Appendix 06

Soil and Water Chemical Analysis Results

(DETS Laboratory Ltd, January and February 2024)

(Refs: 23-29036-1, 23-29383-1, 23-29501-1, 23-29505-1, 24-00608, 23-29937, 24-01406 and 24-02529)

Certificate of Analysis

Certificate Number 23-29036 *Issued:* 02-Jan-24

Client Mason Evans Partnership
95 Morrison Street
Glasgow
G5 8BE

Our Reference 23-29036

Client Reference P22/271

Order No Scott Armstrong

Contract Title (P22/271) Rotterdam Wharf, Scottish Opera, Glasgow

Description 7 Soil samples, 4 Leachate prepared by DETS samples.

Date Received 11-Dec-23

Date Started 11-Dec-23

Date Completed 02-Jan-24

Test Procedures Identified by prefix DETSn (details on request).

Notes Opinions and interpretations are outside the laboratory's scope of ISO 17025 accreditation. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.

Approved By [redacted]
Kirk Bridgewood
General Manager

2139

Summary of Chemical Analysis

UKWIR Samples

Our Ref 23-29036
Client Ref P22/271
Contract Title (P22/271) Rotterdam Wharf, Scottish Opera, Glasgow

Test	Method	LOD	Units	Lab No	2274821	2274822	2274823	2274824	2274825	2274826	2274827
				.Sample ID	BH07	BH07	BH07	BH07	BH07	BH08	BH08
				Depth	0.30	0.50	1.00	2.50	3.50	0.30	1.00
				Other ID							
				Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
				Sampling Date	04/12/2023	04/12/2023	04/12/2023	04/12/2023	04/12/2023	04/12/2023	04/12/2023
				Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s	n/s
Conductivity	DETSC 2009	1	uS/cm			2100				
pH	DETSC 2008#		pH	9.5	8.4	8.7	8.2	8.1	8.5	8.6
Redox Potential	DETSC 2016*	-500	mV			220				
Mineral Oil(C11-C20)	DETSC 3311	10	mg/kg			< 10				
Mineral Oil(C20-C40)	DETSC 3311	10	mg/kg			< 10				
Total VOCs	DETSC 3431*	0.01	mg/kg			< 0.01				
BTEX + MTBE	DETSC 3431	0.01	mg/kg			< 0.01				
Total SVOCs	DETSC 3433*	0.1	mg/kg			0.2				
Phenol	DETSC 3433	0.1	mg/kg			< 0.1				
Cresols and Chlorinated Phenols	DETSC 3433*	0.1	mg/kg			< 0.1				
TICs (Ethers,Ketones,Aldehydes,Amines,Nitrobenzene)			mg/kg			None				

Key: * -not accredited. # -MCERTS (accreditation only applies if report carries the MCERTS logo). n/s -not supplied.

Summary of Chemical Analysis

Soil Samples

Our Ref 23-29036
Client Ref P22/271
Contract Title (P22/271) Rotterdam Wharf, Scottish Opera, Glasgow

Lab No				2274821	2274822	2274823	2274824	2274825	2274826	2274827		
.Sample ID				BH07	BH07	BH07	BH07	BH07	BH08	BH08		
Depth				0.30	0.50	1.00	2.50	3.50	0.30	1.00		
Other ID												
Sample Type				SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL		
Sampling Date				04/12/2023	04/12/2023	04/12/2023	04/12/2023	04/12/2023	04/12/2023	04/12/2023		
Sampling Time				n/s	n/s	n/s	n/s	n/s	n/s	n/s		
Test	**Method**	**LOD**	**Units**									
Preparation												
Moisture Content	DETSC 1004	0.1	%	3.6	12	11	13	15	7.4	11		
Metals												
Arsenic	DETSC 2301#	0.2	mg/kg	3.3	6.9	7.0	3.9	4.6	3.7	3.9		
Boron, Water Soluble (2.5:1)	DETSC 2311#	0.2	mg/kg	0.3	0.7	1.0	0.9	0.6	0.3	< 0.2		
Cadmium	DETSC 2301#	0.1	mg/kg	< 0.1	0.1	0.2	0.1	0.2	< 0.1	< 0.1		
Chromium	DETSC 2301#	0.15	mg/kg	22	25	18	20	29	32	19		
Chromium, Hexavalent	DETSC 2204*	1	mg/kg	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0		
Copper	DETSC 2301#	0.2	mg/kg	32	28	38	23	28	8.7	16		
Lead	DETSC 2301#	0.3	mg/kg	11	17	37	19	22	2.7	7.1		
Mercury	DETSC 2325#	0.05	mg/kg	< 0.05	< 0.05	0.07	< 0.05	< 0.05	< 0.05	< 0.05		
Nickel	DETSC 2301#	1	mg/kg	25	31	29	30	36	28	22		
Selenium	DETSC 2301#	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5		
Zinc	DETSC 2301#	1	mg/kg	95	77	130	89	97	45	57		
Inorganics												
Conductivity	DETSC 2009	1	uS/cm			2100						
pH	DETSC 2008#		pH	9.5	8.4	8.7	8.2	8.1	8.5	8.6		
Cyanide, Total	DETSC 2130#	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1		
Total Organic Carbon	DETSC 2084#	0.5	%	2.3	1.3	2.4	2.1	1.9	< 0.5	0.9		
Organic Matter (by calculation)	*	0.1	%	4.0	2.2	4.2	3.6	3.3	0.3	1.6		
Redox Potential	DETSC 2016*	-500	mV			220						
Sulphide	DETSC 2024*	10	mg/kg	28	40	72	28	44	< 10	64		
Sulphate as SO4, Total	DETSC 2321#	0.01	%	0.13	0.07	0.05	0.03	0.02	0.02	0.03		
Petroleum Hydrocarbons												
Aliphatic C5-C6	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01		
Aliphatic C6-C8	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01		
Aliphatic C8-C10	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01		
Aliphatic C10-C12	DETSC 3072#	1.5	mg/kg	< 1.5	< 1.5	< 1.5	< 1.5	< 1.5	< 1.5	< 1.5		
Aliphatic C12-C16	DETSC 3072#	1.2	mg/kg	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2		
Aliphatic C16-C21	DETSC 3072#	1.5	mg/kg	46	< 1.5	< 1.5	< 1.5	< 1.5	< 1.5	< 1.5		
Aliphatic C16-C35	DETSC 3072#	4.9	mg/kg	1100	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9		
Aliphatic C21-C35	DETSC 3072#	3.4	mg/kg	1000	< 3.4	< 3.4	< 3.4	< 3.4	< 3.4	< 3.4		
Aliphatic C5-C35	DETSC 3072*	10	mg/kg	1100	< 10	< 10	< 10	< 10	< 10	< 10		
Aromatic C5-C7	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01		
Aromatic C7-C8	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01		
Aromatic C8-C10	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01		
Aromatic C10-C12	DETSC 3072#	0.9	mg/kg	< 0.9	< 0.9	< 0.9	< 0.9	< 0.9	< 0.9	< 0.9		
Aromatic C12-C16	DETSC 3072#	0.5	mg/kg	3.1	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5		
Aromatic C16-C21	DETSC 3072#	0.6	mg/kg	99	< 0.6	< 0.6	< 0.6	< 0.6	< 0.6	< 0.6		
Aromatic C21-C35	DETSC 3072#	1.4	mg/kg	1800	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4		
Aromatic C5-C35	DETSC 3072*	10	mg/kg	1900	< 10	< 10	< 10	< 10	< 10	< 10		
TPH Ali/Aro Total C5-C35	DETSC 3072*	10	mg/kg	3000	< 10	< 10	< 10	< 10	< 10	< 10		

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Summary of Chemical Analysis

Soil Samples

Our Ref 23-29036
Client Ref P22/271
Contract Title (P22/271) Rotterdam Wharf, Scottish Opera, Glasgow

Test	Method	LOD	Units	Lab No	2274821	2274822	2274823	2274824	2274825	2274826	2274827
				.Sample ID	BH07	BH07	BH07	BH07	BH07	BH08	BH08
				Depth	0.30	0.50	1.00	2.50	3.50	0.30	1.00
				Other ID							
				Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
				Sampling Date	04/12/2023	04/12/2023	04/12/2023	04/12/2023	04/12/2023	04/12/2023	04/12/2023
				Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s	n/s
EPH (C11-C20)	DETSC 3311	10	mg/kg			< 10				
EPH (C20-C40)	DETSC 3311	10	mg/kg			< 10				
PAHs											
Naphthalene	DETSC 3301	0.1	mg/kg	< 2.0	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthylene	DETSC 3301	0.1	mg/kg	< 2.0	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthene	DETSC 3301	0.1	mg/kg	< 2.0	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Fluorene	DETSC 3301	0.1	mg/kg	< 2.0	< 0.1	0.1	0.1	< 0.1	< 0.1	< 0.1
Phenanthrene	DETSC 3301	0.1	mg/kg	< 2.0	< 0.1	0.3	0.1	< 0.1	< 0.1	< 0.1
Anthracene	DETSC 3301	0.1	mg/kg	< 2.0	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Fluoranthene	DETSC 3301	0.1	mg/kg	< 2.0	< 0.1	0.6	0.3	0.5	< 0.1	< 0.1
Pyrene	DETSC 3301	0.1	mg/kg	< 2.0	< 0.1	0.4	0.2	< 0.1	< 0.1	< 0.1
Benzo(a)anthracene	DETSC 3301	0.1	mg/kg	< 2.0	< 0.1	0.2	< 0.1	0.2	< 0.1	< 0.1
Chrysene	DETSC 3301	0.1	mg/kg	< 2.0	< 0.1	0.1	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(b)fluoranthene	DETSC 3301	0.1	mg/kg	< 2.0	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(k)fluoranthene	DETSC 3301	0.1	mg/kg	< 2.0	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(a)pyrene	DETSC 3301	0.1	mg/kg	< 2.0	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Indeno(1,2,3-c,d)pyrene	DETSC 3301	0.1	mg/kg	< 2.0	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Dibenzo(a,h)anthracene	DETSC 3301	0.1	mg/kg	< 2.0	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(g,h,i)perylene	DETSC 3301	0.1	mg/kg	< 2.0	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
PAH 16 Total	DETSC 3301	1.6	mg/kg	< 32.0	< 1.6	1.9	< 1.6	< 1.6	< 1.6	< 1.6
PCBs											
PCB 77	DETSC 3401*	0.01	mg/kg		< 0.01	< 0.01				
PCB 81	DETSC 3401*	0.01	mg/kg		< 0.01	< 0.01				
PCB 105	DETSC 3401*	0.01	mg/kg		< 0.01	< 0.01				
PCB 114	DETSC 3401*	0.01	mg/kg		< 0.01	< 0.01				
PCB 118	DETSC 3401#	0.01	mg/kg		< 0.01	< 0.01				
PCB 123	DETSC 3401*	0.01	mg/kg		< 0.01	< 0.01				
PCB 126	DETSC 3401*	0.01	mg/kg		< 0.01	< 0.01				
PCB 156	DETSC 3401*	0.01	mg/kg		< 0.01	< 0.01				
PCB 157	DETSC 3401*	0.01	mg/kg		< 0.01	< 0.01				
PCB 167	DETSC 3401*	0.01	mg/kg		< 0.01	< 0.01				
PCB 169	DETSC 3401*	0.01	mg/kg		< 0.01	< 0.01				
PCB 189	DETSC 3401*	0.01	mg/kg		< 0.01	< 0.01				
Phenols											
Phenol - Monohydric	DETSC 2130#	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	0.5

Key: * -not accredited. # -MCERTS (accreditation only applies if report carries the MCERTS logo). n/s -not supplied.

Summary of Chemical Analysis
Soil VOC/SVOC Samples

Our Ref 23-29036
Client Ref P22/271
Contract Title (P22/271) Rotterdam Wharf, Scottish Opera, Glasgow

Lab No	2274823
.Sample ID	BH07
Depth	1.00
Other ID	
Sample Type	SOIL
Sampling Date	04/12/2023
Sampling Time	n/s

Test	Method	LOD	Units	
VOCs				
Vinyl Chloride	DETSC 3431	0.01	mg/kg	< 0.01
1,1 Dichloroethylene	DETSC 3431	0.01	mg/kg	< 0.01
Trans-1,2-dichloroethylene	DETSC 3431	0.01	mg/kg	< 0.01
1,1-dichloroethane	DETSC 3431	0.01	mg/kg	< 0.01
Cis-1,2-dichloroethylene	DETSC 3431	0.01	mg/kg	< 0.01
2,2-dichloropropane	DETSC 3431	0.01	mg/kg	< 0.01
Bromochloromethane	DETSC 3431	0.01	mg/kg	< 0.01
Chloroform	DETSC 3431	0.01	mg/kg	< 0.01
1,1,1-trichloroethane	DETSC 3431	0.01	mg/kg	< 0.01
1,1-dichloropropene	DETSC 3431	0.01	mg/kg	< 0.01
Carbon tetrachloride	DETSC 3431	0.01	mg/kg	< 0.01
Benzene	DETSC 3431	0.01	mg/kg	< 0.01
1,2-dichloroethane	DETSC 3431	0.01	mg/kg	< 0.01
Trichloroethylene	DETSC 3431	0.01	mg/kg	< 0.01
1,2-dichloropropane	DETSC 3431	0.01	mg/kg	< 0.01
Dibromomethane	DETSC 3431	0.01	mg/kg	< 0.01
Bromodichloromethane	DETSC 3431	0.01	mg/kg	< 0.01
cis-1,3-dichloropropene	DETSC 3431	0.01	mg/kg	< 0.01
Toluene	DETSC 3431	0.01	mg/kg	< 0.01
trans-1,3-dichloropropene	DETSC 3431	0.01	mg/kg	< 0.01
1,1,2-trichloroethane	DETSC 3431	0.01	mg/kg	< 0.01
Tetrachloroethylene	DETSC 3431	0.01	mg/kg	< 0.01
1,3-dichloropropane	DETSC 3431	0.01	mg/kg	< 0.01
Dibromochloromethane	DETSC 3431	0.01	mg/kg	< 0.01
1,2-dibromoethane	DETSC 3431	0.01	mg/kg	< 0.01
Chlorobenzene	DETSC 3431	0.01	mg/kg	< 0.01
1,1,1,2-tetrachloroethane	DETSC 3431	0.01	mg/kg	< 0.01
Ethylbenzene	DETSC 3431	0.01	mg/kg	< 0.01
m+p-Xylene	DETSC 3431	0.01	mg/kg	< 0.01
o-Xylene	DETSC 3431	0.01	mg/kg	< 0.01
Styrene	DETSC 3431*	0.01	mg/kg	< 0.01
Bromoform	DETSC 3431	0.01	mg/kg	< 0.01
Isopropylbenzene	DETSC 3431	0.01	mg/kg	< 0.01
Bromobenzene	DETSC 3431	0.01	mg/kg	< 0.01
1,2,3-trichloropropane	DETSC 3431	0.01	mg/kg	< 0.01
n-propylbenzene	DETSC 3431	0.01	mg/kg	< 0.01
2-chlorotoluene	DETSC 3431	0.01	mg/kg	< 0.01
1,3,5-trimethylbenzene	DETSC 3431	0.01	mg/kg	< 0.01
4-chlorotoluene	DETSC 3431	0.01	mg/kg	< 0.01
Tert-butylbenzene	DETSC 3431	0.01	mg/kg	< 0.01
1,2,4-trimethylbenzene	DETSC 3431	0.01	mg/kg	< 0.01

Key: * -not accredited. n/s -not supplied.

Summary of Chemical Analysis
Soil VOC/SVOC Samples

Our Ref 23-29036
Client Ref P22/271
Contract Title (P22/271) Rotterdam Wharf, Scottish Opera, Glasgow

Lab No	2274823
.Sample ID	BH07
Depth	1.00
Other ID	
Sample Type	SOIL
Sampling Date	04/12/2023
Sampling Time	n/s

Test	Method	LOD	Units	
sec-butylbenzene	DETSC 3431	0.01	mg/kg	< 0.01
p-isopropyltoluene	DETSC 3431	0.01	mg/kg	< 0.01
1,3-dichlorobenzene	DETSC 3431	0.01	mg/kg	< 0.01
1,4-dichlorobenzene	DETSC 3431	0.01	mg/kg	< 0.01
n-butylbenzene	DETSC 3431	0.01	mg/kg	< 0.01
1,2-dichlorobenzene	DETSC 3431	0.01	mg/kg	< 0.01
1,2-dibromo-3-chloropropane	DETSC 3431	0.01	mg/kg	< 0.01
1,2,4-trichlorobenzene	DETSC 3431	0.01	mg/kg	< 0.01
Hexachlorobutadiene	DETSC 3431	0.01	mg/kg	< 0.01
1,2,3-trichlorobenzene	DETSC 3431	0.01	mg/kg	< 0.01
MTBE	DETSC 3431*	0.01	mg/kg	< 0.01
VOC TICs - Semi Quant	DETSC 3431*			N
SVOCs				
Phenol	DETSC 3433	0.1	mg/kg	< 0.1
Aniline	DETSC 3433*	0.1	mg/kg	< 0.1
2-Chlorophenol	DETSC 3433	0.1	mg/kg	< 0.1
Benzyl Alcohol	DETSC 3433	0.1	mg/kg	< 0.1
2-Methylphenol	DETSC 3433	0.1	mg/kg	< 0.1
Bis(2-chloroisopropyl)ether	DETSC 3433	0.1	mg/kg	< 0.1
3&4-Methylphenol	DETSC 3433	0.1	mg/kg	< 0.1
2,4-Dimethylphenol	DETSC 3433	0.1	mg/kg	< 0.1
Bis-(dichloroethoxy)methane	DETSC 3433	0.1	mg/kg	< 0.1
2,4-Dichlorophenol	DETSC 3433	0.1	mg/kg	< 0.1
1,2,4-Trichlorobenzene	DETSC 3433	0.1	mg/kg	< 0.1
4-Chloro-3-methylphenol	DETSC 3433	0.1	mg/kg	< 0.1
2-Methylnaphthalene	DETSC 3433	0.1	mg/kg	< 0.1
Hexachlorocyclopentadiene	DETSC 3433*	0.1	mg/kg	< 0.1
2,4,6-Trichlorophenol	DETSC 3433	0.1	mg/kg	< 0.1
2,4,5-Trichlorophenol	DETSC 3433*	0.1	mg/kg	< 0.1
2-Chloronaphthalene	DETSC 3433	0.1	mg/kg	< 0.1
2-Nitroaniline	DETSC 3433*	0.1	mg/kg	< 0.1
2,4-Dinitrotoluene	DETSC 3433*	0.1	mg/kg	< 0.1
3-Nitroaniline	DETSC 3433*	0.1	mg/kg	< 0.1
4-Nitrophenol	DETSC 3433*	0.1	mg/kg	< 0.1
Dibenzofuran	DETSC 3433	0.1	mg/kg	< 0.1
2,6-Dinitrotoluene	DETSC 3433	0.1	mg/kg	< 0.1
2,3,4,6-Tetrachlorophenol	DETSC 3433*	0.1	mg/kg	< 0.1
Diethylphthalate	DETSC 3433	0.1	mg/kg	< 0.1
4-Chlorophenylphenylether	DETSC 3433*	0.1	mg/kg	< 0.1
4-Nitroaniline	DETSC 3433*	0.1	mg/kg	< 0.1
2-Methyl-4,6-Dinitrophenol	DETSC 3433*	0.1	mg/kg	< 0.1
Diphenylamine	DETSC 3433	0.1	mg/kg	< 0.1

Key: * -not accredited. n/s -not supplied.

Summary of Chemical Analysis
Soil VOC/SVOC Samples

Our Ref 23-29036
Client Ref P22/271
Contract Title (P22/271) Rotterdam Wharf, Scottish Opera, Glasgow

Test	Method	LOD	Units	Lab No 2274823	.Sample ID BH07	Depth 1.00	Other ID	Sample Type SOIL	Sampling Date 04/12/2023	Sampling Time n/s
4-Bromophenylphenylether	DETSC 3433	0.1	mg/kg	< 0.1						
Hexachlorobenzene	DETSC 3433	0.1	mg/kg	< 0.1						
Pentachlorophenol	DETSC 3433*	0.1	mg/kg	< 0.1						
Di-n-butylphthalate	DETSC 3433	0.1	mg/kg	< 0.1						
Butylbenzylphthalate	DETSC 3433*	0.1	mg/kg	< 0.1						
Bis(2-ethylhexyl)phthalate	DETSC 3433	0.1	mg/kg	0.2						
Di-n-octylphthalate	DETSC 3433*	0.1	mg/kg	< 0.1						
1,4-Dinitrobenzene	DETSC 3433*	0.1	mg/kg	< 0.1						
Dimethylphthalate	DETSC 3433	0.1	mg/kg	< 0.1						
1,3-Dinitrobenzene	DETSC 3433*	0.1	mg/kg	< 0.1						
1,2-Dinitrobenzene	DETSC 3433*	0.1	mg/kg	< 0.1						
2,3,5,6-Tetrachlorophenol	DETSC 3433*	0.1	mg/kg	< 0.1						
Azobenzene	DETSC 3433	0.1	mg/kg	< 0.1						
Carbazole	DETSC 3433*	0.1	mg/kg	< 0.1						
SVOC TICs - Semi Quant	DETSC 3433*			N						

Key: * -not accredited. n/s -not supplied.

Summary of Chemical Analysis

Leachate Samples

Our Ref 23-29036
Client Ref P22/271
Contract Title (P22/271) Rotterdam Wharf, Scottish Opera, Glasgow

Lab No				2274828	2274829	2274830	2274831
.Sample ID				BH07	BH07	BH07	BH08
Depth				0.50	2.50	3.50	1.00
Other ID							
Sample Type				LEACHATE	LEACHATE	LEACHATE	LEACHATE
Sampling Date				04/12/2023	04/12/2023	04/12/2023	04/12/2023
Sampling Time				n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**				
Preparation							
Leachate 2:1 250g Non-WAC	DETSC 1009*			Y	Y	Y	Y
Metals							
Arsenic, Dissolved	DETSC 2306	0.16	ug/l	0.61	0.66	0.28	0.40
Cadmium, Dissolved	DETSC 2306	0.03	ug/l	< 0.03	< 0.03	< 0.03	< 0.03
Calcium, Dissolved	DETSC 2306	0.09	mg/l	6.9	9.7	5.8	5.6
Chromium, Dissolved	DETSC 2306	0.25	ug/l	< 0.25	< 0.25	< 0.25	< 0.25
Copper, Dissolved	DETSC 2306	0.4	ug/l	1.7	1.6	0.7	1.6
Lead, Dissolved	DETSC 2306	0.09	ug/l	0.25	0.38	0.13	< 0.09
Magnesium, Dissolved	DETSC 2306	0.02	mg/l	0.25	0.67	0.40	0.25
Mercury, Dissolved (Low Level)	DETSC 2324	0.001	ug/l	0.0024	0.0042	0.0017	0.0014
Nickel, Dissolved	DETSC 2306	0.5	ug/l	< 0.5	< 0.5	< 0.5	0.8
Selenium, Dissolved	DETSC 2306	0.25	ug/l	0.45	0.37	< 0.25	0.25
Zinc, Dissolved	DETSC 2306	1.3	ug/l	< 1.3	< 1.3	< 1.3	< 1.3
Inorganics							
Total Hardness as CaCO3	DETSC 2303	0.1	mg/l	18.2	26.9	16.0	15.1
Sulphate as SO4	DETSC 2055	0.1	mg/l	5.0	6.8	5.6	2.6
Sulphide	DETSC 2208	10	ug/l	< 10	< 10	< 10	< 10
Petroleum Hydrocarbons							
Aliphatic C5-C6	DETSC 3322	0.1	ug/l	22	22	20	21
Aliphatic C6-C8	DETSC 3322	0.1	ug/l	< 0.1	< 0.1	< 0.1	< 0.1
Aliphatic C8-C10	DETSC 3322	0.1	ug/l	< 0.1	< 0.1	< 0.1	< 0.1
Aliphatic C10-C12	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic C12-C16	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic C16-C21	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic C21-C35	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic C5-C35	DETSC 3072*	10	ug/l	22	23	21	22
Aromatic C5-C7	DETSC 3322	0.1	ug/l	< 0.1	< 0.1	< 0.1	< 0.1
Aromatic C7-C8	DETSC 3322	0.1	ug/l	< 0.1	< 0.1	< 0.1	< 0.1
Aromatic C8-C10	DETSC 3322	0.1	ug/l	< 0.1	< 0.1	< 0.1	< 0.1
Aromatic C10-C12	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic C12-C16	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic C16-C21	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic C21-C35	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic C5-C35	DETSC 3072*	10	ug/l	< 10	< 10	< 10	< 10
TPH Ali/Aro Total C5-C35	DETSC 3072*	10	ug/l	22	23	21	22
PAHs							
Naphthalene	DETSC 3304	0.05	ug/l	0.84	0.33	0.13	0.52
Acenaphthylene	DETSC 3304	0.01	ug/l	0.12	0.04	0.02	0.36
Acenaphthene	DETSC 3304	0.01	ug/l	0.11	0.08	0.02	0.10
Fluorene	DETSC 3304	0.01	ug/l	0.07	0.04	< 0.01	0.13
Phenanthrene	DETSC 3304	0.01	ug/l	0.08	0.13	0.02	0.21

Key: * -not accredited. n/s -not supplied.

Summary of Chemical Analysis

Leachate Samples

Our Ref 23-29036
Client Ref P22/271
Contract Title (P22/271) Rotterdam Wharf, Scottish Opera, Glasgow

Lab No				2274828	2274829	2274830	2274831
.Sample ID				BH07	BH07	BH07	BH08
Depth				0.50	2.50	3.50	1.00
Other ID							
Sample Type				LEACHATE	LEACHATE	LEACHATE	LEACHATE
Sampling Date				04/12/2023	04/12/2023	04/12/2023	04/12/2023
Sampling Time				n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**				
Anthracene	DETSC 3304	0.01	ug/l	0.02	0.04	< 0.01	0.03
Fluoranthene	DETSC 3304	0.01	ug/l	0.08	0.12	0.01	0.08
Pyrene	DETSC 3304	0.01	ug/l	0.08	0.12	0.02	0.05
Benzo(a)anthracene	DETSC 3304*	0.01	ug/l	0.03	0.04	< 0.01	0.01
Chrysene	DETSC 3304	0.01	ug/l	0.04	0.06	< 0.01	0.01
Benzo(b)fluoranthene	DETSC 3304	0.01	ug/l	0.03	0.05	< 0.01	0.01
Benzo(k)fluoranthene	DETSC 3304	0.01	ug/l	< 0.01	0.02	< 0.01	< 0.01
Benzo(a)pyrene	DETSC 3304	0.01	ug/l	0.06	0.06	< 0.01	< 0.01
Indeno(1,2,3-c,d)pyrene	DETSC 3304	0.01	ug/l	0.02	0.03	< 0.01	< 0.01
Dibenzo(a,h)anthracene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(g,h,i)perylene	DETSC 3304	0.01	ug/l	0.03	0.03	< 0.01	0.01
PAH Total	DETSC 3304	0.2	ug/l	1.6	1.2	0.21	1.5
Phenols							
Total Phenol	DETSC 3451*	0.5	ug/l	< 0.50	< 0.50	< 0.50	1.1

Key: * -not accredited. n/s -not supplied.

Summary of Asbestos Analysis

Soil Samples

Our Ref 23-29036
Client Ref P22/271
Contract Title (P22/271) Rotterdam Wharf, Scottish Opera, Glasgow

Lab No	Sample ID	Material Type	Result	Comment*	Analyst
2274821	BH07 0.30	SOIL	NAD	none	Ben Barsby
2274822	BH07 0.50	SOIL	NAD	none	Ben Barsby
2274823	BH07 1.00	SOIL	NAD	none	Ben Barsby
2274824	BH07 2.50	SOIL	NAD	none	Ben Barsby
2274825	BH07 3.50	SOIL	NAD	none	Ben Barsby
2274826	BH08 0.30	SOIL	NAD	none	Ben Barsby
2274827	BH08 1.00	SOIL	NAD	none	Ben Barsby

Crocidolite = Blue Asbestos, Amosite = Brown Asbestos, Chrysotile = White Asbestos. Anthophyllite, Actinolite and Tremolite are other forms of Asbestos. Samples are analysed by DETSC 1101 using polarised light microscopy in accordance with HSG248 and documented in-house methods. NAD = No Asbestos Detected. Where a sample is NAD, the result is based on analysis of at least 2 sub-samples and should be taken to mean 'no asbestos detected in sample'. Key: * - not included in laboratory scope of accreditation.

Information in Support of the Analytical Results

Our Ref 23-29036
Client Ref P22/271
Contract (P22/271) Rotterdam Wharf, Scottish Opera, Glasgow

Containers Received & Deviating Samples

Lab No	Sample ID	Date Sampled	Containers Received	Holding time exceeded for tests	Inappropriate container for tests
2274821	BH07 0.30 SOIL	04/12/23	GJ 250ml, GJ 60ml, PT 1L		
2274822	BH07 0.50 SOIL	04/12/23	GJ 250ml, GJ 60ml, PT 1L		
2274823	BH07 1.00 SOIL	04/12/23	GJ 250ml, GJ 60ml, PT 1L		
2274824	BH07 2.50 SOIL	04/12/23	GJ 250ml, GJ 60ml, PT 1L		
2274825	BH07 3.50 SOIL	04/12/23	GJ 250ml, GJ 60ml, PT 1L		
2274826	BH08 0.30 SOIL	04/12/23	GJ 250ml, GJ 60ml, PT 1L		
2274827	BH08 1.00 SOIL	04/12/23	GJ 250ml, GJ 60ml, PT 1L		
2274828	BH07 0.50 LEACHATE	04/12/23	GJ 250ml, GJ 60ml, PT 1L		
2274829	BH07 2.50 LEACHATE	04/12/23	GJ 250ml, GJ 60ml, PT 1L		
2274830	BH07 3.50 LEACHATE	04/12/23	GJ 250ml, GJ 60ml, PT 1L		
2274831	BH08 1.00 LEACHATE	04/12/23	GJ 250ml, GJ 60ml, PT 1L		

Key: G-Glass P-Plastic J-Jar T-Tub

DETS cannot be held responsible for the integrity of samples received whereby the laboratory did not undertake the sampling. In this instance samples received may be deviating. Deviating Sample criteria are based on British and International standards and laboratory trials in conjunction with the UKAS note 'Guidance on Deviating Samples'. All samples received are listed above. However, those samples that have additional comments in relation to hold time, inappropriate containers etc are deviating due to the reasons stated. This means that the analysis is accredited where applicable, but results may be compromised due to sample deviations. If no sampled date (soils) or date+time (waters) has been supplied then samples are deviating. However, if you are able to supply a sampled date (and time for waters) this will prevent samples being reported as deviating where specific hold times are not exceeded and where the container supplied is suitable.

Soil Analysis Notes

Inorganic soil analysis was carried out on a dried sample, crushed to pass a 425µm sieve, in accordance with BS1377.

Organic soil analysis was carried out on an 'as received' sample. Organics results are corrected for moisture and expressed on a dry weight basis.

The Loss on Drying, used to express organics analysis on an air dried basis, is carried out at a temperature of 28°C +/-2°C.

Disposal

From the issue date of this test certificate, samples will be held for the following times prior to disposal :-

Soils - 1 month, Liquids - 2 weeks, Asbestos (test portion) - 6 months

End of Report

Certificate of Analysis

Certificate Number 23-29383 *Issued:* 05-Jan-24

Client Mason Evans Partnership
95 Morrison Street
Glasgow
G5 8BE

Our Reference 23-29383

Client Reference P22/271

Order No Scott Armstrong

Contract Title (P22/271) Rotterdam Wharf, Scottish Opera, Glasgow

Description 9 Soil samples, 8 Leachate prepared by DETS samples, 1 Misc sample.

Date Received 13-Dec-23

Date Started 13-Dec-23

Date Completed 05-Jan-24

Test Procedures Identified by prefix DETSn (details on request).

Notes Opinions and interpretations are outside the laboratory's scope of ISO 17025 accreditation. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.

Approved By [redacted]

Kirk Bridgewood
General Manager

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Summary of Chemical Analysis

UKWIR Samples

Our Ref 23-29383
Client Ref P22/271
Contract Title (P22/271) Rotterdam Wharf, Scottish Opera, Glasgow

Test	Method	LOD	Units	Lab No	2276573	2276574	2276575	2276576	2276577	2276578
				.Sample ID	BH02	BH02	BH02	BH03	BH03	BH03
				Depth	0.50	2.00	4.00	0.50	1.00	2.00
				Other ID						
				Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
				Sampling Date	04/12/2023	04/12/2023	04/12/2023	05/12/2023	05/12/2023	05/12/2023
				Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s
Conductivity	DETSC 2009	1	uS/cm		450				
pH	DETSC 2008#		pH	9.1	8.5	9.5	9.7	10.3	10.7
Redox Potential	DETSC 2016*	-500	mV		120				
Mineral Oil(C11-C20)	DETSC 3311	10	mg/kg		< 10				
Mineral Oil(C20-C40)	DETSC 3311	10	mg/kg		< 10				
Total VOCs	DETSC 3431*	0.01	mg/kg		< 0.01				
BTEX + MTBE	DETSC 3431	0.01	mg/kg		< 0.01				
Total SVOCs	DETSC 3433*	0.1	mg/kg		< 0.1				
Phenol	DETSC 3433	0.1	mg/kg		< 0.1				
Cresols and Chlorinated Phenols	DETSC 3433*	0.1	mg/kg		< 0.1				
TICs (Ethers,Ketones,Aldehydes,Amines,Nitrobenzene)			mg/kg		None				

Key: * -not accredited. # -MCERTS (accreditation only applies if report carries the MCERTS logo). n/s -not supplied.

Summary of Chemical Analysis

UKWIR Samples

Our Ref 23-29383
Client Ref P22/271
Contract Title (P22/271) Rotterdam Wharf, Scottish Opera, Glasgc

			Lab No	2276579	2276580	2276581	2276582
			.Sample ID	BH04	BH04	BH05	BH05
			Depth	0.70	2.50	0.70	3.00
			Other ID				
			Sample Type	SOIL	SOIL	MISC	SOIL
			Sampling Date	06/12/2023	06/12/2023	08/12/2023	08/12/2023
			Sampling Time	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**				
Conductivity	DETSC 2009	1	uS/cm				
pH	DETSC 2008#		pH	10.8	9.6		8.9
Redox Potential	DETSC 2016*	-500	mV			33	
Mineral Oil(C11-C20)	DETSC 3311	10	mg/kg				
Mineral Oil(C20-C40)	DETSC 3311	10	mg/kg				
Total VOCs	DETSC 3431*	0.01	mg/kg				
BTEX + MTBE	DETSC 3431	0.01	mg/kg				
Total SVOCs	DETSC 3433*	0.1	mg/kg				
Phenol	DETSC 3433	0.1	mg/kg				
Cresols and Chlorinated Phenols	DETSC 3433*	0.1	mg/kg				
TICs (Ethers,Ketones,Aldehydes,Amines,Nitrobenzene)			mg/kg				

Key: * -not accredited. # -MCERTS (accreditation only applies if report carries the MCERTS logo). n/s -not supplied.

Summary of Chemical Analysis
Soil/Misc Samples

Our Ref 23-29383
Client Ref P22/271
Contract Title (P22/271) Rotterdam Wharf, Scottish Opera, Glasgow

Test	Method	LOD	Units	Lab No	2276573	2276574	2276575	2276576	2276577	2276578
				.Sample ID	BH02	BH02	BH02	BH03	BH03	BH03
				Depth	0.50	2.00	4.00	0.50	1.00	2.00
				Other ID						
				Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
				Sampling Date	04/12/2023	04/12/2023	04/12/2023	05/12/2023	05/12/2023	05/12/2023
				Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s
Asbestos Quantification	DETSC 1102	0.001	%		0.23	0.22	0.024	0.002	0.001	
Preparation										
Moisture Content	DETSC 1004	0.1	%		17	17	17	16	15	18
Metals										
Arsenic	DETSC 2301#	0.2	mg/kg		13	27	11	4.8	5.1	6.0
Boron, Water Soluble (2.5:1)	DETSC 2311#	0.2	mg/kg		0.9	1.9	0.9	0.5	0.5	0.6
Cadmium	DETSC 2301#	0.1	mg/kg		0.5	1.0	0.3	< 0.1	0.1	0.1
Chromium	DETSC 2301#	0.15	mg/kg		13	21	26	14	14	17
Chromium, Hexavalent	DETSC 2204*	1	mg/kg		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Copper	DETSC 2301#	0.2	mg/kg		44	89	29	32	28	30
Lead	DETSC 2301#	0.3	mg/kg		130	190	51	34	35	43
Mercury	DETSC 2325#	0.05	mg/kg		1.5	1.6	0.05	0.18	0.10	0.05
Nickel	DETSC 2301#	1	mg/kg		31	45	34	20	23	24
Selenium	DETSC 2301#	0.5	mg/kg		1.0	1.1	< 0.5	< 0.5	< 0.5	< 0.5
Zinc	DETSC 2301#	1	mg/kg		130	220	74	62	61	63
Inorganics										
Conductivity	DETSC 2009	1	uS/cm			450				
pH	DETSC 2008#		pH		9.1	8.5	9.5	9.7	10.3	10.7
Cyanide, Total	DETSC 2130#	0.1	mg/kg		0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Total Organic Carbon	DETSC 2084#	0.5	%		0.6	1.4	1.5	1.3	1.9	2.7
Organic Matter (by calculation)	*	0.1	%		1.1	2.4	2.7	2.3	3.3	4.6
Redox Potential	DETSC 2016*	-500	mV			120				
Sulphide	DETSC 2024*	10	mg/kg		32	40	55	51	75	55
Sulphate as SO4, Total	DETSC 2321#	0.01	%		0.19	0.32	0.06	0.11	0.14	0.13
Petroleum Hydrocarbons										
Aliphatic C5-C6	DETSC 3321*	0.01	mg/kg		< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aliphatic C6-C8	DETSC 3321*	0.01	mg/kg		< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aliphatic C8-C10	DETSC 3321*	0.01	mg/kg		< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aliphatic C10-C12	DETSC 3072#	1.5	mg/kg		< 1.5	< 1.5	< 1.5	< 1.5	< 1.5	< 1.5
Aliphatic C12-C16	DETSC 3072#	1.2	mg/kg		< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2
Aliphatic C16-C21	DETSC 3072#	1.5	mg/kg		< 1.5	< 1.5	< 1.5	< 1.5	< 1.5	< 1.5
Aliphatic C16-C35	DETSC 3072#	4.9	mg/kg		< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9
Aliphatic C21-C35	DETSC 3072#	3.4	mg/kg		< 3.4	< 3.4	< 3.4	< 3.4	< 3.4	< 3.4
Aliphatic C5-C35	DETSC 3072*	10	mg/kg		< 10	< 10	< 10	< 10	< 10	< 10
Aromatic C5-C7	DETSC 3321*	0.01	mg/kg		< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aromatic C7-C8	DETSC 3321*	0.01	mg/kg		< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aromatic C8-C10	DETSC 3321*	0.01	mg/kg		< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aromatic C10-C12	DETSC 3072#	0.9	mg/kg		< 0.9	< 0.9	< 0.9	< 0.9	< 0.9	< 0.9
Aromatic C12-C16	DETSC 3072#	0.5	mg/kg		< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Aromatic C16-C21	DETSC 3072#	0.6	mg/kg		< 0.6	< 0.6	< 0.6	< 0.6	< 0.6	< 0.6
Aromatic C21-C35	DETSC 3072#	1.4	mg/kg		< 1.4	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4
Aromatic C5-C35	DETSC 3072*	10	mg/kg		< 10	< 10	< 10	< 10	< 10	< 10

Key: * -not accredited. # -MCERTS (accreditation only applies if report carries the MCERTS logo). n/s -not supplied.

Summary of Chemical Analysis
Soil/Misc Samples

Our Ref 23-29383
Client Ref P22/271
Contract Title (P22/271) Rotterdam Wharf, Scottish Opera, Glasgow

Test	Method	LOD	Units						
Lab No				2276573	2276574	2276575	2276576	2276577	2276578
.Sample ID				BH02	BH02	BH02	BH03	BH03	BH03
Depth				0.50	2.00	4.00	0.50	1.00	2.00
Other ID									
Sample Type				SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Sampling Date				04/12/2023	04/12/2023	04/12/2023	05/12/2023	05/12/2023	05/12/2023
Sampling Time				n/s	n/s	n/s	n/s	n/s	n/s
TPH Ali/Aro Total C5-C35	DETSC 3072*	10	mg/kg	< 10	< 10	< 10	< 10	< 10	< 10
EPH (C11-C20)	DETSC 3311	10	mg/kg		< 10				
EPH (C20-C40)	DETSC 3311	10	mg/kg		< 10				
PAHs									
Naphthalene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthylene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Fluorene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Phenanthrene	DETSC 3301	0.1	mg/kg	0.3	0.3	< 0.1	< 0.1	0.4	0.2
Anthracene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Fluoranthene	DETSC 3301	0.1	mg/kg	0.5	0.4	< 0.1	< 0.1	0.4	0.1
Pyrene	DETSC 3301	0.1	mg/kg	0.5	0.5	< 0.1	< 0.1	0.5	0.3
Benzo(a)anthracene	DETSC 3301	0.1	mg/kg	0.4	0.3	< 0.1	< 0.1	0.2	< 0.1
Chrysene	DETSC 3301	0.1	mg/kg	0.2	0.2	< 0.1	< 0.1	0.2	< 0.1
Benzo(b)fluoranthene	DETSC 3301	0.1	mg/kg	0.2	0.2	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(k)fluoranthene	DETSC 3301	0.1	mg/kg	0.1	0.1	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(a)pyrene	DETSC 3301	0.1	mg/kg	0.2	0.2	< 0.1	< 0.1	< 0.1	< 0.1
Indeno(1,2,3-c,d)pyrene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Dibenzo(a,h)anthracene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(g,h,i)perylene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
PAH 16 Total	DETSC 3301	1.6	mg/kg	2.5	2.3	< 1.6	< 1.6	1.6	< 1.6
PCBs									
PCB 77	DETSC 3401*	0.01	mg/kg		< 0.01				
PCB 81	DETSC 3401*	0.01	mg/kg		< 0.01				
PCB 105	DETSC 3401*	0.01	mg/kg		< 0.01				
PCB 114	DETSC 3401*	0.01	mg/kg		< 0.01				
PCB 118	DETSC 3401#	0.01	mg/kg		< 0.01				
PCB 123	DETSC 3401*	0.01	mg/kg		< 0.01				
PCB 126	DETSC 3401*	0.01	mg/kg		< 0.01				
PCB 156	DETSC 3401*	0.01	mg/kg		< 0.01				
PCB 157	DETSC 3401*	0.01	mg/kg		< 0.01				
PCB 167	DETSC 3401*	0.01	mg/kg		< 0.01				
PCB 169	DETSC 3401*	0.01	mg/kg		< 0.01				
PCB 189	DETSC 3401*	0.01	mg/kg		< 0.01				
Phenols									
Phenol - Monohydric	DETSC 2130#	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3

Key: * -not accredited. # -MCERTS (accreditation only applies if report carries the MCERTS logo). n/s -not supplied.

Summary of Chemical Analysis
Soil/Misc Samples

Our Ref 23-29383
Client Ref P22/271
Contract Title (P22/271) Rotterdam Wharf, Scottish Opera, Glasgc

Test	Method	LOD	Units	Lab No	2276579	2276580	2276581	2276582
				.Sample ID	BH04	BH04	BH05	BH05
				Depth	0.70	2.50	0.70	3.00
				Other ID				
				Sample Type	SOIL	SOIL	MISC	SOIL
				Sampling Date	06/12/2023	06/12/2023	08/12/2023	08/12/2023
				Sampling Time	n/s	n/s	n/s	n/s
Asbestos Quantification	DETSC 1102	0.001	%		0.064	0.001		0.009
Preparation								
Moisture Content	DETSC 1004	0.1	%		17	11	29	11
Metals								
Arsenic	DETSC 2301#	0.2	mg/kg		6.1	3.6	32	3.4
Boron, Water Soluble (2.5:1)	DETSC 2311#	0.2	mg/kg		0.9	0.6	1.6	0.4
Cadmium	DETSC 2301#	0.1	mg/kg		0.2	< 0.1	0.7	< 0.1
Chromium	DETSC 2301#	0.15	mg/kg		15	17	35	18
Chromium, Hexavalent	DETSC 2204*	1	mg/kg		< 1.0	< 1.0	< 1.0	< 1.0
Copper	DETSC 2301#	0.2	mg/kg		39	17	370	15
Lead	DETSC 2301#	0.3	mg/kg		82	14	410	7.2
Mercury	DETSC 2325#	0.05	mg/kg		0.17	< 0.05	0.54	< 0.05
Nickel	DETSC 2301#	1	mg/kg		22	20	70	19
Selenium	DETSC 2301#	0.5	mg/kg		< 0.5	< 0.5	5.2	< 0.5
Zinc	DETSC 2301#	1	mg/kg		64	47	500	50
Inorganics								
Conductivity	DETSC 2009	1	uS/cm					
pH	DETSC 2008#		pH		10.8	9.6		8.9
Cyanide, Total	DETSC 2130#	0.1	mg/kg		< 0.1	< 0.1		< 0.1
Total Organic Carbon	DETSC 2084#	0.5	%		1.7	1.0	6.3	0.7
Organic Matter (by calculation)	*	0.1	%		2.9	1.7	11	1.1
Redox Potential	DETSC 2016*	-500	mV				33	
Sulphide	DETSC 2024*	10	mg/kg		63	40		36
Sulphate as SO4, Total	DETSC 2321#	0.01	%		0.19	0.06	0.53	0.03
Petroleum Hydrocarbons								
Aliphatic C5-C6	DETSC 3321*	0.01	mg/kg		< 0.01	< 0.01		< 0.01
Aliphatic C6-C8	DETSC 3321*	0.01	mg/kg		< 0.01	< 0.01		< 0.01
Aliphatic C8-C10	DETSC 3321*	0.01	mg/kg		< 0.01	< 0.01		< 0.01
Aliphatic C10-C12	DETSC 3072#	1.5	mg/kg		< 1.5	< 1.5		< 1.5
Aliphatic C12-C16	DETSC 3072#	1.2	mg/kg		< 1.2	< 1.2		< 1.2
Aliphatic C16-C21	DETSC 3072#	1.5	mg/kg		< 1.5	< 1.5		< 1.5
Aliphatic C16-C35	DETSC 3072#	4.9	mg/kg		< 4.9	< 4.9		< 4.9
Aliphatic C21-C35	DETSC 3072#	3.4	mg/kg		< 3.4	< 3.4		< 3.4
Aliphatic C5-C35	DETSC 3072*	10	mg/kg		< 10	< 10		< 10
Aromatic C5-C7	DETSC 3321*	0.01	mg/kg		< 0.01	< 0.01		< 0.01
Aromatic C7-C8	DETSC 3321*	0.01	mg/kg		< 0.01	< 0.01		< 0.01
Aromatic C8-C10	DETSC 3321*	0.01	mg/kg		< 0.01	< 0.01		< 0.01
Aromatic C10-C12	DETSC 3072#	0.9	mg/kg		< 0.9	< 0.9		< 0.9
Aromatic C12-C16	DETSC 3072#	0.5	mg/kg		< 0.5	< 0.5		< 0.5
Aromatic C16-C21	DETSC 3072#	0.6	mg/kg		< 0.6	< 0.6		< 0.6
Aromatic C21-C35	DETSC 3072#	1.4	mg/kg		< 1.4	< 1.4		< 1.4
Aromatic C5-C35	DETSC 3072*	10	mg/kg		< 10	< 10		< 10

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Summary of Chemical Analysis
Soil/Misc Samples

Our Ref 23-29383
Client Ref P22/271
Contract Title (P22/271) Rotterdam Wharf, Scottish Opera, Glasgc

Test	Method	LOD	Units				
Lab No				2276579	2276580	2276581	2276582
.Sample ID				BH04	BH04	BH05	BH05
Depth				0.70	2.50	0.70	3.00
Other ID							
Sample Type				SOIL	SOIL	MISC	SOIL
Sampling Date				06/12/2023	06/12/2023	08/12/2023	08/12/2023
Sampling Time				n/s	n/s	n/s	n/s
TPH Ali/Aro Total C5-C35	DETSC 3072*	10	mg/kg	< 10	< 10		< 10
EPH (C11-C20)	DETSC 3311	10	mg/kg				
EPH (C20-C40)	DETSC 3311	10	mg/kg				
PAHs							
Naphthalene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1		< 0.1
Acenaphthylene	DETSC 3301	0.1	mg/kg	0.2	< 0.1		< 0.1
Acenaphthene	DETSC 3301	0.1	mg/kg	0.3	< 0.1		< 0.1
Fluorene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1		< 0.1
Phenanthrene	DETSC 3301	0.1	mg/kg	0.8	< 0.1		< 0.1
Anthracene	DETSC 3301	0.1	mg/kg	0.2	< 0.1		< 0.1
Fluoranthene	DETSC 3301	0.1	mg/kg	0.8	< 0.1		< 0.1
Pyrene	DETSC 3301	0.1	mg/kg	1.0	0.2		< 0.1
Benzo(a)anthracene	DETSC 3301	0.1	mg/kg	1.1	< 0.1		< 0.1
Chrysene	DETSC 3301	0.1	mg/kg	0.4	< 0.1		< 0.1
Benzo(b)fluoranthene	DETSC 3301	0.1	mg/kg	0.3	< 0.1		< 0.1
Benzo(k)fluoranthene	DETSC 3301	0.1	mg/kg	0.2	< 0.1		< 0.1
Benzo(a)pyrene	DETSC 3301	0.1	mg/kg	0.3	< 0.1		< 0.1
Indeno(1,2,3-c,d)pyrene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1		< 0.1
Dibenzo(a,h)anthracene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1		< 0.1
Benzo(g,h,i)perylene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1		< 0.1
PAH 16 Total	DETSC 3301	1.6	mg/kg	5.6	< 1.6		< 1.6
PCBs							
PCB 77	DETSC 3401*	0.01	mg/kg	< 0.01			
PCB 81	DETSC 3401*	0.01	mg/kg	< 0.01			
PCB 105	DETSC 3401*	0.01	mg/kg	< 0.01			
PCB 114	DETSC 3401*	0.01	mg/kg	< 0.01			
PCB 118	DETSC 3401#	0.01	mg/kg	< 0.01			
PCB 123	DETSC 3401*	0.01	mg/kg	< 0.01			
PCB 126	DETSC 3401*	0.01	mg/kg	< 0.01			
PCB 156	DETSC 3401*	0.01	mg/kg	< 0.01			
PCB 157	DETSC 3401*	0.01	mg/kg	< 0.01			
PCB 167	DETSC 3401*	0.01	mg/kg	< 0.01			
PCB 169	DETSC 3401*	0.01	mg/kg	< 0.01			
PCB 189	DETSC 3401*	0.01	mg/kg	< 0.01			
Phenols							
Phenol - Monohydric	DETSC 2130#	0.3	mg/kg	0.5	< 0.3		< 0.3

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Summary of Chemical Analysis
Soil VOC/SVOC Samples

Our Ref 23-29383
Client Ref P22/271
Contract Title (P22/271) Rotterdam Wharf, Scottish Opera, Glasgow

Lab No	2276574
.Sample ID	BH02
Depth	2.00
Other ID	
Sample Type	SOIL
Sampling Date	04/12/2023
Sampling Time	n/s

Test	Method	LOD	Units	
VOCs				
Vinyl Chloride	DETSC 3431	0.01	mg/kg	< 0.01
1,1 Dichloroethylene	DETSC 3431	0.01	mg/kg	< 0.01
Trans-1,2-dichloroethylene	DETSC 3431	0.01	mg/kg	< 0.01
1,1-dichloroethane	DETSC 3431	0.01	mg/kg	< 0.01
Cis-1,2-dichloroethylene	DETSC 3431	0.01	mg/kg	< 0.01
2,2-dichloropropane	DETSC 3431	0.01	mg/kg	< 0.01
Bromochloromethane	DETSC 3431	0.01	mg/kg	< 0.01
Chloroform	DETSC 3431	0.01	mg/kg	< 0.01
1,1,1-trichloroethane	DETSC 3431	0.01	mg/kg	< 0.01
1,1-dichloropropene	DETSC 3431	0.01	mg/kg	< 0.01
Carbon tetrachloride	DETSC 3431	0.01	mg/kg	< 0.01
Benzene	DETSC 3431	0.01	mg/kg	< 0.01
1,2-dichloroethane	DETSC 3431	0.01	mg/kg	< 0.01
Trichloroethylene	DETSC 3431	0.01	mg/kg	< 0.01
1,2-dichloropropane	DETSC 3431	0.01	mg/kg	< 0.01
Dibromomethane	DETSC 3431	0.01	mg/kg	< 0.01
Bromodichloromethane	DETSC 3431	0.01	mg/kg	< 0.01
cis-1,3-dichloropropene	DETSC 3431	0.01	mg/kg	< 0.01
Toluene	DETSC 3431	0.01	mg/kg	< 0.01
trans-1,3-dichloropropene	DETSC 3431	0.01	mg/kg	< 0.01
1,1,2-trichloroethane	DETSC 3431	0.01	mg/kg	< 0.01
Tetrachloroethylene	DETSC 3431	0.01	mg/kg	< 0.01
1,3-dichloropropane	DETSC 3431	0.01	mg/kg	< 0.01
Dibromochloromethane	DETSC 3431	0.01	mg/kg	< 0.01
1,2-dibromoethane	DETSC 3431	0.01	mg/kg	< 0.01
Chlorobenzene	DETSC 3431	0.01	mg/kg	< 0.01
1,1,1,2-tetrachloroethane	DETSC 3431	0.01	mg/kg	< 0.01
Ethylbenzene	DETSC 3431	0.01	mg/kg	< 0.01
m+p-Xylene	DETSC 3431	0.01	mg/kg	< 0.01
o-Xylene	DETSC 3431	0.01	mg/kg	< 0.01
Styrene	DETSC 3431*	0.01	mg/kg	< 0.01
Bromoform	DETSC 3431	0.01	mg/kg	< 0.01
Isopropylbenzene	DETSC 3431	0.01	mg/kg	< 0.01
Bromobenzene	DETSC 3431	0.01	mg/kg	< 0.01
1,2,3-trichloropropane	DETSC 3431	0.01	mg/kg	< 0.01
n-propylbenzene	DETSC 3431	0.01	mg/kg	< 0.01
2-chlorotoluene	DETSC 3431	0.01	mg/kg	< 0.01
1,3,5-trimethylbenzene	DETSC 3431	0.01	mg/kg	< 0.01
4-chlorotoluene	DETSC 3431	0.01	mg/kg	< 0.01
Tert-butylbenzene	DETSC 3431	0.01	mg/kg	< 0.01
1,2,4-trimethylbenzene	DETSC 3431	0.01	mg/kg	< 0.01

Key: * -not accredited. n/s -not supplied.

Summary of Chemical Analysis
Soil VOC/SVOC Samples

Our Ref 23-29383
Client Ref P22/271
Contract Title (P22/271) Rotterdam Wharf, Scottish Opera, Glasgow

Lab No	2276574
.Sample ID	BH02
Depth	2.00
Other ID	
Sample Type	SOIL
Sampling Date	04/12/2023
Sampling Time	n/s

Test	Method	LOD	Units	
sec-butylbenzene	DETSC 3431	0.01	mg/kg	< 0.01
p-isopropyltoluene	DETSC 3431	0.01	mg/kg	< 0.01
1,3-dichlorobenzene	DETSC 3431	0.01	mg/kg	< 0.01
1,4-dichlorobenzene	DETSC 3431	0.01	mg/kg	< 0.01
n-butylbenzene	DETSC 3431	0.01	mg/kg	< 0.01
1,2-dichlorobenzene	DETSC 3431	0.01	mg/kg	< 0.01
1,2-dibromo-3-chloropropane	DETSC 3431	0.01	mg/kg	< 0.01
1,2,4-trichlorobenzene	DETSC 3431	0.01	mg/kg	< 0.01
Hexachlorobutadiene	DETSC 3431	0.01	mg/kg	< 0.01
1,2,3-trichlorobenzene	DETSC 3431	0.01	mg/kg	< 0.01
MTBE	DETSC 3431*	0.01	mg/kg	< 0.01
VOC TICs - Semi Quant	DETSC 3431*			N
SVOCs				
Phenol	DETSC 3433	0.1	mg/kg	< 0.1
Aniline	DETSC 3433*	0.1	mg/kg	< 0.1
2-Chlorophenol	DETSC 3433	0.1	mg/kg	< 0.1
Benzyl Alcohol	DETSC 3433	0.1	mg/kg	< 0.1
2-Methylphenol	DETSC 3433	0.1	mg/kg	< 0.1
Bis(2-chloroisopropyl)ether	DETSC 3433	0.1	mg/kg	< 0.1
3&4-Methylphenol	DETSC 3433	0.1	mg/kg	< 0.1
2,4-Dimethylphenol	DETSC 3433	0.1	mg/kg	< 0.1
Bis-(dichloroethoxy)methane	DETSC 3433	0.1	mg/kg	< 0.1
2,4-Dichlorophenol	DETSC 3433	0.1	mg/kg	< 0.1
1,2,4-Trichlorobenzene	DETSC 3433	0.1	mg/kg	< 0.1
4-Chloro-3-methylphenol	DETSC 3433	0.1	mg/kg	< 0.1
2-Methylnaphthalene	DETSC 3433	0.1	mg/kg	< 0.1
Hexachlorocyclopentadiene	DETSC 3433*	0.1	mg/kg	< 0.1
2,4,6-Trichlorophenol	DETSC 3433	0.1	mg/kg	< 0.1
2,4,5-Trichlorophenol	DETSC 3433*	0.1	mg/kg	< 0.1
2-Chloronaphthalene	DETSC 3433	0.1	mg/kg	< 0.1
2-Nitroaniline	DETSC 3433*	0.1	mg/kg	< 0.1
2,4-Dinitrotoluene	DETSC 3433*	0.1	mg/kg	< 0.1
3-Nitroaniline	DETSC 3433*	0.1	mg/kg	< 0.1
4-Nitrophenol	DETSC 3433*	0.1	mg/kg	< 0.1
Dibenzofuran	DETSC 3433	0.1	mg/kg	< 0.1
2,6-Dinitrotoluene	DETSC 3433	0.1	mg/kg	< 0.1
2,3,4,6-Tetrachlorophenol	DETSC 3433*	0.1	mg/kg	< 0.1
Diethylphthalate	DETSC 3433	0.1	mg/kg	< 0.1
4-Chlorophenylphenylether	DETSC 3433*	0.1	mg/kg	< 0.1
4-Nitroaniline	DETSC 3433*	0.1	mg/kg	< 0.1
2-Methyl-4,6-Dinitrophenol	DETSC 3433*	0.1	mg/kg	< 0.1
Diphenylamine	DETSC 3433	0.1	mg/kg	< 0.1

Key: * -not accredited. n/s -not supplied.

Summary of Chemical Analysis
Soil VOC/SVOC Samples

Our Ref 23-29383
Client Ref P22/271
Contract Title (P22/271) Rotterdam Wharf, Scottish Opera, Glasgow

Lab No	2276574
.Sample ID	BH02
Depth	2.00
Other ID	
Sample Type	SOIL
Sampling Date	04/12/2023
Sampling Time	n/s

Test	Method	LOD	Units	
4-Bromophenylphenylether	DETSC 3433	0.1	mg/kg	< 0.1
Hexachlorobenzene	DETSC 3433	0.1	mg/kg	< 0.1
Pentachlorophenol	DETSC 3433*	0.1	mg/kg	< 0.1
Di-n-butylphthalate	DETSC 3433	0.1	mg/kg	< 0.1
Butylbenzylphthalate	DETSC 3433*	0.1	mg/kg	< 0.1
Bis(2-ethylhexyl)phthalate	DETSC 3433	0.1	mg/kg	< 0.1
Di-n-octylphthalate	DETSC 3433*	0.1	mg/kg	< 0.1
1,4-Dinitrobenzene	DETSC 3433*	0.1	mg/kg	< 0.1
Dimethylphthalate	DETSC 3433	0.1	mg/kg	< 0.1
1,3-Dinitrobenzene	DETSC 3433*	0.1	mg/kg	< 0.1
1,2-Dinitrobenzene	DETSC 3433*	0.1	mg/kg	< 0.1
2,3,5,6-Tetrachlorophenol	DETSC 3433*	0.1	mg/kg	< 0.1
Azobenzene	DETSC 3433	0.1	mg/kg	< 0.1
Carbazole	DETSC 3433*	0.1	mg/kg	< 0.1
SVOC TICs - Semi Quant	DETSC 3433*			N

Key: * -not accredited. n/s -not supplied.

Summary of Chemical Analysis

Leachate Samples

Our Ref 23-29383
Client Ref P22/271
Contract Title (P22/271) Rotterdam Wharf, Scottish Opera, Glasgow

Test	Method	LOD	Units	Lab No	2276583	2276584	2276585	2276586	2276587	2276588
				.Sample ID	BH02	BH02	BH03	BH03	BH04	BH04
				Depth	2.00	4.00	1.00	2.00	0.70	2.50
				Other ID						
				Sample Type	LEACHATE	LEACHATE	LEACHATE	LEACHATE	LEACHATE	LEACHATE
				Sampling Date	04/12/2023	04/12/2023	05/12/2023	05/12/2023	06/12/2023	06/12/2023
				Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s
Preparation										
Leachate 2:1 250g Non-WAC	DETSC 1009*				Y	Y	Y	Y	Y	Y
Metals										
Arsenic, Dissolved	DETSC 2306	0.16	ug/l		2.3	0.50	0.98	1.2	1.7	0.79
Cadmium, Dissolved	DETSC 2306	0.03	ug/l		< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Calcium, Dissolved	DETSC 2306	0.09	mg/l		10	6.0	7.4	7.6	10	6.4
Chromium, Dissolved	DETSC 2306	0.25	ug/l		< 0.25	< 0.25	< 0.25	< 0.25	0.30	< 0.25
Copper, Dissolved	DETSC 2306	0.4	ug/l		1.6	0.7	1.6	2.1	2.2	0.9
Lead, Dissolved	DETSC 2306	0.09	ug/l		0.74	0.22	0.15	0.25	0.48	0.26
Magnesium, Dissolved	DETSC 2306	0.02	mg/l		0.47	0.34	0.37	0.27	0.27	0.62
Mercury, Dissolved (Low Level)	DETSC 2324	0.001	ug/l		0.40	0.070	0.17	0.038	0.056	0.017
Nickel, Dissolved	DETSC 2306	0.5	ug/l		< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Selenium, Dissolved	DETSC 2306	0.25	ug/l		0.98	0.49	0.45	0.72	1.1	1.6
Zinc, Dissolved	DETSC 2306	1.3	ug/l		< 1.3	< 1.3	< 1.3	< 1.3	< 1.3	< 1.3
Inorganics										
Total Hardness as CaCO3	DETSC 2303	0.1	mg/l		27.5	16.4	19.9	20.0	27.1	18.6
Sulphate as SO4	DETSC 2055	0.1	mg/l		8.6	4.4	5.4	3.6	7.5	8.8
Sulphide	DETSC 2208	10	ug/l		< 10	< 10	< 10	24	11	25
Petroleum Hydrocarbons										
Aliphatic C5-C6	DETSC 3322	0.1	ug/l		< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Aliphatic C6-C8	DETSC 3322	0.1	ug/l		< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Aliphatic C8-C10	DETSC 3322	0.1	ug/l		< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Aliphatic C10-C12	DETSC 3072*	1	ug/l		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic C12-C16	DETSC 3072*	1	ug/l		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic C16-C21	DETSC 3072*	1	ug/l		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic C21-C35	DETSC 3072*	1	ug/l		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic C5-C35	DETSC 3072*	10	ug/l		< 10	< 10	< 10	< 10	< 10	< 10
Aromatic C5-C7	DETSC 3322	0.1	ug/l		< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Aromatic C7-C8	DETSC 3322	0.1	ug/l		< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Aromatic C8-C10	DETSC 3322	0.1	ug/l		< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Aromatic C10-C12	DETSC 3072*	1	ug/l		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic C12-C16	DETSC 3072*	1	ug/l		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic C16-C21	DETSC 3072*	1	ug/l		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic C21-C35	DETSC 3072*	1	ug/l		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic C5-C35	DETSC 3072*	10	ug/l		< 10	< 10	< 10	< 10	< 10	< 10
TPH Ali/Aro Total C5-C35	DETSC 3072*	10	ug/l		< 10	< 10	< 10	< 10	< 10	< 10
PAHs										
Naphthalene	DETSC 3304	0.05	ug/l		< 0.05	< 0.05	0.07	0.55	0.10	< 0.05
Acenaphthylene	DETSC 3304	0.01	ug/l		< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthene	DETSC 3304	0.01	ug/l		< 0.01	< 0.01	< 0.01	0.04	0.02	< 0.01
Fluorene	DETSC 3304	0.01	ug/l		< 0.01	< 0.01	0.02	0.02	< 0.01	< 0.01
Phenanthrene	DETSC 3304	0.01	ug/l		0.03	0.02	0.10	0.11	0.04	0.02

Key: * -not accredited. n/s -not supplied.

Summary of Chemical Analysis

Leachate Samples

Our Ref 23-29383
Client Ref P22/271
Contract Title (P22/271) Rotterdam Wharf, Scottish Opera, Glasgow

Lab No				2276583	2276584	2276585	2276586	2276587	2276588
.Sample ID				BH02	BH02	BH03	BH03	BH04	BH04
Depth				2.00	4.00	1.00	2.00	0.70	2.50
Other ID									
Sample Type				LEACHATE	LEACHATE	LEACHATE	LEACHATE	LEACHATE	LEACHATE
Sampling Date				04/12/2023	04/12/2023	05/12/2023	05/12/2023	06/12/2023	06/12/2023
Sampling Time				n/s	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**						
Anthracene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01	< 0.01	0.03	0.06	< 0.01
Fluoranthene	DETSC 3304	0.01	ug/l	0.06	0.03	0.07	0.07	0.04	0.02
Pyrene	DETSC 3304	0.01	ug/l	0.06	0.03	0.06	0.08	0.04	0.02
Benzo(a)anthracene	DETSC 3304*	0.01	ug/l	0.05	0.02	0.03	0.03	< 0.01	< 0.01
Chrysene	DETSC 3304	0.01	ug/l	0.05	0.02	0.03	0.03	0.02	< 0.01
Benzo(b)fluoranthene	DETSC 3304	0.01	ug/l	0.05	0.02	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(k)fluoranthene	DETSC 3304	0.01	ug/l	0.02	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(a)pyrene	DETSC 3304	0.01	ug/l	0.04	0.01	< 0.01	< 0.01	< 0.01	< 0.01
Indeno(1,2,3-c,d)pyrene	DETSC 3304	0.01	ug/l	0.03	0.01	< 0.01	< 0.01	< 0.01	< 0.01
Dibenzo(a,h)anthracene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(g,h,i)perylene	DETSC 3304	0.01	ug/l	0.03	0.01	0.03	< 0.01	< 0.01	< 0.01
PAH Total	DETSC 3304	0.2	ug/l	0.43	< 0.20	0.41	0.95	0.31	< 0.20
Phenols									
Total Phenol	DETSC 3451*	0.5	ug/l	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50

Key: * -not accredited. n/s -not supplied.

Summary of Chemical Analysis

Leachate Samples

Our Ref 23-29383
Client Ref P22/271
Contract Title (P22/271) Rotterdam Wharf, Scottish Opera, Glasgc

Test	Method	LOD	Units		
Lab No				2276589	2276590
.Sample ID				BH05	BH05
Depth				0.70	3.00
Other ID					
Sample Type				LEACHATE	LEACHATE
Sampling Date				08/12/2023	08/12/2023
Sampling Time				n/s	n/s
Preparation					
Leachate 2:1 250g Non-WAC	DETSC 1009*			Y	Y
Metals					
Arsenic, Dissolved	DETSC 2306	0.16	ug/l	4.2	0.68
Cadmium, Dissolved	DETSC 2306	0.03	ug/l	< 0.03	< 0.03
Calcium, Dissolved	DETSC 2306	0.09	mg/l	12	5.2
Chromium, Dissolved	DETSC 2306	0.25	ug/l	0.28	< 0.25
Copper, Dissolved	DETSC 2306	0.4	ug/l	3.2	1.0
Lead, Dissolved	DETSC 2306	0.09	ug/l	0.40	0.19
Magnesium, Dissolved	DETSC 2306	0.02	mg/l	0.29	0.55
Mercury, Dissolved (Low Level)	DETSC 2324	0.001	ug/l	0.049	0.028
Nickel, Dissolved	DETSC 2306	0.5	ug/l	< 0.5	< 0.5
Selenium, Dissolved	DETSC 2306	0.25	ug/l	6.0	0.86
Zinc, Dissolved	DETSC 2306	1.3	ug/l	< 1.3	< 1.3
Inorganics					
Total Hardness as CaCO3	DETSC 2303	0.1	mg/l	30.0	15.2
Sulphate as SO4	DETSC 2055	0.1	mg/l	4.1	4.4
Sulphide	DETSC 2208	10	ug/l	14	11
Petroleum Hydrocarbons					
Aliphatic C5-C6	DETSC 3322	0.1	ug/l	< 0.1	< 0.1
Aliphatic C6-C8	DETSC 3322	0.1	ug/l	< 0.1	< 0.1
Aliphatic C8-C10	DETSC 3322	0.1	ug/l	< 0.1	< 0.1
Aliphatic C10-C12	DETSC 3072*	1	ug/l	< 1.0	< 1.0
Aliphatic C12-C16	DETSC 3072*	1	ug/l	< 1.0	< 1.0
Aliphatic C16-C21	DETSC 3072*	1	ug/l	< 1.0	< 1.0
Aliphatic C21-C35	DETSC 3072*	1	ug/l	< 1.0	< 1.0
Aliphatic C5-C35	DETSC 3072*	10	ug/l	< 10	< 10
Aromatic C5-C7	DETSC 3322	0.1	ug/l	< 0.1	< 0.1
Aromatic C7-C8	DETSC 3322	0.1	ug/l	< 0.1	< 0.1
Aromatic C8-C10	DETSC 3322	0.1	ug/l	< 0.1	< 0.1
Aromatic C10-C12	DETSC 3072*	1	ug/l	< 1.0	< 1.0
Aromatic C12-C16	DETSC 3072*	1	ug/l	< 1.0	< 1.0
Aromatic C16-C21	DETSC 3072*	1	ug/l	< 1.0	< 1.0
Aromatic C21-C35	DETSC 3072*	1	ug/l	< 1.0	< 1.0
Aromatic C5-C35	DETSC 3072*	10	ug/l	< 10	< 10
TPH Ali/Aro Total C5-C35	DETSC 3072*	10	ug/l	< 10	< 10
PAHs					
Naphthalene	DETSC 3304	0.05	ug/l	0.24	< 0.05
Acenaphthylene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01
Acenaphthene	DETSC 3304	0.01	ug/l	0.13	< 0.01
Fluorene	DETSC 3304	0.01	ug/l	0.05	< 0.01
Phenanthrene	DETSC 3304	0.01	ug/l	0.16	0.03

Key: * -not accredited. n/s -not supplied.

Summary of Chemical Analysis

Leachate Samples

Our Ref 23-29383
Client Ref P22/271
Contract Title (P22/271) Rotterdam Wharf, Scottish Opera, Glasgc

			Lab No	2276589	2276590
			.Sample ID	BH05	BH05
			Depth	0.70	3.00
			Other ID		
			Sample Type	LEACHATE	LEACHATE
			Sampling Date	08/12/2023	08/12/2023
			Sampling Time	n/s	n/s
Test	**Method**	**LOD**	**Units**		
Anthracene	DETSC 3304	0.01	ug/l	0.05	< 0.01
Fluoranthene	DETSC 3304	0.01	ug/l	0.14	0.02
Pyrene	DETSC 3304	0.01	ug/l	0.10	0.02
Benzo(a)anthracene	DETSC 3304*	0.01	ug/l	0.05	0.01
Chrysene	DETSC 3304	0.01	ug/l	0.06	< 0.01
Benzo(b)fluoranthene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01
Benzo(k)fluoranthene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01
Benzo(a)pyrene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01
Indeno(1,2,3-c,d)pyrene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01
Dibenzo(a,h)anthracene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01
Benzo(g,h,i)perylene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01
PAH Total	DETSC 3304	0.2	ug/l	0.97	< 0.20
Phenols					
Total Phenol	DETSC 3451*	0.5	ug/l	< 0.50	< 0.50

Key: * -not accredited. n/s -not supplied.

Summary of Asbestos Analysis

Soil Samples

Our Ref 23-29383
Client Ref P22/271
Contract Title (P22/271) Rotterdam Wharf, Scottish Opera, Glasgow

Lab No	Sample ID	Sample Location	Material Type*	Result	Comment*	Analyst
2276573	BH02 0.50		SOIL	Crocidolite Chrysoti	Crocidolite & Chrysotile present in microscopic insulation debris & bundles of both	Keith Wilson
2276574	BH02 2.00		SOIL	Crocidolite Chrysoti	Crocidolite & Chrysotile present in microscopic insulation debris & bundles of both	Keith Wilson
2276575	BH02 4.00		SOIL	Chrysotile	Bundles of Chrysotile fibres	Keith Wilson
2276576	BH03 0.50		SOIL	Chrysotile	Bundles of Chrysotile fibres	Keith Wilson
2276577	BH03 1.00		SOIL	Chrysotile Crocidoli	Bundle of Chrysotile & Crocidolite fibres	Keith Wilson
2276578	BH03 2.00		SOIL	NAD	none	Keith Wilson
2276579	BH04 0.70		SOIL	Chrysotile	Bundles of Chrysotile fibres	Keith Wilson
2276580	BH04 2.50		SOIL	Chrysotile	Bundles of Chrysotile fibres	Keith Wilson
2276581	BH05 0.70		Insulation	Crocidolite Chrysoti	none	Keith Wilson
2276582	BH05 3.00		SOIL	Crocidolite Chrysoti	Crocidolite & Chrysotile present in microscopic insulation debris & bundles of both	Keith Wilson

Crocidolite = Blue Asbestos, Amosite = Brown Asbestos, Chrysotile = White Asbestos. Anthophyllite, Actinolite and Tremolite are other forms of Asbestos. Samples are analysed by DETSC 1101 using polarised light microscopy in accordance with HSG248 and documented in-house methods. NAD = No Asbestos Detected. Where a sample is NAD, the result is based on analysis of at least 2 sub-samples and should be taken to mean 'no asbestos detected in sample'. Key: * -not included in laboratory scope of accreditation.

Summary of Asbestos Quantification Analysis

Soil Samples

Our Ref 23-29383
Client Ref P22/271
Contract Title (P22/271) Rotterdam Wharf, Scottish Opera, Glasgow

	Lab No	2276573	2276574	2276575	2276576
	.Sample ID	BH02	BH02	BH02	BH03
	Depth	0.50	2.00	4.00	0.50
	Other ID				
	Sample Type				
	Sampling Date	04/12/2023	04/12/2023	04/12/2023	05/12/2023
	Sampling Time				
Test	**Method**	**Units**			
Total Mass% Asbestos (a+b+c)	DETSC 1102	Mass %	**0.225**	**0.215**	**0.024**	**0.002**
Gravimetric Quantification (a)	DETSC 1102	Mass %	0.205	0.210	na	na
Detailed Gravimetric Quantification (b)	DETSC 1102	Mass %	0.020	0.005	0.024	0.002
Quantification by PCOM (c)	DETSC 1102	Mass %	na	na	na	na
Potentially Respirable Fibres (d)	DETSC 1102	Fibres/g	na	na	na	na
Breakdown of Gravimetric Analysis (a)						
Mass of Sample		g	161.60	187.72	301.57	92.67
ACMs present*		type	Insulation	Insulation		
Mass of ACM in sample		g	0.39	0.46		
% ACM by mass		%	0.24	0.25		
% asbestos in ACM		%	85	85		
% asbestos in sample		%	0.205	0.210		
Breakdown of Detailed Gravimetric Analysis (b)						
% Amphibole bundles in sample		Mass %	0.015	0.001	na	na
% Chrysotile bundles in sample		Mass %	0.005	0.004	0.024	0.002
Breakdown of PCOM Analysis (c)						
% Amphibole fibres in sample		Mass %	na	na	na	na
% Chrysotile fibres in sample		Mass %	na	na	na	na
Breakdown of Potentially Respirable Fibre Analysis (d)						
Amphibole fibres		Fibres/g	na	na	na	na
Chrysotile fibres		Fibres/g	na	na	na	na

* Denotes test or material description outside of UKAS accreditation.
% asbestos in Asbestos Containing Materials (ACMs) is determined by by reference to HSG 264.
Recommended sample size for quantification is approximately 1kg
# denotes deviating sample

Summary of Asbestos Quantification Analysi

Soil Samples

Our Ref 23-29383
Client Ref P22/271
Contract Title (P22/271) Rotterdam Wharf, Scottish Opera, Glasgow

	Lab No	2276577	2276579	2276580	2276582
	.Sample ID	BH03	BH04	BH04	BH05
	Depth	1.00	0.70	2.50	3.00
	Other ID				
	Sample Type				
	Sampling Date	05/12/2023	06/12/2023	06/12/2023	08/12/2023
	Sampling Time				
Test	**Method**	**Units**				
Total Mass% Asbestos (a+b+c)	DETSC 1102	Mass %	**0.001**	**0.064**	**0.001**	**0.009**
Gravimetric Quantification (a)	DETSC 1102	Mass %	na	na	na	0.005
Detailed Gravimetric Quantification (b)	DETSC 1102	Mass %	0.001	0.064	0.001	0.004
Quantification by PCOM (c)	DETSC 1102	Mass %	na	na	na	na
Potentially Respirable Fibres (d)	DETSC 1102	Fibres/g	na	na	na	na
Breakdown of Gravimetric Analysis (a)						
Mass of Sample		g	68.28	42.10	117.37	185.27
ACMs present*		type				Insulation
Mass of ACM in sample		g				0.01
% ACM by mass		%				0.01
% asbestos in ACM		%				85
% asbestos in sample		%				0.005
Breakdown of Detailed Gravimetric Analysis (b)						
% Amphibole bundles in sample		Mass %	<0.001	na	na	0.002
% Chrysotile bundles in sample		Mass %	<0.001	0.064	0.001	0.002
Breakdown of PCOM Analysis (c)						
% Amphibole fibres in sample		Mass %	na	na	na	na
% Chrysotile fibres in sample		Mass %	na	na	na	na
Breakdown of Potentially Respirable Fibre Analysis (d)						
Amphibole fibres		Fibres/g	na	na	na	na
Chrysotile fibres		Fibres/g	na	na	na	na

* Denotes test or material description outside of UKAS accreditation.
% asbestos in Asbestos Containing Materials (ACMs) is determined by by reference to HSG 264.
Recommended sample size for quantification is approximately 1kg
# denotes deviating sample

Information in Support of the Analytical Results

Our Ref 23-29383
Client Ref P22/271
Contract (P22/271) Rotterdam Wharf, Scottish Opera, Glasgow

Containers Received & Deviating Samples

Lab No	Sample ID	Date Sampled	Containers Received	Holding time exceeded for tests	Inappropriate container for tests
2276573	BH02 0.50 SOIL	04/12/23	GJ 250ml, GJ 60ml, PT 1L	pH + Conductivity (7 days)	
2276574	BH02 2.00 SOIL	04/12/23	GJ 250ml, GJ 60ml, PT 1L	pH + Conductivity (7 days), VOC (7 days)	
2276575	BH02 4.00 SOIL	04/12/23	GJ 250ml, GJ 60ml, PT 1L	pH + Conductivity (7 days)	
2276576	BH03 0.50 SOIL	05/12/23	GJ 250ml, GJ 60ml, PT 1L	pH + Conductivity (7 days)	
2276577	BH03 1.00 SOIL	05/12/23	GJ 250ml, GJ 60ml, PT 1L	pH + Conductivity (7 days)	
2276578	BH03 2.00 SOIL	05/12/23	GJ 250ml, GJ 60ml, PT 1L	pH + Conductivity (7 days)	
2276579	BH04 0.70 SOIL	06/12/23	GJ 250ml, GJ 60ml, PT 1L		
2276580	BH04 2.50 SOIL	06/12/23	GJ 250ml, GJ 60ml, PT 1L		
2276581	BH05 0.70 MISC	08/12/23	GJ 250ml, GJ 60ml, PT 1L		
2276582	BH05 3.00 SOIL	08/12/23	GJ 250ml, GJ 60ml, PT 1L		
2276583	BH02 2.00 LEACHATE	04/12/23	GJ 250ml, GJ 60ml, PT 1L		
2276584	BH02 4.00 LEACHATE	04/12/23	GJ 250ml, GJ 60ml, PT 1L		
2276585	BH03 1.00 LEACHATE	05/12/23	GJ 250ml, GJ 60ml, PT 1L		
2276586	BH03 2.00 LEACHATE	05/12/23	GJ 250ml, GJ 60ml, PT 1L		
2276587	BH04 0.70 LEACHATE	06/12/23	No containers logged		Cannot evaluate
2276588	BH04 2.50 LEACHATE	06/12/23	GJ 250ml, GJ 60ml, PT 1L		
2276589	BH05 0.70 LEACHATE	08/12/23	GJ 250ml, GJ 60ml, PT 1L		
2276590	BH05 3.00 LEACHATE	08/12/23	GJ 250ml, GJ 60ml, PT 1L		

Key: G-Glass P-Plastic J-Jar T-Tub

DETS cannot be held responsible for the integrity of samples received whereby the laboratory did not undertake the sampling. In this instance samples received may be deviating. Deviating Sample criteria are based on British and International standards and laboratory trials in conjunction with the UKAS note 'Guidance on Deviating Samples'. All samples received are listed above. However, those samples that have additional comments in relation to hold time, inappropriate containers etc are deviating due to the reasons stated. This means that the analysis is accredited where applicable, but results may be compromised due to sample deviations. If no sampled date (soils) or date+time (waters) has been supplied then samples are deviating. However, if you are able to supply a sampled date (and time for waters) this will prevent samples being reported as deviating where specific hold times are not exceeded and where the container supplied is suitable.

Soil Analysis Notes

Inorganic soil analysis was carried out on a dried sample, crushed to pass a 425µm sieve, in accordance with BS1377.

Organic soil analysis was carried out on an 'as received' sample. Organics results are corrected for moisture and expressed on a dry weight basis.

The Loss on Drying, used to express organics analysis on an air dried basis, is carried out at a temperature of 28°C +/-2°C.

Disposal

From the issue date of this test certificate, samples will be held for the following times prior to disposal :-

Soils - 1 month, Liquids - 2 weeks, Asbestos (test portion) - 6 months

End of Report

Certificate of Analysis

Certificate Number 23-29501 *Issued:* 04-Jan-24

Client Mason Evans Partnership
95 Morrison Street
Glasgow
G5 8BE

Our Reference 23-29501

Client Reference P22/271

Order No Scott Armstrong

Contract Title (P22/271) Rotterdam Wharf, Scottish Opera, Glasgow

Description 3 Soil samples, 2 Leachate prepared by DETS samples.

Date Received 14-Dec-23

Date Started 14-Dec-23

Date Completed 04-Jan-24

Test Procedures Identified by prefix DETSn (details on request).

Notes Opinions and interpretations are outside the laboratory's scope of ISO 17025 accreditation. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.

Approved By [redacted]

Kirk Bridgewood
General Manager

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Summary of Chemical Analysis

UKWIR Samples

Our Ref 23-29501
Client Ref P22/271
Contract Title (P22/271) Rotterdam Wharf, Scottish Opera, Glasgow

			Lab No	2277160	2277161	2277162
			.Sample ID	BH01A	BH06	BH06
			Depth	1.20	0.50	1.50
			Other ID			
			Sample Type	SOIL	SOIL	SOIL
			Sampling Date	10/12/2023	10/12/2023	10/12/2023
			Sampling Time	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**			
Conductivity	DETSC 2009	1	uS/cm	830		
pH	DETSC 2008#		pH	11.2	8.7	10.8
Redox Potential	DETSC 2016*	-500	mV	89		
Mineral Oil(C11-C20)	DETSC 3311	10	mg/kg	< 10		
Mineral Oil(C20-C40)	DETSC 3311	10	mg/kg	< 10		
Total VOCs	DETSC 3431*	0.01	mg/kg	< 0.01		
BTEX + MTBE	DETSC 3431	0.01	mg/kg	< 0.01		
Total SVOCs	DETSC 3433*	0.1	mg/kg	< 0.1		
Phenol	DETSC 3433	0.1	mg/kg	< 0.1		
Cresols and Chlorinated Phenols	DETSC 3433*	0.1	mg/kg	< 0.1		
TICs (Ethers,Ketones,Aldehydes,Amines,Nitrobenzene)			mg/kg	None		

Key: * -not accredited. # -MCERTS (accreditation only applies if report carries the MCERTS logo). n/s -not supplied.

Summary of Chemical Analysis

Soil Samples

Our Ref 23-29501
Client Ref P22/271
Contract Title (P22/271) Rotterdam Wharf, Scottish Opera, Glasgow

	Lab No	2277160	2277161	2277162
	.Sample ID	BH01A	BH06	BH06
	Depth	1.20	0.50	1.50
	Other ID			
	Sample Type	SOIL	SOIL	SOIL
	Sampling Date	10/12/2023	10/12/2023	10/12/2023
	Sampling Time	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**	
Preparation				
Moisture Content	DETSC 1004	0.1	%	19	4.3	2.6
Metals				
Arsenic	DETSC 2301#	0.2	mg/kg	4.4	3.5	3.6
Boron, Water Soluble (2.5:1)	DETSC 2311#	0.2	mg/kg	1.0	0.3	0.4
Cadmium	DETSC 2301#	0.1	mg/kg	< 0.1	< 0.1	< 0.1
Chromium	DETSC 2301#	0.15	mg/kg	10	39	50
Chromium, Hexavalent	DETSC 2204*	1	mg/kg	< 1.0	< 1.0	< 1.0
Copper	DETSC 2301#	0.2	mg/kg	30	9.8	19
Lead	DETSC 2301#	0.3	mg/kg	10	11	10
Mercury	DETSC 2325#	0.05	mg/kg	< 0.05	< 0.05	< 0.05
Nickel	DETSC 2301#	1	mg/kg	28	34	42
Selenium	DETSC 2301#	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Zinc	DETSC 2301#	1	mg/kg	36	57	70
Inorganics				
Conductivity	DETSC 2009	1	uS/cm	830		
pH	DETSC 2008#		pH	11.2	8.7	10.8
Cyanide, Total	DETSC 2130#	0.1	mg/kg	3.5	< 0.1	0.1
Total Organic Carbon	DETSC 2084#	0.5	%	2.2	< 0.5	< 0.5
Organic Matter (by calculation)	*	0.1	%	3.7	0.1	0.3
Redox Potential	DETSC 2016*	-500	mV	89		
Sulphide	DETSC 2024*	10	mg/kg	120	20	20
Sulphate as SO4, Total	DETSC 2321#	0.01	%	0.25	0.04	0.05
Petroleum Hydrocarbons				
Aliphatic C5-C6	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01
Aliphatic C6-C8	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01
Aliphatic C8-C10	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01
Aliphatic C10-C12	DETSC 3072#	1.5	mg/kg	< 1.5	< 1.5	< 1.5
Aliphatic C12-C16	DETSC 3072#	1.2	mg/kg	< 1.2	< 1.2	< 1.2
Aliphatic C16-C21	DETSC 3072#	1.5	mg/kg	< 1.5	3.0	3.0
Aliphatic C16-C35	DETSC 3072#	4.9	mg/kg	< 4.9	95	96
Aliphatic C21-C35	DETSC 3072#	3.4	mg/kg	< 3.4	92	93
Aliphatic C5-C35	DETSC 3072*	10	mg/kg	< 10	95	96
Aromatic C5-C7	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01
Aromatic C7-C8	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01
Aromatic C8-C10	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01
Aromatic C10-C12	DETSC 3072#	0.9	mg/kg	< 0.9	< 0.9	< 0.9
Aromatic C12-C16	DETSC 3072#	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Aromatic C16-C21	DETSC 3072#	0.6	mg/kg	< 0.6	9.9	5.6
Aromatic C21-C35	DETSC 3072#	1.4	mg/kg	< 1.4	150	160
Aromatic C5-C35	DETSC 3072*	10	mg/kg	< 10	160	170
TPH Ali/Aro Total C5-C35	DETSC 3072*	10	mg/kg	< 10	260	260

Key: * -not accredited. # -MCERTS (accreditation only applies if report carries the MCERTS logo). n/s -not supplied.

Summary of Chemical Analysis

Soil Samples

Our Ref 23-29501
Client Ref P22/271
Contract Title (P22/271) Rotterdam Wharf, Scottish Opera, Glasgow

			Lab No	2277160	2277161	2277162
			.Sample ID	BH01A	BH06	BH06
			Depth	1.20	0.50	1.50
			Other ID			
			Sample Type	SOIL	SOIL	SOIL
			Sampling Date	10/12/2023	10/12/2023	10/12/2023
			Sampling Time	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**			
EPH (C11-C20)	DETSC 3311	10	mg/kg	< 10		
EPH (C20-C40)	DETSC 3311	10	mg/kg	< 10		
PAHs						
Naphthalene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	< 0.1
Acenaphthylene	DETSC 3301	0.1	mg/kg	0.2	0.2	0.2
Acenaphthene	DETSC 3301	0.1	mg/kg	0.1	0.2	0.5
Fluorene	DETSC 3301	0.1	mg/kg	< 0.1	0.3	0.5
Phenanthrene	DETSC 3301	0.1	mg/kg	0.6	1.1	2.1
Anthracene	DETSC 3301	0.1	mg/kg	0.2	0.3	0.6
Fluoranthene	DETSC 3301	0.1	mg/kg	0.5	1.8	1.9
Pyrene	DETSC 3301	0.1	mg/kg	0.5	1.4	1.8
Benzo(a)anthracene	DETSC 3301	0.1	mg/kg	0.7	1.4	1.8
Chrysene	DETSC 3301	0.1	mg/kg	0.2	1.1	1.1
Benzo(b)fluoranthene	DETSC 3301	0.1	mg/kg	< 0.1	0.6	1.0
Benzo(k)fluoranthene	DETSC 3301	0.1	mg/kg	< 0.1	0.4	0.9
Benzo(a)pyrene	DETSC 3301	0.1	mg/kg	< 0.1	0.6	0.8
Indeno(1,2,3-c,d)pyrene	DETSC 3301	0.1	mg/kg	< 0.1	0.6	0.6
Dibenzo(a,h)anthracene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	0.2
Benzo(g,h,i)perylene	DETSC 3301	0.1	mg/kg	< 0.1	0.5	0.5
PAH 16 Total	DETSC 3301	1.6	mg/kg	2.9	11	14
PCBs						
PCB 77	DETSC 3401*	0.01	mg/kg			< 0.01
PCB 81	DETSC 3401*	0.01	mg/kg			< 0.01
PCB 105	DETSC 3401*	0.01	mg/kg			< 0.01
PCB 114	DETSC 3401*	0.01	mg/kg			< 0.01
PCB 118	DETSC 3401#	0.01	mg/kg			< 0.01
PCB 123	DETSC 3401*	0.01	mg/kg			< 0.01
PCB 126	DETSC 3401*	0.01	mg/kg			< 0.01
PCB 156	DETSC 3401*	0.01	mg/kg			< 0.01
PCB 157	DETSC 3401*	0.01	mg/kg			< 0.01
PCB 167	DETSC 3401*	0.01	mg/kg			< 0.01
PCB 169	DETSC 3401*	0.01	mg/kg			< 0.01
PCB 189	DETSC 3401*	0.01	mg/kg			< 0.01
Phenols						
Phenol - Monohydric	DETSC 2130#	0.3	mg/kg	< 0.3	< 0.3	< 0.3

Key: * -not accredited. # -MCERTS (accreditation only applies if report carries the MCERTS logo). n/s -not supplied.

Summary of Chemical Analysis
Soil VOC/SVOC Samples

Our Ref 23-29501
Client Ref P22/271
Contract Title (P22/271) Rotterdam Wharf, Scottish Opera, Glasgow

Lab No	2277160
.Sample ID	BH01A
Depth	1.20
Other ID	
Sample Type	SOIL
Sampling Date	10/12/2023
Sampling Time	n/s

Test	Method	LOD	Units	
VOCs				
Vinyl Chloride	DETSC 3431	0.01	mg/kg	< 0.01
1,1 Dichloroethylene	DETSC 3431	0.01	mg/kg	< 0.01
Trans-1,2-dichloroethylene	DETSC 3431	0.01	mg/kg	< 0.01
1,1-dichloroethane	DETSC 3431	0.01	mg/kg	< 0.01
Cis-1,2-dichloroethylene	DETSC 3431	0.01	mg/kg	< 0.01
2,2-dichloropropane	DETSC 3431	0.01	mg/kg	< 0.01
Bromochloromethane	DETSC 3431	0.01	mg/kg	< 0.01
Chloroform	DETSC 3431	0.01	mg/kg	< 0.01
1,1,1-trichloroethane	DETSC 3431	0.01	mg/kg	< 0.01
1,1-dichloropropene	DETSC 3431	0.01	mg/kg	< 0.01
Carbon tetrachloride	DETSC 3431	0.01	mg/kg	< 0.01
Benzene	DETSC 3431	0.01	mg/kg	< 0.01
1,2-dichloroethane	DETSC 3431	0.01	mg/kg	< 0.01
Trichloroethylene	DETSC 3431	0.01	mg/kg	< 0.01
1,2-dichloropropane	DETSC 3431	0.01	mg/kg	< 0.01
Dibromomethane	DETSC 3431	0.01	mg/kg	< 0.01
Bromodichloromethane	DETSC 3431	0.01	mg/kg	< 0.01
cis-1,3-dichloropropene	DETSC 3431	0.01	mg/kg	< 0.01
Toluene	DETSC 3431	0.01	mg/kg	< 0.01
trans-1,3-dichloropropene	DETSC 3431	0.01	mg/kg	< 0.01
1,1,2-trichloroethane	DETSC 3431	0.01	mg/kg	< 0.01
Tetrachloroethylene	DETSC 3431	0.01	mg/kg	< 0.01
1,3-dichloropropane	DETSC 3431	0.01	mg/kg	< 0.01
Dibromochloromethane	DETSC 3431	0.01	mg/kg	< 0.01
1,2-dibromoethane	DETSC 3431	0.01	mg/kg	< 0.01
Chlorobenzene	DETSC 3431	0.01	mg/kg	< 0.01
1,1,1,2-tetrachloroethane	DETSC 3431	0.01	mg/kg	< 0.01
Ethylbenzene	DETSC 3431	0.01	mg/kg	< 0.01
m+p-Xylene	DETSC 3431	0.01	mg/kg	< 0.01
o-Xylene	DETSC 3431	0.01	mg/kg	< 0.01
Styrene	DETSC 3431*	0.01	mg/kg	< 0.01
Bromoform	DETSC 3431	0.01	mg/kg	< 0.01
Isopropylbenzene	DETSC 3431	0.01	mg/kg	< 0.01
Bromobenzene	DETSC 3431	0.01	mg/kg	< 0.01
1,2,3-trichloropropane	DETSC 3431	0.01	mg/kg	< 0.01
n-propylbenzene	DETSC 3431	0.01	mg/kg	< 0.01
2-chlorotoluene	DETSC 3431	0.01	mg/kg	< 0.01
1,3,5-trimethylbenzene	DETSC 3431	0.01	mg/kg	< 0.01
4-chlorotoluene	DETSC 3431	0.01	mg/kg	< 0.01
Tert-butylbenzene	DETSC 3431	0.01	mg/kg	< 0.01
1,2,4-trimethylbenzene	DETSC 3431	0.01	mg/kg	< 0.01

Key: * -not accredited. n/s -not supplied.

Summary of Chemical Analysis
Soil VOC/SVOC Samples

Our Ref 23-29501
Client Ref P22/271
Contract Title (P22/271) Rotterdam Wharf, Scottish Opera, Glasgow

Lab No	2277160
.Sample ID	BH01A
Depth	1.20
Other ID	
Sample Type	SOIL
Sampling Date	10/12/2023
Sampling Time	n/s

Test	Method	LOD	Units	
sec-butylbenzene	DETSC 3431	0.01	mg/kg	< 0.01
p-isopropyltoluene	DETSC 3431	0.01	mg/kg	< 0.01
1,3-dichlorobenzene	DETSC 3431	0.01	mg/kg	< 0.01
1,4-dichlorobenzene	DETSC 3431	0.01	mg/kg	< 0.01
n-butylbenzene	DETSC 3431	0.01	mg/kg	< 0.01
1,2-dichlorobenzene	DETSC 3431	0.01	mg/kg	< 0.01
1,2-dibromo-3-chloropropane	DETSC 3431	0.01	mg/kg	< 0.01
1,2,4-trichlorobenzene	DETSC 3431	0.01	mg/kg	< 0.01
Hexachlorobutadiene	DETSC 3431	0.01	mg/kg	< 0.01
1,2,3-trichlorobenzene	DETSC 3431	0.01	mg/kg	< 0.01
MTBE	DETSC 3431*	0.01	mg/kg	< 0.01
VOC TICs - Semi Quant	DETSC 3431*			N
SVOCs				
Phenol	DETSC 3433	0.1	mg/kg	< 0.1
Aniline	DETSC 3433*	0.1	mg/kg	< 0.1
2-Chlorophenol	DETSC 3433	0.1	mg/kg	< 0.1
Benzyl Alcohol	DETSC 3433	0.1	mg/kg	< 0.1
2-Methylphenol	DETSC 3433	0.1	mg/kg	< 0.1
Bis(2-chloroisopropyl)ether	DETSC 3433	0.1	mg/kg	< 0.1
3&4-Methylphenol	DETSC 3433	0.1	mg/kg	< 0.1
2,4-Dimethylphenol	DETSC 3433	0.1	mg/kg	< 0.1
Bis-(dichloroethoxy)methane	DETSC 3433	0.1	mg/kg	< 0.1
2,4-Dichlorophenol	DETSC 3433	0.1	mg/kg	< 0.1
1,2,4-Trichlorobenzene	DETSC 3433	0.1	mg/kg	< 0.1
4-Chloro-3-methylphenol	DETSC 3433	0.1	mg/kg	< 0.1
2-Methylnaphthalene	DETSC 3433	0.1	mg/kg	< 0.1
Hexachlorocyclopentadiene	DETSC 3433*	0.1	mg/kg	< 0.1
2,4,6-Trichlorophenol	DETSC 3433	0.1	mg/kg	< 0.1
2,4,5-Trichlorophenol	DETSC 3433*	0.1	mg/kg	< 0.1
2-Chloronaphthalene	DETSC 3433	0.1	mg/kg	< 0.1
2-Nitroaniline	DETSC 3433*	0.1	mg/kg	< 0.1
2,4-Dinitrotoluene	DETSC 3433*	0.1	mg/kg	< 0.1
3-Nitroaniline	DETSC 3433*	0.1	mg/kg	< 0.1
4-Nitrophenol	DETSC 3433*	0.1	mg/kg	< 0.1
Dibenzofuran	DETSC 3433	0.1	mg/kg	< 0.1
2,6-Dinitrotoluene	DETSC 3433	0.1	mg/kg	< 0.1
2,3,4,6-Tetrachlorophenol	DETSC 3433*	0.1	mg/kg	< 0.1
Diethylphthalate	DETSC 3433	0.1	mg/kg	< 0.1
4-Chlorophenylphenylether	DETSC 3433*	0.1	mg/kg	< 0.1
4-Nitroaniline	DETSC 3433*	0.1	mg/kg	< 0.1
2-Methyl-4,6-Dinitrophenol	DETSC 3433*	0.1	mg/kg	< 0.1
Diphenylamine	DETSC 3433	0.1	mg/kg	< 0.1

Key: * -not accredited. n/s -not supplied.

Summary of Chemical Analysis
Soil VOC/SVOC Samples

Our Ref 23-29501
Client Ref P22/271
Contract Title (P22/271) Rotterdam Wharf, Scottish Opera, Glasgow

Lab No	2277160
.Sample ID	BH01A
Depth	1.20
Other ID	
Sample Type	SOIL
Sampling Date	10/12/2023
Sampling Time	n/s

Test	Method	LOD	Units	
4-Bromophenylphenylether	DETSC 3433	0.1	mg/kg	< 0.1
Hexachlorobenzene	DETSC 3433	0.1	mg/kg	< 0.1
Pentachlorophenol	DETSC 3433*	0.1	mg/kg	< 0.1
Di-n-butylphthalate	DETSC 3433	0.1	mg/kg	< 0.1
Butylbenzylphthalate	DETSC 3433*	0.1	mg/kg	< 0.1
Bis(2-ethylhexyl)phthalate	DETSC 3433	0.1	mg/kg	< 0.1
Di-n-octylphthalate	DETSC 3433*	0.1	mg/kg	< 0.1
1,4-Dinitrobenzene	DETSC 3433*	0.1	mg/kg	< 0.1
Dimethylphthalate	DETSC 3433	0.1	mg/kg	< 0.1
1,3-Dinitrobenzene	DETSC 3433*	0.1	mg/kg	< 0.1
1,2-Dinitrobenzene	DETSC 3433*	0.1	mg/kg	< 0.1
2,3,5,6-Tetrachlorophenol	DETSC 3433*	0.1	mg/kg	< 0.1
Azobenzene	DETSC 3433	0.1	mg/kg	< 0.1
Carbazole	DETSC 3433*	0.1	mg/kg	< 0.1
SVOC TICs - Semi Quant	DETSC 3433*			N

Key: * -not accredited. n/s -not supplied.

Summary of Chemical Analysis

Leachate Samples

Our Ref 23-29501
Client Ref P22/271
Contract Title (P22/271) Rotterdam Wharf, Scottish Opera, Glasgow

			Lab No	2277163	2277164
			.Sample ID	BH01A	BH06
			Depth	1.20	1.50
			Other ID		
			Sample Type	LEACHATE	LEACHATE
			Sampling Date	10/12/2023	10/12/2023
			Sampling Time	n/s	n/s
Test	**Method**	**LOD**	**Units**		
Preparation					
Leachate 2:1 250g Non-WAC	DETSC 1009*			Y	Y
Metals					
Arsenic, Dissolved	DETSC 2306	0.16	ug/l	1.3	0.72
Cadmium, Dissolved	DETSC 2306	0.03	ug/l	< 0.03	< 0.03
Calcium, Dissolved	DETSC 2306	0.09	mg/l	12	7.2
Chromium, Dissolved	DETSC 2306	0.25	ug/l	< 0.25	< 0.25
Copper, Dissolved	DETSC 2306	0.4	ug/l	2.5	0.9
Lead, Dissolved	DETSC 2306	0.09	ug/l	0.17	0.66
Magnesium, Dissolved	DETSC 2306	0.02	mg/l	0.29	0.50
Mercury, Dissolved (Low Level)	DETSC 2324	0.001	ug/l	0.017	0.048
Nickel, Dissolved	DETSC 2306	0.5	ug/l	0.5	< 0.5
Selenium, Dissolved	DETSC 2306	0.25	ug/l	1.2	0.42
Zinc, Dissolved	DETSC 2306	1.3	ug/l	< 1.3	1.3
Inorganics					
Total Hardness as CaCO3	DETSC 2303	0.1	mg/l	31.7	20.1
Sulphate as SO4	DETSC 2055	0.1	mg/l	10	7.7
Sulphide	DETSC 2208	10	ug/l	< 10	< 10
Petroleum Hydrocarbons					
Aliphatic C5-C6	DETSC 3322	0.1	ug/l	< 0.1	< 0.1
Aliphatic C6-C8	DETSC 3322	0.1	ug/l	< 0.1	< 0.1
Aliphatic C8-C10	DETSC 3322	0.1	ug/l	< 0.1	< 0.1
Aliphatic C10-C12	DETSC 3072*	1	ug/l	< 1.0	< 1.0
Aliphatic C12-C16	DETSC 3072*	1	ug/l	< 1.0	< 1.0
Aliphatic C16-C21	DETSC 3072*	1	ug/l	< 1.0	< 1.0
Aliphatic C21-C35	DETSC 3072*	1	ug/l	< 1.0	< 1.0
Aliphatic C5-C35	DETSC 3072*	10	ug/l	< 10	< 10
Aromatic C5-C7	DETSC 3322	0.1	ug/l	< 0.1	< 0.1
Aromatic C7-C8	DETSC 3322	0.1	ug/l	< 0.1	< 0.1
Aromatic C8-C10	DETSC 3322	0.1	ug/l	< 0.1	< 0.1
Aromatic C10-C12	DETSC 3072*	1	ug/l	< 1.0	< 1.0
Aromatic C12-C16	DETSC 3072*	1	ug/l	< 1.0	< 1.0
Aromatic C16-C21	DETSC 3072*	1	ug/l	< 1.0	< 1.0
Aromatic C21-C35	DETSC 3072*	1	ug/l	< 1.0	< 1.0
Aromatic C5-C35	DETSC 3072*	10	ug/l	< 10	< 10
TPH Ali/Aro Total C5-C35	DETSC 3072*	10	ug/l	< 10	< 10
PAHs					
Naphthalene	DETSC 3304	0.05	ug/l	0.11	0.05
Acenaphthylene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01
Acenaphthene	DETSC 3304	0.01	ug/l	0.05	< 0.01
Fluorene	DETSC 3304	0.01	ug/l	0.03	< 0.01
Phenanthrene	DETSC 3304	0.01	ug/l	0.11	0.02

Key: * -not accredited. n/s -not supplied.

Summary of Chemical Analysis

Leachate Samples

Our Ref 23-29501
Client Ref P22/271
Contract Title (P22/271) Rotterdam Wharf, Scottish Opera, Glasgow

			Lab No	2277163	2277164
			.Sample ID	BH01A	BH06
			Depth	1.20	1.50
			Other ID		
			Sample Type	LEACHATE	LEACHATE
			Sampling Date	10/12/2023	10/12/2023
			Sampling Time	n/s	n/s
Test	**Method**	**LOD**	**Units**		
Anthracene	DETSC 3304	0.01	ug/l	0.02	< 0.01
Fluoranthene	DETSC 3304	0.01	ug/l	0.08	0.05
Pyrene	DETSC 3304	0.01	ug/l	0.08	0.05
Benzo(a)anthracene	DETSC 3304*	0.01	ug/l	0.03	0.02
Chrysene	DETSC 3304	0.01	ug/l	0.03	0.03
Benzo(b)fluoranthene	DETSC 3304	0.01	ug/l	0.03	0.02
Benzo(k)fluoranthene	DETSC 3304	0.01	ug/l	0.02	0.01
Benzo(a)pyrene	DETSC 3304	0.01	ug/l	0.03	0.03
Indeno(1,2,3-c,d)pyrene	DETSC 3304	0.01	ug/l	0.02	0.02
Dibenzo(a,h)anthracene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01
Benzo(g,h,i)perylene	DETSC 3304	0.01	ug/l	0.03	0.02
PAH Total	DETSC 3304	0.2	ug/l	0.66	0.32
Phenols					
Total Phenol	DETSC 3451*	0.5	ug/l	< 0.50	< 0.50

Key: * -not accredited. n/s -not supplied.

Summary of Asbestos Analysis

Soil Samples

Our Ref 23-29501
Client Ref P22/271
Contract Title (P22/271) Rotterdam Wharf, Scottish Opera, Glasgow

Lab No	Sample ID	Material Type	Result	Comment*	Analyst
2277160	BH01A 1.20	SOIL	NAD	none	Keith Wilson
2277161	BH06 0.50	SOIL	NAD	none	Keith Wilson
2277162	BH06 1.50	SOIL	NAD	none	Keith Wilson

Crocidolite = Blue Asbestos, Amosite = Brown Asbestos, Chrysotile = White Asbestos. Anthophyllite, Actinolite and Tremolite are other forms of Asbestos. Samples are analysed by DETSC 1101 using polarised light microscopy in accordance with HSG248 and documented in-house methods. NAD = No Asbestos Detected. Where a sample is NAD, the result is based on analysis of at least 2 sub-samples and should be taken to mean 'no asbestos detected in sample'. Key: * - not included in laboratory scope of accreditation.

Information in Support of the Analytical Results

Our Ref 23-29501
Client Ref P22/271
Contract (P22/271) Rotterdam Wharf, Scottish Opera, Glasgow

Containers Received & Deviating Samples

Lab No	Sample ID	Date Sampled	Containers Received	Holding time exceeded for tests	Inappropriate container for tests
2277160	BH01A 1.20 SOIL	10/12/23	GJ 250ml, GJ 60ml, PT 1L		
2277161	BH06 0.50 SOIL	10/12/23	GJ 250ml, GJ 60ml, PT 1L		
2277162	BH06 1.50 SOIL	10/12/23	GJ 250ml, GJ 60ml, PT 1L		
2277163	BH01A 1.20 LEACHATE	10/12/23	GJ 250ml, GJ 60ml, PT 1L		
2277164	BH06 1.50 LEACHATE	10/12/23	GJ 250ml, GJ 60ml, PT 1L		

Key: G-Glass P-Plastic J-Jar T-Tub
DETS cannot be held responsible for the integrity of samples received whereby the laboratory did not undertake the sampling. In this instance samples received may be deviating. Deviating Sample criteria are based on British and International standards and laboratory trials in conjunction with the UKAS note 'Guidance on Deviating Samples'. All samples received are listed above. However, those samples that have additional comments in relation to hold time, inappropriate containers etc are deviating due to the reasons stated. This means that the analysis is accredited where applicable, but results may be compromised due to sample deviations. If no sampled date (soils) or date+time (waters) has been supplied then samples are deviating. However, if you are able to supply a sampled date (and time for waters) this will prevent samples being reported as deviating where specific hold times are not exceeded and where the container supplied is suitable.

Soil Analysis Notes

Inorganic soil analysis was carried out on a dried sample, crushed to pass a 425µm sieve, in accordance with BS1377.
Organic soil analysis was carried out on an 'as received' sample. Organics results are corrected for moisture and expressed on a dry weight basis.
The Loss on Drying, used to express organics analysis on an air dried basis, is carried out at a temperature of 28°C +/-2°C.

Disposal

From the issue date of this test certificate, samples will be held for the following times prior to disposal :-
Soils - 1 month, Liquids - 2 weeks, Asbestos (test portion) - 6 months

End of Report

Certificate of Analysis

Certificate Number 23-29505 *Issued:* 05-Jan-24

Client Mason Evans Partnership
95 Morrison Street
Glasgow
G5 8BE

Our Reference 23-29505

Client Reference P22/271

Order No Scott Armstrong

Contract Title (P22/271) Rotterdam Wharf, Scottish Opera, Glasgow

Description 19 Soil samples, 12 Leachate prepared by DETS samples.

Date Received 14-Dec-23

Date Started 14-Dec-23

Date Completed 05-Jan-24

Test Procedures Identified by prefix DETSn (details on request).

Notes Opinions and interpretations are outside the laboratory's scope of ISO 17025 accreditation. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.

Approved By [redacted]
Kirk Bridgewood
General Manager

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Summary of Chemical Analysis

UKWIR Samples

Our Ref 23-29505
Client Ref P22/271
Contract Title (P22/271) Rotterdam Wharf, Scottish Opera, Glasgow

Lab No	2277178
.Sample ID	TP02
Depth	1.50
Other ID	
Sample Type	SOIL
Sampling Date	07/12/2023
Sampling Time	n/s

Test	Method	LOD	Units	
Conductivity	DETSC 2009	1	uS/cm	430
pH	DETSC 2008#		pH	10.0
Redox Potential	DETSC 2016*	-500	mV	96
Mineral Oil(C11-C20)	DETSC 3311	10	mg/kg	< 10
Mineral Oil(C20-C40)	DETSC 3311	10	mg/kg	< 10
Total VOCs	DETSC 3431*	0.01	mg/kg	< 0.01
BTEX + MTBE	DETSC 3431	0.01	mg/kg	< 0.01
Total SVOCs	DETSC 3433*	0.1	mg/kg	3.5
Phenol	DETSC 3433	0.1	mg/kg	< 0.1
Cresols and Chlorinated Phenols	DETSC 3433*	0.1	mg/kg	< 0.1
TICs (Ethers,Ketones,Aldehydes,Amines,Nitrobenzene)			mg/kg	None

Summary of Chemical Analysis

Soil Samples

Our Ref 23-29505
Client Ref P22/271
Contract Title (P22/271) Rotterdam Wharf, Scottish Opera, Glasgow

Test	Method	LOD	Units						
Lab No				2277176	2277177	2277179	2277180	2277181	2277182
.Sample ID				TP01	TP02	TP03	TP03	TP04	TP04
Depth				0.40	0.40	1.20	2.20	0.50	1.50
Other ID									
Sample Type				SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Sampling Date				08/12/2023	07/12/2023	08/12/2023	08/12/2023	07/12/2023	07/12/2023
Sampling Time				n/s	n/s	n/s	n/s	n/s	n/s
Asbestos Quantification	DETSC 1102	0.001	%	0.048	0.004	0.019	0.087	< 0.001	0.001
Preparation									
Moisture Content	DETSC 1004	0.1	%	15	19	26	28	31	20
Metals									
Arsenic	DETSC 2301#	0.2	mg/kg	37	6.7	87	93	9.6	10
Boron, Water Soluble (2.5:1)	DETSC 2311#	0.2	mg/kg	0.9	0.4	4.6	5.8	0.8	0.7
Cadmium	DETSC 2301#	0.1	mg/kg	2.9	0.6	3.1	3.1	0.5	0.4
Chromium	DETSC 2301#	0.15	mg/kg	35	23	76	68	20	23
Chromium, Hexavalent	DETSC 2204*	1	mg/kg	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Copper	DETSC 2301#	0.2	mg/kg	110	67	210	220	54	540
Lead	DETSC 2301#	0.3	mg/kg	370	210	590	630	110	190
Mercury	DETSC 2325#	0.05	mg/kg	1.3	0.89	5.2	1.0	0.51	0.23
Nickel	DETSC 2301#	1	mg/kg	68	29	140	150	26	28
Selenium	DETSC 2301#	0.5	mg/kg	1.0	< 0.5	12	21	< 0.5	< 0.5
Zinc	DETSC 2301#	1	mg/kg	460	130	840	890	200	200
Inorganics									
pH	DETSC 2008#		pH	10.4	11.1	8.6	8.1	7.8	10.4
Cyanide, Total	DETSC 2130#	0.1	mg/kg	< 0.1	< 0.1	0.1	0.1	0.5	< 0.1
Total Organic Carbon	DETSC 2084#	0.5	%	1.4	1.8	3.0	2.3	4.8	2.8
Organic Matter (by calculation)	*	0.1	%	2.4	3.1	5.1	3.9	8.3	4.8
Sulphide	DETSC 2024*	10	mg/kg	51	36	55	28	32	32
Sulphate as SO4, Total	DETSC 2321#	0.01	%	0.45	0.36	0.52	1.1	0.17	0.16
Petroleum Hydrocarbons									
Aliphatic C5-C6	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aliphatic C6-C8	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aliphatic C8-C10	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aliphatic C10-C12	DETSC 3072#	1.5	mg/kg	< 1.5	< 1.5	< 1.5	< 1.5	< 1.5	< 1.5
Aliphatic C12-C16	DETSC 3072#	1.2	mg/kg	< 1.2	< 1.2	1.2	< 1.2	< 1.2	< 1.2
Aliphatic C16-C21	DETSC 3072#	1.5	mg/kg	< 1.5	< 1.5	3.9	< 1.5	< 1.5	< 1.5
Aliphatic C16-C35	DETSC 3072#	4.9	mg/kg	< 4.9	< 4.9	5.8	< 4.9	< 4.9	< 4.9
Aliphatic C21-C35	DETSC 3072#	3.4	mg/kg	< 3.4	< 3.4	< 3.4	< 3.4	< 3.4	< 3.4
Aliphatic C5-C35	DETSC 3072*	10	mg/kg	< 10	< 10	< 10	< 10	< 10	< 10
Aromatic C5-C7	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aromatic C7-C8	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aromatic C8-C10	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aromatic C10-C12	DETSC 3072#	0.9	mg/kg	< 0.9	< 0.9	< 0.9	< 0.9	< 0.9	3.3
Aromatic C12-C16	DETSC 3072#	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	6.7
Aromatic C16-C21	DETSC 3072#	0.6	mg/kg	10	< 0.6	< 0.6	< 0.6	< 0.6	17
Aromatic C21-C35	DETSC 3072#	1.4	mg/kg	30	< 1.4	< 1.4	< 1.4	< 1.4	18
Aromatic C5-C35	DETSC 3072*	10	mg/kg	40	< 10	< 10	< 10	< 10	45
TPH Ali/Aro Total C5-C35	DETSC 3072*	10	mg/kg	40	< 10	< 10	< 10	< 10	45
PAHs									

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Summary of Chemical Analysis

Soil Samples

Our Ref 23-29505
Client Ref P22/271
Contract Title (P22/271) Rotterdam Wharf, Scottish Opera, Glasgow

Test	Method	LOD	Units	Lab No	2277176	2277177	2277179	2277180	2277181	2277182
				.Sample ID	TP01	TP02	TP03	TP03	TP04	TP04
				Depth	0.40	0.40	1.20	2.20	0.50	1.50
				Other ID						
				Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
				Sampling Date	08/12/2023	07/12/2023	08/12/2023	08/12/2023	07/12/2023	07/12/2023
				Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s
Naphthalene	DETSC 3301	0.1	mg/kg		< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0.3
Acenaphthylene	DETSC 3301	0.1	mg/kg		0.3	0.3	0.3	0.3	0.3	0.4
Acenaphthene	DETSC 3301	0.1	mg/kg		0.2	0.1	< 0.1	< 0.1	0.2	1.6
Fluorene	DETSC 3301	0.1	mg/kg		0.2	< 0.1	< 0.1	< 0.1	< 0.1	2.1
Phenanthrene	DETSC 3301	0.1	mg/kg		1.9	1.0	1.1	0.5	0.7	6.1
Anthracene	DETSC 3301	0.1	mg/kg		0.4	0.3	0.3	0.1	0.2	1.2
Fluoranthene	DETSC 3301	0.1	mg/kg		2.8	1.4	1.7	1.1	1.0	4.6
Pyrene	DETSC 3301	0.1	mg/kg		2.7	1.5	1.8	1.3	1.1	4.8
Benzo(a)anthracene	DETSC 3301	0.1	mg/kg		1.8	1.4	1.9	2.2	1.7	2.5
Chrysene	DETSC 3301	0.1	mg/kg		1.3	0.7	0.9	1.1	0.5	1.7
Benzo(b)fluoranthene	DETSC 3301	0.1	mg/kg		0.9	0.5	0.6	0.7	0.3	0.9
Benzo(k)fluoranthene	DETSC 3301	0.1	mg/kg		0.5	0.3	0.4	0.4	0.1	0.5
Benzo(a)pyrene	DETSC 3301	0.1	mg/kg		1.2	0.6	0.8	0.9	0.5	1.5
Indeno(1,2,3-c,d)pyrene	DETSC 3301	0.1	mg/kg		1.3	0.9	1.8	< 0.1	< 0.1	1.9
Dibenzo(a,h)anthracene	DETSC 3301	0.1	mg/kg		0.2	0.2	0.2	< 0.1	< 0.1	0.3
Benzo(g,h,i)perylene	DETSC 3301	0.1	mg/kg		0.9	0.6	< 0.1	< 0.1	< 0.1	1.1
PAH 16 Total	DETSC 3301	1.6	mg/kg		17	9.7	12	8.5	6.6	32
PCBs										
PCB 77	DETSC 3401*	0.01	mg/kg						< 0.01	
PCB 81	DETSC 3401*	0.01	mg/kg						< 0.01	
PCB 105	DETSC 3401*	0.01	mg/kg						< 0.01	
PCB 114	DETSC 3401*	0.01	mg/kg						< 0.01	
PCB 118	DETSC 3401#	0.01	mg/kg						< 0.01	
PCB 123	DETSC 3401*	0.01	mg/kg						< 0.01	
PCB 126	DETSC 3401*	0.01	mg/kg						< 0.01	
PCB 156	DETSC 3401*	0.01	mg/kg						< 0.01	
PCB 157	DETSC 3401*	0.01	mg/kg						< 0.01	
PCB 167	DETSC 3401*	0.01	mg/kg						< 0.01	
PCB 169	DETSC 3401*	0.01	mg/kg						< 0.01	
PCB 189	DETSC 3401*	0.01	mg/kg						< 0.01	
Phenols										
Phenol - Monohydric	DETSC 2130#	0.3	mg/kg		< 0.3	< 0.3	< 0.3	< 0.3	0.5	< 0.3

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Summary of Chemical Analysis

Soil Samples

Our Ref 23-29505
Client Ref P22/271
Contract Title (P22/271) Rotterdam Wharf, Scottish Opera, Glasgc

Test	Method	LOD	Units						
Lab No				2277183	2277184	2277185	2277186	2277187	2277188
.Sample ID				TP05	TP06	TP06	TP07	TP07	TP08
Depth				0.40	0.40	3.50	0.40	2.50	0.40
Other ID									
Sample Type				SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Sampling Date				07/12/2023	07/12/2023	07/12/2023	07/12/2023	07/12/2023	07/12/2023
Sampling Time				n/s	n/s	n/s	n/s	n/s	n/s
Asbestos Quantification	DETSC 1102	0.001	%	< 0.001	< 0.001	< 0.001	0.021	< 0.001	< 0.001
Preparation									
Moisture Content	DETSC 1004	0.1	%	24	12	12	25	14	11
Metals									
Arsenic	DETSC 2301#	0.2	mg/kg	5.6	2.2	3.6	6.1	5.3	5.6
Boron, Water Soluble (2.5:1)	DETSC 2311#	0.2	mg/kg	0.8	0.4	0.4	0.8	0.7	0.8
Cadmium	DETSC 2301#	0.1	mg/kg	0.2	< 0.1	0.1	0.2	< 0.1	0.2
Chromium	DETSC 2301#	0.15	mg/kg	21	26	20	36	19	26
Chromium, Hexavalent	DETSC 2204*	1	mg/kg	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Copper	DETSC 2301#	0.2	mg/kg	49	36	25	100	25	51
Lead	DETSC 2301#	0.3	mg/kg	82	26	23	85	23	73
Mercury	DETSC 2325#	0.05	mg/kg	0.25	0.05	< 0.05	0.35	0.32	< 0.05
Nickel	DETSC 2301#	1	mg/kg	27	25	27	44	24	33
Selenium	DETSC 2301#	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Zinc	DETSC 2301#	1	mg/kg	110	97	74	140	59	110
Inorganics									
pH	DETSC 2008#		pH	8.1	11.2	8.2	8.3	9.8	10.8
Cyanide, Total	DETSC 2130#	0.1	mg/kg	0.3	0.4	< 0.1	0.2	< 0.1	< 0.1
Total Organic Carbon	DETSC 2084#	0.5	%	3.8	1.1	3.6	3.2	1.4	2.3
Organic Matter (by calculation)	*	0.1	%	6.6	2.0	6.2	5.6	2.4	4.0
Sulphide	DETSC 2024*	10	mg/kg	20	< 10	< 10	< 10	12	< 10
Sulphate as SO4, Total	DETSC 2321#	0.01	%	0.10	0.23	0.04	0.11	0.06	0.22
Petroleum Hydrocarbons									
Aliphatic C5-C6	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aliphatic C6-C8	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aliphatic C8-C10	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aliphatic C10-C12	DETSC 3072#	1.5	mg/kg	< 1.5	< 1.5	< 1.5	< 1.5	< 1.5	< 1.5
Aliphatic C12-C16	DETSC 3072#	1.2	mg/kg	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2
Aliphatic C16-C21	DETSC 3072#	1.5	mg/kg	< 1.5	< 1.5	< 1.5	< 1.5	< 1.5	< 1.5
Aliphatic C16-C35	DETSC 3072#	4.9	mg/kg	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9
Aliphatic C21-C35	DETSC 3072#	3.4	mg/kg	< 3.4	< 3.4	< 3.4	< 3.4	< 3.4	< 3.4
Aliphatic C5-C35	DETSC 3072*	10	mg/kg	< 10	< 10	< 10	< 10	< 10	< 10
Aromatic C5-C7	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aromatic C7-C8	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aromatic C8-C10	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aromatic C10-C12	DETSC 3072#	0.9	mg/kg	2.9	< 0.9	< 0.9	< 0.9	< 0.9	< 0.9
Aromatic C12-C16	DETSC 3072#	0.5	mg/kg	5.9	< 0.5	< 0.5	< 0.5	< 0.5	3.7
Aromatic C16-C21	DETSC 3072#	0.6	mg/kg	42	< 0.6	< 0.6	< 0.6	< 0.6	14
Aromatic C21-C35	DETSC 3072#	1.4	mg/kg	78	37	< 1.4	< 1.4	< 1.4	19
Aromatic C5-C35	DETSC 3072*	10	mg/kg	130	37	< 10	< 10	< 10	37
TPH Ali/Aro Total C5-C35	DETSC 3072*	10	mg/kg	130	37	< 10	< 10	< 10	37
PAHs									

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Summary of Chemical Analysis

Soil Samples

Our Ref 23-29505
Client Ref P22/271
Contract Title (P22/271) Rotterdam Wharf, Scottish Opera, Glasgc

Test	Method	LOD	Units	Lab No	2277183	2277184	2277185	2277186	2277187	2277188
				.Sample ID	TP05	TP06	TP06	TP07	TP07	TP08
				Depth	0.40	0.40	3.50	0.40	2.50	0.40
				Other ID						
				Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
				Sampling Date	07/12/2023	07/12/2023	07/12/2023	07/12/2023	07/12/2023	07/12/2023
				Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s
Naphthalene	DETSC 3301	0.1	mg/kg		1.0	< 0.1	< 0.1	< 0.1	< 0.1	1.3
Acenaphthylene	DETSC 3301	0.1	mg/kg		0.3	0.1	< 0.1	0.2	< 0.1	0.4
Acenaphthene	DETSC 3301	0.1	mg/kg		2.0	0.2	< 0.1	0.2	< 0.1	3.3
Fluorene	DETSC 3301	0.1	mg/kg		1.7	0.2	< 0.1	0.5	< 0.1	3.6
Phenanthrene	DETSC 3301	0.1	mg/kg		8.4	1.0	0.2	1.3	< 0.1	15
Anthracene	DETSC 3301	0.1	mg/kg		2.5	0.3	< 0.1	0.4	< 0.1	4.0
Fluoranthene	DETSC 3301	0.1	mg/kg		13	1.1	0.2	1.9	< 0.1	12
Pyrene	DETSC 3301	0.1	mg/kg		11	1.2	0.3	2.0	< 0.1	12
Benzo(a)anthracene	DETSC 3301	0.1	mg/kg		6.4	1.0	< 0.1	1.4	< 0.1	4.8
Chrysene	DETSC 3301	0.1	mg/kg		5.7	0.5	< 0.1	0.9	< 0.1	4.5
Benzo(b)fluoranthene	DETSC 3301	0.1	mg/kg		3.9	0.4	< 0.1	0.6	< 0.1	2.6
Benzo(k)fluoranthene	DETSC 3301	0.1	mg/kg		2.5	0.2	< 0.1	0.3	< 0.1	1.7
Benzo(a)pyrene	DETSC 3301	0.1	mg/kg		4.9	0.6	< 0.1	0.9	< 0.1	4.1
Indeno(1,2,3-c,d)pyrene	DETSC 3301	0.1	mg/kg		3.2	0.7	< 0.1	0.8	< 0.1	2.5
Dibenzo(a,h)anthracene	DETSC 3301	0.1	mg/kg		0.8	< 0.1	< 0.1	0.2	< 0.1	0.5
Benzo(g,h,i)perylene	DETSC 3301	0.1	mg/kg		2.9	0.5	< 0.1	0.7	< 0.1	2.7
PAH 16 Total	DETSC 3301	1.6	mg/kg		70	8.0	< 1.6	12	< 1.6	75
PCBs										
PCB 77	DETSC 3401*	0.01	mg/kg							
PCB 81	DETSC 3401*	0.01	mg/kg							
PCB 105	DETSC 3401*	0.01	mg/kg							
PCB 114	DETSC 3401*	0.01	mg/kg							
PCB 118	DETSC 3401#	0.01	mg/kg							
PCB 123	DETSC 3401*	0.01	mg/kg							
PCB 126	DETSC 3401*	0.01	mg/kg							
PCB 156	DETSC 3401*	0.01	mg/kg							
PCB 157	DETSC 3401*	0.01	mg/kg							
PCB 167	DETSC 3401*	0.01	mg/kg							
PCB 169	DETSC 3401*	0.01	mg/kg							
PCB 189	DETSC 3401*	0.01	mg/kg							
Phenols										
Phenol - Monohydric	DETSC 2130#	0.3	mg/kg		0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3

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Summary of Chemical Analysis

Soil Samples

Our Ref 23-29505
Client Ref P22/271
Contract Title (P22/271) Rotterdam Wharf, Scottish Opera, Glasgc

Test	Method	LOD	Units	Lab No	2277189	2277190	2277191	2277192	2277193	2277194
				.Sample ID	TP08	TP09	TP09	TP10	TP11	TP11
				Depth	1.10	0.40	1.20	1.50	1.10	2.70
				Other ID						
				Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
				Sampling Date	07/12/2023	08/12/2023	08/12/2023	08/12/2023	08/12/2023	08/12/2023
				Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s
Asbestos Quantification	DETSC 1102	0.001	%		0.012	< 0.001			0.001	
Preparation										
Moisture Content	DETSC 1004	0.1	%		9.6	3.7	14	13	13	12
Metals										
Arsenic	DETSC 2301#	0.2	mg/kg		5.3	4.0	2.8	4.2	3.7	4.1
Boron, Water Soluble (2.5:1)	DETSC 2311#	0.2	mg/kg		0.7	0.3	1.1	0.5	1.2	0.7
Cadmium	DETSC 2301#	0.1	mg/kg		0.1	< 0.1	0.1	< 0.1	< 0.1	0.1
Chromium	DETSC 2301#	0.15	mg/kg		17	43	15	21	13	22
Chromium, Hexavalent	DETSC 2204*	1	mg/kg		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Copper	DETSC 2301#	0.2	mg/kg		68	15	28	22	40	27
Lead	DETSC 2301#	0.3	mg/kg		130	8.9	32	17	74	21
Mercury	DETSC 2325#	0.05	mg/kg		0.29	< 0.05	< 0.05	< 0.05	0.31	< 0.05
Nickel	DETSC 2301#	1	mg/kg		28	36	21	21	16	32
Selenium	DETSC 2301#	0.5	mg/kg		< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Zinc	DETSC 2301#	1	mg/kg		94	51	74	64	71	84
Inorganics										
pH	DETSC 2008#		pH		10.8	9.3	7.9	7.1	11.0	7.7
Cyanide, Total	DETSC 2130#	0.1	mg/kg		< 0.1	0.1	< 0.1	< 0.1	0.1	< 0.1
Total Organic Carbon	DETSC 2084#	0.5	%		1.1	< 0.5	3.7	0.9	1.9	2.4
Organic Matter (by calculation)	*	0.1	%		1.8	0.1	6.4	1.5	3.2	4.2
Sulphide	DETSC 2024*	10	mg/kg		48	< 10	< 10	< 10	32	< 10
Sulphate as SO4, Total	DETSC 2321#	0.01	%		0.22	0.06	0.04	0.03	0.25	0.03
Petroleum Hydrocarbons										
Aliphatic C5-C6	DETSC 3321*	0.01	mg/kg		< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aliphatic C6-C8	DETSC 3321*	0.01	mg/kg		< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aliphatic C8-C10	DETSC 3321*	0.01	mg/kg		< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aliphatic C10-C12	DETSC 3072#	1.5	mg/kg		< 1.5	< 1.5	< 1.5	< 1.5	3.6	< 1.5
Aliphatic C12-C16	DETSC 3072#	1.2	mg/kg		< 1.2	< 1.2	< 1.2	< 1.2	2.9	< 1.2
Aliphatic C16-C21	DETSC 3072#	1.5	mg/kg		< 1.5	< 1.5	< 1.5	< 1.5	14	< 1.5
Aliphatic C16-C35	DETSC 3072#	4.9	mg/kg		< 4.9	< 4.9	< 4.9	< 4.9	90	< 4.9
Aliphatic C21-C35	DETSC 3072#	3.4	mg/kg		< 3.4	< 3.4	< 3.4	< 3.4	76	< 3.4
Aliphatic C5-C35	DETSC 3072*	10	mg/kg		< 10	< 10	< 10	< 10	96	< 10
Aromatic C5-C7	DETSC 3321*	0.01	mg/kg		< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aromatic C7-C8	DETSC 3321*	0.01	mg/kg		< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aromatic C8-C10	DETSC 3321*	0.01	mg/kg		< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aromatic C10-C12	DETSC 3072#	0.9	mg/kg		1.2	< 0.9	< 0.9	< 0.9	< 0.9	< 0.9
Aromatic C12-C16	DETSC 3072#	0.5	mg/kg		2.2	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Aromatic C16-C21	DETSC 3072#	0.6	mg/kg		10	12	< 0.6	< 0.6	2.8	< 0.6
Aromatic C21-C35	DETSC 3072#	1.4	mg/kg		22	80	< 1.4	< 1.4	51	< 1.4
Aromatic C5-C35	DETSC 3072*	10	mg/kg		35	92	< 10	< 10	54	< 10
TPH Ali/Aro Total C5-C35	DETSC 3072*	10	mg/kg		35	92	< 10	< 10	150	< 10
PAHs										

Key: * -not accredited. # -MCERTS (accreditation only applies if report carries the MCERTS logo). n/s -not supplied.

Summary of Chemical Analysis

Soil Samples

Our Ref 23-29505
Client Ref P22/271
Contract Title (P22/271) Rotterdam Wharf, Scottish Opera, Glasgc

Test	Method	LOD	Units	Lab No	2277189	2277190	2277191	2277192	2277193	2277194
				.Sample ID	TP08	TP09	TP09	TP10	TP11	TP11
				Depth	1.10	0.40	1.20	1.50	1.10	2.70
				Other ID						
				Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
				Sampling Date	07/12/2023	08/12/2023	08/12/2023	08/12/2023	08/12/2023	08/12/2023
				Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s
Naphthalene	DETSC 3301	0.1	mg/kg		0.5	0.3	< 0.1	< 0.1	0.3	< 0.1
Acenaphthylene	DETSC 3301	0.1	mg/kg		0.6	0.2	0.3	< 0.1	0.4	< 0.1
Acenaphthene	DETSC 3301	0.1	mg/kg		1.5	0.3	< 0.1	< 0.1	1.5	< 0.1
Fluorene	DETSC 3301	0.1	mg/kg		1.5	0.3	< 0.1	< 0.1	1.9	< 0.1
Phenanthrene	DETSC 3301	0.1	mg/kg		5.5	1.4	< 0.1	< 0.1	5.7	< 0.1
Anthracene	DETSC 3301	0.1	mg/kg		1.4	0.4	< 0.1	< 0.1	1.5	< 0.1
Fluoranthene	DETSC 3301	0.1	mg/kg		5.9	1.7	< 0.1	< 0.1	7.1	< 0.1
Pyrene	DETSC 3301	0.1	mg/kg		5.9	1.6	0.2	< 0.1	7.0	< 0.1
Benzo(a)anthracene	DETSC 3301	0.1	mg/kg		2.6	1.7	< 0.1	< 0.1	2.9	< 0.1
Chrysene	DETSC 3301	0.1	mg/kg		2.1	0.8	< 0.1	< 0.1	2.3	< 0.1
Benzo(b)fluoranthene	DETSC 3301	0.1	mg/kg		1.3	0.6	< 0.1	< 0.1	1.4	< 0.1
Benzo(k)fluoranthene	DETSC 3301	0.1	mg/kg		0.8	0.4	< 0.1	< 0.1	0.9	< 0.1
Benzo(a)pyrene	DETSC 3301	0.1	mg/kg		1.9	0.9	< 0.1	< 0.1	2.0	< 0.1
Indeno(1,2,3-c,d)pyrene	DETSC 3301	0.1	mg/kg		1.4	1.1	< 0.1	< 0.1	1.6	< 0.1
Dibenzo(a,h)anthracene	DETSC 3301	0.1	mg/kg		0.3	0.1	< 0.1	< 0.1	0.3	< 0.1
Benzo(g,h,i)perylene	DETSC 3301	0.1	mg/kg		1.3	0.7	< 0.1	< 0.1	1.3	< 0.1
PAH 16 Total	DETSC 3301	1.6	mg/kg		35	12	< 1.6	< 1.6	38	< 1.6
PCBs										
PCB 77	DETSC 3401*	0.01	mg/kg		< 0.01			< 0.01	< 0.01	
PCB 81	DETSC 3401*	0.01	mg/kg		< 0.01			< 0.01	< 0.01	
PCB 105	DETSC 3401*	0.01	mg/kg		< 0.01			< 0.01	< 0.01	
PCB 114	DETSC 3401*	0.01	mg/kg		< 0.01			< 0.01	< 0.01	
PCB 118	DETSC 3401#	0.01	mg/kg		< 0.01			< 0.01	< 0.01	
PCB 123	DETSC 3401*	0.01	mg/kg		< 0.01			< 0.01	< 0.01	
PCB 126	DETSC 3401*	0.01	mg/kg		< 0.01			< 0.01	< 0.01	
PCB 156	DETSC 3401*	0.01	mg/kg		< 0.01			< 0.01	< 0.01	
PCB 157	DETSC 3401*	0.01	mg/kg		< 0.01			< 0.01	< 0.01	
PCB 167	DETSC 3401*	0.01	mg/kg		< 0.01			< 0.01	< 0.01	
PCB 169	DETSC 3401*	0.01	mg/kg		< 0.01			< 0.01	< 0.01	
PCB 189	DETSC 3401*	0.01	mg/kg		< 0.01			< 0.01	< 0.01	
Phenols										
Phenol - Monohydric	DETSC 2130#	0.3	mg/kg		< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3

Key: * -not accredited. # -MCERTS (accreditation only applies if report carries the MCERTS logo). n/s -not supplied.

Summary of Chemical Analysis

Leachate Samples

Our Ref 23-29505
Client Ref P22/271
Contract Title (P22/271) Rotterdam Wharf, Scottish Opera, Glasgow

Lab No				2277195	2277196	2277197	2277198	2277199	2277200
.Sample ID				TP01	TP02	TP03	TP04	TP06	TP06
Depth				0.40	1.50	2.20	1.50	0.40	3.50
Other ID									
Sample Type				LEACHATE	LEACHATE	LEACHATE	LEACHATE	LEACHATE	LEACHATE
Sampling Date				08/12/2023	07/12/2023	08/12/2023	07/12/2023	07/12/2023	07/12/2023
Sampling Time				n/s	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**						
Preparation									
Leachate 2:1 250g Non-WAC	DETSC 1009*			Y	Y	Y	Y	Y	Y
Metals									
Arsenic, Dissolved	DETSC 2306	0.16	ug/l	2.9	1.4	2.5	0.95	0.91	0.71
Cadmium, Dissolved	DETSC 2306	0.03	ug/l	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Calcium, Dissolved	DETSC 2306	0.09	mg/l	7.4	5.4	22	9.8	8.4	2.6
Chromium, Dissolved	DETSC 2306	0.25	ug/l	0.32	0.99	0.25	< 0.25	1.9	< 0.25
Copper, Dissolved	DETSC 2306	0.4	ug/l	2.5	1.6	2.0	1.5	1.8	1.0
Lead, Dissolved	DETSC 2306	0.09	ug/l	2.5	1.5	0.67	1.0	1.5	0.15
Magnesium, Dissolved	DETSC 2306	0.02	mg/l	0.31	0.35	1.3	0.87	0.50	0.44
Mercury, Dissolved (Low Level)	DETSC 2324	0.001	ug/l	0.0050	0.0028	0.058	0.022	0.051	0.050
Nickel, Dissolved	DETSC 2306	0.5	ug/l	< 0.5	0.5	0.7	< 0.5	< 0.5	< 0.5
Selenium, Dissolved	DETSC 2306	0.25	ug/l	0.48	0.44	6.5	0.73	0.32	0.93
Zinc, Dissolved	DETSC 2306	1.3	ug/l	1.6	1.5	2.7	1.4	< 1.3	< 1.3
Inorganics									
Total Hardness as CaCO3	DETSC 2303	0.1	mg/l	19.7	14.8	61.3	28.0	22.9	8.26
Sulphate as SO4	DETSC 2055	0.1	mg/l	3.1	4.6	53	5.7	4.3	3.8
Sulphide	DETSC 2208	10	ug/l	< 10	< 10	< 10	< 10	< 10	< 10
Petroleum Hydrocarbons									
Aliphatic C5-C6	DETSC 3322	0.1	ug/l	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	
Aliphatic C6-C8	DETSC 3322	0.1	ug/l	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	
Aliphatic C8-C10	DETSC 3322	0.1	ug/l	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	
Aliphatic C10-C12	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
Aliphatic C12-C16	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	64	
Aliphatic C16-C21	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	95	
Aliphatic C21-C35	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	28	
Aliphatic C5-C35	DETSC 3072*	10	ug/l	< 10	< 10	< 10	< 10	190	
Aromatic C5-C7	DETSC 3322	0.1	ug/l	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	
Aromatic C7-C8	DETSC 3322	0.1	ug/l	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	
Aromatic C8-C10	DETSC 3322	0.1	ug/l	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	
Aromatic C10-C12	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	11	
Aromatic C12-C16	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	22	
Aromatic C16-C21	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	27	
Aromatic C21-C35	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	11	
Aromatic C5-C35	DETSC 3072*	10	ug/l	< 10	< 10	< 10	< 10	71	
TPH Ali/Aro Total C5-C35	DETSC 3072*	10	ug/l	< 10	< 10	< 10	< 10	260	
PAHs									
Naphthalene	DETSC 3304	0.05	ug/l	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	
Acenaphthylene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	
Acenaphthene	DETSC 3304	0.01	ug/l	< 0.01	0.01	< 0.01	0.02	< 0.01	
Fluorene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01	< 0.01	0.02	< 0.01	
Phenanthrene	DETSC 3304	0.01	ug/l	0.02	0.06	< 0.01	0.20	0.02	

Key: * -not accredited. n/s -not supplied.

Summary of Chemical Analysis

Leachate Samples

Our Ref 23-29505
Client Ref P22/271
Contract Title (P22/271) Rotterdam Wharf, Scottish Opera, Glasgow

Lab No	2277195	2277196	2277197	2277198	2277199	2277200	
.Sample ID	TP01	TP02	TP03	TP04	TP06	TP06	
Depth	0.40	1.50	2.20	1.50	0.40	3.50	
Other ID							
Sample Type	LEACHATE	LEACHATE	LEACHATE	LEACHATE	LEACHATE	LEACHATE	
Sampling Date	08/12/2023	07/12/2023	08/12/2023	07/12/2023	07/12/2023	07/12/2023	
Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s	
Test	**Method**	**LOD**	**Units**				
Anthracene	DETSC 3304	0.01	ug/l	< 0.01	0.01	< 0.01	0.10	< 0.01	
Fluoranthene	DETSC 3304	0.01	ug/l	0.03	0.08	< 0.01	0.28	0.04	
Pyrene	DETSC 3304	0.01	ug/l	0.04	0.08	< 0.01	0.23	0.04	
Benzo(a)anthracene	DETSC 3304*	0.01	ug/l	0.01	0.03	< 0.01	0.11	0.02	
Chrysene	DETSC 3304	0.01	ug/l	0.02	0.03	< 0.01	0.13	0.02	
Benzo(b)fluoranthene	DETSC 3304	0.01	ug/l	0.02	0.04	< 0.01	0.13	< 0.01	
Benzo(k)fluoranthene	DETSC 3304	0.01	ug/l	0.01	0.02	< 0.01	0.06	0.01	
Benzo(a)pyrene	DETSC 3304	0.01	ug/l	0.02	0.04	< 0.01	0.13	0.02	
Indeno(1,2,3-c,d)pyrene	DETSC 3304	0.01	ug/l	0.02	0.02	< 0.01	0.07	0.02	
Dibenzo(a,h)anthracene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01	< 0.01	0.01	< 0.01	
Benzo(g,h,i)perylene	DETSC 3304	0.01	ug/l	0.03	0.03	< 0.01	0.07	0.03	
PAH Total	DETSC 3304	0.2	ug/l	0.23	0.46	< 0.20	1.6	0.23	
Phenols									
Total Phenol	DETSC 3451*	0.5	ug/l	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50

Key: * -not accredited. n/s -not supplied.

Summary of Chemical Analysis

Leachate Samples

Our Ref 23-29505
Client Ref P22/271
Contract Title (P22/271) Rotterdam Wharf, Scottish Opera, Glasgc

Lab No				2277201	2277202	2277203	2277204	2277205	2277206
.Sample ID				TP07	TP08	TP09	TP10	TP11	TP11
Depth				0.40	1.10	1.20	1.50	1.10	2.70
Other ID									
Sample Type				LEACHATE	LEACHATE	LEACHATE	LEACHATE	LEACHATE	LEACHATE
Sampling Date				07/12/2023	07/12/2023	08/12/2023	08/12/2023	08/12/2023	08/12/2023
Sampling Time				n/s	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**						
Preparation									
Leachate 2:1 250g Non-WAC	DETSC 1009*			Y	Y	Y	Y	Y	Y
Metals									
Arsenic, Dissolved	DETSC 2306	0.16	ug/l	0.78	0.91	0.75	0.77	0.96	0.64
Cadmium, Dissolved	DETSC 2306	0.03	ug/l	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Calcium, Dissolved	DETSC 2306	0.09	mg/l	6.7	8.6	4.8	1.5	7.5	1.5
Chromium, Dissolved	DETSC 2306	0.25	ug/l	< 0.25	< 0.25	< 0.25	0.62	0.51	< 0.25
Copper, Dissolved	DETSC 2306	0.4	ug/l	1.6	2.1	0.9	2.3	2.3	1.2
Lead, Dissolved	DETSC 2306	0.09	ug/l	2.2	4.7	0.72	0.50	0.68	0.38
Magnesium, Dissolved	DETSC 2306	0.02	mg/l	0.49	0.50	0.52	0.35	0.26	0.32
Mercury, Dissolved (Low Level)	DETSC 2324	0.001	ug/l	0.030	0.21	0.0058	0.026	0.022	0.023
Nickel, Dissolved	DETSC 2306	0.5	ug/l	< 0.5	< 0.5	< 0.5	0.9	< 0.5	0.6
Selenium, Dissolved	DETSC 2306	0.25	ug/l	< 0.25	< 0.25	0.26	< 0.25	0.44	< 0.25
Zinc, Dissolved	DETSC 2306	1.3	ug/l	1.7	< 1.3	< 1.3	2.5	< 1.3	< 1.3
Inorganics									
Total Hardness as CaCO3	DETSC 2303	0.1	mg/l	18.9	23.6	14.0	5.16	19.9	5.03
Sulphate as SO4	DETSC 2055	0.1	mg/l	4.0	2.7	13	6.2	4.9	3.0
Sulphide	DETSC 2208	10	ug/l	< 10	< 10	< 10	11	< 10	11
Petroleum Hydrocarbons									
Aliphatic C5-C6	DETSC 3322	0.1	ug/l	< 0.1	< 0.1		< 0.1	< 0.1	
Aliphatic C6-C8	DETSC 3322	0.1	ug/l	< 0.1	< 0.1		< 0.1	< 0.1	
Aliphatic C8-C10	DETSC 3322	0.1	ug/l	< 0.1	< 0.1		< 0.1	< 0.1	
Aliphatic C10-C12	DETSC 3072*	1	ug/l	< 1.0	< 1.0		< 1.0	< 1.0	
Aliphatic C12-C16	DETSC 3072*	1	ug/l	1.4	< 1.0		< 1.0	< 1.0	
Aliphatic C16-C21	DETSC 3072*	1	ug/l	7.1	4.8		< 1.0	< 1.0	
Aliphatic C21-C35	DETSC 3072*	1	ug/l	< 1.0	< 1.0		< 1.0	< 1.0	
Aliphatic C5-C35	DETSC 3072*	10	ug/l	< 10	< 10		< 10	< 10	
Aromatic C5-C7	DETSC 3322	0.1	ug/l	< 0.1	< 0.1		< 0.1	< 0.1	
Aromatic C7-C8	DETSC 3322	0.1	ug/l	< 0.1	< 0.1		< 0.1	< 0.1	
Aromatic C8-C10	DETSC 3322	0.1	ug/l	< 0.1	< 0.1		< 0.1	< 0.1	
Aromatic C10-C12	DETSC 3072*	1	ug/l	< 1.0	22		< 1.0	< 1.0	
Aromatic C12-C16	DETSC 3072*	1	ug/l	< 1.0	12		< 1.0	< 1.0	
Aromatic C16-C21	DETSC 3072*	1	ug/l	< 1.0	36		< 1.0	< 1.0	
Aromatic C21-C35	DETSC 3072*	1	ug/l	< 1.0	130		< 1.0	< 1.0	
Aromatic C5-C35	DETSC 3072*	10	ug/l	< 10	200		< 10	< 10	
TPH Ali/Aro Total C5-C35	DETSC 3072*	10	ug/l	< 10	200		< 10	< 10	
PAHs									
Naphthalene	DETSC 3304	0.05	ug/l	< 0.05	0.08		< 0.05	0.20	
Acenaphthylene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01		< 0.01	< 0.01	
Acenaphthene	DETSC 3304	0.01	ug/l	< 0.01	0.04		< 0.01	0.05	
Fluorene	DETSC 3304	0.01	ug/l	< 0.01	0.02		< 0.01	0.02	
Phenanthrene	DETSC 3304	0.01	ug/l	0.02	0.07		< 0.01	0.04	

Key: * -not accredited. n/s -not supplied.

Summary of Chemical Analysis

Leachate Samples

Our Ref 23-29505
Client Ref P22/271
Contract Title (P22/271) Rotterdam Wharf, Scottish Opera, Glasgc

Test	Method	LOD	Units	Lab No	2277201	2277202	2277203	2277204	2277205	2277206
				.Sample ID	TP07	TP08	TP09	TP10	TP11	TP11
				Depth	0.40	1.10	1.20	1.50	1.10	2.70
				Other ID						
				Sample Type	LEACHATE	LEACHATE	LEACHATE	LEACHATE	LEACHATE	LEACHATE
				Sampling Date	07/12/2023	07/12/2023	08/12/2023	08/12/2023	08/12/2023	08/12/2023
				Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s
Anthracene	DETSC 3304	0.01	ug/l		< 0.01	0.02		< 0.01	0.02	
Fluoranthene	DETSC 3304	0.01	ug/l		0.03	0.15		< 0.01	0.05	
Pyrene	DETSC 3304	0.01	ug/l		0.04	0.17		< 0.01	0.08	
Benzo(a)anthracene	DETSC 3304*	0.01	ug/l		0.02	0.06		< 0.01	0.02	
Chrysene	DETSC 3304	0.01	ug/l		0.02	0.09		< 0.01	0.03	
Benzo(b)fluoranthene	DETSC 3304	0.01	ug/l		0.03	0.13		< 0.01	0.04	
Benzo(k)fluoranthene	DETSC 3304	0.01	ug/l		0.01	0.05		< 0.01	0.02	
Benzo(a)pyrene	DETSC 3304	0.01	ug/l		0.03	0.09		< 0.01	0.03	
Indeno(1,2,3-c,d)pyrene	DETSC 3304	0.01	ug/l		0.02	0.07		< 0.01	0.02	
Dibenzo(a,h)anthracene	DETSC 3304	0.01	ug/l		< 0.01	< 0.01		< 0.01	< 0.01	
Benzo(g,h,i)perylene	DETSC 3304	0.01	ug/l		0.03	0.10		< 0.01	0.03	
PAH Total	DETSC 3304	0.2	ug/l		0.24	1.1		< 0.20	0.63	
Phenols										
Total Phenol	DETSC 3451*	0.5	ug/l		< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50

Key: * -not accredited. n/s -not supplied.

Summary of Asbestos Analysis

Soil Samples

Our Ref 23-29505
Client Ref P22/271
Contract Title (P22/271) Rotterdam Wharf, Scottish Opera, Glasgow

Lab No	Sample ID	Material Type	Result	Comment*	Analyst
2277176	TP01 0.40	SOIL	Chrysotile Crocidolite	Chrysotile and Crocidolite present in microscopic insulation debris	D Wilkinson
2277177	TP02 0.40	SOIL	Chrysotile Crocidolite	Chrysotile and Crocidolite present in microscopic insulation debris	D Wilkinson
2277179	TP03 1.20	SOIL	Crocidolite	Crocidolite present as fibre bundles	D Wilkinson
2277180	TP03 2.20	SOIL	Chrysotile Crocidolite	Chrysotile and Crocidolite present in microscopic insulation debris	D Wilkinson
2277181	TP04 0.50	SOIL	Chrysotile	Chrysotile present as fibre bundles	D Wilkinson
2277182	TP04 1.50	SOIL	Chrysotile Crocidolite	Chrysotile and Crocidolite present as fibre bundles	D Wilkinson
2277183	TP05 0.40	SOIL	Chrysotile	Chrysotile present as fibre bundles	D Wilkinson
2277184	TP06 0.40	SOIL	Chrysotile	Chrysotile present as fibre bundles	D Wilkinson
2277185	TP06 3.50	SOIL	Chrysotile	Chrysotile present as fibre bundles	D Wilkinson
2277186	TP07 0.40	SOIL	Chrysotile	Chrysotile present in microscopic insulation debris	D Wilkinson
2277187	TP07 2.50	SOIL	Crocidolite	Crocidolite present as fibre bundles	D Wilkinson
2277188	TP08 0.40	SOIL	Chrysotile	Chrysotile present as fibre bundles	D Wilkinson
2277189	TP08 1.10	SOIL	Chrysotile	Chrysotile present in microscopic insulation debris	D Wilkinson
2277190	TP09 0.40	SOIL	Chrysotile	Chrysotile present as fibre bundles	D Wilkinson
2277191	TP09 1.20	SOIL	NAD	none	D Wilkinson
2277192	TP10 1.50	SOIL	NAD	none	D Wilkinson
2277193	TP11 1.10	SOIL	Crocidolite	Crocidolite present as fibre bundles	D Wilkinson
2277194	TP11 2.70	SOIL	NAD	none	D Wilkinson

Crocidolite = Blue Asbestos, Amosite = Brown Asbestos, Chrysotile = White Asbestos. Anthophyllite, Actinolite and Tremolite are other forms of Asbestos. Samples are analysed by DETSC 1101 using polarised light microscopy in accordance with HSG248 and documented in-house methods. NAD = No Asbestos Detected. Where a sample is NAD, the result is based on analysis of at least 2 sub-samples and should be taken to mean 'no asbestos detected in sample'. Key: * -not included in laboratory scope of accreditation.

Summary of Asbestos Quantification Analysis

Soil Samples

Our Ref 23-29505
Client Ref P22/271
Contract Title (P22/271) Rotterdam Wharf, Scottish Opera, Glasgow

	Lab No	2277176	2277177	2277179	2277180
	.Sample ID	TP01	TP02	TP03	TP03
	Depth	0.40	0.40	1.20	2.20
	Other ID				
	Sample Type				
	Sampling Date	08/12/2023	07/12/2023	08/12/2023	08/12/2023
	Sampling Time				
Test	**Method**	**Units**			
Total Mass% Asbestos (a+b+c)	DETSC 1102	Mass %	**0.048**	**0.004**	**0.019**	**0.087**
Gravimetric Quantification (a)	DETSC 1102	Mass %	0.048	0.004	na	0.087
Detailed Gravimetric Quantification (b)	DETSC 1102	Mass %	na	na	0.019	na
Quantification by PCOM (c)	DETSC 1102	Mass %	na	na	na	na
Potentially Respirable Fibres (d)	DETSC 1102	Fibres/g	na	na	na	na
Breakdown of Gravimetric Analysis (a)						
Mass of Sample		g	779.87	1272.04	652.86	634.08
ACMs present*		type	Insulation	Insulation		Insulation
Mass of ACM in sample		g	0.44	0.06		0.65
% ACM by mass		%	0.06	0.00		0.10
% asbestos in ACM		%	85	85		85
% asbestos in sample		%	0.048	0.004		0.087
Breakdown of Detailed Gravimetric Analysis (b)						
% Amphibole bundles in sample		Mass %	na	na	0.019	na
% Chrysotile bundles in sample		Mass %	na	na	na	na
Breakdown of PCOM Analysis (c)						
% Amphibole fibres in sample		Mass %	na	na	na	na
% Chrysotile fibres in sample		Mass %	na	na	na	na
Breakdown of Potentially Respirable Fibre Analysis (d)						
Amphibole fibres		Fibres/g	na	na	na	na
Chrysotile fibres		Fibres/g	na	na	na	na

* Denotes test or material description outside of UKAS accreditation.
% asbestos in Asbestos Containing Materials (ACMs) is determined by by reference to HSG 264.
Recommended sample size for quantification is approximately 1kg
# denotes deviating sample

Summary of Asbestos Quantification Analysi

Soil Samples

Our Ref 23-29505
Client Ref P22/271
Contract Title (P22/271) Rotterdam Wharf, Scottish Opera, Glasgow

	Lab No	2277181	2277182	2277183	2277184
	.Sample ID	TP04	TP04	TP05	TP06
	Depth	0.50	1.50	0.40	0.40
	Other ID				
	Sample Type				
	Sampling Date	07/12/2023	07/12/2023	07/12/2023	07/12/2023
	Sampling Time				
Test	Method	Units				
Total Mass% Asbestos (a+b+c)	DETSC 1102	Mass %	**< 0.001**	**0.001**	**< 0.001**	**< 0.001**
Gravimetric Quantification (a)	DETSC 1102	Mass %	na	na	na	na
Detailed Gravimetric Quantification (b)	DETSC 1102	Mass %	<0.001	0.001	<0.001	<0.001
Quantification by PCOM (c)	DETSC 1102	Mass %	na	na	na	na
Potentially Respirable Fibres (d)	DETSC 1102	Fibres/g	na	na	na	na
Breakdown of Gravimetric Analysis (a)						
Mass of Sample		g	537.31	952.89	781.32	715.14
ACMs present*		type				
Mass of ACM in sample		g				
% ACM by mass		%				
% asbestos in ACM		%				
% asbestos in sample		%				
Breakdown of Detailed Gravimetric Analysis (b)						
% Amphibole bundles in sample		Mass %	na	<0.001	na	na
% Chrysotile bundles in sample		Mass %	<0.001	<0.001	<0.001	<0.001
Breakdown of PCOM Analysis (c)						
% Amphibole fibres in sample		Mass %	na	na	na	na
% Chrysotile fibres in sample		Mass %	na	na	na	na
Breakdown of Potentially Respirable Fibre Analysis (d)						
Amphibole fibres		Fibres/g	na	na	na	na
Chrysotile fibres		Fibres/g	na	na	na	na

* Denotes test or material description outside of UKAS accreditation.
% asbestos in Asbestos Containing Materials (ACMs) is determined by by reference to HSG 264.
Recommended sample size for quantification is approximately 1kg
# denotes deviating sample

Summary of Asbestos Quantification Analysi

Soil Samples

Our Ref 23-29505
Client Ref P22/271
Contract Title (P22/271) Rotterdam Wharf, Scottish Opera, Glasgow

	Lab No	2277185	2277186	2277187	2277188
	.Sample ID	TP06	TP07	TP07	TP08
	Depth	3.50	0.40	2.50	0.40
	Other ID				
	Sample Type				
	Sampling Date	07/12/2023	07/12/2023	07/12/2023	07/12/2023
	Sampling Time				
Test	**Method**	**Units**			
Total Mass% Asbestos (a+b+c)	DETSC 1102	Mass %	**< 0.001**	**0.021**	**< 0.001**	**< 0.001**
Gravimetric Quantification (a)	DETSC 1102	Mass %	na	0.021	na	na
Detailed Gravimetric Quantification (b)	DETSC 1102	Mass %	<0.001	na	<0.001	<0.001
Quantification by PCOM (c)	DETSC 1102	Mass %	na	na	na	na
Potentially Respirable Fibres (d)	DETSC 1102	Fibres/g	na	na	na	na
Breakdown of Gravimetric Analysis (a)						
Mass of Sample		g	1051.71	403.41	1344.63	992.50
ACMs present*		type		Insulation		
Mass of ACM in sample		g		0.10		
% ACM by mass		%		0.03		
% asbestos in ACM		%		85		
% asbestos in sample		%		0.021		
Breakdown of Detailed Gravimetric Analysis (b)						
% Amphibole bundles in sample		Mass %	na	na	<0.001	na
% Chrysotile bundles in sample		Mass %	<0.001	na	na	<0.001
Breakdown of PCOM Analysis (c)						
% Amphibole fibres in sample		Mass %	na	na	na	na
% Chrysotile fibres in sample		Mass %	na	na	na	na
Breakdown of Potentially Respirable Fibre Analysis (d)						
Amphibole fibres		Fibres/g	na	na	na	na
Chrysotile fibres		Fibres/g	na	na	na	na

* Denotes test or material description outside of UKAS accreditation.
% asbestos in Asbestos Containing Materials (ACMs) is determined by by reference to HSG 264.
Recommended sample size for quantification is approximately 1kg
# denotes deviating sample

Summary of Asbestos Quantification Analysi

Soil Samples

Our Ref 23-29505
Client Ref P22/271
Contract Title (P22/271) Rotterdam Wharf, Scottish Opera, Glasgow

	Lab No	2277189	2277190	2277193
	.Sample ID	TP08	TP09	TP11
	Depth	1.10	0.40	1.10
	Other ID			
	Sample Type			
	Sampling Date	07/12/2023	08/12/2023	08/12/2023
	Sampling Time			
Test	**Method**	**Units**		
Total Mass% Asbestos (a+b+c)	DETSC 1102	Mass %	**0.012**	**< 0.001**	**0.001**
Gravimetric Quantification (a)	DETSC 1102	Mass %	0.012	na	na
Detailed Gravimetric Quantification (b)	DETSC 1102	Mass %	na	<0.001	0.001
Quantification by PCOM (c)	DETSC 1102	Mass %	na	na	na
Potentially Respirable Fibres (d)	DETSC 1102	Fibres/g	na	na	na
Breakdown of Gravimetric Analysis (a)					
Mass of Sample		g	795.17	1502.05	842.54
ACMs present*		type	Insulation		
Mass of ACM in sample		g	0.11		
% ACM by mass		%	0.01		
% asbestos in ACM		%	85		
% asbestos in sample		%	0.012		
Breakdown of Detailed Gravimetric Analysis (b)					
% Amphibole bundles in sample		Mass %	na	na	0.001
% Chrysotile bundles in sample		Mass %	na	<0.001	na
Breakdown of PCOM Analysis (c)					
% Amphibole fibres in sample		Mass %	na	na	na
% Chrysotile fibres in sample		Mass %	na	na	na
Breakdown of Potentially Respirable Fibre Analysis (d)					
Amphibole fibres		Fibres/g	na	na	na
Chrysotile fibres		Fibres/g	na	na	na

* Denotes test or material description outside of UKAS accreditation.
% asbestos in Asbestos Containing Materials (ACMs) is determined by by reference to HSG 264.
Recommended sample size for quantification is approximately 1kg
# denotes deviating sample

Information in Support of the Analytical Results

Our Ref 23-29505
Client Ref P22/271
Contract (P22/271) Rotterdam Wharf, Scottish Opera, Glasgow

Containers Received & Deviating Samples

Lab No	Sample ID	Date Sampled	Containers Received	Holding time exceeded for tests	Inappropriate container for tests
2277176	TP01 0.40 SOIL	08/12/23	GJ 250ml, GJ 60ml, PT 1L x2		
2277177	TP02 0.40 SOIL	07/12/23	GJ 250ml, GJ 60ml, PT 1L x2		
2277178	TP02 1.50 SOIL	07/12/23	GJ 250ml, GJ 60ml, PT 1L x2		
2277179	TP03 1.20 SOIL	08/12/23	GJ 250ml, GJ 60ml, PT 1L x2		
2277180	TP03 2.20 SOIL	08/12/23	GJ 250ml, GJ 60ml, PT 1L x2		
2277181	TP04 0.50 SOIL	07/12/23	GJ 250ml, GJ 60ml, PT 1L x2		
2277182	TP04 1.50 SOIL	07/12/23	GJ 250ml, GJ 60ml, PT 1L x2		
2277183	TP05 0.40 SOIL	07/12/23	GJ 250ml, GJ 60ml, PT 1L x2		
2277184	TP06 0.40 SOIL	07/12/23	GJ 250ml, GJ 60ml, PT 1L x2		
2277185	TP06 3.50 SOIL	07/12/23	GJ 250ml, GJ 60ml, PT 1L x2		
2277186	TP07 0.40 SOIL	07/12/23	GJ 250ml, GJ 60ml, PT 1L x2		
2277187	TP07 2.50 SOIL	07/12/23	GJ 250ml, GJ 60ml, PT 1L x2		
2277188	TP08 0.40 SOIL	07/12/23	GJ 250ml, GJ 60ml, PT 1L x2		
2277189	TP08 1.10 SOIL	07/12/23	GJ 250ml, GJ 60ml, PT 1L x2		
2277190	TP09 0.40 SOIL	08/12/23	GJ 250ml, GJ 60ml, PT 1L x2		
2277191	TP09 1.20 SOIL	08/12/23	GJ 250ml, GJ 60ml, PT 1L x2		
2277192	TP10 1.50 SOIL	08/12/23	GJ 250ml, GJ 60ml, PT 1L x2		
2277193	TP11 1.10 SOIL	08/12/23	GJ 250ml, GJ 60ml, PT 1L x2		
2277194	TP11 2.70 SOIL	08/12/23	GJ 250ml, GJ 60ml, PT 1L x2		
2277195	TP01 0.40 LEACHATE	08/12/23	GJ 250ml, GJ 60ml, PT 1L x2		
2277196	TP02 1.50 LEACHATE	07/12/23	GJ 250ml, GJ 60ml, PT 1L x2		
2277197	TP03 2.20 LEACHATE	08/12/23	GJ 250ml, GJ 60ml, PT 1L x2		
2277198	TP04 1.50 LEACHATE	07/12/23	GJ 250ml, GJ 60ml, PT 1L x2		
2277199	TP06 0.40 LEACHATE	07/12/23	GJ 250ml, GJ 60ml, PT 1L x2		
2277200	TP06 3.50 LEACHATE	07/12/23	GJ 250ml, GJ 60ml, PT 1L x2		
2277201	TP07 0.40 LEACHATE	07/12/23	GJ 250ml, GJ 60ml, PT 1L x2		
2277202	TP08 1.10 LEACHATE	07/12/23	GJ 250ml, GJ 60ml, PT 1L x2		
2277203	TP09 1.20 LEACHATE	08/12/23	GJ 250ml, GJ 60ml, PT 1L x2		
2277204	TP10 1.50 LEACHATE	08/12/23	GJ 250ml, GJ 60ml, PT 1L x2		
2277205	TP11 1.10 LEACHATE	08/12/23	GJ 250ml, GJ 60ml, PT 1L x2		
2277206	TP11 2.70 LEACHATE	08/12/23	GJ 250ml, GJ 60ml, PT 1L x2		

Key: G-Glass P-Plastic J-Jar T-Tub

DETS cannot be held responsible for the integrity of samples received whereby the laboratory did not undertake the sampling. In this instance samples received may be deviating. Deviating Sample criteria are based on British and International standards and laboratory trials in conjunction with the UKAS note 'Guidance on Deviating Samples'. All samples received are listed above. However, those samples that have additional comments in relation to hold time, inappropriate containers etc are deviating due to the reasons stated. This means that the analysis is accredited where applicable, but results may be compromised due to sample deviations. If no sampled date (soils) or date+time (waters) has been supplied then samples are deviating. However, if you are able to supply a sampled date (and time for waters) this will prevent samples being reported as deviating where specific hold times are not exceeded and where the container supplied is suitable.

Information in Support of the Analytical Results

Our Ref 23-29505
Client Ref P22/271
Contract (P22/271) Rotterdam Wharf, Scottish Opera, Glasgow

Soil Analysis Notes

Inorganic soil analysis was carried out on a dried sample, crushed to pass a 425µm sieve, in accordance with BS1377.

Organic soil analysis was carried out on an 'as received' sample. Organics results are corrected for moisture and expressed on a dry weight basis.

The Loss on Drying, used to express organics analysis on an air dried basis, is carried out at a temperature of 28°C +/-2°C.

Disposal

From the issue date of this test certificate, samples will be held for the following times prior to disposal :-

Soils - 1 month, Liquids - 2 weeks, Asbestos (test portion) - 6 months

End of Report

Certificate of Analysis

Certificate Number 24-00608

Issued: 17-Jan-24

Client MATTest Ltd.
10 Queenslie Point
120 Stepps Road
Glasgow
G33 3NQ

Our Reference 24-00608

Client Reference 23/1390

Order No MATSC5583

Contract Title Rotterdam Wharf, Scottish Opera, Glasgow

Description 3 Soil samples.

Date Received 12-Jan-24

Date Started 12-Jan-24

Date Completed 17-Jan-24

Test Procedures Identified by prefix DETSn (details on request).

Notes Opinions and interpretations are outside the laboratory's scope of ISO 17025 accreditation. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.

Approved By [redacted]

Kirk Bridgewood
General Manager

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Summary of Chemical Analysis

Soil Samples

Our Ref 24-00608
Client Ref 23/1390
Contract Title Rotterdam Wharf, Scottish Opera, Glasgow

			Lab No	2285533	2285534	2285535
			.Sample ID	BH01A	BH03	BH05
			Depth	6.50	9.30	12.30
			Other ID			
			Sample Type	SOIL	SOIL	SOIL
			Sampling Date	n/s	n/s	n/s
			Sampling Time	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**			
Inorganics						
pH	DETSC 2008#		pH	8.1	8.3	7.9
Sulphate as SO4, Total	DETSC 2321#	0.01	%	0.04	0.03	0.06

Key: # -MCERTS (accreditation only applies if report carries the MCERTS logo). n/s -not supplied.

Information in Support of the Analytical Results

Our Ref 24-00608
Client Ref 23/1390
Contract Rotterdam Wharf, Scottish Opera, Glasgow

Containers Received & Deviating Samples

Lab No	Sample ID	Date Sampled	Containers Received	Holding time exceeded for tests	Inappropriate container for tests
2285533	BH01A 6.50 SOIL		PT 1L	Sample date not supplied, Total Sulphate ICP (30 days), pH + Conductivity (7 days)	
2285534	BH03 9.30 SOIL		PT 1L	Sample date not supplied, Total Sulphate ICP (30 days), pH + Conductivity (7 days)	
2285535	BH05 12.30 SOIL		PT 1L	Sample date not supplied, Total Sulphate ICP (30 days), pH + Conductivity (7 days)	

Key: P-Plastic T-Tub
DETS cannot be held responsible for the integrity of samples received whereby the laboratory did not undertake the sampling. In this instance samples received may be deviating. Deviating Sample criteria are based on British and International standards and laboratory trials in conjunction with the UKAS note 'Guidance on Deviating Samples'. All samples received are listed above. However, those samples that have additional comments in relation to hold time, inappropriate containers etc are deviating due to the reasons stated. This means that the analysis is accredited where applicable, but results may be compromised due to sample deviations. If no sampled date (soils) or date+time (waters) has been supplied then samples are deviating. However, if you are able to supply a sampled date (and time for waters) this will prevent samples being reported as deviating where specific hold times are not exceeded and where the container supplied is suitable.

Soil Analysis Notes

Inorganic soil analysis was carried out on a dried sample, crushed to pass a 425µm sieve, in accordance with BS1377.

Organic soil analysis was carried out on an 'as received' sample. Organics results are corrected for moisture and expressed on a dry weight basis.

The Loss on Drying, used to express organics analysis on an air dried basis, is carried out at a temperature of 28°C +/-2°C.

Disposal

From the issue date of this test certificate, samples will be held for the following times prior to disposal :-

Soils - 1 month, Liquids - 2 weeks, Asbestos (test portion) - 6 months

End of Report

Certificate of Analysis

Certificate Number 23-29937

Issued: 08-Jan-24

Client Mason Evans Partnership
95 Morrison Street
Glasgow
G5 8BE

Our Reference 23-29937

Client Reference P22-271

Order No Scott Armstong

Contract Title (P22/271) Rotterdam Wharf, Scottish Opera, Glasgow

Description One Water sample.

Date Received 20-Dec-23

Date Started 20-Dec-23

Date Completed 08-Jan-24

Test Procedures Identified by prefix DETSn (details on request).

Notes Opinions and interpretations are outside the laboratory's scope of ISO 17025 accreditation. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.

Approved By [redacted]

Kirk Bridgewood
General Manager

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Summary of Chemical Analysis

Water Samples

Our Ref 23-29937
Client Ref P22-271
Contract Title (P22/271) Rotterdam Wharf, Scottish Opera, Glasgow

Lab No	2279884
.Sample ID	BH05
Depth	
Other ID	
Sample Type	WATER
Sampling Date	18/12/2023
Sampling Time	n/s

Test	Method	LOD	Units	
Metals				
Arsenic, Dissolved	DETSC 2306	0.16	ug/l	1.6
Boron, Dissolved	DETSC 2306*	12	ug/l	110
Cadmium, Dissolved	DETSC 2306	0.03	ug/l	< 0.03
Calcium, Dissolved	DETSC 2306	0.09	mg/l	47
Chromium, Dissolved	DETSC 2306	0.25	ug/l	1.7
Copper, Dissolved	DETSC 2306	0.4	ug/l	2.0
Lead, Dissolved	DETSC 2306	0.09	ug/l	< 0.09
Magnesium, Dissolved	DETSC 2306	0.02	mg/l	11
Mercury, Dissolved (Low Level)	DETSC 2324	0.001	ug/l	0.0027
Nickel, Dissolved	DETSC 2306	0.5	ug/l	1.6
Selenium, Dissolved	DETSC 2306	0.25	ug/l	9.9
Zinc, Dissolved	DETSC 2306	1.3	ug/l	15
Inorganics				
pH	DETSC 2008		pH	7.6
Cyanide, Total Low Level	DETSC 2131	0.1	ug/l	0.2
Dissolved, Oxygen	DETSC 2048*	0.1	mg/l	10.6
Dissolved Organic Carbon	DETSC 2033*	2	mg/l	4.0
Total Hardness as CaCO3	DETSC 2303	0.1	mg/l	162
Sulphate as SO4	DETSC 2055	0.1	mg/l	70
Sulphide	DETSC 2208	10	ug/l	14
Petroleum Hydrocarbons				
Aliphatic C5-C6	DETSC 3322	0.1	ug/l	< 0.1
Aliphatic C6-C8	DETSC 3322	0.1	ug/l	< 0.1
Aliphatic C8-C10	DETSC 3322	0.1	ug/l	< 0.1
Aliphatic C10-C12	DETSC 3072*	1	ug/l	< 1.0
Aliphatic C12-C16	DETSC 3072*	1	ug/l	< 1.0
Aliphatic C16-C21	DETSC 3072*	1	ug/l	< 1.0
Aliphatic C21-C35	DETSC 3072*	1	ug/l	25
Aliphatic C5-C35	DETSC 3072*	10	ug/l	25
Aromatic C5-C7	DETSC 3322	0.1	ug/l	< 0.1
Aromatic C7-C8	DETSC 3322	0.1	ug/l	< 0.1
Aromatic C8-C10	DETSC 3322	0.1	ug/l	< 0.1
Aromatic C10-C12	DETSC 3072*	1	ug/l	< 1.0
Aromatic C12-C16	DETSC 3072*	1	ug/l	< 1.0
Aromatic C16-C21	DETSC 3072*	1	ug/l	< 1.0
Aromatic C21-C35	DETSC 3072*	1	ug/l	< 1.0
Aromatic C5-C35	DETSC 3072*	10	ug/l	< 10
TPH Ali/Aro Total C5-C35	DETSC 3072*	10	ug/l	26
PAHs				
Naphthalene	DETSC 3304	0.05	ug/l	< 0.05
Acenaphthylene	DETSC 3304	0.01	ug/l	< 0.01

Key: * -not accredited. n/s -not supplied.

Summary of Chemical Analysis

Water Samples

Our Ref 23-29937
Client Ref P22-271
Contract Title (P22/271) Rotterdam Wharf, Scottish Opera, Glasgow

Lab No	2279884
.Sample ID	BH05
Depth	
Other ID	
Sample Type	WATER
Sampling Date	18/12/2023
Sampling Time	n/s

Test	Method	LOD	Units	
Acenaphthene	DETSC 3304	0.01	ug/l	< 0.01
Fluorene	DETSC 3304	0.01	ug/l	< 0.01
Phenanthrene	DETSC 3304	0.01	ug/l	0.01
Anthracene	DETSC 3304	0.01	ug/l	< 0.01
Fluoranthene	DETSC 3304	0.01	ug/l	< 0.01
Pyrene	DETSC 3304	0.01	ug/l	< 0.01
Benzo(a)anthracene	DETSC 3304*	0.01	ug/l	< 0.01
Chrysene	DETSC 3304	0.01	ug/l	< 0.01
Benzo(b)fluoranthene	DETSC 3304	0.01	ug/l	< 0.01
Benzo(k)fluoranthene	DETSC 3304	0.01	ug/l	< 0.01
Benzo(a)pyrene	DETSC 3304	0.01	ug/l	< 0.01
Indeno(1,2,3-c,d)pyrene	DETSC 3304	0.01	ug/l	< 0.01
Dibenzo(a,h)anthracene	DETSC 3304	0.01	ug/l	< 0.01
Benzo(g,h,i)perylene	DETSC 3304	0.01	ug/l	< 0.01
PAH Total	DETSC 3304	0.2	ug/l	< 0.20
Phenols				
Total Phenol	DETSC 3451*	0.5	ug/l	< 0.50

Key: * -not accredited. n/s -not supplied.

Information in Support of the Analytical Results

Our Ref 23-29937
Client Ref P22-271
Contract (P22/271) Rotterdam Wharf, Scottish Opera, Glasgow

Containers Received & Deviating Samples

Lab No	Sample ID	Date Sampled	Containers Received	Holding time exceeded for tests	Inappropriate container for tests
2279884	BH05 WATER	18/12/23	GB 1L x2, GB to 500ml, PB 1L	pH/Cond (1 days)	

Key: G-Glass P-Plastic B-Bottle
DETS cannot be held responsible for the integrity of samples received whereby the laboratory did not undertake the sampling. In this instance samples received may be deviating. Deviating Sample criteria are based on British and International standards and laboratory trials in conjunction with the UKAS note 'Guidance on Deviating Samples'. All samples received are listed above. However, those samples that have additional comments in relation to hold time, inappropriate containers etc are deviating due to the reasons stated. This means that the analysis is accredited where applicable, but results may be compromised due to sample deviations. If no sampled date (soils) or date+time (waters) has been supplied then samples are deviating. However, if you are able to supply a sampled date (and time for waters) this will prevent samples being reported as deviating where specific hold times are not exceeded and where the container supplied is suitable.

Disposal

From the issue date of this test certificate, samples will be held for the following times prior to disposal :-
Soils - 1 month, Liquids - 2 weeks, Asbestos (test portion) - 6 months

End of Report

Certificate of Analysis

Certificate Number 24-01406 *Issued:* 31-Jan-24

Client Mason Evans Partnership
95 Morrison Street
Glasgow
G5 8BE

Our Reference 24-01406

Client Reference P22-271

Order No Scott Armstrong

Contract Title (P22/271) Rotterdam Wharf, Scottish Opera, Glasgow

Description 3 Other Water samples.

Date Received 24-Jan-24

Date Started 24-Jan-24

Date Completed 31-Jan-24

Test Procedures Identified by prefix DETSn (details on request).

Notes Opinions and interpretations are outside the laboratory's scope of ISO 17025 accreditation. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.

Approved By [redacted]

Kirk Bridgewood
General Manager

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Summary of Chemical Analysis

Water Samples

Our Ref 24-01406
Client Ref P22-271
Contract Title (P22/271) Rotterdam Wharf, Scottish Opera, Glasgow

	Lab No	2290175	2290176	2290177
	.Sample ID	BH02	BH04	BH06
	Depth			
	Other ID			
	Sample Type	WATER OTHER	WATER OTHER	WATER OTHER
	Sampling Date	22/01/2024	22/01/2024	22/01/2024
	Sampling Time	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**	
Metals				
Arsenic, Dissolved	DETSC 2306	0.16	ug/l	1.4	2.3	0.99
Boron, Dissolved	DETSC 2306*	12	ug/l	230	220	240
Cadmium, Dissolved	DETSC 2306	0.03	ug/l	0.14	0.04	< 0.03
Calcium, Dissolved	DETSC 2306	0.09	mg/l	76	54	78
Chromium, Dissolved	DETSC 2306	0.25	ug/l	1.2	0.96	0.26
Copper, Dissolved	DETSC 2306	0.4	ug/l	11	2.8	1.3
Lead, Dissolved	DETSC 2306	0.09	ug/l	0.40	0.56	0.25
Magnesium, Dissolved	DETSC 2306	0.02	mg/l	19	12	30
Mercury, Dissolved (Low Level)	DETSC 2324	0.001	ug/l	0.0016	0.0014	< 0.0010
Nickel, Dissolved	DETSC 2306	0.5	ug/l	11	5.1	4.3
Selenium, Dissolved	DETSC 2306	0.25	ug/l	3.7	15	0.64
Zinc, Dissolved	DETSC 2306	1.3	ug/l	170	160	100
Inorganics						
pH	DETSC 2008		pH	7.4	7.7	7.4
Cyanide, Total Low Level	DETSC 2131	0.1	ug/l	0.3	0.3	0.2
Dissolved, Oxygen	DETSC 2048*	0.1	mg/l	10.9	10.1	2.3
Dissolved Organic Carbon	DETSC 2085	2	mg/l	3.0	< 2.0	2.1
Total Hardness as CaCO3	DETSC 2303	0.1	mg/l	266	184	317
Sulphate as SO4	DETSC 2055	0.1	mg/l	340	320	130
Sulphide	DETSC 2208	10	ug/l	11	100	11
Petroleum Hydrocarbons						
Aliphatic C5-C6	DETSC 3322	0.1	ug/l	< 0.1	< 0.1	< 0.1
Aliphatic C6-C8	DETSC 3322	0.1	ug/l	< 0.1	< 0.1	< 0.1
Aliphatic C8-C10	DETSC 3322	0.1	ug/l	< 0.1	< 0.1	< 0.1
Aliphatic C10-C12	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0
Aliphatic C12-C16	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0
Aliphatic C16-C21	DETSC 3072*	1	ug/l	< 1.0	7.2	< 1.0
Aliphatic C21-C35	DETSC 3072*	1	ug/l	< 1.0	230	< 1.0
Aliphatic C5-C35	DETSC 3072*	10	ug/l	< 10	240	< 10
Aromatic C5-C7	DETSC 3322	0.1	ug/l	< 0.1	< 0.1	< 0.1
Aromatic C7-C8	DETSC 3322	0.1	ug/l	< 0.1	< 0.1	< 0.1
Aromatic C8-C10	DETSC 3322	0.1	ug/l	< 0.1	< 0.1	< 0.1
Aromatic C10-C12	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0
Aromatic C12-C16	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0
Aromatic C16-C21	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0
Aromatic C21-C35	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0
Aromatic C5-C35	DETSC 3072*	10	ug/l	< 10	< 10	< 10
TPH Ali/Aro Total C5-C35	DETSC 3072*	10	ug/l	< 10	240	< 10
PAHs						
Naphthalene	DETSC 3304	0.05	ug/l	0.10	< 0.05	0.12
Acenaphthylene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01	< 0.01

Key: * -not accredited. n/s -not supplied.

Summary of Chemical Analysis

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Contract Title (P22/271) Rotterdam Wharf, Scottish Opera, Glasgow

				Lab No	2290175	2290176	2290177
				.Sample ID	BH02	BH04	BH06
				Depth			
				Other ID			
				Sample Type	WATER OTHER	WATER OTHER	WATER OTHER
				Sampling Date	22/01/2024	22/01/2024	22/01/2024
				Sampling Time	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**			
Acenaphthene	DETSC 3304	0.01	ug/l	0.02	< 0.01	0.01
Fluorene	DETSC 3304	0.01	ug/l	0.05	0.01	0.03
Phenanthrene	DETSC 3304	0.01	ug/l	0.23	0.06	0.20
Anthracene	DETSC 3304	0.01	ug/l	0.01	< 0.01	< 0.01
Fluoranthene	DETSC 3304	0.01	ug/l	0.07	0.02	0.03
Pyrene	DETSC 3304	0.01	ug/l	0.07	0.03	0.04
Benzo(a)anthracene	DETSC 3304*	0.01	ug/l	0.03	< 0.01	0.02
Chrysene	DETSC 3304	0.01	ug/l	0.03	< 0.01	0.02
Benzo(b)fluoranthene	DETSC 3304	0.01	ug/l	0.06	0.02	0.04
Benzo(k)fluoranthene	DETSC 3304	0.01	ug/l	0.02	< 0.01	0.01
Benzo(a)pyrene	DETSC 3304	0.01	ug/l	0.03	0.01	0.02
Indeno(1,2,3-c,d)pyrene	DETSC 3304	0.01	ug/l	0.03	0.01	0.03
Dibenzo(a,h)anthracene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01	< 0.01
Benzo(g,h,i)perylene	DETSC 3304	0.01	ug/l	0.07	0.02	0.05
PAH Total	DETSC 3304	0.2	ug/l	0.82	< 0.20	0.63
Phenols						
Total Phenol	DETSC 3451*	0.5	ug/l	< 0.50	< 0.50	< 0.50

2290175, 2290176, 2290177 - WATER OTHER
testing is not accredited

Information in Support of the Analytical Results

Our Ref 24-01406
Client Ref P22-271
Contract (P22/271) Rotterdam Wharf, Scottish Opera, Glasgow

Containers Received & Deviating Samples

Lab No	Sample ID	Date Sampled	Containers Received	Holding time exceeded for tests	Inappropriate container for tests
2290175	BH02 WATER	22/01/24	GB 1L x2, GV, PB 1L	pH/Cond (1 days)	
2290176	BH04 WATER	22/01/24	GB 1L x2, GV, PB 1L	pH/Cond (1 days)	
2290177	BH06 WATER	22/01/24	GB 1L x2, PB 1L	pH/Cond (1 days)	

Key: G-Glass P-Plastic B-Bottle V-Vial

DETS cannot be held responsible for the integrity of samples received whereby the laboratory did not undertake the sampling. In this instance samples received may be deviating. Deviating Sample criteria are based on British and International standards and laboratory trials in conjunction with the UKAS note 'Guidance on Deviating Samples'. All samples received are listed above. However, those samples that have additional comments in relation to hold time, inappropriate containers etc are deviating due to the reasons stated. This means that the analysis is accredited where applicable, but results may be compromised due to sample deviations. If no sampled date (soils) or date+time (waters) has been supplied then samples are deviating. However, if you are able to supply a sampled date (and time for waters) this will prevent samples being reported as deviating where specific hold times are not exceeded and where the container supplied is suitable.

Disposal

From the issue date of this test certificate, samples will be held for the following times prior to disposal :-

Soils - 1 month, Liquids - 2 weeks, Asbestos (test portion) - 6 months

End of Report