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# iltechnics

environmental and geotechnical consultants



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FAO Mr Tomas Lekstutis Galliford Try Building - Southern Wonersh House **Old Portsmouth Road** Guildford GU31LR

Date: Your Ref: Our Ref:

20<sup>th</sup> January 2017 L-STN3652G-002

Dear Tomas,

### RE: Groundwater investigation at Astor College, University College London

### Introduction and brief

Further to our recent telephone, e-mail correspondence, and your subsequent instructions, we confirm completion of water sampling at the above site and can now offer the following report.

As per your request, we confirm visiting site to sample water, which Galliford Try noted to having a strong hydrocarbon odour. Our recommendations were for samples of the water to be tested by laboratory techniques to determine concentrations for a range of common contaminants. Once known, this report (and contents) should be passed on to a water treatment company for their comment, so that they can price for the extraction of water and obtain the correct licence to discharge.

### Site location and description

The site is located towards the northern outskirts of London within the University College London (UCL) campus. The site is located within an unoccupied courtyard area, for the Astor College and Sainsbury's welcome centre. Surfacing at the site comprises paving slabs, with some vegetation growing between paving slabs.

A concrete wall for the Sainsbury's welcome centre building borders the northern site boundary. Astor College halls of residence border the site to the east, which comprised an 8 storey building. The southern boundary is formed by a gymnasium, with a single storey basement. The Middlesex Hospital Annexe, which is a 4 storey building, borders the western site boundary.

At the time of our water sampling we, a former crane base had been cored (200mm in diameter) in approximately 30 positions to depth of 1.2m and one to 0.5m. Two of the holes contained water which exhibited olfactory and visual signs of being contaminated with hydrocarbons. We understand that the area was boarded over until such time that the water can be extracted. Refer Drawing 101 for plan of existing site features.

### L-STN3652G-002

#### Geology

Geological maps produced by the British Geological Survey (BGS) at a scale of 1:50,000 scale, show the geology at the site to be Lynch Hill Gravel underlain by London Clay. Lynch Hill Gravel typically comprises sands and gravels, with London Clay typically comprising clays.

Lynch Hill Gravel is considered permeable and subsequently has been designated a Secondary A aquifer. London Clay is impermeable and has been designated as unproductive strata.

#### Fieldwork

Fieldwork was previously carried out between 13<sup>th</sup> – 15<sup>th</sup> July 2016, which comprised the formation of nine hand excavated trial pits and TRL DCP testing in ten positions. On the 8<sup>th</sup> August 2016, a further seven hand excavated trial pits were formed in the northern area of the site, to locate a separate crane base.

Sampling of water was carried out on the 10<sup>th</sup> January 2017, with samples collected for laboratory determination of concentration of chemical contaminants was taken from the core holes using new proprietary plastic bailing equipment. The samples were placed in appropriate bottles, quickly sealed with a screw cap with a PTFE washer and subsequently labelled. Water samples were taken to the laboratory on the same day of sampling.

#### Laboratory testing

Laboratory testing was carried out as deemed necessary and limited to pH, anions, alkalinity, ammonium, cyanides, thiocyanate, sulphide, metals, total petroleum hydrocarbons (TPH), volatile and semi-volatile organic compounds and phenols.

Laboratory testing was carried out by an independent specialist testing house, which operates a quality assurance scheme. A copy of the laboratory test result certificate is attached.

#### **Further works**

Once the water has been abstracted and the concrete crane base has been removed, we would like the opportunity to re-visit the site to confirm whether there is any hydrocarbon impacted soil. Such soil would require separating from other soil and likely classifying individually for offsite disposal.

We trust this report provides you with the information you require. If you have any queries please do not hesitate to contact us.

Yours sincerely,

K. Carnhaton

Ross Carrington BSc (Hons), MSc, CSci, AIEMA <u>ross.carrington@soiltechnics.net</u> Senior geo-environmental Engineer, Soiltechnics Limited

Encs:

Drawing 101 (Plan showing existing site features and location of exploratory points) Copy of laboratory test result certificate



**Charlotte Street** 



### soiltechnics environmental and geotechnical consultants



Chemtest The right chemistry to deliver results Chemtest Ltd. Depot Road Newmarket CB8 0AL Tel: 01638 606070 Email: info@chemtest.co.uk

Report No.:	17-00552-1		
Initial Date of Issue:	19-Jan-2017		
Client	Soiltechnics Limited		
Client Address:	Cedar Barn White Lodge Walgrave Northampton Northamptonshire NN6 9PY		
Contact(s):	Rachel Brown		
Project	STN3652G Astor College UCL London		
Quotation No.:		Date Received:	11-Jan-2017
Order No.:	23254	Date Instructed:	18-Jan-2017
No. of Samples:	2		
Turnaround (Wkdays):	2	Results Due:	19-Jan-2017
Date Approved:	19-Jan-2017		
Approved By:			

**Details:** 

Glynn Harvey, Laboratory Manager

Dichlorodifluoromethane

Client: Soiltechnics Limited	Chemtest Job No.:			17-00552	17-00552	
Quotation No.:	C	hemte	st Sam	397779	397780	
Order No.: 23254		Clier	nt Samp	BH	BH	
		Clie	ent Sam	1-008	1-009	
			Sample	WATER	WATER	
			Тор Dep	oth (m):	0.5	1.2
			Date Sa	mpled:	05-Jan-2017	05-Jan-2017
Determinand	Accred.	SOP	Units	LOD		
pН	U	1010		N/A	10.9	11.2
Nitrate	U	1220	mg/l	0.50	6.8	8.1
Sulphate	U	1220	mg/l	1.0	140	140
Cyanide (Total)	U	1300	mg/l	0.050	< 0.050	< 0.050
Cyanide (Free)	U	1300	mg/l	0.050	< 0.050	< 0.050
Cyanide (Complex)	U	1300	mg/l	0.050	< 0.050	< 0.050
Sulphide	U	1325	mg/l	0.050	[B] < 0.050	[B] < 0.050
Arsenic (Dissolved)	U	1450	µg/l	1.0	3.3	< 1.0
Boron (Dissolved)	U	1450	µg/l	20	130	20
Beryllium (Dissolved)	U	1450	µg/l	1.0	< 1.0	< 1.0
Cadmium (Dissolved)	U	1450	µg/l	0.080	< 0.080	< 0.080
Chromium (Dissolved)	U	1450	µg/l	1.0	< 1.0	< 1.0
Copper (Dissolved)	U	1450	µg/l	1.0	12	19
Mercury (Dissolved)	U	1450	µg/l	0.50	< 0.50	< 0.50
Nickel (Dissolved)	U	1450	µg/l	1.0	1.2	< 1.0
Lead (Dissolved)	U	1450	µg/l	1.0	2.9	< 1.0
Selenium (Dissolved)	U	1450	µg/l	1.0	< 1.0	< 1.0
Vanadium (Dissolved)	U	1450	µg/l	1.0	7.0	2.5
Zinc (Dissolved)	U	1450	µg/l	1.0	6.0	2.9
Aliphatic TPH >C5-C6	Ν	1675	µg/l	0.10	< 0.10	< 0.10
Aliphatic TPH >C6-C8	Ν	1675	µg/l	0.10	< 0.10	< 0.10
Aliphatic TPH >C8-C10	Ν	1675	µg/l	0.10	< 0.10	< 0.10
Aliphatic TPH >C10-C12	Ν	1675	µg/l	0.10	< 0.10	< 0.10
Aliphatic TPH >C12-C16	Ν	1675	µg/l	0.10	< 0.10	20
Aliphatic TPH >C16-C21	Ν	1675	µg/l	0.10	42	440
Aliphatic TPH >C21-C35	Ν	1675	µg/l	0.10	3600	26000
Aliphatic TPH >C35-C44	Ν	1675	µg/l	0.10	< 0.10	< 0.10
Total Aliphatic Hydrocarbons	Ν	1675	µg/l	5.0	3600	27000
Aromatic TPH >C5-C7	Ν	1675	µg/l	0.10	< 0.10	< 0.10
Aromatic TPH >C7-C8	Ν	1675	µg/l	0.10	< 0.10	< 0.10
Aromatic TPH >C8-C10	Ν	1675	µg/l	0.10	< 0.10	< 0.10
Aromatic TPH >C10-C12	Ν	1675	µg/l	0.10	< 0.10	< 0.10
Aromatic TPH >C12-C16	Ν	1675	µg/l	0.10	< 0.10	< 0.10
Aromatic TPH >C16-C21	Ν	1675	µg/l	0.10	< 0.10	< 0.10
Aromatic TPH >C21-C35	Ν	1675	µg/l	0.10	870	5500
Aromatic TPH >C35-C44	Ν	1675	µg/l	0.10	1300	210
Total Aromatic Hydrocarbons	Ν	1675	µg/l	5.0	2200	5700
Total Petroleum Hydrocarbons	Ν	1675	µg/l	10	5800	32000

1760

U

µg/l

1.0

< 1.0

< 1.0

Client: Soiltechnics Limited	Chemtest Job No.:			17-00552	17-00552	
Quotation No.:		hemte	st Sam	397779	397780	
Order No.: 23254		Clier	nt Samp	BH	BH	
	Client Sample ID.:				1-008	1-009
	Sample Type:			WATER	WATER	
			Тор Dep	oth (m):	0.5	1.2
			Date Sa	ampled:	05-Jan-2017	05-Jan-2017
Determinand	Accred.	SOP	Units	LOD		
Chloromethane	U	1760	µg/l	1.0	< 1.0	< 1.0
Vinyl Chloride	N	1760	µg/l	1.0	< 1.0	< 1.0
Bromomethane	U	1760	µg/l	5.0	< 5.0	< 5.0
Chloroethane	U	1760	µg/l	2.0	< 2.0	< 2.0
Trichlorofluoromethane	U	1760	µg/l	1.0	< 1.0	< 1.0
1,1-Dichloroethene	U	1760	µg/l	1.0	< 1.0	< 1.0
Trans 1,2-Dichloroethene	U	1760	µg/l	1.0	< 1.0	< 1.0
1,1-Dichloroethane	U	1760	µg/l	1.0	< 1.0	< 1.0
cis 1,2-Dichloroethene	U	1760	µg/l	1.0	< 1.0	< 1.0
Bromochloromethane	U	1760	µg/l	5.0	< 5.0	< 5.0
Trichloromethane	U	1760	µg/l	1.0	< 1.0	< 1.0
1,1,1-Trichloroethane	U	1760	µg/l	1.0	< 1.0	< 1.0
Tetrachloromethane	U	1760	µg/l	1.0	< 1.0	< 1.0
1,1-Dichloropropene	U	1760	µg/l	1.0	< 1.0	< 1.0
Benzene	U	1760	µg/l	1.0	< 1.0	< 1.0
1,2-Dichloroethane	U	1760	µg/l	2.0	< 2.0	< 2.0
Trichloroethene	N	1760	µg/l	1.0	< 1.0	< 1.0
1,2-Dichloropropane	U	1760	µg/l	1.0	< 1.0	< 1.0
Dibromomethane	U	1760	µg/l	10	< 10	< 10
Bromodichloromethane	U	1760	µg/l	5.0	< 5.0	< 5.0
cis-1,3-Dichloropropene	N	1760	µg/l	10	< 10	< 10
Toluene	U	1760	µg/l	1.0	< 1.0	< 1.0
Trans-1,3-Dichloropropene	Ν	1760	µg/l	10	< 10	< 10
1,1,2-Trichloroethane	U	1760	µg/l	10	< 10	< 10
Tetrachloroethene	U	1760	µg/l	1.0	< 1.0	< 1.0
1,3-Dichloropropane	U	1760	µg/l	2.0	< 2.0	< 2.0
Dibromochloromethane	U	1760	µg/l	10	< 10	< 10
1,2-Dibromoethane	U	1760	µg/l	5.0	< 5.0	< 5.0
Chlorobenzene	N	1760	µg/l	1.0	< 1.0	< 1.0
1,1,1,2-Tetrachloroethane	U	1760	µg/l	2.0	< 2.0	< 2.0
Ethylbenzene	U	1760	µg/l	1.0	< 1.0	< 1.0
m & p-Xylene	U	1760	µg/l	1.0	< 1.0	< 1.0
o-Xylene	U	1760	µg/l	1.0	< 1.0	< 1.0
Styrene	U	1760	µg/l	1.0	< 1.0	< 1.0
Tribromomethane	U	1760	µg/l	1.0	< 1.0	< 1.0
Isopropylbenzene	U	1760	µg/l	1.0	< 1.0	< 1.0
Bromobenzene	U	1760	µg/l	1.0	< 1.0	< 1.0
1,2,3-Trichloropropane	N	1760	µg/l	50	< 50	< 50
N-Propylbenzene	U	1760	ua/l	1.0	< 1.0	< 1.0

Client: Soiltechnics Limited	Chemtest Job No.:			17-00552	17-00552	
Quotation No.:	Chemtest Sample ID.:				397779	397780
Order No.: 23254	Client Sample Ref.:				BH	BH
	Client Sample ID.:			1-008	1-009	
	Sample Type:			WATER	WATER	
			Тор Dep	oth (m):	0.5	1.2
			Date Sa	ampled:	05-Jan-2017	05-Jan-2017
Determinand	Accred.	SOP	Units	LOD		
2-Chlorotoluene	U	1760	µg/l	1.0	< 1.0	< 1.0
1,3,5-Trimethylbenzene	U	1760	µg/l	1.0	< 1.0	< 1.0
4-Chlorotoluene	U	1760	µg/l	1.0	< 1.0	< 1.0
Tert-Butylbenzene	U	1760	µg/l	1.0	< 1.0	< 1.0
1,2,4-Trimethylbenzene	U	1760	µg/l	1.0	< 1.0	< 1.0
Sec-Butylbenzene	U	1760	µg/l	1.0	< 1.0	< 1.0
1,3-Dichlorobenzene	N	1760	µg/l	1.0	< 1.0	< 1.0
4-Isopropyltoluene	U	1760	µg/l	1.0	< 1.0	< 1.0
1,4-Dichlorobenzene	U	1760	µg/l	1.0	< 1.0	< 1.0
N-Butylbenzene	U	1760	µg/l	1.0	< 1.0	< 1.0
1,2-Dichlorobenzene	U	1760	µg/l	1.0	< 1.0	< 1.0
1,2-Dibromo-3-Chloropropane	U	1760	µg/l	50	< 50	< 50
1,2,4-Trichlorobenzene	U	1760	µg/l	1.0	< 1.0	< 1.0
Hexachlorobutadiene	U	1760	µg/l	1.0	< 1.0	< 1.0
1,2,3-Trichlorobenzene	U	1760	µg/l	2.0	< 2.0	< 2.0
Methyl Tert-Butyl Ether	N	1760	µg/l	1.0	< 1.0	< 1.0
1,1,2-Trichloro 1,2,2 Trifluoroethane	N	1760	µg/l	2.0	< 2.0	< 2.0
Bromoform	N	1760	µg/l	10	< 10	< 10
Carbon Tetrachloride	N	1760	µg/l	10	< 10	< 10
Chloroform	N	1760	µg/l	10	< 10	< 10
2,2-Dichloropropane	N	1760	µg/l	10	< 10	< 10
N-Nitrosodimethylamine	N	1790	µg/l	0.50	< 0.50	< 0.50
Phenol	N	1790	µg/l	0.50	< 0.50	< 0.50
2-Chlorophenol	N	1790	µg/l	0.50	< 0.50	< 0.50
Bis-(2-Chloroethyl)Ether	N	1790	µg/l	0.50	< 0.50	< 0.50
1,3-Dichlorobenzene	N	1790	µg/l	0.50	< 0.50	< 0.50
1,4-Dichlorobenzene	N	1790	µg/l	0.50	< 0.50	< 0.50
1,2-Dichlorobenzene	N	1790	µg/l	0.50	< 0.50	< 0.50
2-Methylphenol (o-Cresol)	N	1790	µg/l	0.50	< 0.50	< 0.50
Bis(2-Chloroisopropyl)Ether	N	1790	µg/l	0.50	< 0.50	< 0.50
Hexachloroethane	N	1790	µg/l	0.50	< 0.50	< 0.50
N-Nitrosodi-n-propylamine	N	1790	µg/l	0.50	< 0.50	< 0.50
4-Methylphenol	N	1790	µg/l	0.50	< 0.50	< 0.50
Nitrobenzene	N	1790	µg/l	0.50	< 0.50	< 0.50
Isophorone	N	1790	µg/l	0.50	< 0.50	< 0.50
2-Nitrophenol	N	1790	µg/l	0.50	< 0.50	< 0.50
2,4-Dimethylphenol	N	1790	µg/l	0.50	< 0.50	< 0.50
Bis(2-Chloroethoxy)Methane	N	1790	µg/l	0.50	< 0.50	< 0.50
2,4-Dichlorophenol	N	1790	µg/l	0.50	< 0.50	< 0.50

Client: Soiltechnics Limited	Chemtest Job No.:			17-00552	17-00552	
Quotation No.:	Chemtest Sample ID.:				397779	397780
Order No.: 23254		Clier	nt Samp	BH	BH	
	Client Sample ID.:				1-008	1-009
	Sample Type:			WATER	WATER	
			Тор Dep	oth (m):	0.5	1.2
			Date Sa	ampled:	05-Jan-2017	05-Jan-2017
Determinand	Accred.	SOP	Units	LOD		
1,2,4-Trichlorobenzene	N	1790	µg/l	0.50	< 0.50	< 0.50
Naphthalene	Ν	1790	µg/l	0.50	< 0.50	< 0.50
4-Chloroaniline	N	1790	µg/l	0.50	< 0.50	< 0.50
Hexachlorobutadiene	N	1790	µg/l	0.50	< 0.50	< 0.50
4-Chloro-3-Methylphenol	N	1790	µg/l	0.50	< 0.50	< 0.50
2-Methylnaphthalene	N	1790	µg/l	0.50	< 0.50	< 0.50
Hexachlorocyclopentadiene	N	1790	µg/l	0.50	< 0.50	< 0.50
2,4,6-Trichlorophenol	N	1790	µg/l	0.50	< 0.50	< 0.50
2,4,5-Trichlorophenol	N	1790	µg/l	0.50	< 0.50	< 0.50
2-Chloronaphthalene	N	1790	µg/l	0.50	< 0.50	< 0.50
2-Nitroaniline	N	1790	µg/l	0.50	< 0.50	< 0.50
Acenaphthylene	N	1790	µq/l	0.50	< 0.50	< 0.50
Dimethylphthalate	N	1790	µg/l	0.50	< 0.50	< 0.50
2,6-Dinitrotoluene	N	1790	µg/l	0.50	< 0.50	< 0.50
Acenaphthene	N	1790	µq/l	0.50	< 0.50	< 0.50
3-Nitroaniline	N	1790	µg/l	0.50	< 0.50	< 0.50
Dibenzofuran	N	1790	µq/l	0.50	< 0.50	< 0.50
4-Chlorophenylphenylether	N	1790	µq/l	0.50	< 0.50	< 0.50
2,4-Dinitrotoluene	N	1790	µg/l	0.50	< 0.50	< 0.50
Fluorene	N	1790	µg/l	0.50	< 0.50	< 0.50
Diethyl Phthalate	N	1790	µg/l	0.50	< 0.50	< 0.50
4-Nitroaniline	N	1790	µg/l	0.50	< 0.50	< 0.50
2-Methyl-4,6-Dinitrophenol	N	1790	µq/l	0.50	< 0.50	< 0.50
Azobenzene	N	1790	µg/l	0.50	< 0.50	< 0.50
4-Bromophenylphenyl Ether	N	1790	µq/l	0.50	< 0.50	< 0.50
Hexachlorobenzene	N	1790	µg/l	0.50	< 0.50	< 0.50
Pentachlorophenol	N	1790	ua/l	0.50	< 0.50	< 0.50
Phenanthrene	N	1790	ua/l	0.50	< 0.50	< 0.50
Anthracene	N	1790	ua/l	0.50	< 0.50	< 0.50
Carbazole	N	1790	µg/l	0.50	< 0.50	< 0.50
Di-N-Butyl Phthalate	N	1790	µq/l	0.50	< 0.50	< 0.50
Fluoranthene	N	1790	ua/l	0.50	< 0.50	< 0.50
Pyrene	N	1790	µg/l	0.50	< 0.50	< 0.50
Butylbenzyl Phthalate	N	1790	µg/l	0.50	< 0.50	< 0.50
Benzo[a]anthracene	N	1790	µg/l	0.50	< 0.50	< 0.50
Chrysene	N	1790	µa/l	0.50	< 0.50	< 0.50
Bis(2-Ethylhexyl)Phthalate	N	1790	µg/l	0.50	< 0.50	< 0.50
Di-N-Octyl Phthalate	N	1790	µa/l	0.50	< 0.50	< 0.50
Benzolblfluoranthene	N	1790		0.50	< 0.50	< 0.50



Client: Soiltechnics Limited	Chemtest Job No.:				17-00552	17-00552
Quotation No.:	0	Chemte	st Sam	ple ID.:	397779	397780
Order No.: 23254		Clie	nt Samp	le Ref.:	BH	BH
		Clie	ent Sam	ple ID.:	1-008	1-009
			Sampl	е Туре:	WATER	WATER
			Тор Dep	oth (m):	0.5	1.2
	Date Sampled:			05-Jan-2017	05-Jan-2017	
Determinand	Accred.	SOP	Units	LOD		
Benzo[k]fluoranthene	N	1790	µg/l	0.50	< 0.50	< 0.50
Benzo[a]pyrene	N	1790	µg/l	0.50	< 0.50	< 0.50
Indeno(1,2,3-c,d)Pyrene	N	1790	µg/l	0.50	< 0.50	< 0.50
Dibenz(a,h)Anthracene	N 1790 μg/l 0.50		< 0.50	< 0.50		
Benzo[g,h,i]perylene	Ν	1790	µg/l	0.50	< 0.50	< 0.50
4-Nitrophenol	N	1790	µg/l	0.50	< 0.50	< 0.50
Total Phenols	U	1920	mg/l	0.030	[B] < 0.030	[B] < 0.030



### **Deviations**

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

Sample ID:	Sample Ref:	Sample ID:	Sampled Date:	Deviation Code(s):	Containers Received:
397779	ВН	1-008	05-Jan-2017	В	Coloured Winchester 1000ml
397779	BH	1-008	05-Jan-2017	В	EPA Vial 40ml
397779	BH	1-008	05-Jan-2017	В	Plastic Bottle 1000ml
397780	ВН	1-009	05-Jan-2017	В	Coloured Winchester 1000ml
397780	BH	1-009	05-Jan-2017	В	EPA Vial 40ml
397780	BH	1-009	05-Jan-2017	В	Plastic Bottle 1000ml



### **Test Methods**

SOP	Title	Parameters included	Method summary
1010	pH Value of Waters	рН	pH Meter
1220	Anions, Alkalinity & Ammonium in Waters	Fluoride; Chloride; Nitrite; Nitrate; Total; Oxidisable Nitrogen (TON); Sulfate; Phosphate; Alkalinity; Ammonium	Automated colorimetric analysis using 'Aquakem 600' Discrete Analyser.
1300	Cyanides & Thiocyanate in Waters	Free (or easy liberatable) Cyanide; total Cyanide; complex Cyanide; Thiocyanate	Continuous Flow Analysis.
1325	Sulphide in Waters	Sulphides	Automated colorimetric analysis by 'Aquakem 600' Discrete Analyser using N,N–dimethyl- pphenylenediamine.
1450	Metals in Waters by ICP-MS	Metals, including: Antimony; Arsenic; Barium; Beryllium; Boron; Cadmium; Chromium; Cobalt; Copper; Lead; Manganese; Mercury; Molybdenum; Nickel; Selenium; Tin; Vanadium; Zinc	Filtration of samples followed by direct determination by inductively coupled plasma mass spectrometry (ICP-MS).
1675	TPH Aliphatic/Aromatic split in Waters by GC-FID(cf. Texas Method 1006 / TPH CWG)	Aliphatics: >C5–C6, >C6–C8, >C8– C10, >C10–C12, >C12–C16, >C16–C21, >C21– C35, >C35– C44Aromatics: >C5–C7, >C7–C8, >C8– C10, >C10–C12, >C12–C16, >C16– C21, >C21– C35, >C35– C44	Pentane extraction / GCxGC FID detection
1760	Volatile Organic Compounds (VOCs) in Waters by Headspace GC-MS	Volatile organic compounds, including BTEX and halogenated Aliphatic/Aromatics. (cf. USEPA Method 8260)	Automated headspace gas chromatographic (GC) analysis of water samples with mass spectrometric (MS) detection of volatile organic compounds.
1790	Semi-Volatile Organic Compounds (SVOCs) in Waters by GC-MS	Semi-volatile organic compounds	Solvent extraction / GCMS detection
1920	Phenols in Waters by HPLC	Phenolic compounds including: Phenol, Cresols, Xylenols, Trimethylphenols Note: Chlorophenols are excluded.	Determination by High Performance Liquid Chromatography (HPLC) using electrochemical detection.



### **Report Information**

### Key

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

Comments or interpretations are beyond the scope of UKAS accreditation The results relate only to the items tested Uncertainty of measurement for the determinands tested are available upon request None of the results in this report have been recovery corrected All results are expressed on a dry weight basis The following tests were analysed on samples as received and the results subsequently corrected to a dry weight basis TPH, BTEX, VOCs, SVOCs, PCBs, Phenols For all other tests the samples were dried at < 37°C prior to analysis All Asbestos testing is performed at the indicated laboratory Issue numbers are sequential starting with 1 all subsequent reports are incremented by 1

### **Sample Deviation Codes**

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

### **Sample Retention and Disposal**

All soil samples will be retained for a period of 45 days from the date of receipt All water samples will be retained for 14 days from the date of receipt Charges may apply to extended sample storage

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