

Cambridge Waste Water Treatment Plant Relocation Project
Anglian Water Services Limited

Appendix 14.3: Geoenvironmental Results – Proposed WWTP

Application Document Reference: 5.4.14.3
PINS Project Reference: WW010003
APFP Regulation No. 5(2)a

Project: TE8364 Cambridge Waste Water Treatment Plant Relocation					Groundwater							
Client: Soil Engineering Geoservices Ltd					infrastructure							
Chemtest Job No.:					21-40931	21-40934	21-40935	21-38515				
Quotation No.:					1324639	1324646	1324647	1312386				
Order No.:					2	2	2					
Chemtest Sample ID.:					BH_TUN_011	BH_FE_001	BH_FE_002	BH_TUN_001A				
Client Sample Ref.:					WATER	WATER	WATER	WATER				
Sample Location:					4	3	5					
Sample Type:					17-Nov-2021	17-Nov-2021	17-Nov-2021	03-Nov-21				
Top Depth (m):					WMCK / CBG	RTD	WMCK	RTD				
Date Sampled:												
Strata												
Fluoranthene	U	1800	µg/l	0.1	0.000038	0.038	0.0000063	0.0063	< 0.10	< 0.10	< 0.10	< 0.10
Pyrene	U	1800	µg/l	0.1	-	-	-	-	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[a]anthracene	U	1800	µg/l	0.1	-	-	-	-	< 0.10	< 0.10	< 0.10	< 0.10
Chrysene	U	1800	µg/l	0.1	-	-	-	-	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[b]fluoranthene	U	1800	µg/l	0.1	0.001	1	-	-	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[k]fluoranthene	U	1800	µg/l	0.1	0.001	1	-	-	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[a]pyrene	U	1800	µg/l	0.1	0.00001	0.01	0.00000017	0.00017	< 0.10	< 0.10	< 0.10	< 0.10
Indeno(1,2,3-c,d)Pyrene	U	1800	µg/l	0.1	0.0001	0.1	-	-	< 0.10	< 0.10	< 0.10	< 0.10
Dibenz(a,h)Anthracene	U	1800	µg/l	0.1	-	-	-	-	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[g,h,i]perylene	U	1800	µg/l	0.1	0.001	1	-	-	< 0.10	< 0.10	< 0.10	< 0.10
Total Of 16 PAH's	U	1800	µg/l	2	-	-	-	-	< 2.0	< 2.0	< 2.0	< 2.0
Resorcinol	U	1920	mg/l	0.005	-	-	-	-	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Phenol	U	1920	mg/l	0.005	0.0005	0.5	0.0077	7.7	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Cresols	U	1920	mg/l	0.005	-	-	-	-	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Xylenols	U	1920	mg/l	0.005	-	-	-	-	< 0.0050	< 0.0050	< 0.0050	< 0.0050
1-Naphthol	N	1920	mg/l	0.005	-	-	-	-	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Trimethylphenols	U	1920	mg/l	0.005	-	-	-	-	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Total Phenols	U	1920	mg/l	0.03	-	-	-	-	< 0.030	< 0.030	< 0.030	< 0.030

Project: TE8364 Cambridge Waste Water Treatment Plant Relocation									infrastructure	infrastructure	infrastructure	infrastructure	
Client: Soil Engineering Geoservices Ltd					Chemtest Job No.:					21-38515	21-38515	21-38384	21-38384
Quotation No.:					Chemtest Sample ID.:					1312387	1312388	1311775	1311776
Order No.:					Client Sample Ref.:					BH_FE_001	BH_FE_002	BH_TUN_011	BH_TUN_006
					Sample Location:					WATER	WATER	WATER	WATER
					Sample Type:	UK DWS mg/l	UK DWS ug/l	EQS mg/l	EQS ug/l			2	2
					Top Depth (m):							02-Nov-21	02-Nov-21
					Date Sampled:					03-Nov-21	03-Nov-21	02-Nov-21	02-Nov-21
					Strata					SUPD	WMCK	WMCK	MGR/RTD
Fluoranthene	U	1800	µg/l	0.1	0.000038	0.038	0.0000063	0.0063	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Pyrene	U	1800	µg/l	0.1	-	-	-	-	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[a]anthracene	U	1800	µg/l	0.1	-	-	-	-	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Chrysene	U	1800	µg/l	0.1	-	-	-	-	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[b]fluoranthene	U	1800	µg/l	0.1	0.001	1	-	-	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[k]fluoranthene	U	1800	µg/l	0.1	0.001	1	-	-	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[a]pyrene	U	1800	µg/l	0.1	0.00001	0.01	0.00000017	0.00017	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Indeno(1,2,3-c,d)Pyrene	U	1800	µg/l	0.1	0.0001	0.1	-	-	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Dibenz(a,h)Anthracene	U	1800	µg/l	0.1	-	-	-	-	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[g,h,i]perylene	U	1800	µg/l	0.1	0.001	1	-	-	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Total Of 16 PAH's	U	1800	µg/l	2	-	-	-	-	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Resorcinol	U	1920	mg/l	0.005	-	-	-	-	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Phenol	U	1920	mg/l	0.005	0.0005	0.5	0.0077	7.7	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Cresols	U	1920	mg/l	0.005	-	-	-	-	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Xylenols	U	1920	mg/l	0.005	-	-	-	-	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
1-Naphthol	N	1920	mg/l	0.005	-	-	-	-	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Trimethylphenols	U	1920	mg/l	0.005	-	-	-	-	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Total Phenols	U	1920	mg/l	0.03	-	-	-	-	< 0.030	< 0.030	< 0.030	< 0.030	< 0.030

Project: TE8364 Cambridge Waste Water Treatment Plant Relocation									core	core	core	core	
Client: Soil Engineering Geoservices Ltd					Chemtest Job No.:				21-40932	21-40940	21-40941	21-40943	
Quotation No.:					Chemtest Sample ID.:				1324640	1324663	1324664	1324669	
Order No.:					Client Sample Ref.:				1	1	1	1	
					Sample Location:				BH_STW_026	BH_STW_001	BH_STW_009	BH_STW_015	
					Sample Type:	UK DWS mg/l	UK DWS ug/l	EQS mg/l	EQS ug/l	WATER	WATER	WATER	WATER
					Top Depth (m):				8	8	10	10	
					Date Sampled:				18-Nov-2021	18-Nov-2021	18-Nov-2021	18-Nov-2021	
					Strata				WMCK	WMCK	WMCK	WMCK	
Fluoranthene	U	1800	µg/l	0.1	0.000038	0.038	0.0000063	0.0063	< 0.10	< 0.10	< 0.10	< 0.10	
Pyrene	U	1800	µg/l	0.1	-	-	-	-	< 0.10	< 0.10	< 0.10	< 0.10	
Benzo[a]anthracene	U	1800	µg/l	0.1	-	-	-	-	< 0.10	< 0.10	< 0.10	< 0.10	
Chrysene	U	1800	µg/l	0.1	-	-	-	-	< 0.10	< 0.10	< 0.10	< 0.10	
Benzo[b]fluoranthene	U	1800	µg/l	0.1	0.001	1	-	-	< 0.10	< 0.10	< 0.10	< 0.10	
Benzo[k]fluoranthene	U	1800	µg/l	0.1	0.001	1	-	-	< 0.10	< 0.10	< 0.10	< 0.10	
Benzo[a]pyrene	U	1800	µg/l	0.1	0.00001	0.01	0.00000017	0.00017	< 0.10	< 0.10	< 0.10	< 0.10	
Indeno(1,2,3-c,d)Pyrene	U	1800	µg/l	0.1	0.0001	0.1	-	-	< 0.10	< 0.10	< 0.10	< 0.10	
Dibenz(a,h)Anthracene	U	1800	µg/l	0.1	-	-	-	-	< 0.10	< 0.10	< 0.10	< 0.10	
Benzo[g,h,i]perylene	U	1800	µg/l	0.1	0.001	1	-	-	< 0.10	< 0.10	< 0.10	< 0.10	
Total Of 16 PAH's	U	1800	µg/l	2	-	-	-	-	< 2.0	< 2.0	< 2.0	< 2.0	
Resorcinol	U	1920	mg/l	0.005	-	-	-	-	< 0.0050	< 0.0050	< 0.0050	< 0.0050	
Phenol	U	1920	mg/l	0.005	0.0005	0.5	0.0077	7.7	< 0.0050	< 0.0050	< 0.0050	< 0.0050	
Cresols	U	1920	mg/l	0.005	-	-	-	-	< 0.0050	< 0.0050	< 0.0050	< 0.0050	
Xylenols	U	1920	mg/l	0.005	-	-	-	-	< 0.0050	< 0.0050	< 0.0050	< 0.0050	
1-Naphthol	N	1920	mg/l	0.005	-	-	-	-	< 0.0050	< 0.0050	< 0.0050	< 0.0050	
Trimethylphenols	U	1920	mg/l	0.005	-	-	-	-	< 0.0050	< 0.0050	< 0.0050	< 0.0050	
Total Phenols	U	1920	mg/l	0.03	-	-	-	-	< 0.030	< 0.030	< 0.030	< 0.030	

Project: TE8364 Cambridge Waste Water Treatment Plant Relocation								core core core			
Client: Soil Engineering Geoservices Ltd		Chemtest Job No.:						21-40944	21-40945	21-40946	
Quotation No.:		Chemtest Sample ID.:						1324670	1324671	1324672	
Order No.:		Client Sample Ref.:						1	1	1	
		Sample Location:						BH STW_023	BH STW_024	BH STW_025	
		Sample Type:			UK DWS mg/l	UK DWS ug/l	EQS mg/l	EQS ug/l	WATER	WATER	WATER
		Top Depth (m):							10	10	8
		Date Sampled:							18-Nov-2021	18-Nov-2021	18-Nov-2021
		Strata							WMCK	WMCK	WMCK
Fluoranthene	U	1800	µg/l	0.1	0.000038	0.038	0.0000063	0.0063	< 0.10	< 0.10	< 0.10
Pyrene	U	1800	µg/l	0.1	-	-	-	-	< 0.10	< 0.10	< 0.10
Benzo[a]anthracene	U	1800	µg/l	0.1	-	-	-	-	< 0.10	< 0.10	< 0.10
Chrysene	U	1800	µg/l	0.1	-	-	-	-	< 0.10	< 0.10	< 0.10
Benzo[b]fluoranthene	U	1800	µg/l	0.1	0.001	1	-	-	< 0.10	< 0.10	< 0.10
Benzo[k]fluoranthene	U	1800	µg/l	0.1	0.001	1	-	-	< 0.10	< 0.10	< 0.10
Benzo[a]pyrene	U	1800	µg/l	0.1	0.00001	0.01	0.00000017	0.00017	< 0.10	< 0.10	< 0.10
Indeno(1,2,3-c,d)Pyrene	U	1800	µg/l	0.1	0.0001	0.1	-	-	< 0.10	< 0.10	< 0.10
Dibenz(a,h)Anthracene	U	1800	µg/l	0.1	-	-	-	-	< 0.10	< 0.10	< 0.10
Benzo[g,h,i]perylene	U	1800	µg/l	0.1	0.001	1	-	-	< 0.10	< 0.10	< 0.10
Total Of 16 PAH's	U	1800	µg/l	2	-	-	-	-	< 2.0	< 2.0	< 2.0
Resorcinol	U	1920	mg/l	0.005	-	-	-	-	< 0.0050	< 0.0050	< 0.0050
Phenol	U	1920	mg/l	0.005	0.0005	0.5	0.0077	7.7	< 0.0050	< 0.0050	< 0.0050
Cresols	U	1920	mg/l	0.005	-	-	-	-	< 0.0050	< 0.0050	< 0.0050
Xylenols	U	1920	mg/l	0.005	-	-	-	-	< 0.0050	< 0.0050	< 0.0050
1-Naphthol	N	1920	mg/l	0.005	-	-	-	-	< 0.0050	< 0.0050	< 0.0050
Trimethylphenols	U	1920	mg/l	0.005	-	-	-	-	< 0.0050	< 0.0050	< 0.0050
Total Phenols	U	1920	mg/l	0.03	-	-	-	-	< 0.030	< 0.030	< 0.030

Project: TE8364 Cambridge Waste Water Treatment Plant Relocation					Surface water						
Client: Soil Engineering Geoservices Ltd					Quay Fen main por Allicky Farm Pond Black ditch						
Chemtest Job No.:					21-40949	21-40950	21-40952				
Chemtest Sample ID.:					1324689	1324690	1324693				
Client Sample Ref.:					1	1	1				
Sample Location:					SW01	SW02	SW03				
Sample Type:					WATER	WATER	WATER				
Top Depth (m):					0	0	0				
Date Sampled:					#####	#####	#####				
Strata					n/a	n/a	n/a				
Fluoranthene	U	1800	µg/l	0.1	0.000038	0.038	0.0000063	0.0063	< 0.10	< 0.10	< 0.10
Pyrene	U	1800	µg/l	0.1	-	-	-	-	< 0.10	< 0.10	< 0.10
Benzo[a]anthracene	U	1800	µg/l	0.1	-	-	-	-	< 0.10	< 0.10	< 0.10
Chrysene	U	1800	µg/l	0.1	-	-	-	-	< 0.10	< 0.10	< 0.10
Benzo[b]fluoranthene	U	1800	µg/l	0.1	0.001	1	-	-	< 0.10	< 0.10	< 0.10
Benzo[k]fluoranthene	U	1800	µg/l	0.1	0.001	1	-	-	< 0.10	< 0.10	< 0.10
Benzo[a]pyrene	U	1800	µg/l	0.1	0.00001	0.01	0.00000017	0.00017	< 0.10	< 0.10	< 0.10
Indeno(1,2,3-c,d)Pyrene	U	1800	µg/l	0.1	0.0001	0.1	-	-	< 0.10	< 0.10	< 0.10
Dibenz(a,h)Anthracene	U	1800	µg/l	0.1	-	-	-	-	< 0.10	< 0.10	< 0.10
Benzo[g,h,i]perylene	U	1800	µg/l	0.1	0.001	1	-	-	< 0.10	< 0.10	< 0.10
Total Of 16 PAH's	U	1800	µg/l	2	-	-	-	-	< 2.0	< 2.0	< 2.0
Resorcinol	U	1920	mg/l	0.005	-	-	-	-	< 0.0050	< 0.0050	< 0.0050
Phenol	U	1920	mg/l	0.005	0.0005	0.5	0.0077	7.7	< 0.0050	< 0.0050	< 0.0050
Cresols	U	1920	mg/l	0.005	-	-	-	-	< 0.0050	< 0.0050	< 0.0050
Xylenols	U	1920	mg/l	0.005	-	-	-	-	< 0.0050	< 0.0050	< 0.0050
1-Naphthol	N	1920	mg/l	0.005	-	-	-	-	< 0.0050	< 0.0050	< 0.0050
Trimethylphenols	U	1920	mg/l	0.005	-	-	-	-	< 0.0050	< 0.0050	< 0.0050
Total Phenols	U	1920	mg/l	0.03	-	-	-	-	< 0.030	< 0.030	< 0.030

Project: TE8364 Cambridge Waste Water Treatment Plant Relocation						Results - Leachate							
						core	core	infrastructure	infrastructure	infrastructure			
Client: Soil Engineering Geoservices Ltd						21-26285	21-28134	21-28963	21-31059	21-26263			
Chemtest Job No.:						21-26285	21-28134	21-28963	21-31059	21-26263			
Chemtest Sample ID.:						1251058	1260362	1264390	1274689	1250924			
Quotation No.: Q21-24797						8	2	2	2	8			
Client Sample ID.:						BH_STW_009	BH_STW_012A	TUN-003	BH-TUN-001A	BH_TUN_004			
Sample Location:						SOIL	SOIL	SOIL	SOIL	SOIL			
Sample Type:						1.1	0.2	0.2	0.2	1.1			
Top Depth (m):						1.2	0.2	0.25	0.25	1.2			
Bottom Depth (m):						28-Jul-2021	10-Aug-2021	16-Aug-2021	06-Sep-2021	44405			
Date Sampled:						WMCK	MGR	MGR	MGR	RTD			
Strata:													
Determinand	Accred.	SOP	Type	Units	LOD								
pH	U	1010	2:1		N/A	-	-	-	8.5	8.2	7.2	8.9	8.3
Chloride	U	1220	2:1	mg/l	1	250	250000	-	1.8	2	2.3	1.8	9.6
Fluoride	U	1220	2:1	mg/l	0.05	1.5	1500	-	0.55	1.6	1.2	0.8	0.35
Ammoniacal Nitrogen	U	1220	2:1	mg/l	0.05	0.38	380	0.2	0.11	0.67	0.061	0.075	0.15
Sulphate	U	1220	2:1	mg/l	1	250	250000	-	7.7	8.7	160	13	110
Cyanide (Total)	U	1300	2:1	mg/l	0.05	-	-	-	< 0.050	< 0.050	< 0.050		< 0.050
Cyanide (Free)	U	1300	2:1	mg/l	0.05	0.05	50	0.001	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Cyanide (Complex)	U	1300	2:1	mg/l	0.05	-	-	-	< 0.050	< 0.050	< 0.050	0.1	< 0.050
Calcium	U	1455	2:1	mg/l	2	250	250000	-	24	29	69	32	68
Magnesium	U	1455	2:1	mg/l	0.2	50	50000	-	0.76	0.72	2.7	1	3.2
Arsenic	U	1455	2:1	µg/l	0.2	0.01	10	0.05	0.34	2.8	1.8	0.003	6
Boron	U	1455	2:1	µg/l	10	1	1000	2	43	35	64	0.02	130
Barium	U	1455	2:1	µg/l	5	1300	1300000	-	< 5.0	6.3	53	0.019	11
Beryllium	U	1455	2:1	µg/l	1	-	-	-	< 1.0	< 1.0	< 1.0	< 0.001	< 1.0
Cadmium	U	1455	2:1	µg/l	0.11	0.005	5	0.00008	< 0.11	< 0.11	< 0.11	< 0.00011	< 0.11
Chromium	U	1455	2:1	µg/l	0.5	0.05	50	-	< 0.50	0.97	< 0.50		1.9
Copper	U	1455	2:1	µg/l	0.5	2	2000	0.001	2.4	4.4	7	0.0072	15
Manganese	U	1455	2:1	µg/l	0.5	0.05	50	0.123	2.7	4.8	2	0.0013	1.5
Molybdenum	U	1455	2:1	µg/l	0.2	0.07	70	-	6.4	2.3	21	0.013	15
Nickel	U	1455	2:1	µg/l	0.5	0.02	20	0.004	< 0.50	2.3	3.8	0.0014	4.3
Lead	U	1455	2:1	µg/l	0.5	0.01	10	0.0012	< 0.50	1.4	< 0.50	< 0.0005	< 0.5
Antimony	U	1455	2:1	µg/l	0.5	0.005	5	-	< 0.50	< 0.50	0.83	0.0013	3.8
Selenium	U	1455	2:1	µg/l	0.5	0.01	10	-	0.58	< 0.50	1.3	0.0012	1
Vanadium	U	1455	2:1	µg/l	0.5	-	-	-	0.55	3.9	2.3	< 0.0005	10
Zinc	U	1455	2:1	µg/l	2.5	5	5000	0.0109	2.6	< 2.5	< 2.5	< 0.003	2.5
Mercury Low Level	U	1460	2:1	µg/l	0.01	-	-	-	< 0.010	< 0.010	0.02		< 0.01
Iron	N	1455	2:1	µg/l	5	0.2	200	1	< 5.0	1400	13	0.042	11
Chromium (Trivalent)	N	1490	2:1	µg/l	20	-	-	0.0047	< 20	< 20	< 20	< 20	< 20
Low-Level Chromium (Hexavalent)	N	1495	2:1	µg/l	0.1	-	-	-	< 0.10	0.17	0.16	< 20	0.65
Total Organic Carbon	U	1610	2:1	mg/l	2	-	-	-	15	9.1	8.6		19
Resorcinol	U	1920	2:1	mg/l	0.005	-	-	-	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Phenol	U	1920	2:1	mg/l	0.005	0.0005	0.5	0.0077	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Cresols	U	1920	2:1	mg/l	0.005	-	-	-	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Xylenols	U	1920	2:1	mg/l	0.005	-	-	-	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
1-Naphthol	N	1920	2:1	mg/l	0.005	-	-	-	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Trimethylphenols	U	1920	2:1	mg/l	0.005	-	-	-	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Total Phenols	U	1920	2:1	mg/l	0.03	-	-	-	< 0.030	< 0.030	< 0.030	< 0.030	< 0.030

Project: TE8364 Cambridge Waste Water Treatment Plant Relocation				Results - Soil				Site	infrastructure	infrastructure	infrastructure
Client: Soil Engineering Geoservices Ltd				Chemtest Job No.:					21-26263	21-35054-1	21-35054-1
Quotation No.: Q21-24797				Chemtest Sample ID.:					1250924	1294728	1294729
Order No.:				Client Sample Ref.:					8	13.2	13.2
				Client Sample ID.:					BH_TUN_04	BH_TUN_015	BH_TUN_018
Sample Location:				Public Open Space (park) 1% SOM mg/kg	Public Open Space (park) 1% SOM ug/kg	Commercial 1% SOM mg/kg	Commercial 1% SOM ug/kg	1.1	10.5	10.5	
Type:								SOIL	SOIL	SOIL	
Top Depth (m):								1.1	10.3	10.2	
Date Sampled:								28-Jul-21	08-Oct-21	07-Oct-21	
Asbestos Lab:				DURHAM	DURHAM	DURHAM					
Strata:				RTD	WMCK	WMCK					
Determinand	Accred.	SOP	Units	LOD							
ACM Type	U	2192		N/A	-	-	-	-			
Asbestos Identification	U	2192		N/A	-	-	-	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	
Moisture	N	2030	%	0.020	-	-	-	4.7	45	45	
Soil Colour	N	2040		N/A	-	-	-	Brown	Grey	Beige	
Other Material	N	2040		N/A	-	-	-	Stones	None	Stones	
Soil Texture	N	2040		N/A	-	-	-	Sand	Clay	Gravel	
pH	M	2010		4	-	-	-	9.1	8.5	8.4	
Boron (Hot Water Soluble)	M	2120	mg/kg	0.4	-	-	-	1.2	0.7	0.41	
Sulphate (2:1 Water Soluble) as SO4	M	2120	g/l	0.01	-	-	-	0.14	0.33	0.5	
Total Sulphur	M	2175	%	0.01	-	-	-	0.063	0.13	0.16	
Cyanide (Free)	M	2300	mg/kg	0.5	-	-	-	<0.5	<0.5	[B] <0.5	
Iron	N	2430	mg/kg	100	-	-	-	15000	2700	2200	
Arsenic	M	2450	mg/kg	1	170	170000	640	640000	12	7.6	3.2
Barium	M	2450	mg/kg	10	5800	5800000	22000	22000000	72	17	13
Beryllium	U	2450	mg/kg	1	63	63000	12	12000	<1	<1	<1
Cadmium	M	2450	mg/kg	0.1	560	560000	190	190000	3.2	<0.1	<0.1
Chromium	M	2450	mg/kg	1	-	-	-	-	24	3.5	2
Manganese	M	2450	mg/kg	5	-	-	-	-	330	470	430
Molybdenum	M	2450	mg/kg	2	2900	2900000	18000	18000000	<2	<2	<2
Antimony	N	2450	mg/kg	2	3300	3300000	7400	7400000	<2	<2	<2
Copper	M	2450	mg/kg	0.5	44000	44000000	68000	68000000	30	13	9.5
Mercury	M	2450	mg/kg	0.1	-	-	-	-	0.51	<0.1	<0.1
Nickel	M	2450	mg/kg	0.5	800	800000	980	980000	17	9.9	8.2
Lead	M	2450	mg/kg	0.5	1300	1300000	2300	2300000	36	7.7	4.8
Selenium	M	2450	mg/kg	0.2	1800	1800000	12000	12000000	<0.2	<0.2	<0.2
Vanadium	U	2450	mg/kg	5	5000	5000000	9000	9000000	37	6.3	<5
Zinc	M	2450	mg/kg	0.5	170000	170000000	730000	730000000	90	11	6.8
Chromium (Trivalent)	N	2490	mg/kg	1	33000	33000000	8600	8600000	24	3.5	2
Chromium (Hexavalent)	N	2490	mg/kg	0.5	-	-	-	-	<0.5	<0.5	<0.5
Fraction of Organic Carbon	M	2625		0.001	-	-	-	-	0.005	0.003	0.002
Aliphatic TPH >C5-C6	N	2680	mg/kg	1	95000	95000000	3200	3200000	<1.0	<1.0	[B] <1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1	150000	150000000	7800	7800000	<1.0	<1.0	[B] <1.0
Aliphatic TPH >C8-C10	M	2680	mg/kg	1	14000	14000000	2000	2000000	<1.0	<1.0	[B] <1.0
Aliphatic TPH >C10-C12	M	2680	mg/kg	1	21000	21000000	9700	9700000	<1.0	<1.0	[B] <1.0
Aliphatic TPH >C12-C16	M	2680	mg/kg	1	25000	25000000	59000	59000000	<1.0	<1.0	[B] <1.0
Aliphatic TPH >C16-C21	M	2680	mg/kg	1	-	-	-	-	<1.0	<1.0	[B] <1.0
Aliphatic TPH >C21-C35	M	2680	mg/kg	1	-	-	-	-	<1.0	<1.0	[B] <1.0
Aliphatic TPH >C35-C44	N	2680	mg/kg	1	-	-	-	-	<1.0	<1.0	[B] <1.0
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5	-	-	-	-	<5.0	<5.0	[B] <5.0
Aromatic TPH >C5-C7	N	2680	mg/kg	1	76000	76000000	26000	26000000	<1.0	<1.0	[B] <1.0
Aromatic TPH >C7-C8	N	2680	mg/kg	1	87000	87000000	56000	56000000	<1.0	<1.0	[B] <1.0
Aromatic TPH >C8-C10	M	2680	mg/kg	1	72000	72000000	3500	3500000	<1.0	<1.0	[B] <1.0
Aromatic TPH >C10-C12	M	2680	mg/kg	1	9200	9200000	16000	16000000	<1.0	<1.0	[B] <1.0
Aromatic TPH >C12-C16	M	2680	mg/kg	1	10000	10000000	36000	36000000	<1.0	<1.0	[B] <1.0
Aromatic TPH >C16-C21	U	2680	mg/kg	1	7600	7600000	28000	28000000	<1.0	<1.0	[B] <1.0
Aromatic TPH >C21-C35	M	2680	mg/kg	1	7800	7800000	28000	28000000	<1.0	<1.0	[B] <1.0
Aromatic TPH >C35-C44	N	2680	mg/kg	1	7800	7800000	28000	28000000	<1.0	<1.0	[B] <1.0
Total Aromatic Hydrocarbons	N	2680	mg/kg	5	-	-	-	-	<5	<5	[B] <5.0
Total Petroleum Hydrocarbons	N	2680	mg/kg	10	-	-	-	-	<10	<10	[B] <1.0
Naphthalene	M	2700	mg/kg	0.1	1200	1200000	190	190000	<0.10	<0.10	<0.10
Acenaphthylene	M	2700	mg/kg	0.1	29000	29000000	83000	83000000	<0.10	<0.10	<0.10
Acenaphthene	M	2700	mg/kg	0.1	29000	29000000	84000	84000000	<0.10	<0.10	<0.10
Fluorene	M	2700	mg/kg	0.1	20000	20000000	63000	63000000	<0.10	<0.10	<0.10
Phenanthrene	M	2700	mg/kg	0.1	6200	6200000	22000	22000000	<0.10	<0.10	<0.10
Anthracene	M	2700	mg/kg	0.1	150000	150000000	52000	520000000	<0.10	<0.10	<0.10
Fluoranthene	M	2700	mg/kg	0.1	6300	6300000	23000	23000000	0.26	<0.10	<0.10
Pyrene	M	2700	mg/kg	0.1	15000	15000000	54000	54000000	0.32	<0.10	<0.10
Benzo[a]anthracene	M	2700	mg/kg	0.1	49	49000	170	170000	0.2	<0.10	<0.10
Chrysene	M	2700	mg/kg	0.1	93	93000	350	350000	0.29	<0.10	<0.10
Benzo[b]fluoranthene	M	2700	mg/kg	0.1	13	13000	44	44000	0.2	<0.10	<0.10
Benzo[k]fluoranthene	M	2700	mg/kg	0.1	370	370000	1200	1200000	0.41	<0.10	<0.10
Benzo[a]pyrene	M	2700	mg/kg	0.1	11	11000	35	35000	0.27	<0.10	<0.10
Indeno[1,2,3-c,d]Pyrene	M	2700	mg/kg	0.1	150	150000	500	500000	0.35	<0.10	<0.10
Dibenz[a,h]Anthracene	M	2700	mg/kg	0.1	1.1	1100	3.5	3500	0.29	<0.10	<0.10
Benzo[g,h,i]perylene	M	2700	mg/kg	0.1	1400	1400000	3900	3900000	0.29	<0.10	<0.10
Total Of 16 PAH's	M	2700	mg/kg	2	-	-	-	-	2.9	<2.0	<2.0
Dichlorodifluoromethane	U	2760	µg/kg	1	-	-	-	-	<0.10	<0.10	[B] <1.0
Chloromethane	M	2760	µg/kg	1	-	-	-	-	<0.10	<0.10	[B] <1.0
Vinyl Chloride	M	2760	µg/kg	1	4.8	4800	0.059	59	<0.10	<0.10	[B] <1.0
Bromomethane	M	2760	µg/kg	20	-	-	-	-	<20	<20	[B] <20
Chloroethane	U	2760	µg/kg	2	154000	154000000	900	900000	<2.0	<2.0	[B] <2.0

Project: TE8364 Cambridge Waste Water Treatment Plant Relocation				Results - Soil				Site	infrastructure	infrastructure	infrastructure
Client: Soil Engineering Geoservices Ltd				Chemtest Job No.:					21-26263	21-35054-1	21-35054-1
Quotation No.: Q21-24797				Chemtest Sample ID.:					1250924	1294728	1294729
Order No.:				Client Sample Ref.:					8	13.2	13.2
				Client Sample ID.:					BH_TUN_04	BH_TUN_015	BH_TUN_018
Sample Location:				Public Open Space (park) 1% SOM mg/kg	Public Open Space (park) 1% SOM ug/kg	Commercial 1% SOM mg/kg	Commercial 1% SOM ug/kg	1.1	10.5	10.5	
Type:								SOIL	SOIL	SOIL	
Depth:								1.1	10.3	10.2	
Date Sampled:								28-Jul-21	08-Oct-21	07-Oct-21	
Asbestos Lab:							DURHAM	DURHAM	DURHAM		
Strata:							RTD	WMCK	WMCK		
Determinand	Accred.	SOP	Units	LOD							
Trichlorofluoromethane	M	2760	µg/kg	1	-	-	-	< 1.0	< 1.0	[B] <1.0	
1,1-Dichloroethene	M	2760	µg/kg	1	3500	3500000	24	24000	< 1.0	[B] <1.0	
Trans 1,2-Dichloroethene	M	2760	µg/kg	1	-	-	-	< 1.0	< 1.0	[B] <1.0	
1,1-Dichloroethane	M	2760	µg/kg	1	20000	20000000	260	260000	< 1.0	[B] <1.0	
cis 1,2-Dichloroethene	M	2760	µg/kg	1	-	-	-	< 1.0	< 1.0	[B] <1.0	
Bromochloromethane	U	2760	µg/kg	5	-	-	-	< 5.0	< 5.0	[B] <5.0	
Trichloromethane	M	2760	µg/kg	1	-	-	-	< 1.0	< 1.0	[B] <1.0	
1,1,1-Trichloroethane	M	2760	µg/kg	1	57000	57000000	660	660000	< 1.0	[B] <1.0	
Tetrachloromethane	M	2760	µg/kg	1	-	-	-	< 1.0	< 1.0	[B] <1.0	
1,1-Dichloropropene	U	2760	µg/kg	1	-	-	-	< 1.0	< 1.0	[B] <1.0	
Benzene	M	2760	µg/kg	1	90	90000	27	27000	< 1.0	[B] <1.0	
1,2-Dichloroethane	M	2760	µg/kg	2	21	21000	0.67	670	< 2.0	[B] <2.0	
Trichloroethene	N	2760	µg/kg	1	70	70000	1.2	1200	< 1.0	[B] <1.0	
1,2-Dichloropropane	M	2760	µg/kg	1	160	160000	3.1	3100	< 1.0	[B] <1.0	
Dibromomethane	M	2760	µg/kg	1	-	-	-	< 1.0	< 1.0	[B] <1.0	
Bromodichloromethane	M	2760	µg/kg	5	56	56000	2	2000	< 5.0	[B] <1.0	
cis-1,3-Dichloropropene	N	2760	µg/kg	10	-	-	-	< 10	< 10	[B] <10	
Toluene	M	2760	µg/kg	1	87000	87000000	56000	56000000	< 1.0	[B] <1.0	
Trans-1,3-Dichloropropene	N	2760	µg/kg	10	-	-	-	< 10	< 10	[B] <10	
1,1,2-Trichloroethane	M	2760	µg/kg	10	1100	1100000	89	89000	< 10	[B] <10	
Tetrachloroethene	M	2760	µg/kg	1	810	810000	19	19000	< 1.0	[B] <1.0	
1,3-Dichloropropane	U	2760	µg/kg	2	-	-	-	< 2.0	< 2.0	[B] <2.0	
Dibromochloromethane	U	2760	µg/kg	10	-	-	-	< 10	< 10	[B] <1.0	
1,2-Dibromoethane	M	2760	µg/kg	5	-	-	-	< 5.0	< 5.0	[B] <5.0	
Chlorobenzene	M	2760	µg/kg	1	1300	1300000	56	56000	< 1.0	[B] <1.0	
1,1,1,2-Tetrachloroethane	M	2760	µg/kg	2	1500	1500000	110	110000	< 2.0	[B] <2.0	
Ethylbenzene	M	2760	µg/kg	1	17000	17000000	5700	5700000	< 1.0	[B] <1.0	
m & p-Xylene	M	2760	µg/kg	1	-	-	-	< 1.0	< 1.0	[B] <1.0	
o-Xylene	M	2760	µg/kg	1	17000	17000000	6600	6600000	< 1.0	[B] <1.0	
Styrene	M	2760	µg/kg	1	5900	5900000	3200	3200000	< 1.0	[B] <1.0	
Tribromomethane	U	2760	µg/kg	1	-	-	-	< 1.0	< 1.0	[B] <1.0	
Isopropylbenzene	M	2760	µg/kg	1	23000	23000000	1300	1300000	< 1.0	[B] <1.0	
Bromobenzene	M	2760	µg/kg	1	1800	1800000	92	92000	< 1.0	[B] <1.0	
1,2,3-Trichloropropane	N	2760	µg/kg	50	-	-	-	< 50	< 50	[B] <50	
N-Propylbenzene	U	2760	µg/kg	1	36000	36000000	3900	3900000	< 1.0	[B] <1.0	
2-Chlorotoluene	M	2760	µg/kg	1	-	-	-	< 1.0	< 1.0	[B] <1.0	
1,3,5-Trimethylbenzene	M	2760	µg/kg	1	-	-	-	< 1.0	< 1.0	[B] <1.0	
4-Chlorotoluene	U	2760	µg/kg	1	-	-	-	< 1.0	< 1.0	[B] <1.0	
Tert-Butylbenzene	U	2760	µg/kg	1	-	-	-	< 1.0	< 1.0	[B] <1.0	
1,2,4-Trimethylbenzene	M	2760	µg/kg	1	310	310000	39	39000	< 1.0	[B] <1.0	
Sec-Butylbenzene	U	2760	µg/kg	1	-	-	-	< 1.0	< 1.0	[B] <1.0	
1,3-Dichlorobenzene	M	2760	µg/kg	1	390	390000	30	30000	< 1.0	[B] <1.0	
4-Isopropyltoluene	U	2760	µg/kg	1	-	-	-	< 1.0	< 1.0	[B] <1.0	
1,4-Dichlorobenzene	M	2760	µg/kg	1	36000	36000000	4200	4200000	< 1.0	[B] <1.0	
N-Butylbenzene	U	2760	µg/kg	1	-	-	-	< 1.0	< 1.0	[B] <1.0	
1,2-Dichlorobenzene	M	2760	µg/kg	1	24000	24000000	2000	2000000	< 1.0	[B] <1.0	
1,2-Dibromo-3-Chloropropane	U	2760	µg/kg	50	-	-	-	< 50	< 50	[B] <50	
1,2,4-Trichlorobenzene	M	2760	µg/kg	1	1700	1700000	220	220000	< 1.0	[B] <1.0	
Hexachlorobutadiene	U	2760	µg/kg	1	48	48000	31	31000	< 1.0	[B] <1.0	
1,2,3-Trichlorobenzene	U	2760	µg/kg	2	-	-	-	< 2.0	< 2.0	[B] <2.0	
Methyl Tert-Butyl Ether	M	2760	µg/kg	1	98000	98000000	7500	7500000	< 1.0	[B] <1.0	
Resorcinol	M	2920	mg/kg	0.02	-	-	-	< 0.020	< 0.020	[B] <0.02	
Phenol	M	2920	mg/kg	0.02	440	440000	440	440000	< 0.020	[B] <0.02	
Cresols	M	2920	mg/kg	0.02	-	-	-	< 0.020	< 0.020	[B] <0.02	
Xylenols	M	2920	mg/kg	0.02	-	-	-	< 0.020	< 0.020	[B] <0.02	
1-Naphthol	N	2920	mg/kg	0.02	-	-	-	< 0.020	< 0.020	[B] <0.02	
Trimethylphenols	M	2920	mg/kg	0.02	-	-	-	< 0.020	< 0.020	[B] <0.02	
Total Phenols	M	2920	mg/kg	0.1	-	-	-	< 0.10	< 0.10	[B] <0.1	

Get in touch

You can contact us by:



Emailing at info@cwwtpr.com



Calling our Freephone information line on **0808 196 1661**



Writing to us at **Freepost: CWWTPR**

You can view all our DCO application documents and updates on the application on The Planning Inspectorate website:

<https://infrastructure.planninginspectorate.gov.uk/projects/eastern/cambridge-waste-water-treatment-plant-relocation/>