



**Kasia Mazerant**  
Concept Site Investigations  
Unit 8  
Warple Mews  
Warple Way  
London  
W3 0RF

i2 Analytical Ltd.  
7 Woodshots Meadow,  
Croxley Green  
Business Park,  
Watford,  
Herts,  
WD18 8YS

**t:** 020 88112880

**e:** kasia@conceptconsultants.co.uk

**t:** 01923 225404

**f:** 01923 237404

**e:** reception@i2analytical.com

## **Analytical Report Number : 14-64062**

<b>Project / Site name:</b>	St Giles Circus	<b>Samples received on:</b>	02/12/2014
<b>Your job number:</b>	14-2669	<b>Samples instructed on:</b>	04/12/2014
<b>Your order number:</b>	CL230	<b>Analysis completed by:</b>	15/12/2014
<b>Report Issue Number:</b>	1	<b>Report issued on:</b>	15/12/2014
<b>Samples Analysed:</b>	14 soil samples		

**Signed:**

Neil Donovan  
Environmental Forensics Manager  
**For & on behalf of i2 Analytical Ltd.**

**Signed:**

Thurstan Plummer  
Organics Technical Manager  
**For & on behalf of i2 Analytical Ltd.**

Other office located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils - 4 weeks from reporting  
leachates - 2 weeks from reporting  
waters - 2 weeks from reporting  
asbestos - 6 months from reporting

Excel copies of reports are only valid when accompanied by this PDF certificate.



4041



Environmental Science

Analytical Report Number: 14-64062

Project / Site name: St Giles Circus

Your Order No: CL230

Lab Sample Number	398143	398144	398145	398146	398147			
Sample Reference	WS06	WS06	WS06	WS06	WS09			
Sample Number	ES01	ES02	ES03	ES04	ES01			
Depth (m)	0.50	1.00	2.00	3.00	0.50			
Date Sampled	28/11/2014	28/11/2014	28/11/2014	28/11/2014	28/11/2014			
Time Taken	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied			
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Moisture Content	%	N/A	NONE	5.8	2.9	13	11	9.8
Total mass of sample received	kg	0.001	NONE	0.35	0.46	0.44	0.49	0.45

Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected	Not-detected	Not-detected	Not-detected
------------------	------	-----	-----------	--------------	--------------	--------------	--------------	--------------

**General Inorganics**

pH	pH Units	N/A	MCERTS	8.6	8.8	8.6	8.5	10.2
Total Cyanide	mg/kg	1	MCERTS	< 1	< 1	< 1	< 1	< 1
Free Cyanide	mg/kg	1	NONE	< 1	< 1	< 1	< 1	< 1
Thiocyanate as SCN	mg/kg	5	NONE	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Total Sulphate as SO <sub>4</sub>	mg/kg	50	ISO 17025	< 50	< 50	120	58	1100
Elemental Sulphur	mg/kg	20	NONE	< 20	< 20	< 20	< 20	< 20
Organic Matter	%	0.1	MCERTS	0.3	0.4	0.3	0.5	0.4
Total Organic Carbon (TOC)	%	0.1	MCERTS	0.2	0.2	0.2	0.3	0.2

**Total Phenols**

Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
----------------------------	-------	---	--------	-------	-------	-------	-------	-------

**Speciated PAHs**

Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	0.97
Acenaphthylene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Fluorene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Phenanthrene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	< 0.10	0.23
Anthracene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Fluoranthene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	< 0.10	0.34
Pyrene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	< 0.10	0.29
Benzo(a)anthracene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Chrysene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(b)fluoranthene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo(k)fluoranthene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo(a)pyrene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Dibenz(a,h)anthracene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05

**Total PAH**

Speciated Total EPA-16 PAHs	mg/kg	1.6	MCERTS	< 1.60	< 1.60	< 1.60	< 1.60	1.83
-----------------------------	-------	-----	--------	--------	--------	--------	--------	------

**Heavy Metals / Metalloids**

Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	9.0	10	11	8.3	16
Boron (water soluble)	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	0.4
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Chromium (hexavalent)	mg/kg	4	MCERTS	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	17	12	11	12	21
Copper (aqua regia extractable)	mg/kg	1	MCERTS	9.8	6.9	11	5.2	14
Lead (aqua regia extractable)	mg/kg	1	MCERTS	4.8	4.9	3.7	5.0	210
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	17	14	14	15	24
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	22	16	18	18	37



4041



Environmental Science

Analytical Report Number: 14-64062

Project / Site name: St Giles Circus

Your Order No: CL230

Lab Sample Number	398143	398144	398145	398146	398147
Sample Reference	WS06	WS06	WS06	WS06	WS09
Sample Number	ES01	ES02	ES03	ES04	ES01
Depth (m)	0.50	1.00	2.00	3.00	0.50
Date Sampled	28/11/2014	28/11/2014	28/11/2014	28/11/2014	28/11/2014
Time Taken	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status		

**Monoaromatics**

Compound	Units	Limit of detection	Accreditation Status	398143	398144	398145	398146	398147
Benzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p & m-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

**Petroleum Hydrocarbons**

TPH1 (C6 - C12)	mg/kg	Limit of detection	Accreditation Status	398143	398144	398145	398146	398147
TPH1 (C6 - C12)	mg/kg	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	< 8.0	< 8.0	< 8.0	< 8.0	< 8.0
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	< 8.0	< 8.0	< 8.0	< 8.0	< 8.0
TPH-CWG - Aliphatic > EC35 - EC44	mg/kg	8.4	NONE	< 8.4	< 8.4	< 8.4	< 8.4	< 8.4
<b>TPH-CWG - Aliphatic (EC5 - EC35)</b>	mg/kg	10	MCERTS	< 10	< 10	< 10	< 10	< 10
<b>TPH-CWG - Aliphatic (EC5 - EC44)</b>	mg/kg	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	2.9
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	< 10	< 10	< 10	24	< 10
TPH-CWG - Aromatic > EC35 - EC44	mg/kg	8.4	NONE	< 8.4	< 8.4	< 8.4	9.6	< 8.4
<b>TPH-CWG - Aromatic (EC5 - EC35)</b>	mg/kg	10	MCERTS	< 10	< 10	< 10	24	< 10
<b>TPH-CWG - Aromatic (EC5 - EC44)</b>	mg/kg	10	NONE	< 10	< 10	< 10	34	< 10

**Miscellaneous Organics**

Toluene Extractable Matter	mg/kg	Limit of detection	Accreditation Status	398143	398144	398145	398146	398147
Toluene Extractable Matter	mg/kg	100	NONE	< 100	< 100	< 100	< 100	< 100



4041



Environmental Science

Analytical Report Number: 14-64062

Project / Site name: St Giles Circus

Your Order No: CL230

Lab Sample Number	398148	398149	398150	398151	398152			
Sample Reference	WS09	WS10	WS10	WS10	WS10			
Sample Number	ES02	ES01	ES02	ES03	ES04			
Depth (m)	1.00	0.50	1.00	2.00	2.70			
Date Sampled	28/11/2014	28/11/2014	28/11/2014	28/11/2014	28/11/2014			
Time Taken	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied			
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Moisture Content	%	N/A	NONE	4.3	1.8	8.2	14	10
Total mass of sample received	kg	0.001	NONE	0.45	0.41	0.44	0.43	0.55

Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected	Not-detected	Not-detected	Not-detected
------------------	------	-----	-----------	--------------	--------------	--------------	--------------	--------------

**General Inorganics**

pH	pH Units	N/A	MCERTS	9.4	8.5	8.4	8.5	8.5
Total Cyanide	mg/kg	1	MCERTS	< 1	< 1	< 1	< 1	< 1
Free Cyanide	mg/kg	1	NONE	< 1	< 1	< 1	< 1	< 1
Thiocyanate as SCN	mg/kg	5	NONE	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Total Sulphate as SO <sub>4</sub>	mg/kg	50	ISO 17025	900	92	480	160	97
Elemental Sulphur	mg/kg	20	NONE	< 20	< 20	< 20	< 20	21
Organic Matter	%	0.1	MCERTS	0.3	0.8	0.9	0.5	0.7
Total Organic Carbon (TOC)	%	0.1	MCERTS	0.2	0.5	0.5	0.3	0.4

**Total Phenols**

Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
----------------------------	-------	---	--------	-------	-------	-------	-------	-------

**Speciated PAHs**

Naphthalene	mg/kg	0.05	MCERTS	1.5	2.3	2.3	< 0.05	< 0.05
Acenaphthylene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Fluorene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Phenanthrene	mg/kg	0.1	MCERTS	0.31	< 0.10	< 0.10	< 0.10	< 0.10
Anthracene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Fluoranthene	mg/kg	0.1	MCERTS	0.36	< 0.10	< 0.10	< 0.10	< 0.10
Pyrene	mg/kg	0.1	MCERTS	0.33	< 0.10	< 0.10	< 0.10	< 0.10
Benzo(a)anthracene	mg/kg	0.1	MCERTS	0.14	< 0.10	< 0.10	< 0.10	< 0.10
Chrysene	mg/kg	0.05	MCERTS	0.12	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(b)fluoranthene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo(k)fluoranthene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo(a)pyrene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Dibenz(a,h)anthracene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05

**Total PAH**

Speciated Total EPA-16 PAHs	mg/kg	1.6	MCERTS	2.74	2.32	2.33	< 1.60	< 1.60
-----------------------------	-------	-----	--------	------	------	------	--------	--------

**Heavy Metals / Metalloids**

Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	13	13	14	6.3	8.6
Boron (water soluble)	mg/kg	0.2	MCERTS	< 0.2	0.8	0.4	< 0.2	< 0.2
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Chromium (hexavalent)	mg/kg	4	MCERTS	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	21	24	22	18	20
Copper (aqua regia extractable)	mg/kg	1	MCERTS	15	31	44	18	15
Lead (aqua regia extractable)	mg/kg	1	MCERTS	28	88	160	29	18
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	22	22	18	13	23
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	32	59	72	39	41



4041



Environmental Science

Analytical Report Number: 14-64062

Project / Site name: St Giles Circus

Your Order No: CL230

Lab Sample Number	398148	398149	398150	398151	398152
Sample Reference	WS09	WS10	WS10	WS10	WS10
Sample Number	ES02	ES01	ES02	ES03	ES04
Depth (m)	1.00	0.50	1.00	2.00	2.70
Date Sampled	28/11/2014	28/11/2014	28/11/2014	28/11/2014	28/11/2014
Time Taken	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status		
<b>Monoaromatics</b>					
Benzene	µg/kg	1	MCERTS	< 1.0	< 1.0
Toluene	µg/kg	1	MCERTS	< 1.0	< 1.0
Ethylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0
p & m-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0
o-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0	< 1.0

**Petroleum Hydrocarbons**

TPH1 (C6 - C12)	mg/kg	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	< 8.0	< 8.0	< 8.0	< 8.0	< 8.0
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	< 8.0	< 8.0	< 8.0	< 8.0	< 8.0
TPH-CWG - Aliphatic > EC35 - EC44	mg/kg	8.4	NONE	< 8.4	< 8.4	< 8.4	< 8.4	< 8.4
<b>TPH-CWG - Aliphatic (EC5 - EC35)</b>	mg/kg	10	MCERTS	< 10	< 10	< 10	< 10	< 10
<b>TPH-CWG - Aliphatic (EC5 - EC44)</b>	mg/kg	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	5.0	4.8	5.2	1.1	< 1.0
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic > EC35 - EC44	mg/kg	8.4	NONE	< 8.4	< 8.4	< 8.4	< 8.4	< 8.4
<b>TPH-CWG - Aromatic (EC5 - EC35)</b>	mg/kg	10	MCERTS	< 10	< 10	< 10	< 10	< 10
<b>TPH-CWG - Aromatic (EC5 - EC44)</b>	mg/kg	10	NONE	< 10	< 10	< 10	< 10	< 10

**Miscellaneous Organics**

Toluene Extractable Matter	mg/kg	100	NONE	< 100	< 100	< 100	< 100	< 100
----------------------------	-------	-----	------	-------	-------	-------	-------	-------



4041



Environmental Science

Analytical Report Number: 14-64062

Project / Site name: St Giles Circus

Your Order No: CL230

Lab Sample Number	398153	398154	398155	398156				
Sample Reference	WS10	WS13	WS13	WS13				
Sample Number	ES05	ES01	ES02	ES03				
Depth (m)	3.80	0.50	1.00	2.00				
Date Sampled	28/11/2014	28/11/2014	28/11/2014	28/11/2014				
Time Taken	None Supplied	None Supplied	None Supplied	None Supplied				
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	
Moisture Content	%	N/A	NONE	12	13	12	9.9	
Total mass of sample received	kg	0.001	NONE	0.46	0.41	0.43	0.44	

Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected	Not-detected	Not-detected	

**General Inorganics**

pH	pH Units	N/A	MCERTS	8.4	8.9	8.5	8.4	
Total Cyanide	mg/kg	1	MCERTS	< 1	< 1	< 1	< 1	
Free Cyanide	mg/kg	1	NONE	< 1	< 1	< 1	< 1	
Thiocyanate as SCN	mg/kg	5	NONE	< 5.0	< 5.0	< 5.0	< 5.0	
Total Sulphate as SO <sub>4</sub>	mg/kg	50	ISO 17025	390	9700	240	260	
Elemental Sulphur	mg/kg	20	NONE	< 20	< 20	< 20	< 20	
Organic Matter	%	0.1	MCERTS	0.2	0.9	0.1	0.1	
Total Organic Carbon (TOC)	%	0.1	MCERTS	0.1	0.5	< 0.1	< 0.1	

**Total Phenols**

Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	

**Speciated PAHs**

Naphthalene	mg/kg	0.05	MCERTS	< 0.05	0.21	< 0.05	0.17	
Acenaphthylene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	< 0.10	
Acenaphthene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	< 0.10	
Fluorene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	< 0.10	
Phenanthrene	mg/kg	0.1	MCERTS	< 0.10	1.4	< 0.10	0.37	
Anthracene	mg/kg	0.1	MCERTS	< 0.10	0.22	< 0.10	0.10	
Fluoranthene	mg/kg	0.1	MCERTS	< 0.10	1.3	< 0.10	0.60	
Pyrene	mg/kg	0.1	MCERTS	< 0.10	1.1	< 0.10	0.50	
Benzo(a)anthracene	mg/kg	0.1	MCERTS	< 0.10	0.55	< 0.10	0.29	
Chrysene	mg/kg	0.05	MCERTS	< 0.05	0.47	< 0.05	0.21	
Benzo(b)fluoranthene	mg/kg	0.1	MCERTS	< 0.10	0.42	< 0.10	0.24	
Benzo(k)fluoranthene	mg/kg	0.1	MCERTS	< 0.10	0.38	< 0.10	0.11	
Benzo(a)pyrene	mg/kg	0.1	MCERTS	< 0.10	0.35	< 0.10	0.17	
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	MCERTS	< 0.10	0.22	< 0.10	< 0.10	
Dibenz(a,h)anthracene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	< 0.10	
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05	0.26	< 0.05	< 0.05	

**Total PAH**

Speciated Total EPA-16 PAHs	mg/kg	1.6	MCERTS	< 1.60	6.95	< 1.60	2.76	

**Heavy Metals / Metalloids**

Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	9.2	19	9.0	12	
Boron (water soluble)	mg/kg	0.2	MCERTS	< 0.2	0.7	< 0.2	< 0.2	
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2	0.7	< 0.2	< 0.2	
Chromium (hexavalent)	mg/kg	4	MCERTS	< 4.0	< 4.0	< 4.0	< 4.0	
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	8.9	19	24	23	
Copper (aqua regia extractable)	mg/kg	1	MCERTS	6.9	180	15	14	
Lead (aqua regia extractable)	mg/kg	1	MCERTS	9.6	1100	26	27	
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	12	< 0.3	< 0.3	
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	13	16	18	18	
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	19	750	41	35	



4041



Environmental Science

Analytical Report Number: 14-64062

Project / Site name: St Giles Circus

Your Order No: CL230

Lab Sample Number	398153	398154	398155	398156	
Sample Reference	WS10	WS13	WS13	WS13	
Sample Number	ES05	ES01	ES02	ES03	
Depth (m)	3.80	0.50	1.00	2.00	
Date Sampled	28/11/2014	28/11/2014	28/11/2014	28/11/2014	
Time Taken	None Supplied	None Supplied	None Supplied	None Supplied	
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status		
<b>Monoaromatics</b>					
Benzene	µg/kg	1	MCERTS	< 1.0	< 1.0
Toluene	µg/kg	1	MCERTS	< 1.0	< 1.0
Ethylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0
p & m-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0
o-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0	< 1.0

**Petroleum Hydrocarbons**

TPH1 (C6 - C12)	mg/kg	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1
TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	< 2.0	< 2.0	< 2.0
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	< 8.0	< 8.0	< 8.0	< 8.0
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	< 8.0	< 8.0	< 8.0	< 8.0
TPH-CWG - Aliphatic > EC35 - EC44	mg/kg	8.4	NONE	< 8.4	< 8.4	< 8.4	< 8.4
<b>TPH-CWG - Aliphatic (EC5 - EC35)</b>	mg/kg	10	MCERTS	< 10	< 10	< 10	< 10
<b>TPH-CWG - Aliphatic (EC5 - EC44)</b>	mg/kg	10	NONE	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	2.8	< 2.0	< 2.0
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	< 10	12	< 10	< 10
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	< 10	11	< 10	< 10
TPH-CWG - Aromatic > EC35 - EC44	mg/kg	8.4	NONE	< 8.4	< 8.4	< 8.4	< 8.4
<b>TPH-CWG - Aromatic (EC5 - EC35)</b>	mg/kg	10	MCERTS	< 10	26	< 10	< 10
<b>TPH-CWG - Aromatic (EC5 - EC44)</b>	mg/kg	10	NONE	< 10	26	< 10	< 10

**Miscellaneous Organics**

Toluene Extractable Matter	mg/kg	100	NONE	< 100	< 100	< 100	< 100
----------------------------	-------	-----	------	-------	-------	-------	-------



4041



Environmental Science

**Analytical Report Number : 14-64062****Project / Site name: St Giles Circus**

\* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and topsoil/loam soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
398143	WS06	ES01	0.50	Light brown sand.
398144	WS06	ES02	1.00	Light brown sand.
398145	WS06	ES03	2.00	Light brown sand.
398146	WS06	ES04	3.00	Light brown sand.
398147	WS09	ES01	0.50	Light brown sand.
398148	WS09	ES02	1.00	Light brown sand.
398149	WS10	ES01	0.50	Light brown sand.
398150	WS10	ES02	1.00	Light brown sand.
398151	WS10	ES03	2.00	Light brown sand.
398152	WS10	ES04	2.70	Light brown sand.
398153	WS10	ES05	3.80	Light brown sand.
398154	WS13	ES01	0.50	Brown sand with rubble and brick.
398155	WS13	ES02	1.00	Light brown sand.
398156	WS13	ES03	2.00	Light brown sand.





4041



Environmental Science

Analytical Report Number : 14-64062

Project / Site name: St Giles Circus

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
(Polish) TPH1 (Soil)	In-house method	In-house method based on USEPA8260	L073S-PL	W	NONE
Asbestos identification in soil	Asbestos Identification with the use of polarised light microscopy in conjunction with disperion staining techniques.	In house method based on HSG 248	A001-PL	D	ISO 17025
Boron, water soluble, in soil	Determination of water soluble boron in soil by hot water extract followed by ICP-OES.	In-house method based on Second Site Properties version 3	L038-PL	D	MCERTS
BTEX and MTBE in soil	Determination of BTEX in soil by headspace GC-MS.	In-house method based on USEPA8260	L073S-PL	W	MCERTS
Elemental sulphur in soil	Determination of elemental sulphur in soil by extraction in dichloromethane followed by HPLC.	In-house method based on Secondsite Property Holdings Guidance for Assessing and Managing Potential	L021-PL	D	NONE
Free cyanide in soil	Determination of free cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	NONE
Hexavalent chromium in soil	Determination of hexavalent chromium in soil by extraction in water then by acidification, addition of 1,5 diphénylcarbazine followed by colorimetry.	In-house method	L080-PL	D	MCERTS
Metals in soil by ICP-OES	Determination of metals in soil by aqua-regia digestion followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L038-PL	D	MCERTS
Moisture Content	Moisture content, determined gravimetrically.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L019-UK/PL	W	NONE
Monohydric phenols in soil	Determination of phenols in soil by extraction with sodium hydroxide followed by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)	L080-PL	W	MCERTS
Organic matter in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L023-PL	D	MCERTS
pH in soil	Determination of pH in soil by addition of water followed by electrometric measurement.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L005-PL	W	MCERTS
Speciated EPA-16 PAHs in soil	Determination of PAH compounds in soil by extraction in dichloromethane and hexane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270	L064-PL	D	MCERTS
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Stones not passing through a 10 mm sieve is determined gravimetrically and reported as a percentage of the dry weight. Sample	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
Thiocyanate in soil	Determination of thiocyanate in soil by extraction in caustic soda followed by acidification followed by addition of ferric nitrate followed by spectrophotometer.	In-house method	L049-PL	D	NONE
Toluene Extractable Matter in soil	Gravimetrically determined through extraction with toluene.	In-house method	L013-UK	D	NONE
Total cyanide in soil	Determination of total cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	MCERTS



4041



Environmental Science

Analytical Report Number : 14-64062

Project / Site name: St Giles Circus

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Total organic carbon in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L023-PL	D	MCERTS
Total sulphate (as SO <sub>4</sub> in soil)	Determination of total sulphate in soil by extraction with 10% HCl followed by ICP-OES.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L038-PL	D	ISO 17025
TPHCWG (Soil)	Determination of pentane extractable hydrocarbons in soil by GC-MS/GC-FID.	In-house method	L076-PL	W	MCERTS

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.

For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30°C.



**Kasia Mazerant**  
Concept Site Investigations  
Unit 8  
Warple Mews  
Warple Way  
London  
W3 0RF

i2 Analytical Ltd.  
7 Woodshots Meadow,  
Croxley Green  
Business Park,  
Watford,  
Herts,  
WD18 8YS

**t:** 020 88112880

**e:** kasia@conceptconsultants.co.uk

**t:** 01923 225404

**f:** 01923 237404

**e:** reception@i2analytical.com

## **Analytical Report Number : 14-64069**

<b>Project / Site name:</b>	St Giles Circus	<b>Samples received on:</b>	02/12/2014
<b>Your job number:</b>	14-2669	<b>Samples instructed on:</b>	04/12/2014
<b>Your order number:</b>	CL230	<b>Analysis completed by:</b>	16/12/2014
<b>Report Issue Number:</b>	1	<b>Report issued on:</b>	16/12/2014
<b>Samples Analysed:</b>	2 wac multi samples		

**Signed:** 

Dr Claire Stone  
Quality Manager  
**For & on behalf of i2 Analytical Ltd.**

**Signed:** 

Thurstan Plummer  
Organics Technical Manager  
**For & on behalf of i2 Analytical Ltd.**

Other office located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils - 4 weeks from reporting  
leachates - 2 weeks from reporting  
waters - 2 weeks from reporting  
asbestos - 6 months from reporting

Excel copies of reports are only valid when accompanied by this PDF certificate.

## i2 Analytical

7 Woodshots Meadow  
Croxley Green Business Park  
Watford, WD18 8YS

Telephone: 01923 225404

Fax: 01923 237404

email:reception@i2analytical.com

Waste Acceptance Criteria Analytical Results							
Report No:	14-64069						
				Client: CONCEPT			
Location	St Giles Circus						
Lab Reference (Sample Number)	398172			Landfill Waste Acceptance Criteria			
Sampling Date	01/12/2014			Limits			
Sample ID	WS06 ES03			Inert Waste Landfill	Stable Non-reactive HAZARDOUS waste in non-hazardous Landfill	Hazardous Waste Landfill	
Depth (m)	2.00						
<b>Solid Waste Analysis</b>							
TOC (%)**	0.2			3%	5%	6%	
Loss on Ignition (%) **	-			--	--	10%	
BTEX (µg/kg) **	< 10			6000	--	--	
Sum of PCBs (mg/kg)	< 0.30			1	--	--	
Mineral Oil (mg/kg)	< 10			500	--	--	
Total PAH (WAC-17) (mg/kg)	< 1.6			100	--	--	
pH (units)**	-			--	>6	--	
Acid Neutralisation Capacity (mol / kg)	-			--	To be evaluated	To be evaluated	
<b>Eluate Analysis</b>							
(BS EN 12457 - 3 preparation utilising end over end leaching procedure)	2:1	8:1		Cumulative 10:1	Limit values for compliance leaching test		
	mg/l	mg/l		mg/kg	using BS EN 12457-3 at L/S 10 l/kg (mg/kg)		
Arsenic *	0.017	< 0.010		< 0.050	0.5	2	25
Barium *	0.042	0.0054		0.10	20	100	300
Cadmium *	< 0.0005	< 0.0005		< 0.0020	0.04	1	5
Chromium *	0.018	0.0014		0.035	0.5	10	70
Copper *	0.011	< 0.0030		0.023	2	50	100
Mercury *	< 0.0015	< 0.0015		< 0.010	0.01	0.2	2
Molybdenum *	0.0096	< 0.0030		0.030	0.5	10	30
Nickel *	0.019	0.0016		0.038	0.4	10	40
Lead *	0.0066	< 0.0050		0.023	0.5	10	50
Antimony *	< 0.0050	< 0.0050		< 0.020	0.06	0.7	5
Selenium *	< 0.010	< 0.010		< 0.040	0.1	0.5	7
Zinc *	0.028	0.0030		0.062	4	50	200
Chloride *	8.9	< 4.0		< 15	800	4000	25000
Fluoride	0.65	0.20		2.6	10	150	500
Sulphate *	18	1.4		35	1000	20000	50000
TDS	80	20		280	4000	60000	100000
Phenol Index (Monhydric Phenols) *	< 0.13	< 0.13		< 0.50	1	-	-
DOC	14	2.0		35	500	800	1000
<b>Leach Test Information</b>							
Stone Content (%)	< 0.1						
Sample Mass (kg)	0.44						
Dry Matter (%)	87						
Moisture (%)	13						
<b>Stage 1</b>							
Volume Eluate L2 (litres)	0.33						
Filtered Eluate VE1 (litres)	0.22						

Results are expressed on a dry weight basis, after correction for moisture content where applicable  
Stated limits are for guidance only and i2 cannot be held responsible for any discrepancies with current legislation

\* = UKAS accredited (liquid eluate analysis only)

\*\* = MCERTS accredited

## i2 Analytical

7 Woodshots Meadow  
Croxley Green Business Park  
Watford, WD18 8YS

Telephone: 01923 225404

Fax: 01923 237404

email:reception@i2analytical.com

Waste Acceptance Criteria Analytical Results							
Report No:	14-64069						
				Client: CONCEPT			
Location	St Giles Circus						
Lab Reference (Sample Number)	398173			Landfill Waste Acceptance Criteria			
Sampling Date	01/12/2014			Limits			
Sample ID	WS10 ES05			Inert Waste Landfill	Stable Non-reactive HAZARDOUS waste in non-hazardous Landfill	Hazardous Waste Landfill	
Depth (m)	3.80						
<b>Solid Waste Analysis</b>							
TOC (%)**	0.1			3%	5%	6%	
Loss on Ignition (%) **	-			--	--	10%	
BTEX (µg/kg) **	< 10			6000	--	--	
Sum of PCBs (mg/kg)	< 0.30			1	--	--	
Mineral Oil (mg/kg)	< 10			500	--	--	
Total PAH (WAC-17) (mg/kg)	< 1.6			100	--	--	
pH (units)**	-			--	>6	--	
Acid Neutralisation Capacity (mol / kg)	-			--	To be evaluated	To be evaluated	
<b>Eluate Analysis</b>	2:1	8:1		Cumulative 10:1	Limit values for compliance leaching test		
(BS EN 12457 - 3 preparation utilising end over end leaching procedure)	mg/l	mg/l		mg/kg	using BS EN 12457-3 at L/S 10 l/kg (mg/kg)		
Arsenic *	0.017	< 0.010		0.085	0.5	2	25
Barium *	0.026	0.012		0.14	20	100	300
Cadmium *	< 0.0005	< 0.0005		< 0.0020	0.04	1	5
Chromium *	0.010	0.0042		0.050	0.5	10	70
Copper *	0.011	< 0.0030		0.034	2	50	100
Mercury *	< 0.0015	< 0.0015		< 0.010	0.01	0.2	2
Molybdenum *	0.0051	< 0.0030		< 0.020	0.5	10	30
Nickel *	0.014	0.0051		0.062	0.4	10	40
Lead *	0.0059	< 0.0050		0.030	0.5	10	50
Antimony *	< 0.0050	< 0.0050		< 0.020	0.06	0.7	5
Selenium *	< 0.010	< 0.010		< 0.040	0.1	0.5	7
Zinc *	0.020	0.0077		0.092	4	50	200
Chloride *	12	< 4.0		20	800	4000	25000
Fluoride	0.40	0.12		1.5	10	150	500
Sulphate *	13	1.4		29	1000	20000	50000
TDS	80	20		280	4000	60000	100000
Phenol Index (Monhydric Phenols) *	< 0.13	< 0.13		< 0.50	1	-	-
DOC	7.7	3.2		37	500	800	1000
<b>Leach Test Information</b>							
Stone Content (%)	< 0.1						
Sample Mass (kg)	0.41						
Dry Matter (%)	92						
Moisture (%)	8.2						
<b>Stage 1</b>							
Volume Eluate L2 (litres)	0.34						
Filtered Eluate VE1 (litres)	0.23						

Results are expressed on a dry weight basis, after correction for moisture content where applicable  
Obtain further information from our website [www.i2analytical.com](http://www.i2analytical.com) or contact us by email [enquiries@i2analytical.com](mailto:enquiries@i2analytical.com) or telephone 01923 225404

\* = UKAS accredited (liquid eluate analysis only)

\*\* = MCERTS accredited



4041



Environmental Science

**Analytical Report Number : 14-64069**

**Project / Site name: St Giles Circus**

\* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and topsoil/loam soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
398172	WS06	ES03	2.00	Light brown sand.
398173	WS10	ES05	3.80	Light brown sand.



4041



Environmental Science

Analytical Report Number : 14-64069

Project / Site name: St Giles Circus

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
BTEX (Sum of BTEX compounds) in soil	Determination of BTEX in soil by headspace GC-MS. Individual components MCERTS accredited	In-house method based on USEPA8260	L073S-PL	W	MCERTS
Chloride in WAC leachate (BS EN 12457-3 Prep)	Determination of chloride in leachate by Gallery discrete analyser.	In-house method based on Standard Methods for the Examination of Water and Waste Water, 21st Ed.	L082-PL	W	ISO 17025
DOC in WAC leachate (BS EN 12457-3 Prep)	Determination of dissolved organic carbon in leachate by the measurement on a non-dispersive infrared analyser of carbon dioxide released by acidification.	In-house method based on Standard Methods for the Examination of Water and Waste Water, 21st Ed.	L037-PL	W	NONE
Fluoride in WAC leachate (BS EN 12457-3 Prep)	Determination of fluoride in leachate by 1:1ratio with a buffer solution followed by Ion Selective Electrode.	In-house method based on Standard Methods for the Examination of Water and Waste Water, 21st Ed.	L033-PL	W	NONE
Metals in WAC leachate (BS EN 12457-3 Prep)	Determination of metals in leachate by acidification followed by ICP-OES.	In-house method based on Standard Methods for the Examination of Water and Waste Water, 21st Ed.	L039-PL	W	ISO 17025
Mineral Oil in Soil	Determination of dichloromethane/hexane extractable hydrocarbons in soil by GC-MS.	In-house method based on USEPA 8270	L064-PL	D	NONE
Moisture Content	Moisture content, determined gravimetrically.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L019-UK/PL	W	NONE
PCB's by GC-MS in soil	Determination of PCB by extraction with acetone and hexane followed by GC-MS.	In-house method based on USEPA 8082	L027-PL	D	NONE
Phenol Index in WAC leachate (BS EN 12457-3 Prep)	Determination of monohydric phenols in leachate by continuous flow analyser.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)	L080-PL	W	ISO 17025
Seciated WAC-17 PAHs in soil	Determination of PAH compounds in soil by extraction in dichloromethane and hexane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270	L064-PL	D	NONE
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Stones not passing through a 10 mm sieve is determined gravimetrically and reported as a percentage of the dry weight. Sample	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
Sulphate in WAC leachate (BS EN 12457-3 Prep)	Determination of sulphate in leachate by acidification followed by ICP-OES.	In-house method based on Standard Methods for the Examination of Water and Waste Water, 21st Ed.	L039-PL	W	ISO 17025
TDS in WAC leachate (BS EN 12457-3 Prep)	Determination of total dissolved solids in leachate by electrometric measurement.	In-house method based on Standard Methods for the Examination of Water and Waste Water, 21st Ed.	L004-PL	W	NONE
Total organic carbon in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L023-PL	D	MCERTS

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.

For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 300c.



**Kasia Mazerant**  
Concept Site Investigations  
Unit 8  
Warple Mews  
Warple Way  
London  
W3 0RF

i2 Analytical Ltd.  
7 Woodshots Meadow,  
Croxley Green  
Business Park,  
Watford,  
Herts,  
WD18 8YS

**t:** 020 88112880

**e:** kasia@conceptconsultants.co.uk

**t:** 01923 225404

**f:** 01923 237404

**e:** reception@i2analytical.com

## **Analytical Report Number : 14-64297**

<b>Project / Site name:</b>	St Giles Circus	<b>Samples received on:</b>	05/12/2014
<b>Your job number:</b>	14-2669	<b>Samples instructed on:</b>	05/12/2014
<b>Your order number:</b>		<b>Analysis completed by:</b>	16/12/2014
<b>Report Issue Number:</b>	1	<b>Report issued on:</b>	16/12/2014
<b>Samples Analysed:</b>	1 soil sample		

**Signed:** 

Dr Claire Stone  
Quality Manager  
**For & on behalf of i2 Analytical Ltd.**

**Signed:** 

Thurstan Plummer  
Organics Technical Manager  
**For & on behalf of i2 Analytical Ltd.**

Other office located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils - 4 weeks from reporting  
leachates - 2 weeks from reporting  
waters - 2 weeks from reporting  
asbestos - 6 months from reporting

Excel copies of reports are only valid when accompanied by this PDF certificate.





4041



Environmental Science

Analytical Report Number: 14-64297

Project / Site name: St Giles Circus

<b>Lab Sample Number</b>				399845				
<b>Sample Reference</b>				WS13				
<b>Sample Number</b>				ES04				
<b>Depth (m)</b>				3.00				
<b>Date Sampled</b>				02/12/2014				
<b>Time Taken</b>				None Supplied				
<b>Analytical Parameter (Soil Analysis)</b>	<b>Units</b>	<b>Limit of detection</b>	<b>Accreditation Status</b>					
Stone Content	%	0.1	NONE	< 0.1				
Moisture Content	%	N/A	NONE	12				
Total mass of sample received	kg	0.001	NONE	0.40				

<b>Asbestos in Soil</b>	Type	N/A	ISO 17025	Not-detected				
-------------------------	------	-----	-----------	--------------	--	--	--	--

**General Inorganics**

pH	pH Units	N/A	MCERTS	6.8				
Total Cyanide	mg/kg	1	MCERTS	< 1				
Free Cyanide	mg/kg	1	NONE	< 1				
Thiocyanate as SCN	mg/kg	5	NONE	< 5.0				
Total Sulphate as SO <sub>4</sub>	mg/kg	50	ISO 17025	330				
Elemental Sulphur	mg/kg	20	NONE	< 20				
Organic Matter	%	0.1	MCERTS	0.1				
Total Organic Carbon (TOC)	%	0.1	MCERTS	< 0.1				

**Total Phenols**

<b>Total Phenols (monohydric)</b>	mg/kg	1	MCERTS	< 1.0				
-----------------------------------	-------	---	--------	-------	--	--	--	--

**Speciated PAHs**

Naphthalene	mg/kg	0.05	MCERTS	< 0.05				
Acenaphthylene	mg/kg	0.1	MCERTS	< 0.10				
Acenaphthene	mg/kg	0.1	MCERTS	< 0.10				
Fluorene	mg/kg	0.1	MCERTS	< 0.10				
Phenanthrene	mg/kg	0.1	MCERTS	< 0.10				
Anthracene	mg/kg	0.1	MCERTS	< 0.10				
Fluoranthene	mg/kg	0.1	MCERTS	< 0.10				
Pyrene	mg/kg	0.1	MCERTS	< 0.10				
Benzo(a)anthracene	mg/kg	0.1	MCERTS	< 0.10				
Chrysene	mg/kg	0.05	MCERTS	< 0.05				
Benzo(b)fluoranthene	mg/kg	0.1	MCERTS	< 0.10				
Benzo(k)fluoranthene	mg/kg	0.1	MCERTS	< 0.10				
Benzo(a)pyrene	mg/kg	0.1	MCERTS	< 0.10				
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	MCERTS	< 0.10				
Dibenz(a,h)anthracene	mg/kg	0.1	MCERTS	< 0.10				
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05				

**Total PAH**

<b>Speciated Total EPA-16 PAHs</b>	mg/kg	1.6	MCERTS	< 1.60				
------------------------------------	-------	-----	--------	--------	--	--	--	--

**Heavy Metals / Metalloids**

Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	7.5				
Boron (water soluble)	mg/kg	0.2	MCERTS	< 0.2				
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2				
Chromium (hexavalent)	mg/kg	4	MCERTS	< 4.0				
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	9.5				
Copper (aqua regia extractable)	mg/kg	1	MCERTS	5.6				
Lead (aqua regia extractable)	mg/kg	1	MCERTS	3.9				
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3				
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	9.5				
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0				
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	21				



4041



Environmental Science

Analytical Report Number: 14-64297

Project / Site name: St Giles Circus

Lab Sample Number				399845				
Sample Reference				WS13				
Sample Number				ES04				
Depth (m)				3.00				
Date Sampled				02/12/2014				
Time Taken				None Supplied				
<b>Analytical Parameter (Soil Analysis)</b>				<b>Units</b>	<b>Limit of detection</b>	<b>Accreditation Status</b>		

**Monoaromatics**

Benzene	µg/kg	1	MCERTS	< 1.0				
Toluene	µg/kg	1	MCERTS	< 1.0				
Ethylbenzene	µg/kg	1	MCERTS	< 1.0				
p & m-xylene	µg/kg	1	MCERTS	< 1.0				
o-xylene	µg/kg	1	MCERTS	< 1.0				
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0				

**Petroleum Hydrocarbons**

TPH1 (C6 - C12)	mg/kg	0.1	ISO 17025	< 0.1				
-----------------	-------	-----	-----------	-------	--	--	--	--

TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.1	MCERTS	< 0.1				
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.1	MCERTS	< 0.1				
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.1	MCERTS	< 0.1				
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0				
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0				
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	< 8.0				
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	< 8.0				
TPH-CWG - Aliphatic > EC35 - EC44	mg/kg	8.4	NONE	< 8.4				
<b>TPH-CWG - Aliphatic (EC5 - EC35)</b>	mg/kg	10	MCERTS	< 10				
<b>TPH-CWG - Aliphatic (EC5 - EC44)</b>	mg/kg	10	NONE	< 10				

TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.1	MCERTS	< 0.1				
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.1	MCERTS	< 0.1				
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.1	MCERTS	< 0.1				
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0				
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0				
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	< 10				
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	< 10				
TPH-CWG - Aromatic > EC35 - EC44	mg/kg	8.4	NONE	< 8.4				
<b>TPH-CWG - Aromatic (EC5 - EC35)</b>	mg/kg	10	MCERTS	< 10				
<b>TPH-CWG - Aromatic (EC5 - EC44)</b>	mg/kg	10	NONE	< 10				

**Miscellaneous Organics**

Toluene Extractable Matter	mg/kg	100	NONE	< 100				
----------------------------	-------	-----	------	-------	--	--	--	--



4041



Environmental Science

**Analytical Report Number : 14-64297**

**Project / Site name: St Giles Circus**

\* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and topsoil/loam soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
399845	WS13	ES04	3.00	Brown sand.



4041



Environmental Science

Analytical Report Number : 14-64297

Project / Site name: St Giles Circus

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Asbestos identification in soil	Asbestos Identification with the use of polarised light microscopy in conjunction with disperion staining techniques.	In house method based on HSG 248	A001-PL	D	ISO 17025
Boron, water soluble, in soil	Determination of water soluble boron in soil by hot water extract followed by ICP-OES.	In-house method based on Second Site Properties version 3	L038-PL	D	MCERTS
BTEX and MTBE in soil	Determination of BTEX in soil by headspace GC-MS.	In-house method based on USEPA8260	L073S-PL	W	MCERTS
Elemental sulphur in soil	Determination of elemental sulphur in soil by extraction in dichloromethane followed by HPLC.	In-house method based on Secondsite Property Holdings Guidance for Assessing and Managing Potential	L021-PL	D	NONE
Free cyanide in soil	Determination of free cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	NONE
Hexavalent chromium in soil	Determination of hexavalent chromium in soil by extraction in water then by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.	In-house method	L080-PL	D	MCERTS
Metals in soil by ICP-OES	Determination of metals in soil by aqua-regia digestion followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L038-PL	D	MCERTS
Moisture Content	Moisture content, determined gravimetrically.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L019-UK/PL	W	NONE
Monohydric phenols in soil	Determination of phenols in soil by extraction with sodium hydroxide followed by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)	L080-PL	W	MCERTS
Organic matter in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L023-PL	D	MCERTS
pH in soil	Determination of pH in soil by addition of water followed by electrometric measurement.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L005-PL	W	MCERTS
Speciated EPA-16 PAHs in soil	Determination of PAH compounds in soil by extraction in dichloromethane and hexane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270	L064-PL	D	MCERTS
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Stones not passing through a 10 mm sieve is determined gravimetrically and reported as a percentage of the dry weight. Sample results are not corrected for the stone content of the sample.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
Thiocyanate in soil	Determination of thiocyanate in soil by extraction in caustic soda followed by acidification followed by addition of ferric nitrate followed by spectrophotometer.	In-house method	L049-PL	D	NONE
Toluene Extractable Matter in soil	Gravimetrically determined through extraction with toluene.	In-house method	L013-UK	D	NONE
Total cyanide in soil	Determination of total cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	MCERTS



4041



Environmental Science

Analytical Report Number : 14-64297

Project / Site name: St Giles Circus

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Total organic carbon in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L023-PL	D	MCERTS
Total sulphate (as SO <sub>4</sub> in soil)	Determination of total sulphate in soil by extraction with 10% HCl followed by ICP-OES.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L038-PL	D	ISO 17025
TPH C6- C12	In-house method	In-house method based on USEPA8260	L073S-PL	W	ISO 17025
TPHCWG (Soil)	Determination of pentane extractable hydrocarbons in soil by GC-MS/GC-FID.	In-house method	L076-PL	W	MCERTS

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.

For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30°C.



**Kasia Mazerant**  
Concept Site Investigations  
Unit 8  
Warple Mews  
Warple Way  
London  
W3 0RF

i2 Analytical Ltd.  
7 Woodshots Meadow,  
Croxley Green  
Business Park,  
Watford,  
Herts,  
WD18 8YS

**t:** 020 88112880

**e:** kasia@conceptconsultants.co.uk

**t:** 01923 225404

**f:** 01923 237404

**e:** reception@i2analytical.com

## **Analytical Report Number : 14-64298**

<b>Project / Site name:</b>	St Giles Circus	<b>Samples received on:</b>	05/12/2014
<b>Your job number:</b>	14-2669	<b>Samples instructed on:</b>	05/12/2014
<b>Your order number:</b>	CL230	<b>Analysis completed by:</b>	17/12/2014
<b>Report Issue Number:</b>	1	<b>Report issued on:</b>	17/12/2014
<b>Samples Analysed:</b>	1 wac multi sample		

**Signed:** 

Dr Claire Stone  
Quality Manager  
**For & on behalf of i2 Analytical Ltd.**

**Signed:** 

Thurstan Plummer  
Organics Technical Manager  
**For & on behalf of i2 Analytical Ltd.**

Other office located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils - 4 weeks from reporting  
leachates - 2 weeks from reporting  
waters - 2 weeks from reporting  
asbestos - 6 months from reporting

Excel copies of reports are only valid when accompanied by this PDF certificate.

## i2 Analytical

7 Woodshots Meadow  
Croxley Green Business Park  
Watford, WD18 8YS

Telephone: 01923 225404

Fax: 01923 237404

email:reception@i2analytical.com

Waste Acceptance Criteria Analytical Results						
Report No:	14-64298					
				Client: CONCEPT		
Location	St Giles Circus					
Lab Reference (Sample Number)	399846			Landfill Waste Acceptance Criteria		
Sampling Date	02/12/2014			Limits		
Sample ID	WS13 ES04			Inert Waste Landfill	Stable Non-reactive HAZARDOUS waste in non-hazardous Landfill	Hazardous Waste Landfill
Depth (m)	3.00					
<b>Solid Waste Analysis</b>						
TOC (%)**	< 0.1			3%	5%	6%
Loss on Ignition (%) **	-			--	--	10%
BTEX (µg/kg) **	< 10			6000	--	--
Sum of PCBs (mg/kg)	< 0.30			1	--	--
Mineral Oil (mg/kg)	< 10			500	--	--
Total PAH (WAC-17) (mg/kg)	< 1.6			100	--	--
pH (units)**	-			--	>6	--
Acid Neutralisation Capacity (mol / kg)	-			--	To be evaluated	To be evaluated
<b>Eluate Analysis</b>						
(BS EN 12457 - 3 preparation utilising end over end leaching procedure)	2:1	8:1		Cumulative 10:1	Limit values for compliance leaching test	
	mg/l	mg/l		mg/kg	using BS EN 12457-3 at L/S 10 l/kg (mg/kg)	
Arsenic *	< 0.010	< 0.010		< 0.050	0.5	2
Barium *	0.023	0.012		0.14	20	100
Cadmium *	< 0.0005	< 0.0005		< 0.0020	0.04	1
Chromium *	0.0096	0.0040		0.048	0.5	10
Copper *	0.044	0.0054		0.11	2	50
Mercury *	< 0.0015	< 0.0015		< 0.010	0.01	0.2
Molybdenum *	0.010	0.0032		0.042	0.5	10
Nickel *	0.010	0.0037		0.046	0.4	10
Lead *	0.0082	< 0.0050		0.040	0.5	10
Antimony *	< 0.0050	< 0.0050		< 0.020	0.06	0.7
Selenium *	< 0.010	< 0.010		< 0.040	0.1	0.5
Zinc *	0.027	0.0069		0.098	4	50
Chloride *	4.7	< 4.0		< 15	800	4000
Fluoride	0.36	0.13		1.6	10	150
Sulphate *	20	2.6		51	1000	20000
TDS	60	30		340	4000	60000
Phenol Index (Monhydric Phenols) *	< 0.13	< 0.13		< 0.50	1	-
DOC	8.6	4.7		53	500	800
<b>Leach Test Information</b>						
Stone Content (%)	< 0.1					
Sample Mass (kg)	0.40					
Dry Matter (%)	88					
Moisture (%)	12					
<b>Stage 1</b>						
Volume Eluate L2 (litres)	0.33					
Filtered Eluate VE1 (litres)	0.25					

Results are expressed on a dry weight basis, after correction for moisture content where applicable  
Stated limits are for guidance only and i2 cannot be held responsible for any discrepancies with current legislation

\* = UKAS accredited (liquid eluate analysis only)

\*\* = MCERTS accredited



4041



Environmental Science

**Analytical Report Number : 14-64298**

**Project / Site name: St Giles Circus**

\* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and topsoil/loam soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
399846	WS13 ES04	None Supplied	3.00	Brown sand.



Analytical Report Number : 14-64298

Project / Site name: St Giles Circus

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
BTEX (Sum of BTEX compounds) in soil	Determination of BTEX in soil by headspace GC-MS. Individual components MCERTS accredited	In-house method based on USEPA8260	L073S-PL	W	MCERTS
Chloride in WAC leachate (BS EN 12457-3 Prep)	Determination of chloride in leachate by Gallery discrete analyser.	In-house method based on Standard Methods for the Examination of Water and Waste Water, 21st Ed.	L082-PL	W	ISO 17025
DOC in WAC leachate (BS EN 12457-3 Prep)	Determination of dissolved organic carbon in leachate by the measurement on a non-dispersive infrared analyser of carbon dioxide released by acidification.	In-house method based on Standard Methods for the Examination of Water and Waste Water, 21st Ed.	L037-PL	W	NONE
Fluoride in WAC leachate (BS EN 12457-3 Prep)	Determination of fluoride in leachate by 1:1ratio with a buffer solution followed by Ion Selective Electrode.	In-house method based on Standard Methods for the Examination of Water and Waste Water, 21st Ed.	L033-PL	W	NONE
Metals in WAC leachate (BS EN 12457-3 Prep)	Determination of metals in leachate by acidification followed by ICP-OES.	In-house method based on Standard Methods for the Examination of Water and Waste Water, 21st Ed.	L039-PL	W	ISO 17025
Mineral Oil in Soil	Determination of dichloromethane/hexane extractable hydrocarbons in soil by GC-MS.	In-house method based on USEPA 8270	L064-PL	D	NONE
Moisture Content	Moisture content, determined gravimetrically.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L019-UK/PL	W	NONE
PCB's by GC-MS in soil	Determination of PCB by extraction with acetone and hexane followed by GC-MS.	In-house method based on USEPA 8082	L027-PL	D	NONE
Phenol Index in WAC leachate (BS EN 12457-3 Prep)	Determination of monohydric phenols in leachate by continuous flow analyser.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)	L080-PL	W	ISO 17025
Sociated WAC-17 PAHs in soil	Determination of PAH compounds in soil by extraction in dichloromethane and hexane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270	L064-PL	D	NONE
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Stones not passing through a 10 mm sieve is determined gravimetrically and reported as a percentage of the dry weight. Sample	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
Sulphate in WAC leachate (BS EN 12457-3 Prep)	Determination of sulphate in leachate by acidification followed by ICP-OES.	In-house method based on Standard Methods for the Examination of Water and Waste Water, 21st Ed.	L039-PL	W	ISO 17025
TDS in WAC leachate (BS EN 12457-3 Prep)	Determination of total dissolved solids in leachate by electrometric measurement.	In-house method based on Standard Methods for the Examination of Water and Waste Water, 21st Ed.	L004-PL	W	NONE
Total organic carbon in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L023-PL	D	MCERTS

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.

For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 300c.



**Kasia Mazerant**  
Concept Site Investigations  
Unit 8  
Warple Mews  
Warple Way  
London  
W3 0RF

i2 Analytical Ltd.  
7 Woodshots Meadow,  
Croxley Green  
Business Park,  
Watford,  
Herts,  
WD18 8YS

**t:** 020 88112880

**e:** kasia@conceptconsultants.co.uk

**t:** 01923 225404

**f:** 01923 237404

**e:** reception@i2analytical.com

## **Analytical Report Number : 14-64295**

<b>Project / Site name:</b>	St Giles Circus	<b>Samples received on:</b>	05/12/2014
<b>Your job number:</b>	14/2669	<b>Samples instructed on:</b>	09/12/2014
<b>Your order number:</b>	CL241	<b>Analysis completed by:</b>	17/12/2014
<b>Report Issue Number:</b>	1	<b>Report issued on:</b>	17/12/2014
<b>Samples Analysed:</b>	14 soil samples		

**Signed:** 

Dr Claire Stone  
Quality Manager  
**For & on behalf of i2 Analytical Ltd.**

**Signed:** 

Thurstan Plummer  
Organics Technical Manager  
**For & on behalf of i2 Analytical Ltd.**

Other office located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils - 4 weeks from reporting  
leachates - 2 weeks from reporting  
waters - 2 weeks from reporting  
asbestos - 6 months from reporting

Excel copies of reports are only valid when accompanied by this PDF certificate.

**Analytical Report Number: 14-64295**  
**Project / Site name: St Giles Circus**  
**Your Order No: CL241**

Lab Sample Number	399804			399805	399806	399807	399808
Sample Reference	WS15			WS15	WS15	WS15	WS15
Sample Number	ES01			ES02	ES03	ES04	ES05
Depth (m)	0.50			1.00	2.00	3.00	4.00
Date Sampled	03/12/2014			03/12/2014	03/12/2014	03/12/2014	03/12/2014
Time Taken	None Supplied			None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status				
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1
Moisture Content	%	N/A	NONE	3.0	4.1	10	19
Total mass of sample received	kg	0.001	NONE	1.2	1.2	1.4	0.99

Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected	Not-detected	Not-detected	Not-detected
------------------	------	-----	-----------	--------------	--------------	--------------	--------------	--------------

#### General Inorganics

pH	pH Units	N/A	MCERTS	8.7	8.0	8.0	8.3	7.9
Total Cyanide	mg/kg	1	MCERTS	< 1	< 1	< 1	< 1	< 1
Free Cyanide	mg/kg	1	NONE	< 1	< 1	< 1	< 1	< 1
Thiocyanate as SCN	mg/kg	5	NONE	< 5.0	8.9	< 5.0	< 5.0	< 5.0
Total Sulphate as SO <sub>4</sub>	mg/kg	50	ISO 17025	1900	85	220	< 50	560
Elemental Sulphur	mg/kg	20	NONE	< 20	< 20	< 20	< 20	< 20
Total Organic Carbon (TOC)	%	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	0.1

#### Total Phenols

Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
----------------------------	-------	---	--------	-------	-------	-------	-------	-------

#### Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthylene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Fluorene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Phenanthrene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Anthracene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Fluoranthene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Pyrene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo(a)anthracene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Chrysene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(b)fluoranthene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo(k)fluoranthene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo(a)pyrene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Dibenz(a,h)anthracene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05

#### Total PAH

Speciated Total EPA-16 PAHs	mg/kg	1.6	MCERTS	< 1.60	< 1.60	< 1.60	< 1.60	< 1.60
-----------------------------	-------	-----	--------	--------	--------	--------	--------	--------

#### Heavy Metals / Metalloids

Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	7.5	7.7	4.6	4.9	17
Boron (water soluble)	mg/kg	0.2	MCERTS	0.7	0.3	0.2	0.3	0.7
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Chromium (hexavalent)	mg/kg	4	MCERTS	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	11	9.8	4.6	8.7	45
Copper (aqua regia extractable)	mg/kg	1	MCERTS	16	5.2	4.1	4.7	37
Lead (aqua regia extractable)	mg/kg	1	MCERTS	55	3.4	2.0	3.1	17
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	9.2	11	6.2	9.1	46
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	18	15	11	12	87

**Analytical Report Number: 14-64295**  
**Project / Site name: St Giles Circus**  
**Your Order No: CL241**

Lab Sample Number				399804	399805	399806	399807	399808
Sample Reference				WS15	WS15	WS15	WS15	WS15
Sample Number				ES01	ES02	ES03	ES04	ES05
Depth (m)				0.50	1.00	2.00	3.00	4.00
Date Sampled				03/12/2014	03/12/2014	03/12/2014	03/12/2014	03/12/2014
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					

**Monoaromatics**

Compound	Units	Limit of detection	Accreditation Status	399804	399805	399806	399807	399808
Benzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p & m-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

**Petroleum Hydrocarbons**

TPH1 (C6 - C12)	mg/kg	Limit of detection	Accreditation Status	399804	399805	399806	399807	399808
TPH1 (C6 - C12)	mg/kg	0.1	ISO 17025	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1

TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	< 8.0	< 8.0	< 8.0	< 8.0	< 8.0
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	< 8.0	< 8.0	< 8.0	< 8.0	< 8.0
<b>TPH-CWG - Aliphatic (EC5 - EC35)</b>	mg/kg	10	MCERTS	< 10	< 10	< 10	< 10	< 10

TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	< 10	< 10	< 10	< 10	< 10
<b>TPH-CWG - Aromatic (EC5 - EC35)</b>	mg/kg	10	MCERTS	< 10	< 10	< 10	< 10	< 10

**Miscellaneous Organics**

Toluene Extractable Matter	mg/kg	100	NONE	< 100	< 100	< 100	< 100	< 100
----------------------------	-------	-----	------	-------	-------	-------	-------	-------

Analytical Report Number: 14-64295

Project / Site name: St Giles Circus

Your Order No: CL241

Lab Sample Number				399809	399810	399811	399812	399813
Sample Reference				WS22	WS22	WS22	WS22	WS22
Sample Number				ES01	ES02	ES03	ES04	ES05
Depth (m)				0.50	1.00	1.50	2.50	3.00
Date Sampled				03/12/2014	03/12/2014	03/12/2014	03/12/2014	03/12/2014
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Moisture Content	%	N/A	NONE	2.9	4.7	11	12	20
Total mass of sample received	kg	0.001	NONE	0.79	2.0	2.0	2.0	0.97

Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected	Not-detected	Not-detected	Not-detected
------------------	------	-----	-----------	--------------	--------------	--------------	--------------	--------------

**General Inorganics**

pH	pH Units	N/A	MCERTS	8.0	8.0	8.1	7.7	8.1
Total Cyanide	mg/kg	1	MCERTS	< 1	< 1	< 1	< 1	< 1
Free Cyanide	mg/kg	1	NONE	< 1	< 1	< 1	< 1	< 1
Thiocyanate as SCN	mg/kg	5	NONE	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Total Sulphate as SO <sub>4</sub>	mg/kg	50	ISO 17025	130	100	260	1100	210
Elemental Sulphur	mg/kg	20	NONE	< 20	< 20	< 20	< 20	< 20
Total Organic Carbon (TOC)	%	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1

**Total Phenols**

Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
----------------------------	-------	---	--------	-------	-------	-------	-------	-------

**Speciated PAHs**

Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthylene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Fluorene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Phenanthrene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Anthracene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Fluoranthene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Pyrene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo(a)anthracene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Chrysene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(b)fluoranthene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo(k)fluoranthene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo(a)pyrene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Dibenz(a,h)anthracene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05

**Total PAH**

Speciated Total EPA-16 PAHs	mg/kg	1.6	MCERTS	< 1.60	< 1.60	< 1.60	< 1.60	< 1.60
-----------------------------	-------	-----	--------	--------	--------	--------	--------	--------

**Heavy Metals / Metalloids**

Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	11	11	11	16	19
Boron (water soluble)	mg/kg	0.2	MCERTS	0.8	0.3	1.7	1.0	2.5
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Chromium (hexavalent)	mg/kg	4	MCERTS	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	20	14	17	17	43
Copper (aqua regia extractable)	mg/kg	1	MCERTS	11	6.9	45	23	35
Lead (aqua regia extractable)	mg/kg	1	MCERTS	6.4	5.5	91	22	17
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	16	12	16	26	53
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	26	20	50	35	77

Analytical Report Number: 14-64295

Project / Site name: St Giles Circus

Your Order No: CL241

Lab Sample Number	399809			399810	399811	399812	399813
Sample Reference	WS22			WS22	WS22	WS22	WS22
Sample Number	ES01			ES02	ES03	ES04	ES05
Depth (m)	0.50			1.00	1.50	2.50	3.00
Date Sampled	03/12/2014			03/12/2014	03/12/2014	03/12/2014	03/12/2014
Time Taken	None Supplied			None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status				
<b>Monoaromatics</b>							
Benzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0
p & m-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0
o-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0

**Petroleum Hydrocarbons**

TPH1 (C6 - C12)	mg/kg	0.1	ISO 17025	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	< 8.0	< 8.0	< 8.0	< 8.0	< 8.0
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	< 8.0	< 8.0	< 8.0	< 8.0	< 8.0
<b>TPH-CWG - Aliphatic (EC5 - EC35)</b>	mg/kg	10	MCERTS	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	< 10	< 10	< 10	< 10	< 10
<b>TPH-CWG - Aromatic (EC5 - EC35)</b>	mg/kg	10	MCERTS	< 10	< 10	< 10	< 10	< 10

**Miscellaneous Organics**

Toluene Extractable Matter	mg/kg	100	NONE	< 100	< 100	< 100	< 100	< 100
----------------------------	-------	-----	------	-------	-------	-------	-------	-------

**Analytical Report Number: 14-64295**  
**Project / Site name: St Giles Circus**  
**Your Order No: CL241**

Lab Sample Number	399814				399815				399816				399817			
Sample Reference	WS23				WS23				WS23				WS23			
Sample Number	ES01				ES02				ES03				ES04			
Depth (m)	0.50				1.00				2.00				2.80			
Date Sampled	03/12/2014				03/12/2014				03/12/2014				03/12/2014			
Time Taken	None Supplied				None Supplied				None Supplied				None Supplied			
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status													
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	
Moisture Content	%	N/A	NONE	3.6	21	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	
Total mass of sample received	kg	0.001	NONE	2.0	0.90	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	

Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected	Not-detected	Not-detected

#### General Inorganics

pH	pH Units	N/A	MCERTS	8.9	8.1	7.9	8.2
Total Cyanide	mg/kg	1	MCERTS	< 1	< 1	< 1	< 1
Free Cyanide	mg/kg	1	NONE	< 1	< 1	< 1	< 1
Thiocyanate as SCN	mg/kg	5	NONE	< 5.0	< 5.0	< 5.0	< 5.0
Total Sulphate as SO <sub>4</sub>	mg/kg	50	ISO 17025	2000	390	53	1300
Elemental Sulphur	mg/kg	20	NONE	< 20	< 20	< 20	< 20
Total Organic Carbon (TOC)	%	0.1	MCERTS	< 0.1	< 0.1	< 0.1	0.1

#### Total Phenols

Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0

#### Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthylene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	< 0.10
Fluorene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	< 0.10
Phenanthrene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	< 0.10
Anthracene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	< 0.10
Fluoranthene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	< 0.10
Pyrene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	< 0.10
Benzo(a)anthracene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	< 0.10
Chrysene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(b)fluoranthene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	< 0.10
Benzo(k)fluoranthene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	< 0.10
Benzo(a)pyrene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	< 0.10
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	< 0.10
Dibenz(a,h)anthracene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	< 0.10
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05

#### Total PAH

Speciated Total EPA-16 PAHs	mg/kg	1.6	MCERTS	< 1.60	< 1.60	< 1.60	< 1.60

#### Heavy Metals / Metalloids

Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	12	17	9.0	13
Boron (water soluble)	mg/kg	0.2	MCERTS	0.9	1.7	0.3	0.4
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2
Chromium (hexavalent)	mg/kg	4	MCERTS	< 4.0	< 4.0	< 4.0	< 4.0
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	14	52	10	50
Copper (aqua regia extractable)	mg/kg	1	MCERTS	23	44	6.8	41
Lead (aqua regia extractable)	mg/kg	1	MCERTS	79	18	3.9	15
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	13	56	10	50
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	27	110	46	90

Analytical Report Number: 14-64295

Project / Site name: St Giles Circus

Your Order No: CL241

Lab Sample Number				399814	399815	399816	399817	
Sample Reference				WS23	WS23	WS23	WS23	
Sample Number				ES01	ES02	ES03	ES04	
Depth (m)				0.50	1.00	2.00	2.80	
Date Sampled				03/12/2014	03/12/2014	03/12/2014	03/12/2014	
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
<b>Monoaromatics</b>								
Benzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	
Toluene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	
Ethylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	
p & m-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	
o-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	

**Petroleum Hydrocarbons**

TPH1 (C6 - C12)	mg/kg	0.1	ISO 17025	< 0.1	< 0.1	< 0.1	< 0.1	
TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	< 2.0	< 2.0	3.5	
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	< 8.0	< 8.0	< 8.0	< 8.0	
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	< 8.0	< 8.0	< 8.0	< 8.0	
<b>TPH-CWG - Aliphatic (EC5 - EC35)</b>	mg/kg	10	MCERTS	< 10	< 10	< 10	< 10	
TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	1.2	
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	< 2.0	< 2.0	< 2.0	
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	< 10	< 10	< 10	< 10	
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	< 10	< 10	< 10	< 10	
<b>TPH-CWG - Aromatic (EC5 - EC35)</b>	mg/kg	10	MCERTS	< 10	< 10	< 10	< 10	

**Miscellaneous Organics**

Toluene Extractable Matter	mg/kg	100	NONE	< 100	< 100	< 100	< 100	
----------------------------	-------	-----	------	-------	-------	-------	-------	--





**Analytical Report Number : 14-64295**

**Project / Site name: St Giles Circus**

\* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and topsoil/loam soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
399804	WS15	ES01	0.50	Light brown sand with gravel and rubble.
399805	WS15	ES02	1.00	Light brown sand with gravel.
399806	WS15	ES03	2.00	Light brown sand with gravel.
399807	WS15	ES04	3.00	Light brown sand with gravel.
399808	WS15	ES05	4.00	Brown clay.
399809	WS22	ES01	0.50	Brown clay.
399810	WS22	ES02	1.00	Light brown sandy topsoil with gravel and rubble.
399811	WS22	ES03	1.50	Light brown sandy topsoil with gravel.
399812	WS22	ES04	2.50	Light brown sandy topsoil with gravel.
399813	WS22	ES05	3.00	Light brown sandy clay with gravel.
399814	WS23	ES01	0.50	Light brown sandy topsoil with gravel.
399815	WS23	ES02	1.00	Brown clay.
399816	WS23	ES03	2.00	Light brown sand.
399817	WS23	ES04	2.80	Grey clay.

**Analytical Report Number : 14-64295**

**Project / Site name: St Giles Circus**

**Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)**

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Asbestos identification in soil	Asbestos Identification with the use of polarised light microscopy in conjunction with disperion staining techniques.	In house method based on HSG 248	A001-PL	D	ISO 17025
Boron, water soluble, in soil	Determination of water soluble boron in soil by hot water extract followed by ICP-OES.	In-house method based on Second Site Properties version 3	L038-PL	D	MCERTS
BTEX and MTBE in soil	Determination of BTEX in soil by headspace GC-MS.	In-house method based on USEPA8260	L073S-PL	W	MCERTS
Elemental sulphur in soil	Determination of elemental sulphur in soil by extraction in dichloromethane followed by HPLC.	In-house method based on Secondsite Property Holdings Guidance for Assessing and Managing Potential	L021-PL	D	NONE
Free cyanide in soil	Determination of free cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	NONE
Hexavalent chromium in soil	Determination of hexavalent chromium in soil by extraction in water then by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.	In-house method	L080-PL	D	MCERTS
Metals in soil by ICP-OES	Determination of metals in soil by aqua-regia digestion followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L038-PL	D	MCERTS
Moisture Content	Moisture content, determined gravimetrically.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L019-UK/PL	W	NONE
Monohydric phenols in soil	Determination of phenols in soil by extraction with sodium hydroxide followed by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)	L080-PL	W	MCERTS
pH in soil	Determination of pH in soil by addition of water followed by electrometric measurement.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L005-PL	W	MCERTS
Speciated EPA-16 PAHs in soil	Determination of PAH compounds in soil by extraction in dichloromethane and hexane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270	L064-PL	D	MCERTS
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Stones not passing through a 10 mm sieve is determined gravimetrically and reported as a percentage of the dry weight. Sample	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
Thiocyanate in soil	Determination of thiocyanate in soil by extraction in caustic soda followed by acidification followed by addition of ferric nitrate followed by spectrophotometer.	In-house method	L049-PL	D	NONE
Toluene Extractable Matter in soil	Gravimetrically determined through extraction with toluene.	In-house method	L013-UK	D	NONE
Total cyanide in soil	Determination of total cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	MCERTS
Total organic carbon in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L023-PL	D	MCERTS
Total sulphate (as SO4 in soil)	Determination of total sulphate in soil by extraction with 10% HCl followed by ICP-OES.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L038-PL	D	ISO 17025

ISS No 14-64295-1



**Analytical Report Number : 14-64295**

**Project / Site name: St Giles Circus**

**Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)**

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
TPH C6- C12	In-house method	In-house method based on USEPA8260	L073S-PL	W	ISO 17025
TPHCWG (Soil)	Determination of pentane extractable hydrocarbons in soil by GC-MS/GC-FID.	In-house method	L076-PL	W	MCERTS

**For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.**

**For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.**

**Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.**



**Kasia Mazerant**

Concept Site Investigations  
Unit 8  
Warple Mews  
Warple Way  
London  
W3 0RF

**t:** 020 88112880

**e:** kasia@conceptconsultants.co.uk

i2 Analytical Ltd.  
7 Woodshots Meadow,  
Croxley Green  
Business Park,  
Watford,  
Herts,  
WD18 8YS

**t:** 01923 225404

**f:** 01923 237404

**e:** reception@i2analytical.com

## **Analytical Report Number : 15-65272**

<b>Project / Site name:</b>	St Giles Circus	<b>Samples received on:</b>	07/01/2015
<b>Your job number:</b>	14-2669	<b>Samples instructed on:</b>	07/01/2015
<b>Your order number:</b>	CL268	<b>Analysis completed by:</b>	16/01/2015
<b>Report Issue Number:</b>	1	<b>Report issued on:</b>	16/01/2015
<b>Samples Analysed:</b>	3 water samples		

**Signed:** CC Stone

Dr Claire Stone  
Quality Manager  
**For & on behalf of i2 Analytical Ltd.**

**Signed:** Dee Theis

Dee Theis  
Operations Director  
**For & on behalf of i2 Analytical Ltd.**

Other office located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils - 4 weeks from reporting  
leachates - 2 weeks from reporting  
waters - 2 weeks from reporting  
asbestos - 6 months from reporting

Excel copies of reports are only valid when accompanied by this PDF certificate.



Analytical Report Number: 15-65272

Project / Site name: St Giles Circus

Your Order No: CL268

Lab Sample Number				405637	405638	405639		
Sample Reference				PB5	PB4	PB2		
Sample Number				None Supplied	None Supplied	None Supplied		
Depth (m)				None Supplied	None Supplied	None Supplied		
Date Sampled				07/01/2015	07/01/2015	07/01/2015		
Time Taken				None Supplied	None Supplied	None Supplied		
Analytical Parameter (Water Analysis)	Units	Limit of detection	Accreditation Status					

**General Inorganics**

pH	pH Units	N/A	ISO 17025	7.8	7.6	7.3		
Total Cyanide	µg/l	10	ISO 17025	< 10	48	< 10		
Free Cyanide (Low Level 1 µg/l)	µg/l	1	ISO 17025	< 1	< 1	< 1		
Thiocyanate as SCN	µg/l	200	ISO 17025	< 200	230	200		
Sulphate as SO <sub>4</sub>	µg/l	45	ISO 17025	154000	194000	290000		
Sulphide	µg/l	5	NONE	< 5.0	< 5.0	< 5.0		

**Total Phenols**

Total Phenols (monohydric)	µg/l	10	ISO 17025	< 10	< 10	< 10		
----------------------------	------	----	-----------	------	------	------	--	--

**Speciated PAHs**

Naphthalene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01		
Acenaphthylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01		
Acenaphthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01		
Fluorene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01		
Phenanthrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01		
Anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01		
Fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01		
Pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01		
Benzo(a)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01		
Chrysene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01		
Benzo(b)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01		
Benzo(k)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01		
Benzo(a)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01		
Indeno(1,2,3-cd)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01		
Dibenz(a,h)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01		
Benzo(ghi)perylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01		

**Total PAH**

Total EPA-16 PAHs	µg/l	0.2	ISO 17025	< 0.20	< 0.20	< 0.20		
-------------------	------	-----	-----------	--------	--------	--------	--	--

**Heavy Metals / Metalloids**

Arsenic (dissolved)	µg/l	0.15	ISO 17025	0.48	9.65	2.15		
Boron (dissolved)	µg/l	10	ISO 17025	150	300	280		
Cadmium (dissolved)	µg/l	0.02	ISO 17025	< 0.02	< 0.02	0.03		
Chromium (hexavalent)	µg/l	5	ISO 17025	< 5.0	< 5.0	< 5.0		
Chromium (dissolved)	µg/l	0.2	ISO 17025	< 0.2	0.3	< 0.2		
Copper (dissolved)	µg/l	0.5	ISO 17025	12	14	12		
Lead (dissolved)	µg/l	0.2	ISO 17025	0.2	0.5	0.2		
Mercury (dissolved)	µg/l	0.05	ISO 17025	< 0.05	< 0.05	< 0.05		
Nickel (dissolved)	µg/l	0.5	ISO 17025	7.1	16	11		
Selenium (dissolved)	µg/l	0.6	ISO 17025	14	4.4	6.2		
Zinc (dissolved)	µg/l	0.5	ISO 17025	0.9	0.8	3.0		



Analytical Report Number: 15-65272

Project / Site name: St Giles Circus

Your Order No: CL268

<b>Lab Sample Number</b>				405637	405638	405639		
<b>Sample Reference</b>				PB5	PB4	PB2		
<b>Sample Number</b>				None Supplied	None Supplied	None Supplied		
<b>Depth (m)</b>				None Supplied	None Supplied	None Supplied		
<b>Date Sampled</b>				07/01/2015	07/01/2015	07/01/2015		
<b>Time Taken</b>				None Supplied	None Supplied	None Supplied		
<b>Analytical Parameter (Water Analysis)</b>	<b>Units</b>	<b>Limit of detection</b>	<b>Accreditation Status</b>					

**Monoaromatics**

Benzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Toluene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
Ethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
p & m-xylene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
o-xylene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		
MTBE (Methyl Tertiary Butyl Ether)	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0		

**Petroleum Hydrocarbons**

Petroleum Range Organics (C6 - C10)	µg/l	10	NONE	< 10.0	< 10.0	< 10.0		
TPH-CWG - Aliphatic >C5 - C6	µg/l	10	NONE	< 10	< 10	< 10		
TPH-CWG - Aliphatic >C6 - C8	µg/l	10	NONE	< 10	< 10	< 10		
TPH-CWG - Aliphatic >C8 - C10	µg/l	10	NONE	< 10	< 10	< 10		
TPH-CWG - Aliphatic >C10 - C12	µg/l	10	NONE	< 10	< 10	< 10		
TPH-CWG - Aliphatic >C12 - C16	µg/l	10	NONE	< 10	< 10	< 10		
TPH-CWG - Aliphatic >C16 - C21	µg/l	10	NONE	< 10	< 10	< 10		
TPH-CWG - Aliphatic >C21 - C35	µg/l	10	NONE	< 10	< 10	< 10		
TPH-CWG - Aliphatic >C35 - C44	µg/l	10	NONE	< 10	< 10	< 10		
<b>TPH-CWG - Aliphatic (C5 - C35)</b>	µg/l	10	NONE	< 10	< 10	< 10		
<b>TPH-CWG - Aliphatic (C5 - C44)</b>	mg/l	10	NONE	< 10	< 10	< 10		
TPH-CWG - Aromatic >C5 - C7	µg/l	10	NONE	< 10	< 10	< 10		
TPH-CWG - Aromatic >C7 - C8	µg/l	10	NONE	< 10	< 10	< 10		
TPH-CWG - Aromatic >C8 - C10	µg/l	10	NONE	< 10	< 10	< 10		
TPH-CWG - Aromatic >C10 - C12	µg/l	10	NONE	< 10	< 10	< 10		
TPH-CWG - Aromatic >C12 - C16	µg/l	10	NONE	< 10	< 10	< 10		
TPH-CWG - Aromatic >C16 - C21	µg/l	10	NONE	< 10	< 10	< 10		
TPH-CWG - Aromatic >C21 - C35	µg/l	10	NONE	< 10	< 10	< 10		
TPH-CWG - Aromatic >C35 - C44	µg/l	10	NONE	< 10	< 10	< 10		
<b>TPH-CWG - Aromatic (C5 - C35)</b>	µg/l	10	NONE	< 10	< 10	< 10		
<b>TPH-CWG - Aromatic (C5 - C44)</b>	mg/l	10	NONE	< 10	< 10	< 10		
TPH (C35 - C44)	µg/l	10	NONE	< 10	< 10	< 10		



Analytical Report Number: 15-65272

Project / Site name: St Giles Circus

Your Order No: CL268

<b>Lab Sample Number</b>	405637	405638	405639		
<b>Sample Reference</b>	PB5	PB4	PB2		
<b>Sample Number</b>	None Supplied	None Supplied	None Supplied		
<b>Depth (m)</b>	None Supplied	None Supplied	None Supplied		
<b>Date Sampled</b>	07/01/2015	07/01/2015	07/01/2015		
<b>Time Taken</b>	None Supplied	None Supplied	None Supplied		
<b>Analytical Parameter (Water Analysis)</b>	<b>Units</b>	<b>Limit of detection</b>	<b>Accreditation Status</b>		

**VOCs**

Compound	Units	Limit of detection	Accreditation Status	405637	405638	405639
Chloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0
Chloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0
Bromomethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0
Vinyl Chloride	µg/l	1	NONE	< 1.0	< 1.0	< 1.0
Trichlorofluoromethane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0
1,1-Dichloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0
Cis-1,2-dichloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0
1,1-Dichloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0
2,2-Dichloropropane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0
Trichloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0
1,1,1-Trichloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0
1,2-Dichloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0
1,1-Dichloropropene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0
Trans-1,2-dichloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0
Benzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0
Tetrachloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0
1,2-Dichloropropane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0
Trichloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0
Dibromomethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0
Bromodichloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0
Cis-1,3-dichloropropene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0
Trans-1,3-dichloropropene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0
Toluene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0
1,1,2-Trichloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0
1,3-Dichloropropane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0
Dibromochloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0
Tetrachloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0
1,2-Dibromoethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0
Chlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0
1,1,1,2-Tetrachloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0
Ethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0
p & m-Xylene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0
Styrene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0
Tribromomethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0
o-Xylene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0
1,1,2,2-Tetrachloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0
Isopropylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0
Bromobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0
n-Propylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0
2-Chlorotoluene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0
4-Chlorotoluene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0
1,3,5-Trimethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0
tert-Butylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0
1,2,4-Trimethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0
sec-Butylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0
1,3-Dichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0
p-Isopropyltoluene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0
1,2-Dichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0
1,4-Dichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0
Butylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0
1,2-Dibromo-3-chloropropane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0
1,2,4-Trichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0
Hexachlorobutadiene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0
1,2,3-Trichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0



Analytical Report Number: 15-65272

Project / Site name: St Giles Circus

Your Order No: CL268

<b>Lab Sample Number</b>				405637	405638	405639		
<b>Sample Reference</b>				PB5	PB4	PB2		
<b>Sample Number</b>				None Supplied	None Supplied	None Supplied		
<b>Depth (m)</b>				None Supplied	None Supplied	None Supplied		
<b>Date Sampled</b>				07/01/2015	07/01/2015	07/01/2015		
<b>Time Taken</b>				None Supplied	None Supplied	None Supplied		
<b>Analytical Parameter (Water Analysis)</b>	<b>Units</b>	<b>Limit of detection</b>	<b>Accreditation Status</b>					

**VOCs TICs**

VOCs TICs Compound Name		10	NONE	None Detected	None Detected	None Detected		
VOC % Match	%	10	NONE	0	0	0		





Analytical Report Number: 15-65272

Project / Site name: St Giles Circus

Your Order No: CL268

<b>Lab Sample Number</b>	405637	405638	405639		
<b>Sample Reference</b>	PB5	PB4	PB2		
<b>Sample Number</b>	None Supplied	None Supplied	None Supplied		
<b>Depth (m)</b>	None Supplied	None Supplied	None Supplied		
<b>Date Sampled</b>	07/01/2015	07/01/2015	07/01/2015		
<b>Time Taken</b>	None Supplied	None Supplied	None Supplied		
<b>Analytical Parameter (Water Analysis)</b>	<b>Units</b>	<b>Limit of detection</b>	<b>Accreditation Status</b>		

SVOCs							
Analytical Parameter	Units	Limit of detection	Accreditation Status	405637	405638	405639	
Aniline	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	
Phenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	
2-Chlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	
Bis(2-chloroethyl)ether	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	
1,3-Dichlorobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	
1,2-Dichlorobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	
1,4-Dichlorobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	
Bis(2-chloroisopropyl)ether	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	
2-Methylphenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	
Hexachloroethane	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	
Nitrobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	
4-Methylphenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	
Isophorone	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	
2-Nitrophenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	
2,4-Dimethylphenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	
Bis(2-chloroethoxy)methane	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	
1,2,4-Trichlorobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	
Naphthalene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	
2,4-Dichlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	
4-Chloroaniline	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	
Hexachlorobutadiene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	
4-Chloro-3-methylphenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	
2,4,6-Trichlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	
2,4,5-Trichlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	
2-Methylnaphthalene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	
2-Chloronaphthalene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	
Dimethylphthalate	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	
2,6-Dinitrotoluene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	
Acenaphthylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	
Acenaphthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	
2,4-Dinitrotoluene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	
Dibenzofuran	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	
4-Chlorophenyl phenyl ether	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	
Diethyl phthalate	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	
4-Nitroaniline	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	
Fluorene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	
Azobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	
Bromophenyl phenyl ether	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	
Hexachlorobenzene	µg/l	0.02	NONE	< 0.02	< 0.02	< 0.02	
Phenanthrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	
Anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	
Carbazole	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	
Dibutyl phthalate	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	
Anthraquinone	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	
Fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	
Pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	
Butyl benzyl phthalate	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	
Benzo(a)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	
Chrysene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	
Benzo(b)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	
Benzo(k)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	
Benzo(a)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	
Indeno(1,2,3-cd)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	
Dibenz(a,h)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	
Benzo(ghi)perylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	



Analytical Report Number: 15-65272

Project / Site name: St Giles Circus

Your Order No: CL268

<b>Lab Sample Number</b>				405637	405638	405639		
<b>Sample Reference</b>				PB5	PB4	PB2		
<b>Sample Number</b>				None Supplied	None Supplied	None Supplied		
<b>Depth (m)</b>				None Supplied	None Supplied	None Supplied		
<b>Date Sampled</b>				07/01/2015	07/01/2015	07/01/2015		
<b>Time Taken</b>				None Supplied	None Supplied	None Supplied		
<b>Analytical Parameter (Water Analysis)</b>				<b>Units</b>	<b>Limit of detection</b>	<b>Accreditation Status</b>		
<b>SVOCs TICs</b>								
<b>SVOCs TICs Compound Name</b>				N/A	NONE	None Detected	None Detected	None Detected
<b>SVOC % Match</b>				%	N/A	NONE	0	0

U/S = Unsuitable Sample I/S = Insufficient Sample



**Analytical Report Number : 15-65272**

**Project / Site name: St Giles Circus**

**Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)**

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Boron in water	Determination of boron by acidification followed by ICP-MS. Accredited matrices: SW, GW.	In-house method based on USEPA Method 6020 & 200.8 "for the determination of trace elements in water by ICP-MS.	L012-PL	W	ISO 17025
BTEX and MTBE in water	Determination of BTEX and MTBE in water by headspace GC-MS. Accredited matrices: SW PW GW	In-house method based on USEPA8260	L073W-PL	W	ISO 17025
Free cyanide in water	Determination of free cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	ISO 17025
Hexavalent chromium in water	Determination of hexavalent chromium in water by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.	In-house method by continuous flow analyser. Accredited Matrices SW, GW, PW.	L080-PL	W	ISO 17025
Metals in water by ICP-MS (dissolved)	Determination of metals in water by acidification followed by ICP-MS. Accredited Matrices: SW, GW, PW except B=SW,GW, Hg=SW,PW, Al=SW,PW.	In-house method based on USEPA Method 6020 & 200.8 "for the determination of trace elements in water by ICP-MS.	L012-PL	W	ISO 17025
Monohydric phenols in water	Determination of phenols in water by continuous flow analyser. Accredited matrices: SW PW GW	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)	L080-PL	W	ISO 17025
pH in water	Determination of pH in water by electrometric measurement. Accredited matrices: SW PW GW	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L005-PL	W	ISO 17025
PRO (Waters)	Determination of hydrocarbons C6-C10 by headspace GC-MS.	In-house method based on USEPA8260	L073W-PL	W	NONE
Semi-volatile organic compounds in water	Determination of semi-volatile organic compounds in leachate by extraction in dichloromethane followed by GC-MS.	In-house method based on USEPA 8270	L070-UK	W	NONE
Speciated EPA-16 PAHs in water	Determination of PAH compounds in water by extraction in dichloromethane followed by GC-MS with the use of surrogate and internal standards. Accredited matrices: SW PW GW	In-house method based on USEPA 8270	L070-UK	W	ISO 17025
Sulphate in water	Determination of sulphate in water by acidification followed by ICP-OES. Accredited matrices: SW PW GW	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L039-PL	W	ISO 17025
Sulphide in water	Determination of sulphide in water by ion selective electrode.	In-house method	L010-PL	W	NONE
Tentatively identified compounds (SVOC) in water	Determination of semi-volatile organic compounds total ion count in water by extraction with hexane followed by GC-MS followed by a full library scan.	In-house method based on USEPA 8270	L070-UK	W	NONE
Tentatively identified compounds (VOC) in water	Determination of volatile organic compounds total ion count in water by headspace GC-MS followed by a full library scan.	In-house method based on USEPA8260	L073W-PL	W	NONE
Thiocyanate in water	Determination of thiocyanate in water by discreet analyser (colorimetry). Accredited matrices SW, GW, PW.	In house method based on SMWW 4500-CN-M. Accredited matrices: SW, PW, GW.	L082-PL	W	ISO 17025
Total cyanide in water	Determination of total cyanide by distillation followed by colorimetry. Accredited matrices: SW PW GW	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	ISO 17025
TPH in (Water)		In-house method	L070-UK		NONE

ISS No 15-65272-1

This certificate should not be reproduced, except in full, without the express permission of the laboratory. The results included within the report are representative of the samples submitted for analysis.



**Analytical Report Number : 15-65272**

**Project / Site name: St Giles Circus**

**Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)**

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
TPHCWG (Waters)	Determination of dichloromethane extractable hydrocarbons in water by GC-MS, speciation by interpretation.	In-house method	L070-UK	W	NONE
Volatile organic compounds in water	Determination of volatile organic compounds in water by headspace GC-MS. Accredited matrices: SW PW GW	In-house method based on USEPA8260	L073W-PL	W	ISO 17025

**For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.**

**For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.**














**Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30°C.**

<b>Excavation Method</b> Open-drive sampler	<b>Dimensions</b>	<b>Ground Level (mOD)</b>	<b>Client</b> Consolidated Developments Limited	<b>Job Number</b> J12236
	<b>Location</b>	<b>Dates</b> 05/10/2012	<b>Engineer</b> Engenuiti	<b>Sheet</b> 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
					(0.07)	Paving slab		
					0.07	Concrete		
					(0.16)			
					0.23			
					(0.77)	MADE GROUND (bricks with rare fragments of chalk and charcoal)		
1.00-1.45	CPT N=7		2,2/2,2,1,2		1.00	MADE GROUND (greyish brown sand with rare gravel and occasional fragments of ash, brick, charcoal, chalk and concrete)		
1.40	D1				(0.60)			
					1.60	MADE GROUND (bricks including whole bricks and fragments of brick)		
2.00-2.45	CPT N=8		3,3/1,3,3,1		(0.60)			
2.40	D2				2.20	MADE GROUND (greyish brown sand with abundant fragments of brick, charcoal and concrete)		
					(0.50)			
3.00-3.31	CPT 54/160		10,15/24,26,4		2.70	Brown gravelly SAND. Gravel is fine to coarse subangular to subrounded and sand is medium		
3.00	D3				(0.20)			
					2.90	Very dense brown SAND and GRAVEL. Sand is fine to coarse. Gravel is fine to coarse subangular to subrounded		
3.50	D4				(0.70)			
3.70	D5				3.60	Brown gravelly SAND. Gravel is fine to medium angular and sand is medium to coarse		
					(0.20)			
4.00-4.45	CPT N=44		5,7/10,10,11,13		3.80	Dense light orange-brown medium SAND with very rare fine angular gravel		
4.00	D6				(0.90)			
4.50	D7				4.70	Light orange-brown gravelly SAND. Gravel is fine to coarse subangular and sand is fine to coarse		
			Water strike(1) at 4.75m.		(1.07)			
5.00	D8				5.77	Stiff brown mottled grey fissured silty CLAY with occasional partings of orange-brown fine sand and silt with rare carbonaceous material		
5.50	D9				(0.23)			
6.00	D10				6.00	Complete at 6.00m		

<b>Remarks</b> Cased to 3.0 m Standpipe installed to a depth of 5.2 m Groundwater measured at a depth of 4.4 m on 16/10/2012 and 4.35 m on 08/11/2012	<b>Scale (approx)</b>	<b>Logged By</b>
	1:50	HD
	<b>Figure No.</b> J12236.BH 1	

<b>Excavation Method</b> Open-drive sampler	<b>Dimensions</b>	<b>Ground Level (mOD)</b>	<b>Client</b> Consolidated Developments Limited	<b>Job Number</b> J12236
	<b>Location</b>	<b>Dates</b> 05/10/2012	<b>Engineer</b> Engenuiti	<b>Sheet</b> 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
0.90	D1				(0.07) 0.07 (0.20) 0.27 (0.73) 1.00	Paving slab Concrete MADE GROUND (greyish brown clayey silty fine sand with rare gravel, abundant fragments of brick and charcoal and rare glass) Poor recovery to 1.0 m MADE GROUND (brickwork)	   	
1.50	D2				(1.10) 2.10	MADE GROUND (dark brownish grey clayey silty sand with rare gravel, occasional fragments of charcoal, glass and claypipes)		
2.50	D3				(1.30) 3.40	MADE GROUND (light orange-brown mottled grey sand with abundant brick and rare fragments of charcoal)		
3.30	D4				3.90	MADE GROUND (bricks including whole bricks and fragments of brick)		
3.70	D5				(0.35) 4.25 (0.15) 4.40	MADE GROUND (bricks including whole bricks and fragments of brick) Light orange-brown fine to medium SAND with very rare fine angular gravel	 	
4.00	D6				(0.25) 4.65	MADE GROUND (bricks including whole bricks and fragments of brick) Light orange-brown gravelly SAND. Sand is fine to coarse and gravel is fine to coarse subangular	 	
4.40	D7				(1.05)	Dense light orange-brown SAND and GRAVEL with rare cobbles. Sand is fine to coarse and gravel is fine to coarse subangular		
4.50	D8				5.70 (0.30) 6.00	Stiff brown mottled grey fissured silty CLAY with occasional partings of orange-brown fine sand and silt and rare carbonaceous material		
4.80	D9	Water strike(1) at 4.80m.						
5.00-5.45	CPT N=40	3,7/10,10,10,10						
5.50	D10							
5.90	D11							
Complete at 6.00m								

<b>Remarks</b> Cased to 4.8 m Standpipe installed to a depth of 5.85 m Groundwater measured at a depth of 4.21 m on 16/10/2012 and 4.20 m on 08/11/2012	<b>Scale (approx)</b>	<b>Logged By</b>
	1:50	HD
	<b>Figure No.</b> J12236.BH 2	

<b>Excavation Method</b> Open-drive sampler	<b>Dimensions</b>	<b>Ground Level (mOD)</b>	<b>Client</b> Consolidated Developments Limited	<b>Job Number</b> J12236
	<b>Location</b>	<b>Dates</b> 05/10/2012	<b>Engineer</b> Engenuiti	<b>Sheet</b> 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
0.50	D1				(0.07) 0.07 (0.06) 0.13 (0.09) 0.22 (0.03) 0.25 (0.15) 0.40 (0.30) 0.70 (1.20)	Paving slab Concrete Granite cobbles Concrete Sub-base (sand and gravel) MADE GROUND (greyish brown slightly clayey silty sand with rare gravel and occasional fragments of brick and charcoal) MADE GROUND (bricks including whole bricks and fragments of brick)		
1.95 2.00-2.45	D2 CPT N=5		1,2/1,1,2,1		1.90	MADE GROUND (grey sandy silt with occasional partings of white fine sand with occasional fragments of brick, wood and charcoal. Layer of brick between a depth of 2.7 m and 2.8 m)		
2.50	D3				(2.35)			
3.50	D4		Water strike(1) at 3.90m.					
4.60 4.75 4.85 4.95	D5 D6 D7 D8				4.25 (0.25) 4.50 (0.20) 4.70 (0.10) 4.80 (0.65)	MADE GROUND (dark grey silt with occasional fragments of fine brick) Organic odour noted Light greenish grey SAND and GRAVEL. Sand is fine to coarse and gravel is fine to coarse subangular to subrounded Soft dark grey mottled black and greenish grey sandy SILT		
5.20	D9				5.45	Variably soft to stiff orange-brown silty CLAY. Claystone encountered at a depth of 5.2 m		
5.80	D10				(0.55) 6.00	Stiff dark grey fissured silty CLAY		
						Complete at 6.00m		

<b>Remarks</b> Cased to 5.0 m Standpipe installed to a depth of 6.0 m Groundwater measured at a depth of 3.72 m on 16/10/2012 and 3.66 m on 08/11/2012	<b>Scale (approx)</b>	<b>Logged By</b>
	1:50	HD
	<b>Figure No.</b> J12236.BH 3	