

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:	Combined Report SSE Site Vastern Road - WAC						
					Client: CCGROUND		
Location	SSE Site, Vastern Road, Reading						
Lab Reference (Sample Number)	908420 / 908421				Landfill Waste Acceptance Criteria		
Sampling Date	09/02/2018				Limits		
Sample ID	TP1005				Inert Waste Landfill	Stable Non-reactive HAZARDOUS waste in non-hazardous Landfill	Hazardous Waste Landfill
Depth (m)	0.30						
Solid Waste Analysis							
TOC (%)**	0.7				3%	5%	6%
Loss on Ignition (%) **	2.0				--	--	10%
BTEX (µg/kg) **	< 10				6000	--	--
Sum of PCBs (mg/kg) **	< 0.007				1	--	--
Mineral Oil (mg/kg)	780				500	--	--
Total PAH (WAC-17) (mg/kg)	88				100	--	--
pH (units)**	9.4				--	>6	--
Acid Neutralisation Capacity (mol / kg)	25				--	To be evaluated	To be evaluated
Eluate Analysis							
(BS EN 12457 - 2 preparation utilising end over end leaching procedure)	10:1			10:1	Limit values for compliance leaching test		
	mg/l			mg/kg	using BS EN 12457-2 at L/S 10 l/kg (mg/kg)		
Arsenic *	0.0089			0.0685	0.5	2	25
Barium *	0.0523			0.404	20	100	300
Cadmium *	< 0.0001			< 0.0008	0.04	1	5
Chromium *	0.021			0.16	0.5	10	70
Copper *	0.0074			0.057	2	50	100
Mercury *	0.0034			0.0266	0.01	0.2	2
Molybdenum *	0.0023			0.0176	0.5	10	30
Nickel *	0.0010			0.0076	0.4	10	40
Lead *	0.089			0.69	0.5	10	50
Antimony *	0.0089			0.069	0.06	0.7	5
Selenium *	< 0.0040			< 0.040	0.1	0.5	7
Zinc *	0.044			0.34	4	50	200
Chloride *	65			500	800	4000	25000
Fluoride	0.23			1.8	10	150	500
Sulphate *	14			110	1000	20000	50000
TDS	230			1800	4000	60000	100000
Phenol Index (Monhydric Phenols) *	< 0.010			< 0.10	1	-	-
DOC	3.65			28.2	500	800	1000
Leach Test Information							
Stone Content (%)	< 0.1						
Sample Mass (kg)	1.9						
Dry Matter (%)	89						
Moisture (%)	11						
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

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes as defined by the Waste (England and Wales) Regulations 2011 (as amended) and EA Guidance WM3.
This analysis is only applicable for landfill acceptance criteria (The Environmental Permitting (England and Wales) Regulations) and does not give any indication as to whether a waste may be hazardous or non-hazardous.

Iss No Combined SSE Site, Vastern Road, Reading C5925-WAC

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.

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:	Combined Report SSE Site Vastern Road - WAC						
					Client: CCGROUND		
Location	SSE Site, Vastern Road, Reading						
Lab Reference (Sample Number)	908423 / 908424				Landfill Waste Acceptance Criteria		
Sampling Date	08/02/2018				Limits		
Sample ID	WS1006				Inert Waste Landfill	Stable Non-reactive HAZARDOUS waste in non-hazardous Landfill	Hazardous Waste Landfill
Depth (m)	1.90						
Solid Waste Analysis							
TOC (%)**	1.2				3%	5%	6%
Loss on Ignition (%) **	3.3				--	--	10%
BTEX (µg/kg) **	< 10				6000	--	--
Sum of PCBs (mg/kg) **	< 0.007				1	--	--
Mineral Oil (mg/kg)	< 10				500	--	--
Total PAH (WAC-17) (mg/kg)	3.0				100	--	--
pH (units)**	8.0				--	>6	--
Acid Neutralisation Capacity (mol / kg)	17				--	To be evaluated	To be evaluated
Eluate Analysis							
(BS EN 12457 - 2 preparation utilising end over end leaching procedure)	10:1			10:1	Limit values for compliance leaching test		
	mg/l			mg/kg	using BS EN 12457-2 at L/S 10 l/kg (mg/kg)		
Arsenic *	0.0047			0.0293	0.5	2	25
Barium *	0.0212			0.131	20	100	300
Cadmium *	< 0.0001			< 0.0008	0.04	1	5
Chromium *	0.0005			< 0.0040	0.5	10	70
Copper *	0.0052			0.032	2	50	100
Mercury *	< 0.0005			< 0.0050	0.01	0.2	2
Molybdenum *	0.0072			0.0442	0.5	10	30
Nickel *	0.0013			0.0078	0.4	10	40
Lead *	< 0.0010			< 0.010	0.5	10	50
Antimony *	< 0.0017			< 0.017	0.06	0.7	5
Selenium *	< 0.0040			< 0.040	0.1	0.5	7
Zinc *	0.0013			0.0078	4	50	200
Chloride *	4.1			26	800	4000	25000
Fluoride	0.29			1.8	10	150	500
Sulphate *	36			220	1000	20000	50000
TDS	170			1000	4000	60000	100000
Phenol Index (Monhydric Phenols) *	< 0.010			< 0.10	1	-	-
DOC	8.15			50.4	500	800	1000
Leach Test Information							
Stone Content (%)	< 0.1						
Sample Mass (kg)	1.2						
Dry Matter (%)	72						
Moisture (%)	28						
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

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes as defined by the Waste (England and Wales) Regulations 2011 (as amended) and EA Guidance WM3.
This analysis is only applicable for landfill acceptance criteria (The Environmental Permitting (England and Wales) Regulations) and does not give any indication as to whether a waste may be hazardous or non-hazardous.

Iss No Combined SSE Site, Vastern Road, Reading C5925-WAC

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.

Page 7 of 14

i2 Analytical

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

Telephone: 01923 225404

Fax: 01923 237404

email:reception@i2analytical.com

Waste Acceptance Criteria Analytical Results

Report No:	Combined Report SSE Site Vastern Road - WAC						
					Client: CCGROUND		
Location	SSE Site, Vastern Road, Reading						
Lab Reference (Sample Number)	908461 / 908462				Landfill Waste Acceptance Criteria		
Sampling Date	13/02/2018				Limits		
Sample ID	BH2003				Inert Waste Landfill	Stable Non-reactive HAZARDOUS waste in non-hazardous Landfill	Hazardous Waste Landfill
Depth (m)	3.50						
Solid Waste Analysis							
TOC (%)**	0.3				3%	5%	6%
Loss on Ignition (%) **	1.4				--	--	10%
BTEX (µg/kg) **	< 10				6000	--	--
Sum of PCBs (mg/kg) **	< 0.007				1	--	--
Mineral Oil (mg/kg)	700				500	--	--
Total PAH (WAC-17) (mg/kg)	< 0.9				100	--	--
pH (units)**	8.1				--	>6	--
Acid Neutralisation Capacity (mol / kg)	5.3				--	To be evaluated	To be evaluated
Eluate Analysis							
(BS EN 12457 - 2 preparation utilising end over end leaching procedure)	10:1			10:1	Limit values for compliance leaching test		
	mg/l			mg/kg	using BS EN 12457-2 at L/S 10 l/kg (mg/kg)		
Arsenic *	< 0.0011			< 0.0110	0.5	2	25
Barium *	0.0054			0.0428	20	100	300
Cadmium *	< 0.0001			< 0.0008	0.04	1	5
Chromium *	0.0005			0.0041	0.5	10	70
Copper *	0.0014			0.011	2	50	100
Mercury *	< 0.0005			< 0.0050	0.01	0.2	2
Molybdenum *	0.0102			0.0815	0.5	10	30
Nickel *	< 0.0003			< 0.0030	0.4	10	40
Lead *	< 0.0010			< 0.010	0.5	10	50
Antimony *	< 0.0017			< 0.017	0.06	0.7	5
Selenium *	< 0.0040			< 0.040	0.1	0.5	7
Zinc *	0.0012			0.0092	4	50	200
Chloride *	1.6			13	800	4000	25000
Fluoride	0.12			0.97	10	150	500
Sulphate *	12			92	1000	20000	50000
TDS	44			360	4000	60000	100000
Phenol Index (Monhydric Phenols) *	< 0.010			< 0.10	1	-	-
DOC	3.09			24.7	500	800	1000
Leach Test Information							
Stone Content (%)	43						
Sample Mass (kg)	2.0						
Dry Matter (%)	94						
Moisture (%)	6.5						
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							
** = MCERTS accredited							

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes as defined by the Waste (England and Wales) Regulations 2011 (as amended) and EA Guidance WM3.
This analysis is only applicable for landfill acceptance criteria (The Environmental Permitting (England and Wales) Regulations) and does not give any indication as to whether a waste may be hazardous or non-hazardous.

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:	Combined Report SSE Site Vastern Road - WAC						
					Client: CCGROUND		
Location	SSE Site, Vastern Road, Reading						
Lab Reference (Sample Number)	908677 / 908678				Landfill Waste Acceptance Criteria		
Sampling Date	06/02/2018				Limits		
Sample ID	WS1004				Inert Waste Landfill	Stable Non-reactive HAZARDOUS waste in non-hazardous Landfill	Hazardous Waste Landfill
Depth (m)	1.00						
Solid Waste Analysis							
TOC (%)**	1.1				3%	5%	6%
Loss on Ignition (%) **	3.0				--	--	10%
BTEX (µg/kg) **	< 10				6000	--	--
Sum of PCBs (mg/kg) **	< 0.007				1	--	--
Mineral Oil (mg/kg)	< 10				500	--	--
Total PAH (WAC-17) (mg/kg)	2.1				100	--	--
pH (units)**	8.8				--	>6	--
Acid Neutralisation Capacity (mol / kg)	16				--	To be evaluated	To be evaluated
Eluate Analysis							
(BS EN 12457 - 2 preparation utilising end over end leaching procedure)	10:1			10:1	Limit values for compliance leaching test		
	mg/l			mg/kg	using BS EN 12457-2 at L/S 10 l/kg (mg/kg)		
Arsenic *	0.0167			0.129	0.5	2	25
Barium *	0.0061			0.0472	20	100	300
Cadmium *	< 0.0001			< 0.0008	0.04	1	5
Chromium *	0.0016			0.012	0.5	10	70
Copper *	0.0055			0.043	2	50	100
Mercury *	< 0.0005			< 0.0050	0.01	0.2	2
Molybdenum *	0.0070			0.0544	0.5	10	30
Nickel *	0.0012			0.0093	0.4	10	40
Lead *	0.0028			0.022	0.5	10	50
Antimony *	0.0094			0.073	0.06	0.7	5
Selenium *	< 0.0040			< 0.040	0.1	0.5	7
Zinc *	0.021			0.16	4	50	200
Chloride *	30			230	800	4000	25000
Fluoride	0.37			2.9	10	150	500
Sulphate *	5.6			43	1000	20000	50000
TDS	120			930	4000	60000	100000
Phenol Index (Monhydric Phenols) *	< 0.010			< 0.10	1	-	-
DOC	2.54			19.7	500	800	1000
Leach Test Information							
Stone Content (%)	< 0.1						
Sample Mass (kg)	1.0						
Dry Matter (%)	88						
Moisture (%)	12						
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

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes as defined by the Waste (England and Wales) Regulations 2011 (as amended) and EA Guidance WM3.
This analysis is only applicable for landfill acceptance criteria (The Environmental Permitting (England and Wales) Regulations) and does not give any indication as to whether a waste may be hazardous or non-hazardous.

Iss No Combined SSE Site, Vastern Road, Reading C5925-WAC

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.

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:	Combined Report SSE Site Vastern Road - WAC						
					Client: CCGROUND		
Location	SSE Site, Vastern Road, Reading						
Lab Reference (Sample Number)	909157 / 909158				Landfill Waste Acceptance Criteria		
Sampling Date	14/02/2018				Limits		
Sample ID	BH2005				Inert Waste Landfill	Stable Non-reactive HAZARDOUS waste in non-hazardous Landfill	Hazardous Waste Landfill
Depth (m)	1.90						
Solid Waste Analysis							
TOC (%)**	3.5				3%	5%	6%
Loss on Ignition (%) **	8.0				--	--	10%
BTEX (µg/kg) **	< 10				6000	--	--
Sum of PCBs (mg/kg) **	< 0.007				1	--	--
Mineral Oil (mg/kg)	1300				500	--	--
Total PAH (WAC-17) (mg/kg)	2.1				100	--	--
pH (units)**	7.7				--	>6	--
Acid Neutralisation Capacity (mol / kg)	11				--	To be evaluated	To be evaluated
Eluate Analysis							
(BS EN 12457 - 2 preparation utilising end over end leaching procedure)	10:1			10:1	Limit values for compliance leaching test		
	mg/l			mg/kg	using BS EN 12457-2 at L/S 10 l/kg (mg/kg)		
Arsenic *	0.0015			< 0.0110	0.5	2	25
Barium *	0.0355			0.256	20	100	300
Cadmium *	< 0.0001			< 0.0008	0.04	1	5
Chromium *	< 0.0004			< 0.0040	0.5	10	70
Copper *	0.0090			0.065	2	50	100
Mercury *	< 0.0005			< 0.0050	0.01	0.2	2
Molybdenum *	0.0045			0.0323	0.5	10	30
Nickel *	< 0.0003			< 0.0030	0.4	10	40
Lead *	0.0097			0.070	0.5	10	50
Antimony *	< 0.0017			< 0.017	0.06	0.7	5
Selenium *	< 0.0040			< 0.040	0.1	0.5	7
Zinc *	0.010			0.072	4	50	200
Chloride *	91			660	800	4000	25000
Fluoride	0.44			3.2	10	150	500
Sulphate *	10			74	1000	20000	50000
TDS	250			1800	4000	60000	100000
Phenol Index (Monhydric Phenols) *	< 0.010			< 0.10	1	-	-
DOC	18.7			134	500	800	1000
Leach Test Information							
Stone Content (%)	< 0.1						
Sample Mass (kg)	1.8						
Dry Matter (%)	77						
Moisture (%)	23						
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

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes as defined by the Waste (England and Wales) Regulations 2011 (as amended) and EA Guidance WM3.
This analysis is only applicable for landfill acceptance criteria (The Environmental Permitting (England and Wales) Regulations) and does not give any indication as to whether a waste may be hazardous or non-hazardous.

Iss No Combined SSE Site, Vastern Road, Reading C5925-WAC

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.

Page 10 of 14

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:	Combined Report SSE Site Vastern Road - WAC						
					Client: CCGROUND		
Location	SSE Site, Vastern Road, Reading						
Lab Reference (Sample Number)	909209 / 909210				Landfill Waste Acceptance Criteria		
Sampling Date	14/02/2018				Limits		
Sample ID	BH2006				Inert Waste Landfill	Stable Non-reactive HAZARDOUS waste in non-hazardous Landfill	Hazardous Waste Landfill
Depth (m)	1.80						
Solid Waste Analysis							
TOC (%)**	3.2				3%	5%	6%
Loss on Ignition (%) **	11.4				--	--	10%
BTEX (µg/kg) **	< 10				6000	--	--
Sum of PCBs (mg/kg) **	< 0.007				1	--	--
Mineral Oil (mg/kg)	200				500	--	--
Total PAH (WAC-17) (mg/kg)	4.1				100	--	--
pH (units)**	8.2				--	>6	--
Acid Neutralisation Capacity (mol / kg)	19				--	To be evaluated	To be evaluated
Eluate Analysis							
(BS EN 12457 - 2 preparation utilising end over end leaching procedure)	10:1			10:1	Limit values for compliance leaching test		
	mg/l			mg/kg	using BS EN 12457-2 at L/S 10 l/kg (mg/kg)		
Arsenic *	0.0024			0.0160	0.5	2	25
Barium *	0.0549			0.370	20	100	300
Cadmium *	< 0.0001			< 0.0008	0.04	1	5
Chromium *	0.0044			0.030	0.5	10	70
Copper *	0.0062			0.042	2	50	100
Mercury *	< 0.0005			< 0.0050	0.01	0.2	2
Molybdenum *	0.0104			0.0698	0.5	10	30
Nickel *	< 0.0003			< 0.0030	0.4	10	40
Lead *	0.0070			0.047	0.5	10	50
Antimony *	< 0.0017			< 0.017	0.06	0.7	5
Selenium *	< 0.0040			< 0.040	0.1	0.5	7
Zinc *	0.0094			0.064	4	50	200
Chloride *	34			230	800	4000	25000
Fluoride	0.56			3.8	10	150	500
Sulphate *	13			89	1000	20000	50000
TDS	150			1000	4000	60000	100000
Phenol Index (Monhydric Phenols) *	< 0.010			< 0.10	1	-	-
DOC	4.32			29.1	500	800	1000
Leach Test Information							
Stone Content (%)	< 0.1						
Sample Mass (kg)	2.0						
Dry Matter (%)	72						
Moisture (%)	28						
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							
** = MCERTS accredited							

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes as defined by the Waste (England and Wales) Regulations 2011 (as amended) and EA Guidance WM3.
This analysis is only applicable for landfill acceptance criteria (The Environmental Permitting (England and Wales) Regulations) and does not give any indication as to whether a waste may be hazardous or non-hazardous.



Combined Report : SSE Site, Vastern Road - WAC

Project / Site name: SSE Site, Vastern Road, Reading

* 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 loam (MCERTS) 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 *
908247	BH1003C	None Supplied	0.45	Brown gravelly sand.
908280	BH1004	None Supplied	2.00	Grey clay and sand.
908329	WS013	None Supplied	0.60	Grey gravelly sand with stones and rubble.
908417	WS1002	None Supplied	1.70	Grey clay and sand with gravel.
908420	TP1005	None Supplied	0.30	Brown sand with brick and gravel
908423	WS1006	None Supplied	1.90	Light brown clay and sand.
908461	BH2003	None Supplied	3.50	Light brown clay and sand with stones and gravel.
908463	TP1004	None Supplied	1.00	Brown clay and sand with gravel and brick.
908677	WS1004	None Supplied	1.00	Light brown clay and sand with gravel and rubble.
909157	BH2005	None Supplied	1.90	Grey clay and sand with gravel and chalk.
909209	BH2006	None Supplied	1.80	Brown clay and sand with gravel.

Combined Report : SSE Site, Vastern Road - WAC
Project / Site name: SSE Site, Vastern Road, Reading
Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Water (PrW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Acid neutralisation capacity of soil	Determination of acid neutralisation capacity by addition of acid or alkali followed by electronic probe.	In-house method based on Guidance on Sampling and Testing of Wastes to Meet Landfill Waste Acceptance"	L046-UK	W	NONE
Asbestos identification in soil	Asbestos Identification with the use of polarised light microscopy in conjunction with dispersion staining techniques.	In house method based on HSG 248	A001-PL	D	ISO 17025
BS EN 12457-2 (10:1) Leachate Prep	10:1 (as recieved, moisture adjusted) end over end extraction with water for 24 hours. Eluate filtered prior to analysis.	In-house method based on BSEN12457-2.	L043-PL	W	NONE
BTEX in soil (Monoaromatics)	Determination of BTEX in soil by headspace GC-MS.	In-house method based on USEPA8260	L073B-PL	W	MCERTS
Chloride 10:1 WAC	Determination of Chloride colorimetrically by discrete analyser.	In house based on MEWAM Method ISBN 0117516260.	L082-PL	W	ISO 17025
Cr (III) in soil	In-house method by calculation from total Cr and Cr VI.	In-house method by calculation	L080-PL	W	NONE
D.O. for Gravimetric Quant if Screen/ID positive	Dependent option for Gravimetric Quant if Screen/ID positive scheduled.	In house asbestos methods A001 & A006.	A006-PL	D	NONE
Dissolved organic carbon 10:1 WAC	Determination of dissolved inorganic carbon in leachate by TOC/DOC NDIR Analyser.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L037-PL	W	NONE
Fluoride 10:1 WAC	Determination of fluoride in leachate by 1:1ratio with a buffer solution followed by Ion Selective Electrode.	In-house method based on Use of Total Ionic Strength Adjustment Buffer for Electrode Determination"	L033B-PL	W	ISO 17025
Hexavalent chromium in soil (Lower Level)	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	W	MCERTS
Loss on ignition of soil @ 450oC	Determination of loss on ignition in soil by gravimetrically with the sample being ignited in a muffle furnace.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L047-PL	D	MCERTS
Metals in leachate by ICP-OES	Determination of metals in leachate by acidification followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil"	L039-PL	W	ISO 17025
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
Mineral Oil (Soil) C10 - C40	Determination of mineral oil fraction extractable hydrocarbons in soil by GC-MS/GC-FID.	In-house method	L076-PL	D	NONE
Moisture Content	Moisture content, determined gravimetrically.	In-house method based on BS1377 Part 2, 1990, Chemical and Electrochemical Tests	L019-UK/PL	W	NONE
Monohydric phenols 10:1 WAC	Determination of phenols in leachate by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L080-PL	W	ISO 17025
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 (Automated) 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"	L009-PL	D	MCERTS

Combined Report : SSE Site, Vastern Road - WAC

Project / Site name: SSE Site, Vastern Road, Reading

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

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
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	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
pH in soil (automated)	Determination of pH in soil by addition of water followed by automated electrometric measurement.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L099-PL	D	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. Gravimetric determination of stone > 10 mm as % dry weight.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
Sulphate 10:1 WAC	Determination of sulphate in leachate by ICP-OES	In-house method based on MEWAM 1986 Methods for the Determination of Metals in Soil"	L039-PL	W	ISO 17025
Sulphate, water soluble, in soil (16hr extraction)	Determination of water soluble sulphate by ICP-OES. Results reported directly (leachate equivalent) and corrected for extraction ratio (soil equivalent).	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests, 2:1 water:soil extraction, analysis by ICP-OES.	L038-PL	D	MCERTS
Total dissolved solids 10:1 WAC	Determination of total dissolved solids in water by electrometric measurement.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L004-PL	W	NONE
Total organic carbon (Automated) 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"	L009-PL	D	MCERTS
TPH Chromatogram	TPH Chromatogram.	In-house method	L064-PL	D	NONE
TPHCWG (Soil)	Determination of hexane extractable hydrocarbons in soil by GC-MS/GC-FID.	In-house method	L088/76-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.



Exova Jones Environmental

Registered Address : Exova (UK) Ltd, Lochend Industrial Estate, Newbridge, Midlothian, EH28 8PL

Unit 3 Deeside Point
Zone 3
Deeside Industrial Park
Deeside
CH5 2UA

Adler and Allan Ltd
4B Lovett Road
Hampton Lovett Trading Estate
Droitwich
WR9 0QG

Tel: +44 (0) 1244 833780

Fax: +44 (0) 1244 833781



Attention :	Angela Gomez
Date :	20th July, 2017
Your reference :	CL2637.ai.1
Our reference :	Test Report 17/11978 Batch 1
Location :	Reading
Date samples received :	12th July, 2017
Status :	Final report
Issue :	1

Nine samples were received for analysis on 12th July, 2017 of which nine were scheduled for analysis. Please find attached our Test Report which should be read with notes at the end of the report and should include all sections if reproduced. Interpretations and opinions are outside the scope of any accreditation, and all results relate only to samples supplied.

All analysis is carried out on as received samples and reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected.

Compiled By:

Phil Sommerton BSc
Project Manager

Client Name: Adler and Allan Ltd
Reference: CL2637.ai.1
Location: Reading
Contact: Angela Gomez
JE Job No.: 17/11978

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

J E Sample No.	1-2	3-4	5-6	7-8	9-10	11-12	13-14				Please see attached notes for all abbreviations and acronyms		
Sample ID	SP1	SP2	SP3	SP4	SP5	Excav1-Base	Stockpile						
Depth													
COC No / misc													
Containers	V J	V J	V J	V J	V J	V J	V J						
Sample Date	10/07/2017	10/07/2017	10/07/2017	10/07/2017	10/07/2017	10/07/2017	10/07/2017						
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil						
Batch Number	1	1	1	1	1	1	1						
Date of Receipt	12/07/2017	12/07/2017	12/07/2017	12/07/2017	12/07/2017	12/07/2017	12/07/2017				LOD/LOR	Units	Method No.
Arsenic #	-	-	-	-	-	-	11.8				<0.5	mg/kg	TM30/PM15
Barium #	-	-	-	-	-	-	47				<1	mg/kg	TM30/PM15
Beryllium	-	-	-	-	-	-	1.1				<0.5	mg/kg	TM30/PM15
Cadmium #	-	-	-	-	-	-	<0.1				<0.1	mg/kg	TM30/PM15
Chromium #	-	-	-	-	-	-	161.5				<0.5	mg/kg	TM30/PM15
Copper #	-	-	-	-	-	-	25				<1	mg/kg	TM30/PM15
Lead #	-	-	-	-	-	-	457				<5	mg/kg	TM30/PM15
Mercury #	-	-	-	-	-	-	0.2				<0.1	mg/kg	TM30/PM15
Nickel #	-	-	-	-	-	-	27.9				<0.7	mg/kg	TM30/PM15
Selenium #	-	-	-	-	-	-	<1				<1	mg/kg	TM30/PM15
Vanadium	-	-	-	-	-	-	38				<1	mg/kg	TM30/PM15
Water Soluble Boron #	-	-	-	-	-	-	<0.1				<0.1	mg/kg	TM74/PM32
Zinc #	-	-	-	-	-	-	55				<5	mg/kg	TM30/PM15
PAH MS													
Naphthalene #	-	-	-	-	-	-	<0.20 ^{AA}				<0.04	mg/kg	TM4/PM8
Acenaphthylene	-	-	-	-	-	-	0.18 ^{AA}				<0.03	mg/kg	TM4/PM8
Acenaphthene #	-	-	-	-	-	-	<0.25 ^{AA}				<0.05	mg/kg	TM4/PM8
Fluorene #	-	-	-	-	-	-	<0.20 ^{AA}				<0.04	mg/kg	TM4/PM8
Phenanthrene #	-	-	-	-	-	-	0.71 ^{AA}				<0.03	mg/kg	TM4/PM8
Anthracene #	-	-	-	-	-	-	0.37 ^{AA}				<0.04	mg/kg	TM4/PM8
Fluoranthene #	-	-	-	-	-	-	0.73 ^{AA}				<0.03	mg/kg	TM4/PM8
Pyrene #	-	-	-	-	-	-	0.57 ^{AA}				<0.03	mg/kg	TM4/PM8
Benzo(a)anthracene #	-	-	-	-	-	-	0.53 ^{AA}				<0.06	mg/kg	TM4/PM8
Chrysene #	-	-	-	-	-	-	0.34 ^{AA}				<0.02	mg/kg	TM4/PM8
Benzo(bk)fluoranthene #	-	-	-	-	-	-	0.56 ^{AA}				<0.07	mg/kg	TM4/PM8
Benzo(a)pyrene #	-	-	-	-	-	-	0.28 ^{AA}				<0.04	mg/kg	TM4/PM8
Indeno(123cd)pyrene #	-	-	-	-	-	-	0.24 ^{AA}				<0.04	mg/kg	TM4/PM8
Dibenzo(ah)anthracene #	-	-	-	-	-	-	<0.20 ^{AA}				<0.04	mg/kg	TM4/PM8
Benzo(ghi)perylene #	-	-	-	-	-	-	<0.20 ^{AA}				<0.04	mg/kg	TM4/PM8
PAH 16 Total	-	-	-	-	-	-	4.5 ^{AA}				<0.6	mg/kg	TM4/PM8
Benzo(b)fluoranthene	-	-	-	-	-	-	0.40 ^{AA}				<0.05	mg/kg	TM4/PM8
Benzo(k)fluoranthene	-	-	-	-	-	-	0.16 ^{AA}				<0.02	mg/kg	TM4/PM8
PAH Surrogate % Recovery	-	-	-	-	-	-	110 ^{AA}				<0	%	TM4/PM8

Client Name: Adler and Allan Ltd
 Reference: CL2637.ai.1
 Location: Reading
 Contact: Angela Gomez
 JE Job No.: 17/11978

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

J E Sample No.	1-2	3-4	5-6	7-8	9-10	11-12	13-14				Please see attached notes for all abbreviations and acronyms		
Sample ID	SP1	SP2	SP3	SP4	SP5	Excav1-Base	Stockpile						
Depth													
COC No / misc													
Containers	V J	V J	V J	V J	V J	V J	V J						
Sample Date	10/07/2017	10/07/2017	10/07/2017	10/07/2017	10/07/2017	10/07/2017	10/07/2017						
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil						
Batch Number	1	1	1	1	1	1	1						
Date of Receipt	12/07/2017	12/07/2017	12/07/2017	12/07/2017	12/07/2017	12/07/2017	12/07/2017				LOD/LOR	Units	Method No.
TPH CWG													
Aliphatics													
>C5-C6 #	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1 ^{SV}	<0.1 ^{SV}				<0.1	mg/kg	TM36/PM12
>C6-C8 #	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1 ^{SV}	<0.1 ^{SV}				<0.1	mg/kg	TM36/PM12
>C8-C10	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1 ^{SV}	<0.1 ^{SV}				<0.1	mg/kg	TM36/PM12
>C10-C12 #	<0.2	<0.2	<0.2	<0.2	0.6	<0.2	0.9				<0.2	mg/kg	TM5/PM16
>C12-C16 #	<4	<4	<4	<4	472	1603	1685				<4	mg/kg	TM5/PM16
>C16-C21 #	<7	<7	<7	<7	3488	12528	17384				<7	mg/kg	TM5/PM16
>C21-C35 #	<7	<7	<7	<7	20	135	54				<7	mg/kg	TM5/PM16
Total aliphatics C5-35	<19	<19	<19	<19	3981	14266	19124				<19	mg/kg	TM5/PM16
Aromatics													
>C5-EC7 #	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1 ^{SV}	<0.1 ^{SV}				<0.1	mg/kg	TM36/PM12
>EC7-EC8 #	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1 ^{SV}	<0.1 ^{SV}				<0.1	mg/kg	TM36/PM12
>EC8-EC10 #	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1 ^{SV}	<0.1 ^{SV}				<0.1	mg/kg	TM36/PM12
>EC10-EC12 #	<0.2	<0.2	<0.2	<0.2	<0.2	1.3	1.3				<0.2	mg/kg	TM5/PM16
>EC12-EC16 #	<4	<4	<4	<4	88	466	873				<4	mg/kg	TM5/PM16
>EC16-EC21 #	<7	<7	<7	10	534	2915	7020				<7	mg/kg	TM5/PM16
>EC21-EC35 #	<7	26	22	148	97	113	27				<7	mg/kg	TM5/PM16
Total aromatics C5-35 #	<19	26	22	158	719	3495	7921				<19	mg/kg	TM5/PM16
Total aliphatics and aromatics(C5-35)	<38	<38	<38	158	4700	17761	27045				<38	mg/kg	TM5/PM16
MTBE #	<5	<5	<5	<5	<5	<5 ^{SV}	<5 ^{SV}				<5	ug/kg	TM31/PM12
Benzene #	<5	<5	<5	<5	<5	<5 ^{SV}	<5 ^{SV}				<5	ug/kg	TM31/PM12
Toluene #	<5	<5	<5	<5	<5	<5 ^{SV}	<5 ^{SV}				<5	ug/kg	TM31/PM12
Ethylbenzene #	<5	<5	<5	<5	<5	<5 ^{SV}	<5 ^{SV}				<5	ug/kg	TM31/PM12
m/p-Xylene #	<5	<5	<5	<5	<5	<5 ^{SV}	<5 ^{SV}				<5	ug/kg	TM31/PM12
o-Xylene #	<5	<5	<5	<5	<5	<5 ^{SV}	<5 ^{SV}				<5	ug/kg	TM31/PM12
PCB 28 #	-	-	-	-	-	-	<5				<5	ug/kg	TM17/PM8
PCB 52 #	-	-	-	-	-	-	<5				<5	ug/kg	TM17/PM8
PCB 101 #	-	-	-	-	-	-	<5				<5	ug/kg	TM17/PM8
PCB 118 #	-	-	-	-	-	-	<5				<5	ug/kg	TM17/PM8
PCB 138 #	-	-	-	-	-	-	<5				<5	ug/kg	TM17/PM8
PCB 153 #	-	-	-	-	-	-	<5				<5	ug/kg	TM17/PM8
PCB 180 #	-	-	-	-	-	-	<5				<5	ug/kg	TM17/PM8
Total 7 PCBs #	-	-	-	-	-	-	<35				<35	ug/kg	TM17/PM8
Natural Moisture Content	7.8	25.0	31.3	29.0	20.1	26.9	12.3				<0.1	%	PM4/PM0

Client Name: Adler and Allan Ltd
Reference: CL2637.ai.1
Location: Reading
Contact: Angela Gomez
JE Job No.: 17/11978

Report : Liquid

Liquids/products: V=40ml vial, G=glass bottle, P=plastic bottle
 H=H₂SO₄, Z=ZnAc, N=NaOH, HN=HNO₃

J E Sample No.	15-16	17											
Sample ID	Drums	Drum2											
Depth													
COC No / misc													
Containers	V G	G											
Sample Date	10/07/2017	10/07/2017											
Sample Type	Ground Water	Ground Water											
Batch Number	1	1											
Date of Receipt	12/07/2017	12/07/2017											
TPH CWG											LOD/LOR	Units	Method No.
Aliphatics													
>C5-C6 #	<10 ^{SV}	19									<10	ug/l	TM36/PM12
>C6-C8 #	<10 ^{SV}	<10									<10	ug/l	TM36/PM12
>C8-C10 #	<10 ^{SV}	<10									<10	ug/l	TM36/PM12
>C10-C12 #	<5	<5									<5	ug/l	TM5/PM30
>C12-C16 #	2300	90									<10	ug/l	TM5/PM30
>C16-C21 #	23190	1000									<10	ug/l	TM5/PM30
>C21-C35 #	<10	<10									<10	ug/l	TM5/PM30
Total aliphatics C5-35 #	25490	1109									<10	ug/l	TM5/PM30/PM12
Aromatics													
>C5-EC7 #	<10 ^{SV}	<10									<10	ug/l	TM36/PM12
>EC7-EC8 #	<10 ^{SV}	<10									<10	ug/l	TM36/PM12
>EC8-EC10 #	<10 ^{SV}	<10									<10	ug/l	TM36/PM12
>EC10-EC12 #	8	<5									<5	ug/l	TM5/PM30
>EC12-EC16 #	4330	190									<10	ug/l	TM5/PM30
>EC16-EC21 #	32970	1530									<10	ug/l	TM5/PM30
>EC21-EC35 #	<10	<10									<10	ug/l	TM5/PM30
Total aromatics C5-35 #	37308	1720									<10	ug/l	TM5/PM30/PM12
Total aliphatics and aromatics(C5-35) #	62798	2829									<10	ug/l	TM5/PM30/PM12
MTBE #	<5 ^{SV}	<5									<5	ug/l	TM31/PM12
Benzene #	<5 ^{SV}	<5									<5	ug/l	TM31/PM12
Toluene #	<5 ^{SV}	<5									<5	ug/l	TM31/PM12
Ethylbenzene #	<5 ^{SV}	<5									<5	ug/l	TM31/PM12
m/p-Xylene #	<5 ^{SV}	<5									<5	ug/l	TM31/PM12
o-Xylene #	<5 ^{SV}	<5									<5	ug/l	TM31/PM12

Please see attached notes for all abbreviations and acronyms

Matrix : Solid

5 of 12

Matrix : Liquid

Matrix : Solid

Location: Reading

Contact: Angela Gomez

[illegible]

Only analyses which are accredited are recorded as deviating if set criteria are not met.

Client Name: Adler and Allan Ltd **Matrix :** Liquid

Reference: CL2637.ai.1

Location: Reading

Contact: Angela Gomez

Matrix : Liquid

[illegible]

Please note that only samples that are deviating are mentioned in this report. If no samples are listed it is because none were deviating.

Only analyses which are accredited are recorded as deviating if set criteria are not met.

NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

JE Job No.: 17/11978

SOILS

Please note we are only MCERTS accredited (UK soils only) for sand, loam and clay and any other matrix is outside our scope of accreditation.

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation has been performed on clay, sand and loam, only samples that are predominantly these matrices, or combinations of them will be within our MCERTS scope. If samples are not one of a combination of the above matrices they will not be marked as MCERTS accredited.

It is assumed that you have taken representative samples on site and require analysis on a representative subsample. Stones will generally be included unless we are requested to remove them.

All samples will be discarded one month after the date of reporting, unless we are instructed to the contrary.

If you have not already done so, please send us a purchase order if this is required by your company.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

All analysis is reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected. Samples are dried at 35°C ±5°C unless otherwise stated. Moisture content for CEN Leachate tests are dried at 105°C ±5°C.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

Where a CEN 10:1 ZERO Headspace VOC test has been carried out, a 10:1 ratio of water to wet (as received) soil has been used.

% Asbestos in Asbestos Containing Materials (ACMs) is determined by reference to HSG 264 The Survey Guide - Appendix 2 : ACMs in buildings listed in order of ease of fibre release.

Negative Neutralization Potential (NP) values are obtained when the volume of NaOH (0.1N) titrated (pH 8.3) is greater than the volume of HCl (1N) to reduce the pH of the sample to 2.0 - 2.5. Any negative NP values are corrected to 0.

The calculation of Pyrite content assumes that all oxidisable sulphides present in the sample are pyrite. This may not be the case. The calculation may be an overestimate when other sulphides such as Barite (Barium Sulphate) are present.

WATERS

Please note we are not a UK Drinking Water Inspectorate (DWI) Approved Laboratory .

ISO17025 accreditation applies to surface water and groundwater and usually one other matrix which is analysis specific, any other liquids are outside our scope of accreditation.

As surface waters require different sample preparation to groundwaters the laboratory must be informed of the water type when submitting samples.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

DEVIATING SAMPLES

Samples must be received in a condition appropriate to the requested analyses. All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. If this is not the case you will be informed and any test results that may be compromised highlighted on your deviating samples report.

SURROGATES

Surrogate compounds are added during the preparation process to monitor recovery of analytes. However low recovery in soils is often due to peat, clay or other organic rich matrices. For waters this can be due to oxidants, surfactants, organic rich sediments or remediation fluids. Acceptable limits for most organic methods are 70 - 130% and for VOCs are 50 - 150%. When surrogate recoveries are outside the performance criteria but the associated AQC passes this is assumed to be due to matrix effect. Results are not surrogate corrected.

DILUTIONS

A dilution suffix indicates a dilution has been performed and the reported result takes this into account. No further calculation is required.

BLANKS

Where analytes have been found in the blank, the sample will be treated in accordance with our laboratory procedure for dealing with contaminated blanks.

NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a UKAS requirement for data not reported as accredited to be considered indicative only, but this does not mean the data is not valid.

Where possible, and if requested, samples will be re-extracted and a revised report issued with accredited results. Please do not hesitate to contact the laboratory if further details are required of the circumstances which have led to the removal of accreditation.

ABBREVIATIONS and ACRONYMS USED

#	ISO17025 (UKAS) accredited - UK.
SA	ISO17025 (SANAS) accredited - South Africa.
B	Indicates analyte found in associated method blank.
DR	Dilution required.
M	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
++	Result outside calibration range, results should be considered as indicative only and are not accredited.
*	Analysis subcontracted to a Jones Environmental approved laboratory.
AD	Samples are dried at 35°C ±5°C
CO	Suspected carry over
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS
ME	Matrix Effect
NFD	No Fibres Detected
BS	AQC Sample
LB	Blank Sample
N	Client Sample
TB	Trip Blank Sample
OC	Outside Calibration Range
AA	x5 Dilution

JE Job No: 17/11978

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
PM4	Gravimetric measurement of Natural Moisture Content and % Moisture Content at either 35°C or 105°C. Calculation based on ISO 11465 and BS1377.	PM0	No preparation is required.				
TM4	Modified USEPA 8270 method for the solvent extraction and determination of 16 PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.			AR	Yes
TM4	Modified USEPA 8270 method for the solvent extraction and determination of 16 PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes		AR	Yes
TM5	Modified USEPA 8015B method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) with carbon banding within the range C8-C40 GC-FID.	PM16	Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.	Yes		AR	Yes
TM5	Modified USEPA 8015B method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) with carbon banding within the range C8-C40 GC-FID.	PM16	Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.			AR	
TM5	Modified USEPA 8015B method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) with carbon banding within the range C8-C40 GC-FID.	PM30	Water samples are extracted with solvent using a magnetic stirrer to create a vortex.				
TM5	Modified USEPA 8015B method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) with carbon banding within the range C8-C40 GC-FID.	PM30	Water samples are extracted with solvent using a magnetic stirrer to create a vortex.	Yes			
TM5/TM36	TM005: Modified USEPA 8015B. Determination of solvent Extractable Petroleum Hydrocarbons (EPH) including column fractionation in the carbon range of C10-35 into aliphatic and aromatic fractions by GC-FID. TM036: Modified USEPA 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C5-10 by headspace GC-FID. Including determination of	PM12/PM16	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis./Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.			AR	Yes
TM5/TM36	TM005: Modified USEPA 8015B. Determination of solvent Extractable Petroleum Hydrocarbons (EPH) including column fractionation in the carbon range of C10-35 into aliphatic and aromatic fractions by GC-FID. TM036: Modified USEPA 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C5-10 by headspace GC-FID. Including determination of	PM12/PM16	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis./Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.	Yes		AR	Yes
TM5/TM36	TM005: Modified USEPA 8015B. Determination of solvent Extractable Petroleum Hydrocarbons (EPH) including column fractionation in the carbon range of C10-35 into aliphatic and aromatic fractions by GC-FID. TM036: Modified USEPA 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C5-10 by headspace GC-FID. Including determination of	PM30/PM12	CWG GC-FID	Yes			

JE Job No: 17/11978

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM17	Modified US EPA method 8270. Determination of specific Polychlorinated Biphenyl congeners by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes		AR	Yes
TM30	Determination of Trace Metal elements by ICP-OES (Inductively Coupled Plasma - Optical Emission Spectrometry). Modified US EPA Method 200.7, 6010B and BS EN ISO 11885 2009	PM15	Acid digestion of dried and ground solid samples using Aqua Regia refluxed at 112.5 °C. Samples containing asbestos are not dried and ground.			AD	Yes
TM30	Determination of Trace Metal elements by ICP-OES (Inductively Coupled Plasma - Optical Emission Spectrometry). Modified US EPA Method 200.7, 6010B and BS EN ISO 11885 2009	PM15	Acid digestion of dried and ground solid samples using Aqua Regia refluxed at 112.5 °C. Samples containing asbestos are not dried and ground.	Yes		AD	Yes
TM31	Modified USEPA 8015B. Determination of Methyltertbutylether, Benzene, Toluene, Ethylbenzene and Xylene by headspace GC-FID.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.	Yes			
TM31	Modified USEPA 8015B. Determination of Methyltertbutylether, Benzene, Toluene, Ethylbenzene and Xylene by headspace GC-FID.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.	Yes		AR	Yes
TM36	Modified US EPA method 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.	Yes			
TM36	Modified US EPA method 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.			AR	Yes
TM36	Modified US EPA method 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.	Yes		AR	Yes
TM74	Analysis of water soluble boron (20:1 extract) by ICP-OES.	PM32	Hot water soluble boron is extracted from dried and ground samples using a 20:1 ratio.	Yes		AD	Yes



Exova Jones Environmental

Registered Address : Exova (UK) Ltd, Lochend Industrial Estate, Newbridge, Midlothian, EH28 8PL

Unit 3 Deeside Point
Zone 3
Deeside Industrial Park
Deeside
CH5 2UA

Adler and Allan Ltd
4B Lovett Road
Hampton Lovett Trading Estate
Droitwich
WR9 0QG

Tel: +44 (0) 1244 833780

Fax: +44 (0) 1244 833781



Attention :	Angela Gomez
Date :	21st July, 2017
Your reference :	CL2637
Our reference :	Test Report 17/12160 Batch 1
Location :	Reading
Date samples received :	15th July, 2017
Status :	Final report
Issue :	1

Five samples were received for analysis on 15th July, 2017 of which five were scheduled for analysis. Please find attached our Test Report which should be read with notes at the end of the report and should include all sections if reproduced. Interpretations and opinions are outside the scope of any accreditation, and all results relate only to samples supplied.

All analysis is carried out on as received samples and reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected.

Compiled By:

Bruce Leslie
Project Co-ordinator

Client Name: Adler and Allan Ltd
Reference: CL2637
Location: Reading
Contact: Angela Gomez
JE Job No.: 17/12160

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

J E Sample No.	1-2	3-4									Please see attached notes for all abbreviations and acronyms		
Sample ID	EXC1-B-01	EXC1-B-02											
Depth													
COC No / misc													
Containers	V J	V J											
Sample Date	13/07/2017	13/07/2017											
Sample Type	Soil	Soil											
Batch Number	1	1											
Date of Receipt	15/07/2017	15/07/2017									LOD/LOR	Units	Method No.
TPH CWG													
Aliphatics													
>C5-C6 #	<0.1	<0.1									<0.1	mg/kg	TM36/PM12
>C6-C8 #	<0.1	<0.1									<0.1	mg/kg	TM36/PM12
>C8-C10	<0.1	<0.1									<0.1	mg/kg	TM36/PM12
>C10-C12 #	<0.2	<0.2									<0.2	mg/kg	TM5/PM16
>C12-C16 #	<4	15									<4	mg/kg	TM5/PM16
>C16-C21 #	35	180									<7	mg/kg	TM5/PM16
>C21-C35 #	<7	45									<7	mg/kg	TM5/PM16
Total aliphatics C5-35	35	240									<19	mg/kg	TM5/PM16/PM12
Aromatics													
>C5-EC7 #	<0.1	<0.1									<0.1	mg/kg	TM36/PM12
>EC7-EC8 #	<0.1	<0.1									<0.1	mg/kg	TM36/PM12
>EC8-EC10 #	<0.1	<0.1									<0.1	mg/kg	TM36/PM12
>EC10-EC12 #	<0.2	<0.2									<0.2	mg/kg	TM5/PM16
>EC12-EC16 #	<4	16									<4	mg/kg	TM5/PM16
>EC16-EC21 #	<7	184									<7	mg/kg	TM5/PM16
>EC21-EC35 #	<7	66									<7	mg/kg	TM5/PM16
Total aromatics C5-35 #	<19	266									<19	mg/kg	TM5/PM16/PM12
Total aliphatics and aromatics(C5-35)	<38	506									<38	mg/kg	TM5/PM16/PM12
MTBE #	<5	<5									<5	ug/kg	TM31/PM12
Benzene #	<5	<5									<5	ug/kg	TM31/PM12
Toluene #	<5	<5									<5	ug/kg	TM31/PM12
Ethylbenzene #	<5	<5									<5	ug/kg	TM31/PM12
m/p-Xylene #	<5	<5									<5	ug/kg	TM31/PM12
o-Xylene #	<5	<5									<5	ug/kg	TM31/PM12
Natural Moisture Content	6.1	17.7									<0.1	%	PM4/PM0

Client Name: Adler and Allan Ltd
Reference: CL2637
Location: Reading
Contact: Angela Gomez
JE Job No.: 17/12160

Report : Liquid

Liquids/products: V=40ml vial, G=glass bottle, P=plastic bottle
 H=H₂SO₄, Z=ZnAc, N=NaOH, HN=HNO₃

J E Sample No.	5-6	7-8	9-10								Please see attached notes for all abbreviations and acronyms		
Sample ID	SW1	SW2	SW3										
Depth													
COC No / misc													
Containers	V G	V G	V G										
Sample Date	13/07/2017	13/07/2017	13/07/2017										
Sample Type	Surface Water	Surface Water	Surface Water										
Batch Number	1	1	1										
Date of Receipt	15/07/2017	15/07/2017	15/07/2017								LOD/LOR	Units	Method No.
TPH CWG													
Aliphatics													
>C5-C6 #	<10	<10	<10								<10	ug/l	TM36/PM12
>C6-C8 #	<10	<10	<10								<10	ug/l	TM36/PM12
>C8-C10 #	<10	<10	<10								<10	ug/l	TM36/PM12
>C10-C12 #	<5	<5	<5								<5	ug/l	TM5/PM30
>C12-C16 #	<10	<10	<10								<10	ug/l	TM5/PM30
>C16-C21 #	<10	<10	<10								<10	ug/l	TM5/PM30
>C21-C35 #	<10	<10	<10								<10	ug/l	TM5/PM30
Total aliphatics C5-35 #	<10	<10	<10								<10	ug/l	TM5/PM30/PM12
Aromatics													
>C5-EC7 #	<10	<10	<10								<10	ug/l	TM36/PM12
>EC7-EC8 #	<10	<10	<10								<10	ug/l	TM36/PM12
>EC8-EC10 #	<10	<10	<10								<10	ug/l	TM36/PM12
>EC10-EC12 #	<5	<5	<5								<5	ug/l	TM5/PM30
>EC12-EC16 #	<10	<10	<10								<10	ug/l	TM5/PM30
>EC16-EC21 #	<10	<10	<10								<10	ug/l	TM5/PM30
>EC21-EC35 #	<10	<10	<10								<10	ug/l	TM5/PM30
Total aromatics C5-35 #	<10	<10	<10								<10	ug/l	TM5/PM30/PM12
Total aliphatics and aromatics(C5-35) #	<10	<10	<10								<10	ug/l	TM5/PM30/PM12
MTBE #	<5	<5	<5								<5	ug/l	TM31/PM12
Benzene #	<5	<5	<5								<5	ug/l	TM31/PM12
Toluene #	<5	<5	<5								<5	ug/l	TM31/PM12
Ethylbenzene #	<5	<5	<5								<5	ug/l	TM31/PM12
m/p-Xylene #	<5	<5	<5								<5	ug/l	TM31/PM12
o-Xylene #	<5	<5	<5								<5	ug/l	TM31/PM12

Matrix : Solid

4 of 10

Matrix : Liquid

5 of 10

Client Name: Adler and Allan Ltd

Reference: CL2637

Location: Reading

Contact: Angela Gomez

[illegible]

Please note that only samples that are deviating are mentioned in this report. If no samples are listed it is because none were deviating.

Only analyses which are accredited are recorded as deviating if set criteria are not met.

NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

JE Job No.: 17/12160

SOILS

Please note we are only MCERTS accredited (UK soils only) for sand, loam and clay and any other matrix is outside our scope of accreditation.

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation has been performed on clay, sand and loam, only samples that are predominantly these matrices, or combinations of them will be within our MCERTS scope. If samples are not one of a combination of the above matrices they will not be marked as MCERTS accredited.

It is assumed that you have taken representative samples on site and require analysis on a representative subsample. Stones will generally be included unless we are requested to remove them.

All samples will be discarded one month after the date of reporting, unless we are instructed to the contrary.

If you have not already done so, please send us a purchase order if this is required by your company.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

All analysis is reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected. Samples are dried at 35°C ±5°C unless otherwise stated. Moisture content for CEN Leachate tests are dried at 105°C ±5°C.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

Where a CEN 10:1 ZERO Headspace VOC test has been carried out, a 10:1 ratio of water to wet (as received) soil has been used.

% Asbestos in Asbestos Containing Materials (ACMs) is determined by reference to HSG 264 The Survey Guide - Appendix 2 : ACMs in buildings listed in order of ease of fibre release.

Negative Neutralization Potential (NP) values are obtained when the volume of NaOH (0.1N) titrated (pH 8.3) is greater than the volume of HCl (1N) to reduce the pH of the sample to 2.0 - 2.5. Any negative NP values are corrected to 0.

The calculation of Pyrite content assumes that all oxidisable sulphides present in the sample are pyrite. This may not be the case. The calculation may be an overestimate when other sulphides such as Barite (Barium Sulphate) are present.

WATERS

Please note we are not a UK Drinking Water Inspectorate (DWI) Approved Laboratory .

ISO17025 accreditation applies to surface water and groundwater and usually one other matrix which is analysis specific, any other liquids are outside our scope of accreditation.

As surface waters require different sample preparation to groundwaters the laboratory must be informed of the water type when submitting samples.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

DEVIATING SAMPLES

Samples must be received in a condition appropriate to the requested analyses. All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. If this is not the case you will be informed and any test results that may be compromised highlighted on your deviating samples report.

SURROGATES

Surrogate compounds are added during the preparation process to monitor recovery of analytes. However low recovery in soils is often due to peat, clay or other organic rich matrices. For waters this can be due to oxidants, surfactants, organic rich sediments or remediation fluids. Acceptable limits for most organic methods are 70 - 130% and for VOCs are 50 - 150%. When surrogate recoveries are outside the performance criteria but the associated AQC passes this is assumed to be due to matrix effect. Results are not surrogate corrected.

DILUTIONS

A dilution suffix indicates a dilution has been performed and the reported result takes this into account. No further calculation is required.

BLANKS

Where analytes have been found in the blank, the sample will be treated in accordance with our laboratory procedure for dealing with contaminated blanks.

NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a UKAS requirement for data not reported as accredited to be considered indicative only, but this does not mean the data is not valid.

Where possible, and if requested, samples will be re-extracted and a revised report issued with accredited results. Please do not hesitate to contact the laboratory if further details are required of the circumstances which have led to the removal of accreditation.

ABBREVIATIONS and ACRONYMS USED

#	ISO17025 (UKAS) accredited - UK.
SA	ISO17025 (SANAS) accredited - South Africa.
B	Indicates analyte found in associated method blank.
DR	Dilution required.
M	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
++	Result outside calibration range, results should be considered as indicative only and are not accredited.
*	Analysis subcontracted to a Jones Environmental approved laboratory.
AD	Samples are dried at 35°C ±5°C
CO	Suspected carry over
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS
ME	Matrix Effect
NFD	No Fibres Detected
BS	AQC Sample
LB	Blank Sample
N	Client Sample
TB	Trip Blank Sample
OC	Outside Calibration Range

JE Job No: 17/12160

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
PM4	Gravimetric measurement of Natural Moisture Content and % Moisture Content at either 35°C or 105°C. Calculation based on ISO 11465 and BS1377.	PM0	No preparation is required.				
TM5	Modified USEPA 8015B method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) with carbon banding within the range C8-C40 GC-FID.	PM16	Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.	Yes		AR	Yes
TM5	Modified USEPA 8015B method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) with carbon banding within the range C8-C40 GC-FID.	PM16	Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.			AR	
TM5	Modified USEPA 8015B method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) with carbon banding within the range C8-C40 GC-FID.	PM30	Water samples are extracted with solvent using a magnetic stirrer to create a vortex.				
TM5	Modified USEPA 8015B method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) with carbon banding within the range C8-C40 GC-FID.	PM30	Water samples are extracted with solvent using a magnetic stirrer to create a vortex.	Yes			
TM5/TM36	TM003: Modified USEPA 8015B. Determination of solvent Extractable Petroleum Hydrocarbons (EPH) including column fractionation in the carbon range of C10-35 into aliphatic and aromatic fractions by GC-FID. TM036: Modified USEPA 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C5-10 by headspace GC-FID. Including determination of BTEX.	PM12/PM16	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis./Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.			AR	Yes
TM5/TM36	TM003: Modified USEPA 8015B. Determination of solvent Extractable Petroleum Hydrocarbons (EPH) including column fractionation in the carbon range of C10-35 into aliphatic and aromatic fractions by GC-FID. TM036: Modified USEPA 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C5-10 by headspace GC-FID. Including determination of BTEX.	PM12/PM16	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis./Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.	Yes		AR	Yes
TM5/TM36	TM003: Modified USEPA 8015B. Determination of solvent Extractable Petroleum Hydrocarbons (EPH) including column fractionation in the carbon range of C10-35 into aliphatic and aromatic fractions by GC-FID. TM036: Modified USEPA 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C5-10 by headspace GC-FID. Including determination of BTEX and calculation of Aliphatic fractions.	PM30/PM12	CWG GC-FID	Yes			
TM31	Modified USEPA 8015B. Determination of Methyltertbutylether, Benzene, Toluene, Ethylbenzene and Xylene by headspace GC-FID.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.	Yes			
TM31	Modified USEPA 8015B. Determination of Methyltertbutylether, Benzene, Toluene, Ethylbenzene and Xylene by headspace GC-FID.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.	Yes		AR	Yes

JE Job No: 17/12160

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM36	Modified US EPA method 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.	Yes			
TM36	Modified US EPA method 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.			AR	Yes
TM36	Modified US EPA method 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.	Yes		AR	Yes



Exova Jones Environmental

Registered Address : Exova (UK) Ltd, Lochend Industrial Estate, Newbridge, Midlothian, EH28 8PL

Unit 3 Deeside Point
Zone 3
Deeside Industrial Park
Deeside
CH5 2UA

Adler and Allan Ltd
4B Lovett Road
Hampton Lovett Trading Estate
Droitwich
WR9 0QG

Tel: +44 (0) 1244 833780

Fax: +44 (0) 1244 833781



Attention : Angela Gomez
Date : 25th July, 2017
Your reference :
Our reference : Test Report 17/12172 Batch 1
Location :
Date samples received : 15th July, 2017
Status : Final report
Issue : 1

Eight samples were received for analysis on 15th July, 2017 of which eight were scheduled for analysis. Please find attached our Test Report which should be read with notes at the end of the report and should include all sections if reproduced. Interpretations and opinions are outside the scope of any accreditation, and all results relate only to samples supplied.

All analysis is carried out on as received samples and reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected.

Compiled By:

Bruce Leslie
Project Co-ordinator

Client Name: Adler and Allan Ltd
Reference:
Location:
Contact: Angela Gomez
JE Job No.: 17/12172

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

J E Sample No.	1-2	3-4	5-6	7-8	9	10	11-12	13-14			Please see attached notes for all abbreviations and acronyms		
Sample ID	LOCATION 1	LOCATION 2	LOCATION 3	LOCATION 4	LOCATION 5	LOCATION 5	LOCATION 6	LOCATION 7					
Depth	BASE	SIDEWALL	SIDEWALL	SIDEWALL	SIDEWALL	BANK	BASE	SIDEWALL					
COC No / misc													
Containers	V J	V J	V J	V J	V	J	V J	V J					
Sample Date	09/07/2017	09/07/2017	09/07/2017	09/07/2017	09/07/2017	09/07/2017	09/07/2017	09/07/2017					
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil					
Batch Number	1	1	1	1	1	1	1	1					
Date of Receipt	15/07/2017	15/07/2017	15/07/2017	15/07/2017	15/07/2017	15/07/2017	15/07/2017	15/07/2017			LOD/LOR	Units	Method No.
TPH CWG													
Aliphatics													
>C5-C6 #	<0.1 ^{SV}	<0.1 ^{SV}	<0.1	<0.1	<0.1 ^{SV}	<0.1 ^{SV}	<0.1	<0.1			<0.1	mg/kg	TM36/PM12
>C6-C8 #	0.1 ^{SV}	<0.1 ^{SV}	<0.1	<0.1	<0.1 ^{SV}	<0.1 ^{SV}	<0.1	<0.1			<0.1	mg/kg	TM36/PM12
>C8-C10	0.1 ^{SV}	<0.1 ^{SV}	<0.1	0.1	<0.1 ^{SV}	<0.1 ^{SV}	0.2	<0.1			<0.1	mg/kg	TM36/PM12
>C10-C12 #	4.2 ⁺⁺	<0.2	<0.2	<0.2	1.2	1.6	<0.2	<0.2			<0.2	mg/kg	TM5/PM16
>C12-C16 #	3093 ⁺⁺	338	61	184	1023	764	452	7			<4	mg/kg	TM5/PM16
>C16-C21 #	26866 ⁺⁺	3034	594	1768	9076	6875	4403	218			<7	mg/kg	TM5/PM16
>C21-C35 #	131 ⁺⁺	13	<7	<7	29	29	36	73			<7	mg/kg	TM5/PM16
Total aliphatics C5-35	30094	3385	655	1952	10129	7670	4891	298			<19	mg/kg	TM5/PM16
Aromatics													
>C5-EC7 #	<0.1 ^{SV}	<0.1 ^{SV}	<0.1	<0.1	<0.1 ^{SV}	<0.1 ^{SV}	<0.1	<0.1			<0.1	mg/kg	TM36/PM12
>EC7-EC8 #	<0.1 ^{SV}	<0.1 ^{SV}	<0.1	<0.1	<0.1 ^{SV}	<0.1 ^{SV}	<0.1	<0.1			<0.1	mg/kg	TM36/PM12
>EC8-EC10 #	0.1 ^{SV}	<0.1 ^{SV}	<0.1	<0.1	<0.1 ^{SV}	<0.1 ^{SV}	<0.1	<0.1			<0.1	mg/kg	TM36/PM12
>EC10-EC12 #	2.3	<0.2	<0.2	<0.2	1.4	<0.2	<0.2	<0.2			<0.2	mg/kg	TM5/PM16
>EC12-EC16 #	1538	194	68	205	468	522	289	<4			<4	mg/kg	TM5/PM16
>EC16-EC21 #	10725	1354	476	1482	3279	3706	2172	40			<7	mg/kg	TM5/PM16
>EC21-EC35 #	41	<7	<7	<7	11	22	<7	26			<7	mg/kg	TM5/PM16
Total aromatics C5-35 #	12306	1548	544	1687	3759	4250	2461	66			<19	mg/kg	TM5/PM16
Total aliphatics and aromatics(C5-35)	42400	4933	1199	3639	13888	11920	7352	364			<38	mg/kg	TM5/PM16
MTBE #	<5 ^{SV}	<5 ^{SV}	<5	<5	<5 ^{SV}	<5 ^{SV}	<5	<5			<5	ug/kg	TM31/PM12
Benzene #	<5 ^{SV}	<5 ^{SV}	<5	<5	<5 ^{SV}	<5 ^{SV}	<5	<5			<5	ug/kg	TM31/PM12
Toluene #	<5 ^{SV}	<5 ^{SV}	<5	<5	<5 ^{SV}	<5 ^{SV}	<5	91			<5	ug/kg	TM31/PM12
Ethylbenzene #	28 ^{SV}	<5 ^{SV}	<5	<5	<5 ^{SV}	<5 ^{SV}	<5	<5			<5	ug/kg	TM31/PM12
m/p-Xylene #	96 ^{SV}	<5 ^{SV}	<5	<5	<5 ^{SV}	<5 ^{SV}	<5	<5			<5	ug/kg	TM31/PM12
o-Xylene #	35 ^{SV}	<5 ^{SV}	<5	<5	<5 ^{SV}	<5 ^{SV}	<5	<5			<5	ug/kg	TM31/PM12
Natural Moisture Content	17.1	21.1	18.8	11.9	37.7	31.9	6.1	3.0			<0.1	%	PM4/PM0

Matrix : Solid

Location:

Contact: Angela Gomez

3 of 7

Matrix : Solid

Client Name: Adler and Allan Ltd **Matrix : Solid**

Reference:

Reference:

Location:

Location:

Contact: Angela Gomez

[illegible]

Please note that only samples that are deviating are mentioned in this report. If no samples are listed it is because none were deviating. Only analyses which are accredited are recorded as deviating if set criteria are not met.

Please note that only samples that are deviating are mentioned in this report. If no samples are listed it is because none were deviating. Only analyses which are accredited are recorded as deviating if set criteria are not met.

NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

JE Job No.: 17/12172

SOILS

Please note we are only MCERTS accredited (UK soils only) for sand, loam and clay and any other matrix is outside our scope of accreditation.

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation has been performed on clay, sand and loam, only samples that are predominantly these matrices, or combinations of them will be within our MCERTS scope. If samples are not one of a combination of the above matrices they will not be marked as MCERTS accredited.

It is assumed that you have taken representative samples on site and require analysis on a representative subsample. Stones will generally be included unless we are requested to remove them.

All samples will be discarded one month after the date of reporting, unless we are instructed to the contrary.

If you have not already done so, please send us a purchase order if this is required by your company.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

All analysis is reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected. Samples are dried at 35°C ±5°C unless otherwise stated. Moisture content for CEN Leachate tests are dried at 105°C ±5°C.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

Where a CEN 10:1 ZERO Headspace VOC test has been carried out, a 10:1 ratio of water to wet (as received) soil has been used.

% Asbestos in Asbestos Containing Materials (ACMs) is determined by reference to HSG 264 The Survey Guide - Appendix 2 : ACMs in buildings listed in order of ease of fibre release.

Negative Neutralization Potential (NP) values are obtained when the volume of NaOH (0.1N) titrated (pH 8.3) is greater than the volume of HCl (1N) to reduce the pH of the sample to 2.0 - 2.5. Any negative NP values are corrected to 0.

The calculation of Pyrite content assumes that all oxidisable sulphides present in the sample are pyrite. This may not be the case. The calculation may be an overestimate when other sulphides such as Barite (Barium Sulphate) are present.

WATERS

Please note we are not a UK Drinking Water Inspectorate (DWI) Approved Laboratory .

ISO17025 accreditation applies to surface water and groundwater and usually one other matrix which is analysis specific, any other liquids are outside our scope of accreditation.

As surface waters require different sample preparation to groundwaters the laboratory must be informed of the water type when submitting samples.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

DEVIATING SAMPLES

Samples must be received in a condition appropriate to the requested analyses. All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. If this is not the case you will be informed and any test results that may be compromised highlighted on your deviating samples report.

SURROGATES

Surrogate compounds are added during the preparation process to monitor recovery of analytes. However low recovery in soils is often due to peat, clay or other organic rich matrices. For waters this can be due to oxidants, surfactants, organic rich sediments or remediation fluids. Acceptable limits for most organic methods are 70 - 130% and for VOCs are 50 - 150%. When surrogate recoveries are outside the performance criteria but the associated AQC passes this is assumed to be due to matrix effect. Results are not surrogate corrected.

DILUTIONS

A dilution suffix indicates a dilution has been performed and the reported result takes this into account. No further calculation is required.

BLANKS

Where analytes have been found in the blank, the sample will be treated in accordance with our laboratory procedure for dealing with contaminated blanks.

NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a UKAS requirement for data not reported as accredited to be considered indicative only, but this does not mean the data is not valid.

Where possible, and if requested, samples will be re-extracted and a revised report issued with accredited results. Please do not hesitate to contact the laboratory if further details are required of the circumstances which have led to the removal of accreditation.

ABBREVIATIONS and ACRONYMS USED

#	ISO17025 (UKAS) accredited - UK.
SA	ISO17025 (SANAS) accredited - South Africa.
B	Indicates analyte found in associated method blank.
DR	Dilution required.
M	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
++	Result outside calibration range, results should be considered as indicative only and are not accredited.
*	Analysis subcontracted to a Jones Environmental approved laboratory.
AD	Samples are dried at 35°C ±5°C
CO	Suspected carry over
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS
ME	Matrix Effect
NFD	No Fibres Detected
BS	AQC Sample
LB	Blank Sample
N	Client Sample
TB	Trip Blank Sample
OC	Outside Calibration Range

JE Job No: 17/12172

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
PM4	Gravimetric measurement of Natural Moisture Content and % Moisture Content at either 35°C or 105°C. Calculation based on ISO 11465 and BS1377.	PM0	No preparation is required.				
TM5	Modified USEPA 8015B method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) with carbon banding within the range C8-C40 GC-FID.	PM16	Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.	Yes		AR	Yes
TM5	Modified USEPA 8015B method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) with carbon banding within the range C8-C40 GC-FID.	PM16	Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.			AR	
TM5/TM36	TM005: Modified USEPA 8015B. Determination of solvent Extractable Petroleum Hydrocarbons (EPH) including column fractionation in the carbon range of C10-35 into aliphatic and aromatic fractions by GC-FID. TM036: Modified USEPA 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C5-10 by headspace GC-FID. Including determination of BTEX and calculation of Aliphatic fractions.	PM12/PM16	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis./Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.			AR	Yes
TM5/TM36	TM005: Modified USEPA 8015B. Determination of solvent Extractable Petroleum Hydrocarbons (EPH) including column fractionation in the carbon range of C10-35 into aliphatic and aromatic fractions by GC-FID. TM036: Modified USEPA 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C5-10 by headspace GC-FID. Including determination of BTEX and calculation of Aliphatic fractions.	PM12/PM16	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis./Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.	Yes		AR	Yes
TM31	Modified USEPA 8015B. Determination of Methylterbutylether, Benzene, Toluene, Ethylbenzene and Xylene by headspace GC-FID.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.	Yes		AR	Yes
TM36	Modified US EPA method 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.			AR	Yes
TM36	Modified US EPA method 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.	Yes		AR	Yes

**Jon Ind**

CC Ground Investigation Ltd
Unit A2
Innsworth Tech Park
Innsworth Lane
Gloucester
GL3 1DL

t: 01452 739 165
f: 01452 739 220
e: jon@ccground.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 : 18-78223

Project / Site name:	SSE Site, Vastern Road, Reading	Samples received on:	07/03/2018
Your job number:	C5925	Samples instructed on:	08/03/2018
Your order number:	C5925	Analysis completed by:	16/03/2018
Report Issue Number:	1	Report issued on:	16/03/2018
Samples Analysed:	12 water samples		

Signed:

Nicole Fay
Quality Assistant
For & on behalf of i2 Analytical Ltd.

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

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: 18-78223

Project / Site name: SSE Site, Vastern Road, Reading

Your Order No: C5925

Lab Sample Number				920646	920647	920648	920649	920650
Sample Reference				WS1006	WS1005	WS1004	WS1003	WS1007
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				2.16	1.69	2.30	2.13	1.02
Date Sampled				07/03/2018	07/03/2018	07/03/2018	07/03/2018	07/03/2018
Time Taken				None Supplied	None Supplied	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	7.3	8.3	7.2	7.5	7.7
Electrical Conductivity at 20 °C	µS/cm	10	ISO 17025	1600	3000	1900	1000	840
Sulphate as SO ₄	µg/l	45	ISO 17025	97400	161000	134000	47200	39000
Sulphate as SO ₄	mg/l	0.045	ISO 17025	97.4	161	134	47.2	39.0
Chloride	mg/l	0.15	ISO 17025	220	470	370	130	71
Ammonium as NH ₄	µg/l	15	ISO 17025	1400	2400	1200	1200	830
Alkalinity	mgCaCO ₃ /l	3	ISO 17025	580	670	500	370	500
Dissolved Oxygen	mg/l	1	NONE	8.4	8.9	< 1.0	2.6	7.2

Total Phenols

Total Phenols (monohydric)	µg/l	10	ISO 17025	< 10	11	< 10	< 10	< 10
----------------------------	------	----	-----------	------	----	------	------	------

Speciated PAHs

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

Total PAH

Total EPA-16 PAHs	µg/l	0.16	ISO 17025	< 0.16	< 0.16	< 0.16	< 0.16	< 0.16
-------------------	------	------	-----------	--------	--------	--------	--------	--------

Heavy Metals / Metalloids

Arsenic (dissolved)	µg/l	0.15	ISO 17025	1.18	6.41	1.56	2.25	1.79
Cadmium (dissolved)	µg/l	0.02	ISO 17025	< 0.02	0.03	< 0.02	< 0.02	< 0.02
Calcium (dissolved)	mg/l	0.012	ISO 17025	190	280	230	150	93
Chromium (hexavalent)	µg/l	5	ISO 17025	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Chromium (III)	µg/l	1	NONE	< 1.0	1.6	< 1.0	< 1.0	< 1.0
Chromium (dissolved)	µg/l	0.2	ISO 17025	< 0.2	1.6	< 0.2	< 0.2	0.6
Copper (dissolved)	µg/l	0.5	ISO 17025	9.3	11	3.6	3.0	4.8
Lead (dissolved)	µg/l	0.2	ISO 17025	< 0.2	1.5	0.8	0.2	0.6
Mercury (dissolved)	µg/l	0.05	ISO 17025	0.13	0.08	0.08	0.06	< 0.05
Nickel (dissolved)	µg/l	0.5	ISO 17025	3.3	12	3.4	2.9	3.8
Selenium (dissolved)	µg/l	0.6	ISO 17025	1.6	51	1.5	0.9	3.7
Zinc (dissolved)	µg/l	0.5	ISO 17025	5.0	4.6	3.4	3.2	8.1



Analytical Report Number: 18-78223

Project / Site name: SSE Site, Vastern Road, Reading

Your Order No: C5925

Lab Sample Number				920646	920647	920648	920649	920650
Sample Reference				WS1006	WS1005	WS1004	WS1003	WS1007
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				2.16	1.69	2.30	2.13	1.02
Date Sampled				07/03/2018	07/03/2018	07/03/2018	07/03/2018	07/03/2018
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	Units	Limit of detection	Accreditation Status					

Monoaromatics

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

Petroleum Hydrocarbons

TPH-CWG - Aliphatic >C5 - C6	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >C6 - C8	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >C8 - C10	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >C10 - C12	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >C12 - C16	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >C16 - C21	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >C21 - C35	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic (C5 - C35)	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10

TPH-CWG - Aromatic >C5 - C7	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C7 - C8	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C8 - C10	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C10 - C12	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C12 - C16	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C16 - C21	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C21 - C35	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic (C5 - C35)	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10



Analytical Report Number: 18-78223

Project / Site name: SSE Site, Vastern Road, Reading

Your Order No: C5925

Lab Sample Number				920646	920647	920648	920649	920650
Sample Reference				WS1006	WS1005	WS1004	WS1003	WS1007
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				2.16	1.69	2.30	2.13	1.02
Date Sampled				07/03/2018	07/03/2018	07/03/2018	07/03/2018	07/03/2018
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	Units	Limit of detection	Accreditation Status					

VOCs

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

Iss No 18-78223-1 SSE Site, Vastern Road, Reading C5925

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.

Page 4 of 21



Analytical Report Number: 18-78223

Project / Site name: SSE Site, Vastern Road, Reading

Your Order No: C5925

Lab Sample Number				920646	920647	920648	920649	920650
Sample Reference				WS1006	WS1005	WS1004	WS1003	WS1007
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				2.16	1.69	2.30	2.13	1.02
Date Sampled				07/03/2018	07/03/2018	07/03/2018	07/03/2018	07/03/2018
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	Units	Limit of detection	Accreditation Status					

VOCs TICs

VOCs TICs Compound Name		10	NONE	ND	ND	ND	ND	ND
VOC % Match	%	10	NONE	-	-	-	-	-

SVOCs

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

Iss No 18-78223-1 SSE Site, Vastern Road, Reading C5925

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: 18-78223

Project / Site name: SSE Site, Vastern Road, Reading

Your Order No: C5925

Lab Sample Number				920646	920647	920648	920649	920650
Sample Reference				WS1006	WS1005	WS1004	WS1003	WS1007
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				2.16	1.69	2.30	2.13	1.02
Date Sampled				07/03/2018	07/03/2018	07/03/2018	07/03/2018	07/03/2018
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	Units	Limit of detection	Accreditation Status					
Benzo(ghi)perylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01



Analytical Report Number: 18-78223

Project / Site name: SSE Site, Vastern Road, Reading

Your Order No: C5925

Lab Sample Number				920646	920647	920648	920649	920650
Sample Reference				WS1006	WS1005	WS1004	WS1003	WS1007
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				2.16	1.69	2.30	2.13	1.02
Date Sampled				07/03/2018	07/03/2018	07/03/2018	07/03/2018	07/03/2018
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	Units	Limit of detection	Accreditation Status					

SVOCs TICs

SVOCs TICs Compound Name		N/A	NONE	ND	ND	ND	ND	ND
SVOC % Match	%	N/A	NONE	0	0	0	0	0

PCBs by GC-MS

PCB Congener 28	µg/l	0.02	NONE	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
PCB Congener 52	µg/l	0.02	NONE	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
PCB Congener 101	µg/l	0.02	NONE	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
PCB Congener 118	µg/l	0.02	NONE	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
PCB Congener 138	µg/l	0.02	NONE	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
PCB Congener 153	µg/l	0.02	NONE	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
PCB Congener 180	µg/l	0.02	NONE	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02

PCBs by GC-MS

Total PCBs	µg/l	0.14	NONE	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14
------------	------	------	------	--------	--------	--------	--------	--------

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



Analytical Report Number: 18-78223

Project / Site name: SSE Site, Vastern Road, Reading

Your Order No: C5925

Lab Sample Number				920651	920652	920653	920654	920655
Sample Reference				WS1019	BH1001	BH1002C	BH1003E	BH1004
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				2.27	2.30	2.38	2.62	2.17
Date Sampled				07/03/2018	07/03/2018	07/03/2018	07/03/2018	07/03/2018
Time Taken				None Supplied	None Supplied	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	7.5	7.4	7.4	7.7	7.2
Electrical Conductivity at 20 °C	µS/cm	10	ISO 17025	870	1000	1100	1400	4400
Sulphate as SO ₄	µg/l	45	ISO 17025	63100	60200	36900	45900	40100
Sulphate as SO ₄	mg/l	0.045	ISO 17025	63.1	60.2	36.9	45.9	40.1
Chloride	mg/l	0.15	ISO 17025	99	130	150	260	1300
Ammonium as NH ₄	µg/l	15	ISO 17025	38	1100	1100	250	2900
Alkalinity	mgCaCO ₃ /l	3	ISO 17025	450	480	490	250	620
Dissolved Oxygen	mg/l	1	NONE	3.4	3.5	1.8	4.7	2.4

Total Phenols

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

Speciated PAHs

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

Total PAH

Total EPA-16 PAHs	µg/l	0.16	ISO 17025	< 0.16	< 0.16	< 0.16	< 0.16	< 0.16
-------------------	------	------	-----------	--------	--------	--------	--------	--------

Heavy Metals / Metalloids

Arsenic (dissolved)	µg/l	0.15	ISO 17025	0.20	3.39	6.41	1.37	0.53
Cadmium (dissolved)	µg/l	0.02	ISO 17025	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
Calcium (dissolved)	mg/l	0.012	ISO 17025	150	140	130	150	250
Chromium (hexavalent)	µg/l	5	ISO 17025	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Chromium (III)	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chromium (dissolved)	µg/l	0.2	ISO 17025	0.3	< 0.2	< 0.2	0.7	< 0.2
Copper (dissolved)	µg/l	0.5	ISO 17025	3.4	4.4	1.9	4.0	2.4
Lead (dissolved)	µg/l	0.2	ISO 17025	0.5	1.8	< 0.2	0.4	0.2
Mercury (dissolved)	µg/l	0.05	ISO 17025	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Nickel (dissolved)	µg/l	0.5	ISO 17025	4.2	1.9	2.5	1.4	2.5
Selenium (dissolved)	µg/l	0.6	ISO 17025	1.0	0.9	1.4	6.7	5.7
Zinc (dissolved)	µg/l	0.5	ISO 17025	2.4	3.3	2.4	2.4	1.8



Analytical Report Number: 18-78223

Project / Site name: SSE Site, Vastern Road, Reading

Your Order No: C5925

Lab Sample Number				920651	920652	920653	920654	920655
Sample Reference				WS1019	BH1001	BH1002C	BH1003E	BH1004
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				2.27	2.30	2.38	2.62	2.17
Date Sampled				07/03/2018	07/03/2018	07/03/2018	07/03/2018	07/03/2018
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	Units	Limit of detection	Accreditation Status					

Monoaromatics

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

Petroleum Hydrocarbons

TPH-CWG - Aliphatic >C5 - C6	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >C6 - C8	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >C8 - C10	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >C10 - C12	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >C12 - C16	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >C16 - C21	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >C21 - C35	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic (C5 - C35)	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10

TPH-CWG - Aromatic >C5 - C7	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C7 - C8	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C8 - C10	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C10 - C12	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C12 - C16	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C16 - C21	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C21 - C35	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic (C5 - C35)	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10



Analytical Report Number: 18-78223

Project / Site name: SSE Site, Vastern Road, Reading

Your Order No: C5925

Lab Sample Number				920651	920652	920653	920654	920655
Sample Reference				WS1019	BH1001	BH1002C	BH1003E	BH1004
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				2.27	2.30	2.38	2.62	2.17
Date Sampled				07/03/2018	07/03/2018	07/03/2018	07/03/2018	07/03/2018
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	Units	Limit of detection	Accreditation Status					

VOCs

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

Iss No 18-78223-1 SSE Site, Vastern Road, Reading C5925

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.

Page 10 of 21



Analytical Report Number: 18-78223

Project / Site name: SSE Site, Vastern Road, Reading

Your Order No: C5925

Lab Sample Number				920651	920652	920653	920654	920655
Sample Reference				WS1019	BH1001	BH1002C	BH1003E	BH1004
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				2.27	2.30	2.38	2.62	2.17
Date Sampled				07/03/2018	07/03/2018	07/03/2018	07/03/2018	07/03/2018
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	Units	Limit of detection	Accreditation Status					

VOCs TICs

VOCs TICs Compound Name		10	NONE	ND	-	-	-	-
VOC % Match	%	10	NONE	-	-	-	-	-

SVOCs

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

Iss No 18-78223-1 SSE Site, Vastern Road, Reading C5925

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.

Page 11 of 21



Analytical Report Number: 18-78223

Project / Site name: SSE Site, Vastern Road, Reading

Your Order No: C5925

Lab Sample Number				920651	920652	920653	920654	920655
Sample Reference				WS1019	BH1001	BH1002C	BH1003E	BH1004
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				2.27	2.30	2.38	2.62	2.17
Date Sampled				07/03/2018	07/03/2018	07/03/2018	07/03/2018	07/03/2018
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	Units	Limit of detection	Accreditation Status					
Benzo(ghi)perylene	µg/l	0.01	ISO 17025	< 0.01	-	-	-	-



Analytical Report Number: 18-78223

Project / Site name: SSE Site, Vastern Road, Reading

Your Order No: C5925

Lab Sample Number				920651	920652	920653	920654	920655
Sample Reference				WS1019	BH1001	BH1002C	BH1003E	BH1004
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				2.27	2.30	2.38	2.62	2.17
Date Sampled				07/03/2018	07/03/2018	07/03/2018	07/03/2018	07/03/2018
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	Units	Limit of detection	Accreditation Status					

SVOCs TICs

SVOCs TICs Compound Name		N/A	NONE	ND	-	-	-	-
SVOC % Match	%	N/A	NONE	0	-	-	-	-

PCBs by GC-MS

PCB Congener 28	µg/l	0.02	NONE	< 0.02	-	-	-	-
PCB Congener 52	µg/l	0.02	NONE	< 0.02	-	-	-	-
PCB Congener 101	µg/l	0.02	NONE	< 0.02	-	-	-	-
PCB Congener 118	µg/l	0.02	NONE	< 0.02	-	-	-	-
PCB Congener 138	µg/l	0.02	NONE	< 0.02	-	-	-	-
PCB Congener 153	µg/l	0.02	NONE	< 0.02	-	-	-	-
PCB Congener 180	µg/l	0.02	NONE	< 0.02	-	-	-	-

PCBs by GC-MS

Total PCBs	µg/l	0.14	NONE	< 0.14	-	-	-	-
------------	------	------	------	--------	---	---	---	---

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



Analytical Report Number: 18-78223

Project / Site name: SSE Site, Vastern Road, Reading

Your Order No: C5925

Lab Sample Number				920656	920657			
Sample Reference				BH2001	BH2002			
Sample Number				None Supplied	None Supplied			
Depth (m)				2.39	2.35			
Date Sampled				07/03/2018	07/03/2018			
Time Taken				None Supplied	None Supplied			
Analytical Parameter (Water Analysis)	Units	Limit of detection	Accreditation Status					

General Inorganics

pH	pH Units	N/A	ISO 17025	7.5	7.3			
Electrical Conductivity at 20 °C	µS/cm	10	ISO 17025	1500	850			
Sulphate as SO ₄	µg/l	45	ISO 17025	36400	23300			
Sulphate as SO ₄	mg/l	0.045	ISO 17025	36.4	23.3			
Chloride	mg/l	0.15	ISO 17025	190	41			
Ammonium as NH ₄	µg/l	15	ISO 17025	520	130			
Alkalinity	mgCaCO ₃ /l	3	ISO 17025	640	640			
Dissolved Oxygen	mg/l	1	NONE	2.1	< 1.0			

Total Phenols

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

Speciated PAHs

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

Total PAH

Total EPA-16 PAHs	µg/l	0.16	ISO 17025	< 0.16	< 0.16			
-------------------	------	------	-----------	--------	--------	--	--	--

Heavy Metals / Metalloids

Arsenic (dissolved)	µg/l	0.15	ISO 17025	2.78	1.51			
Cadmium (dissolved)	µg/l	0.02	ISO 17025	0.03	0.03			
Calcium (dissolved)	mg/l	0.012	ISO 17025	140	160			
Chromium (hexavalent)	µg/l	5	ISO 17025	< 5.0	< 5.0			
Chromium (III)	µg/l	1	NONE	< 1.0	< 1.0			
Chromium (dissolved)	µg/l	0.2	ISO 17025	0.4	< 0.2			
Copper (dissolved)	µg/l	0.5	ISO 17025	3.3	1.3			
Lead (dissolved)	µg/l	0.2	ISO 17025	0.4	0.5			
Mercury (dissolved)	µg/l	0.05	ISO 17025	< 0.05	< 0.05			
Nickel (dissolved)	µg/l	0.5	ISO 17025	5.7	2.5			
Selenium (dissolved)	µg/l	0.6	ISO 17025	6.9	1.4			
Zinc (dissolved)	µg/l	0.5	ISO 17025	3.0	6.1			



Analytical Report Number: 18-78223

Project / Site name: SSE Site, Vastern Road, Reading

Your Order No: C5925

Lab Sample Number				920656	920657			
Sample Reference				BH2001	BH2002			
Sample Number				None Supplied	None Supplied			
Depth (m)				2.39	2.35			
Date Sampled				07/03/2018	07/03/2018			
Time Taken				None Supplied	None Supplied			
Analytical Parameter (Water Analysis)	Units	Limit of detection	Accreditation Status					

Monoaromatics

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

Petroleum Hydrocarbons

TPH-CWG - Aliphatic >C5 - C6	µg/l	1	ISO 17025	< 1.0	< 1.0			
TPH-CWG - Aliphatic >C6 - C8	µg/l	1	ISO 17025	< 1.0	< 1.0			
TPH-CWG - Aliphatic >C8 - C10	µg/l	1	ISO 17025	< 1.0	< 1.0			
TPH-CWG - Aliphatic >C10 - C12	µg/l	10	NONE	< 10	< 10			
TPH-CWG - Aliphatic >C12 - C16	µg/l	10	NONE	< 10	< 10			
TPH-CWG - Aliphatic >C16 - C21	µg/l	10	NONE	< 10	< 10			
TPH-CWG - Aliphatic >C21 - C35	µg/l	10	NONE	< 10	< 10			
TPH-CWG - Aliphatic (C5 - C35)	µg/l	10	NONE	< 10	< 10			

TPH-CWG - Aromatic >C5 - C7	µg/l	1	ISO 17025	< 1.0	< 1.0			
TPH-CWG - Aromatic >C7 - C8	µg/l	1	ISO 17025	< 1.0	< 1.0			
TPH-CWG - Aromatic >C8 - C10	µg/l	1	ISO 17025	< 1.0	< 1.0			
TPH-CWG - Aromatic >C10 - C12	µg/l	10	NONE	< 10	< 10			
TPH-CWG - Aromatic >C12 - C16	µg/l	10	NONE	< 10	< 10			
TPH-CWG - Aromatic >C16 - C21	µg/l	10	NONE	< 10	< 10			
TPH-CWG - Aromatic >C21 - C35	µg/l	10	NONE	< 10	< 10			
TPH-CWG - Aromatic (C5 - C35)	µg/l	10	NONE	< 10	< 10			



Analytical Report Number: 18-78223

Project / Site name: SSE Site, Vastern Road, Reading

Your Order No: C5925

Lab Sample Number				920656	920657			
Sample Reference				BH2001	BH2002			
Sample Number				None Supplied	None Supplied			
Depth (m)				2.39	2.35			
Date Sampled				07/03/2018	07/03/2018			
Time Taken				None Supplied	None Supplied			
Analytical Parameter (Water Analysis)	Units	Limit of detection	Accreditation Status					

VOCs

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

Iss No 18-78223-1 SSE Site, Vastern Road, Reading C5925

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.

Page 16 of 21



Analytical Report Number: 18-78223

Project / Site name: SSE Site, Vastern Road, Reading

Your Order No: C5925

Lab Sample Number				920656	920657			
Sample Reference				BH2001	BH2002			
Sample Number				None Supplied	None Supplied			
Depth (m)				2.39	2.35			
Date Sampled				07/03/2018	07/03/2018			
Time Taken				None Supplied	None Supplied			
Analytical Parameter (Water Analysis)	Units	Limit of detection	Accreditation Status					

VOCs TICs

VOCs TICs Compound Name		10	NONE	ND	ND			
VOC % Match	%	10	NONE	-	-			

SVOCs

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

Iss No 18-78223-1 SSE Site, Vastern Road, Reading C5925

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.

Page 17 of 21



Analytical Report Number: 18-78223

Project / Site name: SSE Site, Vastern Road, Reading

Your Order No: C5925

Lab Sample Number				920656	920657			
Sample Reference				BH2001	BH2002			
Sample Number				None Supplied	None Supplied			
Depth (m)				2.39	2.35			
Date Sampled				07/03/2018	07/03/2018			
Time Taken				None Supplied	None Supplied			
Analytical Parameter (Water Analysis)	Units	Limit of detection	Accreditation Status					
Benzo(ghi)perylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01			



Analytical Report Number: 18-78223

Project / Site name: SSE Site, Vastern Road, Reading

Your Order No: C5925

Lab Sample Number				920656	920657			
Sample Reference				BH2001	BH2002			
Sample Number				None Supplied	None Supplied			
Depth (m)				2.39	2.35			
Date Sampled				07/03/2018	07/03/2018			
Time Taken				None Supplied	None Supplied			
Analytical Parameter (Water Analysis)	Units	Limit of detection	Accreditation Status					

SVOCs TICs

SVOCs TICs Compound Name		N/A	NONE	0	0			
SVOC % Match	%	N/A	NONE	0	0			

PCBs by GC-MS

PCB Congener 28	µg/l	0.02	NONE	< 0.02	< 0.02			
PCB Congener 52	µg/l	0.02	NONE	< 0.02	< 0.02			
PCB Congener 101	µg/l	0.02	NONE	< 0.02	< 0.02			
PCB Congener 118	µg/l	0.02	NONE	< 0.02	< 0.02			
PCB Congener 138	µg/l	0.02	NONE	< 0.02	< 0.02			
PCB Congener 153	µg/l	0.02	NONE	< 0.02	< 0.02			
PCB Congener 180	µg/l	0.02	NONE	< 0.02	< 0.02			

PCBs by GC-MS

Total PCBs	µg/l	0.14	NONE	< 0.14	< 0.14			
------------	------	------	------	--------	--------	--	--	--

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



Analytical Report Number : 18-78223

Project / Site name: SSE Site, Vastern Road, Reading

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

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Alkalinity in Water	Determination of Alkalinity by discrete analyser (colorimetry). Accredited matrices: SW, PW, GW.	In house method based on MEWAM & USEPA Method 310.2.	L082-PL	W	ISO 17025
Ammonium as NH ₄ in water	Determination of Ammonium/Ammonia/Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method. Accredited matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	ISO 17025
BTEX and MTBE in water (Monoaromatics)	Determination of BTEX and MTBE in water by headspace GC-MS. Accredited matrices: SW PW GW	In-house method based on USEPA8260	L073B-PL	W	ISO 17025
Chloride in water	Determination of Chloride colorimetrically by discrete analyser.	In house based on MEWAM Method ISBN 0117516260. Accredited matrices: SW, PW, GW.	L082-PL	W	ISO 17025
Cr (III) in water	In-house method by calculation from total Cr and Cr VI.	In-house method by calculation	L080-PL	W	NONE
Dissolved Oxygen in water	Determination of dissolved oxygen.	In-house method	L086-PL	W	NONE
Electrical conductivity at 20oC of water	Determination of electrical conductivity in water by electrometric measurement. Accredited Matrices SW, GW, PW	In-house method	L031-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
Metals in water by ICP-OES (dissolved)	Determination of metals in water by acidification followed by ICP-OES. Accredited Matrices SW, GW, PW, PrW.(Al, Cu,Fe,Zn).	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L039-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
PCB's By GC-MS in water	Determination of PCB by extraction with acetone and hexane followed by GC-MS.	In-house method based on USEPA 8082	L028-PL	W	NONE
pH at 20oC in water (automated)	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	L099-PL	W	ISO 17025
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	L102B-PL	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	L102B-PL	W	ISO 17025
Sulphate in water	Determination of sulphate in water by acidification followed by ICP-OES. Accredited matrices: SW PW GW, PrW.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L039-PL	W	ISO 17025



Analytical Report Number : 18-78223

Project / Site name: SSE Site, Vastern Road, Reading

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

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
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-PL	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	L073B-PL	W	NONE
TPH Chromatogram	TPH Chromatogram.	In-house method	L070-PL	W	NONE
TPHCWG (Waters)	Determination of dichloromethane extractable hydrocarbons in water by GC-MS, speciation by interpretation.	In-house method	L070-PL	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	L073B-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 30oC.

**Jon Ind**

CC Ground Investigation Ltd
Unit A2
Innsworth Tech Park
Innsworth Lane
Gloucester
GL3 1DL

t: 01452 739 165
f: 01452 739 220
e: jon@ccground.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 : 18-78389

Project / Site name:	SSE Site, Vastern Road, Reading	Samples received on:	09/03/2018
Your job number:	C5925	Samples instructed on:	09/03/2018
Your order number:	C5925	Analysis completed by:	19/03/2018
Report Issue Number:	1	Report issued on:	19/03/2018
Samples Analysed:	7 water samples		

Signed: 

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

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

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: 18-78389

Project / Site name: SSE Site, Vastern Road, Reading

Your Order No: C5925

Lab Sample Number				921465	921466	921467	921468	921469
Sample Reference				BH2003	BH2004	BH2005	BH2006	BH1005
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				2.43	2.52	2.50	1.60	2.56
Date Sampled				08/03/2018	08/03/2018	08/03/2018	08/03/2018	08/03/2018
Time Taken				None Supplied	None Supplied	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	7.6	7.6	6.9	7.2	7.3
Electrical Conductivity at 20 °C	µS/cm	10	ISO 17025	810	660	2500	3000	1400
Sulphate as SO ₄	µg/l	45	ISO 17025	18700	18500	39000	73500	61900
Sulphate as SO ₄	mg/l	0.045	ISO 17025	18.7	18.5	39.0	73.5	61.9
Chloride	mg/l	0.15	ISO 17025	130	61	580	740	280
Ammonium as NH ₄	µg/l	15	ISO 17025	250	250	220	320	26
Alkalinity	mgCaCO ₃ /l	3	ISO 17025	400	390	680	620	410
Dissolved Oxygen	mg/l	1	NONE	9.7	9.8	9.3	9.6	8.7

Total Phenols

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

Speciated PAHs

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

Total PAH

Total EPA-16 PAHs	µg/l	0.16	ISO 17025	< 0.16	< 0.16	< 0.16	< 0.16	< 0.16
-------------------	------	------	-----------	--------	--------	--------	--------	--------

Heavy Metals / Metalloids

Arsenic (dissolved)	µg/l	0.15	ISO 17025	1.91	2.36	3.55	0.93	0.62
Cadmium (dissolved)	µg/l	0.02	ISO 17025	0.06	0.09	0.12	< 0.02	0.03
Calcium (dissolved)	mg/l	0.012	ISO 17025	120	120	320	220	170
Chromium (hexavalent)	µg/l	5	ISO 17025	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Chromium (III)	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chromium (dissolved)	µg/l	0.2	ISO 17025	0.6	0.6	< 0.2	0.3	< 0.2
Copper (dissolved)	µg/l	0.5	ISO 17025	11	8.3	4.4	0.7	3.5
Lead (dissolved)	µg/l	0.2	ISO 17025	0.5	0.8	0.5	3.6	0.4
Mercury (dissolved)	µg/l	0.05	ISO 17025	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Nickel (dissolved)	µg/l	0.5	ISO 17025	1.7	4.7	14	3.4	5.2
Selenium (dissolved)	µg/l	0.6	ISO 17025	2.5	2.3	3.0	2.5	1.5
Zinc (dissolved)	µg/l	0.5	ISO 17025	7.8	12	160	13	4.4



Analytical Report Number: 18-78389

Project / Site name: SSE Site, Vastern Road, Reading

Your Order No: C5925

Lab Sample Number				921465	921466	921467	921468	921469
Sample Reference				BH2003	BH2004	BH2005	BH2006	BH1005
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				2.43	2.52	2.50	1.60	2.56
Date Sampled				08/03/2018	08/03/2018	08/03/2018	08/03/2018	08/03/2018
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	Units	Limit of detection	Accreditation Status					

Monoaromatics

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

Petroleum Hydrocarbons

TPH-CWG - Aliphatic >C5 - C6	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >C6 - C8	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >C8 - C10	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >C10 - C12	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >C12 - C16	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >C16 - C21	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >C21 - C35	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic (C5 - C35)	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10

TPH-CWG - Aromatic >C5 - C7	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C7 - C8	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C8 - C10	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C10 - C12	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C12 - C16	µg/l	10	NONE	< 10	< 10	730	27	47
TPH-CWG - Aromatic >C16 - C21	µg/l	10	NONE	< 10	< 10	2700	61	120
TPH-CWG - Aromatic >C21 - C35	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic (C5 - C35)	µg/l	10	NONE	< 10	< 10	3400	88	170



Analytical Report Number: 18-78389

Project / Site name: SSE Site, Vastern Road, Reading

Your Order No: C5925

Lab Sample Number				921465	921466	921467	921468	921469
Sample Reference				BH2003	BH2004	BH2005	BH2006	BH1005
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				2.43	2.52	2.50	1.60	2.56
Date Sampled				08/03/2018	08/03/2018	08/03/2018	08/03/2018	08/03/2018
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	Units	Limit of detection	Accreditation Status					

VOCs

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

Iss No 18-78389-1 SSE Site, Vastern Road, Reading C5925

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.

Page 4 of 15



Analytical Report Number: 18-78389

Project / Site name: SSE Site, Vastern Road, Reading

Your Order No: C5925

Lab Sample Number				921465	921466	921467	921468	921469
Sample Reference				BH2003	BH2004	BH2005	BH2006	BH1005
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				2.43	2.52	2.50	1.60	2.56
Date Sampled				08/03/2018	08/03/2018	08/03/2018	08/03/2018	08/03/2018
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	Units	Limit of detection	Accreditation Status					

VOCs TICs

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



Analytical Report Number: 18-78389

Project / Site name: SSE Site, Vastern Road, Reading

Your Order No: C5925

Lab Sample Number				921465	921466	921467	921468	921469
Sample Reference				BH2003	BH2004	BH2005	BH2006	BH1005
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				2.43	2.52	2.50	1.60	2.56
Date Sampled				08/03/2018	08/03/2018	08/03/2018	08/03/2018	08/03/2018
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	Units	Limit of detection	Accreditation Status					

SVOCs

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



Analytical Report Number: 18-78389

Project / Site name: SSE Site, Vastern Road, Reading

Your Order No: C5925

Lab Sample Number				921465	921466	921467	921468	921469
Sample Reference				BH2003	BH2004	BH2005	BH2006	BH1005
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				2.43	2.52	2.50	1.60	2.56
Date Sampled				08/03/2018	08/03/2018	08/03/2018	08/03/2018	08/03/2018
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)				Units	Limit of detection	Accreditation Status		

SVOCs TICs

SVOCs TICs Compound Name		N/A	NONE	None Detected	None Detected	Benzene, (1-propylnonyl)-	Benzene, (1-butyldecyl)-	-
SVOC % Match	%	N/A	NONE	0	0	97	97	-
SVOCs TICs Compound Name		N/A	NONE	-	-	1H-Isoindole-1,3(2H)-dione	1R-.alpha.-Pinene	-
SVOC % Match	%	N/A	NONE	-	-	96	96	-
SVOCs TICs Compound Name		N/A	NONE	-	-	Benzene, (1-butyldecyl)-	Benzene, (1-propylnonyl)-	-
SVOC % Match	%	N/A	NONE	-	-	96	96	-
SVOCs TICs Compound Name		N/A	NONE	-	-	Benzene, (1-ethyldecyl)-	Benzene, (1-butylheptyl)-	-
SVOC % Match	%	N/A	NONE	-	-	96	95	-
SVOCs TICs Compound Name		N/A	NONE	-	-	Benzenepropanoic acid, .beta.-methyl-, (S)-	Benzene, (1-butyldecyl)-	-
SVOC % Match	%	N/A	NONE	-	-	95	95	-
SVOCs TICs Compound Name		N/A	NONE	-	-	Benzene, (1-butylhexyl)-	Benzene, (1-propyldecyl)-	-
SVOC % Match	%	N/A	NONE	-	-	95	95	-
SVOCs TICs Compound Name		N/A	NONE	-	-	Benzene, (1-butylheptyl)-	Benzene, (1-ethylundecyl)-	-
SVOC % Match	%	N/A	NONE	-	-	95	95	-
SVOCs TICs Compound Name		N/A	NONE	-	-	Benzene, (1-pentylheptyl)-	1H-Isoindole-1,3(2H)-dione	-
SVOC % Match	%	N/A	NONE	-	-	95	94	-
SVOCs TICs Compound Name		N/A	NONE	-	-	Benzene, (1-butyldecyl)-	Benzene, (1-ethyldecyl)-	-
SVOC % Match	%	N/A	NONE	-	-	95	94	-
SVOCs TICs Compound Name		N/A	NONE	-	-	Benzene, (1-propyldecyl)-	Benzene, (1-pentylheptyl)-	-
SVOC % Match	%	N/A	NONE	-	-	95	94	-

PCBs by GC-MS

PCB Congener 28	µg/l	0.02	NONE	< 0.02	< 0.02	< 0.02	< 0.02	-
PCB Congener 52	µg/l	0.02	NONE	< 0.02	< 0.02	< 0.02	< 0.02	-
PCB Congener 101	µg/l	0.02	NONE	< 0.02	< 0.02	< 0.02	< 0.02	-
PCB Congener 118	µg/l	0.02	NONE	< 0.02	< 0.02	< 0.02	< 0.02	-
PCB Congener 138	µg/l	0.02	NONE	< 0.02	< 0.02	< 0.02	< 0.02	-
PCB Congener 153	µg/l	0.02	NONE	< 0.02	< 0.02	< 0.02	< 0.02	-
PCB Congener 180	µg/l	0.02	NONE	< 0.02	< 0.02	< 0.02	< 0.02	-

PCBs by GC-MS

Total PCBs	µg/l	0.14	NONE	< 0.14	< 0.14	< 0.14	< 0.14	-
------------	------	------	------	--------	--------	--------	--------	---

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

Iss No 18-78389-1 SSE Site, Vastern Road, Reading C5925

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.

Page 7 of 15



Analytical Report Number: 18-78389

Project / Site name: SSE Site, Vastern Road, Reading

Your Order No: C5925

Lab Sample Number				921470	921471			
Sample Reference				SW1001	SW1002			
Sample Number				None Supplied	None Supplied			
Depth (m)				0.50	0.50			
Date Sampled				08/03/2018	08/03/2018			
Time Taken				None Supplied	None Supplied			
Analytical Parameter (Water Analysis)	Units	Limit of detection	Accreditation Status					

General Inorganics

pH	pH Units	N/A	ISO 17025	8.1	8.1			
Electrical Conductivity at 20 °C	µS/cm	10	ISO 17025	680	680			
Sulphate as SO ₄	µg/l	45	ISO 17025	54200	54900			
Sulphate as SO ₄	mg/l	0.045	ISO 17025	54.2	54.9			
Chloride	mg/l	0.15	ISO 17025	66	64			
Ammonium as NH ₄	µg/l	15	ISO 17025	110	270			
Alkalinity	mgCaCO ₃ /l	3	ISO 17025	230	230			
Dissolved Oxygen	mg/l	1	NONE	10	10			

Total Phenols

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

Speciated PAHs

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

Total PAH

Total EPA-16 PAHs	µg/l	0.16	ISO 17025	< 0.16	< 0.16			
-------------------	------	------	-----------	--------	--------	--	--	--

Heavy Metals / Metalloids

Arsenic (dissolved)	µg/l	0.15	ISO 17025	0.96	1.27			
Cadmium (dissolved)	µg/l	0.02	ISO 17025	0.03	0.05			
Calcium (dissolved)	mg/l	0.012	ISO 17025	110	100			
Chromium (hexavalent)	µg/l	5	ISO 17025	< 5.0	< 5.0			
Chromium (III)	µg/l	1	NONE	< 1.0	< 1.0			
Chromium (dissolved)	µg/l	0.2	ISO 17025	0.6	0.8			
Copper (dissolved)	µg/l	0.5	ISO 17025	6.1	6.7			
Lead (dissolved)	µg/l	0.2	ISO 17025	0.7	0.8			
Mercury (dissolved)	µg/l	0.05	ISO 17025	< 0.05	< 0.05			
Nickel (dissolved)	µg/l	0.5	ISO 17025	1.9	2.5			
Selenium (dissolved)	µg/l	0.6	ISO 17025	1.2	1.2			
Zinc (dissolved)	µg/l	0.5	ISO 17025	4.9	4.5			



Analytical Report Number: 18-78389

Project / Site name: SSE Site, Vastern Road, Reading

Your Order No: C5925

Lab Sample Number				921470	921471			
Sample Reference				SW1001	SW1002			
Sample Number				None Supplied	None Supplied			
Depth (m)				0.50	0.50			
Date Sampled				08/03/2018	08/03/2018			
Time Taken				None Supplied	None Supplied			
Analytical Parameter (Water Analysis)	Units	Limit of detection	Accreditation Status					

Monoaromatics

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

Petroleum Hydrocarbons

TPH-CWG - Aliphatic >C5 - C6	µg/l	1	ISO 17025	< 1.0	< 1.0			
TPH-CWG - Aliphatic >C6 - C8	µg/l	1	ISO 17025	< 1.0	< 1.0			
TPH-CWG - Aliphatic >C8 - C10	µg/l	1	ISO 17025	< 1.0	< 1.0			
TPH-CWG - Aliphatic >C10 - C12	µg/l	10	NONE	< 10	< 10			
TPH-CWG - Aliphatic >C12 - C16	µg/l	10	NONE	< 10	< 10			
TPH-CWG - Aliphatic >C16 - C21	µg/l	10	NONE	< 10	< 10			
TPH-CWG - Aliphatic >C21 - C35	µg/l	10	NONE	< 10	< 10			
TPH-CWG - Aliphatic (C5 - C35)	µg/l	10	NONE	< 10	< 10			

TPH-CWG - Aromatic >C5 - C7	µg/l	1	ISO 17025	< 1.0	< 1.0			
TPH-CWG - Aromatic >C7 - C8	µg/l	1	ISO 17025	< 1.0	< 1.0			
TPH-CWG - Aromatic >C8 - C10	µg/l	1	ISO 17025	< 1.0	< 1.0			
TPH-CWG - Aromatic >C10 - C12	µg/l	10	NONE	< 10	< 10			
TPH-CWG - Aromatic >C12 - C16	µg/l	10	NONE	< 10	< 10			
TPH-CWG - Aromatic >C16 - C21	µg/l	10	NONE	< 10	< 10			
TPH-CWG - Aromatic >C21 - C35	µg/l	10	NONE	< 10	< 10			
TPH-CWG - Aromatic (C5 - C35)	µg/l	10	NONE	< 10	< 10			



Analytical Report Number: 18-78389

Project / Site name: SSE Site, Vastern Road, Reading

Your Order No: C5925

Lab Sample Number				921470	921471			
Sample Reference				SW1001	SW1002			
Sample Number				None Supplied	None Supplied			
Depth (m)				0.50	0.50			
Date Sampled				08/03/2018	08/03/2018			
Time Taken				None Supplied	None Supplied			
Analytical Parameter (Water Analysis)	Units	Limit of detection	Accreditation Status					

VOCs

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

Iss No 18-78389-1 SSE Site, Vastern Road, Reading C5925

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.

Page 10 of 15



Analytical Report Number: 18-78389

Project / Site name: SSE Site, Vastern Road, Reading

Your Order No: C5925

Lab Sample Number				921470	921471			
Sample Reference				SW1001	SW1002			
Sample Number				None Supplied	None Supplied			
Depth (m)				0.50	0.50			
Date Sampled				08/03/2018	08/03/2018			
Time Taken				None Supplied	None Supplied			
Analytical Parameter (Water Analysis)	Units	Limit of detection	Accreditation Status					

VOCs TICs

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



Analytical Report Number: 18-78389

Project / Site name: SSE Site, Vastern Road, Reading

Your Order No: C5925

Lab Sample Number				921470	921471			
Sample Reference				SW1001	SW1002			
Sample Number				None Supplied	None Supplied			
Depth (m)				0.50	0.50			
Date Sampled				08/03/2018	08/03/2018			
Time Taken				None Supplied	None Supplied			
Analytical Parameter (Water Analysis)	Units	Limit of detection	Accreditation Status					

SVOCs

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



Analytical Report Number: 18-78389

Project / Site name: SSE Site, Vastern Road, Reading

Your Order No: C5925

Lab Sample Number				921470	921471			
Sample Reference				SW1001	SW1002			
Sample Number				None Supplied	None Supplied			
Depth (m)				0.50	0.50			
Date Sampled				08/03/2018	08/03/2018			
Time Taken				None Supplied	None Supplied			
Analytical Parameter (Water Analysis)	Units	Limit of detection	Accreditation Status					

SVOCs TICs

SVOCs TICs Compound Name		N/A	NONE	None Detected	None Detected			
SVOC % Match	%	N/A	NONE	0	0			
SVOCs TICs Compound Name		N/A	NONE	-	-			
SVOC % Match	%	N/A	NONE	-	-			
SVOCs TICs Compound Name		N/A	NONE	-	-			
SVOC % Match	%	N/A	NONE	-	-			
SVOCs TICs Compound Name		N/A	NONE	-	-			
SVOC % Match	%	N/A	NONE	-	-			
SVOCs TICs Compound Name		N/A	NONE	-	-			
SVOC % Match	%	N/A	NONE	-	-			
SVOCs TICs Compound Name		N/A	NONE	-	-			
SVOC % Match	%	N/A	NONE	-	-			
SVOCs TICs Compound Name		N/A	NONE	-	-			
SVOC % Match	%	N/A	NONE	-	-			
SVOCs TICs Compound Name		N/A	NONE	-	-			
SVOC % Match	%	N/A	NONE	-	-			
SVOCs TICs Compound Name		N/A	NONE	-	-			
SVOC % Match	%	N/A	NONE	-	-			

PCBs by GC-MS

PCB Congener 28	µg/l	0.02	NONE	< 0.02	< 0.02			
PCB Congener 52	µg/l	0.02	NONE	< 0.02	< 0.02			
PCB Congener 101	µg/l	0.02	NONE	< 0.02	< 0.02			
PCB Congener 118	µg/l	0.02	NONE	< 0.02	< 0.02			
PCB Congener 138	µg/l	0.02	NONE	< 0.02	< 0.02			
PCB Congener 153	µg/l	0.02	NONE	< 0.02	< 0.02			
PCB Congener 180	µg/l	0.02	NONE	< 0.02	< 0.02			

PCBs by GC-MS

Total PCBs	µg/l	0.14	NONE	< 0.14	< 0.14			
------------	------	------	------	--------	--------	--	--	--

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



Analytical Report Number : 18-78389

Project / Site name: SSE Site, Vastern Road, Reading

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

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Alkalinity in Water	Determination of Alkalinity by discrete analyser (colorimetry). Accredited matrices: SW, PW, GW.	In house method based on MEWAM & USEPA Method 310.2.	L082-PL	W	ISO 17025
Ammonium as NH ₄ in water	Determination of Ammonium/Ammonia/Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method. Accredited matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	ISO 17025
BTEX and MTBE in water (Monoaromatics)	Determination of BTEX and MTBE in water by headspace GC-MS. Accredited matrices: SW PW GW	In-house method based on USEPA8260	L073B-PL	W	ISO 17025
Chloride in water	Determination of Chloride colorimetrically by discrete analyser.	In house based on MEWAM Method ISBN 0117516260. Accredited matrices: SW, PW, GW.	L082-PL	W	ISO 17025
Cr (III) in water	In-house method by calculation from total Cr and Cr VI.	In-house method by calculation	L080-PL	W	NONE
Dissolved Oxygen in water	Determination of dissolved oxygen.	In-house method	L086-PL	W	NONE
Electrical conductivity at 20oC of water	Determination of electrical conductivity in water by electrometric measurement. Accredited Matrices SW, GW, PW	In-house method	L031-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
Metals in water by ICP-OES (dissolved)	Determination of metals in water by acidification followed by ICP-OES. Accredited Matrices SW, GW, PW, PrW.(Al, Cu,Fe,Zn).	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L039-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
PCB's By GC-MS in water	Determination of PCB by extraction with acetone and hexane followed by GC-MS.	In-house method based on USEPA 8082	L028-PL	W	NONE
pH at 20oC in water (automated)	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	L099-PL	W	ISO 17025
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	L102B-PL	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	L102B-PL	W	ISO 17025
Sulphate in water	Determination of sulphate in water by acidification followed by ICP-OES. Accredited matrices: SW PW GW, PrW.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L039-PL	W	ISO 17025
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-PL	W	NONE

Iss No 18-78389-1 SSE Site, Vastern Road, Reading C5925

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.

Page 14 of 15



Analytical Report Number : 18-78389

Project / Site name: SSE Site, Vastern Road, Reading

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

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
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	L073B-PL	W	NONE
TPHCWG (Waters)	Determination of dichloromethane extractable hydrocarbons in water by GC-MS, speciation by interpretation.	In-house method	L070-PL	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	L073B-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 30oC.

**Jon Ind**

CC Ground Investigation Ltd
Unit A2
Innsworth Tech Park
Innsworth Lane
Gloucester
GL3 1DL

t: 01452 739 165
f: 01452 739 220
e: jon@ccground.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 : 18-81102

Project / Site name:	SSE Site, Vestern Road, Reading	Samples received on:	05/04/2018
Your job number:	C5925	Samples instructed on:	05/04/2018
Your order number:	C5925-JI	Analysis completed by:	11/04/2018
Report Issue Number:	1	Report issued on:	11/04/2018
Samples Analysed:	17 water samples		

Signed:

Jordan Hill
Reporting Manager
For & on behalf of i2 Analytical Ltd.

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

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: 18-81102

Project / Site name: SSE Site, Vestern Road, Reading

Your Order No: C5925-JI

Lab Sample Number				936887	936888	936889	936890	936891
Sample Reference				WS1006	WS1005	WS1004	WS1003	WS1007
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				1.91	1.47	2.07	1.91	1.03
Date Sampled				04/04/2018	04/04/2018	04/04/2018	04/04/2018	04/04/2018
Time Taken				None Supplied	None Supplied	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	7.0	8.1	7.3	7.6	7.8
Electrical Conductivity at 20 °C	µS/cm	10	ISO 17025	1700	3400	1500	680	1400
Sulphate as SO ₄	µg/l	45	ISO 17025	177000	400000	101000	49300	80300
Sulphate as SO ₄	mg/l	0.045	ISO 17025	177	400	101	49.3	80.3
Chloride	mg/l	0.15	ISO 17025	310	810	320	62	88
Ammonium as NH ₄	µg/l	15	ISO 17025	840	4300	1200	1400	1500
Dissolved Organic Carbon (DOC)	mg/l	0.1	NONE	9.71	31.7	5.79	4.86	6.48
Alkalinity	mgCaCO ₃ /l	3	ISO 17025	550	620	460	350	500
Dissolved Oxygen	mg/l	1	NONE	4.3	7.4	8.5	4.9	3.9

Total Phenols

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

Speciated PAHs

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

Total PAH

Total EPA-16 PAHs	µg/l	0.16	ISO 17025	< 0.16	< 0.16	< 0.16	< 0.16	< 0.16
-------------------	------	------	-----------	--------	--------	--------	--------	--------

Heavy Metals / Metalloids

Arsenic (dissolved)	µg/l	0.15	ISO 17025	1.92	8.62	1.51	2.21	9.48
Cadmium (dissolved)	µg/l	0.02	ISO 17025	< 0.02	0.02	< 0.02	< 0.02	< 0.02
Calcium (dissolved)	mg/l	0.012	ISO 17025	230	82	180	110	41
Chromium (hexavalent)	µg/l	5	ISO 17025	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Chromium (III)	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chromium (dissolved)	µg/l	0.2	ISO 17025	0.4	1.0	0.3	0.4	1.0
Copper (dissolved)	µg/l	0.5	ISO 17025	1.8	5.9	2.6	2.4	1.6
Lead (dissolved)	µg/l	0.2	ISO 17025	< 0.2	2.0	< 0.2	< 0.2	< 0.2
Mercury (dissolved)	µg/l	0.05	ISO 17025	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Nickel (dissolved)	µg/l	0.5	ISO 17025	2.3	9.0	0.9	< 0.5	11
Selenium (dissolved)	µg/l	0.6	ISO 17025	1.2	9.3	0.8	< 0.6	1.8
Zinc (dissolved)	µg/l	0.5	ISO 17025	2.6	3.7	1.2	2.0	5.2



Analytical Report Number: 18-81102

Project / Site name: SSE Site, Vestern Road, Reading

Your Order No: C5925-JI

Lab Sample Number				936887	936888	936889	936890	936891
Sample Reference				WS1006	WS1005	WS1004	WS1003	WS1007
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				1.91	1.47	2.07	1.91	1.03
Date Sampled				04/04/2018	04/04/2018	04/04/2018	04/04/2018	04/04/2018
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	Units	Limit of detection	Accreditation Status					

Monoaromatics

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

Petroleum Hydrocarbons

TPH-CWG - Aliphatic >C5 - C6	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >C6 - C8	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >C8 - C10	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >C10 - C12	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >C12 - C16	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >C16 - C21	µg/l	10	NONE	< 10	57	< 10	< 10	< 10
TPH-CWG - Aliphatic >C21 - C35	µg/l	10	NONE	< 10	84	< 10	< 10	< 10
TPH-CWG - Aliphatic (C5 - C35)	µg/l	10	NONE	< 10	140	< 10	< 10	< 10

TPH-CWG - Aromatic >C5 - C7	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C7 - C8	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C8 - C10	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C10 - C12	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C12 - C16	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C16 - C21	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C21 - C35	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic (C5 - C35)	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10



Analytical Report Number: 18-81102

Project / Site name: SSE Site, Vestern Road, Reading

Your Order No: C5925-JI

Lab Sample Number				936887	936888	936889	936890	936891
Sample Reference				WS1006	WS1005	WS1004	WS1003	WS1007
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				1.91	1.47	2.07	1.91	1.03
Date Sampled				04/04/2018	04/04/2018	04/04/2018	04/04/2018	04/04/2018
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	Units	Limit of detection	Accreditation Status					

VOCs

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

Iss No 18-81102-1 SSE Site, Vestern Road, Reading C5925

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.

Page 4 of 27



Analytical Report Number: 18-81102

Project / Site name: SSE Site, Vestern Road, Reading

Your Order No: C5925-JI

Lab Sample Number				936887	936888	936889	936890	936891
Sample Reference				WS1006	WS1005	WS1004	WS1003	WS1007
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				1.91	1.47	2.07	1.91	1.03
Date Sampled				04/04/2018	04/04/2018	04/04/2018	04/04/2018	04/04/2018
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	Units	Limit of detection	Accreditation Status					

VOCs TICs

VOCs TICs Compound Name		N/A	NONE	ND	ND	ND	ND	ND
VOC % Match	%	N/A	NONE	-	-	-	-	-



Analytical Report Number: 18-81102

Project / Site name: SSE Site, Vestern Road, Reading

Your Order No: C5925-JI

Lab Sample Number				936887	936888	936889	936890	936891
Sample Reference				WS1006	WS1005	WS1004	WS1003	WS1007
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				1.91	1.47	2.07	1.91	1.03
Date Sampled				04/04/2018	04/04/2018	04/04/2018	04/04/2018	04/04/2018
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	Units	Limit of detection	Accreditation Status					

SVOCs

Aniline	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Phenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2-Chlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Bis(2-chloroethyl)ether	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
1,3-Dichlorobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
1,2-Dichlorobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
1,4-Dichlorobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Bis(2-chloroisopropyl)ether	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2-Methylphenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Hexachloroethane	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Nitrobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
4-Methylphenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Isophorone	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2-Nitrophenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2,4-Dimethylphenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Bis(2-chloroethoxy)methane	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
1,2,4-Trichlorobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Naphthalene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
2,4-Dichlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
4-Chloroaniline	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobutadiene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
4-Chloro-3-methylphenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2,4,6-Trichlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2,4,5-Trichlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2-Methylnaphthalene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2-Chloronaphthalene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Dimethylphthalate	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2,6-Dinitrotoluene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
2,4-Dinitrotoluene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Dibenzofuran	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
4-Chlorophenyl phenyl ether	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Diethyl phthalate	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
4-Nitroaniline	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Fluorene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Azobenzene	µg/l	0.05	NONE	< 0.05	5.7	< 0.05	< 0.05	< 0.05
Bromophenyl phenyl ether	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Phenanthrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Carbazole	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Dibutyl phthalate	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Anthraquinone	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Butyl benzyl phthalate	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(a)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Chrysene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(b)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(k)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(a)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Indeno(1,2,3-cd)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Dibenz(a,h)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(ghi)perylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01



Analytical Report Number: 18-81102

Project / Site name: SSE Site, Vestern Road, Reading

Your Order No: C5925-JI

Lab Sample Number	936887	936888	936889	936890	936891
Sample Reference	WS1006	WS1005	WS1004	WS1003	WS1007
Sample Number	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)	1.91	1.47	2.07	1.91	1.03
Date Sampled	04/04/2018	04/04/2018	04/04/2018	04/04/2018	04/04/2018
Time Taken	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	Units	Limit of detection	Accreditation Status		

SVOCs TICs

SVOCs TICs Compound Name		N/A	NONE	ND	Benzene, 1,2-dichloro-3-isocyanato-96	ND	ND	ND
SVOC % Match	%	N/A	NONE	-	-	-	-	-
SVOCs TICs Compound Name		N/A	NONE	-	Phenol, 2,4-bis(1,1-dimethylethyl)-96	-	-	-
SVOC % Match	%	N/A	NONE	-	-	-	-	-
SVOCs TICs Compound Name		N/A	NONE	-	Benzophenone 96	-	-	-
SVOC % Match	%	N/A	NONE	-	-	-	-	-
SVOCs TICs Compound Name		N/A	NONE	-	Longifolenaldehyde 96	-	-	-
SVOC % Match	%	N/A	NONE	-	-	-	-	-
SVOCs TICs Compound Name		N/A	NONE	-	1H-Cycloprop[e]azulene, decahydro-1,1,7-trimethyl-4-methylene-, [1aR-(1a.alpha.,4a.beta.,7.alpha.,7a.beta.,7b.alpha.)]-95	-	-	-
SVOC % Match	%	N/A	NONE	-	-	-	-	-
SVOCs TICs Compound Name		N/A	NONE	-	D-Homoandrostane, (5.alpha.,13.alpha.)-95	-	-	-
SVOC % Match	%	N/A	NONE	-	-	-	-	-
SVOCs TICs Compound Name		N/A	NONE	-	3-Carene 94	-	-	-
SVOC % Match	%	N/A	NONE	-	-	-	-	-
SVOCs TICs Compound Name		N/A	NONE	-	3a,9-Dimethyldodecahydrocyclohepta[d]inden-3-one 94	-	-	-
SVOC % Match	%	N/A	NONE	-	-	-	-	-
SVOCs TICs Compound Name		N/A	NONE	-	.alpha.-Pinene 93	-	-	-
SVOC % Match	%	N/A	NONE	-	-	-	-	-
SVOCs TICs Compound Name		N/A	NONE	-	Benzenesulfonamide, N-butyl-93	-	-	-
SVOC % Match	%	N/A	NONE	-	-	-	-	-

PCBs by GC-MS

PCB Congener 28	µg/l	0.02	NONE	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
PCB Congener 52	µg/l	0.02	NONE	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
PCB Congener 101	µg/l	0.02	NONE	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
PCB Congener 118	µg/l	0.02	NONE	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
PCB Congener 138	µg/l	0.02	NONE	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
PCB Congener 153	µg/l	0.02	NONE	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
PCB Congener 180	µg/l	0.02	NONE	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02

PCBs by GC-MS

Total PCBs	µg/l	0.14	NONE	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14
------------	------	------	------	--------	--------	--------	--------	--------

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

Iss No 18-81102-1 SSE Site, Vestern Road, Reading C5925

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.

Page 7 of 27



Analytical Report Number: 18-81102

Project / Site name: SSE Site, Vestern Road, Reading

Your Order No: C5925-JI

Lab Sample Number				936892	936893	936894	936895	936896
Sample Reference				WS1019	BH1001	BH1003E	BH2004	BH2003
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				2.04	2.07	2.39	2.28	2.21
Date Sampled				04/04/2018	04/04/2018	04/04/2018	04/04/2018	04/04/2018
Time Taken				None Supplied	None Supplied	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	7.4	7.4	7.7	7.6	7.6
Electrical Conductivity at 20 °C	µS/cm	10	ISO 17025	860	710	1100	680	690
Sulphate as SO ₄	µg/l	45	ISO 17025	48700	66400	21300	18500	17300
Sulphate as SO ₄	mg/l	0.045	ISO 17025	48.7	66.4	21.3	18.5	17.3
Chloride	mg/l	0.15	ISO 17025	120	77	260	75	90
Ammonium as NH ₄	µg/l	15	ISO 17025	60	540	38	40	24
Dissolved Organic Carbon (DOC)	mg/l	0.1	NONE	3.47	3.58	2.69	3.01	2.78
Alkalinity	mgCaCO ₃ /l	3	ISO 17025	380	240	230	370	250
Dissolved Oxygen	mg/l	1	NONE	5.7	5.2	9.3	9.4	9.5

Total Phenols

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

Speciated PAHs

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

Total PAH

Total EPA-16 PAHs	µg/l	0.16	ISO 17025	< 0.16	< 0.16	< 0.16	< 0.16	< 0.16
-------------------	------	------	-----------	--------	--------	--------	--------	--------

Heavy Metals / Metalloids

Arsenic (dissolved)	µg/l	0.15	ISO 17025	0.24	0.33	2.05	2.12	1.80
Cadmium (dissolved)	µg/l	0.02	ISO 17025	0.05	< 0.02	< 0.02	0.04	< 0.02
Calcium (dissolved)	mg/l	0.012	ISO 17025	130	110	100	110	97
Chromium (hexavalent)	µg/l	5	ISO 17025	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Chromium (III)	µg/l	1	NONE	< 1.0	< 1.0	1.2	< 1.0	< 1.0
Chromium (dissolved)	µg/l	0.2	ISO 17025	0.5	0.5	1.2	0.8	0.8
Copper (dissolved)	µg/l	0.5	ISO 17025	6.4	2.6	4.6	5.5	3.8
Lead (dissolved)	µg/l	0.2	ISO 17025	0.3	< 0.2	< 0.2	< 0.2	< 0.2
Mercury (dissolved)	µg/l	0.05	ISO 17025	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Nickel (dissolved)	µg/l	0.5	ISO 17025	5.9	2.2	< 0.5	2.4	1.5
Selenium (dissolved)	µg/l	0.6	ISO 17025	0.8	< 0.6	1.7	2.0	1.6
Zinc (dissolved)	µg/l	0.5	ISO 17025	15	7.0	1.2	7.8	6.9



Analytical Report Number: 18-81102

Project / Site name: SSE Site, Vestern Road, Reading

Your Order No: C5925-JI

Lab Sample Number				936892	936893	936894	936895	936896
Sample Reference				WS1019	BH1001	BH1003E	BH2004	BH2003
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				2.04	2.07	2.39	2.28	2.21
Date Sampled				04/04/2018	04/04/2018	04/04/2018	04/04/2018	04/04/2018
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	Units	Limit of detection	Accreditation Status					

Monoaromatics

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

Petroleum Hydrocarbons

TPH-CWG - Aliphatic >C5 - C6	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >C6 - C8	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >C8 - C10	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >C10 - C12	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >C12 - C16	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >C16 - C21	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >C21 - C35	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic (C5 - C35)	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C5 - C7	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C7 - C8	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C8 - C10	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C10 - C12	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C12 - C16	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C16 - C21	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C21 - C35	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic (C5 - C35)	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10



Analytical Report Number: 18-81102

Project / Site name: SSE Site, Vestern Road, Reading

Your Order No: C5925-JI

Lab Sample Number				936892	936893	936894	936895	936896
Sample Reference				WS1019	BH1001	BH1003E	BH2004	BH2003
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				2.04	2.07	2.39	2.28	2.21
Date Sampled				04/04/2018	04/04/2018	04/04/2018	04/04/2018	04/04/2018
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	Units	Limit of detection	Accreditation Status					

VOCs

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

Iss No 18-81102-1 SSE Site, Vestern Road, Reading C5925

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.

Page 10 of 27



Analytical Report Number: 18-81102

Project / Site name: SSE Site, Vestern Road, Reading

Your Order No: C5925-JI

Lab Sample Number				936892	936893	936894	936895	936896
Sample Reference				WS1019	BH1001	BH1003E	BH2004	BH2003
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				2.04	2.07	2.39	2.28	2.21
Date Sampled				04/04/2018	04/04/2018	04/04/2018	04/04/2018	04/04/2018
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	Units	Limit of detection	Accreditation Status					

VOCs TICs

VOCs TICs Compound Name		N/A	NONE	ND	-	-	ND	ND
VOC % Match	%	N/A	NONE	-	-	-	-	-



Analytical Report Number: 18-81102

Project / Site name: SSE Site, Vestern Road, Reading

Your Order No: C5925-JI

Lab Sample Number				936892	936893	936894	936895	936896
Sample Reference				WS1019	BH1001	BH1003E	BH2004	BH2003
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				2.04	2.07	2.39	2.28	2.21
Date Sampled				04/04/2018	04/04/2018	04/04/2018	04/04/2018	04/04/2018
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	Units	Limit of detection	Accreditation Status					

SVOCs

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	0.05	NONE	< 0.05	-	-	< 0.05	< 0.05
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: 18-81102

Project / Site name: SSE Site, Vestern Road, Reading

Your Order No: C5925-JI

Lab Sample Number	936892	936893	936894	936895	936896
Sample Reference	WS1019	BH1001	BH1003E	BH2004	BH2003
Sample Number	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)	2.04	2.07	2.39	2.28	2.21
Date Sampled	04/04/2018	04/04/2018	04/04/2018	04/04/2018	04/04/2018
Time Taken	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	Units	Limit of detection	Accreditation Status		

SVOCs TICs

SVOCs TICs Compound Name		N/A	NONE	ND	-	-	ND	ND
SVOC % Match	%	N/A	NONE	-	-	-	-	-
SVOCs TICs Compound Name		N/A	NONE	-	-	-	-	-
SVOC % Match	%	N/A	NONE	-	-	-	-	-
SVOCs TICs Compound Name		N/A	NONE	-	-	-	-	-
SVOC % Match	%	N/A	NONE	-	-	-	-	-
SVOCs TICs Compound Name		N/A	NONE	-	-	-	-	-
SVOC % Match	%	N/A	NONE	-	-	-	-	-
SVOCs TICs Compound Name		N/A	NONE	-	-	-	-	-
SVOC % Match	%	N/A	NONE	-	-	-	-	-
SVOCs TICs Compound Name		N/A	NONE	-	-	-	-	-
SVOC % Match	%	N/A	NONE	-	-	-	-	-
SVOCs TICs Compound Name		N/A	NONE	-	-	-	-	-
SVOC % Match	%	N/A	NONE	-	-	-	-	-
SVOCs TICs Compound Name		N/A	NONE	-	-	-	-	-
SVOC % Match	%	N/A	NONE	-	-	-	-	-
SVOCs TICs Compound Name		N/A	NONE	-	-	-	-	-
SVOC % Match	%	N/A	NONE	-	-	-	-	-
SVOCs TICs Compound Name		N/A	NONE	-	-	-	-	-
SVOC % Match	%	N/A	NONE	-	-	-	-	-

PCBs by GC-MS

PCB Congener 28	µg/l	0.02	NONE	< 0.02	-	-	< 0.02	< 0.02
PCB Congener 52	µg/l	0.02	NONE	< 0.02	-	-	< 0.02	< 0.02
PCB Congener 101	µg/l	0.02	NONE	< 0.02	-	-	< 0.02	< 0.02
PCB Congener 118	µg/l	0.02	NONE	< 0.02	-	-	< 0.02	< 0.02
PCB Congener 138	µg/l	0.02	NONE	< 0.02	-	-	< 0.02	< 0.02
PCB Congener 153	µg/l	0.02	NONE	< 0.02	-	-	< 0.02	< 0.02
PCB Congener 180	µg/l	0.02	NONE	< 0.02	-	-	< 0.02	< 0.02

PCBs by GC-MS

Total PCBs	µg/l	0.14	NONE	< 0.14	-	-	< 0.14	< 0.14
------------	------	------	------	--------	---	---	--------	--------

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

Iss No 18-81102-1 SSE Site, Vestern Road, Reading C5925

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.

Page 13 of 27



Analytical Report Number: 18-81102

Project / Site name: SSE Site, Vestern Road, Reading

Your Order No: C5925-JI

Lab Sample Number				936897	936898	936899	936900	936901
Sample Reference				BH2002	BH2001	BH1002C	BH2006	BH2005
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				2.10	2.15	2.14	1.52	2.06
Date Sampled				04/04/2018	04/04/2018	04/04/2018	04/04/2018	04/04/2018
Time Taken				None Supplied	None Supplied	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	7.3	7.3	7.4	7.1	6.9
Electrical Conductivity at 20 °C	µS/cm	10	ISO 17025	620	1400	1000	3200	2300
Sulphate as SO ₄	µg/l	45	ISO 17025	16200	21400	47500	79300	33400
Sulphate as SO ₄	mg/l	0.045	ISO 17025	16.2	21.4	47.5	79.3	33.4
Chloride	mg/l	0.15	ISO 17025	45	240	180	920	620
Ammonium as NH ₄	µg/l	15	ISO 17025	36	180	1000	160	120
Dissolved Organic Carbon (DOC)	mg/l	0.1	NONE	11.6	14.8	5.13	5.52	26.9
Alkalinity	mgCaCO ₃ /l	3	ISO 17025	430	620	370	650	590
Dissolved Oxygen	mg/l	1	NONE	3.6	6.0	5.6	7.3	6.4

Total Phenols

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

Speciated PAHs

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

Total PAH

Total EPA-16 PAHs	µg/l	0.16	ISO 17025	< 0.16	< 0.16	< 0.16	< 0.16	< 0.16
-------------------	------	------	-----------	--------	--------	--------	--------	--------

Heavy Metals / Metalloids

Arsenic (dissolved)	µg/l	0.15	ISO 17025	3.03	2.18	9.81	3.42	4.96
Cadmium (dissolved)	µg/l	0.02	ISO 17025	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
Calcium (dissolved)	mg/l	0.012	ISO 17025	120	130	120	210	250
Chromium (hexavalent)	µg/l	5	ISO 17025	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Chromium (III)	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chromium (dissolved)	µg/l	0.2	ISO 17025	0.2	0.5	0.2	0.3	0.2
Copper (dissolved)	µg/l	0.5	ISO 17025	1.9	2.5	5.4	1.0	5.1
Lead (dissolved)	µg/l	0.2	ISO 17025	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Mercury (dissolved)	µg/l	0.05	ISO 17025	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Nickel (dissolved)	µg/l	0.5	ISO 17025	1.8	3.9	1.5	4.5	14
Selenium (dissolved)	µg/l	0.6	ISO 17025	1.5	3.4	0.6	1.2	1.2
Zinc (dissolved)	µg/l	0.5	ISO 17025	2.7	4.1	2.5	8.8	260



Analytical Report Number: 18-81102

Project / Site name: SSE Site, Vestern Road, Reading

Your Order No: C5925-JI

Lab Sample Number				936897	936898	936899	936900	936901
Sample Reference				BH2002	BH2001	BH1002C	BH2006	BH2005
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				2.10	2.15	2.14	1.52	2.06
Date Sampled				04/04/2018	04/04/2018	04/04/2018	04/04/2018	04/04/2018
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	Units	Limit of detection	Accreditation Status					

Monoaromatics

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

Petroleum Hydrocarbons

TPH-CWG - Aliphatic >C5 - C6	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >C6 - C8	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >C8 - C10	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >C10 - C12	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >C12 - C16	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >C16 - C21	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >C21 - C35	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic (C5 - C35)	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C5 - C7	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C7 - C8	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C8 - C10	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C10 - C12	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C12 - C16	µg/l	10	NONE	< 10	< 10	< 10	< 10	79
TPH-CWG - Aromatic >C16 - C21	µg/l	10	NONE	< 10	< 10	< 10	< 10	170
TPH-CWG - Aromatic >C21 - C35	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic (C5 - C35)	µg/l	10	NONE	< 10	< 10	< 10	< 10	250



Analytical Report Number: 18-81102

Project / Site name: SSE Site, Vestern Road, Reading

Your Order No: C5925-JI

Lab Sample Number				936897	936898	936899	936900	936901
Sample Reference				BH2002	BH2001	BH1002C	BH2006	BH2005
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				2.10	2.15	2.14	1.52	2.06
Date Sampled				04/04/2018	04/04/2018	04/04/2018	04/04/2018	04/04/2018
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	Units	Limit of detection	Accreditation Status					

VOCs

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

Iss No 18-81102-1 SSE Site, Vestern Road, Reading C5925

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.

Page 16 of 27



Analytical Report Number: 18-81102

Project / Site name: SSE Site, Vestern Road, Reading

Your Order No: C5925-JI

Lab Sample Number				936897	936898	936899	936900	936901
Sample Reference				BH2002	BH2001	BH1002C	BH2006	BH2005
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				2.10	2.15	2.14	1.52	2.06
Date Sampled				04/04/2018	04/04/2018	04/04/2018	04/04/2018	04/04/2018
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	Units	Limit of detection	Accreditation Status					

VOCs TICs

VOCs TICs Compound Name		N/A	NONE	ND	ND	-	ND	ND
VOC % Match	%	N/A	NONE	-	-	-	-	-



Analytical Report Number: 18-81102

Project / Site name: SSE Site, Vestern Road, Reading

Your Order No: C5925-JI

Lab Sample Number	936897	936898	936899	936900	936901
Sample Reference	BH2002	BH2001	BH1002C	BH2006	BH2005
Sample Number	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)	2.10	2.15	2.14	1.52	2.06
Date Sampled	04/04/2018	04/04/2018	04/04/2018	04/04/2018	04/04/2018
Time Taken	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	Units	Limit of detection	Accreditation Status		

SVOCs

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



Analytical Report Number: 18-81102

Project / Site name: SSE Site, Vestern Road, Reading

Your Order No: C5925-JI

Lab Sample Number	936897	936898	936899	936900	936901
Sample Reference	BH2002	BH2001	BH1002C	BH2006	BH2005
Sample Number	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)	2.10	2.15	2.14	1.52	2.06
Date Sampled	04/04/2018	04/04/2018	04/04/2018	04/04/2018	04/04/2018
Time Taken	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	Units	Limit of detection	Accreditation Status		

SVOCs TICs

SVOCs TICs Compound Name		N/A	NONE	ND	ND	-	ND	Bicyclo[3.1.1]hept-2-ene, 2,6,6-trimethyl-, (.+/-.)-95
SVOC % Match	%	N/A	NONE	-	-	-	-	
SVOCs TICs Compound Name		N/A	NONE	-	-	-	-	Cyclopropane, 1,1-dimethyl-2-(3-methyl-1,3-butadienyl)-93
SVOC % Match	%	N/A	NONE	-	-	-	-	
SVOCs TICs Compound Name		N/A	NONE	-	-	-	-	Acetophenone93
SVOC % Match	%	N/A	NONE	-	-	-	-	
SVOCs TICs Compound Name		N/A	NONE	-	-	-	-	3-Phenylheptanoic acid93
SVOC % Match	%	N/A	NONE	-	-	-	-	
SVOCs TICs Compound Name		N/A	NONE	-	-	-	-	Bromacil93
SVOC % Match	%	N/A	NONE	-	-	-	-	
SVOCs TICs Compound Name		N/A	NONE	-	-	-	-	Benzene, 1-methyl-2-(1-methylethyl)-92
SVOC % Match	%	N/A	NONE	-	-	-	-	
SVOCs TICs Compound Name		N/A	NONE	-	-	-	-	Benzene, tert-butyl-91
SVOC % Match	%	N/A	NONE	-	-	-	-	
SVOCs TICs Compound Name		N/A	NONE	-	-	-	-	-
SVOC % Match	%	N/A	NONE	-	-	-	-	-
SVOCs TICs Compound Name		N/A	NONE	-	-	-	-	-
SVOC % Match	%	N/A	NONE	-	-	-	-	-
SVOCs TICs Compound Name		N/A	NONE	-	-	-	-	-
SVOC % Match	%	N/A	NONE	-	-	-	-	-

PCBs by GC-MS

PCB Congener 28	µg/l	0.02	NONE	< 0.02	< 0.02	-	< 0.02	< 0.02
PCB Congener 52	µg/l	0.02	NONE	< 0.02	< 0.02	-	< 0.02	< 0.02
PCB Congener 101	µg/l	0.02	NONE	< 0.02	< 0.02	-	< 0.02	< 0.02
PCB Congener 118	µg/l	0.02	NONE	< 0.02	< 0.02	-	< 0.02	< 0.02
PCB Congener 138	µg/l	0.02	NONE	< 0.02	< 0.02	-	< 0.02	< 0.02
PCB Congener 153	µg/l	0.02	NONE	< 0.02	< 0.02	-	< 0.02	< 0.02
PCB Congener 180	µg/l	0.02	NONE	< 0.02	< 0.02	-	< 0.02	< 0.02

PCBs by GC-MS

Total PCBs	µg/l	0.14	NONE	< 0.14	< 0.14	-	< 0.14	< 0.14
------------	------	------	------	--------	--------	---	--------	--------

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

Iss No 18-81102-1 SSE Site, Vestern Road, Reading C5925

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.

Page 19 of 27



Analytical Report Number: 18-81102

Project / Site name: SSE Site, Vestern Road, Reading

Your Order No: C5925-JI

Lab Sample Number				936902	936903			
Sample Reference				BH1005	BH1004			
Sample Number				None Supplied	None Supplied			
Depth (m)				2.33	1.95			
Date Sampled				04/04/2018	04/04/2018			
Time Taken				None Supplied	None Supplied			
Analytical Parameter (Water Analysis)	Units	Limit of detection	Accreditation Status					

General Inorganics

pH	pH Units	N/A	ISO 17025	7.3	7.0			
Electrical Conductivity at 20 °C	µS/cm	10	ISO 17025	1500	3900			
Sulphate as SO ₄	µg/l	45	ISO 17025	60100	33600			
Sulphate as SO ₄	mg/l	0.045	ISO 17025	60.1	33.6			
Chloride	mg/l	0.15	ISO 17025	340	1400			
Ammonium as NH ₄	µg/l	15	ISO 17025	58	2100			
Dissolved Organic Carbon (DOC)	mg/l	0.1	NONE	4.18	4.00			
Alkalinity	mgCaCO ₃ /l	3	ISO 17025	410	440			
Dissolved Oxygen	mg/l	1	NONE	8.7	8.1			

Total Phenols

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

Speciated PAHs

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

Total PAH

Total EPA-16 PAHs	µg/l	0.16	ISO 17025	< 0.16	< 0.16			
-------------------	------	------	-----------	--------	--------	--	--	--

Heavy Metals / Metalloids

Arsenic (dissolved)	µg/l	0.15	ISO 17025	0.34	0.44			
Cadmium (dissolved)	µg/l	0.02	ISO 17025	0.04	< 0.02			
Calcium (dissolved)	mg/l	0.012	ISO 17025	180	220			
Chromium (hexavalent)	µg/l	5	ISO 17025	< 5.0	< 5.0			
Chromium (III)	µg/l	1	NONE	< 1.0	< 1.0			
Chromium (dissolved)	µg/l	0.2	ISO 17025	0.3	0.3			
Copper (dissolved)	µg/l	0.5	ISO 17025	2.4	8.4			
Lead (dissolved)	µg/l	0.2	ISO 17025	< 0.2	0.2			
Mercury (dissolved)	µg/l	0.05	ISO 17025	< 0.05	< 0.05			
Nickel (dissolved)	µg/l	0.5	ISO 17025	4.5	2.6			
Selenium (dissolved)	µg/l	0.6	ISO 17025	0.9	1.4			
Zinc (dissolved)	µg/l	0.5	ISO 17025	3.4	2.4			



Analytical Report Number: 18-81102

Project / Site name: SSE Site, Vestern Road, Reading

Your Order No: C5925-JI

Lab Sample Number				936902	936903			
Sample Reference				BH1005	BH1004			
Sample Number				None Supplied	None Supplied			
Depth (m)				2.33	1.95			
Date Sampled				04/04/2018	04/04/2018			
Time Taken				None Supplied	None Supplied			
Analytical Parameter (Water Analysis)	Units	Limit of detection	Accreditation Status					

Monoaromatics

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

Petroleum Hydrocarbons

TPH-CWG - Aliphatic >C5 - C6	µg/l	1	ISO 17025	< 1.0	< 1.0			
TPH-CWG - Aliphatic >C6 - C8	µg/l	1	ISO 17025	< 1.0	< 1.0			
TPH-CWG - Aliphatic >C8 - C10	µg/l	1	ISO 17025	< 1.0	< 1.0			
TPH-CWG - Aliphatic >C10 - C12	µg/l	10	NONE	< 10	< 10			
TPH-CWG - Aliphatic >C12 - C16	µg/l	10	NONE	< 10	< 10			
TPH-CWG - Aliphatic >C16 - C21	µg/l	10	NONE	< 10	< 10			
TPH-CWG - Aliphatic >C21 - C35	µg/l	10	NONE	< 10	< 10			
TPH-CWG - Aliphatic (C5 - C35)	µg/l	10	NONE	< 10	< 10			

TPH-CWG - Aromatic >C5 - C7	µg/l	1	ISO 17025	< 1.0	< 1.0			
TPH-CWG - Aromatic >C7 - C8	µg/l	1	ISO 17025	< 1.0	< 1.0			
TPH-CWG - Aromatic >C8 - C10	µg/l	1	ISO 17025	< 1.0	< 1.0			
TPH-CWG - Aromatic >C10 - C12	µg/l	10	NONE	< 10	< 10			
TPH-CWG - Aromatic >C12 - C16	µg/l	10	NONE	< 10	< 10			
TPH-CWG - Aromatic >C16 - C21	µg/l	10	NONE	< 10	< 10			
TPH-CWG - Aromatic >C21 - C35	µg/l	10	NONE	< 10	< 10			
TPH-CWG - Aromatic (C5 - C35)	µg/l	10	NONE	< 10	< 10			



Analytical Report Number: 18-81102

Project / Site name: SSE Site, Vestern Road, Reading

Your Order No: C5925-JI

Lab Sample Number				936902	936903			
Sample Reference				BH1005	BH1004			
Sample Number				None Supplied	None Supplied			
Depth (m)				2.33	1.95			
Date Sampled				04/04/2018	04/04/2018			
Time Taken				None Supplied	None Supplied			
Analytical Parameter (Water Analysis)	Units	Limit of detection	Accreditation Status					

VOCs

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



Analytical Report Number: 18-81102

Project / Site name: SSE Site, Vestern Road, Reading

Your Order No: C5925-JI

Lab Sample Number				936902	936903			
Sample Reference				BH1005	BH1004			
Sample Number				None Supplied	None Supplied			
Depth (m)				2.33	1.95			
Date Sampled				04/04/2018	04/04/2018			
Time Taken				None Supplied	None Supplied			
Analytical Parameter (Water Analysis)				Units	Limit of detection	Accreditation Status		

VOCs TICs

VOCs TICs Compound Name		N/A	NONE	-	-			
VOC % Match	%	N/A	NONE	-	-			



Analytical Report Number: 18-81102

Project / Site name: SSE Site, Vestern Road, Reading

Your Order No: C5925-JI

Lab Sample Number				936902	936903			
Sample Reference				BH1005	BH1004			
Sample Number				None Supplied	None Supplied			
Depth (m)				2.33	1.95			
Date Sampled				04/04/2018	04/04/2018			
Time Taken				None Supplied	None Supplied			
Analytical Parameter (Water Analysis)	Units	Limit of detection	Accreditation Status					

SVOCs

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



Analytical Report Number: 18-81102

Project / Site name: SSE Site, Vestern Road, Reading

Your Order No: C5925-JI

Lab Sample Number				936902	936903			
Sample Reference				BH1005	BH1004			
Sample Number				None Supplied	None Supplied			
Depth (m)				2.33	1.95			
Date Sampled				04/04/2018	04/04/2018			
Time Taken				None Supplied	None Supplied			
Analytical Parameter (Water Analysis)	Units	Limit of detection	Accreditation Status					

SVOCs TICs

SVOCs TICs Compound Name		N/A	NONE	-	-			
SVOC % Match	%	N/A	NONE	-	-			
SVOCs TICs Compound Name		N/A	NONE	-	-			
SVOC % Match	%	N/A	NONE	-	-			
SVOCs TICs Compound Name		N/A	NONE	-	-			
SVOC % Match	%	N/A	NONE	-	-			
SVOCs TICs Compound Name		N/A	NONE	-	-			
SVOC % Match	%	N/A	NONE	-	-			
SVOCs TICs Compound Name		N/A	NONE	-	-			
SVOC % Match	%	N/A	NONE	-	-			
SVOCs TICs Compound Name		N/A	NONE	-	-			
SVOC % Match	%	N/A	NONE	-	-			
SVOCs TICs Compound Name		N/A	NONE	-	-			
SVOC % Match	%	N/A	NONE	-	-			
SVOCs TICs Compound Name		N/A	NONE	-	-			
SVOC % Match	%	N/A	NONE	-	-			
SVOCs TICs Compound Name		N/A	NONE	-	-			
SVOC % Match	%	N/A	NONE	-	-			
SVOCs TICs Compound Name		N/A	NONE	-	-			
SVOC % Match	%	N/A	NONE	-	-			

PCBs by GC-MS

PCB Congener 28	µg/l	0.02	NONE	-	-			
PCB Congener 52	µg/l	0.02	NONE	-	-			
PCB Congener 101	µg/l	0.02	NONE	-	-			
PCB Congener 118	µg/l	0.02	NONE	-	-			
PCB Congener 138	µg/l	0.02	NONE	-	-			
PCB Congener 153	µg/l	0.02	NONE	-	-			
PCB Congener 180	µg/l	0.02	NONE	-	-			

PCBs by GC-MS

Total PCBs	µg/l	0.14	NONE	-	-			
------------	------	------	------	---	---	--	--	--

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

Iss No 18-81102-1 SSE Site, Vestern Road, Reading C5925

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.

Page 25 of 27



Analytical Report Number : 18-81102

Project / Site name: SSE Site, Vestern Road, Reading

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

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Alkalinity in Water	Determination of Alkalinity by discrete analyser (colorimetry). Accredited matrices: SW, PW, GW.	In house method based on MEWAM & USEPA Method 310.2.	L082-PL	W	ISO 17025
Ammonium as NH ₄ in water	Determination of Ammonium/Ammonia/Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method. Accredited matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	ISO 17025
BTEX and MTBE in water (Monoaromatics)	Determination of BTEX and MTBE in water by headspace GC-MS. Accredited matrices: SW PW GW	In-house method based on USEPA8260	L073B-PL	W	ISO 17025
Chloride in water	Determination of Chloride colorimetrically by discrete analyser.	In house based on MEWAM Method ISBN 0117516260. Accredited matrices: SW, PW, GW.	L082-PL	W	ISO 17025
Cr (III) in water	In-house method by calculation from total Cr and Cr VI.	In-house method by calculation	L080-PL	W	NONE
Dissolved Organic Carbon in water	Determination of dissolved inorganic carbon in water by TOC/DOC NDIR Analyser.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L037-PL	W	NONE
Dissolved Oxygen in water	Determination of dissolved oxygen.	In-house method	L086-PL	W	NONE
Electrical conductivity at 20oC of water	Determination of electrical conductivity in water by electrometric measurement. Accredited Matrices SW, GW, PW	In-house method	L031-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
Metals in water by ICP-OES (dissolved)	Determination of metals in water by acidification followed by ICP-OES. Accredited Matrices SW, GW, PW, PrW.(Al, Cu,Fe,Zn).	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L039-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
PCB's By GC-MS in water	Determination of PCB by extraction with acetone and hexane followed by GC-MS.	In-house method based on USEPA 8082	L028-PL	W	NONE
pH at 20oC in water (automated)	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	L099-PL	W	ISO 17025
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	L102B-PL	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	L102B-PL	W	ISO 17025
Sulphate in water	Determination of sulphate in water by acidification followed by ICP-OES. Accredited matrices: SW PW GW, PrW.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L039-PL	W	ISO 17025

Iss No 18-81102-1 SSE Site, Vestern Road, Reading C5925

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.

Page 26 of 27



Analytical Report Number : 18-81102

Project / Site name: SSE Site, Vestern Road, Reading

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

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
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-PL	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	L073B-PL	W	NONE
TPHCWG (Waters)	Determination of dichloromethane extractable hydrocarbons in water by GC-MS, speciation by interpretation.	In-house method	L070-PL	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	L073B-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 30oC.



Exova Jones Environmental

Registered Address : Exova (UK) Ltd, Lochend Industrial Estate, Newbridge, Midlothian, EH28 8PL

Unit 3 Deeside Point
Zone 3
Deeside Industrial Park
Deeside
CH5 2UA

Omnia
10 Manor Court
2 Barnes Wallis Road
Segensworth
Fareham
PO15 5TH

Tel: +44 (0) 1244 833780
Fax: +44 (0) 1244 833781



Attention :	Adrian King
Date :	19th April, 2018
Your reference :	A10967
Our reference :	Test Report 18/5668 Batch 1
Location :	Vastern Road, Reading
Date samples received :	17th April, 2018
Status :	Final report
Issue :	2

Seven samples were received for analysis on 17th April, 2018 of which three were scheduled for analysis. Please find attached our Test Report which should be read with notes at the end of the report and should include all sections if reproduced. Interpretations and opinions are outside the scope of any accreditation, and all results relate only to samples supplied.
All analysis is carried out on as received samples and reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected.

Compiled By:

Phil Sommerton BSc
Project Manager

Client Name: Omnia
Reference: A10967
Location: Vastern Road, Reading
Contact: Adrian King
JE Job No.: 18/5668

Report : Liquid

Liquids/products: V=40ml vial, G=glass bottle, P=plastic bottle
 H=H₂SO₄, Z=ZnAc, N=NaOH, HN=HN0₃

J E Sample No.	9-12	17-20	26-30								Please see attached notes for all abbreviations and acronyms		
Sample ID	WS1003 WS1	WS1005A WS1	WS1019WS1										
Depth	2.12-5.01	1.10-2.04	2.26-4.98										
COC No / misc													
Containers	V P G	V P G	V H N P G										
Sample Date	16/04/2018	16/04/2018	16/04/2018										
Sample Type	Ground Water	Ground Water	Ground Water										
Batch Number	1	1	1										
Date of Receipt	17/04/2018	17/04/2018	17/04/2018										
TPH CWG													
Aliphatics													
>C5-C6 #	<10	<10	<10								<10	ug/l	TM36/PM12
>C6-C8 #	<10	<10	<10								<10	ug/l	TM36/PM12
>C8-C10 #	<10	<10	<10								<10	ug/l	TM36/PM12
>C10-C12 #	<5	<5	<5								<5	ug/l	TM5/PM16/PM30
>C12-C16 #	<10	<10	<10								<10	ug/l	TM5/PM16/PM30
>C16-C21 #	<10	90	<10								<10	ug/l	TM5/PM16/PM30
>C21-C35 #	<10	90	<10								<10	ug/l	TM5/PM16/PM30
Total aliphatics C5-35 #	<10	180	<10								<10	ug/l	TM5/PM16/PM30
Aromatics													
>C5-EC7 #	<10	<10	<10								<10	ug/l	TM36/PM12
>EC7-EC8 #	<10	<10	<10								<10	ug/l	TM36/PM12
>EC8-EC10 #	<10	<10	<10								<10	ug/l	TM36/PM12
>EC10-EC12 #	<5	<5	<5								<5	ug/l	TM5/PM16/PM30
>EC12-EC16 #	<10	<10	<10								<10	ug/l	TM5/PM16/PM30
>EC16-EC21 #	<10	<10	<10								<10	ug/l	TM5/PM16/PM30
>EC21-EC35 #	<10	<10	<10								<10	ug/l	TM5/PM16/PM30
Total aromatics C5-35 #	<10	<10	<10								<10	ug/l	TM5/PM16/PM30
Total aliphatics and aromatics(C5-35) #	<10	180	<10								<10	ug/l	TM5/PM16/PM30
MTBE #	<5	<5	<5								<5	ug/l	TM31/PM12
Benzene #	<5	<5	<5								<5	ug/l	TM31/PM12
Toluene #	<5	<5	<5								<5	ug/l	TM31/PM12
Ethylbenzene #	<5	<5	<5								<5	ug/l	TM31/PM12
m/p-Xylene #	<5	<5	<5								<5	ug/l	TM31/PM12
o-Xylene #	<5	<5	<5								<5	ug/l	TM31/PM12

Matrix : Liquid

[illegible]

Client Name: Omnia **Matrix : Liquid**

Reference: A10967

Location: Vastern Road, Reading

Contact: Adrian King

Matrix : Liquid

[illegible]

Please note that only samples that are deviating are mentioned in this report. If no samples are listed it is because none were deviating.

Only analyses which are accredited are recorded as deviating if set criteria are not met.

NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

JE Job No.: 18/5668

SOILS

Please note we are only MCERTS accredited (UK soils only) for sand, loam and clay and any other matrix is outside our scope of accreditation.

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation has been performed on clay, sand and loam, only samples that are predominantly these matrices, or combinations of them will be within our MCERTS scope. If samples are not one of a combination of the above matrices they will not be marked as MCERTS accredited.

It is assumed that you have taken representative samples on site and require analysis on a representative subsample. Stones will generally be included unless we are requested to remove them.

All samples will be discarded one month after the date of reporting, unless we are instructed to the contrary.

If you have not already done so, please send us a purchase order if this is required by your company.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

All analysis is reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected. Samples are dried at 35°C ±5°C unless otherwise stated. Moisture content for CEN Leachate tests are dried at 105°C ±5°C.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

Where a CEN 10:1 ZERO Headspace VOC test has been carried out, a 10:1 ratio of water to wet (as received) soil has been used.

% Asbestos in Asbestos Containing Materials (ACMs) is determined by reference to HSG 264 The Survey Guide - Appendix 2 : ACMs in buildings listed in order of ease of fibre release.

Negative Neutralization Potential (NP) values are obtained when the volume of NaOH (0.1N) titrated (pH 8.3) is greater than the volume of HCl (1N) to reduce the pH of the sample to 2.0 - 2.5. Any negative NP values are corrected to 0.

The calculation of Pyrite content assumes that all oxidisable sulphides present in the sample are pyrite. This may not be the case. The calculation may be an overestimate when other sulphides such as Barite (Barium Sulphate) are present.

WATERS

Please note we are not a UK Drinking Water Inspectorate (DWI) Approved Laboratory .

ISO17025 accreditation applies to surface water and groundwater and usually one other matrix which is analysis specific, any other liquids are outside our scope of accreditation.

As surface waters require different sample preparation to groundwaters the laboratory must be informed of the water type when submitting samples.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

DEVIATING SAMPLES

Samples must be received in a condition appropriate to the requested analyses. All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. If this is not the case you will be informed and any test results that may be compromised highlighted on your deviating samples report.

SURROGATES

Surrogate compounds are added during the preparation process to monitor recovery of analytes. However low recovery in soils is often due to peat, clay or other organic rich matrices. For waters this can be due to oxidants, surfactants, organic rich sediments or remediation fluids. Acceptable limits for most organic methods are 70 - 130% and for VOCs are 50 - 150%. When surrogate recoveries are outside the performance criteria but the associated AQC passes this is assumed to be due to matrix effect. Results are not surrogate corrected.

DILUTIONS

A dilution suffix indicates a dilution has been performed and the reported result takes this into account. No further calculation is required.

BLANKS

Where analytes have been found in the blank, the sample will be treated in accordance with our laboratory procedure for dealing with contaminated blanks.

NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a UKAS requirement for data not reported as accredited to be considered indicative only, but this does not mean the data is not valid.

Where possible, and if requested, samples will be re-extracted and a revised report issued with accredited results. Please do not hesitate to contact the laboratory if further details are required of the circumstances which have led to the removal of accreditation.

REPORTS FROM THE SOUTH AFRICA LABORATORY

Any method number not prefixed with SA has been undertaken in our UK laboratory unless reported as subcontracted.

Please include all sections of this report if it is reproduced

ABBREVIATIONS and ACRONYMS USED

#	ISO17025 (UKAS Ref No. 4225) accredited - UK.
SA	ISO17025 (SANAS Ref No.T0729) accredited - South Africa.
B	Indicates analyte found in associated method blank.
DR	Dilution required.
M	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
++	Result outside calibration range, results should be considered as indicative only and are not accredited.
*	Analysis subcontracted to a Jones Environmental approved laboratory.
AD	Samples are dried at 35°C ±5°C
CO	Suspected carry over
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS
ME	Matrix Effect
NFD	No Fibres Detected
BS	AQC Sample
LB	Blank Sample
N	Client Sample
TB	Trip Blank Sample
OC	Outside Calibration Range

JE Job No: 18/5668

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM5	Modified USEPA 8015B method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) with carbon banding within the range C8-C40 GC-FID.	PM16/PM30	Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE/Water samples are extracted with solvent using a magnetic stirrer to create a vortex.	Yes			
TM5	Modified USEPA 8015B method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) with carbon banding within the range C8-C40 GC-FID.	PM30	Water samples are extracted with solvent using a magnetic stirrer to create a vortex.				
TM5/TM36	please refer to TM5 and TM36 for method details	PM12/PM16/PM30	please refer to PM16/PM30 and PM12 for method details	Yes			
TM31	Modified USEPA 8015B. Determination of Methyltertbutylether, Benzene, Toluene, Ethylbenzene and Xylene by headspace GC-FID.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.	Yes			
TM36	Modified US EPA method 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.	Yes			



Exova Jones Environmental

Registered Address : Exova (UK) Ltd, Lochend Industrial Estate, Newbridge, Midlothian, EH28 8PL

Unit 3 Deeside Point
Zone 3
Deeside Industrial Park
Deeside
CH5 2UA

Omnia
10 Manor Court
2 Barnes Wallis Road
Segensworth
Fareham
PO15 5TH

Tel: +44 (0) 1244 833780
Fax: +44 (0) 1244 833781



Attention :	Adrian King
Date :	24th April, 2018
Your reference :	A10967
Our reference :	Test Report 18/5703 Batch 1
Location :	Vastern Road, Reading
Date samples received :	17th April, 2018
Status :	Final report
Issue :	1

Nine samples were received for analysis on 17th April, 2018 of which four were scheduled for analysis. Please find attached our Test Report which should be read with notes at the end of the report and should include all sections if reproduced. Interpretations and opinions are outside the scope of any accreditation, and all results relate only to samples supplied.

All analysis is carried out on as received samples and reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected.

Compiled By:

Phil Sommerton BSc
Project Manager

Client Name: Omnia
Reference: A10967
Location: Vastern Road, Reading
Contact: Adrian King
JE Job No.: 18/5703

Report : Liquid

Liquids/products: V=40ml vial, G=glass bottle, P=plastic bottle
H=H₂SO₄, Z=ZnAc, N=NaOH, HN=HNO₃

J E Sample No.	1-5	26-29	30-35	36-40							Please see attached notes for all abbreviations and acronyms		
Sample ID	BH2003 WS1	BH2006 WS1	BH2005 WS1	BH1005 WS1									
Depth	2.39-4.01	1.53-2.03	2.08-3.01	2.49-7.14									
COC No / misc													
Containers	V H N P G	V P G	V P G	V H N P G									
Sample Date	13/04/2018	13/04/2018	13/04/2018	13/04/2018									
Sample Type	Ground Water	Ground Water	Ground Water	Ground Water									
Batch Number	1	1	1	1									
Date of Receipt	17/04/2018	17/04/2018	17/04/2018	17/04/2018							LOD/LOR	Units	Method No.
TPH CWG													
Aliphatics													
>C5-C6 #	<10	<10	<10	<10							<10	ug/l	TM36/PM12
>C6-C8 #	<10	<10	<10	<10							<10	ug/l	TM36/PM12
>C8-C10 #	<10	<10	<10	<10							<10	ug/l	TM36/PM12
>C10-C12 #	<5	<5	<5	<5							<5	ug/l	TM5/PM16/PM30
>C12-C16 #	<10	20	<10	<10							<10	ug/l	TM5/PM16/PM30
>C16-C21 #	<10	90	50	40							<10	ug/l	TM5/PM16/PM30
>C21-C35 #	<10	<10	<10	<10							<10	ug/l	TM5/PM16/PM30
Total aliphatics C5-35 #	<10	110	50	40							<10	ug/l	TM5/PM16/PM30
Aromatics													
>C5-EC7 #	<10	<10	<10	<10							<10	ug/l	TM36/PM12
>EC7-EC8 #	<10	<10	<10	<10							<10	ug/l	TM36/PM12
>EC8-EC10 #	<10	<10	<10	<10							<10	ug/l	TM36/PM12
>EC10-EC12 #	<5	<5	<5	<5							<5	ug/l	TM5/PM16/PM30
>EC12-EC16 #	<10	30	40	20							<10	ug/l	TM5/PM16/PM30
>EC16-EC21 #	<10	160	190	70							<10	ug/l	TM5/PM16/PM30
>EC21-EC35 #	<10	<10	<10	<10							<10	ug/l	TM5/PM16/PM30
Total aromatics C5-35 #	<10	190	230	90							<10	ug/l	TM5/PM16/PM30
Total aliphatics and aromatics(C5-35) #	<10	300	280	130							<10	ug/l	TM5/PM16/PM30
MTBE #	<5	<5	<5	<5							<5	ug/l	TM31/PM12
Benzene #	<5	<5	<5	<5							<5	ug/l	TM31/PM12
Toluene #	<5	<5	<5	<5							<5	ug/l	TM31/PM12
Ethylbenzene #	<5	<5	<5	<5							<5	ug/l	TM31/PM12
m/p-Xylene #	<5	<5	<5	<5							<5	ug/l	TM31/PM12
o-Xylene #	<5	<5	<5	<5							<5	ug/l	TM31/PM12
PCB 28	-	-	<0.1	-							<0.1	ug/l	TM17/PM30
PCB 52	-	-	<0.1	-							<0.1	ug/l	TM17/PM30
PCB 101	-	-	<0.1	-							<0.1	ug/l	TM17/PM30
PCB 118	-	-	<0.1	-							<0.1	ug/l	TM17/PM30
PCB 138	-	-	<0.1	-							<0.1	ug/l	TM17/PM30
PCB 153	-	-	<0.1	-							<0.1	ug/l	TM17/PM30
PCB 180	-	-	<0.1	-							<0.1	ug/l	TM17/PM30
Total 7 PCBs	-	-	<0.7	-							<0.7	ug/l	TM17/PM30

Matrix : Liquid

3 of 7

Client Name: Omnia
Reference: A10967
Location: Vastern Road, Reading
Contact: Adrian King

Client Name: Omnia
Reference: A10967
Location: Vastern Road, Reading
Contact: Adrian King

Client Name: Omnia
Reference: A10967
Location: Vastern Road, Reading
Contact: Adrian King

Client Name: Omnia
Reference: A10967
Location: Vastern Road, Reading
Contact: Adrian King

[illegible]

Please note that only samples that are deviating are mentioned in this report. If no samples are listed it is because none were deviating. Only analyses which are accredited are recorded as deviating if set criteria are not met.

NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

JE Job No.: 18/5703

SOILS

Please note we are only MCERTS accredited (UK soils only) for sand, loam and clay and any other matrix is outside our scope of accreditation.

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation has been performed on clay, sand and loam, only samples that are predominantly these matrices, or combinations of them will be within our MCERTS scope. If samples are not one of a combination of the above matrices they will not be marked as MCERTS accredited.

It is assumed that you have taken representative samples on site and require analysis on a representative subsample. Stones will generally be included unless we are requested to remove them.

All samples will be discarded one month after the date of reporting, unless we are instructed to the contrary.

If you have not already done so, please send us a purchase order if this is required by your company.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

All analysis is reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected. Samples are dried at 35°C ±5°C unless otherwise stated. Moisture content for CEN Leachate tests are dried at 105°C ±5°C.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

Where a CEN 10:1 ZERO Headspace VOC test has been carried out, a 10:1 ratio of water to wet (as received) soil has been used.

% Asbestos in Asbestos Containing Materials (ACMs) is determined by reference to HSG 264 The Survey Guide - Appendix 2 : ACMs in buildings listed in order of ease of fibre release.

Negative Neutralization Potential (NP) values are obtained when the volume of NaOH (0.1N) titrated (pH 8.3) is greater than the volume of HCl (1N) to reduce the pH of the sample to 2.0 - 2.5. Any negative NP values are corrected to 0.

The calculation of Pyrite content assumes that all oxidisable sulphides present in the sample are pyrite. This may not be the case. The calculation may be an overestimate when other sulphides such as Barite (Barium Sulphate) are present.

WATERS

Please note we are not a UK Drinking Water Inspectorate (DWI) Approved Laboratory .

ISO17025 accreditation applies to surface water and groundwater and usually one other matrix which is analysis specific, any other liquids are outside our scope of accreditation.

As surface waters require different sample preparation to groundwaters the laboratory must be informed of the water type when submitting samples.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

DEVIATING SAMPLES

Samples must be received in a condition appropriate to the requested analyses. All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. If this is not the case you will be informed and any test results that may be compromised highlighted on your deviating samples report.

SURROGATES

Surrogate compounds are added during the preparation process to monitor recovery of analytes. However low recovery in soils is often due to peat, clay or other organic rich matrices. For waters this can be due to oxidants, surfactants, organic rich sediments or remediation fluids. Acceptable limits for most organic methods are 70 - 130% and for VOCs are 50 - 150%. When surrogate recoveries are outside the performance criteria but the associated AQC passes this is assumed to be due to matrix effect. Results are not surrogate corrected.

DILUTIONS

A dilution suffix indicates a dilution has been performed and the reported result takes this into account. No further calculation is required.

BLANKS

Where analytes have been found in the blank, the sample will be treated in accordance with our laboratory procedure for dealing with contaminated blanks.

NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a UKAS requirement for data not reported as accredited to be considered indicative only, but this does not mean the data is not valid.

Where possible, and if requested, samples will be re-extracted and a revised report issued with accredited results. Please do not hesitate to contact the laboratory if further details are required of the circumstances which have led to the removal of accreditation.

REPORTS FROM THE SOUTH AFRICA LABORATORY

Any method number not prefixed with SA has been undertaken in our UK laboratory unless reported as subcontracted.

Please include all sections of this report if it is reproduced

ABBREVIATIONS and ACRONYMS USED

#	ISO17025 (UKAS Ref No. 4225) accredited - UK.
SA	ISO17025 (SANAS Ref No.T0729) accredited - South Africa.
B	Indicates analyte found in associated method blank.
DR	Dilution required.
M	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
++	Result outside calibration range, results should be considered as indicative only and are not accredited.
*	Analysis subcontracted to a Jones Environmental approved laboratory.
AD	Samples are dried at 35°C ±5°C
CO	Suspected carry over
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS
ME	Matrix Effect
NFD	No Fibres Detected
BS	AQC Sample
LB	Blank Sample
N	Client Sample
TB	Trip Blank Sample
OC	Outside Calibration Range

JE Job No: 18/5703

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM5	Modified USEPA 8015B method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) with carbon banding within the range C8-C40 GC-FID.	PM16/PM30	Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE/Water samples are extracted with solvent using a magnetic stirrer to create a vortex.	Yes			
TM5	Modified USEPA 8015B method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) with carbon banding within the range C8-C40 GC-FID.	PM30	Water samples are extracted with solvent using a magnetic stirrer to create a vortex.				
TM5/TM36	please refer to TM5 and TM36 for method details	PM12/PM16/PM30	please refer to PM16/PM30 and PM12 for method details	Yes			
TM17	Modified US EPA method 8270. Determination of specific Polychlorinated Biphenyl congeners by GC-MS.	PM30	Water samples are extracted with solvent using a magnetic stirrer to create a vortex.				
TM31	Modified USEPA 8015B. Determination of Methyltertbutylether, Benzene, Toluene, Ethylbenzene and Xylene by headspace GC-FID.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.	Yes			
TM36	Modified US EPA method 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.	Yes			



Exova Jones Environmental

Registered Address : Exova (UK) Ltd, Lochend Industrial Estate, Newbridge, Midlothian, EH28 8PL

Unit 3 Deeside Point
Zone 3
Deeside Industrial Park
Deeside
CH5 2UA

Omnia
10 Manor Court
2 Barnes Wallis Road
Segensworth
Fareham
PO15 5TH

Tel: +44 (0) 1244 833780
Fax: +44 (0) 1244 833781



Attention : Lee McDonald
Date : 24th April, 2018
Your reference : A10967
Our reference : Test Report 18/5726 Batch 1
Location : Vastern Road, Reading
Date samples received : 18th April, 2018
Status : Final report
Issue : 1

Twenty seven samples were received for analysis on 18th April, 2018 of which eleven were scheduled for analysis. Please find attached our Test Report which should be read with notes at the end of the report and should include all sections if reproduced. Interpretations and opinions are outside the scope of any accreditation, and all results relate only to samples supplied.
All analysis is carried out on as received samples and reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected.

Compiled By:

Phil Sommerton BSc
Project Manager

Please see attached notes for all abbreviations and acronyms

Client Name: Omnia
Reference: A10967
Location: Vastern Road, Reading
Contact: Lee McDonald
JE Job No.: 18/5726

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

J E Sample No.	3-4	9-10	21-22	23-24	25-26	31-32	39-40	41-42	43-44	45-46	Please see attached notes for all abbreviations and acronyms		
Sample ID	WS101	WS101	WS102	WS102	WS103	WS103	WS104	WS104	WS104	WS105			
Depth	0.45-0.80	1.30-1.50	1.50-2.00	2.00-2.40	0.40-0.70	1.60-1.70	1.55-1.75	1.75-2.00	2.00-2.40	0.60-0.90			
COC No / misc													
Containers	V J	V J	V J	V J	V J	V J	V J	V J	V J	V J			
Sample Date	16/04/2018	16/04/2018	16/04/2018	16/04/2018	16/04/2018	16/04/2018	17/04/2018	17/04/2018	17/04/2018	17/04/2018			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Batch Number	1	1	1	1	1	1	1	1	1	1			
Date of Receipt	18/04/2018	18/04/2018	18/04/2018	18/04/2018	18/04/2018	18/04/2018	18/04/2018	18/04/2018	18/04/2018	18/04/2018	LOD/LOR	Units	Method No.
TPH CWG													
Aliphatics													
>C5-C6 #	<0.1 ^{SV}	<0.1	<0.1	<0.1	<0.1 ^{SV}	<0.1	<0.1 ^{SV}	<0.1	<0.1	<0.1	<0.1	mg/kg	TM36/PM12
>C6-C8 #	<0.1 ^{SV}	<0.1	<0.1	<0.1	<0.1 ^{SV}	<0.1	0.3 ^{SV}	<0.1	<0.1	<0.1	<0.1	mg/kg	TM36/PM12
>C8-C10	<0.1 ^{SV}	<0.1	<0.1	<0.1	<0.1 ^{SV}	<0.1	2.9 ^{SV}	0.7	1.2	<0.1	<0.1	mg/kg	TM36/PM12
>C10-C12 #	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	101.0	72.1	27.2	<0.2	<0.2	mg/kg	TM5/PM8/PM16
>C12-C16 #	<4	<4	<4	<4	<4	<4	1113	241	90	<4	<4	mg/kg	TM5/PM8/PM16
>C16-C21 #	<7	<7	<7	<7	<7	<7	2336	331	116	<7	<7	mg/kg	TM5/PM8/PM16
>C21-C35 #	<7	<7	<7	<7	11	<7	393	57	20	<7	<7	mg/kg	TM5/PM8/PM16
Total aliphatics C5-35	<19	<19	<19	<19	<19	<19	3946	702	254	<19	<19	mg/kg	TM5/PM8/PM16/PM12/PM10
Aromatics													
>C5-EC7 #	<0.1 ^{SV}	<0.1	<0.1	<0.1	<0.1 ^{SV}	<0.1	<0.1 ^{SV}	<0.1	<0.1	<0.1	<0.1	mg/kg	TM36/PM12
>EC7-EC8 #	<0.1 ^{SV}	<0.1	<0.1	<0.1	<0.1 ^{SV}	<0.1	<0.1 ^{SV}	<0.1	<0.1	<0.1	<0.1	mg/kg	TM36/PM12
>EC8-EC10 #	<0.1 ^{SV}	<0.1	<0.1	<0.1	<0.1 ^{SV}	<0.1	<0.1 ^{SV}	<0.1	<0.1	<0.1	<0.1	mg/kg	TM36/PM12
>EC10-EC12 #	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	12.9	18.3	7.0	<0.2	<0.2	mg/kg	TM5/PM8/PM16
>EC12-EC16 #	<4	<4	<4	<4	<4	<4	233	67	27	<4	<4	mg/kg	TM5/PM8/PM16
>EC16-EC21 #	18	<7	<7	<7	26	<7	657	92	35	<7	<7	mg/kg	TM5/PM8/PM16
>EC21-EC35 #	49	<7	<7	<7	155	<7	333	<7	<7	23	<7	mg/kg	TM5/PM8/PM16
Total aromatics C5-35 #	67	<19	<19	<19	181	<19	1236	177	69	23	<19	mg/kg	TM5/PM8/PM16/PM12/PM10
Total aliphatics and aromatics(C5-35)	67	<38	<38	<38	181	<38	5182	879	323	<38	<38	mg/kg	TM5/PM8/PM16/PM12/PM10
MTBE #	<5 ^{SV}	<5	<5	<5	<5 ^{SV}	<5	<5 ^{SV}	<5	<5	<5	<5	ug/kg	TM31/PM12
Benzene #	<5 ^{SV}	<5	<5	<5	<5 ^{SV}	<5	<5 ^{SV}	<5	<5	<5	<5	ug/kg	TM31/PM12
Toluene #	<5 ^{SV}	<5	<5	<5	<5 ^{SV}	<5	<5 ^{SV}	<5	<5	<5	<5	ug/kg	TM31/PM12
Ethylbenzene #	<5 ^{SV}	<5	<5	<5	<5 ^{SV}	<5	<5 ^{SV}	<5	12	<5	<5	ug/kg	TM31/PM12
m/p-Xylene #	<5 ^{SV}	<5	<5	<5	<5 ^{SV}	<5	24 ^{SV}	16	26	<5	<5	ug/kg	TM31/PM12
o-Xylene #	<5 ^{SV}	<5	<5	<5	<5 ^{SV}	<5	<5 ^{SV}	<5	29	<5	<5	ug/kg	TM31/PM12
PCB 28 #	-	<5	-	-	-	-	-	-	<5	-	<5	ug/kg	TM17/PM8
PCB 52 #	-	<5	-	-	-	-	-	-	<5	-	<5	ug/kg	TM17/PM8
PCB 101 #	-	<5	-	-	-	-	-	-	<5	-	<5	ug/kg	TM17/PM8
PCB 118 #	-	<5	-	-	-	-	-	-	<5	-	<5	ug/kg	TM17/PM8
PCB 138 #	-	<5	-	-	-	-	-	-	<5	-	<5	ug/kg	TM17/PM8
PCB 153 #	-	<5	-	-	-	-	-	-	<5	-	<5	ug/kg	TM17/PM8
PCB 180 #	-	<5	-	-	-	-	-	-	<5	-	<5	ug/kg	TM17/PM8
Total 7 PCBs #	-	<35	-	-	-	-	-	-	<35	-	<35	ug/kg	TM17/PM8
Total Phenols HPLC	<0.15	-	-	-	<0.15	-	-	-	-	<0.15	<0.15	mg/kg	TM26/PM21
Natural Moisture Content	-	51.8	20.1	56.7	-	14.5	38.8	63.8	52.6	-	<0.1	%	PM4/PM0
Moisture Content (% Wet Weight)	11.0	-	-	-	11.9	-	-	-	-	4.8	<0.1	%	PM4/PM0
Hexavalent Chromium #	<0.3	-	-	-	<0.3	-	-	-	-	<0.3	<0.3	mg/kg	TM38/PM20
Sulphate as SO4 (2:1 Ext)	0.3374	-	-	-	0.1798	-	-	-	-	0.1028	<0.0015	g/l	TM38/PM60

Please see attached notes for all abbreviations and acronyms

Client Name: Omnia
Reference: A10967
Location: Vastern Road, Reading
Contact: Lee McDonald
JE Job No.: 18/5726

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

J E Sample No.	53-54											
Sample ID	WS105											
Depth	2.00-2.30											
COC No / misc												
Containers	V J											
Sample Date	17/04/2018											
Sample Type	Soil											
Batch Number	1											
Date of Receipt	18/04/2018											
										Please see attached notes for all abbreviations and acronyms		
										LOD/LOR	Units	Method No.
TPH CWG												
Aliphatics												
>C5-C6 #	<0.1									<0.1	mg/kg	TM36/PM12
>C6-C8 #	<0.1									<0.1	mg/kg	TM36/PM12
>C8-C10	<0.1									<0.1	mg/kg	TM36/PM12
>C10-C12 #	<0.2									<0.2	mg/kg	TM5/PM8/PM16
>C12-C16 #	<4									<4	mg/kg	TM5/PM8/PM16
>C16-C21 #	<7									<7	mg/kg	TM5/PM8/PM16
>C21-C35 #	<7									<7	mg/kg	TM5/PM8/PM16
Total aliphatics C5-35	<19									<19	mg/kg	TM5/PM8/PM16/PM12/PM10
Aromatics												
>C5-EC7 #	<0.1									<0.1	mg/kg	TM36/PM12
>EC7-EC8 #	<0.1									<0.1	mg/kg	TM36/PM12
>EC8-EC10 #	<0.1									<0.1	mg/kg	TM36/PM12
>EC10-EC12 #	<0.2									<0.2	mg/kg	TM5/PM8/PM16
>EC12-EC16 #	<4									<4	mg/kg	TM5/PM8/PM16
>EC16-EC21 #	<7									<7	mg/kg	TM5/PM8/PM16
>EC21-EC35 #	<7									<7	mg/kg	TM5/PM8/PM16
Total aromatics C5-35 #	<19									<19	mg/kg	TM5/PM8/PM16/PM12/PM10
Total aliphatics and aromatics(C5-35)	<38									<38	mg/kg	TM5/PM8/PM16/PM12/PM10
MTBE #	<5									<5	ug/kg	TM31/PM12
Benzene #	<5									<5	ug/kg	TM31/PM12
Toluene #	<5									<5	ug/kg	TM31/PM12
Ethylbenzene #	<5									<5	ug/kg	TM31/PM12
m/p-Xylene #	<5									<5	ug/kg	TM31/PM12
o-Xylene #	<5									<5	ug/kg	TM31/PM12
PCB 28 #	-									<5	ug/kg	TM17/PM8
PCB 52 #	-									<5	ug/kg	TM17/PM8
PCB 101 #	-									<5	ug/kg	TM17/PM8
PCB 118 #	-									<5	ug/kg	TM17/PM8
PCB 138 #	-									<5	ug/kg	TM17/PM8
PCB 153 #	-									<5	ug/kg	TM17/PM8
PCB 180 #	-									<5	ug/kg	TM17/PM8
Total 7 PCBs #	-									<35	ug/kg	TM17/PM8
Total Phenols HPLC	-									<0.15	mg/kg	TM26/PM21
Natural Moisture Content	79.0									<0.1	%	PM4/PM0
Moisture Content (% Wet Weight)	-									<0.1	%	PM4/PM0
Hexavalent Chromium #	-									<0.3	mg/kg	TM38/PM20
Sulphate as SO4 (2:1 Ext)	-									<0.0015	g/l	TM38/PM60

Client Name: Omnia
Reference: A10967
Location: Vastern Road, Reading
Contact: Lee McDonald
JE Job No.: 18/5726

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

[illegible]

Matrix : Solid

QF-PM 3.1.8 v10

Client Name: Omnia
Reference: A10967
Location: Vastern Road, Reading
Contact: Lee McDonald

Note:

Asbestos Screen analysis is carried out in accordance with our documented in-house methods PM042 and TM065 and HSG 248 by Stereo and Polarised Light Microscopy using Dispersion Staining Techniques and is covered by our UKAS accreditation. Detailed Gravimetric Quantification and PCOM Fibre Analysis is carried out in accordance with our documented in-house methods PM042 and TM131 and HSG 248 using Stereo and Polarised Light Microscopy and Phase Contrast Optical Microscopy (PCOM). Samples are retained for not less than 6 months from the date of analysis unless specifically requested.

Opinions, including ACM type and Asbestos level, lie outside the scope of our UKAS accreditation.

Where the sample is not taken by a Jones Environmental Laboratory consultant, Jones Environmental Laboratory cannot be responsible for inaccurate or unrepresentative sampling.

Signed on behalf of Jones Environmental Laboratory:



Ryan Butterworth
Asbestos Team Leader

[illegible]

Matrix : Solid

[illegible]

Matrix : Solid

Please note that only samples that are deviating are mentioned in this report. If no samples are listed it is because none were deviating. Only analyses which are accredited are recorded as deviating if set criteria are not met.

NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

JE Job No.: 18/5726

SOILS

Please note we are only MCERTS accredited (UK soils only) for sand, loam and clay and any other matrix is outside our scope of accreditation.

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation has been performed on clay, sand and loam, only samples that are predominantly these matrices, or combinations of them will be within our MCERTS scope. If samples are not one of a combination of the above matrices they will not be marked as MCERTS accredited.

It is assumed that you have taken representative samples on site and require analysis on a representative subsample. Stones will generally be included unless we are requested to remove them.

All samples will be discarded one month after the date of reporting, unless we are instructed to the contrary.

If you have not already done so, please send us a purchase order if this is required by your company.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

All analysis is reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected. Samples are dried at 35°C ±5°C unless otherwise stated. Moisture content for CEN Leachate tests are dried at 105°C ±5°C.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

Where a CEN 10:1 ZERO Headspace VOC test has been carried out, a 10:1 ratio of water to wet (as received) soil has been used.

% Asbestos in Asbestos Containing Materials (ACMs) is determined by reference to HSG 264 The Survey Guide - Appendix 2 : ACMs in buildings listed in order of ease of fibre release.

Negative Neutralization Potential (NP) values are obtained when the volume of NaOH (0.1N) titrated (pH 8.3) is greater than the volume of HCl (1N) to reduce the pH of the sample to 2.0 - 2.5. Any negative NP values are corrected to 0.

The calculation of Pyrite content assumes that all oxidisable sulphides present in the sample are pyrite. This may not be the case. The calculation may be an overestimate when other sulphides such as Barite (Barium Sulphate) are present.

WATERS

Please note we are not a UK Drinking Water Inspectorate (DWI) Approved Laboratory .

ISO17025 accreditation applies to surface water and groundwater and usually one other matrix which is analysis specific, any other liquids are outside our scope of accreditation.

As surface waters require different sample preparation to groundwaters the laboratory must be informed of the water type when submitting samples.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

DEVIATING SAMPLES

Samples must be received in a condition appropriate to the requested analyses. All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. If this is not the case you will be informed and any test results that may be compromised highlighted on your deviating samples report.

SURROGATES

Surrogate compounds are added during the preparation process to monitor recovery of analytes. However low recovery in soils is often due to peat, clay or other organic rich matrices. For waters this can be due to oxidants, surfactants, organic rich sediments or remediation fluids. Acceptable limits for most organic methods are 70 - 130% and for VOCs are 50 - 150%. When surrogate recoveries are outside the performance criteria but the associated AQC passes this is assumed to be due to matrix effect. Results are not surrogate corrected.

DILUTIONS

A dilution suffix indicates a dilution has been performed and the reported result takes this into account. No further calculation is required.

BLANKS

Where analytes have been found in the blank, the sample will be treated in accordance with our laboratory procedure for dealing with contaminated blanks.

NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a UKAS requirement for data not reported as accredited to be considered indicative only, but this does not mean the data is not valid.

Where possible, and if requested, samples will be re-extracted and a revised report issued with accredited results. Please do not hesitate to contact the laboratory if further details are required of the circumstances which have led to the removal of accreditation.

REPORTS FROM THE SOUTH AFRICA LABORATORY

Any method number not prefixed with SA has been undertaken in our UK laboratory unless reported as subcontracted.

Please include all sections of this report if it is reproduced

ABBREVIATIONS and ACRONYMS USED

#	ISO17025 (UKAS Ref No. 4225) accredited - UK.
SA	ISO17025 (SANAS Ref No.T0729) accredited - South Africa.
B	Indicates analyte found in associated method blank.
DR	Dilution required.
M	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
++	Result outside calibration range, results should be considered as indicative only and are not accredited.
*	Analysis subcontracted to a Jones Environmental approved laboratory.
AD	Samples are dried at 35°C ±5°C
CO	Suspected carry over
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS
ME	Matrix Effect
NFD	No Fibres Detected
BS	AQC Sample
LB	Blank Sample
N	Client Sample
TB	Trip Blank Sample
OC	Outside Calibration Range

JE Job No: 18/5726

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
PM4	Gravimetric measurement of Natural Moisture Content and % Moisture Content at either 35°C or 105°C. Calculation based on ISO 11465 and BS1377.	PM0	No preparation is required.				
PM4	Gravimetric measurement of Natural Moisture Content and % Moisture Content at either 35°C or 105°C. Calculation based on ISO 11465 and BS1377.	PM0	No preparation is required.			AR	
TM4	Modified USEPA 8270 method for the solvent extraction and determination of 16 PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.			AR	Yes
TM4	Modified USEPA 8270 method for the solvent extraction and determination of 16 PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes		AR	Yes
TM5	Modified USEPA 8015B method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) with carbon banding within the range C8-C40 GC-FID.	PM16	Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.			AR	
TM5	Modified USEPA 8015B method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) with carbon banding within the range C8-C40 GC-FID.	PM8/PM16	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required/Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.	Yes		AR	Yes
TM5/TM36	please refer to TM5 and TM36 for method details	PM8/PM12/PM16	please refer to PM8/PM16 and PM12 for method details			AR	Yes
TM5/TM36	please refer to TM5 and TM36 for method details	PM8/PM12/PM16	please refer to PM8/PM16 and PM12 for method details	Yes		AR	Yes
TM17	Modified US EPA method 8270. Determination of specific Polychlorinated Biphenyl congeners by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes		AR	Yes
TM21	Modified USEPA 415.1. Determination of Total Organic Carbon or Total Carbon by combustion in an Eltra TOC furnace/analyser in the presence of oxygen. The CO2 generated is quantified using infra-red detection. Organic Matter (SOM) calculated as per EA MCERTS Chemical Testing of Soil, March 2012 v4.	PM24	Dried and ground solid samples are washed with hydrochloric acid, then rinsed with deionised water to remove the mineral carbon before TOC analysis.	Yes		AD	Yes

JE Job No: 18/5726

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM26	Determination of phenols by Reversed Phased High Performance Liquid Chromatography and Electro-Chemical Detection.	PM21	As received solid or water samples are extracted in Methanol: Sodium Hydroxide (0.1M NaOH) (60:40) by orbital shaker.			AR	Yes
TM30	Determination of Trace Metal elements by ICP-OES (Inductively Coupled Plasma - Optical Emission Spectrometry). Modified US EPA Method 200.7, 6010B and BS EN ISO 11885 2009	PM62	Acid digestion of as received solid samples using Aqua Regia refluxed at 112.5 °C.			AR	Yes
TM31	Modified USEPA 8015B. Determination of Methyltertbutylether, Benzene, Toluene, Ethylbenzene and Xylene by headspace GC-FID.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.	Yes		AR	Yes
TM36	Modified US EPA method 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.			AR	Yes
TM36	Modified US EPA method 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.	Yes		AR	Yes
TM38	Soluble Ion analysis using the Thermo Aquakem Photometric Automatic Analyser. Modified US EPA methods 325.2, 375.4, 365.2, 353.1, 354.1	PM20	Extraction of dried and ground or as received samples with deionised water in a 2:1 water to solid ratio using a reciprocal shaker for all analytes except hexavalent chromium. Extraction of as received sample using 10:1 ratio of 0.2M sodium hydroxide to soil for hexavalent chromium using a reciprocal shaker.	Yes		AR	Yes
TM38	Soluble Ion analysis using the Thermo Aquakem Photometric Automatic Analyser. Modified US EPA methods 325.2, 375.4, 365.2, 353.1, 354.1	PM60	As received solid samples are extracted with deionised water in a 2:1 ratio of water to solid.			AR	Yes
TM65	Asbestos Bulk Identification method based on HSG 248.	PM42	Solid samples undergo a thorough visual inspection for asbestos fibres prior to asbestos identification using TM065.	Yes		AR	
TM73	Modified US EPA methods 150.1 and 9045D and BS1377:1990. Determination of pH by Metrohm automated probe analyser.	PM11	Extraction of as received solid samples using one part solid to 2.5 parts deionised water.	Yes		AR	No
TM74	Analysis of water soluble boron (20:1 extract) by ICP-OES.	PM61	As received solid samples are extracted with hot water in a 20:1 ratio of water to soil ready for analysis by ICP.			AR	Yes

JE Job No: 18/5726

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/S ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM89	Modified USEPA method OIA-1667. Determination of cyanide by Flow Injection Analyser. Where WAD cyanides are required a Ligand displacement step is carried out before analysis.	PM45	As received solid samples are extracted with 1M NaOH by orbital shaker for Cyanide and Thiocyanate analysis.	Yes		AR	Yes
NONE	No Method Code	NONE	No Method Code			AR	Yes

Omnia
3-6 The Quarterdeck
Port Solent
Portsmouth
PO6 4TP

Attention : Adrian King
Date : 6th November, 2019
Your reference : A11220
Our reference : Test Report 19/17968 Batch 1
Location : Vastern Road, Reading Monitoring
Date samples received : 2nd November, 2019
Status : Final report
Issue : 1

Five samples were received for analysis on 2nd November, 2019 of which five were scheduled for analysis. Please find attached our Test Report which should be read with notes at the end of the report and should include all sections if reproduced. Interpretations and opinions are outside the scope of any accreditation, and all results relate only to samples supplied.

All analysis is carried out on as received samples and reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected.

Authorised By:



Phil Sommerton BSc

Senior Project Manager

Please include all sections of this report if it is reproduced

Element Materials Technology

Client Name: Omnia
Reference: A11220
Location: Vastern Road, Reading Monitoring
Contact: Adrian King
EMT Job No: 19/17968

Report : Liquid

Liquids/products: V=40ml vial, G=glass bottle, P=plastic bottle
 H=H₂SO₄, Z=ZnAc, N=NaOH, HN=HNO₃

EMT Sample No.	1-3	4-6	7-9	10-12	13-15						Please see attached notes for all abbreviations and acronyms		
Sample ID	BH2002	BH2003	BH2004	BH2005	BH1005								
Depth	3.10	3.20	3.00	2.90	5.00								
COC No / misc													
Containers	V G	V G	V G	V G	V G								
Sample Date	01/11/2019 14:01	01/11/2019 13:17	01/11/2019 12:28	01/11/2019 10:44	01/11/2019 11:35								
Sample Type	Liquid	Liquid	Liquid	Liquid	Liquid								
Batch Number	1	1	1	1	1								
Date of Receipt	02/11/2019	02/11/2019	02/11/2019	02/11/2019	02/11/2019						LOD/LOR	Units	Method No.
MTBE	<5	<5	<5	<5	<5						<5	ug/l	TM31/PM12
Benzene	<5	<5	<5	<5	<5						<5	ug/l	TM31/PM12
Toluene	<5	<5	<5	<5	<5						<5	ug/l	TM31/PM12
Ethylbenzene	<5	<5	<5	<5	<5						<5	ug/l	TM31/PM12
m/p-Xylene	<5	<5	<5	<5	<5						<5	ug/l	TM31/PM12
o-Xylene	<5	<5	<5	<5	<5						<5	ug/l	TM31/PM12
TPH CWG													
Aliphatics													
>C5-C6	<10	<10	<10	<10	<10						<10	ug/l	TM36/PM12
>C6-C8	<10	<10	<10	<10	<10						<10	ug/l	TM36/PM12
>C8-C10	<10	<10	<10	<10	<10						<10	ug/l	TM36/PM12
>C10-C12	<5	<5	<5	<5	<5						<5	ug/l	TM5/PM16/PM30
>C12-C16	<10	<10	<10	190	40						<10	ug/l	TM5/PM16/PM30
>C16-C21	<10	<10	80	1070	200						<10	ug/l	TM5/PM16/PM30
>C21-C35	<10	<10	<10	<10	<10						<10	ug/l	TM5/PM16/PM30
Total aliphatics C5-35	<10	<10	80	1260	240						<10	ug/l	TM5/PM16/PM30
Aromatics													
>C5-EC7	<10	<10	<10	<10	<10						<10	ug/l	TM36/PM12
>EC7-EC8	<10	<10	<10	<10	<10						<10	ug/l	TM36/PM12
>EC8-EC10	<10	<10	<10	<10	<10						<10	ug/l	TM36/PM12
>EC10-EC12	<5	<5	<5	45	<5						<5	ug/l	TM5/PM16/PM30
>EC12-EC16	<10	<10	<10	480	40						<10	ug/l	TM5/PM16/PM30
>EC16-EC21	<10	<10	<10	2000	190						<10	ug/l	TM5/PM16/PM30
>EC21-EC35	<10	<10	<10	<10	<10						<10	ug/l	TM5/PM16/PM30
Total aromatics C5-35	<10	<10	<10	2525	230						<10	ug/l	TM5/PM16/PM30
Total aliphatics and aromatics(C5-35)	<10	<10	80	3785	470						<10	ug/l	TM5/PM16/PM30

Client Name: Omnia
Reference: A11220
Location: Vastern Road, Reading Monitoring
Contact: Adrian King

Client Name: Omnia
Reference: A11220
Location: Vastern Road, Reading Monitoring
Contact: Adrian King

Client Name: Omnia
Reference: A11220
Location: Vastern Road, Reading Monitoring
Contact: Adrian King

Client Name: Omnia
Reference: A11220
Location: Vastern Road, Reading Monitoring
Contact: Adrian King

[illegible]

Please note that only samples that are deviating are mentioned in this report. If no samples are listed it is because none were deviating. Only analyses which are accredited are recorded as deviating if set criteria are not met.

NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

EMT Job No.: 19/17968

SOILS

Please note we are only MCERTS accredited (UK soils only) for sand, loam and clay and any other matrix is outside our scope of accreditation.

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation has been performed on clay, sand and loam, only samples that are predominantly these matrices, or combinations of them will be within our MCERTS scope. If samples are not one of a combination of the above matrices they will not be marked as MCERTS accredited.

It is assumed that you have taken representative samples on site and require analysis on a representative subsample. Stones will generally be included unless we are requested to remove them.

All samples will be discarded one month after the date of reporting, unless we are instructed to the contrary.

If you have not already done so, please send us a purchase order if this is required by your company.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

All analysis is reported on a dry weight basis unless stated otherwise. Limits of detection for analyses carried out on as received samples are not moisture content corrected. Results are not surrogate corrected. Samples are dried at 35°C ±5°C unless otherwise stated. Moisture content for CEN Leachate tests are dried at 105°C ±5°C.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

Where a CEN 10:1 ZERO Headspace VOC test has been carried out, a 10:1 ratio of water to wet (as received) soil has been used.

% Asbestos in Asbestos Containing Materials (ACMs) is determined by reference to HSG 264 The Survey Guide - Appendix 2 : ACMs in buildings listed in order of ease of fibre release.

Sufficient amount of sample must be received to carry out the testing specified. Where an insufficient amount of sample has been received the testing may not meet the requirements of our accredited methods, as such accreditation may be removed.

Negative Neutralization Potential (NP) values are obtained when the volume of NaOH (0.1N) titrated (pH 8.3) is greater than the volume of HCl (1N) to reduce the pH of the sample to 2.0 - 2.5. Any negative NP values are corrected to 0.

The calculation of Pyrite content assumes that all oxidisable sulphides present in the sample are pyrite. This may not be the case. The calculation may be an overestimate when other sulphides such as Barite (Barium Sulphate) are present.

WATERS

Please note we are not a UK Drinking Water Inspectorate (DWI) Approved Laboratory .

ISO17025 accreditation applies to surface water and groundwater and usually one other matrix which is analysis specific, any other liquids are outside our scope of accreditation.

As surface waters require different sample preparation to groundwaters the laboratory must be informed of the water type when submitting samples.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

DEVIATING SAMPLES

All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. The temperature of sample receipt is recorded on the confirmation schedules in order that the client can make an informed decision as to whether testing should still be undertaken.

SURROGATES

Surrogate compounds are added during the preparation process to monitor recovery of analytes. However low recovery in soils is often due to peat, clay or other organic rich matrices. For waters this can be due to oxidants, surfactants, organic rich sediments or remediation fluids. Acceptable limits for most organic methods are 70 - 130% and for VOCs are 50 - 150%. When surrogate recoveries are outside the performance criteria but the associated AQC passes this is assumed to be due to matrix effect. Results are not surrogate corrected.

DILUTIONS

A dilution suffix indicates a dilution has been performed and the reported result takes this into account. No further calculation is required.

BLANKS

Where analytes have been found in the blank, the sample will be treated in accordance with our laboratory procedure for dealing with contaminated blanks.

NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a UKAS requirement for data not reported as accredited to be considered indicative only, but this does not mean the data is not valid.

Where possible, and if requested, samples will be re-extracted and a revised report issued with accredited results. Please do not hesitate to contact the laboratory if further details are required of the circumstances which have led to the removal of accreditation.

Please include all sections of this report if it is reproduced

REPORTS FROM THE SOUTH AFRICA LABORATORY

Any method number not prefixed with SA has been undertaken in our UK laboratory unless reported as subcontracted.

Measurement Uncertainty

Measurement uncertainty defines the range of values that could reasonably be attributed to the measured quantity. This range of values has not been included within the reported results. Uncertainty expressed as a percentage can be provided upon request.

ABBREVIATIONS and ACRONYMS USED

#	ISO17025 (UKAS Ref No. 4225) accredited - UK.
SA	ISO17025 (SANAS Ref No.T0729) accredited - South Africa
B	Indicates analyte found in associated method blank.
DR	Dilution required.
M	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
>>	Results above calibration range, the result should be considered the minimum value. The actual result could be significantly higher, this result is not accredited.
*	Analysis subcontracted to an Element Materials Technology approved laboratory.
AD	Samples are dried at 35°C ±5°C
CO	Suspected carry over
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS
ME	Matrix Effect
NFD	No Fibres Detected
BS	AQC Sample
LB	Blank Sample
N	Client Sample
TB	Trip Blank Sample
OC	Outside Calibration Range

EMT Job No: 19/17968

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM5	Modified 8015B method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) within the range C8-C40 by GCFID. For waters the solvent extracts dissolved phase plus a sheen if present.	PM16/PM30	Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE/Water samples are extracted with solvent using a magnetic stirrer to create a vortex.				
TM5/TM36	please refer to TM5 and TM36 for method details	PM12/PM16/PM30	please refer to PM16/PM30 and PM12 for method details				
TM31	Modified USEPA 8015B. Determination of Methyltertbutylether, Benzene, Toluene, Ethylbenzene and Xylene by headspace GC-FID.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.				
TM36	Modified US EPA method 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID. MTBE by GCFID co-elutes with 3-methylpentane if present and therefore can give a false positive. Positive MTBE results can be confirmed using GCMS.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.				

APPENDIX VI
EXPLORATORY HOLE LOGS

BOREHOLE LOG



Borehole No.

BH1001

Sheet 1 of 2

Telephone: 01452 739165, Fax: 01452 739220, Email: info@ccground.co.uk

Project Name: SSE Site, Vastern Road, Reading	Project No: C5925	Co-ords: E 471576 N 174181	Hole Type CP
Location: Vastern Road, Reading, RG1 8BU	Level: 38.39mAOD	Scale 1 : 50.00	
Client: SSE Plc	Dates: Start: 29/01/2018 End: 31/01/2018	Logged By MM	

(m)	Water Levels	Samples & In Situ Testing			Sample	Install	Description	Depth (m)	Level (mAOD)	Legend
		No/Type	Depth (m)	Result						
1		B ES B B	0.20 - 0.40 0.20 0.40 - 0.60 0.50 0.70 - 1.20				MADE GROUND: Grey ASPHALT. MADE GROUND: Dark grey sandy slightly silty angular fine to coarse GRAVEL of siliceous material and brick with low cobble content. MADE GROUND: Brown sandy silty angular fine to coarse GRAVEL of siliceous material and brick with medium cobble content of brick. MADE GROUND: Grey CONCRETE. MADE GROUND: Soft dark greyish brown slightly gravelly sandy CLAY. Gravel is angular fine to coarse of siliceous material, concrete and brick. Soft becoming very soft green slightly sandy CLAY with a moderate organic odour. (ALLUVIUM)	0.10 0.40 0.60 0.70 (0.80) 1.50	38.29 37.99 37.79 37.69 36.89	1
2		ES SPT	1.20 1.20 - 1.65	S 4						
3		D ES UT100 D	2.00 2.00 - 2.45 2.50					(2.50)		2
4		D SPT	3.00 3.00 - 3.45	S<1						3
5		B D SPT C	4.00 - 4.45 4.00 4.00 - 4.45	S 5			Loose grey silty very sandy angular to subangular fine to coarse GRAVEL of siliceous material. (KEMPTON PARK GRAVEL)	4.00 (1.00)	34.39	4
6		B D SPT C	5.00 - 5.45 5.00 5.00 - 5.45	C 25			Medium dense grey sandy silty angular to sub-angular fine to coarse GRAVEL of siliceous material. (KEMPTON PARK GRAVEL)	5.00 (1.50)	33.39	5
7		D SPT C	6.00 6.50 - 6.95	C 27			Medium dense light brown sandy becoming very sandy silty angular to sub-rounded fine to coarse GRAVEL of siliceous material. (KEMPTON PARK GRAVEL)	6.50 (2.50)	31.89	6
8		D	7.00							7

EQUIPMENT: Hand tools. Hydraulic breaker. Light cable percussion rig.

METHOD: Hard standing broken out using hydraulic breaker with a range of chisels and continued with hand dug inspection pit: 0.00-1.20m. Cable percussion drilled using 250mm diameter clay cutter and bailer 1.20-1.70m and 200mm diameter clay cutter and bailer 1.70-12.00m.

CASING: 250mm diameter to 1.70m. 200mm diameter to 10.50m.

GROUNDWATER: Encountered at 4.00m, and rose to 3.40m after 20 minutes; and at 8.00m and rose to 1.70m after 20 minutes.

INSTALLATION: Borehole was sealed with bentonite pellets: 7.00-12.00m. 50mm ID HDPE slotted pipe with washed gravel response zone: 7.00-1.00m. 50mm ID HDPE plain pipe with bentonite pellet seal: 1.00-0.20m. Flush 150mm steel cover set in concrete: Flush cover set in concrete: 0.20-0.10m. Gas valve fitted. Surface reinstated with tarmacadam 0.10-0.00m.

REMARKS: Borehole was installed on 31/1/18. Clean drilling techniques; bentonite seal from 1.50-2.00m. PID readings taken on all environmental samples. Results: 0.20m - 0.10ppm; 0.50m - 0.20ppm; 1.20m - 0.20ppm; 2.00m - 0.40ppm.

Groundwater:

Date	Strike Depth (m)	Casing Depth (m)	Depth After Observation (m)
30/01/18	4.00	4.00	3.40
30/01/18	8.00	7.60	1.70

Hole Progress:

Date	Hole Depth (m)	Casing Depth (m)	Water Depth (m)
29/01/2018 17:00	0.05		
30/01/2018 08:00	0.05		

BOREHOLE LOG



Borehole No.

BH1001

Sheet 2 of 2

Telephone: 01452 739165 , Fax: 01452 739220 , Email: info@ccground.co.uk

Project Name: SSE Site, Vastern Road, Reading	Project No: C5925	Co-ords: E 471576 N 174181	Hole Type CP
Location: Vastern Road, Reading, RG1 8BU	Level: 38.39mAOD	Scale 1 : 50.00	
Client: SSE Plc	Dates: Start: 29/01/2018 End: 31/01/2018	Logged By MM	

(m)	Water Levels	Samples & In Situ Testing			Sample	Install	Description	Depth (m)	Level (mAOD)	Legend
		No/Type	Depth (m)	Result						
		D SPT	8.00 8.00 - 8.45	S 10			Medium dense light brown sandy becoming very sandy silty angular to sub-rounded fine to coarse GRAVEL of siliceous material. (KEMPTON PARK GRAVEL) <i>(continued from previous sheet)</i> 8.00m: Firm grey gravelly sandy clay. Gravel angular to sub-rounded fine to medium.			
9		D	9.00				CHALK recovered as: light brown and off white slightly sandy slightly silty angular to sub-angular fine to coarse GRAVEL and COBBLES of weak low to medium density chalk (WHITE CHALK SUBGROUP)	9.00	29.39	
		SPT	9.50 - 9.95	S 6						
10		D	10.00					(3.00)		
11		D SPT	11.00 11.00 - 11.45	S 12						
12		D	12.00				Borehole completed at 12.00m	12.00	26.39	
13										
14										
15										
16										
17										

Groundwater:

Date	Strike Depth (m)	Casing Depth (m)	Depth After Observation (m)
30/01/2018 17:00	12.00	10.50	3.60
31/01/2018 08:00	12.00	10.50	

Hole Progress:

Date	Hole Depth (m)	Casing Depth (m)	Water Depth (m)
30/01/2018 17:00	12.00	10.50	3.60
31/01/2018 08:00	12.00	10.50	

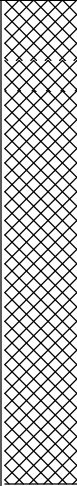
INSPECTION PIT LOG



Pit No
BH1002
Sheet 1 of 1

Telephone: 01452 739165 , Fax: 01452 739220 , Email: info@ccground.co.uk

Project Name: SSE Site, Vastern Road, Reading	Project No: C5925	Co-ords: E 471596 N 174164 Level: 38.30mAOD	Date 29/01/2018
Location: Vastern Road, Reading, RG1 8BU	Dimensions: 0.50m Depth 0.80m		Scale 1 : 12.5
Client: SSE Plc			Logged By MM

(m)	Water Levels	Samples & In Situ Testing			Description	Depth (m)	Level (mAD)	Legend
		No/Type	Depth (m)	Result				
1		B ES	0.10 - 0.15 0.15		MADE GROUND: Grey ASPHALT.	(0.10)	38.20 38.15	
					MADE GROUND: Dark grey sandy slightly silty angular fine to coarse GRAVEL of siliceous material and brick.	0.10		
					MADE GROUND: Grey CONCRETE.	0.15		
					(0.65)			
					Inspection pit completed at 0.80m	0.80	37.50	
2								

EQUIPMENT: Hand tools. Hydraulic breaker.

METHOD: Hard standing broken out using hydraulic breaker with a range of chisels and continued with hand dug inspection pit: 0.00-0.80m.

CASING: None used.

GROUNDWATER: None encountered.

BACKFILL: Borehole was backfilled with bentonite pellets and ground surface reinstated.

REMARKS: Unable to advance hole through concrete. Relocated as BH1002A. PID readings taken on all environmental samples. Results: 0.15m - 0.20ppm.

INSPECTION PIT LOG


 Pit No
BH1002A

Sheet 1 of 1

Telephone: 01452 739165 , Fax: 01452 739220 , Email: info@ccground.co.uk

Project Name: SSE Site, Vastern Road,
ReadingProject No:
C5925
Co-ords: E 471600 N 174161
Level: 38.28mAODDate
30/01/2018

Location: Vastern Road, Reading, RG1 8BU

Dimensions: 0.50m

Scale
1 : 12.5

Client: SSE Plc

Depth
0.80m

0.50m

Logged By
MM

(m)	Water Levels	Samples & In Situ Testing			Description	Depth (m)	Level (mAOD)	Legend
		No/Type	Depth (m)	Result				
1		ES	0.50		MADE GROUND: Grey ASPHALT.	(0.10)	38.18	
					MADE GROUND: Grey to brown sandy slightly silty angular fine to coarse GRAVEL of siliceous material and brick with low cobble content and rare possible asbestos containing material.	0.10		
						(0.70)		
2					0.80m: Concrete across base of pit. Inspection pit completed at 0.80m	0.80	37.48	

EQUIPMENT: Hand tools. Hydraulic breaker.

METHOD: Hard standing broken out using hydraulic breaker with a range of chisels and continued with hand dug inspection pit: 0.00-0.80m.

CASING: None used.

GROUNDWATER: None encountered.

BACKFILL: Borehole was backfilled with bentonite pellets and ground surface reinstated.

REMARKS: Unable to advance hole through concrete. Relocated as BH1002B. PID readings taken on all environmental samples. Results: 0.50m - 0.00ppm.

INSPECTION PIT LOG


 Pit No
BH1002B

Sheet 1 of 1

Telephone: 01452 739165 , Fax: 01452 739220 , Email: info@ccground.co.uk

Project Name: SSE Site, Vastern Road,
ReadingProject No:
C5925
Co-ords: E 471592 N 174149
Level: 38.37mAODDate
30/01/2018

Location: Vastern Road, Reading, RG1 8BU

Dimensions: 0.50m

Scale
1 : 12.5

Client: SSE Plc

Depth
0.45m

0.50m

Logged By
MM

(m)	Water Levels	Samples & In Situ Testing			Description	Depth (m)	Level (mAD)	Legend
		No/Type	Depth (m)	Result				
1					MADE GROUND: Grey ASPHALT.	(0.10)	38.27	
					MADE GROUND: Red brick MASONRY.	0.10		
						(0.25)		
					MADE GROUND: Grey CONCRETE.	0.35	38.02	
					0.450m: 1no. metal pipe approximately 50mm diameter, broken with surround of light grey to brown sandy slightly silty angular fine gravel of siliceous material. Inspection pit completed at 0.45m	(0.10) 0.45	37.92	
2								

EQUIPMENT: Hand tools. Hydraulic breaker.

METHOD: Hard standing broken out using hydraulic breaker with a range of chisels and continued with hand dug inspection pit: 0.00-0.45m.

CASING: None used.

GROUNDWATER: None encountered.

BACKFILL: Borehole was backfilled with bentonite pellets and ground surface reinstated.

REMARKS: Metal pipe in base of pit. Relocated as BH1002C.

BOREHOLE LOG



Borehole No.

BH1002C

Sheet 1 of 4

Telephone: 01452 739165, Fax: 01452 739220, Email: info@ccground.co.uk

Project Name: SSE Site, Vastern Road, Reading	Project No: C5925	Co-ords: E 471591 N 174147	Hole Type CP
Location: Vastern Road, Reading, RG1 8BU	Level: 38.40mAOD	Scale 1 : 50.00	
Client: SSE Plc	Dates: Start: 31/01/2018 End: 02/02/2018	Logged By MM	

(m)	Water Levels	Samples & In Situ Testing			Sample	Install	Description	Depth (m)	Level (mAOD)	Legend
		No/Type	Depth (m)	Result						
1		B ES	0.10 - 0.50 0.20				MADE GROUND: Grey ASPHALT.	0.10	38.30	
							MADE GROUND: Brown tending to grey sandy slightly silty angular fine to coarse GRAVEL of siliceous material and red brick with medium cobble content. Cobbles are angular of brick.	0.30	38.10	
		ES B	0.60 0.65 - 1.10				MADE GROUND: Red brick MASONRY.	0.50 0.65	37.90 37.75	
		ES	1.00				MADE GROUND: Light brown locally grey sandy slightly silty angular fine to coarse GRAVEL of siliceous material and red brick.	(0.45) 1.10	37.30	
		D	1.20				MADE GROUND: Dark greyish brown slightly gravelly sandy CLAY. Gravel is angular fine to coarse of siliceous material, concrete and red brick.			
2		ES SPT	1.50 1.50 - 1.65	S 6			Very soft dark grey slightly sandy CLAY with occasional partially decomposed organic material (<5mm). (ALLUVIUM)	(1.20)		
							Soft to firm greenish grey slightly sandy CLAY. (ALLUVIUM)	2.30	36.10	
3		ES UT100	2.50 2.50 - 2.95							
		D	3.00					(1.50)		
4		SPT	3.50 - 3.95	S 31						
		B	3.80 - 4.30				Dense grey sandy silty angular to sub-angular fine to coarse GRAVEL of siliceous material. (KEMPTON PARK GRAVEL)	3.80	34.60	
5		B SPT C	4.50 - 5.00 4.50 - 4.95	C 34				(1.30)		
							Medium dense locally dense light brown sandy tending to very sandy slightly silty angular to sub-angular fine to coarse GRAVEL of siliceous material. (KEMPTON PARK GRAVEL)	5.10	33.30	
6		B SPT C	5.50 - 6.00 5.50 - 5.95	C 27						
7		B SPT C	7.00 - 7.50 7.00 - 7.45	C 30						
								(5.00)		
8										

EQUIPMENT: Hand tools. Hydraulic breaker. Light cable percussion rig.

METHOD: Hard standing broken out using hydraulic breaker with a range of chisels and continued with hand dug inspection pit: 0.00-1.20m. Cable percussion drilled using 200mm diameter clay cutter and bailer 1.20-10.50m and 150mm diameter clay cutter and bailer 10.50-35.00m.

CASING: 250mm diameter to 1.70m, 200mm diameter to 10.50m, 150mm diameter to 24.90m.

GROUNDWATER: Encountered at 4.00m, and rose to 3.40m after 20 minutes; and at 8.00m and rose to 1.70m after 20 minutes.

INSTALLATION: Borehole was backfilled with bentonite pellets: 35.00-7.00m. 50mm ID HDPE slotted pipe with washed gravel response zone: 7.00-2.00m. 50mm ID HDPE plain pipe with bentonite pellet seal: 2.00-0.20m. Flush 150mm steel cover set in concrete: Flush cover set in concrete: 0.20-0.10m. Gas valve fitted. Surface reinstated with tarmacadam 0.10-0.00m.

REMARKS: Clean drilling techniques; bentonite seal from 1.50-2.00m. PID readings taken on all environmental samples. Results: 0.20m - 0.00ppm; 0.60m - 1.50ppm; 1.00m - 0.00ppm; 1.50m - 4.50ppm; 2.50m - 0.30ppm.

Groundwater:

Date	Strike Depth (m)	Casing Depth (m)	Depth After Observation (m)
31/01/18	4.00	4.00	3.40
01/02/18	8.00	8.00	1.70

Hole Progress:

Date	Hole Depth (m)	Casing Depth (m)	Water Depth (m)
31/01/2018 17:00	7.00	6.90	3.20
01/02/2018 08:00	7.00	6.90	

BOREHOLE LOG



Borehole No.

BH1002C

Sheet 2 of 4

Telephone: 01452 739165 , Fax: 01452 739220 , Email: info@ccground.co.uk

Project Name: SSE Site, Vastern Road,
Reading

Project No:

C5925

Co-ords: E 471591 N 174147

Hole Type
CP

Location: Vastern Road, Reading, RG1 8BU

Level: 38.40mAOD

Scale
1 : 50.00

Client: SSE Plc

Dates: Start: 31/01/2018
End: 02/02/2018Logged By
MM

(m)	Water Levels	Samples & In Situ Testing			Sample	Install	Description	Depth (m)	Level (mAOD)	Legend
		No/Type	Depth (m)	Result						
9		B SPT C	8.50 - 9.00 8.50 - 8.95	C 21			Medium dense locally dense light brown sandy tending to very sandy slightly silty angular to sub-angular fine to coarse GRAVEL of siliceous material. (KEMPTON PARK GRAVEL) (continued from previous sheet)			
10		B SPT C	10.00 - 10.50 10.00 - 10.45	C 8			CHALK recovered as light brown and off white slightly sandy silty angular to sub-angular fine to coarse GRAVEL with rare flints. Clasts are very weak low to medium dense. (Dc) (WHITE CHALK SUBGROUP)	10.10	28.30	
11		U100	11.50 - 11.95					(1.90)		
12		D	12.00				CHALK recovered as off white sandy silty angular to sub-angular fine to coarse GRAVEL with rare rinded flints. Clasts are weak high density. (WHITE CHALK SUBGROUP)	12.00	26.40	
13		SPT	13.00 - 13.45	S 8						
14		D	14.00							
15		U100	14.50 - 14.95							
15		D	15.00							
16		SPT	16.00 - 16.45	S 33						
17		D	17.00							
		U100	17.50 - 17.95							

Groundwater:

Date Strike Depth (m) Casing Depth (m) Depth After Observation (m)

Hole Progress:

Date Hole Depth (m) Casing Depth (m) Water Depth (m)

BOREHOLE LOG



Borehole No.

BH1002C

Sheet 3 of 4

Telephone: 01452 739165 , Fax: 01452 739220 , Email: info@ccground.co.uk

Project Name: SSE Site, Vastern Road, Reading	Project No: C5925	Co-ords: E 471591 N 174147	Hole Type CP
Location: Vastern Road, Reading, RG1 8BU	Level: 38.40mAOD	Scale 1 : 50.00	
Client: SSE Plc	Dates: Start: 31/01/2018 End: 02/02/2018	Logged By MM	

(m)	Water Levels	Samples & In Situ Testing			Sample	Install	Description	Depth (m)	Level (mAD)	Legend
		No/Type	Depth (m)	Result						
18		D	18.00				CHALK recovered as off white sandy silty angular to sub-angular fine to coarse GRAVEL with rare rinded flints. Clasts are weak high density. (WHITE CHALK SUBGROUP) (continued from previous sheet)			
19		SPT	19.00 - 19.45	S 46						
20		U100	20.50 - 20.95							
21		D	21.00							
22		SPT	22.00 - 22.45	S*55						
23		B	23.50 - 24.00					(23.00)		
24										
25		SPT	25.00 - 25.45	S*188						
26		SPT	26.50 - 26.95	S*81						
27										

Groundwater:

Date	Strike Depth (m)	Casing Depth (m)	Depth After Observation (m)
------	------------------	------------------	-----------------------------

Hole Progress:

Date	Hole Depth (m)	Casing Depth (m)	Water Depth (m)
01/02/2018 17:00	25.00	24.90	3.80
02/02/2018 08:00	25.00	24.90	3.60

BOREHOLE LOG



Borehole No.

BH1002C

Sheet 4 of 4

Telephone: 01452 739165 , Fax: 01452 739220 , Email: info@ccground.co.uk

Project Name: SSE Site, Vastern Road, Reading	Project No: C5925	Co-ords: E 471591 N 174147	Hole Type CP
Location: Vastern Road, Reading, RG1 8BU	Level: 38.40mAOD	Scale 1 : 50.00	
Client: SSE Plc	Dates: Start: 31/01/2018 End: 02/02/2018	Logged By MM	

(m)	Water Levels	Samples & In Situ Testing			Sample	Install	Description	Depth (m)	Level (mAOD)	Legend
		No/Type	Depth (m)	Result						
28		SPT	28.00 - 28.45	S*176			CHALK recovered as off white sandy silty angular to sub-angular fine to coarse GRAVEL with rare rinded flints. Clasts are weak high density. (WHITE CHALK SUBGROUP) (continued from previous sheet)			
29										
30		SPT	29.50 - 29.95	S*107						
31										
32		SPT	31.00 - 31.45	S*103						
33										
34		SPT	32.50 - 32.95	S*120						
35										
36		SPT	34.00 - 34.45	S*83						
37										
		D	35.00				Borehole completed at 35.00m	35.00	3.40	

Groundwater:

Date Strike Depth (m) Casing Depth (m) Depth After Observation (m)

Hole Progress:

Date Hole Depth (m) Casing Depth (m) Water Depth (m)

02/02/2018 17:00 35.00 34.90 3.60

INSPECTION PIT LOG



Pit No
BH1003
Sheet 1 of 1

Telephone: 01452 739165 , Fax: 01452 739220 , Email: info@ccground.co.uk

Project Name: SSE Site, Vastern Road, Reading	Project No: C5925	Co-ords: E 471556 N 174145 Level: 38.57mAOD	Date 01/02/2018
Location: Vastern Road, Reading, RG1 8BU	Dimensions: 0.50m Depth 0.80m		Scale 1 : 12.5
Client: SSE Plc			Logged By MM

(m)	Water Levels	Samples & In Situ Testing			Description	Depth (m)	Level (mAOD)	Legend
		No/Type	Depth (m)	Result				
1					MADE GROUND: Grey ASPHALT.	(0.10)		
		B	0.10 - 0.25		MADE GROUND: Brown to grey slightly gravelly slightly silty SAND. Gravel is angular fine to coarse of siliceous material and brick.	0.10	38.47	
		D ES	0.20		MADE GROUND: Red brick MASONRY.	(0.15)		
						0.25	38.32	
						(0.20)		
					MADE GROUND: Brown to grey gravelly slightly silty SAND. Gravel is angular fine to coarse of siliceous material and brick.	0.45	38.12	
					MADE GROUND: Grey CONCRETE.	(0.10)		
						0.55	38.02	
2		B	0.65 - 0.80		MADE GROUND: Brown to grey gravelly slightly silty SAND. Gravel is angular fine to coarse of siliceous material and brick.	(0.10)		
						0.65	37.92	
		D ES	0.80		0.80m: Clay pipe in north face of inspection pit. Intact (approximately 100mm). Inspection pit completed at 0.80m	(0.15)		
						0.80	37.77	

EQUIPMENT: Hand tools. Hydraulic breaker.

METHOD: Hard standing broken out using hydraulic breaker with a range of chisels and continued with hand dug inspection pit: 0.00-0.80m.

CASING: None used.

GROUNDWATER: None encountered.

BACKFILL: Borehole was backfilled with bentonite pellets and ground surface reinstated.

REMARKS: Borehole terminated due to clay pipe at 0.80m. Relocated as BH1003A. PID readings taken on all environmental samples. Results: 0.20m - 0.30ppm; 0.80m - 0.20ppm.

INSPECTION PIT LOG


Pit No
BH1003A

Sheet 1 of 1

Telephone: 01452 739165 , Fax: 01452 739220 , Email: info@ccground.co.uk

Project Name: SSE Site, Vastern Road,
Reading

Project No:
C5925

Co-ords: E 471557 N 174145
Level: 38.56mAOD

Date
02/02/2018

Location: Vastern Road, Reading, RG1 8BU

Dimensions: m

Depth
1.50m

E

Scale
1 : 12.5

Client: SSE Plc

Logged By
MM

(m)	Water Levels	Samples & In Situ Testing			Description	Depth (m)	Level (mAOD)	Legend
		No/Type	Depth (m)	Result				
1		B D ES SPT	0.90 - 1.20 1.00 1.20 - 1.65		MADE GROUND: Grey ASPHALT.	(0.10)	38.46 38.36 38.16 37.86 37.66 37.06	
					MADE GROUND: Brownish grey slightly gravelly slightly silty SAND. Gravel is angular fine to coarse of siliceous material and brick.	0.10 (0.10)		
					MADE GROUND: Red brick MASONRY.	0.20 (0.20)		
					MADE GROUND: Brownish grey gravelly slightly silty SAND. Gravel is angular fine to coarse of siliceous material and brick.	0.40 (0.30)		
					MADE GROUND: Grey CONCRETE.	0.70 (0.20)		
					MADE GROUND: Loose brownish grey gravelly slightly silty (ashy) SAND with low cobble content. Gravel is angular fine to coarse of siliceous material and brick. Cobbles are angular of brick.	0.90		
					1.20-1.50m: Concrete footing in north face of the pit.	(0.60)		
2					Inspection pit completed at 1.50m	1.50	37.06	

EQUIPMENT: Hand tools. Hydraulic breaker. Light cable percussion rig.

METHOD: Hard standing broken out using hydraulic breaker with a range of chisels and continued with hand dug inspection pit: 0.00-1.15m. Cable percussion drilled using 200mm diameter clay cutter and bailer 1.20-1.50m

CASING: None used.

GROUNDWATER: Groundwater seepage encountered at 0.50m. No rise is record.

BACKFILL: Borehole was backfilled with bentonite pellets and ground surface reinstated.

REMARKS: Unable to advance hole through concrete. Relocated as BH1003B. PID readings taken on all environmental samples. Results: 1.00m - 0.30ppm.

INSPECTION PIT LOG


 Pit No
BH1003B

Sheet 1 of 1

Telephone: 01452 739165 , Fax: 01452 739220 , Email: info@ccground.co.uk

Project Name: SSE Site, Vastern Road,
ReadingProject No:
C5925
Co-ords: E 471544 N 174148
 Level: 38.71mAOD
Date
 02/02/2018

Location: Vastern Road, Reading, RG1 8BU

Dimensions: 0.50m

Depth
 0.70m

0.60m

Scale
 1 : 12.5

Client: SSE Plc

Logged By
 TH

(m)	Water Levels	Samples & In Situ Testing			Description	Depth (m)	Level (mAOD)	Legend
		No/Type	Depth (m)	Result				
1		C	0.05 - 0.70		MADE GROUND: Black ASPHALT.	0.08	38.63	
					MADE GROUND: Dark grey CONCRETE.			
						(0.32)		
					MADE GROUND: Light grey CONCRETE.	0.40	38.31	
						(0.30)		
					Inspection pit completed at 0.70m	0.70	38.01	
2								

EQUIPMENT: Hand tools. Hydraulic breaker. Terrier 2002 track mounted rig.

METHOD: Hard standing broken out using hydraulic breaker with a range of chisels: 0.00-0.05m. Borehole advanced using 300mm diameter coring barrel: 0.05-0.70m.

CASING: None used.

GROUNDWATER: None encountered.

BACKFILL: Borehole was backfilled with arisings and ground surface reinstated.

REMARKS: Unable to advance hole through concrete. Relocated as BH1003C.

INSPECTION PIT LOG


 Pit No
BH1003C

Sheet 1 of 1

Telephone: 01452 739165 , Fax: 01452 739220 , Email: info@ccground.co.uk

Project Name: SSE Site, Vastern Road,
ReadingProject No:
C5925
Co-ords: E 471544 N 174137
 Level: 38.76mAOD
Date
 05/02/2018

Location: Vastern Road, Reading, RG1 8BU

Dimensions: 0.50m

Scale
 1 : 12.5

Client: SSE Plc

Depth
 0.50m

0.50m

Logged By
 TH/MM

(m)	Water Levels	Samples & In Situ Testing			Description	Depth (m)	Level (mAOD)	Legend
		No/Type	Depth (m)	Result				
1		C	0.00 - 0.20		MADE GROUND: Dark grey ASPHALT.	(0.10)	38.66	
		B	0.10		MADE GROUND: Brown very sandy slightly clayey angular to sub-rounded fine to coarse GRAVEL mixed lithologies including concrete, red brick, chalk and siliceous material.	0.10		
		D ES	0.20			(0.40)		
		B	0.30 - 0.45					
		D ES	0.45		0.40-0.47m: Clayey.		38.26	
2					0.50m: Concrete across base of pit. Inspection pit completed at 0.50m	0.50		

EQUIPMENT: Hand tools. Hydraulic breaker. Terrier 2002 track mounted rig.

METHOD: Hard standing broken out using hydraulic breaker with a range of chisels: 0.00-0.05m. Borehole advanced using 300mm diameter coring barrel utilizing water flush: 0.05-0.20m.

Hand dug inspection pit: 0.20-0.50m.

CASING: None used.

GROUNDWATER: None encountered.

BACKFILL: None used.

REMARKS: Unable to advance hole through concrete at 0.50. Relocated as BH1003D. Inspection pit covered and fenced off to be continued using rotary drilling techniques: See BH2004. PID readings taken on all environmental samples. Results: 0.20m -0.20ppm; 0.45m -0.40ppm.

INSPECTION PIT LOG


 Pit No
BH1003D

Sheet 1 of 1

Telephone: 01452 739165 , Fax: 01452 739220 , Email: info@ccground.co.uk

Project Name: SSE Site, Vastern Road,
ReadingProject No:
C5925
Co-ords: E 471535 N 174144
 Level: 38.72mAOD
Date
 05/02/2018

Location: Vastern Road, Reading, RG1 8BU

Dimensions: 0.60m

Depth
 0.05m

0.50m

Scale
 1 : 12.5

Client: SSE Plc

Logged By
 TH

(m)	Water Levels	Samples & In Situ Testing			Description	Depth (m)	Level (mAOD)	Legend
		No/Type	Depth (m)	Result				
					MADE GROUND: Dark grey ASPHALT. 0.05m: Concrete across base of inspection pit. Inspection pit completed at 0.05m	0.05	38.67	
1								
2								

EQUIPMENT: Hydraulic breaker.

METHOD: Hard standing broken out using hydraulic breaker with a range of chisels: 0.00-0.05m.

CASING: None used.

GROUNDWATER: None encountered.

BACKFILL: Ground surface reinstated.

REMARKS: Unable to advance hole through concrete. Relocated as BH1003E.

BOREHOLE LOG



Borehole No.

BH1003E

Sheet 1 of 4

Telephone: 01452 739165, Fax: 01452 739220, Email: info@ccground.co.uk

Project Name: SSE Site, Vastern Road, Reading

Project No:

C5925

Co-ords: E 471544 N 174164

Hole Type
CP

Location: Vastern Road, Reading, RG1 8BU

Level: 38.71mAOD

Scale
1 : 50.00

Client: SSE Plc

Dates: Start: 05/02/2018
End: 08/02/2018Logged By
TH

(m)	Water Levels	Samples & In Situ Testing			Sample	Install	Description	Depth (m)	Level (mAOD)	Legend
		No/Type	Depth (m)	Result						
1							MADE GROUND: Black ASPHALT.	0.08	38.63	1
		B	0.30 - 0.40				MADE GROUND: Grey sandy angular fine to coarse GRAVEL of igneous material.	0.15	38.56	
		ES	0.30							
		B	0.60 - 0.70				MADE GROUND: Reddish brown very sandy silty angular to sub-angular fine to coarse GRAVEL of red brick, concrete and siliceous material.	0.55	38.16	
		ES	0.60							
2		B	1.00 - 1.10				0.40-0.50m: 2no. clay pipes. Broken and infilled with sediment. Orientation approximately East to West.	0.90	37.81	2
		ES	1.00				MADE GROUND: Light brown very sandy clayey angular to sub-rounded fine to coarse GRAVEL of mixed lithologies including chalk, red brick, and siliceous material.	1.20	37.51	
		B	1.30 - 1.40							
		ES	1.30							
		SPT	1.50 - 1.95	S 2			MADE GROUND: Off white and light brown sandy very clayey angular to sub-rounded COBBLES of chalk with some very silty angular to sub-angular fine to coarse gravel of chalk and siliceous material.	1.90	36.81	
3		D	2.00							3
		ES					MADE GROUND: Light brown sandy very clayey angular to sub-rounded fine to coarse GRAVEL of red brick, chalk and siliceous material locally tending to slightly sandy gravelly clay with rare bone and clay pot fragments (<100mm).	2.70	36.01	
		UT100	2.50 - 2.95				1.50-1.90m: Very loose.			
							Very soft bluish grey mottled greenish grey silty CLAY with rare shell fragments (<5mm), rare pockets (<30mm) of dark grey peat and a moderate organic odour. (ALLUVIUM)	3.30	35.41	
		B	3.50 - 4.00				Very soft greyish brown slightly sandy gravelly CLAY. Gravel is angular to sub-rounded fine to coarse siliceous material. (ALLUVIUM)			
4		SPT C	3.50 - 3.95	C 7			3.00-3.30m: Tending to sandy, very clayey gravel.	(1.20)		4
		D	4.00				Loose greyish brown very sandy slightly silty angular to sub-rounded, fine to coarse GRAVEL of siliceous material. (KEMPTON PARK GRAVEL)			
		B	4.50 - 5.00							
		SPT C	4.50 - 4.95	C 30			Dense grey very sandy silty angular to sub-angular to sub-rounded fine to coarse GRAVEL of siliceous material. (KEMPTON PARK GRAVEL)	4.50	34.21	
		D	5.00							
5		B	5.50 - 6.00							5
		SPT C	5.50 - 5.95	C 30						
		D	6.00							
		B	7.00 - 7.45							
		SPT C	7.00 - 7.45	C 32						
6		D	6.00							6
7		B	7.00 - 7.45							7
		D	7.00							
		SPT C	7.00 - 7.45							
8										8

EQUIPMENT: Hand tools. Hydraulic breaker. Light cable percussion rig.

METHOD: Hard standing broken out using hydraulic breaker with a range of chisels and continued with hand dug inspection pit: 0.00-1.50m. Cable percussion drilled using 200mm diameter clay cutter and bailer 1.50-10.50m and 150mm diameter clay cutter and bailer 10.50-35.00m..

CASING: 250mm diameter to 1.70m, 200mm diameter to 12.80m, 150mm diameter to 26.50m.

GROUNDWATER: Encountered at 4.00m, and rose to 3.40m after 20 minutes; and at 8.00m and rose to 1.70m after 20 minutes.

INSTALLATION: Borehole was backfilled with bentonite pellets: 35.00-6.00m. 50mm ID HDPE slotted pipe with washed gravel response zone: 6.00-1.00m. 50mm ID HDPE plain pipe with bentonite pellet seal: 1.00-0.40m. Flush 150mm steel cover set in concrete: 0.40-0.10m. Gas valve fitted. Surface reinstated with tarmacadam 0.10-0.00m.

REMARKS: Clean drilling techniques; bentonite seal from 1.50-2.40m. PID readings taken on all environmental samples. Results: 0.30m - 1.10ppm; 0.60m - 1.60ppm; 1.00m - 1.10.ppm; 1.30m - 0.30ppm; 2.00m - 0.00ppm.

Groundwater:

Date	Strike Depth (m)	Casing Depth (m)	Depth After Observation (m)
------	------------------	------------------	-----------------------------

Hole Progress:

Date	Hole Depth (m)	Casing Depth (m)	Water Depth (m)
05/02/2018 17:00	1.50		
06/02/2018 08:00	1.50		
08/02/2018 08:00			

BOREHOLE LOG



Borehole No.

BH1003E

Sheet 2 of 4

Telephone: 01452 739165 , Fax: 01452 739220 , Email: info@ccground.co.uk

Project Name: SSE Site, Vastern Road, Reading	Project No: C5925	Co-ords: E 471544 N 174164	Hole Type CP
Location: Vastern Road, Reading, RG1 8BU	Level: 38.71mAOD	Scale 1 : 50.00	
Client: SSE Plc	Dates: Start: 05/02/2018 End: 08/02/2018	Logged By TH	

(m)	Water Levels	Samples & In Situ Testing			Sample	Install	Description	Depth (m)	Level (mAD)	Legend
		No/Type	Depth (m)	Result						
		D	8.00				Dense grey very sandy silty angular to sub-angular to sub-rounded fine to coarse GRAVEL of siliceous material. (KEMPTON PARK GRAVEL) (continued from previous sheet)			
		B SPT C	8.50 - 8.95	C 22			8.00-8.10m: Light brown slight sandy gravelly silty CLAY. Gravel is angular to sub-rounded fine to coarse chalk.	8.50	30.21	
9		D	9.00				Medium dense light brown very sandy silty angular to rounded fine to coarse GRAVEL of siliceous material and chalk. (KEMPTON PARK GRAVEL)			
								(2.60)		
10		D SPT C	10.00 10.00 - 10.45	C 30						
11		D	11.00				Soft light brown locally light greyish brown slightly sandy gravelly silty CLAY. Gravel is angular to rounded fine to coarse siliceous material and chalk. (KEMPTON PARK GRAVEL)	11.10	27.61	
		SPT	11.50 - 11.95	S 9				(0.75)		
12		D	12.00				Medium dense slightly sandy very silty angular to sub-rounded fine to coarse GRAVEL of siliceous material and chalk. (KEMPTON PARK GRAVEL)	11.85	26.86	
								(0.65)		
13		B	12.50 - 12.80				CHALK recovered as off white slightly sandy very silty sub-angular to sub-rounded fine to coarse Gravel with rare rinded flints. Clasts are very weak medium and high density. (WHITE CHALK SUBGROUP)	12.50	26.21	
		B D	13.00 - 13.41 13.00							
14		D	14.00							
		SPT	14.50 - 14.95	S 17						
15		D	15.00							
16		D U100	16.00 16.00 - 16.45							
17		D	17.00							
		SPT	17.50 - 17.95	S 19			17.50-17.95m: Occasional flints.			

Groundwater:

Date Strike Depth (m) Casing Depth (m) Depth After Observation (m)

Hole Progress:

Date	Hole Depth (m)	Casing Depth (m)	Water Depth (m)
06/02/2018 17:00	11.50	11.50	3.50
07/02/2018 08:00	11.50	11.50	3.00

BOREHOLE LOG



Borehole No.

BH1003E

Sheet 3 of 4

Telephone: 01452 739165 , Fax: 01452 739220 , Email: info@ccground.co.uk

Project Name: SSE Site, Vastern Road, Reading	Project No: C5925	Co-ords: E 471544 N 174164	Hole Type CP
Location: Vastern Road, Reading, RG1 8BU	Level: 38.71mAOD	Scale 1 : 50.00	
Client: SSE Plc	Dates: Start: 05/02/2018 End: 08/02/2018	Logged By TH	

(m)	Water Levels	Samples & In Situ Testing			Sample	Install	Description	Depth (m)	Level (mAD)	Legend
		No/Type	Depth (m)	Result						
18		D	18.00				CHALK recovered as off white slightly sandy very silty sub-angular to sub-rounded fine to coarse Gravel with rare rinded flints. Clasts are very weak medium and high density. (WHITE CHALK SUBGROUP) (continued from previous sheet)	(11.50)		
19		D U100	19.00 19.00 - 19.45							
20		D	20.00				20.00-20.45m: Locally speckled black.			
		SPT	20.50 - 20.95	S 28						
21		D	21.00							
22		B D U100	22.00 - 22.45 22.00 22.00 - 22.45							
23		D	23.00							
		SPT	23.50 - 23.95	S*167						
24		D	24.00				CHALK recovered as off white slightly sandy very silty sub-angular to sub-rounded fine to coarse GRAVEL with rare rinded flints. Clasts are weak high density. (WHITE CHALK SUBGROUP)	24.00	14.71	
25		D SPT	25.00 25.00 - 25.45	S*88						
26		D	26.00							
		SPT	26.50 - 26.95	S*185						
27		D	27.00							

Groundwater:

Date Strike Depth (m) Casing Depth (m) Depth After Observation (m)

Hole Progress:

Date Hole Depth (m) Casing Depth (m) Water Depth (m)
07/02/2018 17:00 26.50 26.50 5.90

BOREHOLE LOG



Borehole No.

BH1003E

Sheet 4 of 4

Telephone: 01452 739165 , Fax: 01452 739220 , Email: info@ccground.co.uk

Project Name: SSE Site, Vastern Road, Reading	Project No: C5925	Co-ords: E 471544 N 174164	Hole Type CP
Location: Vastern Road, Reading, RG1 8BU	Level: 38.71mAOD	Scale 1 : 50.00	
Client: SSE Plc	Dates: Start: 05/02/2018 End: 08/02/2018	Logged By TH	

(m)	Water Levels	Samples & In Situ Testing			Sample	Install	Description	Depth (m)	Level (mAOD)	Legend
		No/Type	Depth (m)	Result						
28		D SPT	28.00 28.00 - 28.45	S*130			CHALK recovered as off white slightly sandy very silty sub-angular to sub-rounded fine to coarse GRAVEL with rare rinded flints. Clasts are weak high density. (WHITE CHALK SUBGROUP) (continued from previous sheet)			
29		D SPT	29.00 29.50 - 29.95	S*200				(11.00)		
30		D SPT	30.00 31.00 - 31.45	S*115			31.00-34.00m: Occasional rinded flints			
31		D SPT	31.00 32.50 - 32.95	S*88						
32		D SPT	32.00 34.00 - 34.45	S*97						
33		D SPT	33.00 35.00				Borehole completed at 35.00m	35.00	3.71	
34										
35										
36										
37										

Groundwater:

Date Strike Depth (m) Casing Depth (m) Depth After Observation (m)

Hole Progress:

Date Hole Depth (m) Casing Depth (m) Water Depth (m)

BOREHOLE LOG



Borehole No.

BH1004

Sheet 1 of 4

Telephone: 01452 739165 , Fax: 01452 739220 , Email: info@ccground.co.uk

Project Name: SSE Site, Vastern Road, Reading	Project No: C5925	Co-ords: E 471494 N 174112	Hole Type CP
Location: Vastern Road, Reading, RG1 8BU	Level: 38.31mAOD	Scale 1 : 50.00	
Client: SSE Plc	Dates: Start: 05/02/2018 End: 08/02/2018	Logged By MM/TH	

(m)	Water Levels	Samples & In Situ Testing			Sample	Install	Description	Depth (m)	Level (mAOD)	Legend
		No/Type	Depth (m)	Result						
							Black ASPHALT.	0.10	38.21	
		ES	0.30				MADE GROUND: Dark grey mottled black gravelly silty SAND. Gravel is sub-angular, fine to coarse siliceous material and clinker.	0.40	37.91	
		ES	0.60				MADE GROUND: Brown and greyish brown gravelly silty SAND with low cobble content and occasional fragments of wood and ceramics. Gravel is angular fine to coarse of red brick and concrete. Cobbles are angular of red brick.	(0.80)		
1		ES	1.00				MADE GROUND: Soft black gravelly CLAY. Gravel is angular, fine to medium red brick.	1.20	37.11	
		B	1.30 - 1.70					(0.50)		
		SPT	1.50 - 1.95	S 1						
		ES	1.70				Very soft bluish grey and brownish grey silty CLAY with frequent pockets (<30mm) of partially decomposed organic material and a moderate organic odour. (ALLUVIUM)	1.70	36.61	
2		B	2.00 - 2.40					(0.70)		
		ES	2.00							
		B	2.50 - 3.00	C 24			Medium dense light brown very sandy silty angular to rounded fine to coarse GRAVEL of siliceous material. (KEMPTON PARK GRAVEL)	2.40	35.91	
		SPT C	2.50 - 2.95				2.40-8.10m: Partial loss of fines.			
3										
		B	3.50 - 4.00	C 21						
		SPT C	3.50 - 3.95							
4										
		B	4.50 - 5.00	C 22						
		SPT C	4.50 - 4.95							
5										
		B	5.50 - 6.00	C 29				(5.70)		
		SPT C	5.50 - 5.95							
6										
		B	7.00 - 7.50	C 25						
		SPT C	7.00 - 7.45							
7										
8										

EQUIPMENT: Hand tools. Hydraulic breaker. Light cable percussion rig.

METHOD: Hard standing broken out using hydraulic breaker with a range of chisels and continued with hand dug inspection pit: 0.00-1.20m. Cable percussion drilled using 250mm diameter clay cutter and bailer 1.20-2.00m and 200mm diameter clay cutter and bailer 1.20-9.00m, and 150mm diameter clay cutter and bailer 9.00-35.00m.

CASING: 250mm diameter to 2.00m, 200mm diameter to 9.00m, 150mm diameter to 35.00m.

GROUNDWATER: None recorded, however was added to assist drilling.

INSTALLATION: Borehole was backfilled with bentonite pellets: 35.00-7.00m. 50mm ID HDPE slotted pipe with washed gravel response zone: 7.00-1.00m. 50mm ID HDPE plain pipe with bentonite pellet seal: 1.00-0.40m. Flush 150mm steel cover set in concrete: 0.40-0.10m. Gas valve fitted. Surface reinstated with tarmacadam 0.10-0.00m.

REMARKS: Clean drilling techniques; bentonite seal from 1.50-2.40m. PID readings taken on all environmental samples. Results: 0.30m - 0.30ppm; 0.60m - 0.20ppm; 1.00m - 0.40ppm; 1.20m - 2.30ppm; 1.70m - 0.20ppm; 2.00m - 1.00ppm.

Groundwater:

Date	Strike Depth (m)	Casing Depth (m)	Depth After Observation (m)
------	------------------	------------------	-----------------------------

Hole Progress:

Date	Hole Depth (m)	Casing Depth (m)	Water Depth (m)
05/02/2018 17:00	2.50	2.00	
06/02/2018 08:00	2.50	2.00	

BOREHOLE LOG



Borehole No.

BH1004

Sheet 2 of 4

Telephone: 01452 739165 , Fax: 01452 739220 , Email: info@ccground.co.uk

Project Name: SSE Site, Vastern Road, Reading	Project No: C5925	Co-ords: E 471494 N 174112	Hole Type CP
Location: Vastern Road, Reading, RG1 8BU	Level: 38.31mAOD	Scale 1 : 50.00	
Client: SSE Plc	Dates: Start: 05/02/2018 End: 08/02/2018	Logged By MM/TH	

(m)	Water Levels	Samples & In Situ Testing			Sample	Install	Description	Depth (m)	Level (mAOD)	Legend
		No/Type	Depth (m)	Result						
		B	8.20 - 8.50				CHALK off white locally speckled black recovered as very silty sub-angular to sub-rounded fine to coarse GRAVEL with rare rinded flints. Clasts are very weak and weak medium density. (Dc) (WHITE CHALK SUBGROUP)	8.10	30.21	
		B SPT	8.50 - 9.00 8.50 - 8.95	S 7						
9										
		U100	10.00 - 10.45							
10		D	10.50							
11		SPT	11.50 - 11.95	S 8						
		D	12.50							
12										
		U100	13.00 - 13.45							
13		D	13.50							
14		SPT	14.50 - 14.95	S 19				(12.40)		
		D	15.50							
15										
		U100	16.00 - 16.45							
16		D	16.50							
17		SPT	17.50 - 17.95	S 34						

Groundwater:

Date Strike Depth (m) Casing Depth (m) Depth After Observation (m)

Hole Progress:

Date Hole Depth (m) Casing Depth (m) Water Depth (m)