2	0	

Sample Matrix: WATER

Site Area(s) Selected: Whole site

Event(s) Selected: All events

PAHs Aquifer: CHAM

ANALYTE	MIN	MEAN*	MAX	ASSESSMENT CRITERIA (AC)	ASSESSMENT CRITERIA SOURCE	UNITS	NO. LOCATIONS SAMPLED	NO. SAMPLES > LOD	NO. LOCATIONS > AC	LOCATION(S) FAILING SCREENING
Pyrene	0.005	0.024	0.063	-		ug/l	7	3	0	

Pesticides, Herbicides and Insectici Aquifer: CHAM

ANALYTE	MIN	MEAN*	MAX	ASSESSMENT CRITERIA (AC)	ASSESSMENT CRITERIA SOURCE	UNITS	NO. LOCATIONS SAMPLED	NO. SAMPLES > LOD	NO. LOCATIONS > AC	LOCATION(S) FAILING SCREENING
Hexachlorocyclopentadiene	1.00	0.50	1.00	-		ug/l	1	-	0	
Pentachlorophenol	1.00	0.50	1.00	9.00	WHO 2017	ug/l	1	-	0	

Sample Matrix: WATER

Site Area(s) Selected: Whole site

Event(s) Selected: All events

Pharmaceuticals Aquifer: CHAM

ANALYTE	MIN	MEAN*	MAX	ASSESSMENT CRITERIA (AC)	ASSESSMENT CRITERIA SOURCE	UNITS	NO. LOCATIONS SAMPLED	NO. SAMPLES > LOD	NO. LOCATIONS > AC	LOCATION(S) FAILING SCREENING
2-Nitroaniline	1.00	0.50	1.00	-		ug/l	1	-	0	

Phenols Aquifer: CHAM

ANALYTE	MIN	MEAN*	MAX	ASSESSMENT CRITERIA (AC)	ASSESSMENT CRITERIA SOURCE	UNITS	NO. LOCATIONS SAMPLED	NO. SAMPLES > LOD	NO. LOCATIONS > AC	LOCATION(S) FAILING SCREENING
2,4-Dimethylphenol	1.00	0.50	1.00	-		ug/l	1	-	0	
2-Methylphenol (o-Cresol)	1.00	0.50	1.00	-		ug/l	1	-	0	
2-Nitrophenol	1.00	0.50	1.00	-		ug/l	1	-	0	
4-Methylphenol	1.00	0.50	1.00	-		ug/l	1	-	0	
4-Nitrophenol	1.00	0.50	1.00	-		ug/l	1	-	0	
Phenol	1.00	0.50	1.00	-		ug/l	1	-	0	
Xylenols	11.00	5.50	11.00	-		ug/l	2	-	0	

Sample Matrix: WATER

Site Area(s) Selected: Whole site

Event(s) Selected: All events

Phthalates

Aquifer: CHAM

ANALYTE	MIN	MEAN*	MAX	ASSESSMENT CRITERIA (AC)	ASSESSMENT CRITERIA SOURCE	UNITS	NO. LOCATIONS SAMPLED	NO. SAMPLES > LOD	NO. LOCATIONS > AC	LOCATION(S) FAILING SCREENING
Bis (2-ethylhexyl) phthalate	2.00	1.00	2.00	8.00	WHO 2017	ug/l	1	-	0	
Butyl benzyl phthalate	1.00	0.50	1.00	-		ug/l	1	-	0	
Diethyl phthalate	1.00	0.50	1.00	-		ug/l	1	-	0	
Dimethyl phthalate	1.00	0.50	1.00	-		ug/l	1	-	0	
Di-n-butyl phthalate	1.00	0.50	1.00	-		ug/l	1	-	0	
Di-n-octyl phthalate	5.00	2.50	5.00	-		ug/l	1	-	0	

QA Standard

Aquifer: CHAM

ANALYTE	MIN	MEAN*	MAX	ASSESSMENT CRITERIA (AC)	ASSESSMENT CRITERIA SOURCE	UNITS	NO. LOCATIONS SAMPLED	NO. SAMPLES > LOD	NO. LOCATIONS > AC	LOCATION(S) FAILING SCREENING
4-Bromofluorobenzene	99.0	99.0	99.0	-		%	1	1	0	
Dibromofluoromethane	107	107	107	-		%	1	1	0	
Toluene-d8 Surrogate	98.0	98.0	98.0	-		%	1	1	0	

Sample Matrix: WATER

Site Area(s) Selected: Whole site

Event(s) Selected: All events

TPH/EPH Aquifer: CHAM

ANALYTE	MIN	MEAN*	MAX	ASSESSMENT CRITERIA (AC)	ASSESSMENT CRITERIA SOURCE	UNITS	NO. LOCATIONS SAMPLED	NO. SAMPLES > LOD	NO. LOCATIONS > AC	LOCATION(S) FAILING SCREENING
GRO Surrogate	94.0	98.3	106.0	-		%	7	7	0	
PRO (C5-C12)	50.0	25.0	50.0	-		ug/l	7	-	0	

VOCs Aquifer: CHAM

ANALYTE	MIN	MEAN*	MAX	ASSESSMENT CRITERIA (AC)	ASSESSMENT CRITERIA SOURCE	UNITS	NO. LOCATIONS SAMPLED	NO. SAMPLES > LOD	NO. LOCATIONS > AC	LOCATION(S) FAILING SCREENING
4-Isopropyltoluene	1.00	0.50	1.00	-		ug/l	1	-	0	
iso-Propylbenzene	1.00	0.50	1.00	-		ug/l	1	-	0	
n-Butylbenzene	1.00	0.50	1.00	-		ug/l	1	-	0	
n-Propylbenzene	1.00	0.50	1.00	-		ug/l	1	-	0	
Sec-Butylbenzene	1.00	0.50	1.00	-		ug/l	1	-	0	
Tert-Butylbenzene	1.00	0.50	1.00	-		ug/l	1	-	0	

Sample Matrix: WATER

Site Area(s) Selected: Whole site

Event(s) Selected: All events

Sample Matrix: WATER

Site Area(s) Selected: Whole site

Event(s) Selected: All events

Unrecognised analytes Aquifer: MG

ANALYTE	MIN	MEAN*	MAX	ASSESSMENT CRITERIA (AC)	ASSESSMENT CRITERIA SOURCE	UNITS	NO. LOCATIONS SAMPLED	NO. SAMPLES > LOD	NO. LOCATIONS > AC	LOCATION(S) FAILING SCREENING
(Unrecognised code)	25.0	25.0	25.0	-		ug/l	1	1	0	
C16-C35 Aromatics (Unrecognised code)	9740	9740	9740	-		ug/l	1	1	0	

Sample Matrix: WATER

Site Area(s) Selected: Whole site

Event(s) Selected: All events

Aliphatics and Aromatics Aquifer: MG

ANALYTE	MIN	MEAN*	MAX	ASSESSMENT CRITERIA (AC)	ASSESSMENT CRITERIA SOURCE	UNITS	NO. LOCATIONS SAMPLED	NO. SAMPLES > LOD	NO. LOCATIONS > AC	LOCATION(S) FAILING SCREENING
Aliphatic C05-C06	10.00	5.00	10.00	15,000	WHO 2008	ug/l	1	-	0	
Aliphatic C06-C08	10.00	5.00	10.00	15,000	WHO 2008	ug/l	1	-	0	
Aliphatic C08-C10	10.0	65.5	126.0	300	WHO 2008	ug/l	1	1	0	
Aliphatic C10-C12	10	261	516	300	WHO 2008	ug/l	1	1	1	WS10
Aliphatic C12-C16	10	5803	11600	300	WHO 2008	ug/l	1	1	1	WS10
Aliphatic C16-C21	10	6853	13700	-		ug/l	1	1	0	
Aliphatic C21-C35	10	3318	6630	-		ug/l	1	1	0	
Aliphatics C12-C35	10	15953	31900	-		ug/l	1	1	0	
Aromatic C06-C07	10.00	5.00	10.00	-		ug/l	1	-	0	
Aromatic C07-C08	10.00	5.00	10.00	-		ug/l	1	-	0	
Aromatic C08-C10	10.0	44.5	84.0	300	WHO 2008	ug/l	1	1	0	
Aromatic C10-C12	10	175	344	90.0	WHO 2008	ug/l	1	1	1	WS10
Aromatic C12-C16	10	1553	3100	90.0	WHO 2008	ug/l	1	1	1	WS10
Aromatic C12-C35	25	6413	12800	-		ug/l	1	2	0	
Aromatic C16-C21	15	3393	6770	90.0	WHO 2008	ug/l	1	2	1	WS10
Aromatic C21-C35	10	1490	2970	90.0	WHO 2008	ug/l	1	2	1	WS10
Total Aliphatics and Aromatics (C5-C35)	49	22925	45800	10.0	EA 2009	ug/l	1	2	1	WS10

Sample Matrix: WATER

Site Area(s) Selected: Whole site

Event(s) Selected: All events

BTEX and Fuel Additives

Aquifer: MG

ANALYTE	MIN	MEAN*	MAX	ASSESSMENT CRITERIA (AC)	ASSESSMENT CRITERIA SOURCE	UNITS	NO. LOCATIONS SAMPLED	NO. SAMPLES > LOD	NO. LOCATIONS > AC	LOCATION(S) FAILING SCREENING
1,2,4-Trimethylbenzene	1.00	0.50	1.00	-		ug/l	1	-	0	
1,3,5-Trimethylbenzene	1.00	0.50	1.00	-		ug/l	1	-	0	
Benzene	1.00	2.00	7.00	1.00	UK DWS	ug/l	1	-	0	
BTEX	28.0	14.0	28.0	-		ug/l	1	-	0	
Ethylbenzene	1.00	1.50	5.00	300	WHO 2017	ug/l	1	-	0	
Methyl t-butylether (MTBE)	1.00	1.00	3.00	15.0	WHO 2017	ug/l	1	-	0	
Tertiary Amyl Methyl Ether (TAME)	1.00	0.50	1.00	-		ug/l	1	-	0	
Toluene	1.00	1.25	4.00	700	WHO 2017	ug/l	1	-	0	
Xylene	2.00	1.00	2.00	500	WHO 2017	ug/l	1	-	0	
Xylene-m & p	1.00	2.25	8.00	-		ug/l	1	-	0	
Xylene-o	1.00	1.00	3.00	-		ug/l	1	-	0	

Sample Matrix: WATER

Site Area(s) Selected: Whole site
Event(s) Selected: All events

Chlorinated Aliphatics Aquifer: MG

ANALYTE	MIN	MEAN*	MAX	ASSESSMENT CRITERIA (AC)	ASSESSMENT CRITERIA SOURCE	UNITS	NO. LOCATIONS SAMPLED	NO. SAMPLES > LOD	NO. LOCATIONS > AC	LOCATION(S) FAILING SCREENING
1,1,1,2-Tetrachloroethane	1.00	0.50	1.00	-		ug/l	1	-	0	
1,1,1-Trichloroethane	1.00	0.50	1.00	2,000	WHO 2017	ug/l	1	-	0	
1,1,2,2-Tetrachloroethane	1.00	0.50	1.00	-		ug/l	1	-	0	
1,1,2-Trichloroethane	1.00	0.50	1.00	-		ug/l	1	-	0	
1,1-Dichloroethane	1.00	0.50	1.00	-		ug/l	1	-	0	
1,1-Dichloroethene	1.00	0.50	1.00	140	WHO 2017	ug/l	1	-	0	
1,1-Dichloropropene	1.00	0.50	1.00	20.0	WHO 2017	ug/l	1	-	0	
1,2,3-Trichloropropane	1.00	0.50	1.00	-		ug/l	1	-	0	
1,2-Dichloroethane	1.00	0.50	1.00	3.00	UK DWS	ug/l	1	-	0	
1,2-Dichloropropane	1.00	0.50	1.00	40.0	WHO 2017	ug/l	1	-	0	
1,3-Dichloropropane	1.00	0.50	1.00	-		ug/l	1	-	0	
2,2-Dichloropropane	1.00	0.50	1.00	-		ug/l	1	-	0	
Carbon tetrachloride	1.00	0.50	1.00	3.00	UK DWS	ug/l	1	-	0	
Chloroethane	1.00	0.50	1.00	-		ug/l	1	-	0	
Chloroform	1.00	0.50	1.00	-		ug/l	1	-	0	
Chloromethane	1.00	0.50	1.00	-		ug/l	1	-	0	
Cis 1,2-Dichloroethene	1.00	0.50	1.00	50.0	WHO 2017	ug/l	1	-	0	
Cis 1,3-Dichloropropene	1.00	0.50	1.00	-		ug/l	1	-	0	

Sample Matrix: WATER

Site Area(s) Selected: Whole site

Event(s) Selected: All events

Chlorinated Aliphatics

Aquifer: MG

ANALYTE	MIN	MEAN*	MAX	ASSESSMENT CRITERIA (AC)	ASSESSMENT CRITERIA SOURCE	UNITS	NO. LOCATIONS SAMPLED	NO. SAMPLES > LOD	NO. LOCATIONS > AC	LOCATION(S) FAILING SCREENING
Dichloromethane	3.00	1.50	3.00	20.0	WHO 2017	ug/l	1	-	0	
Hexachlorobutadiene	1.00	0.50	1.00	0.60	WHO 2017	ug/l	1	-	0	
Hexachloroethane	1.00	0.50	1.00	-		ug/l	1	-	0	
Tetrachloroethene (PCE)	1.00	0.50	1.00	-		ug/l	1	-	0	
Trans-1,2-Dichloroethene	1.00	0.50	1.00	50.0	WHO 2017	ug/l	1	-	0	
Trans-1,3-Dichloropropene	1.00	0.50	1.00	-		ug/l	1	-	0	
Trichloroethene (TCE)	1.00	0.50	1.00	-		ug/l	1	-	0	
Vinyl chloride	1.00	0.50	1.00	0.50	UK DWS	ug/l	1	-	0	

Sample Matrix: WATER

Site Area(s) Selected: Whole site

Event(s) Selected: All events

Chlorinated Aromatics Aquifer: MG

ANALYTE	MIN	MEAN*	MAX	ASSESSMENT CRITERIA (AC)	ASSESSMENT CRITERIA SOURCE	UNITS	NO. LOCATIONS SAMPLED	NO. SAMPLES > LOD	NO. LOCATIONS > AC	LOCATION(S) FAILING SCREENING
1,2,3-Trichlorobenzene	1.00	0.50	1.00	-		ug/l	1	-	0	
1,2,4-Trichlorobenzene	1.00	0.50	1.00	-		ug/l	1	-	0	
1,2-Dichlorobenzene	1.00	0.50	1.00	1,000	WHO 2017	ug/l	1	-	0	
1,3,5-Trichlorobenzene	1.00	0.50	1.00	-		ug/l	1	-	0	
1,3-Dichlorobenzene	1.00	0.50	1.00	-		ug/l	1	-	0	
1,4-Dichlorobenzene	1.00	0.50	1.00	300	WHO 2017	ug/l	1	-	0	
2-Chlorotoluene	1.00	0.50	1.00	-		ug/l	1	-	0	
4-Chlorotoluene	1.00	0.50	1.00	-		ug/l	1	-	0	
Chlorobenzene	1.00	0.50	1.00	300	WHO 2017	ug/l	1	-	0	
Hexachlorobenzene	1.00	0.50	1.00	-		ug/l	1	-	0	

Sample Matrix: WATER

Site Area(s) Selected: Whole site

Event(s) Selected: All events

Chlorinated Phenols Aquifer: MG

ANALYTE	MIN	MEAN*	MAX	ASSESSMENT CRITERIA (AC)	ASSESSMENT CRITERIA SOURCE	UNITS	NO. LOCATIONS SAMPLED	NO. SAMPLES > LOD	NO. LOCATIONS > AC	LOCATION(S) FAILING SCREENING
2,4,5-Trichlorophenol	1.00	0.50	1.00	-		ug/l	1	-	0	
2,4,6-Trichlorophenol	1.00	0.50	1.00	200	WHO 2017	ug/l	1	-	0	
2,4-Dichlorophenol	1.00	0.50	1.00	-		ug/l	1	-	0	
2-Chlorophenol	1.00	0.50	1.00	-		ug/l	1	-	0	
4-Chloro-3-Methylphenol	1.00	0.50	1.00	-		ug/l	1	-	0	

Dioxins and Furans Aquifer: MG

ANALYTE	MIN	MEAN*	MAX	ASSESSMENT CRITERIA (AC)	ASSESSMENT CRITERIA SOURCE	UNITS	NO. LOCATIONS SAMPLED	NO. SAMPLES > LOD	NO. LOCATIONS > AC	LOCATION(S) FAILING SCREENING
Dibenzofuran	1.00	0.50	1.00	-		ug/l	1	-	0	

Sample Matrix: WATER

Site Area(s) Selected: Whole site
Event(s) Selected: All events

Dyes **Aquifer: MG**

ANALYTE	MIN	MEAN*	MAX	ASSESSMENT CRITERIA (AC)	ASSESSMENT CRITERIA SOURCE	UNITS	NO. LOCATIONS SAMPLED	NO. SAMPLES > LOD	NO. LOCATIONS > AC	LOCATION(S) FAILING SCREENING
3-Nitroaniline	1.00	0.50	1.00	-		ug/l	1	-	0	
4-Nitroaniline	1.00	0.50	1.00	-		ug/l	1	-	0	

Explosives **Aquifer: MG**

ANALYTE	MIN	MEAN*	MAX	ASSESSMENT CRITERIA (AC)	ASSESSMENT CRITERIA SOURCE	UNITS	NO. LOCATIONS SAMPLED	NO. SAMPLES > LOD	NO. LOCATIONS > AC	LOCATION(S) FAILING SCREENING
2,4-Dinitrotoluene	1.00	0.50	1.00	-		ug/l	1	-	0	
2,6-Dinitrotoluene	1.00	0.50	1.00	-		ug/l	1	-	0	

Sample Matrix: WATER

Site Area(s) Selected: Whole site

Event(s) Selected: All events

Halogenated Hydrocarbons Aquifer: MG

ANALYTE	MIN	MEAN*	MAX	ASSESSMENT CRITERIA (AC)	ASSESSMENT CRITERIA SOURCE	UNITS	NO. LOCATIONS SAMPLED	NO. SAMPLES > LOD	NO. LOCATIONS > AC	LOCATION(S) FAILING SCREENING
1,2-Dibromo-3-Chloropropane	1.00	0.50	1.00	1.00	WHO 2017	ug/l	1	-	0	
1,2-Dibromoethane	1.00	0.50	1.00	0.40	WHO 2017	ug/l	1	-	0	
Bromobenzene	1.00	0.50	1.00	-		ug/l	1	-	0	
Bromochloromethane	1.00	0.50	1.00	-		ug/l	1	-	0	
Bromodichloromethane	1.00	0.50	1.00	-		ug/l	1	-	0	
Bromoform	1.00	0.50	1.00	-		ug/l	1	-	0	
Bromomethane	1.00	0.50	1.00	-		ug/l	1	-	0	
Dibromochloromethane	1.00	0.50	1.00	100	WHO 2017	ug/l	1	-	0	
Dibromomethane	1.00	0.50	1.00	-		ug/l	1	-	0	
Dichlorodifluoromethane	1.00	0.50	1.00	-		ug/l	1	-	0	
Trichlorofluoromethane	1.00	0.50	1.00	-		ug/l	1	-	0	



Sample Matrix: WATER

Site Area(s) Selected: Whole site

Event(s) Selected: All events

Ketones

Aquifer: MG

ANALYTE	MIN	MEAN*	MAX	ASSESSMENT CRITERIA (AC)	ASSESSMENT CRITERIA SOURCE	UNITS	NO. LOCATIONS SAMPLED	NO. SAMPLES > LOD	NO. LOCATIONS > AC	LOCATION(S) FAILING SCREENING
Isophorone	1.00	0.50	1.00	-		ug/l	1	-	0	

Sample Matrix: WATER

Site Area(s) Selected: Whole site

Event(s) Selected: All events

Other

Aquifer: MG

ANALYTE	MIN	MEAN*	MAX	ASSESSMENT CRITERIA (AC)	ASSESSMENT CRITERIA SOURCE	UNITS	NO. LOCATIONS SAMPLED	NO. SAMPLES > LOD	NO. LOCATIONS > AC	LOCATION(S) FAILING SCREENING
2-Chloronaphthalene	1.00	0.50	1.00	-		ug/l	1	-	0	
4-Bromophenylphenyl ether	1.00	0.50	1.00	-		ug/l	1	-	0	
4-Chloroaniline	1.00	0.50	1.00	-		ug/l	1	-	0	
4-Chlorophenyl phenyl ether	1.00	0.50	1.00	-		ug/l	1	-	0	
Azobenzene	1.00	0.50	1.00	-		ug/l	1	-	0	
Bis (2-chloroethoxy) methane	1.00	0.50	1.00	-		ug/l	1	-	0	
Bis (2-chloroethyl) ether	1.00	0.50	1.00	-		ug/l	1	-	0	
Carbazole	1.00	0.50	1.00	-		ug/l	1	-	0	
Carbon Disulphide	1.00	0.50	1.00	-		ug/l	1	-	0	
Nitrobenzene	1.00	0.50	1.00	-		ug/l	1	-	0	
n-Nitrosodi-n-Propylamine	1.00	0.50	1.00	-		ug/l	1	-	0	
Styrene	1.00	0.50	1.00	20.0	WHO 2017	ug/l	1	-	0	

Sample Matrix: WATER

Site Area(s) Selected: Whole site

Event(s) Selected: All events

PAHs

Aquifer: MG

ANALYTE	MIN	MEAN*	MAX	ASSESSMENT CRITERIA (AC)	ASSESSMENT CRITERIA SOURCE	UNITS	NO. LOCATIONS SAMPLED	NO. SAMPLES > LOD	NO. LOCATIONS > AC	LOCATION(S) FAILING SCREENING
2-Methylnaphthalene	1.00	0.50	1.00	-		ug/l	1	-	0	
Acenaphthene	0.005	0.005	0.015	-		ug/l	1	-	0	
Acenaphthylene	0.005	0.004	0.011	-		ug/l	1	-	0	
Anthracene	0.005	0.005	0.015	-		ug/l	1	-	0	
Benzo (a) anthracene	0.005	0.006	0.017	-		ug/l	1	-	0	
Benzo (a) pyrene	0.002	0.003	0.009	0.010	UK DWS	ug/l	1	-	0	
Benzo (b) fluoranthene	0.005	0.007	0.023	-		ug/l	1	-	0	
Benzo (ghi) perylene	0.088	0.088	0.088	-		ug/l	1	1	0	
Benzo (k) fluoranthene	0.005	0.008	0.027	-		ug/l	1	-	0	
Chrysene	0.010	0.008	0.013	-		ug/l	1	1	0	
Dibenzo (ah) anthracene	0.005	0.022	0.042	-		ug/l	1	1	0	
Fluoranthene	0.005	0.006	0.017	-		ug/l	1	-	0	
Fluorene	0.005	0.005	0.014	-		ug/l	1	-	0	
Indeno (1,2,3-cd) pyrene	0.005	0.028	0.053	-		ug/l	1	1	0	
Naphthalene	0.01	1.31	2.61	-		ug/l	1	1	0	
PAH (Total)	2.79	2.79	2.79	-		ug/l	1	1	0	
PAH Total (EPA 16)	0.082	0.041	0.082	-		ug/l	1	-	0	
Phenanthrene	0.010	0.010	0.022	-		ug/l	1	1	0	

Sample Matrix: WATER

Site Area(s) Selected: Whole site

Event(s) Selected: All events

PAHs Aquifer: MG

ANALYTE	MIN	MEAN*	MAX	ASSESSMENT CRITERIA (AC)	ASSESSMENT CRITERIA SOURCE	UNITS	NO. LOCATIONS SAMPLED	NO. SAMPLES > LOD	NO. LOCATIONS > AC	LOCATION(S) FAILING SCREENING
Pyrene	0.03	1.73	3.43	-		ug/l	1	2	0	

Pesticides, Herbicides and Insectici Aquifer: MG

ANALYTE	MIN	MEAN*	MAX	ASSESSMENT CRITERIA (AC)	ASSESSMENT CRITERIA SOURCE	UNITS	NO. LOCATIONS SAMPLED	NO. SAMPLES > LOD	NO. LOCATIONS > AC	LOCATION(S) FAILING SCREENING
Hexachlorocyclopentadiene	1.00	0.50	1.00	-		ug/l	1	-	0	
Pentachlorophenol	1.00	0.50	1.00	9.00	WHO 2017	ug/l	1	-	0	

Sample Matrix: WATER

Site Area(s) Selected: Whole site

Event(s) Selected: All events

Pharmaceuticals

Aquifer: MG

ANALYTE	MIN	MEAN*	MAX	ASSESSMENT CRITERIA (AC)	ASSESSMENT CRITERIA SOURCE	UNITS	NO. LOCATIONS SAMPLED	NO. SAMPLES > LOD	NO. LOCATIONS > AC	LOCATION(S) FAILING SCREENING
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2-Nitroaniline	1.00	0.50	1.00	-		ug/l	1	-	0	
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Phenols

Aquifer: MG

ANALYTE	MIN	MEAN*	MAX	ASSESSMENT CRITERIA (AC)	ASSESSMENT CRITERIA SOURCE	UNITS	NO. LOCATIONS SAMPLED	NO. SAMPLES > LOD	NO. LOCATIONS > AC	LOCATION(S) FAILING SCREENING
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2,4-Dimethylphenol	1.00	0.50	1.00	-		ug/l	1	-	0	
2-Methylphenol (o-Cresol)	1.00	0.50	1.00	-		ug/l	1	-	0	
2-Nitrophenol	1.00	0.50	1.00	-		ug/l	1	-	0	
4-Methylphenol	1.00	0.50	1.00	-		ug/l	1	-	0	
4-Nitrophenol	1.00	0.50	1.00	-		ug/l	1	-	0	
Phenol	1.00	0.50	1.00	-		ug/l	1	-	0	
Xylenols	11.00	5.50	11.00	-		ug/l	1	-	0	

Sample Matrix: WATER

Site Area(s) Selected: Whole site

Event(s) Selected: All events

Phthalates Aquifer: MG

ANALYTE	MIN	MEAN*	MAX	ASSESSMENT CRITERIA (AC)	ASSESSMENT CRITERIA SOURCE	UNITS	NO. LOCATIONS SAMPLED	NO. SAMPLES > LOD	NO. LOCATIONS > AC	LOCATION(S) FAILING SCREENING
Bis (2-ethylhexyl) phthalate	2.25	2.25	2.25	8.00	WHO 2017	ug/l	1	1	0	
Butyl benzyl phthalate	1.00	0.50	1.00	-		ug/l	1	-	0	
Diethyl phthalate	1.00	0.50	1.00	-		ug/l	1	-	0	
Dimethyl phthalate	1.00	0.50	1.00	-		ug/l	1	-	0	
Di-n-butyl phthalate	1.00	0.50	1.00	-		ug/l	1	-	0	
Di-n-octyl phthalate	5.00	2.50	5.00	-		ug/l	1	-	0	

QA Standard Aquifer: MG

ANALYTE	MIN	MEAN*	MAX	ASSESSMENT CRITERIA (AC)	ASSESSMENT CRITERIA SOURCE	UNITS	NO. LOCATIONS SAMPLED	NO. SAMPLES > LOD	NO. LOCATIONS > AC	LOCATION(S) FAILING SCREENING
4-Bromofluorobenzene	98.3	98.3	98.3	-		%	1	1	0	
Dibromofluoromethane	107	107	107	-		%	1	1	0	
Toluene-d8 Surrogate	99.6	99.6	99.6	-		%	1	1	0	



Sample Matrix: WATER

Site Area(s) Selected: Whole site
Event(s) Selected: All events

TPH/EPH Aquifer: MG

ANALYTE	MIN	MEAN*	MAX	ASSESSMENT CRITERIA (AC)	ASSESSMENT CRITERIA SOURCE	UNITS	NO. LOCATIONS SAMPLED	NO. SAMPLES > LOD	NO. LOCATIONS > AC	LOCATION(S) FAILING SCREENING
GRO Surrogate	87.0	90.0	93.0	-		%	1	2	0	
PRO (C5-C12)	50	553	1080	-		ug/l	1	1	0	

VOCs Aquifer: MG

ANALYTE	MIN	MEAN*	MAX	ASSESSMENT CRITERIA (AC)	ASSESSMENT CRITERIA SOURCE	UNITS	NO. LOCATIONS SAMPLED	NO. SAMPLES > LOD	NO. LOCATIONS > AC	LOCATION(S) FAILING SCREENING
4-Isopropyltoluene	1.00	0.50	1.00	-		ug/l	1	-	0	
iso-Propylbenzene	1.00	0.50	1.00	-		ug/l	1	-	0	
n-Butylbenzene	1.00	0.50	1.00	-		ug/l	1	-	0	
n-Propylbenzene	1.00	0.50	1.00	-		ug/l	1	-	0	
Sec-Butylbenzene	1.00	0.50	1.00	-		ug/l	1	-	0	
Tert-Butylbenzene	1.00	0.50	1.00	-		ug/l	1	-	0	

Sample Matrix: WATER

Site Area(s) Selected: Whole site
Event(s) Selected: All events

Sample Matrix: WATER

Site Area(s) Selected: Whole site

Event(s) Selected: All events

BTEX and Fuel Additives Aquifer: N/A

ANALYTE	MIN	MEAN*	MAX	ASSESSMENT CRITERIA (AC)	ASSESSMENT CRITERIA SOURCE	UNITS	NO. LOCATIONS SAMPLED	NO. SAMPLES > LOD	NO. LOCATIONS > AC	LOCATION(S) FAILING SCREENING
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Xylene - Total (Summed)	1.00	3.80	8.00	-		ug/l	9	10	0	
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Chlorinated Phenols Aquifer: N/A

ANALYTE	MIN	MEAN*	MAX	ASSESSMENT CRITERIA (AC)	ASSESSMENT CRITERIA SOURCE	UNITS	NO. LOCATIONS SAMPLED	NO. SAMPLES > LOD	NO. LOCATIONS > AC	LOCATION(S) FAILING SCREENING
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Chlorophenols - Total (Summed Isomers)	1.00	1.00	1.00	-		ug/l	2	2	0	
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Phenols Aquifer: N/A

ANALYTE	MIN	MEAN*	MAX	ASSESSMENT CRITERIA (AC)	ASSESSMENT CRITERIA SOURCE	UNITS	NO. LOCATIONS SAMPLED	NO. SAMPLES > LOD	NO. LOCATIONS > AC	LOCATION(S) FAILING SCREENING
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Methylphenols Total (Summed)	1.00	1.00	1.00	-		ug/l	2	2	0	
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EXCEEDANCES OF THRESHOLDS

Sample matrix: LEACHATE

General Chemistry

Analyte	Point ID	Response Zone Depth (M)	Result Criteria Source	Threshold	Units	Stratum
pH	TP102	0.4 - 0.4	11.1 UK DWS	10.0	pH Units	Made Ground Granular

EXCEEDANCES OF THRESHOLDS

Sample matrix: WATER

Aliphatics and Aromatics

Analyte	Point ID	Response Zone Depth (M)	Result Criteria Source	Threshold	Units	Stratum
Aliphatic C10-C12	WS10	0.5 - 1.5	516 WHO 2008	300	ug/l	Made Ground Granular / Charmouth Mudstone Formation
Aliphatic C12-C16	WS10	0.5 - 1.5	11600 WHO 2008	300	ug/l	Made Ground Granular / Charmouth Mudstone Formation
Aromatic C10-C12	WS10	0.5 - 1.5	344 WHO 2008	90.0	ug/l	Made Ground Granular / Charmouth Mudstone Formation
Aromatic C12-C16	WS10	0.5 - 1.5	3100 WHO 2008	90.0	ug/l	Made Ground Granular / Charmouth Mudstone Formation
Aromatic C16-C21	WS10	0.5 - 1.5	6770 WHO 2008	90.0	ug/l	Made Ground Granular / Charmouth Mudstone Formation
Aromatic C21-C35	WS10	0.5 - 1.5	2970 WHO 2008	90.0	ug/l	Made Ground Granular / Charmouth Mudstone Formation
Total Aliphatics and Aromatics (C5-C35)	BH02	2 - 7	75.0 EA 2009	10.0	ug/l	Charmouth Mudstone Formation
	WS03	1 - 4	13.0 EA 2009	10.0	ug/l	
	WS10	0.5 - 1.5	49.0 EA 2009	10.0	ug/l	Made Ground Granular / Charmouth Mudstone Formation
			0.5 - 1.5	45800 EA 2009	10.0	ug/l

Inorganics

Analyte	Point ID	Response Zone Depth (M)	Result Criteria Source	Threshold	Units	Stratum
Sulphate as SO4	BH02	2 - 7	350000 UK DWS	250000	ug/l	Charmouth Mudstone Formation
	BH04	1.5 - 7	1110000 UK DWS	250000	ug/l	Alluvium / Charmouth Mudstone Formation
	WS01	1 - 3	1600000 UK DWS	250000	ug/l	Charmouth Mudstone Formation
	WS03	1 - 4	949000 UK DWS	250000	ug/l	

Metals

Analyte	Point ID	Response Zone Depth (M)	Result Criteria Source	Threshold	Units	Stratum
Arsenic	BH02	2 - 7	10.3 UK DWS	10.0	ug/l	Charmouth Mudstone Formation
Nickel	BH04	1.5 - 7	53.7 UK DWS	20.0	ug/l	Alluvium / Charmouth Mudstone Formation
	BH05	1 - 3	59.1 UK DWS	20.0	ug/l	Alluvium
Selenium	BH02	2 - 7	134 UK DWS	10.0	ug/l	Charmouth Mudstone Formation
	BH05	1 - 3	23.7 UK DWS	10.0	ug/l	Alluvium
	BH102	2.13 - 8	43.8 UK DWS	10.0	ug/l	Charmouth Mudstone Formation
	WS01	1 - 3	64.9 UK DWS	10.0	ug/l	
	WS03	1 - 4	14.5 UK DWS	10.0	ug/l	

PAHs

EXCEEDANCES OF THRESHOLDS**Sample matrix: WATER****PAHs**

Analyte	Point ID	Response Zone Depth (M)	Result	Criteria Source	Threshold	Units	Stratum
Benzo (a) pyrene	BH02	2 - 7	0.041	UK DWS	0.010	ug/l	Charmouth Mudstone Formation
	WS03	1 - 4	0.040	UK DWS	0.010	ug/l	

PRE-REPORT DATA CHECK



The following analyte codes are not recognised in the gINT library.

These analytes cannot be compared to exceedance values but can still be mapped.

CNMT

ItemKey / Analyte code

B2CIPE(T)



All SampleMatrix fields are complete



The following result units are different to the screening units.

Check the units reported by the lab are correct. Otherwise, seek advice to add the result units to the Gint library.

These analytes cannot be compared to exceedance values but can still be mapped.

Analyte	Result Units	Screening Units
Arsenic	mg/kg	ug/l
Cadmium	mg/kg	ug/l
Cyanide (Total)	mg/kg	ug/l
Chromium	mg/kg	ug/l
Copper	mg/kg	ug/l
Iron	mg/kg	ug/l
Mercury	mg/kg	ug/l
Nickel	mg/kg	ug/l
Lead	mg/kg	ug/l
Selenium	mg/kg	ug/l
Zinc	mg/kg	ug/l

Region	Wales and England	Hardness	> 250 mg/l
Water Body	Surface water	Receiving surface water status	Good (or below)
Water Body Type	Inland		
Surface Water Type	River or Stream	Altitude	Any

Sample Matrix: LEACHATE

Site Area(s) Selected: Whole site
Event(s) Selected: All events

General Chemistry

ANALYTE	MIN	MEAN*	MAX	ASSESSMENT CRITERIA (AC)	ASSESSMENT CRITERIA SOURCE	UNITS	NO. LOCATIONS SAMPLED	NO. SAMPLES > LOD	NO. LOCATIONS > AC	LOCATION(S) FAILING SCREENING
pH	9.3	10.2	11.1	6.00/9.00	EQS 2015	pH Units	2	2	2	TP102, TP106
Electrical conductivity	220	347	474	-		uS/cm	2	2	0	

Inorganics

ANALYTE	MIN	MEAN*	MAX	ASSESSMENT CRITERIA (AC)	ASSESSMENT CRITERIA SOURCE	UNITS	NO. LOCATIONS SAMPLED	NO. SAMPLES > LOD	NO. LOCATIONS > AC	LOCATION(S) FAILING SCREENING
Cyanide (Total)	0.50	0.25	0.50	-		mg/kg	2	-	0	
Cyanide (Free)	50.0	25.0	50.0	1.00	EQS 2015	ug/l	5	-	0	
Cyanide (Total)	50.0	25.0	50.0	1.00	EQS 2015 - Assumes Free Cyanide	ug/l	6	-	0	

Sample Matrix: LEACHATE

Site Area(s) Selected: Whole site
Event(s) Selected: All events

Metals

ANALYTE	MIN	MEAN*	MAX	ASSESSMENT CRITERIA (AC)	ASSESSMENT CRITERIA SOURCE	UNITS	NO. LOCATIONS SAMPLED	NO. SAMPLES > LOD	NO. LOCATIONS > AC	LOCATION(S) FAILING SCREENING
Arsenic	0.005	0.015	0.028	-		mg/kg	2	1	0	
Cadmium	0.0008	0.0004	0.0008	-		mg/kg	2	-	0	
Chromium	0.013	0.013	0.013	-		mg/kg	2	2	0	
Copper	0.003	0.009	0.017	-		mg/kg	2	1	0	
Ferric Iron	0.50	0.25	0.50	-		mg/kg	1	-	0	
Ferrous Iron	1.00	0.50	1.00	-		mg/kg	1	-	0	
Iron	0.190	0.095	0.190	-		mg/kg	1	-	0	
Lead	0.002	0.013	0.024	-		mg/kg	2	1	0	
Mercury	0.0001	0.0001	0.0001	-		mg/kg	2	1	0	
Nickel	0.004	0.013	0.024	-		mg/kg	2	1	0	
Selenium	0.005	0.004	0.006	-		mg/kg	2	1	0	
Zinc	0.078	0.089	0.099	-		mg/kg	2	2	0	
Arsenic	0.12	1.88	5.53	50.0	EQS 2015	ug/l	11	8	0	
Cadmium	0.080	0.048	0.100	-		ug/l	11	-	0	
Chromium	0.22	1.72	4.84	4.70	EQS 2015	ug/l	11	9	1	WS04
Copper	0.30	0.87	2.23	1.00	EQS 2015 - Bioavailable	ug/l	11	5	5	BH01, BH02, BH04, TP106, WS04
Ferric Iron	50.0	25.0	50.0	-		ug/l	1	-	0	
Ferrous Iron	100.0	50.0	100.0	-		ug/l	1	-	0	

Sample Matrix: LEACHATE

Site Area(s) Selected: Whole site
Event(s) Selected: All events

Metals

ANALYTE	MIN	MEAN*	MAX	ASSESSMENT CRITERIA (AC)	ASSESSMENT CRITERIA SOURCE	UNITS	NO. LOCATIONS SAMPLED	NO. SAMPLES > LOD	NO. LOCATIONS > AC	LOCATION(S) FAILING SCREENING
Iron	19.00	9.50	19.00	1,000	EQS 2015	ug/l	1	-	0	
Lead	0.02	0.50	2.41	1.20	EQS 2015 - Bioavailable	ug/l	11	6	2	BH01, TP106
Mercury	0.010	0.007	0.015	0.070	EQS 2015 MAC	ug/l	11	3	0	
Nickel	0.15	1.19	2.82	4.00	EQS 2015 - Bioavailable	ug/l	11	8	0	
Selenium	0.39	0.88	6.73	-		ug/l	11	4	0	
Zinc	0.41	2.46	9.94	10.9	EQS 2015 - Bioavailable	ug/l	11	8	0	

Physical

ANALYTE	MIN	MEAN*	MAX	ASSESSMENT CRITERIA (AC)	ASSESSMENT CRITERIA SOURCE	UNITS	NO. LOCATIONS SAMPLED	NO. SAMPLES > LOD	NO. LOCATIONS > AC	LOCATION(S) FAILING SCREENING
Temperature	18.7	19.2	19.7	-		DegC	2	2	0	

Sample Matrix: WATER

Site Area(s) Selected: Whole site

Event(s) Selected: All events

Unrecognised analytes Aquifer: ALV

ANALYTE	MIN	MEAN*	MAX	ASSESSMENT CRITERIA (AC)	ASSESSMENT CRITERIA SOURCE	UNITS	NO. LOCATIONS SAMPLED	NO. SAMPLES > LOD	NO. LOCATIONS > AC	LOCATION(S) FAILING SCREENING
(Unrecognised code)	0.10	0.10	0.10	-		%	1	1	0	
(Unrecognised code)	0.005	0.003	0.005	-		ug/l	1	-	0	

Sample Matrix: WATER

Site Area(s) Selected: Whole site

Event(s) Selected: All events

Aliphatics and Aromatics Aquifer: ALV

ANALYTE	MIN	MEAN*	MAX	ASSESSMENT CRITERIA (AC)	ASSESSMENT CRITERIA SOURCE	UNITS	NO. LOCATIONS SAMPLED	NO. SAMPLES > LOD	NO. LOCATIONS > AC	LOCATION(S) FAILING SCREENING
Aliphatic C05-C06	10.00	5.00	10.00	-		ug/l	1	-	0	
Aliphatic C06-C08	10.00	5.00	10.00	-		ug/l	1	-	0	
Aliphatic C08-C10	10.00	5.00	10.00	-		ug/l	1	-	0	
Aliphatic C10-C12	10.00	5.00	10.00	-		ug/l	1	-	0	
Aliphatic C12-C16	10.00	5.00	10.00	-		ug/l	1	-	0	
Aliphatic C16-C21	10.00	5.00	10.00	-		ug/l	1	-	0	
Aliphatic C21-C35	10.00	5.00	10.00	-		ug/l	1	-	0	
Aliphatics C12-C35	10.00	5.00	10.00	-		ug/l	1	-	0	
Aromatic C06-C07	10.00	5.00	10.00	10.0	CL:AIRE 2017	ug/l	1	-	0	
Aromatic C07-C08	10.00	5.00	10.00	74.0	CL:AIRE 2017	ug/l	1	-	0	
Aromatic C08-C10	10.00	5.00	10.00	20.0	CL:AIRE 2017	ug/l	1	-	0	
Aromatic C10-C12	10.00	5.00	10.00	2.00	CL:AIRE 2017	ug/l	1	-	0	
Aromatic C12-C16	10.00	5.00	10.00	2.00	CL:AIRE 2017	ug/l	1	-	0	
Aromatic C12-C35	10.00	5.00	10.00	-		ug/l	1	-	0	
Aromatic C16-C21	10.00	5.00	10.00	0.10	CL:AIRE 2017	ug/l	1	-	0	
Aromatic C21-C35	10.00	5.00	10.00	0.0002	CL:AIRE 2017	ug/l	1	-	0	
Total Aliphatics and Aromatics (C5-C35)	10.00	5.00	10.00	-		ug/l	1	-	0	

Sample Matrix: WATER

Site Area(s) Selected: Whole site

Event(s) Selected: All events

BTEX and Fuel Additives Aquifer: ALV

ANALYTE	MIN	MEAN*	MAX	ASSESSMENT CRITERIA (AC)	ASSESSMENT CRITERIA SOURCE	UNITS	NO. LOCATIONS SAMPLED	NO. SAMPLES > LOD	NO. LOCATIONS > AC	LOCATION(S) FAILING SCREENING
Benzene	7.00	3.50	7.00	10.0	EQS 2015	ug/l	1	-	0	
BTEX	28.0	14.0	28.0	-		ug/l	1	-	0	
Ethylbenzene	5.00	2.50	5.00	20.0	Proposed EQS	ug/l	1	-	0	
Methyl t-butylether (MTBE)	3.00	1.50	3.00	-		ug/l	1	-	0	
Toluene	4.00	2.00	4.00	74.0	EQS 2015	ug/l	1	-	0	
Xylene-m & p	8.00	4.00	8.00	-		ug/l	1	-	0	
Xylene-o	3.00	1.50	3.00	-		ug/l	1	-	0	

General Chemistry Aquifer: ALV

ANALYTE	MIN	MEAN*	MAX	ASSESSMENT CRITERIA (AC)	ASSESSMENT CRITERIA SOURCE	UNITS	NO. LOCATIONS SAMPLED	NO. SAMPLES > LOD	NO. LOCATIONS > AC	LOCATION(S) FAILING SCREENING
pH	7.34	7.34	7.34	6.00/9.00	EQS 2015	pH Units	1	1	0	

Sample Matrix: WATER

Site Area(s) Selected: Whole site

Event(s) Selected: All events

Inorganics

Aquifer: ALV

ANALYTE	MIN	MEAN*	MAX	ASSESSMENT CRITERIA (AC)	ASSESSMENT CRITERIA SOURCE	UNITS	NO. LOCATIONS SAMPLED	NO. SAMPLES > LOD	NO. LOCATIONS > AC	LOCATION(S) FAILING SCREENING
Cyanide (Total)	50.0	25.0	50.0	1.00	EQS 2015 - Assumes Free Cyanide	ug/l	1	-	0	

Sample Matrix: WATER

Site Area(s) Selected: Whole site

Event(s) Selected: All events

Metals **Aquifer: ALV**

ANALYTE	MIN	MEAN*	MAX	ASSESSMENT CRITERIA (AC)	ASSESSMENT CRITERIA SOURCE	UNITS	NO. LOCATIONS SAMPLED	NO. SAMPLES > LOD	NO. LOCATIONS > AC	LOCATION(S) FAILING SCREENING
Arsenic	0.50	0.25	0.50	50.0	EQS 2015	ug/l	1	-	0	
Cadmium	0.080	0.040	0.080	-		ug/l	1	-	0	
Chromium	1.00	0.50	1.00	4.70	EQS 2015	ug/l	1	-	0	
Copper	1.01	1.01	1.01	1.00	EQS 2015 - Bioavailable	ug/l	1	1	1	BH05
Hexavalent Chromium	30.0	15.0	30.0	3.40	EQS 2015	ug/l	1	-	0	
Lead	0.31	0.31	0.31	1.20	EQS 2015 - Bioavailable	ug/l	1	1	0	
Mercury	0.010	0.005	0.010	0.070	EQS 2015 MAC	ug/l	1	-	0	
Nickel	59.1	59.1	59.1	4.00	EQS 2015 - Bioavailable	ug/l	1	1	1	BH05
Selenium	23.7	23.7	23.7	-		ug/l	1	1	0	
Zinc	7.61	7.61	7.61	10.9	EQS 2015 - Bioavailable	ug/l	1	1	0	

Sample Matrix: WATER

Site Area(s) Selected: Whole site

Event(s) Selected: All events

PAHs **Aquifer: ALV**

ANALYTE	MIN	MEAN*	MAX	ASSESSMENT CRITERIA (AC)	ASSESSMENT CRITERIA SOURCE	UNITS	NO. LOCATIONS SAMPLED	NO. SAMPLES > LOD	NO. LOCATIONS > AC	LOCATION(S) FAILING SCREENING
Acenaphthene	0.005	0.003	0.005	-		ug/l	1	-	0	
Acenaphthylene	0.005	0.003	0.005	-		ug/l	1	-	0	
Anthracene	0.005	0.003	0.005	0.10	EQS 2015	ug/l	1	-	0	
Benzo (a) anthracene	0.005	0.003	0.005	-		ug/l	1	-	0	
Benzo (a) pyrene	0.002	0.001	0.002	0.0002	EQS 2015	ug/l	1	-	0	
Benzo (b) fluoranthene	0.005	0.003	0.005	0.017	EQS 2015 MAC	ug/l	1	-	0	
Benzo (k) fluoranthene	0.005	0.003	0.005	0.017	EQS 2015 MAC	ug/l	1	-	0	
Chrysene	0.005	0.003	0.005	-		ug/l	1	-	0	
Dibenzo (ah) anthracene	0.005	0.003	0.005	-		ug/l	1	-	0	
Fluoranthene	0.005	0.003	0.005	0.006	EQS 2015	ug/l	1	-	0	
Fluorene	0.005	0.003	0.005	-		ug/l	1	-	0	
Indeno (1,2,3-cd) pyrene	0.005	0.003	0.005	-		ug/l	1	-	0	
Naphthalene	0.010	0.005	0.010	2.00	EQS 2015	ug/l	1	-	0	
PAH Total (EPA 16)	0.082	0.041	0.082	-		ug/l	1	-	0	
Phenanthrene	0.005	0.003	0.005	-		ug/l	1	-	0	
Pyrene	0.005	0.003	0.005	-		ug/l	1	-	0	



Sample Matrix: WATER

Site Area(s) Selected: Whole site
Event(s) Selected: All events

Phenols Aquifer: ALV

ANALYTE	MIN	MEAN*	MAX	ASSESSMENT CRITERIA (AC)	ASSESSMENT CRITERIA SOURCE	UNITS	NO. LOCATIONS SAMPLED	NO. SAMPLES > LOD	NO. LOCATIONS > AC	LOCATION(S) FAILING SCREENING
Xylenols	11.00	5.50	11.00	-		ug/l	1	-	0	

TPH/EPH Aquifer: ALV

ANALYTE	MIN	MEAN*	MAX	ASSESSMENT CRITERIA (AC)	ASSESSMENT CRITERIA SOURCE	UNITS	NO. LOCATIONS SAMPLED	NO. SAMPLES > LOD	NO. LOCATIONS > AC	LOCATION(S) FAILING SCREENING
GRO Surrogate	90.0	90.0	90.0	-		%	1	1	0	
PRO (C5-C12)	50.0	25.0	50.0	-		ug/l	1	-	0	

Sample Matrix: WATER

Site Area(s) Selected: Whole site
Event(s) Selected: All events

Sample Matrix: WATER

Site Area(s) Selected: Whole site

Event(s) Selected: All events

Unrecognised analytes

Aquifer: CHAM

ANALYTE	MIN	MEAN*	MAX	ASSESSMENT CRITERIA (AC)	ASSESSMENT CRITERIA SOURCE	UNITS	NO. LOCATIONS SAMPLED	NO. SAMPLES > LOD	NO. LOCATIONS > AC	LOCATION(S) FAILING SCREENING
(Unrecognised code)	0.14	0.15	0.15	-		%	2	2	0	
(Unrecognised code)	0.005	0.003	0.005	-		ug/l	2	-	0	
C16-C35 Aromatics (Unrecognised code)	10.0	13.6	48.0	-		ug/l	5	1	0	

Sample Matrix: WATER

Site Area(s) Selected: Whole site

Event(s) Selected: All events

Aliphatics and Aromatics Aquifer: CHAM

ANALYTE	MIN	MEAN*	MAX	ASSESSMENT CRITERIA (AC)	ASSESSMENT CRITERIA SOURCE	UNITS	NO. LOCATIONS SAMPLED	NO. SAMPLES > LOD	NO. LOCATIONS > AC	LOCATION(S) FAILING SCREENING
Aliphatic C05-C06	10.00	5.00	10.00	-		ug/l	7	-	0	
Aliphatic C06-C08	10.00	5.00	10.00	-		ug/l	7	-	0	
Aliphatic C08-C10	10.00	5.00	10.00	-		ug/l	7	-	0	
Aliphatic C10-C12	10.00	5.00	10.00	-		ug/l	7	-	0	
Aliphatic C12-C16	10.00	5.00	10.00	-		ug/l	7	-	0	
Aliphatic C16-C21	10.00	5.00	10.00	-		ug/l	7	-	0	
Aliphatic C21-C35	10.00	6.71	17.00	-		ug/l	7	1	0	
Aliphatics C12-C35	10.00	6.71	17.00	-		ug/l	7	1	0	
Aromatic C06-C07	10.00	5.00	10.00	10.0	CL:AIRE 2017	ug/l	7	-	0	
Aromatic C07-C08	10.00	5.00	10.00	74.0	CL:AIRE 2017	ug/l	7	-	0	
Aromatic C08-C10	10.00	5.00	10.00	20.0	CL:AIRE 2017	ug/l	7	-	0	
Aromatic C10-C12	10.00	5.00	10.00	2.00	CL:AIRE 2017	ug/l	7	-	0	
Aromatic C12-C16	10.00	5.00	10.00	2.00	CL:AIRE 2017	ug/l	7	-	0	
Aromatic C12-C35	10.0	11.1	48.0	-		ug/l	7	1	0	
Aromatic C16-C21	10.00	5.00	10.00	0.10	CL:AIRE 2017	ug/l	7	-	0	
Aromatic C21-C35	10.0	11.1	48.0	0.0002	CL:AIRE 2017	ug/l	7	1	1	BH02
Total Aliphatics and Aromatics (C5-C35)	10.0	16.1	75.0	-		ug/l	7	2	0	

Sample Matrix: WATER

Site Area(s) Selected: Whole site

Event(s) Selected: All events

BTEX and Fuel Additives

Aquifer: CHAM

ANALYTE	MIN	MEAN*	MAX	ASSESSMENT CRITERIA (AC)	ASSESSMENT CRITERIA SOURCE	UNITS	NO. LOCATIONS SAMPLED	NO. SAMPLES > LOD	NO. LOCATIONS > AC	LOCATION(S) FAILING SCREENING
1,2,4-Trimethylbenzene	1.00	0.50	1.00	-		ug/l	1	-	0	
1,3,5-Trimethylbenzene	1.00	0.50	1.00	-		ug/l	1	-	0	
Benzene	1.00	1.36	7.00	10.0	EQS 2015	ug/l	7	-	0	
BTEX	28.0	14.0	28.0	-		ug/l	2	-	0	
Ethylbenzene	1.00	1.07	5.00	20.0	Proposed EQS	ug/l	7	-	0	
Methyl t-butylether (MTBE)	1.00	0.79	3.00	-		ug/l	7	-	0	
Tertiary Amyl Methyl Ether (TAME)	1.00	0.50	1.00	-		ug/l	5	-	0	
Toluene	1.00	0.93	4.00	74.0	EQS 2015	ug/l	7	-	0	
Xylene	2.00	1.00	2.00	30.0	CL:AIRE 2017	ug/l	5	-	0	
Xylene-m & p	1.00	1.50	8.00	-		ug/l	7	-	0	
Xylene-o	1.00	0.79	3.00	-		ug/l	7	-	0	

Sample Matrix: WATER

Site Area(s) Selected: Whole site

Event(s) Selected: All events

Chlorinated Aliphatics Aquifer: CHAM

ANALYTE	MIN	MEAN*	MAX	ASSESSMENT CRITERIA (AC)	ASSESSMENT CRITERIA SOURCE	UNITS	NO. LOCATIONS SAMPLED	NO. SAMPLES > LOD	NO. LOCATIONS > AC	LOCATION(S) FAILING SCREENING
1,1,1,2-Tetrachloroethane	1.00	0.50	1.00	-		ug/l	1	-	0	
1,1,1-Trichloroethane	1.00	0.50	1.00	-		ug/l	1	-	0	
1,1,2,2-Tetrachloroethane	1.00	0.50	1.00	-		ug/l	1	-	0	
1,1,2-Trichloroethane	1.00	0.50	1.00	-		ug/l	1	-	0	
1,1-Dichloroethane	1.00	0.50	1.00	-		ug/l	1	-	0	
1,1-Dichloroethene	1.00	0.50	1.00	-		ug/l	1	-	0	
1,1-Dichloropropene	1.00	0.50	1.00	-		ug/l	1	-	0	
1,2,3-Trichloropropane	1.00	0.50	1.00	-		ug/l	1	-	0	
1,2-Dichloroethane	1.00	0.50	1.00	10.0	EQS 2015	ug/l	1	-	0	
1,2-Dichloropropane	1.00	0.50	1.00	-		ug/l	1	-	0	
1,3-Dichloropropane	1.00	0.50	1.00	-		ug/l	1	-	0	
2,2-Dichloropropane	1.00	0.50	1.00	-		ug/l	1	-	0	
Carbon tetrachloride	1.00	0.50	1.00	12.0	EQS 2015	ug/l	1	-	0	
Chloroethane	1.00	0.50	1.00	-		ug/l	1	-	0	
Chloroform	1.00	0.50	1.00	2.50	EQS 2015	ug/l	1	-	0	
Chloromethane	1.00	0.50	1.00	-		ug/l	1	-	0	
Cis 1,2-Dichloroethene	1.00	0.50	1.00	-		ug/l	1	-	0	
Cis 1,3-Dichloropropene	1.00	0.50	1.00	-		ug/l	1	-	0	

Sample Matrix: WATER

Site Area(s) Selected: Whole site

Event(s) Selected: All events

Chlorinated Aliphatics

Aquifer: CHAM

ANALYTE	MIN	MEAN*	MAX	ASSESSMENT CRITERIA (AC)	ASSESSMENT CRITERIA SOURCE	UNITS	NO. LOCATIONS SAMPLED	NO. SAMPLES > LOD	NO. LOCATIONS > AC	LOCATION(S) FAILING SCREENING
Dichloromethane	3.00	1.50	3.00	20.0	EQS 2015	ug/l	1	-	0	
Hexachlorobutadiene	1.00	0.50	1.00	0.60	EQS 2015 MAC	ug/l	1	-	0	
Hexachloroethane	1.00	0.50	1.00	-		ug/l	1	-	0	
Tetrachloroethene (PCE)	1.00	0.50	1.00	10.0	EQS 2015	ug/l	1	-	0	
Trans-1,2-Dichloroethene	1.00	0.50	1.00	-		ug/l	1	-	0	
Trans-1,3-Dichloropropene	1.00	0.50	1.00	-		ug/l	1	-	0	
Trichloroethene (TCE)	1.00	0.50	1.00	10.0	EQS 2015	ug/l	1	-	0	
Vinyl chloride	1.00	0.50	1.00	-		ug/l	1	-	0	

Sample Matrix: WATER

Site Area(s) Selected: Whole site

Event(s) Selected: All events

Chlorinated Aromatics Aquifer: CHAM

ANALYTE	MIN	MEAN*	MAX	ASSESSMENT CRITERIA (AC)	ASSESSMENT CRITERIA SOURCE	UNITS	NO. LOCATIONS SAMPLED	NO. SAMPLES > LOD	NO. LOCATIONS > AC	LOCATION(S) FAILING SCREENING
1,2,3-Trichlorobenzene	1.00	0.50	1.00	-		ug/l	1	-	0	
1,2,4-Trichlorobenzene	1.00	0.50	1.00	-		ug/l	1	-	0	
1,2-Dichlorobenzene	1.00	0.50	1.00	-		ug/l	1	-	0	
1,3,5-Trichlorobenzene	1.00	0.50	1.00	-		ug/l	1	-	0	
1,3-Dichlorobenzene	1.00	0.50	1.00	-		ug/l	1	-	0	
1,4-Dichlorobenzene	1.00	0.50	1.00	-		ug/l	1	-	0	
2-Chlorotoluene	1.00	0.50	1.00	-		ug/l	1	-	0	
4-Chlorotoluene	1.00	0.50	1.00	-		ug/l	1	-	0	
Chlorobenzene	1.00	0.50	1.00	-		ug/l	1	-	0	
Hexachlorobenzene	1.00	0.50	1.00	0.050	EQS 2015 MAC	ug/l	1	-	0	

Sample Matrix: WATER

Site Area(s) Selected: Whole site

Event(s) Selected: All events

Chlorinated Phenols

Aquifer: CHAM

ANALYTE	MIN	MEAN*	MAX	ASSESSMENT CRITERIA (AC)	ASSESSMENT CRITERIA SOURCE	UNITS	NO. LOCATIONS SAMPLED	NO. SAMPLES > LOD	NO. LOCATIONS > AC	LOCATION(S) FAILING SCREENING
2,4,5-Trichlorophenol	1.00	0.50	1.00	-		ug/l	1	-	0	
2,4,6-Trichlorophenol	1.00	0.50	1.00	-		ug/l	1	-	0	
2,4-Dichlorophenol	1.00	0.50	1.00	4.20	EQS 2015	ug/l	1	-	0	
2-Chlorophenol	1.00	0.50	1.00	-		ug/l	1	-	0	
4-Chloro-3-Methylphenol	1.00	0.50	1.00	-		ug/l	1	-	0	

Dioxins and Furans

Aquifer: CHAM

ANALYTE	MIN	MEAN*	MAX	ASSESSMENT CRITERIA (AC)	ASSESSMENT CRITERIA SOURCE	UNITS	NO. LOCATIONS SAMPLED	NO. SAMPLES > LOD	NO. LOCATIONS > AC	LOCATION(S) FAILING SCREENING
Dibenzofuran	1.00	0.50	1.00	-		ug/l	1	-	0	

Sample Matrix: WATER

Site Area(s) Selected: Whole site
Event(s) Selected: All events

Dyes **Aquifer: CHAM**

ANALYTE	MIN	MEAN*	MAX	ASSESSMENT CRITERIA (AC)	ASSESSMENT CRITERIA SOURCE	UNITS	NO. LOCATIONS SAMPLED	NO. SAMPLES > LOD	NO. LOCATIONS > AC	LOCATION(S) FAILING SCREENING
3-Nitroaniline	1.00	0.50	1.00	-		ug/l	1	-	0	
4-Nitroaniline	1.00	0.50	1.00	-		ug/l	1	-	0	

Explosives **Aquifer: CHAM**

ANALYTE	MIN	MEAN*	MAX	ASSESSMENT CRITERIA (AC)	ASSESSMENT CRITERIA SOURCE	UNITS	NO. LOCATIONS SAMPLED	NO. SAMPLES > LOD	NO. LOCATIONS > AC	LOCATION(S) FAILING SCREENING
2,4-Dinitrotoluene	1.00	0.50	1.00	-		ug/l	1	-	0	
2,6-Dinitrotoluene	1.00	0.50	1.00	-		ug/l	1	-	0	

Sample Matrix: WATER

Site Area(s) Selected: Whole site

Event(s) Selected: All events

General Chemistry

Aquifer: CHAM

ANALYTE	MIN	MEAN*	MAX	ASSESSMENT CRITERIA (AC)	ASSESSMENT CRITERIA SOURCE	UNITS	NO. LOCATIONS SAMPLED	NO. SAMPLES > LOD	NO. LOCATIONS > AC	LOCATION(S) FAILING SCREENING
pH	7.04	7.46	8.07	6.00/9.00	EQS 2015	pH Units	7	7	0	

Sample Matrix: WATER

Site Area(s) Selected: Whole site

Event(s) Selected: All events

Halogenated Hydrocarbons

Aquifer: CHAM

ANALYTE	MIN	MEAN*	MAX	ASSESSMENT CRITERIA (AC)	ASSESSMENT CRITERIA SOURCE	UNITS	NO. LOCATIONS SAMPLED	NO. SAMPLES > LOD	NO. LOCATIONS > AC	LOCATION(S) FAILING SCREENING
1,2-Dibromo-3-Chloropropane	1.00	0.50	1.00	-		ug/l	1	-	0	
1,2-Dibromoethane	1.00	0.50	1.00	-		ug/l	1	-	0	
Bromobenzene	1.00	0.50	1.00	-		ug/l	1	-	0	
Bromochloromethane	1.00	0.50	1.00	-		ug/l	1	-	0	
Bromodichloromethane	1.00	0.50	1.00	-		ug/l	1	-	0	
Bromoform	1.00	0.50	1.00	-		ug/l	1	-	0	
Bromomethane	1.00	0.50	1.00	-		ug/l	1	-	0	
Dibromochloromethane	1.00	0.50	1.00	-		ug/l	1	-	0	
Dibromomethane	1.00	0.50	1.00	-		ug/l	1	-	0	
Dichlorodifluoromethane	1.00	0.50	1.00	-		ug/l	1	-	0	
Trichlorofluoromethane	1.00	0.50	1.00	-		ug/l	1	-	0	

Sample Matrix: WATER

Site Area(s) Selected: Whole site

Event(s) Selected: All events

Inorganics **Aquifer: CHAM**

ANALYTE	MIN	MEAN*	MAX	ASSESSMENT CRITERIA (AC)	ASSESSMENT CRITERIA SOURCE	UNITS	NO. LOCATIONS SAMPLED	NO. SAMPLES > LOD	NO. LOCATIONS > AC	LOCATION(S) FAILING SCREENING
Cyanide	5.00	2.50	5.00	1.00	EQS 2015 - Assumes Free Cyanide	ug/l	5	-	0	
Cyanide (Total)	50.0	25.0	50.0	1.00	EQS 2015 - Assumes Free Cyanide	ug/l	2	-	0	
Sulphate as SO4	165000	834800	1600000	-		ug/l	5	5	0	

Ketones **Aquifer: CHAM**

ANALYTE	MIN	MEAN*	MAX	ASSESSMENT CRITERIA (AC)	ASSESSMENT CRITERIA SOURCE	UNITS	NO. LOCATIONS SAMPLED	NO. SAMPLES > LOD	NO. LOCATIONS > AC	LOCATION(S) FAILING SCREENING
Isophorone	1.00	0.50	1.00	-		ug/l	1	-	0	

Sample Matrix: WATER

Site Area(s) Selected: Whole site
Event(s) Selected: All events

Metals **Aquifer: CHAM**

ANALYTE	MIN	MEAN*	MAX	ASSESSMENT CRITERIA (AC)	ASSESSMENT CRITERIA SOURCE	UNITS	NO. LOCATIONS SAMPLED	NO. SAMPLES > LOD	NO. LOCATIONS > AC	LOCATION(S) FAILING SCREENING
Arsenic	0.65	3.12	10.30	50.0	EQS 2015	ug/l	7	7	0	
Cadmium	0.080	0.057	0.122	-		ug/l	7	1	0	
Chromium	1.00	6.62	15.90	4.70	EQS 2015	ug/l	7	6	4	BH01, BH02, BH04, WS03
Copper	1.35	4.75	7.78	1.00	EQS 2015 - Bioavailable	ug/l	7	7	7	BH01, BH02, BH04, BH101, BH102, WS01, WS03
Hexavalent Chromium	3.00	5.36	30.00	3.40	EQS 2015	ug/l	7	-	0	
Lead	0.07	0.52	1.52	1.20	EQS 2015 - Bioavailable	ug/l	7	6	1	BH04
Mercury	0.010	0.032	0.164	0.070	EQS 2015 MAC	ug/l	6	1	1	BH101
Nickel	4.1	13.4	53.7	4.00	EQS 2015 - Bioavailable	ug/l	7	7	7	BH01, BH02, BH04, BH101, BH102, WS01, WS03
Selenium	1.7	38.7	134.0	-		ug/l	7	7	0	
Zinc	1.0	11.8	22.7	10.9	EQS 2015 - Bioavailable	ug/l	7	6	4	BH04, BH102, WS01, WS03

Sample Matrix: WATER

Site Area(s) Selected: Whole site

Event(s) Selected: All events

Other

Aquifer: CHAM

ANALYTE	MIN	MEAN*	MAX	ASSESSMENT CRITERIA (AC)	ASSESSMENT CRITERIA SOURCE	UNITS	NO. LOCATIONS SAMPLED	NO. SAMPLES > LOD	NO. LOCATIONS > AC	LOCATION(S) FAILING SCREENING
2-Chloronaphthalene	1.00	0.50	1.00	-		ug/l	1	-	0	
4-Bromophenylphenyl ether	1.00	0.50	1.00	-		ug/l	1	-	0	
4-Chloroaniline	1.00	0.50	1.00	-		ug/l	1	-	0	
4-Chlorophenyl phenyl ether	1.00	0.50	1.00	-		ug/l	1	-	0	
Azobenzene	1.00	0.50	1.00	-		ug/l	1	-	0	
Bis (2-chloroethoxy) methane	1.00	0.50	1.00	-		ug/l	1	-	0	
Bis (2-chloroethyl) ether	1.00	0.50	1.00	-		ug/l	1	-	0	
Carbazole	1.00	0.50	1.00	-		ug/l	1	-	0	
Carbon Disulphide	1.00	0.50	1.00	-		ug/l	1	-	0	
Nitrobenzene	1.00	0.50	1.00	-		ug/l	1	-	0	
n-Nitrosodi-n-Propylamine	1.00	0.50	1.00	-		ug/l	1	-	0	
Styrene	1.00	0.50	1.00	-		ug/l	1	-	0	

Sample Matrix: WATER

Site Area(s) Selected: Whole site
Event(s) Selected: All events

PAHs **Aquifer: CHAM**

ANALYTE	MIN	MEAN*	MAX	ASSESSMENT CRITERIA (AC)	ASSESSMENT CRITERIA SOURCE	UNITS	NO. LOCATIONS SAMPLED	NO. SAMPLES > LOD	NO. LOCATIONS > AC	LOCATION(S) FAILING SCREENING
2-Methylnaphthalene	1.00	0.50	1.00	-		ug/l	1	-	0	
Acenaphthene	0.005	0.006	0.015	-		ug/l	7	-	0	
Acenaphthylene	0.005	0.005	0.011	-		ug/l	7	-	0	
Anthracene	0.005	0.006	0.015	0.10	EQS 2015	ug/l	7	-	0	
Benzo (a) anthracene	0.005	0.011	0.036	-		ug/l	7	1	0	
Benzo (a) pyrene	0.002	0.014	0.041	0.0002	EQS 2015	ug/l	7	2	2	BH02, WS03
Benzo (b) fluoranthene	0.005	0.030	0.113	0.017	EQS 2015 MAC	ug/l	7	2	2	BH02, WS03
Benzo (ghi) perylene	0.016	0.028	0.060	0.008	EQS 2015 MAC	ug/l	5	2	2	BH02, WS03
Benzo (k) fluoranthene	0.005	0.013	0.029	0.017	EQS 2015 MAC	ug/l	7	1	1	BH02
Chrysene	0.005	0.009	0.027	-		ug/l	7	2	0	
Dibenzo (ah) anthracene	0.005	0.009	0.028	-		ug/l	7	1	0	
Fluoranthene	0.005	0.016	0.041	0.006	EQS 2015	ug/l	7	3	3	BH02, BH04, WS03
Fluorene	0.005	0.006	0.014	-		ug/l	7	-	0	
Indeno (1,2,3-cd) pyrene	0.005	0.019	0.067	-		ug/l	7	2	0	
Naphthalene	0.010	0.037	0.100	2.00	EQS 2015	ug/l	7	-	0	
PAH (Total)	0.34	0.26	0.43	-		ug/l	5	2	0	
PAH Total (EPA 16)	0.082	0.041	0.082	-		ug/l	2	-	0	
Phenanthrene	0.005	0.009	0.022	-		ug/l	7	2	0	

Sample Matrix: WATER

Site Area(s) Selected: Whole site

Event(s) Selected: All events

PAHs **Aquifer: CHAM**

ANALYTE	MIN	MEAN*	MAX	ASSESSMENT CRITERIA (AC)	ASSESSMENT CRITERIA SOURCE	UNITS	NO. LOCATIONS SAMPLED	NO. SAMPLES > LOD	NO. LOCATIONS > AC	LOCATION(S) FAILING SCREENING
Pyrene	0.005	0.024	0.063	-		ug/l	7	3	0	

Pesticides, Herbicides and Insectici **Aquifer: CHAM**

ANALYTE	MIN	MEAN*	MAX	ASSESSMENT CRITERIA (AC)	ASSESSMENT CRITERIA SOURCE	UNITS	NO. LOCATIONS SAMPLED	NO. SAMPLES > LOD	NO. LOCATIONS > AC	LOCATION(S) FAILING SCREENING
Hexachlorocyclopentadiene	1.00	0.50	1.00	-		ug/l	1	-	0	
Pentachlorophenol	1.00	0.50	1.00	0.40	EQS 2015	ug/l	1	-	0	

Sample Matrix: WATER

Site Area(s) Selected: Whole site

Event(s) Selected: All events

Pharmaceuticals Aquifer: CHAM

ANALYTE	MIN	MEAN*	MAX	ASSESSMENT CRITERIA (AC)	ASSESSMENT CRITERIA SOURCE	UNITS	NO. LOCATIONS SAMPLED	NO. SAMPLES > LOD	NO. LOCATIONS > AC	LOCATION(S) FAILING SCREENING
2-Nitroaniline	1.00	0.50	1.00	-		ug/l	1	-	0	

Phenols Aquifer: CHAM

ANALYTE	MIN	MEAN*	MAX	ASSESSMENT CRITERIA (AC)	ASSESSMENT CRITERIA SOURCE	UNITS	NO. LOCATIONS SAMPLED	NO. SAMPLES > LOD	NO. LOCATIONS > AC	LOCATION(S) FAILING SCREENING
2,4-Dimethylphenol	1.00	0.50	1.00	-		ug/l	1	-	0	
2-Methylphenol (o-Cresol)	1.00	0.50	1.00	-		ug/l	1	-	0	
2-Nitrophenol	1.00	0.50	1.00	-		ug/l	1	-	0	
4-Methylphenol	1.00	0.50	1.00	-		ug/l	1	-	0	
4-Nitrophenol	1.00	0.50	1.00	-		ug/l	1	-	0	
Phenol	1.00	0.50	1.00	7.70	EQS 2015	ug/l	1	-	0	
Xylenols	11.00	5.50	11.00	-		ug/l	2	-	0	

Sample Matrix: WATER

Site Area(s) Selected: Whole site

Event(s) Selected: All events

Phthalates Aquifer: CHAM

ANALYTE	MIN	MEAN*	MAX	ASSESSMENT CRITERIA (AC)	ASSESSMENT CRITERIA SOURCE	UNITS	NO. LOCATIONS SAMPLED	NO. SAMPLES > LOD	NO. LOCATIONS > AC	LOCATION(S) FAILING SCREENING
Bis (2-ethylhexyl) phthalate	2.00	1.00	2.00	1.30	EQS 2015	ug/l	1	-	0	
Butyl benzyl phthalate	1.00	0.50	1.00	7.50	EQS 2015	ug/l	1	-	0	
Diethyl phthalate	1.00	0.50	1.00	-		ug/l	1	-	0	
Dimethyl phthalate	1.00	0.50	1.00	-		ug/l	1	-	0	
Di-n-butyl phthalate	1.00	0.50	1.00	-		ug/l	1	-	0	
Di-n-octyl phthalate	5.00	2.50	5.00	-		ug/l	1	-	0	

QA Standard Aquifer: CHAM

ANALYTE	MIN	MEAN*	MAX	ASSESSMENT CRITERIA (AC)	ASSESSMENT CRITERIA SOURCE	UNITS	NO. LOCATIONS SAMPLED	NO. SAMPLES > LOD	NO. LOCATIONS > AC	LOCATION(S) FAILING SCREENING
4-Bromofluorobenzene	99.0	99.0	99.0	-		%	1	1	0	
Dibromofluoromethane	107	107	107	-		%	1	1	0	
Toluene-d8 Surrogate	98.0	98.0	98.0	-		%	1	1	0	

Sample Matrix: WATER

Site Area(s) Selected: Whole site

Event(s) Selected: All events

TPH/EPH Aquifer: CHAM

ANALYTE	MIN	MEAN*	MAX	ASSESSMENT CRITERIA (AC)	ASSESSMENT CRITERIA SOURCE	UNITS	NO. LOCATIONS SAMPLED	NO. SAMPLES > LOD	NO. LOCATIONS > AC	LOCATION(S) FAILING SCREENING
GRO Surrogate	94.0	98.3	106.0	-		%	7	7	0	
PRO (C5-C12)	50.0	25.0	50.0	-		ug/l	7	-	0	

VOCs Aquifer: CHAM

ANALYTE	MIN	MEAN*	MAX	ASSESSMENT CRITERIA (AC)	ASSESSMENT CRITERIA SOURCE	UNITS	NO. LOCATIONS SAMPLED	NO. SAMPLES > LOD	NO. LOCATIONS > AC	LOCATION(S) FAILING SCREENING
4-Isopropyltoluene	1.00	0.50	1.00	-		ug/l	1	-	0	
iso-Propylbenzene	1.00	0.50	1.00	-		ug/l	1	-	0	
n-Butylbenzene	1.00	0.50	1.00	-		ug/l	1	-	0	
n-Propylbenzene	1.00	0.50	1.00	-		ug/l	1	-	0	
Sec-Butylbenzene	1.00	0.50	1.00	-		ug/l	1	-	0	
Tert-Butylbenzene	1.00	0.50	1.00	-		ug/l	1	-	0	

Sample Matrix: WATER

Site Area(s) Selected: Whole site

Event(s) Selected: All events

Sample Matrix: WATER

Site Area(s) Selected: Whole site

Event(s) Selected: All events

Unrecognised analytes Aquifer: MG

ANALYTE	MIN	MEAN*	MAX	ASSESSMENT CRITERIA (AC)	ASSESSMENT CRITERIA SOURCE	UNITS	NO. LOCATIONS SAMPLED	NO. SAMPLES > LOD	NO. LOCATIONS > AC	LOCATION(S) FAILING SCREENING
(Unrecognised code)	25.0	25.0	25.0	-		ug/l	1	1	0	
C16-C35 Aromatics (Unrecognised code)	9740	9740	9740	-		ug/l	1	1	0	

Sample Matrix: WATER

Site Area(s) Selected: Whole site

Event(s) Selected: All events

Aliphatics and Aromatics Aquifer: MG

ANALYTE	MIN	MEAN*	MAX	ASSESSMENT CRITERIA (AC)	ASSESSMENT CRITERIA SOURCE	UNITS	NO. LOCATIONS SAMPLED	NO. SAMPLES > LOD	NO. LOCATIONS > AC	LOCATION(S) FAILING SCREENING
Aliphatic C05-C06	10.00	5.00	10.00	-		ug/l	1	-	0	
Aliphatic C06-C08	10.00	5.00	10.00	-		ug/l	1	-	0	
Aliphatic C08-C10	10.0	65.5	126.0	-		ug/l	1	1	0	
Aliphatic C10-C12	10	261	516	-		ug/l	1	1	0	
Aliphatic C12-C16	10	5803	11600	-		ug/l	1	1	0	
Aliphatic C16-C21	10	6853	13700	-		ug/l	1	1	0	
Aliphatic C21-C35	10	3318	6630	-		ug/l	1	1	0	
Aliphatics C12-C35	10	15953	31900	-		ug/l	1	1	0	
Aromatic C06-C07	10.00	5.00	10.00	10.0	CL:AIRE 2017	ug/l	1	-	0	
Aromatic C07-C08	10.00	5.00	10.00	74.0	CL:AIRE 2017	ug/l	1	-	0	
Aromatic C08-C10	10.0	44.5	84.0	20.0	CL:AIRE 2017	ug/l	1	1	1	WS10
Aromatic C10-C12	10	175	344	2.00	CL:AIRE 2017	ug/l	1	1	1	WS10
Aromatic C12-C16	10	1553	3100	2.00	CL:AIRE 2017	ug/l	1	1	1	WS10
Aromatic C12-C35	25	6413	12800	-		ug/l	1	2	0	
Aromatic C16-C21	15	3393	6770	0.10	CL:AIRE 2017	ug/l	1	2	1	WS10
Aromatic C21-C35	10	1490	2970	0.0002	CL:AIRE 2017	ug/l	1	2	1	WS10
Total Aliphatics and Aromatics (C5-C35)	49	22925	45800	-		ug/l	1	2	0	

Sample Matrix: WATER

Site Area(s) Selected: Whole site

Event(s) Selected: All events

BTEX and Fuel Additives

Aquifer: MG

ANALYTE	MIN	MEAN*	MAX	ASSESSMENT CRITERIA (AC)	ASSESSMENT CRITERIA SOURCE	UNITS	NO. LOCATIONS SAMPLED	NO. SAMPLES > LOD	NO. LOCATIONS > AC	LOCATION(S) FAILING SCREENING
1,2,4-Trimethylbenzene	1.00	0.50	1.00	-		ug/l	1	-	0	
1,3,5-Trimethylbenzene	1.00	0.50	1.00	-		ug/l	1	-	0	
Benzene	1.00	2.00	7.00	10.0	EQS 2015	ug/l	1	-	0	
BTEX	28.0	14.0	28.0	-		ug/l	1	-	0	
Ethylbenzene	1.00	1.50	5.00	20.0	Proposed EQS	ug/l	1	-	0	
Methyl t-butylether (MTBE)	1.00	1.00	3.00	-		ug/l	1	-	0	
Tertiary Amyl Methyl Ether (TAME)	1.00	0.50	1.00	-		ug/l	1	-	0	
Toluene	1.00	1.25	4.00	74.0	EQS 2015	ug/l	1	-	0	
Xylene	2.00	1.00	2.00	30.0	CL:AIRE 2017	ug/l	1	-	0	
Xylene-m & p	1.00	2.25	8.00	-		ug/l	1	-	0	
Xylene-o	1.00	1.00	3.00	-		ug/l	1	-	0	

Sample Matrix: WATER

Site Area(s) Selected: Whole site

Event(s) Selected: All events

Chlorinated Aliphatics

Aquifer: MG

ANALYTE	MIN	MEAN*	MAX	ASSESSMENT CRITERIA (AC)	ASSESSMENT CRITERIA SOURCE	UNITS	NO. LOCATIONS SAMPLED	NO. SAMPLES > LOD	NO. LOCATIONS > AC	LOCATION(S) FAILING SCREENING
1,1,1,2-Tetrachloroethane	1.00	0.50	1.00	-		ug/l	1	-	0	
1,1,1-Trichloroethane	1.00	0.50	1.00	-		ug/l	1	-	0	
1,1,2,2-Tetrachloroethane	1.00	0.50	1.00	-		ug/l	1	-	0	
1,1,2-Trichloroethane	1.00	0.50	1.00	-		ug/l	1	-	0	
1,1-Dichloroethane	1.00	0.50	1.00	-		ug/l	1	-	0	
1,1-Dichloroethene	1.00	0.50	1.00	-		ug/l	1	-	0	
1,1-Dichloropropene	1.00	0.50	1.00	-		ug/l	1	-	0	
1,2,3-Trichloropropane	1.00	0.50	1.00	-		ug/l	1	-	0	
1,2-Dichloroethane	1.00	0.50	1.00	10.0	EQS 2015	ug/l	1	-	0	
1,2-Dichloropropane	1.00	0.50	1.00	-		ug/l	1	-	0	
1,3-Dichloropropane	1.00	0.50	1.00	-		ug/l	1	-	0	
2,2-Dichloropropane	1.00	0.50	1.00	-		ug/l	1	-	0	
Carbon tetrachloride	1.00	0.50	1.00	12.0	EQS 2015	ug/l	1	-	0	
Chloroethane	1.00	0.50	1.00	-		ug/l	1	-	0	
Chloroform	1.00	0.50	1.00	2.50	EQS 2015	ug/l	1	-	0	
Chloromethane	1.00	0.50	1.00	-		ug/l	1	-	0	
Cis 1,2-Dichloroethene	1.00	0.50	1.00	-		ug/l	1	-	0	
Cis 1,3-Dichloropropene	1.00	0.50	1.00	-		ug/l	1	-	0	

Sample Matrix: WATER

Site Area(s) Selected: Whole site

Event(s) Selected: All events

Chlorinated Aliphatics

Aquifer: MG

ANALYTE	MIN	MEAN*	MAX	ASSESSMENT CRITERIA (AC)	ASSESSMENT CRITERIA SOURCE	UNITS	NO. LOCATIONS SAMPLED	NO. SAMPLES > LOD	NO. LOCATIONS > AC	LOCATION(S) FAILING SCREENING
Dichloromethane	3.00	1.50	3.00	20.0	EQS 2015	ug/l	1	-	0	
Hexachlorobutadiene	1.00	0.50	1.00	0.60	EQS 2015 MAC	ug/l	1	-	0	
Hexachloroethane	1.00	0.50	1.00	-		ug/l	1	-	0	
Tetrachloroethene (PCE)	1.00	0.50	1.00	10.0	EQS 2015	ug/l	1	-	0	
Trans-1,2-Dichloroethene	1.00	0.50	1.00	-		ug/l	1	-	0	
Trans-1,3-Dichloropropene	1.00	0.50	1.00	-		ug/l	1	-	0	
Trichloroethene (TCE)	1.00	0.50	1.00	10.0	EQS 2015	ug/l	1	-	0	
Vinyl chloride	1.00	0.50	1.00	-		ug/l	1	-	0	

Sample Matrix: WATER

Site Area(s) Selected: Whole site

Event(s) Selected: All events

Chlorinated Aromatics Aquifer: MG

ANALYTE	MIN	MEAN*	MAX	ASSESSMENT CRITERIA (AC)	ASSESSMENT CRITERIA SOURCE	UNITS	NO. LOCATIONS SAMPLED	NO. SAMPLES > LOD	NO. LOCATIONS > AC	LOCATION(S) FAILING SCREENING
1,2,3-Trichlorobenzene	1.00	0.50	1.00	-		ug/l	1	-	0	
1,2,4-Trichlorobenzene	1.00	0.50	1.00	-		ug/l	1	-	0	
1,2-Dichlorobenzene	1.00	0.50	1.00	-		ug/l	1	-	0	
1,3,5-Trichlorobenzene	1.00	0.50	1.00	-		ug/l	1	-	0	
1,3-Dichlorobenzene	1.00	0.50	1.00	-		ug/l	1	-	0	
1,4-Dichlorobenzene	1.00	0.50	1.00	-		ug/l	1	-	0	
2-Chlorotoluene	1.00	0.50	1.00	-		ug/l	1	-	0	
4-Chlorotoluene	1.00	0.50	1.00	-		ug/l	1	-	0	
Chlorobenzene	1.00	0.50	1.00	-		ug/l	1	-	0	
Hexachlorobenzene	1.00	0.50	1.00	0.050	EQS 2015 MAC	ug/l	1	-	0	

Sample Matrix: WATER

Site Area(s) Selected: Whole site

Event(s) Selected: All events

Chlorinated Phenols Aquifer: MG

ANALYTE	MIN	MEAN*	MAX	ASSESSMENT CRITERIA (AC)	ASSESSMENT CRITERIA SOURCE	UNITS	NO. LOCATIONS SAMPLED	NO. SAMPLES > LOD	NO. LOCATIONS > AC	LOCATION(S) FAILING SCREENING
2,4,5-Trichlorophenol	1.00	0.50	1.00	-		ug/l	1	-	0	
2,4,6-Trichlorophenol	1.00	0.50	1.00	-		ug/l	1	-	0	
2,4-Dichlorophenol	1.00	0.50	1.00	4.20	EQS 2015	ug/l	1	-	0	
2-Chlorophenol	1.00	0.50	1.00	-		ug/l	1	-	0	
4-Chloro-3-Methylphenol	1.00	0.50	1.00	-		ug/l	1	-	0	

Dioxins and Furans Aquifer: MG

ANALYTE	MIN	MEAN*	MAX	ASSESSMENT CRITERIA (AC)	ASSESSMENT CRITERIA SOURCE	UNITS	NO. LOCATIONS SAMPLED	NO. SAMPLES > LOD	NO. LOCATIONS > AC	LOCATION(S) FAILING SCREENING
Dibenzofuran	1.00	0.50	1.00	-		ug/l	1	-	0	

Sample Matrix: WATER

Site Area(s) Selected: Whole site
Event(s) Selected: All events

Dyes **Aquifer: MG**

ANALYTE	MIN	MEAN*	MAX	ASSESSMENT CRITERIA (AC)	ASSESSMENT CRITERIA SOURCE	UNITS	NO. LOCATIONS SAMPLED	NO. SAMPLES > LOD	NO. LOCATIONS > AC	LOCATION(S) FAILING SCREENING
3-Nitroaniline	1.00	0.50	1.00	-		ug/l	1	-	0	
4-Nitroaniline	1.00	0.50	1.00	-		ug/l	1	-	0	

Explosives **Aquifer: MG**

ANALYTE	MIN	MEAN*	MAX	ASSESSMENT CRITERIA (AC)	ASSESSMENT CRITERIA SOURCE	UNITS	NO. LOCATIONS SAMPLED	NO. SAMPLES > LOD	NO. LOCATIONS > AC	LOCATION(S) FAILING SCREENING
2,4-Dinitrotoluene	1.00	0.50	1.00	-		ug/l	1	-	0	
2,6-Dinitrotoluene	1.00	0.50	1.00	-		ug/l	1	-	0	

Sample Matrix: WATER

Site Area(s) Selected: Whole site

Event(s) Selected: All events

Halogenated Hydrocarbons Aquifer: MG

ANALYTE	MIN	MEAN*	MAX	ASSESSMENT CRITERIA (AC)	ASSESSMENT CRITERIA SOURCE	UNITS	NO. LOCATIONS SAMPLED	NO. SAMPLES > LOD	NO. LOCATIONS > AC	LOCATION(S) FAILING SCREENING
1,2-Dibromo-3-Chloropropane	1.00	0.50	1.00	-		ug/l	1	-	0	
1,2-Dibromoethane	1.00	0.50	1.00	-		ug/l	1	-	0	
Bromobenzene	1.00	0.50	1.00	-		ug/l	1	-	0	
Bromochloromethane	1.00	0.50	1.00	-		ug/l	1	-	0	
Bromodichloromethane	1.00	0.50	1.00	-		ug/l	1	-	0	
Bromoform	1.00	0.50	1.00	-		ug/l	1	-	0	
Bromomethane	1.00	0.50	1.00	-		ug/l	1	-	0	
Dibromochloromethane	1.00	0.50	1.00	-		ug/l	1	-	0	
Dibromomethane	1.00	0.50	1.00	-		ug/l	1	-	0	
Dichlorodifluoromethane	1.00	0.50	1.00	-		ug/l	1	-	0	
Trichlorofluoromethane	1.00	0.50	1.00	-		ug/l	1	-	0	

Sample Matrix: WATER

Site Area(s) Selected: Whole site

Event(s) Selected: All events

Ketones

Aquifer: MG

ANALYTE	MIN	MEAN*	MAX	ASSESSMENT CRITERIA (AC)	ASSESSMENT CRITERIA SOURCE	UNITS	NO. LOCATIONS SAMPLED	NO. SAMPLES > LOD	NO. LOCATIONS > AC	LOCATION(S) FAILING SCREENING
Isophorone	1.00	0.50	1.00	-		ug/l	1	-	0	

Sample Matrix: WATER

Site Area(s) Selected: Whole site

Event(s) Selected: All events

Other

Aquifer: MG

ANALYTE	MIN	MEAN*	MAX	ASSESSMENT CRITERIA (AC)	ASSESSMENT CRITERIA SOURCE	UNITS	NO. LOCATIONS SAMPLED	NO. SAMPLES > LOD	NO. LOCATIONS > AC	LOCATION(S) FAILING SCREENING
2-Chloronaphthalene	1.00	0.50	1.00	-		ug/l	1	-	0	
4-Bromophenylphenyl ether	1.00	0.50	1.00	-		ug/l	1	-	0	
4-Chloroaniline	1.00	0.50	1.00	-		ug/l	1	-	0	
4-Chlorophenyl phenyl ether	1.00	0.50	1.00	-		ug/l	1	-	0	
Azobenzene	1.00	0.50	1.00	-		ug/l	1	-	0	
Bis (2-chloroethoxy) methane	1.00	0.50	1.00	-		ug/l	1	-	0	
Bis (2-chloroethyl) ether	1.00	0.50	1.00	-		ug/l	1	-	0	
Carbazole	1.00	0.50	1.00	-		ug/l	1	-	0	
Carbon Disulphide	1.00	0.50	1.00	-		ug/l	1	-	0	
Nitrobenzene	1.00	0.50	1.00	-		ug/l	1	-	0	
n-Nitrosodi-n-Propylamine	1.00	0.50	1.00	-		ug/l	1	-	0	
Styrene	1.00	0.50	1.00	-		ug/l	1	-	0	

Sample Matrix: WATER

Site Area(s) Selected: Whole site

Event(s) Selected: All events

PAHs

Aquifer: MG

ANALYTE	MIN	MEAN*	MAX	ASSESSMENT CRITERIA (AC)	ASSESSMENT CRITERIA SOURCE	UNITS	NO. LOCATIONS SAMPLED	NO. SAMPLES > LOD	NO. LOCATIONS > AC	LOCATION(S) FAILING SCREENING
2-Methylnaphthalene	1.00	0.50	1.00	-		ug/l	1	-	0	
Acenaphthene	0.005	0.005	0.015	-		ug/l	1	-	0	
Acenaphthylene	0.005	0.004	0.011	-		ug/l	1	-	0	
Anthracene	0.005	0.005	0.015	0.10	EQS 2015	ug/l	1	-	0	
Benzo (a) anthracene	0.005	0.006	0.017	-		ug/l	1	-	0	
Benzo (a) pyrene	0.002	0.003	0.009	0.0002	EQS 2015	ug/l	1	-	0	
Benzo (b) fluoranthene	0.005	0.007	0.023	0.017	EQS 2015 MAC	ug/l	1	-	0	
Benzo (ghi) perylene	0.088	0.088	0.088	0.008	EQS 2015 MAC	ug/l	1	1	1	WS10
Benzo (k) fluoranthene	0.005	0.008	0.027	0.017	EQS 2015 MAC	ug/l	1	-	0	
Chrysene	0.010	0.008	0.013	-		ug/l	1	1	0	
Dibenzo (ah) anthracene	0.005	0.022	0.042	-		ug/l	1	1	0	
Fluoranthene	0.005	0.006	0.017	0.006	EQS 2015	ug/l	1	-	0	
Fluorene	0.005	0.005	0.014	-		ug/l	1	-	0	
Indeno (1,2,3-cd) pyrene	0.005	0.028	0.053	-		ug/l	1	1	0	
Naphthalene	0.01	1.31	2.61	2.00	EQS 2015	ug/l	1	1	1	WS10
PAH (Total)	2.79	2.79	2.79	-		ug/l	1	1	0	
PAH Total (EPA 16)	0.082	0.041	0.082	-		ug/l	1	-	0	
Phenanthrene	0.010	0.010	0.022	-		ug/l	1	1	0	

Sample Matrix: WATER

Site Area(s) Selected: Whole site

Event(s) Selected: All events

PAHs Aquifer: MG

ANALYTE	MIN	MEAN*	MAX	ASSESSMENT CRITERIA (AC)	ASSESSMENT CRITERIA SOURCE	UNITS	NO. LOCATIONS SAMPLED	NO. SAMPLES > LOD	NO. LOCATIONS > AC	LOCATION(S) FAILING SCREENING
Pyrene	0.03	1.73	3.43	-		ug/l	1	2	0	

Pesticides, Herbicides and Insectici Aquifer: MG

ANALYTE	MIN	MEAN*	MAX	ASSESSMENT CRITERIA (AC)	ASSESSMENT CRITERIA SOURCE	UNITS	NO. LOCATIONS SAMPLED	NO. SAMPLES > LOD	NO. LOCATIONS > AC	LOCATION(S) FAILING SCREENING
Hexachlorocyclopentadiene	1.00	0.50	1.00	-		ug/l	1	-	0	
Pentachlorophenol	1.00	0.50	1.00	0.40	EQS 2015	ug/l	1	-	0	

Sample Matrix: WATER

Site Area(s) Selected: Whole site

Event(s) Selected: All events

Pharmaceuticals Aquifer: MG

ANALYTE	MIN	MEAN*	MAX	ASSESSMENT CRITERIA (AC)	ASSESSMENT CRITERIA SOURCE	UNITS	NO. LOCATIONS SAMPLED	NO. SAMPLES > LOD	NO. LOCATIONS > AC	LOCATION(S) FAILING SCREENING
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2-Nitroaniline	1.00	0.50	1.00	-		ug/l	1	-	0	
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Phenols Aquifer: MG

ANALYTE	MIN	MEAN*	MAX	ASSESSMENT CRITERIA (AC)	ASSESSMENT CRITERIA SOURCE	UNITS	NO. LOCATIONS SAMPLED	NO. SAMPLES > LOD	NO. LOCATIONS > AC	LOCATION(S) FAILING SCREENING
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2,4-Dimethylphenol	1.00	0.50	1.00	-		ug/l	1	-	0	
2-Methylphenol (o-Cresol)	1.00	0.50	1.00	-		ug/l	1	-	0	
2-Nitrophenol	1.00	0.50	1.00	-		ug/l	1	-	0	
4-Methylphenol	1.00	0.50	1.00	-		ug/l	1	-	0	
4-Nitrophenol	1.00	0.50	1.00	-		ug/l	1	-	0	
Phenol	1.00	0.50	1.00	7.70	EQS 2015	ug/l	1	-	0	
Xylenols	11.00	5.50	11.00	-		ug/l	1	-	0	

Sample Matrix: WATER

Site Area(s) Selected: Whole site

Event(s) Selected: All events

Phthalates Aquifer: MG

ANALYTE	MIN	MEAN*	MAX	ASSESSMENT CRITERIA (AC)	ASSESSMENT CRITERIA SOURCE	UNITS	NO. LOCATIONS SAMPLED	NO. SAMPLES > LOD	NO. LOCATIONS > AC	LOCATION(S) FAILING SCREENING
Bis (2-ethylhexyl) phthalate	2.25	2.25	2.25	1.30	EQS 2015	ug/l	1	1	1	WS10
Butyl benzyl phthalate	1.00	0.50	1.00	7.50	EQS 2015	ug/l	1	-	0	
Diethyl phthalate	1.00	0.50	1.00	-		ug/l	1	-	0	
Dimethyl phthalate	1.00	0.50	1.00	-		ug/l	1	-	0	
Di-n-butyl phthalate	1.00	0.50	1.00	-		ug/l	1	-	0	
Di-n-octyl phthalate	5.00	2.50	5.00	-		ug/l	1	-	0	

QA Standard Aquifer: MG

ANALYTE	MIN	MEAN*	MAX	ASSESSMENT CRITERIA (AC)	ASSESSMENT CRITERIA SOURCE	UNITS	NO. LOCATIONS SAMPLED	NO. SAMPLES > LOD	NO. LOCATIONS > AC	LOCATION(S) FAILING SCREENING
4-Bromofluorobenzene	98.3	98.3	98.3	-		%	1	1	0	
Dibromofluoromethane	107	107	107	-		%	1	1	0	
Toluene-d8 Surrogate	99.6	99.6	99.6	-		%	1	1	0	

Sample Matrix: WATER

Site Area(s) Selected: Whole site

Event(s) Selected: All events

TPH/EPH

Aquifer: MG

ANALYTE	MIN	MEAN*	MAX	ASSESSMENT CRITERIA (AC)	ASSESSMENT CRITERIA SOURCE	UNITS	NO. LOCATIONS SAMPLED	NO. SAMPLES > LOD	NO. LOCATIONS > AC	LOCATION(S) FAILING SCREENING
GRO Surrogate	87.0	90.0	93.0	-		%	1	2	0	
PRO (C5-C12)	50	553	1080	-		ug/l	1	1	0	

VOCs

Aquifer: MG

ANALYTE	MIN	MEAN*	MAX	ASSESSMENT CRITERIA (AC)	ASSESSMENT CRITERIA SOURCE	UNITS	NO. LOCATIONS SAMPLED	NO. SAMPLES > LOD	NO. LOCATIONS > AC	LOCATION(S) FAILING SCREENING
4-Isopropyltoluene	1.00	0.50	1.00	-		ug/l	1	-	0	
iso-Propylbenzene	1.00	0.50	1.00	-		ug/l	1	-	0	
n-Butylbenzene	1.00	0.50	1.00	-		ug/l	1	-	0	
n-Propylbenzene	1.00	0.50	1.00	-		ug/l	1	-	0	
Sec-Butylbenzene	1.00	0.50	1.00	-		ug/l	1	-	0	
Tert-Butylbenzene	1.00	0.50	1.00	-		ug/l	1	-	0	

Sample Matrix: WATER

Site Area(s) Selected: Whole site

Event(s) Selected: All events

Sample Matrix: WATER

Site Area(s) Selected: Whole site

Event(s) Selected: All events

BTEX and Fuel Additives Aquifer: N/A

ANALYTE	MIN	MEAN*	MAX	ASSESSMENT CRITERIA (AC)	ASSESSMENT CRITERIA SOURCE	UNITS	NO. LOCATIONS SAMPLED	NO. SAMPLES > LOD	NO. LOCATIONS > AC	LOCATION(S) FAILING SCREENING
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Xylene - Total (Summed)	1.00	3.80	8.00	-		ug/l	9	10	0	
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Chlorinated Phenols Aquifer: N/A

ANALYTE	MIN	MEAN*	MAX	ASSESSMENT CRITERIA (AC)	ASSESSMENT CRITERIA SOURCE	UNITS	NO. LOCATIONS SAMPLED	NO. SAMPLES > LOD	NO. LOCATIONS > AC	LOCATION(S) FAILING SCREENING
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Chlorophenols - Total (Summed Isomers)	1.00	1.00	1.00	-		ug/l	2	2	0	
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Phenols Aquifer: N/A

ANALYTE	MIN	MEAN*	MAX	ASSESSMENT CRITERIA (AC)	ASSESSMENT CRITERIA SOURCE	UNITS	NO. LOCATIONS SAMPLED	NO. SAMPLES > LOD	NO. LOCATIONS > AC	LOCATION(S) FAILING SCREENING
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Methylphenols Total (Summed)	1.00	1.00	1.00	-		ug/l	2	2	0	
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EXCEEDANCES OF THRESHOLDS

Sample matrix: LEACHATE

General Chemistry

Analyte	Point ID	Response Zone Depth (M)	Result	Criteria Source	Threshold	Units	Stratum
pH	TP102	0.4 - 0.4	11.1	EQS 2015	9.00	pH	Made Ground Granular
	TP106	1 - 1	9.32	EQS 2015	9.00	pH	Made Ground Cohesive

Metals

Analyte	Point ID	Response Zone Depth (M)	Result	Criteria Source	Threshold	Units	Stratum
Chromium	WS04	0.3 - 0.3	4.84	EQS 2015	4.70	ug/l	Made Ground Cohesive
Copper	BH01	0.6 - 0.6	1.10	EQS 2015 - Bioavailable	1.00	ug/l	Made Ground Cohesive
	BH02	0.5 - 0.5	1.11	EQS 2015 - Bioavailable	1.00	ug/l	Alluvium
	BH04	0.7 - 0.7	1.23	EQS 2015 - Bioavailable	1.00	ug/l	Made Ground Cohesive
	TP106	1 - 1	1.65	EQS 2015 - Bioavailable	1.00	ug/l	
	WS04	0.3 - 0.3	2.23	EQS 2015 - Bioavailable	1.00	ug/l	
Lead	BH01	0.6 - 0.6	1.21	EQS 2015 - Bioavailable	1.20	ug/l	Made Ground Cohesive
	TP106	1 - 1	2.41	EQS 2015 - Bioavailable	1.20	ug/l	

EXCEEDANCES OF THRESHOLDS

Sample matrix: WATER

Aliphatics and Aromatics

Analyte	Point ID	Response Zone Depth (M)	Result Criteria Source	Threshold	Units	Stratum
Aromatic C08-C10	WS10	0.5 - 1.5	84.0 CL:AIRE 2017	20.0	ug/l	Made Ground Granular / Charmouth Mudstone Formation
Aromatic C10-C12	WS10	0.5 - 1.5	344 CL:AIRE 2017	2.00	ug/l	Made Ground Granular / Charmouth Mudstone Formation
Aromatic C12-C16	WS10	0.5 - 1.5	3100 CL:AIRE 2017	2.00	ug/l	Made Ground Granular / Charmouth Mudstone Formation
Aromatic C16-C21	WS10	0.5 - 1.5	15.0 CL:AIRE 2017	0.10	ug/l	Made Ground Granular / Charmouth Mudstone Formation
		0.5 - 1.5	6770 CL:AIRE 2017	0.10	ug/l	
Aromatic C21-C35	BH02	2 - 7	48.0 CL:AIRE 2017	0.0002	ug/l	Charmouth Mudstone Formation
	WS10	0.5 - 1.5	10.0 CL:AIRE 2017	0.0002	ug/l	Made Ground Granular / Charmouth Mudstone Formation
		0.5 - 1.5	2970 CL:AIRE 2017	0.0002	ug/l	

Metals

Analyte	Point ID	Response Zone Depth (M)	Result Criteria Source	Threshold	Units	Stratum
Chromium	BH01	2 - 7	8.71 EQS 2015	4.70	ug/l	Charmouth Mudstone Formation
	BH02	2 - 7	6.46 EQS 2015	4.70	ug/l	
	BH04	1.5 - 7	15.9 EQS 2015	4.70	ug/l	Alluvium / Charmouth Mudstone Formation
	WS03	1 - 4	8.02 EQS 2015	4.70	ug/l	Charmouth Mudstone Formation
Copper	BH01	2 - 7	1.55 EQS 2015 - Bioavailable	1.00	ug/l	Charmouth Mudstone Formation
	BH02	2 - 7	7.78 EQS 2015 - Bioavailable	1.00	ug/l	
	BH04	1.5 - 7	6.16 EQS 2015 - Bioavailable	1.00	ug/l	Alluvium / Charmouth Mudstone Formation
	BH05	1 - 3	1.01 EQS 2015 - Bioavailable	1.00	ug/l	Alluvium
	BH101	6.25 - 8	1.35 EQS 2015 - Bioavailable	1.00	ug/l	Charmouth Mudstone Formation
	BH102	2.13 - 8	4.13 EQS 2015 - Bioavailable	1.00	ug/l	
	WS01	1 - 3	6.33 EQS 2015 - Bioavailable	1.00	ug/l	
	WS03	1 - 4	5.93 EQS 2015 - Bioavailable	1.00	ug/l	
Lead	BH04	1.5 - 7	1.52 EQS 2015 - Bioavailable	1.20	ug/l	Alluvium / Charmouth Mudstone Formation
Mercury	BH101	6.25 - 8	0.16 EQS 2015 MAC	0.070	ug/l	Charmouth Mudstone Formation
Nickel	BH01	2 - 7	5.16 EQS 2015 - Bioavailable	4.00	ug/l	Charmouth Mudstone Formation
	BH02	2 - 7	6.59 EQS 2015 - Bioavailable	4.00	ug/l	
	BH04	1.5 - 7	53.7 EQS 2015 - Bioavailable	4.00	ug/l	Alluvium / Charmouth Mudstone Formation

EXCEEDANCES OF THRESHOLDS

Sample matrix: WATER

Metals

Analyte	Point ID	Response Zone Depth (M)	Result	Criteria Source	Threshold	Units	Stratum
Nickel	BH05	1 - 3	59.1	EQS 2015 - Bioavailable	4.00	ug/l	Alluvium
	BH101	6.25 - 8	4.12	EQS 2015 - Bioavailable	4.00	ug/l	Charmouth Mudstone Formation
	BH102	2.13 - 8	4.10	EQS 2015 - Bioavailable	4.00	ug/l	
	WS01	1 - 3	9.16	EQS 2015 - Bioavailable	4.00	ug/l	
	WS03	1 - 4	10.8	EQS 2015 - Bioavailable	4.00	ug/l	
Zinc	BH04	1.5 - 7	22.4	EQS 2015 - Bioavailable	10.9	ug/l	Alluvium / Charmouth Mudstone Formation
	BH102	2.13 - 8	22.7	EQS 2015 - Bioavailable	10.9	ug/l	Charmouth Mudstone Formation
	WS01	1 - 3	17.1	EQS 2015 - Bioavailable	10.9	ug/l	
	WS03	1 - 4	12.9	EQS 2015 - Bioavailable	10.9	ug/l	

PAHs

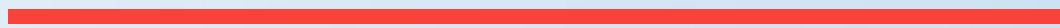
Analyte	Point ID	Response Zone Depth (M)	Result	Criteria Source	Threshold	Units	Stratum
Benzo (a) pyrene	BH02	2 - 7	0.041	EQS 2015	0.0002	ug/l	Charmouth Mudstone Formation
	WS03	1 - 4	0.040	EQS 2015	0.0002	ug/l	
Benzo (b) fluoranthene	BH02	2 - 7	0.11	EQS 2015 MAC	0.017	ug/l	Charmouth Mudstone Formation
	WS03	1 - 4	0.061	EQS 2015 MAC	0.017	ug/l	
Benzo (ghi) perylene	BH02	2 - 7	0.060	EQS 2015 MAC	0.008	ug/l	Charmouth Mudstone Formation
	WS03	1 - 4	0.057	EQS 2015 MAC	0.008	ug/l	
	WS10	0.5 - 1.5	0.088	EQS 2015 MAC	0.008	ug/l	Made Ground Granular / Charmouth Mudstone Formation
Benzo (k) fluoranthene	BH02	2 - 7	0.029	EQS 2015 MAC	0.017	ug/l	Charmouth Mudstone Formation
Fluoranthene	BH02	2 - 7	0.026	EQS 2015	0.006	ug/l	Charmouth Mudstone Formation
	BH04	1.5 - 7	0.020	EQS 2015	0.006	ug/l	Alluvium / Charmouth Mudstone Formation
	WS03	1 - 4	0.041	EQS 2015	0.006	ug/l	Charmouth Mudstone Formation
Naphthalene	WS10	0.5 - 1.5	2.61	EQS 2015	2.00	ug/l	Made Ground Granular / Charmouth Mudstone Formation

Phthalates

Analyte	Point ID	Response Zone Depth (M)	Result	Criteria Source	Threshold	Units	Stratum
Bis (2-ethylhexyl) phthalate	WS10	0.5 - 1.5	2.25	EQS 2015	1.30	ug/l	Made Ground Granular / Charmouth Mudstone Formation

Appendix H

GEOTECHNICAL LAB DATA





WSP PB LBH
WSP PB
4th Floor
6 Devonshire Square
London
EC2M 4YE

Attention: George Baggot

CERTIFICATE OF ANALYSIS

Date: 19 July 2016
Customer: H_WSP_LON
Sample Delivery Group (SDG): 160617-98
Your Reference: 70020138
Location: Tradeteam Site (DHL) Gloucester
Report No: 369596

This report has been revised and directly supersedes 369556 in its entirety.

We received 18 samples on Friday June 17, 2016 and 18 of these samples were scheduled for analysis which was completed on Tuesday July 19, 2016. Accredited laboratory tests are defined within the report, but opinions, interpretations and on-site data expressed herein are outside the scope of ISO 17025 accreditation.

Should this report require incorporation into client reports, it must be used in its entirety and not simply with the data sections alone.

All chemical testing (unless subcontracted) is performed at ALcontrol Hawarden Laboratories.

Approved By:

Sonia McWhan

Operations Manager



SDG: 160617-98
Job: H_WSP_LON-224
Client Reference: 70020138

Location: Tradeteam Site (DHL) Gloucester
Customer: WSP PB LBH
Attention: George Baggot

Order Number: 70020138-001
Report Number: 369596
Superseded Report: 369556

Received Sample Overview

Lab Sample No(s)	Customer Sample Ref.	AGS Ref.	Depth (m)	Sampled Date
13614016	BH01	D	1.20 - 1.20	17/06/2016
13614020	BH01	D	3.00 - 3.00	17/06/2016
13614022	BH01	B	5.50 - 6.00	17/06/2016
13614024	BH01	D	6.50 - 6.50	17/06/2016
13614026	BH02	D	0.50 - 0.50	17/06/2016
13614030	BH02	U100	2.00 - 2.00	17/06/2016
13614028	BH02	B	2.00 - 2.50	17/06/2016
13614033	BH03	D	0.50 - 0.50	17/06/2016
13614035	BH03	B	1.00 - 1.50	17/06/2016
13614037	BH03	D	1.50 - 1.50	17/06/2016
13614041	BH03	U100	2.00 - 2.45	17/06/2016
13614039	BH03	B	2.00 - 2.50	17/06/2016
13614043	BH03	D	3.00 - 3.00	17/06/2016
13614047	BH03	D	5.00 - 5.00	17/06/2016
13614049	BH04	D	1.20 - 1.20	17/06/2016
13614051	BH04	B	1.50 - 2.00	17/06/2016
13614053	BH05	B	1.00 - 1.50	17/06/2016
13614018	BH05	D	1.50 - 1.50	17/06/2016

Only received samples which have had analysis scheduled will be shown on the following pages.



CERTIFICATE OF ANALYSIS

Validated

SDG: 160617-98
Job: H_WSP_LON-224
Client Reference: 70020138

Location: Tradeteam Site (DHL) Gloucester
Customer: WSP PB LBH
Attention: George Baggot

Order Number: 70020138-001
Report Number: 369596
Superseded Report: 369556

SOLID		Lab Sample No(s)	Customer Sample Reference	AGS Reference	Depth (m)	Container
Results Legend Test No Determination Possible		13614018	BH05	D	1.50 - 1.50	Geolabs container
		13614053	BH05	B	1.00 - 1.50	Geolabs container
		13614051	BH04	B	1.50 - 2.00	Geolabs container
		13614049	BH04	D	1.20 - 1.20	Geolabs container
		13614047	BH03	D	5.00 - 5.00	Geolabs container
		13614043	BH03	D	3.00 - 3.00	Geolabs container
		13614039	BH03	B	2.00 - 2.50	Geolabs container
		13614041	BH03	U100	2.00 - 2.45	Geolabs container
		13614037	BH03	D	1.50 - 1.50	Geolabs container
		13614035	BH03	B	1.00 - 1.50	Geolabs container
		13614033	BH03	D	0.50 - 0.50	Geolabs container
		13614028	BH02	B	2.00 - 2.50	Geolabs container
		13614030	BH02	U100	2.00 - 2.00	Geolabs container
		13614026	BH02	D	0.50 - 0.50	Geolabs container
		13614024	BH01	D	6.50 - 6.50	Geolabs container
		13614022	BH01	B	5.50 - 6.00	Geolabs container
		13614020	BH01	D	3.00 - 3.00	Geolabs container
		13614016	BH01	D	1.20 - 1.20	Geolabs container
Geotechnical Testing*	All	NDPs: 0 Tests: 18		X X X X X X X X X X X X X X X X X X		

SDG: 160617-98
Job: H_WSP_LON-224
Client Reference: 70020138

Location: Tradeteam Site (DHL) Gloucester
Customer: WSP PB LBH
Attention: George Baggot

Order Number: 70020138-001
Report Number: 369596
Superseded Report: 369556

Table of Results - Appendix

Method No	Reference	Description	Wet/Dry Sample ¹	Surrogate Corrected
SUB		Subcontracted Test		

¹ Applies to Solid samples only. DRY indicates samples have been dried at 35°C. NA = not applicable.



SDG: 160617-98
Job: H_WSP_LON-224
Client Reference: 70020138

Location: Tradeteam Site (DHL) Gloucester
Customer: WSP PB LBH
Attention: George Baggot

Order Number: 70020138-001
Report Number: 369596
Superseded Report: 369556

Test Completion Dates

Lab Sample No(s)	13614016	13614020	13614022	13614024	13614026	13614028	13614030	13614033	13614035	13614037
Customer Sample Ref.	BH01	BH01	BH01	BH01	BH02	BH02	BH02	BH03	BH03	BH03
AGS Ref.	D	D	B	D	D	B	U100	D	B	D
Depth	1.20 - 1.20	3.00 - 3.00	5.50 - 6.00	6.50 - 6.50	0.50 - 0.50	2.00 - 2.50	2.00 - 2.00	0.50 - 0.50	1.00 - 1.50	1.50 - 1.50
Type	GEOTECH	GEOTECH	GEOTECH	GEOTECH	GEOTECH	GEOTECH	GEOTECH	GEOTECH	GEOTECH	GEOTECH
Geotechnical Testing*	18-Jul-2016	18-Jul-2016	18-Jul-2016	19-Jul-2016	18-Jul-2016	18-Jul-2016	18-Jul-2016	19-Jul-2016	18-Jul-2016	18-Jul-2016

Lab Sample No(s)	13614039	13614041	13614043	13614047	13614049	13614051	13614018	13614053
Customer Sample Ref.	BH03	BH03	BH03	BH03	BH04	BH04	BH05	BH05
AGS Ref.	B	U100	D	D	D	B	D	B
Depth	2.00 - 2.50	2.00 - 2.45	3.00 - 3.00	5.00 - 5.00	1.20 - 1.20	1.50 - 2.00	1.50 - 1.50	1.00 - 1.50
Type	GEOTECH	GEOTECH	GEOTECH	GEOTECH	GEOTECH	GEOTECH	GEOTECH	GEOTECH
Geotechnical Testing*	18-Jul-2016	19-Jul-2016	19-Jul-2016	18-Jul-2016	18-Jul-2016	18-Jul-2016	19-Jul-2016	18-Jul-2016



Contract Number: 31383

Client's Reference: **SDG 160617-98 P40520**

Report Date: **18-07-2016**

Client **ALcontrol Laboratories**
Hawarden Business Park
Manor Road
Flintshire
CH5 3US

Contract Title: **Tradeteam (DHL) Gloucester**
For the attention of: **Alcontrol GSTL**

Date Received: **21-06-2016**
Date Commenced: **21-06-2016**
Date Completed: **18-07-2016**

Test Description	Qty
Moisture Content - * UKAS	8
Plasticity 4 Point Limit (ALC) - * UKAS	8
PSD-Wet Sieve/Dry Sieve 1377 : 1990 Part 2 : 9.2 - * UKAS	6
Sedimentation - * UKAS	4
One Dimensional consolidation - * UKAS	2
BRE Suite SD1	1
CUD 100mm Consolidated undrained triaxial compression test on a Single Specimen with Multistage Loading with the measurement of pore water pressure including saturation and consolidation, test duration FOUR days. BS1377 : Part 8 : Clause 7 : 1990 - @ Non Accredited Test	1

Notes: Observations and interpretations are outside the UKAS Accreditation
* - denotes test included in laboratory scope of accreditation
- denotes test carried out by approved contractor
@ - denotes non accredited tests

This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.

Approved Signatories:

Alex Wynn (Associate Director) - Benjamin Sharp (Contracts Manager) - Emma Sharp (Office Manager)
Jon Tatam (Administrative/Quality Assistant) - Paul Evans (Quality/Technical Manager) - Vaughan Edwards (Managing Director)



Contract Number: 31383

Test Description	Qty
Extra over items for test duration in excess of four days.	13
Disposal of Samples on Project	1

Notes: Observations and Interpretations are outside the UKAS Accreditation

* - denotes test included in laboratory scope of accreditation

- denotes test carried out by approved contractor

@ - denotes non accredited tests

This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.

Approved Signatories:

Alex Wynn (Associate Director) - Benjamin Sharp (Contracts Manager) - Emma Sharp (Office Manager)

Jon Tatam (Administrative/Quality Assistant) - Paul Evans (Quality/Technical Manager) - Vaughan Edwards (Managing Director)

**Test Report: Method of the Determination of the plastic limit and plasticity index
BS 1377 : Part 2 : 1990 Method 5**

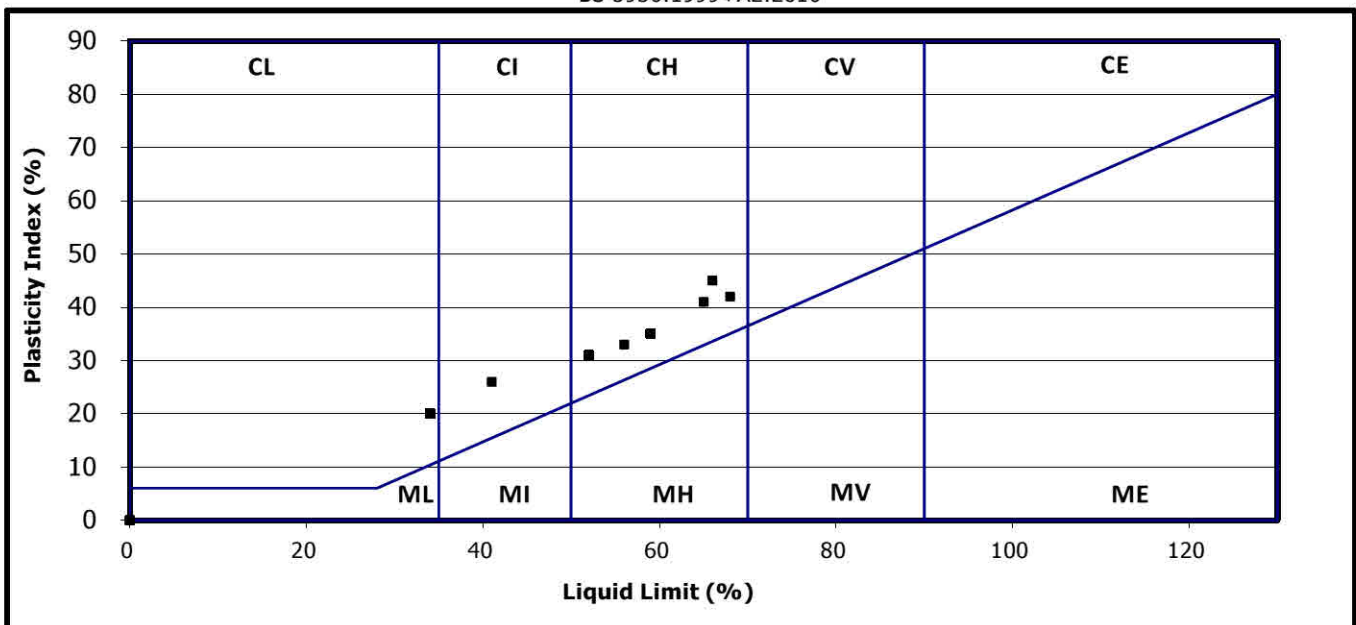
Client ref: SDG 160617-97
Location: Tradeteam
Contract Number: 31383-

Hole/ Sample Number	Sample Type	Depth m	Moisture Content % Cl. 3.2	Liquid Limit % Cl. 4.3/4.4	Plastic Limit % Cl. 5.	Plasticity Index % Cl. 6.	% Passing .425mm	Remarks
BH01	D	1.20	20	41	15	26	73	CI Intermediate Plasticity
BH01	D	6.50	18	56	23	33	100	CH High Plasticity
BH02	D	0.50	22	52	21	31	73	CH High Plasticity
BH03	D	0.50	5.8	34	14	20	86	CL Low Plasticity
BH03	D	3.00	24	66	21	45	100	CH High Plasticity
BH03	D	5.00	21	68	26	42	84	CH High Plasticity
BH04	D	1.20	19	59	24	35	86	CH High Plasticity
BH05	D	1.50	24	65	24	41	83	CH High Plasticity

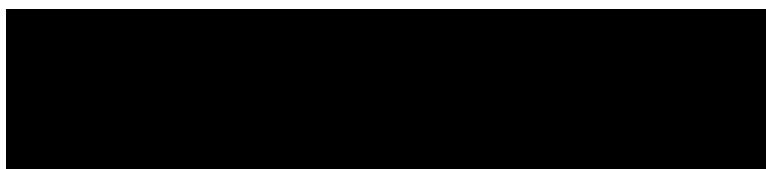
Symbols: NP : Non Plastic # : Liquid Limit and Plastic Limit Wet Sieved

PLASTICITY CHART FOR CASAGRANDE CLASSIFICATION.

BS 5930:1999+A2:2010



For and behalf of GEO Site & Testing Services Ltd



Test Report:

**Particle Size Distribution Test
BS 1377 Part 2:1990.**

Wet Sieve & Pipette Analysis, Clause 9.2 & 9.4

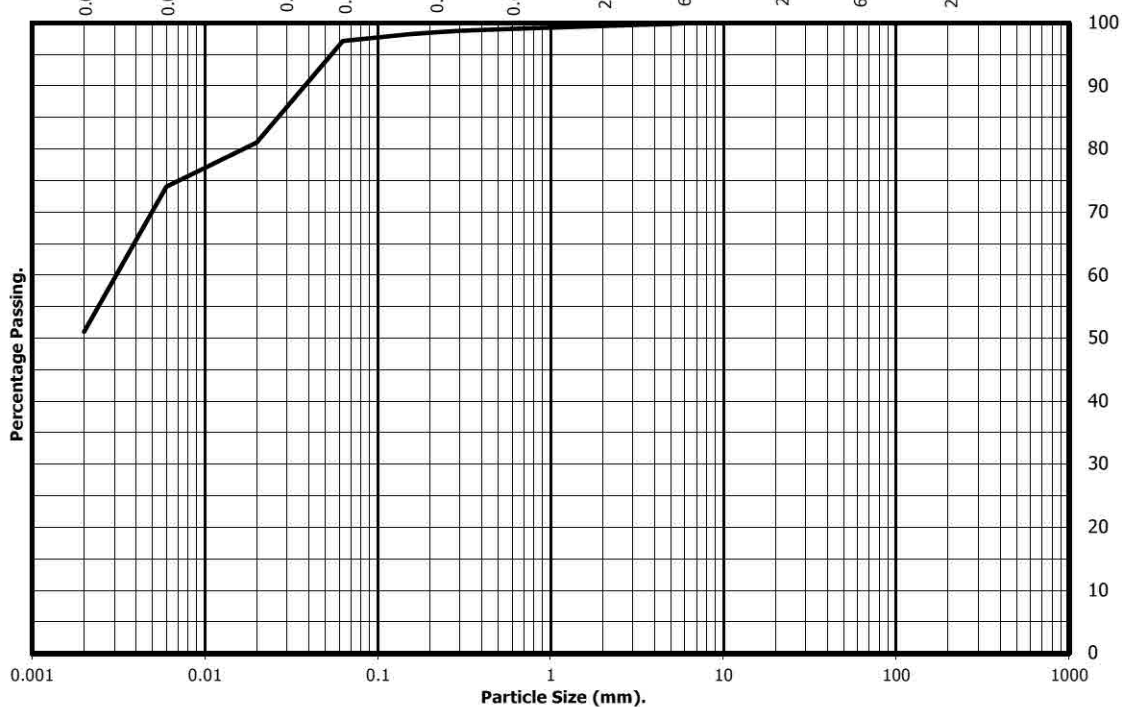
Client ref: SDG 160617-98
Contract Number: 31383-
Hole Number: BH1

Sample Number: N/A
Depth from (m): 5.50
Depth to (m): 6.00
Sample Type: B

Location: Tradeteam
Description: Greyish brown sandy fine to medium silty CLAY.

CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve	% Passing
125	100
90	100
75	100
63	100
50	100
37.5	100
28	100
20	100
14	100
10	100
6.3	100
5.0	100
3.35	100
2.00	100
1.18	99
0.60	99
0.425	99
0.300	99
0.212	98
0.150	98
0.063	97



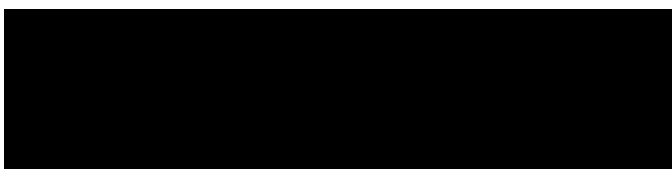
Particle Diameter	% Passing
0.02	81
0.006	74
0.002	51

Clay	Silt	Sand	Gravel	Cobbles	Soil Fraction
51	46	3	0	0	Total Percentage

Remarks:

Cl 9.4.8 - Sample has not been pretreated

For and behalf of GEO Site & Testing Services Ltd



Test Report:

**Particle Size Distribution Test
BS 1377 Part 2:1990.**

Wet Sieve & Pipette Analysis, Clause 9.2 & 9.4

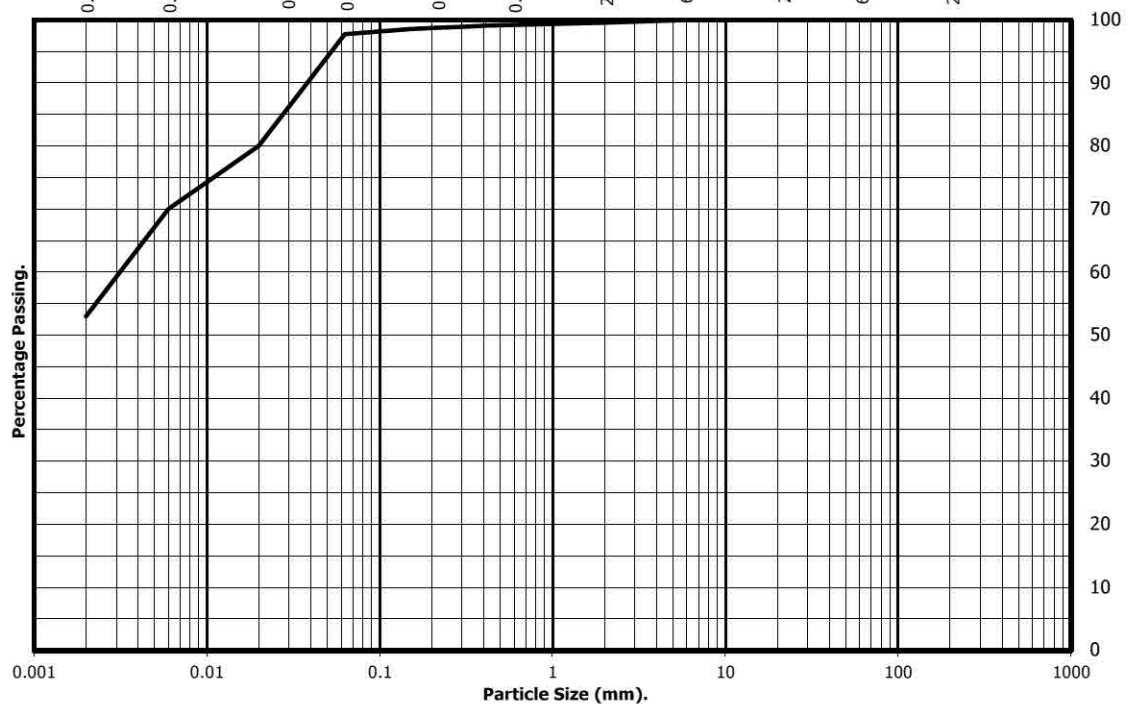
Client ref: SDG 160617-98
Contract Number: 31383-
Hole Number: BH2

Sample Number: N/A
Depth from (m): 2.00
Depth to (m): 2.50
Sample Type: B

Location: Tradeteam
Description: Greyish brown sandy fine to medium silty CLAY.

CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve	% Passing
125	100
90	100
75	100
63	100
50	100
37.5	100
28	100
20	100
14	100
10	100
6.3	100
5.0	100
3.35	100
2.00	100
1.18	99
0.60	99
0.425	99
0.300	99
0.212	99
0.150	99
0.063	98



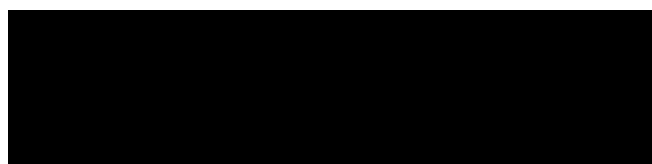
Particle Diameter	% Passing
0.02	80
0.006	70
0.002	53

Clay	Silt	Sand	Gravel	Cobbles	Soil Fraction
53	45	2	0	0	Total Percentage

Remarks:

Cl 9.4.8 - Sample has not been pretreated

For and behalf of GEO Site & Testing Services Ltd



Test Report:

Particle Size Distribution Test

BS 1377 Part 2:1990.

Wet Sieve, Clause 9.2

Client ref: **SDG 160617-98**
 Contract Number: **31383-**
 Hole Number: **BH3**

Sample Number: **N/A**
 Depth from (m): **1.00**
 Depth to (m): **1.50**
 Sample Type: **B**

Location: **Tradeteam**
 Description: **Brown gravelly sandy fine to medium silty CLAY.**

CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve	% Passing
125	100
90	100
75	100
63	100
50	100
37.5	100
28	100
20	100
14	100
10	99
6.3	98
5.0	97
3.35	96
2.00	94
1.18	92
0.60	89
0.425	87
0.300	80
0.212	74
0.150	72
0.063	70



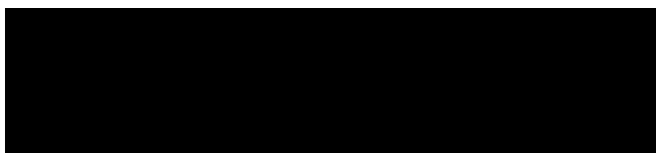
Particle Diameter	% Passing
0.02	#
0.006	#
0.002	#

	Silt and Clay	Sand	Gravel	Cobbles	Soil Fraction
	70	24	6	0	Total Percentage

Remarks:

- not determined

For and behalf of GEO Site & Testing Services Ltd



Test Report:

**Particle Size Distribution Test
BS 1377 Part 2:1990.**

Wet Sieve & Pipette Analysis, Clause 9.2 & 9.4

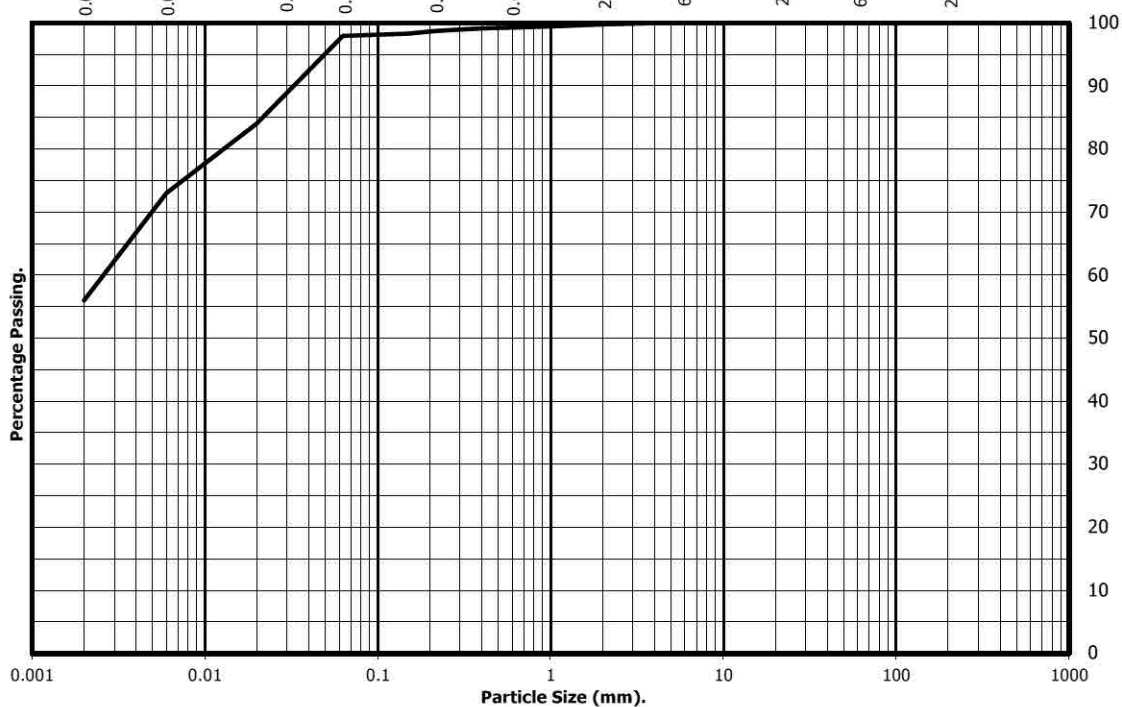
Client ref: SDG 160617-98
Contract Number: 31383-
Hole Number: BH3

Sample Number: N/A
Depth from (m): 2.00
Depth to (m): 2.50
Sample Type: B

Location: Tradeteam
Description: Greyish brown sandy fine to medium silty CLAY.

CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve	% Passing
125	100
90	100
75	100
63	100
50	100
37.5	100
28	100
20	100
14	100
10	100
6.3	100
5.0	100
3.35	100
2.00	100
1.18	100
0.60	99
0.425	99
0.300	99
0.212	99
0.150	98
0.063	98



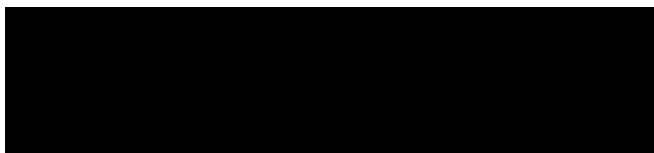
Particle Diameter	% Passing
0.02	84
0.006	73
0.002	56

Clay	Silt	Sand	Gravel	Cobbles	Soil Fraction
56	42	2	0	0	Total Percentage

Remarks:

Cl 9.4.8 - Sample has not been pretreated

For and behalf of GEO Site & Testing Services Ltd



Test Report:

**Particle Size Distribution Test
BS 1377 Part 2:1990.**

Wet Sieve, Clause 9.2

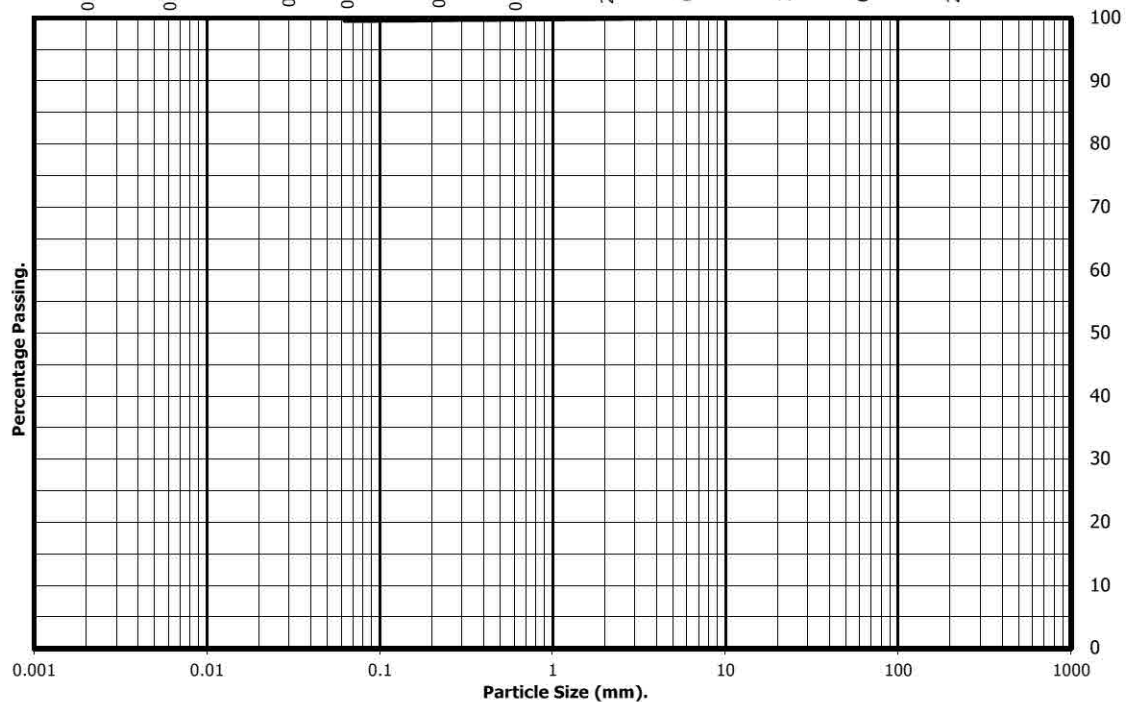
Client ref: SDG 160617-98
Contract Number: 31383-
Hole Number: BH4

Sample Number: N/A
Depth from (m): 1.50
Depth to (m): 2.00
Sample Type: B

Location: Tradeteam
Description: Brown fine to medium silty CLAY.

CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve	% Passing
125	100
90	100
75	100
63	100
50	100
37.5	100
28	100
20	100
14	100
10	100
6.3	100
5.0	100
3.35	100
2.00	100
1.18	100
0.60	100
0.425	100
0.300	100
0.212	100
0.150	100
0.063	100



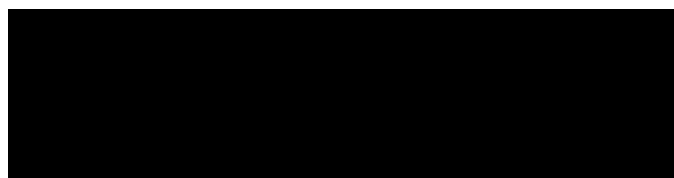
Particle Diameter	% Passing
0.02	#
0.006	#
0.002	#

	Silt and Clay	Sand	Gravel	Cobbles	Soil Fraction
	100	0	0	0	Total Percentage

Remarks:

- not determined

For and behalf of GEO Site & Testing Services Ltd



Test Report:

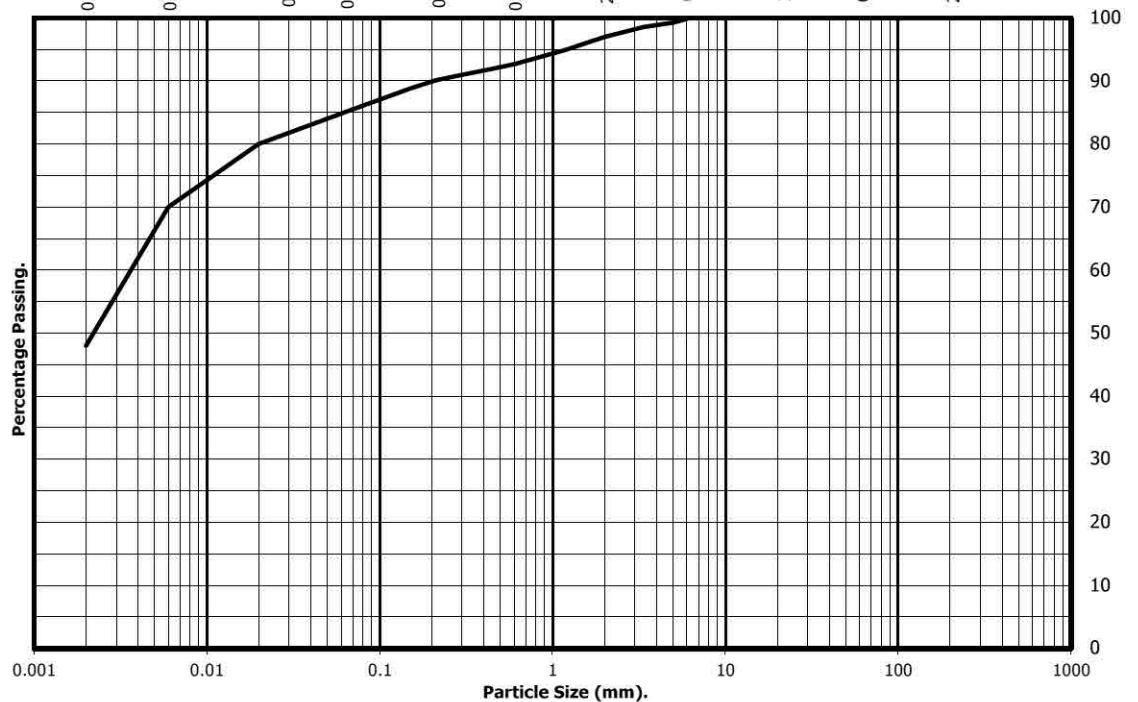
**Particle Size Distribution Test
BS 1377 Part 2:1990.**

Wet Sieve & Pipette Analysis, Clause 9.2 & 9.4

Client ref: **SDG 160617-98** Sample Number: **N/A**
 Contract Number: **31383-** Depth from (m): **1.00**
 Hole Number: **BH5** Depth to (m): **1.50**
 Location: **Tradeteam** Sample Type: **B**
 Description: **Brown gravelly sandy fine to medium silty CLAY.**

CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve	% Passing
125	100
90	100
75	100
63	100
50	100
37.5	100
28	100
20	100
14	100
10	100
6.3	100
5.0	99
3.35	99
2.00	97
1.18	95
0.60	93
0.425	92
0.300	91
0.212	90
0.150	89
0.063	85



Particle Diameter	% Passing
0.02	80
0.006	70
0.002	48

Clay	Silt	Sand	Gravel	Cobbles	Soil Fraction
48	37	12	3	0	Total Percentage

Remarks:

Cl 9.4.8 - Sample has not been pretreated

For and behalf of GEO Site & Testing Services Ltd





Unit 4
Heol Aur
Dafen Ind EstateDafen
Carmarthenshire
SA14 8QN
Tel: 01554 784040
01554 750752
Fax: 01554 770529
01554 784041
Web: www.geo.uk.com

Certificate of Analysis

Date: 24-06-16

Client: Alcontrol

Our Reference: 31383-

Client Reference: 160617-98

Contract Title: Tradeteam

Description: (Total Samples) 1

Date Received: 00-01-00

Date Started: 22-06-16

Date Completed: 24-06-16

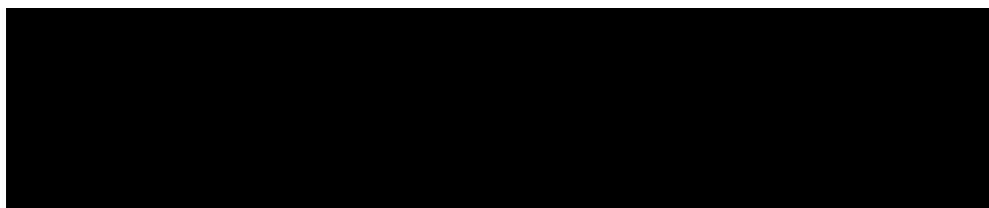
Test Procedures: (BRE BR 279)

Notes:

Solid samples will be disposed 1 month and liquids 2 weeks
after the date of issue of this test certificate

Approved By:

Authorised Signatories:

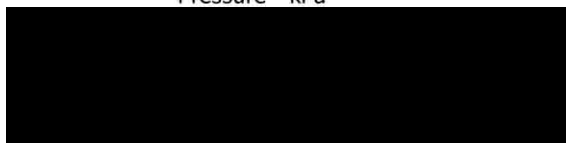
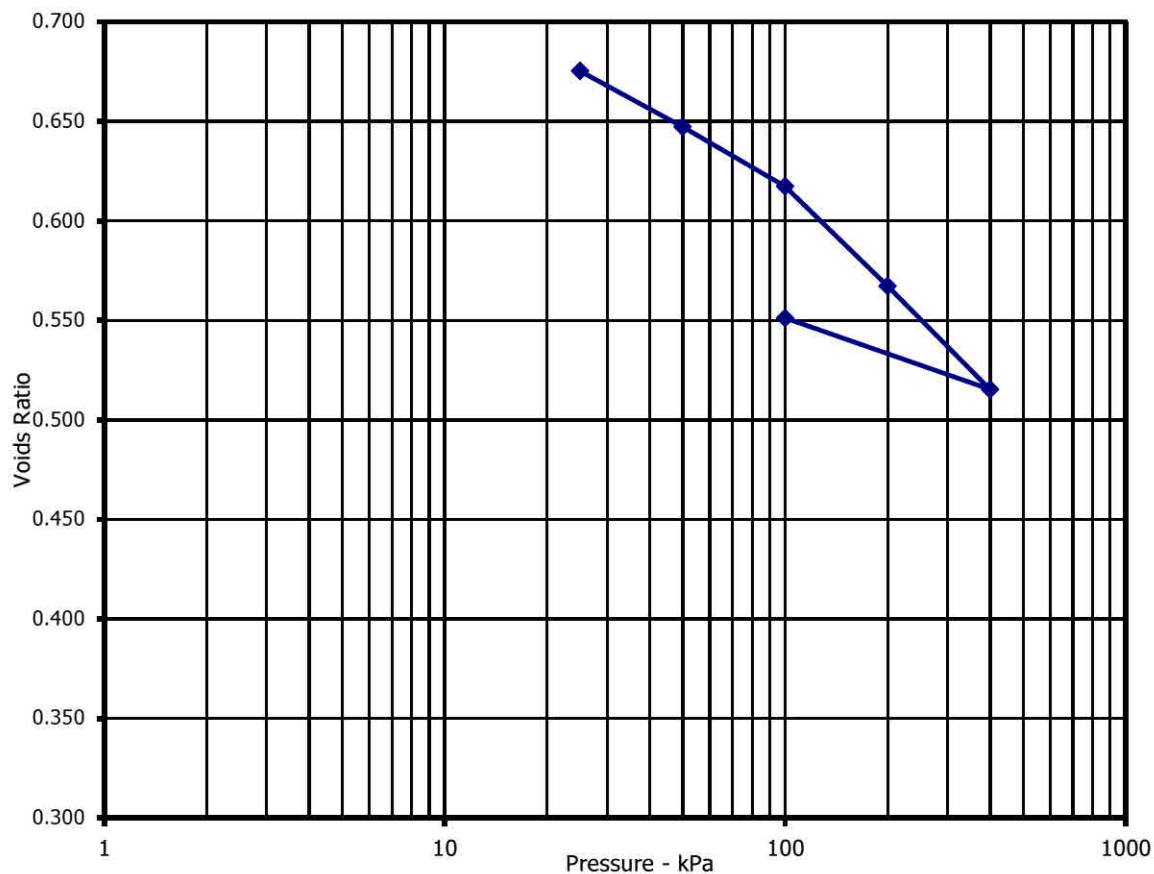


Test Report: ONE DIMENSIONAL CONSOLIDATION

BS1377: Part 5: 1990

Client ref: **SDG 160617-98**
 Location: **Tradeteam**
 Contract Number: **31383-**
 Hole/Sample Number: **BH2**
 Depth (m) : **2.00 - N/A**
 Sample Type: **UT**

Initial Conditions		Pressure Range	Mv	Cv	Method of time fitting used
Moisture Content (%):	24	kPa	m2/MN	m2/yr	Cv Calculated using t90
Bulk Density (Mg/m3):	1.94	0 - 25	0.48	18.08	Nominal Laboratory Temperature
Dry Density (Mg/m3):	1.56	25 - 50	0.67	6.72	20'C
Voids Ratio:	0.696	50 - 100	0.36	6.86	Location of specimen with sample
Degree of saturation:	91.6	100 - 200	0.31	4.33	top
Height (mm):	19.85	200 - 400	0.17	5.14	Remarks:
Diameter (mm)	75.04	400 - 100	0.08	3.74	
Particle Density (Mg/m3)	2.65				
Assumed					



Date approved: 11-07-16

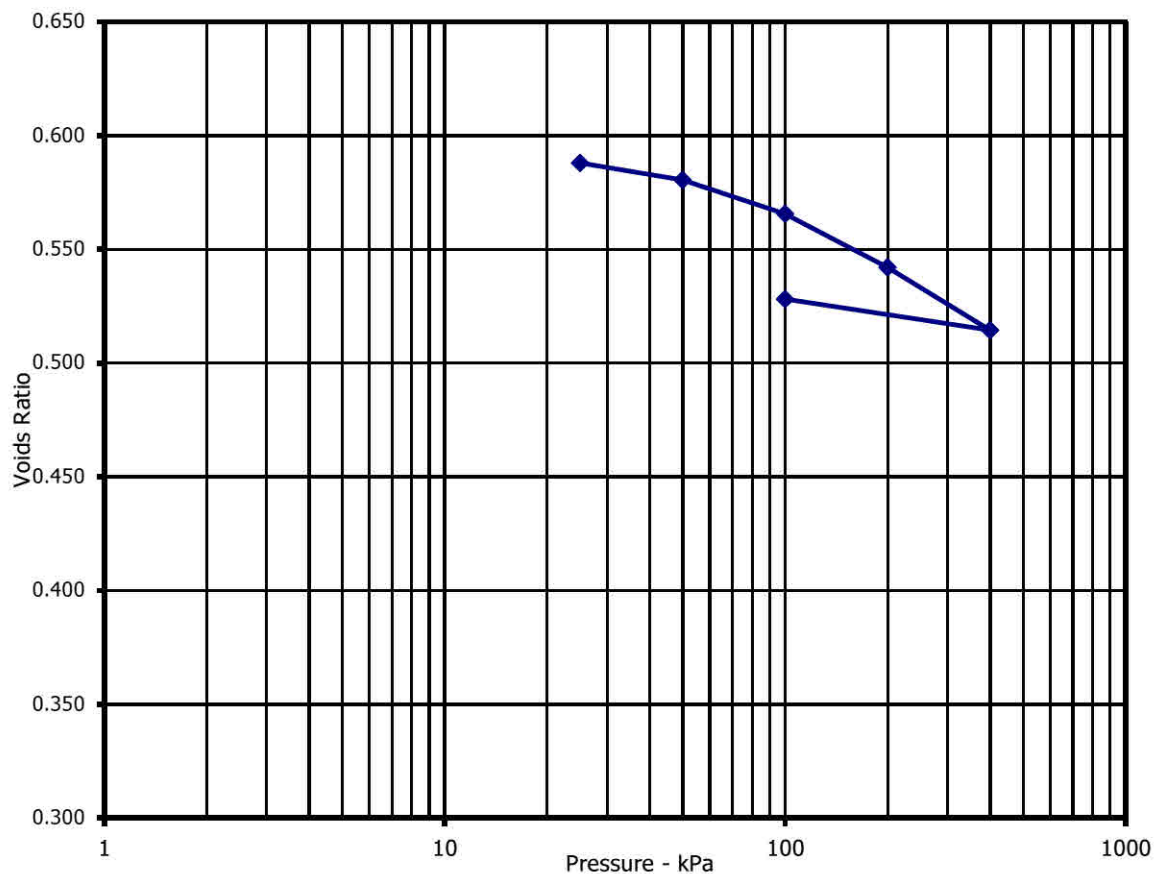


Test Report: ONE DIMENSIONAL CONSOLIDATION

BS1377: Part 5: 1990

Client ref: **SDG 160617-98**
 Location: **Tradeteam**
 Contract Number: **31383-**
 Hole/Sample Number: **BH3**
 Depth (m) : **1.50 - N/A**
 Sample Type: **UT**

Initial Conditions		Pressure Range	Mv	Cv	Method of time fitting used
Moisture Content (%):	22	kPa	m2/MN	m2/yr	Cv Calculated using t90
Bulk Density (Mg/m3):	2.04	0 - 25	0.01	18.15	Nominal Laboratory Temperature
Dry Density (Mg/m3):	1.67	25 - 50	0.19	3.45	20'C
Voids Ratio:	0.588	50 - 100	0.19	10.75	Location of specimen with sample
Degree of saturation:	100.4	100 - 200	0.15	4.67	top
Height (mm):	19.77	200 - 400	0.09	10.14	Remarks:
Diameter (mm)	75.02	400 - 100	0.03	4.16	
Particle Density (Mg/m3)	2.65				
Assumed					



Date approved: 11-07-16



Consolidated Undrained Triaxial Compression Test

BS 1377 : Part 8 : 1990

Specimen Details

Borehole		BH3
Sample No.		
Depth	from(m)	2.00
Depth	to(m)	2.45
Date		18-07-16
Disturbed / Undisturbed		Undisturbed

Description of Specimen

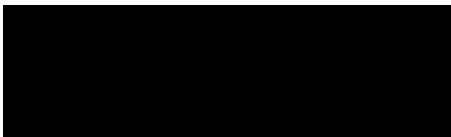
Greyish Brown slightly silty CLAY

Initial Specimen Conditions

Height	mm	205.00
Diameter	mm	103.00
Area	mm ²	8332.29
Volume	cm ³	1708.12
Mass	g	3431.30
Dry Mass	g	3060.30
Density	Mg/m ³	2.01
Dry Density	Mg/m ³	1.79
Moisture Content	%	12
Specific Gravity	kN/m ³	2.65
	(assumed/measured)	assumed

Final Specimen Conditions

Moisture Content	%	10
Density	Mg/m ³	2.18
Dry Density	Mg/m ³	1.99



19-07-16
Date

Client Ref
160617-98

Contract No

31383

Tradeteam

GSTL
GEO SITE & TESTING SERVICES LTD

Consolidated Undrained Triaxial Compression Test

BS 1377 : Part 8 : 1990

Specimen Details

Borehole		BH3
Sample No.		
Depth	from(m)	2.00
Depth	to(m)	2.45

Test Setup

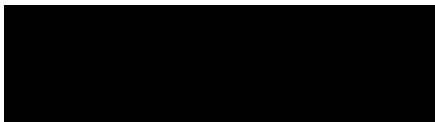
Date started		25-06-16
Date Finished		18-07-16
Top Drain Used		y
Base Drain Used		y
Side Drains Used		y
Pressure System Number		P4
Cell Number		C4

Saturation

Cell Pressure Incr.	kPa	100.00
Back Pressure Incr.	kPa	95.00
Differential Pressure	kPa	5.00
Final Cell Pressure	kPa	700.00
Final Pore Pressure	kPa	690.00
Final B Value		0.97

Consolidation

Effective Pressure	kPa	200.00	400.00	
Cell Pressure	kPa	700.00	700.00	
Back Pressure	kPa	500.00	300.00	
Excess Pore Pressure	kPa	190.00	256.00	
Pore Pressure at End	kPa	500.00	300.00	
Consolidated Volume	cm ³	1602.02	1551.02	
Consolidated Height	mm	200.76	206.20	
Consolidated Area	mm ²	7987.25	7523.72	
Vol. Compressibility	m ² /MN	0.12423	0.10612	
Consolidation Coef.	m ² /yr.	0.15497	0.04377	



19-07-16
Date

Client Ref

160617-98

Contract No

31383

Tradeteam



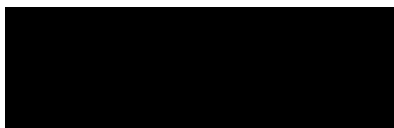
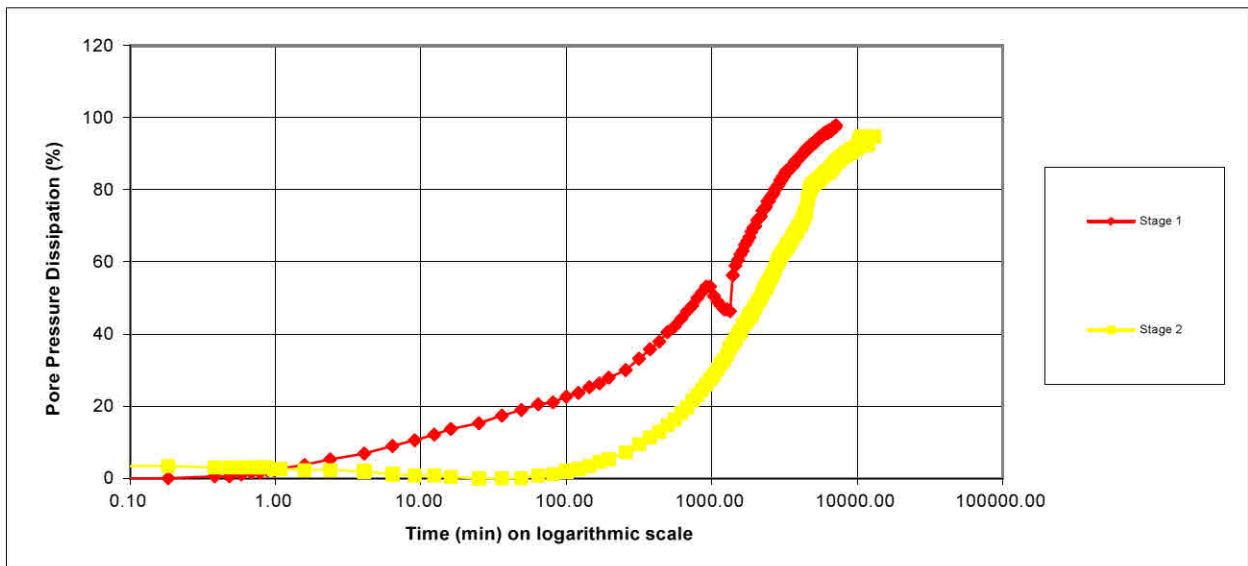
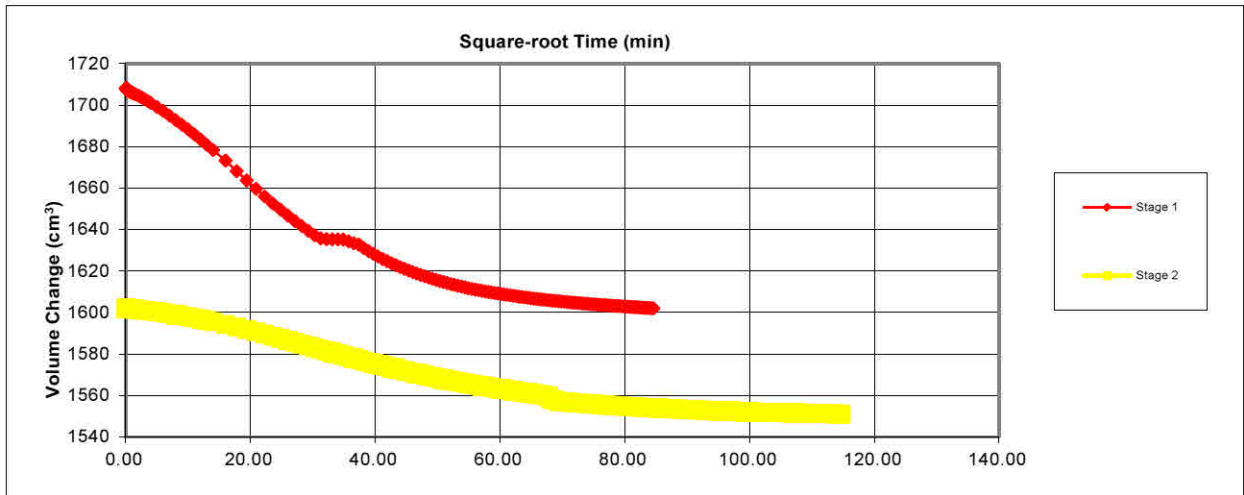
Consolidated Undrained Triaxial Compression Test

BS 1377 : Part 8 : 1990

Specimen Details

Borehole		BH3
Sample No.		
Depth	from(m)	2.00
Depth	to(m)	2.45

Consolidation Stage



19-07-16
Date

Client Ref
160617-98

Contract No

31383

Tradeteam



Consolidated Undrained Triaxial Compression Test

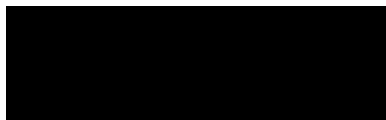
BS 1377 : Part 8 : 1990

Specimen Details

Borehole		BH3
Sample No.		
Depth	from(m)	2.00
Depth	to(m)	2.45

Shearing

Initial Cell Pressure	kPa	700	700	
Initial Pore Pressure	kPa	500	300	
Rate of Strain	mm/min	0.0031	0.0009	
Max Deviator Stress				
Axial Strain		4.458	6.973	
Axial Stress	kPa	218.422	438.45	
Cor. Deviator stress	kPa	215.437	432.22	
Effective Major Stress	kPa	310.437	625.22	
Effective Minor Stress	kPa	96.000	193.00	
Effective Stress Ratio		3.234	3.239	
s'	kPa	203.219	409.11	
t'	kPa	107.219	216.11	
Max Effective Principle Stress Ratio				
Axial Strain		4.458	7.909	
Axial Stress	kPa	218.422	447.775	
Cor. Deviator stress	kPa	214.437	428.444	
Effective Major Stress	kPa	310.437	615.444	
Effective Minor Stress	kPa	96.000	187.000	
Effective Stress Ratio		3.234	3.291	
s'	kPa	203.219	401.222	
t'	kPa	107.219	214.222	
Shear Resistance Angle	degs	33.0		
Cohesion c'	kPa	-3		



19-07-16
Date

Client Ref

160617-98

Contract No

31383

Tradeteam

GSTL
GEO SITE & TESTING SERVICES LTD

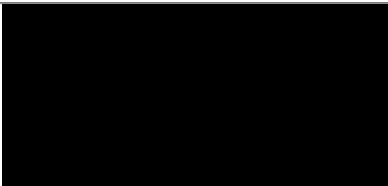
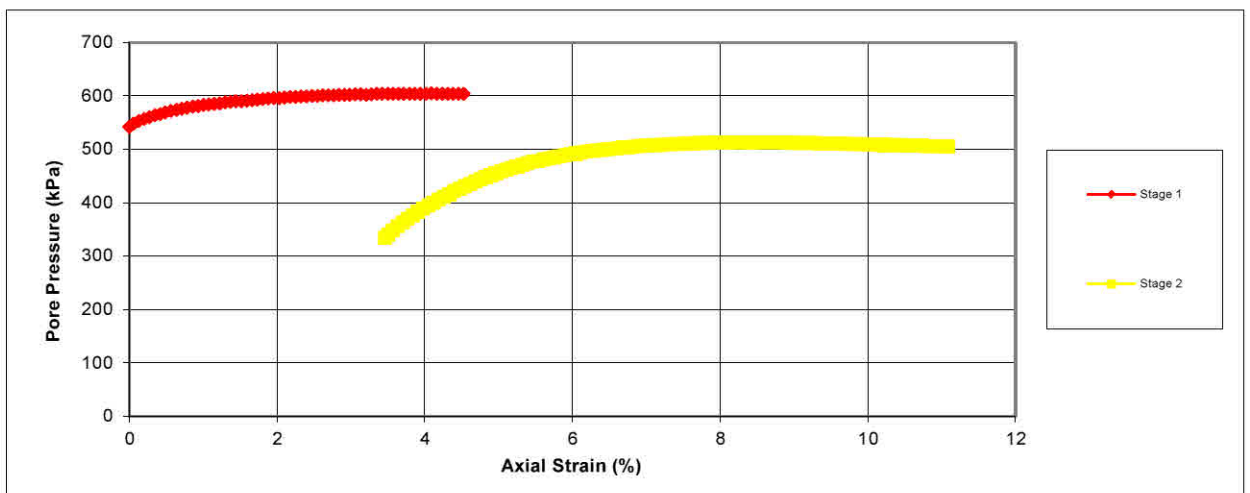
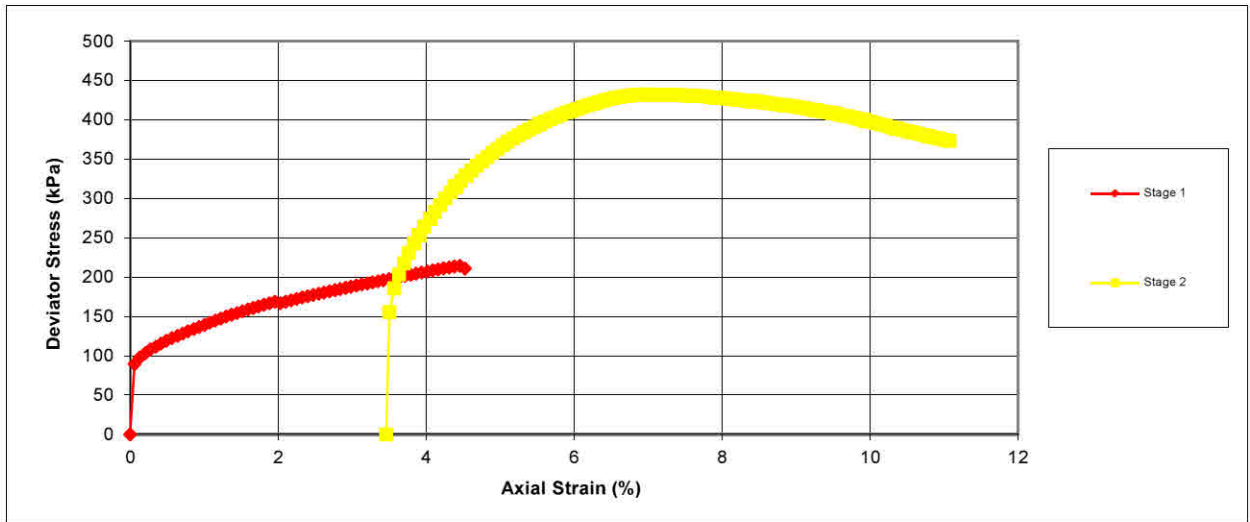
Consolidated Undrained Triaxial Compression Test

BS 1377 : Part 8 : 1990

Specimen Details

Borehole		BH3
Sample No.		
Depth	from(m)	2.00
Depth	to(m)	2.45

Shearing Stage



19-07-16
Date

Client Ref
160617-98

Contract No
31383

Tradeteam

GSTL
GEO SITE & TESTING SERVICES LTD

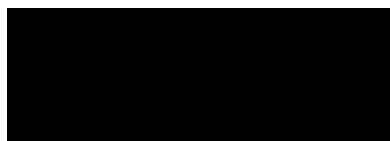
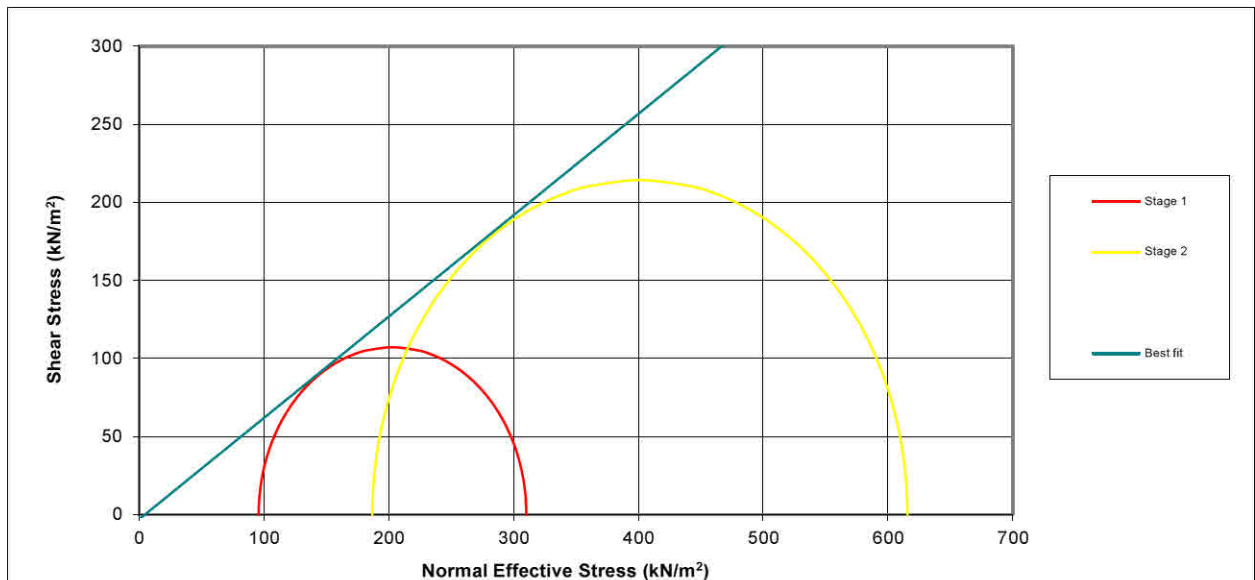
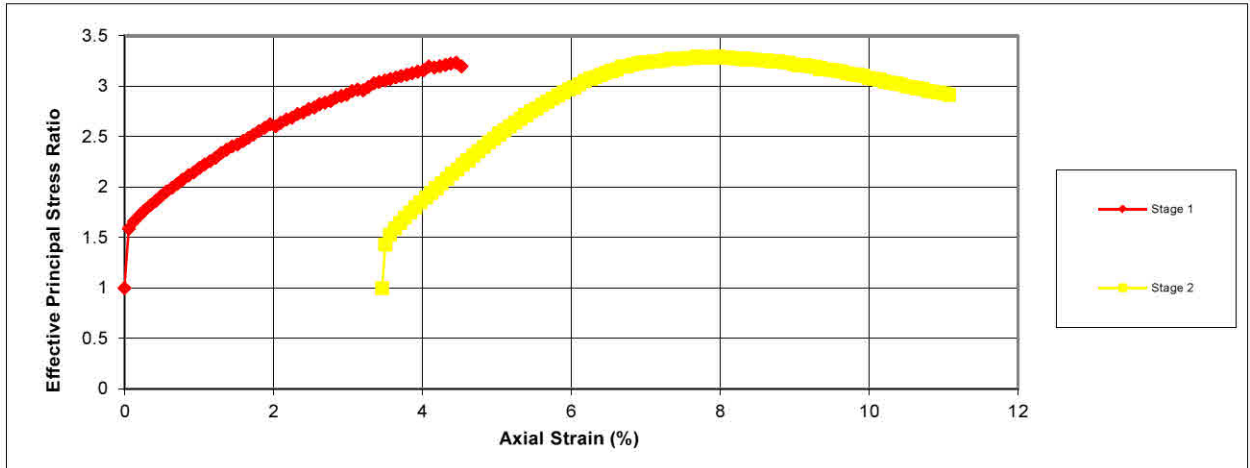
Consolidated Undrained Triaxial Compression Test

BS 1377 : Part 8 : 1990

Specimen Details

Borehole		BH3
Sample No.		
Depth	from(m)	2.00
Depth	to(m)	2.45

Shearing Stage



19-07-16
Date

Client Ref
160617-98

Contract No

31383

Tradeteam

GSTL
GEO SITE & TESTING SERVICES LTD

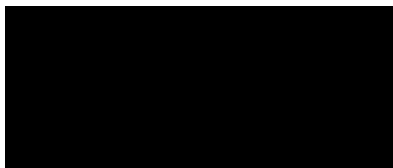
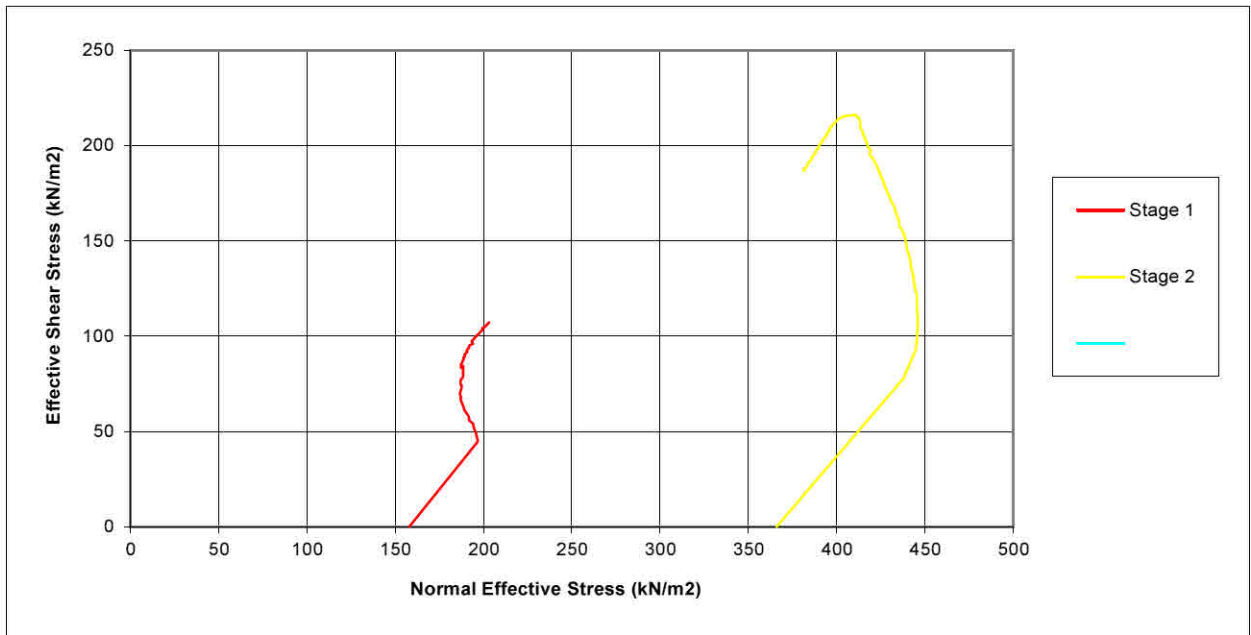
Consolidated Undrained Triaxial Compression Test

BS 1377 : Part 8 : 1990

Specimen Details

Borehole		BH3
Sample No.		
Depth	from(m)	2.00
Depth	to(m)	2.45

Shearing Stage



19-07-16
Date

Client Ref

160617-98

Contract No

31383

Tradeteam

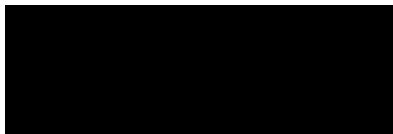
GSTL
GEO SITE & TESTING SERVICES LTD

Consolidated Undrained Triaxial Compression Test

BS 1377 : Part 8 : 1990

Specimen Details

Borehole		BH3
Sample No.		
Depth	from(m)	2.00
Depth	to(m)	2.45



19-07-16
Date

Client Ref
160617-98

Tradeteam

Contract No

31383



SDG: 160617-98
Job: H_WSP_LON-224
Client Reference: 70020138

Location: Tradetean Site (DHL) Gloucester
Customer: WSP PB LBH
Attention: George Baggot

Order Number: 70020138-001
Report Number: 369596
Superseded Report: 369556

Appendix

1. Results are expressed on a dry weight basis (dried at 35°C) for all soil analyses except for the following: NRA and CEN Leach tests, flash point LOI, pH, ammonium as NH₄ by the BRE method, VOC TICs and SVOC TICs.

2. Samples will be run in duplicate upon request, but an additional charge may be incurred

3. If sufficient sample is received a sub sample will be retained free of charge for 30 days after analysis is completed (e-mailed) for all sample types unless the sample is destroyed on testing. The prepared soil sub sample that is analysed for asbestos will be retained for a period of 6 months after the analysis date. All bulk samples will be retained for a period of 6 months after the analysis date. All samples received and not scheduled will be disposed of one month after the date of receipt unless we are instructed to the contrary. Once the initial period has expired, a storage charge will be applied for each month or part thereof until the client cancels the request for sample storage. ALcontrol Laboratories reserve the right to charge for samples received and stored but not analysed.

4. With respect to turnaround, we will always endeavour to meet client requirements wherever possible, but turnaround times cannot be absolutely guaranteed due to so many variables beyond our control.

5. We take responsibility for any test performed by sub-contractors (marked with an asterisk). We endeavour to use UKAS/MCERTS Accredited Laboratories, who either complete a quality questionnaire or are audited by ourselves. For some determinands there are no UKAS/MCERTS Accredited Laboratories, in this instance a laboratory with a known track record will be utilised.

6. When requested, the individual sub sample scheduled will be analysed in house for the presence of asbestos fibres and asbestos containing material by our documented in house method TM048 based on HSG 248 (2005), which is accredited to ISO17025. If a specific asbestos fibre type is not found this will be reported as "Not detected". If no asbestos fibre types are found all will be reported as "Not detected" and the sub sample analysed deemed to be clear of asbestos. If an asbestos fibre type is found it will be reported as detected (for each fibre type found). Testing can be carried out on asbestos positive samples, but, due to Health and Safety considerations, may be replaced by alternative tests or reported as No Determination Possible (NDP). The quantity of asbestos present is not determined unless specifically requested.

7. If no separate volatile sample is supplied by the client, or if a headspace or sediment is present in the volatile sample, the integrity of the data may be compromised. This will be flagged up as an invalid VOC on the test schedule and the result marked as deviating on the test certificate.

8. If appropriate preserved bottles are not received preservation will take place on receipt. However, the integrity of the data may be compromised.

9. NDP - No determination possible due to insufficient/unsuitable sample.

10. Metals in water are performed on a filtered sample, and therefore represent dissolved metals - total metals must be requested separately.

11. Results relate only to the items tested.

12. LoDs (Limit of Detection) for wet tests reported on a dry weight basis are not corrected for moisture content.

13. **Surrogate recoveries** - Surrogates are added to your sample to monitor recovery of the test requested. A % recovery is reported, results are not corrected for the recovery measured. Typical recoveries for organics tests are 70-130%, they are generally wider for volatiles analysis, 50-150%. Recoveries in soils are affected by organic rich or clay rich matrices. Waters can be affected by remediation fluids or high amounts of sediment. Test results are only ever reported if all of the associated quality checks pass; it is assumed that all recoveries outside of the values above are due to matrix affect.

14. **Product analyses** - Organic analyses on products can only be semi-quantitative due to the matrix effects and high dilution factors employed.

15. Phenols monohydric by HPLC include phenol, cresols (2-Methylphenol, 3-Methylphenol and 4-Methylphenol) and Xylenols (2,3 Dimethylphenol, 2,4 Dimethylphenol, 2,5 Dimethylphenol, 2,6 Dimethylphenol, 3,4 Dimethylphenol, 3,5 Dimethylphenol).

16. Total of 5 speciated phenols by HPLC includes Phenol, 2,3,5-Trimethyl Phenol, 2-Isopropylphenol, Cresols and Xylenols (as detailed in 15).

17. Stones/debris are not routinely removed. We always endeavour to take a representative sub sample from the received sample.

18. In certain circumstances the method detection limit may be elevated due to the sample being outside the calibration range. Other factors that may contribute to this include possible interferences. In both cases the sample would be diluted which would cause the method detection limit to be raised.

19. Mercury results quoted on soils will not include volatile mercury as the analysis is performed on a dried and crushed sample.

General

20. For the BSEN 12457-3 two batch process to allow the cumulative release to be calculated, the volume of the leachate produced is measured and filtered for all tests. We therefore cannot carry out any unfiltered analysis. The tests affected include volatiles GCFID/GCMS and all subcontracted analysis.

21. For leachate preparations other than Zero Headspace Extraction (ZHE) volatile loss may occur.

22. We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials - whether these are derived from naturally occurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample. Other coarse granular material such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

23. Analysis and identification of specific compounds using GCFID is by retention time only, and we routinely calibrate and quantify for benzene, toluene, ethylbenzenes and xylenes (BTEX). For total volatiles in the C5-C12 range, the total area of the chromatogram is integrated and expressed as ug/kg or ug/l. Although this analysis is commonly used for the quantification of gasoline range organics (GRO), the system will also detect other compounds such as chlorinated solvents, and this may lead to a falsely high result with respect to hydrocarbons only. It is not possible to specifically identify these non-hydrocarbons, as standards are not routinely run for any other compounds, and for more definitive identification, volatiles by GCMS should be utilised.

24. **Tentatively Identified Compounds (TICs)** are non-target peaks in VOC and SVOC analysis. All non-target peaks detected with a concentration above the LoD are subjected to a mass spectral library search. Non-target peaks with a library search confidence of >75% are reported based on the best mass spectral library match. When a non-target peak with a library search confidence of <75% is detected it is reported as "mixed hydrocarbons". Non-target compounds identified from the scan data are semi-quantified relative to one of the deuterated internal standards, under the same chromatographic conditions as the target compounds. This result is reported as a semi-quantitative value and reported as Tentatively Identified Compounds (TICs). TICs are outside the scope of UKAS accreditation and are not moisture corrected.

Sample Deviations

1	Container with Headspace provided for volatiles analysis
2	Incorrect container received
3	Deviation from method
4	Holding time exceeded before sample received
5	Samples exceeded holding time before preservation was performed
\$	Sampled on date not provided
♦	Sample holding time exceeded in laboratory
@	Sample holding time exceeded due to sampled on date
&	Sample Holding Time exceeded - Late arrival of instructions.

Asbestos

Identification of Asbestos in Bulk Materials & Soils

The results for identification of asbestos in bulk materials are obtained from supplied bulk materials which have been examined to determine the presence of asbestos fibres using ALcontrol Laboratories (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining, based on HSG 248 (2005).

The results for identification of asbestos in soils are obtained from a homogenised sub sample which has been examined to determine the presence of asbestos fibres using ALcontrol Laboratories (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining, based on HSG 248 (2005).

Asbestos Type	Common Name
Chrysotile	White Asbestos
Amosite	Brown Asbestos
Crocidolite	Blue Asbestos
Fibrous Actinolite	-
Fibrous Anthophyllite	-
Fibrous Tremolite	-

Visual Estimation Of Fibre Content

Estimation of fibre content is not permitted as part of our UKAS accredited test other than: - Trace - Where only one or two asbestos fibres were identified.

Further guidance on typical asbestos fibre content of manufactured products can be found in HSG 264.

The identification of asbestos containing materials and soils falls within our schedule of tests for which we hold UKAS accreditation, however opinions, interpretations and all other information contained in the report are outside the scope of UKAS accreditation.



Unit 7-8 Hawarden Business Park
Manor Road (off Manor Lane)
Hawarden
Deeside
CH5 3US

Website: www.alsenvironmental.co.uk

WSP PB LBH
WSP PB
4th Floor
6 Devonshire Square
London
EC2M 4YE

Attention: George Baggot

CERTIFICATE OF ANALYSIS

Date: 13 April 2018
Customer: H_WSP_LON
Sample Delivery Group (SDG): 180302-66
Your Reference: 70020138
Location: Tradeteam Site (DHL) Gloucester
Report No: 451633

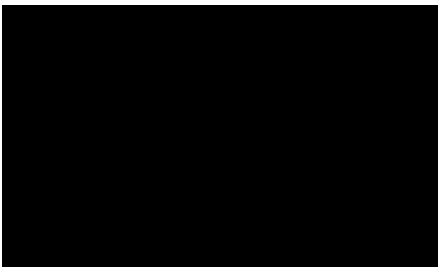
This report has been revised and directly supersedes 451021 in its entirety.

We received 93 samples on Friday March 02, 2018 and 30 of these samples were scheduled for analysis which was completed on Friday April 13, 2018. Accredited laboratory tests are defined within the report, but opinions, interpretations and on-site data expressed herein are outside the scope of ISO 17025 accreditation.

Should this report require incorporation into client reports, it must be used in its entirety and not simply with the data sections alone.

Chemical testing (unless subcontracted) performed at ALS Life Sciences Ltd Hawarden (Method codes TM) or ALS Life Sciences Ltd Aberdeen (Method codes S).

Approved By:





CERTIFICATE OF ANALYSIS

Validated

SDG: 180302-66
Location: Tradetean Site (DHL) Glouc

Client Reference: 70020138
Order Number: 70020138-006

Report Number: 451633
Superseded Report: 451021

Received Sample Overview

Lab Sample No(s)	Customer Sample Ref.	AGS Ref.	Depth (m)	Sampled Date
17149875	BH101	B	0.50 - 0.50	14/02/2018
17149885	BH101	D	1.50 - 1.50	14/02/2018
17149916	BH101	D	2.50 - 2.50	14/02/2018
17149943	BH101	D	3.50 - 3.50	14/02/2018
17149981	BH101	D	4.50 - 4.50	14/02/2018
17150014	BH101	D	5.00 - 5.00	14/02/2018
17150042	BH101	D	6.00 - 6.45	14/02/2018
17150072	BH101	D	6.50 - 6.50	14/02/2018
17150103	BH101	D	7.50 - 7.50	14/02/2018
17149908	BH101	D	8.00 - 8.45	14/02/2018
17149959	BH102	D	0.60 - 0.60	14/02/2018
17149932	BH102	B	0.60 - 0.60	14/02/2018
17149997	BH102	D	1.20 - 1.20	14/02/2018
17150024	BH102	U100	1.50 - 1.95	14/02/2018
17150049	BH102	D	2.50 - 2.50	14/02/2018
17150079	BH102	D	2.60 - 2.60	14/02/2018
17150105	BH102	U100	3.00 - 3.45	14/02/2018
17149878	BH102	D	3.50 - 3.50	14/02/2018
17149889	BH102	D	4.00 - 4.00	14/02/2018
17149882	BH102	D	4.00 - 4.45	14/02/2018
17149892	BH102	D	4.50 - 4.50	14/02/2018
17149895	BH102	U100	5.00 - 5.45	14/02/2018
17149898	BH102	D	5.50 - 5.50	14/02/2018
17149901	BH102	D	6.50 - 6.50	14/02/2018
17149903	BH102	D	7.50 - 7.50	14/02/2018
17149906	BH102	D	8.00 - 8.00	14/02/2018
17149912	BH103	D	0.50 - 0.50	14/02/2018
17149910	BH103	B	0.50 - 1.00	14/02/2018
17149914	BH103	D	1.00 - 1.00	14/02/2018
17149918	BH103	D	1.20 - 1.20	14/02/2018
17149920	BH103	D	1.80 - 1.80	14/02/2018
17149923	BH103	U100	2.00 - 2.45	14/02/2018
17149926	BH103	D	3.00 - 3.00	14/02/2018
17149928	BH103	D	3.50 - 3.50	14/02/2018
17149930	BH103	U100	4.00 - 4.45	14/02/2018
17149934	BH103	D	4.50 - 4.50	14/02/2018
17149936	BH103	D	6.00 - 6.00	14/02/2018
17149938	BH103	D	8.00 - 8.10	14/02/2018
17149940	BH104	D	0.60 - 0.60	14/02/2018
17149946	BH104	D	1.20 - 1.20	14/02/2018
17149948	BH104	D	1.50 - 2.00	14/02/2018
17149951	BH104	D	2.50 - 2.50	14/02/2018
17149953	BH104	D	3.00 - 3.00	14/02/2018
17149956	BH104	D	3.50 - 3.50	14/02/2018
17149962	BH104	D	4.00 - 4.00	14/02/2018
17149964	BH104	D	4.50 - 4.50	14/02/2018
17149969	BH104	D	5.00 - 5.00	14/02/2018
17149972	BH104	D	6.00 - 6.00	14/02/2018
17149976	BH104	D	6.50 - 6.50	14/02/2018
17149984	BH104	D	7.50 - 7.50	14/02/2018
17149988	BH104	D	8.00 - 8.00	14/02/2018
17163224	BH106	B	1.20 - 1.20	14/02/2018
17149991	TP101	B	0.65 - 0.65	14/02/2018
17149994	TP101	B	1.20 - 1.20	14/02/2018
17149999	TP101	D	1.20 - 1.20	14/02/2018
17150002	TP102	B	0.50 - 0.50	14/02/2018
17150004	TP102	D	0.50 - 0.50	14/02/2018



CERTIFICATE OF ANALYSIS

Validated

SDG:	180302-66	Client Reference:	70020138	Report Number:	451633
Location:	Tradeteam Site (DHL) Glouc	Order Number:	70020138-006	Superseded Report:	451021

17150006	TP102	B	1.20 - 1.20	14/02/2018
17150008	TP102	D	1.20 - 1.20	14/02/2018
17150010	TP103	B	0.70 - 0.70	14/02/2018
17150017	TP103	D	0.70 - 0.70	14/02/2018
17150019	TP103	B	1.60 - 1.60	14/02/2018
17150022	TP103	D	1.60 - 1.60	14/02/2018
17150026	TP104	B	0.50 - 0.50	14/02/2018
17150028	TP104	D	0.50 - 0.50	14/02/2018
17150030	TP104	B	1.30 - 1.30	14/02/2018
17150034	TP104	D	1.30 - 1.30	14/02/2018
17150036	TP105	B	0.60 - 0.60	14/02/2018
17150038	TP105	D	0.60 - 0.60	14/02/2018
17150040	TP105	B	1.40 - 1.40	14/02/2018
17150044	TP105	D	1.40 - 1.40	14/02/2018
17150047	TP106	B	0.40 - 0.40	14/02/2018
17150051	TP106	D	0.40 - 0.40	14/02/2018
17150055	TP106	D	1.20 - 1.20	14/02/2018
17150057	TP106	B	2.00 - 2.00	14/02/2018
17150060	TP106	D	2.00 - 2.00	14/02/2018
17150053	TP106.	B	1.20 - 1.20	14/02/2018
17150063	TP201	B	0.40 - 0.40	14/02/2018
17150066	TP201	D	0.40 - 0.40	14/02/2018
17150069	TP201	B	0.90 - 0.90	14/02/2018
17150076	TP201	D	0.90 - 0.90	14/02/2018
17150083	TP202	B	0.40 - 0.40	14/02/2018
17150086	TP202	D	0.40 - 0.40	14/02/2018
17150089	TP202	B	1.10 - 1.10	14/02/2018
17150091	TP202	D	1.10 - 1.10	14/02/2018
17150093	TP203	B	0.50 - 0.50	14/02/2018
17150095	TP203	D	0.50 - 0.50	14/02/2018
17150097	TP203	B	1.00 - 1.00	14/02/2018
17150099	TP203	D	1.00 - 1.00	14/02/2018
17150101	TP204	B	0.60 - 0.60	14/02/2018
17150108	TP204	D	0.60 - 0.60	14/02/2018
17150110	TP204	B	1.00 - 1.00	14/02/2018
17150112	TP204	D	1.00 - 1.00	14/02/2018

Maximum Sample/Coolbox Temperature (°C) :

ISO5667-3 Water quality - Sampling - Part3 -

During Transportation samples shall be stored in a cooling device capable of maintaining a temperature of (5±3)°C.

4.2

ALS have data which show that a cool box with 4 frozen icepacks is capable of maintaining pre-chilled samples at a temperature of (5±3)°C for a period of up to 24hrs.

Only received samples which have had analysis scheduled will be shown on the following pages.



CERTIFICATE OF ANALYSIS

Validated

SDG: 180302-66
Location: Tradetean Site (DHL) Glouc

Client Reference: 70020138
Order Number: 70020138-006

Report Number: 451633
Superseded Report: 451021

Sample Descriptions

Grain Sizes

very fine	<0.063mm	fine	0.063mm - 0.1mm	medium	0.1mm - 2mm	coarse	2mm - 10mm	very coarse	>10mm
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Lab Sample No(s)	Customer Sample Ref.	Depth (m)	Colour	Description	Inclusions	Inclusions 2
17149885	BH101	1.50 - 1.50	Dark Brown	Clay	Stones	Vegetation
17149959	BH102	0.60 - 0.60	Dark Brown	Sandy Clay Loam	Stones	Vegetation
17149910	BH103	0.50 - 1.00	Light Brown	Sandy Clay Loam	Stones	Vegetation
17150099	TP203	1.00 - 1.00	Dark Brown	Silty Clay Loam	Stones	Vegetation
17150053	TP106	1.20 - 1.20	Dark Brown	Clay	Stones	None

These descriptions are only intended to act as a cross check if sample identities are questioned, and to provide a log of sample matrices with respect to MCERTS validation. They are not intended as full geological descriptions.

We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials - whether these are derived from naturally occurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample.

Other coarse granular materials such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.



CERTIFICATE OF ANALYSIS

Validated

SDG:	180302-66	Client Reference:	70020138	Report Number:	451633
Location:	Tradetean Site (DHL) Glouc	Order Number:	70020138-006	Superseded Report:	451021

Results Legend # ISO17025 accredited. M mCERTS accredited. aq Aqueous / settled sample. diss.filt Dissolved / filtered sample. tot.unfilt Total / unfiltered sample. * Subcontracted test. ** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery (F) Trigger breach confirmed 1-5&*@ Sample deviation (see appendix)		Customer Sample Ref.	BH101	BH101	BH101	BH102	BH102	BH102		
Component	LOD/Units	Method	Depth (m)	Sample Type	Date Sampled	Sample Time	Date Received	SDG Ref	Lab Sample No.(s)	AGS Reference
Moisture Content Ratio (% of as received sample)	%	PM024	0.50 - 0.50	GeoTech Soils	14/02/2018	14/02/2018	14/02/2018	14/02/2018	14/02/2018	14/02/2018
CBR Remoulded*		SUB	1.50 - 1.50	GeoTech Soils	14/02/2018	14/02/2018	14/02/2018	14/02/2018	14/02/2018	14/02/2018
Moisture Content (GEOTECH)*		SUB	7.50 - 7.50	GeoTech Soils	14/02/2018	14/02/2018	14/02/2018	14/02/2018	14/02/2018	14/02/2018
Compaction 2.5kg*		SUB	0.60 - 0.60	GeoTech Soils	14/02/2018	14/02/2018	14/02/2018	14/02/2018	14/02/2018	14/02/2018
Plasticity Index 4 point*		SUB	0.60 - 0.60	GeoTech Soils	14/02/2018	14/02/2018	14/02/2018	14/02/2018	14/02/2018	14/02/2018
PSD Wet/Dry sieve*		SUB	0.60 - 0.60	GeoTech Soils	14/02/2018	14/02/2018	14/02/2018	14/02/2018	14/02/2018	14/02/2018
Sedimentation*		SUB	0.60 - 0.60	GeoTech Soils	14/02/2018	14/02/2018	14/02/2018	14/02/2018	14/02/2018	14/02/2018
Triaxial U100 Multi*		SUB	0.60 - 0.60	GeoTech Soils	14/02/2018	14/02/2018	14/02/2018	14/02/2018	14/02/2018	14/02/2018
Sulphur, Total	<0.02 %	TM132	1.50 - 1.95	GeoTech Soils	14/02/2018	14/02/2018	14/02/2018	14/02/2018	14/02/2018	14/02/2018
pH	1 pH Units	TM133								
Sulphate, acid soluble (total)	<0.02 %	TM221								
Soluble Sulphate 2:1 extract as SO4 BRE	<0.004 g/l	TM243								
Chloride 2:1 water/soil extract BRE	<0.0025 g/l	TM243								
Nitrate as NO3, 2:1 water soluble (BRE)	<0.0003 g/l	TM243								
Ammoniacal N as NH4 in 2:1 extract BRE	<0.0003 g/l	TM248								
Magnesium (BRE)	<0.008 g/l	TM282								



CERTIFICATE OF ANALYSIS

Validated

SDG: 180302-66 Client Reference: 70020138 Report Number: 451633
 Location: Tradetean Site (DHL) Glouc Order Number: 70020138-006 Superseded Report: 451021

Results Legend		Customer Sample Ref.	TP103	TP104	TP105	TP106	TP106.	TP201
#	ISO17025 accredited.							
M	mCERTS accredited.							
aq	Aqueous / settled sample.							
diss.filt	Dissolved / filtered sample.							
tot.unfilt	Total / unfiltered sample.							
*	Subcontracted test.							
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery							
(F)	Trigger breach confirmed							
1-5&*\$@	Sample deviation (see appendix)							
		Depth (m)	1.60 - 1.60	1.30 - 1.30	1.40 - 1.40	0.40 - 0.40	1.20 - 1.20	0.40 - 0.40
		Sample Type	GeoTech Soils	GeoTech Soils	GeoTech Soils	GeoTech Soils	GeoTech Soils	GeoTech Soils
		Date Sampled	14/02/2018	14/02/2018	14/02/2018	14/02/2018	14/02/2018	14/02/2018
		Sample Time						
		Date Received	02/03/2018	02/03/2018	02/03/2018	02/03/2018	02/03/2018	02/03/2018
		SDG Ref	180302-66	180302-66	180302-66	180302-66	180302-66	180302-66
		Lab Sample No.(s)	17150022	17150034	17150040	17150047	17150053	17150063
		AGS Reference	D	D	B	B	B	B
Component	LOD/Units	Method						
Moisture Content Ratio (% of as received sample)	%	PM024					14	
Moisture Content (GEOTECH)*		SUB	See Attached	See Attached				
Plasticity Index 4 point*		SUB	See Attached	See Attached				
PSD Wet/Dry sieve*		SUB			See Attached	See Attached	See Attached	See Attached
Sedimentation*		SUB			See Attached	See Attached	See Attached	See Attached
Sulphur, Total	<0.02 %	TM132					0.0939	
pH	1 pH Units	TM133					8.01	
Sulphate, acid soluble (total)	<0.02 %	TM221					0.0786	
Soluble Sulphate 2:1 extract as SO4 BRE	<0.004 g/l	TM243					0.238	
Chloride 2:1 water/soil extract BRE	<0.0025 g/l	TM243					0.0259	
Nitrate as NO3, 2:1 water soluble (BRE)	<0.0003 g/l	TM243					0.000394	
Ammoniacal N as NH4 in 2:1 extract BRE	<0.0003 g/l	TM248					0.00773	
Magnesium (BRE)	<0.008 g/l	TM282					<0.008	



CERTIFICATE OF ANALYSIS

Validated

SDG: 180302-66 **Client Reference:** 70020138 **Report Number:** 451633
Location: Tradetteam Site (DHL) Glouc **Order Number:** 70020138-006 **Superseded Report:** 451021

Notification of NDPs (No determination possible)

Date Received : 02/03/2018 14:50:07

Sample No	Customer Sample Ref.	Depth (m)	Test	Comment
17150010	TP103 BZ	0.70 - 0.70	Geotechnical Testing*	Sample unsuitable for analysis
17150083	TP202 BZ	0.40 - 0.40	Geotechnical Testing*	Scheduling Error
17150063	TP201 BZ	0.40 - 0.40	Geotechnical Testing*	Insufficient Sample
17149932	BH102 BZ	0.60 - 0.60	Geotechnical Testing*	Insufficient Sample



CERTIFICATE OF ANALYSIS

Validated

SDG: 180302-66 Client Reference: 70020138 Report Number: 451633
Location: Tradeteam Site (DHL) Glouc Order Number: 70020138-006 Superseded Report: 451021

Table of Results - Appendix

Method No	Reference	Description
PM024	Modified BS 1377	Soil preparation including homogenisation, moisture screens of soils for Asbestos Containing Material
SUB		Subcontracted Test
TM132	In - house Method	ELTRA CS800 Operators Guide
TM133	BS 1377: Part 3 1990;BS 6068-2.5	Determination of pH in Soil and Water using the GLpH pH Meter
TM221	Inductively Coupled Plasma - Atomic Emission Spectroscopy. An Atlas of Spectral Information: Winge, Fassel, Peterson and Floyd	Determination of Acid extractable Sulphate in Soils by IRIS Emission Spectrometer
TM243		Mixed Anions In Soils By Kone
TM248	In-House Method	Determination of Ammonium BRE (2:1 Extract) on solids
TM282		Extraction of Magnesium by BRE Method

NA = not applicable.

Chemical testing (unless subcontracted) performed at ALS Life Sciences Ltd Hawarden (Method codes TM) or ALS Life Sciences Ltd Aberdeen (Method codes S).



CERTIFICATE OF ANALYSIS

Validated

SDG:	180302-66	Client Reference:	70020138
Location:	Tradetean Site (DHL) Glouc	Order Number:	70020138-006
		Report Number:	451633
		Superseded Report:	451021

Test Completion Dates

Lab Sample No(s)	17149875	17149885	17150103	17149892	17149895	17149932	17149959	17150024	17150105	17149910
Customer Sample Ref.	BH101	BH101	BH101	BH102	BH102	BH102	BH102	BH102	BH102	BH103
AGS Ref.	B	D	D	D	U100	B	D	U100	U100	B
Depth	0.50 - 0.50	1.50 - 1.50	7.50 - 7.50	4.50 - 4.50	5.00 - 5.45	0.60 - 0.60	0.60 - 0.60	1.50 - 1.95	3.00 - 3.45	0.50 - 1.00
Type	GeoTech Soils	GeoTech Soils	GeoTech Soils	GeoTech Soils	GeoTech Soils	GeoTech Soils	GeoTech Soils	GeoTech Soils	GeoTech Soils	GeoTech Soils
Ammoniacal N as NH4 in 2:1 extract		15-Mar-2018					15-Mar-2018			15-Mar-2018
Anions by Kone (soil)		16-Mar-2018					16-Mar-2018			16-Mar-2018
Geotechnical Testing*	03-Apr-2018	03-Apr-2018	03-Apr-2018	03-Apr-2018	21-Mar-2018	10-Apr-2018		21-Mar-2018	21-Mar-2018	03-Apr-2018
Magnesium (BRE)		14-Mar-2018					14-Mar-2018			14-Mar-2018
NO3, NO2 and TON by KONE (s)		13-Mar-2018					13-Mar-2018			13-Mar-2018
pH		12-Mar-2018					12-Mar-2018			12-Mar-2018
Sample description		08-Mar-2018					08-Mar-2018			08-Mar-2018
Total Sulphate		13-Mar-2018					13-Mar-2018			13-Mar-2018
Total Sulphur		13-Mar-2018					13-Mar-2018			13-Mar-2018

Lab Sample No(s)	17149923	17149928	17149930	17149940	17149951	17149991	17149999	17150002	17150022	17150034
Customer Sample Ref.	BH103	BH103	BH103	BH104	BH104	TP101	TP101	TP102	TP103	TP104
AGS Ref.	U100	D	U100	D	D	B	D	B	D	D
Depth	2.00 - 2.45	3.50 - 3.50	4.00 - 4.45	0.60 - 0.60	2.50 - 2.50	0.65 - 0.65	1.20 - 1.20	0.50 - 0.50	1.60 - 1.60	1.30 - 1.30
Type	GeoTech Soils	GeoTech Soils	GeoTech Soils	GeoTech Soils	GeoTech Soils	GeoTech Soils	GeoTech Soils	GeoTech Soils	GeoTech Soils	GeoTech Soils
Geotechnical Testing*	21-Mar-2018	03-Apr-2018	21-Mar-2018	03-Apr-2018	03-Apr-2018	21-Mar-2018	03-Apr-2018	21-Mar-2018	03-Apr-2018	03-Apr-2018

Lab Sample No(s)	17150040	17150047	17150063	17150069	17150097	17150099	17150110	17150053
Customer Sample Ref.	TP105	TP106	TP201	TP201	TP203	TP203	TP204	TP106
AGS Ref.	B	B	B	B	B	D	B	B
Depth	1.40 - 1.40	0.40 - 0.40	0.40 - 0.40	0.90 - 0.90	1.00 - 1.00	1.00 - 1.00	1.00 - 1.00	1.20 - 1.20
Type	GeoTech Soils	GeoTech Soils	GeoTech Soils	GeoTech Soils	GeoTech Soils	GeoTech Soils	GeoTech Soils	GeoTech Soils
Ammoniacal N as NH4 in 2:1 extract						15-Mar-2018		15-Mar-2018
Anions by Kone (soil)						16-Mar-2018		16-Mar-2018
Geotechnical Testing*	21-Mar-2018	13-Apr-2018	03-Apr-2018	03-Apr-2018	21-Mar-2018		03-Apr-2018	21-Mar-2018
Magnesium (BRE)						14-Mar-2018		16-Mar-2018
NO3, NO2 and TON by KONE (s)						13-Mar-2018		16-Mar-2018
pH						12-Mar-2018		15-Mar-2018
Sample description						08-Mar-2018		15-Mar-2018
Total Sulphate						13-Mar-2018		16-Mar-2018
Total Sulphur						13-Mar-2018		16-Mar-2018



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ALS Environmental
Units 7-8 Hawarden Business Park
Manor Lane
Hawarden
Deeside
CH5 3US

For the attention of Carrie Foster/Shaun Park

Version No. 4
Page No. 1 of 17
Date of Issue 13/04/2018

TEST REPORT

PROJECT/SITE	Tradeteam (DHL), Gloucester	Samples received	19/02/2018
GEL REPORT NUMBER	34023	Schedule received	05/03/2018
Your ref/PO:	180302-66	Testing commenced	07/03/2018
Test report refers to	Schedule 1	Status	Final

SUMMARY OF RESULTS ATTACHED

TEST METHOD & DESCRIPTION	QUANTITY	ACCREDITED TEST
BS EN ISO 17892-1: 2014:5. Water Content	13	YES
BS1377: Part 2: 1990:4.2-4.4&5.2-5.4, Liquid & Plastic Limits	12	YES
BS EN ISO 17892-4: 2016: 5.2, Particle Size Distribution - Wet Sieve	8	NO
BS EN ISO 17892-4: 2016: 5.4, Particle Size Distribution - Pipette	8	NO
BS1377: Part 4: 1990:3, Dry Density/Moisture Content Relationship	2	YES
BS1377: Part 4: 1990:7, California Bearing Ratio (CBR)	1	YES
BS EN ISO 17892-5: 2017, Oedometer	2	NO
BS1377: Part 7: 1990:8&9, Undrained Triaxial Compression	3	YES

Remarks
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Doc TR01 Rev No. 20 Revision date 09/10/17 DC:JH

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Sort code: 30-15-99 Bank account: 00072116

LIQUID AND PLASTIC LIMITS

BS.1377 : PART 2 : 1990 : 4 and 5



CLIENT ALS ENVIRONMENTAL

SITE TRADETEAM (DHL), GLOUCESTER

borehole / trial pit no.	sample		specimen depth (m)	natural water content (%)	specimen preparation and test method	fraction >0.425 mm (%)	liquid limit (%)	plastic limit (%)	plasticity index (%)	description and remarks
	no./type	depth (m)								
BH101	D	1.50	1.50	25.7	BXE	11	54	23	31	Grey mottled brown slightly gravelly slightly sandy CLAY
BH101	D	7.50	7.50	15.7	AXE	0	48	21	27	Grey slightly sandy CLAY
BH102	D	4.50	4.50	19.7	AXE	0	54	23	31	Grey slightly sandy CLAY
BH103	B	0.50	0.50	21.6	BXE	9	58	20	38	Grey mottled brown slightly gravelly slightly sandy CLAY
BH103	D	3.50	3.50	23.4	BXE	1	56	24	32	Greyish brown slightly sandy CLAY
BH104	D	0.60	0.60	26.4	BXE	6	56	22	34	Brown mottled grey slightly gravelly slightly sandy CLAY
BH104	D	2.50	2.50	21.7	BXD	7	55	22	33	Brown mottled grey and orangish brown slightly sandy CLAY with rare gypsum
TP101	B	0.65	0.65	4.4	E					Orangish brown slightly silty sandy GRAVEL
TP101	D	1.20	1.20	28.0	BXE	1	66	24	42	Grey mottled brown slightly sandy CLAY
TP103	D	1.60	1.60	30.2	BXD	6	69	28	41	Dark grey slightly sandy CLAY
TP104	D	1.30	1.30	19.4	BXE	9	48	18	30	Grey mottled brown slightly gravelly slightly sandy CLAY
TP201	B	0.90	0.90	25.6	BXE	3	57	23	34	Grey mottled brown slightly sandy CLAY
TP204	B	1.00	1.00	25.3	BXE	9	62	22	40	Brown mottled grey slightly gravelly slightly sandy CLAY

general remarks

natural water content determined in accordance with BS EN ISO 17892 - 1 : 2014 (unless specified)

NP denotes non plastic

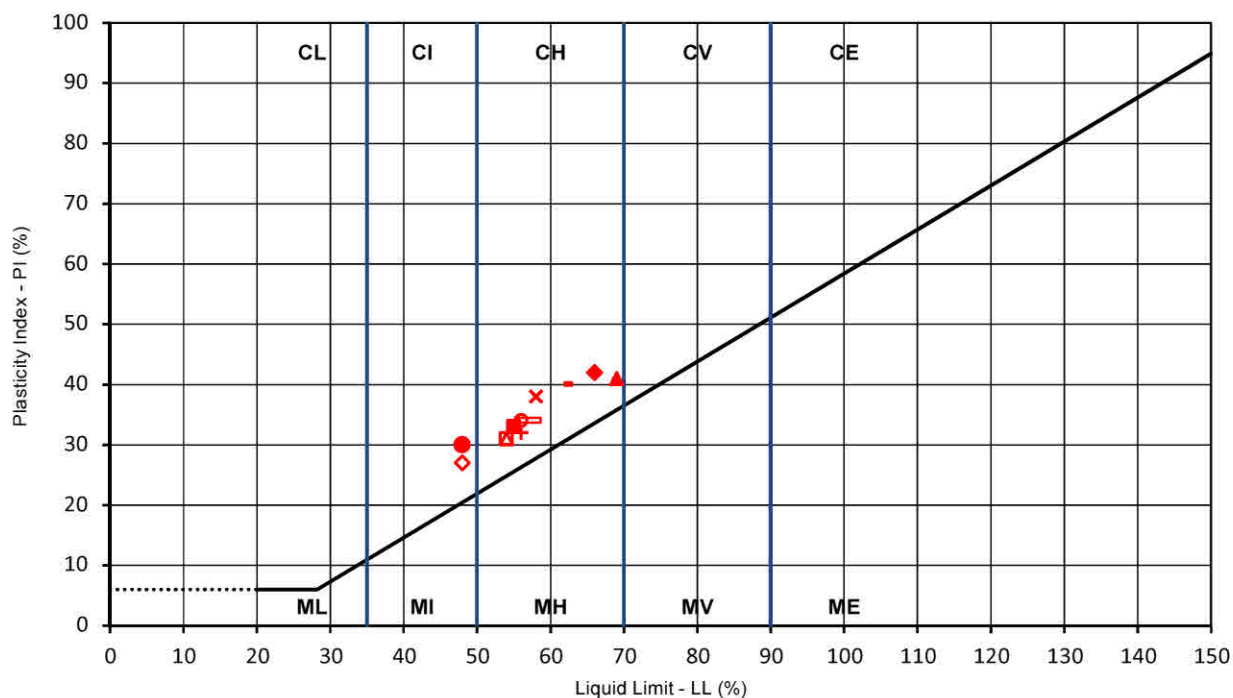
denotes sample tested is smaller than that which is recommended in accordance with BS1377 or BS EN ISO 17892

specimen preparation	test method	CONTRACT	CHECKED
A - as received	D - oven dried (60°C)	34023	EC
B - washed on 0.425mm sieve	E - oven dried (105°C)		
C - air dried	F - not known		
	X - cone penetrometer (test 4.3)		
	Y - cone penetrometer (test 4.4)		
	Z - casagrande apparatus (test 4.5)		

Geotechnical Engineering Limited
ATTERBERG LINE PLOT



CLIENT ALS ENVIRONMENTAL
 SITE TRADETEAM (DHL), GLOUCESTER



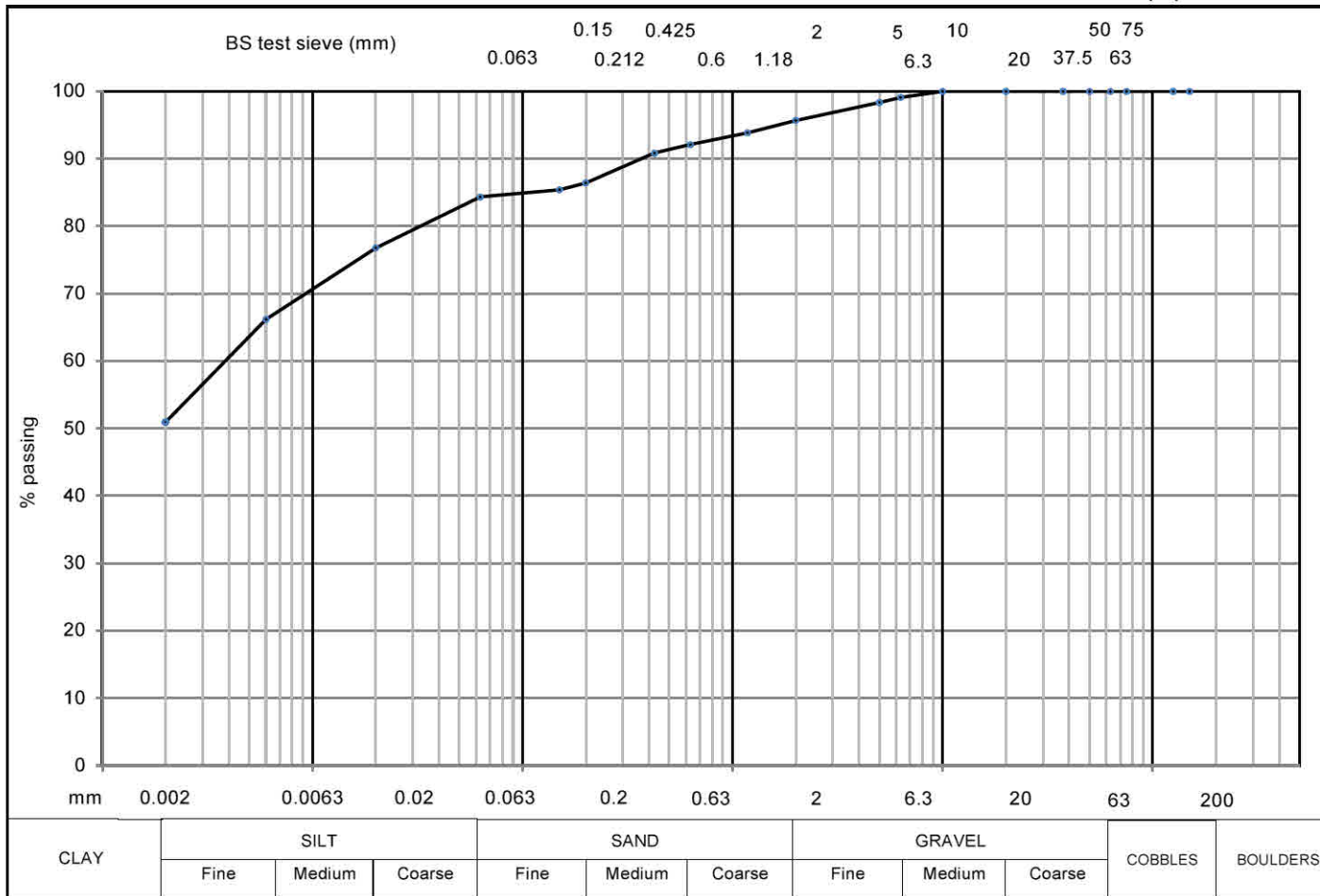
	BH/TP No.	depth (m)	LL	PL	PI	remarks
□	BH101	1.50	54	23	31	
◇	BH101	7.50	48	21	27	
△	BH102	4.50	54	23	31	
×	BH103	0.50	58	20	38	
+	BH103	3.50	56	24	32	
○	BH104	0.60	56	22	34	
■	BH104	2.50	55	22	33	
◆	TP101	1.20	66	24	42	
▲	TP103	1.60	69	28	41	
●	TP104	1.30	48	18	30	
▣	TP201	0.90	57	23	34	
▪	TP204	1.00	62	22	40	

CONTRACT	CHECKED
34023	EC

Geotechnical Engineering Limited
PARTICLE SIZE DISTRIBUTION
 BS EN ISO 17892 - 4 : 2016 : 5



CLIENT	ALS ENVIRONMENTAL	BH/TP No.	BH101
SITE	TRADETEAM (DHL), GLOUCESTER	SAMPLE No./TYPE	B
DESCRIPTION	Greyish brown mottled orange slightly gravelly slightly sandy CLAY	SAMPLE DEPTH (m)	0.50
		SPECIMEN TOP (m)	0.50
		SPECIMEN BASE (m)	1.00



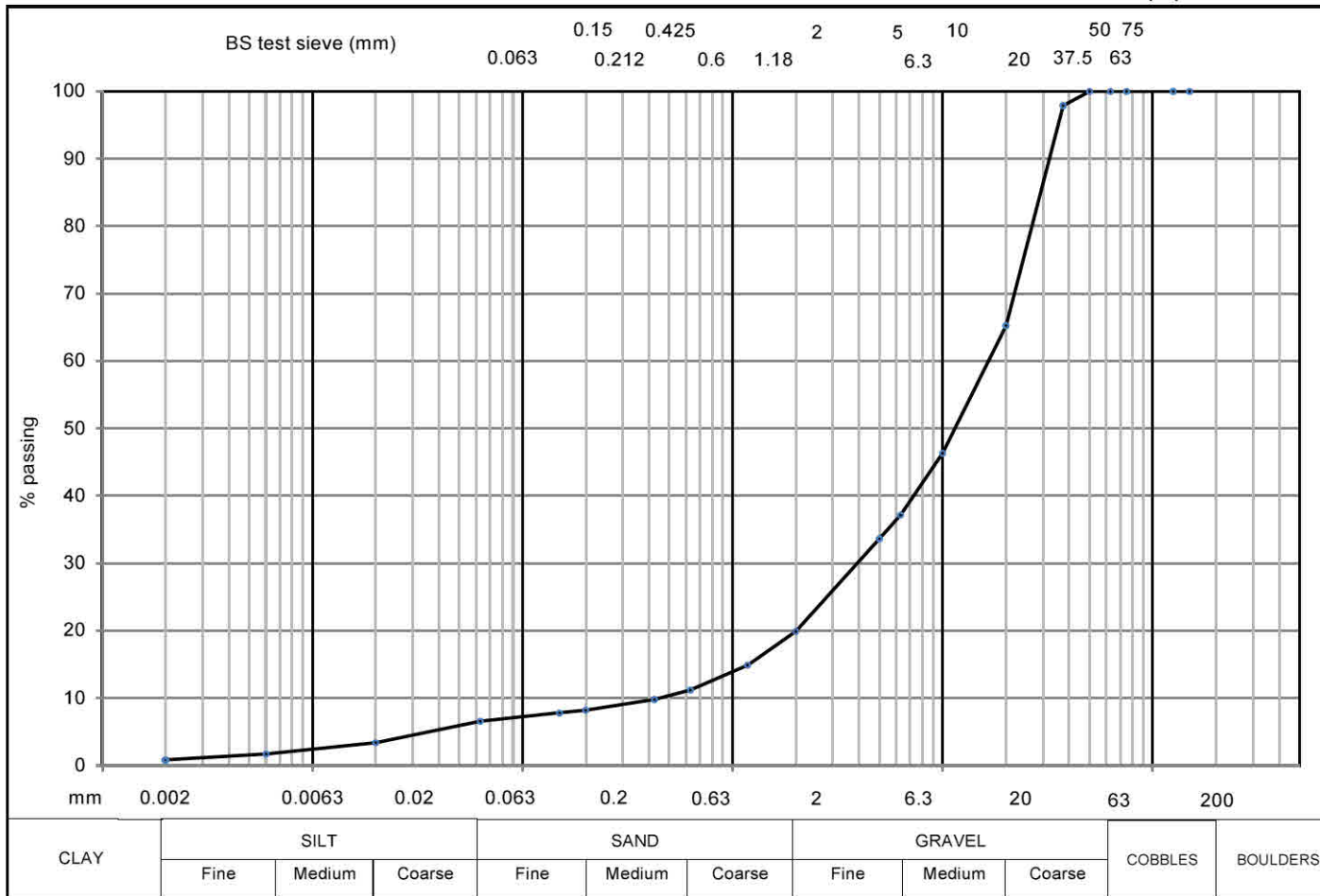
soil type	% fraction	BS test sieve (mm)	% passing	BS test sieve (mm)	% passing	BS test sieve (µm)	% finer
CLAY	51						
SILT	33	150		5	98	20	77
SILT & CLAY	84						
SAND	11	75		2	96	6	66
GRAVEL	4						
COBBLE & BOULDER	0	63		1.18	94	2	51
test method(s)	5.2 & 5.4	50		0.63	92		
test method		37.5		0.425	91		
5.2 - sieving		20		0.2	86		
5.3 - sedimentation by hydrometer		10	100	0.15	85		
5.4 - sedimentation by pipette		6.3	99	0.063	84		

remarks # denotes sample tested is smaller than that which is recommended in accordance with BS EN 17892 Particle density assigned an assumed value of 2.70 Mg/m ³	CONTRACT 34023	CHECKED EC
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Geotechnical Engineering Limited
PARTICLE SIZE DISTRIBUTION
 BS EN ISO 17892 - 4 : 2016 : 5



CLIENT	ALS ENVIRONMENTAL	BH/TP No.	TP102
SITE	TRADETEAM (DHL), GLOUCESTER	SAMPLE No./TYPE	B
DESCRIPTION	Brown silty sandy GRAVEL	SAMPLE DEPTH (m)	0.50
		SPECIMEN TOP (m)	0.50
		SPECIMEN BASE (m)	N/A



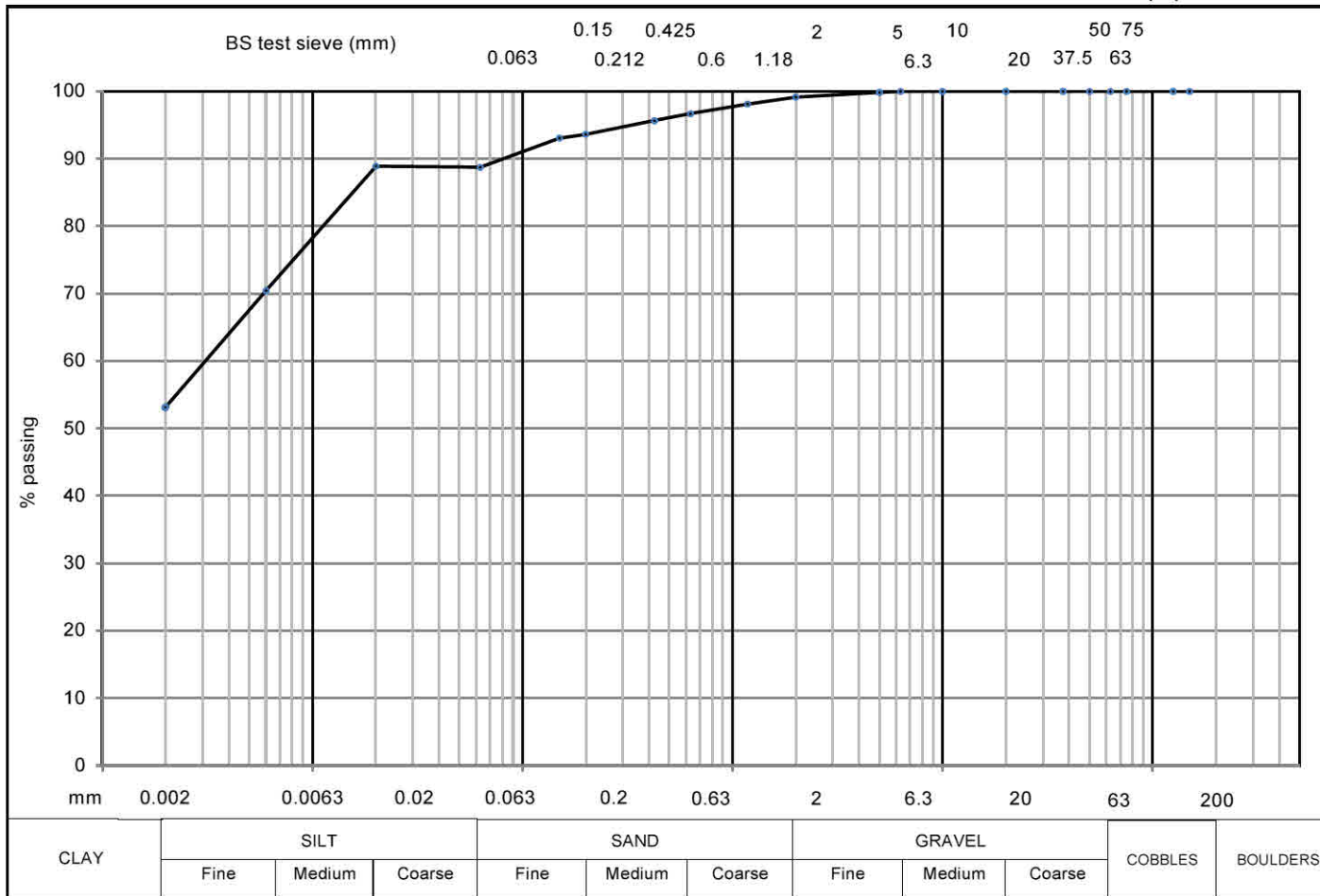
soil type	% fraction	BS test sieve (mm)	% passing	BS test sieve (mm)	% passing	BS test sieve (µm)	% finer
CLAY	1						
SILT	6	150		5	34	20	3
SILT & CLAY	7						
SAND	13	75		2	20	6	2
GRAVEL	80						
COBBLE & BOULDER	0	63		1.18	15	2	1
test method(s)	5.2# & 5.4	50	100	0.63	11		
test method		37.5	98	0.425	10		
5.2 - sieving		20	65	0.2	8		
5.3 - sedimentation by hydrometer		10	46	0.15	8		
5.4 - sedimentation by pipette		6.3	37	0.063	7		

remarks # denotes sample tested is smaller than that which is recommended in accordance with BS EN 17892 Particle density assigned an assumed value of 2.70 Mg/m ³	CONTRACT 34023	CHECKED EC
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Geotechnical Engineering Limited
PARTICLE SIZE DISTRIBUTION
 BS EN ISO 17892 - 4 : 2016 : 5



CLIENT	ALS ENVIRONMENTAL	BH/TP No.	TP105
SITE	TRADETEAM (DHL), GLOUCESTER	SAMPLE No./TYPE	B
DESCRIPTION	Dark grey slightly sandy CLAY with frequent gypsum	SAMPLE DEPTH (m)	1.40
		SPECIMEN TOP (m)	1.40
		SPECIMEN BASE (m)	1.40



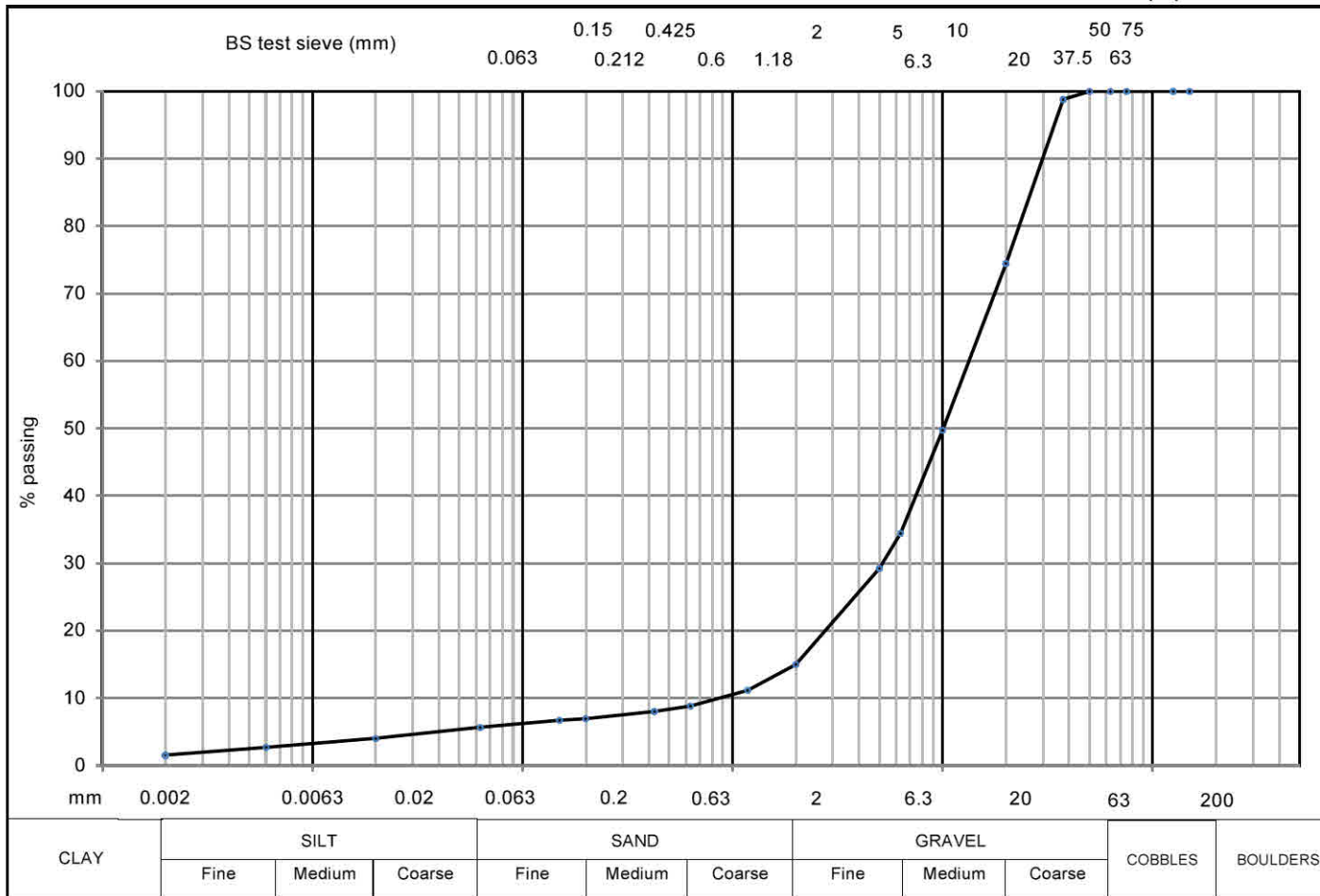
soil type	% fraction	BS test sieve (mm)	% passing	BS test sieve (mm)	% passing	BS test sieve (µm)	% finer
CLAY	53						
SILT	36	150		5	100	20	89
SILT & CLAY	89						
SAND	10	75		2	99	6	70
GRAVEL	1						
COBBLE & BOULDER	0	63		1.18	98	2	53
test method(s)	5.2 & 5.4	50		0.63	97		
test method		37.5		0.425	96		
5.2 - sieving		20		0.2	94		
5.3 - sedimentation by hydrometer		10		0.15	93		
5.4 - sedimentation by pipette		6.3	100	0.063	89		

remarks # denotes sample tested is smaller than that which is recommended in accordance with BS EN 17892 Particle density assigned an assumed value of 2.70 Mg/m ³	CONTRACT 34023	CHECKED EC
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Geotechnical Engineering Limited
PARTICLE SIZE DISTRIBUTION
 BS EN ISO 17892 - 4 : 2016 : 5



CLIENT	ALS ENVIRONMENTAL	BH/TP No.	TP106
SITE	TRADETEAM (DHL), GLOUCESTER	SAMPLE No./TYPE	B
DESCRIPTION	Brown silty sandy GRAVEL	SAMPLE DEPTH (m)	0.40
		SPECIMEN TOP (m)	0.40
		SPECIMEN BASE (m)	N/A



CLAY	SILT			SAND			GRAVEL			COBBLES	BOULDERS
	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse		

soil type	% fraction	BS test sieve (mm)	% passing	BS test sieve (mm)	% passing	BS test sieve (µm)	% finer
CLAY	2						
SILT	4	150		5	29	20	4
SILT & CLAY	6						
SAND	9	75		2	15	6	3
GRAVEL	85						
COBBLE & BOULDER	0	63		1.18	11	2	2
test method(s)	5.2 & 5.4	50	100	0.63	9		
test method		37.5	99	0.425	8		
5.2 - sieving		20	74	0.2	7		
5.3 - sedimentation by hydrometer		10	50	0.15	7		
5.4 - sedimentation by pipette		6.3	34	0.063	6		

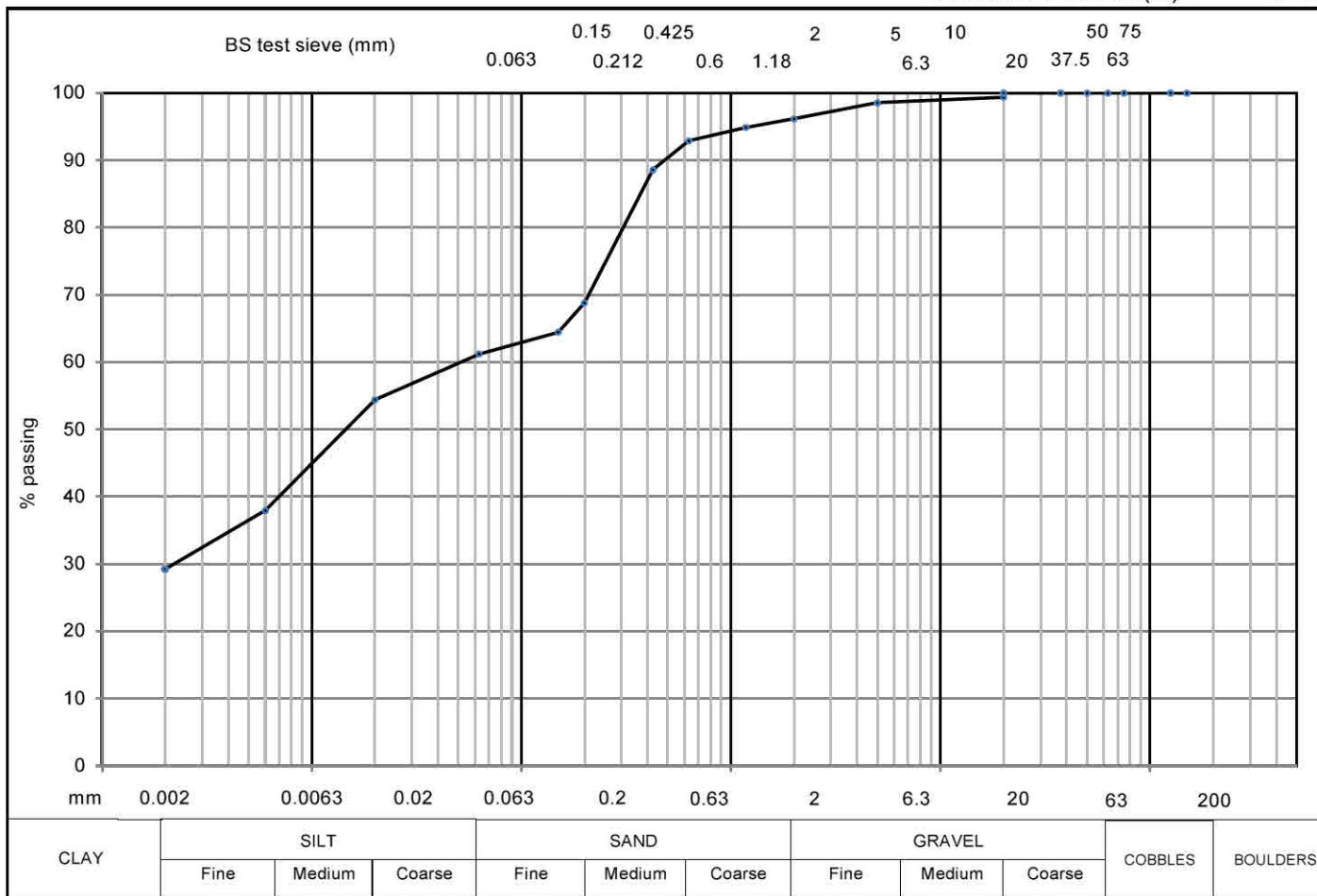
remarks	CONTRACT	CHECKED
# denotes sample tested is smaller than that which is recommended in accordance with BS EN 17892 Particle density assigned an assumed value of 2.70 Mg/m ³	34023	EC

Geotechnical Engineering Limited
PARTICLE SIZE DISTRIBUTION
 BS EN ISO 17892 - 4 : 2016 : 5



CLIENT ALS ENVIRONMENTAL
 SITE TRADETEAM (DHL), GLOUCESTER
 DESCRIPTION Brown slightly gravelly sandy CLAY

BH/TP No. TP106
 SAMPLE No./TYPE B
 SAMPLE DEPTH (m) 1.20
 SPECIMEN TOP (m) 1.20
 SPECIMEN BASE (m) 1.20



CLAY	SILT			SAND			GRAVEL			COBBLES	BOULDERS
	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse		
	29	32	61	35	4	0					

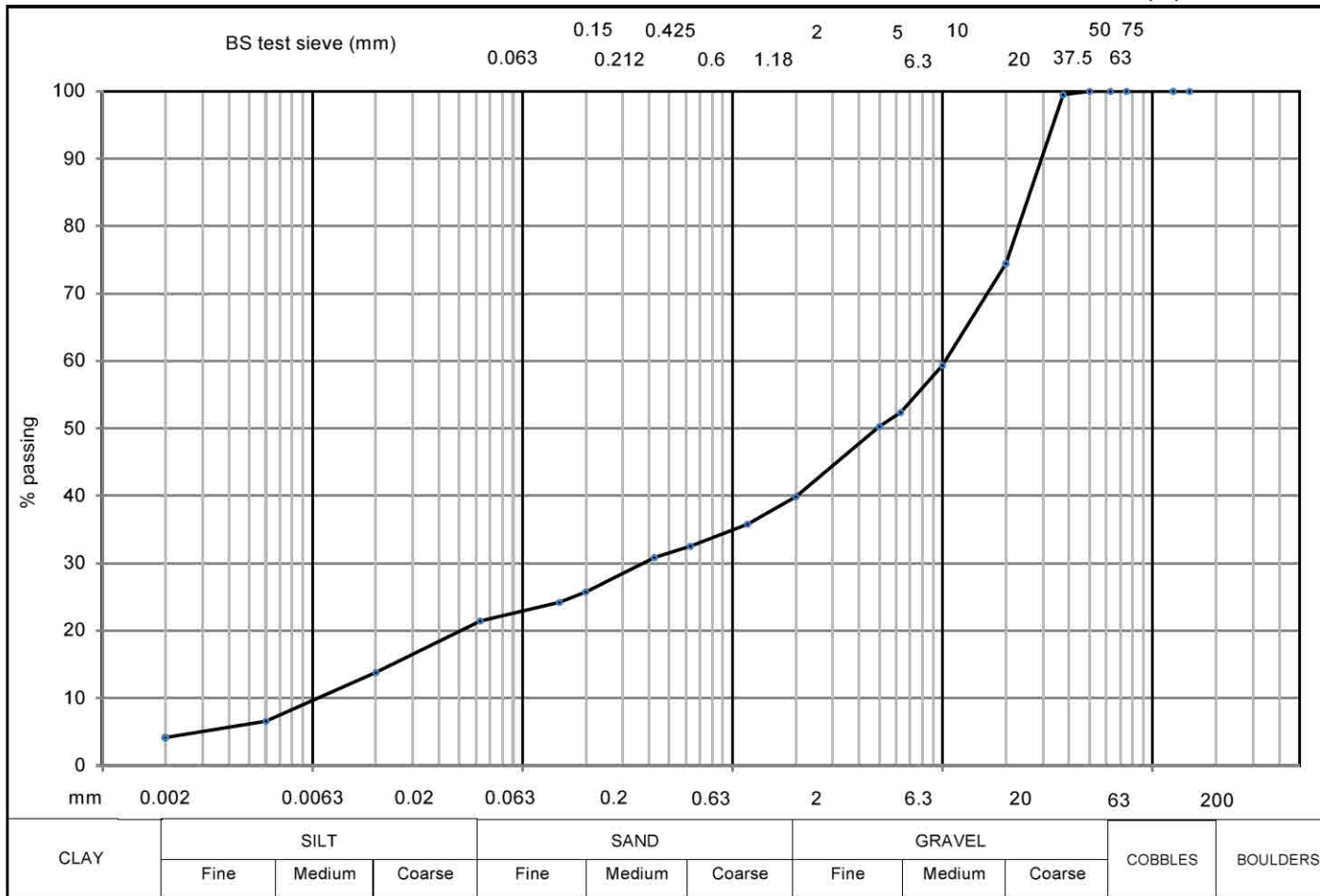
soil type	% fraction	BS test sieve (mm)	% passing	BS test sieve (mm)	% passing	BS test sieve (µm)	% finer
CLAY	29			5	99	20	54
SILT	32	150		2	96	6	38
SILT & CLAY	61			1.18	95	2	29
SAND	35	75					
GRAVEL	4						
COBBLE & BOULDER	0	63					
test method(s)	5.2 & 5.4	50		0.63	93		
test method		37.5		0.425	89		
5.2 - sieving		20		0.2	69		
5.3 - sedimentation by hydrometer		10	100	0.15	64		
5.4 - sedimentation by pipette		6.3	99	0.063	61		

remarks # denotes sample tested is smaller than that which is recommended in accordance with BS EN 17892 Particle density assigned an assumed value of 2.70 Mg/m ³	CONTRACT 34023	CHECKED EC
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Geotechnical Engineering Limited
PARTICLE SIZE DISTRIBUTION
 BS EN ISO 17892 - 4 : 2016 : 5



CLIENT	ALS ENVIRONMENTAL	BH/TP No.	TP201
SITE	TRADETEAM (DHL), GLOUCESTER	SAMPLE No./TYPE	B
DESCRIPTION	Orangish brown sandy very silty GRAVEL	SAMPLE DEPTH (m)	0.40
		SPECIMEN TOP (m)	0.40
		SPECIMEN BASE (m)	0.40



CLAY	SILT			SAND			GRAVEL			COBBLES	BOULDERS
	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse		

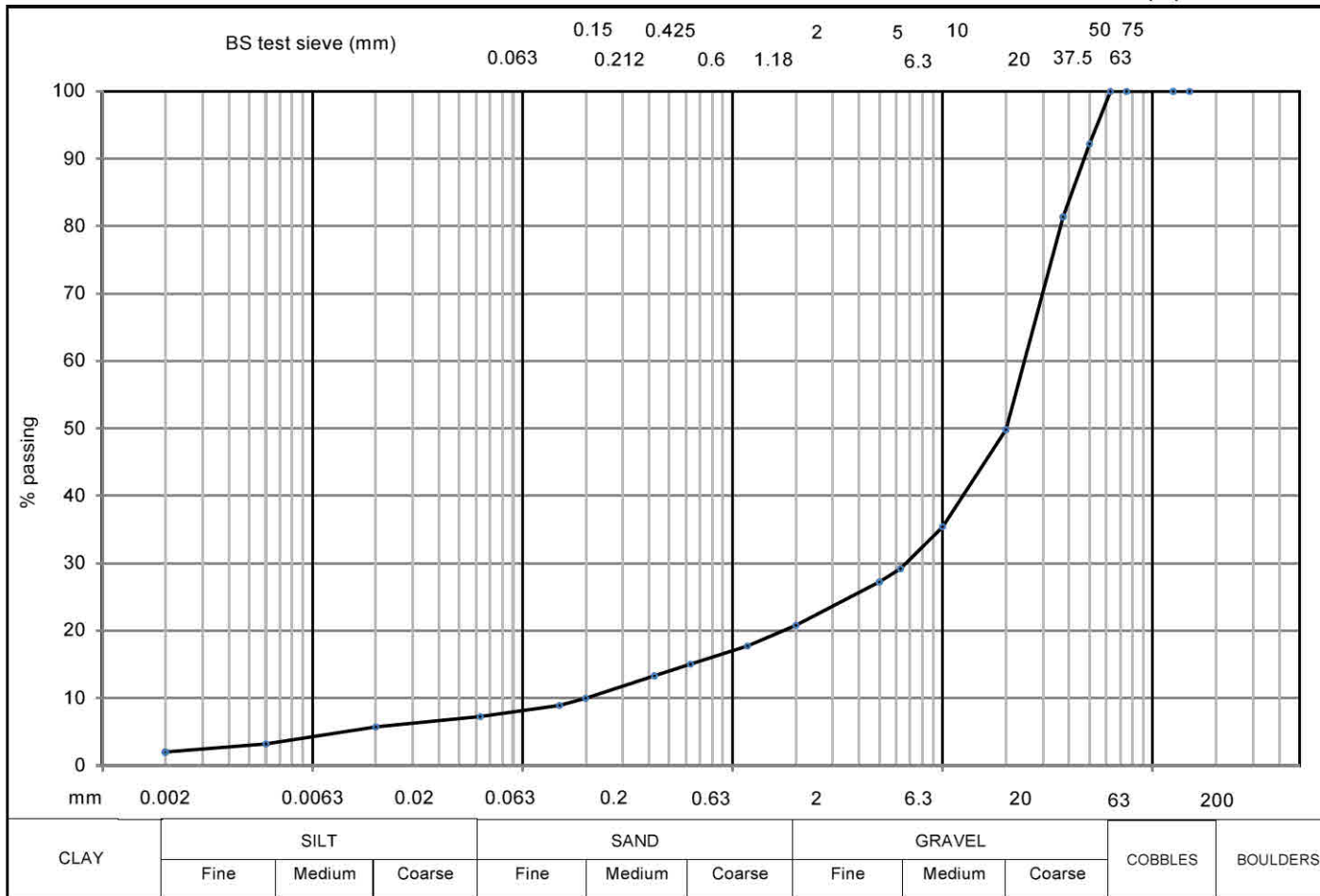
soil type	% fraction	BS test sieve (mm)	% passing	BS test sieve (mm)	% passing	BS test sieve (µm)	% finer
CLAY	4						
SILT	17	150		5	50	20	14
SILT & CLAY	21						
SAND	18	75		2	40	6	7
GRAVEL	60						
COBBLE & BOULDER	0	63		1.18	36	2	4
test method(s)	5.2 & 5.4	50	100	0.63	33		
test method		37.5	99	0.425	31		
5.2 - sieving		20	74	0.2	26		
5.3 - sedimentation by hydrometer		10	59	0.15	24		
5.4 - sedimentation by pipette		6.3	52	0.063	21		

remarks # denotes sample tested is smaller than that which is recommended in accordance with BS EN 17892 Particle density assigned an assumed value of 2.70 Mg/m ³	CONTRACT 34023	CHECKED EC
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Geotechnical Engineering Limited
PARTICLE SIZE DISTRIBUTION
 BS EN ISO 17892 - 4 : 2016 : 5



CLIENT	ALS ENVIRONMENTAL	BH/TP No.	TP202
SITE	TRADETEAM (DHL), GLOUCESTER	SAMPLE No./TYPE	B
DESCRIPTION	Brown silty sandy GRAVEL	SAMPLE DEPTH (m)	0.40
		SPECIMEN TOP (m)	0.40
		SPECIMEN BASE (m)	0.40



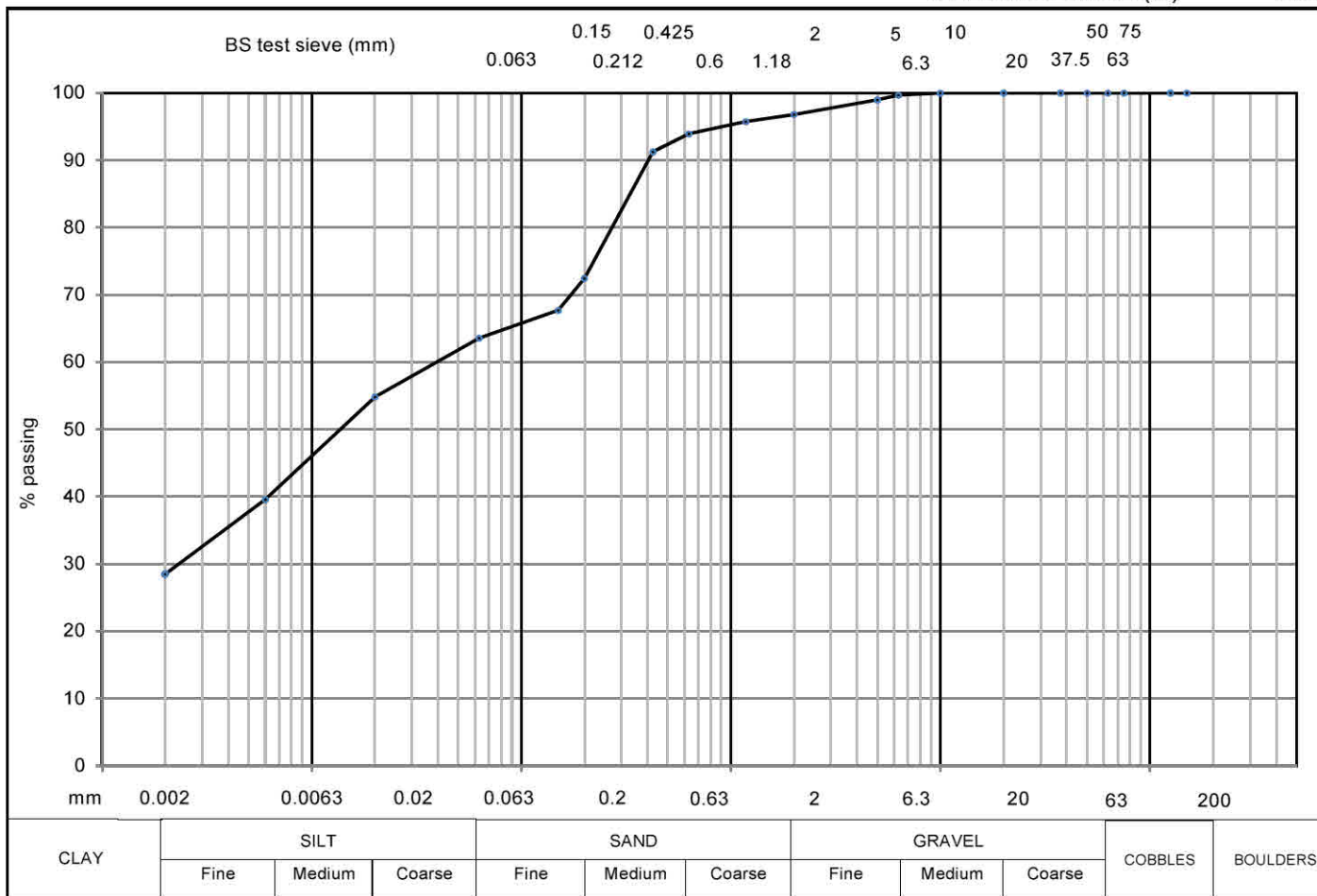
soil type	% fraction	BS test sieve (mm)	% passing	BS test sieve (mm)	% passing	BS test sieve (µm)	% finer
CLAY	2						
SILT	5	150		5	27	20	6
SILT & CLAY	7						
SAND	14	75		2	21	6	3
GRAVEL	79						
COBBLE & BOULDER	0	63	100	1.18	18	2	2
test method(s)	5.2 & 5.4	50	92	0.63	15		
test method		37.5	81	0.425	13		
5.2 - sieving		20	50	0.2	10		
5.3 - sedimentation by hydrometer		10	35	0.15	9		
5.4 - sedimentation by pipette		6.3	29	0.063	7		

remarks # denotes sample tested is smaller than that which is recommended in accordance with BS EN 17892 Particle density assigned an assumed value of 2.70 Mg/m ³	CONTRACT 34023	CHECKED EC
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Geotechnical Engineering Limited
PARTICLE SIZE DISTRIBUTION
 BS EN ISO 17892 - 4 : 2016 : 5



CLIENT	ALS ENVIRONMENTAL	BH/TP No.	TP203
SITE	TRADETEAM (DHL), GLOUCESTER	SAMPLE No./TYPE	B
DESCRIPTION	Dark brownish grey slightly sandy silty CLAY	SAMPLE DEPTH (m)	1.00
		SPECIMEN TOP (m)	1.00
		SPECIMEN BASE (m)	1.00



CLAY	SILT			SAND			GRAVEL			COBBLES	BOULDERS
	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse		

soil type	% fraction	BS test sieve (mm)	% passing	BS test sieve (mm)	% passing	BS test sieve (µm)	% finer
CLAY	29						
SILT	35	150		5	99	20	55
SILT & CLAY	64						
SAND	33	75		2	97	6	40
GRAVEL	3						
COBBLE & BOULDER	0	63		1.18	96	2	28
test method(s)	5.2 & 5.4	50		0.63	94		
test method		37.5		0.425	91		
5.2 - sieving		20		0.2	72		
5.3 - sedimentation by hydrometer		10	100	0.15	68		
5.4 - sedimentation by pipette		6.3	100	0.063	64		

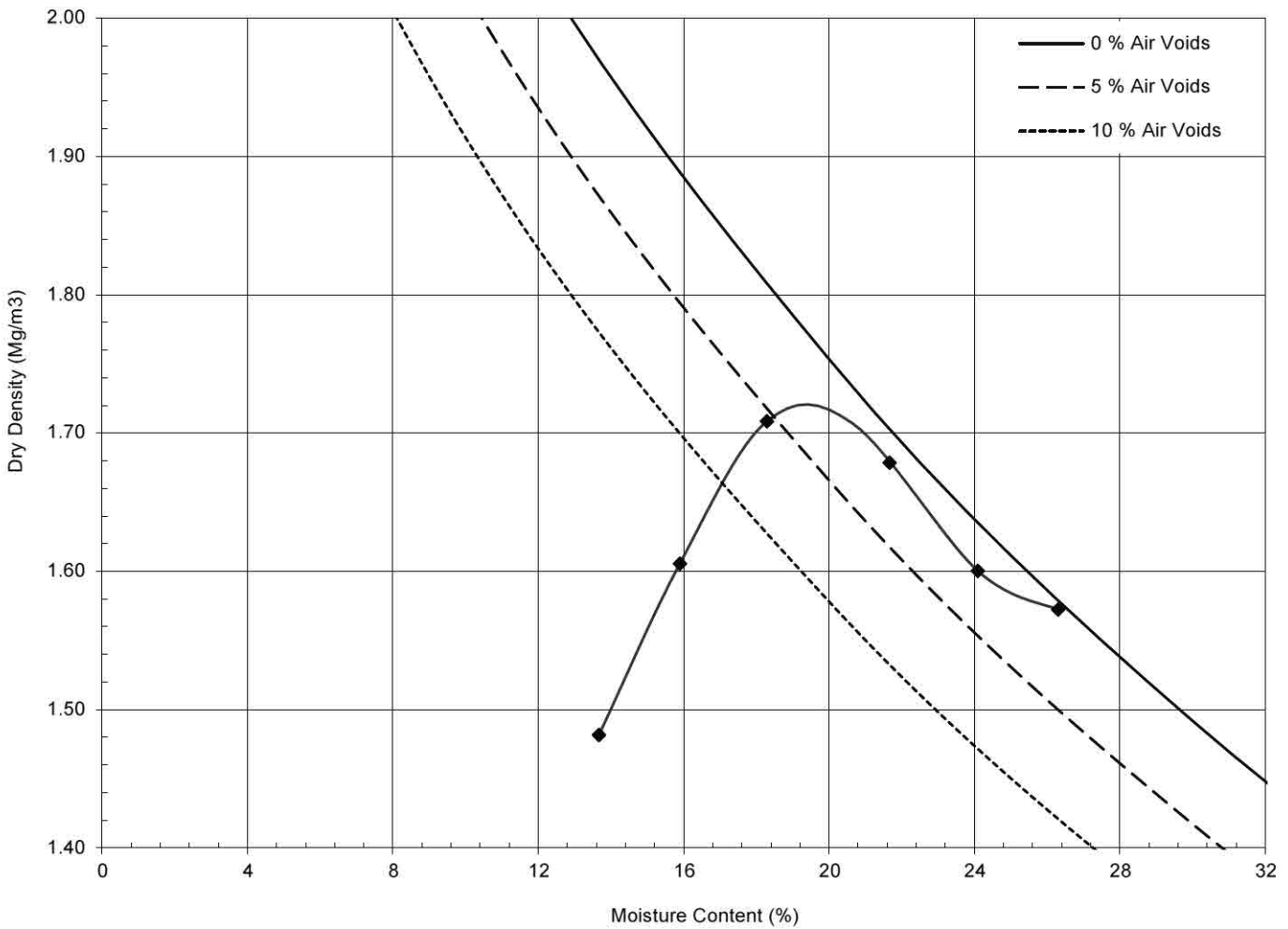
remarks	CONTRACT	CHECKED
# denotes sample tested is smaller than that which is recommended in accordance with BS EN 17892 Particle density assigned an assumed value of 2.70 Mg/m ³	34023	EC

DRY DENSITY/MOISTURE CONTENT RELATIONSHIP



BS. 1377 : Part 4 : 1990 : 3

CLIENT	ALS ENVIRONMENTAL	BH/TP No.	BH101
SITE	TRADETEAM (DHL), GLOUCESTER	SAMPLE No./TYPE	B
DESCRIPTION	Greyish brown mottled orange slightly gravelly slightly sandy CLAY	SAMPLE DEPTH (m)	0.50
		SPECIMEN DEPTH (m)	0.50



test method	3.3.4.1 2.5kg dynamic compaction - 1L mould				
preparation procedure	3.2.4.2 (grading zone 2)				
sample preparation	R				
proportion retained on 37.5mm sieve	%	0	initial moisture content	%	25
proportion retained on 20mm sieve	%	2	maximum dry density	(Mg/m ³)	1.72
particle density	(Mg/m ³)	2.7	optimum moisture content	%	19
remarks	# denotes particle density has been assigned an assumed value C denotes sample has been chopped to pass 20mm sieve S denotes sample has been shredded to pass 20mm sieve R denotes sample material has been recycled between/for points				
				CONTRACT	CHECKED
				34023	EC

DRY DENSITY/MOISTURE CONTENT RELATIONSHIP

BS. 1377 : Part 4 : 1990 : 3



CLIENT ALS ENVIRONMENTAL

BH/TP No.

BH102

SITE TRADETEAM (DHL), GLOUCESTER

SAMPLE No./TYPE

B

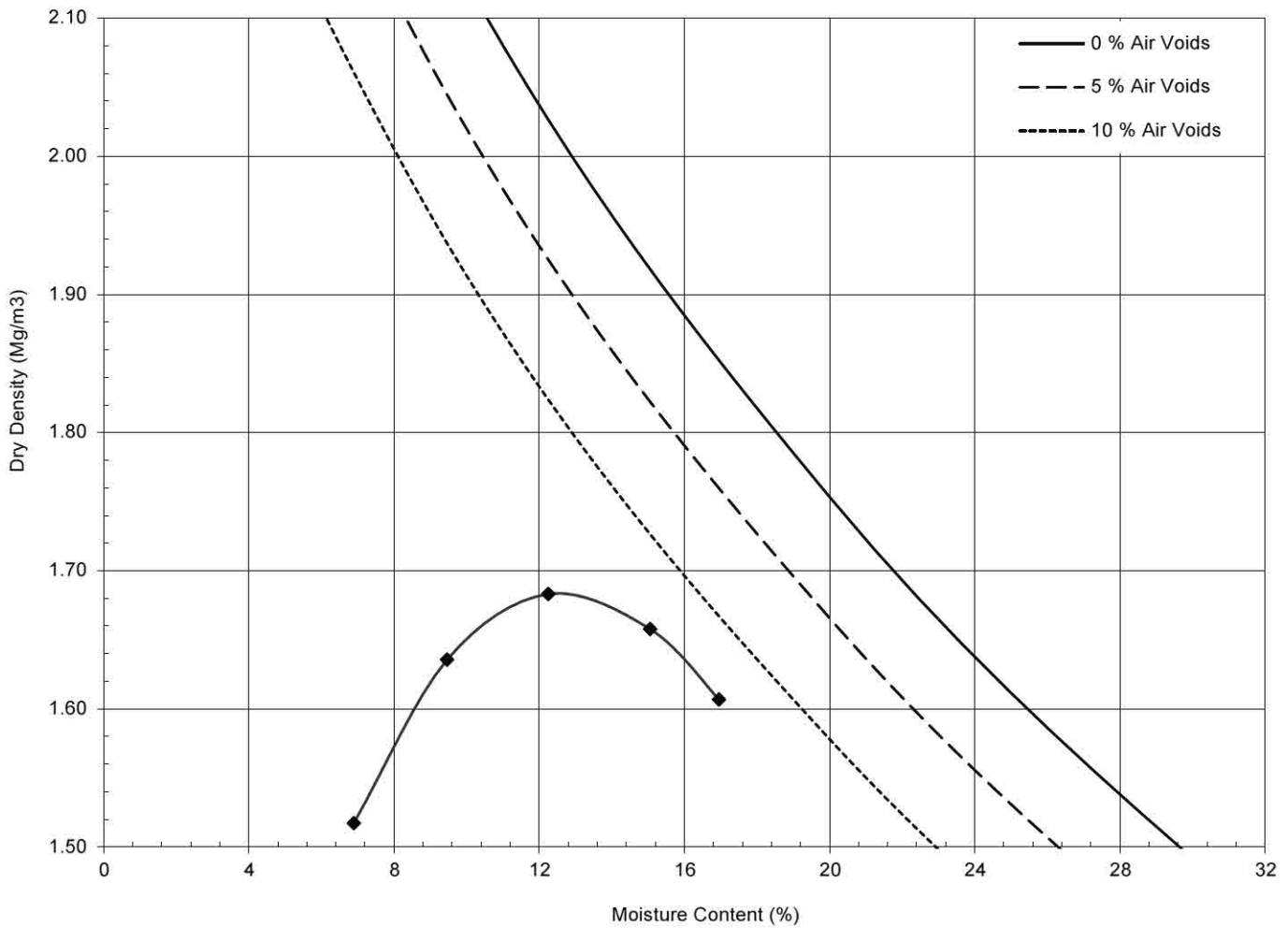
DESCRIPTION Orangish brown mottled bluish grey slightly gravelly sandy silty CLAY

SAMPLE DEPTH (m)

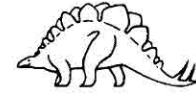
0.60

SPECIMEN DEPTH (m)

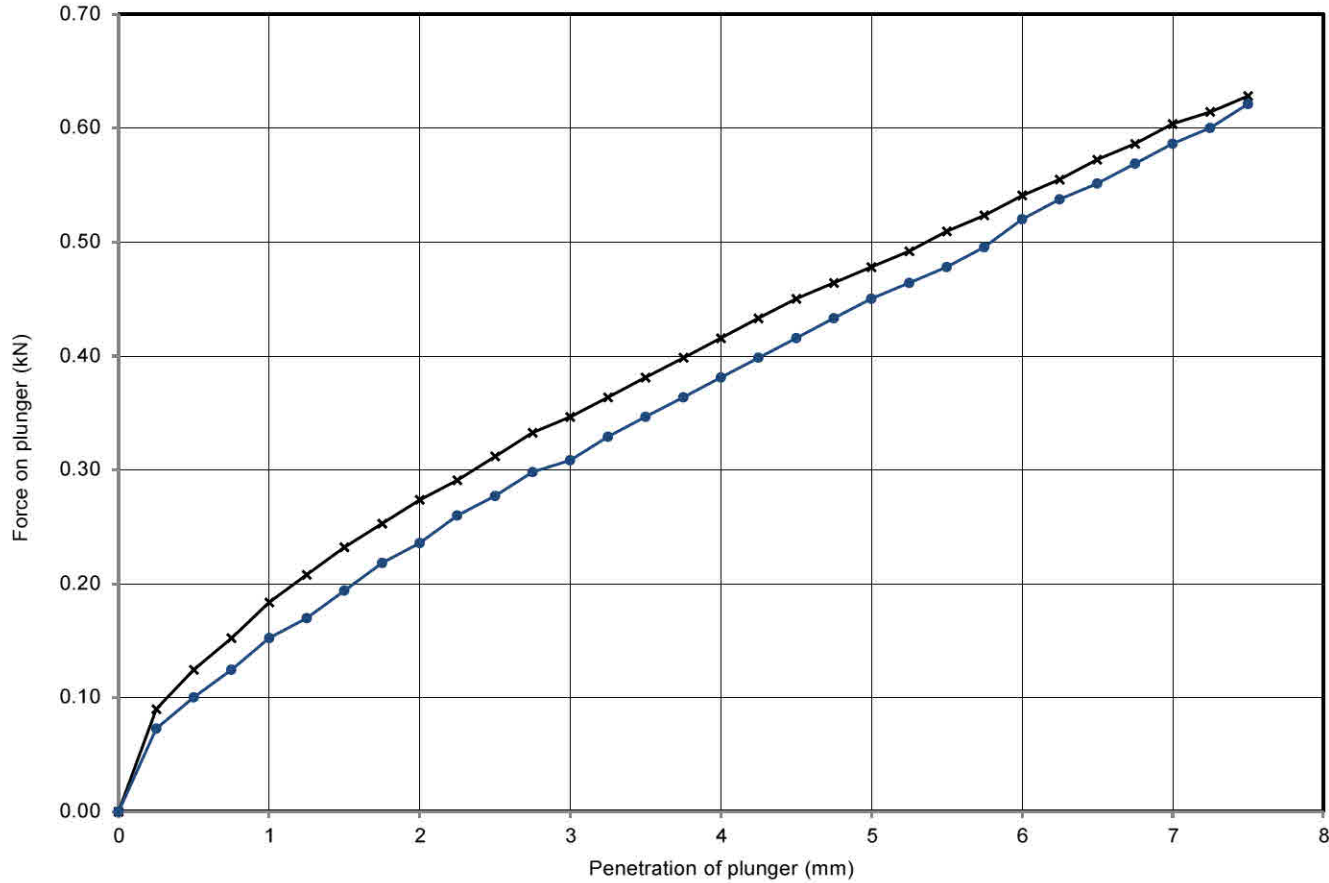
0.60



test method	3.3.4.1 2.5kg dynamic compaction - 1L mould				
preparation procedure	3.2.4.2 (grading zone 2)				
sample preparation	S R				
proportion retained on 37.5mm sieve	%	0	initial moisture content	%	14
proportion retained on 20mm sieve	%	4	maximum dry density	(Mg/m ³)	1.69
particle density	(Mg/m ³)	2.7	optimum moisture content	%	13
remarks	# denotes particle density has been assigned an assumed value C denotes sample has been chopped to pass 20mm sieve S denotes sample has been shredded to pass 20mm sieve R denotes sample material has been recycled between/for points				
				CONTRACT	CHECKED
				34023	EC



CLIENT	ALS ENVIRONMENTAL	BH/TP No.	BH102
SITE	TRADETEAM (DHL), GLOUCESTER	SAMPLE No./TYPE	B
DESCRIPTION	Orangish brown mottled bluish grey slightly gravelly sandy silty CLAY	SAMPLE DEPTH (m)	0.60
		SPECIMEN DEPTH (m)	0.60



sample preparation:		Dynamic compaction - 4.5kg rammer with specified effort	
proportion > 20mm removed (%)	5.1	sample condition	Unsoaked
surcharge mass (kg)	10	amount of swell (mm)	
INITIAL CONDITIONS		FINAL CONDITIONS	
moisture content (%)	14	moisture content top (%)	14
bulk density (Mg/m ³)	2.16	moisture content base (%)	16
dry density (Mg/m ³)	1.89		
remarks		results	
		CBR value top (%)	2.4
		CBR value base (%)	2.3
		average CBR value (%)	2.3
		CONTRACT	CHECKED
		34023	EC

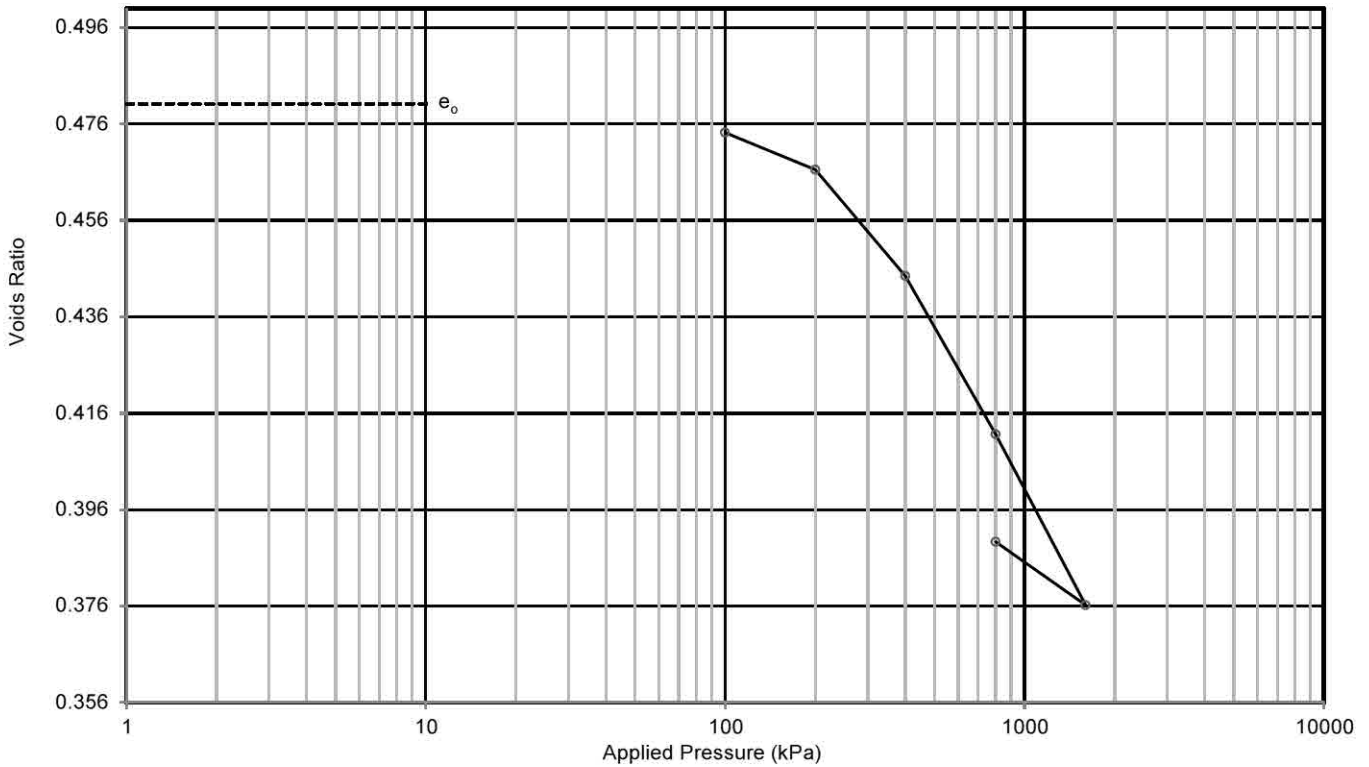
DETERMINATION OF ONE-DIMENSIONAL CONSOLIDATION PROPERTIES

BS EN ISO 17892 - 5 : 2017 : 6



CLIENT ALS ENVIRONMENTAL
 SITE TRADETEAM (DHL), GLOUCESTER
 DESCRIPTION Grey slightly sandy silty CLAY

BH/TP No. BH102
 SAMPLE No./TYPE U
 SAMPLE DEPTH (m) 5.00
 SPECIMEN DEPTH (m) 5.23



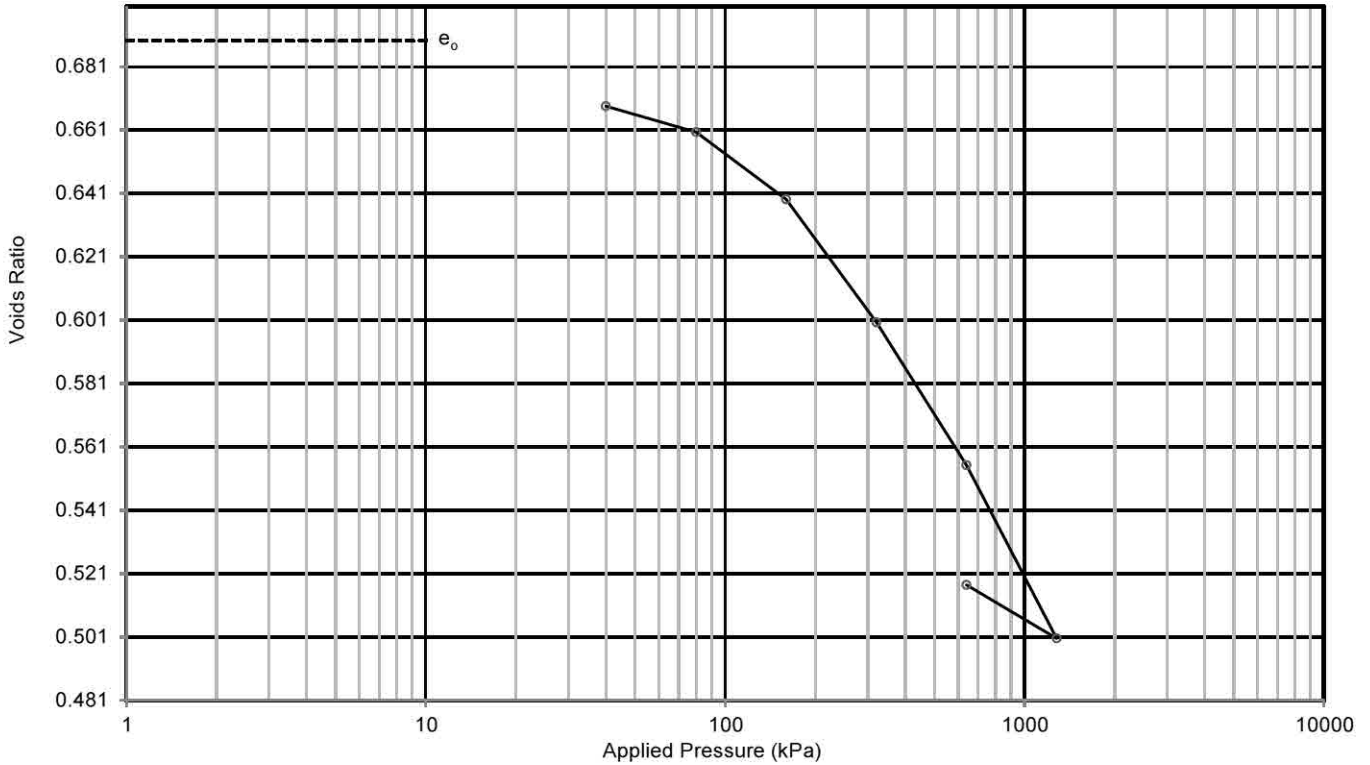
test and sample details			test results			
			pressure stage (kPa)	voids ratio	laboratory compressibility mv (m2/MN)	consolidation Cv (m2/yr)
specimen diameter	mm	63.12				
specimen height	mm	18.86				
initial moisture content	%	18.1				
final moisture content	%	17.4				
initial bulk density	Mg/m3	2.15	100	0.474		
initial dry density	Mg/m3	1.82	200	0.467	0.052	0.57
initial voids ratio		0.480	400	0.444	0.075	0.78
initial degree of saturation	%	102	800	0.412	0.057	0.52
particle density	Mg/m3	#2.70	1600	0.376	0.031	0.66
swelling pressure	kPa	N/A	800	0.389	0.012	
P'o to P'o +100 kPa		-				
laboratory temperature	oC	20 ± 2				
method of time fitting		root time				
remarks # denotes particle density has been assigned an assumed value Specimen swelled on first loading increment.					CONTRACT	CHECKED
					34023	EC

DETERMINATION OF ONE-DIMENSIONAL CONSOLIDATION PROPERTIES

BS EN ISO 17892 - 5 : 2017 : 6



CLIENT	ALS ENVIRONMENTAL	BH/TP No.	BH103
SITE	TRADETEAM (DHL), GLOUCESTER	SAMPLE No./TYPE	U
DESCRIPTION	Greenish grey slightly sandy slightly gravelly CLAY	SAMPLE DEPTH (m)	2.00
		SPECIMEN DEPTH (m)	2.40



test and sample details			test results			
			pressure stage (kPa)	voids ratio	laboratory coefficients of compressibility mv (m2/MN)	consolidation Cv (m2/yr)
specimen diameter	mm	63.34				
specimen height	mm	18.87				
initial moisture content	%	25.2				
final moisture content	%	22.5				
initial bulk density	Mg/m3	2.00	40	0.668		
initial dry density	Mg/m3	1.60	80	0.660		
initial voids ratio		0.689	160	0.639	0.16	2.4
initial degree of saturation	%	99	320	0.600	0.15	0.45
particle density	Mg/m3	#2.70	640	0.555	0.088	0.35
swelling pressure	kPa	N/A	1280	0.501	0.055	0.37
			640	0.517	0.018	
P'o to P'o +100 kPa		-				
laboratory temperature	oC	20 ± 2				
method of time fitting		root time				
remarks # denotes particle density has been assigned an assumed value Specimen swelled on first two loading increments.					CONTRACT	CHECKED
					34023	EC

UNDRAINED TRIAXIAL COMPRESSION

BS.1377 : PART 7 : 1990 : 9



CLIENT ALS ENVIRONMENTAL

SITE TRADETEAM (DHL), GLOUCESTER

borehole /trial pit no.	sample		specimen depth (m)	code	moisture content		dimensions		density		cell pressure (kPa)	rate of strain (%/min)	deviator stress (kPa)	failure strain (%)	failure mode	shear strength* (kPa)	description and remarks
	no./type	depth (m)			initial (%)	final (%)	length (mm)	diameter (mm)	bulk (Mg/m ³)	dry (Mg/m ³)							
BH102	U	1.50	1.70	UUM100	29.8	29.8	206	105	1.90	1.46	25 50 100	4.1	79 103 114	5.3 9.7 13.6	I	40 52 57	Brown slightly gravelly slightly sandy CLAY
BH102	U	3.00	3.00	UUM100	23.9	24.9	188	101	2.07	1.67	60 120 240	3.8	136 162 185	6.9 10.1 13.3	S	68 81 92	Grey slightly sandy CLAY
BH103	U	4.00	4.00	UUM100	22.9	22.7	206	105	1.98	1.61	80 160 320	4.1	85 97 120	2.4 3.9 5.8	S	42 49 60	Grey slightly sandy CLAY
general remarks:				code:	failure mode:				membrane type/thickness:				CONTRACT		CHECKED		
* shear strength taken as half deviator stress at failure for each stage membrane correction applied sample taken vertically (unless otherwise specified) strain rate 2%/min (unless otherwise specified)				UU - unconsolidated undrained M - multi stage S - set of three R - remoulded	B - barrel (plastic failure) S - shear (brittle failure) I - intermediate O - other (see remarks)				latex membrane used (unless otherwise specified) 38 - 0.2mm 70 - 0.4mm 100 - 0.4mm				34023		EC		



CERTIFICATE OF ANALYSIS

SDG: 180302-66	Client Reference: 70020138	Report Number: 451633
Location: Tradeteam Site (DHL) Gloucester	Order Number: 70020138-006	Superseded Report: 451021

Appendix

1. Results are expressed on a dry weight basis (dried at 35°C) for all soil analyses except for the following: NRA and CEN Leach tests, flash point LOI, pH, ammonium as NH4 by the BRE method, VOC TICs and SVOC TICs.

2. Samples will be run in duplicate upon request, but an additional charge may be incurred.

3. If sufficient sample is received a sub sample will be retained free of charge for 30 days after analysis is completed (e-mailed) for all sample types unless the sample is destroyed on testing. The prepared soil sub sample that is analysed for asbestos will be retained for a period of 6 months after the analysis date. All bulk samples will be retained for a period of 6 months after the analysis date. All samples received and not scheduled will be disposed of one month after the date of receipt unless we are instructed to the contrary. Once the initial period has expired, a storage charge will be applied for each month or part thereof until the client cancels the request for sample storage. ALS reserve the right to charge for samples received and stored but not analysed.

4. With respect to turnaround, we will always endeavour to meet client requirements wherever possible, but turnaround times cannot be absolutely guaranteed due to so many variables beyond our control.

5. We take responsibility for any test performed by sub-contractors (marked with an asterisk). We endeavour to use UKAS/MCERTS Accredited Laboratories, who either complete a quality questionnaire or are audited by ourselves. For some determinands there are no UKAS/MCERTS Accredited Laboratories, in this instance a laboratory with a known track record will be utilised.

6. When requested, the individual sub sample scheduled will be analysed in house for the presence of asbestos fibres and asbestos containing material by our documented in house method TM048 based on HSG 248 (2005), which is accredited to ISO17025. If a specific asbestos fibre type is not found this will be reported as "Not detected". If no asbestos fibre types are found all will be reported as "Not detected" and the sub sample analysed deemed to be clear of asbestos. If an asbestos fibre type is found it will be reported as detected (for each fibre type found). Testing can be carried out on asbestos positive samples, but, due to Health and Safety considerations, may be replaced by alternative tests or reported as No Determination Possible (NDP). The quantity of asbestos present is not determined unless specifically requested.

7. If no separate volatile sample is supplied by the client, or if a headspace or sediment is present in the volatile sample, the integrity of the data may be compromised. This will be flagged up as an invalid VOC on the test schedule and the result marked as deviating on the test certificate.

8. If appropriate preserved bottles are not received preservation will take place on receipt. However, the integrity of the data may be compromised.

9. NDP - No determination possible due to insufficient/unsuitable sample.

10. Metals in water are performed on a filtered sample, and therefore represent dissolved metals - total metals must be requested separately.

11. Results relate only to the items tested.

12. LoDs (Limit of Detection) for wet tests reported on a dry weight basis are not corrected for moisture content.

13. **Surrogate recoveries** - Surrogates are added to your sample to monitor recovery of the test requested. A % recovery is reported, results are not corrected for the recovery measured. Typical recoveries for organics tests are 70-130%, they are generally wider for volatiles analysis, 50-150%. Recoveries in soils are affected by organic rich or clay rich matrices. Waters can be affected by remediation fluids or high amounts of sediment. Test results are only ever reported if all of the associated quality checks pass; it is assumed that all recoveries outside of the values above are due to matrix affect.

14. **Product analyses** - Organic analyses on products can only be semi-quantitative due to the matrix effects and high dilution factors employed.

15. Phenols monohydric by HPLC include phenol, cresols (2-Methylphenol, 3-Methylphenol and 4-Methylphenol) and Xylenols (2,3 Dimethylphenol, 2,4 Dimethylphenol, 2,5 Dimethylphenol, 2,6 Dimethylphenol, 3,4 Dimethylphenol, 3,5 Dimethylphenol).

16. Total of 5 speciated phenols by HPLC includes Phenol, 2,3,5-Trimethyl Phenol, 2-Isopropylphenol, Cresols and Xylenols (as detailed in 15).

17. Stones/debris are not routinely removed. We always endeavour to take a representative sub sample from the received sample.

18. In certain circumstances the method detection limit may be elevated due to the sample being outside the calibration range. Other factors that may contribute to this include possible interferences. In both cases the sample would be diluted which would cause the method detection limit to be raised.

19. Mercury results quoted on soils will not include volatile mercury as the analysis is performed on a dried and crushed sample.

20. For leachate preparations other than Zero Headspace Extraction (ZHE) volatile loss may occur.

General

21. For the BSEN 12457-3 two batch process to allow the cumulative release to be calculated, the volume of the leachate produced is measured and filtered for all tests. We therefore cannot carry out any unfiltered analysis. The tests affected include volatiles GCFID/GCMS and all subcontracted analysis.

22. We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials - whether these are derived from naturally occurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample. Other coarse granular material such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

23. Analysis and identification of specific compounds using GCFID is by retention time only, and we routinely calibrate and quantify for benzene, toluene, ethylbenzenes and xylenes (BTEX). For total volatiles in the C5-C12 range, the total area of the chromatogram is integrated and expressed as ug/kg or ug/l. Although this analysis is commonly used for the quantification of gasoline range organics (GRO), the system will also detect other compounds such as chlorinated solvents, and this may lead to a falsely high result with respect to hydrocarbons only. It is not possible to specifically identify these non-hydrocarbons, as standards are not routinely run for any other compounds, and for more definitive identification, volatiles by GCMS should be utilised.

24. **Tentatively Identified Compounds (TICs)** are non-target peaks in VOC and SVOC analysis. All non-target peaks detected with a concentration above the LoD are subjected to a mass spectral library search. Non-target peaks with a library search confidence of >75% are reported based on the best mass spectral library match. When a non-target peak with a library search confidence of <75% is detected it is reported as "mixed hydrocarbons". Non-target compounds identified from the scan data are semi-quantified relative to one of the deuterated internal standards, under the same chromatographic conditions as the target compounds. This result is reported as a semi-quantitative value and reported as Tentatively Identified Compounds (TICs). TICs are outside the scope of UKAS accreditation and are not moisture corrected.

Sample Deviations

If a sample is classed as deviated then the associated results may be compromised.

1	Container with Headspace provided for volatiles analysis
2	Incorrect container received
3	Deviation from method
4	Holding time exceeded before sample received
5	Samples exceeded holding time before preservation was performed
§	Sampled on date not provided
◆	Sample holding time exceeded in laboratory
@	Sample holding time exceeded due to sampled on date
&	Sample Holding Time exceeded - Late arrival of instructions.

Asbestos

Identification of Asbestos in Bulk Materials & Soils

The results for identification of asbestos in bulk materials are obtained from supplied bulk materials which have been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining, based on HSG 248 (2005).

The results for identification of asbestos in soils are obtained from a homogenised sub sample which has been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining, based on HSG 248 (2005).

Astestost Type	Common Name
Chrysotile	White Asbestos
Amosite	Brown Asbestos
Coisidolite	Blue Asbestos
Fibrous Actinolite	-
Fibrous Anthophyllite	-
Fibrous Tremolite	-

Visual Estimation Of Fibre Content

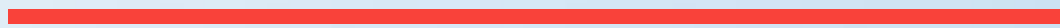
Estimation of fibre content is not permitted as part of our UKAS accredited test other than: - Trace - Where only one or two asbestos fibres were identified.

Further guidance on typical asbestos fibre content of manufactured products can be found in HSG 264.

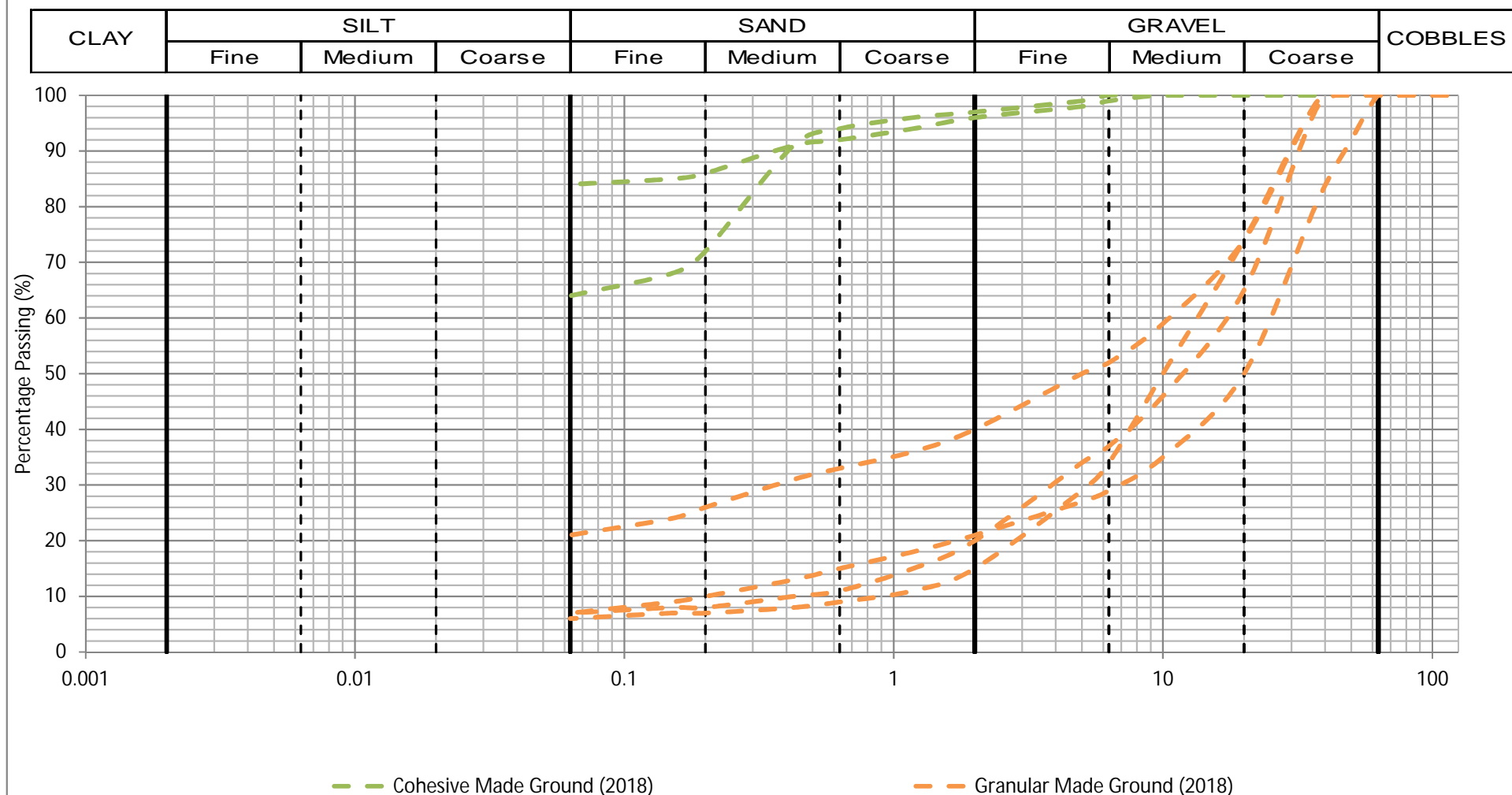
The identification of asbestos containing materials and soils falls within our schedule of tests for which we hold UKAS accreditation, however opinions, interpretations and all other information contained in the report are outside the scope of UKAS accreditation.

Appendix I

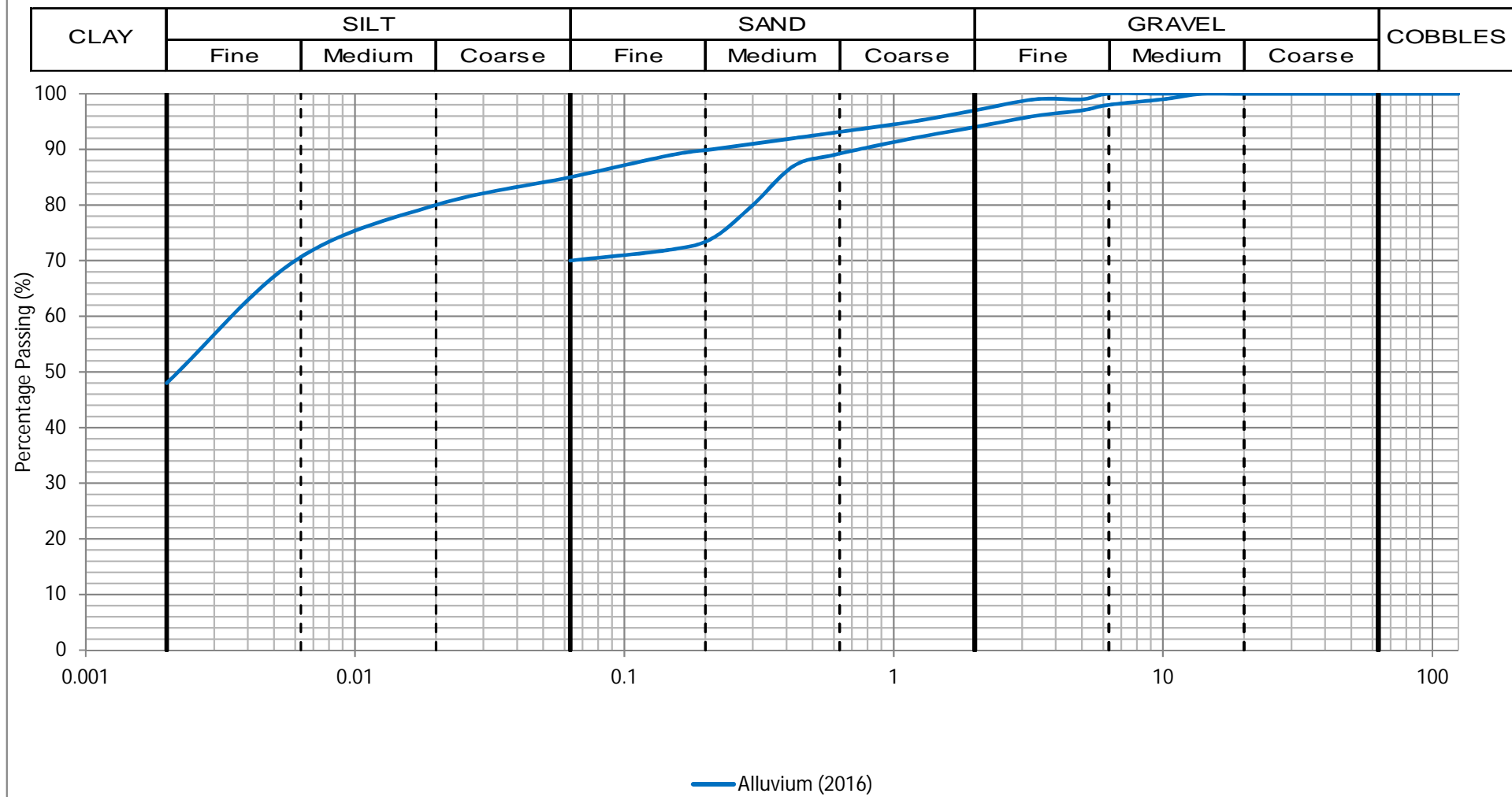
GEOTECHNICAL DATA PLOTS



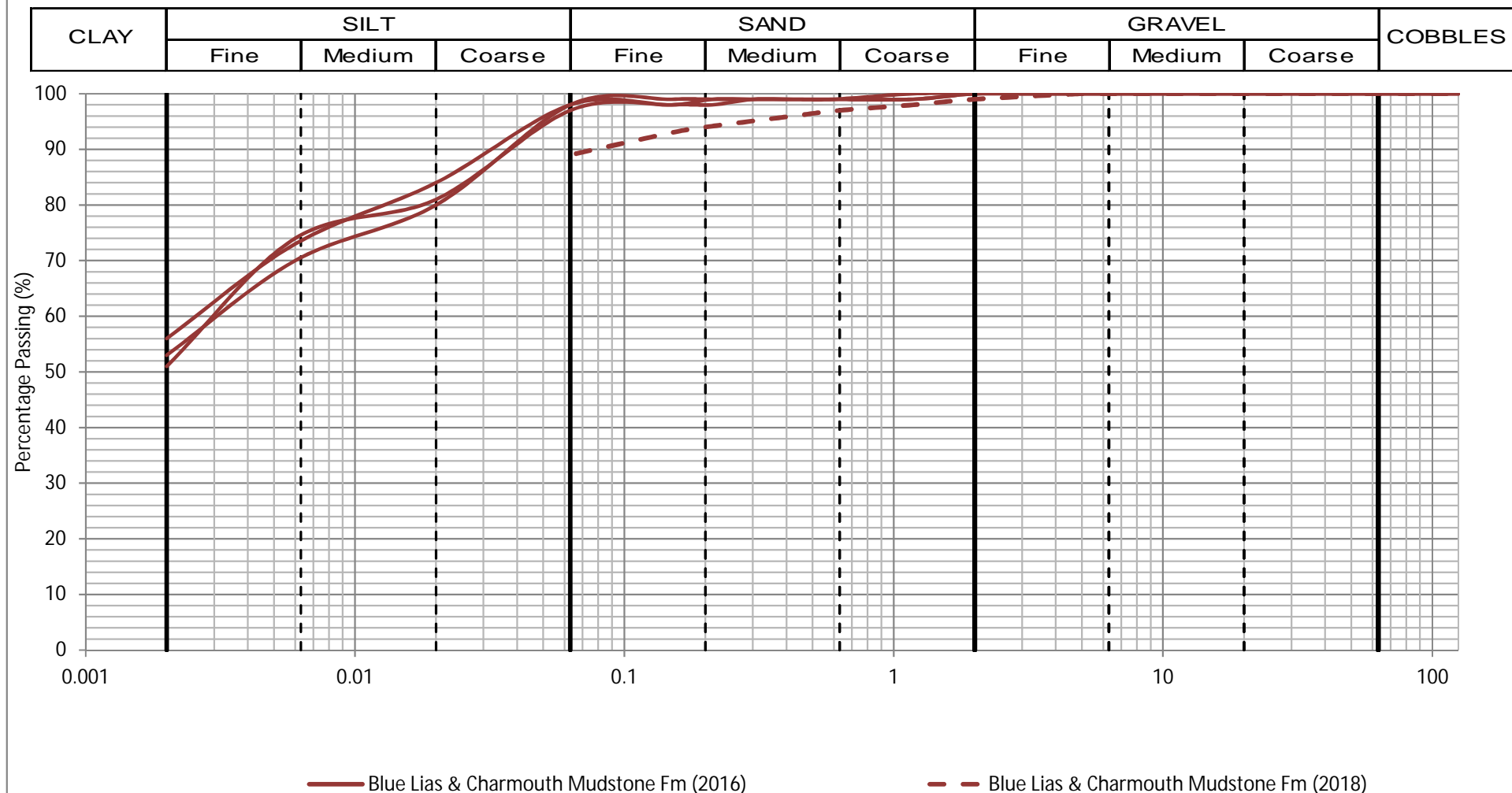
PSD - Made Ground



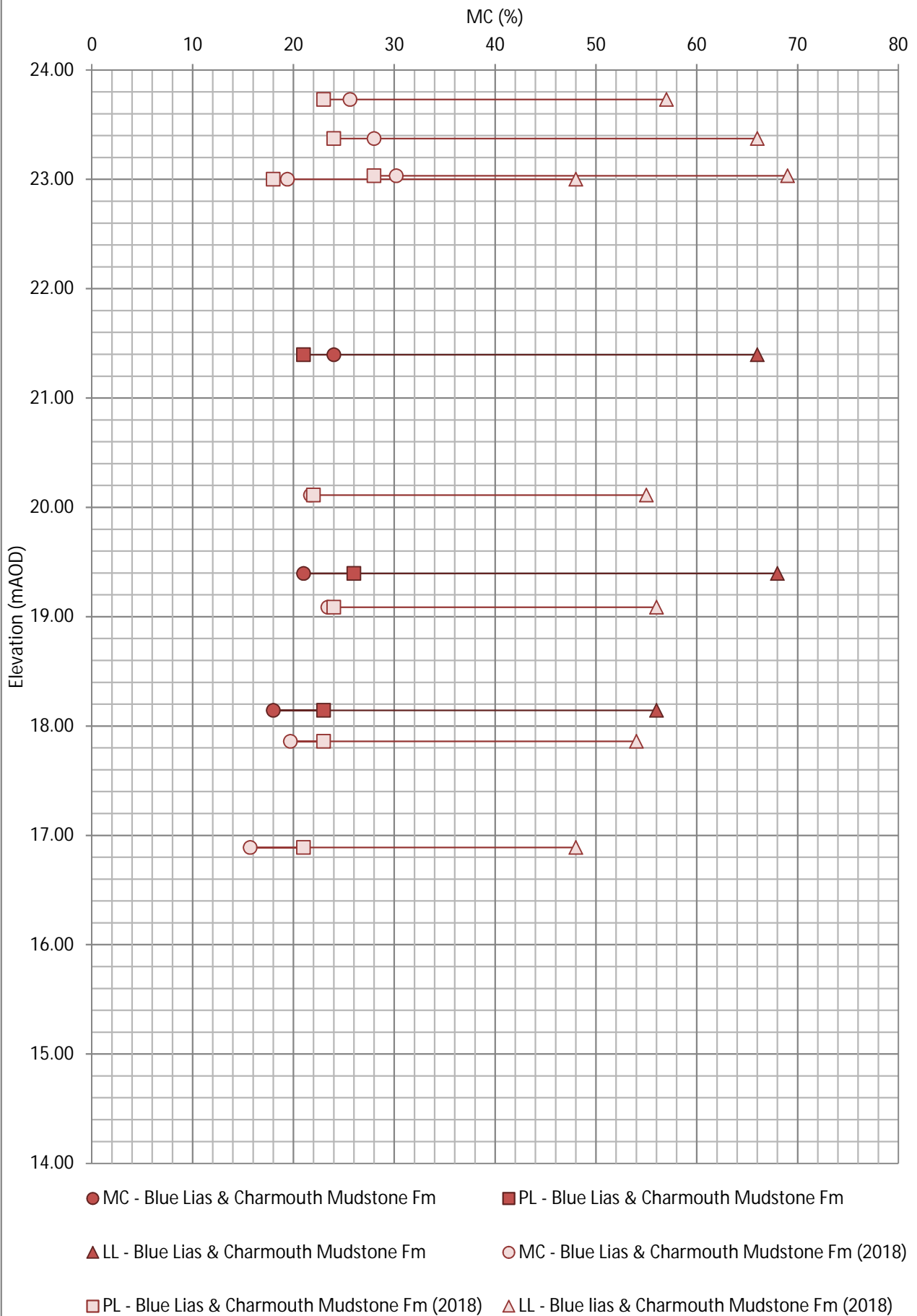
PSD - Alluvium



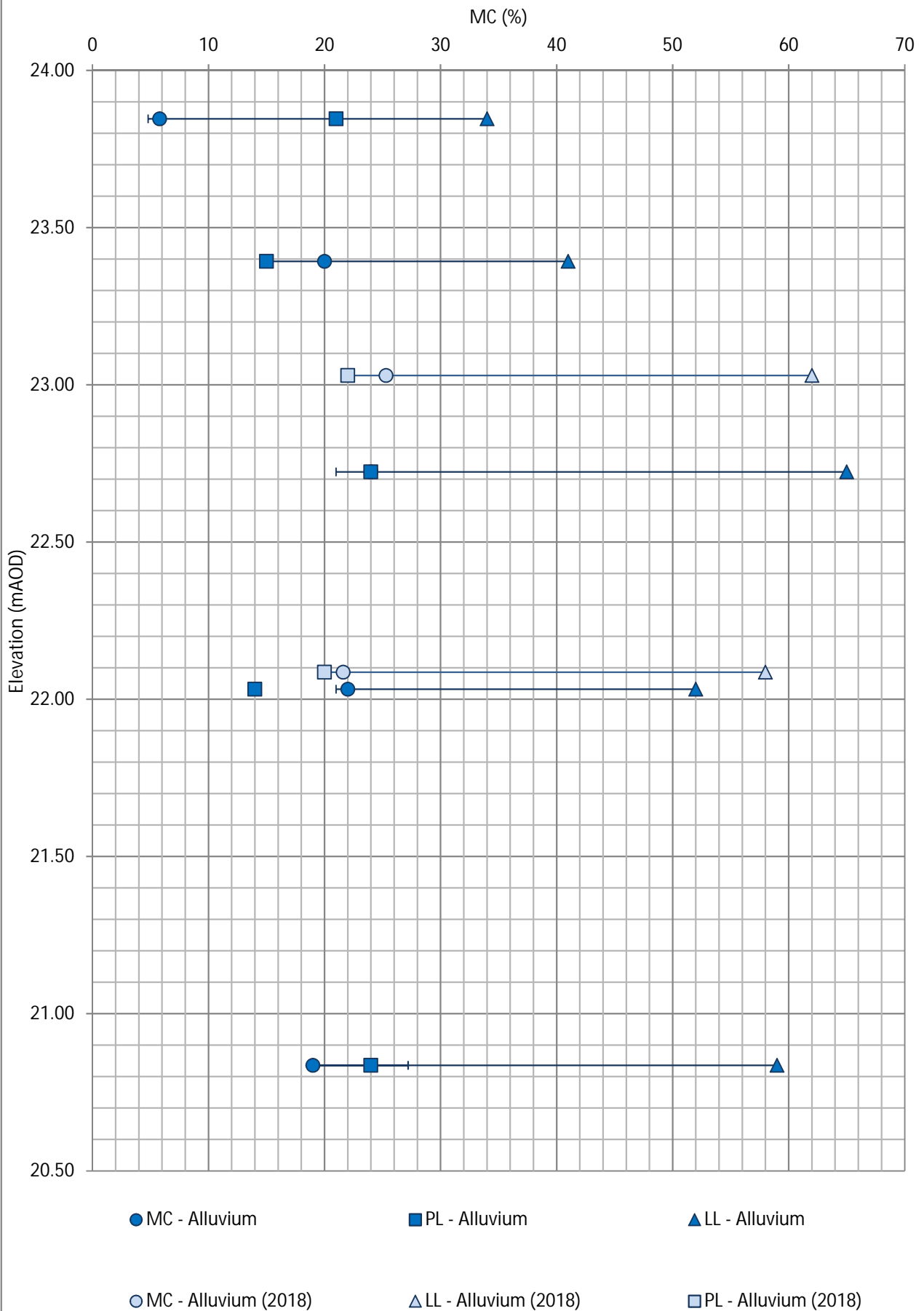
PSD - Blue Lias & Charmouth Mudstone Fm



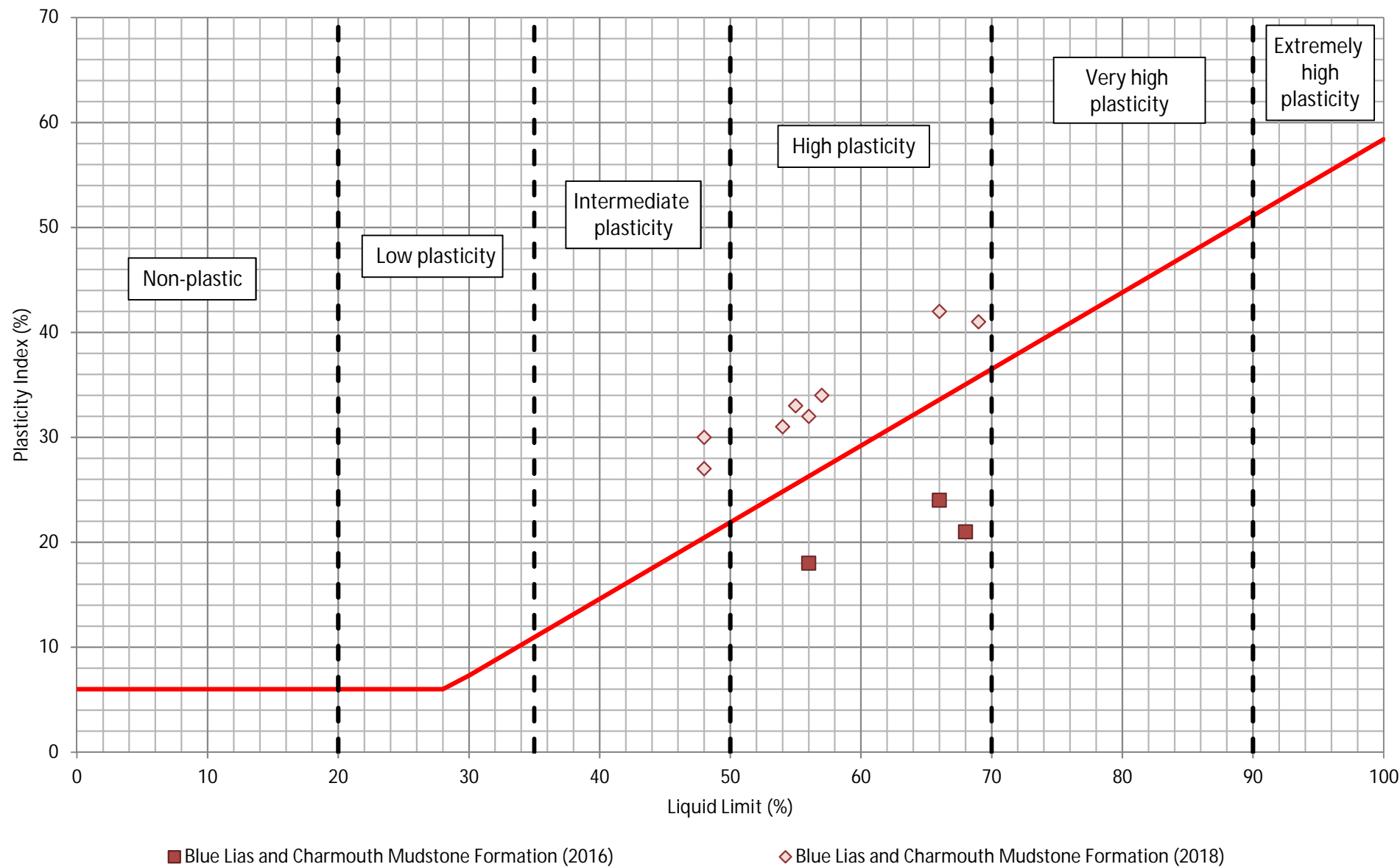
Atterberg Limits vs Elevation - Blue Lias & Charmouth Mudstone Fm



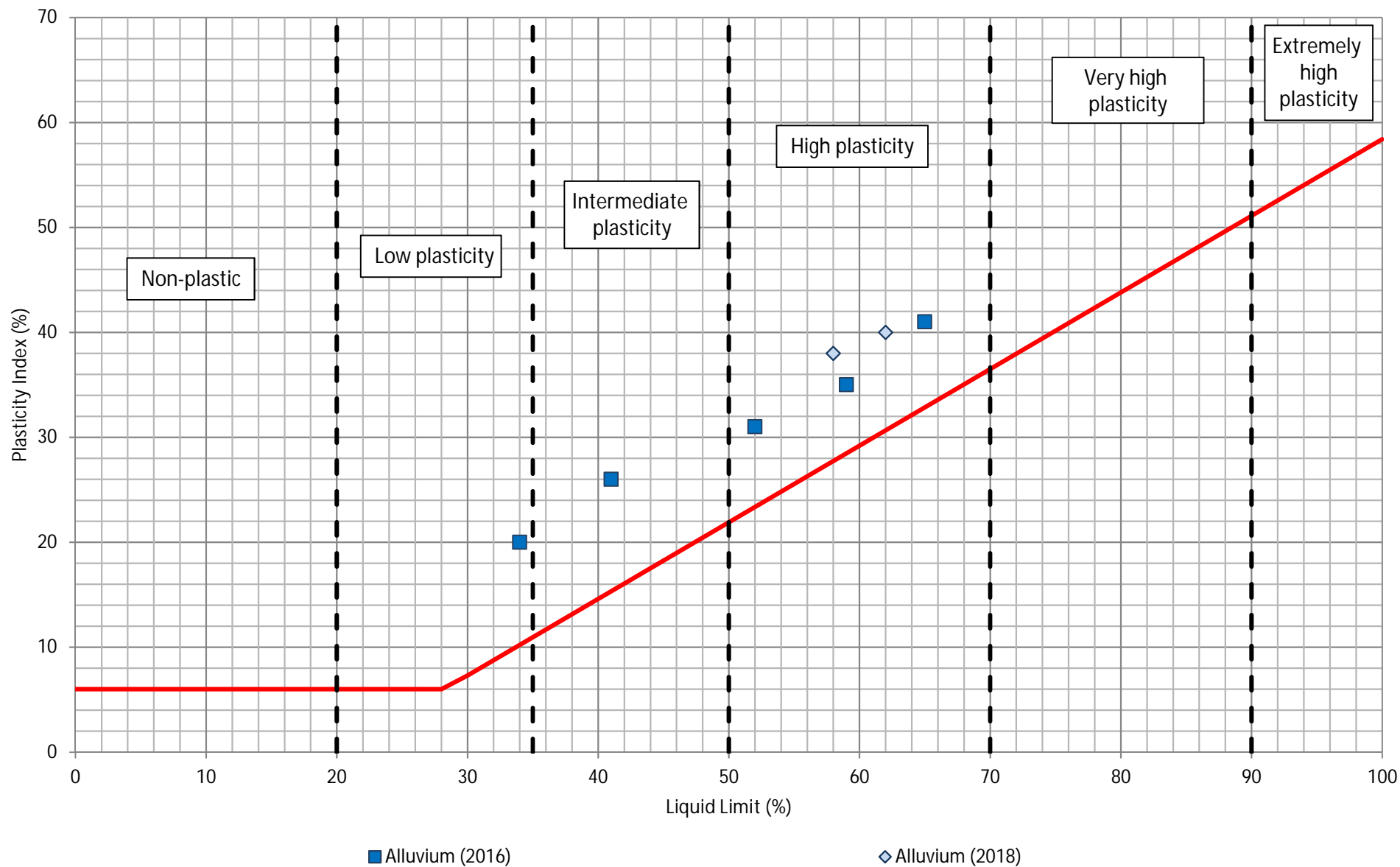
Atterberg Limits vs Elevation - Alluvium

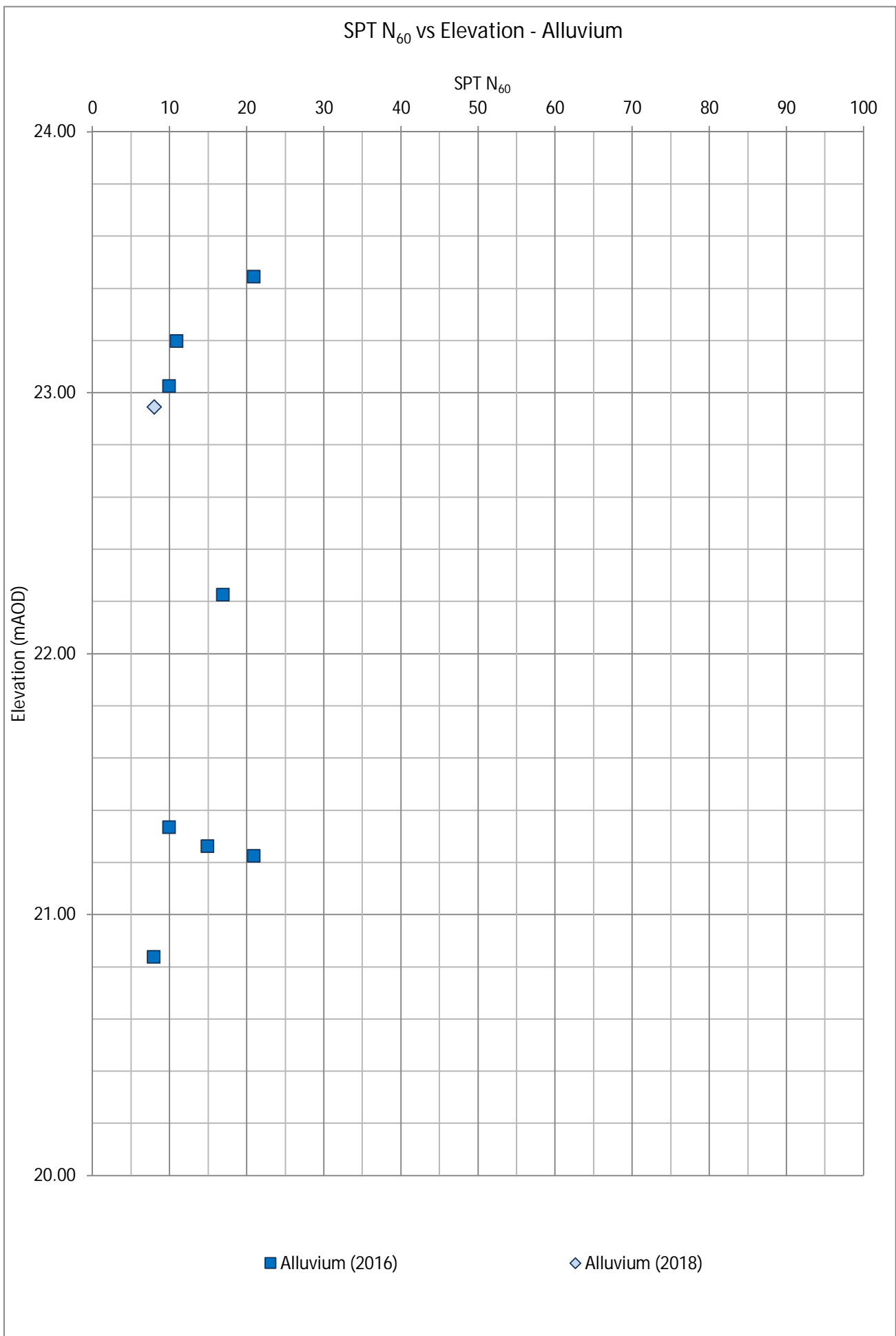


A-Line Plot - Blue Lias & Charmouth Mudstone Fm

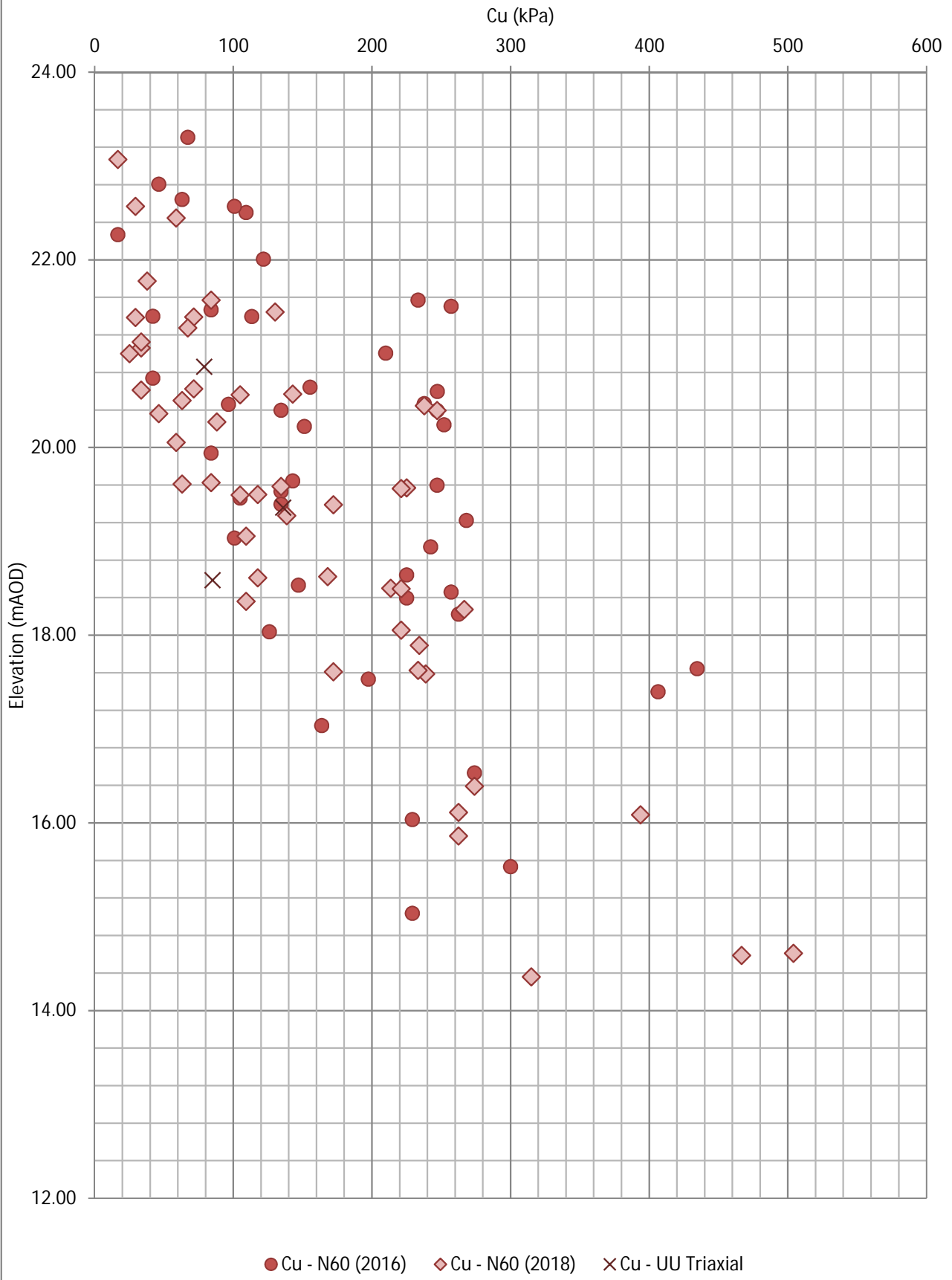


A-Line Plot - Alluvium

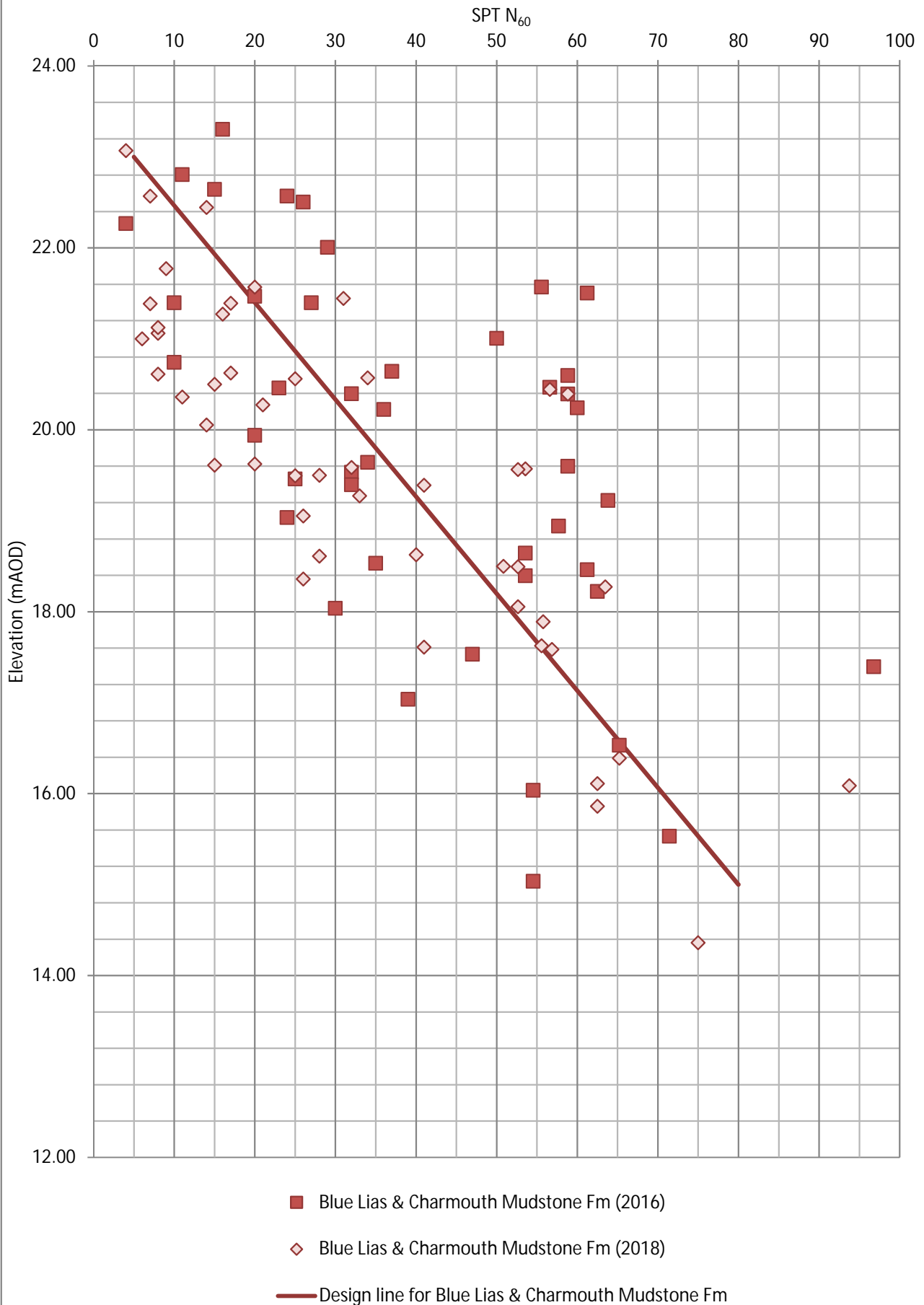




Cu vs Elevation - Blue Lias and Charmouth Mudstone Fm



SPT N_{60} vs Elevation - Blue Lias & Charmouth Mudstone Fm





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