APPENDIX B

Laboratory Test Results

envirolab
Hattersley Science & Technology Park
Stockport Road, Hattersley, SK14 3QU

FINAL ANALYTICAL TEST REPORT

Envirolab Job Number: 24/06298
Issue Number: 1 **Date:** 03 July, 2024

Client: SP Associates (Steven M Peters Associates Ltd)
1 Market Place
Warwick
Warwickshire
CV34 4SA

Project Manager: Steven Peters
Project Name: Kingmoor Wrexham
Project Ref: 51761-3
Order No: 1761-4
Date Samples Received: 26/06/24
Date Instructions Received: 26/06/24
Date Analysis Completed: 03/07/24

Approved by:



Amy Riding
Administration Assistant

Envirolab Job Number: 24/06298

Client Project Name: Kingmoor Wrexham

Client Project Ref: 51761-3

Lab Sample ID	24/06298/1	24/06298/2	24/06298/3	24/06298/4	24/06298/5	24/06298/6	24/06298/7	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TP9	TP10	TP11	TP12	TP13	TP14	TP15			
Depth to Top	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
Depth To Bottom	0.30	0.30	0.40	0.30	0.40	0.40	0.40			
Date Sampled	20-Jun-24	20-Jun-24	20-Jun-24	20-Jun-24	20-Jun-24	20-Jun-24	20-Jun-24			
Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL			
Sample Matrix Code	6AE	6AE	6ABE	6AE	6AE	6AE	6AE			
% Stones >10mm$_A$	2.9	3.4	<0.1	<0.1	<0.1	3.7	<0.1	% w/w	0.1	A-T-044
pH$_D$ M#	8.33	8.29	8.30	8.29	8.25	8.29	6.94	pH	0.01	A-T-031s
Sulphate (water sol 2:1)$_D$ M#	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.02	g/l	0.01	A-T-028s
Phenols - Total by HPLC$_A$	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	mg/kg	0.2	A-T-050s
Arsenic$_D$ M#	<1	<1	<1	<1	<1	<1	6	mg/kg	1	A-T-024s
Cadmium$_D$ M#	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	mg/kg	0.5	A-T-024s
Copper$_D$ M#	13	13	13	13	14	13	14	mg/kg	1	A-T-024s
Chromium$_D$ M#	27	25	25	26	26	25	35	mg/kg	1	A-T-024s
Lead$_D$ M#	27	27	26	27	29	25	137	mg/kg	1	A-T-024s
Mercury$_D$	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	mg/kg	0.17	A-T-024s
Nickel$_D$ M#	24	24	24	25	25	23	24	mg/kg	1	A-T-024s
Selenium$_D$ M#	<1	<1	<1	<1	<1	<1	<1	mg/kg	1	A-T-024s
Vanadium$_D$ M#	34	32	31	32	32	31	42	mg/kg	1	A-T-024s
Zinc$_D$ M#	47	49	45	47	50	44	65	mg/kg	5	A-T-024s

Envirolab Job Number: 24/06298

Client Project Name: Kingmoor Wrexham

Client Project Ref: 51761-3

Lab Sample ID	24/06298/1	24/06298/2	24/06298/3	24/06298/4	24/06298/5	24/06298/6	24/06298/7	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TP9	TP10	TP11	TP12	TP13	TP14	TP15			
Depth to Top	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
Depth To Bottom	0.30	0.30	0.40	0.30	0.40	0.40	0.40			
Date Sampled	20-Jun-24	20-Jun-24	20-Jun-24	20-Jun-24	20-Jun-24	20-Jun-24	20-Jun-24			
Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL			
Sample Matrix Code	6AE	6AE	6ABE	6AE	6AE	6AE	6AE			
Asbestos in Soil (inc. matrix)										
Asbestos in soil$_D^{\#}$	NAD	NAD	NAD	NAD	NAD	NAD	NAD			A-T-045
Asbestos Matrix (visual)$_D$	-	-	-	-	-	-	-			A-T-045
Asbestos Matrix (microscope)$_D$	-	-	-	-	-	-	-			A-T-045
Asbestos ACM - Suitable for Water Absorption Test?$_D$	N/A	N/A	N/A	N/A	N/A	N/A	N/A			A-T-045

Envirolab Job Number: 24/06298

Client Project Name: Kingmoor Wrexham

Client Project Ref: 51761-3

Lab Sample ID	24/06298/1	24/06298/2	24/06298/3	24/06298/4	24/06298/5	24/06298/6	24/06298/7	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TP9	TP10	TP11	TP12	TP13	TP14	TP15			
Depth to Top	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
Depth To Bottom	0.30	0.30	0.40	0.30	0.40	0.40	0.40			
Date Sampled	20-Jun-24	20-Jun-24	20-Jun-24	20-Jun-24	20-Jun-24	20-Jun-24	20-Jun-24			
Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL			
Sample Matrix Code	6AE	6AE	6ABE	6AE	6AE	6AE	6AE			
PAH-16MS										
Acenaphthene$_A^{M\#}$	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-019s
Acenaphthylene$_A^{M\#}$	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-019s
Anthracene$_A^{M\#}$	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	mg/kg	0.02	A-T-019s
Benzo(a)anthracene$_A^{M\#}$	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	mg/kg	0.04	A-T-019s
Benzo(a)pyrene$_A^{M\#}$	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	mg/kg	0.04	A-T-019s
Benzo(b)fluoranthene$_A^{M\#}$	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	mg/kg	0.05	A-T-019s
Benzo(ghi)perylene$_A^{M\#}$	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	mg/kg	0.05	A-T-019s
Benzo(k)fluoranthene$_A^{M\#}$	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	mg/kg	0.07	A-T-019s
Chrysene$_A^{M\#}$	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	mg/kg	0.06	A-T-019s
Dibenzo(ah)anthracene$_A^{M\#}$	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	mg/kg	0.04	A-T-019s
Fluoranthene$_A^{M\#}$	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	mg/kg	0.08	A-T-019s
Fluorene$_A^{M\#}$	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-019s
Indeno(123-cd)pyrene$_A^{M\#}$	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	mg/kg	0.03	A-T-019s
Naphthalene $_A^{M\#}$	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	mg/kg	0.03	A-T-019s
Phenanthrene$_A^{M\#}$	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	mg/kg	0.03	A-T-019s
Pyrene$_A^{M\#}$	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	mg/kg	0.07	A-T-019s
Total PAH-16MS$_A^{M\#}$	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	mg/kg	0.01	A-T-019s

Lab Sample ID	24/06298/1	24/06298/2	24/06298/3	24/06298/4	24/06298/5	24/06298/6	24/06298/7	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TP9	TP10	TP11	TP12	TP13	TP14	TP15			
Depth to Top	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
Depth To Bottom	0.30	0.30	0.40	0.30	0.40	0.40	0.40			
Date Sampled	20-Jun-24	20-Jun-24	20-Jun-24	20-Jun-24	20-Jun-24	20-Jun-24	20-Jun-24			
Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL			
Sample Matrix Code	6AE	6AE	6ABE	6AE	6AE	6AE	6AE			
TPH CWG with Clean Up										
Ali >C5-C6$_A$	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
Ali >C6-C8$_A$	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
Ali >C8-C10$_A$	<1	<1	<1	<1	<1	<1	<1	mg/kg	1	A-T-055s
Ali >C10-C12$_A$$^{M\#}$	<1	<1	<1	<1	<1	<1	<1	mg/kg	1	A-T-055s
Ali >C12-C16$_A$$^{M\#}$	<1	<1	<1	<1	<1	<1	<1	mg/kg	1	A-T-055s
Ali >C16-C21$_A$$^{M\#}$	<1	<1	<1	<1	<1	<1	<1	mg/kg	1	A-T-055s
Ali >C21-C35$_A$$^{M\#}$	<1	<1	<1	<1	2	<1	3	mg/kg	1	A-T-055s
Total Aliphatics$_A$	<1	<1	<1	<1	2	<1	3	mg/kg	1	Calc-As Recd
Aro >C5-C7$_A$$^{\#}$	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
Aro >C7-C8$_A$$^{\#}$	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
Aro >C8-C10$_A$	<1	<1	<1	<1	<1	<1	<1	mg/kg	1	A-T-055s
Aro >C10-C12$_A$	<1	<1	<1	<1	<1	<1	<1	mg/kg	1	A-T-055s
Aro >C12-C16$_A$	<1	<1	<1	<1	<1	<1	<1	mg/kg	1	A-T-055s
Aro >C16-C21$_A$$^{M\#}$	<1	<1	<1	<1	<1	<1	<1	mg/kg	1	A-T-055s
Aro >C21-C35$_A$$^{M\#}$	<1	<1	<1	<1	<1	<1	1	mg/kg	1	A-T-055s
Total Aromatics$_A$	<1	<1	<1	<1	<1	<1	1	mg/kg	1	Calc-As Recd
TPH (Ali & Aro >C5-C35)$_A$	<1	<1	<1	<1	2	<1	4	mg/kg	1	Calc-As Recd
BTEX - Benzene$_A$$^{\#}$	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
BTEX - Toluene$_A$$^{\#}$	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
BTEX - Ethyl Benzene$_A$$^{\#}$	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
BTEX - m & p Xylene$_A$$^{\#}$	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
BTEX - o Xylene$_A$$^{\#}$	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
MTBE$_A$$^{\#}$	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s

Envirolab Job Number: 24/06298

Client Project Name: Kingmoor Wrexham

Client Project Ref: 51761-3

Lab Sample ID	24/06298/8	24/06298/9	24/06298/10	24/06298/11	24/06298/12	24/06298/13	24/06298/14	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TP16	TP17	TP18	TP19	TP20	TP21	TP22			
Depth to Top	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
Depth To Bottom	0.30	0.30	0.40	0.30	0.30	0.30	0.30			
Date Sampled	20-Jun-24	20-Jun-24	20-Jun-24	20-Jun-24	20-Jun-24	20-Jun-24	20-Jun-24			
Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL			
Sample Matrix Code	6AE	6AE	6AE	6AE	6AE	6AE	6AE			
% Stones >10mm$_A$	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	% w/w	0.1	A-T-044
pH$_D$$^{M\#}$	6.59	6.26	7.71	6.18	5.97	6.17	6.20	pH	0.01	A-T-031s
Sulphate (water sol 2:1)$_D$$^{M\#}$	0.02	0.02	0.03	<0.01	0.02	0.03	0.02	g/l	0.01	A-T-026s
Phenols - Total by HPLC$_A$	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	mg/kg	0.2	A-T-058s
Arsenic$_D$$^{M\#}$	7	6	8	4	4	3	4	mg/kg	1	A-T-024s
Cadmium$_D$$^{M\#}$	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	mg/kg	0.5	A-T-024s
Copper$_D$$^{M\#}$	15	16	13	20	14	15	13	mg/kg	1	A-T-024s
Chromium$_D$$^{M\#}$	41	43	36	37	31	29	33	mg/kg	1	A-T-024s
Lead$_D$$^{M\#}$	58	59	281	35	49	47	922	mg/kg	1	A-T-024s
Mercury$_D$	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	mg/kg	0.17	A-T-024s
Nickel$_D$$^{M\#}$	28	25	22	29	18	17	19	mg/kg	1	A-T-024s
Selenium$_D$$^{M\#}$	<1	<1	<1	<1	<1	<1	<1	mg/kg	1	A-T-024s
Vanadium$_D$$^{M\#}$	50	55	46	40	37	34	42	mg/kg	1	A-T-024s
Zinc$_D$$^{M\#}$	73	76	70	73	64	65	80	mg/kg	5	A-T-024s

Envirolab Job Number: 24/06298

Client Project Name: Kingmoor Wrexham

Client Project Ref: 51761-3

Lab Sample ID	24/06298/8	24/06298/9	24/06298/10	24/06298/11	24/06298/12	24/06298/13	24/06298/14	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TP16	TP17	TP18	TP19	TP20	TP21	TP22			
Depth to Top	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
Depth To Bottom	0.30	0.30	0.40	0.30	0.30	0.30	0.30			
Date Sampled	20-Jun-24	20-Jun-24	20-Jun-24	20-Jun-24	20-Jun-24	20-Jun-24	20-Jun-24			
Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL			
Sample Matrix Code	6AE	6AE	6AE	6AE	6AE	6AE	6AE			
Asbestos in Soil (inc. matrix)										
Asbestos in soil$_D^{\#}$	NAD	NAD	NAD	NAD	NAD	NAD	NAD			A-T-045
Asbestos Matrix (visual)$_D$	-	-	-	-	-	-	-			A-T-045
Asbestos Matrix (microscope)$_D$	-	-	-	-	-	-	-			A-T-045
Asbestos ACM - Suitable for Water Absorption Test?$_D$	N/A	N/A	N/A	N/A	N/A	N/A	N/A			A-T-045

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Envirolab Job Number: 24/06298

Client Project Name: Kingmoor Wrexham

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Lab Sample ID	24/06298/8	24/06298/9	24/06298/10	24/06298/11	24/06298/12	24/06298/13	24/06298/14	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TP16	TP17	TP18	TP19	TP20	TP21	TP22			
Depth to Top	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
Depth To Bottom	0.30	0.30	0.40	0.30	0.30	0.30	0.30			
Date Sampled	20-Jun-24	20-Jun-24	20-Jun-24	20-Jun-24	20-Jun-24	20-Jun-24	20-Jun-24			
Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL			
Sample Matrix Code	6AE	6AE	6AE	6AE	6AE	6AE	6AE			
PAH-16MS										
Acenaphthene$_A^{M\#}$	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-019s
Acenaphthylene$_A^{M\#}$	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-019s
Anthracene$_A^{M\#}$	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	mg/kg	0.02	A-T-019s
Benzo(a)anthracene$_A^{M\#}$	0.06	<0.04	<0.04	<0.04	<0.04	0.08	<0.04	mg/kg	0.04	A-T-019s
Benzo(a)pyrene$_A^{M\#}$	0.08	<0.04	<0.04	<0.04	0.07	0.08	<0.04	mg/kg	0.04	A-T-019s
Benzo(b)fluoranthene$_A^{M\#}$	0.09	<0.05	<0.05	<0.05	0.08	0.13	<0.05	mg/kg	0.05	A-T-019s
Benzo(ghi)perylene$_A^{M\#}$	<0.05	<0.05	<0.05	<0.05	<0.05	0.07	<0.05	mg/kg	0.05	A-T-019s
Benzo(k)fluoranthene$_A^{M\#}$	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	mg/kg	0.07	A-T-019s
Chrysene$_A^{M\#}$	0.09	<0.06	<0.06	<0.06	<0.06	0.11	<0.06	mg/kg	0.06	A-T-019s
Dibenzo(ah)anthracene$_A^{M\#}$	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	mg/kg	0.04	A-T-019s
Fluoranthene$_A^{M\#}$	<0.08	<0.08	<0.08	<0.08	<0.08	0.13	<0.08	mg/kg	0.08	A-T-019s
Fluorene$_A^{M\#}$	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-019s
Indeno(123-cd)pyrene$_A^{M\#}$	0.05	<0.03	<0.03	<0.03	0.05	0.07	<0.03	mg/kg	0.03	A-T-019s
Naphthalene $_A^{M\#}$	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	mg/kg	0.03	A-T-019s
Phenanthrene$_A^{M\#}$	0.05	<0.03	<0.03	<0.03	<0.03	0.07	<0.03	mg/kg	0.03	A-T-019s
Pyrene$_A^{M\#}$	<0.07	<0.07	<0.07	<0.07	<0.07	0.13	<0.07	mg/kg	0.07	A-T-019s
Total PAH-16MS$_A^{M\#}$	0.42	<0.08	<0.08	<0.08	0.20	0.87	<0.08	mg/kg	0.01	A-T-019s

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Envirolab Job Number: 24/06298

Client Project Name: Kingmoor Wrexham

Client Project Ref: 51761-3

Lab Sample ID	24/06298/8	24/06298/9	24/06298/10	24/06298/11	24/06298/12	24/06298/13	24/06298/14	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TP16	TP17	TP18	TP19	TP20	TP21	TP22			
Depth to Top	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
Depth To Bottom	0.30	0.30	0.40	0.30	0.30	0.30	0.30			
Date Sampled	20-Jun-24	20-Jun-24	20-Jun-24	20-Jun-24	20-Jun-24	20-Jun-24	20-Jun-24			
Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL			
Sample Matrix Code	6AE	6AE	6AE	6AE	6AE	6AE	6AE			
TPH CWG with Clean Up										
Ali >C5-C6$_A$	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
Ali >C6-C8$_A$	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
Ali >C8-C10$_A$	<1	<1	<1	<1	<1	<1	<1	mg/kg	1	A-T-055s
Ali >C10-C12$_A$$^{M\#}$	<1	<1	<1	<1	<1	<1	<1	mg/kg	1	A-T-055s
Ali >C12-C16$_A$$^{M\#}$	<1	<1	<1	<1	<1	<1	<1	mg/kg	1	A-T-055s
Ali >C16-C21$_A$$^{M\#}$	<1	<1	<1	<1	<1	1	<1	mg/kg	1	A-T-055s
Ali >C21-C35$_A$$^{M\#}$	4	3	1	1	1	13	4	mg/kg	1	A-T-055s
Total Aliphatics$_A$	4	3	1	1	1	14	4	mg/kg	1	Calc-As Recd
Aro >C5-C7$_A$$^{\#}$	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
Aro >C7-C8$_A$$^{\#}$	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
Aro >C8-C10$_A$	<1	<1	<1	<1	<1	<1	<1	mg/kg	1	A-T-055s
Aro >C10-C12$_A$	<1	<1	<1	<1	<1	<1	<1	mg/kg	1	A-T-055s
Aro >C12-C16$_A$	<1	<1	<1	<1	<1	<1	<1	mg/kg	1	A-T-055s
Aro >C16-C21$_A$$^{M\#}$	1	3	<1	<1	<1	1	<1	mg/kg	1	A-T-055s
Aro >C21-C35$_A$$^{M\#}$	4	5	<1	<1	<1	4	1	mg/kg	1	A-T-055s
Total Aromatics$_A$	5	8	<1	<1	<1	6	1	mg/kg	1	Calc-As Recd
TPH (Ali & Aro >C5-C35)$_A$	9	11	1	1	1	19	5	mg/kg	1	Calc-As Recd
BTEX - Benzene$_A$$^{\#}$	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
BTEX - Toluene$_A$$^{\#}$	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
BTEX - Ethyl Benzene$_A$$^{\#}$	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
BTEX - m & p Xylene$_A$$^{\#}$	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
BTEX - o Xylene$_A$$^{\#}$	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
MTBE$_A$$^{\#}$	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s

envirolab

Envirolab Job Number: 24/06298

Client Project Name: Kingmoor Wrexham

Client Project Ref: 51761-3

Lab Sample ID	24/06298/15							Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TP23									
Depth to Top	0.00									
Depth To Bottom	0.30									
Date Sampled	20-Jun-24									
Sample Type	SOIL									
Sample Matrix Code	6AE									
% Stones >10mm$_A$	<0.1							% w/w	0.1	A-T-044
pH$_D$[M#]	6.45							pH	0.01	A-T-031s
Sulphate (water sol 2:1)$_D$[M#]	<0.01							g/l	0.01	A-T-026s
Phenols - Total by HPLC$_A$	<0.2							mg/kg	0.2	A-T-050s
Arsenic$_D$[M#]	5							mg/kg	1	A-T-024s
Cadmium$_D$[M#]	<0.5							mg/kg	0.5	A-T-024s
Copper$_D$[M#]	12							mg/kg	1	A-T-024s
Chromium$_D$[M#]	29							mg/kg	1	A-T-024s
Lead$_D$[M#]	151							mg/kg	1	A-T-024s
Mercury$_D$	<0.17							mg/kg	0.17	A-T-024s
Nickel$_D$[M#]	20							mg/kg	1	A-T-024s
Selenium$_D$[M#]	<1							mg/kg	1	A-T-024s
Vanadium$_D$[M#]	33							mg/kg	1	A-T-024s
Zinc$_D$[M#]	56							mg/kg	5	A-T-024s

Envirolab Job Number: 24/06298

Client Project Name: Kingmoor Wrexham

Client Project Ref: 51761-3

Lab Sample ID	24/06298/15							Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TP23									
Depth to Top	0.00									
Depth To Bottom	0.30									
Date Sampled	20-Jun-24									
Sample Type	SOIL									
Sample Matrix Code	6AE									
Asbestos in Soil (inc. matrix)										
Asbestos in soil$_D^{\#}$	NAD									A-T-045
Asbestos Matrix (visual)$_D$	-									A-T-045
Asbestos Matrix (microscope)$_D$	-									A-T-045
Asbestos ACM - Suitable for Water Absorption Test?$_D$	N/A									A-T-045

Envirolab Job Number: 24/06298

Client Project Name: Kingmoor Wrexham

Client Project Ref: 51761-3

Lab Sample ID	24/06298/15							Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TP23									
Depth to Top	0.00									
Depth To Bottom	0.30									
Date Sampled	20-Jun-24									
Sample Type	SOIL									
Sample Matrix Code	6AE									
PAH-16MS										
Acenaphthene$_A^{M\#}$	<0.01							mg/kg	0.01	A-T-019s
Acenaphthylene$_A^{M\#}$	<0.01							mg/kg	0.01	A-T-019s
Anthracene$_A^{M\#}$	<0.02							mg/kg	0.02	A-T-019s
Benzo(a)anthracene$_A^{M\#}$	<0.04							mg/kg	0.04	A-T-019s
Benzo(a)pyrene$_A^{M\#}$	<0.04							mg/kg	0.04	A-T-019s
Benzo(b)fluoranthene$_A^{M\#}$	<0.05							mg/kg	0.05	A-T-019s
Benzo(ghi)perylene$_A^{M\#}$	<0.05							mg/kg	0.05	A-T-019s
Benzo(k)fluoranthene$_A^{M\#}$	<0.07							mg/kg	0.07	A-T-019s
Chrysene$_A^{M\#}$	<0.06							mg/kg	0.06	A-T-019s
Dibenzo(ah)anthracene$_A^{M\#}$	<0.04							mg/kg	0.04	A-T-019s
Fluoranthene$_A^{M\#}$	<0.08							mg/kg	0.08	A-T-019s
Fluorene$_A^{M\#}$	<0.01							mg/kg	0.01	A-T-019s
Indeno(123-cd)pyrene$_A^{M\#}$	<0.03							mg/kg	0.03	A-T-019s
Naphthalene $_A^{M\#}$	<0.03							mg/kg	0.03	A-T-019s
Phenanthrene$_A^{M\#}$	<0.03							mg/kg	0.03	A-T-019s
Pyrene$_A^{M\#}$	<0.07							mg/kg	0.07	A-T-019s
Total PAH-16MS$_A^{M\#}$	<0.08							mg/kg	0.01	A-T-019s

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Envirolab Job Number: 24/06298

Client Project Name: Kingmoor Wrexham

Client Project Ref: 51761-3

Lab Sample ID	24/06298/15							Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TP23									
Depth to Top	0.00									
Depth To Bottom	0.30									
Date Sampled	20-Jun-24									
Sample Type	SOIL									
Sample Matrix Code	6AE									
TPH CWG with Clean Up										
Ali >C5-C6$_A$	<0.01							mg/kg	0.01	A-T-022s
Ali >C6-C8$_A$	<0.01							mg/kg	0.01	A-T-022s
Ali >C8-C10$_A$	<1							mg/kg	1	A-T-055s
Ali >C10-C12$_A^{M\#}$	<1							mg/kg	1	A-T-055s
Ali >C12-C16$_A^{M\#}$	<1							mg/kg	1	A-T-055s
Ali >C16-C21$_A^{M\#}$	<1							mg/kg	1	A-T-055s
Ali >C21-C35$_A^{M\#}$	<1							mg/kg	1	A-T-055s
Total Aliphatics$_A$	<1							mg/kg	1	Calc-As Recd
Aro >C5-C7$_A^{\#}$	<0.01							mg/kg	0.01	A-T-022s
Aro >C7-C8$_A^{\#}$	<0.01							mg/kg	0.01	A-T-022s
Aro >C8-C10$_A$	<1							mg/kg	1	A-T-055s
Aro >C10-C12$_A$	<1							mg/kg	1	A-T-055s
Aro >C12-C16$_A$	<1							mg/kg	1	A-T-055s
Aro >C16-C21$_A^{M\#}$	<1							mg/kg	1	A-T-055s
Aro >C21-C35$_A^{M\#}$	<1							mg/kg	1	A-T-055s
Total Aromatics$_A$	<1							mg/kg	1	Calc-As Recd
TPH (Ali & Aro >C5-C35)$_A$	<1							mg/kg	1	Calc-As Recd
BTEX - Benzene$_A^{\#}$	<0.01							mg/kg	0.01	A-T-022s
BTEX - Toluene$_A^{\#}$	<0.01							mg/kg	0.01	A-T-022s
BTEX - Ethyl Benzene$_A^{\#}$	<0.01							mg/kg	0.01	A-T-022s
BTEX - m & p Xylene$_A^{\#}$	<0.01							mg/kg	0.01	A-T-022s
BTEX - o Xylene$_A^{\#}$	<0.01							mg/kg	0.01	A-T-022s
MTBE$_A^{\#}$	<0.01							mg/kg	0.01	A-T-022s

Report Notes

General

•This report shall not be reproduced, except in full, without written approval from Envirolab.
•The client Sample No, Client Sample ID, Depth to top, Depth to Bottom and Date Sampled are all provided by the client and can affect the validity of results.
•The results reported herein relate only to the material supplied to the laboratory.
•The residue of any samples contained within this report, and any received within the same delivery, will be disposed of **four weeks** after the initial scheduling. For samples tested for Asbestos we will retain a portion of the dried sample for a minimum of **six months** after the initial Asbestos testing is completed.
•Analytical results reflect the quality of the sample at the time of analysis only.
•Opinions and Interpretations expressed are outside our scope of accreditation.
•A deviating sample report is appended and will indicate if samples or tests have been found to be deviating. Any test results affected may not be an accurate record of the concentration at the time of sampling and, as a result, may be invalid.
•If a sample is outside of the calibration range or affected by interferences then it may need diluting. This will result in the limit of detection (LOD) being raised.
•Subcontracted Analysis: Please see the appended report for any deviations, current LODs and accreditation status of the test.

Key

Superscript "#"	Accredited to ISO 17025
Superscript "M"	Accredited to MCertS
Superscript "U"	Individual result not accredited
None of the above symbols	Analysis unaccredited
Subscript "A"	Analysis performed on as-received Sample
Subscript "D"	Analysis performed on the dried sample, crushed to pass 2mm sieve.
Subscript "D" on Asbestos	Analysis performed on a dried aliquot of sample provided.
Subscript "^"	Analysis has dependant options against results. Details appear in the comments of your Sample receipt
IS	Insufficient Sample for analysis
US	Unsuitable Sample for analysis
NDP	No Determination Possible
NAD	No Asbestos Detected
N/A	Not applicable

Asbestos

Asbestos in soil analysis is performed on a dried aliquot of the submitted sample and cannot guarantee to identify asbestos if only present in small numbers as discrete fibres/fragments in the original sample.
Stones etc. are not removed from the sample prior to analysis
Quantification of asbestos is a 3 stage process including visual identification, hand picking and weighing, and fibre counting by sedimentation/phase contrast optical microscopy if required. If asbestos is identified as being present but is not in a form that is suitable for analysis by hand picking and weighing (normally if the asbestos is present as free fibres) quantification by sedimentation is performed. Where ACMs are found a percentage asbestos is assigned to each with reference to 'HSG264, Asbestos: The survey guide' and the calculated asbestos content is expressed as a percentage of the dried soil sample aliquot used.

Assigned Matrix Codes

1	SAND	6	CLAY/LOAM	A	Contains Stones
2	LOAM	7	OTHER	B	Contains Construction Rubble
3	CLAY	8	Asbestos Bulk (Only Asbestos ID accredited)	C	Contains visible hydrocarbons
4	LOAM/SAND	9	Incinerator Ash (some Metals accredited)	D	Contains glass / metal
5	SAND/CLAY			E	Contains roots / twigs
Note: 7,8,9 matrices are not covered by our ISO 17025 or MCertS accreditation, unless stated above.					

Soil Chemical Analysis:

All results are reported as dry weight (<40°C).
For samples with Matrix Codes 1 - 6 natural stones, brick and concrete fragments >10mm and any extraneous material (visible glass, metal or twigs) are removed and excluded from the sample prior to analysis and reported results corrected to a whole sample basis. This is reported as '% stones >10mm'.
For samples with Matrix Code 7 the whole sample is dried and crushed prior to analysis and this supersedes any "A" subscripts
All analysis is performed on the sample as received for soil samples which are positive for asbestos or the client has informed asbestos may be present and/or if they are from outside the European Union and this supersedes any "D" subscripts.

TPH by method A-T-007:

For waters, free and visible oils are excluded from the sample used for analysis, so the reported result represents the dissolved phase only.
Results "with Clean up" indicates samples cleaned up with Silica during extraction.

EPH CWG (method A-T-055) from TPH CWG:

EPH CWG results have humics mathematically subtracted through instrument calculation.
Where these humic substances have been identified in any IDs from "TPH CWG with clean up" please note that the concentration is **NOT** included in the quantified results but present in the ID for information.

Electrical Conductivity of water by method A-T-037:

Results greater than 12900µS/cm @ 25^0C / 11550µS/cm @ 20^0C fall outside the calibration range and as such are unaccredited.

Please contact your client manager if you require any further information.

Envirolab Deviating Samples Report

Hattersley Science & Technology Park, Stockport Road, Hattersley, SK14 3QU
Tel. 0161 368 4921 email. ask@envlab.co.uk

Client: SP Associates (Steven M Peters Associates Ltd), 1 Market Place, , Warwick, Warwickshire, CV34 4SA

Project: Kingmoor Wrexham

Clients Project No: 51761-3

Project No: 24/06298

Date Received: 26/06/2024 (am)

Cool Box Temperatures (°C): 21.9, 21.0

NO DEVIATIONS IDENTIFIED

If, at any point before reaching the laboratory, the temperature of the samples has breached those set in published standards, e.g. BS-EN 5667-3, ISO 18400-102:2017, then the concentration of any affected analytes may differ from that at the time of sampling.

Envirolab Analysis Dates

Lab Sample ID	24/06298/1	24/06298/2	24/06298/3	24/06298/4	24/06298/5	24/06298/6	24/06298/7	24/06298/8	24/06298/9	24/06298/10	24/06298/11	24/06298/12
Client Sample No												
Client Sample ID/Depth	TP9 0.00-0.30m	TP10 0.00-0.30m	TP11 0.00-0.40m	TP12 0.00-0.30m	TP13 0.00-0.40m	TP14 0.00-0.40m	TP15 0.00-0.40m	TP16 0.00-0.30m	TP17 0.00-0.30m	TP18 0.00-0.40m	TP19 0.00-0.30m	TP20 0.00-0.30m
Date Sampled	20/06/24	20/06/24	20/06/24	20/06/24	20/06/24	20/06/24	20/06/24	20/06/24	20/06/24	20/06/24	20/06/24	20/06/24
A-T-019s	02/07/2024	02/07/2024	02/07/2024	02/07/2024	02/07/2024	02/07/2024	02/07/2024	02/07/2024	02/07/2024	02/07/2024	02/07/2024	02/07/2024
A-T-022s	02/07/2024	02/07/2024	02/07/2024	02/07/2024	02/07/2024	02/07/2024	02/07/2024	02/07/2024	02/07/2024	02/07/2024	02/07/2024	02/07/2024
A-T-024s	03/07/2024	03/07/2024	03/07/2024	03/07/2024	03/07/2024	03/07/2024	03/07/2024	03/07/2024	03/07/2024	03/07/2024	03/07/2024	03/07/2024
A-T-026s	02/07/2024	02/07/2024	02/07/2024	02/07/2024	02/07/2024	02/07/2024	02/07/2024	02/07/2024	02/07/2024	02/07/2024	02/07/2024	02/07/2024
A-T-031s	02/07/2024	02/07/2024	02/07/2024	02/07/2024	02/07/2024	02/07/2024	02/07/2024	02/07/2024	02/07/2024	02/07/2024	02/07/2024	02/07/2024
A-T-044	01/07/2024	01/07/2024	01/07/2024	01/07/2024	01/07/2024	01/07/2024	01/07/2024	01/07/2024	01/07/2024	01/07/2024	01/07/2024	01/07/2024
A-T-045	27/06/2024	27/06/2024	27/06/2024	27/06/2024	27/06/2024	27/06/2024	27/06/2024	27/06/2024	27/06/2024	27/06/2024	27/06/2024	27/06/2024
A-T-050s	03/07/2024	03/07/2024	03/07/2024	03/07/2024	03/07/2024	03/07/2024	03/07/2024	03/07/2024	03/07/2024	03/07/2024	03/07/2024	03/07/2024
A-T-055s	02/07/2024	02/07/2024	02/07/2024	02/07/2024	02/07/2024	02/07/2024	02/07/2024	02/07/2024	02/07/2024	02/07/2024	02/07/2024	02/07/2024
Calc-As Recd	02/07/2024	02/07/2024	02/07/2024	02/07/2024	02/07/2024	02/07/2024	02/07/2024	02/07/2024	02/07/2024	02/07/2024	02/07/2024	02/07/2024

Lab Sample ID	24/06298/13	24/06298/14	24/06298/15
Client Sample No			
Client Sample ID/Depth	TP21 0.00-0.30m	TP22 0.00-0.30m	TP23 0.00-0.30m
Date Sampled	20/06/24	20/06/24	20/06/24
A-T-019s	02/07/2024	02/07/2024	02/07/2024
A-T-022s	02/07/2024	02/07/2024	02/07/2024
A-T-024s	03/07/2024	03/07/2024	03/07/2024
A-T-026s	02/07/2024	02/07/2024	02/07/2024
A-T-031s	02/07/2024	02/07/2024	02/07/2024
A-T-044	01/07/2024	01/07/2024	01/07/2024
A-T-045	27/06/2024	27/06/2024	27/06/2024
A-T-050s	03/07/2024	03/07/2024	03/07/2024
A-T-055s	02/07/2024	02/07/2024	02/07/2024
Calc-As Recd	02/07/2024	02/07/2024	02/07/2024

The above dates are the analysis completion dates, please note that these are not necessarily the date that the analysis was weighed/extracted.

End of Report

envirolab
Hattersley Science & Technology Park
Stockport Road, Hattersley, SK14 3QU

FINAL ANALYTICAL TEST REPORT

Envirolab Job Number: 24/06120
Issue Number: 1 **Date:** 28 June, 2024

Client:
SP Associates (Steven M Peters Associates Ltd)
1 Market Place
Warwick
Warwickshire
CV34 4SA

Project Manager: Steven Peters
Project Name: Kingmoor, Wrexham
Project Ref: 51761-3
Order No: 1701-3
Date Samples Received: 20/06/24
Date Instructions Received: 20/06/24
Date Analysis Completed: 28/06/24

Approved by:



Gemma Berrisford
Deputy Client Services Supervisor

mCERTS THE ENVIRONMENT AGENCY'S MONITORING CERTIFICATION SCHEME
UKAS TESTING 1247

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Envirolab Job Number: 24/06120

Client Project Name: Kingmoor, Wrexham

Client Project Ref: 51761-3

Lab Sample ID	24/06120/1	24/06120/2	24/06120/3	24/06120/4	24/06120/5	24/06120/6	24/06120/7	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TP1	TP1	TP2	TP2	TP3	TP4	TP5			
Depth to Top	0.20	0.30	0.20	0.40	0.00	0.00	0.00			
Depth To Bottom	0.30	0.50	0.40	0.60	0.40	0.20	0.40			
Date Sampled	17-Jun-24	17-Jun-24	17-Jun-24	17-Jun-24	17-Jun-24	17-Jun-24	17-Jun-24			
Sample Type	SOLID	SOIL - D	SOIL - D	SOIL - D	SOIL - D	SOIL - D	SOIL - D			
Sample Matrix Code	7	6A	6A	6A	6AE	6AE	6AE			
% Stones >10mm$_A$	33.4	<0.1	24.9	<0.1	<0.1	<0.1	<0.1	% w/w	0.1	A-T-044
pH$_D$$^{M\#}$	9.38^U	8.52	9.42	8.12	7.93	5.70	5.96	pH	0.01	A-T-031s
Sulphate (water sol 2:1)$_D$$^{M\#}$	0.02^U	0.04	0.03	0.07	<0.01	<0.01	0.02	g/l	0.01	A-T-026s
Phenols - Total by HPLC$_A$	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	mg/kg	0.2	A-T-050s
Arsenic$_D$$^{M\#}$	3^U	4	3	5	5	5	4	mg/kg	1	A-T-024s
Cadmium$_D$$^{M\#}$	<0.5^U	<0.5	0.6	<0.5	<0.5	<0.5	<0.5	mg/kg	0.5	A-T-024s
Copper$_D$$^{M\#}$	7^U	18	9	19	18	13	13	mg/kg	1	A-T-024s
Chromium$_D$$^{M\#}$	7^U	34	11	46	36	26	26	mg/kg	1	A-T-024s
Lead$_D$$^{M\#}$	57^U	15	93	14	25	65	108	mg/kg	1	A-T-024s
Mercury$_D$	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	mg/kg	0.17	A-T-024s
Nickel$_D$$^{M\#}$	7^U	34	11	41	33	15	17	mg/kg	1	A-T-024s
Selenium$_D$$^{M\#}$	<1^U	<1	<1	<1	<1	<1	<1	mg/kg	1	A-T-024s
Vanadium$_D$$^{M\#}$	7^U	35	9	51	38	31	32	mg/kg	1	A-T-024s
Zinc$_D$$^{M\#}$	66^U	55	105	58	61	68	65	mg/kg	5	A-T-024s

Envirolab Job Number: 24/06120

Client Project Name: Kingmoor, Wrexham

Client Project Ref: 51761-3

Lab Sample ID	24/06120/1	24/06120/2	24/06120/3	24/06120/4	24/06120/5	24/06120/6	24/06120/7	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TP1	TP1	TP2	TP2	TP3	TP4	TP5			
Depth to Top	0.20	0.30	0.20	0.40	0.00	0.00	0.00			
Depth To Bottom	0.30	0.50	0.40	0.60	0.40	0.20	0.40			
Date Sampled	17-Jun-24	17-Jun-24	17-Jun-24	17-Jun-24	17-Jun-24	17-Jun-24	17-Jun-24			
Sample Type	SOLID	SOIL - D	SOIL - D	SOIL - D	SOIL - D	SOIL - D	SOIL - D			
Sample Matrix Code	7	6A	6A	6A	6AE	6AE	6AE			
Asbestos in Soil (inc. matrix)										
Asbestos in soil$_D^{\#}$	NAD^{U}	NAD	NAD	NAD	NAD	NAD	NAD			A-T-045
Asbestos Matrix (visual)$_D$	-	-	-	-	-	-	-			A-T-045
Asbestos Matrix (microscope)$_D$	-	-	-	-	-	-	-			A-T-045
Asbestos ACM - Suitable for Water Absorption Test?$_D$	N/A	N/A	N/A	N/A	N/A	N/A	N/A			A-T-045

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Envirolab Job Number: 24/06120

Client Project Name: Kingmoor, Wrexham

Client Project Ref: 51761-3

Lab Sample ID	24/06120/1	24/06120/2	24/06120/3	24/06120/4	24/06120/5	24/06120/6	24/06120/7	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TP1	TP1	TP2	TP2	TP3	TP4	TP5			
Depth to Top	0.20	0.30	0.20	0.40	0.00	0.00	0.00			
Depth To Bottom	0.30	0.50	0.40	0.60	0.40	0.20	0.40			
Date Sampled	17-Jun-24	17-Jun-24	17-Jun-24	17-Jun-24	17-Jun-24	17-Jun-24	17-Jun-24			
Sample Type	SOLID	SOIL - D	SOIL - D	SOIL - D	SOIL - D	SOIL - D	SOIL - D			
Sample Matrix Code	7	6A	6A	6A	6AE	6AE	6AE			
PAH-16MS										
Acenaphthene$_A^{M\#}$	<0.10^U	<0.01	<0.01	<0.01	<0.01	<0.01	0.12	mg/kg	0.01	A-T-019s
Acenaphthylene$_A^{M\#}$	<0.10^U	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-019s
Anthracene$_A^{M\#}$	<0.20^U	<0.02	<0.02	<0.02	<0.02	<0.02	0.12	mg/kg	0.02	A-T-019s
Benzo(a)anthracene$_A^{M\#}$	<0.40^U	<0.04	<0.04	<0.04	<0.04	<0.04	0.24	mg/kg	0.04	A-T-019s
Benzo(a)pyrene$_A^{M\#}$	<0.40^U	<0.04	<0.04	<0.04	<0.04	<0.04	0.18	mg/kg	0.04	A-T-019s
Benzo(b)fluoranthene$_A^{M\#}$	<0.50^U	<0.05	<0.05	<0.05	<0.05	<0.05	0.25	mg/kg	0.05	A-T-019s
Benzo(ghi)perylene$_A^{M\#}$	<0.50^U	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	mg/kg	0.05	A-T-019s
Benzo(k)fluoranthene$_A^{M\#}$	<0.70^U	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	mg/kg	0.07	A-T-019s
Chrysene$_A^{M\#}$	<0.60^U	<0.06	<0.06	<0.06	<0.06	<0.06	0.30	mg/kg	0.06	A-T-019s
Dibenzo(ah)anthracene$_A^{M\#}$	<0.40^U	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	mg/kg	0.04	A-T-019s
Fluoranthene$_A^{M\#}$	<0.80^U	<0.08	<0.08	<0.08	<0.08	<0.08	0.56	mg/kg	0.08	A-T-019s
Fluorene$_A^{M\#}$	<0.10^U	<0.01	<0.01	<0.01	<0.01	<0.01	0.07	mg/kg	0.01	A-T-019s
Indeno(123-cd)pyrene$_A^{M\#}$	<0.30^U	<0.03	<0.03	<0.03	<0.03	<0.03	0.07	mg/kg	0.03	A-T-019s
Naphthalene $_A^{M\#}$	<0.30^U	<0.03	<0.03	<0.03	<0.03	<0.03	0.06	mg/kg	0.03	A-T-019s
Phenanthrene$_A^{M\#}$	<0.30^U	<0.03	<0.03	<0.03	<0.03	<0.03	0.52	mg/kg	0.03	A-T-019s
Pyrene$_A^{M\#}$	<0.70^U	<0.07	<0.07	<0.07	<0.07	<0.07	0.50	mg/kg	0.07	A-T-019s
Total PAH-16MS$_A^{M\#}$	<0.80^U	<0.08	<0.08	<0.08	<0.08	<0.08	2.99	mg/kg	0.01	A-T-019s

Envirolab Job Number: 24/06120

Client Project Name: Kingmoor, Wrexham

Client Project Ref: 51761-3

Lab Sample ID	24/06120/1	24/06120/2	24/06120/3	24/06120/4	24/06120/5	24/06120/6	24/06120/7	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TP1	TP1	TP2	TP2	TP3	TP4	TP5			
Depth to Top	0.20	0.30	0.20	0.40	0.00	0.00	0.00			
Depth To Bottom	0.30	0.50	0.40	0.60	0.40	0.20	0.40			
Date Sampled	17-Jun-24	17-Jun-24	17-Jun-24	17-Jun-24	17-Jun-24	17-Jun-24	17-Jun-24			
Sample Type	SOLID	SOIL - D	SOIL - D	SOIL - D	SOIL - D	SOIL - D	SOIL - D			
Sample Matrix Code	7	6A	6A	6A	6AE	6AE	6AE			
TPH CWG with Clean Up										
Ali >C5-C6$_A$	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
Ali >C6-C8$_A$	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
Ali >C8-C10$_A$	<10	<1	<1	<1	<1	<1	<1	mg/kg	1	A-T-055s
Ali >C10-C12$_A$$^{M\#}$	<10^U	<1	<1	<1	<1	<1	<1	mg/kg	1	A-T-055s
Ali >C12-C16$_A$$^{M\#}$	<10^U	<1	<1	<1	<1	<1	<1	mg/kg	1	A-T-055s
Ali >C16-C21$_A$$^{M\#}$	<10^U	<1	<1	<1	<1	<1	<1	mg/kg	1	A-T-055s
Ali >C21-C35$_A$$^{M\#}$	<10^U	<1	2	1	1	4	10	mg/kg	1	A-T-055s
Total Aliphatics$_A$	<10	<1	2	1	1	4	10	mg/kg	1	Calc-As Recd
Aro >C5-C7$_A$$^{\#}$	<0.05^U	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
Aro >C7-C8$_A$$^{\#}$	<0.05^U	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
Aro >C8-C10$_A$	<10	<1	<1	<1	<1	<1	1	mg/kg	1	A-T-055s
Aro >C10-C12$_A$	<10	<1	<1	<1	<1	<1	1	mg/kg	1	A-T-055s
Aro >C12-C16$_A$	<10	<1	<1	<1	<1	<1	6	mg/kg	1	A-T-055s
Aro >C16-C21$_A$$^{M\#}$	<10^U	<1	<1	<1	<1	<1	22	mg/kg	1	A-T-055s
Aro >C21-C35$_A$$^{M\#}$	<10^U	<1	<1	<1	<1	1	105	mg/kg	1	A-T-055s
Total Aromatics$_A$	<10	<1	<1	<1	<1	1	136	mg/kg	1	Calc-As Recd
TPH (Ali & Aro >C5-C35)$_A$	<10	<1	2	1	1	6	146	mg/kg	1	Calc-As Recd
BTEX - Benzene$_A$$^{\#}$	<0.05^U	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
BTEX - Toluene$_A$$^{\#}$	<0.05^U	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
BTEX - Ethyl Benzene$_A$$^{\#}$	<0.05^U	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
BTEX - m & p Xylene$_A$$^{\#}$	<0.05^U	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
BTEX - o Xylene$_A$$^{\#}$	<0.05^U	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
MTBE$_A$$^{\#}$	<0.05^U	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s

envirolab

Envirolab Job Number: 24/06120

Client Project Name: Kingmoor, Wrexham

Client Project Ref: 51761-3

Lab Sample ID	24/06120/8	24/06120/9	24/06120/10					Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TP6	TP7	TP8							
Depth to Top	0.00	0.00	0.00							
Depth To Bottom	0.40	0.30	0.40							
Date Sampled	17-Jun-24	17-Jun-24	17-Jun-24							
Sample Type	SOIL - D	SOIL - D	SOIL - D							
Sample Matrix Code	6AE	6AE	6AE							
% Stones >10mm$_A$	1.5	<0.1	<0.1					% w/w	0.1	A-T-044
pH$_D$ [M#]	6.15	5.88	6.86					pH	0.01	A-T-031s
Sulphate (water sol 2:1)$_D$ [M#]	0.02	<0.01	<0.01					g/l	0.01	A-T-026s
Phenols - Total by HPLC$_A$	<0.2	<0.2	<0.2					mg/kg	0.2	A-T-050s
Arsenic$_D$ [M#]	6	6	4					mg/kg	1	A-T-024s
Cadmium$_D$ [M#]	<0.5	<0.5	<0.5					mg/kg	0.5	A-T-024s
Copper$_D$ [M#]	14	15	13					mg/kg	1	A-T-024s
Chromium$_D$ [M#]	33	35	24					mg/kg	1	A-T-024s
Lead$_D$ [M#]	164	180	59					mg/kg	1	A-T-024s
Mercury$_D$	<0.17	<0.17	<0.17					mg/kg	0.17	A-T-024s
Nickel$_D$ [M#]	21	21	20					mg/kg	1	A-T-024s
Selenium$_D$ [M#]	<1	<1	<1					mg/kg	1	A-T-024s
Vanadium$_D$ [M#]	41	41	28					mg/kg	1	A-T-024s
Zinc$_D$ [M#]	65	85	58					mg/kg	5	A-T-024s

Envirolab Job Number: 24/06120

Client Project Name: Kingmoor, Wrexham

Client Project Ref: 51761-3

Lab Sample ID	24/06120/8	24/06120/9	24/06120/10					Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TP6	TP7	TP8							
Depth to Top	0.00	0.00	0.00							
Depth To Bottom	0.40	0.30	0.40							
Date Sampled	17-Jun-24	17-Jun-24	17-Jun-24							
Sample Type	SOIL - D	SOIL - D	SOIL - D							
Sample Matrix Code	6AE	6AE	6AE							
Asbestos in Soil (inc. matrix)										
Asbestos in soil$_D^{\#}$	NAD	NAD	NAD							A-T-045
Asbestos Matrix (visual)$_D$	-	-	-							A-T-045
Asbestos Matrix (microscope)$_D$	-	-	-							A-T-045
Asbestos ACM - Suitable for Water Absorption Test?$_D$	N/A	N/A	N/A							A-T-045

Lab Sample ID	24/06120/8	24/06120/9	24/06120/10					Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TP6	TP7	TP8							
Depth to Top	0.00	0.00	0.00							
Depth To Bottom	0.40	0.30	0.40							
Date Sampled	17-Jun-24	17-Jun-24	17-Jun-24							
Sample Type	SOIL - D	SOIL - D	SOIL - D							
Sample Matrix Code	6AE	6AE	6AE							
PAH-16MS										
Acenaphthene$_A^{M\#}$	<0.01	<0.01	<0.01					mg/kg	0.01	A-T-019s
Acenaphthylene$_A^{M\#}$	<0.01	<0.01	<0.01					mg/kg	0.01	A-T-019s
Anthracene$_A^{M\#}$	<0.02	<0.02	<0.02					mg/kg	0.02	A-T-019s
Benzo(a)anthracene$_A^{M\#}$	<0.04	<0.04	<0.04					mg/kg	0.04	A-T-019s
Benzo(a)pyrene$_A^{M\#}$	<0.04	<0.04	<0.04					mg/kg	0.04	A-T-019s
Benzo(b)fluoranthene$_A^{M\#}$	<0.05	<0.05	<0.05					mg/kg	0.05	A-T-019s
Benzo(ghi)perylene$_A^{M\#}$	<0.05	<0.05	<0.05					mg/kg	0.05	A-T-019s
Benzo(k)fluoranthene$_A^{M\#}$	<0.07	<0.07	<0.07					mg/kg	0.07	A-T-019s
Chrysene$_A^{M\#}$	<0.06	<0.06	<0.06					mg/kg	0.06	A-T-019s
Dibenzo(ah)anthracene$_A^{M\#}$	<0.04	<0.04	<0.04					mg/kg	0.04	A-T-019s
Fluoranthene$_A^{M\#}$	<0.08	<0.08	<0.08					mg/kg	0.08	A-T-019s
Fluorene$_A^{M\#}$	<0.01	<0.01	<0.01					mg/kg	0.01	A-T-019s
Indeno(123-cd)pyrene$_A^{M\#}$	<0.03	<0.03	<0.03					mg/kg	0.03	A-T-019s
Naphthalene $_A^{M\#}$	<0.03	<0.03	<0.03					mg/kg	0.03	A-T-019s
Phenanthrene$_A^{M\#}$	<0.03	<0.03	<0.03					mg/kg	0.03	A-T-019s
Pyrene$_A^{M\#}$	<0.07	<0.07	<0.07					mg/kg	0.07	A-T-019s
Total PAH-16MS$_A^{M\#}$	<0.08	<0.08	<0.08					mg/kg	0.01	A-T-019s

Envirolab Job Number: 24/06120

Client Project Name: Kingmoor, Wrexham

Client Project Ref: 51761-3

Lab Sample ID	24/06120/8	24/06120/9	24/06120/10					Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TP6	TP7	TP8							
Depth to Top	0.00	0.00	0.00							
Depth To Bottom	0.40	0.30	0.40							
Date Sampled	17-Jun-24	17-Jun-24	17-Jun-24							
Sample Type	SOIL - D	SOIL - D	SOIL - D							
Sample Matrix Code	6AE	6AE	6AE							
TPH CWG with Clean Up										
Ali >C5-C6$_A$	<0.01	<0.01	<0.01					mg/kg	0.01	A-T-022s
Ali >C6-C8$_A$	<0.01	<0.01	<0.01					mg/kg	0.01	A-T-022s
Ali >C8-C10$_A$	<1	<1	<1					mg/kg	1	A-T-055s
Ali >C10-C12$_A$$^{M\#}$	<1	<1	<1					mg/kg	1	A-T-055s
Ali >C12-C16$_A$$^{M\#}$	<1	<1	<1					mg/kg	1	A-T-055s
Ali >C16-C21$_A$$^{M\#}$	1	<1	<1					mg/kg	1	A-T-055s
Ali >C21-C35$_A$$^{M\#}$	5	10	4					mg/kg	1	A-T-055s
Total Aliphatics$_A$	6	10	4					mg/kg	1	Calc-As Recd
Aro >C5-C7$_A$$^{\#}$	<0.01	<0.01	<0.01					mg/kg	0.01	A-T-022s
Aro >C7-C8$_A$$^{\#}$	<0.01	<0.01	<0.01					mg/kg	0.01	A-T-022s
Aro >C8-C10$_A$	<1	<1	<1					mg/kg	1	A-T-055s
Aro >C10-C12$_A$	<1	<1	<1					mg/kg	1	A-T-055s
Aro >C12-C16$_A$	<1	<1	<1					mg/kg	1	A-T-055s
Aro >C16-C21$_A$$^{M\#}$	3	<1	1					mg/kg	1	A-T-055s
Aro >C21-C35$_A$$^{M\#}$	1	3	2					mg/kg	1	A-T-055s
Total Aromatics$_A$	4	3	4					mg/kg	1	Calc-As Recd
TPH (Ali & Aro >C5-C35)$_A$	10	13	7					mg/kg	1	Calc-As Recd
BTEX - Benzene$_A$$^{\#}$	<0.01	<0.01	<0.01					mg/kg	0.01	A-T-022s
BTEX - Toluene$_A$$^{\#}$	<0.01	<0.01	<0.01					mg/kg	0.01	A-T-022s
BTEX - Ethyl Benzene$_A$$^{\#}$	<0.01	<0.01	<0.01					mg/kg	0.01	A-T-022s
BTEX - m & p Xylene$_A$$^{\#}$	<0.01	<0.01	<0.01					mg/kg	0.01	A-T-022s
BTEX - o Xylene$_A$$^{\#}$	<0.01	<0.01	<0.01					mg/kg	0.01	A-T-022s
MTBE$_A$$^{\#}$	<0.01	<0.01	<0.01					mg/kg	0.01	A-T-022s

Report Notes

General

•This report shall not be reproduced, except in full, without written approval from Envirolab.
•The client Sample No, Client Sample ID, Depth to top, Depth to Bottom and Date Sampled are all provided by the client and can affect the validity of results.
•The results reported herein relate only to the material supplied to the laboratory.
•The residue of any samples contained within this report, and any received within the same delivery, will be disposed of **four weeks** after the initial scheduling. For samples tested for Asbestos we will retain a portion of the dried sample for a minimum of **six months** after the initial Asbestos testing is completed.
•Analytical results reflect the quality of the sample at the time of analysis only.
•Opinions and Interpretations expressed are outside our scope of accreditation.
•A deviating sample report is appended and will indicate if samples or tests have been found to be deviating. Any test results affected may not be an accurate record of the concentration at the time of sampling and, as a result, may be invalid.
•If a sample is outside of the calibration range or affected by interferences then it may need diluting. This will result in the limit of detection (LOD) being raised.
•Subcontracted Analysis: Please see the appended report for any deviations, current LODs and accreditation status of the test.

Key

Superscript "#"	Accredited to ISO 17025
Superscript "M"	Accredited to MCertS
Superscript "U"	Individual result not accredited
None of the above symbols	Analysis unaccredited
Subscript "A"	Analysis performed on as-received Sample
Subscript "D"	Analysis performed on the dried sample, crushed to pass 2mm sieve.
Subscript "D" on Asbestos	Analysis performed on a dried aliquot of sample provided.
Subscript "^"	Analysis has dependant options against results. Details appear in the comments of your Sample receipt
IS	Insufficient Sample for analysis
US	Unsuitable Sample for analysis
NDP	No Determination Possible
NAD	No Asbestos Detected
N/A	Not applicable

Asbestos

Asbestos in soil analysis is performed on a dried aliquot of the submitted sample and cannot guarantee to identify asbestos if only present in small numbers as discrete fibres/fragments in the original sample.
Stones etc. are not removed from the sample prior to analysis
Quantification of asbestos is a 3 stage process including visual identification, hand picking and weighing, and fibre counting by sedimentation/phase contrast optical microscopy if required. If asbestos is identified as being present but is not in a form that is suitable for analysis by hand picking and weighing (normally if the asbestos is present as free fibres) quantification by sedimentation is performed. Where ACMs are found a percentage asbestos is assigned to each with reference to 'HSG264, Asbestos: The survey guide' and the calculated asbestos content is expressed as a percentage of the dried soil sample aliquot used.

Assigned Matrix Codes

1	SAND	6	CLAY/LOAM	A	Contains Stones
2	LOAM	7	OTHER	B	Contains Construction Rubble
3	CLAY	8	Asbestos Bulk (Only Asbestos ID accredited)	C	Contains visible hydrocarbons
4	LOAM/SAND	9	Incinerator Ash (some Metals accredited)	D	Contains glass / metal
5	SAND/CLAY			E	Contains roots / twigs
Note: 7,8,9 matrices are not covered by our ISO 17025 or MCertS accreditation, unless stated above.					

Soil Chemical Analysis:

All results are reported as dry weight (<40°C).
For samples with Matrix Codes 1 - 6 natural stones, brick and concrete fragments >10mm and any extraneous material (visible glass, metal or twigs) are removed and excluded from the sample prior to analysis and reported results corrected to a whole sample basis. This is reported as '% stones >10mm'.
For samples with Matrix Code 7 the whole sample is dried and crushed prior to analysis and this supersedes any "A" subscripts
All analysis is performed on the sample as received for soil samples which are positive for asbestos or the client has informed asbestos may be present and/or if they are from outside the European Union and this supersedes any "D" subscripts.

TPH by method A-T-007:

For waters, free and visible oils are excluded from the sample used for analysis, so the reported result represents the dissolved phase only.
Results "with Clean up" indicates samples cleaned up with Silica during extraction.

EPH CWG (method A-T-055) from TPH CWG:

EPH CWG results have humics mathematically subtracted through instrument calculation.
Where these humic substances have been identified in any IDs from "TPH CWG with clean up" please note that the concentration is **NOT** included in the quantified results but present in the ID for information.

Electrical Conductivity of water by method A-T-037:

Results greater than 12900µS/cm @ 25^0C / 11550µS/cm @ 20^0C fall outside the calibration range and as such are unaccredited.

Please contact your client manager if you require any further information.

Envirolab Deviating Samples Report

Hattersley Science & Technology Park, Stockport Road, Hattersley, SK14 3QU
Tel. 0161 368 4921 email. ask@envlab.co.uk

Client: SP Associates (Steven M Peters Associates Ltd), 1 Market Place, , Warwick, Warwickshire, CV34 4SA

Project: Kingmoor, Wrexham

Clients Project No: 51761-3

Project No: 24/06120

Date Received: 20/06/2024 (am)

Cool Box Temperatures (°C): 17.2

NO DEVIATIONS IDENTIFIED

If, at any point before reaching the laboratory, the temperature of the samples has breached those set in published standards, e.g. BS-EN 5667-3, ISO 18400-102:2017, then the concentration of any affected analytes may differ from that at the time of sampling.

Envirolab Analysis Dates

Lab Sample ID	24/06120/1	24/06120/2	24/06120/3	24/06120/4	24/06120/5	24/06120/6	24/06120/7	24/06120/8	24/06120/9	24/06120/10
Client Sample No										
Client Sample ID/Depth	TP1 0.20-0.30m	TP1 0.30-0.50m	TP2 0.20-0.40m	TP2 0.40-0.60m	TP3 0.00-0.40m	TP4 0.00-0.20m	TP5 0.00-0.40m	TP6 0.00-0.40m	TP7 0.00-0.30m	TP8 0.00-0.40m
Date Sampled	17/06/24	17/06/24	17/06/24	17/06/24	17/06/24	17/06/24	17/06/24	17/06/24	17/06/24	17/06/24
A-T-019s	27/06/2024	27/06/2024	27/06/2024	27/06/2024	27/06/2024	27/06/2024	27/06/2024	27/06/2024	27/06/2024	27/06/2024
A-T-022s	26/06/2024	26/06/2024	26/06/2024	26/06/2024	26/06/2024	26/06/2024	26/06/2024	26/06/2024	26/06/2024	26/06/2024
A-T-024s	27/06/2024	27/06/2024	27/06/2024	27/06/2024	27/06/2024	27/06/2024	27/06/2024	27/06/2024	27/06/2024	27/06/2024
A-T-026s	27/06/2024	27/06/2024	27/06/2024	27/06/2024	27/06/2024	27/06/2024	27/06/2024	27/06/2024	27/06/2024	27/06/2024
A-T-031s	26/06/2024	26/06/2024	26/06/2024	26/06/2024	26/06/2024	26/06/2024	26/06/2024	26/06/2024	26/06/2024	26/06/2024
A-T-044	25/06/2024	25/06/2024	25/06/2024	25/06/2024	25/06/2024	25/06/2024	25/06/2024	25/06/2024	25/06/2024	25/06/2024
A-T-045	22/06/2024	22/06/2024	22/06/2024	22/06/2024	22/06/2024	22/06/2024	22/06/2024	22/06/2024	22/06/2024	22/06/2024
A-T-050s	27/06/2024	27/06/2024	27/06/2024	27/06/2024	27/06/2024	27/06/2024	27/06/2024	27/06/2024	27/06/2024	27/06/2024
A-T-055s	28/06/2024	28/06/2024	28/06/2024	28/06/2024	28/06/2024	28/06/2024	28/06/2024	28/06/2024	28/06/2024	28/06/2024
Calc-As Recd	28/06/2024	28/06/2024	28/06/2024	28/06/2024	28/06/2024	28/06/2024	28/06/2024	28/06/2024	28/06/2024	28/06/2024

The above dates are the analysis completion dates, please note that these are not necessarily the date that the analysis was weighed/extracted.

End of Report