

Direct Tel: 0207 928 7888
Direct Email: freddie.alcock@watermangroup.com

Our Ref: EED10658-109-C-013-FA
Your Ref:

Date: 03 July 2012

Gill Davies
Technical Officer Contaminated Land,
Red Kite House,
Howbery Park,
Crowmarsh Gifford,
Wallingford,
Oxon
OX10 8BD.

Dear Gill,

Re: Results of sampling from borehole BH225 and BH226 Heyford Park.

This letter is being issued as an addendum to the report entitled Heyford Park – Flying Field, Hydrogeological Characterisation and Groundwater Quality Assessment, Report Reference EED10658-109.9.3.1_FA. Following your review of the report you requested that two additional boreholes be drilled to the south and south east of the Fuel Entry Compound (FEC) and POL21 A, B & C (BH225 and BH226). The boreholes were installed to help confirm groundwater flow direction in this area and to determine the impact of Total Petroleum Hydrocarbon (TPH) contaminants detected BH222 and BH223 are having on the down gradient water body.

The characterisation of the hydrological and contaminative status of the Flying Field was undertaken to address Conditions 33 and 34 as listed in Decision Notice APP/C3105/A/08/2080594, dated 11 January 2010 and as such this letter should be also be considered in relation to these Conditions.

The locations of BH225 and BH226 were agreed with you via email on 02-02-2012 and on the basis of monitored groundwater levels. As part of additional intrusive works three samples were collected from each of the new boreholes between 03 March and 05 April 2012. The Heyford Park Drain was also sampled as part of the additional work, as you requested. This was sampled on two occasions on the third visit the drain was found to be dry. Installation and sampling of the boreholes was carried concurrently with the intrusive investigation that was carried out in the New Settlement Area of Heyford as reported in Waterman Report Reference EED10658-13.2.1.

A plan showing the locations of boreholes BH225 and BH226 and the Heyford Park drain are shown in Figure A1, whilst borehole logs for BH225 and BH226 are appended to this letter. Table1 shows groundwater levels in boreholes BH225 and BH226.

Table 1: Groundwater level monitoring data in borehole BH225 and BH226.

Borehole	Depth m (mAOD) 07-03-2012	Depth m (mAOD) 24-03-2011	Depth m (mAOD) 04-04-2012	Average
BH225	2.05 (120.88)	2.2 (120.73)	2.27 (120.66)	120.75
BH226	2.99 (121.27)	3.84 (120.42)	4.67 (119.56)	120.43

Groundwater level monitoring results from boreholes drilled in the New Settlement Area and relevant boreholes installed on the Flying Field were used to generate the Surfer® plot depicting groundwater flow direction in the area. The surfer plot is presented in Figure A2, appended to this letter. It can be seen from the surfer plot that groundwater from the vicinity of the boreholes BH223 and BH224 is flowing in a southerly direction and therefore borehole BH201, BH225, BH226 are considered to be

down groundwater gradient from these boreholes, the FEC and POL21. Boreholes BHNSA21, BHNSA17, BHNSA18, BHNSA19 and BHNSA20 are also located down groundwater gradient of the area. It should be noted however that boreholes BHNSA21, BHNSA18 and BHNSA19 were positioned to target buried fuel storage tanks. The results of the TPH analysis detected in samples collected from the above mentioned boreholes and the Heyford Park Drain are presented in Table 2. Extracts from the lab certificates containing the results of analysis for samples collected from BH225 and BH226 are appended to this letter.

Table 2: TPH concentrations detected in boreholes targeting the Fuel Entry Compound and boreholes down groundwater gradient.

Borehole	07 March 2012	23 March 2012	04 April 2012	Investigation Phase
BH225	<0.01	<0.01	0.034	2012 Investigation of the NSA
BH226	0.014	<0.01	<0.01	2012 Investigation of the NSA
HDP*	<0.01	<0.01	Dry	2012 Investigation of the NSA
Borehole	June 2011	July 2011	August 2011	
BH223	0.302	0.669	0.647	2011 Investigation of the Flying Field
BH224	0.243	0.693	0.021	2011 Investigation of the Flying Field
BH201	0.015	0.01	0.019	2011 Investigation of the Flying Field
Borehole	07 March 2012	23 March 2012	05 April 2012	
BHNSA18	0.02	0.02	0.01	2012 Investigation of the NSA
BHNSA19	0.01	<0.01	0.03	2012 Investigation of the NSA
BHNSA20	<0.01	<0.01	<0.01	2012 Investigation of the NSA
BHNSA21	0.11	0.11	0.05	2012 Investigation of the NSA

Concentrations of TPH are provided in mg/l

*Heyford Park Drain.

The results of analysis show that for two of the three samples collected from borehole BH225 and BH226, concentrations of TPH were not reported above the limits of detection and the United Kingdom Water Industry Research (UKWIR) threshold concentration of 0.01mg/kg. Only minor exceedances were noted on the other sampling events. The exceedances recorded are consistent of results recorded for groundwater samples collected from the flying Field i.e. marginal and sporadic in nature.

The results of analysis from other boreholes down groundwater gradient show a marginal impact with the exception of BHNSA21 which was specifically positioned to target a buried fuel storage tank at this location and cannot be considered a reflection of the contamination detected in BH223 and BH224.

Both boreholes BH201 and BHNSA20 which were advanced close to the south boundary of the site and the Heyford Ford Park Drain which issues close of the site boundary show that groundwater leaving the site in this area is relatively good and is reflective of general groundwater quality across much of Heyford Park.

Based on the results of the analysis, in particular the results from BH225 and BH226, it is considered the contamination detected in BH223 and BH224 is not significantly impacting groundwater quality down gradient of the fuel entry compound and POL21. Results are considered consistent with the background quality of groundwater underlying Heyford Park and/or the Flying Field.

Also, as you are aware, since the time the samples were collected from BH223 and BH224 significant remedial work has taken place on the Flying Field which involved emptying, cleaning and filling of 99 tanks and the cleaning and foam filling of 23km of pipeline, thereby significantly reducing a potential residual risk to groundwater. A detailed description of these works is provided in Contract Completion Report, reference 1246DOR.

In view of the results of analysis from groundwater samples discussed above and the remedial works already undertaken, it is considered unwarranted to complete further remedial works or investigation in the vicinity of the FEC and POL21.

It is also worth noting that in report EED10658-109.9.3.1 it is proposed that quarterly sampling of specific boreholes including BH223, BH224, 225 and 226 will take place for a period of 2 years. This process has yet to begin however will obviously provide additional information regarding the groundwater quality in the vicinity of the FEC and POL 21.

We therefore ask that you consider the findings detailed in this letter in tandem with report EED10658-9.3.1 sufficient to fully discharge Condition 33 of Decision Notice APP/C3105/A/08/2080594.

If you have any further questions regarding this matter please do not hesitate to contact me.

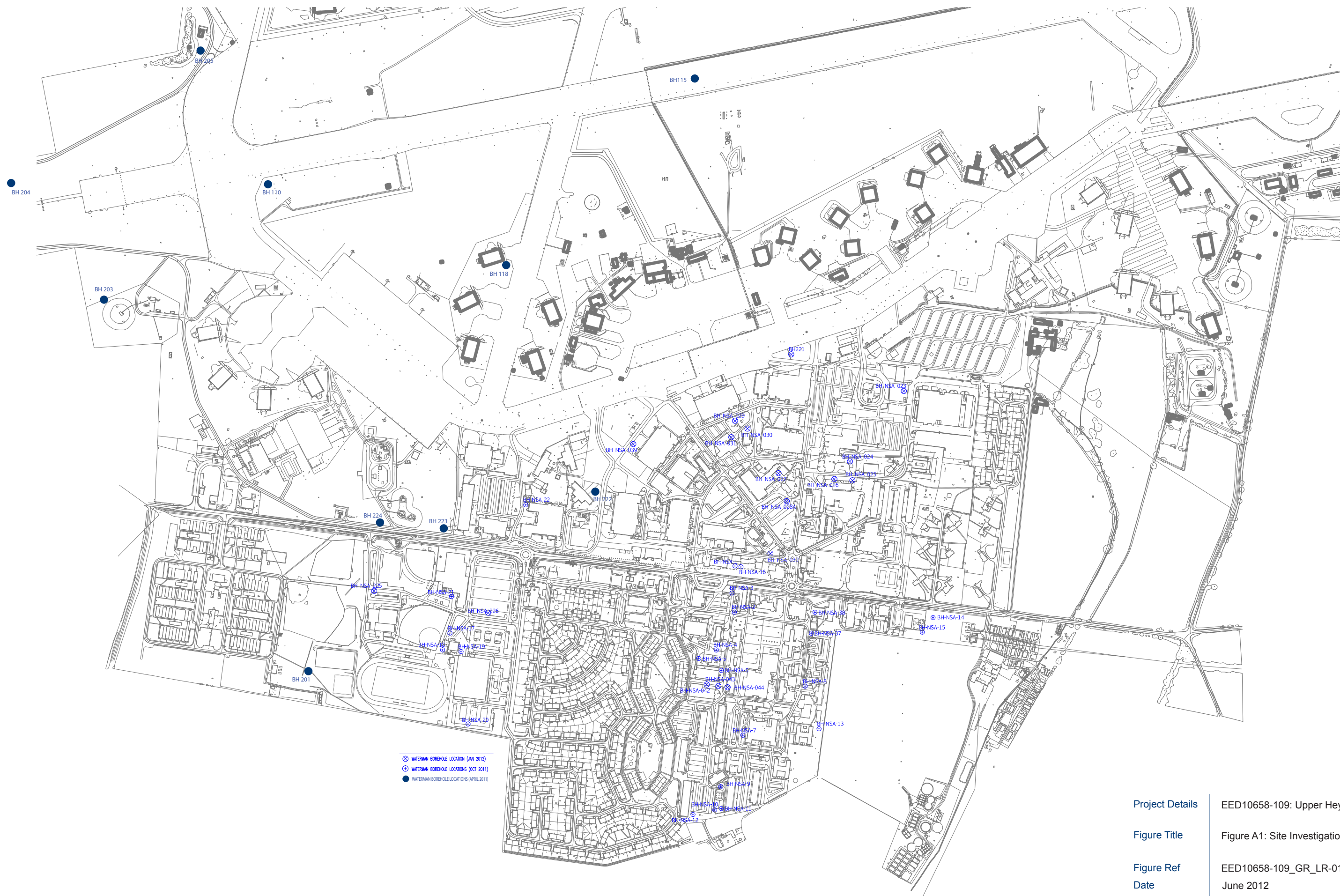
Regards



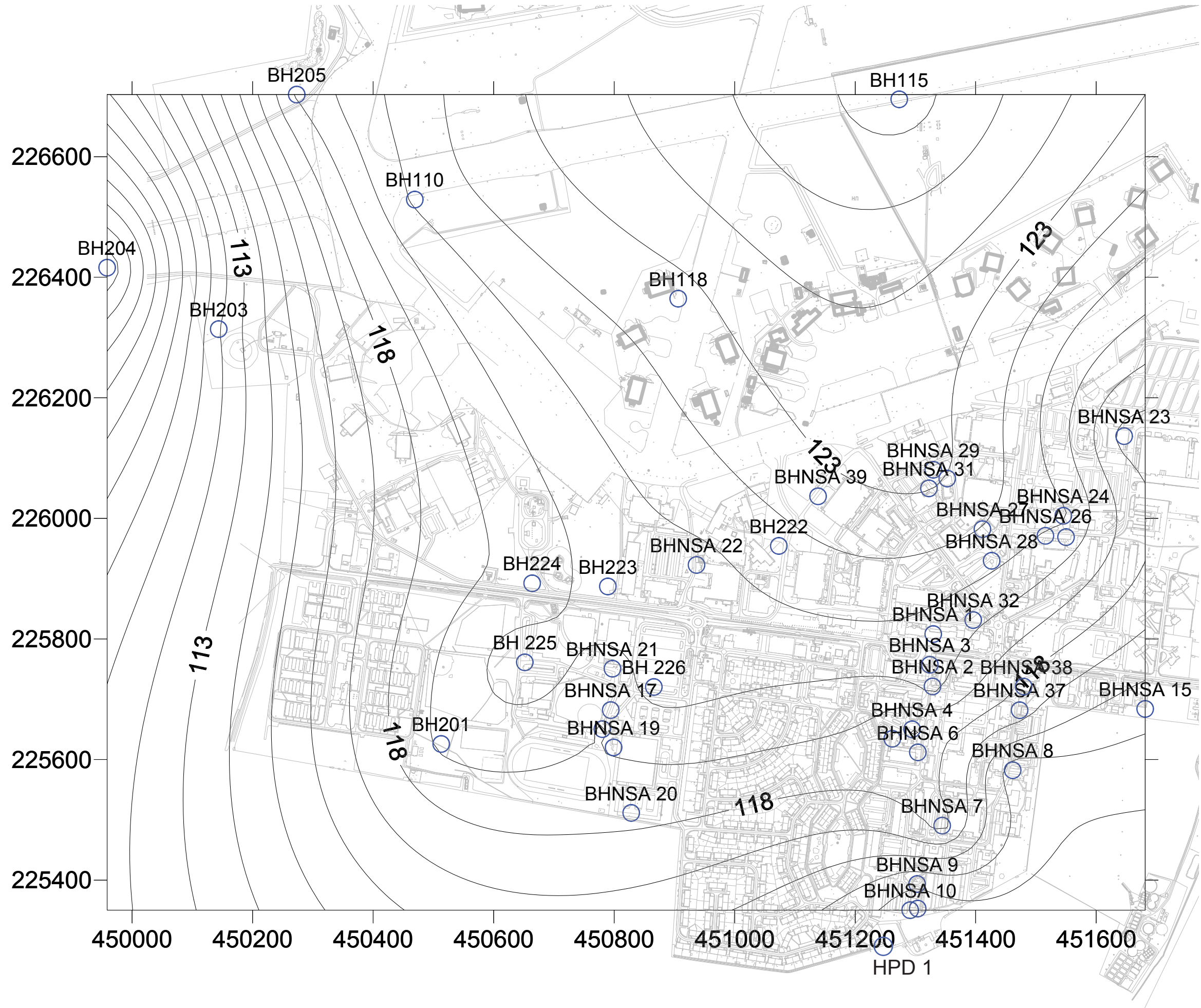
Freddie Alcock
Senior Consultant
For and on Behalf of Waterman, Energy Environment & Design.

Documents Enclosed:

- Figure A1, Borehole location plan
- Figure A2, Surfer plot, showing groundwater flow direction
- Borehole Logs BH225 and BH226
- Extracts from laboratory certificates



Project Details	EED10658-109: Upper Heyford
Figure Title	Figure A1: Site Investigation Plan
Figure Ref	EED10658-109_GR_LR-013_A1A
Date	June 2012
File Location	\\nt-incs\weed\l\projects\eed10658\109\graphics\lr-013\issued figures



Project Details	EED10658-109: Upper Heyford
Figure Title	Figure A2: Borehole Location Plan
Figure Ref	EED10658-109_GR_LR-013_A2A
Date	June 2012
File Location	\\nt-lncs\weed\projects\eed10658\109\graphics\lr-013\issued figures

Gasoline Range Organics (BTEX and Aliphatic Carbon Ranges)

Customer and Site Details: Waterman EED : Upper Heyford
Job Number: W13_4878
Directory: D:\TES\DATA\Y2012\0416HSA_GC09\041612A 2012-04-16 13-30-01\055F3901.D
Method: Headspace GCFID

Matrix: Water
Date Booked in: 11-Apr-12
Date extracted: 16-Apr-12
Date Analysed: 17-Apr-12, 01:36:01

* Sample data with an asterisk are not UKAS accredited.

Sample ID	Client ID	Concentration, (mg/l)					Aliphatics				
		Benzene	Toluene	Ethyl benzene	m/p-Xylene	o-Xylene	C5 - C6	>C6 - C7	>C7 - C8	>C8 - C10	Total GRO
* EX1285042	BHNSA1	<0.005	<0.005	<0.005	<0.005	<0.005	<0.1	<0.1	<0.1	<0.1	<0.1
* EX1285043	BHNSA12	<0.005	<0.005	<0.005	<0.005	<0.005	<0.1	<0.1	<0.1	<0.1	<0.1
* EX1285044	BHNSA13	<0.005	<0.005	<0.005	<0.005	<0.005	<0.1	<0.1	<0.1	<0.1	<0.1
* EX1285045	BHNSA14	<0.005	<0.005	<0.005	<0.005	<0.005	<0.1	<0.1	<0.1	<0.1	<0.1
* EX1285046	BHNSA15	<0.005	<0.005	<0.005	<0.005	<0.005	<0.1	<0.1	<0.1	<0.1	<0.1
* EX1285047	BHNSA16	<0.005	<0.005	<0.005	<0.005	<0.005	<0.1	<0.1	<0.1	<0.1	<0.1
* EX1285048	BHNSA20	<0.005	<0.005	<0.005	<0.005	<0.005	<0.1	<0.1	<0.1	<0.1	<0.1
* EX1285049	BHNSA22	<0.005	<0.005	<0.005	<0.005	<0.005	<0.1	<0.1	<0.1	<0.1	<0.1
* EX1285050	BHNSA23	<0.005	<0.005	<0.005	<0.005	<0.005	<0.1	<0.1	<0.1	<0.1	<0.1
* EX1285051	BHNSA27	<0.005	<0.005	<0.005	<0.005	<0.005	<0.1	<0.1	<0.1	<0.1	<0.1
* EX1285052	BHNSA28	<0.005	<0.005	<0.005	<0.005	<0.005	<0.1	<0.1	<0.1	<0.1	<0.1
* EX1285053	BHNSA32	<0.005	<0.005	<0.005	<0.005	<0.005	<0.1	<0.1	<0.1	<0.1	<0.1
* EX1285054	BHNSA39	<0.005	<0.005	<0.005	<0.005	<0.005	<0.1	<0.1	<0.1	<0.1	<0.1
* EX1285055	BHNSA226	<0.005	<0.005	<0.005	<0.005	<0.005	<0.1	<0.1	<0.1	<0.1	<0.1
* EX1285056	BHNSA12X	<0.005	<0.005	<0.005	<0.005	<0.005	<0.1	<0.1	<0.1	<0.1	<0.1

Note: Benzene elutes between C6 and C7, toluene elutes between C7 and C8, ethyl benzene and the xylenes elute between C8 and C9.

Each BTEX compound is deducted from the appropriate band to give the aliphatic fractions, however aromatic compounds may still be contributing to these fractions

ALIPHATIC / AROMATIC FRACTION BY GC/FID

Customer and Site Details:

Job Number:

QC Batch Number:

Directory:

Method:

Waterman EED : Upper Heyford

W13_4878

120282

D:\TES\DATA\Y2012\041612TPH_GC15\041612 2012-04-16 08-18-57\091B4701.D

Bottle

Separation:

Eluents:

Silica gel

Hexane, DCM

Matrix:

Date Booked in:

Date Extracted:

Date Analysed:

Water

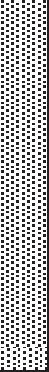
11-Apr-12

14-Apr-12

16-Apr-12, 21:18:05

		Concentration, (mg/l)											
		>C8 - C10		>C10 - C12		>C12 - C16		>C16 - C21		>C21 - C35		>C8 - C40	
Sample ID	Client ID	Aliphatics	Aromatics	Aliphatics	Aromatics	Aliphatics	Aromatics	Aliphatics	Aromatics	Aliphatics	Aromatics	Aliphatics	Aromatics
EX1285042	BHNSA1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
EX1285043	BHNSA12	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
EX1285044	BHNSA13	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
EX1285045	BHNSA14	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
EX1285046	BHNSA15	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
EX1285047	BHNSA16	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
EX1285048	BHNSA20	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
EX1285049	BHNSA22	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.012	0.013
EX1285050	BHNSA23	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
EX1285051	BHNSA27	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
EX1285052	BHNSA28	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.012	<0.01
EX1285053	BHNSA32	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
EX1285054	BHNSA39	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
EX1285055	BHNSA226	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	<0.01	0.01
EX1285056	BHNSA12X	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.011

* This sample data is not UKAS accredited.

 Specialists in the investigation & reclamation of brownfield sites ROTARY BOREHOLE RECORD										Borehole Number		BHNSA 225	Job No:	P8251J128				
										Site:		Upper Heyford, Oxfordshire						
										Ground Level (m)		122.932						
										Co-Ordinates		E: 450651.805		N: 225761.212				
										Date:		13/02/2012						
Depth (m)	Sample		Core Length Recovered	Depth of Casing	Test		Seat Drive		Test Drive				PID Result	Legend	Description			
	Depth (m)	Type			Type	Depth	75	75	75	75	75	75						
0.80	0.50	D	Open Hole		PID	0.5								0		Brown sandy CLAY containing occasional fragments of limestone		
1.20					SPT	1.2	5	7	10	13	13	14			Brown/yellow slightly clayey GRAVEL. Gravel is angular of limestone			
3.20				3m												Pale yellow/ grey LIMESTONE		
3.70															Pale grey CLAY			
4.90				4m											Grey SILTSTONE			
5.30				5m											Pale to dark grey CLAY			
5.50																		
6.10															Grey SILTSTONE			
10.00																Grey CLAY		
10.00															Pale grey to dark grey silty MUDSTONE			
Remarks: 1. Groundwater struck at 3.1m bgl, rose to 2.6m bgl after 20 mins monitoring 2. Installed from 10 - 9m bgl with bentonite, 9m - 1m bgl slotted standpipe, 1m bgl to surface plain pipe																		
Jomas Associates Ltd - Highbridge Industrial Estate, Oxford Road, Uxbridge, UBB 1 HR T: 01895 77 2187 E: info@jomasassociates.com W: www.jomasassociates.com																		

Plant:	Commachio 305
Client:	Heyford Park LLP
Driller:	Taylor/Gidman
Engineer:	M Williams



Specialists in the investigation & reclamation of brownfield sites

ROTARY BOREHOLE RECORD

 Specialists in the investigation & reclamation of brownfield sites ROTARY BOREHOLE RECORD										Borehole Number		BHNSA 226		Job No:		P8251J128	
										Site:		Upper Heyford, Oxfordshire					
										Ground Level (m)		124.266					
										Co-Ordinates		E: 450865.958		N: 225720.296			
										Date:		14/02/2012					
Depth (m)	Sample		Core Length Recovered	Depth of Casing	Test		Seat Drive		Test Drive				PID Result	Legend	Description		
	Depth (m)	Type			Type	Depth	75	75	75	75	75	75					
0.10			Open Hole														
0.70	0.50	D			PID	0.5							0		Brown sandy CLAY with occasional fragments of highly weathered limestone		
1.20				1m	SPT	1.2	8	12	19	21	10 ref				Yellow/brown slightly clayey GRAVEL. Gravel is angular of limestone		
1.60															Yellow LIMESTONE		
1.90															Yellow SAND		
3.10				3m											Yellow silty SANDSTONE		
3.50															Yellow/orange SAND		
4.20				4m											Grey SILTSTONE		
4.40															Yellow SAND		
5.60				4.5m											Yellow/Grey SILTSTONE		
6.10															Grey SILTSTONE		
8.70															Grey clayey MUDSTONE		
10.00															Grey CLAY		
Plant: Commachio 305 Client: Heyford Park LLP Driller: Taylor/Gidman Engineer: M Williams															Remarks: 1. Groundwater struck at 6.1m bgl, rose to 4.5m bgl after 20 mins monitoring 2. Installed from 10 - 9m bgl with bentonite, 9m - 1m bgl slotted standpipe, 1m bgl to surface plain pipe		

Jomas Associates Ltd - Highbridge Industrial Estate, Oxford Road, Uxbridge, UBB 1 HR

T: 01895 77 2187 E: info@jomasassociates.com W: www.jomasassociates.com

Gasoline Range Organics (BTEX and Aliphatic Carbon Ranges)

Customer and Site Details: Waterman EED : Upper Heyford
Job Number: W13_3314
Directory: D:\TES\DATA\Y2012\0314HSA_GC09\031412A 2012-03-15 08-48-39\130F6801.D
Method: Headspace GCFID

Matrix: Water
Date Booked in: 08-Mar-12
Date extracted: 14-Mar-12
Date Analysed: 16-Mar-12, 05:5

* Sample data with an asterisk are not UKAS accredited.

Sample ID	Client ID	Concentration, (mg/l)					Aliphatics				
		Benzene	Toluene	Ethyl benzene	m/p-Xylene	o-Xylene	C5 - C6	>C6 - C7	>C7 - C8	>C8 - C10	Total GRO
* EX1275730	BH225	<0.005	<0.005	<0.005	<0.005	<0.005	<0.1	<0.1	<0.1	<0.1	<0.1
* EX1275731	BH226	<0.005	<0.005	<0.005	<0.005	<0.005	<0.1	<0.1	<0.1	<0.1	<0.1
* EX1275732	HPD1	<0.005	<0.005	<0.005	<0.005	<0.005	<0.1	<0.1	<0.1	<0.1	<0.1
* EX1275733	BHNSA20	<0.005	<0.005	<0.005	<0.005	<0.005	<0.1	<0.1	<0.1	<0.1	<0.1
* EX1275734	BHNSA19	<0.005	<0.005	<0.005	<0.005	<0.005	<0.1	<0.1	<0.1	<0.1	<0.1
* EX1275735	BHNSA17	<0.005	<0.005	<0.005	<0.005	<0.005	<0.1	<0.1	<0.1	<0.1	<0.1
* EX1275736	BHNSA18	<0.005	<0.005	<0.005	<0.005	<0.005	<0.1	<0.1	<0.1	<0.1	<0.1
* EX1275737	BHNSA21	<0.005	<0.005	<0.005	<0.005	<0.005	<0.1	<0.1	<0.1	<0.1	<0.1
* EX1275738	BHNSA15	<0.005	<0.005	<0.005	<0.005	<0.005	<0.1	<0.1	<0.1	<0.1	<0.1
* EX1275739	BHNSA15X	<0.005	<0.005	<0.005	<0.005	<0.005	<0.1	<0.1	<0.1	<0.1	<0.1
* EX1275740	BHNSA14	<0.005	<0.005	<0.005	<0.005	<0.005	<0.1	<0.1	<0.1	<0.1	<0.1
* EX1275741	BHNSA11	<0.005	<0.005	<0.005	<0.005	<0.005	<0.1	<0.1	<0.1	<0.1	<0.1
* EX1275742	BHNSA10	<0.005	<0.005	<0.005	<0.005	<0.005	<0.1	<0.1	<0.1	<0.1	<0.1
* EX1275743	BHNSA9	<0.005	<0.005	<0.005	<0.005	<0.005	<0.1	<0.1	<0.1	<0.1	<0.1
* EX1275744	BHNSA6	<0.005	<0.005	<0.005	<0.005	<0.005	<0.1	<0.1	<0.1	<0.1	<0.1
* EX1275745	BHNSA1	<0.005	<0.005	<0.005	<0.005	<0.005	<0.1	<0.1	<0.1	<0.1	<0.1
* EX1275746	BHNSA16	<0.005	<0.005	<0.005	<0.005	<0.005	<0.1	<0.1	<0.1	<0.1	<0.1
* EX1275747	BHNSA22	<0.005	<0.005	<0.005	<0.005	<0.005	<0.1	<0.1	<0.1	<0.1	<0.1
* EX1275748	BHNSA7	<0.005	<0.005	<0.005	<0.005	<0.005	<0.1	<0.1	<0.1	<0.1	<0.1
* EX1275749	BHNSA38	<0.005	<0.005	<0.005	<0.005	<0.005	<0.1	<0.1	<0.1	<0.1	<0.1

Note: Benzene elutes between C6 and C7, toluene elutes between C7 and C8, ethyl benzene and the xylenes elute between C8 and C9.

ALIPHATIC / AROMATIC FRACTION BY GC/FID

Customer and Site Details: Waterman EED : Upper Heyford
Job Number: W13_3314
QC Batch Number: 120198
Directory: D:\TES\DATA\Y2012\031412TPH_GC15\031412 2012-03-14 08-08-11\100B6101.D
Method: Bottle

Matrix: Water
Date Booked in: 08-Mar-12
Date Extracted: 14-Mar-12
Date Analysed: 15-Mar-12, 01:19:27

		Concentration, (mg/l)											
		>C8 - C10		>C10 - C12		>C12 - C16		>C16 - C21		>C21 - C35		>C8 - C40	
Sample ID	Client ID	Aliphatics	Aromatics	Aliphatics	Aromatics	Aliphatics	Aromatics	Aliphatics	Aromatics	Aliphatics	Aromatics	Aliphatics	Aromatics
EX1275730	BH225	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
EX1275731	BH226	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.014
EX1275732	HPD1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
EX1275733	BHNSA20	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.016	<0.01	0.02	<0.01
EX1275734	BHNSA19	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	<0.01
EX1275735	BHNSA17	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.012
EX1275736	BHNSA18	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.013	0.01
EX1275737	BHNSA21	<0.01	<0.01	<0.01	0.023	<0.01	0.039	<0.01	0.011	<0.01	<0.01	0.025	0.089
EX1275738	BHNSA15	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.012	0.017
EX1275739	BHNSA15X	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
EX1275740	BHNSA14	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.012	0.011
EX1275741	BHNSA11	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.012	0.01
EX1275742	BHNSA10	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.012
EX1275743	BHNSA9	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
EX1275744	BHNSA6	0.018	<0.01	0.067	0.03	0.345	0.183	0.31	0.233	0.204	0.186	0.97	0.664
EX1275745	BHNSA1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.025	<0.01	0.034	0.012
EX1275746	BHNSA16	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
EX1275747	BHNSA22	<0.01	<0.01	0.016	0.013	0.036	0.034	<0.01	<0.01	0.063	0.023	0.134	0.083
EX1275748	BHNSA7	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.011	0.013
EX1275749	BHNSA38	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01

* This sample data is not UKAS accredited.

Gasoline Range Organics (BTEX and Aliphatic Carbon Ranges)

Customer and Site Details: Waterman EED : Upper Heyford
Job Number: W13_4281
Directory: D:\TES\DATA\Y2012\0402HSA_GC09\040212A 2012-04-03 06-07-14\066F1401.D
Method: Headspace GCFID

Matrix: Water
Date Booked in: 27-Mar-12
Date extracted: 02-Apr-12
Date Analysed: 03-Apr-12, 10:26:11

* Sample data with an asterisk are not UKAS accredited.

[illegible]

Note: Benzene elutes between C6 and C7, toluene elutes between C7 and C8, ethyl benzene and the xylenes elute between C8 and C9.

Each BTEX compound is deducted from the appropriate band to give the aliphatic fractions, however aromatic compounds may still be contributing to these fractions

ALIPHATIC / AROMATIC FRACTION BY GC/FID

Customer and Site Details:

Job Number:

QC Batch Number:

Directory:

Method:

Waterman EED : Upper Heyford

W13_4281

120252

D:\TES\DATA\Y2012\040512TPH_GC15\040512 2012-04-05 08-26-13\075B3401.D

Bottle

Separation:

Eluents:

Silica gel

Hexane, DCM

Matrix:

Date Booked in:

Date Extracted:

Date Analysed:

Water

27-Mar-12

03-Apr-12

05-Apr-12, 17:49:34

		Concentration, (mg/l)											
		>C8 - C10		>C10 - C12		>C12 - C16		>C16 - C21		>C21 - C35		>C8 - C40	
Sample ID	Client ID	Aliphatics	Aromatics	Aliphatics	Aromatics	Aliphatics	Aromatics	Aliphatics	Aromatics	Aliphatics	Aromatics	Aliphatics	Aromatics
EX1281691	BH-NSA-37	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.02
EX1281692	BH-NSA-39	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
EX1281693	BH-NSA-42	<0.01	<0.01	<0.01	<0.01	0.036	<0.01	0.01	<0.01	0.016	<0.01	0.073	0.014
EX1281694	BH-NSA-43	0.054	<0.01	0.236	0.024	0.422	0.091	0.032	0.021	0.011	<0.01	0.755	0.147
EX1281695	BH-NSA-44	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
EX1281696	BH-NSA-45	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.012	0.017
EX1281697	BH-NSA-225	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
EX1281698	BH-NSA-226	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	<0.01	0.01	0.01
EX1281699	BH-NSA-19x	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
EX1281700	BH-NSA-MW1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
EX1281701	BH-NSA-HD1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01

* This sample data is not UKAS accredited.

Gasoline Range Organics (BTEX and Aliphatic Carbon Ranges)

Customer and Site Details: Waterman EED : Upper Heyford
Job Number: W13_4836
Directory: D:\TES\DATA\Y2012\0416HSA_GC09\041612C 2012-04-17 12-52-29\107F2701.D
Method: Headspace GCFID

Matrix: Water
Date Booked in: 10-Apr-12
Date extracted: 16-Apr-12
Date Analysed: 17-Apr-12, 21:15:00

* Sample data with an asterisk are not UKAS accredited.

Sample ID	Client ID	Concentration, (mg/l)					Aliphatics				
		Benzene	Toluene	Ethyl benzene	m/p-Xylene	o-Xylene	C5 - C6	>C6 - C7	>C7 - C8	>C8 - C10	Total GRO
* EX1284834	BHNSA9	<0.005	<0.005	<0.005	<0.005	<0.005	<0.1	<0.1	<0.1	<0.1	<0.1
* EX1284835	BHNSA10	<0.005	<0.005	<0.005	<0.005	<0.005	<0.1	<0.1	<0.1	<0.1	<0.1
* EX1284836	BHNSA11	<0.005	<0.005	<0.005	<0.005	<0.005	<0.1	<0.1	<0.1	<0.1	<0.1
* EX1284837	BHNSA17	<0.005	<0.005	<0.005	<0.005	<0.005	<0.1	<0.1	<0.1	<0.1	<0.1
* EX1284838	BHNSA18	<0.005	<0.005	<0.005	<0.005	<0.005	<0.1	<0.1	<0.1	<0.1	<0.1
* EX1284839	BHNSA19	<0.005	<0.005	<0.005	<0.005	<0.005	<0.1	<0.1	<0.1	<0.1	<0.1
* EX1284840	BHNSA21	<0.005	<0.005	<0.005	<0.005	<0.005	<0.1	<0.1	<0.1	0.1	0.1
* EX1284841	BHNSA37	<0.005	<0.005	<0.005	<0.005	<0.005	<0.1	<0.1	<0.1	<0.1	<0.1
* EX1284842	BHNSA38	<0.005	<0.005	<0.005	<0.005	<0.005	<0.1	<0.1	<0.1	<0.1	<0.1
* EX1284843	BHNSA225	<0.005	<0.005	<0.005	<0.005	<0.005	<0.1	<0.1	<0.1	<0.1	<0.1
* EX1284844	MW1	<0.005	<0.005	<0.005	<0.005	<0.005	<0.1	<0.1	<0.1	<0.1	<0.1
* EX1284845	BHNSA2	<0.005	<0.005	<0.005	<0.005	<0.005	<0.1	<0.1	<0.1	<0.1	<0.1
* EX1284846	BHNSA5	<0.005	<0.005	<0.005	<0.005	<0.005	<0.1	<0.1	<0.1	<0.1	<0.1
* EX1284847	BHNSA45	<0.005	<0.005	<0.005	<0.005	<0.005	<0.1	<0.1	<0.1	<0.1	<0.1
* EX1284848	BHNSA4	<0.005	<0.005	<0.005	<0.005	<0.005	<0.1	<0.1	<0.1	<0.1	<0.1
* EX1284849	BHNSA42	<0.005	<0.005	<0.005	<0.005	<0.005	<0.1	<0.1	<0.1	<0.1	<0.1
* EX1284852	BHNSA3	<0.005	<0.005	<0.005	<0.005	<0.005	<0.1	<0.1	<0.1	<0.1	<0.1
* EX1284853	BHNSA44	<0.005	<0.005	<0.005	<0.005	<0.005	<0.1	<0.1	<0.1	<0.1	<0.1

Note: Benzene elutes between C6 and C7, toluene elutes between C7 and C8, ethyl benzene and the xylenes elute between C8 and C9.

Each BTEX compound is deducted from the appropriate band to give the aliphatic fractions, however aromatic compounds may still be contributing to these fractions

ALIPHATIC / AROMATIC FRACTION BY GC/FID

Customer and Site Details:

Job Number:

QC Batch Number:

Directory:

Method:

Waterman EED : Upper Heyford

W13_4836

288

D:\TES\DATA\Y2012\041812TPH_GC15\041812 2012-04-18 10-52-48\075B3201.D

Ultra Sonic

Separation:

Eluents:

Silica gel

Hexane, DCM

Matrix:

Date Booked in

Date Extracted

Date Analysed

Water

10-Apr-12

17-Apr-12

18-Apr-12, 20:18:59

		Concentration, (mg/l)											
		>C8 - C10		>C10 - C12		>C12 - C16		>C16 - C21		>C21 - C35		>C8 - C40	
Sample ID	Client ID	Aliphatics	Aromatics	Aliphatics	Aromatics	Aliphatics	Aromatics	Aliphatics	Aromatics	Aliphatics	Aromatics	Aliphatics	Aromatics
EX1284834	BHNSA9	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.012	0.012
EX1284835	BHNSA10	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	<0.01	0.02	0.011
EX1284836	BHNSA11	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.015	0.012
EX1284837	BHNSA17	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.013	0.012
EX1284838	BHNSA18	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.011	<0.01
EX1284839	BHNSA19	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.014	0.011
EX1284840	BHNSA21	<0.01	<0.01	<0.01	0.013	<0.01	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	0.054
EX1284841	BHNSA37	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.014	<0.01	0.022	<0.01
EX1284842	BHNSA38	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
EX1284843	BHNSA225	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.013	0.021
EX1284844	MW1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.013	<0.01
EX1284845	BHNSA2	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.014	<0.01
EX1284846	BHNSA5	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.011	<0.01
EX1284847	BHNSA45	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
EX1284848	BHNSA4	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.014	<0.01
EX1284849	BHNSA42	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
EX1284852	BHNSA3	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.027	0.012	0.035	0.018
EX1284853	BHNSA44	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01

* This sample data is not UKAS accredited.